

APPENDIX C FACTUAL REPORT: GEOENVIRONMENTAL HAZARDS - MFS

Factual Report: Geoenvironmental Hazards

Mount Frederick South Sub-area

20 July 2026

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Prepared for:

Bathurst Resources Limited

Bathurst Resources Limited
Level 12, 1 Willeston Street, Wellington 6011
PO Box 5963, Lambton Quay,
Wellington 6145, New Zealand

Prepared by:

Mine Waste Management Limited

5 Sir Willaim Pickering Drive, Burnside, Christchurch 8053, New Zealand

+64 3 242 0221

www.minewaste.com.au

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EXECUTIVE SUMMARY

Bathurst Resources Limited (BRL) is seeking to obtain authorisation through the Fast-track Approvals Act (FTAA) to progress development and mining of the coal resources across the wider Buller Plateaux. This project is referred to as the Buller Plateaux Continuation Project (BPCP or Project).

The purpose of the BPCP is to re-consent the existing infrastructure and mining operations associated with the existing Stockton Mine and provide access to additional coal mining areas across the Buller Plateaux, as the coal resource in the current Stockton Mine is close to depletion, and further coal resources for blending are required. There are five key project sub-areas:

- Stockton mining area (Stockton)
- Mount Frederick South (MFS)
- Escarpment Extended (ESE)
- Upper Waimangaroa Haul Road (UWHR)
- Cypress mining area (Cypress)

Mine Waste Management Limited (MWM) has developed this report on environmental geochemistry hazards for the MFS sub-area, which provides a comprehensive geochemical analysis and characterisation of materials for the MFS sub-area.

General Background

Over 150 years of mining has occurred on the Stockton Plateau with earlier workings predominantly underground, and more recently by open cast activities. Historic mine workings are located within the MFS sub-area and drainage from these workings discharge into Deep Stream, which then joins the Waimangaroa River lower down in the catchment.

Mining activities are within the Brunner Coal Measures (BCM), a lithological unit known for its ability to generate acid and metalliferous drainage (AMD). At the MFS sub-area the risks for AMD are expected to be lower than at the adjacent Stockton Coal Mine (Stockton) as the BCM have a lower sulfur content at MFS compared to similar overburden materials at Stockton. This is due to the depositional environment at MFS being influenced by fresh water fluvial sediments (low sulfur) with occasional periodic marine incursions (high sulfur), whereas the depositional environment at Stockton (e.g., Mangatini and Millerton catchments) was predominantly a marine-influenced environment with higher sulfur materials (e.g., estuarine depositional environment). This trend has been identified by other similar studies (Pope et al., 2010a,b).

This report focuses on understanding the environmental implications and the potential for AMD for the MFS sub-area. The geoenvironmental hazards associated with the MFS sub-area were investigated using acid-base accounting (ABA) data from 24 drillholes completed in the MFS sub-area during 2023/2024. Samples were analysed to determine the AMD potential of the materials.

Geochemical Investigations

A total of 472 samples from 24 drillholes were analysed by ABA methods. General findings of the geochemical analysis and characterisation are:

- Total sulfur content varies from <0.005 wt% (LOR¹) to 13.1 wt%.
 - 95 % of samples ≤ 1.1 wt % sulfur.
 - 75 % of samples ≤ 0.34 wt % sulfur.
 - 50 % of samples ≤ 0.06 wt % sulfur.
 - 25 % of samples ≤ 0.019 wt % sulfur.

Paste pH ranges from 3.3 to 8.2 and paste Electrical Conductivity (EC) varies from 4 to 670 µS/cm.

- NAG² pH ranges from 2.3 to 6.8 and NAG acidity ranges from 2 to 297 kg H₂SO₄/t.
- NAPP³ ranges from -20 to 401 kg H₂SO₄/t.

Relationships between total sulfur and portable X-ray fluorescence (pXRF) analysis of ABA samples were analysed with a strong relationship found between pXRF derived sulfur values and total wt% sulfur values. Results suggest the potential for pXRF analysis of sulfur to be a useful tool for field-based classification at MFS. The relationship will require validation for field-based activities as the testing was undertaken on sample laboratory pulps rather than field samples.

Samples were often, but not always, taken over different lithological units with the sample description assigned to the lithological code of the largest unit within the sampled interval. Observations of sampled material include:

- 49% of samples were within the granule sized or coarser fraction (breccia and conglomerate).
- 28% of samples were very fine to coarse sandstone (non-laminated).
- 9% carbonaceous mudstones.
- 8% Greenland Group basement.
- 4% laminated sandstones.
- 2% siltstone and low carbonaceous mudstone.

Drillholes generally terminated in Greenland Group or conglomerate/breccia up to 10 m below the coal floor. This introduces material into the analysis that potentially will not be significantly represented within the final pit shell.

AMIRA (2002) column leach tests have been completed on four samples from drillhole DC16 (commenced April 2024). Samples were selected from a range of total sulfur values (0.009, 0.084, 0.174 and 0.581 wt% sulfur). Results have been reported by MWM (2026a).

¹ Limit of Reporting

² Net acid generation

³ Net Acid Producing Potential

AMD Source Hazards

Results were classified using a process flow model approach (e.g., Olds et al., 2015). The model allows for rapid identification of the lowest risk (< 0.05 wt% sulfur) and highest risk materials (> 0.33 wt% sulfur) based only on total sulfur. This has benefits for operational testing (turn-around time and costs).

The following summary of the MFS process flow model is provided:

- All material < 0.05 wt% sulfur is classified as NAF.
- Material between 0.05 and 0.33 wt% sulfur is tested for NAG pH. This material is classified as NAF where NAG pH is > 4.5, Low Risk (LR) where NAG pH ≤ 4.5 and ≤ 0.2 wt% S and Potentially Acid Forming (PAF) where NAG pH ≤ 4.5 and > 0.2 wt% S.
- Material between 0.33 wt% and 0.7 wt% sulfur is classified as PAF.
- All material > 0.7 wt% sulfur is classified as HAF.

Results of material classification (as per sample length) using the proposed MFS process flow model indicated:

- 77% non-acid forming (NAF)
- 3% low risk (LR)
- 13% PAF
- 7% high acid forming (HAF) (>0.7 wt%)

The MFS Process Flow classification of the samples was compared between the existing Escarpment Mine Process Flow Classification with classification results identical, except for one sample, which indicates the classification process can be considered a generic approach for the Brunner Coal Measures.

The Process Flow model introduces a HAF category that is not present within the AMIRA (2002) and Price (2009) classifications. The inclusion of a HAF category provides an opportunity for alternative management of this higher risk material. Low paste pH results for PAF and HAF materials indicate rapid to immediate acid generation. With little acid neutralisation capacity (ANC) in PAF and HAF units this test is likely to be a reasonable indication of immediate acid generation rates / severity.

From the dataset available a lithological alignment with material classification is observed including:

- 63% of laminated sandstones are PAF or HAF
- 61% of carbonaceous mudstone samples are PAF or HAF
- 26% of sandstones are PAF or HAF
- 99% of conglomerate is NAF
- 91% of breccia is NAF

Laminated units and mudstone that are more consistent of a marine depositional environment are more likely to be classified as HAF or PAF material. These observations are consistent with results for drillhole DC16 with a predominantly fluvial environment with marine incursions.

Block Model

BRL (2025) applied the MFS AMD Process Flow classification to available drillhole data to form the MFS AMD block model. The MFS AMD block model identifies 1.9% of the total waste rock is HAF, with this material accounting for approximately 15.9% of the total acid load for the MFS Project. Remaining waste rock within the block model was classified as PAF (14.4%), LR (14.5%), and NAF (69.1%). The average mass weighted sulfur content of the proposed MFS Project is 0.12 wt% S. This is significantly lower than the neighbouring Stockton Coal Mine, Hence AMD risks are also lower and water treatment requirements (acidity loads) will also be lower.

Summary

- Data indicates that a process flow model approach, based on the Escarpment Mine process flow model (Olds et al., 2015), allows for fast identification of the lowest risk (< 0.05 wt% sulfur) and highest risk material (> 0.33 wt% sulfur) with 72.2% of samples classified on total sulfur only.
- NAG pH is essential to classify other samples.
- The use of ANC data has lesser value, due to minor quantities, and was not used to classify samples at MFS.

Disparity observed between the MFS AMD dataset and the MFS block model classification characteristics are potentially due to:

- Incorporation of data within the MFS AMD database of material below the coal floor that is unlikely to be included in the block model
- Uncertainty in areas of the block model due to limited data availability.

Recommendations

Based on the investigation presented in this report, several key recommendations are proposed to further optimise the MFS AMD block model. By implementing these recommendations, and utilising adaptive management processes, the characterisation of the materials and the potential impact of the source hazards will continue to be improved. The following recommendations are proposed:

- Continue detailed geochemical analysis of samples including sulfur speciation testing.
- Additional drilling to further refine the MFS block model.
- Development of quality assurance/quality control procedures for laboratory ABA testing.

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1 INTRODUCTION

Bathurst Resources Limited (BRL) is seeking to obtain authorisation through the Fast-track Approvals Act 2024 (FTAA) to progress development and mining of the coal resources across the wider Buller Plateaux, referred to as the Buller Plateaux Continuation Project (BPCP or Project).

1.1 Background

The purpose of the BPCP is to re-consent the existing infrastructure and mining operations associated with the existing Stockton Mine and provide access to additional coal mining areas across the Buller Plateaux, as the coal resource in the current Stockton Mine is close to depletion, and further coal resources for blending are required. There are five key Project sub-areas:

- Stockton mining area (Stockton)
- Mount Frederick South (MFS)
- Escarpment Extended (ESE)
- Upper Waimangaroa Haul Road (UWHR)
- Cypress mining area (Cypress)

Mine Waste Management Limited (MWM) has developed this report on environmental geochemistry hazards (i.e., acid and metalliferous drainage (AMD)) for the MFS sub-area, which provides a comprehensive geochemical analysis and characterisation of materials for the MFS sub-area.

1.2 Project Description

BRL completed a drilling campaign across the MFS sub-area, with drill core being sampled for AMD testing. The drilling programme consisted of 24 diamond drillholes completed during 2023/2024. Drillhole depths ranged between 13.5 and 61.7 m with non-coal material sampled for targeted laboratory analysis to support classification of the AMD risk of the project.

1.3 Objectives

BRL has requested the development of a detailed technical report on the geoenvironmental hazards of the MFS sub-area to support the assessment of environmental effects (AEE). The objective of this report is to identify the geoenvironmental hazards in the MFS sub-area by conducting an AMD source hazard assessment with the respective materials characterisation.

1.4 Introduction to AMD

AMD refers to water contamination caused by mining activities, containing toxic metals, salts, and acidity. AMD is typically generated by the excavation of rocks that contain sulfide minerals, such as pyrite. When these minerals are exposed to oxygen and water, they undergo weathering processes and oxidise, generating acidity and releasing toxic metals. Microorganisms accelerate this process.

AMD can be categorised into Acid Rock Drainage (ARD) with high acidity, Neutral Metalliferous Drainage (NMD) with high metal concentrations but neutral pH, and Saline Drainage (SD) with elevated sulfate levels. AMD poses various health, safety, and environmental risks such as skin contact,

ingestion, and inhalation hazards, bioaccumulation of metals in the food chain, sedimentation in drainage channels, increased erosion, degradation of infrastructure, spontaneous combustion, gas emissions, visual impacts, and negative perceptions, affecting business reputation and sustainability. Closing AMD affected sites and treating AMD can incur long-term costs and risks.

2 BACKGROUND

The following section summarises relevant background information for the proposed MFS sub-area.

2.1 Previous Studies

2.1.1 Historic Mining Activities

The Stockton coal mining region is part of the Buller coalfield that includes for instance, the Stockton Mine, the Cypress mine, Island Block mine, and historic workings on the Denniston plateau. It is located 40 minutes' drive NNE of Westport on the West Coast of the South Island of New Zealand. Coal has been mined in the Buller Coalfield since 1872 (Flores and Sykes, 1996) and early operations were underground. The site has changed ownership several times, most recently from Solid Energy New Zealand Ltd to BT Mining Ltd in 2017. Historic underground mining activities also occurred within the MFS sub-area. A map of historic workings is shown in Figure 1.

2.1.2 Water Quality and Quantity

Water sampling was undertaken within the Deep Stream area to obtain baseline water quality data (Solid Energy, 2006). The results showed that underground mine adit discharges had a pH of 3.74 and 4 and contained slightly elevated levels of aluminium (Al). However, data indicates that the measured acidity is $< 10 \text{ mg CaCO}_3/\text{L}$, which is considered low. The discharge from an adit also contained elevated concentrations of zinc (Zn). This indicated historic underground workings were contributing AMD with low concentrations of acidity and some trace metals to Deep Stream (Solid Energy, 2006). Additional baseline water quality data are available in MWM (2026b), which also contains location maps of where samples were collected.

The main stem of Deep Stream was also sampled by Solid Energy (2006). This water had a pH of 5.42 and slightly elevated Al, which indicated the main stem of Deep Stream was not impacted by AMD. In addition, five further water samples were taken from near the upper catchment of Deep Stream near Mount Fredrick to determine if mining at the Stockton Mine was having an adverse environmental impact on Deep Stream. The results showed the pH of the upper catchment is approximately pH 6.5 and contains low concentrations of trace metals and sulfate. The pH of these waters is about 1 pH unit higher than the lower Deep Stream catchment and is likely to be pristine and unaffected by mining at the Stockton Mine (Solid Energy, 2006).

2.1.3 AMD Studies

Overburden in the Deep Stream block consists of Brunner Coal Measures (BCM). This material is generally considered potentially acid forming (PAF) and could contribute AMD impacted waters to Deep Stream and ultimately the Waimangaroa River if disturbed and appropriate AMD management techniques are not applied. Solid Energy (2006) notes that:

- AMD emanating from historic underground mines in the Deep Stream area has low acidities and trace metals compared to historic workings in Millerton and the Mangatini Stream catchments.
- The overburden in the Deep Stream area may have lower sulfur levels compared to the overburden in the Mangatini and Millerton catchments.
- A comprehensive geochemical characterisation of overburden will be needed to determine the potential severity of AMD.

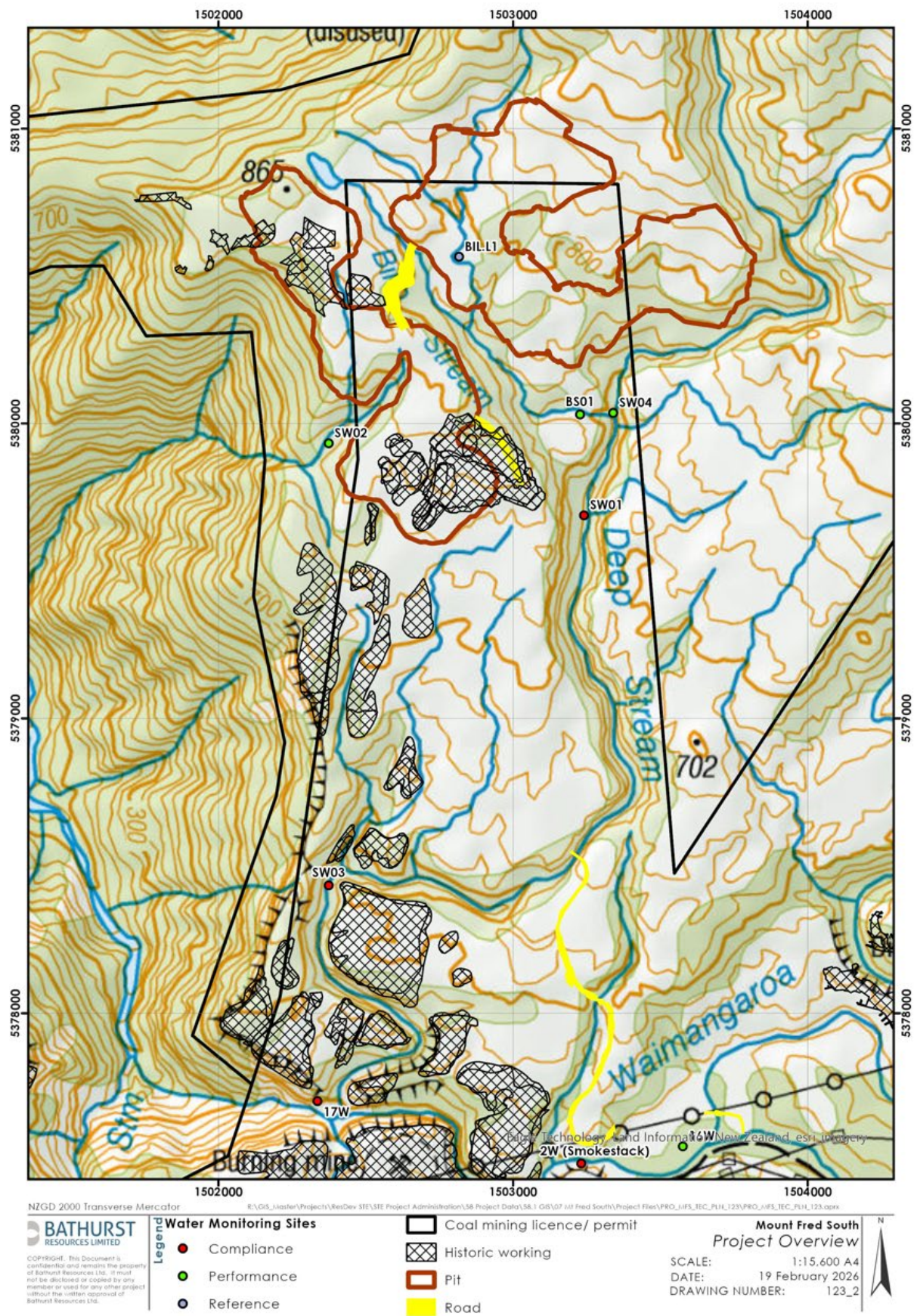


Figure 1: Areas of historic workings within the vicinity of the MFS sub-area.

2.1.4 Baseline Study Report

MWM has reviewed the potential geoenvironmental hazards for the MFS sub-area. The following risks and opportunities were identified from the geological / geochemical assessment:

- Marine incursions have high sulfur content and are likely to be potentially acid forming (PAF) materials.
- PAF materials within drillhole DC16 appear to be occasional and thin (a few metres thick) in the upper overburden. Mining of these materials by smaller equipment may be required to selectively excavate these materials.
- AMD management using a variety of engineering controls (and water treatment) will be required to prevent any effects to the receiving environment from these PAF marine materials.
- Significant quantities of non acid forming (NAF) materials are present and are associated with fluvially deposited sediments.

A source-pathway-receptor (SPR) assessment was undertaken to understand risk to the receiving environment based on conceptual mine plans. Characteristics of AMD source hazards were identified:

- Proposed mining activities are within the BCM, a lithological unit well known for its ability to generate AMD.
- Sulfur content can be elevated, such that AMD is likely, with some samples classified as PAF.
- A low sulfur fluvial depositional environment indicates that a significant proportion of the deposit is unlikely to generate AMD.
- Site water quality data suggests that water quality from existing adits is of reasonable quality with acidity < 10 mg CaCO₃/L.
- AMD should be expected. Appropriate management of PAF units is necessary to minimise any long-term effects of the proposed project.

2.2 Hydrology and Hydrogeology

The Stockton Plateau is roughly rectangular in shape, broader across the northern boundary and tapering to the south covering a total of 47.04 km². It lies more or less parallel to the West Coast between 2.1 to 8.0 km from the coastline between a north trending seaward mountain range (Rough Milne Mitchell Landscape Architects, 2021). The Stockton Plateau is deeply incised by streams and contains the headwaters and tributaries of the Waimangaroa River, which flows southwards, and Cypress / St Patricks streams, which flow northwards. The MFS sub-area comprises the southern third of the Stockton Plateau.

The drainage area of the MFS sub-area encompasses 640 ha of gently to moderately, generally south sloping terrain. The topography is west-trending coastal hill and low mountains in the northwest with some deep gorges formed by rivers. The unit is generally characterised by extensive areas of exposed sandstone rock pavement with obvious drainage patterns (Rough Milne Mitchell Landscape Architects, 2021).

The MFS sub-area is bounded by Webb Stream in the north, the coastal ridgeline south of Mount Frederick in the west, the steep scarp of the Waimangaroa River Gorge in the south, and the

Waimangaroa River valley / headwaters in the east. It is deeply incised by a number of streams including Billo and Deep Stream in the south, L75 Stream in the north, which flow east or southeast (Rough Milne Mitchell Landscape Architects, 2021).

2.3 Climate

There has been no monitoring of climatic conditions within the MFS sub-area itself, however, there are meteorological stations within 6 km to the northeast (Stockton Office Met (790 m above sea level (asl)) and Cypress Met (725 m)), and within 6 km to the south-west (James Weather Station (645 m asl) and at Lake Brazil Weather Station (640 m asl). There is also a rain gauge on Mount Frederick itself at an altitude of 1056 m asl (Chater, 2024). These stations have been relied on to make estimates of climatic conditions within the MFS drainage area. (Figure 2).

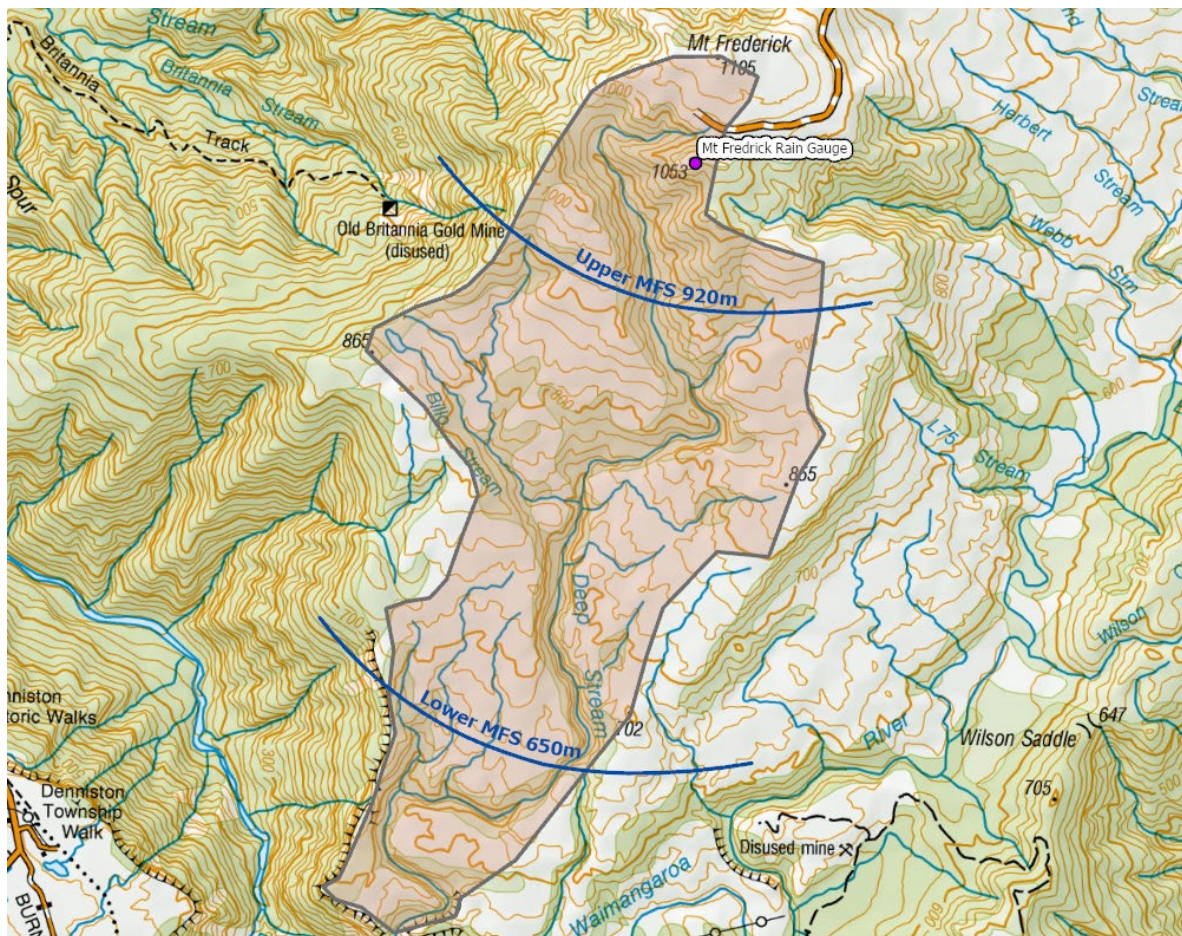


Figure 2: Upper and lower sections of the MFS Drainage area

Note these boundaries are used for climatic estimates.

Source: Chater (2024).

The Lake Brazil gauge replicates well the terrain of the MFS Drainage area (in terms of both aspect and altitude) and, therefore, the Lake Brazil (640 m) rainfall record provides a robust direct surrogate for rainfall in the “Lower MFS Drainage” area (Chater, 2024).

The upper drainage area spans from about 800 to 1,100 m in altitude. The Stockton Met gauge is at 790 m and the Mount Frederick gauge, which sits essentially at the top of the MFS drainage area, is at 1,056 m. Stockton Office rainfall record is quality assured and virtually gap free, whereas the Mount Frederick data has some gaps. Where there is concurrent record, Mount Frederick rainfall proves to be

1.075 times that of Stockton Met. The “Upper MFS drainage area” is assumed to have rainfall between that of Stockton Met and Mount Frederick (1.075 times Stockton Met) for a total of 1.0375 times that of Stockton Met, and a data set for the “Upper MFS drainage area” has been devised on this basis (Chater, 2024).

2.4 Geology

This section reviews the relevant geological / geochemical data available for the site.

2.4.1 Regional Geology

The Buller Coalfield in the West Coast Basin-and-Range Province has undergone subsidence and extension since the Late Cretaceous (Flores and Sykes, 1996). The BCM, deposited from the middle Eocene to Oligocene, form the foundational layer of a transgressive sequence, which are a succession of estuarine high sulfur sedimentary rocks consisting of clastic rocks and coal seams. The BCM unconformably overlie the basement rocks comprising Greenland Group turbidite sequences, intruded by granites and porphyries. The BCM are dominated by sandstones inter-layered with siltstones, mudstones, carbonaceous mudstones, and coal seams. The sequence is 70 to 130 m thick and was deposited in a fluvioparalic environment consisting of braided and meandering streams within a deltaic, barrier, tidal environment (Flores and Sykes, 1996). The BCM are conformably overlain by, and laterally interfingered with, the Eocene marine Kaiata mudstone formation, which has increasing carbonate content upwards away from the BCM contact (Flores and Sykes, 1996).

After extensive subaerial erosion, these measures thinly covered the northern region, while thicker sequences accumulated in local basins. The soil thicknesses within the MFS sub-area are typically thin (<300 mm) to absent, with tussock root mass comprising a significant portion of the surface soil. Underlying the soil, exposed across much of the project area, is typically indurated sandstone of the BCM.

A review of the palaeogeological environment was undertaken by Flores and Sykes (1996). The interpretations suggest that the Deep Stream area was dominated by a fluvial system (Figure 3), where the area to the south of Mount Frederick (i.e., MFS and Deep Stream), as shown in Figure 3A, was dominated by a braided trunk-tributary stream (Figure 3B), which was surrounded by mires. As noted in literature (e.g., Pope et al., 2010a,b), fluvial systems tend to be lower in pyrite compared to marine-influenced systems. Ongoing geochemical testing will confirm this model and its applicability to the MFS Project.

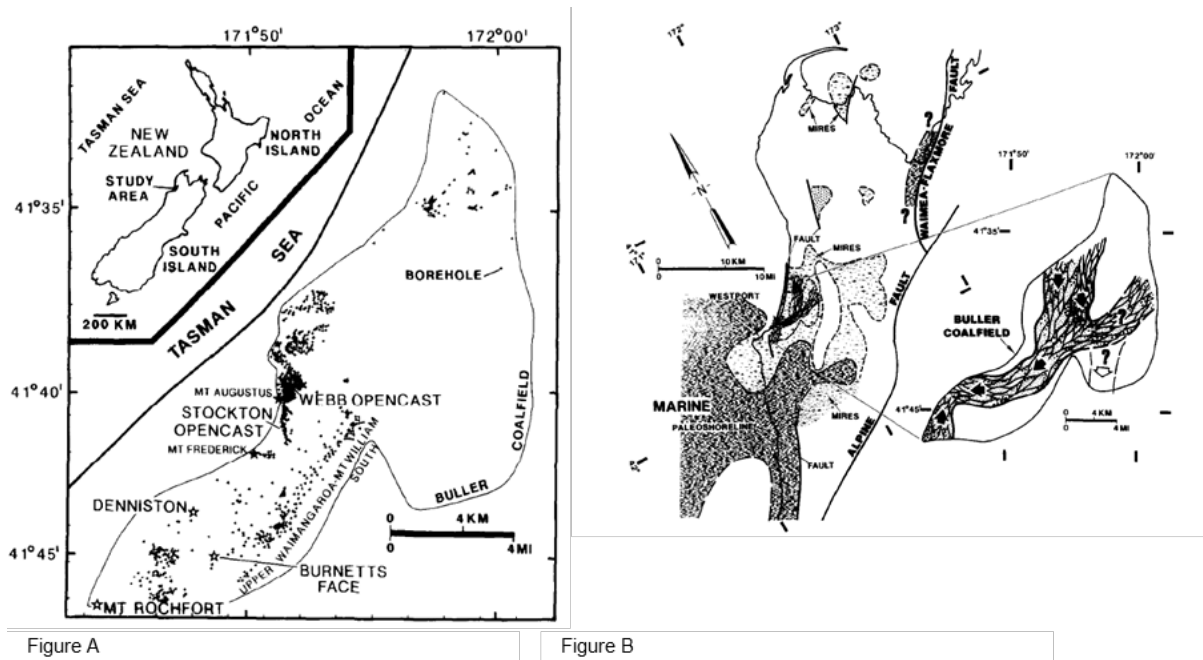


Figure 3: Palaeogeological environment for the Deep Stream area.

Source: Flores and Sykes (1996).

2.4.2 Geoenvironmental Background

The latest drill hole collars associated with the MFS 2023/2024 drilling campaign undertaken at the MFS sub-area are overlain over the interpreted palaeogeological environment in Figure 4. All the drill holes are in a predominantly fluvial environment as proposed by Flores and Sykes (1996), however geological logging combined with acid base accounting (ABA) data suggest that there have also been marine incursions into this area (e.g., higher sulfur materials).

ABA data analysis was completed for drillhole DC16 (Figure 5), which is located in the MFS East (MFSE) Pit. Initial findings from this analysis included:

- Total sulfur is higher in all marine palaeogeological environments when compared to fresh fluvial palaeogeological environments.
- Sampling of individual units successfully identified thinner units of PAF materials. This confirms the benefits of an intensive geochemical sampling program to classify PAF and NAF materials.
- A significant proportion of the lithologies as represented by this drillhole are NAF.
- Thin PAF units above coal may require mining by smaller equipment to avoid mixing NAF with PAF materials to produce a larger quantity of PAF.

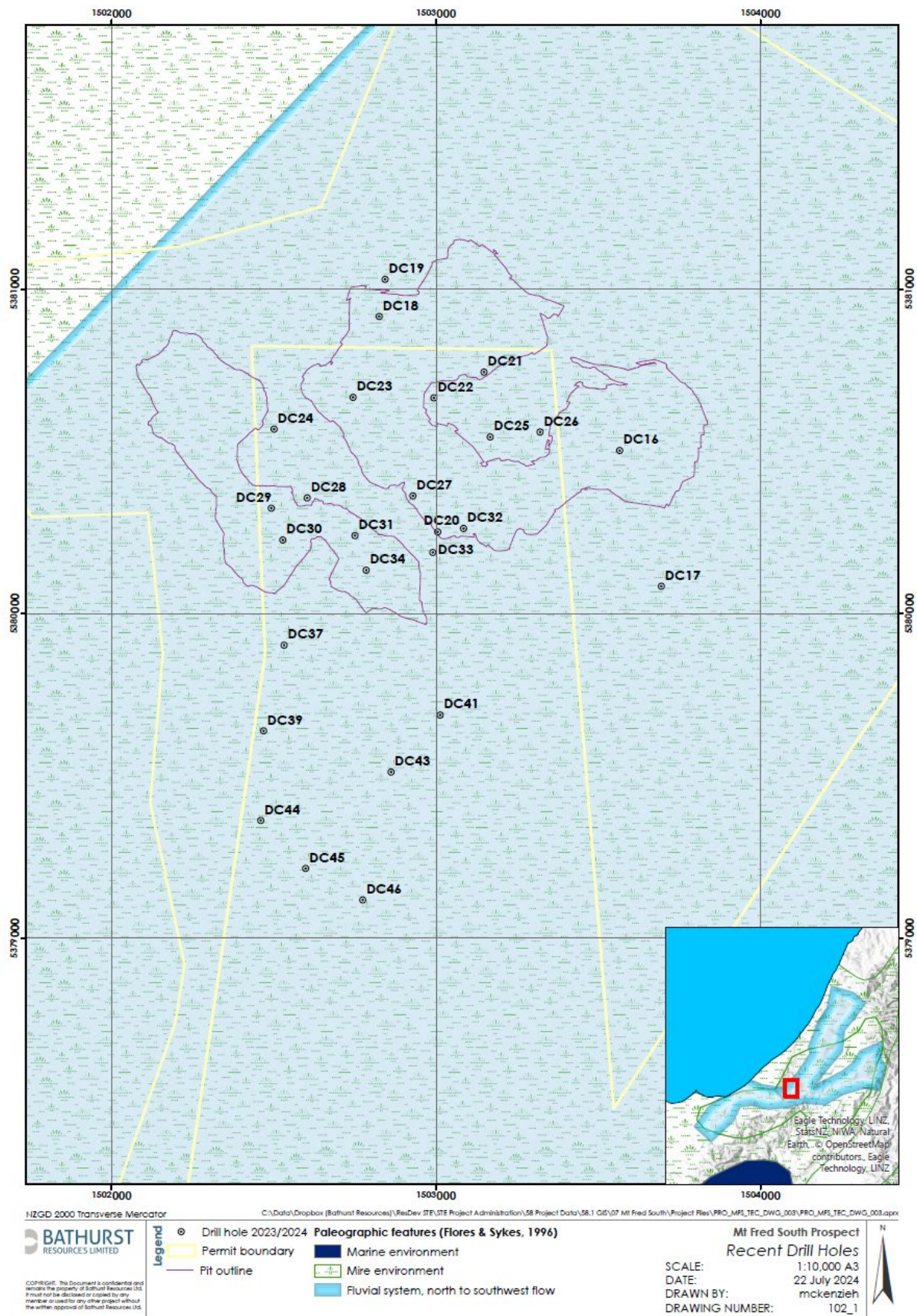


Figure 4: Palaeogeological environment for MFS with MFS AMD drill hole locations provided.

Depth (m. approx)	Unit	Lithology (broad)	Sample ID	Total S (wt%)	ANC (kg H2SO4/t)	TAP (kg H2SO4/t)	NAPP (kg H2SO4/t)	NAG pH	AMIRA 2002 Criteria	Thickness (m)	Palaeoenvironment	Comment
1	BCM	Open hole - no sample collected	-	-	-	-	-	-	-	-	-	
2												
3		Coarse SS, Granule conglomerate, minor mudstone	AMD-DC16-001-VCSS	0.005	4	0.15	-3	5.7	NAF	2.2	Fresh	Fluvial Environment (conglomerates) - low sulfur; slightly neutralising
4												
5		Coarse-med SS, Granule conglomerate	AMD-DC16-002-GRCG	0.043	2	1.3	0	5.4	NAF	4	Fresh	Selective mining (1.3 m) - generates acid immediately
6												
7		Carb mudstone, v.f. SS	AMD-DC16-003-CM/VFSS	0.522	-1	16	16	3.8	PAF	1.3	Marine	Fluvial Environment (conglomerates) - low sulfur; no ANC
8												
9		V.coarse-med SS, Granule conglomerate	AMD-DC16-004-GRCG	0.025	0	0.76	0	5.8	NAF	3	Fresh	Selective mining (1.7 m) - generates acid immediately
10												
11		Granule conglomerate	AMD-DC16-005-GRCG B	0.009	0	0.28	0	5.8	NAF	3	Fresh	Fluvial Environment (conglomerates) - low sulfur; no ANC
12												
13		Granule breccia, v.coarse SS, minor carb mudstone, minor pebble breccia	AMD-DC16-006-GRCG	0.005	1	0.15	-1	5.7	NAF	3	Fresh	Fluvial Environment (conglomerates) - low sulfur; no ANC
14												
15		Med-fine SS, lam v.f. SS	AMD-DC16-007-MSS	0.581	-1	18	18	3.5	PAF	1.7	Marine	Fluvial Environment (conglomerates) - low sulfur; no ANC
16												
17		V.coarse-med SS, minor f. SS	AMD-DC16-008-VCSS	0.014	1	0.42	-1	5.8	NAF	2	Fresh	PAF (Coal Roof)
18												
19		Granule breccia, minor high carb mudstone	AMD-DC16-009-GRBX	0.007	0	0.2	0	6	NAF	1.8	Fresh	PAF (Coal Roof)
20												
21		Granule breccia	AMD-DC16-010-GRBX	0.174	1	5.3	4	4.5	PAF	3.2	Marine	Coal Floor - non-acid forming
22												
23		Fine-med SS, minor carb midstone	AMD-DC16-011-MSS	0.240	0	7.4	7	4.1	PAF	1.8	Marine	Coal Floor - non-acid forming
24												
25		Laminated fine SS, v.f. SS	AMD-DC16-012-FSS	0.549	0	17	16	3.4	PAF	0.8	Marine	Coal Floor - non-acid forming
26												
27		Coal	-	-	-	-	-	-	-	-	-	Coal Floor - non-acid forming
28												
29												Coal Floor - non-acid forming
30												
31		Coarse-v.f. SS, high carb mudstone, minor coal	AMD-DC16-013-HCM	0.084	4	2.6	-2	4.8	NAF	3	Fresh / Transitional	Coal Floor - non-acid forming
32												
33		V.coarse-v.f. SS, pebble conglomerate, minor carb mudstone	AMD-DC16-014-HCM/MSS	0.085	4	2.6	-1	5	NAF	3	Fresh / Transitional	Coal Floor - non-acid forming
34												
35		Fine SS, high carb mudstone, minor coal,	AMD-DC16-015-HCM/FSS	0.127	0	3.9	4	4.7	UC	1.3	Marine	Coal Floor - non-acid forming
36												
37		Pebble conglomerate	AMD-DC16-016-PBCG	0.850	2	26	24	3.1	PAF	0.7	Marine	Coal Floor - non-acid forming
38												
39		Coarse-v.f. SS, mudstone	AMD-DC16-017-ARG	0.029	1	0.88	0	5.1	NAF	0.7	Fresh	Coal Floor - non-acid forming
40												
41		Argillite, greywacke	AMD-DC16-018-GWK	-	-	-	-	-	-	-	-	Coal Floor - non-acid forming
42												
43	BSM											
43.5												

Figure 5: ABA Results from Drillhole DC16 plotted with the likely Palaeogeological Environment.

2.4.3 Stockton Coal Mine

The distribution of sulfur across the Stockton Coal Mine has previously been investigated (e.g., Elder et al., 2011) and shows that the northern areas have the higher sulfur concentrations, and the southern areas have the lower sulfur concentrations. The data was gathered by a tiphead sampling programme, where samples were collected daily from active tipheads and analysed for total sulfur (Figure 6). The Elder et al. (2011) data align with Flores and Sykes (1996) interpretation that the area to the south of the Stockton Mine is lower sulfur with a stronger fluvial influence and a lesser marine / estuarine influence on sediments being deposited.

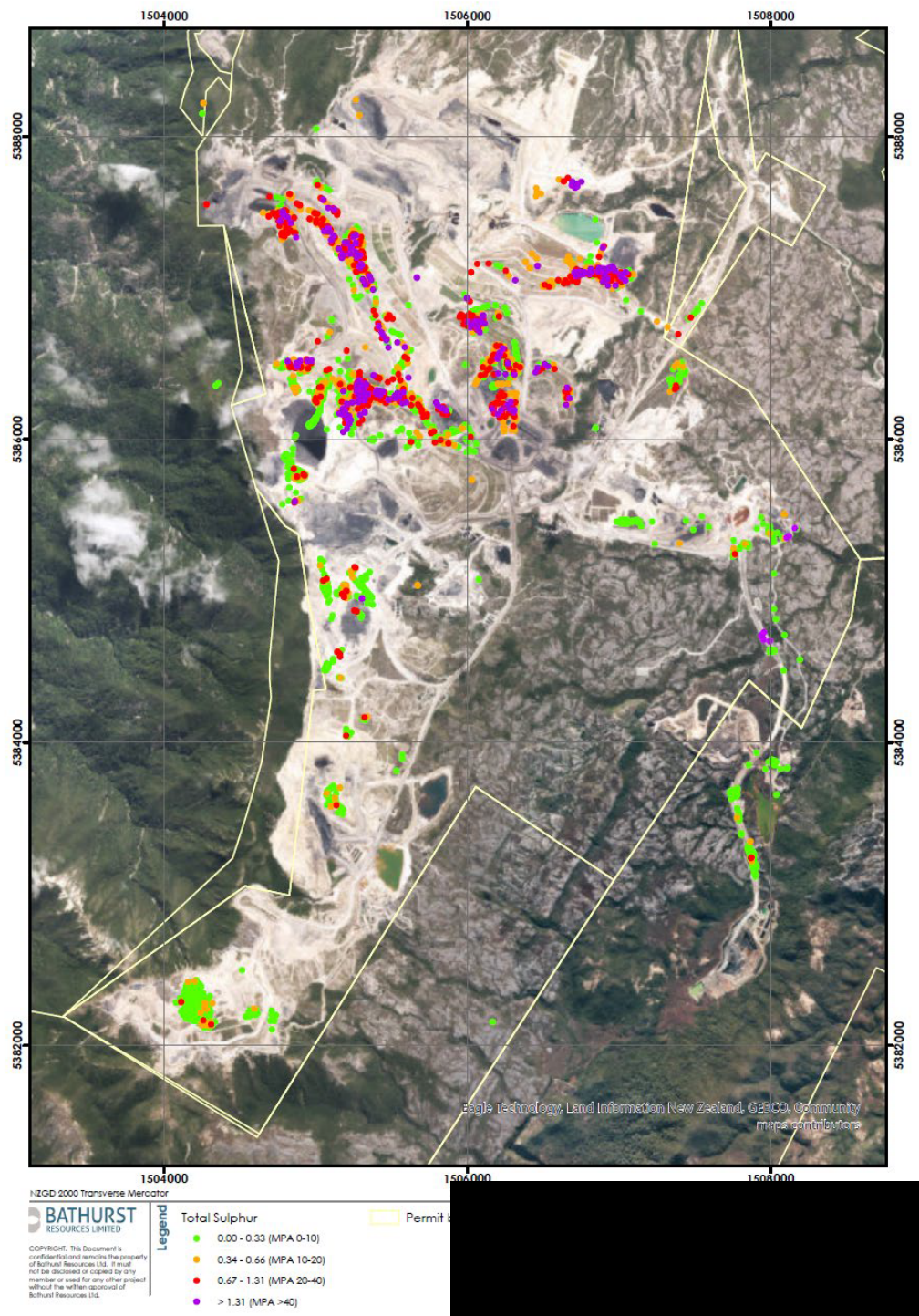


Figure 6: Total S – Stockton tiphead sampling programme

3 MATERIAL CHARACTERISATION METHODOLOGY

3.1 Introduction

MWM was engaged to provide advice on the AMD testing for the MFS sub-area, which included:

- Guidance on the total number of AMD samples required for an industry standard sample population.
- Guidance on the sampling process (e.g., recommendations on compositing and lithology-based sampling).
- Guidance on the AMD analysis suite, which will be relatively broad to allow for future waste rock classification scheme options.

Sampling and analysis guidelines were provided to BRL as per Section 3.2 below.

3.2 Sampling and Analysis Plan

3.2.1 Sample Selection

The following sample selection guidance was provided to BRL:

- All drill core samples should be collected to align with significant lithological units with >1 m intervals. If thicker NAF units are present, then selective mining may be possible. This is likely to be important to obtain sufficient quantities of NAF for rehabilitation purposes if the Project was to proceed. Sampling needs to be reflective of such units.
- Preferably composite samples should be avoided unless there is significant stratigraphic variation over short intervals (<1 m).
- Coal floor and coal roof can often be elevated in sulfides. These units should be sampled. If the coal floor is benign, there is the potential for this to be left as pavement, to possibly replicate the pre-mining environment.
- BRL has indicated the BRL Project Geologist will be responsible for logging and selecting core for geochemical analysis.
- It was noted the Project Geologist sends full core samples to SGS in Westport for analysis. It is recommended that a certified reference sample is provided with each drillhole for quality assurance / quality control (QA/QC) purposes (see Appendix C).

3.2.2 Analysis Programme

Two phases of geochemical testing were recommended. This report presents results from Phase 1 – Static Geochemistry Testing. The samples were analysed by a typical ABA static testing suite and include:

- Rinse pH and electrical conductivity (EC) (1:5)
- Paste pH and EC (1:2)
- Total sulfur content (wt%)

- Acid neutralising capacity (ANC)
- Net acid producing potential (NAPP)
- Net acidity generation (NAG) testing to determine NAG pH and NAG acidity (pH 4.5 and pH 7.0).

AMIRA Column Leach Tests have been completed on four samples from drillhole DC16 (commenced April 2024) with results documented in MWM (2026a). Testing of the leachate included:

- Volume of leachate, pH, EC, acidity, and alkalinity.
- Dissolved metals / metalloids: Al, As, B, Cd, Cr, Co, Cu, Fe, Hg, Mn, Ni, Pb, Se, Sn, Ti, Zn.
- Major anions / cations: Cl, SO₄, Ca, Mg, Na, K, Si.

Details for the column leach test samples are included in Figure 5, the selected samples are as follows:

- AMD-DC16-005-GRCG B
- AMD-DC16-007-MSS
- AMD-DC16-010-GRBX
- AMD-DC16-013-HCM

3.3 Geoenvironmental Classification Summary

3.3.1 Introduction

Geoenvironmental testing is used to determine if a sample is NAF or PAF, which is based on the difference or ratio between acid forming and acid neutralising minerals in the rock. Classification is typically based on either (or both) the AMIRA (2002) or Price (2009) classification schemes until site-specific classification systems are developed.

3.3.2 AMIRA Classification

The AMIRA Classification system (Table 1) uses NAPP and NAG pH to classify samples as PAF, NAF or Uncertain (UC). Where NAPP is positive and NAG pH is less than 4.5, samples are classified as PAF. Where NAPP is negative and NAG pH is greater than 4.5, samples are classified as NAF. Samples with conflicting NAPP and NAG pH are classified as UC.

Table 1: AMIRA (2002) AMD classification system.

CLASSIFICATION	CRITERIA	COMMENTS
Potentially Acid Forming (PAF)	NAPP ≥ 0; NAG pH ≤ 4.5	Sample always has a significant sulfur content, the acid generating potential of which exceeds the inherent acid neutralising capacity of the material.
Non-Acid Forming (NAF)	NAPP < 0; NAG pH > 4.5	Sample may, or may not, have a significant sulfur content but the ANC availability is more than adequate to neutralise the acid that theoretically could be produced.
Uncertain (UC)	NAPP ≥ 0; NAG pH < 4.5 NAPP < 0; NAG pH ≤ 4.5	An uncertain classification is used when there is an apparent conflict between the NAPP and NAG results.

3.3.3 Price Classification

The Mine Environment Neutral Drainage Programme (MEND) classification system (Price, 2009) (Table 2) uses the ratio between ANC and Maximum Potential Acidity (MPA) to classify samples as PAF, NAF or UC, where the Neutralisation Potential Ratio (NPR) = ANC/MPA. Where NPR is less than 1, samples are classified as PAF. Where NPR is greater than 2, sufficient neutralising capacity is inferred to account for acid production, and the samples are classified as NAF. Where ANC/MPA is between 1 and 2, samples are classified as UC.

Table 2: Price (2009) AMD classification system.

CLASSIFICATION	CRITERIA	COMMENTS
Potentially Acid Forming (PAF)	ANC/MPA < 1	Potentially acid generating material, unless sulfide minerals are non-reactive, or ANC is preferentially exposed on surfaces.
Non-Acid Forming (NAF)	ANC/MPA > 2	Non-potentially acid generation material, unless ANC is insufficiently reactive, extremely reactive sulfides are present, or preferential exposure of sulfides is found in the material.
Uncertain (UC)	$1 \leq \text{ANC/MPA} \leq 2$	Possibly PAF if ANC is insufficiently reactive or is depleted at a faster rate than sulfides.

3.3.4 Process Flow Classification System

Using the AMIRA classification approach for waste rock from the nearby Escarpment Mine resulted in a significant number of samples being classified as UC. To assist with classification, a revised geochemical classification model was developed for the Escarpment Mine utilising a process flow approach that was validated by column leach test data (Olds et al., 2015) (Figure 7). This was accepted by the regulator and the appointed peer review panel as being appropriate.

This process flow approach reduces the requirement of blanket testing of all samples with an initial focus on total sulfur. Further testing of samples is contingent on the total sulfur result. Samples are only classified as uncertain when critical data required for categorisation are missing (Olds et al., 2015). This process flow model introduces a High Acid Forming (HAF) category that is not present within the AMIRA (2002) and Price (2009) classifications. The inclusion of a HAF category provides an opportunity for alternative management of the highest risk material.

Sulfur cut-off values were developed for the existing Escarpment Mine process flow classification from consent conditions (Table 3). A low-risk total sulfur cut-off value of 0.2 wt% classification was based on NAPP Acidity < 5 (kg CaCO₃ eq./t). NAF was classified as < 0.015 wt% total sulfur. ANC was less than 10 kg H₂SO₄ for the majority of Escarpment Mine ABA samples indicating ANC is insignificant in classification of high sulfur samples. A PAF total sulfur cut-off value above which no further testing was required was defined as > 0.45 wt% (14 kg H₂SO₄).

Table 3: Resource Consent (RC RC10193) AMD classification for the Escarpment Coal Mine.

CLASSIFICATION	PASTE PH	NAG PH	NAPP
NAF	> 4.5	> 4.5	< 0
Low Risk	> 4.5	> 4.5	< 5
PAF	< 4.5	< 4.5	> 2

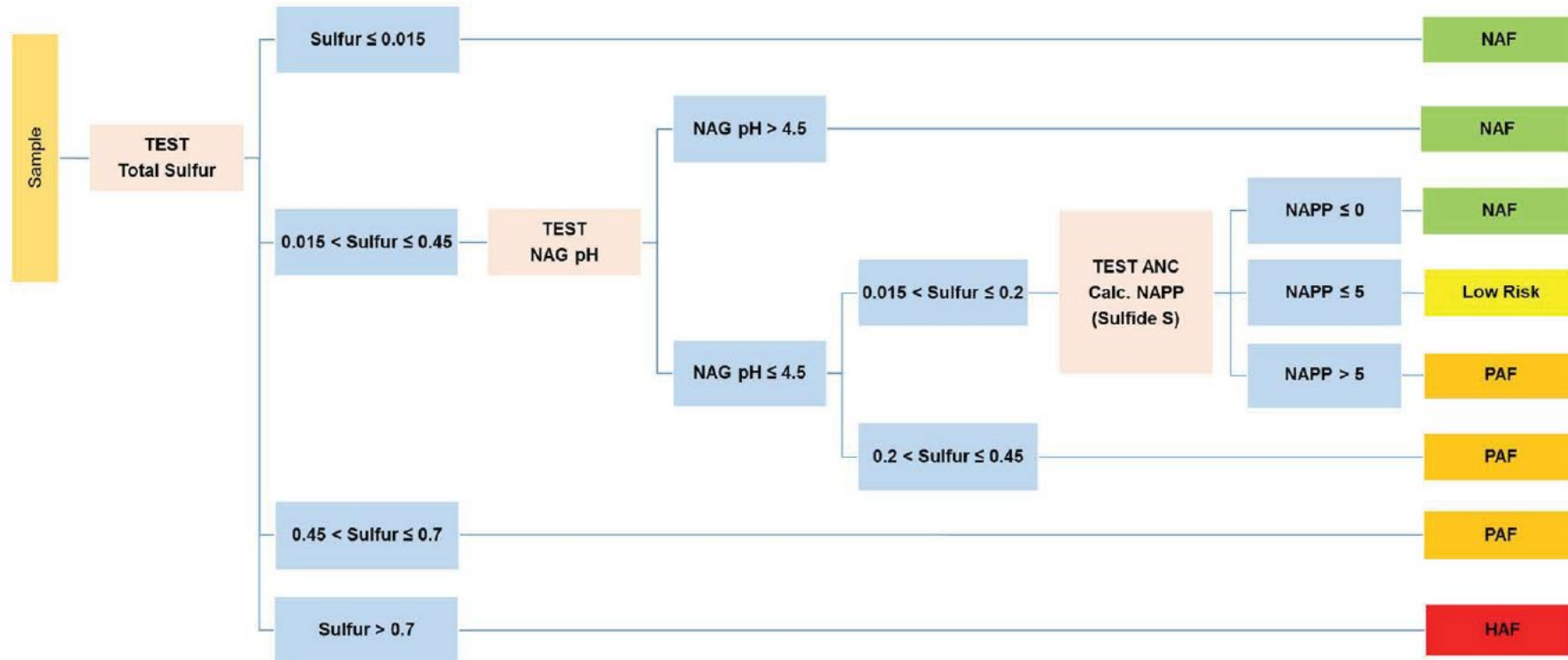


Figure 7: Escarpment Mine process flow classification

Source: Olds et al. (2015)

4 RESULTS AND DATA ANALYSIS

In this section, results for the materials characterisation are presented and described. Scale logs provided by BRL are presented in Appendix D, ABA tabulated data are provided in Appendix E and laboratory certificates are provided in Appendix F.

4.1 Introduction

The following is a summary of the representative characteristics of the samples analysed as part of the MFS AMD drilling programme:

- 24 diamond drillholes (see Figure 4 for collar locations).
- Drillhole depths between 13.5 – 61.7 m.
- Total of 727 m of drill core sampled.
- 472 samples total analysed.
- Sample size between 0.1 m and 4.06 m.

General observations of MFS samples:

- Drillholes generally terminated in Greenland Group or conglomerate/breccia.
- Samples were often taken over different lithological units, generally two or more lithological descriptions per sample with the lithological code of the largest unit recorded.

Approximate volumes of materials sampled based on the drillhole lithological population are summarised in Figure 8 as presented:

- 49% of samples were within the granule sized or coarser fraction (breccia and conglomerate)
- 28% of samples were very fine to coarse sandstone (non-laminated)
- 9% carbonaceous mudstones
- 8% Greenland Group basement
- 4% laminated sandstones
- 2% siltstone and low carbonaceous mudstone.

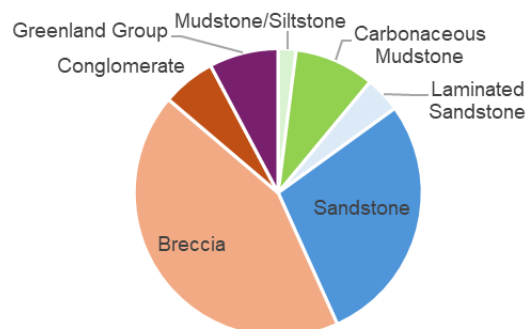


Figure 8: Lithological makeup of sampled material.

% of primary lithological unit, samples often taken over lithological boundaries and include two or more units.

4.2 Acid Base Accounting

This section provides a summary of the ABA data for the project.

4.2.1 ABA Summary

A summary of the results for ABA and NAG results along with paste pH and EC is provided in Table 4. From the results the following can be observed:

- Paste pH varies from 3.3 to 8.2 and paste EC from 4 to 670 $\mu\text{S}/\text{cm}$.

Total sulfur content varies from <0.005 (Limit of Reporting (LOR)) to 13.1 wt%.

- NAG pH varies from 2.3 to 6.8.
- NAPP ranges from -20 to 401 kg $\text{H}_2\text{SO}_4/\text{t}$.

4.2.2 ABA Quality Assurance / Quality Control

Samples from each drillhole were analysed as individual batches with QA/QC procedures applied per drillhole including duplicate samples, certified reference material samples, and internal laboratory QA/QC. As classification relies on ABA laboratory results, it is important to review the quality and repeatability of samples to understand the potential for inaccurate classification.

4.2.2.1 Certified Reference Material (CRM)

The analysis of a Certified Reference Material (CRM) is one tool for assessing the accuracy of analyses conducted by laboratories. A range of four CRMs sourced from Geostats Pty Ltd were utilised during laboratory analyses with sulfur values ranging between 0.08 and 0.36%. Twenty-five (25) CRMs were analysed during the project with one CRM added per drillhole, with the exception of DC44 and DC45 where two CRMs were analysed (Table 5).

Relative Percent Difference (RPD) is a measure of the variability of two values. A positive RPD between the two results indicates the SGS lab result is higher than the CRM. RPD was positive in all but one instance for an average across all samples of 6.5 % indicating lab results were consistently higher than the CRM. All results were within an acceptable two standard deviations of mean CRM values.

Table 4: Descriptive ABA statistics for the MFS AMD drilling programme.

DRILLHOLE DATA	PASTE pH (1:2)	PASTE EC	S (wt%)	ANC (kg H ₂ SO ₄ /t)	MPA (kg H ₂ SO ₄ /t)	NAPP (kg H ₂ SO ₄ /t)	NAG pH*	NAG 4.5 (kg H ₂ SO ₄ /t)	NAG 7 (kg H ₂ SO ₄ /t)	NPR
Min	3.3	4	0.005	-16	0.15	-20	2.3	0	2	0
Max	8.2	670	13.10	20	400	401	6.8	264	297	45.75
Median	5.2	28	0.063	1	1.90	1	5.3	0	14	0.235
Average	5.1	88	0.298	1	9.12	8	5.0	4	18	1.744
STD	1.04	123	0.783	2.38	24.0	24.16	1.10	15.93	17.45	3.996
n	91	157	472	472	472	472	472	452	472	472

Table 5: CRM quality control results for ABA data from MFS.

SAMPLEID	CRM ID	SGS LAB RESULT	CRM VALUE	TOTAL SULFUR (%)			ERROR * (%) RPD
				CRM STD DEV	(-)2STD DEV	(+)2STD DEV	
AMD_DC20_005	GS310-10	0.29	0.27	0.03	0.21	0.33	7.1
AMD_DC29_013	GS310-10	0.288	0.27	0.03	0.21	0.33	6.5
AMD_DC30_024	GS310-10	0.294	0.27	0.03	0.21	0.33	8.5
AMD_DC32_21	GS310-10	0.281	0.27	0.03	0.21	0.33	4.0
AMD_DC44_029	GS310-10	0.29	0.27	0.03	0.21	0.33	7.1
AMD_DC17_032	GS320-10	0.293	0.27	0.02	0.23	0.31	8.2
AMD_DC21_20	GS320-10	0.283	0.27	0.02	0.23	0.31	4.7
AMD_DC26_018	GS320-10	0.292	0.27	0.02	0.23	0.31	7.8
AMD_DC27_015	GS320-10	0.295	0.27	0.02	0.23	0.31	8.8
AMD_DC28_12	GS320-10	0.276	0.27	0.02	0.23	0.31	2.2
AMD_DC43_024	GS320-10	0.295	0.27	0.02	0.23	0.31	8.8
AMD_DC19_022	GS917-4	0.363	0.36	0.02	0.32	0.40	0.8
AMD_DC22_023	GS917-4	0.384	0.36	0.02	0.32	0.40	6.5
AMD_DC23_28	GS917-4	0.388	0.36	0.02	0.32	0.40	7.5
AMD_DC31_014	GS917-4	0.378	0.36	0.02	0.32	0.40	4.9
AMD_DC34_022	GS917-4	0.35	0.36	0.02	0.32	0.40	-2.8
AMD_DC39_025	GS917-4	0.382	0.36	0.02	0.32	0.40	5.9
AMD_DC45_035	GS917-4	0.369	0.36	0.02	0.32	0.40	2.5
AMD_DC18_017	GS922-8	0.087	0.08	0.02	0.04	0.12	8.4
AMD_DC24_004	GS922-8	0.083	0.08	0.02	0.04	0.12	3.7
AMD_DC25_021	GS922-8	0.083	0.08	0.02	0.04	0.12	3.7
AMD_DC37_024	GS922-8	0.087	0.08	0.02	0.04	0.12	8.4
AMD_DC41_021	GS922-8	0.091	0.08	0.02	0.04	0.12	12.9
AMD_DC44_028	GS922-8	0.088	0.08	0.02	0.04	0.12	9.5
AMD_DC45_034	GS922-8	0.087	0.08	0.02	0.04	0.12	8.4

* RPD calculated as $(\text{SGS lab result} - \text{CRM}) / ((\text{SGS lab result} + \text{CRM}) / 2) * 100$.

4.2.2.2 Duplicate Samples

Twenty-three (23) duplicate samples were analysed, with one sample selected from each drill hole. No sample was duplicated from drillhole DC20. Table 6 provides comparison of original and duplicate samples for select analytes based on the reliance of these for AMD classification.

A range of total sulfur values was represented with results of original and duplicate samples ranging between 0.01 and 1.14 wt% sulfur. Correlation of sulfur values between duplicate samples varied between 0 to $\pm 51\%$ RPD (Figure 9). Positive and negative RPD are reported for assessment of lab processing as duplicate samples are processed at the end of each batch. No obvious processing variation is identified as negative and positive RPD follow a similar trend. Samples and duplicates with an average lower total sulfur value of < 0.1 wt% record a higher RPD% range from 0 to ± 51 wt%. For samples and duplicates with average sulfur > 0.1 wt%, RPD% values are lower, ranging from 0 to ± 14 wt%.

Table 6: Comparison of Original and duplicate samples from MFS AMD drilling project.

DRILL HOLE ID	DUPLICATE SAMPLE (AMD)	S wt% ORIGINAL	S wt% DUPLICATE	S wt% RPD* (%)	NAG pH ORIGINAL	NAG pH DUPLICATE	NAG pH RPD* (%)	NAPP ORIGINAL kg H ₂ SO ₄ /t	NAPP DUPLICATE ² kg H ₂ SO ₄ /t	NAPP RPD ¹ (%)
DC16	DC16_008	0.014	0.016	-13.3	5.8	5.8	0.0	-1	-1	0
DC17	DC17_009	0.007	0.005	33.3	5.8	6.2	-6.7	-2	-4	-68
DC18	DC18_009	0.014	0.01	33.3	5	5.1	-2.0	-3	-2	40
DC19	DC19_009	0.055	0.07	-24.0	4.7	4.9	-4.2	-1	0	200
DC21	DC21_09	1.14	1.09	4.5	3.1	3.2	-3.2	35	33	5.9
DC22	DC22_009	0.012	0.012	0.0	6	6.1	-1.7	0	0	0
DC23	DC23_09	0.008	0.012	-40.0	6	5.5	8.7	-1	-2	-67
DC24	DC24_010	0.374	0.43	-13.9	3.9	3.9	0.0	11	13	-17
DC25	DC25_009	0.084	0.05	50.7	4.6	5.1	-10.3	-1	-3	-100
DC26	DC26_009	0.032	0.029	9.8	5.5	5.6	-1.8	1	0	200
DC27	DC31_009	0.539	0.52	3.6	3.7	3.8	-2.7	16	16	0
DC28	DC28_009	0.028	0.025	11.3	6	5.8	3.4	-1	-1	0
DC29	DC29_009	0.047	0.045	4.3	4.9	5	-2.0	1	1	0
DC30	DC30_009	0.394	0.4	-1.5	3.8	4.2	-10.0	11	11	0
DC31	DC31_009	0.539	0.52	3.6	3.7	3.8	-2.7	16	16	0
DC32	DC32_009	0.582	0.625	-7.1	3.7	3.5	5.6	18	18	0
DC34	DC34_009	0.017	0.013	26.7	5.8	6	-3.4	-1	-1	0
DC37	DC37_009	0.183	0.183	0.0	4.4	4.1	7.1	4	4	0
DC39	DC39_009	0.094	0.091	3.2	5.9	6	-1.7	3	3	0
DC41	DC41_009	0.766	0.786	-2.6	3.4	3.3	3.0	23	23	0
DC43	DC43_009	0.532	0.551	-3.5	3.8	3.9	-2.6	16	17	-6.1
DC44	DC44_009	1.04	1.03	1.0	3.2	3.3	-3.1	32	32	0
DC45	DC45_009	0.035	0.033	5.9	6.4	6.1	4.8	1	0	200

1- RPD calculated as ((original result – duplicate result)/((original result + duplicate result)/2)*100. A negative RPD value indicates the duplicate result was higher than the original result.

2- ANC data were low (median = 1 kg H₂SO₄/t) driving a high variance as assessed by the RPD. Analysis indicates that the ANC RPD's ranged from 0 to 600%.

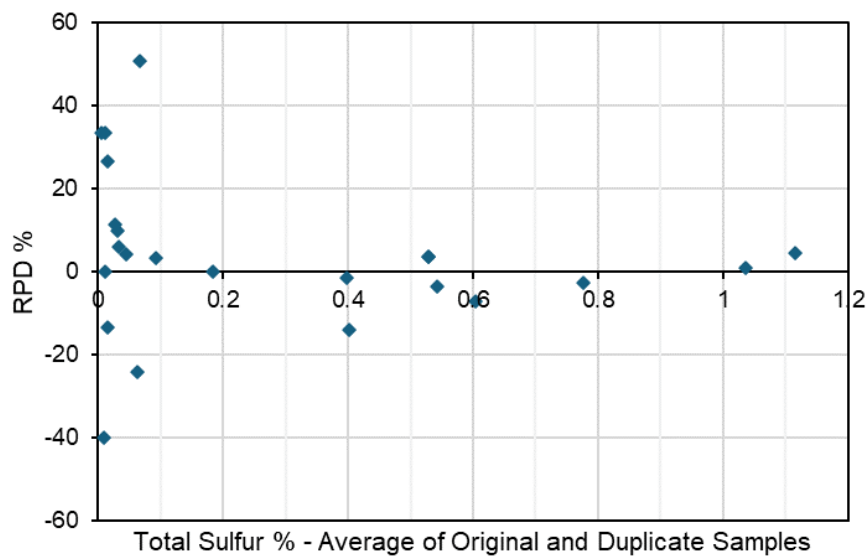


Figure 9: RPD% of original and duplicate samples for total sulfur.

4.2.2.3 Laboratory Blanks

NAG pH Blanks were recorded for each laboratory job (per drillhole) with results ranging from 5.1 to 6.6.

4.3 Total Sulfur

Total sulfur content varied from <0.005 (LOR) to 13.1 wt% (Figure 10), with the following percentiles observed:

- 95 % of samples $\leq$ 1.1 wt % sulfur.
- 75 % of samples $\leq$ 0.34 wt % sulfur.
- 50 % of samples $\leq$ 0.06 wt % sulfur.
- 25 % of samples $\leq$ 0.019 wt % sulfur

Sulfur distribution of samples $\leq$ 1.0 wt% can be more clearly observed in Figure 11. The total wt % sulfur of the four samples selected for column leach testing from drillhole DC16 (0.009, 0.084, 0.174 and 0.581 wt% sulfur) are illustrated in Figure 11.

Comparison of total sulfur versus NAG pH is shown in Figure 12. Data indicates that samples having a NAG pH $>$ 4.5 had a sulfur content $<$ 0.05 wt%. This threshold was used to define NAF samples using total sulfur data. This assessment of the sulfur threshold was the same approach that was undertaken at Escarpment Mine (Olds et al., 2015), although that relationship indicated that NAG samples (NAG pH $>$ 4.5) had a total sulfur content $<$ 0.015 wt% sulfur.

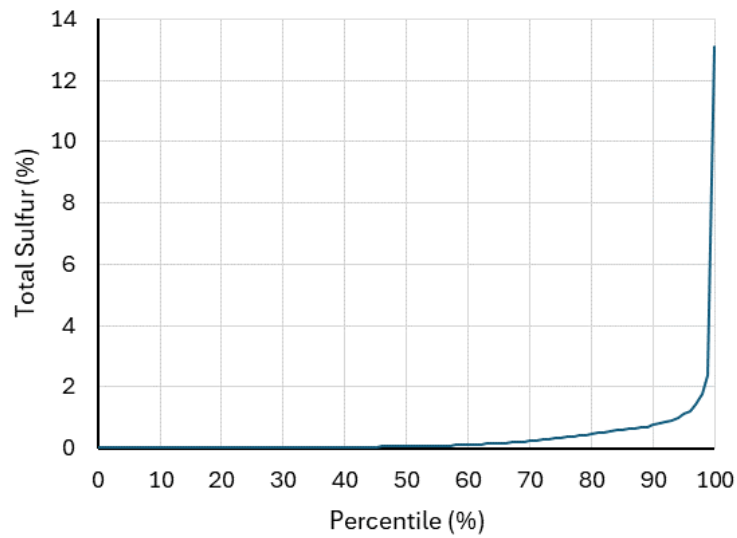


Figure 10: Total sulfur distribution of MFS AMD samples.

Total sample population = 472.

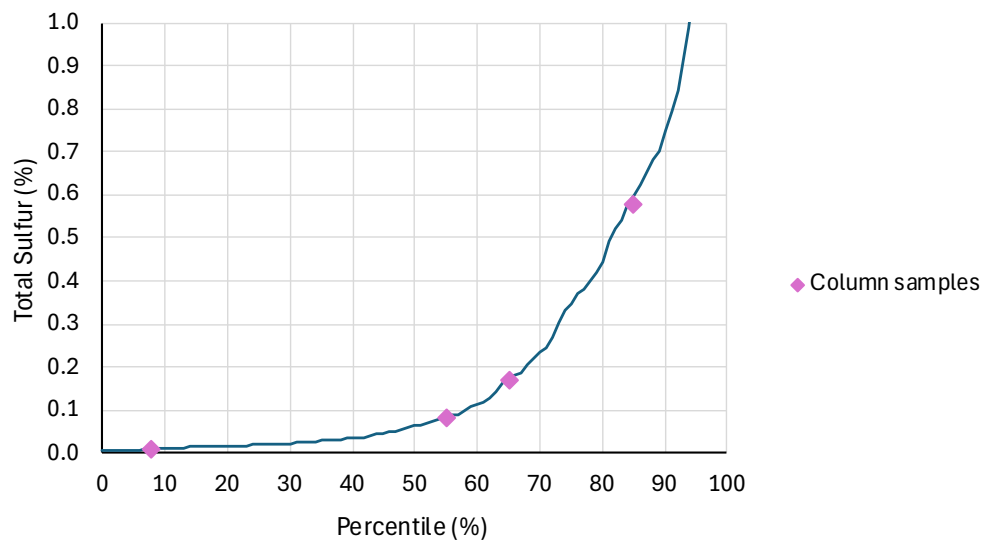


Figure 11: Total sulfur distribution of MFS AMD samples ≤ 1.0 wt%.

Sample population < 1 wt% S represents 94 % of the total sample population

Note: Total sulfur values of the four samples selected for column leach testing are illustrated.

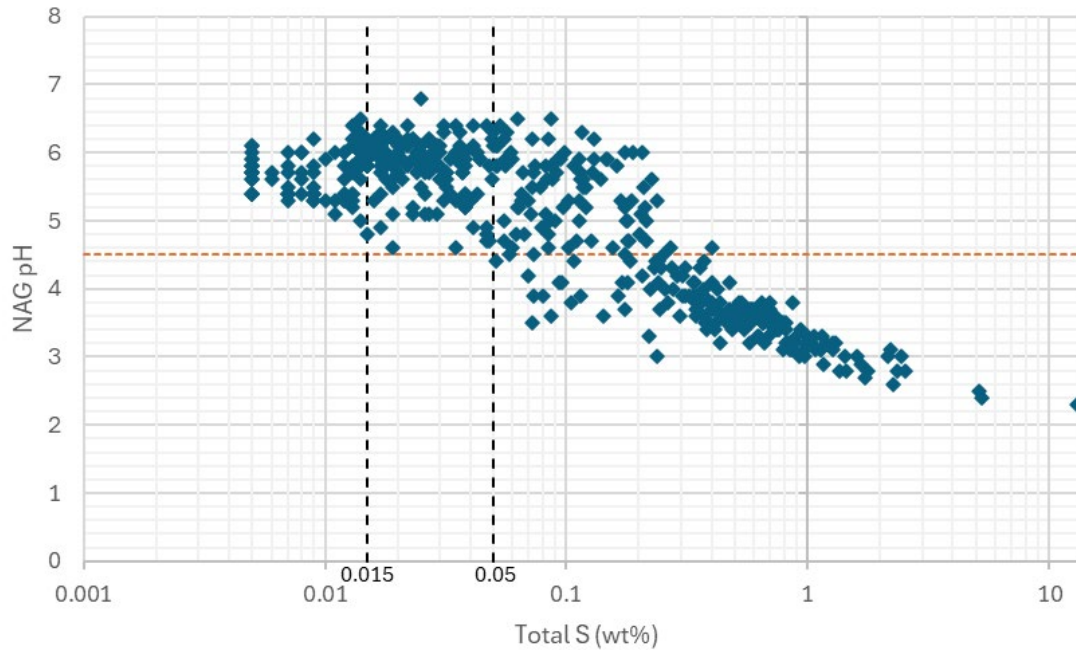


Figure 12: Total sulfur versus NAG pH of MFS AMD samples.

Red dashed line indicates NAG pH = 4.5

4.4 AMD Classification

According to the AMIRA classification scheme, samples are classified as NAF, PAF, and UC Category 1 (Figure 13). UC Category 2 (UC-2) data are generally due to interference of the NAG pH test by organic acids (AMIRA, 2002), only one sample was classified within UC Category 2.

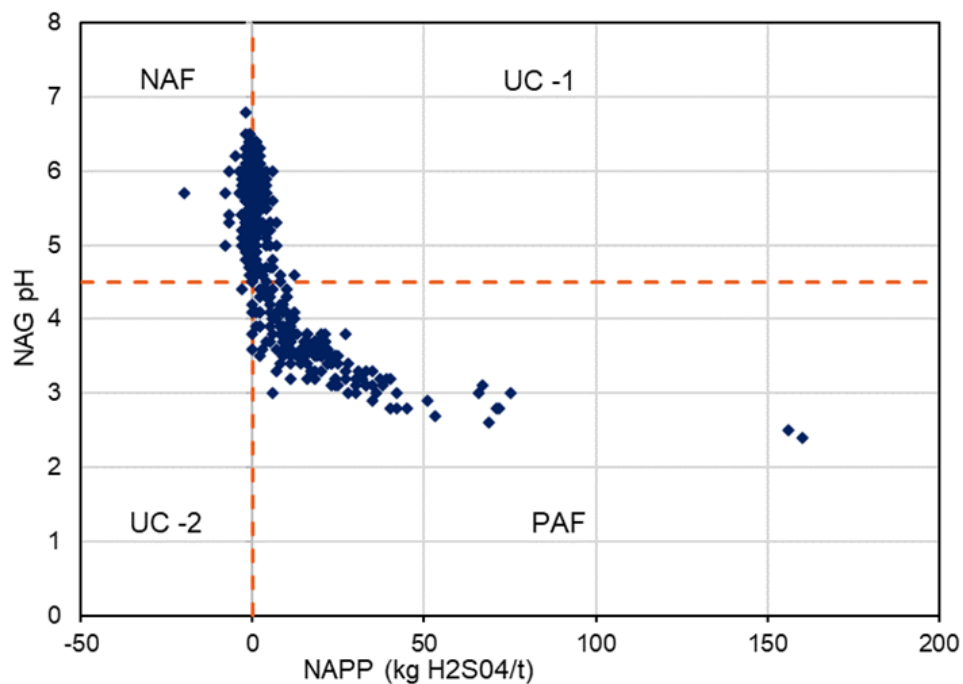


Figure 13: AMIRA (2002) classification based on NAPP and NAG pH data.

Based on the Price (2009) criteria, a majority of samples are classified as PAF (Figure 14). However, a high proportion of samples have a low sulfur content.

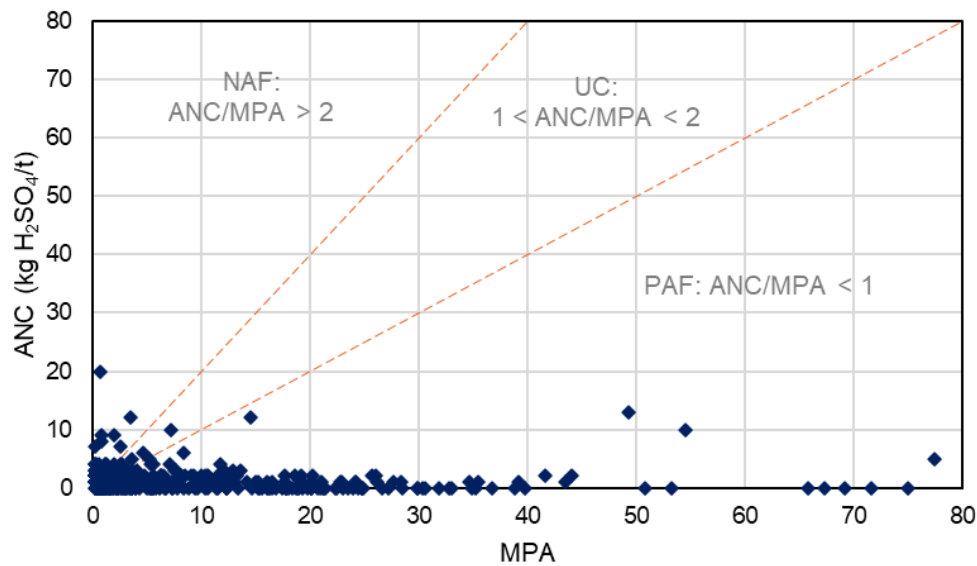


Figure 14: Price (2009) classification.

Figure 15 indicates a range of paste pH results with samples predominantly within the inert and NAF category. Samples within the PAF category (NAG pH < 4.5) are primarily rapid to immediately acid generating.

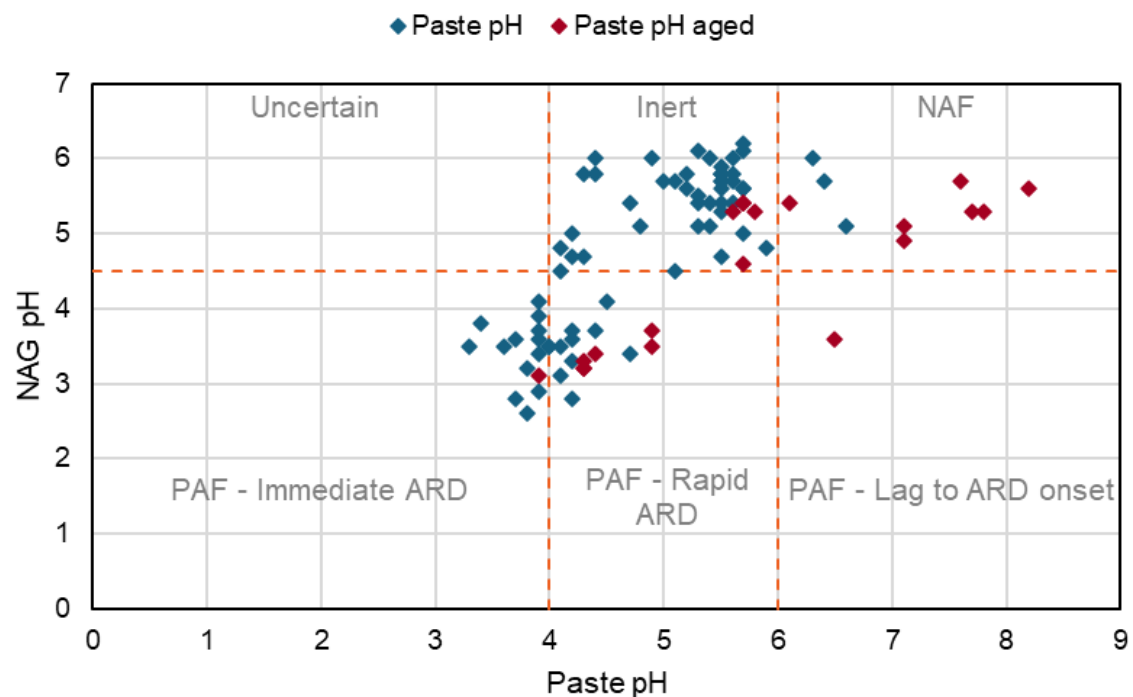


Figure 15: Paste pH and NAG pH results and classification

Adapted from (Weber et al., 2006)

4.5 Process Flow Classification

4.5.1 Analysis

MFS AMD sample results were reviewed using the existing Escarpment Mine flow model approach with a view to adjust the model as required based on MFS material characteristics. Analysis of MFS ABA data indicates the majority of ANC values are less than 10 kg H₂SO₄ (see Figure 14), and all samples reporting > 7 kg H₂SO₄ are Greenland Group or breccia immediately overlying Greenland Group basement; these lithologies are unlikely to contribute to significant volumes of waste rock material (being below coal floor). An ANC value of 10 kg H₂SO₄ was therefore selected as a conservative value⁴ for an adjusted PAF cutoff limit set at 0.33 wt% total sulfur. This means that if the sulfur content is > 0.33 wt%S then no further testing is required. This was altered from the PAF value of 0.45 wt% as shown in Olds et al. (2015) model (as per Figure 7).

The HAF cut-off limit of > 0.7 wt% total sulfur was maintained from the original Escarpment Mine model. There is potential for further refinement of the HAF value as the project progresses by ongoing testing to validate (e.g., ABA) that 0.7 wt% total sulfur is a reasonable threshold to separate PAF and HAF. For instance, the HAF cut-off value can be optimised based on the costs and benefits of managing differing HAF volumes. As per the current block model if 1.9% of HAF material is managed well, then 15.9% of the total acid load is well managed,

At MFS, samples with a sulfur content of $0.05 < S \leq 0.2$ wt% and NAG pH ≤ 4.5 can be classified as NAF (0.2%), Low Risk (LR) (3.6%), or PAF (0.4%) using NAPP data (where the percentage data reflects the proportion of the total sample population). However, this requires ANC data, which is an expensive and time-consuming test. Given this is a small percentage of the sample population, the majority of samples are LR, it was decided that materials having a sulfur content of $0.05 < S \leq 0.2$ wt% and NAG pH ≤ 4.5 would be classified as LR.

The proposed MFS Process Flow Classification scheme is illustrated in Figure 16 with the percentage of MFS AMD samples classified per group.

4.5.2 AMD Classification Versus Lithology

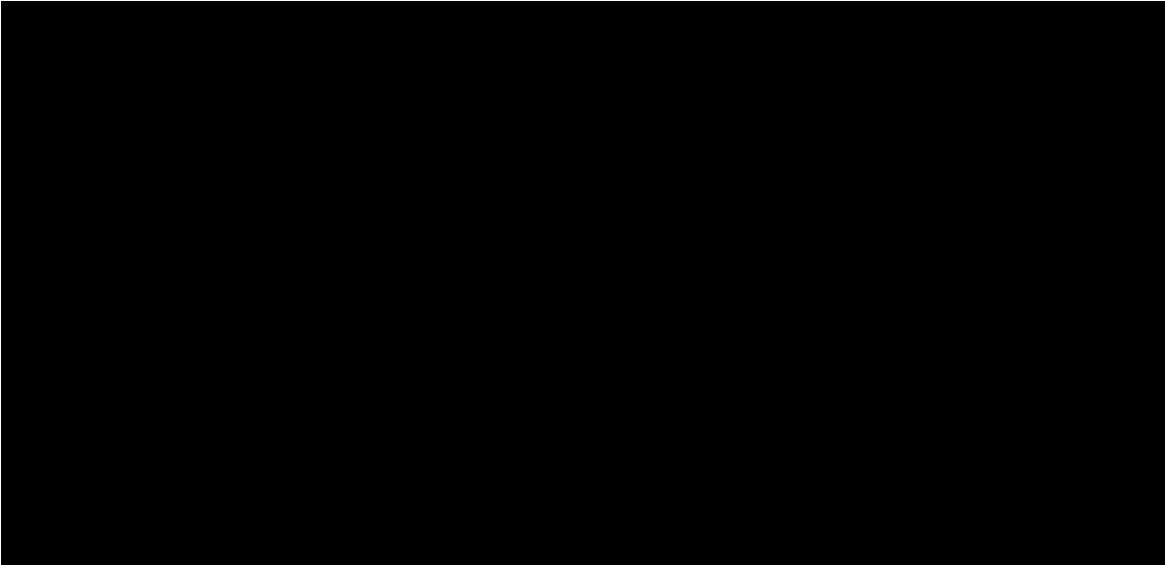
Assessment of lithological characteristics with respective MFS process flow classifications include the following observations:

- 63% laminated sandstones PAF or HAF
- 61% of carbonaceous mudstone samples PAF or HAF
- 26% of sandstone PAF or HAF
- 99% of conglomerate is NAF
- 91% of breccia is NAF

Coarser material, in particular conglomerates, are associated with fluvial environments with a high percentage of this material characterised as NAF. Finely laminated units and mudstone that are more consistent of a marine depositional environment are more likely to be classified as HAF or PAF material. These observations are consistent with previously discussed results for DC16 with a predominantly fluvial environment with marine incursions.

⁴ Average ANC for the AMD samples results was 1 kg H₂SO₄.

4.5.3 *Model Code*



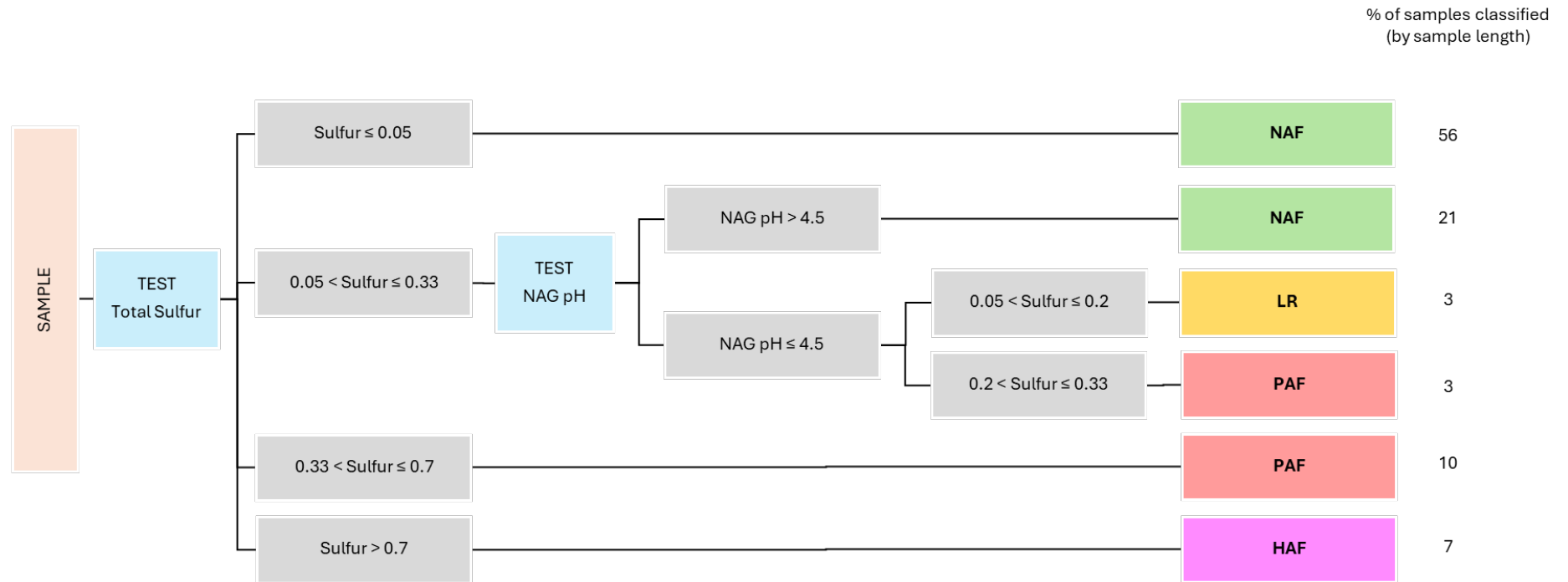


Figure 16: MFS Process Flow Classification.

Note: Percentages are based on sample length as a function of the total population sample length.

4.6 Comparison: Classification Schemes

4.6.1 AMIRA, Price, and Process Flow Classification Schemes

Figure 17 presents the results for the AMIRA, Price, and the MFS Process Flow classification schemes with results weighted based on the total sample length. It was noted that NAF samples on average were significantly larger than higher risk materials:

- HAF 0.94 m thick
- PAF 1.07 m thick
- LR 1.00 m thick
- NAF 1.82 m thick

If MFS process flow classification was based on number of samples, HAF would account for 11% of samples.

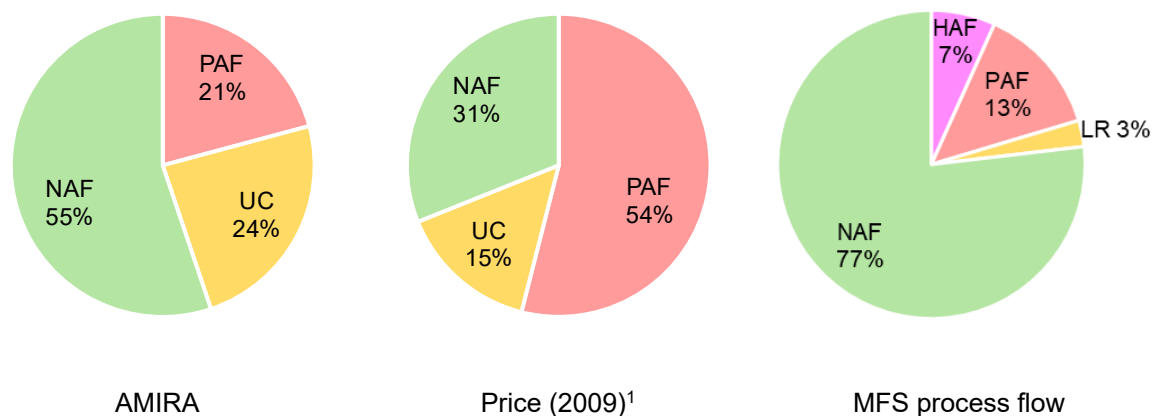


Figure 17: Comparison of AMD classification models for MFS AMD samples.

Note: Percentage results are based on total sample length.

¹ Low ANC values result in high estimation of PAF material when using Price (2009) classification even with low sulfur values (i.e., Price (2009) does not consider the risk for lower sulfur materials)

4.6.2 Escarpment and MFS South Process Flow Comparison

Classification of ABA data using the MFS process flow classification was compared to the existing Escarpment Mine process flow model using the MFS data. The outcome of this analysis indicated all samples were classified the same in both models with the exception of four samples including:

A carbonaceous mudstone was classified as PAF under the MFS classification and NAF under the existing Escarpment Mine classification due to the following ABA results for the sample:

- Total sulfur 0.401 wt%
- NAG pH 4.6
- NAPP 12.27 kg H₂SO₄/t

- The sample was classified PAF due to the more conservative value of 0.33 wt% sulfur for PAF cutoff in the MFS classification (as compared to 0.45 wt% for the Escarpment Mine).

The following 3 samples are classified LR under MFS classification with total sulfur between 0.05 and 0.2 wt% and NAG pH $\leq$ 4.5. This material is further tested for ANC and NAPP under the Escarpment Mine classification.

- A carbonaceous mudstone was classified PAF under the Escarpment Mine classification due to the following ABA results for the sample:
 - Total sulfur 0.179 wt%
 - NAG pH 4.1
 - NAPP 5.48 kg H₂SO₄/t
- Granule breccia classified NAF under Escarpment Mine classification due to the following ABA results for the sample:
 - Total sulfur 0.058 wt%
 - NAG pH 4.5
 - NAPP -0.23 kg H₂SO₄/t
- Very fine sandstone classified PAF under Escarpment Mine classification due to the following ABA results for the sample:
 - Total sulfur 0.175 wt%
 - NAG pH 3.7
 - NAPP 5.36 kg H₂SO₄/t

4.7 Portable X-ray Fluorescence

Pulps from one drillhole (DC16) were analysed by BRL staff using portable X-ray Fluorescence (pXRF) to assess the potential for correlation of Zn with sulfides. Initial Zn correlation with total sulfur results were promising and pulps from the remaining MFS AMD drillhole samples were analysed.

Average Zn results were plotted against total sulfur with AMD classification domains indicated as per MFS process flow classification (Figure 18). Results indicate the relationship is poor and Zn is unlikely to be useful for field classification of overburden.

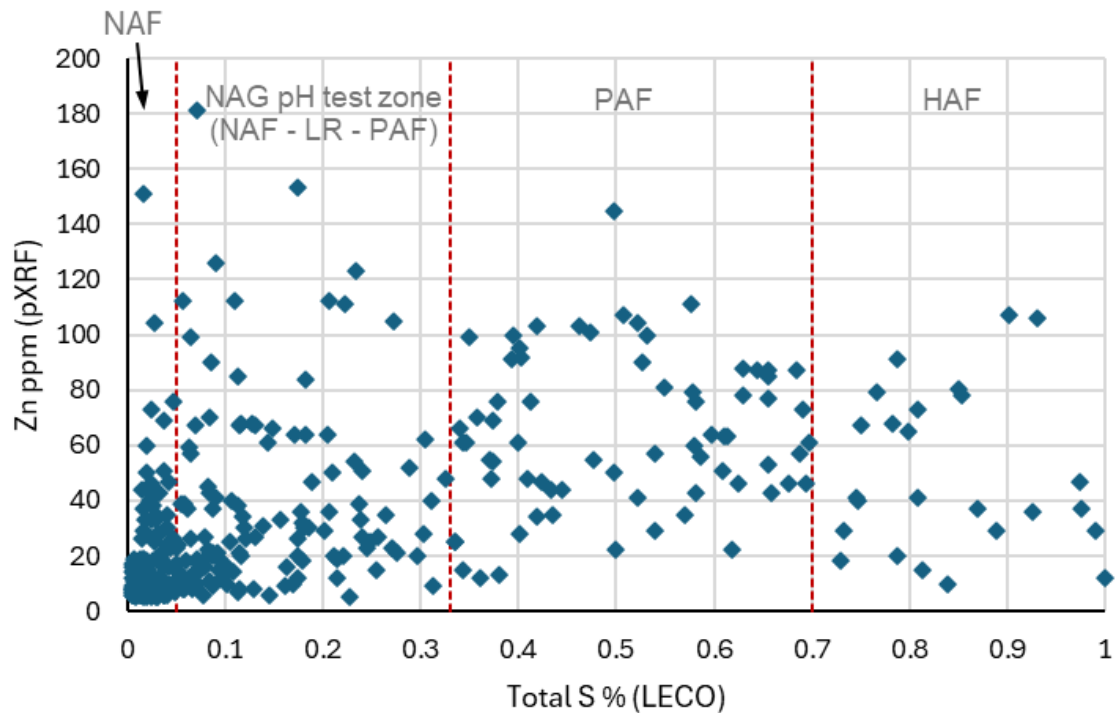


Figure 18: pXRF results for Zn versus total sulfur %.

Other relationships between pXRF data and total sulfur % were explored. Good correlation was observed between pXRF sulfur analysis and total wt% sulfur from the AMD data (Figure 19). Results suggest the potential for pXRF analysis of sulfur to be a useful tool for field-based classification at MFS.

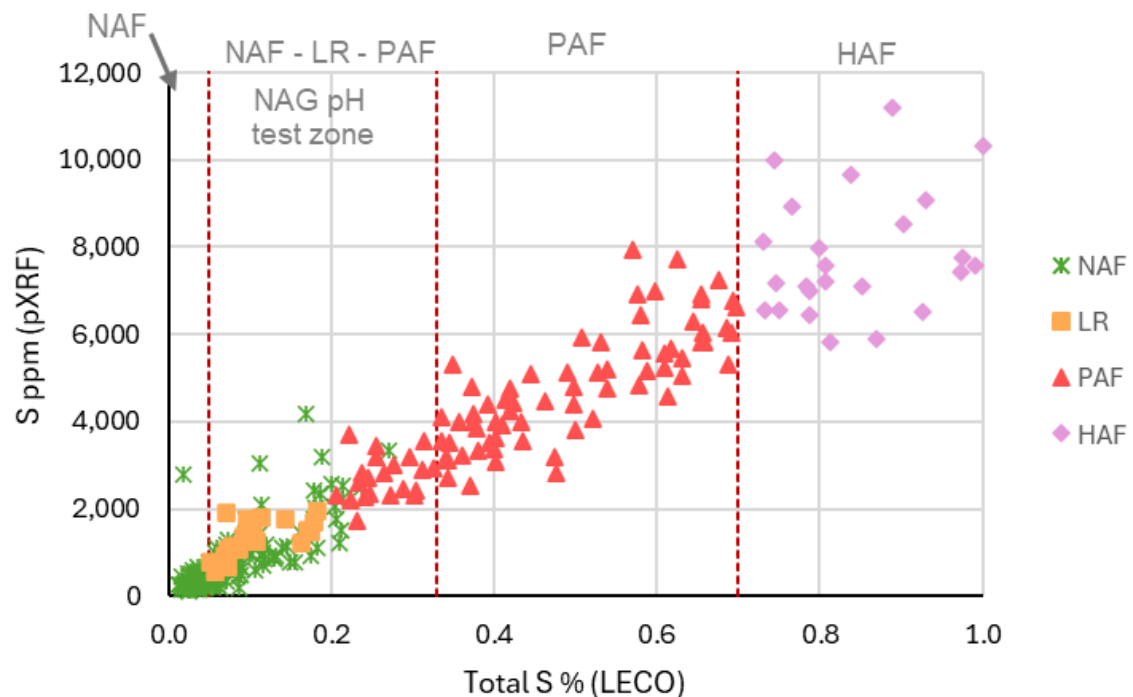


Figure 19: pXRF results for sulfur versus total sulfur % for data < 1 wt% sulfur.

Samples are classified using the MFS process flow approach.

5 AMD SOURCE HAZARD ANALYSIS

The data presented in this report was used to determine the material AMD source hazards for the MFS sub-area. The following section discusses the potential source hazards

5.1 AMD Source Hazard Analysis

Based on the AMD analysis using the proposed MFS process flow model, approximately 77% of material as per sampled width is NAF, 20% of material is classified PAF or HAF, and 3% LR. Utilising a cut off value of 0.7 wt% total sulfur, HAF accounts of 7% of total material.

Drillholes were generally terminated in Greenland Group basement with some drillholes terminating over 10 m below the coal floor. This introduces a source of variation in classification volumes from the ABA data AMD model and the modelled pit shells due to inclusion of material in the ABA analysis that is unlikely to be significantly represented in final waste rock volumes.

5.2 MFS Block Model

The MFS sub-area consists of two proposed pits, MFSE Pit, and the smaller MFS West Pit (MFSW). BRL applied the MFS AMD process flow approach to form the MFS block model for the two pits using Maptek Vulcan's regularise tri-blocking functions from the MFS Coal Resource model (BRL, 2025). The combined waste rock tonnages for the two pits derived from the block model are summarised in Table 7.

Table 7: Total acid potential of waste rock from the MFS block model.

CLASSIFICATION	TONNES OF WASTE ROCK ¹ (TO NEAREST 1000t)	% OF TOTAL WASTE ROCK	MPA (kg H ₂ SO ₄ /t)	TOTAL ACID POTENTIAL (TO NEAREST 100t)	% OF TOTAL ACID POTENTIAL
HAF	655,000	1.9%	29.99	19,600	15.9
PAF	4,923,000	14.4%	10.10	49,700	40.2
LR	4,963,000	14.5%	3.67	18,200	14.7
NAF	23,603,000	69.1%	1.53	36,100	29.2
Total	34,144,000			123,700	

¹ Density is applied in the model to BCM (2.4356) and Basement (2.5186) material differently. Density is also based on in ground moisture estimates.

Source: BRL – Note these data relate to an early version of the block model. Later material quantities are provided in MWM (2026c).

The MFS block model identifies 1.9% of the total waste rock is HAF. Remaining waste rock within the block model was classified as PAF (14.4%), LR (14.5%), and NAF (69.1%). Data presented in Table 7 indicates that if all the HAF, PAF, and LR materials are managed to minimise AMD that the management of 30.8% of the rock will account for 70.8% of the AMD hazard.

Analysis of these data by BRL through the AMD block model indicates that the average mass weighted sulfur content of the proposed MFS Pits is 0.12 wt% sulfur

5.3 AMD Block Model Uncertainty

Available drillhole data for the larger MFSE pit was limited to the east (Figure 4), with higher uncertainty in the block model than the MFSW pit. Additional drilling and/or testing is recommended to reduce the

uncertainty associated with the limited available data within MFSE block model. Observational data and the ABA population indicates that:

- A low sulfur fluvial depositional environment is present and suggests a significant proportion of the deposit is unlikely to generate AMD.
- AMD emanating from historic underground mines in the Deep Stream area has low acidities (e.g., < 10 mg/L CaCO₃), low sulfate (< 10 mg SO₄/L) and trace metals compared to historic workings in Millerton and the Mangatini Stream catchments.
- Site water quality data suggests that the geochemical effects of mining (i.e., AMD) have had minor impact on the receiving environment.

These observations suggest that the risk is lower, and adaptive management processes will be provided for in the AMD Management Plans to further refine and improve the AMD block model as mining activities are undertaken. The block model cross section is provided in Figure 20.

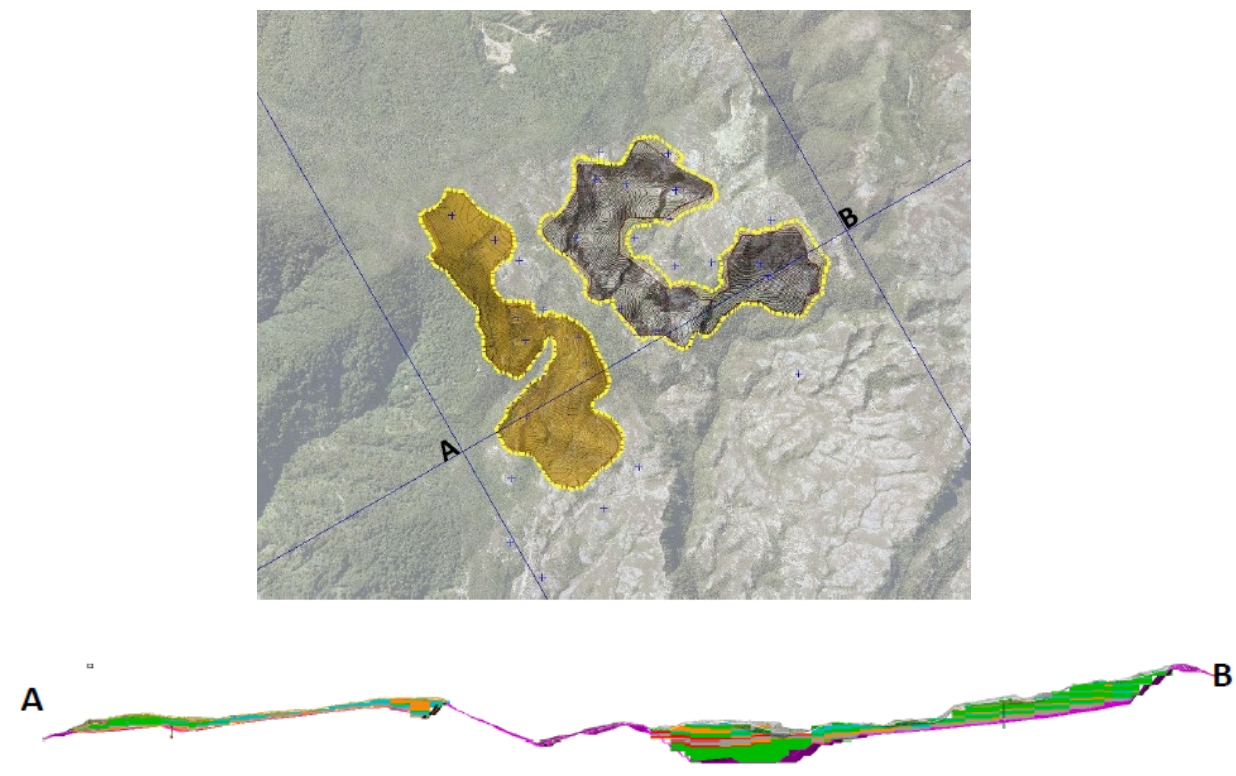


Figure 20: Cross-section view of the MFS ABA model (A-B shown on plan).

Green = NAF, Cyan=Low Risk, Orange = PAF, Red = HAF, Grey = Coal

Source: BRL

6 SUMMARY AND RECOMMENDATIONS

6.1 Summary

The geoenvironmental hazards associated with the MFS sub-area were investigated in this report. For the study, 472 samples from 24 drillholes were analysed to determine the AMD potential of the materials and hence identify the AMD source hazards.

At MFS the risks for AMD are expected to be lower than at the adjacent Stockton Coal Mine (Stockton) as BCM have a lower sulfur content at MFS compared to similar overburden materials at Stockton. This is due to the depositional environment at MFS being strongly influenced by fresh water fluvial sediments (low sulfur) with occasional periodic marine incursions (high sulfur), whereas the depositional environment at Stockton was predominantly a marine-influenced environment with higher sulfur materials (e.g., estuarine). Approximately 15% of sampled material was carbonaceous mudstones, laminated sandstones, and siltstones/mudstones that are more likely to be associated with marine deposition.

Analysis of ABA data from the MFS drilling programme resulted in 20% of sampled material classified as HAF or PAF and 77% of material classified as NAF using the proposed MFS process flow model. Results from paste pH analysis suggests PAF and HAF material has rapid to immediate ARD onset.

The use of a process flow model approach, with adjustments made to PAF criteria from the existing Escarpment Mine process flow model, removes the uncertain category unless critical criteria is unavailable. The model allows for fast identification of the lowest risk (< 0.05 wt% sulfur) and highest risk material (> 0.33 wt% sulfur) on total sulfur only.

HAF volume from the MFS block model is 1.9%, and PAF volume is 14.4% for a total HAF/PAF volume of 16.3%. Combined PAF/HAF volume from ABA analysis from the MFS drilling programme is 20%. The MFS block model indicates NAF comprises 69.1% of combined waste rock for the two pits, similar to material classification of 77% NAF from MFS drilling programme ABA data.

pXRF data from MFS AMD samples indicate sulfur is potentially a tool for field-based classification identification at MFS.

6.2 Recommendations

Based on the investigation presented in this report, several key recommendations are proposed to further optimise the MFS AMD block model. By implementing these recommendations, and utilising adaptive management processes, the characterisation of the materials and the potential impact of the source hazards will continue to be improved. The following recommendations are proposed:

- Continue detailed geochemical analysis of samples including sulfur speciation testing.
- Additional drilling to further refine the MFS block model.
- Development of quality assurance/quality control procedures for laboratory ABA testing.

7 REFERENCES

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- Solid Energy (New Zealand) Limited, October 2006. Deep Creek PAG 2 Environmental Report.

8 LIMITATIONS

Attention is drawn to the document “Limitations”, which is included in Appendix G of this report. The statements presented in this document are intended to provide advice on what the realistic expectations of this report should be, and to present recommendations on how to minimise the risks associated with this project. The document is not intended to reduce the level of responsibility accepted by Mine Waste Management, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in doing so.

APPENDIX A ABBREVIATIONS

ABBREVIATION	DEFINITION
ABA	Acid base accounting
AEE	Assessment of Environmental Effects
Al	Aluminium
AMD	Acid and metalliferous drainage
ANC	Acid neutralisation capacity
ARD	Acid Rock Drainage
BCM	Brunner Coal Measures
BPCP	Buller Plateaux Continuation Project
BRL	Bathurst Resources Limited
CRM	Certified Reference Material
EC	Electrical Conductivity
FTAA	Fast-track Approvals Act
HAF	High acid forming
LOR	Limit of Reporting
LR	Low risk
MEND	Mine Environment Neutral Drainage Program
MFS	Mount Frederick South
MFSE Pit	Mount Frederick South East Pit
MFSW Pit	Mount Frederick South West Pit
MPA	Maximum potential acidity
MWM	Mine Waste Management Limited
NAF	Non-acid forming
NAG	Net acidity generation
NAPP	Net acid production potential
NMD	Neutral Metalliferous Drainage
NPR	Neutralisation Potential Ratio
PAF	Potentially acid forming
pXRF	portable X-ray Fluorescence
QA/QC	Quality assurance and quality control
RPD	Relative Percent Difference
SD	Saline Drainage
SPR	Source-Pathway-Receptor
UC	Uncertain
UWHR	Upper Waimangaroa Haul Road

ABBREVIATION	DEFINITION
Zn	Zinc

APPENDIX B DEFINITIONS

TERM	DEFINITION
Acid Base Accounting	Conducted to predict acid generation and neutralisation characteristics of a waste rock material.
Acid Neutralisation Capacity	This is a measure of the insitu neutralising potential of a sample. Expressed as kg H ₂ SO ₄ equivalent per tonne.
Acid and Metalliferous Drainage	Includes both acidic drainage typically caused from the oxidation of exposed sulfides, and metalliferous drainage resulting from elevated levels of toxic metals and salinity. Saline drainage can also occur. In all instances sulfate is high.
Acidic Drainage	A form of AMD, characterised by low pH, elevated toxic metal concentrations, high sulfate concentrations and high salinity.
Maximum Potential Acidity	Is a measure of the insitu acid production of a sample. Expressed as kg H ₂ SO ₄ equivalent per tonne.
Metalliferous Drainage	A form of AMD characterised by near-neutral pH, elevated heavy metal concentrations, and high sulfate salinity.
Net Acid Production Potential	Is a measure of the samples overall acid generating capacity and is calculated by subtracting the ANC from MPA. A negative NAPP indicates a net neutralising capacity and a positive NAPP indicates a net acid generating capacity. NAPP, MPA, and ANC are expressed in kg H ₂ SO ₄ per tonne equivalent.
Non-Acid Forming	Section 4.4 has further information on the classification of The Project's waste rock classification scheme.

APPENDIX C CERTIFIED REFERENCE MATERIAL CERTIFICATES

MEMORANDUM

Document Title: Certified Reference Materials for acid base accounting

Document Rev: Rev0

Date 18 September 2023

The potential hazard for acid metalliferous drainage (AMD) typically involves laboratory based static geochemical testing, which includes acid base accounting (ABA) analyses such as acid neutralisation capacity (ANC), maximum potential acidity (MPA) and net acid generating (NAG) tests. These tests are regularly carried out by both mine sites and commercial laboratories. Such testing should include the use of certified reference materials (CRM) as one aspect of the quality assurance / quality control (QA/QC) programme.

CRM are one tool for assessing the accuracy of analyses conducted by laboratories. However, there is an acknowledgment that the development of certified reference materials requires careful consideration to ensure material homogeneity and material stability (Bleeze et al., 2022).

This memorandum provides background information on the use of certified reference materials for QA/QC purposes.

GEOSTATS REFERENCE MATERIAL

Geostats Pty Ltd (Geostats) (Perth, Western Australia) provides a range of CRM. The CRM possess a nominal 40-micron particle size and are blended to achieve maximum homogeneity within the specific sample matrix. All CRM are tested thoroughly in the Geostats bi-annual laboratory survey, which involves assaying by multiple laboratories. Results are compiled into a comprehensive statistical report for each CRM. Table 1 provides a list of the CRM that has been supplied by Geostats and the referenced parameters.

Table 1. Certified reference materials.

PRODUCT CODE	REFERENCED PARAMETER (%)	
GS310-10	Total S	Total C
GS320-10	Total S	Total C
GS917-4	Total S	Total C
GS922-8	Total S	Total C

Source: Geostats Pty Ltd List of certified reference materials (2023).

Table 3 summarises the analysis data for the CRM samples shown in Table 1 as provided by Geostats. Certification can be found in Attachment A.

Interlaboratory Testing

A study conducted by Bleeze et al. (2022) assessed the suitability of six Geostats CRM for ANC and NAGpH analysis (this work can be found in Attachment B). Two interlaboratory test rounds were conducted on the following CRM: GS312-8, GS310-10, GS918-6, GS911-8, GS917-4, and GS312-3.

The first round of interlaboratory testing requested laboratories to use their usual methods. A second round of testing using the same set of samples, required the participating laboratories to use supplied standardised methods (Bleeze et al., 2022). Results indicated that irrespective of whether participating laboratories used their in-house methods, or the standardised methods, the mean ANC and NAGpH values were the same for both rounds of interlaboratory testing.

Table 2 shows the certification outcomes for ANC and NAGpH. Samples included ores, low-grade ores, and other mine materials covering a range of ANC (11.6 – 516 kg H₂SO₄/t) and NAGpH (3.4 – 8.3) values.

Overall, the results showed that interlaboratory reproducibility was favourable, allowing for certified ANC or NAGpH values to be developed. Hence, these materials can provide confidence in laboratory methodologies, which is essential for informed decision making processes in regards to the potential for AMD.

Table 2. ANC and NAGpH reference material properties.

SAMPLE CODE	REFERENCED PARAMETER	UNITS	REFERENCE VALUE	CERTIFICATION LEVEL
GS312-8	ANC	kg H ₂ SO ₄ /t	11.6	Reference Value
GS310-10	ANC	kg H ₂ SO ₄ /t	77.8	Certified Value
GS918-6	ANC	kg H ₂ SO ₄ /t	516	Certified Value
GS911-8	NAGpH	pH unit	8.29	Certified Value
GS917-4	NAGpH	pH unit	3.43	Certified Value
GS312-3	NAGpH	pH unit	4.48	Certified Value

Source: Bleeze et al. (2022).

Blue samples have been included in the summary table below, which were used for this project.

Summary

For reporting purposes, the Geostats data and Bleeze et al. (2022) data are presented in Table 3.

Table 3. Reference material properties - summary

SAMPLE CODE	SULFUR (MEAN)	CARBON (MEAN)	ANC	NAGpH
	wt%	wt%	kg H ₂ SO ₄ /t	pH units
GS310-10	0.27	1.08	77.8	-
GS320-10	0.27	0.59	-	-
GS917-4	0.36	0.05	-	3.43
GS922-8	0.08	0.45	-	-

Table 4. Certified reference material.

PRODUCT CODE	SULFUR STATISTICS (%)				CARBON STATISTICS (%)				DESCRIPTION OF SOURCE / MATRIX	COLOUR DESIGNATION
	Mean	Stdev	Count	95% CI	Mean	Stdev	Count	95% CI		
GS310-10 ¹	0.27	0.03	64	+/- 0.008	1.08	0.06	40	+/- 0.019	Copper gold ore	Very light gray
GS320-10 ²	0.27	0.02	95	+/- 0.004	0.59	0.03	75	+/- 0.007	High grade gold sulfide	Light gray
GS917-4 ³	0.36	0.02	90	+/- 0.004	0.05	0.01	68	+/- 0.004	Low grade transitional ore ex Laos	Yellowish gray
GS922-8 ⁴	0.08	0.02	80	+/- 0.004	0.45	0.03	69	+/- 0.007	Oxide andesite, Pilbara, WA	Moderate orange pink

Source: Geostats Pty Ltd List of certified reference materials (2023).

Certified certificate date:

1 - April-2010.

2 - April-2020.

3 - October-2017.

4 - October-2022.

CLOSING REMARKS

Please do not hesitate to contact Paul Weber at 027 294 5181 or paul.weber@minewaste.com.au should you wish to discuss this memorandum in greater detail.

Attachments: Attachment A – Certified Reference Material Certificates
Attachment B – Interlaboratory Testing Programme Paper

REFERENCES

Bleeze, B., Qian, G., Romero, S., Stewart, W., and Schumann, R., 2022. Development of Certified Reference Materials for ANC and NAG Test Methods. 12th ICARD. 18-24 September 2022.

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ATTACHMENT A – CERTIFIED REFERENCE MATERIAL CERTIFICATES

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Sulphur and Carbon Reference Material Product Code

GS310-10

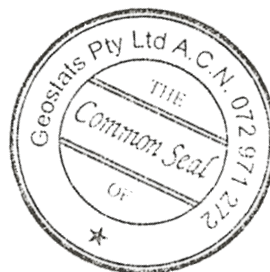
Certified Control Values

Sulphur

Sulphur Grade 0.27 %
Standard Deviation 0.03 %
Confidence Interval +/- 0.008 %

Carbon

Carbon Grade 1.08 %
Standard Deviation 0.06 %
Confidence Interval +/- 0.019 %



CRM Details

Control Statistic Details

Control statistics were produced from results accumulated in the April-2010 round robin. A total of 64 sulphur results and 40 carbon results were used to certify this material.

Material Description

This material is described as a Copper gold ore.

Usage

This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.

Preparation and Packaging

All CRMs are dried in an oven for a minimum of 12 hours at 110°C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an air classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into heat sealed, air tight, plastic or foil lined pulp packets ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

Assay Testwork

All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by multiple laboratories from around the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.

Stability

This product remains stable in its original packaging, away from direct sunlight.

Material Safety

This product is not hazardous and non-toxic.

20 Hines Road, O'Connor, Western Australia 6163

Phone : +61 8 9314 2566, Fax : +61 8 9314 3699

e-mail : pjh@geostats.com.au, srr@geostats.com.au

Website <http://www.geostats.com.au>

GS310-10

Geostats Pty Ltd, Certified Sulphur and Carbon Reference Material, Product Code:

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Sulphur and Carbon Reference Material Product Code

GS320-10

Certified Control Values

Sulphur

Sulphur Grade 0.27 %
Standard Deviation 0.02 %
Confidence Interval +/- 0.004 %

Carbon

Carbon Grade 0.59 %
Standard Deviation 0.03 %
Confidence Interval +/- 0.007 %



CRM Details

Control Statistic Details

Control statistics were produced from results accumulated in the April-2020 round robin. A total of 95 sulphur results and 75 carbon results were used to certify this material.

Material Description

This material is described as a High grade gold sulphide.

Usage

This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.

Preparation and Packaging

All CRMs are dried in an oven for a minimum of 12 hours at 110°C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an air classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into heat sealed, air tight, plastic or foil lined pulp packets ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

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All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by multiple laboratories from around the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.

Stability

This product remains stable in its original packaging, away from direct sunlight.

Material Safety

This product is not hazardous and non-toxic.

20 Hines Road, O'Connor, Western Australia 6163
Phone: +61 8 9314 2566 | Email: info@geostats.com.au
Website: www.geostats.com.au

GS320-10

Geostats Pty Ltd, Certified Sulphur and Carbon Reference Material, Product Code:

GEOSTATS PTY LTD
Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Sulphur and Carbon Reference Material Product Code

GS917-4

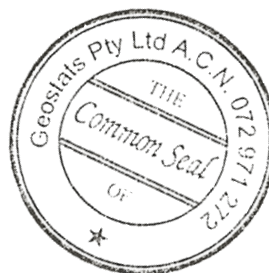
Certified Control Values

Sulphur

Sulphur Grade 0.36 %
Standard Deviation 0.02 %
Confidence Interval +/- 0.004 %

Carbon

Carbon Grade 0.05 %
Standard Deviation 0.01 %
Confidence Interval +/- 0.004 %



CRM Details

Control Statistic Details

Control statistics were produced from results accumulated in the October-2017 round robin. A total of 90 sulphur results and 68 carbon results were used to certify this material.

Material Description

This material is described as a Low grade transitional ore ex Laos.

Usage

This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.

Preparation and Packaging

All CRMs are dried in an oven for a minimum of 12 hours at 110°C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an air classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into heat sealed, air tight, plastic or foil lined pulp packets ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

Assay Testwork

All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by multiple laboratories from around the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.

Stability

This product remains stable in its original packaging, away from direct sunlight.

Material Safety

This product is not hazardous and non-toxic.

20 Hines Road, O'Connor, Western Australia 6163
Phone : +61 8 9314 2566, Fax : +61 8 9314 3699
e-mail : pjh@geostats.com.au, srr@geostats.com.au
Website <http://www.geostats.com.au>

GS917-4

Geostats Pty Ltd, Certified Sulphur and Carbon Reference Material, Product Code:

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Sulphur and Carbon Reference Material Product Code

GS922-8

Certified Control Values

Sulphur

Sulphur Grade 0.08 %
Standard Deviation 0.02 %
Confidence Interval +/- 0.004 %

Carbon

Carbon Grade 0.45 %
Standard Deviation 0.03 %
Confidence Interval +/- 0.007 %



CRM Details

Control Statistic Details

Control statistics were produced from results accumulated in the October-2022 round robin. A total of 80 sulphur results and 69 carbon results were used to certify this material.

Material Description

This material is described as an Oxide andesite, Pilbara, WA.

Usage

This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.

Preparation and Packaging

All CRMs are dried in an oven for a minimum of 12 hours at 110°C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an air classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into heat sealed, air tight, plastic or foil lined pulp packets ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

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GS922-8

Geostats Pty Ltd, Certified Sulphur and Carbon Reference Material, Product Code:

ATTACHMENT B – INTERLABORATORY TESTING PROGRAMME PAPER



Development of Certified Reference Materials for ANC and NAG Test Methods

Belinda Bleeze^A, Gujie Qian^A, Stuart Romero^B, Warwick Stewart^C, and Russell Schumann^{C*}

^A College of Science and Engineering, Flinders University, Bedford Park SA 5042, Australia

^B Geostats Pty Ltd, O'Connor, WA 6163, Australia

^C Environmental Geochemistry International Pty Ltd, Balmain NSW 2041, Australia

*Presenting author: [REDACTED]

ABSTRACT

Current practice in determining potential liability from acid rock drainage (ARD) usually involves static geochemical testing, which frequently includes acid neutralisation capacity (ANC) and net acid generating (NAG) tests. The tests are routinely conducted by mine site and commercial laboratories providing services to the mining industry and consultants. However, unlike many analytical methods, ANC and NAG tests often lack appropriate quality control (QC) measures, including routine analysis of reference materials.

There have been numerous methods or modifications for the determination of ANC. Each modification to the procedure may result in a different measured ANC value for a particular sample. While it appears there is less variation in the methods used for the NAG test, there are numerous factors which may affect the result and lead to variations between laboratories. These circumstances suggest that reference materials should be developed and routinely used for QC purposes in ANC and NAG testing.

In this study, we examined commercially available reference materials to see if they would be suitable for ANC and NAG analysis. Samples included ores, low-grade ores and other mine materials covering a range of ANC (12 – 516 kg H₂SO₄/t) or NAGpH (3.4 – 8.3) values. Two interlaboratory test programmes were conducted to assess their suitability as reference materials for ANC and NAG analysis. The first round of interlaboratory testing requested laboratories to use their usual methods. A second round of testing using the same set of samples, required the participating laboratories to use supplied “standardised” methods.

The results showed that whether participating laboratories used their in-house methods, or the standardised methods, mean ANC and NAGpH values were the same for both rounds of interlaboratory testing. However, when all laboratories used the same test methods, the variation of results was reduced.

The test programme enabled us to apply certified NAGpH values (3.4, 4.5 and 8.3) and certified ANC values (78 and 516 kg H₂SO₄/t) to five reference materials. Results for a sixth sample gave higher interlaboratory variation in the measured ANC and provided a reference value of 12 kg H₂SO₄/t as guide, but the variation (RSD 23%) was too high to certify this value.



These certified reference materials (CRM) will be available for laboratories undertaking ANC and NAG tests to improve QC protocols and increase end user confidence in the results from laboratories using these materials.

Keywords: ANC; NAG, interlaboratory testing, certified reference materials

1.0 INTRODUCTION

The development of any mining project will invariably include an assessment of the environmental impact of the project. A major component of this assessment is to determine if any acid rock drainage (ARD) is likely to result from the project and to investigate management options. Current practice in determining ARD liability usually includes static geochemical tests, which essentially assess the balance between potential acid generating processes in materials (waste rock, ore and tailings) handled during the mining/processing operations and the acid neutralising potential of these materials.

A number of static geochemical test methods are routinely used to assess this balance between acid generating and acid neutralising capacity, including acid neutralisation capacity (ANC), or neutralising potential (NP), and the net acid generating (NAG) test. These methods are now widely used by mining operations and consultants for ARD assessment. The tests are routinely conducted by mine site laboratories, and commercial laboratories providing services to the mining industry and consultants. Additionally, regulatory bodies frequently recommend the use of these methods as a part of any ARD assessment, further broadening their use by the industry.

A number of methods have been proposed over the years to assess the ANC of mine rock samples. Unlike the concentration of a particular element in a sample, e.g., total sulphur content, the measured neutralising capacity may vary, depending on how the measurement was conducted. Laboratory analyses of ANC should be viewed as a guide to the magnitude of the effective acid neutralisation potential rather than a precise and accurate measurement. Consequently, there have been numerous methods or modifications of various methods reported in the literature for the determination of ANC. Each modification to the procedure is likely to result in a different measured ANC value for a particular sample. Consequently, laboratories and consultants often make errors in analysis and interpretation of the results. The most common error made in the Sobek or modified Sobek ANC test is the incorrect addition of acid, usually because of improper interpretation of the Fizz test (Price 2009). There may also be problems with the relationship between laboratory ANC measurements and effective neutralising potential if different methods are used for different phases of the ARD programme.

Unlike ANC tests, reported methods for NAG testing appear to be restricted to that specified in the ARD Test Handbook (AMIRA 2002). Despite the uniformity of the method used for evaluation of NAG, several authors have identified areas of concern about the reproducibility of the measurement. Charles et al. 2015 noted that for samples with excess of carbonate, very high pH can be measured post boil often 1.5 – 2 pH units above the pre-boil pH. Results showed that any inconsistency in the timing of pH measurement could change the NAGpH



value for this type of sample. The authors also noted that the change in pH could also impact the solubility of certain elements, potentially affecting results of NAG liquor analysis.

Parbhaker-Fox et al. 2018 examined the NAGpH test using a number of samples from Savage River mine, Tasmania. They examined several variables in the test and how they affect the final NAGpH value. Variables included reaction time, heating time, heating temperature, cooling time and peroxide strength. They noted all these factors can affect the final NAGpH. They also recommended that a standard reference material should be developed and used for QC purposes during NAGpH testing.

These studies suggest that both the ANC and NAG procedures used to obtain any set of reported results need to be described in some detail to enable users to fully interpret results. They also suggest that reference materials covering a range of ANC and NAG values and based on specific and detailed methods, would be useful to enable laboratories to develop appropriate QC procedures which are currently lacking for many ARD methods.

This paper describes results from a research programme designed to develop method specific reference standards for ANC and NAG test methods which cover the range of ANC and NAG values and material types required by laboratories undertaking ARD geochemical analyses.

2.0 METHODOLOGY

2.1 Project Outline

It is generally recognised that important aspects of development of reference materials which should be considered are characterisation of material homogeneity, material stability and determination of reference values, usually through interlaboratory studies (Ellison et al. 2001). To meet these criteria, it was thought prudent to investigate the use of existing reference materials which had demonstrated homogeneity and stability, so that the programme could progress immediately to the interlaboratory study stage. To this end, reference materials available through Geostats Pty Ltd (Perth Western Australia), which had been certified for Total S and Total C content, and which represented relevant matrices for ARD characterisation i.e., mining ores and rock, were selected for use in development of ARD reference materials.

The process of development of reference materials for ANC and NAG testing was undertaken using the following steps:

1. Twelve certified reference materials were selected from the Geostats catalogue based on Total S and C values to cover the range of likely ANC and NAGpH values required. These materials were characterised (ANC, NAG, Quantitative X-ray Diffraction (QXRD), multi-element bulk assay) and from these results, six were selected for interlaboratory testing.
2. Round 1 interlaboratory study using in-house methods.
3. Analysis of Round 1 interlaboratory study including variations in the methods employed.



4. Analysis of parameters in ANC and NAG test methods (sensitivity analysis) to assess sources of variability in Round 1 results.
5. Development of “standardised” methods based on the results of sensitivity analysis.
6. Round 2 interlaboratory study using “standardised” methods.
7. Analysis of results to assign reference values.

2.2 Interlaboratory Test Programme

The interlaboratory test programme consisted of two rounds of testing, with inhouse methods used for the first round and standardised methods in the second. Each laboratory was provided with six different certified reference materials (CRM) supplied by Geostats. 60 samples (3 x 10 replicates for ANC testing and 3 x 10 replicates for NAG testing) were dispatched to each participating laboratory. The sample numbering schema was randomised. The participating laboratories comprised a combination of domestic and international commercial laboratories, all of which were assigned a reference number to ensure confidentiality when reporting results.

Statistical analysis was conducted on the results reported in both rounds of the interlaboratory testing. ANC results were converted to the universal unit of kg H₂SO₄/t prior to statistical analysis. The data was analysed using a one-way ANOVA function in Excel, to test for variation and significance in the data set. Outliers were identified using the inter-quartile range (IQR) with the upper and lower limits and confirmed through a GRUBBS analysis. Analysis included the calculation of the mean, standard deviation, 95% confidence interval (CI) and the relative standard deviation (RSD).

The inhouse methods reported by participating laboratories were used to highlight discrepancies between different methods and the potential impact of these differences on the final result. Round one had twelve laboratories participate, while round two had nine participating laboratories.

3.0 RESULTS AND DISCUSSION

3.1 Test Material Characterisation

Following testing of the 12 Geostats CRMs, 3 samples were selected which covered a range of ANC values (17 - 536 kg H₂SO₄/t) and another 3 samples which covered a range of NAGpH values (3.4 – 8.4) (Table 1). XRD analysis of GS312-8 showed the presence of trace calcite, supported by a total carbon assay of 0.03% (carbonate ANC = 2 kg H₂SO₄/t) suggesting that silicate minerals provide most of neutralising capacity in this material. XRD and carbon analysis indicate the majority of ANC in GS310-10 and GS918-6 is derived from dolomite in these materials. Acid-base analysis results for sample GS911-8 reveals an excess of neutralising capacity, which is supported by NAG test results which gave a high NAGpH indicative of excess carbonate. XRD analysis showed the presence of pyrite, but also significant dolomite and calcite. XRD and sulphur speciation analysis of sample GS917-4 showed that all the sulphur present in this material was present as pyrite. Carbon analysis, supported by XRD indicated a lack of carbonate minerals in this material, consistent with the low ANC and low



NAGpH. Carbon and sulphur analysis together with XRD analysis demonstrated a lack of carbonate minerals in GS312-3, with almost all the total S present as chalcopyrite. The moderately low NAGpH (4.9) of this sample probably reflects the lack of carbonate neutralising minerals and the presence of chalcopyrite rather than pyrite as the dominate sulphide. Oxidative dissolution of chalcopyrite will generate only half the acidity of pyrite to pH 4.5, with the remaining acidity arising from copper hydrolysis when titrated to pH 7 (Stewart et al. 2003).

Table 1. Acid-base analysis and NAG test results for materials used in interlaboratory testing

Sample Code	Acid-Base Analysis				NAG Test		
	Total S (%)	ANC (kg H ₂ SO ₄ /t)	NAPP (kg H ₂ SO ₄ /t)	ANC/MPA	NAGpH	NAG _(pH 4.5) (kg H ₂ SO ₄ /t)	NAG _(pH 7.0) (kg H ₂ SO ₄ /t)
GS312-8	0.75	17	6	0.7	4.3	0.4	8
GS310-10	0.27	77	-69	9.3	9.6	0	0
GS918-6	0.31	536	-527	57.0	8.9	0	0
GS911-8	1.76	98	-44	1.8	8.4	0	0
GS917-4	0.36	3	8	0.3	3.4	5	10
GS312-3	0.47	11	3	0.8	4.9	0	3

3.2 Round 1 Interlaboratory Test Results

Twelve laboratories participated in the initial interlaboratory study. These included 8 commercial laboratory services with 7 of these located within Australia and one laboratory in Canada. In addition to the commercial laboratories, there was one specialised ARD-laboratory and one University-based laboratory (both Australian), and two mine laboratories (Indonesia and PNG) which also participated in the test programme.

The results for ANC and NAG testing are summarised in Tables 2 and 3 respectively. For ANC testing, the two samples with higher ANC, almost exclusively contributed by carbonates (principally dolomite), provided good interlaboratory reproducibility with 5% RSD in each case. However, for the material with the lowest ANC, principally derived from dissolution of silicate minerals, the interlaboratory reproducibility was significantly poorer (RSD of 27%).

Interlaboratory reproducibility for NAGpH was acceptable (<10%) for the two samples where the final NAGpH was either acidic (3.4) or alkaline (8.4). However, for the material where the final NAGpH was close to 4.5, the RSD increased to 15%, suggesting that where there is a more even balance between the acid-generating and acid-neutralising properties of the sample, it is likely that greater variance in the NAGpH values reported by different laboratories will occur.



Table 2. Results for Round 1 interlaboratory ANC testing

Sample Code	Mean ANC (kg H ₂ SO ₄ /t)	Std Dev (kg H ₂ SO ₄ /t)	RSD (%)	95% CI (kg H ₂ SO ₄ /t)	Ave. Intra-Laboratory RSD (%)	Count ¹
GS312-8	10	2.7	27	0.54	7	103
GS310-10	78	4.2	5	0.83	2	102
GS918-6	519	25	5	4.8	1	108

1. Number of results used in the analysis after exclusion of outliers. A total of 113 results were received for GS312-8 and GS918-6 and 112 results for GS310-10.

Table 3. Results for Round 1 interlaboratory NAG testing

Sample Code	Mean NAGpH	Std Dev	RSD (%)	95% CI	Ave. Intra-Laboratory RSD (%)	Count ¹
GS911-8	8.4	0.6	7	0.11	2	113
GS917-4	3.4	0.3	9	0.06	4	103
GS312-3	4.4	0.6	15	0.13	3	103

1. Number of results used in the analysis after exclusion of outliers. A total of 113 results were received for each sample.

3.3 Sensitivity Analysis and Method Refinement

As a part of the first round interlaboratory test programme, participating laboratories were asked to provide details of the in-house method used for each analysis. Tables 4 and 5 provide summaries of the main test parameters used for ANC and NAG testing respectively. Given the apparent considerable variability in the way the ANC and NAG tests were conducted, the results showed surprisingly good interlaboratory reproducibility. However, for some samples (low silicate-based ANC, NAGpH close to 4.5) interlaboratory reproducibility was not satisfactory. Consequently, testing was conducted whereby certain test parameters were varied, and the effect of these variations on the measured ANC or NAGpH were evaluated. For ANC, these parameters included fizz rating assignment (including the final pH after digest), digestion/heating time, digestion/heating temperature, and the cooling time. For NAG testing, the initial pH of hydrogen peroxide, reaction time, heating temperature and cooling time were examined for their influence on the measured NAGpH.

Tables 6 and 7 show the results of experiments used to investigate the influence of test parameters on the measurement of ANC and NAGpH/NAG values respectively. The results of these tests suggest that for determination of ANC, the amount of acid added (evaluated by the final digest solution pH) and digest temperature appear to have the most influence on the result. The NAG test appears to be more robust, except for specific samples where a NAGpH near to 4.5 can be influenced by initial pH of the peroxide used for the test, or where the sample contains organic substances for which changes in the post-reaction heating temperature and time can significantly alter the result.



Table 4. Test parameters reported for Round 1 interlaboratory ANC testing

Parameter	Range of values
Sample weight	1 – 5 g
HCl used for digest	0.1 – 1 M, 4 – 75 mL
Digest temperature	80 – 140 °C
Digest time	2 minutes – 3 hours
Fizz rating	0 - 4, 1 - 5
Final pH control ¹	0.8 – 1.5, <1.9, <3

1. These represent the pH range or upper limit at which the test result is accepted. If these values are not met, the test is repeated using a different fizz rating.

Table 5. Test parameters reported for Round 1 interlaboratory NAG testing

Parameter	Range of values
Sample weight	1 – 2.5 g
H ₂ O ₂ used for digest	15%, 100 – 250 mL
Digest temperature	Ambient and then 150 – 250 °C
Digest time	Typically, overnight at ambient temperature and then 30 minutes to 2 hours at elevated temperature
Initial peroxide pH control ¹	None, adjust to pH 4.5, 4.6, 4.8 – 5.1, 4.9 – 5.2

1. Hydrogen peroxide is often stabilised by addition of various stabilisers some of which are acidic.

Table 6. Results of sensitivity tests for ANC analysis

Parameter	Range of values evaluated	Result
Final pH	0.8 – 3.3	When the final pH was <2, ANC measurements were similar. Where the final pH was 3 or above, there was a significant decrease in ANC.
Digest time	1 – 3 h	Negligible effect
Digest temperature	80 – 100 °C	The effect seems to be sample dependent. Measured ANC was constant across this temperature range for some samples and increased with temperature for others.
Cooling time	2 – 60 h	Negligible effect

**Table 7. Results of sensitivity tests for NAG analysis**

Parameter	Range of values evaluated	Result
Peroxide pH	2.8 – 5.5	The effect seems to be sample dependent. For a sample with a NAGpH near 4.5 the low peroxide pH sample gave lower measured NAGpH and slightly higher NAG values
Reaction time	8 – 48 h at ambient temperature	Negligible effect
Post reaction heating temperature	100 °C for 2 h – 250 °C for 2 h	The effect seems to be sample dependent. There was negligible effect on a sample lacking organic C, but for a sample with significant organic C, NAGpH increased and NAG values decreased with temperature likely because of mineralisation of organics by reaction with peroxide.
Cooling time	24 and 48 h	Negligible effect

3.4 Round 2 Interlaboratory Test Results

Participating laboratories from round 1 of the interlaboratory test programme were invited to participate in a second round of testing using “standardised” methods derived from the results of the sensitivity analysis experiments described above. In summary, the ANC methodology used for this round of interlaboratory testing included:

- 2 g of sample digested for 2 h at 80 °C
- The final pH of the digest solution should be ≤ 2 , adjust fizz rating to achieve this as required
- Titrate to pH ≈ 5 , add 2 drops 30% H_2O_2 and then titrate to pH 7

For NAG testing, the method used for this round of interlaboratory testing included:

- 2.5 g of sample reacted with 250 mL of 15% H_2O_2 adjusted to pH 4.6 – 5.5
- React at ambient temperature for a maximum of 24 h
- Heat for 2 h at a gentle simmer/boil
- Cool for a maximum of 16 h and titrate to pH 4.5 and then 7

Nine of the 12 labs that participated in the first round of interlaboratory testing also contributed to the second-round test programme. The results for ANC and NAG testing are summarised in Tables 8 and 9 respectively.



There was little variation observed between the two rounds for low ANC material. The absolute standard deviation is consistent between both rounds, with the RSD 3% smaller in the second round. Despite the small reduction in RSD between the first and second rounds, at 23% RSD, the variation in interlaboratory test results is still significant. Participating laboratories typically reported a limit of detection of 1 kg H₂SO₄/t, although this may overestimate method sensitivity. Nevertheless, a value of 12 kg H₂SO₄/t is sufficiently above the method detection limit, such that measurement reproducibility should be less than 10% RSD. The measured Total C in this sample is 0.03 % and, assuming all of this carbon is present as carbonate C, suggests a carbonate ANC of 2 kg H₂SO₄/t. This indicates that the majority of the ANC of approximately 12 kg H₂SO₄/t is likely to be derived from silicate minerals. Dissolution of silicate minerals, unlike carbonate minerals, is unlikely to be quantitative during the ANC digest procedure. As such, the measured ANC is expected to be relatively sensitive to the method parameters used. Under these circumstances, an absolute standard deviation in interlaboratory results of under 3 kg H₂SO₄/t is reasonable and, in the context of acid base accounting, unlikely to be significant.

For the other two samples, interlaboratory reproducibility using the “standardised” ANC method was excellent with RSD of 3% for both samples.

Using the “standardised” NAG procedure, the interlaboratory reproducibility for analysis of NAGpH of the three samples examined gave RSD of less than or equal to 6%, indicating excellent reproducibility. The use of hydrogen peroxide in which the pH has been standardised to between 4.6 and 5.5, appears to have resulted in significant improvement in the reproducibility of the NAGpH for sample GS918-6, which gave a NAGpH of 4.5. The result was similar to the round 1 results, but with the RSD reduced from 15% in the first round to 4% in the second round.

Table 8. Results for Round 2 interlaboratory ANC testing

Sample Code	Mean ANC (kg H ₂ SO ₄ /t)	Std Dev (kg H ₂ SO ₄ /t)	RSD (%)	95% CI (kg H ₂ SO ₄ /t)	Ave. Intra-Laboratory RSD (%)	Count ¹
GS312-8	12	2.7	23	0.68	5	66
GS310-10	78	2.7	3	0.61	1	76
GS918-6	516	15	3	3.4	0.5	76

1. Number of results used in the analysis after exclusion of outliers. A total of 76 results were received for each sample.

Table 9. Results for Round 2 interlaboratory NAG testing

Sample Code	Mean NAGpH	Std Dev	RSD (%)	95% CI	Ave. Intra-Laboratory RSD (%)	Count ¹
GS911-8	8.3	0.3	4	0.08	2	76
GS917-4	3.4	0.2	6	0.05	2	76
GS312-3	4.5	0.2	4	0.04	1	76

1. Number of results used in the analysis after exclusion of outliers. A total of 76 results were received for each sample.



3.5 Comparison of Round 1 and 2 Interlaboratory Test Results

Figure 1 shows a comparison between the average ANC values measured during the first and second rounds of interlaboratory testing. The error bars represent the 95% CI calculated from all values obtained for the sample, excluding outliers. This comparison shows minimal difference of the average value and 95% CI obtained for both rounds. These results suggest that the measurement of ANC for these materials is not particularly method dependent, which is important for reference materials and supporting their use in QC for ANC analysis.

Figure 2 shows the average NAGpH values obtained from the Round 1 and Round 2 interlaboratory studies for the three NAG materials tested. The values presented exclude outliers and the error bars represent the 95% CI of the means. These figures show that there was minimal difference in the average NAGpH measured in the two rounds of testing. These results suggest that the NAG test is reasonably robust, so that any minor differences in the way the test was conducted by the various participating laboratories, did not appear to result in significant variation in the measured NAGpH. However, **these results do suggest adjusting the pH of the hydrogen peroxide prior to reaction will likely improve method reproducibility.**

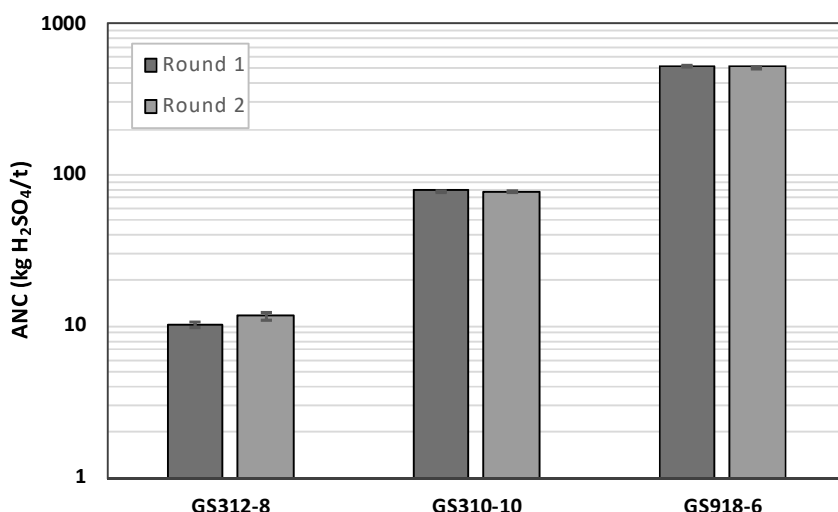


Figure 1. Average ANC values obtained from round one and round two of interlaboratory testing. Error bars show the 95% confidence interval.

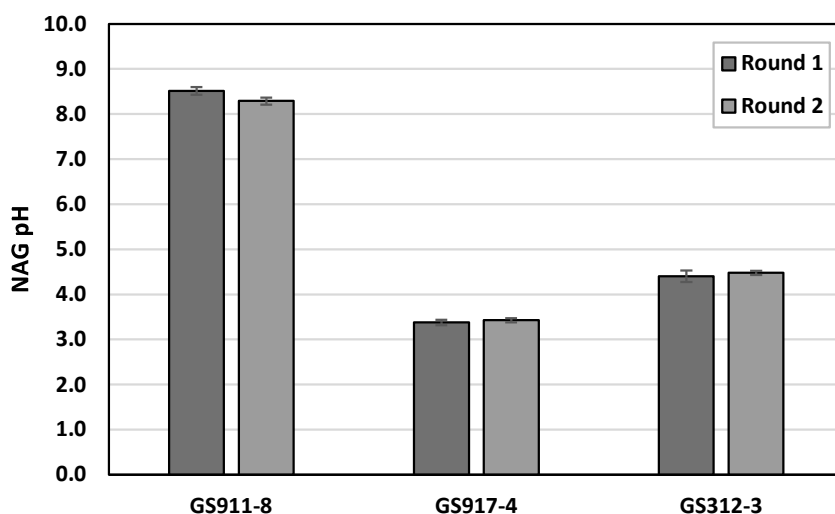


Figure 2. Average NAGpH values obtained from round one and round two of interlaboratory testing. Error bars show the 95% confidence interval.

4.0 CONCLUSIONS

The certification outcomes for the three ANC and three NAG materials tested are shown in Table 10 below. For all but one of the samples evaluated, interlaboratory reproducibility was sufficiently good to provide certified values for ANC or NAGpH. For the lowest ANC sample GS312-8, the interlaboratory variance was such that a certified value was not assigned and for this material a reference value was assigned.

These materials will now be made available to analysts wishing to improve QC protocols for ANC and NAG analyses, and their use should add to the reliability of these measurements which form an important part of ARD risk assessment of mined materials.

Table 10. Properties of reference materials

Sample Code	Referenced Parameter	Units	Reference Value	Certification Level
GS312-8	ANC	(kg H ₂ SO ₄ /t)	11.6	Reference Value
GS310-10	ANC	(kg H ₂ SO ₄ /t)	77.8	Certified Value
GS918-6	ANC	(kg H ₂ SO ₄ /t)	516	Certified Value
GS911-8	NAGpH	pH unit	8.29	Certified Value
GS917-4	NAGpH	pH unit	3.43	Certified Value
GS312-3	NAGpH	pH unit	4.48	Certified Value



5.0 ACKNOWLEDGEMENTS

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APPENDIX D DRILLHOLE LOGS

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.00185		BA_ANC -0.1 0.4	BA_ANC -1 4	BA_NAPP -3 24	BA_TAP 0.15 26	BA_PASTE 3 6.6
0.5	BCM	OH			0	0		0.00185		-0.1 0.4	-1 4	-3 24	0.15 26	3 6.6
1														
1.5														
2														
2.5														
		VCSS	SW	ST	50	100	AMD_DC16_001_VCSS	0.005		0.4	4	-3	0.15	5.5
		GRCG		MS										
		VCSS												
		VFSS	HW	WK										
3		VCSS	SW	MS	87	100								

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.00185		BA_ANC -0.1 0.4	BA_ANC -1 4	ABA_NAPP -3 24	ABA_TAP 0.15 26	BA_PASTE 3 6.6
4	BCM	VCSS		MS	87	100	AMD_DC16_001_VCSS	0.005		0.4	4	-3	0.15	5.5
		GRCG MST GRCG		WK										
		VCSS												
4.5			SW											
5		GRCG		MS			AMD_DC16_002_GRCG	0.043		0.2	2	0	1.3	4.3
5.5					95	100								
6		MSS	MW	MWK										
		VCSS		MS										
6.5		CM	SW	WK				0.522		-0.1	-1	16	16	3.2
		VFSS	UW	MWK	58	100								

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul		BA_ANC	BA_ANC	BA_NAPP	BA_TAP	BA_PASTE
					0 100	0 100		0.0185		-0.1 0.4	-1 4	-3 24	0.15 26	3 6.6
7.5	BCM	VFSS	UW	MWK	58	100		0.522		-0.1	-1	16	16	3.2
		MSS												
		VCSS												
8														
8.5		GRCG	SW	MS	86	100								
9							AMD_DC16_004_GRCG	0.025		0	0	0	0.76	4.1
9.5		MSS	MW	MWK										
10		GRCG	SW	MS	89	100								
10.5							AMD_DC16_005_GRCG AMD_DC16_005_GRCG	0.009		0	0	0	0.28	4.8

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.00185		BA_ANC -0.1 0.4	BA_ANC -1 4	ABA_NAPP -3 24	ABA_TAP 0.15 26	PA_PASTE 3 6.6
11	BCM	GRCG	SW	MS	89	100								
11.5					100	100								
12							AMD_DC16_005_GRCG AMD_DC16_005_GRCG B	0.009		0	0	0	0.28	4.8
12.5														
13					100	100								
13.5														
14		CM GRBX CM GRBX PBBX	UW SW MW SW MW	MWK MS WK MWK WK	60	100	AMD_DC16_006_GRCG	0.005		0.1	1	-1	0.15	4.7

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.00185		BA_ANC -0.1 0.4	BA_ANC -1 4	BA_NAPP -3 24	BA_TAP 0.15 26	BA_PASTE 3 6.6
		PBBX	MW	WK										
		VCSS												
14.5														
		GRBX			60	100								
15			SW	MS			AMD_DC16_006_GRCG	0.005		0.1	1	-1	0.15	4.7
15.5														
	BCM	VCSS			88	100								
16														
		VFSS	HW	WK										
16.5			MW	MWK										
		MSS												
17			UW	MS	94	100	AMD_DC16_007_MSS	0.581		-0.1	-1	18	18	3
17.5		FSS												

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.00185		BA_ANC -0.1 0.4	BA_ANC -1 4	ABA_NAPP -3 24	BA_TAP 0.15 26	BA_PASTE 3 6.6
		FSS	UW	MS	94	100								
18		LVFS	SW	WK			AMD_DC16_007_MSS	0.581		-0.1	-1	18	18	3
18.5		MSS			53	100								
19		CSS		MWK										
19.5	BCM		MW				AMD_DC16_008_VCSS	0.014		0.1	1	-1	0.42	4.3
20		VCSS		MS	81	100								
20.5		VFSS	HW	WK										
21		GRBX	MW	MS			AMD_DC16_009_GRBX	0.007		0	0	0	0.2	4.7

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.00185		BA_ANC -0.1 0.4	BA_ANC -1 4	ABA_NAPP -3 24	BA_TAP 0.15 26	BA_PASTE 3 6.6
		GRBX HCM	MW SW MW	MS WK	81	100								
21.5							AMD_DC16_009_GRBX	0.007		0	0	0	0.2	4.7
22					96	100								
22.5														
23	BCM	GRBX	SW	MS										
23.5					100	100	AMD_DC16_010_GRBX	0.174		0.1	1	4	5.3	4.9
24														
24.5					86	100								

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.00185		BA_ANC -0.1 0.4	BA_ANC -1 4	ABA_NAPP -3 24	BA_TAP 0.15 26	BA_PASTE 3 6.6
25	BCM	GRBX	SW	MS	86	100	AMD_DC16_010_GRBX	0.174		0.1	1	4	5.3	4.9
		CM	MW	WK										
		FSS												
25.5														
26		MSS		MS	97	100	AMD_DC16_011_Mss	0.24		0	0	7	7.4	3.6
			SW											
26.5														
27		LFSS			90	100	AMD_DC16_012_FSS	0.549		0	0	16	17	4.4
27.5		VFSS	UW											
		CQ					QP_DC16_001							
28		CO	SW	WK	33	100	QP_DC16_002							

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.0185		BA_ANC -0.1 0.4	BA_ANC -1 4	BA_NAPP -3 24	BA_TAP 0.15 26	BA_PASTE 3 6.6
							QP_DC16_002							
28.5					33	100	QP_DC16_003							
29							QP_DC16_004							
29.5					77	100	QP_DC16_005							
30	BCM	CO	SW	WK			QP_DC16_006							
30.5							QP_DC16_007							
31					57	100	QP_DC16_008							
31.5							QP_DC16_009							

PROSPECT

DEPTH
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Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.0185		BA_ANC -0.1 0.4	BA_ANC -1 4	ABA_NAPP -3 24	ABA_TAP 0.15 26	BA_PASTE 3 6.6
32	BCM	CO	SW	WK	57	100	QP_DC16_009							
							QP_DC16_010							
32.5					67	100	QP_DC16_011							
							QP_DC16_012							
							QP_DC16_013							
33		CQ	WB SW				QP_DC16_014							
		HCM CQ					QP_DC16_015							
		VFSS												
33.5			UW	MWK										
		HCM			79	100	AMD_DC16_013_HCM	0.084		0.4	4	-2	2.6	5.8
34														
		CO												
34.5		HCM												
		CO												
		HCM												
35		VFSS		MWK	73	100								

DEPTH
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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH		
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.0185		BA_ANC -0.1 0.4	BA_ANC_hs -1 4	BA_NAPP -3 24	BA_TAP_hs 0.15 26	BA_PASTE 3 6.6		
35.5	BCM	VFSS	UW	MWK	73	100	AMD_DC16_013_HCM	0.084		0.4	4	-2	2.6	5.8		
		FSS														
		CSS		MS												
36		FSS		MWK												
		VCSS		MS												
36.5		HCM		MWK	93	100			0.085	0.4	4	-1	2.6	5.7		
		MSS														
		VCSS		ST												
		CM		WK												
37		VCSS		ST												
		CM		MWK	77	100										
		VFSS														
37.5		VCSS														
		FSS														
38	VFSS	SW	MWK	77		100										
38.5		CSS	UW	ST												
		VFSS		MWK												

PROSPECT

DEPTH
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	Lithology				Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH		
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.00185		BA_ANC_cc -0.1 0.4	BA_ANC_hs -1 4	ABA_NAPP -3 24	ABA_TAP_hs 0.15 26	BA_PASTE 3 6.6		
39	BCM	VFSS	UW	MWK	77	100		0.085		0.4	4	-1	2.6	5.7		
		PBCG		ST												
		HCM	SW	MWK	27	100		0.127		0	0	4	3.9	5.4		
39.5		FT	CW	FM												
		HCM	SW	MWK												
		FSS	UW	WK												
		HCM		WK												
		FSS	SW	MWK												
40		CQ		WK												
		FSS		MWK												
40.5			UW	ST			AMD_DC16_016_PBCG	0.85		0.2	2	24	26	4		
41		PBCG														
		FSS		MS			AMD_DC16_017_ARG	0.029		0.1	1	0	0.88	6.6		
41.5		CSS														
		VFSS	HW	WK	64	100										
		MST														
42	BSM	ARG	SW				AMD_DC16_018_GWK			0.2	2					

PROSPECT

DEPTH
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Depth	Lithology				Recovery		Sampling							
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH
					RQD 0 100	Rec_pct 0 100		BA_Sul 0.00185		BA_ANC -0.1 0.4	BA_ANC -1 4	ABA_NAPP -3 24	ABA_TAP_hs 0.15 26	ABA_PASTE 3 6.6
42.5	BSM	ARG	SW	WK	64	100	AMD_DC16_018_GWK							
43		GWK	UW	ST	13	100				0.2	2			
		ARG	SW	WK										
43.5		GWK	UW	ST										

PROSPECT

DEPTH
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		Lithology			Recovery		Sampling													
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45				
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45				
								0.0126	2.66	2.20	0.40	-3	69	0.1569	3.65	73	460	0	59	
0.5	BCM		SW	ST			AMD_DC17_001	0.009	6.2	0.1	1	-1	0.26	5.7	4	0				
			MW	MWK																
			SW	ST																
			MW	MWK																
			LC																	
			MW	MWK																
			LC																	
2			MW				MS													
			HW																	
			MW																	
2.5											AMD_DC17_003	0.028	6.1	0.1	1	0	0.85	5.3	6	0
3							SW	ST			AMD_DC17_004	0.013	6.1	0.3	3	-2	0.39	5.7	5	0

PROSPECT

DEPTH
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	Lithology				Recovery		Sampling																
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45							
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45							
								0.0126	2.6	6.2	0	0.4	0	4	-3	69	0.1569	3.6	5.7	3	460	0	59
4	BCM	GRCG	SW	ST			AMD_DC17_004	0.013	6.1	0.3	3	-2	0.39	5.7	5	0							
4.5		RBBX		MWK			AMD_DC17_005	0.011	6	0.1	1	0	0.34	5.6	4	0							
5			MW	ST																			
5.5		GRCG		MWK			AMD_DC17_006	0.006	5.6	0.1	1	-1	0.17	5.5	4	0							
6			SW	MS																			
6.5		VCSS	MW	ST			AMD_DC17_007	0.005	5.9	0.2	2	-2	0.15	5.5	4	0							

PROSPECT

DEPTH
43.7

Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
								0.0126	2.66	2.20	0.40	-3.69	0.1569	3.65	73.46	0.59
7	BCM	VCSS	MW	ST			AMD_DC17_007	0.005	5.9	0.2	2	-2	0.15	5.5	4	0
		GRCG	SW				AMD_DC17_008	0.005	5.8	0.1	1	-1	0.15	5.5	4	0
7.5		VCSS	MW	MS			AMD_DC17_009	0.007	5.8	0.2	2	-2	0.21	5.5	5	0
		GRCG		MWK												
8		VCSS		ST			AMD_DC17_010	0.005	6	0.3	3	-3	0.15	5.4	4	0
		GRCG		MW												
		VCSS		MWK												
8.5		GRCG	MW	ST												
		VCSS														
9		GRCG														
9.5		VCSS	SW	ST			AMD_DC17_010	0.005	6	0.3	3	-3	0.15	5.4	4	0
		GRCG														
10		VCSS	SW	ST			AMD_DC17_010	0.005	6	0.3	3	-3	0.15	5.4	4	0
		GRCG														

PROSPECT

DEPTH
43.7

	Lithology				Recovery		Sampling																						
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45													
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45													
								0.0126	2.66	2.20	0.40	-3.69	0.1569	3.65	73	460	0	59											
10.5	BCM		SW	ST			AMD_DC17_010	0.005				-3	0.15		4	0													
11				MWK																									
11.5																													
12			MW																AMD_DC17_011										
12.5				ST																									
13			SW																										
13.5				MS			AMD_DC17_011	0.007				-2	0.2		4	0													
				MWK																									
				MS																									

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
								0.0126	2.662	0.4	0.4	-3.69	0.1569	3.657	3460	0.59
14	BCM	CSS	MW	MS			AMD_DC17_011	0.007	5.7	0.2	2	-2	0.2	5.6	4	0
14.5		VCSS														
15		GRCG		ST												
15.5		VCSS					AMD_DC17_012	0.006	5.7	0.3	3	-2	0.18	5.5	5	0
16		GRCG		MS												
16.5		VCSS														
17		GRCG		ST			AMD_DC17_013	0.008	5.7	0.3	3	-2	0.24	5.5	3	0

PROSPECT

DEPTH
43.7

Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
								0.0126	2.662	0.04	0.04	-3.69	0.1569	3.657	3460	059
17.5	BCM	GRCG	MW	ST			AMD_DC17_013	0.008	5.7	0.3	3	-2	0.24	5.5	3	0
18																
18.5																
19																
19.5																
20																
20.5																
21																
21.5																
22																
22.5	BCM	VCSS	MW	MS			AMD_DC17_014	1.16	2.9	0.1	1	35	35	3.9	300	24
23																
23.5																
24																
24.5																
25																
25.5																
26																
26.5																
27																
27.5	BCM	VFSS	MW	WK			AMD_DC17_015	1.44	2.8	0.2	2	42	44	3.7	460	30
28																
28.5																
29																
29.5																
30																
30.5																
31																
31.5																
32																
32.5	BCM	ZSS	SW	MS			AMD_DC17_016	1.16	2.9	0.1	1	35	35	3.9	300	24
33																
33.5																
34																
34.5																
35																
35.5																
36																
36.5																
37																
37.5	BCM	FSS	UW	MWK			AMD_DC17_017	1.44	2.8	0.2	2	42	44	3.7	460	30
38																
38.5																
39																
39.5																
40																
40.5																
41																
41.5																
42																
42.5	BCM	MSS	UW	MWK			AMD_DC17_018	1.44	2.8	0.2	2	42	44	3.7	460	30
43																
43.5																
44																
44.5																
45																
45.5																
46																
46.5																
47																

PROSPECT

DEPTH
43.7

	Lithology				Recovery		Sampling														
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45					
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45					
								0.0126	2.6	6.2	0.4	0	-3	69	0.1569	3.6	5.7	3	460	0	59
21	BCM	MSS	UW	MWK			AMD_DC17_015	1.44	2.8	0.2	2	42	44	3.7	460	30					
21.5		CSS	SW	ST			AMD_DC17_016	0.336	3.9	0.2	2	8	10	3.9	200	3					
		VCSS																			
		VCSS																			
22		CSS	MW	MS			AMD_DC17_017	0.007	5.4	0.2	2	-2	0.21	5.4	6	0					
		VCSS																			
		CSS																			
22.5		VCSS	SW																		
		CSS																			
		VCSS																			
23		VCSS	MW																		
		CSS																			
		MSS																			
		VCSS																			
		MSS																			
		VCSS																			
23.5		MSS	MS																		
		VCSS																			
		MSS																			
24	VCSS	MWK																			
	MSS																				
	CSS																				
	VCSS																				
	VCSS	SW	MS																		
		MSS	MW																		

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Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
								0.0126	2.662	0.04	0.04	-3.69	0.1569	3.657	3460	059
24.5	BCM	MSS	MW	MS			AMD_DC17_018	0.071	5.1	0.2	2	0	2.2	4.8	18	0
		CSS		MWK												
		VCSS		WK												
		MSS														
		CSS	SW	MWK			QP_DC17_001									
		CM					QP_DC17_002									
25.5			UW	WK			QP_DC17_003									
							QP_DC17_004									
		CM	SW				QP_DC17_005									
26.5			UW	VWK												
27		CM	UW	WK			AMD_DC17_019	0.445	3.6	0.3	3	11	14	3.9	140	7
							QP_DC17_006									
				MWK			QP_DC17_007									
				WK												

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Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
								0.0126	2.662	0.4	0.4	-3.69	0.1569	3.657	3460	0.59
28		CM		WK			QP_DC17_007									
		MS		MWK			AMD_DC17_020	0.498	3.5	0	0	15	15	3.6	430	6
28.5		MS					AMD_DC17_021	0.625	3.3	0.2	2	17	19	4.2	74	13
29		CM	UW	MS			QP_DC17_009									
29.5	BCM	HCM					AMD_DC17_022	2.26	2.6	0	0	69	69	3.8	340	59
30		MS		MWK			AMD_DC17_023	0.067	4.8	0.3	3	-1	2	4.1	65	0
30.5		MS														
31		MS		MWK												

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	Lithology				Recovery		Sampling														
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45					
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45					
								0.0126	2.6	6.2	0.4	0	-3	69	0.1569	3.6	5.7	3	460	0	59
31.5	BCM	MSS	MW	MWK			AMD_DC17_023	0.067	4.8	0.3	3	-1	2	4.1	65	0					
		CSS	SW																		
32			MW																		
32.5																					
33	BCM	VCSS	SW	ST			AMD_DC17_024	0.008	5.4	0.2	2	-2	0.23	5.5	5	0					
33.5																					
34																					
34.5																					
		GRCG					AMD_DC17_025	0.007	5.4	0.1	1	-1	0.21	5.6	4	0					

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	Lithology				Recovery		Sampling										
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45	
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	PASTE_pH	Conductivity	ABA_NAG_45	
								0.0126	2.66	2.20	0.40	-3.69	0.1569	3.65	7.34	60.59	
35	BCM	GRCG	SW	ST			AMD_DC17_025	0.007	5.4	0.1	1	-1	0.21	5.6	4	0	
35.5																	
36		VCSS					AMD_DC17_026	0.005	5.8	0.2	2	-2	0.17	5.6	4	0	
36.5																	
37		GRCG		MWK			AMD_DC17_027	0.021	5.6	0.3	3	-2	0.63	5.2	9	0	
37.5		MSS															
38		GRCG		ST													

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	Lithology				Recovery		Sampling													
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45				
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45				
								0.0126	2.66	2.20	0.40	-3	69	0.1569	3.65	73	460	0	59	
38.5	BCM	GRCG	SW	ST			AMD_DC17_027	0.021	5.6	0.3	3	-2	0.63	5.2	9	0				
39		VCSS	MS	AMD_DC17_028			0.013	5.3	0.2	2	-2	0.41	5.5	6	0					
39.5																				
40		GRCG	MW	ST			AMD_DC17_029	0.078	5.5	0.2	2	0	2.4	5.3	5	0				
40.5																				
41			SW	MS																
	VCSS	MW	AMD_DC17_030		0.005	5.6	0.1	1	-1	0.15	5.7	4	0							
41.5																				

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	Lithology				Recovery		Sampling														
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45					
								ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45					
								0.0126	2.6	6.2	0.4	0	-3	69	0.1569	3.6	5.7	3	460	0	59
42	BCM	VCSS	MW	MS			AMD_DC17_030	0.005	5.6	0.1	1	-1	0.15	5.7	4	0					
42.5																					
43		GRCC					AMD_DC17_031	0.008	5.6	0.2	2	-2	0.23	5.7	4	0					
43.5		VCSS																			

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Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH
					RQD 0 100	Rec_pc 0 100		ABA_Sul_T 0.00185	ABA_NAG_pH 3.1 5.9	ABA_ANC_cc -0.2 1	ABA_ANC_hs -1 10	ABA_NAPP -4 25	ABA_TAP_hs 0.1526	ABA_NAG_45 0 16	Conductivity_pH_solu 10 180	RINSE_pH 4 5.9
0.5		OH			0	0										
1		LC														
1.5	BCM	CM		W	0	75										
				VWK												
2		CM	UW	MWK	0	100	AMD_DC18_001	0.618	3.6	-0.2	-1	19	19	6	150	4
2.5		MST														
		VFSS														
3		MSS	SW	MS	85	100	AMD_DC18_002	0.044	5.9	0.2	2	-1	1.3	0	27	5.1
		VFSS														

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	Lithology				Recovery		Sampling										
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH	
					RQD 0 100	Rec_pc 0 100		ABA_Sul_T 0.00185	ABA_NAG_pH 3.1 5.9	ABA_ANC_cc -0.2 1	ABA_ANC_hs -1 10	ABA_NAPP -4 25	ABA_TAP_hs 0.1526	ABA_NAG_45 0 16	Conductivity_pH_solu 10 180	RINSE_pH 4 5.9	
3.5	BCM	VFSS	SW	MS	85	100	AMD_DC18_002	0.044	5.9	0.2	2	-1	1.3	0	27	5.1	
		MST	UW	MWK	36	100	AMD_DC18_003	0.248	4.3	0.3	3	5	7.6	1	44	4.6	
		CM															
		VFSS															
4		HCM	WK MWK														
4.5			CM	MS													
				MWK													
5				SW													
5.5			FSS			85	100										
6		CM	MS				AMD_DC18_004	0.853	3.1	0.1	1	25	26	16	110	4.2	
			UW														
6.5		VFSS				97	100										

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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH
					RQD 0 100	Rec_pc 0 100		ABA_Sul_T 0.00185	ABA_NAG_pH 3.1 5.9	ABA_ANC_cc -0.2 1	ABA_ANC_hs -1 10	ABA_NAPP -4 25	ABA_TAP_hs 0.15 26	ABA_NAG_45 0 16	Conductivity_pH_solu 10 180	RINSE_pH 4 5.9
7	BCM	VFSS	UW	MS	97	100	AMD_DC18_004	0.853	3.1	0.1	1	25	26	16	110	4.2
7.5		LFSS	SW	MWK												
		LC														
8		VCSS	MW	ST	60	100	AMD_DC18_005	0.005	5.7	0.4	4	-4	0.15	0	14	5.7
9																
9.5		GRBX	SW		9	100										
10			MW	MS												

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Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH
					RQD 0 100	Rec_pc 0 100		ABA_Sul_T 0.00185	ABA_NAG_pH 3.1 5.9	ABA_ANC_cc -0.2 1	ABA_ANC_hs -1 10	ABA_NAPP -4 25	ABA_TAP_hs 0.15 26	ABA_NAG_45 0 16	Conductivity_pH_solu 10 180	RINSE_pH 4 5.9
10.5		GRBX	MW	MS	9	100	AMD_DC18_005	0.005	5.7	0.4	4	-4	0.15	0	14	5.7
11		CSS	SW UW	MWK												
11.5		GRBX	SW	ST	53	100										
12	BCM						AMD_DC18_006	0.009	5.3	0.1	1	-1	0.28	0	12	5.8
12.5		VCSS														
13			MW	MS	0	100										
13.5		GRCG			37	100										

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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH
					RQD 0 100	Rec_pc 0 100		BA_Sul 0.00185	A_NAG 3.1 5.9	A_ANC -0.2 1	A_ANC -1 10	BA_NAP -4 25	A_TAP 0.1526	A_NAG 0 16	ctivity_pH 10 180	RINSE_pH 4 5.9
		GRCG CSS	MW	MS MWK	37	100	AMD_DC18_006	0.009	5.3	0.1	1	-1	0.28	0	12	5.8
14																
14.5					55	100										
15																
15.5	BCM	GRBX	SW	VS			AMD_DC18_007	0.005	5.4	0.1	1	-1	0.15	0	12	5.9
16					100	100										
16.5																
		LCSS		ST	80	100	AMD_DC18_008	0.038	5.4	0.3	3	-2	1.2	0	15	5.9
		VCSS														

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	Lithology				Recovery		Sampling										
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH	
					RQD 0 100	Rec_pc 0 100		ABA_Sul_T 0.00185	ABA_NAG_pH 3.1 5.9	ABA_ANC_cc -0.2 1	ABA_ANC_hs -1 10	ABA_NAPP -4 25	ABA_TAP_hs 0.1526	ABA_NAG_45 0 16	Conductivity_pH_solu 10 180	RINSE_pH 4 5.9	
17		VCSS															
17.5		GRBX		ST	80	100											
18		FSS		WK													
18.5	BCM	GRBX	SW				AMD_DC18_008	0.038	5.4	0.3	3	-2	1.2	0	15	5.9	
19				ST	83	100											
19.5		VCSS															
20		CSS VCSS			100	100	AMD_DC18_009	0.014	5	0.4	3	-3	0.41	0	14	5.6	

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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH
					RQD 0 100	Rec_pc 0 100		BA_Sul 0.00185	A_NAG 3.1 5.9	A_ANC -0.2 1	A_ANC -1 10	BA_NAP -4 25	A_TAP 0.1526	A_NAG 0 16	ctivity_pH 10 180	RINSE_pH 4 5.9
20.5	BCM	VCSS	SW	ST	100	100	AMD_DC18_009	0.014	5	0.4	3	-3	0.41	0	14	5.6
21		CM	UW	MWK												
21.5		GRBX	SW	ST	89	100										
22		CM		MWK												
22.5		GRBX		ST												
23		LFSS	UW	MS	100	100	AMD_DC18_010	0.264	3.8	0.2	2	6	8.1	3	90	4.2
23.5		LCSS	SW	ST												

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Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH
					RQD 0 100	Rec_pc 0 100		BA_Sul	A_NAG	A_ANC	A_ANC	BA_NAP	A_TAP	A_NAG	ctivity_p	NSE_p
								0.0185	3.1 5.9	-0.2 1	-1 10	-4 25	0.1526	0 16	10 180	4 5.9
24	BCM	LCSS	SW	ST	100	100	AMD_DC18_010	0.264	3.8	0.2	2	6	8.1	3	90	4.2
		LMSS	UW													
24.5																
		VCSS	SW													
25				MS	70	100										
		MSS														
25.5				MWK												
		CSS														
26		VCSS	SW	ST			AMD_DC18_011	0.005	5.4	0.2	2	-2	0.15	0	10	5.6
		GRBX	UW													
26.5																
		VCSS														
27		GRBX	SW													

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Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH
					RQD 0 100	Rec_pc 0 100		BA_Sul 0.00185	A_NAG 3.1 5.9	A_ANC -0.2 1	A_ANC -1 10	BA_NAP -4 25	A_TAP 0.1526	A_NAG 0 16	ctivity_p 10 180	NSE_p 4 5.9
		GRBX		ST	87	100										
		MSS		MS												
27.5		GRBX	SW	ST	84	100	AMD_DC18_011	0.005	5.4	0.2	2	-2	0.15	0	10	5.6
28		LC														
		GRBX	HW	WK	0	85.71										
28.5		MW														
	BCM	MST		MWK			AMD_DC18_012	0.788	3.1	0.1	1	23	24	13	66	4.3
29		UW			37	85.71										
		CM		MS												
29.5		LC														
					0	60	QP_DC18_001									
30		CM	UW	MWK												
			MW	WK												
		CM	UW	MWK	26	100	AMD_DC18_013	0.655	3.5	0.1	1	19	20	7	120	4.1

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Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH
					RQD 0 100	Rec_pc 0 100		BA_Sul 0.00185	A_NAG 3.1 5.9	A_ANC -0.2 1	A_ANC -1 10	BA_NAP -4 25	A_TAP 0.1526	A_NAG 0 16	ctivity_p 10 180	RINSE_p 4 5.9
30.5	BCM	CM	UW	MWK	26	100	AMD_DC18_013	0.655	3.5	0.1	1	19	20	7	120	4.1
					0	100	QP_DC18_002									
31							QP_DC18_003									
					0	100	QP_DC18_004									
31.5							QP_DC18_005									
							QP_DC18_006									
32							QP_DC18_007									
							QP_DC18_008									
32.5					0	100	QP_DC18_009									
							AMD_DC18_014	0.105	3.8	0.3	3	0	3.2	5	23	4.8
33		CM	UW	WK												
			HW													
33.5																

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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH
					RQD 0 100	Rec_pc 0 100		BA_Sul 0.00185	A_NAG 3.1 5.9	A_ANC -0.2 1	A_ANC -1 10	BA_NAP -4 25	A_TAP 0.1526	A_NAG 0 16	ctivity_p 10 180	NSE_p 4 5.9
34	BCM	CM	HW UW	WK MS	0	100	AMD_DC18_014 QP_DC18_010									
			HW	WK												
					19	100										
34.5			SW	MWK												
35																
		CM	HW	WK				0.105	3.8	0.3	3	0	3.2	5	23	4.8
35.5			SW	MWK	16	93.33										
36			HW	WK												
		LC														
36.5			HW	WK												
37		CM	SW	MWK	45	100	AMD_DC18_015	0.232	4.3	0.4	4	4	7.1	1	61	4.8

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	Lithology				Recovery		Sampling																					
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH												
					RQD 0 100	Rec_pc 0 100		ABA_Sul_T 0.0185	ABA_NAG_pH 3.1 5.9	ABA_ANC_cc -0.2 1	ABA_ANC_hs -1 10	ABA_NAPP -4 25	ABA_TAP_hs 0.1526	ABA_NAG_45 0 16	Conductivity_pH_solu 10 180	RINSE_pH 4 5.9												
37.5	BCM	CM	SW	MWK	45	100	AMD_DC18_015	0.232	4.3	0.4	4	4	7.1	1	61	4.8												
38																												
38.5		VFSS	UW	MS																								
39																												
39.5																												
40		CSS		ST			AMD_DC18_016	0.234	4.4	1	10	-3	7.2	0	180	4.1												
40.5	PBBX		MS																									
		PBBX		WK MS																								

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Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	Conductivity_pH_solu	RINSE_pH
					RQD 0 100	Rec_pc 0 100		ABA_Sul_T 0.00185	ABA_NAG_pH 3.1 5.9	ABA_ANC_cc -0.2 1	ABA_ANC_hs -1 10	ABA_NAPP -4 25	ABA_TAP_hs 0.1526	ABA_NAG_45 0 16	Conductivity_pH_solu 10 180	RINSE_pH 4 5.9
	BCM	PBBX	UW	MS			AMD_DC18_016	0.234	4.4	1	10	-3	7.2	0	180	4.1

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DEPTH
34.8

Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
					RQD 0 100	Rec_pc 0 200		BA_Sul 0.0136	A_NAG 2.8 5.7	A_ANC 0.1 2.1	A_ANC 1 20	BA_NAPP -20 40	A_TAP 0.1542	PASTE 3.7 5.6	Condu 11 380	A_NAG 0 27
0.5		OH			0	0										
1		CSS	UW	ST	12	200	AMD_DC19_001	0.005	5.4	0.7	7	-7	0.15	5.6	11	0
1.5	BCM	VFSS		WK												
2		CSS		ST												
		FSS		MS												
		VCSS		ST												
		CSS		ST												
		VFSS	HW	WK												
		CSS	UW	ST	62	100										
		FSS	SW	MWK												
		LFSS	UW													
2.5		CSS														
		LMSS		MS												
3		LVFS	SW		29	100	AMD_DC19_002	0.017	5.4	0.3	3	-3	0.51	5.3	17	0
		CM		WK												
		CO	UW	MWK			QP_DC19_001									

PROSPECT

DEPTH
34.8

Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
					RQD 0 100	Rec_pc 0 200		ABA_Sul 0.0136	ABA_NAG 2.8 5.7	ABA_ANC 0.1 2.1	ABA_ANC 1 20	ABA_NAPP -20 40	ABA_TAP 0.1542	ABA_PASTE 3.7 5.6	ABA_Condu 11 380	ABA_NAG 0 27
		CO			29	100	QP_DC19_001									
							QP_DC19_002									
							QP_DC19_003									
4		CM CSS VFSS CSS VFSS CM	UW SW UW	MWK ST MWK												
		VCSS	SW	ST	34	100	AMD_DC19_003	0.023	5.1	0.3	3	-2	0.71	5.4	11	0
4.5																
		CO					QP_DC19_004									
							QP_DC19_005									
5	BCM	VFSS FSS	UW	MS ST												
		LVFS		MWK												
		CO			57	100	AMD_DC19_004									
5.5		CM VFSS		MWK			QP_DC19_006									
		VCSS					QP_DC19_007									
		CSS	UW	ST												
6		VCSS CM CSS		WK				0.419	3.5	0.2	2	11	13	4	260	5
		GRBX	SW													
		CSS	UW													
6.5		GRBX	SW	ST												
		CSS														

PROSPECT

DEPTH
34.8



Lithology					Recovery		Sampling											
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45		
					RQD 0 100	Rec_pc 0 200		BA_Sul 0.0136	A_NAG 2.8 5.7	A_ANC 0.1 2.1	A_ANC 1 20	BA_NAPP -20 40	A_TAP 0.1542	PASTE 3.7 5.6	Condu 11 380	A_NAG 0 27		
7	BCM	CSS	SW	ST			AMD_DC19_004	0.419	3.5	0.2	2	11	13	4	260	5		
		MSS																
		CSS																
		LVFS	UW	MWK														
		CM	SW	WK														
7.5		CO					QP_DC19_008											
							QP_DC19_009											
							QP_DC19_010											
							QP_DC19_011											
							QP_DC19_012											
							QP_DC19_013											
							QP_DC19_014											
							QP_DC19_015											
							QP_DC19_016											
							AMD_DC19_005											
10		CM	UW	ST				1.36	2.8	0.2	2	40	42	4.2	150	27		

PROSPECT

DEPTH
34.8

Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
					RQD 0 100	Rec_pc 0 200		BA_Sul 0.0136	A_NAG 2.8 5.7	A_ANC 0.1 2.1	A_ANC 1 20	BA_NAPP -20 40	A_TAP 0.1542	PASTE 3.7 5.6	Condu 11 380	A_NAG 0 27
10.5	BCM	CM	UW	ST	93	93.33	AMD_DC19_005	1.36	2.8	0.2	2	40	42	4.2	150	27
11		VFSS		MS			AMD_DC19_006	0.462	3.5	0.1	1	13	14	4.1	190	6
11.5																
12		CM		MWK	94	106.67	AMD_DC19_007	0.419	3.7	0.3	3	10	13	4.2	160	5
12.5		VFSS		MS												
		MSS														
13		CSS		ST	AMD_DC19_008	0.413	3.4	0.2	2	11	13	3.9	240	6		
13.5		FSS		MS												
		MSS														
		CSS														
		VCSS				100	100									

PROSPECT

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34.8

Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
					RQD 0 100	Rec_pc 0 200		BA_Sul	A_NAG	A_ANC	A_ANC	BA_NAP	A_TAP	PASTE	Condu	A_NAG
								0.0136	2.8 5.7	0.1 2.1	1 20	-20 40	0.1542	3.7 5.6	11 380	0 27
14	BCM	VCSS	UW	MS	100	100	AMD_DC19_008	0.413	3.4	0.2	2	11	13	3.9	240	6
		FSS		WK												
		MSS		MS												
14.5		FSS		WK												
		CSS														
		VCSS		MS												
		MSS	SW													
15																
		VCSS		ST												
15.5																
16		GRBX	UW	MS	89	100										
		MSS		MW												
16.5		GRBX	SW	MS	97	100	AMD_DC19_009	0.055	4.7	0.2	2	-1	1.7	4.3	73	0
17																

PROSPECT

DEPTH
34.8

Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
					RQD 0 100	Rec_pc 0 200		BA_Sul 0.0136	A_NAG 2.8 5.7	A_ANC 0.1 2.1	A_ANC 1 20	BA_NAPP -20 40	A_TAP 0.1542	PASTE 3.7 5.6	Condu 11 380	A_NAG 0 27
17.5	BCM	GRBX	SW	MS	97	100	AMD_DC19_009	0.055	4.7	0.2	2	-1	1.7	4.3	73	0
18		CM	MW													
18.5		LMSS	SW	WK			AMD_DC19_010	0.374	3.6	0.2	2	9	11	4.2	130	5
		MSS		MWK												
		LFSS	UW													
19		FSS		WK	72	100										
		LMSS	SW				AMD_DC19_011	0.378	3.5	0.2	2	9	12	4	210	5
19.5																
20				MWK												
		CSS	MW		85	100	AMD_DC19_012	0.011	5.1	0.4	4	-3	0.34	5.3	20	0
20.5		LMSS	SW	ST												
		CSS														

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34.8

Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
					RQD 0 100	Rec_pc 0 200		BA_Sul 0.0136	A_NAG 2.8 5.7	A_ANC 0.1 2.1	A_ANC 1 20	BA_NAPP -20 40	A_TAP 0.1542	PASTE 3.7 5.6	Condu 11 380	A_NAG 0 27
21		CSS		ST	85	100										
			SW													
21.5		VCSS		MS			AMD_DC19_012	0.011	5.1	0.4	4	-3	0.34	5.3	20	0
		CM	UW	WK												
		VCSS		MWK												
22			SW		51	93.33										
		GRBX		ST												
		MST	MW	MWK												
		LC														
22.5	BCM	CM		WK			AMD_DC19_013	0.4	3.7	0.2	2	11	12	4.4	97	5
			SW													
23		GRBX		ST												
23.5		VCSS		MWK	90	100										
							AMD_DC19_014	0.245	3.7	0.4	3	4	7.5	3.9	190	3
			UW													
24		GRBX		ST												
			SW		88	100	AMD_DC19_015	0.048	4.7	0.3	3	-1	1.5	4.2	82	0

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34.8

Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
					RQD 0 100	Rec_pc 0 200		BA_Sul 0.0136	A_NAG 2.8 5.7	A_ANC 0.1 2.1	A_ANC 1 20	BA_NAP -20 40	A_TAP 0.1542	PASTE 3.7 5.6	Condu 11 380	A_NAG 0 27
24.5	BCM	GRBX	SW	ST	88	100	AMD_DC19_015	0.048	4.7	0.3	3	-1	1.5	4.2	82	0
25		CSS		MS			AMD_DC19_016	0.297	3.6	0.2	2	7	9.1	3.7	310	4
25.5		VCSS														
26		GRBX	UW	ST	100	100	AMD_DC19_017	0.058	4.5	0.2	2	0	1.8	4.1	110	0
26.5		GRBX														
27		PBBX														
27.5		GRBX			93	100										

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34.8

Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
					RQD 0 100	Rec_pc 0 200		BA_Sul 0.0136	A_NAG 2.8 5.7	A_ANC 0.1 2.1	A_ANC 1 20	BA_NAP -20 40	A_TAP 0.1542	PASTE 3.7 5.6	Condu 11 380	A_NAG 0 27
28		GRBX	UW	ST	93	100	AMD_DC19_017	0.058	4.5	0.2	2	0	1.8	4.1	110	0
28.5																
29		VCSS	MW	WK												
		MSS	SW													
		FSS		VWK												
29.5	BCM	LC			33	42.86	AMD_DC19_018	0.659	3.2	0.2	2	18	20	3.8	380	11
30		CM														
			MW	WK												
30.5		VFSS														
31		CSS	SW	MS	54	118.18	AMD_DC19_019	0.171	4.1	0.5	5	0	5.2	4.5	84	1
					72	100										

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Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
					RQD 0 100	Rec_pc 0 200		ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH	ABA_Conductivity	ABA_NAG_45
31.5		CSS	SW				AMD_DC19_019	0.171	4.1	0.5	5	0	5.2	4.5	84	1
32		PBCG		MS	72	100										
		CM PBCG FSS		WK MS WK												
32.5	BCM		UW		81	100	AMD_DC19_020	0.113	5	1.2	12	-8	3.5	4.2	190	0
33		PBBX		MS												
33.5																
	BCM	FSS	UW	MS												
34	BSM	ARG	SW	ST	19	93.33	AMD_DC19_021	0.02	5.7	2.1	20	-20	0.6	5	50	0
34.5		LC														

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.0321	18	0	5.5	0	0.7	0	0.93	3	4.7		
	HOL	SOIL															
	BCM		CW	VWK													
0.5		CSS	HW	WK													
			MW	MS													
1																	
			GRBX			AMD_DC20_001	0.03	18	0	5.8	0	0	1	0.93	3	5.5	
1.5			CW	VWK													
2																	
			VCSS	HW	WK												
2.5																	
3			GRBX	MW	MS	AMD_DC20_002	0.146	15	0	5.9	0.1	1	4	4.5	10	4.7	
			HW	WK													

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Lithology					Sampling																							
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						0.0321	18	0	5.5	0.7	0	-5	4	0.9	4.7													
3.5	BCM	GRBX	HW	WK	AMD_DC20_002	0.146	15	0	5.9	0.1	1	4	4.5	10	4.7													
				MS																								
4		MSS	SW	MWK																								
4.5																												
5		CSS		MS																								
5.5	CO		UW	WK	QP_DC20_001																							
					QP_DC20_002																							
6					QP_DC20_003																							
6.5					QP_DC20_004																							

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DEPTH
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Lithology					Sampling																			
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						0.0021	8	18	0	5.5	6.2	0	0.7	0	7	-5	4	0.9	6.4	3	23	4.7	5.5	
7	BCM	CO	UW	WK	QP_DC20_004																			
					QP_DC20_005																			
7.5																								
					QP_DC20_006																			
					QP_DC20_007																			
8		CQ			QP_DC20_008																			
8.5	BSM	ARG	UW	MWK	AMD_DC20_003	0.21	10	0	5.5	0.2	2	4	6.4	11	4.9									
9																								
9.5																								
10		CZN																						

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13.5



Lithology					Sampling																		
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						0.0821	8	18	0	5.5	6.2	0	0.7	0	7	-5	4	0.9	6.4	3	23	4.7	5.5
	BSM	CZN			AMD_DC20_003	0.21	10	0	5.5	0.2	2	4	6.4	11	4.9								
10.5																							
11																							
11.5																							
12		ARG	SW	MWK	AMD_DC20_004	0.084	8	0	6.2	0.7	7	-5	2.6	23	4.7								
12.5																							
13																							

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31.8

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged	
						0.0114	18 31	3.1 6	0 16	-0.10.4	-1 4	-4 35	0.2735	3.7 5.8	8 280	
	BCM	SOIL			AMD_DC21_01											
0.5		VCSS	HW	MWK		0.019	17	5.1	0	0	0	1	0.58	4.4	41	
		CM	MW	EW												
1					AMD_DC21_02											
1.5		GRBX	SW	MS		0.009	16	5.4	0	-0.1	-1	0	0.27	5.1	15	
2																
		CZN	HW	EW	AMD_DC21_03											
		ZSS	SW	MS		0.013	22	5.4	0	0.1	1	-1	0.41	5.2	15	
2.5		CZN	CW	EW												
		MSS	MW	ST	AMD_DC21_04											
3		VCSS	SW			0.009	20	5.4	0	0	0	0	0.28	5.3	13	
		LC														
		VCSS	SW	ST												

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Lithology					Sampling																
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged						
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged						
						0.0114	8	31	3.1	6	0	16	-0.10	4	-4	35	0.2735	3.7	5.8	8	280
3.5	BCM	VCSS	SW	ST	AMD_DC21_04	0.009	20	5.4	0	0	0	0	0.28	5.3	13						
		GRBX		MS																	
4		LC																			
4.5		LC																			
5		GRBX	SW	MS																	
5.5		GRBX	HW	WK																	
6		LC																			
6.5	GRBX	SW	ST	AMD_DC21_05	0.012	18	5.3	0	0	0	0	0	0.36	5.4	10						

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DEPTH
31.8

Lithology					Sampling										Conductivity_aged
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	
						0.0114	18 31	3.1 6	0 16	-0.10.4	-1 4	-4 35	0.2735	3.7 5.8	8 280
7	BCM	GRBX	SW	ST	AMD_DC21_05	0.012	18	5.3	0	0	0	0	0.36	5.4	10
7.5		CSS		MS											
8															
8.5		VCSS	SW	ST	AMD_DC21_06	0.011	31	5.3	0	0	0	0	0.32	5.5	10
9															
9.5		GRBX LC		MW											
10		GRBX	SW	ST	AMD_DC21_07	0.009	27	5.3	0	0.1	1	-1	0.27	5.4	11
		MST GRBX	MW	ST											

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DEPTH
31.8

Lithology					Sampling										
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged
						0.0114	8 31	3.1 6	0 16	-0.10.4	-1 4	-4 35	0.2735	3.7 5.8	8 280
10.5	BCM	GRBX	MW	ST	AMD_DC21_07	0.009	27	5.3	0	0.1	1	-1	0.27	5.4	11
11															
11.5		CM	SW	MWK	QP_DC21_001										
		HCM	UW												
12		CM	SW	MS	AMD_DC21_08	0.289	13	4.2	1	-0.1	-1	9	8.8	4.3	76
12.5															
13		FSS	UW		AMD_DC21_09	1.14	29	3.1	16	-0.1	-1	35	35	4.3	97
13.5			MSS		SW	AMD_DC21_10	0.102	16	4.6	0	0	0	3	3.1	4.4
						AMD_DC21_11	0.012	24	5.4	0	0.1	1	-1	0.36	5.5

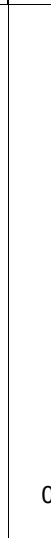
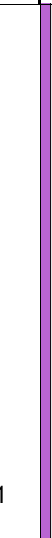
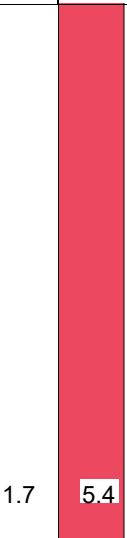
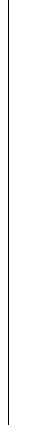
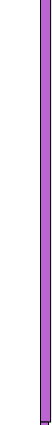
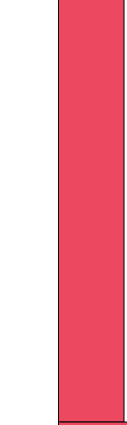
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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged	
						0.0114	8 31	3.1 6	0 16	-0.10.4	-1 4	-4 35	0.2735	3.7 5.8	8 280	
14		MSS		MS												
14.5		VCSS														
15																
15.5	BCM		SW		AMD_DC21_11	0.012	24	5.4	0	0.1	1	-1	0.36	5.5	9	
16		GRBX		ST												
16.5																
17		PBBX			AMD_DC21_12	0.055	14	5	0	0.1	1	1	1.7	5.4	12	

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged	
						0.0114	8 31	3.1 6	0 16	-0.10.4	-1 4	-4 35	0.2735	3.7 5.8	8 280	
17.5	BCM		SW	ST	AMD_DC21_12	0.055									12	
18				ST												
18.5				ST												
19		MSS		MWK	AMD_DC21_13	0.01									8	
19.5	GRBX	ST														
20	PBBX															
20.5																

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged	
						0.0114	8 31	3.1 6	0 16	-0.10.4	-1 4	-4 35	0.2735	3.7 5.8	8 280	
21	BCM	PBBX	SW	ST	AMD_DC21_13	0.01	23	5.3	0	0	0	0	0.32	5.5	8	
		CO	MW	WK	QP_DC21_002											
					QP_DC21_003											
21.5					QP_DC21_004											
		HCM			QP_DC21_005											
22		CO			QP_DC21_006											
		HCM			QP_DC21_007											
22.5		CQ	MW		QP_DC21_008											
					QP_DC21_009											
		CM	SW	WK	AMD_DC21_14	0.179	13	4.1	1	-0.1	-1	5	5.5	3.7	280	
23		MSS	UW	ST	AMD_DC21_15	0.344	11	3.6	4	-0.1	-1	11	11	4.2	100	
23.5																
24	BSM	FSS		MS	AMD_DC21_16	0.499	12	3.7	4	-0.1	0	15	15	4.1	110	
		CSS		MWK												

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Lithology					Sampling										
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged
						BA_Sul	BA_NAG	NAG_pH	NAG_45	ANC_cc	ANC_hs	NAPP	TAP_hs	pH_aged	Conductivity_aged
						0.0114	8 31	3.1 6	0 16	-0.10.4	-1 4	-4 35	0.2735	3.7 5.8	8 280
24.5	BSM	CSS	UW	MWK	AMD_DC21_16	0.499	12	3.7	4	-0.1	0	15	15	4.1	110
25															
25.5			MW	MS	AMD_DC21_17	0.477	12	3.7	4	0	0	15	15	4.2	72
26		GGB													
26.5															
27			SW		AMD_DC21_18	0.064	10	5.2	0	0.4	4	-2	2	5.4	18
27.5															

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	pH_aged	Conductivity_aged	
						0.0114	8	3.1	0	-0.10	-1	-4	0.2735	3.7	18	
28	BSM	GGB	SW	MS	AMD_DC21_18	0.064	10	5.2	0	0.4	4	-2	2	5.4	18	
28.5																
29																
29.5																
30					AMD_DC21_19	0.017	8	6	0	0.4	4	-4	0.53	5.8	15	
30.5																
31																

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Lithology					Sampling																			
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						0.00181	4	18	0	11	3.5	6.5	-0.2	0.4	-2	4	-2	25	0.36	25	7	280	3.9	5.9
0.5 <																								

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00181	14.18	0.11	3.56.5	-0.20.4	-2.4	-2.25	0.3625	7.280	3.95.9	
3.5	BCM	MSS	SW	MS	AMD_DC22_004	0.02	14	0	5.9	0	0	0	0.61	12	5.4	
		VCSS														
4		FSS	MW	WK												
4.5	BCM	GRBX	SW	MS	AMD_DC22_005	0.019	15	0	5.9	0	0	0	0.59	9	5.4	
5																
5.5																
6	BCM	GRBX	SW	MS	AMD_DC22_006	0.038	11	0	6	0	0	1	1.2	12	5.2	
6.5																

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7	BCM	GRBX	SW	MS	AMD_DC22_006	0.038	11	0	6	0	0	1	1.2	12	5.2
7.5															
8															
8.5															
9															
9.5	CM	FSS	SW	MWK	AMD_DC22_007	0.083	13	0	5.6	-0.1	0	3	2.5	38	4.8
10															
10															
10															
10	MSS	FSS	SW	MS	AMD_DC22_008	0.033	12	0	5.9	-0.1	-1	1	1	8	5.6
10															
10	MSS	FSS	SW	MS	AMD_DC22_009	0.012	12	0	6	0.1	1	0	0.36	11	5.7
10															

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Lithology					Sampling																		
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						0.00181	14	18	11	3.5	6.5	-0.20	4	-2	4	-2	25	0.36	25	7	280	3.9	5.9
10.5	BCM	VCSS	SW	MS	AMD_DC22_009	0.012	12	0	6	0.1	1	0	0.36	11	5.7								
		GRBX																					
11			VFSS	UW	ST	AMD_DC22_010	0.527	12	5	3.6	-0.1	-1	16	16	280	3.9							
11.5			CM	SW	MWK	AMD_DC22_011	0.808	18	11	3.5	-0.1	-1	25	25	200	3.9							
12			VFSS	UW	MS	AMD_DC22_012	0.691	14	7	3.7	-0.1	-1	21	21	230	3.9							
12.5			LFSS			AMD_DC22_013	0.645	13	6	3.8	-0.2	-1	20	20	210	3.9							
13			CSS	SW	ST	AMD_DC22_014	0.017	10	0	6	0.1	1	0	0.53	14	5.4							
		MSS	UW																				
		VCSS	SW																				
13.5		GRBX																					

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0181	4.18	0.11	3.56.5	-0.20.4	-2.4	-2.25	0.3625	7.280	3.95.9	
14	BCM	GRBX	SW	ST	AMD_DC22_014	0.017	10	0	6	0.1	1	0	0.53	14	5.4	
		CSS														
		GRBX														
		VCSS														
14.5		MSS		MS	AMD_DC22_015	0.012	13	0	6	0.1	1	-1	0.37	8	5.6	
		VCSS														
15																
15.5		GRBX														
16				ST												
16.5		VFSS	MW	WK	AMD_DC22_016	0.072	12	0	5.5	-0.1	0	2	2.2	12	5.9	
		CM	UW	ST												
		GRBX		WK												
		SAND														
		GRBX	SW	ST	AMD_DC22_017	0.015	10	0	6.1	0	0	0	0.47	7	5.7	

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[illegible]

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00181	4.18	0.11	3.56.5	-0.20.4	-2.4	-2.25	0.3625	7.280	3.95.9	
20.5	BCM	GRBX	SW	ST	AMD_DC22_018	0.313	11	1	4.3	-0.1	0	10	9.6	270	4	
21		LC														
21.5		CO	UW	WK	QP_DC22_001											
					QP_DC22_002											
					QP_DC22_003											
22		CQ			QP_DC22_004											
		HCM	WB	MWK	QP_DC22_005											
22.5					QP_DC22_006											
		CM	SW	VWK	QP_DC22_007											
		CQ			QP_DC22_008											
23		CO	UW	MS	QP_DC22_009											
23.5					QP_DC22_010											

	Lithology				Sampling																			
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						0.00181	4	18	0	11	3.5	6.5	-0.2	0.4	-2	4	-2	25	0.3625	7	280	3.9	5.9	
24	BCM	CO	UW	MS	QP_DC22_010																			
		MWK		QP_DC22_011																				
MSS		AMD_DC22_019		0.73	17	9	3.6	-0.2	-2	22	22	140	4.1											
PBBX																								
24.5	BSM	MSS	UW	ST	AMD_DC22_020	0.13	8	0	5.9	0.2	2	2	4											
25		LC	UW	ST	AMD_DC22_021	0.37	6	1	4.4	0.1	1	10	11	52	4.7									
26		MSS	UW	ST																				
		MST	SW	WK																				
26.5		FSS	UW	ST																				
		MST	SW	WK																				
		FSS	UW	ST																				
27	MST	SW	WK																					

	Lithology				Sampling																			
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						0.00181	4	18	0	11	3.5	6.5	-0.2	0.4	-2	4	-2	25	0.36	25	7	280	3.9	5.9
	BSM	MST	SW	WK	AMD_DC22_021																			
27.5		GWK	UW	ST																				
28		ARG	SW	MWK			0.37	6	1	4.4	0.1	1	10	11	52	4.7								
28.5		GWK	UW	ST																				
		ARG	SW	MWK																				
		GWK	UW	MS	AMD_DC22_022																			
29		ARG	SW	MWK																				
		GWK	UW	MS																				
29.5		ARG	SW	MWK																				
		GWK	UW	ST			0.087	4	0	6.5	0.4	4	-2	2.7	14	5.6								
30		ARG	SW	MWK																				
		GWK	UW	ST																				
		ARG	SW	MWK																				
		GWK	UW	ST																				

Lithology					Sampling																			
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						0.00181	4	18	0	11	3.5	6.5	-0.2	0.4	-2	4	-2	25	0.36	25	7	280	3.9	5.9
30.5	BSM	GWK	UW	ST	AMD_DC22_022	0.087	4	0	6.5	0.4	4	-2	2.7	14	5.6									
		ARG	SW	WK																				
31		GWK	UW	ST																				
		ARG	SW	MWK																				
		GWK	UW	ST																				
31.5		ARG	SW	MWK																				
		GWK	UW	ST																				

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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD 0 95	Rec_pc 73.300		ABA_Sul_T 0.0178	ABA_NAG_pH 2.8 6	ABA_ANC_cc -0.31.3	ABA_ANC_hs -3 12	ABA_NAPP -2 45	ABA_TAP_hs 0.2554	ABA_NAG_45 0 27	pH_aged 3.4 6	Conductivity_aged 4 350
0.5		GRBX		ST												
		VCSS														
1					83	100										
1.5	BCM		SW				AMD_DC23_01	0.012	5.4	0.2	2	-2	0.36	0	5.8	5
2																
2.5		GRBX		MS	21	100										
3																
					94	100	AMD_DC23_02	0.009	5.5	0.1	1	-1	0.27	0	5.6	4

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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pc		ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					0 95	73.330		0.0178	2.8 6	-0.31.3	-3 12	-2 45	0.2554	0 27	3.4 6	4 350
3.5	BCM	GRBX	SW	MS	94	100	AMD_DC23_02	0.009	5.5	0.1	1	-1	0.27	0	5.6	4
4																
4.5																
5																
5.5			MW	MWK	88	100										
6							AMD_DC23_03	0.037	5.7	0.1	1	1	1.1	0	5.6	5
6.5			UW	MS	25	80										
		CM	MW	WK			AMD_DC23_04	0.221	3.3	-0.3	-3	7	6.8	14	6	23
		LC														
		GRBX	UW	MS			AMD_DC23_05	0.008	6	0.1	1	-1	0.26	0	5.9	4
		HCM		MWK	36	100	AMD_DC23_06	0.051	4.4	-0.2	-2	2	1.6	1	5.5	8

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	Lithology				Recovery		Sampling																			
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged										
					RQD 0 95	Rec_pc 73.300		BA_Sul 0.0178	A_NAG 2.8 6	A_ANC -0.31.3	A_ANC -3 12	BA_NAP -2 45	A_TAP 0.2554	A_NAG 0 27	H_age 3.4 6	uctivity 4 350										
7	BCM	HCM CM	UW	MWK	36	100	AMD_DC23_06	0.051	4.4	-0.2	-2	2	1.6	1	5.5	8										
		GRBX	MW	WK			AMD_DC23_07	0.036	5.3	0.1	1	0	1.1	0	5.7	7										
		FSS MSS VCSS	SW	MWK MS			AMD_DC23_08	0.013	5.2	0	0	0	0.39	0	5.7	7										
7.5		MSS	UW		83	100																				
		VCSS		MWK		AMD_DC23_09	0.008	6	0.1	1	-1	0.25	0	5.6	6											
8																										
8.5			SW																							
9		CSS		MS																						
9.5					87											100										
10		FSS VCSS	UW SW																							
				ST																						

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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pc		ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					0 95	73.330		0.0178	2.8 6	-0.31.3	-3 12	-2 45	0.2554	0 27	3.4 6	4 350
10.5	BCM	VCSS MSS	SW	ST	87	100	AMD_DC23_09	0.008	6	0.1	1	-1	0.25	0	5.6	6
11		VCSS	MW	MS	0	100	AMD_DC23_10	0.009	5.7	0.1	1	-1	0.28	0	5.4	8
11.5		CQ	UW													
12		CM	HW	WK			AMD_DC23_11	0.613	3.6	-0.1	-1	19	19	5	3.9	180
12.5		ZSS	SW													
13		FSS	UW	MWK	68	100	AMD_DC23_12	0.751	3.4	0	0	23	23	9	3.6	350
		CSS MSS	MW													
13.5		VCSS	SW	MS	95	100	AMD_DC23_13	0.01	5.9	0.2	2	-2	0.31	0	5.5	6
		GRBX														

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	Lithology				Recovery		Sampling										
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged	
					RQD	Rec_pc		BA_Sul	A_NAG	A_ANC	A_ANC	BA_NAP	A_TAP	A_NAG	H_age	uctivity	
					0 95	73.3 100		0.0178	2.8 6	-0.31.3	-3 12	-2 45	0.2554	0 27	3.4 6	4 350	
14	BCM	GRBX	SW	MS	95	100	AMD_DC23_13	0.01	5.9	0.2	2	-2	0.31	0	5.5	6	
14.5																	
15		VCSS	MW		69	100	AMD_DC23_14	0.015	5.8	0.3	3	-2	0.47	0	5.7	7	
15.5																	
16		GRBX	SW		ST	54	100										
16.5																	
17	GRBX	MW	MS														

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	Lithology				Recovery		Sampling											
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged		
					RQD 0 95	Rec_pc 73.330		BA_Sul 0.0178	A_NAG 2.8 6	A_ANC -0.31.3	A_ANC -3 12	BA_NAP -2 45	A_TAP 0.2554	A_NAG 0 27	H_age 3.4 6	uctivity 4 350		
17.5	BCM	GRBX	MW	MS	54	100	AMD_DC23_14	0.015	5.8	0.3	3	-2	0.47	0	5.7	7		
18							AMD_DC23_15	0.031	5.3	0.2	2	-1	0.96	0	5.8	5		
18.5					33	100	AMD_DC23_16	0.539	3.6	0.1	1	16	16	5	4	170		
19							UW	MS	90	100	AMD_DC23_17	0.346	3.8	0.2	2	8	11	3
19.5		CM	MWK	ST														
		FSS																
20		VFSS																
		CSS																
20.5		FSS																
		CSS																

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	Lithology				Recovery		Sampling																			
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged										
					RQD 0 95	Rec_pc 73.300		BA_Sul 0.0178	A_NAG 2.8 6	A_ANC -0.31.3	A_ANC -3 12	BA_NAP -2 45	A_TAP 0.2554	A_NAG 0 27	H_age 3.4 6	uctivity 4 350										
21	BCM	CSS	UW	ST	90	100	AMD_DC23_17	0.346	3.8	0.2	2	8	11	3	3.8	230										
		MSS		SF																						
21.5		CSS		ST																						
		CM FSS	HW	MWK VWK																						
22		MSS	UW	MS	11	100																				
		FSS																								
22.5		MSS																								
		FSS																								
23		CSS	SW	ST			AMD_DC23_18	0.256	4	0.1	1	7	7.8	2	3.4	350										
		VCSS	UW																							
23.5		CSS																								
		FSS	HW	WK	45	100																				
24		VCSS	SW	MWK																						

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DEPTH
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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pc		BA_Sul	A_NAG	A_ANC	A_ANC	BA_NAP	A_TAP	A_NAG	H_age	uctivity
					0 95	73.300		0.0178	2.8 6	-0.31.3	-3 12	-2 45	0.2554	0 27	3.4 6	4 350
24.5	BCM		SW	MWK	45	100										
		VCSS			10	100	AMD_DC23_18	0.256	4	0.1	1	7	7.8	2	3.4	350
25			HW	VWK												
25.5		CM														
		HCM		MWK	0	75	QP_DC23_001									
							QP_DC23_002									
26		CQ	SW		0	100	QP_DC23_003									
				WK												
26.5		CM	MW		0	100	QP_DC23_004									
		CQ	SW				QP_DC23_005									
					0	100	QP_DC23_006									
							QP_DC23_007									
27																
		CO	UW	MWK			QP_DC23_008									
27.5					33	100	QP_DC23_009									

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DEPTH
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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pc		BA_Sul	A_NAG	A_ANC	A_ANC	BA_NAP	A_TAP	A_NAG	H_age	uctivity
					0 95	73.330		0.0178	2.8 6	-0.31.3	-3 12	-2 45	0.2554	0 27	3.4 6	4 350
28	BCM	CO	UW	MWK	33	100	QP_DC23_009									
							QP_DC23_010									
28.5					71	100	QP_DC23_011									
							QP_DC23_012									
29							QP_DC23_013									
29.5					56	100	QP_DC23_014									
							QP_DC23_015									
30							QP_DC23_016									
30.5																
31					31	100										

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Lithology					Recovery		Sampling																			
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged										
					RQD	Rec_pct		ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged										
					0 95	73.300		0.0178	2.8 6	-0.31 3	-3 12	-2 45	0.2554	0 27	3.4 6	4 350										
31.5	BCM	CO	UW	MWK	31	100	QP_DC23_016	0.079	4.9	0.1	1	1	2.4	0	4.7	34										
							QP_DC23_017																			
		FSS					AMD_DC23_19																			
32			SW	WK	11	100	QP_DC23_018																			
		CQ					QP_DC23_019																			
							QP_DC23_020																			
32.5			HCM	MW																						
				HW	WK																					
		CM				10	100	AMD_DC23_20	0.062	4.8	0.1	1	1	1.9	0	4.9	22									
33.5			UW	MS																						
34			VFSS		WK																					
				MW	MWK																					
		CM				0	100	AMD_DC23_22	0.038	5.2	0.1	1	0	1.2	0	4.9	19									
34.5							AMD_DC23_23	0.09	5	0.2	2	1	2.8	0	4.4	58										

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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pct		ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					0 95	73.330		0.0178	2.8 6	-0.31.3	-3 12	-2 45	0.2554	0 27	3.4 6	4 350
		CM		MWK	0	100										
		FSS														
35		MSS	MW	WK												
		VFSS														
35.5					38	100	AMD_DC23_23	0.09	5	0.2	2	1	2.8	0	4.4	58
36		MSS	SW	MWK												
	BCM															
		CSS	UW	ST												
36.5			SW	MWK												
		GRCG	MW				AMD_DC23_24	0.206	4.2	0.2	2	5	6.3	1	3.8	200
		FSS														
37		PBBX	HW	WK	60	100										
37.5		GRCG														
		FSS	CW	EW												
38	BSM	PBBX	HW	WK	27	100	AMD_DC23_26	0.474	4.1	1.3	12	2	14	2	4.7	140

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Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pct		ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					0 95	73.330		0.0178	2.8 6	-0.31.3	-3 12	-2 45	0.2554	0 27	3.4 6	4 350
38.5	BSM	PBBX	HW	WK	27	100	AMD_DC23_26	0.474	4.1	1.3	12	2	14	2	4.7	140
39		GWK	SW	MWK												
39.5		ARG	MW	WK	15	73.33	AMD_DC23_27	1.78	2.8	1	10	45	54	27	4.3	180
40		GWK	SFA	MS												
40.5		LC														

Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0215	14	0	6	-0.3	-3	-2	0.4666	16870	3.15.4	
		MSS	SW		AMD_DC24_001	0.015	14	0	6	0	0	0	0.46	36	5.1	
0.5				MWK												
		GRBX	MW													
1					AMD_DC24_002	0.024	16	0	5.7	-0.1	-1	1	0.74	34	5	
		LC														
1.5																
	BCM	GRBX	CW	EW												
2		MSS														
		FSS	MW	WK	AMD_DC24_003	0.019	14	0	6.2	0	0	1	0.57	27	5.1	
2.5																
		LC														
3																
		CM			QP_DC24_001											
		ZSS	SW	WK	AMD_DC24_005	0.117	10	0	5.5	-0.1	-1	4	3.6	26	4.6	

Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0215	2.55	0.41	3.68	-0.30	-3.3	-2.66	0.4666	16.870	3.15	4.4
3.5	BCM	ZSS	SW	WK	AMD_DC24_005	0.117	10	0	5.5	-0.1	-1	4	3.6	26	4.6	
		MST		MS												
4																
4.5		ZSS														
5			UW													
		CM		MWK												
5.5		ZSS			AMD_DC24_006	0.587	14	7	3.7	-0.1	-1	18	18	30	3.7	
6		FSS														
6.5																

Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0215	255	0.41	3.68	-0.303	-3.3	-2.66	0.4666	16870	3.15.4	
7	BCM	FSS	UW	MWK	AMD_DC24_006	0.587	14	7	3.7	-0.1	-1	18	18	30	3.7	
		CSS	SW	ST	AMD_DC24_007	0.017	7	0	6.1	0.1	1	0	0.51	25	5.2	
7.5			MW													
8																
8.5		VCSS		SW	AMD_DC24_008	0.015	11	0	6	0.1	1	0	0.47	16	5.4	
9																
9.5																
10																

Lithology					Sampling																								
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH														
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH														
						0.0215	2	55	0	41	3	6.8	-0.3	0.3	-3	3	-2	66	0.4666	16	870	3.1	5.4						
10.5	BCM	VCSS	SW	ST	AMD_DC24_008	0.015	11	0	6	0.1	1	0	0.47	16	5.4														
11																													
11.5																													
12																	CM	UW	MS	QP_DC24_002									
																	VCSS	SW	ST										
																	CO	UW	WK	QP_DC24_003									
12.5																	CQ												
																	HCM			QP_DC24_004									
13		CM	UW	MS	AMD_DC24_009	2.15	55	41	3	-0.3	-3	66	66	870	3.1														
		FSS			AMD_DC24_010	0.374	14	3	3.9	0	0	11	11	320	3.6														
		CM																											
13.5		FSS															MWK												

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Deep Creek

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0215	255	0.41	3.68	-0.303	-3.3	-2.66	0.4666	16870	3.15.4	
14	BCM	FSS	UW	MWK	AMD_DC24_010	0.374	14	3	3.9	0	0	11	11	320	3.6	
14.5																
15																
15.5																
16	CO	CM	SW	WK	QP_DC24_005											
16.1					QP_DC24_006											
16.4					QP_DC24_007											
16.7					QP_DC24_008											
16.5	CQ															

Depth	Lithology				SAMPLEID	Sampling										
	Formation	Lithology	Weathering	Strength		ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0215	2.55	0.41	3.68	-0.30	-3.3	-2.66	0.4666	16.870	3.15.4	
17	BCM	CQ	SW		QP_DC24_008 QP_DC24_009											
17.5		CM	MW	WK	AMD_DC24_011	0.06	20	0	4.6	0	0	1	1.8	35	4.6	
18		ZSS	UW	MWK												
		CQ		WK	QP_DC24_010											
18.5		CM	MW	MWK	AMD_DC24_012	0.08	31	6	3.9	0.1	1	1	2.5	33	4.7	
19		CO	SW	WK	QP_DC24_011 QP_DC24_012											
		CM			QP_DC24_013											
19.5		LC														
		CQ CM	SW MW		AMD_DC24_013 QP_DC24_014											
20		ARG	HW	WK		0.131	4	0	6.2	0.3	3	1	4	50	4.2	

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Deep Creek

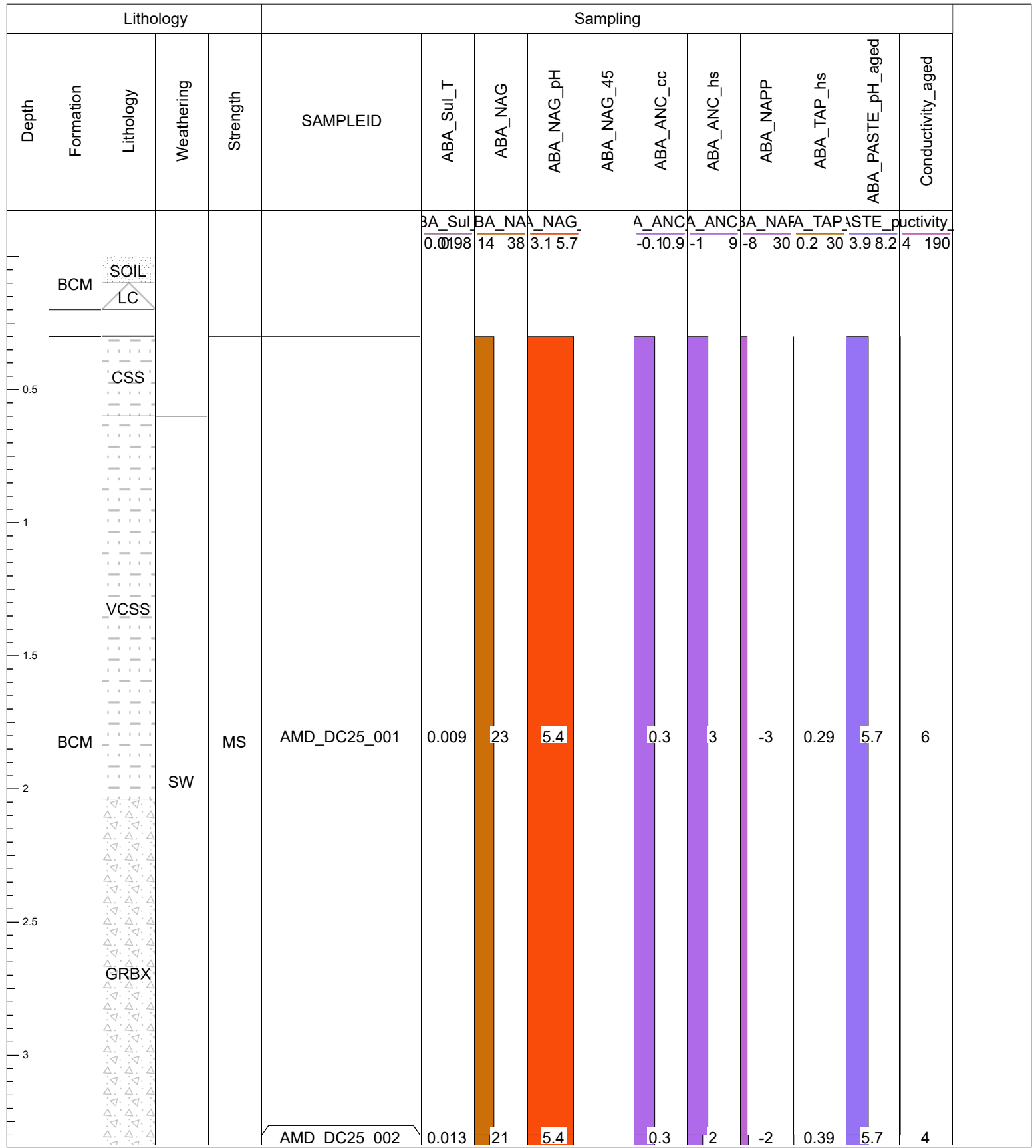
DEPTH
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Lithology					Sampling																		
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						0.0215	2	55	0	41	3	6.8	-0.3	0.3	-3	3	-2	66	0.4666	16	870	3.1	5.4
20.5	BSM		HW	WK	AMD_DC24_013																		
21																							
21.5																							
22																							
22.5																							
			UW	MWK	AMD_DC24_014																		

PROSPECT

DEPTH
37.5



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH		ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						0.0198	14.38	3.15.7		-0.10.9	-1.9	-8.30	0.230	3.98.2	4190	
3.5	BCM	GRBX	SW	MS	AMD_DC25_002	0.013	21	5.4		0.3	2	-2	0.39	5.7	4	
4				ST												
4.5				MWK												
5		VCSS	SW	MS	AMD_DC25_003	0.012	19	5.3		0.1	1	-1	0.36	5.6	6	
5.5		GRBX		MS												
6		CSS		MWK												
6.5		GRBX	MW	MS												

PROSPECT

DEPTH
37.5

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH		ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						0.0198	14 38	3.1 5.7		-0.10.9	-1 9	-8 30	0.2 30	3.9 8.2	4 190	
7	BCM	GRBX	MW	MS	AMD_DC25_003	0.012	19	5.3		0.1	1	-1	0.36	5.6	6	
7.5																
8					AMD_DC25_004	0.976	29	3.1		-0.1	-1	30	30	3.9	190	
8.5		VFSS	SW													
9					AMD_DC25_005	0.175	32	3.7		0	0	5	5.3	4.9	23	
9.5			MW		AMD_DC25_006	0.63	26	3.3		0.1	1	18	19	4.3	110	
10		LVFS	SW		AMD_DC25_007	0.578	34	3.2		0.1	1	16	18	4.3	93	

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DEPTH
37.5



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH		ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						0.00198	14.38	3.15.7		-0.10.9	-1.9	-8.30	0.230	3.98.2	4190	
			SW		AMD_DC25_007	0.578	34	3.2		0.1	1	16	18	4.3	93	
10.5																
		LVFS														
11																
11.5																
	BCM			MS												
			MW		AMD_DC25_008	0.007	38	5.3		0.2	2	-2	0.2	5.8	6	
12																
12.5																
		GRBX														
13																

PROSPECT

DEPTH
37.5



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH		ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						0.00198	14 38	3.1 5.7		-0.10.9	-1 9	-8 30	0.2 30	3.9 8.2	4 190	
13.5	BCM	GRBX	MW	MS	AMD_DC25_008	0.007	38	5.3		0.2	2	-2	0.2	5.8	6	
14																
14.5																
15					AMD_DC25_009	0.084	26	4.6		0.3	3	-1	2.6	5.7	16	
15.5	VCSS	VCSS														
16																
16.5					AMD_DC25_010	0.007	32	5.4		0.4	4	-3	0.2	6.1	5	

Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged		
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH		ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged		
						0.00198	14.38	3.15.7		-0.10.9	-1.9	-8.30	0.2.30	3.98.2	4.190		
17	BCM	VCSS	MW	MS	AMD_DC25_010	0.007	32	5.4		0.4	4	-3	0.2	6.1	5		
17.5																	
18		CSS															
18.5		LFSS	SW		AMD_DC25_011	0.393	27	3.5		0.3	3	9	12	4.9	120		
19		FSS															
19.5		LFSS			AMD_DC25_012	0.434	30	3.2		0.2	2	11	13	4.3	170		
20																	

PROSPECT

DEPTH
37.5



Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged		
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH		ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged		
						0.00198	14.38	3.15.7		-0.10.9	-1.9	-8.30	0.230	3.98.2	4.190		
	BCM	LFSS	SW	MS	AMD_DC25_012	0.434	30	3.2		-0.2	-2	-11	-13	4.3	170		
		FSS															
20.5		MSS	MW														
		CSS	SW														
21						AMD_DC25_013	0.381	25	3.4		0.4	4	8	12	4.4	89	
21.5																	
		GRBX															
22																	
22.5		CO			QP_DC25_001												
					QP_DC25_002												
23		HCM			QP_DC25_003												
		CO															

PROSPECT

DEPTH
37.5



Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged		
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH		ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged		
						0.0198	14.38	3.15.7		-0.10.9	-1.9	-8.30	0.2.30	3.98.2	4.190		
23.5	BCM	CO			QP_DC25_003												
					QP_DC25_004												
24					QP_DC25_005												
24.5					QP_DC25_006												
25					QP_DC25_007												
25.5					QP_DC25_008												
26		HCM			QP_DC25_009												
		CM				MWK	AMD_DC25_014	0.087	34	3.6		0.2	2	0	2.7	6.5	26
26.5																	

PROSPECT

DEPTH
37.5

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH		ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						0.0198	14.38	3.15.7		-0.10.9	-1.9	-8.30	0.2.30	3.98.2	4.190	
27	BCM			MWK	AMD_DC25_014	0.087	34	3.6		0.2	2	0	2.7	6.5	26	
27.5																
28		   		MS	AMD_DC25_015	0.017	21	4.9		0.3	2	-2	0.52	7.1	28	
28.5																
29																
29.5					AMD_DC25_016	0.027	20	5.1		0.3	3	-2	0.84	7.1	24	
30				MWK	AMD_DC25_017	0.016	20	5.3		0.3	3	-2	0.48	7.8	34	

PROSPECT

DEPTH
37.5

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH		ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						0.0198	14.38	3.15.7		-0.10.9	-1.9	-8.30	0.2.30	3.98.2	4.190	
30.5	BCM	VFSS	UW	MWK	AMD_DC25_017	0.016	20	5.3		0.3	3	-2	0.48	7.8	34	
31		LC														
31.5		VFSS		MWK												
		PBBX														
32		VFSS		MS	AMD_DC25_018	0.032	17	5.6		0.3	3	-2	0.97	8.2	41	
32.5		VFSS	UW													
		PBBX		MWK												
33		VFSS		MS												
		CBBX		MWK												
	VFSS		MS													

PROSPECT

DEPTH
37.5

Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_pH	ABA_NAG_45	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						ABA_Sul_T	ABA_NAG	ABA_NAG_pH		ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_PASTE_pH_aged	Conductivity_aged	
						0.0198	14.38	3.15.7		-0.10.9	-1.9	-8.30	0.230	3.98.2	4190	
33.5	BCM	VFSS	UW	MS	AMD_DC25_018	0.032	17	5.6		0.3	3	-2	0.97	8.2	41	
		PBBX														
34		VFSS														
		CBBX		MWK												
		FSS														
34.5		PBBX														
		FSS														
35		PBBX		MS	AMD_DC25_019	0.065	14	5.3		0.9	9	-7	2	7.7	43	
35.5																
36		CBBX		MWK												
		CZN		EW												
36.5	BSM	GGB	UW	MS	AMD_DC25_020	0.027	15	5.7		0.9	9	-8	0.81	7.6	21	

DEPTH
37.5



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PROSPECT
Deep Creek

DEPTH
22.9



Lithology					Sampling										
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH
						0.00184	8.33	0.14	3.26	-0.20	-2.6	-1.24	0.3726	13500	3.35
	HOL	SOIL COL	CW	VSO											
0.5	BCM	CSS	SW	MWK	AMD_DC26_001	0.017	25	0	5.7	0	0	1	0.52	50	4.9
1		LC													
1.5		CSS		MS											
2		MSS	UW	MWK											
		CSS	SW	MS											
		MSS	MW	WK											
2.5		GRBX	SW	ST											
		LC													
3		VCSS	CW	EW											
		CM	MW	MWK											

PROSPECT
Deep Creek

DEPTH
22.9



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0184	8.33	0.14	3.26	-0.20	-2.6	-1.24	0.3726	13500	5.3	
3.5	BCM	CM	MW	MWK	AMD_DC26_002	0.026	19	0	5.7	-0.1	-1	1	0.8	32	5	
		VFSS	HW	VWK	AMD_DC26_003	0.015	19	0	5.9	0	0	0	0.44	22	5.1	
4																
		MSS		MWK	AMD_DC26_004	0.026	27	0	5.4	0	0	1	0.81	13	5.3	
4.5																
5																
			SW													
5.5																
6		GRBX	ST		AMD_DC26_005	0.012	23	0	5.6	0	0	0	0.37	45	5.1	
6.5																

PROSPECT
Deep Creek

DEPTH
22.9



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00184	8.33	0.14	3.26	-0.20	-2.6	-1.24	0.3726	13500	3.35	3.3
7	BCM	GRBX	SW	ST	AMD_DC26_005	0.012	23	0	5.6	0	0	0	0.37	45	5.1	
7.5		VCSS		MS												
8		VCSS														
8.5		GRBX	MW	MWK	AMD_DC26_006	0.017	13	0	6.1	0	0	1	0.52	18	5	
9	BSM	VCSS	HW	WK												
9.5		VCSS														
10	BCM	GRBX	SW	ST												

Depth	Lithology				SAMPLEID	Sampling										
	Formation	Lithology	Weathering	Strength		ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0184	8.33	0.14	3.26.1	-0.20.6	-2.6	-1.24	0.3726	13.500	3.35.3	
10.5	BCM	GRBX	SW	ST	AMD_DC26_006	0.017	13	0	6.1	0	0	1	0.52	18	5	
		MSS		MS	AMD_DC26_007	0.036	11	0	6.1	0	0	1	1.1	31	5.1	
11		FSS		WK												
11.5		CM	MW	MWK	AMD_DC26_008	0.073	15	0	5.7	0.1	1	1	2.2	25	5.1	
12		GRBX	SW	ST	AMD_DC26_009	0.032	20	0	5.5	-0.1	-1	1	0.98	17	5.3	
		VCSS		MS												
12.5		CM VCSS		WK												
13		LC														
		FSS	SW	MS	AMD_DC26_010	0.035	28	0	5.3	0.1	1	0	1.1	17	5.2	
13.5		CM	MW	MWK	AMD_DC26_011	0.108	33	1	4.4	-0.1	-1	3	3.3	28	4.8	

Depth	Lithology				SAMPLEID	Sampling									
	Formation	Lithology	Weathering	Strength		ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH
						0.0184	8.33	0.14	3.26	-0.20	-2.6	-1.24	0.37	2613	500
						0.0184	8.33	0.14	3.26	-0.20	-2.6	-1.24	0.37	2613	500
14	BCM	CM	MW	MWK	AMD_DC26_011	0.108	33	1	4.4	-0.1	-1	3	3.3	28	4.8
			UW	WK	QP_DC26_001										
		FSS	SW	MS											
				ST											
		CM			AMD_DC26_012	0.07	21	0	5.3	-0.1	-1	2	2.1	14	5.1
		CQ	MW		QP_DC26_002										
				WK											
			HW												
14.5															
		CM			AMD_DC26_013	0.435	15	4	3.8	-0.2	-2	13	13	13	3.9
15			SW	MWK											
			HW	WK											
15.5															
16															
		GRBX	MW	MWK	AMD_DC26_014	0.839	19	14	3.2	0.2	2	24	26	500	3.3
16.5															

	Lithology				Sampling																							
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						0.00184	8.33	0.14	3.26	-0.206	-2.6	-1.24	0.3726	13500	3.35	3.3												
17	BCM		MW		AMD_DC26_014	0.839	19	14	3.2	0.2	2	24	26	500	3.3													
17.5			GRBX														MWK											
18			SW																									
18.5		VCSS	MS																									
		MSS																										
		VCSS	ST																									
		MSS																										
19		CO	UW	MWK													QP_DC26_003											
																	QP_DC26_004											
	QP_DC26_005																											
19.5	MST	HW		AMD_DC26_016	0.733	22	11	3.4	0	0	22	22	200	3.8														
20	BSM	GGB	SW	WK	AMD_DC26_017	0.149	8	0	5.9	0.6	6	-1	4.6	48	4.7													

PROSPECT
Deep Creek

DEPTH
22.9



Lithology					Sampling																		
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						0.00184	8	33	0	14	3.2	6.1	-0.2	0.6	-2	6	-1	24	0.3726	13	500	3.3	5.3
20.5	BSM	GGB	SW	WK	AMD_DC26_017	0.149	8	0	5.9	0.6	6	-1	4.6	48	4.7								
21																							
21.5																							
22																							
22.5																							

PROSPECT
Deep Creek

DEPTH
25.8



Lithology					Sampling																								
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH														
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH														
						0.016	9	0	6.2	0.1	1	-1	0.49	56	5.4														
0.5	BCM	VCSS	SW	SO	AMD_DC27_001	0.016	9	0	6.2	0.1	1	-1	0.49	56	5.4														
1																													
1.5																													
2	BSM	GRBX	MW	ST	AMD_DC27_002	0.022	13	0	6.1	0	0	0	0.68	72	5.5														
2.5																													
3		MST		VWK																									
		VCSS	SW	ST	AMD_DC27_003	0.016	11	0	6.2	0.1	1	-1	0.49	57	5.3														

PROSPECT
Deep Creek

DEPTH
25.8



Lithology					Sampling																							
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						0.011	14	297	0	264	2.3	6.5	-1.7	0.3	-16	3	-1	401	0.3	400	12,700	2.6	5.5					
3.5	BSM	VCSS	SW	ST	AMD_DC27_003	0.016	11	0	6.2	0.1	1	-1	0.49	57	5.3													
4		GRBX	MW																									
4.5		CSS	UW																									
5	BCM	PBBX	SW	MS	AMD_DC27_004	0.013	10	0	6.4	0.1	1	-1	0.38	30	5.4													
5.5		VCSS																										
6		PBBX	UW	ST																								
6.5		GRBX	SW																									

Depth	Lithology				SAMPLEID	Sampling										
	Formation	Lithology	Weathering	Strength		ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.013	10	0	6.4	0.1	1	-1	0.38	30	5.4	
7		GRBX	SW	ST	AMD_DC27_004											
		CZN	HW	WK												
		CM	SW		AMD_DC27_005	0.098	13	0	6	0	0	3	3	92	4.4	
		VFSS		MWK												
					AMD_DC27_006	0.12	11	0	5.5	0.1	1	3	3.7	92	4.3	
7.5		FSS														
		MSS		MS												
8		CSS	UW													
		MSS														
8.5	BCM															
		CSS	SW		AMD_DC27_007	0.014	7	0	6.5	0.1	1	-1	0.43	19	5.3	
9				ST												
		VCSS														
9.5																
10																

PROSPECT
Deep Creek

DEPTH
25.8



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.014	7	0	6.5	0.1	1	-1	0.43	19	5.3	
10.5	BCM	VCSS		ST	AMD_DC27_007	0.017	7	0	6.4	0.1	1	-1	0.52	21	5.3	
		GRBX														
		CSS		MS												
11																
		PBBX		ST												
11.5																
			SW		AMD_DC27_008											
12																
		MSS		MS												
12.5																
		PBBX		ST												
13																
		VCSS														
		CM														
13.5		CSS	SW	ST	AMD_DC27_009	0.162	9	0	5.8	0.1	1	4	5	140	3.8	

PROSPECT
Deep Creek

DEPTH
25.8



Lithology					Sampling																		
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						0.01	14	297	0	264	2.3	6.5	-1.7	0.3	-16	3	-1	401	0.3	400	12,700	2.6	5.5
14	BCM	CSS	SW	ST	AMD_DC27_009	0.162	9	0	5.8	0.1	1	4	5	140	3.8								
14.5																							
15																							
15.5		VCSS																					
16	BCM		SW	ST	AMD_DC27_010	0.031	11	0	6.3	0.1	1	0	0.94	31	5.1								
16.5																							

PROSPECT
Deep Creek

DEPTH
25.8



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.031	11	0	6.3	0.1	1	0	0.94	31	5.1	
17	BCM	VCSS	SW	ST	AMD_DC27_010	0.031	11	0	6.3	0.1	1	0	0.94	31	5.1	
		PBBX														
17.5		CSS	UW		AMD_DC27_011	13.1	297	264	2.3	-1.7	-16	401	400	2,700	2.6	
		CO			QP_DC27_001											
					QP_DC27_002											
18		CM			QP_DC27_003											
					QP_DC27_004											
18.5					QP_DC27_005											
					QP_DC27_006											
19		CO	UW	MS	QP_DC27_007											
19.5					QP_DC27_008											
20		CO			QP_DC27_009											

PROSPECT
Deep Creek

DEPTH
25.8



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.018	1.14	297	0.264	2.3	6.5	-1.7	0.3	19,700	2.6	5.5
20.5	BCM	CQ			QP_DC27_009											
		CM	SW	MWK	QP_DC27_010											
21		PBBX	MW	WK	AMD_DC27_012	0.188	7	0	6	0	0	6	5.8	280	3.7	
21.5	BSM															
22		ARG	SW	MWK												
22.5		GWK		ST	AMD_DC27_013	0.116	6	0	6.3	0.3	3	1	3.5	110	4.2	
23																
23.5		ARG	SW	MWK	AMD_DC27_014	0.063	4	0	6.5	0.3	3	-1	1.9	60	4.5	
			HW	VWK												

PROSPECT
Deep Creek

DEPTH
25.8



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.063	4	0	6.5	0.3	3	-1	1.9	60	4.5	
24	BSM				AMD_DC27_014	0.063	4	0	6.5	0.3	3	-1	1.9	60	4.5	
24.5		ARG	HW	VWK												
25																
25.5		LC														

PROSPECT

DEPTH
13.5

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.001129	330	11	3.56	-0.40	-4	-1	3	0.15	9	4.1
0.5	BCM	SOIL			AMD_DC28_001	0.113	10	0	5.3	-0.4	-4	3	3.5	130	4.1	
		VCSS	SW	MS	AMD_DC28_002	0.072	24	11	3.5	0.1	1	2	2.2	15	4.8	
		LC														
1		CO	SW	MWK	QP_DC28_001											
					QP_DC28_002											
1.5																
					QP_DC28_003											
2					QP_DC28_004											
		CM	UW	MS	AMD_DC28_003	0.115	33	8	3.9	0.2	2	2	3.5	12	5	
																CO
2.5	CM		SW	MWK												
	ZSS	UW	MS	AMD_DC28_004	0.113	19	0	5.9	0.2	2	2	3.5	9	5.5		
3															MST	

	Lithology				Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.001129	330	11	3.56	-0.40	-4	-1	0.15	9	4.1	5.7
3.5	BCM	MST	UW	MS	AMD_DC28_004	0.113	19	0	5.9	0.2	2	2	3.5	9	5.5	
		ZSS														
		MST														
		ZSS														
4		VFSS	SW		AMD_DC28_005	0.005	14	0	6.1	0.1	1	-1	0.15	10	5.7	
		LVFS														
		MST														
		ZSS														
5		MST	UW		AMD_DC28_006	0.016	16	0	6	0.2	2	-1	0.48	39	4.8	
		ZSS														
	MST															
5.5	MST															
6	FSS	MW	MWK	AMD_DC28_007	0.082	15	0	5.8	0.1	1	1	2.5	40	4.5		
6.5	CSS		MS	AMD_DC28_008	0.02	15	0	5.7	0.1	1	-1	0.62	14	4.8		

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0112	9.33	0.11	3.56	-0.40	-4.3	-1.3	0.15	13.5	4.1	5.7
7	BCM	CSS	MW	MS	AMD_DC28_008	0.02	15	0	5.7	0.1	1	-1	0.62	14	4.8	
		PBBX														
		LCSS	SW													
7.5		GRBX	MW													
		LCSS		MWK	AMD_DC28_009	0.028	11	0	6	0.1	1	-1	0.85	27	4.9	
		GRBX														
8		VCSS														
8.5		GRBX	HW													
9				MS	AMD_DC28_010	0.025	9	0	6.1	0.2	2	-1	0.76	31	4.8	
9.5		ZSS	UW													
10		LCSS														
		PBBX														

PROSPECT

DEPTH
13.5

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00112	9 33	0 11	3.5 6.1	-0.40.3	-4 3	-1 3	0.15.5	9 130	4.1 5.7	
	BCM	PBBX	UW	MS	AMD_DC28_010	0.025	9	0	6.1	0.2	2	-1	0.76	31	4.8	
10.5	BSM	GWK			AMD_DC28_011	0.059	17	0	6	0.2	2	0	1.8	35	4.8	
11					GC_DC28_001											
11.5					GC_DC28_002											
12					AMD_DC28_13	0.056	13	0	5.9	0.3	3	-1	1.7	34	4.9	
12.5																
13																

PROSPECT
Deep Creek

DEPTH
28.9



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00131	7.27	0.5	3.962	-0.201	-2.1	-1.9	0.423	7.94	4.15.8	
0.5	BCM	SOIL														
1		LC														
1.5																
2																
2.5	VCSS	MW	MS	AMD_DC29_001	0.019	18	0	5.6	0.1	1	-1	0.58	21	5.5		
3																

PROSPECT
Deep Creek

DEPTH
28.9



Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.0131	17.27	0.5	3.962	-0.201	-2.1	-1.9	0.423	7.94	4.15.8		
3.5	BCM	VCSS	MW		AMD_DC29_001	0.019	18	0	5.6	0.1	1	-1	0.58	21	5.5		
4																	
4.5																	
5																	
5.5	BCM	CSS VCSS CSS	SW	MS	AMD_DC29_002	0.014	18	0	5.8	0.1	1	0	0.42	13	5.6		
		VCSS															
6		MSS															
6.5		VCSS															

Depth	Lithology				SAMPLEID	Sampling										
	Formation	Lithology	Weathering	Strength		ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0131	7.27	0.5	3.962	-0.201	-2.1	-1.9	0.423	7.94	4.15.8	
7	BCM	VCSS	SW	MS	AMD_DC29_002	0.014	18	0	5.8	0.1	1	0	0.42	13	5.6	
		MSS	MW	MWK	AMD_DC29_003	0.016	12	0	6	0.1	1	0	0.5	11	5.8	
7.5		LFSS		MS	AMD_DC29_004	0.118	13	0	5.6	0	0	4	3.6	30	4.8	
		LC														
		LFSS														
		FSS	MW	MWK												
8		CM	MW	MS	AMD_DC29_005	0.139	7	0	5.6	-0.2	-2	4	4.2	11	5.1	
8.5		LFSS			AMD_DC29_006	0.019	15	0	5.9	0	0	0	0.57	7	5.5	
		MSS	MW	MWK												
9		LFSS	HW	WK												
					QP_DC29_001											
					QP_DC29_002											
9.5		CO	UW	MWK	QP_DC29_003											
10					QP_DC29_004											

PROSPECT
Deep Creek

DEPTH
28.9



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00131	7.27	0.5	3.96.2	-0.20.1	-2.1	-1.9	0.42.3	7.94	4.15.8	
10.5	BCM	CO	UW	MWK	QP_DC29_004											
					QP_DC29_005											
11					QP_DC29_006											
					QP_DC29_007											
11.5					QP_DC29_008											
					QP_DC29_009											
12		CM	MW	WK	AMD_DC29_007	0.041	21	0	4.9	0	0	1	1.3	18	4.8	
		CQ	UW		QP_DC29_010											
12.5		CO			QP_DC29_011											
					QP_DC29_012											
13					QP_DC29_013											
13.5																

PROSPECT
Deep Creek

DEPTH
28.9



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00131	7.27	0.5	3.962	-0.201	-2.1	-1.9	0.423	794	4.158	
14	BCM	CO			QP_DC29_013											
					QP_DC29_014											
14.5					QP_DC29_015											
15					QP_DC29_016											
15.5		CQ CM CQ CM CO CM	WK	MS	QP_DC29_017											
16					QP_DC29_018											
16.5					QP_DC29_019											

PROSPECT
Deep Creek

DEPTH
28.9



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00131	7.27	0.5	3.96	2.2	-0.20	1.1	-1.9	0.42	3.7	94.15.8
17	BCM	CO	UW	MS	QP_DC29_019											
					QP_DC29_020											
17.5					QP_DC29_021											
18					QP_DC29_022											
18.5					QP_DC29_023											
19					QP_DC29_024											
19.5					QP_DC29_025											
20					QP_DC29_026											

	Lithology				Sampling																
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH						
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH						
						0.001317	27	0	3.9	6.2	-0.20	1	-1	9	0.42	3	7	94	4.1	5.8	
20.5	BCM	CO	UW	MS	QP_DC29_026																
		CM			QP_DC29_027																
					AMD_DC29_008	0.305	18	5	3.9	0	0	9	9.3	43	4.4						
21			MW																		
21.5		ZSS																			
22						AMD_DC29_009	0.047	20	0	4.9	0	0	1	1.5	25	4.6					
22.5																					
23			LFSS		UW																
			ZSS																		
			LFSS																		
23.5		ZSS																			
					AMD_DC29_010	0.096	27	4	4.1	0.1	1	2	2.9	18	4.7						

	Lithology				Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.0131	7.27	0.5	3.96	-0.20	-2.1	-1.9	0.42	794	4.15		
24	BCM	ZSS	UW	MS	AMD_DC29_010	0.096	27	4	4.1	0.1	1	2	2.9	18	4.7		
		FSS	SW		AMD_DC29_011	0.091	10	0	5.7	0	0	3	2.8	94	4.1		
		ZSS															
		FSS	UW														
24.5		VFSS															
	FSS	SW		BSM	AMD_DC29_012	0.02	10	0	6.2	0.1	1	0	0.6	21	5		
25	GWK	SW															
25.5	LC																
26	GWK	MW	MS														
26.5		LC															
27		GWK	MW	MS													

PROSPECT
Deep Creek

DEPTH
28.9



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0131	7.27	0.5	3.96.2	-0.20.1	-2.1	-1.9	0.42.3	7.94	4.15.8	
27.5	BSM	GWK	MW	MS	AMD_DC29_012	0.02	10	0	6.2	0.1	1	0	0.6	21	5	
		LC														
28		GWK	MW	MS												
28.5																

PROSPECT

DEPTH
40.8

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						0.010.56	1687	036	36.4	0.10.7	16	-14	0.1515	4140		
		SOIL	RW													
0.5		ZSS			AMD_DC30_001	0.018	16	0	5.6	0.2	2	-1	0.55	34		
1		LVFS	MW													
1.5		LFSS														
2	BCM			MS	AMD_DC30_002	0.115	13	0	5.6	0.5	5	-1	3.5	36		
2.5		LFSS	SW													
3			UW	ST	AMD_DC30_003	0.272	15	0	4.3	0.7	6	2	8.3	59		

PROSPECT

DEPTH
40.8

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						0.0056	870	363	6.4	0.1071	6-1	14	0.1515	4	140	
3.5	BCM	LFSS	UW	ST	AMD_DC30_003	0.272	15	0	4.3	0.7	6	2	8.3	59		
4					AMD_DC30_004	0.032	20	0	5.7	0.2	2	-1	0.99	8		
4.5		VCSS	MW													
5	AMD_DC30_005				0.032	22	0	5.7	0.2	2	-1	0.97	5			
5.5																
6																
6.5																

PROSPECT

DEPTH
40.8

Lithology					Sampling																
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH						
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH						
						0.000	0.56	870	36	3	6.4	0.10	0.71	6	-1	14	0.15	15	4	140	
7	BCM	VCSS	MW	ST	AMD_DC30_005	0.032	22	0	5.7	0.2	2	-1	0.97	5							
7.5																					
8																					
8.5					AMD_DC30_006	0.005	22	0	5.7	0.1	1	-1	0.15	4							
9																					
9.5																					
10					AMD_DC30_007	0.005	22	0	5.6	0.1	1	-1	0.15	4							

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						0.005	22	0	5.6	0.1	1	-1	0.15	4		
10.5	BCM	VCSS	MW	ST	AMD_DC30_007	0.005	22	0	5.6	0.1	1	-1	0.15	4		
11		VCSS	MW	ST												
11.5		MSS	UW		AMD_DC30_008	0.311	18	1	3.9	0.1	1	9	9.5	85		
12		VCSS	SW													
12.5		FSS		MS	AMD_DC30_009	0.394	12	2	3.8	0.1	1	11	12	120		
		MSS	UW													
		LFSS	SW													
		MSS														
		LFSS	UW													
13		LFSS														
13.5																

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH		
						0.010.56	87	036	36.4	0.10.7	16	-114	0.1515	4140			
14	BCM	LFSS	UW	MS	AMD_DC30_009	0.394	12	2	3.8	0.1	1	11	12	120			
		LVFS															
		CM		ST	AMD_DC30_010	0.498	21	7	3.6	0.1	1	14	15	35			
14.5		LVFS		MS	AMD_DC30_011	0.223	21	2	4	0.1	1	6	6.8	70			
		MSS															
		LVFS															
		MSS															
15		LFSS				AMD_DC30_012	0.11	21	0	4.7	0.2	2	2	3.4	34		
		LVFS															
15.5		CO				MS	QP_DC30_001										
	QP_DC30_002																
16	QP_DC30_003																
16.5	QP_DC30_004																
				MWK	QP_DC30_004												

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH		
						0.000.56	870	363	6.4	0.10.71	6-1	14	0.1515	4	140		
17	BCM	CO	UW	MWK	QP_DC30_004												
					QP_DC30_005												
17.5					QP_DC30_006												
18				MS	QP_DC30_007												
					QP_DC30_008												
18.5				WK	QP_DC30_009												
19					AMD_DC30_013	0.143	40	9	3.6	0.2	2	3	4.4	16			
19.5				MS	AMD_DC30_014	0.07	29	1	4.2	0.2	2	0	2.1	8			
20																	
		CM															
		ZSS															
		LFSS															
		LVFS															

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	Lithology				Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH		
						0.00	0.56	0.87	0.36	3.64	0.10	0.71	0.61	0.14	0.15	140	
20.5	BCM	LVFS	UW	MS	AMD_DC30_014	0.07	29	1	4.2	0.2	2	0	2.1	8			
				QP_DC30_010													
		CO		MWK	QP_DC30_011												
					QP_DC30_012												
21		CM			AMD_DC30_015	0.238	87	36	3	0.1	1	6	7.3	8			
		ZSS															
21.5		LVFS															
		LFSS															
22					MS	AMD_DC30_016	0.047	27	0	4.8	0.1	1	0	1.4	13		
		LVFS															
22.5																	
		LFSS															
23		LVFS		SW													
		CO		UW	MWK	QP_DC30_013											
23.5			QP_DC30_014														

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Lithology					Sampling													
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH			
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH			
						0.00.5	687	036	36.4	0.10.7	16	-114	0.1515	4140				
24	BCM	CO	UW	MWK	QP_DC30_014													
					QP_DC30_015													
24.5					QP_DC30_016													
					QP_DC30_017													
25		HCM			QP_DC30_018													
					QP_DC30_019													
25.5					QP_DC30_020													
					QP_DC30_021													
26		CO			QP_DC30_022													
					QP_DC30_023													
26.5																		
27																		

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	Lithology				Sampling														
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH				
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH				
						0.00	0.56	870	363	6.4	0.10	0.71	6-1	14	0.15	154	140		
27.5	BCM	CO	UW	MWK	QP_DC30_023														
					QP_DC30_024														
28					QP_DC30_025														
28.5					QP_DC30_026														
29					QP_DC30_027														
29.5					QP_DC30_028														
30					QP_DC30_029														

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Lithology					Sampling																				
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH										
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH										
						0.01	0.56	87	0	36	3	6.4	0.1	0.7	1	6	-1	14	0.15	15	4	140			
30.5	BCM	CO	UW	MWK	QP_DC30_029																				
					QP_DC30_030																				
31					QP_DC30_031																				
31.5					QP_DC30_032																				
32					QP_DC30_033																				
32.5																									
33		LC			QP_DC30_034																				
33.5		CO	UW	MWK	QP_DC30_035																				

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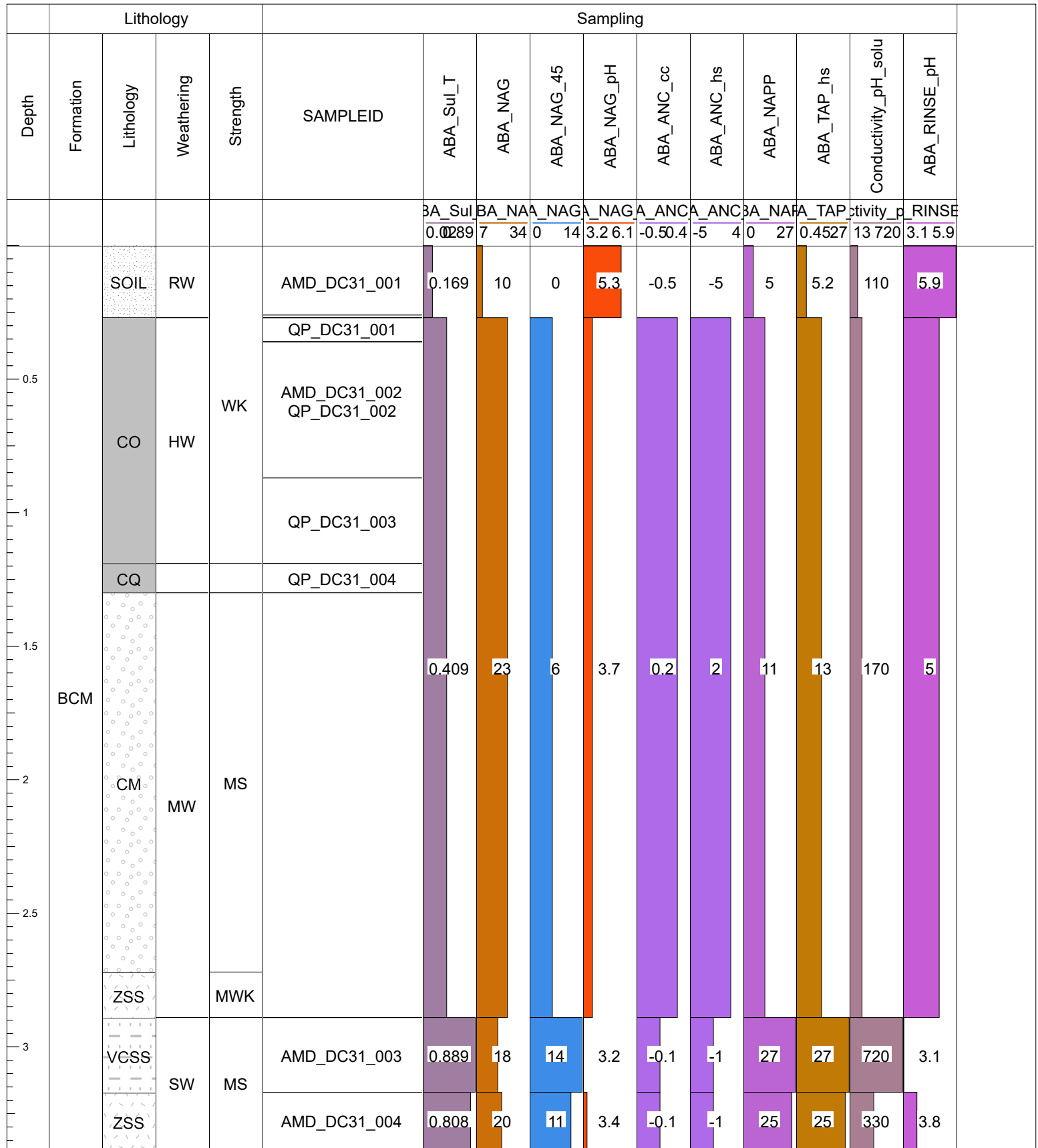
Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						0.010.56	87	036	36.4	0.10.7	16	-14	0.1515	4140		
34	BCM	CO	UW	MWK	QP_DC30_035											
					QP_DC30_036											
		CM		MS	AMD_DC30_017	0.093	23	3	4.1	0.2	2	1	2.9	5		
34.5		CO		MWK												
		CM			AMD_DC30_018	0.073	21	0	4.5	0.2	2	0	2.2	7		
35																
		ZSS			AMD_DC30_019	0.041	14	0	6.4	0.1	1	0	1.3	9		
35.5																
		VFSS		MS												
36																
		MSS			AMD_DC30_020	0.107	11	0	5.8	0.1	1	2	3.3	28		
36.5																
		FSS														
37		PBBX		SW	AMD_DC30_021	0.34	9	1	4.1	0.1	1	9	10	140		

Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						0.0056	0.87	0.36	3.64	0.107	1.6	1.14	0.1515	4.140		
37.5	BCM	PBBX	SW	MS	AMD_DC30_021	0.34	9	1	4.1	0.1	1	9	10	140		
38		CSS														
38.5		GRBX		ST												
39		PBBX		MS												
39.5		FSS		SW	AMD_DC30_022	0.072	6	0	6.2	0.2	2	0	2.2	22		
40		CSS			AMD_DC30_023	0.206	8	0	6	0.2	2	4	6.3	87		
40.5		PBBX														

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	Lithology				Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	RINSE_pH	
						0.000.56	0.687	0.36	3.64	0.10.7	1.6	-1.4	0.1515	4.140		
1	BCM	PBBX	SW	ST	AMD_DC30_023	0.206	8	0	6	0.2	2	4	6.3	87		
2																
3																
4																
5																
6																
7																
8																
9																
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13																
14																
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	Lithology				Sampling																							
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						0.00289	7.34	0.14	3.26	-0.50	-0.45	4.0	27.0	0.4527	13720	3.15												
3.5	BCM	ZSS	SW	MS	AMD_DC31_004	0.808	20	11	3.4	-0.1	-1	25	25	330	3.8													
		CM																										
4		LC																										
4.5		CM	UW	MS																								
		CM																										
5																												
5.5		ZSS	MW	MWK																								
	VFSS	HW	WK	AMD_DC31_005	0.052	10	0	6.1	-0.1	-1	2	1.6	400	4.4														
6					AMD_DC31_006	0.023	17	0	5.9	0.1	1	0	0.69	19	5													
	VCSS	CW	MWK																									
6.5																												

	Lithology				Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.0289	7.34	0.14	3.26	1.1	-0.50	4.0	0.27	0.45	27	13.72	5.9
7	BCM		CW	MWK	AMD_DC31_006	0.023	17	0	5.9	0.1	1	0	0.69	19	5		
7.5																	
8																	
8.5			CW	VWK	AMD_DC31_007	0.019	22	0	5.8	0.1	1	0	0.58	13	5.3		
9																	
9.5			MW	MS													
10																	

	Lithology				Sampling																					
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH											
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH											
						0.00289	7.34	0.14	3.26	-0.50	-5.4	0.27	0.45	27	13.72	5.9										
	BCM	CSS	MW	MS	AMD_DC31_007	0.019	22	0	5.8	0.1	1	0	0.58	13	5.3											
10.5		VCSS		ST																						
			HW	MS																						
11		CSS	MW																							
			HW																							
11.5		VCSS																								
			MW																							
12		CSS																								
			HW																							
12.5		VCSS																								
		MW																								
13		LC																								
		GRBX	HW	MWK	AMD_DC31_008	0.015	21	0	5.8	0.1	1	0	0.45	13	5.4											
13.5		CM	MW	MS	AMD_DC31_009												0.539	13	4	3.7	-0.2	-2	16	16	94	4.2

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00289	7.34	0.14	3.26	-0.50	-5.4	0.27	0.4527	13720	3.15	9.9
14	BCM	CM	MW	MS	AMD_DC31_009	0.539	13	4	3.7	-0.2	-2	16	16	94	4.2	
		ZSS			QP_DC31_005											
14.5		CM		MWK	QP_DC31_006											
15					QP_DC31_007											
15.5					QP_DC31_008											
16					QP_DC31_009											
16.5					QP_DC31_010											
		CO														

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	Lithology				Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0289	7.34	0.14	3.26	-0.50	-0.45	0.27	0.45	27.13	720.3	5.9
17	BCM	CO	MW	MWK	QP_DC31_010											
					QP_DC31_011											
17.5																
					QP_DC31_012											
18																
					QP_DC31_013											
18.5																
					QP_DC31_014											
19		QP_DC31_015														
19.5		QP_DC31_016														
					QP_DC31_017											
					QP_DC31_018											
20	BCM	CM	HW	MWK	AMD_DC31_010	0.073	34	5	3.9	0	0	2	2.2	28	4.9	

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.00289	7.34	0.14	3.26	1.1	-0.50	4.4	0.27	0.45	27	13.72	5.9
20.5	BCM	CM	HW	MWK	AMD_DC31_010	0.073	34	5	3.9	0	0	2	2.2	28	4.9		
21		PBCG			AMD_DC31_011	0.03	22	0	5.6	0	0	1	0.91	54	4.6		
21.5		MSS															
22		PBBX															
22.5		LC															
23		MSS	HW	MS													
23.5																	

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00289	7.34	0.14	3.26	-0.50	-4.40	27.0	0.4527	13720	3.15	9.9
24	BCM	MSS/PBBX	MS	MS	AMD_DC31_011	0.03	22	0	5.6	0	0	1	0.91	54	4.6	
		MSS														
		PBBX														
24.5		MSS														
25	BCM	GRBX	HW	MWK	AMD_DC31_012	0.212	10	0	5.2	0.1	1	5	6.5	100	4.1	
		PBBX														
25.5																
26	BSM															
		ARG			AMD_DC31_013	0.175	7	0	6	0.4	4	2	5.4	44	4.8	
26.5																
27																

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0289	7.34	0.14	3.26	-0.50	-4.40	27.0	0.4527	13.72	3.15	5.9
27.5	BSM		HW	ST	AMD_DC31_013		7	0	6	0.4	4	2	5.4	44	4.8	
28		ARG														
28.5		LC														

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0111	9 116	0 97	2.5 6.1	-1.10.8	-11 8	-7 156	0.1560	9 600	3.4 5.5	
	BCM	CM	SW	MWK	AMD_DC32_001	0.014	28	0	5.6	0	0	0	0.43	24	5.1	
		CSS		ST												
0.5		FSS	UW	MS	AMD_DC32_002	0.201	16	0	4.8	-0.1	-1	6	6.1	60	4.4	
1		CM			AMD_DC32_003	0.697	17	7	3.7	-0.1	-1	21	21	240	3.9	
1.5																
2		GRBX	MW	VWK	AMD_DC32_004	0.005	14	0	6.1	0.1	1	-1	0.15	12	5.3	
2.5	BBG	LC														
3	BCM	GRBX	MW	WK												
		CSS	SW	MWK												
		LC			AMD_DC32_005	0.005	27	0	5.8	0	0	0	0.15	13	5.2	
		FSS	MW	MWK												

PROSPECT

DEPTH
31.8

Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.001119	1160	97	2.561	-1.108	-118	-7156	0.1560	9600	3.455	
3.5		FSS	MW	MWK	AMD_DC32_005	0.005	27	0	5.8	0	0	0	0.15	13	5.2	
		MSS	SW	MS												
4		VCSS	UW	ST												
4.5		GRBX	SW													
5		LC			AMD_DC32_006	0.005	20	0	5.9	0.1	1	-1	0.15	9	5.5	
	BCM		HW	WK												
5.5																
6		GRBX	SW	ST												
6.5					AMD_DC32_007	0.042	14	0	6	0.2	2	-1	1.3	17	4.9	

PROSPECT

DEPTH
31.8

	Lithology				Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.01119	116	0	2.561	-1.108	-11	-7	156	0.15609	600	3.455	
7	BCM		SW	ST	AMD_DC32_007	0.042	14	0	6	0.2	2	-1	1.3	17	4.9		
7.5																	
8																	
8.5		CSS		MS													
		VCSS	ST														
9		CM	WK														
		VCSS	MWK		AMD_DC32_008	5.11	116	97	2.5	-1.1	-11	156	160	570	3.7		
9.5		CM															
		FSS		MS													
10		MSS		ST													
			SW		AMD_DC32_009	0.582	12	5	3.7	-0.2	-2	18	18	180	4		

PROSPECT

DEPTH
31.8

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.051119	1160	97	2.561	-1.108	-118	-7156	0.1560	9600	3.455	
10.5		MSS	SW	ST	AMD_DC32_009	0.582	12	5	3.7	-0.2	-2	18	18	180	4	
11		VCSS														
11.5	BCM	GRBX	MW	MWK												
12																
12.5		PBBX	LS		AMD_DC32_010	0.214	19	0	5	0	0	7	6.5	18	4.9	
13		GRBX	SW	ST												
13.5		VCSS	MW	MS												

PROSPECT

DEPTH
31.8

	Lithology				Sampling														
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH				
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH				
						0.01119	116	0	97	2.56	-1.10	8	-7	156	0.1560	9	600	3.4	5.5
14	BCM	VCSS	MW	MS	AMD_DC32_010	0.214	19	0	5	0	0	7	6.5	18	4.9				
		PBBX																	
		VCSS	SW	ST	AMD_DC32_011	0.066	18	0	5.7	0	0	2	2	31	4.5				
14.5																			
15		GRBX																	
15.5		VCSS																	
16		GRBX		SO	AMD_DC32_012	2.45	45	36	3	-0.3	-3	75	75	600	3.4				
16.5		VCSS	SW	ST															
		GRBX	UW																
		VCSS	SW																

PROSPECT

DEPTH
31.8



Lithology					Sampling															
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH					
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH					
						0.01119	116	0	97	2.56	1.108	-11	8	-7	156	0.1560	9	600	3.4	5.5
17	BCM	VCSS	SW	ST	AMD_DC32_012	2.45	45	36	3	-0.3	-3	75	75	600	3.4					
17.5																				
18																				
18.5		CSS	UW	MS	AMD_DC32_013	0.271	17	0	4.6	-0.1	-1	8	8.3	240	3.8					
19																				
19.5		VCSS	UW	ST																
20		GRBX		VS																

PROSPECT

DEPTH
31.8



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.00119	116	0	2.56	-1.10	-11	-7	156	0.1560	9	3.4
20.5					AMD_DC32_013	0.271	17	0	4.6	-0.1	-1	8	8.3	240	3.8	
21		GRBX	UW	VS												
21.5					AMD_DC32_014	0.49	21	7	3.4	0.1	1	14	15	18	4.9	
22	BCM	CM	SW	VSO												
		GRBX		MS												
22.5					QP_DC32_001											
					QP_DC32_002											
23		CO	SW	WK	QP_DC32_003											
23.5					QP_DC32_004											

PROSPECT

DEPTH
31.8

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0011	9 116	0 97	2.5 6.1	-1.10.8	-11 8	-7 156	0.1560	9 600	3.4 5.5	
24	BCM	CO	SW	WK	QP_DC32_004											
					QP_DC32_005											
24.5					QP_DC32_006											
					QP_DC32_007											
25					QP_DC32_008											
25.5					QP_DC32_009											
		CQ	UW													
		VFSS		MS	AMD_DC32_015	0.336	15	3	4.1	0	0	10	10	150	3.9	
26		CSS	UW	ST	AMD_DC32_016	0.18	14	0	4.7	0	0	5	5.5	55	4.4	
		CM		WK												
26.5		MSS		ST	AMD_DC32_017	0.035	9	0	5.9	0	0	1	1.1	21	5	
27		FSS			AMD_DC32_018	0.037	13	0	5.7	0.1	1	0	1.1	27	5.2	

PROSPECT

DEPTH
31.8

Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.0311	9 116	0 97	2.5 6.1	-1.10.8	-11 8	-7 156	0.1560	9 600	3.4 5.5		
27.5	BCM	FSS	UW	ST	AMD_DC32_018	0.037	13	0	5.7	0.1	1	0	1.1	27	5.2		
		CSS		MS													
		MSS		ST													
28	BSM	ARG	CW	VWK	AMD_DC32_019	0.029	9	0	6.1	0.1	1	0	0.87	31	5.2		
28.5			MW	WK													
29																	
29.5		GWK	SW	MWK	AMD_DC32_020	0.024	13	0	6	0.8	8	-7	0.73	28	5.5		
30																	

PROSPECT

DEPTH
31.8



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.01119	1160	97	2.561	-1.108	-118	-7156	0.1560	9600	3.455	
30.5	BSM	GWK	SW	MWK	AMD_DC32_020	0.024	13	0	6	0.8	8	-7	0.73	28	5.5	
31																
31.5																

PROSPECT

DEPTH
25.5

Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pc		ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					0 71	9.0925		0.0174	2.7 6	-0.10.4	-1 4	-3 53	0.2153	0 36	3.4 5.5	10 570
0.5		SOIL	CW													
		LC			0	28.57										
		VCSS	MW	MS												
1		ZSS		EW	0	125	AMD_DC34_001	0.163	3.9	0	0	5	5	2	4.2	66
1.5		MST														
2	BCM	VFSS	HW	MWK			AMD_DC34_002	1.13	3.1	0.1	1	33	35	19	3.6	390
2.5		ZSS		WK	0	100	AMD_DC34_003	1.74	2.7	-0.1	-1	53	53	36	3.4	570
3		LFSS		MWK			AMD_DC34_004	0.522	3.5	0.1	1	15	16	7	4	110
		MST	CW	EW	25	100	AMD_DC34_005	0.926	3	0.1	1	28	28	15	3.9	170

PROSPECT

DEPTH
25.5

Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pc		ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					0	71		0.0174	2.7	-0.1	-1	-3	0.2	15	3.4	10
3.5	BCM	MST	CW	EW			AMD_DC34_005	0.926	3	0.1	1	28	28	15	3.9	170
4		VCSS	MW	MS	25	100	AMD_DC34_006	0.038	5.2	0.4	4	-3	1.2	0	5.3	12
4.5		MST		EW			AMD_DC34_007	0.974	3	0	0	30	30	15	3.6	380
5		GRBX		MS	46	100										
5.5		MSS	HW	MWK			AMD_DC34_008	0.025	5.5	0.2	2	-1	0.76	0	5	17
6																
6.5		GRBX		MS	39	98.82										

PROSPECT

DEPTH
25.5

Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pct		BA_Sul	A_NAG	A_ANC	A_ANC	BA_NAP	A_TAP	A_NAG	H_aged	uctivity
					0 71	9.0925		0.0174	2.7 6	-0.10.4	-1 4	-3 53	0.2153	0 36	3.4 5.5	10 570
7	BCM	GRBX	HW	MS	39	98.82	AMD_DC34_008	0.025	5.5	0.2	2	-1	0.76	0	5	17
7.5							AMD_DC34_009	0.017	5.8	0.2	2	-1	0.52	0	5.1	13
8		VFSS	SW	ST	66	96.67	AMD_DC34_010	0.688	3.3	0.1	1	20	21	10	4.4	100
8.5		LFSS	HW													
9		VCSS	MW	MS	54	103.33	AMD_DC34_011	0.007	5.5	0.2	1	-1	0.21	0	5.5	10
9.5																
10		GRBX														
		LC			0	9.09										

PROSPECT

DEPTH
25.5

Depth	Lithology				Recovery		Sampling									
	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pc		ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					0	71		0.0174	2.7	-0.10	-1	-3	0.2153	0	3.4	10
10.5	BCM	LC			0	9.09	AMD_DC34_011	0.007	5.5	0.2	1	-1	0.21	0	5.5	10
11		GRBX														
11.5		LFSS		MS			AMD_DC34_012	0.813	3.2	0.1	0	24	25	13	4.2	110
		ZSS			0	100	QP_DC34_01									
		HCM					QP_DC34_02									
12			SW				QP_DC34_03									
12.5			MWK				QP_DC34_04									
					47	100	QP_DC34_05									
13		CO		MS			QP_DC34_06									
13.5				MWK												
			UW	MS	57	100										

PROSPECT

DEPTH
25.5



Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pc		BA_Sul	A_NAG	A_ANC	A_ANC	BA_NAP	A_TAP	A_NAG	H_age	uctivity
					0 71	9.0925		0.0174	2.7 6	-0.10.4	-1 4	-3 53	0.2153	0 36	3.4 5.5	10 570
14	BCM	CO	UW	MS	57	100	QP_DC34_06									
							QP_DC34_07									
14.5							QP_DC34_08									
							QP_DC34_09									
15					55	100	QP_DC34_10									
							QP_DC34_11									
15.5							QP_DC34_12									
							QP_DC34_13									
16					34	100										
16.5																
17			SW													
			UW													

PROSPECT

DEPTH
25.5

Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pct		ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					0 71	9.0925		0.0174	2.7 6	-0.10.4	-1 4	-3 53	0.2153	0 36	3.4 5.5	10 570
17.5	BCM	CO	UW	MS	34	100	QP_DC34_13 QP_DC34_14									
		HCM	SW	MWK			QP_DC34_15									
		CZN		WK			QP_DC34_16									
18																
18.5		CM			61	100	AMD_DC34_013	0.035	4.6	0.2	1	0	1.1	0	5	18
19																
19.5		VFSS					AMD_DC34_014	0.047	4.7	0.1	1	0	1.4	0	4.8	24
		MST					AMD_DC34_015	0.015	4.8	0.1	1	-1	0.47	0	5.2	17
20																
20.5		VFSS			53	100	AMD_DC34_016	0.015	5.8	0.1	1	-1	0.46	0	5	22

PROSPECT

DEPTH
25.5

Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD 0 71	Rec_pc 9.0 100 25		ABA_Sul_T 0.0174	ABA_NAG_pH 2.7 6	ABA_ANC_cc -0.10.4	ABA_ANC_hs -1 4	ABA_NAPP -3 53	ABA_TAP_hs 0.2153	ABA_NAG_45 0 36	pH_aged 3.4 5.5	Conductivity_aged 10 570
21	BCM	VFSS	UW	MS	53	100	AMD_DC34_016	0.015	5.8	0.1	1	-1	0.46	0	5	22
		MST			AMD_DC34_017	0.026	5.1	0.2	2	-2	0.8	0	5	25		
		ZSS			AMD_DC34_018	0.023	5.2	0.2	2	-1	0.7	0	5.1	18		
21.5		VFSS			AMD_DC34_019	0.025	6	0.2	2	-1	0.77	0	5	18		
		ZSS			AMD_DC34_020	0.038	5.3	0.1	1	0	1.2	0	4.9	29		
22		FSS														
		GRBX														
		FSS														
		MSS														
		GRBX														
	MSS															
22.5	GRCG															
	FSS															
	PBBX															
23	BSM	GWK			39	100	AMD_DC34_021	0.156	4.6	0.2	2	3	4.8	0	5	35
23.5																
24					33	100										

PROSPECT

DEPTH
25.5

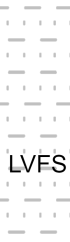


Lithology					Recovery		Sampling									
Depth	Formation	Lithology	Weathering	Strength	RQD	Recovered %	SAMPLEID	ABA_Sul_T	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	ABA_NAG_45	pH_aged	Conductivity_aged
					RQD	Rec_pc		BA_Sul	A_NAG	A_ANC	A_ANC	BA_NAP	A_TAP	A_NAG	H_aged	uctivity
					0 71	9.0925		0.0174	2.7 6	-0.10.4	-1 4	-3 53	0.2153	0 36	3.4 5.5	10 570
24.5	BSM	GWK	UW	MS	33	100	AMD_DC34_021	0.156	4.6	0.2	2	3	4.8	0	5	35
25																

PROSPECT
Deep Creek

DEPTH
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Lithology					Sampling													
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						0.02153	10 50	0 41	2.8 6.1	0 1.4	0 13	-3 72	0.4477	5 340	3.7 5.7			
3.5	BCM			ST	AMD_DC37_004	0.048	14	0	5.8	0.3	3	-2	1.5	5	5.6			
4																		
4.5					GRBX 	SW	AMD_DC37_005	0.088	16	0	5.6	0.3	3	0	2.7	7	5.6	
5																		
		MSS 																
5.5		LFSS 		MWK														
6	BBG	LVFS 		WK	AMD_DC37_006	0.04	19	0	5.3	0.4	4	-2	1.2	13	5.4			
6.5																		

Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02153	10 50	0 41	2.8 6.1	0 1.4	0 13	-3 72	0.4477	5 340	3.7 5.7	
	BBG	LVFS	SW	WK	AMD_DC37_006	0.04	19	0	5.3	0.4	4	-2	1.2	13	5.4	
7		CM	UW	MWK	AMD_DC37_007	0.344	29	9	3.7	0.2	2	9	11	49	4.7	
		MSS		MS												
7.5		CSS	SW													
		MSS	UW													
		CSS	SW	ST	AMD_DC37_008	0.05	14	0	6.1	0.2	2	0	1.5	17	5.3	
		MSS		MS												
8		LFSS														
		LVFS		MWK	AMD_DC37_009	0.183	15	1	4.4	0.2	2	4	5.6	21	4.9	
8.5	BCM	CM														
		LMSS		MS												
		CSS		ST												
9		CM	UW		AMD_DC37_010	0.033	16	0	5.4	0.1	1	0	1	8	5.4	
		VFSS		MS												
		CQ			QP_DC37_004											
9.5				WK	QP_DC37_005											
		CO			QP_DC37_006											
10																

PROSPECT
Deep Creek

DEPTH
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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.02153	10 50	0 41	2.8 6.1	0 1.4	0 13	-3 72	0.4477	5 340	3.7 5.7		
10.5	BCM	CO	UW	WK	QP_DC37_006												
					QP_DC37_007												
11					QP_DC37_008												
					QP_DC37_009												
11.5		CQ			QP_DC37_010												
					QP_DC37_011												
12					QP_DC37_012												
					QP_DC37_013												
12.5		CO			QP_DC37_014												
					QP_DC37_015												
13					QP_DC37_016												
					AMD_DC37_011	1.42	32	23	3	0.1	1	42	43	280	3.7		
13.5		CM	UW	MWK													

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Deep Creek

DEPTH
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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.02153	10 50	0 41	2.8 6.1	0 1.4	0 13	-3 72	0.4477	5 340	3.7 5.7		
	BCM	CM	UW	MWK	AMD_DC37_011	1.42	32	23	3	0.1	1	42	43	280	3.7		
14		CSS	SW	ST	AMD_DC37_012	0.276	16	1	4	0.3	2	6	8.4	140	4		
14.5																	
15																	
15.5	GRBX					AMD_DC37_013	0.019	21	0	5.5	0.2	2	-1	0.57	5	5.6	
16																	
16.5																	

Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02153	10 50	0 41	2.8 6.1	0 1.4	0 13	-3 72	0.4477	5 340	3.7 5.7	
17	BCM	GRBX	SW	ST	AMD_DC37_013	0.019	21	0	5.5	0.2	2	-1	0.57	5	5.6	
17.5		CM	UW		AMD_DC37_014	0.609	13	7	3.6	0.2	2	17	19	170	4	
18		LC														
18.5		CM	UW													
		VFSS			AMD_DC37_015	0.401	10	3	3.8	0	0	12	12	340	3.8	
19		CM	MS		AMD_DC37_016	0.99	21	16	3.2	0	0	30	30	85	4.1	
19.5		LFSS	SW		AMD_DC37_017	0.241	12	1	4.4	0.1	1	6	7.4	58	4.4	
20		VCSS		ST	AMD_DC37_018	0.014	11	0	5.9	0.3	3	-3	0.44	15	5.7	

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DEPTH
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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.02153	10 50	0 41	2.8 6.1	0 1.4	0 13	-3 72	0.4477	5 340	3.7 5.7		
20.5	BCM	VCSS	SW	ST	AMD_DC37_018	0.014	11	0	5.9	0.3	3	-3	0.44	15	5.7		
21																	
21.5																	
22																	
22.5																	
23	BCM	CSS	MW	MWK	AMD_DC37_019	0.038	20	0	5.4	0.2	2	0	1.2	25	4.8		
23.5		VCSS															
		MSS															

Depth	Lithology				SAMPLEID	Sampling										
	Formation	Lithology	Weathering	Strength		ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02153	10 50	0 41	2.8 6.1	0 1.4	0 13	-3 72	0.4477	5 340	3.7 5.7	
24	BCM	MSS	MW	MWK	AMD_DC37_019	0.038	20	0	5.4	0.2	2	0	1.2	25	4.8	
		LC														
		MSS	SW	MWK												
		LFSS	UW	WK	AMD_DC37_020	0.361	14	3	3.8	0.1	1	10	11	97	4.2	
24.5		CQ		VWK												
		LC														
25					AMD_DC37_021	0.325	15	4	3.9	0.2	2	8	10			
		CM	SW	VWK												
25.5		CQ		WK	QP_DC37_017											
		LC														
26				VWK	QP_DC37_018											
		CM			QP_DC37_019											
26.5		CQ		WK	QP_DC37_020											
		LC														
27		CM		WK	QP_DC37_021											

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[illegible]

PROSPECT
Deep Creek

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02153	10 50	0 41	2.8 6.1	0 1.4	0 13	-3 72	0.4477	5 340	3.7 5.7	
30.5	BSM	GWK	MW	WK	AMD_DC37_023	1.61	35	28	3	1.4	13	36	49	200	4.1	
31																
31.5																

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Lithology					Sampling													
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						0.022	5	0	6.4	0.1	1	-1	0.66	20	5.7			
0.5	BCM	SOIL			AMD_DC39_001													
		GRBX																
1																		
1.5																		
2																		
		PBBX	SW	ST	AMD_DC39_001													
2.5																		
	CSS																	
3		PBBX			AMD_DC39_002	0.031	9	0	6.4	0.1	1	0	0.94	24	5.5			

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Lithology					Sampling																	
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH							
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH							
						0.02	2.25	470	32	3.16	4	-0.20	2	2	-1	67	0.41	67	11	220	3.9	5.7
3.5	BCM	PBBX	SW	ST	AMD_DC39_002	0.031	9	0	6.4	0.1	1	0	0.94	24	5.5							
			MW	MWK																		
4																						
4.5																						
5																						
5.5																						
6																						
6.5																						

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0225	7	0	6.2	0	0	1	0.82	13	5.6	
7	BCM	PBBX	SW	ST	AMD_DC39_003	0.027	7	0	6.2	0	0	1	0.82	13	5.6	
7.5		MSS		MS												
8		GRBX														
8.5																
9				ST	AMD_DC39_004	0.049	8	0	6.2	0	0	2	1.5	33	4.6	
9.5		PBBX														
10																

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						BA_Sul_T	BA_NAG	BA_NAG_45	BA_NAG_pH	BA_ANC_cc	BA_ANC_hs	BA_NAPP	BA_TAP_hs	ctivity_pH_solu	RINSE_pH	
						0.0225	470	32	3.164	-0.202	-2	-1	67	0.4167	11220	3.957
	BCM	PBBX	SW	ST	AMD_DC39_004	0.049	8	0	6.2	0	0	2	1.5	33	4.6	
10.5				MWK												
		MSS	UW	MW												
11																
		VCSS	SW	ST												
11.5																
12																
12.5																
	GRBX	MFA	MS	AMD_DC39_005	0.023	7	0	6.2	0	0	0	0.69	22	5.3		
13																
	MSS	MW	WK	AMD_DC39_006	0.401	7	0	4.6	-0.2	-2	12	12	15	5.1		
13.5	CM	SW	MWK													

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.02.25	47	0	3.16.4	-0.20.2	-2	-1	67	0.4167	11	220	3.95.7
14	BCM	CM	SW	MWK	AMD_DC39_006	0.401	7	0	4.6	-0.2	-2	12	12	15	5.1		
			HW	VWK	QP_DC39_001												
14.5		CO	SW	MWK	QP_DC39_002												
					QP_DC39_003												
15		CQ	CM	MWK	QP_DC39_004												
		QP_DC39_005															
		QP_DC39_006															
15.5		CO	UW	WK	QP_DC39_007												
16		CM			QP_DC39_008												
		HCM			QP_DC39_009												
		CQ			QP_DC39_010												
		HCM			QP_DC39_011												
16.5		CM		MS	QP_DC39_012												
					AMD_DC39_007	2.2	47	32	3.1	0	0	67	67	75	4.4		
					AMD_DC39_008	0.044	12	0	5.9	-0.1	-1	1	1.3	11	5.4		
		GRBX	MW														

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Lithology					Sampling																		
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						0.02	2.25	470	32	3.16	4	-0.20	2	-2	2	-1	67	0.41	67	11	220	3.9	5.7
17	BCM	GRBX	MW	MS	AMD_DC39_008	0.044	12	0	5.9	-0.1	-1	1	1.3	11	5.4								
17.5		VCSS		ST																			
18																							
18.5		GRBX	SW																				
19																							
19.5																							
20		CZN	HW		AMD_DC39_009	0.094	10	0	5.9	-0.1	-1	3	2.9	31	4.8								
		CO		WK																			
		VFSS																					

	Lithology				Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.0225	470	32	3.164	-0.202	-2	-1	67	0.4167	11220	3.957	
20.5	BCM	VFSS	SW	WK	AMD_DC39_009	0.094	10	0	5.9	-0.1	-1	3	2.9	31	4.8		
		GRBX		ST	AMD_DC39_010	0.129	9	0	5.7	0	0	4	3.9	15	5.5		
21		CM		UW	WK												
		MSS	SW	MS													
21.5		CM		MWK	QP_DC39_013												
		CQ			QP_DC39_014												
22		CO	UW	WK	QP_DC39_015												
		CQ			QP_DC39_016												
22.5			UW		QP_DC39_017												
				MWK	AMD_DC39_011	0.694	17	6	3.8	0	0	21	21	56	4.4		
23		CM			QP_DC39_018												
					AMD_DC39_012	0.87	18	7	3.8	0	0	27	27	120	4.2		
23.5		VFSS		MS	AMD_DC39_013	0.63	12	6	3.7	-0.1	-1	19	19	130	4.1		

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0225	0.470	0.320	3.164	-0.202	-2.2	-1.67	0.4167	11220	3.957	
24	BCM	VFSS	UW	MS	AMD_DC39_013	0.63	12	6	3.7	-0.1	-1	19	19	130	4.1	
24.5		MSS			AMD_DC39_014	0.58	13	6	3.7	0	0	18	18	220	3.9	
25		LMSS														
25.5			SW	ST	AMD_DC39_015	0.051	8	0	6.1	0	0	2	1.6	35	4.9	
26		CSS														
26.5		CM	UW	WK	AMD_DC39_016	0.017	12	0	5.9	0	0	0	0.51	23	5.2	
27		GRBX														

Lithology					Sampling																								
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH														
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH														
						0.0225	470	32	3.164	-0.202	-22	-167	0.4167	11220	3.957														
27.5	BCM	GRBX	UW	ST	AMD_DC39_016	0.017	12	0	5.9	0	0	0	0.51	23	5.2														
		PBBX																											
28																													
28.5			SW																										
		CSS																											
29		PBBX																											
		GRBX	UW	MWK	AMD_DC39_017	0.029	9	0	6.1	0.1	1	0	0.9	21	5.4														
		CM																											
29.5			SW	ST																									
30		GRBX																											

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.0225	9	0	6.1	0.1	1	0	0.9	21	5.4		
30.5	BCM	GRBX	SW	ST	AMD_DC39_017	0.029	9	0	6.1	0.1	1	0	0.9	21	5.4		
31		PBBX	MW	MS													
31.5																	
32		VCSS	SW	ST	AMD_DC39_018												
32.5																	
33		GRBX				0.013	9	0	6.2	0.1	1	-1	0.41	22	5.1		
33.5																	

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Lithology					Sampling													
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						0.02	2.25	470	32	3.16	4	-0.20	2	-2	11	220	3.95	7
34	BCM	GRBX	SW	ST	AMD_DC39_018	0.013	9	0	6.2	0.1	1	-1	0.41	22	5.1			
34.5		VCSS																
		GRBX																
35		VCSS																
35.5		GRBX	MW	MS	AMD_DC39_019	0.019	10	0	6.3	0.1	1	0	0.6	26	4.7			
36		CM																
36.5		VCSS	SW	MS														
37																		

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Lithology					Sampling																		
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						0.012	2.25	470	32	3.16	4	-0.20	2	-2	2	-1	67	0.41	67	11	220	3.9	5.7
37.5	BCM	VCSS	MS		AMD_DC39_019	0.019	10	0	6.3	0.1	1	0	0.6	26	4.7								
38																							
38.5		GRBX	SW																				
39																							
39.5		GRBX	ST		AMD_DC39_020	0.056	11	0	5.8	0.1	1	1	1.7	48	4.4								
40		CSS																					
40.5		GRBX																					
		CSS																					
		VFSS	UW																				
		VCSS	MW	MS																			
		CM	UW	MWK																			
		VCSS		ST																			

PROSPECT
Deep Creek

DEPTH
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Lithology					Sampling															
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH					
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH					
						0.0225	47	0	32	3.164	-0.202	-2	2	-1	67	0.4167	11	220	3.95	7
41	BCM	VCSS	UW	ST	AMD_DC39_020	0.056	11	0	5.8	0.1	1	1	1.7	48	4.4					
41.5																				
42		PBBX																		
42.5					AMD_DC39_021	0.055	10	0	6.2	0.1	1	0	1.7	110	4.1					
43																				
43.5		CSS																		

	Lithology				Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.00225	470	32	3.164	-0.202	-22	-167	0.4167	11220	3.957		
	BCM	CSS	UW	ST	AMD_DC39_021	0.055	10	0	6.2	0.1	1	0	1.7	110	4.1		
44.5		PBCG	SW														
		VCSS	UW														
45				MS	AMD_DC39_022	0.092	8	0	5.9	0.2	2	1	2.8	96	4.1		
45.5		PBCG	SW														
46																	
		VCSS			ST												
46.5		MSS VFSS MSS	UW		MS												
		FSS	SW	MWK	AMD_DC39_023	0.598	19	8	3.7	0	0	18	18	77	4.2		
		CM	UW	WK MWK													
47		VCSS	SW	ST	AMD_DC39_024	0.205	11	0	5.1	0.2	2	4	6.3	130	4		

Lithology					Sampling																		
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						0.02	2.25	470	32	3.16	4	-0.20	2	2	-1	67	0.41	67	11	220	3.9	5.7	
47.5	BCM	VCSS	SW	ST	AMD_DC39_024																		
48																							
48.5		PBCG	UW			0.205	11	0	5.1	0.2	2	4	6.3	130	4								
49																							
49.5		CM PBCG MSS	SW UW SW	MWK ST																			



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PROSPECT
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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.0166	7.42	0.29	2.96	2.2	-0.10	2.2	-2.51	0.375	18.290	3.96	2.2
3.5	BCM	CSS	MW	MS	AMD_DC41_002	0.014	14	0	6	0.1	1	-1	0.42	68	6		
4																	
4.5																	
5	BCM	GRBX	MS		AMD_DC41_002	0.014	14	0	6	0.1	1	-1	0.42	68	6		
5.5																	
6																	
6.5		VCSS	HW		AMD_DC41_003	0.018	13	0	6	0.2	2	-2	0.55	18	5.7		

PROSPECT
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Lithology					Sampling													
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						0.0166	7.42	0.29	2.96	2.2	-0.10	2.2	-1.2	-2.51	0.3751	18.290	3.96	2.2
7	BCM	VCSS	HW	MS	AMD_DC41_003	0.018	13	0	6	0.2	2	-2	0.55	18	5.7			
		GRBX	MW															
		FSS	HW	MWK														
7.5		GRBX	MW	MS														
		FSS	HW	WK														
8		GRBX	MW	MS														
		GRBX	MW	MS														
8.5		GRBX	MW	MS														
				MWK	QP_DC41_001													
9		CO	SW	MS	QP_DC41_002													
	CQ	MWK		QP_DC41_003														
9.5																		
	CO			QP_DC41_004														
10																		

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	Lithology				Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0166	7.42	0.29	2.96	-0.10	-0.21	-2.51	0.375	18290	3.96	2.2
10.5	BCM	CO		MS	QP_DC41_004											
		CQ			QP_DC41_005											
		CO			QP_DC41_006											
11					QP_DC41_007											
						QP_DC41_008										
11.5						QP_DC41_009										
12		CM	UW	MWK	AMD_DC41_004	1.28	35	22	3.1	0.1	1	38	39	22	5.1	
12.5		ZSS			AMD_DC41_005	0.685	15	9	3.5	0	0	20	21	110	4.3	
13		CM														
		ZSS														
13.5		CM														

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Lithology					Sampling																							
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						0.0166	7.42	0.29	2.96	2.2	-1.2	-2.51	0.3751	18.290	3.96	2.2												
14	BCM	CM	UW	MWK	AMD_DC41_005	0.685	15	9	3.5	0	0	20	21	110	4.3													
		ZSS		MS																								
		CM																										
14.5		ZSS																										
15		CM																										
15.5		GRBX	SW	AMD_DC41_006	0.027	15	0	5.9	0.2	2	-1	0.82	19	5.9														
		LC																										
16		GRBX	SW																									
16.5		VCSS	MW																									

Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0166	7.42	0.29	2.96.2	-0.10.2	-1.2	-2.51	0.3751	8.290	3.96.2	
17	BCM	VCSS			AMD_DC41_006	0.027	15	0	5.9	0.2	2	-1	0.82	19	5.9	
		GRBX	MW	MS												
17.5		MSS	HW	MWK												
18		GRBX	MW	MS	AMD_DC41_020	0.178	16	0	5	0	0	5	5.4	84	4.5	
		CM	HW	WK												
18.5		CSS	MW													
		CM	UW		AMD_DC41_007	0.049	17	0	5.6	0.2	2	0	1.5	18	5.2	
19		MSS														
		GRBX	MW	MS												
19.5		GRBX			AMD_DC41_008	1.66	42	29	2.9	0	0	51	51	110	4.3	
		CO		WK												
20		GRBX														
		CSS	SW	MS												
		GRBX														
		HCM	UW													

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.01667	42	29	2.962	-0.102	-1.2	51	0.3751	118	3.962	
20.5	BCM	HCM	UW	MS	AMD_DC41_008	1.66	42	29	2.9	0	0	51	51	110	4.3	
21		CM		MWK												
21.5																
22		LVFS		MS	AMD_DC41_009	0.766	16	10	3.4	0	0	23	23	290	4	
22.5																
23																
23.5		VFSS														

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0166	7.42	0.29	2.96	-0.10	-1.2	-2.51	0.3751	18.290	3.96	2.2
24	BCM	VFSS CM VFSS CM VFSS VCSS	UW	MS MWK	AMD_DC41_009	0.766	16	10	3.4	0	0	23	23	290	4	
					AMD_DC41_010	0.424	12	3	4	0.1	1	12	13	140	4.3	
24.5																
25				MS												
25.5		GRBX	SW		AMD_DC41_011	0.186	11	0	5.3	0.1	1	5	5.7	200	3.9	
26																
26.5		LCSS	HW	MWK												
27		CSS	SW	MS	AMD_DC41_012	0.041	10	0	6.1	0.1	1	0	1.3	62	4.6	

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.01667	420	29	2.962	-0.102	-1.2	-2.51	0.3751	8290	3.962	
	BCM	CSS	SW	MS	AMD_DC41_012	0.041	10	0	6.1	0.1	1	0	1.3	62	4.6	
27.5																
28																
28.5																
29		GRBX	HW													
29.5																
30					AMD_DC41_013	0.03	12	0	6	0.1	1	0	0.92	8	5.3	

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	Lithology				Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.01667	7.42	0.29	2.96	2.2	-0.1	0.2	-1.2	-2.51	0.37518	290.3	6.2
34	BCM	LVFS	MW	MS	AMD_DC41_014	0.745	19	10	3.4	0.1	1	22	23	160	4.1		
34.5																	
35		VCSS			AMD_DC41_015	0.018	10	0	6.2	0.2	2	-2	0.55	17	5.5		
35.5		GRBX	HW														
36		ZSS	MW		AMD_DC41_016	0.237	7	0	5.3	-0.1	-1	7	7.3	19	5.4		
36.5		VCSS															
37	GRBX			AMD_DC41_017	0.018	9	0	6.2	0.1	1	-1	0.56	15	5.8			
		PBCG															

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.01667	420	29	2.962	-0.102	-12	-251	0.3751	18290	3.962		
37.5	BCM	PBCG	MW	MS	AMD_DC41_017	0.018	9	0	6.2	0.1	1	-1	0.56	15	5.8		
		GRBX	HW														
38		PBCG	MW														
		GRBX															
		PBCG															
38.5		GRBX	SW	MWK	AMD_DC41_018	0.017	15	0	6	0.1	1	0	0.51	15	6.2		
		PBCG															
39		GRBX		MS													
		PBCG		MWK													
39.5		GRBX		MS													
		PBCG		MWK													
40		GRBX		MS													
40.5																	

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0166	7.42	0.29	2.96	-0.10	-1.2	-2.51	0.3751	18.290	3.96	2.2
41	BCM	GRBX	SW	MS	AMD_DC41_018	0.017	15	0	6	0.1	1	0	0.51	15	6.2	
		PBCG		MWK												
41.5		GRBX		MS												
42		PBCG	MW	MWK	AMD_DC41_019	0.019	18	0	5.8	0.1	1	-1	0.59	17	5.7	
42.5		PBCG		MWK												
43		CSS		MS												
43.5		PBCG														

Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02134	10.58	0.44	2.86.3	-0.10.3	-1.3	-2.71	0.3972	5.360	3.86.3	
	BCM	CSS	SFA	ST	AMD_DC43_001	0.019	15	0	5.9	0.2	2	-1	0.57	16	5.8	
0.5		FSS CSS		WK												
		MSS		MS												
1		VCSS														
		MSS														
1.5		VCSS														
	BCM	VCSS	SW	ST	AMD_DC43_002	0.179	16	0	5	0.1	1	4	5.5	100	4.3	
2		PBBX		MS												
		CSS		ST												

	Lithology				Sampling																							
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						0.02134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3													
3.5	BCM	CSS	SW	ST	AMD_DC43_002	0.179	16	0	5	0.1	1	4	5.5	100	4.3													
4		FSS	UW	MS																								
4.5																												
5		CSS	SW	ST																								
5.5		GRBX			AMD_DC43_003	0.027	18	0	6.2	0.1	1	0	0.83	8	6.3													
		CSS																										
	VCSS																											
6	PBBX	MW	MWK																									
6.5	VCSS	SW	MS																									
		PBBX																										

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3	
7	BCM	PBBX	SW	MS	AMD_DC43_003	0.027	18	0	6.2	0.1	1	0	0.83	8	6.3	
7.5		VCSS		ST												
		PBBX														
		VCSS		MWK												
8																
8.5		PBBX		MS												
9					AMD_DC43_004	0.014	17	0	5.9	0.3	3	-2	0.43	10	5.9	
		GRBX		MWK												
9.5																
10		PBBX		MS												

Depth	Lithology				Sampling											
	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3	
10.5		PBBX	SW	MS	AMD_DC43_004	0.014	17	0	5.9	0.3	3	-2	0.43	10	5.9	
11		CM	UW	WK												
		PBBX	SW	ST												
11.5		CM			AMD_DC43_005	0.014	19	0	6.3	0.2	2	-2	0.42	6	6	
12	BCM	PBBX		MS												
		CM														
12.5		CM	UW	MWK	AMD_DC43_005	0.014	19	0	6.3	0.2	2	-2	0.42	6	6	
		PBBX	UW	MS												
13		CM	UW													
		PBBX			AMD_DC43_005	0.014	19	0	6.3	0.2	2	-2	0.42	6	6	
		CM														
13.5		PBBX														
		CSS		MS												

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.0134	10.58	0.44	2.86.3	-0.10.3	-1.3	-2.71	0.3972	5.360	3.86.3		
14	BCM	CSS	SW	MS	AMD_DC43_005	0.014	19	0	6.3	0.2	2	-2	0.42	6	6		
		VCSS															
			MW	MS	AMD_DC43_005	0.014	19	0	6.3	0.2	2	-2	0.42	6	6		
14.5		GRBX															
15		CO	SW	WK	QP_DC43_001	0.747	28	13	3.5	0.1	1	22	23	32	4.8		
			CQ		QP_DC43_002												
					QP_DC43_003												
15.5					QP_DC43_004												
			MWK	WK	QP_DC43_005												
		CM			AMD_DC43_006												
16		MS	MS	AMD_DC43_007	0.656	17	9	3.5	0	0	20	20	190	4.1			
	VFSS			AMD_DC43_008	0.902	21	13	3.3	0.1	1	27	28	130	4.2			
16.5	CM	UW	ST	AMD_DC43_009	0.532	12	5	3.8	-0.1	-1	16	16	360	3.8			
	MSS																

	Lithology				Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.02134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3		
17	BCM	MSS	UW	ST	AMD_DC43_009	0.532	12	5	3.8	-0.1	-1	16	16	360	3.8		
17.5																	
18		LMSS			AMD_DC43_010	0.576	13	6	3.7	0.2	2	16	18	320	3.8		
18.5																	
		CSS		MS	AMD_DC43_011	0.357	10	1	4.3	0.1	1	10	11	200	4.1		
		CM															
19		LVFS		WK	AMD_DC43_012	0.508	15	6	3.7	0	0	15	16	160	4.1		
19.5		CM		MS	AMD_DC43_013	2.34	58	44	2.8	0	0	71	72	140	4.2		
		LVFS			AMD_DC43_014	0.655	17	9	3.5	0	0	20	20	120	4.2		
		LMSS															
20	GRBX	SW	AMD_DC43_015		0.015	12	0	6.2	0.2	2	-2	0.45	7	5.7			

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3	
20.5	BCM	GRBX	SW	MS	AMD_DC43_015	0.015	12	0	6.2	0.2	2	-2	0.45	7	5.7	
21				WK												
21.5																
22		VCSS	UW	ST	AMD_DC43_016	0.063	16	0	5.2	0.1	1	1	1.9	6	5.8	
22.5		CM		MS												
23		VCSS														
23.5		PBBX		MWK												
			SW													
				WK	QP_DC43_006											
		CM			QP_DC43_007											
		CO	UW		QP_DC43_008											

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3	
24	BCM	CQ	UW	WK	QP_DC43_008	0.014	10	0	6.1	0.1	1	-1	0.44	6	5.6	
		CM		MWK	QP_DC43_009											
				QP_DC43_010												
		CSS	SW	MS	AMD_DC43_018											
		VCSS														
				</												

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0134	10.58	0.44	2.86.3	-0.10.3	-1.3	-2.71	0.3972	5.360	3.86.3	
27.5	BCM	PBBX	SW	MS	AMD_DC43_019	0.016	11	0	6	0.1	1	-1	0.48	7	5.8	
		GRBX														
28																
28.5		PBBX														
29																
29.5		VCSS		ST	AMD_DC43_020	0.021	12	0	5.9	0.1	1	0	0.65	5	5.7	
30		PBBX														

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.02134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3		
30.5	BCM	PBBX	SW	ST	AMD_DC43_020	0.021	12	0	5.9	0.1	1	0	0.65	5	5.7		
31		MSS		WK													
31.5		PBBX		ST													
32					AMD_DC43_021	0.013	14	0	5.8	0.1	1	0	0.39	5	5.7		
32.5		VCSS		MS													
33																	
33.5		GRBX															

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Lithology					Sampling													
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						0.0134	10.58	0.44	2.86.3	-0.10.3	-1.3	-2.71	0.3972	5.360	3.86.3			
34	BCM	GRBX	SW	MS	AMD_DC43_021	0.013	14	0	5.8	0.1	1	0	0.39	5	5.7			
34.5																		
35		PBBX																
35.5																		
		VCSS																
36				ST	AMD_DC43_022	0.014	11	0	6	0.1	1	0	0.44	6	5.8			
36.5		PBBX																
37																		

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3	
37.5	BCM	PBBX	SW	ST	AMD_DC43_022	0.014	11	0	6	0.1	1	0	0.44	6	5.8	
38																
38.5																
39				MS	AMD_DC43_023	0.021	10	0	6.1	0	0	0	0.66			
39.5																
40																
40.5		GRBX														
		PBBX														

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.02134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3		
41	BCM	PBBX	SW	MS	AMD_DC43_023	0.021	10	0	6.1	0	0	0	0.66				
41.5																	
42																	
42.5																	
43																	
43.5		VCSS															

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Lithology					Sampling																							
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						0.02134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3													
44.5	BCM	VCSS	SW	MS																								
		GRBX																										
		FSS	HW	WK																								
		CM																										
45		VCSS	SW	ST																								
45.5	BCM																											
46																												
46.5	BCM																											
47																												

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02134	10 58	0 44	2.8 6.3	-0.10.3	-1 3	-2 71	0.3972	5 360	3.8 6.3	
47.5	BCM	GRBX	SW	ST												
48																
48.5		PBBX	UW	MS												
49																
49.5																

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Lithology					Sampling																			
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH									
						0.0224	8	133	0	121	2.4	6.3	-0.7	0.2	-7	2	-1	160	0.4	660	4	730	3.2	5.8
0.5	HOL	SOIL																						
		GRBX	SW	ST	AMD_DC44_001	0.017	11	0	6.3	0	0	1	0.53	120	4.9									
1																								
1.5																								
2	BCM																							
		GRBX	MW	WK																				
2.5																								
3																								
		VCSS																						
			HW	VWK																				

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0224	8133	0121	2.46.3	-0.70.2	-72	-1160	0.4660	4730	3.25.8	
3.5	BCM	VCSS	HW	VWK	AMD_DC44_002	0.022	8	0	6.2	0.2	2	-1	0.68	41	5	
4																
4.5		LC														
5																
5.5		GRBX	HW	VWK	AMD_DC44_003	0.02	10	0	6.1	0.2	2	-1	0.62	12	5.1	
6																
6.5		PBBX	MW	WK												

	Lithology				Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02248	1330	121	2.463	-0.702	-72	-1160	0.4660	4730	3.258	
7	BCM	PBBX	MW	WK	AMD_DC44_003	0.02	10	0	6.1	0.2	2	-1	0.62	12	5.1	
			HW	VWK												
		GRBX	MW	MWK												
7.5		LC														
8																
8.5		PBBX	MW	WK	AMD_DC44_004											
		LC														
9																
		VCSS	SW	MWK												
9.5																
10		CM	UW	MS	AMD_DC44_005	0.783	18	11	3.5	-0.1	-1	24	24	260	3.8	

	Lithology				Sampling														
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH				
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH				
						0.02248	133	10	121	2.4	6.3	-0.70	2	-1	160	0.46604	730	3.2	5.8
10.5	BCM	CM	UW	MS	AMD_DC44_005	0.783	18	11	3.5	-0.1	-1	24	24	260	3.8				
		LC																	
		VFSS	UW	WK															
11	BCM	CM	HW	VWK	AMD_DC44_006 AMD_DC44_007 QP_DC44_001	0.57	16	9	3.6	0	0	17	17	240	3.8				
		PBBX	SW	MS															
		CQ	MW	VWK															
11.5	BCM	CM	HW	VWK		0.799	18	10	3.5	-0.1	-1	24	24	340	3.6				
12	BCM	LC																	
12.5	BCM	CM	UW	MS	AMD_DC44_008	0.93	21	14	3.4	-0.2	-2	28	28	370	3.5				
		FSS	SW	WK															
		CSS		MS															
13	BCM	VFSS	UW		AMD_DC44_009	1.04	22	17	3.2	-0.1	-1	32	32	340	3.6				
		LVFS		MWK															
		MSS																	
13.5	BCM	LFSS																	
		FSS	SW																
		LFSS	UW	WK															

Depth	Lithology				SAMPLEID	Sampling										
	Formation	Lithology	Weathering	Strength		ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0224	8133	0121	2.463	-0.702	-72	-1160	0.4660	4730	3.258	
14	BCM	LFSS	UW	WK	AMD_DC44_009	1.04	22	17	3.2	-0.1	-1	32	32	340	3.6	
		CM	SW													
14.5		GRBX	SFA	MS	AMD_DC44_010	0.087	9	0	5.8	0	0	2	2.7	58	4.3	
15		CM	UW	MWK	QP_DC44_002											
		LC														
		CM		VWK	QP_DC44_003											
15.5		MSS	UW													
16		CO	WK		AMD_DC44_011	0.255	12	1	4.5	0	0	8	7.8	83	4.2	
		CSS	MS													
16.5		VGSS	SW	ST												
		LC														
		CM	SW	WK	AMD_DC44_012	1.3	30	21	3.2	-0.1	-1	40	40	340	3.7	

	Lithology				Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.0224	8133	0121	2.463	-0.702	-72	-1160	0.4660	4730	3.258		
17	BCM	CM	SW		AMD_DC44_012	1.3	30	21	3.2	-0.1	-1	40	40	340	3.7		
17.5																	
18				WK													
18.5		PBBX	MW														
19					AMD_DC44_013	0.024	10	0	6	0	0	1	0.72	22	5.1		
19.5		LC															
		VCSS	UW	MS													
20		PBBX	SW														
		LC															

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0224	8 133	0 121	2.4 6.3	-0.70.2	-7 2	-1 160	0.4660	4 730	3.2 5.8	
20.5	BCM	LC														
21		LC														
21.5		GRBX														
22		PBBX	HW	WK												
22.5		LC														
23		PBBX	HW	WK	AMD_DC44_014	0.025	11	0	6	0	0	1	0.76	18	5.1	
23.5																

	Lithology				Sampling																					
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH											
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH											
						0.02248	11330	121	2.463	-0.702	-7.2	160	0.4660	4730	3.258											
	BCM	PBBX	HW	WK	AMD_DC44_014	0.025	11	0	6	0	0	1	0.76	18	5.1											
24		LC																								
		VCSS	MW	WK	AMD_DC44_015	5.24	133	121	2.4	-0.7	-7	160	160	730	3.2											
24.5		GRBX	HW																							
25		CM	VWK													AMD_DC44_016	1.15	26	19	3.3	-0.1	-1	35	35	230	3.4
25.5																										
26			PBBX	SW	MS	AMD_DC44_017	0.038	12	0	5.8	0.1	1	0	1.2	8	5.3										
26.5																										
27	CM	PBBX	SW	MS																						

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0224	8 133	0 121	2.4 6.3	-0.70.2	-7 2	-1 160	0.4660	4 730	3.2 5.8	
	BCM	PBBX LC	SW	MS	AMD_DC44_017	0.038	12	0	5.8	0.1	1	0	1.2	8	5.3	
27.5		PBBX		ST												
		CM	SW	WK												
28		PBBX			AMD_DC44_018	0.018	17	0	5.8	0.2	2	-1	0.54	9	5.2	
28.5		LC														
29		PBBX														
29.5																
30		GRBX	MW	MWK												

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0224	8 133	0 121	2.4 6.3	-0.70.2	-7 2	-1 160	0.4660	4 730	3.2 5.8	
30.5	BCM	GRBX	MW	MWK	AMD_DC44_018	0.018	17	0	5.8	0.2	2	-1	0.54	9	5.2	
31		LC														
31.5																
32		CM	UW	MS	AMD_DC44_019	1.27	28	19	3.2	0	0	39	39	290	3.8	
32.5																
33		LC														
33.5		CM	SW	WK	AMD_DC44_020	1.08	26	18	3.1	-0.1	-1	33	33	250	3.8	

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02248	1330	121	2.463	-0.702	-72	-1160	0.4660	4730	3.258	
34	BCM	CM	SW	WK	AMD_DC44_020	1.08	26	18	3.1	-0.1	-1	33	33	250	3.8	
34.5																
35		GRBX	UW		AMD_DC44_021	0.115	18	0	5.7	0	0	4	3.5	6	5.3	
35.5																
36	BCM	GRBX	SW	MS	AMD_DC44_021	0.115	18	0	5.7	0	0	4	3.5	6	5.3	
36.5																
37																

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.0224	8 133	0 121	2.4 6.3	-0.70.2	-7 2	-1 160	0.4660	4 730	3.2 5.8	
37.5	BCM	GRBX	SW	MS	AMD_DC44_021	0.115	18	0	5.7	0	0	4	3.5	6	5.3	
38		CSS		ST												
38.5		GRBX		VS	AMD_DC44_022	0.06	13	0	5.9	0	0	2	1.8	6	5.6	
39																
39.5		VCSS		ST												
40																
40.5		PBBX	UW													

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Lithology					Sampling													
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH			
						0.0624	133	0	2.463	-0.702	-7	2	160	0.4660	4730	3.258		
41	BCM	PBBX	UW	ST	AMD_DC44_022	0.06	13	0	5.9	0	0	2	1.8	6	5.6			
41.5																		
42																		
42.5					AMD_DC44_023	0.074	16	0	5.8	0	0	2	2.3	5	5.8			
43																		
43.5		CSS	SW															
		PBBX	UW															

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Lithology					Sampling																		
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH								
						0.02248	133	0	121	2.4	6.3	-0.7	0.2	-7	2	-1	160	0.4	660	4	730	3.2	5.8
44.5	BCM	PBBX	UW	ST	AMD_DC44_023	0.074	16	0	5.8	0	0	2	2.3	5	5.8								
45					AMD_DC44_024	0.015	13	0	6	0.1	1	0	0.46	4	5.5								
45.5		LVFS	MWK		AMD_DC44_025	0.019	12	0	4.6	-0.1	-1	1	0.57	170	4								
46		PBBX	MS																				
46.5		VCSS	SW		AMD_DC44_026	0.227	23	0	5.6	0.1	1	6	6.9	8	5.5								
47				ST																			
		GRBX																					

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.02248	133	0	2.463	-0.702	-7	-1	160	0.46604	730	3.258
47.5	BCM	GRBX	SW	ST	AMD_DC44_026	0.227	23	0	5.6	0.1	1	6	6.9	8	5.5	
48																
48.5																
49		PBBX	MS		AMD_DC44_027	0.029	19	0	5.8	0.1	1	0	0.89	8	5.5	
49.5																

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Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.011.2	4 27	0 19	3.2 6.4	-0.30.2	-3 2	0 37	0.4 37	4 260	3.7 6.6	
0.5	HOL	COL														
1																
1.5					AMD_DC45_001	0.015	13	0	5.8	-0.1	-1	0	0.45	41	6.5	
2	BCM	PBBX	MW	ST												
2.5																
3					AMD_DC45_002	0.013	15	0	5.7	0	0	0	0.4	23	6.6	

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.011.24	27	019	3.26.4	-0.30.2	-3	20	37	0.437	4260	3.76.6	
3.5	BCM	PBBX	MW	ST													
4																	
4.5																	
5					AMD_DC45_002	0.013	15	0	5.7	0	0	0	0.4	23	6.6		
5.5																	
6																	
6.5					AMD_DC45_003	0.017	11	0	5.9	-0.1	-1	1	0.53	12	6.1		

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Lithology					Sampling																
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH						
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH						
						0.011.24	27	0	19	3.26.4	-0.30.2	-3	2	0	37	0.4	37	4	260	3.7	6.6
7	BCM	PBBX	MW	ST	AMD_DC45_003	0.017	11	0	5.9	-0.1	-1	1	0.53	12	6.1						
		CM	UW	MWK																	
7.5																					
8			PBBX	SW	MS																
8.5																					
9					AMD_DC45_004	0.03	11	0	6.1	-0.1	-1	1	0.91	10	5.8						
9.5																					
10		GRBX	UW	ST	AMD_DC45_005	0.02	10	0	5.9	-0.1	-1	1	0.62	7	5.7						

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Lithology					Sampling															
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH					
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH					
						0.011.24	27	0	19	3.26.4	-0.30.2	-3	2	0	37	0.437	4	260	3.76.6	
10.5	BCM	GRBX	UW																	
11				ST	AMD_DC45_005	0.02	10	0	5.9	-0.1	-1	1	0.62	7	5.7					
11.5		PBBX	SW																	
12																				
12.5		CM		MWK	QP_DC45_001															
		GRBX	UW	MS																
		FSS																		
		PBBX	SW	ST	AMD_DC45_006	0.676	17	9	3.6	-0.2	-2	21	21	160	4					
13																				
13.5			VFSS	UW	MS	AMD_DC45_007	0.402	9	2	4.1	-0.2	-2	12	12	89	4.7				

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.011.2	4.27	0.19	3.26.4	-0.30.2	-3.2	0.37	0.437	4.260	3.76.6		
14	BCM	VFSS	UW	MS	AMD_DC45_007	0.402	9	2	4.1	-0.2	-2	12	12	89	4.7		
		CM		MWK	QP_DC45_002												
					QP_DC45_003												
					QP_DC45_004												
					AMD_DC45_008	0.655	14	7	3.6	-0.2	-2	20	20	120	4.4		
VFSS																	
GRBX		ST		MS MWK	AMD_DC45_009	0.035	4	0	6.4	-0.1	-1	1	1.1	8	5.6		
FSS																	
CM																	
15.5																	
16		GRBX		ST													
16.5																	

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.011.24	27	0 19	3.2 6.4	-0.30.2	-3 2	0 37	0.4 37	4 260	3.7 6.6		
17	BCM	GRBX	UW	ST	AMD_DC45_009	0.035	4	0	6.4	-0.1	-1	1	1.1	8	5.6		
17.5																	
18					AMD_DC45_010	0.047	6	0	6.4	-0.1	-1	1	1.4	6	5.6		
18.5																	
19																	
19.5		PBBX															
		CM		MWK													
20		PBBX		ST	AMD_DC45_011	0.053	5	0	6.4	0.1	1	1	1.6	8	5.7		

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Lithology					Sampling																								
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH														
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH														
						0.011.24	27	019	3.26.4	-0.30.2	-3	20	37	0.437	4260	3.76.6													
20.5	BCM	PBBX	UW	ST	AMD_DC45_011	0.053	5	0	6.4	0.1	1	1	1.6	8	5.7														
		VCSS																											
21		PBBX	SW																										
21.5		CM	UW	MS													AMD_DC45_012	0.097	11	0	5.2	-0.3	-3	3	3	11	5.5		
22	BCM	PBBX	UW	ST	AMD_DC45_013	0.05	5	0	6.3	-0.1	-1	2	1.5	8	5.6														
22.5		PBBX																											
23		VFSS	SW																										
23.5		PBBX															MS	AMD_DC45_015	0.038	10	0	5.9	0	0	1	1.2	8	5.5	

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Y-axis	BCM	SW	ST	MS	AMD_DC45_015	0.038	10	0	5.9	0	0	1	1.2	8	5.5
24	PBBX			MS											
24.5															
25	GRBX														
25.5															
26	PBBX														
26.5	CM	UW	MS		AMD_DC45_016	1.07	23	16	3.3	-0.2	-2	33	33	97	4.4
27	VFSS				AMD_DC45_017	0.61	16	7	3.7	-0.3	-3	19	19	50	4.6

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Lithology					Sampling														
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH				
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH				
						0.011.24	27	0	19	3.26.4	-0.30.2	-3	2	0	37	0.437	4	260	3.76.6
27.5	BCM	VFSS		MS	AMD_DC45_017	0.61	16	7	3.7	-0.3	-3	19	19	50	4.6				
28																			
28.5																			
29		GRBX	UW	ST	AMD_DC45_018	0.057	6	0	6.3	0.1	1	1	1.7	4	5.5				
29.5																			
30		PBBX																	

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Lithology					Sampling															
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH					
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH					
						0.011.24	27	0	19	3.26.4	-0.30.2	-3	2	0	37	0.437	4	260	3.76.6	
30.5	BCM	PBBX	UW	ST	AMD_DC45_018	0.057	6	0	6.3	0.1	1	1	1	1.7	4	5.5				
31		CM		MS																
31.5		PBBX		ST	AMD_DC45_019	0.029	8	0	6	0	0	1	0.89	6	5.4					
32		CM		MWK																
32.5		PBBX		MS																
33																				
33.5					AMD_DC45_020	0.036	5	0	6.3	0	0	1	1.1	11	5.3					

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Lithology					Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.011.24	27	019	3.26.4	-0.30.2	-32	037	0.437	4260	3.76.6		
34	BCM	PBBX	UW	MS	AMD_DC45_020	0.036	5	0	6.3	0	0	1	1.1	11	5.3		
34.5																	
35																	
35.5																	
36																	
36.5																	
37					AMD_DC45_021	0.035	9	0	6	0.1	1	0	1.1	10	5.2		

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Lithology					Sampling																							
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH													
						0.011.24	27	019	3.26.4	-0.30.2	-32	037	0.437	4260	3.76.6													
37.5	BCM	PBBX	UW	MS	AMD_DC45_021	0.035	9	0	6	0.1	1	0	1.1	10	5.2													
38																												
38.5		VCSS	SW																									
39		GRBX																										
39.5		PBBX	UW	ST	AMD_DC45_022	1	22	18	3.3	-0.1	-1	31	31	260	3.7													
40																												
40.5		GRBX																										

	Lithology				Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.011.24	27	019	3.26.4	-0.30.2	-32	037	0.437	4260	3.76.6	
41	BCM	GRBX	UW	ST	AMD_DC45_022	1	22	18	3.3	-0.1	-1	31	31	260	3.7	6.6
		VCSS														
41.5		GRBX	SW													
42		CSS	MW													
42.5																
43		CM		MS	AMD_DC45_023	1.2	27	19	3.2	0	0	37	37	63	4.4	
43.5		VFSS	UW	MWK	AMD_DC45_024	0.788	15	9	3.5	0.1	1	23	24	160	4.3	
			MS													

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Lithology					Sampling														
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH				
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH				
						0.011.24	27	0	19	3.26.4	-0.30.2	-3	2	0	37	0.437	4	260	3.76.6
	BCM	VFSS		MS	AMD_DC45_024	0.788	15	9	3.5	0.1	1	23	24	160	4.3				
44.5		GRBX	UW	ST	AMD_DC45_025	0.052	12	0	5.8	0.1	1	1	1.6	15	5				
45																			
45.5																			
46		VCSS																	
	GRBX	SW	MS		AMD_DC45_026	0.019	7	0	6.2	0.1	1	0	0.59	8	5.3				
46.5																			
47																	PBBX	ST	

PROSPECT
Deep Creek

DEPTH
61.7



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.011.24	27	019	3.26.4	-0.30.2	-32	037	0.437	4260	3.76.6	
47.5	BCM	PBBX	SW	ST	AMD_DC45_026	0.019	7	0	6.2	0.1	1	0	0.59	8	5.3	
48																
48.5																
49																
49.5																
50					AMD_DC45_027	0.023	6	0	6.2	0.1	1	0	0.71	12	5.2	
50.5																

	Lithology				Sampling												
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH		
						0.011.2	4 27	0 19	3.2 6.4	-0.30.2	-3 2	0 37	0.4 37	4 260	3.7 6.6		
51	BCM	PBBX	SW	ST	AMD_DC45_027	0.023	6	0	6.2	0.1	1	0	0.71	12	5.2		
51.5		CM		MWK	AMD_DC45_028	0.372	16	4	4	0	0	11	11	100	4.2		
52																	
52.5	BCM		UW														
53		PBBX		ST	AMD_DC45_029	0.102	12	0	5.3	0.1	1	2	3.1	110	4		
53.5																	
54																	

	Lithology				Sampling																
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH						
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH						
						0.011.24	27	0	19	3.26.4	-0.30.2	-3	2	0	37	0.4	37	4	260	3.7	6.6
	BCM	PBBX	UW	ST	AMD_DC45_029	0.102	12	0	5.3	0.1	1	2	3.1	110	4						
54.5		CM		WK	AMD_DC45_030	0.349	17	4	3.9	0.1	1	10	11	110	4.3						
		CM		MWK																	
		PBBX		ST																	
		CM		MWK																	
55																					
55.5																					
56			UW																		
		PBCG		ST	AMD_DC45_031	0.214	14	0	4.7	0.1	1	6	6.5	230	3.7						
56.5																					
57																					
57.5					AMD_DC45_032	0.175	14	0	5.2	0.1	1	4	5.3	230	3.7						

PROSPECT
Deep Creek

DEPTH
61.7



Lithology					Sampling											
Depth	Formation	Lithology	Weathering	Strength	SAMPLEID	ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						ABA_Sul_T	ABA_NAG	ABA_NAG_45	ABA_NAG_pH	ABA_ANC_cc	ABA_ANC_hs	ABA_NAPP	ABA_TAP_hs	Conductivity_pH_solu	ABA_RINSE_pH	
						0.011.2	4 27	0 19	3.2 6.4	-0.30.2	-3 2	0 37	0.4 37	4 260	3.7 6.6	
58	BCM	PBCG	UW	ST	AMD_DC45_032	0.175	14	0	5.2	0.1	1	4	5.3	230	3.7	
58.5																
59		VCSS		MS												
		PBCG			AMD_DC45_033	0.121	16	0	5.2	0.2	2	2	3.7	120	4	
	GRCG															
59.5																
60		PBCG		ST												
60.5																

NORTHING
5379214.776

[illegible]

APPENDIX E ABA DATA SUMMARY

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1.2)		µs/cm	µs/cm	pH (1.5)	µs/cm+										
DC16	2	4.2	2.2	AMD_DC16_001_VCSS	VCSS	0.005	4	0.15	-3	5.7	0	14	6.4		260				0.15	4	4	-3	-3.85	0.85	26.14	NAF	NAF	NAF	NAF
DC16	4.2	6.2	2	AMD_DC16_002_GRCG	GRCG	0.043	2	1.3	0	5.4	0	13	4.7		86				1.32	2	2	0	-0.68	0.68	1.52	NAF	UC	NAF	NAF
DC16	6.2	7.5	1.3	AMD_DC16_003_CM/VFSS	VFSS	0.522	-1	16	16	3.8	4	12	3.4		490				15.97	-1	0	16	15.97	0.03	0.00	PAF	PAF	PAF	PAF
DC16	7.5	10.5	3	AMD_DC16_004_GRCG	GRCG	0.025	0	0.76	0	5.8	0	11	4.4		65				0.77	0	0	0	0.77	-0.77	0.00	NAF	PAF	NAF	NAF
DC16	10.5	13.5	3	AMD_DC16_005_GRCG	GRCG	0.014	1	0.42	-1	6	0	11	4.4		58				0.43	1	1	-1	-0.57	-0.43	2.33	NAF	NAF	NAF	NAF
DC16	10.5	13.5	3	AMD_DC16_005_GRCG B	GRCG	0.009	0	0.28	0	5.8	0	13	5.2		44				0.28	0	0	0	0.28	-0.28	0.00	NAF	PAF	NAF	NAF
DC16	13.5	16.5	3	AMD_DC16_006_GRCG	GRBX	0.005	1	0.15	-1	5.7	0	18	5.1		31				0.15	1	1	-1	-0.85	-0.15	6.54	NAF	NAF	NAF	NAF
DC16	16.5	18.2	1.7	AMD_DC16_007_MSS	MSS	0.581	-1	18	18	3.5	6	13	3.3		670				17.78	-1	0	18	17.78	0.22	0.00	PAF	PAF	PAF	PAF
DC16	18.2	20.2	2	AMD_DC16_008_VCSS	VCSS	0.014	1	0.42	-1	5.8	0	14	4.3		39				0.43	1	1	-1	-0.57	-0.43	2.33	NAF	NAF	NAF	NAF
DC16	20.2	22	1.8	AMD_DC16_009_GRBX	GRBX	0.007	0	0.2	0	6	0	13	4.9		26				0.21	0	0	0	0.21	-0.21	0.00	NAF	PAF	NAF	NAF
DC16	22	25.2	3.2	AMD_DC16_010_GRBX	GRBX	0.174	1	5.3	4	4.5	0	4	5.1		28				5.32	1	1	4	4.3	-0.32	0.19	UC	PAF	LR	LR
DC16	25.2	27	1.8	AMD_DC16_011_Mss	MSS	0.24	0	7.4	7	4.1	2	5	3.9		250				7.34	0	0	7	7.34	-0.34	0.00	PAF	PAF	PAF	PAF
DC16	27	27.8	0.8	AMD_DC16_012_FSS	LFSS	0.549	0	17	16	3.4	7	14	4.7		87				16.80	0	0	16	16.80	-0.80	0.00	PAF	PAF	PAF	PAF
DC16	33.2	36.2	3	AMD_DC16_013_HCM	HCM	0.084	4	2.6	-2	4.8	0	10	5.9		27				2.57	4	4	-2	-1.43	-0.57	1.56	NAF	UC	NAF	NAF
DC16	36.2	39.2	3	AMD_DC16_014_HCM/MSS	VFSS	0.085	4	2.6	-1	5	0	7	5.7		41				2.60	4	4	-1	-1.40	0.40	1.54	NAF	UC	NAF	NAF
DC16	39.2	40.5	1.3	AMD_DC16_015_HCM/VFSS	FSS	0.127	0	3.9	4	4.7	0	8	5.5		42				3.89	0	0	4	3.89	0.11	0.00	UC	PAF	NAF	NAF
DC16	40.5	41.15	0.65	AMD_DC16_016_PBCG	PBCG	0.85	2	26	24	3.1	12	20	4.1		150				26.01	2	2	24	24.01	-0.01	0.08	PAF	PAF	HAF	HAF
DC16	41.15	41.95	0.8	AMD_DC16_017_ARG	FSS	0.029	1	0.88	0	5.1	0	14	6.6		5				0.89	1	1	0	-0.11	0.11	1.13	NAF	UC	NAF	NAF
DC16	41.95	43.7	1.75	AMD_DC16_018_GWK	ARG	0.043	2	1.3	-1	6	0	10	6.3		71				1.32	2	2	-1	-0.68	-0.32	1.52	NAF	UC	NAF	NAF
DC17	0	1	1	AMD_DC17_001	GRCG	0.009	1	0.26	-1	6.2	0	4	5.7		4				0.28	1	1	-1	-0.72	-0.28	3.63	NAF	NAF	NAF	NAF
DC17	1	2	1	AMD_DC17_002	LC	0.037	4	1.1	-3	5.8	0	15	5.5		4				1.13	4	4	-3	-2.87	-0.13	3.53	NAF	NAF	NAF	NAF
DC17	2	3	1	AMD_DC17_003	CSS	0.028	1	0.85	0	6.1	0	10	5.3		6				0.86	1	1	0	-0.14	0.14	1.17	NAF	UC	NAF	NAF
DC17	3	4	1	AMD_DC17_004	GRCG	0.013	3	0.39	-2	6.1	0	8	5.7		5				0.40	3	3	-2	-2.60	0.60	7.54	NAF	NAF	NAF	NAF
DC17	4	5	1	AMD_DC17_005	PBBX	0.011	1	0.34	0	6	0	9	5.6		4				0.34	1	1	0	-0.66	0.66	2.97	NAF	NAF	NAF	NAF
DC17	5	6	1	AMD_DC17_006	GRCG	0.006	1	0.17	-1	5.6	0	16	5.5		4				0.18	1	1	-1	-0.82	-0.18	5.45	NAF	NAF	NAF	NAF
DC17	6	7	1	AMD_DC17_007	VCSS	0.005	2	0.15	-2	5.9	0	10	5.5		4				0.15	2	2	-2	-1.85	-0.15	13.07	NAF	NAF	NAF	NAF
DC17	7	8	1	AMD_DC17_008	GRCG	0.005	1	0.15	-1	5.8	0	11	5.5		4				0.15	1	1	-1	-0.85	-0.15	6.54	NAF	NAF	NAF	NAF
DC17	8	9	1	AMD_DC17_009	VCSS	0.007	2	0.21	-2	5.8	0	17	5.5		5				0.21	2	2	-2	-1.79	-0.21	9.34	NAF	NAF	NAF	NAF
DC17	9	12	3	AMD_DC17_010	GRCG	0.005	3	0.15	-3	6	0	13	5.4		4				0.15	3	3	-3	-2.85	-0.15	19.61	NAF	NAF	NAF	NAF
DC17	12	14	2	AMD_DC17_011	GRCG	0.007	2	0.2	-2	5.7	0	16	5.6		4				0.21	2	2	-2	-1.79	-0.21	9.34	NAF	NAF	NAF	NAF
DC17	14	17	3	AMD_DC17_012	GRCG	0.006	3	0.18	-2	5.7	0	17	5.5		5				0.18	3	3	-2	-2.82	0.82	16.34	NAF	NAF	NAF	NAF
DC17	17	19.6	2.6	AMD_DC17_013	GRCG	0.008	3	0.24	-2	5.7	0	19	5.5		3				0.24	3	3	-2	-2.76	0.76	12.25	NAF	NAF	NAF	NAF
DC17	19.6	20.35	0.75	AMD_DC17_014	ZSS	1.16	1	35	35	2.9	24	36	3.9		300				35.50	1	1	35	34.50	0.50	0.03	PAF	PAF	HAF	HAF
DC17	20.35	21.2	0.85	AMD_DC17_015	MSS	1.44	2	44	42	2.8	30	43	3.7		460				44.06	2	2	42	42.06	-0.06	0.05	PAF	PAF	HAF	HAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1.2)		µs/cm	µs/cm	pH (1.5)	µs/cm+										
DC17	21.2	22	0.8	AMD_DC17_016	VCSS	0.336	2	10	8	3.9	3	7	3.9		200				10.28	2	2	8	8.28	-0.28	0.19	PAF	PAF	PAF	PAF
DC17	22	23.3	1.3	AMD_DC17_017	CSS	0.007	2	0.21	-2	5.4	0	5	5.4		6				0.21	2	2	-2	-1.79	-0.21	9.34	NAF	NAF	NAF	NAF
DC17	23.3	25.32	2.02	AMD_DC17_018	VCSS	0.071	2	2.2	0	5.1	0	21	4.8		18				2.17	2	2	0	0.17	-0.17	0.92	NAF	PAF	NAF	NAF
DC17	26.9	27.55	0.65	AMD_DC17_019	CM	0.445	3	14	11	3.6	7	25	3.9		140				13.62	3	3	11	10.62	0.38	0.22	PAF	PAF	PAF	PAF
DC17	27.95	28.6	0.65	AMD_DC17_020	FSS	0.498	0	15	15	3.5	6	13	3.6		430				15.24	0	0	15	15.24	-0.24	0.00	PAF	PAF	PAF	PAF
DC17	28.6	29.3	0.7	AMD_DC17_021	CM	0.625	2	19	17	3.3	13	31	4.2		74				19.13	2	2	17	17.13	-0.13	0.10	PAF	PAF	PAF	PAF
DC17	29.42	30.2	0.78	AMD_DC17_022	FSS	2.26	0	69	69	2.6	59	74	3.8		340				69.16	0	0	69	69.16	-0.16	0.00	PAF	PAF	HAF	HAF
DC17	30.2	33.2	3	AMD_DC17_023	VCSS	0.067	3	2	-1	4.8	0	14	4.1		65				2.05	3	3	-1	-0.95	-0.05	1.46	NAF	UC	NAF	NAF
DC17	33.2	34.8	1.6	AMD_DC17_024	VCSS	0.008	2	0.23	-2	5.4	0	20	5.5		5				0.24	2	2	-2	-1.76	-0.24	8.17	NAF	NAF	NAF	NAF
DC17	34.8	35.6	0.8	AMD_DC17_025	GRCG	0.007	1	0.21	-1	5.4	0	27	5.6		4				0.21	1	1	-1	-0.79	-0.21	4.67	NAF	NAF	NAF	NAF
DC17	35.6	36.6	1	AMD_DC17_026	VCSS	0.005	2	0.17	-2	5.8	0	19	5.6		4				0.15	2	2	-2	-1.85	-0.15	13.07	NAF	NAF	NAF	NAF
DC17	36.6	38.5	1.9	AMD_DC17_027	GRCG	0.021	3	0.63	-2	5.6	0	27	5.2		9				0.64	3	3	-2	-2.36	0.36	4.67	NAF	NAF	NAF	NAF
DC17	38.5	39.2	0.7	AMD_DC17_028	VCSS	0.013	2	0.41	-2	5.3	0	32	5.5		6				0.40	2	2	-2	-1.60	-0.40	5.03	NAF	NAF	NAF	NAF
DC17	39.2	40.65	1.45	AMD_DC17_029	GRCG	0.078	2	2.4	0	5.5	0	12	5.3		5				2.39	2	2	0	0.39	-0.39	0.84	NAF	PAF	NAF	NAF
DC17	40.65	42.2	1.55	AMD_DC17_030	VCSS	0.005	1	0.15	-1	5.6	0	30	5.7		4				0.15	1	1	-1	-0.85	-0.15	6.54	NAF	NAF	NAF	NAF
DC17	42.2	43.7	1.5	AMD_DC17_031	GRCG	0.008	2	0.23	-2	5.6	0	34	5.7		4				0.24	2	2	-2	-1.76	-0.24	8.17	NAF	NAF	NAF	NAF
DC18	1.4	2.61	1.21	AMD_DC18_001	CM	0.618	-1	19	19	3.6	6	21						150	18.91	-1	0	19	18.91	0.09	0.00	PAF	PAF	PAF	PAF
DC18	2.61	3.6	0.99	AMD_DC18_002	VFSS	0.044	2	1.3	-1	5.9	0	7						27	1.35	2	2	-1	-0.65	-0.35	1.49	NAF	UC	NAF	NAF
DC18	3.6	4.91	1.31	AMD_DC18_003	CM	0.248	3	7.6	5	4.3	1	13						44	7.59	3	3	5	4.59	0.41	0.40	PAF	PAF	PAF	PAF
DC18	4.91	7.7	2.79	AMD_DC18_004	FSS	0.853	1	26	25	3.1	16	25						110	26.10	1	1	25	25.10	-0.10	0.04	PAF	PAF	HAF	HAF
DC18	7.7	10.7	3	AMD_DC18_005	GRBX	0.005	4	0.15	-4	5.7	0	13						14	0.15	4	4	-4	-3.85	-0.15	26.14	NAF	NAF	NAF	NAF
DC18	10.7	13.7	3	AMD_DC18_006	VCSS	0.009	1	0.28	-1	5.3	0	20						12	0.28	1	1	-1	-0.72	-0.28	3.63	NAF	NAF	NAF	NAF
DC18	13.7	16.7	3	AMD_DC18_007	GRBX	0.005	1	0.15	-1	5.4	0	19						12	0.15	1	1	-1	-0.85	-0.15	6.54	NAF	NAF	NAF	NAF
DC18	16.7	19.7	3	AMD_DC18_008	GRBX	0.038	3	1.2	-2	5.4	0	19						15	1.16	3	3	-2	-1.84	-0.16	2.58	NAF	NAF	NAF	NAF
DC18	19.7	22.6	2.9	AMD_DC18_009	VCSS	0.014	3	0.41	-3	5	0	22						14	0.43	3	3	-3	-2.57	-0.43	7.00	NAF	NAF	NAF	NAF
DC18	22.6	25.6	3	AMD_DC18_010	VCSS	0.264	2	8.1	6	3.8	3	10						90	8.08	2	2	6	6.08	-0.08	0.25	PAF	PAF	PAF	PAF
DC18	25.6	28.38	2.78	AMD_DC18_011	GRBX	0.005	2	0.15	-2	5.4	0	22						10	0.15	2	2	-2	-1.85	-0.15	13.07	NAF	NAF	NAF	NAF
DC18	28.38	29.3	0.92	AMD_DC18_012	MST	0.788	1	24	23	3.1	13	24						66	24.11	1	1	23	23.11	-0.11	0.04	PAF	PAF	HAF	HAF
DC18	29.9	30.65	0.75	AMD_DC18_013	CM	0.655	1	20	19	3.5	7	21						120	20.04	1	1	19	19.04	-0.04	0.05	PAF	PAF	PAF	PAF
DC18	33.65	36.6	2.95	AMD_DC18_014	CM	0.105	3	3.2	0	3.8	5	21						23	3.21	3	3	0	0.2	-0.21	0.93	UC	PAF	LR	LR
DC18	36.6	39.7	3.1	AMD_DC18_015	VFSS	0.232	4	7.1	4	4.3	1	6						61	7.10	4	4	4	3.10	0.90	0.56	PAF	PAF	PAF	PAF
DC18	39.7	40.8	1.1	AMD_DC18_016	PBBX	0.234	10	7.2	-3	4.4	0	5						180	7.16	10	10	-3	-2.84	-0.16	1.40	UC	UC	PAF	PAF
DC19	0.9	2.53	1.63	AMD_DC19_001	CSS	0.005	7	0.15	-7	5.4	0	20	5.6		11				0.15	7	7	-7	-6.85	-0.15	45.75	NAF	NAF	NAF	NAF
DC19	2.53	3.41	0.88	AMD_DC19_002	LVFS	0.017	3	0.51	-3	5.4	0	15	5.3		17				0.52	3	3	-3	-2.48	-0.52	5.77	NAF	NAF	NAF	NAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1:2)		µs/cm	µs/cm	pH (1:5)	µs/cm+										
DC19	3.86	4.7	0.84	AMD_DC19_003	VCSS	0.023	3	0.71	-2	5.1	0	18	5.4		11				0.70	3	3	-2	-2.30	0.30	4.26	NAF	NAF	NAF	NAF
DC19	5.1	7.45	2.35	AMD_DC19_004	GRBX	0.419	2	13	11	3.5	5	11	4		260				12.82	2	2	11	10.82	0.18	0.16	PAF	PAF	PAF	PAF
DC19	9.85	10.88	1.03	AMD_DC19_005	CM	1.36	2	42	40	2.8	27	45	4.2		150				41.62	2	2	40	39.62	0.38	0.05	PAF	PAF	HAF	HAF
DC19	10.88	11.81	0.93	AMD_DC19_006	VFSS	0.462	1	14	13	3.5	6	14	4.1		190				14.14	1	1	13	13.14	-0.14	0.07	PAF	PAF	PAF	PAF
DC19	11.81	12.7	0.89	AMD_DC19_007	CM	0.419	3	13	10	3.7	5	14	4.2		160				12.82	3	3	10	9.82	0.18	0.23	PAF	PAF	PAF	PAF
DC19	12.7	15.7	3	AMD_DC19_008	VCSS	0.413	2	13	11	3.4	6	12	3.9		240				12.64	2	2	11	10.64	0.36	0.16	PAF	PAF	PAF	PAF
DC19	15.7	18.25	2.55	AMD_DC19_009	GRBX	0.055	2	1.7	-1	4.7	0	18	4.3		73				1.68	2	2	-1	-0.32	-0.68	1.19	NAF	UC	NAF	NAF
DC19	18.25	19.03	0.78	AMD_DC19_010	LMSS	0.374	2	11	9	3.6	5	13	4.2		130				11.44	2	2	9	9.44	-0.44	0.17	PAF	PAF	PAF	PAF
DC19	19.03	19.75	0.72	AMD_DC19_011	LMSS	0.378	2	12	9	3.5	5	10	4		210				11.57	2	2	9	9.57	-0.57	0.17	PAF	PAF	PAF	PAF
DC19	19.75	22.17	2.42	AMD_DC19_012	CSS	0.011	4	0.34	-3	5.1	0	26	5.3		20				0.34	4	4	-3	-3.66	0.66	11.88	NAF	NAF	NAF	NAF
DC19	22.17	23.23	1.06	AMD_DC19_013	CM	0.4	2	12	11	3.7	5	15	4.4		97				12.24	2	2	11	10.24	0.76	0.16	PAF	PAF	PAF	PAF
DC19	23.23	24.3	1.07	AMD_DC19_014	GRBX	0.245	3	7.5	4	3.7	3	10	3.9		190				7.50	3	3	4	4.50	-0.50	0.40	PAF	PAF	PAF	PAF
DC19	24.3	25.28	0.98	AMD_DC19_015	GRBX	0.048	3	1.5	-1	4.7	0	17	4.2		82				1.47	3	3	-1	-1.53	0.53	2.04	NAF	NAF	NAF	NAF
DC19	25.28	25.95	0.67	AMD_DC19_016	VCSS	0.297	2	9.1	7	3.6	4	10	3.7		310				9.09	2	2	7	7.09	-0.09	0.22	PAF	PAF	PAF	PAF
DC19	25.95	28.89	2.94	AMD_DC19_017	GRBX	0.058	2	1.8	0	4.5	0	15	4.1		110				1.77	2	2	0	-0.23	0.23	1.13	NAF	UC	NAF	LR
DC19	28.89	30.29	1.4	AMD_DC19_018	LC	0.659	2	20	18	3.2	11	18	3.8		380				20.17	2	2	18	18.17	-0.17	0.10	PAF	PAF	PAF	PAF
DC19	30.29	31.63	1.34	AMD_DC19_019	CSS	0.171	5	5.2	0	4.1	1	7	4.5		84				5.23	5	5	0	0.2	-0.23	0.96	UC	PAF	LR	LR
DC19	31.63	33.85	2.22	AMD_DC19_020	PBBX	0.113	12	3.5	-8	5	0	8	4.2		190				3.46	12	12	-8	-8.54	0.54	3.47	NAF	NAF	NAF	NAF
DC19	33.85	34.7	0.85	AMD_DC19_021	ARG	0.02	20	0.6	-20	5.7	0	9	5		50				0.61	20	20	-20	-19.39	-0.61	32.68	NAF	NAF	NAF	NAF
DC20	0	3	3	AMD_DC20_001	GRBX	0.03	0	0.93	1	5.8	0	18					5.5	3	0.92	0	0	1	0.92	0.08	0.00	UC	PAF	NAF	NAF
DC20	3	5.5	2.5	AMD_DC20_002	MSS	0.146	1	4.5	4	5.9	0	15					4.7	10	4.47	1	1	4	3.47	0.53	0.22	UC	PAF	NAF	NAF
DC20	8.1	10.5	2.4	AMD_DC20_003	ARG	0.21	2	6.4	4	5.5	0	10					4.9	11	6.43	2	2	4	4.43	-0.43	0.31	UC	PAF	NAF	NAF
DC20	10.5	13.5	3	AMD_DC20_004	ARG	0.084	7	2.6	-5	6.2	0	8					4.7	23	2.57	7	7	-5	-4.43	-0.57	2.72	NAF	NAF	NAF	NAF
DC21	0	0.74	0.74	AMD_DC21_01	VCSS	0.019	0	0.58	1	5.1	0	17				41			0.58	0	0	1	0.58	0.42	0.00	UC	PAF	NAF	NAF
DC21	0.74	2.17	1.43	AMD_DC21_02	GRBX	0.009	-1	0.27	0	5.4	0	16				15			0.28	-1	0	0	0.28	-0.28	0.00	NAF	PAF	NAF	NAF
DC21	2.17	2.48	0.31	AMD_DC21_03	CZN	0.013	1	0.41	-1	5.4	0	22				15			0.40	1	1	-1	-0.60	-0.40	2.51	NAF	NAF	NAF	NAF
DC21	2.48	5.5	3.02	AMD_DC21_04	GRBX	0.009	0	0.28	0	5.4	0	20				13			0.28	0	0	0	0.28	-0.28	0.00	NAF	PAF	NAF	NAF
DC21	5.5	8.5	3	AMD_DC21_05	GRBX	0.012	0	0.36	0	5.3	0	18				10			0.37	0	0	0	0.37	-0.37	0.00	NAF	PAF	NAF	NAF
DC21	8.5	10.28	1.78	AMD_DC21_06	GRBX	0.011	0	0.32	0	5.3	0	31				10			0.34	0	0	0	0.34	-0.34	0.00	NAF	PAF	NAF	NAF
DC21	10.28	11.6	1.32	AMD_DC21_07	GRBX	0.009	1	0.27	-1	5.3	0	27				11			0.28	1	1	-1	-0.72	-0.28	3.63	NAF	NAF	NAF	NAF
DC21	11.8	13.03	1.23	AMD_DC21_08	CM	0.289	-1	8.8	9	4.2	1	13				76			8.84	-1	0	9	8.84	0.16	0.00	PAF	PAF	PAF	PAF
DC21	13.03	13.33	0.3	AMD_DC21_09	FSS	1.14	-1	35	35	3.1	16	29				97			34.88	-1	0	35	34.88	0.12	0.00	PAF	PAF	HAF	HAF
DC21	13.33	13.8	0.47	AMD_DC21_10	FSS	0.102	0	3.1	3	4.6	0	16				49			3.12	0	0	3	3.12	-0.12	0.00	UC	PAF	NAF	NAF
DC21	13.8	16.8	3	AMD_DC21_11	GRBX	0.012	1	0.36	-1	5.4	0	24				9			0.37	1	1	-1	-0.63	-0.37	2.72	NAF	NAF	NAF	NAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1.2)		µs/cm	µs/cm	pH (1.5)	µs/cm+										
																				kg H2SO4/t									
DC21	16.8	19.8	3	AMD_DC21_12	PBBX	0.055	1	1.7	1	5	0	14				12			1.68	1	1	1	0.68	0.32	0.59	UC	PAF	NAF	NAF
DC21	19.8	21.15	1.35	AMD_DC21_13	PBBX	0.01	0	0.32	0	5.3	0	23				8			0.31	0	0	0	0.31	-0.31	0.00	NAF	PAF	NAF	NAF
DC21	22.7	22.9	0.2	AMD_DC21_14	CM	0.179	-1	5.5	5	4.1	1	13				280			5.48	-1	0	5	5.48	-0.48	0.00	PAF	PAF	PAF	LR
DC21	22.9	24.08	1.18	AMD_DC21_15	MSS	0.344	-1	11	11	3.6	4	11				100			10.53	-1	0	11	10.53	0.47	0.00	PAF	PAF	PAF	PAF
DC21	24.08	24.6	0.52	AMD_DC21_16	CSS	0.499	0	15	15	3.7	4	12				110			15.27	0	0	15	15.27	-0.27	0.00	PAF	PAF	PAF	PAF
DC21	24.6	26.34	1.74	AMD_DC21_17	GGB	0.477	0	15	15	3.7	4	12				72			14.60	0	0	15	14.60	0.40	0.00	PAF	PAF	PAF	PAF
DC21	26.34	29.34	3	AMD_DC21_18	GGB	0.064	4	2	-2	5.2	0	10				18			1.96	4	4	-2	-2.04	0.04	2.04	NAF	NAF	NAF	NAF
DC21	29.34	31.8	2.46	AMD_DC21_19	GGB	0.017	4	0.53	-4	6	0	8				15			0.52	4	4	-4	-3.48	-0.52	7.69	NAF	NAF	NAF	NAF
DC22	0	2.65	2.65	AMD_DC22_001	VCSS	0.015	1	0.45	-1	5.9	0	16					5.2	13	0.46	1	1	-1	-0.54	-0.46	2.18	NAF	NAF	NAF	NAF
DC22	2.65	2.9	0.25	AMD_DC22_002	MST	0.022	1	0.68	0	5.8	0	16					5.3	13	0.67	1	1	0	-0.33	0.33	1.49	NAF	UC	NAF	NAF
DC22	2.9	3.13	0.23	AMD_DC22_003	GRBX	0.016	0	0.48	0	6.1	0	10					5.5	15	0.49	0	0	0	0.49	-0.49	0.00	NAF	PAF	NAF	NAF
DC22	3.13	3.43	0.3	AMD_DC22_004	FSS	0.02	0	0.61	0	5.9	0	14					5.4	12	0.61	0	0	0	0.61	-0.61	0.00	NAF	PAF	NAF	NAF
DC22	3.43	6.5	3.07	AMD_DC22_005	GRBX	0.019	0	0.59	0	5.9	0	15					5.4	9	0.58	0	0	0	0.58	-0.58	0.00	NAF	PAF	NAF	NAF
DC22	6.5	9.61	3.11	AMD_DC22_006	GRBX	0.038	0	1.2	1	6	0	11					5.2	12	1.16	0	0	1	1.16	-0.16	0.00	UC	PAF	NAF	NAF
DC22	9.61	9.9	0.29	AMD_DC22_007	CM	0.083	0	2.5	3	5.6	0	13					4.8	38	2.54	0	0	3	2.54	0.46	0.00	UC	PAF	NAF	NAF
DC22	9.9	10.01	0.11	AMD_DC22_008	FSS	0.033	-1	1	1	5.9	0	12					5.6	8	1.01	-1	0	1	1.01	-0.01	0.00	UC	PAF	NAF	NAF
DC22	10.01	11.07	1.06	AMD_DC22_009	GRBX	0.012	1	0.36	0	6	0	12					5.7	11	0.37	1	1	0	-0.63	0.63	2.72	NAF	NAF	NAF	NAF
DC22	11.07	11.55	0.48	AMD_DC22_010	VFSS	0.527	-1	16	16	3.6	5	12					3.9	280	16.13	-1	0	16	16.13	-0.13	0.00	PAF	PAF	PAF	PAF
DC22	11.55	11.96	0.41	AMD_DC22_011	CM	0.808	-1	25	25	3.5	11	18					3.9	200	24.72	-1	0	25	24.72	0.28	0.00	PAF	PAF	HAF	HAF
DC22	11.96	12.37	0.41	AMD_DC22_012	VFSS	0.891	-1	21	21	3.7	7	14					3.9	230	21.14	-1	0	21	21.14	-0.14	0.00	PAF	PAF	PAF	PAF
DC22	12.37	12.91	0.54	AMD_DC22_013	LFSS	0.645	-1	20	20	3.8	6	13					3.9	210	19.74	-1	0	20	19.74	0.26	0.00	PAF	PAF	PAF	PAF
DC22	12.91	14.9	1.99	AMD_DC22_014	GRBX	0.017	1	0.53	0	6	0	10					5.4	14	0.52	1	1	0	-0.48	0.48	1.92	NAF	UC	NAF	NAF
DC22	14.9	16.37	1.47	AMD_DC22_015	GRBX	0.012	1	0.37	-1	6	0	13					5.6	8	0.37	1	1	-1	-0.63	-0.37	2.72	NAF	NAF	NAF	NAF
DC22	16.37	16.49	0.12	AMD_DC22_016	CM	0.072	0	2.2	2	5.5	0	12					5.9	12	2.20	0	0	2	2.20	-0.20	0.00	UC	PAF	NAF	NAF
DC22	16.49	19.5	3.01	AMD_DC22_017	GRBX	0.015	0	0.47	0	6.1	0	10					5.7	7	0.46	0	0	0	0.46	-0.46	0.00	NAF	PAF	NAF	NAF
DC22	19.5	21.2	1.7	AMD_DC22_018	GRBX	0.313	0	9.6	10	4.3	1	11					4	270	9.58	0	0	10	9.58	0.42	0.00	PAF	PAF	PAF	PAF
DC22	24.05	24.3	0.25	AMD_DC22_019	MSS	0.73	-2	22	22	3.6	9	17					4.1	140	22.34	-2	0	22	22.34	-0.34	0.00	PAF	PAF	HAF	HAF
DC22	24.3	25.8	1.5	AMD_DC22_020	MSS	0.13	2	4	2	5.9	0	8						-99	3.98	2	2	2	1.98	0.02	0.50	UC	PAF	NAF	NAF
DC22	25.8	28.8	3	AMD_DC22_021	GWK	0.37	1	11	10	4.4	1	6					4.7	52	11.32	1	1	10	10.32	-0.32	0.09	PAF	PAF	PAF	PAF
DC22	28.8	31.8	3	AMD_DC22_022	GWK	0.087	4	2.7	-2	6.5	0	4					5.6	14	2.66	4	4	-2	-1.34	-0.66	1.50	NAF	UC	NAF	NAF
DC23	0	3	3	AMD_DC23_01	GRBX	0.012	2	0.36	-2	5.4	0	16				5			0.37	2	2	-2	-1.63	-0.37	5.45	NAF	NAF	NAF	NAF
DC23	3	6	3	AMD_DC23_02	GRBX	0.009	1	0.27	-1	5.5	0	16				4			0.28	1	1	-1	-0.72	-0.28	3.63	NAF	NAF	NAF	NAF
DC23	6	6.6	0.6	AMD_DC23_03	GRBX	0.037	1	1.1	1	5.7	0	13				5			1.13	1	1	1	0.13	0.87	0.88	UC	PAF	NAF	NAF
DC23	6.6	6.8	0.2	AMD_DC23_04	LC	0.221	-3	6.8	7	3.3	14	60				23			6.76	-3	0	7	6.76	0.24	0.00	PAF	PAF	PAF	PAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1:2)		µs/cm	µs/cm	pH (1:5)	µs/cm+										
DC23	6.8	6.9	0.1	AMD_DC23_05	GRBX	0.008	1	0.26	-1	6	0	8				4			0.24	1	1	-1	-0.76	-0.24	4.08	NAF	NAF	NAF	NAF
DC23	6.9	7.07	0.17	AMD_DC23_06	HCM	0.051	-2	1.6	2	4.4	1	31				8			1.56	-2	0	2	1.6	0.44	0.00	PAF	PAF	LR	LR
DC23	7.07	7.28	0.21	AMD_DC23_07	GRBX	0.036	1	1.1	0	5.3	0	15				7			1.10	1	1	0	0.10	-0.10	0.91	NAF	PAF	NAF	NAF
DC23	7.28	7.8	0.52	AMD_DC23_08	MSS	0.013	0	0.39	0	5.2	0	19				7			0.40	0	0	0	0.40	-0.40	0.00	NAF	PAF	NAF	NAF
DC23	7.8	10.8	3	AMD_DC23_09	CSS	0.008	1	0.25	-1	6	0	11				6			0.24	1	1	-1	-0.76	-0.24	4.08	NAF	NAF	NAF	NAF
DC23	10.8	11.57	0.77	AMD_DC23_10	VCSS	0.009	1	0.28	-1	5.7	0	19				8			0.28	1	1	-1	-0.72	-0.28	3.63	NAF	NAF	NAF	NAF
DC23	11.57	12.24	0.67	AMD_DC23_11	CM	0.613	-1	19	19	3.6	5	14				180			18.76	-1	0	19	18.76	0.24	0.00	PAF	PAF	PAF	PAF
DC23	12.24	12.95	0.71	AMD_DC23_12	FSS	0.751	0	23	23	3.4	9	17				350			22.98	0	0	23	22.98	0.02	0.00	PAF	PAF	HAF	HAF
DC23	12.95	15.95	3	AMD_DC23_13	GRBX	0.01	2	0.31	-2	5.9	0	11				6			0.31	2	2	-2	-1.69	-0.31	6.54	NAF	NAF	NAF	NAF
DC23	15.95	19	3.05	AMD_DC23_14	GRBX	0.015	3	0.47	-2	5.8	0	13				7			0.46	3	3	-2	-2.54	0.54	6.54	NAF	NAF	NAF	NAF
DC23	19	19.44	0.44	AMD_DC23_15	GRBX	0.031	2	0.96	-1	5.3	0	22				5			0.95	2	2	-1	-1.05	0.05	2.11	NAF	NAF	NAF	NAF
DC23	19.44	19.8	0.36	AMD_DC23_16	CM	0.539	1	16	16	3.6	5	12				170			16.49	1	1	16	15.49	0.51	0.06	PAF	PAF	PAF	PAF
DC23	19.8	22.8	3	AMD_DC23_17	CSS	0.346	2	11	8	3.8	3	7				230			10.59	2	2	8	8.59	-0.59	0.19	PAF	PAF	PAF	PAF
DC23	22.8	25.5	2.7	AMD_DC23_18	VCSS	0.256	1	7.8	7	4	2	7				350			7.83	1	1	7	6.83	0.17	0.13	PAF	PAF	PAF	PAF
DC23	31.6	32.05	0.45	AMD_DC23_19	FSS	0.079	1	2.4	1	4.9	0	6				34			2.42	1	1	1	1.42	-0.42	0.41	UC	PAF	NAF	NAF
DC23	32.75	33.8	1.05	AMD_DC23_20	CM	0.062	1	1.9	1	4.8	0	9				22			1.90	1	1	1	0.90	0.10	0.53	UC	PAF	NAF	NAF
DC23	33.8	34.67	0.87	AMD_DC23_22	CM	0.038	1	1.2	0	5.2	0	11				19			1.16	1	1	0	0.16	-0.16	0.86	NAF	PAF	NAF	NAF
DC23	34.67	36.3	1.63	AMD_DC23_23	MSS	0.09	2	2.8	1	5	0	12				58			2.75	2	2	1	0.75	0.25	0.73	UC	PAF	NAF	NAF
DC23	36.3	36.77	0.47	AMD_DC23_24	CSS	0.206	2	6.3	5	4.2	1	7				200			6.30	2	2	5	4.30	0.70	0.32	PAF	PAF	PAF	PAF
DC23	36.77	37.8	1.03	AMD_DC23_25	PBBX	0.182	4	5.6	2	4.7	0	6				56			5.57	4	4	2	1.57	0.43	0.72	UC	PAF	NAF	NAF
DC23	37.8	38.9	1.1	AMD_DC23_26	PBBX	0.474	12	14	2	4.1	2	7				140			14.50	12	12	2	2.50	-0.50	0.83	PAF	PAF	PAF	PAF
DC23	38.9	40.8	1.9	AMD_DC23_27	ARG	1.78	10	54	45	2.8	27	39				180			54.47	10	10	45	44.47	0.53	0.18	PAF	PAF	HAF	HAF
DC24	0	0.32	0.32	AMD_DC24_001	MSS	0.015	0	0.46	0	6	0	14					5.1	36	0.46	0	0	0	0.46	-0.46	0.00	NAF	PAF	NAF	NAF
DC24	0.32	1.84	1.52	AMD_DC24_002	GRBX	0.024	-1	0.74	1	5.7	0	16					5	34	0.73	-1	0	1	0.73	0.27	0.00	UC	PAF	NAF	NAF
DC24	1.84	2.3	0.46	AMD_DC24_003	FSS	0.019	0	0.57	1	6.2	0	14					5.1	27	0.58	0	0	1	0.58	0.42	0.00	UC	PAF	NAF	NAF
DC24	3.2	6	2.8	AMD_DC24_005	ZSS	0.117	-1	3.6	4	5.5	0	10					4.6	26	3.58	-1	0	4	3.58	0.42	0.00	UC	PAF	NAF	NAF
DC24	6	7.05	1.05	AMD_DC24_006	FSS	0.587	-1	18	18	3.7	7	14					3.7	30	17.96	-1	0	18	17.96	0.04	0.00	PAF	PAF	PAF	PAF
DC24	7.05	9	1.95	AMD_DC24_007	VCSS	0.017	1	0.51	0	6.1	0	7					5.2	25	0.52	1	1	0	-0.48	0.48	1.92	NAF	UC	NAF	NAF
DC24	9	12.15	3.15	AMD_DC24_008	VCSS	0.015	1	0.47	0	6	0	11					5.4	16	0.46	1	1	0	-0.54	0.54	2.18	NAF	NAF	NAF	NAF
DC24	12.8	12.99	0.19	AMD_DC24_009	CM	2.15	-3	66	66	3	41	55					3.1	870	65.79	-3	0	66	65.79	0.21	0.00	PAF	PAF	HAF	HAF
DC24	12.99	15.75	2.76	AMD_DC24_010	FSS	0.374	0	11	11	3.9	3	14					3.6	320	11.44	0	0	11	11.44	-0.44	0.00	PAF	PAF	PAF	PAF
DC24	17.1	18	0.9	AMD_DC24_011	CM	0.06	0	1.8	1	4.6	0	20					4.6	35	1.84	0	0	1	1.84	-0.84	0.00	UC	PAF	NAF	NAF
DC24	18.14	18.6	0.46	AMD_DC24_012	CM	0.08	1	2.5	1	3.9	6	31					4.7	33	2.45	1	1	1	1.4	-0.45	0.41	PAF	PAF	LR	LR
DC24	19.5	22.5	3	AMD_DC24_013	ARG	0.131	3	4	1	6.2	0	4					4.2	50	4.01	3	3	1	1.01	-0.01	0.75	UC	PAF	NAF	NAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model	
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1:2)		µs/cm	µs/cm	pH (1:5)	µs/cm+					kg H2SO4/t						
DC24	22.5	23	0.5	AMD_DC24_014	GWK	0.025	3	0.77	-2	6.8	0	2					5	18	0.77	3	3	-2	-2.24	0.24	3.92	NAF	NAF	NAF	NAF	
DC25	0.3	3.3	3	AMD_DC25_001	VCSS	0.009	3	0.29	-3	5.4		23		5.7		6			0.28	3	3	-3	-2.72	-0.28	10.89	NAF	NAF	NAF	NAF	
DC25	3.3	6.3	3	AMD_DC25_002	GRBX	0.013	2	0.39	-2	5.4		21		5.7		4			0.40	2	2	-2	-1.60	-0.40	5.03	NAF	NAF	NAF	NAF	
DC25	6.3	7.3	1	AMD_DC25_003	GRBX	0.012	1	0.36	-1	5.3		19		5.6		6			0.37	1	1	-1	-0.63	-0.37	2.72	NAF	NAF	NAF	NAF	
DC25	7.3	8.8	1.5	AMD_DC25_004	VFSS	0.976	-1	30	30	3.1		29		3.9		190			29.87	-1	0	30	29.87	0.13	0.00	PAF	PAF	HAF	HAF	
DC25	8.8	9.1	0.3	AMD_DC25_005	VFSS	0.175	0	5.3	5	3.7		32		4.9		23			5.36	0	0	5	5.36	-0.36	0.00	PAF	PAF	PAF	LR	
DC25	9.1	9.82	0.72	AMD_DC25_006	VFSS	0.63	1	19	18	3.3		26		4.3		110			19.28	1	1	18	18.28	-0.28	0.05	PAF	PAF	PAF	PAF	
DC25	9.82	10.52	0.7	AMD_DC25_007	LVFS	0.578	1	18	16	3.2		34		4.3		93			17.69	1	1	16	16.69	-0.69	0.06	PAF	PAF	PAF	PAF	
DC25	10.52	13.52	3	AMD_DC25_008	GRBX	0.007	2	0.2	-2	5.3		38		5.8		6			0.21	2	2	-2	-1.79	-0.21	9.34	NAF	NAF	NAF	NAF	
DC25	13.52	16.5	2.98	AMD_DC25_009	GRBX	0.084	3	2.6	-1	4.6		26		5.7		16			2.57	3	3	-1	-0.43	-0.57	1.17	NAF	UC	NAF	NAF	
DC25	16.5	18.49	1.99	AMD_DC25_010	VCSS	0.007	4	0.2	-3	5.4		32		6.1		5			0.21	4	4	-3	-3.79	0.79	18.67	NAF	NAF	NAF	NAF	
DC25	18.49	18.66	0.17	AMD_DC25_011	LFSS	0.393	3	12	9	3.5		27		4.9		120			12.03	3	3	9	9.03	-0.03	0.25	PAF	PAF	PAF	PAF	
DC25	18.66	20.09	1.43	AMD_DC25_012	LFSS	0.434	2	13	11	3.2		30		4.3		170			13.28	2	2	11	11.28	-0.28	0.15	PAF	PAF	PAF	PAF	
DC25	20.09	22.33	2.24	AMD_DC25_013	GRBX	0.381	4	12	8	3.4		25		4.4		89			11.66	4	4	8	7.66	0.34	0.34	PAF	PAF	PAF	PAF	
DC25	26.02	27.39	1.37	AMD_DC25_014	CM	0.087	2	2.7	0	3.6		34		6.5		26			2.66	2	2	0	0.7	-0.66	0.75	UC	PAF	LR	LR	
DC25	27.39	29.46	2.07	AMD_DC25_015	CM	0.017	2	0.52	-2	4.9		21		7.1		28			0.52	2	2	-2	-1.48	-0.52	3.84	NAF	NAF	NAF	NAF	
DC25	29.46	29.97	0.51	AMD_DC25_016	CM	0.027	3	0.84	-2	5.1		20		7.1		24			0.83	3	3	-2	-2.17	0.17	3.63	NAF	NAF	NAF	NAF	
DC25	29.97	30.53	0.56	AMD_DC25_017	VFSS	0.016	3	0.48	-2	5.3		20		7.8		34			0.49	3	3	-2	-2.51	0.51	6.13	NAF	NAF	NAF	NAF	
DC25	30.53	33.53	3	AMD_DC25_018	VFSS	0.032	3	0.97	-2	5.6		17		8.2		41			0.98	3	3	-2	-2.02	0.02	3.06	NAF	NAF	NAF	NAF	
DC25	33.53	36.39	2.86	AMD_DC25_019	PBBX	0.065	9	2	-7	5.3		14		7.7		43			1.99	9	9	-7	-7.01	0.01	4.52	NAF	NAF	NAF	NAF	
DC25	36.39	37.5	1.11	AMD_DC25_020	GGB	0.027	9	0.81	-8	5.7		15		7.6		21			0.83	9	9	-8	-8.17	0.17	10.89	NAF	NAF	NAF	NAF	
DC26	0.09	3.14	3.05	AMD_DC26_001	CSS	0.017	0	0.52	1	5.7	0	25					4.9	50	0.52	0	0	1	0.52	0.48	0.00	UC	PAF	NAF	NAF	
DC26	3.14	3.47	0.33	AMD_DC26_002	CM	0.026	-1	0.8	1	5.7	0	19					5	32	0.80	-1	0	1	0.80	0.20	0.00	UC	PAF	NAF	NAF	
DC26	3.47	3.78	0.31	AMD_DC26_003	VFSS	0.015	0	0.44	0	5.9	0	19					5.1	22	0.46	0	0	0	0.46	-0.46	0.00	NAF	PAF	NAF	NAF	
DC26	3.78	4.82	1.04	AMD_DC26_004	MSS	0.026	0	0.81	1	5.4	0	27					5.3	13	0.80	0	0	1	0.80	0.20	0.00	UC	PAF	NAF	NAF	
DC26	4.82	7.9	3.08	AMD_DC26_005	GRBX	0.012	0	0.37	0	5.6	0	23					5.1	45	0.37	0	0	0	0.37	-0.37	0.00	NAF	PAF	NAF	NAF	
DC26	7.9	10.4	2.5	AMD_DC26_006	GRBX	0.017	0	0.52	1	6.1	0	13					5	18	0.52	0	0	1	0.52	0.48	0.00	UC	PAF	NAF	NAF	
DC26	10.4	11.47	1.07	AMD_DC26_007	MSS	0.036	0	1.1	1	6.1	0	11					5.1	31	1.10	0	0	1	1.10	-0.10	0.00	UC	PAF	NAF	NAF	
DC26	11.47	11.8	0.33	AMD_DC26_008	CM	0.073	1	2.2	1	5.7	0	15					5.1	25	2.23	1	1	1	1.23	-0.23	0.45	UC	PAF	NAF	NAF	
DC26	11.8	12.8	1	AMD_DC26_009	VCSS	0.032	-1	0.98	1	5.5	0	20					5.3	17	0.98	-1	0	1	0.98	0.02	0.00	UC	PAF	NAF	NAF	
DC26	13.2	13.35	0.15	AMD_DC26_010	FSS	0.035	1	1.1	0	5.3	0	28					5.2	17	1.07	1	1	0	0.07	-0.07	0.93	NAF	PAF	NAF	NAF	
DC26	13.35	13.54	0.19	AMD_DC26_011	CM	0.108	-1	3.3	3	4.4	1	33					4.8	28	3.30	-1	0	3	3.3	-0.30	0.00	PAF	PAF	LR	LR	
DC26	13.66	13.97	0.31	AMD_DC26_012	CM	0.07	-1	2.1	2	5.3	0	21					5.1	14	2.14	-1	0	2	2.14	-0.14	0.00	UC	PAF	NAF	NAF	
DC26	14.1	15.38	1.28	AMD_DC26_013	CM	0.435	-2	13	13	3.8	4	15					3.9	13	13.31	-2	0	13	13.31	-0.31	0.00	PAF	PAF	PAF	PAF	

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1.2)		µs/cm	µs/cm	pH (1.5)	µs/cm+										
DC26	15.38	18.8	3.42	AMD_DC26_014	GRBX	0.839	2	26	24	3.2	14	19					3.3	500	25.67	2	2	24	23.67	0.33	0.08	PAF	PAF	HAF	HAF
DC26	19.4	19.6	0.2	AMD_DC26_016	MST	0.733	0	22	22	3.4	11	22					3.8	200	22.43	0	0	22	22.43	-0.43	0.00	PAF	PAF	HAF	HAF
DC26	19.6	22.9	3.3	AMD_DC26_017	GGB	0.149	6	4.6	-1	5.9	0	8					4.7	48	4.56	6	6	-1	-1.44	0.44	1.32	NAF	UC	NAF	NAF
DC27	0	2.7	2.7	AMD_DC27_001	VCSS	0.016	1	0.49	-1	6.2	0	9					5.4	56	0.49	1	1	-1	-0.51	-0.49	2.04	NAF	NAF	NAF	NAF
DC27	2.7	3.1	0.4	AMD_DC27_002	MSS	0.022	0	0.68	0	6.1	0	13					5.5	72	0.67	0	0	0	0.67	-0.67	0.00	NAF	PAF	NAF	NAF
DC27	3.1	5.39	2.29	AMD_DC27_003	GRBX	0.016	1	0.49	-1	6.2	0	11					5.3	57	0.49	1	1	-1	-0.51	-0.49	2.04	NAF	NAF	NAF	NAF
DC27	5.39	7.01	1.62	AMD_DC27_004	PBBX	0.013	1	0.38	-1	6.4	0	10					5.4	30	0.40	1	1	-1	-0.60	-0.40	2.51	NAF	NAF	NAF	NAF
DC27	7.01	7.25	0.24	AMD_DC27_005	CM	0.098	0	3	3	6	0	13					4.4	92	3.00	0	0	3	3.00	0.00	0.00	UC	PAF	NAF	NAF
DC27	7.25	7.45	0.2	AMD_DC27_006	VFSS	0.12	1	3.7	3	5.5	0	11					4.3	92	3.67	1	1	3	2.67	0.33	0.27	UC	PAF	NAF	NAF
DC27	7.45	10.5	3.05	AMD_DC27_007	VCSS	0.014	1	0.43	-1	6.5	0	7					5.3	19	0.43	1	1	-1	-0.57	-0.43	2.33	NAF	NAF	NAF	NAF
DC27	10.5	13.5	3	AMD_DC27_008	PBBX	0.017	1	0.52	-1	6.4	0	7					5.3	21	0.52	1	1	-1	-0.48	-0.52	1.92	NAF	UC	NAF	NAF
DC27	13.5	16.5	3	AMD_DC27_009	VCSS	0.162	1	5	4	5.8	0	9					3.8	140	4.96	1	1	4	3.96	0.04	0.20	UC	PAF	NAF	NAF
DC27	16.5	17.5	1	AMD_DC27_010	VCSS	0.031	1	0.94	0	6.3	0	11					5.1	31	0.95	1	1	0	-0.05	0.05	1.05	NAF	UC	NAF	NAF
DC27	17.5	17.7	0.2	AMD_DC27_011	CSS	13.1	-16	400	401	2.3	264	297					2.6	2700	400.86	-16	0	401	400.86	0.14	0.00	PAF	PAF	HAF	HAF
DC27	20.65	21.55	0.9	AMD_DC27_012	PBBX	0.188	0	5.8	6	6	0	7					3.7	280	5.75	0	0	6	5.75	0.25	0.00	UC	PAF	NAF	NAF
DC27	21.55	23	1.45	AMD_DC27_013	GWK	0.116	3	3.5	1	6.3	0	6					4.2	110	3.55	3	3	1	0.55	0.45	0.85	UC	PAF	NAF	NAF
DC27	23	25.4	2.4	AMD_DC27_014	ARG	0.063	3	1.9	-1	6.5	0	4					4.5	60	1.93	3	3	-1	-1.07	0.07	1.56	NAF	UC	NAF	NAF
DC28	0	0.49	0.49	AMD_DC28_001	SOIL	0.113	-4	3.5	3	5.3	0	10					4.1	130	3.46	-4	0	3	3.46	-0.46	0.00	UC	PAF	NAF	NAF
DC28	0.49	0.7	0.21	AMD_DC28_002	VCSS	0.072	1	2.2	2	3.5	11	24					4.8	15	2.20	1	1	2	1.2	0.80	0.45	PAF	PAF	LR	LR
DC28	2.18	2.9	0.72	AMD_DC28_003	CM	0.115	2	3.5	2	3.9	8	33					5	12	3.52	2	2	2	1.5	0.48	0.57	PAF	PAF	LR	LR
DC28	2.9	4.05	1.15	AMD_DC28_004	ZSS	0.113	2	3.5	2	5.9	0	19					5.5	9	3.46	2	2	2	1.46	0.54	0.58	UC	PAF	NAF	NAF
DC28	4.05	4.71	0.66	AMD_DC28_005	LVFS	0.005	1	0.15	-1	6.1	0	14					5.7	10	0.15	1	1	-1	-0.85	-0.15	6.54	NAF	NAF	NAF	NAF
DC28	4.71	5.91	1.2	AMD_DC28_006	MST	0.016	2	0.48	-1	6	0	16					4.8	39	0.49	2	2	-1	-1.51	0.51	4.08	NAF	NAF	NAF	NAF
DC28	5.91	6.5	0.59	AMD_DC28_007	FSS	0.082	1	2.5	1	5.8	0	15					4.5	40	2.51	1	1	1	1.51	-0.51	0.40	UC	PAF	NAF	NAF
DC28	6.5	8.9	2.4	AMD_DC28_008	GRBX	0.02	1	0.62	-1	5.7	0	15					4.8	14	0.61	1	1	-1	-0.39	-0.61	1.63	NAF	UC	NAF	NAF
DC28	8.9	10.04	1.14	AMD_DC28_009	ZSS	0.028	1	0.85	-1	6	0	11					4.9	27	0.86	1	1	-1	-0.14	-0.86	1.17	NAF	UC	NAF	NAF
DC28	10.04	10.29	0.25	AMD_DC28_010	PBBX	0.025	2	0.76	-1	6.1	0	9					4.8	31	0.77	2	2	-1	-1.24	0.24	2.61	NAF	NAF	NAF	NAF
DC28	10.29	11.8	1.51	AMD_DC28_011	GWK	0.059	2	1.8	0	6	0	17					4.8	35	1.81	2	2	0	-0.19	0.19	1.11	NAF	UC	NAF	NAF
DC28	11.8	12.08	0.28	GC_DC28_001	GWK																								
DC28	12.08	12.35	0.27	GC_DC28_002	GWK																								
DC28	12.35	13.5	1.15	AMD_DC28_13	GWK	0.056	3	1.7	-1	5.9	0	13					4.9	34	1.71	3	3	-1.00	-1.29	0.29	1.75	NAF	UC	NAF	NAF
DC29	1.7	4.7	3	AMD_DC29_001	VCSS	0.019	1	0.58	-1	5.6	0	18					5.5	21	0.58	1	1	-1.00	-0.42	-0.58	1.72	NAF	UC	NAF	NAF
DC29	4.7	6.96	2.26	AMD_DC29_002	VCSS	0.014	1	0.42	0	5.8	0	18					5.6	13	0.43	1	1	0.00	-0.57	0.57	2.33	NAF	NAF	NAF	NAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1.2)		µs/cm	µs/cm	pH (1.5)	µs/cm+										
DC29	6.96	7.37	0.41	AMD_DC29_003	MSS	0.016	1	0.5	0	6	0	12					5.8	11	0.49	1	1	0.00	-0.51	0.51	2.04	NAF	NAF	NAF	NAF
DC29	7.37	7.99	0.62	AMD_DC29_004	FSS	0.118	0	3.6	4	5.6	0	13					4.8	30	3.61	0	0	4.00	3.61	0.39	0.00	UC	PAF	NAF	NAF
DC29	7.99	8.5	0.51	AMD_DC29_005	CM	0.139	-2	4.2	4	5.6	0	7					5.1	11	4.25	-2	0	4.00	4.25	-0.25	0.00	UC	PAF	NAF	NAF
DC29	8.5	9.11	0.61	AMD_DC29_006	LFSS	0.019	0	0.57	0	5.9	0	15					5.5	7	0.58	0	0	0.00	0.58	-0.58	0.00	NAF	PAF	NAF	NAF
DC29	11.95	12.3	0.35	AMD_DC29_007	CM	0.041	0	1.3	1	4.9	0	21					4.8	18	1.25	0	0	1.00	1.25	-0.25	0.00	UC	PAF	NAF	NAF
DC29	20.41	20.62	0.21	AMD_DC29_008	CM	0.305	0	9.3	9	3.9	5	18					4.4	43	9.33	0	0	9.00	9.33	-0.33	0.00	PAF	PAF	PAF	PAF
DC29	20.62	23.5	2.88	AMD_DC29_009	ZSS	0.047	0	1.5	1	4.9	0	20					4.6	25	1.44	0	0	1.00	1.44	-0.44	0.00	UC	PAF	NAF	NAF
DC29	23.5	23.72	0.22	AMD_DC29_010	ZSS	0.096	1	2.9	2	4.1	4	27					4.7	18	2.94	1	1	2	1.9	0.06	0.34	PAF	PAF	LR	LR
DC29	23.72	24.84	1.12	AMD_DC29_011	FSS	0.091	0	2.8	3	5.7	0	10					4.1	94	2.78	0	0	3.00	2.78	0.22	0.00	UC	PAF	NAF	NAF
DC29	24.84	28.9	4.06	AMD_DC29_012	GWK	0.02	1	0.6	0	6.2	0	10					5	21	0.61	1	1	0.00	-0.39	0.39	1.63	NAF	UC	NAF	NAF
DC30	0	0.65	0.65	AMD_DC30_001	ZSS	0.018	2	0.55	-1	5.6	0	16					4.6	34	0.55	2	2	-1.00	-1.45	0.45	3.63	NAF	NAF	NAF	NAF
DC30	0.65	2.93	2.28	AMD_DC30_002	LFSS	0.115	5	3.5	-1	5.6	0	13					5.2	36	3.52	5	5	-1.00	-1.48	0.48	1.42	NAF	UC	NAF	NAF
DC30	2.93	3.89	0.96	AMD_DC30_003	LFSS	0.272	6	8.3	2	4.3	0	15					5.2	59	8.32	6	6	2.00	2.32	-0.32	0.72	PAF	PAF	PAF	PAF
DC30	3.89	4.15	0.26	AMD_DC30_004	LFSS	0.032	2	0.99	-1	5.7	0	20					6	8	0.98	2	2	-1.00	-1.02	0.02	2.04	NAF	NAF	NAF	NAF
DC30	4.15	7	2.85	AMD_DC30_005	VCSS	0.032	2	0.97	-1	5.7	0	22					6	5	0.98	2	2	-1.00	-1.02	0.02	2.04	NAF	NAF	NAF	NAF
DC30	7	10	3	AMD_DC30_006	VCSS	0.005	1	0.15	-1	5.7	0	22					6	4	0.15	1	1	-1.00	-0.85	-0.15	6.54	NAF	NAF	NAF	NAF
DC30	10	12.42	2.42	AMD_DC30_007	VCSS	0.005	1	0.15	-1	5.6	0	22					5.9	4	0.15	1	1	-1.00	-0.85	-0.15	6.54	NAF	NAF	NAF	NAF
DC30	12.42	12.8	0.38	AMD_DC30_008	MSS	0.311	1	9.5	9	3.9	1	18					4.2	85	9.52	1	1	9.00	8.52	0.48	0.11	PAF	PAF	PAF	PAF
DC30	12.8	13.94	1.14	AMD_DC30_009	LFSS	0.394	1	12	11	3.8	2	12					4.2	120	12.06	1	1	11.00	11.06	-0.06	0.08	PAF	PAF	PAF	PAF
DC30	13.94	14.41	0.47	AMD_DC30_010	CM	0.498	1	15	14	3.6	7	21					4.5	35	15.24	1	1	14.00	14.24	-0.24	0.07	PAF	PAF	PAF	PAF
DC30	14.41	14.56	0.15	AMD_DC30_011	LVFS	0.223	1	6.8	6	4	2	21					4.3	70	6.82	1	1	6.00	5.82	0.18	0.15	PAF	PAF	PAF	PAF
DC30	14.56	15.42	0.86	AMD_DC30_012	LFSS	0.11	2	3.4	2	4.7	0	21					4.7	34	3.37	2	2	2.00	1.37	0.63	0.59	UC	PAF	NAF	NAF
DC30	19	19.9	0.9	AMD_DC30_013	CM	0.143	2	4.4	3	3.6	9	40					5.1	16	4.38	2	2	3	2.4	0.62	0.46	PAF	PAF	LR	LR
DC30	19.9	20.42	0.52	AMD_DC30_014	LFSS	0.07	2	2.1	0	4.2	1	29					5.7	8	2.14	2	2	0	0.1	-0.14	0.93	UC	PAF	LR	LR
DC30	21.01	21.45	0.44	AMD_DC30_015	CM	0.238	1	7.3	6	3	36	87					5.4	8	7.28	1	1	6.00	6.28	-0.28	0.14	PAF	PAF	PAF	PAF
DC30	21.45	23.12	1.67	AMD_DC30_016	LVFS	0.047	1	1.4	0	4.8	0	27					5.2	13	1.44	1	1	0.00	0.44	-0.44	0.70	NAF	PAF	NAF	NAF
DC30	34.19	34.6	0.41	AMD_DC30_017	CM	0.093	2	2.9	1	4.1	3	23					5.3	5	2.85	2	2	1	0.8	0.15	0.70	PAF	PAF	LR	LR
DC30	34.6	35.55	0.95	AMD_DC30_018	CM	0.073	2	2.2	0	4.5	0	21					5.6	7	2.23	2	2	0	0.2	-0.23	0.90	NAF	PAF	LR	LR
DC30	35.55	35.9	0.35	AMD_DC30_019	ZSS	0.041	1	1.3	0	6.4	0	14					5.6	9	1.25	1	1	0.00	0.25	-0.25	0.80	NAF	PAF	NAF	NAF
DC30	35.9	36.93	1.03	AMD_DC30_020	MSS	0.107	1	3.3	2	5.8	0	11					4.8	28	3.27	1	1	2.00	2.27	-0.27	0.31	UC	PAF	NAF	NAF
DC30	36.93	39.23	2.3	AMD_DC30_021	PBBX	0.34	1	10	9	4.1	1	9					3.9	140	10.40	1	1	9.00	9.40	-0.40	0.10	PAF	PAF	PAF	PAF
DC30	39.23	39.47	0.24	AMD_DC30_022	FSS	0.072	2	2.2	0	6.2	0	6					5	22	2.20	2	2	0.00	0.20	-0.20	0.91	NAF	PAF	NAF	NAF
DC30	39.47	40.8	1.33	AMD_DC30_023	PBBX	0.206	2	6.3	4	6	0	8					4.3	87	6.30	2	2	4.00	4.30	-0.30	0.32	UC	PAF	NAF	NAF
DC31	0	0.27	0.27	AMD_DC31_001	SOIL	0.169	-5	5.2	5	5.3	0	10					5.9	110	5.17	-5	0	5.00	5.17	-0.17	0.00	UC	PAF	NAF	NAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1:2)		µs/cm	µs/cm	pH (1:5)	µs/cm+										
DC31	0.27	2.89	2.62	AMD_DC31_002	CM	0.409	2	13	11	3.7	6	23					5	170	12.52	2	2	11.00	10.52	0.48	0.16	PAF	PAF	PAF	PAF
DC31	2.89	3.17	0.28	AMD_DC31_003	VCSS	0.889	-1	27	27	3.2	14	18					3.1	720	27.20	-1	0	27.00	27.20	-0.20	0.00	PAF	PAF	HAF	HAF
DC31	3.17	5.78	2.61	AMD_DC31_004	CM	0.808	-1	25	25	3.4	11	20					3.8	330	24.72	-1	0	25.00	24.72	0.28	0.00	PAF	PAF	HAF	HAF
DC31	5.78	5.97	0.19	AMD_DC31_005	VFSS	0.052	-1	1.6	2	6.1	0	10					4.4	400	1.59	-1	0	2.00	1.59	0.41	0.00	UC	PAF	NAF	NAF
DC31	5.97	8.67	2.7	AMD_DC31_006	VCSS	0.023	1	0.69	0	5.9	0	17					5	19	0.70	1	1	0.00	-0.30	0.30	1.42	NAF	UC	NAF	NAF
DC31	8.67	11	2.33	AMD_DC31_007	CSS	0.019	1	0.58	0	5.8	0	22					5.3	13	0.58	1	1	0.00	-0.42	0.42	1.72	NAF	UC	NAF	NAF
DC31	11	13.21	2.21	AMD_DC31_008	VCSS	0.015	1	0.45	0	5.8	0	21					5.4	13	0.46	1	1	0.00	-0.54	0.54	2.18	NAF	NAF	NAF	NAF
DC31	13.21	14.34	1.13	AMD_DC31_009	ZSS	0.539	-2	16	16	3.7	4	13					4.2	94	16.49	-2	0	16.00	16.49	-0.49	0.00	PAF	PAF	PAF	PAF
DC31	19.87	20.93	1.06	AMD_DC31_010	CM	0.073	0	2.2	2	3.9	5	34					4.9	28	2.23	0	0	2	2.2	-0.23	0.00	PAF	PAF	LR	LR
DC31	20.93	23.92	2.99	AMD_DC31_011	MSS	0.03	0	0.91	1	5.6	0	22					4.6	54	0.92	0	0	1.00	0.92	0.08	0.00	UC	PAF	NAF	NAF
DC31	23.92	25.99	2.07	AMD_DC31_012	PBBX	0.212	1	6.5	5	5.2	0	10					4.1	100	6.49	1	1	5.00	5.49	-0.49	0.15	UC	PAF	NAF	NAF
DC31	25.99	29	3.01	AMD_DC31_013	ARG	0.175	4	5.4	2	6	0	7					4.8	44	5.36	4	4	2.00	1.36	0.65	0.75	UC	PAF	NAF	NAF
DC32	0	0.2	0.2	AMD_DC32_001	CM	0.014	0	0.43	0	5.6	0	28					5.1	24	0.43	0	0	0.00	0.43	-0.43	0.00	NAF	PAF	NAF	NAF
DC32	0.2	0.65	0.45	AMD_DC32_002	FSS	0.201	-1	6.1	6	4.8	0	16					4.4	60	6.15	-1	0	6.00	6.15	-0.15	0.00	UC	PAF	NAF	NAF
DC32	0.65	1.6	0.95	AMD_DC32_003	CM	0.697	-1	21	21	3.7	7	17					3.9	240	21.33	-1	0	21.00	21.33	-0.33	0.00	PAF	PAF	PAF	PAF
DC32	1.6	2.86	1.26	AMD_DC32_004	GRBX	0.005	1	0.15	-1	6.1	0	14					5.3	12	0.15	1	1	-1.00	-0.85	-0.15	6.54	NAF	NAF	NAF	NAF
DC32	2.86	3.83	0.97	AMD_DC32_005	FSS	0.005	0	0.15	0	5.8	0	27					5.2	13	0.15	0	0	0.00	0.15	-0.15	0.00	NAF	PAF	NAF	NAF
DC32	3.83	6.5	2.67	AMD_DC32_006	GRBX	0.005	1	0.15	-1	5.9	0	20					5.5	9	0.15	1	1	-1.00	-0.85	-0.15	6.54	NAF	NAF	NAF	NAF
DC32	6.5	9	2.5	AMD_DC32_007	GRBX	0.042	2	1.3	-1	6	0	14					4.9	17	1.29	2	2	-1.00	-0.71	-0.29	1.56	NAF	UC	NAF	NAF
DC32	9	9.5	0.5	AMD_DC32_008	CM	5.11	-11	160	156	2.5	97	116					3.7	570	156.37	-11	0	156.00	156.37	-0.37	0.00	PAF	PAF	HAF	HAF
DC32	9.5	11.08	1.58	AMD_DC32_009	MSS	0.582	-2	18	18	3.7	5	12					4	180	17.81	-2	0	18.00	17.81	0.19	0.00	PAF	PAF	PAF	PAF
DC32	11.08	14	2.92	AMD_DC32_010	GRBX	0.214	0	6.5	7	5	0	19					4.9	18	6.55	0	0	7.00	6.55	0.45	0.00	UC	PAF	NAF	NAF
DC32	14	15.4	1.4	AMD_DC32_011	GRBX	0.066	0	2	2	5.7	0	18					4.5	31	2.02	0	0	2.00	2.02	-0.02	0.00	UC	PAF	NAF	NAF
DC32	15.4	17.4	2	AMD_DC32_012	VCSS	2.45	-3	75	75	3	36	45					3.4	600	74.97	-3	0	75.00	74.97	0.03	0.00	PAF	PAF	HAF	HAF
DC32	17.4	20.4	3	AMD_DC32_013	VCSS	0.271	-1	8.3	8	4.6	0	17					3.8	240	8.29	-1	0	8.00	8.29	-0.29	0.00	UC	PAF	NAF	NAF
DC32	20.4	22.39	1.99	AMD_DC32_014	GRBX	0.49	1	15	14	3.4	7	21					4.9	18	14.99	1	1	14.00	13.99	0.01	0.07	PAF	PAF	PAF	PAF
DC32	25.75	25.93	0.18	AMD_DC32_015	VFSS	0.336	0	10	10	4.1	3	15					3.9	150	10.28	0	0	10.00	10.28	-0.28	0.00	PAF	PAF	PAF	PAF
DC32	25.93	26.11	0.18	AMD_DC32_016	CM	0.18	0	5.5	5	4.7	0	14					4.4	55	5.51	0	0	5.00	5.51	-0.51	0.00	UC	PAF	NAF	NAF
DC32	26.11	26.99	0.88	AMD_DC32_017	MSS	0.035	0	1.1	1	5.9	0	9					5	21	1.07	0	0	1.00	1.07	-0.07	0.00	UC	PAF	NAF	NAF
DC32	26.99	28.08	1.09	AMD_DC32_018	MSS	0.037	1	1.1	0	5.7	0	13					5.2	27	1.13	1	1	0.00	0.13	-0.13	0.88	NAF	PAF	NAF	NAF
DC32	28.08	28.85	0.77	AMD_DC32_019	GWK	0.029	1	0.87	0	6.1	0	9					5.2	31	0.89	1	1	0.00	-0.11	0.11	1.13	NAF	UC	NAF	NAF
DC32	28.85	31.8	2.95	AMD_DC32_020	GWK	0.024	8	0.73	-7	6	0	13					5.5	28	0.73	8	8	-7.00	-7.27	0.27	10.89	NAF	NAF	NAF	NAF
DC34	0	1.59	1.59	AMD_DC34_001	ZSS	0.163	0	5	5	3.9	2	12				66			4.99	0	0	5	5.0	0.01	0.00	PAF	PAF	LR	LR
DC34	1.59	2.06	0.47	AMD_DC34_002	VFSS	1.13	1	35	33	3.1	19	32				390			34.58	1	1	33.00	33.58	-0.58	0.03	PAF	PAF	HAF	HAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1:2)		µs/cm	µs/cm	pH (1:5)	µs/cm+										
DC34	2.06	2.37	0.31	AMD_DC34_003	ZSS	1.74	-1	53	53	2.7	36	48				570			53.24	-1	0	53.00	53.24	-0.24	0.00	PAF	PAF	HAF	HAF
DC34	2.37	3	0.63	AMD_DC34_004	LFSS	0.522	1	16	15	3.5	7	14				110			15.97	1	1	15.00	14.97	0.03	0.06	PAF	PAF	PAF	PAF
DC34	3	3.49	0.49	AMD_DC34_005	MST	0.926	1	28	28	3	15	25				170			26.34	1	1	28.00	27.34	0.66	0.04	PAF	PAF	HAF	HAF
DC34	3.49	4.4	0.91	AMD_DC34_006	VCSS	0.038	4	1.2	-3	5.2	0	18				12			1.16	4	4	-3.00	-2.84	-0.16	3.44	NAF	NAF	NAF	NAF
DC34	4.4	4.54	0.14	AMD_DC34_007	MST	0.974	0	30	30	3	15	25				380			29.80	0	0	30.00	29.80	0.20	0.00	PAF	PAF	HAF	HAF
DC34	4.54	7.5	2.96	AMD_DC34_008	GRBX	0.025	2	0.76	-1	5.5	0	9				17			0.77	2	2	-1.00	-1.24	0.24	2.61	NAF	NAF	NAF	NAF
DC34	7.5	8.02	0.52	AMD_DC34_009	GRBX	0.017	2	0.52	-1	5.8	0	9				13			0.52	2	2	-1.00	-1.48	0.48	3.84	NAF	NAF	NAF	NAF
DC34	8.02	8.68	0.66	AMD_DC34_010	VFSS	0.688	1	21	20	3.3	10	19				100			21.05	1	1	20.00	20.05	-0.05	0.05	PAF	PAF	PAF	PAF
DC34	8.68	11.47	2.79	AMD_DC34_011	VCSS	0.007	1	0.21	-1	5.5	0	15				10			0.21	1	1	-1.00	-0.79	-0.21	4.67	NAF	NAF	NAF	NAF
DC34	11.47	11.76	0.29	AMD_DC34_012	LFSS	0.813	0	25	24	3.2	13	22				110			24.88	0	0	24.00	24.88	-0.88	0.00	PAF	PAF	HAF	HAF
DC34	17.77	19.51	1.74	AMD_DC34_013	CM	0.035	1	1.1	0	4.6	0	11				18			1.07	1	1	0.00	0.07	-0.07	0.93	NAF	PAF	NAF	NAF
DC34	19.51	19.71	0.2	AMD_DC34_014	VFSS	0.047	1	1.4	0	4.7	0	11				24			1.44	1	1	0.00	0.44	-0.44	0.70	NAF	PAF	NAF	NAF
DC34	19.71	20.02	0.31	AMD_DC34_015	MST	0.015	1	0.47	-1	4.8	0	13				17			0.46	1	1	-1.00	-0.54	-0.46	2.18	NAF	NAF	NAF	NAF
DC34	20.02	21.11	1.09	AMD_DC34_016	VFSS	0.015	1	0.46	-1	5.8	0	8				22			0.46	1	1	-1.00	-0.54	-0.46	2.18	NAF	NAF	NAF	NAF
DC34	21.11	21.39	0.28	AMD_DC34_017	ZSS	0.026	2	0.8	-2	5.1	0	13				25			0.80	2	2	-2.00	-1.20	-0.80	2.51	NAF	NAF	NAF	NAF
DC34	21.39	21.55	0.16	AMD_DC34_018	VFSS	0.023	2	0.7	-1	5.2	0	14				18			0.70	2	2	-1.00	-1.30	0.30	2.84	NAF	NAF	NAF	NAF
DC34	21.55	21.81	0.26	AMD_DC34_019	ZSS	0.025	2	0.77	-1	6	0	4				18			0.77	2	2	-1.00	-1.24	0.24	2.61	NAF	NAF	NAF	NAF
DC34	21.81	22.72	0.91	AMD_DC34_020	FSS	0.038	1	1.2	0	5.3	0	13				29			1.16	1	1	0.00	0.16	-0.16	0.86	NAF	PAF	NAF	NAF
DC34	22.72	25.5	2.78	AMD_DC34_021	GWK	0.156	2	4.8	3	4.6	0	11				35			4.77	2	2	3.00	2.77	0.23	0.42	UC	PAF	NAF	NAF
DC37	0.15	0.35	0.2	AMD_DC37_001	CM	0.065	2	2	0	5.4	0	11					5	19	1.99	2	2	0.00	-0.01	0.01	1.01	NAF	UC	NAF	NAF
DC37	0.78	1	0.22	AMD_DC37_002	CM	0.303	2	9.3	8	4.2	1	11					4.6	27	9.27	2	2	8.00	7.27	0.73	0.22	PAF	PAF	PAF	PAF
DC37	1.61	1.8	0.19	AMD_DC37_003	CM	0.082	2	2.5	1	5.1	0	16					5	25	2.51	2	2	1.00	0.51	0.49	0.80	UC	PAF	NAF	NAF
DC37	1.8	4.8	3	AMD_DC37_004	VCSS	0.048	3	1.5	-2	5.8	0	14					5.6	5	1.47	3	3	-2.00	-1.53	-0.47	2.04	NAF	NAF	NAF	NAF
DC37	4.8	5.88	1.08	AMD_DC37_005	LFSS	0.088	3	2.7	0	5.6	0	16					5.6	7	2.69	3	3	0.00	-0.31	0.31	1.11	NAF	UC	NAF	NAF
DC37	5.88	6.83	0.95	AMD_DC37_006	LVFS	0.04	4	1.2	-2	5.3	0	19					5.4	13	1.22	4	4	-2.00	-2.78	0.78	3.27	NAF	NAF	NAF	NAF
DC37	6.83	7.22	0.39	AMD_DC37_007	CM	0.344	2	11	9	3.7	9	29					4.7	49	10.53	2	2	9.00	8.53	0.47	0.19	PAF	PAF	PAF	PAF
DC37	7.22	8.4	1.18	AMD_DC37_008	MSS	0.05	2	1.5	0	6.1	0	14					5.3	17	1.53	2	2	0.00	-0.47	0.47	1.31	NAF	UC	NAF	NAF
DC37	8.4	8.69	0.29	AMD_DC37_009	LVFS	0.183	2	5.6	4	4.4	1	15					4.9	21	5.60	2	2	4	3.6	0.40	0.36	PAF	PAF	LR	LR
DC37	8.69	9.35	0.66	AMD_DC37_010	VFSS	0.033	1	1	0	5.4	0	16					5.4	8	1.01	1	1	0.00	0.01	-0.01	0.99	NAF	PAF	NAF	NAF
DC37	13.3	13.86	0.56	AMD_DC37_011	CM	1.42	1	43	42	3	23	32					3.7	280	43.45	1	1	42.00	42.45	-0.45	0.02	PAF	PAF	HAF	HAF
DC37	13.86	15.5	1.64	AMD_DC37_012	CSS	0.276	2	8.4	6	4	1	16					4	140	8.45	2	2	6.00	6.45	-0.45	0.24	PAF	PAF	PAF	PAF
DC37	15.5	17.55	2.05	AMD_DC37_013	GRBX	0.019	2	0.57	-1	5.5	0	21					5.6	5	0.58	2	2	-1.00	-1.42	0.42	3.44	NAF	NAF	NAF	NAF
DC37	17.55	18.63	1.08	AMD_DC37_014	CM	0.609	2	19	17	3.6	7	13					4	170	18.64	2	2	17.00	16.64	0.36	0.11	PAF	PAF	PAF	PAF
DC37	18.63	18.79	0.16	AMD_DC37_015	VFSS	0.401	0	12	12	3.8	3	10					3.8	340	12.27	0	0	12.00	12.27	-0.27	0.00	PAF	PAF	PAF	PAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
DC37	18.79	19.23	0.44	AMD_DC37_016	CM	0.99	0	30	30	3.2	16	21					4.1	85	30.29	0	0	30.00	30.29	-0.29	0.00	PAF	PAF	HAF	HAF
DC37	19.23	19.7	0.47	AMD_DC37_017	LFSS	0.241	1	7.4	6	4.4	1	12					4.4	58	7.37	1	1	6.00	6.37	-0.37	0.14	PAF	PAF	PAF	PAF
DC37	19.7	22	2.3	AMD_DC37_018	VCSS	0.014	3	0.44	-3	5.9	0	11					5.7	15	0.43	3	3	-3.00	-2.57	-0.43	7.00	NAF	NAF	NAF	NAF
DC37	22	24.09	2.09	AMD_DC37_019	VCSS	0.038	2	1.2	0	5.4	0	20					4.8	25	1.16	2	2	0.00	-0.84	0.84	1.72	NAF	UC	NAF	NAF
DC37	24.09	24.34	0.25	AMD_DC37_020	LFSS	0.361	1	11	10	3.8	3	14					4.2	97	11.05	1	1	10.00	10.05	-0.05	0.09	PAF	PAF	PAF	PAF
DC37	24.34	25.5	1.16	AMD_DC37_021	CM	0.325	2	10	8	3.9	4	15					-99		9.95	2	2	8.00	7.95	0.05	0.20	PAF	PAF	PAF	PAF
DC37	27.3	29	1.7	AMD_DC37_022	ARG	2.53	5	77	72	2.8	41	50					3.8	260	77.42	5	5	72.00	72.42	-0.42	0.06	PAF	PAF	HAF	HAF
DC37	29	31.8	2.8	AMD_DC37_023	GWK	1.61	13	49	36	3	28	35					4.1	200	49.27	13	13	36.00	36.27	-0.27	0.26	PAF	PAF	HAF	HAF
DC39	0	3	3	AMD_DC39_001	GRBX	0.022	1	0.66	-1	6.4	0	5					5.7	20	0.67	1	1	-1.00	-0.33	-0.67	1.49	NAF	UC	NAF	NAF
DC39	3	6	3	AMD_DC39_002	PBBX	0.031	1	0.94	0	6.4	0	9					5.5	24	0.95	1	1	0.00	-0.05	0.05	1.05	NAF	UC	NAF	NAF
DC39	6	9	3	AMD_DC39_003	PBBX	0.027	0	0.82	1	6.2	0	7					5.6	13	0.83	0	0	1.00	0.83	0.17	0.00	UC	PAF	NAF	NAF
DC39	9	12	3	AMD_DC39_004	PBBX	0.049	0	1.5	2	6.2	0	8					4.6	33	1.50	0	0	2.00	1.50	0.50	0.00	UC	PAF	NAF	NAF
DC39	12	13.39	1.39	AMD_DC39_005	GRBX	0.023	0	0.69	0	6.2	0	7					5.3	22	0.70	0	0	0.00	0.70	-0.70	0.00	NAF	PAF	NAF	NAF
DC39	13.39	14.5	1.11	AMD_DC39_006	CM	0.401	-2	12	12	4.6	0	7					5.1	15	12.27	-2	0	12.00	12.27	-0.27	0.00	UC	PAF	NAF	PAF
DC39	16.43	16.73	0.3	AMD_DC39_007	CM	2.2	0	67	67	3.1	32	47					4.4	75	67.32	0	0	67.00	67.32	-0.32	0.00	PAF	PAF	HAF	HAF
DC39	16.73	19.63	2.9	AMD_DC39_008	GRBX	0.044	-1	1.3	1	5.9	0	12					5.4	11	1.35	-1	0	1.00	1.35	-0.35	0.00	UC	PAF	NAF	NAF
DC39	19.63	20.31	0.68	AMD_DC39_009	CZN	0.094	-1	2.9	3	5.9	0	10					4.8	31	2.88	-1	0	3.00	2.88	0.12	0.00	UC	PAF	NAF	NAF
DC39	20.31	21.5	1.19	AMD_DC39_010	GRBX	0.129	0	3.9	4	5.7	0	9					5.5	15	3.95	0	0	4.00	3.95	0.05	0.00	UC	PAF	NAF	NAF
DC39	22.5	22.93	0.43	AMD_DC39_011	CM	0.694	0	21	21	3.8	6	17					4.4	56	21.24	0	0	21.00	21.24	-0.24	0.00	PAF	PAF	PAF	PAF
DC39	23.2	23.34	0.14	AMD_DC39_012	CM	0.87	0	27	27	3.8	7	18					4.2	120	26.62	0	0	27.00	26.62	0.38	0.00	PAF	PAF	HAF	HAF
DC39	23.34	24.1	0.76	AMD_DC39_013	VFSS	0.63	-1	19	19	3.7	6	12					4.1	130	19.28	-1	0	19.00	19.28	-0.28	0.00	PAF	PAF	PAF	PAF
DC39	24.1	26.03	1.93	AMD_DC39_014	LMSS	0.58	0	18	18	3.7	6	13					3.9	220	17.75	0	0	18.00	17.75	0.25	0.00	PAF	PAF	PAF	PAF
DC39	26.03	26.24	0.21	AMD_DC39_015	CM	0.051	0	1.6	2	6.1	0	8					4.9	35	1.56	0	0	2.00	1.56	0.44	0.00	UC	PAF	NAF	NAF
DC39	26.24	29	2.76	AMD_DC39_016	PBBX	0.017	0	0.51	0	5.9	0	12					5.2	23	0.52	0	0	0.00	0.52	-0.52	0.00	NAF	PAF	NAF	NAF
DC39	29	32	3	AMD_DC39_017	GRBX	0.029	1	0.9	0	6.1	0	9					5.4	21	0.89	1	1	0.00	-0.11	0.11	1.13	NAF	UC	NAF	NAF
DC39	32	35	3	AMD_DC39_018	GRBX	0.013	1	0.41	-1	6.2	0	9					5.1	22	0.40	1	1	-1.00	-0.60	-0.40	2.51	NAF	NAF	NAF	NAF
DC39	35	38	3	AMD_DC39_019	VCSS	0.019	1	0.6	0	6.3	0	10					4.7	26	0.58	1	1	0.00	-0.42	0.42	1.72	NAF	UC	NAF	NAF
DC39	38	41	3	AMD_DC39_020	GRBX	0.056	1	1.7	1	5.8	0	11					4.4	48	1.71	1	1	1.00	0.71	0.29	0.58	UC	PAF	NAF	NAF
DC39	41	44	3	AMD_DC39_021	PBBX	0.055	1	1.7	0	6.2	0	10					4.1	110	1.68	1	1	0.00	0.68	-0.68	0.59	NAF	PAF	NAF	NAF
DC39	44	46.43	2.43	AMD_DC39_022	PBCG	0.092	2	2.8	1	5.9	0	8					4.1	96	2.82	2	2	1.00	0.82	0.18	0.71	UC	PAF	NAF	NAF
DC39	46.43	46.92	0.49	AMD_DC39_023	FSS	0.598	0	18	18	3.7	8	19					4.2	77	18.30	0	0	18.00	18.30	-0.30	0.00	PAF	PAF	PAF	PAF
DC39	46.92	49.6	2.68	AMD_DC39_024	PBCG	0.205	2	6.3	4	5.1	0	11					4	130	6.27	2	2	4.00	4.27	-0.27	0.32	UC	PAF	NAF	NAF
DC41	0	3	3	AMD_DC41_001	GRBX	0.012	2	0.37	-2	5.8	0	17					6	99	0.37	2	2	-2.00	-1.63	-0.37	5.45	NAF	NAF	NAF	NAF
DC41	3	6	3	AMD_DC41_002	CSS	0.014	1	0.42	-1	6	0	14					6	68	0.43	1	1	-1.00	-0.57	-0.43	2.33	NAF	NAF	NAF	NAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR ANC>0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model	
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1:2)		µs/cm	µs/cm	pH (1:5)	µs/cm+											
DC41	6	8.89	2.89	AMD_DC41_003	GRBX	0.018	2	0.55	-2	6	0	13						5.7	18	0.55	2	2	-2.00	-1.45	-0.55	3.63	NAF	NAF	NAF	NAF
DC41	11.8	12.26	0.46	AMD_DC41_004	CM	1.28	1	39	38	3.1	22	35						5.1	22	39.17	1	1	38.00	38.17	-0.17	0.03	PAF	PAF	HAF	HAF
DC41	12.26	15.36	3.1	AMD_DC41_005	ZSS	0.685	0	21	20	3.5	9	15						4.3	110	20.96	0	0	20.00	20.96	-0.96	0.00	PAF	PAF	PAF	PAF
DC41	15.36	18	2.64	AMD_DC41_006	GRBX	0.027	2	0.82	-1	5.9	0	15						5.9	19	0.83	2	2	-1.00	-1.17	0.17	2.42	NAF	NAF	NAF	NAF
DC41	18.46	18.63	0.17	AMD_DC41_020	CM	0.178	0	5.4	5	5	0	16						4.5	84	5.45	0	0	5.00	5.45	-0.45	0.00	UC	PAF	NAF	NAF
DC41	18.63	20.2	1.57	AMD_DC41_007	GRBX	0.049	2	1.5	0	5.6	0	17						5.2	18	1.50	2	2	0.00	-0.50	0.50	1.33	NAF	UC	NAF	NAF
DC41	20.2	21.42	1.22	AMD_DC41_008	HCM	1.66	0	51	51	2.9	29	42						4.3	110	50.80	0	0	51.00	50.80	0.20	0.00	PAF	PAF	HAF	HAF
DC41	21.42	23.7	2.28	AMD_DC41_009	LVFS	0.766	0	23	23	3.4	10	16						4	290	23.44	0	0	23.00	23.44	-0.44	0.00	PAF	PAF	HAF	HAF
DC41	23.7	24.11	0.41	AMD_DC41_010	CM	0.424	1	13	12	4	3	12						4.3	140	12.97	1	1	12.00	11.97	0.03	0.08	PAF	PAF	PAF	PAF
DC41	24.11	27	2.89	AMD_DC41_011	GRBX	0.186	1	5.7	5	5.3	0	11						3.9	200	5.69	1	1	5.00	4.69	0.31	0.18	UC	PAF	NAF	NAF
DC41	27	30	3	AMD_DC41_012	GRBX	0.041	1	1.3	0	6.1	0	10						4.6	62	1.25	1	1	0.00	0.25	-0.25	0.80	NAF	PAF	NAF	NAF
DC41	30	33.5	3.5	AMD_DC41_013	GRBX	0.03	1	0.92	0	6	0	12						5.3	8	0.92	1	1	0.00	-0.08	0.08	1.09	NAF	UC	NAF	NAF
DC41	33.5	34.52	1.02	AMD_DC41_014	LVFS	0.745	1	23	22	3.4	10	19						4.1	160	22.80	1	1	22.00	21.80	0.20	0.04	PAF	PAF	HAF	HAF
DC41	34.52	35.71	1.19	AMD_DC41_015	VCSS	0.018	2	0.55	-2	6.2	0	10						5.5	17	0.55	2	2	-2.00	-1.45	-0.55	3.63	NAF	NAF	NAF	NAF
DC41	35.71	35.97	0.26	AMD_DC41_016	ZSS	0.237	-1	7.3	7	5.3	0	7						5.4	19	7.25	-1	0	7.00	7.25	-0.25	0.00	UC	PAF	NAF	NAF
DC41	35.97	39	3.03	AMD_DC41_017	GRBX	0.018	1	0.56	-1	6.2	0	9						5.8	15	0.55	1	1	-1.00	-0.45	-0.55	1.82	NAF	UC	NAF	NAF
DC41	39	42	3	AMD_DC41_018	GRBX	0.017	1	0.51	0	6	0	15						6.2	15	0.52	1	1	0.00	-0.48	0.48	1.92	NAF	UC	NAF	NAF
DC41	42	43.7	1.7	AMD_DC41_019	PBCG	0.019	1	0.59	-1	5.8	0	18						5.7	17	0.58	1	1	-1.00	-0.42	-0.58	1.72	NAF	UC	NAF	NAF
DC43	0	3	3	AMD_DC43_001	PBBX	0.019	2	0.57	-1	5.9	0	15						5.8	16	0.58	2	2	-1.00	-1.42	0.42	3.44	NAF	NAF	NAF	NAF
DC43	3	6	3	AMD_DC43_002	CSS	0.179	1	5.5	4	5	0	16						4.3	100	5.48	1	1	4.00	4.48	-0.48	0.18	UC	PAF	NAF	NAF
DC43	6	9	3	AMD_DC43_003	PBBX	0.027	1	0.83	0	6.2	0	18						6.3	8	0.83	1	1	0.00	-0.17	0.17	1.21	NAF	UC	NAF	NAF
DC43	9	12	3	AMD_DC43_004	PBBX	0.014	3	0.43	-2	5.9	0	17						5.9	10	0.43	3	3	-2.00	-2.57	0.57	7.00	NAF	NAF	NAF	NAF
DC43	12	14.8	2.8	AMD_DC43_005	PBBX	0.014	2	0.42	-2	6.3	0	19						6	6	0.43	2	2	-2.00	-1.57	-0.43	4.67	NAF	NAF	NAF	NAF
DC43	15.75	15.92	0.17	AMD_DC43_006	CM	0.747	1	23	22	3.5	13	28						4.8	32	22.86	1	1	22.00	21.86	0.14	0.04	PAF	PAF	HAF	HAF
DC43	15.92	16.41	0.49	AMD_DC43_007	VFSS	0.656	0	20	20	3.5	9	17						4.1	190	20.07	0	0	20.00	20.07	-0.07	0.00	PAF	PAF	PAF	PAF
DC43	16.41	16.6	0.19	AMD_DC43_008	CM	0.902	1	28	27	3.3	13	21						4.2	130	27.60	1	1	27.00	26.60	0.40	0.04	PAF	PAF	HAF	HAF
DC43	16.6	17.52	0.92	AMD_DC43_009	MSS	0.532	-1	16	16	3.8	5	12						3.8	360	16.28	-1	0	16.00	16.28	-0.28	0.00	PAF	PAF	PAF	PAF
DC43	17.52	18.68	1.16	AMD_DC43_010	LMSS	0.576	2	18	16	3.7	6	13						3.8	320	17.63	2	2	16.00	15.63	0.37	0.11	PAF	PAF	PAF	PAF
DC43	18.68	18.8	0.12	AMD_DC43_011	CM	0.357	1	11	10	4.3	1	10						4.1	200	10.92	1	1	10.00	9.92	0.08	0.09	PAF	PAF	PAF	PAF
DC43	18.8	19.31	0.51	AMD_DC43_012	LVFS	0.508	0	16	15	3.7	6	15						4.1	160	15.54	0	0	15.00	15.54	-0.54	0.00	PAF	PAF	PAF	PAF
DC43	19.31	19.62	0.31	AMD_DC43_013	CM	2.34	0	72	71	2.8	44	58						4.2	140	71.60	0	0	71.00	71.60	-0.60	0.00	PAF	PAF	HAF	HAF
DC43	19.62	20	0.38	AMD_DC43_014	LVFS	0.655	0	20	20	3.5	9	17						4.2	120	20.04	0	0	20.00	20.04	-0.04	0.00	PAF	PAF	PAF	PAF
DC43	20	21.79	1.79	AMD_DC43_015	GRBX	0.015	2	0.45	-2	6.2	0	12						5.7	7	0.46	2	2	-2.00	-1.54	-0.46	4.36	NAF	NAF	NAF	NAF
DC43	21.79	21.91	0.12	AMD_DC43_016	CM	0.063	1	1.9	1	5.2	0	16						5.8	6	1.93	1	1	1.00	0.93	0.07	0.52	UC	PAF	NAF	NAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1.2)		µs/cm	µs/cm	pH (1.5)	µs/cm+										
DC43	21.91	23.24	1.33	AMD_DC43_017	PBBX	0.014	1	0.43	0	5.9	0	13					5.7	7	0.43	1	1	0.00	-0.57	0.57	2.33	NAF	NAF	NAF	NAF
DC43	24.09	27	2.91	AMD_DC43_018	PBBX	0.014	1	0.44	-1	6.1	0	10					5.6	6	0.43	1	1	-1.00	-0.57	-0.43	2.33	NAF	NAF	NAF	NAF
DC43	27	30	3	AMD_DC43_019	PBBX	0.016	1	0.48	-1	6	0	11					5.8	7	0.49	1	1	-1.00	-0.51	-0.49	2.04	NAF	NAF	NAF	NAF
DC43	30	33	3	AMD_DC43_020	PBBX	0.021	1	0.65	0	5.9	0	12					5.7	5	0.64	1	1	0.00	-0.36	0.36	1.56	NAF	UC	NAF	NAF
DC43	33	36	3	AMD_DC43_021	PBBX	0.013	1	0.39	0	5.8	0	14					5.7	5	0.40	1	1	0.00	-0.60	0.60	2.51	NAF	NAF	NAF	NAF
DC43	36	39	3	AMD_DC43_022	PBBX	0.014	1	0.44	0	6	0	11					5.8	6	0.43	1	1	0.00	-0.57	0.57	2.33	NAF	NAF	NAF	NAF
DC43	39	40.8	1.8	AMD_DC43_023	PBBX	0.021	0	0.66	0	6.1	0	10						-99	0.64	0	0	0.00	0.64	-0.64	0.00	NAF	PAF	NAF	NAF
DC44	0.1	0.5	0.4	AMD_DC44_001	GRBX	0.017	0	0.53	1	6.3	0	11					4.9	120	0.52	0	0	1.00	0.52	0.48	0.00	UC	PAF	NAF	NAF
DC44	1.6	4	2.4	AMD_DC44_002	VCSS	0.022	2	0.68	-1	6.2	0	8					5	41	0.67	2	2	-1.00	-1.33	0.33	2.97	NAF	NAF	NAF	NAF
DC44	4.7	7.6	2.9	AMD_DC44_003	GRBX	0.02	2	0.62	-1	6.1	0	10					5.1	12	0.61	2	2	-1.00	-1.39	0.39	3.27	NAF	NAF	NAF	NAF
DC44	7.7	9.37	1.67	AMD_DC44_004	PBBX	0.02	1	0.62	-1	6	0	11					5.6	8	0.61	1	1	-1.00	-0.39	-0.61	1.63	NAF	UC	NAF	NAF
DC44	9.37	10.89	1.52	AMD_DC44_005	CM	0.783	-1	24	24	3.5	11	18					3.8	260	23.96	-1	0	24.00	23.96	0.04	0.00	PAF	PAF	HAF	HAF
DC44	10.89	11.15	0.26	AMD_DC44_006	PBBX	0.57	0	17	17	3.6	9	16					3.8	240	17.44	0	0	17.00	17.44	-0.44	0.00	PAF	PAF	PAF	PAF
DC44	11.15	11.4	0.25	AMD_DC44_007	CM	0.799	-1	24	24	3.5	10	18					3.6	340	24.45	-1	0	24.00	24.45	-0.45	0.00	PAF	PAF	HAF	HAF
DC44	12.2	12.48	0.28	AMD_DC44_008	CM	0.93	-2	28	28	3.4	14	21					3.5	370	28.46	-2	0	28.00	28.46	-0.46	0.00	PAF	PAF	HAF	HAF
DC44	12.48	13.76	1.28	AMD_DC44_009	LFSS	1.04	-1	32	32	3.2	17	22					3.6	340	31.82	-1	0	32.00	31.82	0.18	0.00	PAF	PAF	HAF	HAF
DC44	13.76	14.78	1.02	AMD_DC44_010	GRBX	0.087	0	2.7	2	5.8	0	9					4.3	58	2.66	0	0	2.00	2.66	-0.66	0.00	UC	PAF	NAF	NAF
DC44	15.32	16.7	1.38	AMD_DC44_011	MSS	0.255	0	7.8	8	4.5	1	12					4.2	83	7.80	0	0	8.00	7.80	0.20	0.00	UC	PAF	PAF	PAF
DC44	16.9	17.55	0.65	AMD_DC44_012	CM	1.3	-1	40	40	3.2	21	30					3.7	340	39.78	-1	0	40.00	39.78	0.22	0.00	PAF	PAF	HAF	HAF
DC44	17.55	20.3	2.75	AMD_DC44_013	PBBX	0.024	0	0.72	1	6	0	10					5.1	22	0.73	0	0	1.00	0.73	0.27	0.00	UC	PAF	NAF	NAF
DC44	21.2	23.8	2.6	AMD_DC44_014	PBBX	0.025	0	0.76	1	6	0	11					5.1	18	0.77	0	0	1.00	0.77	0.24	0.00	UC	PAF	NAF	NAF
DC44	24.2	25.06	0.86	AMD_DC44_015	GRBX	5.24	-7	160	160	2.4	121	133					3.2	730	160.34	-7	0	160.00	160.34	-0.34	0.00	PAF	PAF	HAF	HAF
DC44	25.06	25.2	0.14	AMD_DC44_016	CM	1.15	-1	35	35	3.3	19	26					3.4	230	35.19	-1	0	35.00	35.19	-0.19	0.00	PAF	PAF	HAF	HAF
DC44	25.6	28	2.4	AMD_DC44_017	PBBX	0.038	1	1.2	0	5.8	0	12					5.3	8	1.16	1	1	0.00	0.16	-0.16	0.86	NAF	PAF	NAF	NAF
DC44	28	30.6	2.6	AMD_DC44_018	PBBX	0.018	2	0.54	-1	5.8	0	17					5.2	9	0.55	2	2	-1.00	-1.45	0.45	3.63	NAF	NAF	NAF	NAF
DC44	31.7	32.8	1.1	AMD_DC44_019	CM	1.27	0	39	39	3.2	19	28					3.8	290	38.86	0	0	39.00	38.86	0.14	0.00	PAF	PAF	HAF	HAF
DC44	33.2	35.16	1.96	AMD_DC44_020	CM	1.08	-1	33	33	3.1	18	26					3.8	250	33.05	-1	0	33.00	33.05	-0.05	0.00	PAF	PAF	HAF	HAF
DC44	35.16	38	2.84	AMD_DC44_021	GRBX	0.115	0	3.5	4	5.7	0	18					5.3	6	3.52	0	0	4.00	3.52	0.48	0.00	UC	PAF	NAF	NAF
DC44	38	41	3	AMD_DC44_022	VCSS	0.06	0	1.8	2	5.9	0	13					5.6	6	1.84	0	0	2.00	1.84	0.16	0.00	UC	PAF	NAF	NAF
DC44	41	44	3	AMD_DC44_023	PBBX	0.074	0	2.3	2	5.8	0	16					5.8	5	2.26	0	0	2.00	2.26	-0.26	0.00	UC	PAF	NAF	NAF
DC44	44	45.2	1.2	AMD_DC44_024	PBBX	0.015	1	0.46	0	6	0	13					5.5	4	0.46	1	1	0.00	-0.54	0.54	2.18	NAF	NAF	NAF	NAF
DC44	45.2	45.31	0.11	AMD_DC44_025	LVFS	0.019	-1	0.57	1	4.6	0	12					4	170	0.58	-1	0	1.00	0.58	0.42	0.00	UC	PAF	NAF	NAF
DC44	45.31	48	2.69	AMD_DC44_026	VCSS	0.227	1	6.9	6	5.6	0	23					5.5	8	6.95	1	1	6.00	5.95	0.05	0.14	UC	PAF	NAF	NAF
DC44	48	49.6	1.6	AMD_DC44_027	PBBX	0.029	1	0.89	0	5.8	0	19					5.5	8	0.89	1	1	0.00	-0.11	0.11	1.13	NAF	UC	NAF	NAF

Drill Hole	From m	To m	Width	Sample ID	Lithology	Total S	ANC	MPA	NAPP	NAG pH	NAG pH 4.5	NAG pH 7	Paste pH	Paste pH (Aged)	Paste EC	Paste EC (Aged)	Rinse pH	Rinse EC	MPA Calculated	ANC	ANC (<0=0)	NAPP	NAPP Calculated <0 ANC=0	NAPP Check	NPR <0 ANC=0	AMIRA 2002	Price (2009)	Escarpment Model	MFS Model	
					Unit	wt%		Kg H2SO4/T		-		Kg H2SO4/T		pH (1:2)		µs/cm	µs/cm	pH (1:5)	µs/cm+					kg H2SO4/t						
DC45	0	3	3	AMD_DC45_001	PBBX	0.015	-1	0.45	0	5.8	0	13					6.5	41	0.46	-1	0	0.00	0.46	-0.46	0.00	NAF	PAF	NAF	NAF	
DC45	3	6	3	AMD_DC45_002	PBBX	0.013	0	0.4	0	5.7	0	15					6.6	23	0.40	0	0	0.00	0.40	-0.40	0.00	NAF	PAF	NAF	NAF	
DC45	6	9	3	AMD_DC45_003	PBBX	0.017	-1	0.53	1	5.9	0	11					6.1	12	0.52	-1	0	1.00	0.52	0.48	0.00	UC	PAF	NAF	NAF	
DC45	9	9.62	0.62	AMD_DC45_004	PBBX	0.03	-1	0.91	1	6.1	0	11					5.8	10	0.92	-1	0	1.00	0.92	0.08	0.00	UC	PAF	NAF	NAF	
DC45	9.62	12.39	2.77	AMD_DC45_005	PBBX	0.02	-1	0.62	1	5.9	0	10					5.7	7	0.61	-1	0	1.00	0.61	0.39	0.00	UC	PAF	NAF	NAF	
DC45	12.49	12.67	0.18	AMD_DC45_006	GRBX	0.676	-2	21	21	3.6	9	17					4	160	20.69	-2	0	21.00	20.69	0.31	0.00	PAF	PAF	PAF	PAF	
DC45	12.67	13.94	1.27	AMD_DC45_007	VFSS	0.402	-2	12	12	4.1	2	9					4.7	89	12.30	-2	0	12.00	12.30	-0.30	0.00	PAF	PAF	PAF	PAF	
DC45	14.4	14.81	0.41	AMD_DC45_008	VFSS	0.655	-2	20	20	3.6	7	14					4.4	120	20.04	-2	0	20.00	20.04	-0.04	0.00	PAF	PAF	PAF	PAF	
DC45	14.81	17.81	3	AMD_DC45_009	GRBX	0.035	-1	1.1	1	6.4	0	4					5.6	8	1.07	-1	0	1.00	1.07	-0.07	0.00	UC	PAF	NAF	NAF	
DC45	17.81	20	2.19	AMD_DC45_010	GRBX	0.047	-1	1.4	1	6.4	0	6					5.6	6	1.44	-1	0	1.00	1.44	-0.44	0.00	UC	PAF	NAF	NAF	
DC45	20	21.6	1.6	AMD_DC45_011	PBBX	0.053	1	1.6	1	6.4	0	5					5.7	8	1.62	1	1	1.00	0.62	0.38	0.62	UC	PAF	NAF	NAF	
DC45	21.6	21.71	0.11	AMD_DC45_012	CM	0.097	-3	3	3	5.2	0	11					5.5	11	2.97	-3	0	3.00	2.97	0.03	0.00	UC	PAF	NAF	NAF	
DC45	21.71	22.97	1.26	AMD_DC45_013	PBBX	0.05	-1	1.5	2	6.3	0	5					5.6	8	1.53	-1	0	2.00	1.53	0.47	0.00	UC	PAF	NAF	NAF	
DC45	22.97	23.13	0.16	AMD_DC45_014	VFSS	0.051	-1	1.6	2	5.8	0	10					5.3	11	1.56	-1	0	2.00	1.56	0.44	0.00	UC	PAF	NAF	NAF	
DC45	23.13	26.04	2.91	AMD_DC45_015	PBBX	0.038	0	1.2	1	5.9	0	10					5.5	8	1.16	0	0	1.00	1.16	-0.16	0.00	UC	PAF	NAF	NAF	
DC45	26.04	26.83	0.79	AMD_DC45_016	CM	1.07	-2	33	33	3.3	16	23					4.4	97	32.74	-2	0	33.00	32.74	0.26	0.00	PAF	PAF	HAF	HAF	
DC45	26.83	27.48	0.65	AMD_DC45_017	VFSS	0.61	-3	19	19	3.7	7	16					4.6	50	18.67	-3	0	19.00	18.67	0.33	0.00	PAF	PAF	PAF	PAF	
DC45	27.48	30.5	3.02	AMD_DC45_018	GRBX	0.057	1	1.7	1	6.3	0	6					5.5	4	1.74	1	1	1.00	0.74	0.26	0.57	UC	PAF	NAF	NAF	
DC45	30.5	33.5	3	AMD_DC45_019	PBBX	0.029	0	0.89	1	6	0	8					5.4	6	0.89	0	0	1.00	0.89	0.11	0.00	UC	PAF	NAF	NAF	
DC45	33.5	36.5	3	AMD_DC45_020	PBBX	0.036	0	1.1	1	6.3	0	5					5.3	11	1.10	0	0	1.00	1.10	-0.10	0.00	UC	PAF	NAF	NAF	
DC45	36.5	39.5	3	AMD_DC45_021	PBBX	0.035	1	1.1	0	6	0	9					5.2	10	1.07	1	1	0.00	0.07	-0.07	0.93	NAF	PAF	NAF	NAF	
DC45	39.5	42.53	3.03	AMD_DC45_022	GRBX	1	-1	31	31	3.3	18	22					3.7	260	30.60	-1	0	31.00	30.60	0.40	0.00	PAF	PAF	HAF	HAF	
DC45	42.53	42.93	0.4	AMD_DC45_023	CM	1.2	0	37	37	3.2	19	27					4.4	63	36.72	0	0	37.00	36.72	0.28	0.00	PAF	PAF	HAF	HAF	
DC45	42.93	44.15	1.22	AMD_DC45_024	VFSS	0.788	1	24	23	3.5	9	15					4.3	160	24.11	1	1	23.00	23.11	-0.11	0.04	PAF	PAF	HAF	HAF	
DC45	44.15	47	2.85	AMD_DC45_025	GRBX	0.052	1	1.6	1	5.8	0	12					5	15	1.59	1	1	1.00	0.59	0.41	0.63	UC	PAF	NAF	NAF	
DC45	47	50	3	AMD_DC45_026	PBBX	0.019	1	0.59	0	6.2	0	7					5.3	8	0.58	1	1	0.00	-0.42	0.42	1.72	NAF	UC	NAF	NAF	
DC45	50	51.34	1.34	AMD_DC45_027	PBBX	0.023	1	0.71	0	6.2	0	6					5.2	12	0.70	1	1	0.00	-0.30	0.30	1.42	NAF	UC	NAF	NAF	
DC45	51.34	51.59	0.25	AMD_DC45_028	CM	0.372	0	11	11	4	4	16					4.2	100	11.38	0	0	11.00	11.38	-0.38	0.00	PAF	PAF	PAF	PAF	
DC45	51.59	54.27	2.68	AMD_DC45_029	PBBX	0.102	1	3.1	2	5.3	0	12					4	110	3.12	1	1	2.00	2.12	-0.12	0.32	UC	PAF	NAF	NAF	
DC45	54.27	54.72	0.45	AMD_DC45_030	CM	0.349	1	11	10	3.9	4	17					4.3	110	10.68	1	1	10.00	9.68	0.32	0.09	PAF	PAF	PAF	PAF	
DC45	54.72	57.5	2.78	AMD_DC45_031	PBCG	0.214	1	6.5	6	4.7	0	14					3.7	230	6.55	1	1	6.00	5.55	0.45	0.15	UC	PAF	NAF	NAF	
DC45	57.5	60	2.5	AMD_DC45_032	PBCG	0.175	1	5.3	4	5.2	0	14					3.7	230	5.36	1	1	4.00	4.36	-0.36	0.19	UC	PAF	NAF	NAF	
DC45	60	61.7	1.7	AMD_DC45_033	PBCG	0.121	2	3.7	2	5.2	0	16					4	120	3.70	2	2	2.00	1.70	0.30	0.54	UC	PAF	NAF	NAF	

LOOKUP	DESCRIPTION
ARG	Argillite - Greenland Group
CBBX	Cobble Breccia - angular fragments greater than 64mm in size
CM	Carb Mudstone - ash percentage over 50% (black)
CO	Coal - Coal less than 15% ash
COL	Colluvium
CQ	High Ash Coal - ash percentage between 15% and 35%
CS	Carbonaceous Sandstone
CSh	Coalshale
CSS	Coarse Sandstone - particles predominantly 0.5 to 1 mm in size
CZN	Crush Zone - Zone of weak crushed rock of predominately silt with variable percentages of sand to gravel sized particles of the host rock and minor clay. May include gouge seams. Zone boundaries may or may not be roughly parallel.
FSS	Fine Sandstone - particles predominantly 0.125 to 0.25mm in size
FT	Fault - plane of discontinuity displaying evidence of substantial displacement
GGB	Greenland Group Basement - Undifferentiated Greengroup Group lithologies
GRBX	Granule Breccia - angular fragments 2 - 4 mm in size
GRCG	Granule Conglomerate - rounded particles 2-4mm in size in size
GWK	Greywacke
HCM	High Carb Mudstone - ash percentage 35 to 50%
LC	Lost Core
LCSS	Laminated Coarse Sandstone
LFSS	Laminated Fine Sandstone - bedding generally less than 20mm. Particles predominantly 0.125 - 0.25mm in size
LMSS	Laminated Sandstone - bedding generally less than 20 mm. Particles predominantly 0.25 - 0.5mm in size
LVFS	Laminated Very Fine Sandstone - bedding generally less than 20 mm. Particles predominantly 0.06 - 0.125 mm in size
MS	Mudstone
MSS	Medium Sandstone - particles predominantly 0.25 - 0.5 mm in size
MST	Mudstone <25% Carb - particles predominately less than 0.06 mm (clay and silt size)
OH	Open Hole - no sample collected
P	Pug
PBBX	Pebble Breccia - angular fragments 4 - 64 mm in size
PBCG	Pebble Conglomerate - rounded particles 4 - 64 mm in size
SAND	Sand - soil (recent)
SC	Scoria
SD	Siderite
SO	Soil
SOIL	Soil
ST	Siltstone
SW	Swamp
VCSS	Very Coarse Sandstone - particles predominantly 1 - 2 mm in size
VFSS	Very Fine Sandstone - particles predominantly 0.06 - 0.125mm in size
ZSS	Siltstone - particles predominately between 0.06mm and 0.004mm

APPENDIX F LABORATORY CERTIFICATES

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00
Sample ID	Laboratory ID				
AMD_DC16_001_VCSSL - 2 4.2	WP23-12453.001	<0.005	6.4	260	4
AMD_DC16_002_GRCG - 4.2 6.2	WP23-12453.002	0.043	4.7	86	2
AMD_DC16_003_CM/VFSS - 6.2 7.5	WP23-12453.003	0.522	3.4	490	-1
AMD_DC16_004_GRCG - 7.5 10.5	WP23-12453.004	0.025	4.4	65	0
AMD_DC16_005_GRCG - 10.5 13.5	WP23-12453.005	0.014	4.4	58	1
AMD_DC16_005_GRCG B - 10.5 13.5	WP23-12453.006	0.009	5.2	44	0
AMD_DC16_006_GRCG - 13.5 16.5	WP23-12453.007	<0.005	5.1	31	1
AMD_DC16_007_MSS - 16.5 18.2	WP23-12453.008	0.581	3.3	670	-1
AMD_DC16_008_VCSSL - 18.2 20.2	WP23-12453.009	0.014	4.3	39	1

ANALYSIS REPORT

WP23-12453

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Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

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Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

		ESO_CSA06V S % LOR 0.01	ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00
AMD_DC16_009_GRBX - 20.2 22	WP23-12453.010	0.007	4.9	26	0
AMD_DC16_010_GRBX - 22 25.2	WP23-12453.011	0.174	5.1	28	1
AMD_DC16_011_Mss - 25.2 27	WP23-12453.012	0.240	3.9	250	0
AMD_DC16_012_FSS - 27 27.8	WP23-12453.013	0.549	4.7	87	0
AMD_DC16_013_HCM - 33.2 36.2	WP23-12453.014	0.084	5.9	27	4
AMD_DC16_014_HCM/MSS - 36.2 39.2	WP23-12453.015	0.085	5.7	41	4

ANALYSIS REPORT

WP23-12453

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PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00
Sample ID	Laboratory ID				
AMD_DC16_015_HCM/FSS - 39.2 40.5	WP23-12453.016	0.127	5.5	42	0
AMD_DC16_016_PBCG - 40.5 41.15	WP23-12453.017	0.850	4.1	150	2
AMD_DC16_017_ARG - 41.15 41.95	WP23-12453.018	0.029	6.6	5	1
AMD_DC16_008_VCSSL - 18.2 20.2	WP23-12453.009	0.016	4.7	36	2
AMD_DC16_018_ARG - 41.95 43.7	WP23-12453.019	0.043	6.3	71	2

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By:		ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15	ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00
Sample ID	Laboratory ID				
AMD_DC16_001_VCSS - 2 4.2	WP23-12453.001	0.4	<0.15	-3	5.7
AMD_DC16_002_GRCG - 4.2 6.2	WP23-12453.002	0.2	1.3	0	5.4
AMD_DC16_003_CM/VFSS - 6.2 7.5	WP23-12453.003	-0.1	16	16	3.8
AMD_DC16_004_GRCG - 7.5 10.5	WP23-12453.004	0.0	0.76	0	5.8
AMD_DC16_005_GRCG - 10.5 13.5	WP23-12453.005	0.1	0.42	-1	6.0
AMD_DC16_005_GRCG B - 10.5 13.5	WP23-12453.006	0.0	0.28	0	5.8
AMD_DC16_006_GRCG - 13.5 16.5	WP23-12453.007	0.1	0.15	-1	5.7
AMD_DC16_007_MSS - 16.5 18.2	WP23-12453.008	-0.1	18	18	3.5
AMD_DC16_008_VCSS - 18.2 20.2	WP23-12453.009	0.1	0.42	-1	5.8

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

		ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15	ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00
AMD_DC16_009_GRBX - 20.2 22	WP23-12453.010	0.0	0.20	0	6.0
AMD_DC16_010_GRBX - 22 25.2	WP23-12453.011	0.1	5.3	4	4.5
AMD_DC16_011_Mss - 25.2 27	WP23-12453.012	0.0	7.4	7	4.1
AMD_DC16_012_FSS - 27 27.8	WP23-12453.013	0.0	17	16	3.4
AMD_DC16_013_HCM - 33.2 36.2	WP23-12453.014	0.4	2.6	-2	4.8
AMD_DC16_014_HCM/MSS - 36.2 39.2	WP23-12453.015	0.4	2.6	-1	5.0

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By:

		ESO_CLA48V ANC CaCO ₃ * % LOR -100.00	ESO_CLA48V TAP* KGH ₂ SO ₄ /T LOR 0.15	ESO_CLA48V NAPP* KGH ₂ SO ₄ /T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00
Sample ID	Laboratory ID				
AMD_DC16_015_HCM/FSS - 39.2 40.5	WP23-12453.016	0.0	3.9	4	4.7
AMD_DC16_016_PBCG - 40.5 41.15	WP23-12453.017	0.2	26	24	3.1
AMD_DC16_017_ARG - 41.15 41.95	WP23-12453.018	0.1	0.88	0	5.1
AMD_DC16_008_VCSSL - 18.2 20.2	WP23-12453.009	0.2	0.49	-1	5.8
AMD_DC16_018_ARG - 41.95 43.7	WP23-12453.019	0.2	1.3	-1	6.0

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By:

		ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID		
AMD_DC16_001_VCSS - 2 4.2	WP23-12453.001	0	14
AMD_DC16_002_GRCG - 4.2 6.2	WP23-12453.002	0	13
AMD_DC16_003_CM/VFSS - 6.2 7.5	WP23-12453.003	4	12
AMD_DC16_004_GRCG - 7.5 10.5	WP23-12453.004	0	11
AMD_DC16_005_GRCG - 10.5 13.5	WP23-12453.005	0	11
AMD_DC16_005_GRCG B - 10.5 13.5	WP23-12453.006	0	13
AMD_DC16_006_GRCG - 13.5 16.5	WP23-12453.007	0	18
AMD_DC16_007_MSS - 16.5 18.2	WP23-12453.008	6	13
AMD_DC16_008_VCSS - 18.2 20.2	WP23-12453.009	0	14

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

		ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC16_009_GRBX - 20.2 22	WP23-12453.010	0	13
AMD_DC16_010_GRBX - 22 25.2	WP23-12453.011	0	4
AMD_DC16_011_Mss - 25.2 27	WP23-12453.012	2	5
AMD_DC16_012_FSS - 27 27.8	WP23-12453.013	7	14
AMD_DC16_013_HCM - 33.2 36.2	WP23-12453.014	0	10
AMD_DC16_014_HCM/MSS - 36.2 39.2	WP23-12453.015	0	7

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By:

		ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID		
AMD_DC16_015_HCM/FSS - 39.2 40.5	WP23-12453.016	0	8
AMD_DC16_016_PBCG - 40.5 41.15	WP23-12453.017	12	20
AMD_DC16_017_ARG - 41.15 41.95	WP23-12453.018	0	14
AMD_DC16_008_VCSSL - 18.2 20.2	WP23-12453.009	0	17
AMD_DC16_018_ARG - 41.95 43.7	WP23-12453.019	0	10

Date Start/End Analysis (27/10/2023 - 24/11/2023)

* - Denotes non accredited tests

REMARKS:

Note: Rinse pH analysis is reported under the pH 1:2 analyte.

Blank NAG pH= 6.82

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method
ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_NEPM103_1_2: Paste pH in soil: NEPM103 1:2 extraction

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 30-Oct-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Signed and dated on 24-Nov-2023

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ANALYSIS REPORT

WP23-12685

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 20/12/2023
Job Number: WP23-12685
Report Number: 0000026928
Order Reference: QCHEM0054/57 AMD

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC18_001	WP23-12685.001	0.618	-1	-0.2	19
AMD_DC18_002	WP23-12685.002	0.044	2	0.2	1.3
AMD_DC18_003	WP23-12685.003	0.248	3	0.3	7.6
AMD_DC18_004	WP23-12685.004	0.853	1	0.1	26
AMD_DC18_005	WP23-12685.005	0.005	4	0.4	0.15
AMD_DC18_006	WP23-12685.006	0.009	1	0.1	0.28
AMD_DC18_007	WP23-12685.007	<0.005	1	0.1	<0.15
AMD_DC18_008	WP23-12685.008	0.038	3	0.3	1.2
AMD_DC18_009	WP23-12685.009	0.014	3	0.4	0.41

ANALYSIS REPORT

WP23-12685

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 20/12/2023
Job Number: WP23-12685
Report Number: 0000026928
Order Reference: QCHEM0054/57 AMD

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC18_010	WP23-12685.010	0.264	2	0.2	8.1
AMD_DC18_011	WP23-12685.011	<0.005	2	0.2	<0.15
AMD_DC18_012	WP23-12685.012	0.788	1	0.1	24
AMD_DC18_013	WP23-12685.013	0.655	1	0.1	20
AMD_DC18_014	WP23-12685.014	0.105	3	0.3	3.2
AMD_DC18_015	WP23-12685.015	0.232	4	0.4	7.1

ANALYSIS REPORT

WP23-12685

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 20/12/2023
Job Number: WP23-12685
Report Number: 0000026928
Order Reference: QCHEM0054/57 AMD

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC18_016	WP23-12685.016	0.234	10	1.0	7.2
AMD_DC18_009	WP23-12685.009	0.010	2	0.2	0.30
AMD_DC18_017	WP23-12685.017	0.087	50	5.1	2.7

ANALYSIS REPORT

WP23-12685

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 20/12/2023
Job Number: WP23-12685
Report Number: 0000026928
Order Reference: QCHEM0054/57 AMD

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC18_001	WP23-12685.001	19	3.6	6	21
AMD_DC18_002	WP23-12685.002	-1	5.9	0	7
AMD_DC18_003	WP23-12685.003	5	4.3	1	13
AMD_DC18_004	WP23-12685.004	25	3.1	16	25
AMD_DC18_005	WP23-12685.005	-4	5.7	0	13
AMD_DC18_006	WP23-12685.006	-1	5.3	0	20
AMD_DC18_007	WP23-12685.007	-1	5.4	0	19
AMD_DC18_008	WP23-12685.008	-2	5.4	0	19
AMD_DC18_009	WP23-12685.009	-3	5.0	0	22

ANALYSIS REPORT

WP23-12685

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 20/12/2023
Job Number: WP23-12685
Report Number: 0000026928
Order Reference: QCHEM0054/57 AMD

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC18_010	WP23-12685.010	6	3.8	3	10
AMD_DC18_011	WP23-12685.011	-2	5.4	0	22
AMD_DC18_012	WP23-12685.012	23	3.1	13	24
AMD_DC18_013	WP23-12685.013	19	3.5	7	21
AMD_DC18_014	WP23-12685.014	0	3.8	5	21
AMD_DC18_015	WP23-12685.015	4	4.3	1	6

ANALYSIS REPORT

WP23-12685

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 20/12/2023
Job Number: WP23-12685
Report Number: 0000026928
Order Reference: QCHEM0054/57 AMD

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC18_016	WP23-12685.016	-3	4.4	0	5
AMD_DC18_009	WP23-12685.009	-2	5.1	0	21
AMD_DC18_017	WP23-12685.017	-47	5.6	0	11

ANALYSIS REPORT

WP23-12685

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 20/12/2023
Job Number: WP23-12685
Report Number: 0000026928
Order Reference: QCHEM0054/57 AMD

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC18_001	WP23-12685.001	150	4.0
AMD_DC18_002	WP23-12685.002	27	5.1
AMD_DC18_003	WP23-12685.003	44	4.6
AMD_DC18_004	WP23-12685.004	110	4.2
AMD_DC18_005	WP23-12685.005	14	5.7
AMD_DC18_006	WP23-12685.006	12	5.8
AMD_DC18_007	WP23-12685.007	12	5.9
AMD_DC18_008	WP23-12685.008	15	5.9
AMD_DC18_009	WP23-12685.009	14	5.6

ANALYSIS REPORT

WP23-12685

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 20/12/2023
Job Number: WP23-12685
Report Number: 0000026928
Order Reference: QCHEM0054/57 AMD

		ESO_RINSEPH Cond (1:5)* μS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC18_010	WP23-12685.010	90	4.2
AMD_DC18_011	WP23-12685.011	10	5.6
AMD_DC18_012	WP23-12685.012	66	4.3
AMD_DC18_013	WP23-12685.013	120	4.1
AMD_DC18_014	WP23-12685.014	23	4.8
AMD_DC18_015	WP23-12685.015	61	4.8

ANALYSIS REPORT

WP23-12685

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 20/12/2023
Job Number: WP23-12685
Report Number: 0000026928
Order Reference: QCHEM0054/57 AMD

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC18_016	WP23-12685.016	180	4.1
AMD_DC18_009	WP23-12685.009	8	5.6
AMD_DC18_017	WP23-12685.017	-	-

Date Start/End Analysis (16/11/2023 - 20/12/2023)

* - Denotes non accredited tests

REMARKS:

NAG Blank= 5.57

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

ANALYSIS REPORT

WP23-12685



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 20/12/2023
Job Number: WP23-12685
Report Number: 0000026928
Order Reference: QCHEM0054/57 AMD

Signed and dated on 21-Dec-2023

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ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC17_001	WP23-12686.001	0.009	1	0.1	0.26
AMD_DC17_002	WP23-12686.002	0.037	4	0.4	1.1
AMD_DC17_003	WP23-12686.003	0.028	1	0.1	0.85
AMD_DC17_004	WP23-12686.004	0.013	3	0.3	0.39
AMD_DC17_005	WP23-12686.005	0.011	1	0.1	0.34
AMD_DC17_006	WP23-12686.006	0.006	1	0.1	0.17
AMD_DC17_007	WP23-12686.007	<0.005	2	0.2	<0.15
AMD_DC17_008	WP23-12686.008	<0.005	1	0.1	<0.15
AMD_DC17_009	WP23-12686.009	0.007	2	0.2	0.21

ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC17_010	WP23-12686.010	<0.005	3	0.3	<0.15
AMD_DC17_011	WP23-12686.011	0.007	2	0.2	0.20
AMD_DC17_012	WP23-12686.012	0.006	3	0.3	0.18
AMD_DC17_013	WP23-12686.013	0.008	3	0.3	0.24
AMD_DC17_014	WP23-12686.014	1.16	1	0.1	35
AMD_DC17_015	WP23-12686.015	1.44	2	0.2	44

ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC17_016	WP23-12686.016	0.336	2	0.2	10
AMD_DC17_017	WP23-12686.017	0.007	2	0.2	0.21
AMD_DC17_018	WP23-12686.018	0.071	2	0.2	2.2
AMD_DC17_019	WP23-12686.019	0.445	3	0.3	14
AMD_DC17_020	WP23-12686.020	0.498	0	0.0	15
AMD_DC17_021	WP23-12686.021	0.625	2	0.2	19
AMD_DC17_022	WP23-12686.022	2.26	0	0.0	69
AMD_DC17_023	WP23-12686.023	0.067	3	0.3	2.0
AMD_DC17_024	WP23-12686.024	0.008	2	0.2	0.23

ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC17_025	WP23-12686.025	0.007	1	0.1	0.21
AMD_DC17_026	WP23-12686.026	0.005	2	0.2	0.17
AMD_DC17_027	WP23-12686.027	0.021	3	0.3	0.63
AMD_DC17_028	WP23-12686.028	0.013	2	0.2	0.41
AMD_DC17_029	WP23-12686.029	0.078	2	0.2	2.4
AMD_DC17_030	WP23-12686.030	<0.005	1	0.1	<0.15

ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC17_031	WP23-12686.031	0.008	2	0.2	0.23
AMD_DC17_032	WP23-12686.032	0.293	53	5.4	9.0
AMD_DC17_009	WP23-12686.009	<0.005	4	0.4	<0.15

ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
PO Box 79151
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Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC17_001	WP23-12686.001	-1	6.2	0	4
AMD_DC17_002	WP23-12686.002	-3	5.8	0	15
AMD_DC17_003	WP23-12686.003	0	6.1	0	10
AMD_DC17_004	WP23-12686.004	-2	6.1	0	8
AMD_DC17_005	WP23-12686.005	0	6.0	0	9
AMD_DC17_006	WP23-12686.006	-1	5.6	0	16
AMD_DC17_007	WP23-12686.007	-2	5.9	0	10
AMD_DC17_008	WP23-12686.008	-1	5.8	0	11
AMD_DC17_009	WP23-12686.009	-2	5.8	0	17

ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
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Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC17_010	WP23-12686.010	-3	6.0	0	13
AMD_DC17_011	WP23-12686.011	-2	5.7	0	16
AMD_DC17_012	WP23-12686.012	-2	5.7	0	17
AMD_DC17_013	WP23-12686.013	-2	5.7	0	19
AMD_DC17_014	WP23-12686.014	35	2.9	24	36
AMD_DC17_015	WP23-12686.015	42	2.8	30	43

ANALYSIS REPORT

WP23-12686

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Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC17_016	WP23-12686.016	8	3.9	3	7
AMD_DC17_017	WP23-12686.017	-2	5.4	0	5
AMD_DC17_018	WP23-12686.018	0	5.1	0	21
AMD_DC17_019	WP23-12686.019	11	3.6	7	25
AMD_DC17_020	WP23-12686.020	15	3.5	6	13
AMD_DC17_021	WP23-12686.021	17	3.3	13	31
AMD_DC17_022	WP23-12686.022	69	2.6	59	74
AMD_DC17_023	WP23-12686.023	-1	4.8	0	14
AMD_DC17_024	WP23-12686.024	-2	5.4	0	20

ANALYSIS REPORT

WP23-12686

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Job Number: WP23-12686
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		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC17_025	WP23-12686.025	-1	5.4	0	27
AMD_DC17_026	WP23-12686.026	-2	5.8	0	19
AMD_DC17_027	WP23-12686.027	-2	5.6	0	27
AMD_DC17_028	WP23-12686.028	-2	5.3	0	32
AMD_DC17_029	WP23-12686.029	0	5.5	0	12
AMD_DC17_030	WP23-12686.030	-1	5.6	0	30

ANALYSIS REPORT

WP23-12686

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Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC17_031	WP23-12686.031	-2	5.6	0	34
AMD_DC17_032	WP23-12686.032	-44	7.9	0	0
AMD_DC17_009	WP23-12686.009	-4	6.2	0	9

ANALYSIS REPORT

WP23-12686

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Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

Sampled By:

		ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00
Sample ID	Laboratory ID		
AMD_DC17_001	WP23-12686.001	5.7	4
AMD_DC17_002	WP23-12686.002	5.5	4
AMD_DC17_003	WP23-12686.003	5.3	6
AMD_DC17_004	WP23-12686.004	5.7	5
AMD_DC17_005	WP23-12686.005	5.6	4
AMD_DC17_006	WP23-12686.006	5.5	4
AMD_DC17_007	WP23-12686.007	5.5	4
AMD_DC17_008	WP23-12686.008	5.5	4
AMD_DC17_009	WP23-12686.009	5.5	5

ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
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Job Number: WP23-12686
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Order Reference: QCHEM0056 AMD

		ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00
AMD_DC17_010	WP23-12686.010	5.4	4
AMD_DC17_011	WP23-12686.011	5.6	4
AMD_DC17_012	WP23-12686.012	5.5	5
AMD_DC17_013	WP23-12686.013	5.5	3
AMD_DC17_014	WP23-12686.014	3.9	300
AMD_DC17_015	WP23-12686.015	3.7	460

ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
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Christchurch 8446 NEW ZEALAND
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Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

Sampled By:

		ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00
Sample ID	Laboratory ID		
AMD_DC17_016	WP23-12686.016	3.9	200
AMD_DC17_017	WP23-12686.017	5.4	6
AMD_DC17_018	WP23-12686.018	4.8	18
AMD_DC17_019	WP23-12686.019	3.9	140
AMD_DC17_020	WP23-12686.020	3.6	430
AMD_DC17_021	WP23-12686.021	4.2	74
AMD_DC17_022	WP23-12686.022	3.8	340
AMD_DC17_023	WP23-12686.023	4.1	65
AMD_DC17_024	WP23-12686.024	5.5	5

ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

		ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00
AMD_DC17_025	WP23-12686.025	5.6	4
AMD_DC17_026	WP23-12686.026	5.6	4
AMD_DC17_027	WP23-12686.027	5.2	9
AMD_DC17_028	WP23-12686.028	5.5	6
AMD_DC17_029	WP23-12686.029	5.3	5
AMD_DC17_030	WP23-12686.030	5.7	4

ANALYSIS REPORT

WP23-12686

Client: BT Mining Ltd
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Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

Sampled By:

		ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00
Sample ID	Laboratory ID		
AMD_DC17_031	WP23-12686.031	5.7	4
AMD_DC17_032	WP23-12686.032	-	-
AMD_DC17_009	WP23-12686.009	5.5	4

Date Start/End Analysis (27/11/2023 - 21/12/2023)

* - Denotes non accredited tests

REMARKS:

Note that the duplicate sample for AMD_DC17_009 showed some variation from the original for NAG acidity, 16.7 vs 9.3 kg H₂SO₄ / t. All results have been reported.

NAG Blank pH= 6.16

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method
ESO_NEPM103_1_2: Paste pH in soil: NEPM103 1:2 extraction

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ANALYSIS REPORT

WP23-12686



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12686
Report Number: 0000026952
Order Reference: QCHEM0056 AMD

Signed and dated on 21-Dec-2023

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ANALYSIS REPORT

WP23-12687

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12687
Report Number: 0000026954
Order Reference: QCHEM0058 AMD

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC19_001	WP23-12687.001	<0.005	7	0.7	<0.15
AMD_DC19_002	WP23-12687.002	0.017	3	0.3	0.51
AMD_DC19_003	WP23-12687.003	0.023	3	0.3	0.71
AMD_DC19_004	WP23-12687.004	0.419	2	0.2	13
AMD_DC19_005	WP23-12687.005	1.36	2	0.2	42
AMD_DC19_006	WP23-12687.006	0.462	1	0.1	14
AMD_DC19_007	WP23-12687.007	0.419	3	0.3	13
AMD_DC19_008	WP23-12687.008	0.413	2	0.2	13
AMD_DC19_009	WP23-12687.009	0.055	2	0.2	1.7

ANALYSIS REPORT

WP23-12687

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12687
Report Number: 0000026954
Order Reference: QCHEM0058 AMD

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC19_010	WP23-12687.010	0.374	2	0.2	11
AMD_DC19_011	WP23-12687.011	0.378	2	0.2	12
AMD_DC19_012	WP23-12687.012	0.011	4	0.4	0.34
AMD_DC19_013	WP23-12687.013	0.400	2	0.2	12
AMD_DC19_014	WP23-12687.014	0.245	3	0.4	7.5
AMD_DC19_015	WP23-12687.015	0.048	3	0.3	1.5

ANALYSIS REPORT

WP23-12687

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Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12687
Report Number: 0000026954
Order Reference: QCHEM0058 AMD

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC19_016	WP23-12687.016	0.297	2	0.2	9.1
AMD_DC19_017	WP23-12687.017	0.058	2	0.2	1.8
AMD_DC19_018	WP23-12687.018	0.659	2	0.2	20
AMD_DC19_019	WP23-12687.019	0.171	5	0.5	5.2
AMD_DC19_020	WP23-12687.020	0.113	12	1.2	3.5
AMD_DC19_021	WP23-12687.021	0.020	20	2.1	0.60
AMD_DC19_022	WP23-12687.022	0.363	7	0.7	11
AMD_DC19_009	WP23-12687.009	0.070	2	0.2	2.1

ANALYSIS REPORT

WP23-12687

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Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12687
Report Number: 0000026954
Order Reference: QCHEM0058 AMD

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC19_001	WP23-12687.001	-7	5.4	0	20
AMD_DC19_002	WP23-12687.002	-3	5.4	0	15
AMD_DC19_003	WP23-12687.003	-2	5.1	0	18
AMD_DC19_004	WP23-12687.004	11	3.5	5	11
AMD_DC19_005	WP23-12687.005	40	2.8	27	45
AMD_DC19_006	WP23-12687.006	13	3.5	6	14
AMD_DC19_007	WP23-12687.007	10	3.7	5	14
AMD_DC19_008	WP23-12687.008	11	3.4	6	12
AMD_DC19_009	WP23-12687.009	-1	4.7	0	18

ANALYSIS REPORT

WP23-12687

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Report Number: 0000026954
Order Reference: QCHEM0058 AMD

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC19_010	WP23-12687.010	9	3.6	5	13
AMD_DC19_011	WP23-12687.011	9	3.5	5	10
AMD_DC19_012	WP23-12687.012	-3	5.1	0	26
AMD_DC19_013	WP23-12687.013	11	3.7	5	15
AMD_DC19_014	WP23-12687.014	4	3.7	3	10
AMD_DC19_015	WP23-12687.015	-1	4.7	0	17

ANALYSIS REPORT

WP23-12687

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Job Number: WP23-12687
Report Number: 0000026954
Order Reference: QCHEM0058 AMD

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC19_016	WP23-12687.016	7	3.6	4	10
AMD_DC19_017	WP23-12687.017	0	4.5	0	15
AMD_DC19_018	WP23-12687.018	18	3.2	11	18
AMD_DC19_019	WP23-12687.019	0	4.1	1	7
AMD_DC19_020	WP23-12687.020	-8	5.0	0	8
AMD_DC19_021	WP23-12687.021	-20	5.7	0	9
AMD_DC19_022	WP23-12687.022	5	4.0	2	7
AMD_DC19_009	WP23-12687.009	0	4.9	0	13

ANALYSIS REPORT

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Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12687
Report Number: 0000026954
Order Reference: QCHEM0058 AMD

Sampled By:

		ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00
Sample ID	Laboratory ID		
AMD_DC19_001	WP23-12687.001	5.6	11
AMD_DC19_002	WP23-12687.002	5.3	17
AMD_DC19_003	WP23-12687.003	5.4	11
AMD_DC19_004	WP23-12687.004	4.0	260
AMD_DC19_005	WP23-12687.005	4.2	150
AMD_DC19_006	WP23-12687.006	4.1	190
AMD_DC19_007	WP23-12687.007	4.2	160
AMD_DC19_008	WP23-12687.008	3.9	240
AMD_DC19_009	WP23-12687.009	4.3	73

ANALYSIS REPORT

WP23-12687

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Report Number: 0000026954
Order Reference: QCHEM0058 AMD

		ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00
AMD_DC19_010	WP23-12687.010	4.2	130
AMD_DC19_011	WP23-12687.011	4.0	210
AMD_DC19_012	WP23-12687.012	5.3	20
AMD_DC19_013	WP23-12687.013	4.4	97
AMD_DC19_014	WP23-12687.014	3.9	190
AMD_DC19_015	WP23-12687.015	4.2	82

ANALYSIS REPORT

WP23-12687

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Job Number: WP23-12687
Report Number: 0000026954
Order Reference: QCHEM0058 AMD

Sampled By:

		ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00
Sample ID	Laboratory ID		
AMD_DC19_016	WP23-12687.016	3.7	310
AMD_DC19_017	WP23-12687.017	4.1	110
AMD_DC19_018	WP23-12687.018	3.8	380
AMD_DC19_019	WP23-12687.019	4.5	84
AMD_DC19_020	WP23-12687.020	4.2	190
AMD_DC19_021	WP23-12687.021	5.0	50
AMD_DC19_022	WP23-12687.022	-	-
AMD_DC19_009	WP23-12687.009	4.2	75

Date Start/End Analysis (15/11/2023 - 21/12/2023)

* - Denotes non accredited tests

ANALYSIS REPORT

WP23-12687



Client: BT Mining Ltd
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[REDACTED]

Received: 03-Oct-2023
Completed: 21/12/2023
Job Number: WP23-12687
Report Number: 0000026954
Order Reference: QCHEM0058 AMD

REMARKS:

Note that the duplicate sample for AMD_DC19_009 showed some variation from the original for NAG acidity, 18.1 vs 12.6 kg H₂SO₄ / t. All results have been reported.

NAG Blank pH= 5.45

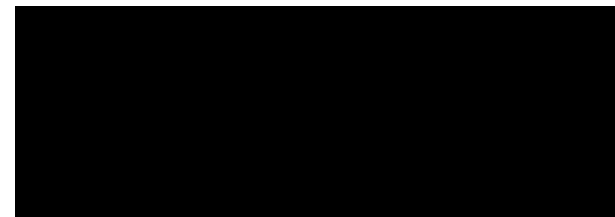
APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method
ESO_NEPM103_1_2: Paste pH in soil: NEPM103 1:2 extraction

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

Signed and dated on 21-Dec-2023



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ANALYSIS REPORT

WP23-12873

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 18/01/2024
Job Number: WP23-12873
Report Number: 0000027162
Order Reference: 531085 QCHEM0061

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC21_01	WP23-12873.001	0.019	0	0.0	0.58
AMD_DC21_02	WP23-12873.002	0.009	-1	-0.1	0.27
AMD_DC21_03	WP23-12873.003	0.013	1	0.1	0.41
AMD_DC21_04	WP23-12873.004	0.009	0	0.0	0.28
AMD_DC21_05	WP23-12873.005	0.012	0	0.0	0.36
AMD_DC21_06	WP23-12873.006	0.011	0	0.0	0.32
AMD_DC21_07	WP23-12873.007	0.009	1	0.1	0.27
AMD_DC21_08	WP23-12873.008	0.289	-1	-0.1	8.8
AMD_DC21_09	WP23-12873.009	1.14	-1	-0.1	35

ANALYSIS REPORT

WP23-12873

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PO Box 79151
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Christchurch 8446 NEW ZEALAND
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Received: 10-Nov-2023
Completed: 18/01/2024
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		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC21_10	WP23-12873.010	0.102	0	0.0	3.1
AMD_DC21_11	WP23-12873.011	0.012	1	0.1	0.36
AMD_DC21_12	WP23-12873.012	0.055	1	0.1	1.7
AMD_DC21_13	WP23-12873.013	0.010	0	0.0	0.32
AMD_DC21_14	WP23-12873.014	0.179	-1	-0.1	5.5
AMD_DC21_15	WP23-12873.015	0.344	-1	-0.1	11

ANALYSIS REPORT

WP23-12873

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Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC21_16	WP23-12873.016	0.499	0	-0.1	15
AMD_DC21_17	WP23-12873.017	0.477	0	0.0	15
AMD_DC21_18	WP23-12873.018	0.064	4	0.4	2.0
AMD_DC21_19	WP23-12873.019	0.017	4	0.4	0.53
AMD_DC21_20	WP23-12873.020	0.283	50	5.1	8.7
AMD_DC21_09	WP23-12873.009	1.09	-1	-0.1	33

ANALYSIS REPORT

WP23-12873

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Report Number: 0000027162
Order Reference: 531085 QCHEM0061

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC21_01	WP23-12873.001	1	5.1	0	17
AMD_DC21_02	WP23-12873.002	0	5.4	0	16
AMD_DC21_03	WP23-12873.003	-1	5.4	0	22
AMD_DC21_04	WP23-12873.004	0	5.4	0	20
AMD_DC21_05	WP23-12873.005	0	5.3	0	18
AMD_DC21_06	WP23-12873.006	0	5.3	0	31
AMD_DC21_07	WP23-12873.007	-1	5.3	0	27
AMD_DC21_08	WP23-12873.008	9	4.2	1	13
AMD_DC21_09	WP23-12873.009	35	3.1	16	29

ANALYSIS REPORT

WP23-12873

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		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC21_10	WP23-12873.010	3	4.6	0	16
AMD_DC21_11	WP23-12873.011	-1	5.4	0	24
AMD_DC21_12	WP23-12873.012	1	5.0	0	14
AMD_DC21_13	WP23-12873.013	0	5.3	0	23
AMD_DC21_14	WP23-12873.014	5	4.1	1	13
AMD_DC21_15	WP23-12873.015	11	3.6	4	11

ANALYSIS REPORT

WP23-12873

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Job Number: WP23-12873
Report Number: 0000027162
Order Reference: 531085 QCHEM0061

Sampled By:		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC21_16	WP23-12873.016	15	3.7	4	12
AMD_DC21_17	WP23-12873.017	15	3.7	4	12
AMD_DC21_18	WP23-12873.018	-2	5.2	0	10
AMD_DC21_19	WP23-12873.019	-4	6.0	0	8
AMD_DC21_20	WP23-12873.020	-41	7.6	0	0
AMD_DC21_09	WP23-12873.009	33	3.2	16	30

ANALYSIS REPORT

WP23-12873

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Received: 10-Nov-2023
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Job Number: WP23-12873
Report Number: 0000027162
Order Reference: 531085 QCHEM0061

Sampled By:

		ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC21_01	WP23-12873.001	41	4.4
AMD_DC21_02	WP23-12873.002	15	5.1
AMD_DC21_03	WP23-12873.003	15	5.2
AMD_DC21_04	WP23-12873.004	13	5.3
AMD_DC21_05	WP23-12873.005	10	5.4
AMD_DC21_06	WP23-12873.006	10	5.5
AMD_DC21_07	WP23-12873.007	11	5.4
AMD_DC21_08	WP23-12873.008	76	4.3
AMD_DC21_09	WP23-12873.009	97	4.3

ANALYSIS REPORT

WP23-12873

Client: BT Mining Ltd
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Christchurch 8446 NEW ZEALAND
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Received: 10-Nov-2023
Completed: 18/01/2024
Job Number: WP23-12873
Report Number: 0000027162
Order Reference: 531085 QCHEM0061

		ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
AMD_DC21_10	WP23-12873.010	49	4.4
AMD_DC21_11	WP23-12873.011	9	5.5
AMD_DC21_12	WP23-12873.012	12	5.4
AMD_DC21_13	WP23-12873.013	8	5.5
AMD_DC21_14	WP23-12873.014	280	3.7
AMD_DC21_15	WP23-12873.015	100	4.2

ANALYSIS REPORT

WP23-12873

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
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Received: 10-Nov-2023
Completed: 18/01/2024
Job Number: WP23-12873
Report Number: 0000027162
Order Reference: 531085 QCHEM0061

Sampled By:

		ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC21_16	WP23-12873.016	110	4.1
AMD_DC21_17	WP23-12873.017	72	4.2
AMD_DC21_18	WP23-12873.018	18	5.4
AMD_DC21_19	WP23-12873.019	15	5.8
AMD_DC21_20	WP23-12873.020	-	-
AMD_DC21_09	WP23-12873.009	96	4.4

Date Start/End Analysis (15/12/2023 - 18/1/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank is 5.9

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method
ESO_NEPM103_1_2: Paste pH in soil: NEPM103 1:2 extraction

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ANALYSIS REPORT

WP23-12873

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 18/01/2024
Job Number: WP23-12873
Report Number: 0000027162
Order Reference: 531085 QCHEM0061

Signed and dated on 18-Jan-2024

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ANALYSIS REPORT

WP23-12874

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC23_01	WP23-12874.001	0.012	2	0.2	0.36
AMD_DC23_02	WP23-12874.002	0.009	1	0.1	0.27
AMD_DC23_03	WP23-12874.003	0.037	1	0.1	1.1
AMD_DC23_04	WP23-12874.004	0.221	-3	-0.3	6.8
AMD_DC23_05	WP23-12874.005	0.008	1	0.1	0.26
AMD_DC23_06	WP23-12874.006	0.051	-2	-0.2	1.6
AMD_DC23_07	WP23-12874.007	0.036	1	0.1	1.1
AMD_DC23_08	WP23-12874.008	0.013	0	0.0	0.39
AMD_DC23_09	WP23-12874.009	0.008	1	0.1	0.25

ANALYSIS REPORT

WP23-12874

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC23_10	WP23-12874.010	0.009	1	0.1	0.28
AMD_DC23_11	WP23-12874.011	0.613	-1	-0.1	19
AMD_DC23_12	WP23-12874.012	0.751	0	0.0	23
AMD_DC23_13	WP23-12874.013	0.010	2	0.2	0.31
AMD_DC23_14	WP23-12874.014	0.015	3	0.3	0.47
AMD_DC23_15	WP23-12874.015	0.031	2	0.2	0.96

ANALYSIS REPORT

WP23-12874

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

Sampled By:					
		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC23_16	WP23-12874.016	0.539	1	0.1	16
AMD_DC23_17	WP23-12874.017	0.346	2	0.2	11
AMD_DC23_18	WP23-12874.018	0.256	1	0.1	7.8
AMD_DC23_19	WP23-12874.019	0.079	1	0.1	2.4
AMD_DC23_20	WP23-12874.020	0.062	1	0.1	1.9
AMD_DC23_21	WP23-12874.021	-	-	-	-
AMD_DC23_22	WP23-12874.022	0.038	1	0.1	1.2
AMD_DC23_23	WP23-12874.023	0.090	2	0.2	2.8
AMD_DC23_24	WP23-12874.024	0.206	2	0.2	6.3

ANALYSIS REPORT

WP23-12874

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC23_25	WP23-12874.025	0.182	4	0.4	5.6
AMD_DC23_26	WP23-12874.026	0.474	12	1.3	14
AMD_DC23_27	WP23-12874.027	1.78	10	1.0	54
AMD_DC23_09	WP23-12874.009	0.012	2	0.2	0.36
AMD_DC23_28	WP23-12874.028	0.388	3	0.3	12

ANALYSIS REPORT

WP23-12874

Client: BT Mining Ltd
PO Box 79151
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Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

Sampled By:		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC23_01	WP23-12874.001	-2	5.4	16	0
AMD_DC23_02	WP23-12874.002	-1	5.5	16	0
AMD_DC23_03	WP23-12874.003	1	5.7	13	0
AMD_DC23_04	WP23-12874.004	7	3.3	60	14
AMD_DC23_05	WP23-12874.005	-1	6.0	8	0
AMD_DC23_06	WP23-12874.006	2	4.4	31	1
AMD_DC23_07	WP23-12874.007	0	5.3	15	0
AMD_DC23_08	WP23-12874.008	0	5.2	19	0
AMD_DC23_09	WP23-12874.009	-1	6.0	11	0

ANALYSIS REPORT

WP23-12874

Client: BT Mining Ltd
PO Box 79151
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Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T
AMD_DC23_10	WP23-12874.010	-1	5.7	19	0
AMD_DC23_11	WP23-12874.011	19	3.6	14	5
AMD_DC23_12	WP23-12874.012	23	3.4	17	9
AMD_DC23_13	WP23-12874.013	-2	5.9	11	0
AMD_DC23_14	WP23-12874.014	-2	5.8	13	0
AMD_DC23_15	WP23-12874.015	-1	5.3	22	0

ANALYSIS REPORT

WP23-12874

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Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

Sampled By:		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC23_16	WP23-12874.016	16	3.6	12	5
AMD_DC23_17	WP23-12874.017	8	3.8	7	3
AMD_DC23_18	WP23-12874.018	7	4.0	7	2
AMD_DC23_19	WP23-12874.019	1	4.9	6	0
AMD_DC23_20	WP23-12874.020	1	4.8	9	0
AMD_DC23_21	WP23-12874.021	-	-	-	-
AMD_DC23_22	WP23-12874.022	0	5.2	11	0
AMD_DC23_23	WP23-12874.023	1	5.0	12	0
AMD_DC23_24	WP23-12874.024	5	4.2	7	1

ANALYSIS REPORT

WP23-12874

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Received: 22-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T
AMD_DC23_25	WP23-12874.025	2	4.7	6	0
AMD_DC23_26	WP23-12874.026	2	4.1	7	2
AMD_DC23_27	WP23-12874.027	45	2.8	39	27
AMD_DC23_09	WP23-12874.009	-2	5.5	19	0
AMD_DC23_28	WP23-12874.028	9	4.0	6	2

ANALYSIS REPORT

WP23-12874

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PO Box 79151
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Christchurch 8446 NEW ZEALAND
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Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

Sampled By:

		ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC23_01	WP23-12874.001	5	5.8
AMD_DC23_02	WP23-12874.002	4	5.6
AMD_DC23_03	WP23-12874.003	5	5.6
AMD_DC23_04	WP23-12874.004	23	6.0
AMD_DC23_05	WP23-12874.005	4	5.9
AMD_DC23_06	WP23-12874.006	8	5.5
AMD_DC23_07	WP23-12874.007	7	5.7
AMD_DC23_08	WP23-12874.008	7	5.7
AMD_DC23_09	WP23-12874.009	6	5.6

ANALYSIS REPORT

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		ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
AMD_DC23_10	WP23-12874.010	8	5.4
AMD_DC23_11	WP23-12874.011	180	3.9
AMD_DC23_12	WP23-12874.012	350	3.6
AMD_DC23_13	WP23-12874.013	6	5.5
AMD_DC23_14	WP23-12874.014	7	5.7
AMD_DC23_15	WP23-12874.015	5	5.8

ANALYSIS REPORT

WP23-12874

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

Sampled By:

		ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC23_16	WP23-12874.016	170	4.0
AMD_DC23_17	WP23-12874.017	230	3.8
AMD_DC23_18	WP23-12874.018	350	3.4
AMD_DC23_19	WP23-12874.019	34	4.7
AMD_DC23_20	WP23-12874.020	22	4.9
AMD_DC23_21	WP23-12874.021	-	-
AMD_DC23_22	WP23-12874.022	19	4.9
AMD_DC23_23	WP23-12874.023	58	4.4
AMD_DC23_24	WP23-12874.024	200	3.8

ANALYSIS REPORT

WP23-12874

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

		ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
AMD_DC23_25	WP23-12874.025	56	4.8
AMD_DC23_26	WP23-12874.026	140	4.7
AMD_DC23_27	WP23-12874.027	180	4.3
AMD_DC23_09	WP23-12874.009	7	5.5
AMD_DC23_28	WP23-12874.028	-	-

Date Start/End Analysis (18/12/2023 - 5/1/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank was 6.0

Sample WP23-12874.004 DC23_04 Rinse pH and conductivity were run on the pulp sample due to no reject crush being available.

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_NEPM103_1_2: Paste pH in soil: NEPM103 1:2 extraction

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ANALYSIS REPORT

WP23-12874

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12874
Report Number: 0000027038
Order Reference: 531085 QCHEM0060

Signed and dated on 05-Jan-2024

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ANALYSIS REPORT

WP23-12875

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12875
Report Number: 0000027040
Order Reference: 531085 QCHEM0059

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC34_001	WP23-12875.001	0.163	0	0.0	5.0
AMD_DC34_002	WP23-12875.002	1.13	1	0.1	35
AMD_DC34_003	WP23-12875.003	1.74	-1	-0.1	53
AMD_DC34_004	WP23-12875.004	0.522	1	0.1	16
AMD_DC34_005	WP23-12875.005	0.926	1	0.1	28
AMD_DC34_006	WP23-12875.006	0.038	4	0.4	1.2
AMD_DC34_007	WP23-12875.007	0.974	0	0.0	30
AMD_DC34_008	WP23-12875.008	0.025	2	0.2	0.76
AMD_DC34_009	WP23-12875.009	0.017	2	0.2	0.52

ANALYSIS REPORT

WP23-12875

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12875
Report Number: 0000027040
Order Reference: 531085 QCHEM0059

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC34_010	WP23-12875.010	0.688	1	0.1	21
AMD_DC34_011	WP23-12875.011	0.007	1	0.2	0.21
AMD_DC34_012	WP23-12875.012	0.813	0	0.1	25
AMD_DC34_013	WP23-12875.013	0.035	1	0.2	1.1
AMD_DC34_014	WP23-12875.014	0.047	1	0.1	1.4
AMD_DC34_015	WP23-12875.015	0.015	1	0.1	0.47

ANALYSIS REPORT

WP23-12875

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12875
Report Number: 0000027040
Order Reference: 531085 QCHEM0059

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC34_016	WP23-12875.016	0.015	1	0.1	0.46
AMD_DC34_017	WP23-12875.017	0.026	2	0.2	0.80
AMD_DC34_018	WP23-12875.018	0.023	2	0.2	0.70
AMD_DC34_019	WP23-12875.019	0.025	2	0.2	0.77
AMD_DC34_020	WP23-12875.020	0.038	1	0.1	1.2
AMD_DC34_021	WP23-12875.021	0.156	2	0.2	4.8
AMD_DC34_022	WP23-12875.022	0.350	79	8.1	11
AMD_DC34_009	WP23-12875.009	0.013	1	0.1	0.39

ANALYSIS REPORT

WP23-12875

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12875
Report Number: 0000027040
Order Reference: 531085 QCHEM0059

Sampled By:		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC34_001	WP23-12875.001	5	3.9	12	2
AMD_DC34_002	WP23-12875.002	33	3.1	32	19
AMD_DC34_003	WP23-12875.003	53	2.7	48	36
AMD_DC34_004	WP23-12875.004	15	3.5	14	7
AMD_DC34_005	WP23-12875.005	28	3.0	25	15
AMD_DC34_006	WP23-12875.006	-3	5.2	18	0
AMD_DC34_007	WP23-12875.007	30	3.0	25	15
AMD_DC34_008	WP23-12875.008	-1	5.5	9	0
AMD_DC34_009	WP23-12875.009	-1	5.8	9	0

ANALYSIS REPORT

WP23-12875

Client: BT Mining Ltd
PO Box 79151
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[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12875
Report Number: 0000027040
Order Reference: 531085 QCHEM0059

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T
AMD_DC34_010	WP23-12875.010	20	3.3	19	10
AMD_DC34_011	WP23-12875.011	-1	5.5	15	0
AMD_DC34_012	WP23-12875.012	24	3.2	22	13
AMD_DC34_013	WP23-12875.013	0	4.6	11	0
AMD_DC34_014	WP23-12875.014	0	4.7	11	0
AMD_DC34_015	WP23-12875.015	-1	4.8	13	0

ANALYSIS REPORT

WP23-12875

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12875
Report Number: 0000027040
Order Reference: 531085 QCHEM0059

Sampled By:		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC34_016	WP23-12875.016	-1	5.8	8	0
AMD_DC34_017	WP23-12875.017	-2	5.1	13	0
AMD_DC34_018	WP23-12875.018	-1	5.2	14	0
AMD_DC34_019	WP23-12875.019	-1	6.0	4	0
AMD_DC34_020	WP23-12875.020	0	5.3	13	0
AMD_DC34_021	WP23-12875.021	3	4.6	11	0
AMD_DC34_022	WP23-12875.022	-68	7.6	0	0
AMD_DC34_009	WP23-12875.009	-1	6.0	7	0

ANALYSIS REPORT

WP23-12875

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12875
Report Number: 0000027040
Order Reference: 531085 QCHEM0059

Sampled By:

		ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC34_001	WP23-12875.001	66	4.2
AMD_DC34_002	WP23-12875.002	390	3.6
AMD_DC34_003	WP23-12875.003	570	3.4
AMD_DC34_004	WP23-12875.004	110	4.0
AMD_DC34_005	WP23-12875.005	170	3.9
AMD_DC34_006	WP23-12875.006	12	5.3
AMD_DC34_007	WP23-12875.007	380	3.6
AMD_DC34_008	WP23-12875.008	17	5.0
AMD_DC34_009	WP23-12875.009	13	5.1

ANALYSIS REPORT

WP23-12875

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12875
Report Number: 0000027040
Order Reference: 531085 QCHEM0059

		ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
AMD_DC34_010	WP23-12875.010	100	4.4
AMD_DC34_011	WP23-12875.011	10	5.5
AMD_DC34_012	WP23-12875.012	110	4.2
AMD_DC34_013	WP23-12875.013	18	5.0
AMD_DC34_014	WP23-12875.014	24	4.8
AMD_DC34_015	WP23-12875.015	17	5.2

ANALYSIS REPORT

WP23-12875

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12875
Report Number: 0000027040
Order Reference: 531085 QCHEM0059

Sampled By:

		ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC34_016	WP23-12875.016	22	5.0
AMD_DC34_017	WP23-12875.017	25	5.0
AMD_DC34_018	WP23-12875.018	18	5.1
AMD_DC34_019	WP23-12875.019	18	5.0
AMD_DC34_020	WP23-12875.020	29	4.9
AMD_DC34_021	WP23-12875.021	35	5.0
AMD_DC34_022	WP23-12875.022	-	-
AMD_DC34_009	WP23-12875.009	13	5.1

Date Start/End Analysis (15/12/2023 - 5/1/2024)

* - Denotes non accredited tests

ANALYSIS REPORT

WP23-12875

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Nov-2023
Completed: 05/01/2024
Job Number: WP23-12875
Report Number: 0000027040
Order Reference: 531085 QCHEM0059

REMARKS:
NAG pH for blank is 5.1

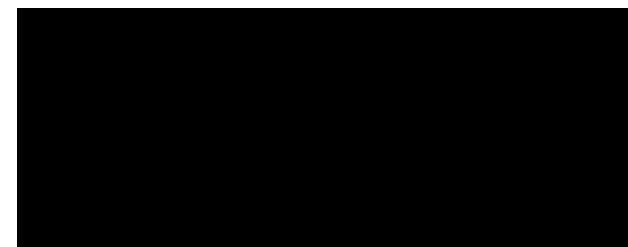
APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method
ESO_NEPM103_1_2: Paste pH in soil: NEPM103 1:2 extraction

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

Signed and dated on 05-Jan-2024



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ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC30_001	WP23-12895.001	0.018	2	0.2	0.55
AMD_DC30_002	WP23-12895.002	0.115	5	0.5	3.5
AMD_DC30_003	WP23-12895.003	0.272	6	0.7	8.3
AMD_DC30_004	WP23-12895.004	0.032	2	0.2	0.99
AMD_DC30_005	WP23-12895.005	0.032	2	0.2	0.97
AMD_DC30_006	WP23-12895.006	<0.005	1	0.1	<0.15
AMD_DC30_007	WP23-12895.007	<0.005	1	0.1	<0.15
AMD_DC30_008	WP23-12895.008	0.311	1	0.1	9.5
AMD_DC30_009	WP23-12895.009	0.394	1	0.1	12

ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC30_010	WP23-12895.010	0.498	1	0.1	15
AMD_DC30_011	WP23-12895.011	0.223	1	0.1	6.8
AMD_DC30_012	WP23-12895.012	0.110	2	0.2	3.4
AMD_DC30_013	WP23-12895.013	0.143	2	0.2	4.4
AMD_DC30_014	WP23-12895.014	0.070	2	0.2	2.1
AMD_DC30_015	WP23-12895.015	0.238	1	0.1	7.3

ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC30_016	WP23-12895.016	0.047	1	0.1	1.4
AMD_DC30_017	WP23-12895.017	0.093	2	0.2	2.9
AMD_DC30_018	WP23-12895.018	0.073	2	0.2	2.2
AMD_DC30_019	WP23-12895.019	0.041	1	0.1	1.3
AMD_DC30_020	WP23-12895.020	0.107	1	0.1	3.3
AMD_DC30_021	WP23-12895.021	0.340	1	0.1	10
AMD_DC30_022	WP23-12895.022	0.072	2	0.2	2.2
AMD_DC30_023	WP23-12895.023	0.206	2	0.2	6.3
AMD_DC30_024	WP23-12895.024	0.294	76	7.8	9.0



ANALYSIS REPORT
WP23-12895



Client: BT Mining Ltd PO Box 79151 Avonhead Christchurch 8446 NEW ZEALAND [REDACTED]	Received: 14-Nov-2023 Completed: 23/04/2024 Job Number: WP23-12895 Report Number: 0000028104 Order Reference: 531085 DC30
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		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC30_009	WP23-12895.009	0.400	1	0.1	12

ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC30_001	WP23-12895.001	-1	5.6	0	16
AMD_DC30_002	WP23-12895.002	-1	5.6	0	13
AMD_DC30_003	WP23-12895.003	2	4.3	0	15
AMD_DC30_004	WP23-12895.004	-1	5.7	0	20
AMD_DC30_005	WP23-12895.005	-1	5.7	0	22
AMD_DC30_006	WP23-12895.006	-1	5.7	0	22
AMD_DC30_007	WP23-12895.007	-1	5.6	0	22
AMD_DC30_008	WP23-12895.008	9	3.9	1	18
AMD_DC30_009	WP23-12895.009	11	3.8	2	12

ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC30_010	WP23-12895.010	14	3.6	7	21
AMD_DC30_011	WP23-12895.011	6	4.0	2	21
AMD_DC30_012	WP23-12895.012	2	4.7	0	21
AMD_DC30_013	WP23-12895.013	3	3.6	9	40
AMD_DC30_014	WP23-12895.014	0	4.2	1	29
AMD_DC30_015	WP23-12895.015	6	3.0	36	87

ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC30_016	WP23-12895.016	0	4.8	0	27
AMD_DC30_017	WP23-12895.017	1	4.1	3	23
AMD_DC30_018	WP23-12895.018	0	4.5	0	21
AMD_DC30_019	WP23-12895.019	0	6.4	0	14
AMD_DC30_020	WP23-12895.020	2	5.8	0	11
AMD_DC30_021	WP23-12895.021	9	4.1	1	9
AMD_DC30_022	WP23-12895.022	0	6.2	0	6
AMD_DC30_023	WP23-12895.023	4	6.0	0	8
AMD_DC30_024	WP23-12895.024	-67	7.4	0	0

ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
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Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
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Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC30_009	WP23-12895.009	11	4.2	2	9

ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC30_001	WP23-12895.001	34	4.6
AMD_DC30_002	WP23-12895.002	36	5.2
AMD_DC30_003	WP23-12895.003	59	5.2
AMD_DC30_004	WP23-12895.004	8	6.0
AMD_DC30_005	WP23-12895.005	5	6.0
AMD_DC30_006	WP23-12895.006	4	6.0
AMD_DC30_007	WP23-12895.007	4	5.9
AMD_DC30_008	WP23-12895.008	85	4.2
AMD_DC30_009	WP23-12895.009	120	4.2

ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC30_010	WP23-12895.010	35	4.5
AMD_DC30_011	WP23-12895.011	70	4.3
AMD_DC30_012	WP23-12895.012	34	4.7
AMD_DC30_013	WP23-12895.013	16	5.1
AMD_DC30_014	WP23-12895.014	8	5.7
AMD_DC30_015	WP23-12895.015	8	5.4

ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC30_016	WP23-12895.016	13	5.2
AMD_DC30_017	WP23-12895.017	5	5.3
AMD_DC30_018	WP23-12895.018	7	5.6
AMD_DC30_019	WP23-12895.019	9	5.6
AMD_DC30_020	WP23-12895.020	28	4.8
AMD_DC30_021	WP23-12895.021	140	3.9
AMD_DC30_022	WP23-12895.022	22	5.0
AMD_DC30_023	WP23-12895.023	87	4.3
AMD_DC30_024	WP23-12895.024	-	-

ANALYSIS REPORT

WP23-12895

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 14-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12895
Report Number: 0000028104
Order Reference: 531085 DC30

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC30_009	WP23-12895.009	-	-

Date Start/End Analysis (19/2/2024 - 23/4/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank was 5.7 to 6.1

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

Signed and dated on 23-Apr-2024

This document is issued by the Company under its General Conditions of Service at http://www.sgs.com/term_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content and appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and/or provided by the Client or by a third party acting at the Client's discretion. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

ANALYSIS REPORT

WP23-12907

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 05/04/2024
Job Number: WP23-12907
Report Number: 0000027892
Order Reference: 531085 DC25

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC25_001	WP23-12907.001	0.009	3	0.3	0.29
AMD_DC25_002	WP23-12907.002	0.013	2	0.3	0.39
AMD_DC25_003	WP23-12907.003	0.012	1	0.1	0.36
AMD_DC25_004	WP23-12907.004	0.976	-1	-0.1	30
AMD_DC25_005	WP23-12907.005	0.175	0	0.0	5.3
AMD_DC25_006	WP23-12907.006	0.630	1	0.1	19
AMD_DC25_007	WP23-12907.007	0.578	1	0.1	18
AMD_DC25_008	WP23-12907.008	0.007	2	0.2	0.20
AMD_DC25_009	WP23-12907.009	0.084	3	0.3	2.6

ANALYSIS REPORT

WP23-12907

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 05/04/2024
Job Number: WP23-12907
Report Number: 0000027892
Order Reference: 531085 DC25

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC25_010	WP23-12907.010	0.007	4	0.4	0.20
AMD_DC25_011	WP23-12907.011	0.393	3	0.3	12
AMD_DC25_012	WP23-12907.012	0.434	2	0.2	13
AMD_DC25_013	WP23-12907.013	0.381	4	0.4	12
AMD_DC25_014	WP23-12907.014	0.087	2	0.2	2.7
AMD_DC25_015	WP23-12907.015	0.017	2	0.3	0.52

ANALYSIS REPORT

WP23-12907

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 05/04/2024
Job Number: WP23-12907
Report Number: 0000027892
Order Reference: 531085 DC25

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC25_016	WP23-12907.016	0.027	3	0.3	0.84
AMD_DC25_017	WP23-12907.017	0.016	3	0.3	0.48
AMD_DC25_018	WP23-12907.018	0.032	3	0.3	0.97
AMD_DC25_019	WP23-12907.019	0.065	9	0.9	2.0
AMD_DC25_020	WP23-12907.020	0.027	9	0.9	0.81
AMD_DC25_021	WP23-12907.021	0.083	45	4.5	2.5
AMD_DC25_009	WP23-12907.009	0.050	5	0.5	1.5

ANALYSIS REPORT

WP23-12907

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 05/04/2024
Job Number: WP23-12907
Report Number: 0000027892
Order Reference: 531085 DC25

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00
Sample ID	Laboratory ID				
AMD_DC25_001	WP23-12907.001	-3	5.4	23	6
AMD_DC25_002	WP23-12907.002	-2	5.4	21	4
AMD_DC25_003	WP23-12907.003	-1	5.3	19	6
AMD_DC25_004	WP23-12907.004	30	3.1	29	190
AMD_DC25_005	WP23-12907.005	5	3.7	32	23
AMD_DC25_006	WP23-12907.006	18	3.3	26	110
AMD_DC25_007	WP23-12907.007	16	3.2	34	93
AMD_DC25_008	WP23-12907.008	-2	5.3	38	6
AMD_DC25_009	WP23-12907.009	-1	4.6	26	16

ANALYSIS REPORT

WP23-12907

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 05/04/2024
Job Number: WP23-12907
Report Number: 0000027892
Order Reference: 531085 DC25

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00
AMD_DC25_010	WP23-12907.010	-3	5.4	32	5
AMD_DC25_011	WP23-12907.011	9	3.5	27	120
AMD_DC25_012	WP23-12907.012	11	3.2	30	170
AMD_DC25_013	WP23-12907.013	8	3.4	25	89
AMD_DC25_014	WP23-12907.014	0	3.6	34	26
AMD_DC25_015	WP23-12907.015	-2	4.9	21	28

ANALYSIS REPORT

WP23-12907

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 05/04/2024
Job Number: WP23-12907
Report Number: 0000027892
Order Reference: 531085 DC25

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_NEPM103_1_2 Cond (1:2) aged* µS/cm LOR 2.00
Sample ID	Laboratory ID				
AMD_DC25_016	WP23-12907.016	-2	5.1	20	24
AMD_DC25_017	WP23-12907.017	-2	5.3	20	34
AMD_DC25_018	WP23-12907.018	-2	5.6	17	41
AMD_DC25_019	WP23-12907.019	-7	5.3	14	43
AMD_DC25_020	WP23-12907.020	-8	5.7	15	21
AMD_DC25_021	WP23-12907.021	-42	7.2	0	-
AMD_DC25_009	WP23-12907.009	-3	5.1	17	16

ANALYSIS REPORT

WP23-12907

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 05/04/2024
Job Number: WP23-12907
Report Number: 0000027892
Order Reference: 531085 DC25

Sampled By:

ESO_NEPM103_1_2
pH 1:2 aged*
pH unit
LOR 2.00

Sample ID	Laboratory ID	
AMD_DC25_001	WP23-12907.001	5.7
AMD_DC25_002	WP23-12907.002	5.7
AMD_DC25_003	WP23-12907.003	5.6
AMD_DC25_004	WP23-12907.004	3.9
AMD_DC25_005	WP23-12907.005	4.9
AMD_DC25_006	WP23-12907.006	4.3
AMD_DC25_007	WP23-12907.007	4.3
AMD_DC25_008	WP23-12907.008	5.8
AMD_DC25_009	WP23-12907.009	5.7

ANALYSIS REPORT

WP23-12907

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 05/04/2024
Job Number: WP23-12907
Report Number: 0000027892
Order Reference: 531085 DC25

		ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
AMD_DC25_010	WP23-12907.010	6.1
AMD_DC25_011	WP23-12907.011	4.9
AMD_DC25_012	WP23-12907.012	4.3
AMD_DC25_013	WP23-12907.013	4.4
AMD_DC25_014	WP23-12907.014	6.5
AMD_DC25_015	WP23-12907.015	7.1

ANALYSIS REPORT

WP23-12907

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 05/04/2024
Job Number: WP23-12907
Report Number: 0000027892
Order Reference: 531085 DC25

Sampled By:

ESO_NEPM103_1_2
pH 1:2 aged*
pH unit
LOR 2.00

Sample ID	Laboratory ID	
AMD_DC25_016	WP23-12907.016	7.1
AMD_DC25_017	WP23-12907.017	7.8
AMD_DC25_018	WP23-12907.018	8.2
AMD_DC25_019	WP23-12907.019	7.7
AMD_DC25_020	WP23-12907.020	7.6
AMD_DC25_021	WP23-12907.021	-
AMD_DC25_009	WP23-12907.009	5.7

Date Start/End Analysis (18/12/2023 - 5/4/2024)

* - Denotes non accredited tests



ANALYSIS REPORT

WP23-12907



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 05/04/2024
Job Number: WP23-12907
Report Number: 0000027892
Order Reference: 531085 DC25

REMARKS:

NAG pH for blank was 5.2

Note that prep duplicate result for sulphur and NAG was outside normal tolerance, but both have near-neutral negative NAPP and NAG pH less than 1 pH unit below the blank. Both results are reported.

Note that paste pH results are rinse pHs.

APPLIED METHODS:

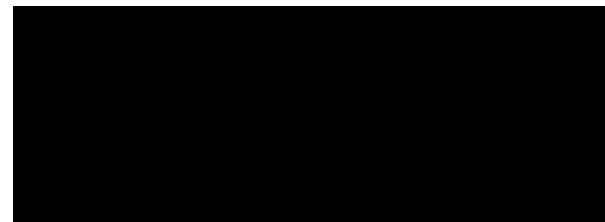
ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_NEPM103_1_2: Paste pH in soil: NEPM103 1:2 extraction

Signed and dated on 05-Apr-2024



This document is issued by the Company under its General Conditions of Service at http://www.sgs.com/term_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content and appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and/or provided by the Client or by a third party acting at the Client's discretion. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

ANALYSIS REPORT

WP23-12918

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12918
Report Number: 0000028096
Order Reference: 531085 DC32

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC32_001	WP23-12918.001	0.014	0	0.0	0.43
AMD_DC32_002	WP23-12918.002	0.201	-1	-0.1	6.1
AMD_DC32_003	WP23-12918.003	0.697	-1	-0.1	21
AMD_DC32_004	WP23-12918.004	<0.005	1	0.1	<0.15
AMD_DC32_005	WP23-12918.005	<0.005	0	0.0	<0.15
AMD_DC32_006	WP23-12918.006	<0.005	1	0.1	<0.15
AMD_DC32_007	WP23-12918.007	0.042	2	0.2	1.3
AMD_DC32_008	WP23-12918.008	5.11	-11	-1.1	160
AMD_DC32_009	WP23-12918.009	0.582	-2	-0.2	18

ANALYSIS REPORT

WP23-12918

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12918
Report Number: 0000028096
Order Reference: 531085 DC32

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC32_010	WP23-12918.010	0.214	0	0.0	6.5
AMD_DC32_011	WP23-12918.011	0.066	0	0.0	2.0
AMD_DC32_012	WP23-12918.012	2.45	-3	-0.3	75
AMD_DC32_013	WP23-12918.013	0.271	-1	-0.1	8.3
AMD_DC32_014	WP23-12918.014	0.490	1	0.1	15
AMD_DC32_015	WP23-12918.015	0.336	0	0.0	10

ANALYSIS REPORT

WP23-12918

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12918
Report Number: 0000028096
Order Reference: 531085 DC32

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC32_016	WP23-12918.016	0.180	0	0.0	5.5
AMD_DC32_017	WP23-12918.017	0.035	0	0.0	1.1
AMD_DC32_018	WP23-12918.018	0.037	1	0.1	1.1
AMD_DC32_019	WP23-12918.019	0.029	1	0.1	0.87
AMD_DC32_020	WP23-12918.020	0.024	8	0.8	0.73
AMD_DC32_21	WP23-12918.021	0.281	79	8.0	8.6
AMD_DC32_009	WP23-12918.009	0.625	1	0.1	19

ANALYSIS REPORT

WP23-12918

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12918
Report Number: 0000028096
Order Reference: 531085 DC32

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC32_001	WP23-12918.001	0	5.6	0	28
AMD_DC32_002	WP23-12918.002	6	4.8	0	16
AMD_DC32_003	WP23-12918.003	21	3.7	7	17
AMD_DC32_004	WP23-12918.004	-1	6.1	0	14
AMD_DC32_005	WP23-12918.005	0	5.8	0	27
AMD_DC32_006	WP23-12918.006	-1	5.9	0	20
AMD_DC32_007	WP23-12918.007	-1	6.0	0	14
AMD_DC32_008	WP23-12918.008	156	2.5	97	116
AMD_DC32_009	WP23-12918.009	18	3.7	5	12

ANALYSIS REPORT

WP23-12918

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12918
Report Number: 0000028096
Order Reference: 531085 DC32

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC32_010	WP23-12918.010	7	5.0	0	19
AMD_DC32_011	WP23-12918.011	2	5.7	0	18
AMD_DC32_012	WP23-12918.012	75	3.0	36	45
AMD_DC32_013	WP23-12918.013	8	4.6	0	17
AMD_DC32_014	WP23-12918.014	14	3.4	7	21
AMD_DC32_015	WP23-12918.015	10	4.1	3	15

ANALYSIS REPORT

WP23-12918

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12918
Report Number: 0000028096
Order Reference: 531085 DC32

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC32_016	WP23-12918.016	5	4.7	0	14
AMD_DC32_017	WP23-12918.017	1	5.9	0	9
AMD_DC32_018	WP23-12918.018	0	5.7	0	13
AMD_DC32_019	WP23-12918.019	0	6.1	0	9
AMD_DC32_020	WP23-12918.020	-7	6.0	0	13
AMD_DC32_21	WP23-12918.021	-70	7.4	0	0
AMD_DC32_009	WP23-12918.009	18	3.5	7	14

ANALYSIS REPORT

WP23-12918

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12918
Report Number: 0000028096
Order Reference: 531085 DC32

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC32_001	WP23-12918.001	24	5.1
AMD_DC32_002	WP23-12918.002	60	4.4
AMD_DC32_003	WP23-12918.003	240	3.9
AMD_DC32_004	WP23-12918.004	12	5.3
AMD_DC32_005	WP23-12918.005	13	5.2
AMD_DC32_006	WP23-12918.006	9	5.5
AMD_DC32_007	WP23-12918.007	17	4.9
AMD_DC32_008	WP23-12918.008	570	3.7
AMD_DC32_009	WP23-12918.009	180	4.0

ANALYSIS REPORT

WP23-12918

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12918
Report Number: 0000028096
Order Reference: 531085 DC32

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC32_010	WP23-12918.010	18	4.9
AMD_DC32_011	WP23-12918.011	31	4.5
AMD_DC32_012	WP23-12918.012	600	3.4
AMD_DC32_013	WP23-12918.013	240	3.8
AMD_DC32_014	WP23-12918.014	18	4.9
AMD_DC32_015	WP23-12918.015	150	3.9

ANALYSIS REPORT

WP23-12918

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12918
Report Number: 0000028096
Order Reference: 531085 DC32

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC32_016	WP23-12918.016	55	4.4
AMD_DC32_017	WP23-12918.017	21	5.0
AMD_DC32_018	WP23-12918.018	27	5.2
AMD_DC32_019	WP23-12918.019	31	5.2
AMD_DC32_020	WP23-12918.020	28	5.5
AMD_DC32_21	WP23-12918.021	-	-
AMD_DC32_009	WP23-12918.009	-	-

Date Start/End Analysis (18/1/2024 - 23/4/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank was 5.8 to 5.9

ANALYSIS REPORT

WP23-12918

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 17-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12918
Report Number: 0000028096
Order Reference: 531085 DC32

APPLIED METHODS:

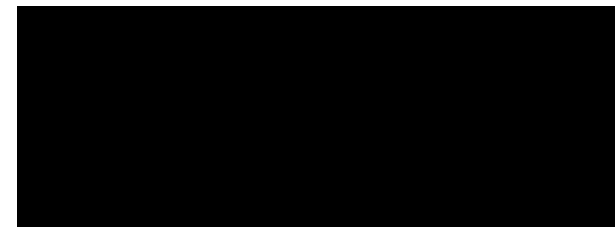
ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

Signed and dated on 23-Apr-2024



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ANALYSIS REPORT

WP23-12938

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 23-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12938
Report Number: 0000028102
Order Reference: 531085 DC28

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC28_001	WP23-12938.001	0.113	-4	-0.4	3.5
AMD_DC28_002	WP23-12938.002	0.072	1	0.1	2.2
AMD_DC28_003	WP23-12938.003	0.115	2	0.2	3.5
AMD_DC28_004	WP23-12938.004	0.113	2	0.2	3.5
AMD_DC28_005	WP23-12938.005	<0.005	1	0.1	<0.15
AMD_DC28_006	WP23-12938.006	0.016	2	0.2	0.48
AMD_DC28_007	WP23-12938.007	0.082	1	0.1	2.5
AMD_DC28_008	WP23-12938.008	0.020	1	0.1	0.62
AMD_DC28_009	WP23-12938.009	0.028	1	0.1	0.85

ANALYSIS REPORT

WP23-12938

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 23-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12938
Report Number: 0000028102
Order Reference: 531085 DC28

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC28_010	WP23-12938.010	0.025	2	0.2	0.76
AMD_DC28_011	WP23-12938.011	0.059	2	0.2	1.8
AMD_DC28_13	WP23-12938.012	0.056	3	0.3	1.7
AMD_DC28_12	WP23-12938.013	0.276	52	5.4	8.5
AMD_DC28_009	WP23-12938.009	0.025	2	0.2	0.76

ANALYSIS REPORT

WP23-12938

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 23-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12938
Report Number: 0000028102
Order Reference: 531085 DC28

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC28_001	WP23-12938.001	3	5.3	0	10
AMD_DC28_002	WP23-12938.002	2	3.5	11	24
AMD_DC28_003	WP23-12938.003	2	3.9	8	33
AMD_DC28_004	WP23-12938.004	2	5.9	0	19
AMD_DC28_005	WP23-12938.005	-1	6.1	0	14
AMD_DC28_006	WP23-12938.006	-1	6.0	0	16
AMD_DC28_007	WP23-12938.007	1	5.8	0	15
AMD_DC28_008	WP23-12938.008	-1	5.7	0	15
AMD_DC28_009	WP23-12938.009	-1	6.0	0	11

ANALYSIS REPORT

WP23-12938

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 23-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12938
Report Number: 0000028102
Order Reference: 531085 DC28

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC28_010	WP23-12938.010	-1	6.1	0	9
AMD_DC28_011	WP23-12938.011	0	6.0	0	17
AMD_DC28_13	WP23-12938.012	-1	5.9	0	13
AMD_DC28_12	WP23-12938.013	-44	8.8	0	0
AMD_DC28_009	WP23-12938.009	-1	5.8	0	16

ANALYSIS REPORT

WP23-12938

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 23-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12938
Report Number: 0000028102
Order Reference: 531085 DC28

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC28_001	WP23-12938.001	130	4.1
AMD_DC28_002	WP23-12938.002	15	4.8
AMD_DC28_003	WP23-12938.003	12	5.0
AMD_DC28_004	WP23-12938.004	9	5.5
AMD_DC28_005	WP23-12938.005	10	5.7
AMD_DC28_006	WP23-12938.006	39	4.8
AMD_DC28_007	WP23-12938.007	40	4.5
AMD_DC28_008	WP23-12938.008	14	4.8
AMD_DC28_009	WP23-12938.009	27	4.9

ANALYSIS REPORT

WP23-12938

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 23-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12938
Report Number: 0000028102
Order Reference: 531085 DC28

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC28_010	WP23-12938.010	31	4.8
AMD_DC28_011	WP23-12938.011	35	4.8
AMD_DC28_13	WP23-12938.012	34	4.9
AMD_DC28_12	WP23-12938.013	-	-
AMD_DC28_009	WP23-12938.009	-	-

Date Start/End Analysis (19/2/2024 - 23/4/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank was 5.8

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method
ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ANALYSIS REPORT

WP23-12938

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 23-Nov-2023
Completed: 23/04/2024
Job Number: WP23-12938
Report Number: 0000028102
Order Reference: 531085 DC28

Signed and dated on 23-Apr-2024

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ANALYSIS REPORT

WP24-13191

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Dec-2023
Completed: 16/05/2024
Job Number: WP24-13191
Report Number: 0000028352
Order Reference: 531085 DC31

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC31_001	WP24-13191.001	0.169	-5	-0.5	5.2
AMD_DC31_002	WP24-13191.002	0.409	2	0.2	13
AMD_DC31_003	WP24-13191.003	0.889	-1	-0.1	27
AMD_DC31_004	WP24-13191.004	0.808	-1	-0.1	25
AMD_DC31_005	WP24-13191.005	0.052	-1	-0.1	1.6
AMD_DC31_006	WP24-13191.006	0.023	1	0.1	0.69
AMD_DC31_007	WP24-13191.007	0.019	1	0.1	0.58
AMD_DC31_008	WP24-13191.008	0.015	1	0.1	0.45
AMD_DC31_009	WP24-13191.009	0.539	-2	-0.2	16

ANALYSIS REPORT

WP24-13191

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13191
Report Number: 0000028352
Order Reference: 531085 DC31

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC31_010	WP24-13191.010	0.073	0	0.0	2.2
AMD_DC31_011	WP24-13191.011	0.030	0	0.0	0.91
AMD_DC31_012	WP24-13191.012	0.212	1	0.1	6.5
AMD_DC31_013	WP24-13191.013	0.175	4	0.4	5.4
DC31_AMD_014	WP24-13191.014	0.378	4	0.4	12
AMD_DC31_009	WP24-13191.009	0.520	-2	-0.2	16

ANALYSIS REPORT

WP24-13191

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Dec-2023
Completed: 16/05/2024
Job Number: WP24-13191
Report Number: 0000028352
Order Reference: 531085 DC31

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC31_001	WP24-13191.001	5	5.3	0	10
AMD_DC31_002	WP24-13191.002	11	3.7	6	23
AMD_DC31_003	WP24-13191.003	27	3.2	14	18
AMD_DC31_004	WP24-13191.004	25	3.4	11	20
AMD_DC31_005	WP24-13191.005	2	6.1	0	10
AMD_DC31_006	WP24-13191.006	0	5.9	0	17
AMD_DC31_007	WP24-13191.007	0	5.8	0	22
AMD_DC31_008	WP24-13191.008	0	5.8	0	21
AMD_DC31_009	WP24-13191.009	16	3.7	4	13

ANALYSIS REPORT

WP24-13191

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13191
Report Number: 0000028352
Order Reference: 531085 DC31

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC31_010	WP24-13191.010	2	3.9	5	34
AMD_DC31_011	WP24-13191.011	1	5.6	0	22
AMD_DC31_012	WP24-13191.012	5	5.2	0	10
AMD_DC31_013	WP24-13191.013	2	6.0	0	7
DC31_AMD_014	WP24-13191.014	7	4.2	1	8
AMD_DC31_009	WP24-13191.009	16	3.8	4	12

ANALYSIS REPORT

WP24-13191

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Dec-2023
Completed: 16/05/2024
Job Number: WP24-13191
Report Number: 0000028352
Order Reference: 531085 DC31

Sampled By:

		ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00	ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00
Sample ID	Laboratory ID		
AMD_DC31_001	WP24-13191.001	5.9	110
AMD_DC31_002	WP24-13191.002	5.0	170
AMD_DC31_003	WP24-13191.003	3.1	720
AMD_DC31_004	WP24-13191.004	3.8	330
AMD_DC31_005	WP24-13191.005	4.4	400
AMD_DC31_006	WP24-13191.006	5.0	19
AMD_DC31_007	WP24-13191.007	5.3	13
AMD_DC31_008	WP24-13191.008	5.4	13
AMD_DC31_009	WP24-13191.009	4.2	94

ANALYSIS REPORT

WP24-13191

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13191
Report Number: 0000028352
Order Reference: 531085 DC31

		ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00	ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00
AMD_DC31_010	WP24-13191.010	4.9	28
AMD_DC31_011	WP24-13191.011	4.6	54
AMD_DC31_012	WP24-13191.012	4.1	100
AMD_DC31_013	WP24-13191.013	4.8	44
DC31_AMD_014	WP24-13191.014	-	-
AMD_DC31_009	WP24-13191.009	-	-

Date Start/End Analysis (25/3/2024 - 16/5/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank was 5.8

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ANALYSIS REPORT

WP24-13191

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13191
Report Number: 0000028352
Order Reference: 531085 DC31

Signed and dated on 16-May-2024

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ANALYSIS REPORT

WP24-13192

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13192
Report Number: 0000028356
Order Reference: 531085 DC27

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC27_001	WP24-13192.001	0.016	1	0.1	0.49
AMD_DC27_002	WP24-13192.002	0.022	0	0.0	0.68
AMD_DC27_003	WP24-13192.003	0.016	1	0.1	0.49
AMD_DC27_004	WP24-13192.004	0.013	1	0.1	0.38
AMD_DC27_005	WP24-13192.005	0.098	0	0.0	3.0
AMD_DC27_006	WP24-13192.006	0.120	1	0.1	3.7
AMD_DC27_007	WP24-13192.007	0.014	1	0.1	0.43
AMD_DC27_008	WP24-13192.008	0.017	1	0.1	0.52
AMD_DC27_009	WP24-13192.009	0.162	1	0.1	5.0

ANALYSIS REPORT

WP24-13192

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13192
Report Number: 0000028356
Order Reference: 531085 DC27

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC27_010	WP24-13192.010	0.031	1	0.1	0.94
AMD_DC27_011	WP24-13192.011	13.1	-16	-1.7	400
AMD_DC27_012	WP24-13192.012	0.188	0	0.0	5.8
AMD_DC27_013	WP24-13192.013	0.116	3	0.3	3.5
AMD_DC27_014	WP24-13192.014	0.063	3	0.3	1.9
AMD_DC27_015	WP24-13192.015	0.295	51	5.2	9.0

ANALYSIS REPORT

WP24-13192

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13192
Report Number: 0000028356
Order Reference: 531085 DC27

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC27_009	WP24-13192.009	0.186	1	0.1	5.7

ANALYSIS REPORT

WP24-13192

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13192
Report Number: 0000028356
Order Reference: 531085 DC27

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC27_001	WP24-13192.001	-1	6.2	0	9
AMD_DC27_002	WP24-13192.002	0	6.1	0	13
AMD_DC27_003	WP24-13192.003	-1	6.2	0	11
AMD_DC27_004	WP24-13192.004	-1	6.4	0	10
AMD_DC27_005	WP24-13192.005	3	6.0	0	13
AMD_DC27_006	WP24-13192.006	3	5.5	0	11
AMD_DC27_007	WP24-13192.007	-1	6.5	0	7
AMD_DC27_008	WP24-13192.008	-1	6.4	0	7
AMD_DC27_009	WP24-13192.009	4	5.8	0	9

ANALYSIS REPORT

WP24-13192

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13192
Report Number: 0000028356
Order Reference: 531085 DC27

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC27_010	WP24-13192.010	0	6.3	0	11
AMD_DC27_011	WP24-13192.011	401	2.3	264	297
AMD_DC27_012	WP24-13192.012	6	6.0	0	7
AMD_DC27_013	WP24-13192.013	1	6.3	0	6
AMD_DC27_014	WP24-13192.014	-1	6.5	0	4
AMD_DC27_015	WP24-13192.015	-42	7.5	0	0



ANALYSIS REPORT

WP24-13192



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13192
Report Number: 0000028356
Order Reference: 531085 DC27

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC27_009	WP24-13192.009	5	5.8	0	9

ANALYSIS REPORT

WP24-13192

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13192
Report Number: 0000028356
Order Reference: 531085 DC27

Sampled By:

		ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00	ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00
Sample ID	Laboratory ID		
AMD_DC27_001	WP24-13192.001	5.4	56
AMD_DC27_002	WP24-13192.002	5.5	72
AMD_DC27_003	WP24-13192.003	5.3	57
AMD_DC27_004	WP24-13192.004	5.4	30
AMD_DC27_005	WP24-13192.005	4.4	92
AMD_DC27_006	WP24-13192.006	4.3	92
AMD_DC27_007	WP24-13192.007	5.3	19
AMD_DC27_008	WP24-13192.008	5.3	21
AMD_DC27_009	WP24-13192.009	3.8	140

ANALYSIS REPORT

WP24-13192

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13192
Report Number: 0000028356
Order Reference: 531085 DC27

		ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00	ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00
AMD_DC27_010	WP24-13192.010	5.1	31
AMD_DC27_011	WP24-13192.011	2.6	2700
AMD_DC27_012	WP24-13192.012	3.7	280
AMD_DC27_013	WP24-13192.013	4.2	110
AMD_DC27_014	WP24-13192.014	4.5	60
AMD_DC27_015	WP24-13192.015	-	-



ANALYSIS REPORT

WP24-13192



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13192
Report Number: 0000028356
Order Reference: 531085 DC27

Sampled By:

		ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00	ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00
Sample ID	Laboratory ID		
AMD_DC27_009	WP24-13192.009	-	-

Date Start/End Analysis (25/3/2024 - 16/5/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank was 5.8

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

ANALYSIS REPORT

WP24-13192

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13192
Report Number: 0000028356
Order Reference: 531085 DC27

Signed and dated on 16-May-2024

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ANALYSIS REPORT

WP24-13195

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13195
Report Number: 0000028358
Order Reference: 531085 DC24

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC24_001	WP24-13195.001	0.015	0	0.0	0.46
AMD_DC24_002	WP24-13195.002	0.024	-1	-0.1	0.74
AMD_DC24_003	WP24-13195.003	0.019	0	0.0	0.57
AMD_DC24_005	WP24-13195.004	0.117	-1	-0.1	3.6
AMD_DC24_006	WP24-13195.005	0.587	-1	-0.1	18
AMD_DC24_007	WP24-13195.006	0.017	1	0.1	0.51
AMD_DC24_008	WP24-13195.007	0.015	1	0.1	0.47
AMD_DC24_009	WP24-13195.008	2.15	-3	-0.3	66
AMD_DC24_010	WP24-13195.009	0.374	0	0.0	11

ANALYSIS REPORT

WP24-13195

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 18-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13195
Report Number: 0000028358
Order Reference: 531085 DC24

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC24_011	WP24-13195.010	0.060	0	0.0	1.8
AMD_DC24_012	WP24-13195.011	0.080	1	0.1	2.5
AMD_DC24_013	WP24-13195.012	0.131	3	0.3	4.0
AMD_DC24_004	WP24-13195.013	0.083	40	4.1	2.5
AMD_DC24_010	WP24-13195.009	0.430	-1	-0.1	13
AMD_DC24_014	WP24-13195.014	0.025	3	0.3	0.77

ANALYSIS REPORT

WP24-13195

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13195
Report Number: 0000028358
Order Reference: 531085 DC24

Sampled By:		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC24_001	WP24-13195.001	0	6.0	0	14
AMD_DC24_002	WP24-13195.002	1	5.7	0	16
AMD_DC24_003	WP24-13195.003	1	6.2	0	14
AMD_DC24_005	WP24-13195.004	4	5.5	0	10
AMD_DC24_006	WP24-13195.005	18	3.7	7	14
AMD_DC24_007	WP24-13195.006	0	6.1	0	7
AMD_DC24_008	WP24-13195.007	0	6.0	0	11
AMD_DC24_009	WP24-13195.008	66	3.0	41	55
AMD_DC24_010	WP24-13195.009	11	3.9	3	14

ANALYSIS REPORT

WP24-13195

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 18-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13195
Report Number: 0000028358
Order Reference: 531085 DC24

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC24_011	WP24-13195.010	1	4.6	0	20
AMD_DC24_012	WP24-13195.011	1	3.9	6	31
AMD_DC24_013	WP24-13195.012	1	6.2	0	4
AMD_DC24_004	WP24-13195.013	-38	7.4	0	0
AMD_DC24_010	WP24-13195.009	13	3.9	4	12
AMD_DC24_014	WP24-13195.014	-2	6.8	0	2

ANALYSIS REPORT

WP24-13195

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13195
Report Number: 0000028358
Order Reference: 531085 DC24

Sampled By:

		ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00	ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00
Sample ID	Laboratory ID		
AMD_DC24_001	WP24-13195.001	5.1	36
AMD_DC24_002	WP24-13195.002	5.0	34
AMD_DC24_003	WP24-13195.003	5.1	27
AMD_DC24_005	WP24-13195.004	4.6	26
AMD_DC24_006	WP24-13195.005	3.7	30
AMD_DC24_007	WP24-13195.006	5.2	25
AMD_DC24_008	WP24-13195.007	5.4	16
AMD_DC24_009	WP24-13195.008	3.1	870
AMD_DC24_010	WP24-13195.009	3.6	320

ANALYSIS REPORT

WP24-13195

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 18-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13195
Report Number: 0000028358
Order Reference: 531085 DC24

		ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00	ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00
AMD_DC24_011	WP24-13195.010	4.6	35
AMD_DC24_012	WP24-13195.011	4.7	33
AMD_DC24_013	WP24-13195.012	4.2	50
AMD_DC24_004	WP24-13195.013	-	-
AMD_DC24_010	WP24-13195.009	-	-
AMD_DC24_014	WP24-13195.014	5.0	18

Date Start/End Analysis (3/5/2024 - 16/5/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank was 5.4

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ANALYSIS REPORT

WP24-13195

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 18-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13195
Report Number: 0000028358
Order Reference: 531085 DC24

Signed and dated on 16-May-2024

This document is issued by the Company under its General Conditions of Service at http://www.sgs.com/term_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content and appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. **WARNING:** The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and/or provided by the Client or by a third party acting at the Client's discretion. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

ANALYSIS REPORT

WP24-13196

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13196
Report Number: 0000028354
Order Reference: 531085 DC26

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC26_001	WP24-13196.001	0.017	0	0.0	0.52
AMD_DC26_002	WP24-13196.002	0.026	-1	-0.1	0.80
AMD_DC26_003	WP24-13196.003	0.015	0	0.0	0.44
AMD_DC26_004	WP24-13196.004	0.026	0	0.0	0.81
AMD_DC26_005	WP24-13196.005	0.012	0	0.0	0.37
AMD_DC26_006	WP24-13196.006	0.017	0	0.0	0.52
AMD_DC26_007	WP24-13196.007	0.036	0	0.0	1.1
AMD_DC26_008	WP24-13196.008	0.073	1	0.1	2.2
AMD_DC26_009	WP24-13196.009	0.032	-1	-0.1	0.98

ANALYSIS REPORT

WP24-13196

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13196
Report Number: 0000028354
Order Reference: 531085 DC26

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC26_010	WP24-13196.010	0.035	1	0.1	1.1
AMD_DC26_011	WP24-13196.011	0.108	-1	-0.1	3.3
AMD_DC26_012	WP24-13196.012	0.070	-1	-0.1	2.1
AMD_DC26_013	WP24-13196.013	0.435	-2	-0.2	13
AMD_DC26_014	WP24-13196.014	0.839	2	0.2	26
AMD_DC26_016	WP24-13196.015	0.733	0	0.0	22

ANALYSIS REPORT

WP24-13196

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13196
Report Number: 0000028354
Order Reference: 531085 DC26

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC26_017	WP24-13196.016	0.149	6	0.6	4.6
AMD_DC26_009	WP24-13196.009	0.029	1	0.1	0.88
AMD_DC26_018	WP24-13196.017	0.292	51	5.2	8.9

ANALYSIS REPORT

WP24-13196

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13196
Report Number: 0000028354
Order Reference: 531085 DC26

Sampled By:		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC26_001	WP24-13196.001	1	5.7	0	25
AMD_DC26_002	WP24-13196.002	1	5.7	0	19
AMD_DC26_003	WP24-13196.003	0	5.9	0	19
AMD_DC26_004	WP24-13196.004	1	5.4	0	27
AMD_DC26_005	WP24-13196.005	0	5.6	0	23
AMD_DC26_006	WP24-13196.006	1	6.1	0	13
AMD_DC26_007	WP24-13196.007	1	6.1	0	11
AMD_DC26_008	WP24-13196.008	1	5.7	0	15
AMD_DC26_009	WP24-13196.009	1	5.5	0	20

ANALYSIS REPORT

WP24-13196

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13196
Report Number: 0000028354
Order Reference: 531085 DC26

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC26_010	WP24-13196.010	0	5.3	0	28
AMD_DC26_011	WP24-13196.011	3	4.4	1	33
AMD_DC26_012	WP24-13196.012	2	5.3	0	21
AMD_DC26_013	WP24-13196.013	13	3.8	4	15
AMD_DC26_014	WP24-13196.014	24	3.2	14	19
AMD_DC26_016	WP24-13196.015	22	3.4	11	22

ANALYSIS REPORT

WP24-13196

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13196
Report Number: 0000028354
Order Reference: 531085 DC26

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC26_017	WP24-13196.016	-1	5.9	0	8
AMD_DC26_009	WP24-13196.009	0	5.6	0	21
AMD_DC26_018	WP24-13196.017	-42	7.7	0	0

ANALYSIS REPORT

WP24-13196

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13196
Report Number: 0000028354
Order Reference: 531085 DC26

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC26_001	WP24-13196.001	50	4.9
AMD_DC26_002	WP24-13196.002	32	5.0
AMD_DC26_003	WP24-13196.003	22	5.1
AMD_DC26_004	WP24-13196.004	13	5.3
AMD_DC26_005	WP24-13196.005	45	5.1
AMD_DC26_006	WP24-13196.006	18	5.0
AMD_DC26_007	WP24-13196.007	31	5.1
AMD_DC26_008	WP24-13196.008	25	5.1
AMD_DC26_009	WP24-13196.009	17	5.3

ANALYSIS REPORT

WP24-13196

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13196
Report Number: 0000028354
Order Reference: 531085 DC26

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC26_010	WP24-13196.010	17	5.2
AMD_DC26_011	WP24-13196.011	28	4.8
AMD_DC26_012	WP24-13196.012	14	5.1
AMD_DC26_013	WP24-13196.013	13	3.9
AMD_DC26_014	WP24-13196.014	500	3.3
AMD_DC26_016	WP24-13196.015	200	3.8

ANALYSIS REPORT

WP24-13196

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 10-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13196
Report Number: 0000028354
Order Reference: 531085 DC26

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC26_017	WP24-13196.016	48	4.7
AMD_DC26_009	WP24-13196.009	-	-
AMD_DC26_018	WP24-13196.017	-	-

Date Start/End Analysis (4/4/2024 - 16/5/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank was 5.6 to 5.8

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

ANALYSIS REPORT

WP24-13196

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 18-Jan-2024
Completed: 16/05/2024
Job Number: WP24-13196
Report Number: 0000028354
Order Reference: 531085 DC26

Signed and dated on 16-May-2024

This document is issued by the Company under its General Conditions of Service at http://www.sgs.com/term_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content and appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. **WARNING:** The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and/or provided by the Client or by a third party acting at the Client's discretion. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

ANALYSIS REPORT

WP24-13252

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 19-Jan-2024
Completed: 23/04/2024
Job Number: WP24-13252
Report Number: 0000028100
Order Reference: 531085 DC29

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC29_001	WP24-13252.001	0.019	1	0.1	0.58
AMD_DC29_002	WP24-13252.002	0.014	1	0.1	0.42
AMD_DC29_003	WP24-13252.003	0.016	1	0.1	0.50
AMD_DC29_004	WP24-13252.004	0.118	0	0.0	3.6
AMD_DC29_005	WP24-13252.005	0.139	-2	-0.2	4.2
AMD_DC29_006	WP24-13252.006	0.019	0	0.0	0.57
AMD_DC29_007	WP24-13252.007	0.041	0	0.0	1.3
AMD_DC29_008	WP24-13252.008	0.305	0	0.0	9.3
AMD_DC29_009	WP24-13252.009	0.047	0	0.0	1.5

ANALYSIS REPORT

WP24-13252

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 19-Jan-2024
Completed: 23/04/2024
Job Number: WP24-13252
Report Number: 0000028100
Order Reference: 531085 DC29

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC29_010	WP24-13252.010	0.096	1	0.1	2.9
AMD_DC29_011	WP24-13252.011	0.091	0	0.0	2.8
AMD_DC29_012	WP24-13252.012	0.020	1	0.1	0.60
AMD_DC29_013	WP24-13252.013	0.288	76	7.7	8.8
AMD_DC29_009	WP24-13252.009	0.045	0	0.0	1.4

ANALYSIS REPORT

WP24-13252

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 19-Jan-2024
Completed: 23/04/2024
Job Number: WP24-13252
Report Number: 0000028100
Order Reference: 531085 DC29

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC29_001	WP24-13252.001	-1	5.6	0	18
AMD_DC29_002	WP24-13252.002	0	5.8	0	18
AMD_DC29_003	WP24-13252.003	0	6.0	0	12
AMD_DC29_004	WP24-13252.004	4	5.6	0	13
AMD_DC29_005	WP24-13252.005	4	5.6	0	7
AMD_DC29_006	WP24-13252.006	0	5.9	0	15
AMD_DC29_007	WP24-13252.007	1	4.9	0	21
AMD_DC29_008	WP24-13252.008	9	3.9	5	18
AMD_DC29_009	WP24-13252.009	1	4.9	0	20

ANALYSIS REPORT

WP24-13252

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 19-Jan-2024
Completed: 23/04/2024
Job Number: WP24-13252
Report Number: 0000028100
Order Reference: 531085 DC29

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC29_010	WP24-13252.010	2	4.1	4	27
AMD_DC29_011	WP24-13252.011	3	5.7	0	10
AMD_DC29_012	WP24-13252.012	0	6.2	0	10
AMD_DC29_013	WP24-13252.013	-67	7.6	0	0
AMD_DC29_009	WP24-13252.009	1	5.0	0	21

ANALYSIS REPORT

WP24-13252

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 19-Jan-2024
Completed: 23/04/2024
Job Number: WP24-13252
Report Number: 0000028100
Order Reference: 531085 DC29

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC29_001	WP24-13252.001	21	5.5
AMD_DC29_002	WP24-13252.002	13	5.6
AMD_DC29_003	WP24-13252.003	11	5.8
AMD_DC29_004	WP24-13252.004	30	4.8
AMD_DC29_005	WP24-13252.005	11	5.1
AMD_DC29_006	WP24-13252.006	7	5.5
AMD_DC29_007	WP24-13252.007	18	4.8
AMD_DC29_008	WP24-13252.008	43	4.4
AMD_DC29_009	WP24-13252.009	25	4.6

ANALYSIS REPORT

WP24-13252

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 19-Jan-2024
Completed: 23/04/2024
Job Number: WP24-13252
Report Number: 0000028100
Order Reference: 531085 DC29

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC29_010	WP24-13252.010	18	4.7
AMD_DC29_011	WP24-13252.011	94	4.1
AMD_DC29_012	WP24-13252.012	21	5.0
AMD_DC29_013	WP24-13252.013	-	-
AMD_DC29_009	WP24-13252.009	-	-

Date Start/End Analysis (25/3/2024 - 23/4/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank is 5.5

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

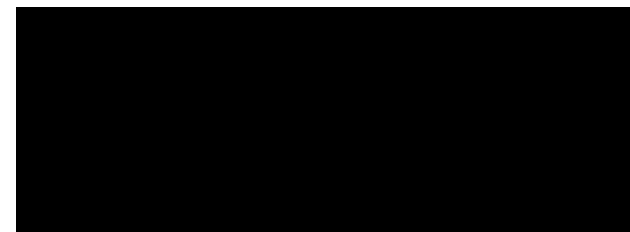
ANALYSIS REPORT

WP24-13252

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 19-Jan-2024
Completed: 23/04/2024
Job Number: WP24-13252
Report Number: 0000028100
Order Reference: 531085 DC29

Signed and dated on 23-Apr-2024



This document is issued by the Company under its General Conditions of Service at http://www.sgs.com/term_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content and appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and/or provided by the Client or by a third party acting at the Client's discretion. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

ANALYSIS REPORT

WP24-13254

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Jan-2024
Completed: 30/04/2024
Job Number: WP24-13254
Report Number: 0000028170
Order Reference: 531085 DC22

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC22_001	WP24-13254.001	0.015	1	0.1	0.45
AMD_DC22_002	WP24-13254.002	0.022	1	0.1	0.68
AMD_DC22_003	WP24-13254.003	0.016	0	0.0	0.48
AMD_DC22_004	WP24-13254.004	0.020	0	0.0	0.61
AMD_DC22_005	WP24-13254.005	0.019	0	0.0	0.59
AMD_DC22_006	WP24-13254.006	0.038	0	0.0	1.2
AMD_DC22_007	WP24-13254.007	0.083	0	-0.1	2.5
AMD_DC22_008	WP24-13254.008	0.033	-1	-0.1	1.0
AMD_DC22_009	WP24-13254.009	0.012	1	0.1	0.36

ANALYSIS REPORT

WP24-13254

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Jan-2024
Completed: 30/04/2024
Job Number: WP24-13254
Report Number: 0000028170
Order Reference: 531085 DC22

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC22_010	WP24-13254.010	0.527	-1	-0.1	16
AMD_DC22_011	WP24-13254.011	0.808	-1	-0.1	25
AMD_DC22_012	WP24-13254.012	0.691	-1	-0.1	21
AMD_DC22_013	WP24-13254.013	0.645	-1	-0.2	20
AMD_DC22_014	WP24-13254.014	0.017	1	0.1	0.53
AMD_DC22_015	WP24-13254.015	0.012	1	0.1	0.37

ANALYSIS REPORT

WP24-13254

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Jan-2024
Completed: 30/04/2024
Job Number: WP24-13254
Report Number: 0000028170
Order Reference: 531085 DC22

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC22_016	WP24-13254.016	0.072	0	-0.1	2.2
AMD_DC22_017	WP24-13254.017	0.015	0	0.0	0.47
AMD_DC22_018	WP24-13254.018	0.313	0	-0.1	9.6
AMD_DC22_019	WP24-13254.019	0.730	-2	-0.2	22
AMD_DC22_020	WP24-13254.020	0.130	2	0.2	4.0
AMD_DC22_021	WP24-13254.021	0.370	1	0.1	11
AMD_DC22_022	WP24-13254.022	0.087	4	0.4	2.7
AMD_DC22_023	WP24-13254.023	0.384	3	0.3	12
AMD_DC22_009	WP24-13254.009	0.012	0	0.0	0.38

ANALYSIS REPORT

WP24-13254

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Jan-2024
Completed: 30/04/2024
Job Number: WP24-13254
Report Number: 0000028170
Order Reference: 531085 DC22

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC22_001	WP24-13254.001	-1	5.9	0	16
AMD_DC22_002	WP24-13254.002	0	5.8	0	16
AMD_DC22_003	WP24-13254.003	0	6.1	0	10
AMD_DC22_004	WP24-13254.004	0	5.9	0	14
AMD_DC22_005	WP24-13254.005	0	5.9	0	15
AMD_DC22_006	WP24-13254.006	1	6.0	0	11
AMD_DC22_007	WP24-13254.007	3	5.6	0	13
AMD_DC22_008	WP24-13254.008	1	5.9	0	12
AMD_DC22_009	WP24-13254.009	0	6.0	0	12

ANALYSIS REPORT

WP24-13254

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Jan-2024
Completed: 30/04/2024
Job Number: WP24-13254
Report Number: 0000028170
Order Reference: 531085 DC22

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC22_010	WP24-13254.010	16	3.6	5	12
AMD_DC22_011	WP24-13254.011	25	3.5	11	18
AMD_DC22_012	WP24-13254.012	21	3.7	7	14
AMD_DC22_013	WP24-13254.013	20	3.8	6	13
AMD_DC22_014	WP24-13254.014	0	6.0	0	10
AMD_DC22_015	WP24-13254.015	-1	6.0	0	13

ANALYSIS REPORT

WP24-13254

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Jan-2024
Completed: 30/04/2024
Job Number: WP24-13254
Report Number: 0000028170
Order Reference: 531085 DC22

Sampled By:		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC22_016	WP24-13254.016	2	5.5	0	12
AMD_DC22_017	WP24-13254.017	0	6.1	0	10
AMD_DC22_018	WP24-13254.018	10	4.3	1	11
AMD_DC22_019	WP24-13254.019	22	3.6	9	17
AMD_DC22_020	WP24-13254.020	2	5.9	0	8
AMD_DC22_021	WP24-13254.021	10	4.4	1	6
AMD_DC22_022	WP24-13254.022	-2	6.5	0	4
AMD_DC22_023	WP24-13254.023	9	4.4	1	7
AMD_DC22_009	WP24-13254.009	0	6.1	0	11

ANALYSIS REPORT

WP24-13254

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Jan-2024
Completed: 30/04/2024
Job Number: WP24-13254
Report Number: 0000028170
Order Reference: 531085 DC22

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC22_001	WP24-13254.001	13	5.2
AMD_DC22_002	WP24-13254.002	13	5.3
AMD_DC22_003	WP24-13254.003	15	5.5
AMD_DC22_004	WP24-13254.004	12	5.4
AMD_DC22_005	WP24-13254.005	9	5.4
AMD_DC22_006	WP24-13254.006	12	5.2
AMD_DC22_007	WP24-13254.007	38	4.8
AMD_DC22_008	WP24-13254.008	8	5.6
AMD_DC22_009	WP24-13254.009	11	5.7

ANALYSIS REPORT

WP24-13254

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Jan-2024
Completed: 30/04/2024
Job Number: WP24-13254
Report Number: 0000028170
Order Reference: 531085 DC22

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC22_010	WP24-13254.010	280	3.9
AMD_DC22_011	WP24-13254.011	200	3.9
AMD_DC22_012	WP24-13254.012	230	3.9
AMD_DC22_013	WP24-13254.013	210	3.9
AMD_DC22_014	WP24-13254.014	14	5.4
AMD_DC22_015	WP24-13254.015	8	5.6

ANALYSIS REPORT

WP24-13254

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Jan-2024
Completed: 30/04/2024
Job Number: WP24-13254
Report Number: 0000028170
Order Reference: 531085 DC22

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC22_016	WP24-13254.016	12	5.9
AMD_DC22_017	WP24-13254.017	7	5.7
AMD_DC22_018	WP24-13254.018	270	4.0
AMD_DC22_019	WP24-13254.019	140	4.1
AMD_DC22_020	WP24-13254.020	-	-
AMD_DC22_021	WP24-13254.021	52	4.7
AMD_DC22_022	WP24-13254.022	14	5.6
AMD_DC22_023	WP24-13254.023	-	-
AMD_DC22_009	WP24-13254.009	-	-

ANALYSIS REPORT

WP24-13254



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 22-Jan-2024
Completed: 30/04/2024
Job Number: WP24-13254
Report Number: 0000028170
Order Reference: 531085 DC22

Date Start/End Analysis (25/3/2024 - 30/4/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank is 6.3

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

Signed and dated on 30-Apr-2024

This document is issued by the Company under its General Conditions of Service at http://www.sgs.com/term_and_conditions.htm. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content and appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. **WARNING:** The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and/or provided by the Client or by a third party acting at the Client's discretion. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC37_001	WP24-13283.001	0.065	2	0.2	2.0
AMD_DC37_002	WP24-13283.002	0.303	2	0.2	9.3
AMD_DC37_003	WP24-13283.003	0.082	2	0.2	2.5
AMD_DC37_004	WP24-13283.004	0.048	3	0.3	1.5
AMD_DC37_005	WP24-13283.005	0.088	3	0.3	2.7
AMD_DC37_006	WP24-13283.006	0.040	4	0.4	1.2
AMD_DC37_007	WP24-13283.007	0.344	2	0.2	11
AMD_DC37_008	WP24-13283.008	0.050	2	0.2	1.5
AMD_DC37_009	WP24-13283.009	0.183	2	0.2	5.6

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC37_010	WP24-13283.010	0.033	1	0.1	1.0
AMD_DC37_011	WP24-13283.011	1.42	1	0.1	43
AMD_DC37_012	WP24-13283.012	0.276	2	0.3	8.4
AMD_DC37_013	WP24-13283.013	0.019	2	0.2	0.57
AMD_DC37_014	WP24-13283.014	0.609	2	0.2	19
AMD_DC37_015	WP24-13283.015	0.401	0	0.0	12

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC37_016	WP24-13283.016	0.990	0	0.0	30
AMD_DC37_017	WP24-13283.017	0.241	1	0.1	7.4
AMD_DC37_018	WP24-13283.018	0.014	3	0.3	0.44
AMD_DC37_019	WP24-13283.019	0.038	2	0.2	1.2
AMD_DC37_020	WP24-13283.020	0.361	1	0.1	11
AMD_DC37_021	WP24-13283.021	0.325	2	0.2	10
AMD_DC37_022	WP24-13283.022	2.53	5	0.5	77
AMD_DC37_023	WP24-13283.023	1.61	13	1.4	49
AMD_DC37_024	WP24-13283.024	0.087	43	4.4	2.7

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC37_009	WP24-13283.009	0.183	2	0.2	5.6

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

Sampled By:		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC37_001	WP24-13283.001	0	5.4	0	11
AMD_DC37_002	WP24-13283.002	8	4.2	1	11
AMD_DC37_003	WP24-13283.003	1	5.1	0	16
AMD_DC37_004	WP24-13283.004	-2	5.8	0	14
AMD_DC37_005	WP24-13283.005	0	5.6	0	16
AMD_DC37_006	WP24-13283.006	-2	5.3	0	19
AMD_DC37_007	WP24-13283.007	9	3.7	9	29
AMD_DC37_008	WP24-13283.008	0	6.1	0	14
AMD_DC37_009	WP24-13283.009	4	4.4	1	15

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC37_010	WP24-13283.010	0	5.4	0	16
AMD_DC37_011	WP24-13283.011	42	3.0	23	32
AMD_DC37_012	WP24-13283.012	6	4.0	1	16
AMD_DC37_013	WP24-13283.013	-1	5.5	0	21
AMD_DC37_014	WP24-13283.014	17	3.6	7	13
AMD_DC37_015	WP24-13283.015	12	3.8	3	10

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC37_016	WP24-13283.016	30	3.2	16	21
AMD_DC37_017	WP24-13283.017	6	4.4	1	12
AMD_DC37_018	WP24-13283.018	-3	5.9	0	11
AMD_DC37_019	WP24-13283.019	0	5.4	0	20
AMD_DC37_020	WP24-13283.020	10	3.8	3	14
AMD_DC37_021	WP24-13283.021	8	3.9	4	15
AMD_DC37_022	WP24-13283.022	72	2.8	41	50
AMD_DC37_023	WP24-13283.023	36	3.0	28	35
AMD_DC37_024	WP24-13283.024	-40	7.3	0	0



ANALYSIS REPORT
WP24-13283



Client: BT Mining Ltd PO Box 79151 Avonhead Christchurch 8446 NEW ZEALAND [REDACTED]	Received: 24-Jan-2024 Completed: 01/05/2024 Job Number: WP24-13283 Report Number: 0000028189 Order Reference: 531085 DC37
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		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC37_009	WP24-13283.009	4	4.1	3	24

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC37_001	WP24-13283.001	19	5.0
AMD_DC37_002	WP24-13283.002	27	4.6
AMD_DC37_003	WP24-13283.003	25	5.0
AMD_DC37_004	WP24-13283.004	5	5.6
AMD_DC37_005	WP24-13283.005	7	5.6
AMD_DC37_006	WP24-13283.006	13	5.4
AMD_DC37_007	WP24-13283.007	49	4.7
AMD_DC37_008	WP24-13283.008	17	5.3
AMD_DC37_009	WP24-13283.009	21	4.9

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

		ESO_RINSEPH Cond (1:5)* μS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC37_010	WP24-13283.010	8	5.4
AMD_DC37_011	WP24-13283.011	280	3.7
AMD_DC37_012	WP24-13283.012	140	4.0
AMD_DC37_013	WP24-13283.013	5	5.6
AMD_DC37_014	WP24-13283.014	170	4.0
AMD_DC37_015	WP24-13283.015	340	3.8

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC37_016	WP24-13283.016	85	4.1
AMD_DC37_017	WP24-13283.017	58	4.4
AMD_DC37_018	WP24-13283.018	15	5.7
AMD_DC37_019	WP24-13283.019	25	4.8
AMD_DC37_020	WP24-13283.020	97	4.2
AMD_DC37_021	WP24-13283.021	-	-
AMD_DC37_022	WP24-13283.022	260	3.8
AMD_DC37_023	WP24-13283.023	200	4.1
AMD_DC37_024	WP24-13283.024	-	-

ANALYSIS REPORT

WP24-13283

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 24-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13283
Report Number: 0000028189
Order Reference: 531085 DC37

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC37_009	WP24-13283.009	-	-

Date Start/End Analysis (25/3/2024 - 1/5/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank is 5.3 to 6.1

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

Signed and dated on 01-May-2024

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ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC44_001	WP24-13287.001	0.017	0	0.0	0.53
AMD_DC44_002	WP24-13287.002	0.022	2	0.2	0.68
AMD_DC44_003	WP24-13287.003	0.020	2	0.2	0.62
AMD_DC44_004	WP24-13287.004	0.020	1	0.1	0.62
AMD_DC44_005	WP24-13287.005	0.783	-1	-0.1	24
AMD_DC44_006	WP24-13287.006	0.570	0	0.0	17
AMD_DC44_007	WP24-13287.007	0.799	-1	-0.1	24
AMD_DC44_008	WP24-13287.008	0.930	-2	-0.2	28
AMD_DC44_009	WP24-13287.009	1.04	-1	-0.1	32

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC44_010	WP24-13287.010	0.087	0	0.0	2.7
AMD_DC44_011	WP24-13287.011	0.255	0	0.0	7.8
AMD_DC44_012	WP24-13287.012	1.30	-1	-0.1	40
AMD_DC44_013	WP24-13287.013	0.024	0	0.0	0.72
AMD_DC44_014	WP24-13287.014	0.025	0	0.0	0.76
AMD_DC44_015	WP24-13287.015	5.24	-7	-0.7	160

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
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Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC44_016	WP24-13287.016	1.15	-1	-0.1	35
AMD_DC44_017	WP24-13287.017	0.038	1	0.1	1.2
AMD_DC44_018	WP24-13287.018	0.018	2	0.2	0.54
AMD_DC44_019	WP24-13287.019	1.27	0	0.0	39
AMD_DC44_020	WP24-13287.020	1.08	-1	-0.1	33
AMD_DC44_021	WP24-13287.021	0.115	0	0.0	3.5
AMD_DC44_022	WP24-13287.022	0.060	0	0.0	1.8
AMD_DC44_023	WP24-13287.023	0.074	0	0.0	2.3
AMD_DC44_024	WP24-13287.024	0.015	1	0.1	0.46

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC44_025	WP24-13287.025	0.019	-1	-0.1	0.57
AMD_DC44_026	WP24-13287.026	0.227	1	0.1	6.9
AMD_DC44_027	WP24-13287.027	0.029	1	0.1	0.89
AMD_DC44_028	WP24-13287.028	0.088	42	4.3	2.7
AMD_DC44_029	WP24-13287.029	0.290	76	7.7	8.9
AMD_DC44_009	WP24-13287.009	1.03	-3	-0.3	32

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC44_001	WP24-13287.001	1	6.3	0	11
AMD_DC44_002	WP24-13287.002	-1	6.2	0	8
AMD_DC44_003	WP24-13287.003	-1	6.1	0	10
AMD_DC44_004	WP24-13287.004	-1	6.0	0	11
AMD_DC44_005	WP24-13287.005	24	3.5	11	18
AMD_DC44_006	WP24-13287.006	17	3.6	9	16
AMD_DC44_007	WP24-13287.007	24	3.5	10	18
AMD_DC44_008	WP24-13287.008	28	3.4	14	21
AMD_DC44_009	WP24-13287.009	32	3.2	17	22

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC44_010	WP24-13287.010	2	5.8	0	9
AMD_DC44_011	WP24-13287.011	8	4.5	1	12
AMD_DC44_012	WP24-13287.012	40	3.2	21	30
AMD_DC44_013	WP24-13287.013	1	6.0	0	10
AMD_DC44_014	WP24-13287.014	1	6.0	0	11
AMD_DC44_015	WP24-13287.015	160	2.4	121	133

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
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Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC44_016	WP24-13287.016	35	3.3	19	26
AMD_DC44_017	WP24-13287.017	0	5.8	0	12
AMD_DC44_018	WP24-13287.018	-1	5.8	0	17
AMD_DC44_019	WP24-13287.019	39	3.2	19	28
AMD_DC44_020	WP24-13287.020	33	3.1	18	26
AMD_DC44_021	WP24-13287.021	4	5.7	0	18
AMD_DC44_022	WP24-13287.022	2	5.9	0	13
AMD_DC44_023	WP24-13287.023	2	5.8	0	16
AMD_DC44_024	WP24-13287.024	0	6.0	0	13

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC44_025	WP24-13287.025	1	4.6	0	12
AMD_DC44_026	WP24-13287.026	6	5.6	0	23
AMD_DC44_027	WP24-13287.027	0	5.8	0	19
AMD_DC44_028	WP24-13287.028	-40	7.3	0	0
AMD_DC44_029	WP24-13287.029	-67	4.5	0	0
AMD_DC44_009	WP24-13287.009	32	3.3	19	22

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC44_001	WP24-13287.001	120	4.9
AMD_DC44_002	WP24-13287.002	41	5.0
AMD_DC44_003	WP24-13287.003	12	5.1
AMD_DC44_004	WP24-13287.004	8	5.6
AMD_DC44_005	WP24-13287.005	260	3.8
AMD_DC44_006	WP24-13287.006	240	3.8
AMD_DC44_007	WP24-13287.007	340	3.6
AMD_DC44_008	WP24-13287.008	370	3.5
AMD_DC44_009	WP24-13287.009	340	3.6

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC44_010	WP24-13287.010	58	4.3
AMD_DC44_011	WP24-13287.011	83	4.2
AMD_DC44_012	WP24-13287.012	340	3.7
AMD_DC44_013	WP24-13287.013	22	5.1
AMD_DC44_014	WP24-13287.014	18	5.1
AMD_DC44_015	WP24-13287.015	730	3.2

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC44_016	WP24-13287.016	230	3.4
AMD_DC44_017	WP24-13287.017	8	5.3
AMD_DC44_018	WP24-13287.018	9	5.2
AMD_DC44_019	WP24-13287.019	290	3.8
AMD_DC44_020	WP24-13287.020	250	3.8
AMD_DC44_021	WP24-13287.021	6	5.3
AMD_DC44_022	WP24-13287.022	6	5.6
AMD_DC44_023	WP24-13287.023	5	5.8
AMD_DC44_024	WP24-13287.024	4	5.5

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC44_025	WP24-13287.025	170	4.0
AMD_DC44_026	WP24-13287.026	8	5.5
AMD_DC44_027	WP24-13287.027	8	5.5
AMD_DC44_028	WP24-13287.028	-	-
AMD_DC44_029	WP24-13287.029	-	-
AMD_DC44_009	WP24-13287.009	-	-

Date Start/End Analysis (25/3/2024 - 1/5/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank is 5.1 to 5.8

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ANALYSIS REPORT

WP24-13287

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 25-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13287
Report Number: 0000028193
Order Reference: 531085 DC44

Signed and dated on 01-May-2024

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ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC45_001	WP24-13295.001	0.015	-1	-0.1	0.45
AMD_DC45_002	WP24-13295.002	0.013	0	0.0	0.40
AMD_DC45_003	WP24-13295.003	0.017	-1	-0.1	0.53
AMD_DC45_004	WP24-13295.004	0.030	-1	-0.1	0.91
AMD_DC45_005	WP24-13295.005	0.020	-1	-0.1	0.62
AMD_DC45_006	WP24-13295.006	0.676	-2	-0.2	21
AMD_DC45_007	WP24-13295.007	0.402	-2	-0.2	12
AMD_DC45_008	WP24-13295.008	0.655	-2	-0.2	20
AMD_DC45_009	WP24-13295.009	0.035	-1	-0.1	1.1

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC45_010	WP24-13295.010	0.047	-1	-0.1	1.4
AMD_DC45_011	WP24-13295.011	0.053	1	0.1	1.6
AMD_DC45_012	WP24-13295.012	0.097	-3	-0.3	3.0
AMD_DC45_013	WP24-13295.013	0.050	-1	-0.1	1.5
AMD_DC45_014	WP24-13295.014	0.051	-1	-0.1	1.6
AMD_DC45_015	WP24-13295.015	0.038	0	0.0	1.2

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC45_016	WP24-13295.016	1.07	-2	-0.2	33
AMD_DC45_017	WP24-13295.017	0.610	-3	-0.3	19
AMD_DC45_018	WP24-13295.018	0.057	1	0.1	1.7
AMD_DC45_019	WP24-13295.019	0.029	0	0.0	0.89
AMD_DC45_020	WP24-13295.020	0.036	0	0.0	1.1
AMD_DC45_021	WP24-13295.021	0.035	1	0.1	1.1
AMD_DC45_022	WP24-13295.022	1.00	-1	-0.1	31
AMD_DC45_023	WP24-13295.023	1.20	0	0.0	37
AMD_DC45_024	WP24-13295.024	0.788	1	0.1	24

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC45_025	WP24-13295.025	0.052	1	0.1	1.6
AMD_DC45_026	WP24-13295.026	0.019	1	0.1	0.59
AMD_DC45_027	WP24-13295.027	0.023	1	0.1	0.71
AMD_DC45_028	WP24-13295.028	0.372	0	0.0	11
AMD_DC45_029	WP24-13295.029	0.102	1	0.1	3.1
AMD_DC45_030	WP24-13295.030	0.349	1	0.1	11

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC45_031	WP24-13295.031	0.214	1	0.1	6.5
AMD_DC45_032	WP24-13295.032	0.175	1	0.1	5.3
AMD_DC45_033	WP24-13295.033	0.121	2	0.2	3.7
AMD_DC45_034	WP24-13295.034	0.087	43	4.4	2.7
AMD_DC45_035	WP24-13295.035	0.369	3	0.3	11
AMD_DC45_009	WP24-13295.009	0.033	1	0.1	1.0

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC45_001	WP24-13295.001	0	5.8	0	13
AMD_DC45_002	WP24-13295.002	0	5.7	0	15
AMD_DC45_003	WP24-13295.003	1	5.9	0	11
AMD_DC45_004	WP24-13295.004	1	6.1	0	11
AMD_DC45_005	WP24-13295.005	1	5.9	0	10
AMD_DC45_006	WP24-13295.006	21	3.6	9	17
AMD_DC45_007	WP24-13295.007	12	4.1	2	9
AMD_DC45_008	WP24-13295.008	20	3.6	7	14
AMD_DC45_009	WP24-13295.009	1	6.4	0	4

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC45_010	WP24-13295.010	1	6.4	0	6
AMD_DC45_011	WP24-13295.011	1	6.4	0	5
AMD_DC45_012	WP24-13295.012	3	5.2	0	11
AMD_DC45_013	WP24-13295.013	2	6.3	0	5
AMD_DC45_014	WP24-13295.014	2	5.8	0	10
AMD_DC45_015	WP24-13295.015	1	5.9	0	10

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
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Christchurch 8446 NEW ZEALAND
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Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC45_016	WP24-13295.016	33	3.3	16	23
AMD_DC45_017	WP24-13295.017	19	3.7	7	16
AMD_DC45_018	WP24-13295.018	1	6.3	0	6
AMD_DC45_019	WP24-13295.019	1	6.0	0	8
AMD_DC45_020	WP24-13295.020	1	6.3	0	5
AMD_DC45_021	WP24-13295.021	0	6.0	0	9
AMD_DC45_022	WP24-13295.022	31	3.3	18	22
AMD_DC45_023	WP24-13295.023	37	3.2	19	27
AMD_DC45_024	WP24-13295.024	23	3.5	9	15

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC45_025	WP24-13295.025	1	5.8	0	12
AMD_DC45_026	WP24-13295.026	0	6.2	0	7
AMD_DC45_027	WP24-13295.027	0	6.2	0	6
AMD_DC45_028	WP24-13295.028	11	4.0	4	16
AMD_DC45_029	WP24-13295.029	2	5.3	0	12
AMD_DC45_030	WP24-13295.030	10	3.9	4	17

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC45_031	WP24-13295.031	6	4.7	0	14
AMD_DC45_032	WP24-13295.032	4	5.2	0	14
AMD_DC45_033	WP24-13295.033	2	5.2	0	16
AMD_DC45_034	WP24-13295.034	-41	7.1	0	0
AMD_DC45_035	WP24-13295.035	8	4.2	1	7
AMD_DC45_009	WP24-13295.009	0	6.1	0	9

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC45_001	WP24-13295.001	41	6.5
AMD_DC45_002	WP24-13295.002	23	6.6
AMD_DC45_003	WP24-13295.003	12	6.1
AMD_DC45_004	WP24-13295.004	10	5.8
AMD_DC45_005	WP24-13295.005	7	5.7
AMD_DC45_006	WP24-13295.006	160	4.0
AMD_DC45_007	WP24-13295.007	89	4.7
AMD_DC45_008	WP24-13295.008	120	4.4
AMD_DC45_009	WP24-13295.009	8	5.6

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

		ESO_RINSEPH Cond (1:5)* μS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC45_010	WP24-13295.010	6	5.6
AMD_DC45_011	WP24-13295.011	8	5.7
AMD_DC45_012	WP24-13295.012	11	5.5
AMD_DC45_013	WP24-13295.013	8	5.6
AMD_DC45_014	WP24-13295.014	11	5.3
AMD_DC45_015	WP24-13295.015	8	5.5

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC45_016	WP24-13295.016	97	4.4
AMD_DC45_017	WP24-13295.017	50	4.6
AMD_DC45_018	WP24-13295.018	4	5.5
AMD_DC45_019	WP24-13295.019	6	5.4
AMD_DC45_020	WP24-13295.020	11	5.3
AMD_DC45_021	WP24-13295.021	10	5.2
AMD_DC45_022	WP24-13295.022	260	3.7
AMD_DC45_023	WP24-13295.023	63	4.4
AMD_DC45_024	WP24-13295.024	160	4.3

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC45_025	WP24-13295.025	15	5.0
AMD_DC45_026	WP24-13295.026	8	5.3
AMD_DC45_027	WP24-13295.027	12	5.2
AMD_DC45_028	WP24-13295.028	100	4.2
AMD_DC45_029	WP24-13295.029	110	4.0
AMD_DC45_030	WP24-13295.030	110	4.3

ANALYSIS REPORT

WP24-13295

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC45_031	WP24-13295.031	230	3.7
AMD_DC45_032	WP24-13295.032	230	3.7
AMD_DC45_033	WP24-13295.033	120	4.0
AMD_DC45_034	WP24-13295.034	-	-
AMD_DC45_035	WP24-13295.035	-	-
AMD_DC45_009	WP24-13295.009	-	-

Date Start/End Analysis (25/3/2024 - 1/5/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank is 6.0 to 6.1

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

ANALYSIS REPORT

WP24-13295



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 01/05/2024
Job Number: WP24-13295
Report Number: 0000028191
Order Reference: 531085 DC45

Signed and dated on 01-May-2024

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ANALYSIS REPORT

WP24-13302

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 24/04/2024
Job Number: WP24-13302
Report Number: 0000028112
Order Reference: 531085 DC41

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC41_001	WP24-13302.001	0.012	2	0.2	0.37
AMD_DC41_002	WP24-13302.002	0.014	1	0.1	0.42
AMD_DC41_003	WP24-13302.003	0.018	2	0.2	0.55
AMD_DC41_004	WP24-13302.004	1.28	1	0.1	39
AMD_DC41_005	WP24-13302.005	0.685	0	0.0	21
AMD_DC41_006	WP24-13302.006	0.027	2	0.2	0.82
AMD_DC41_007	WP24-13302.007	0.049	2	0.2	1.5
AMD_DC41_008	WP24-13302.008	1.66	0	0.0	51
AMD_DC41_009	WP24-13302.009	0.766	0	0.0	23

ANALYSIS REPORT

WP24-13302

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 24/04/2024
Job Number: WP24-13302
Report Number: 0000028112
Order Reference: 531085 DC41

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC41_010	WP24-13302.010	0.424	1	0.1	13
AMD_DC41_011	WP24-13302.011	0.186	1	0.1	5.7
AMD_DC41_012	WP24-13302.012	0.041	1	0.1	1.3
AMD_DC41_013	WP24-13302.013	0.030	1	0.1	0.92
AMD_DC41_014	WP24-13302.014	0.745	1	0.1	23
AMD_DC41_015	WP24-13302.015	0.018	2	0.2	0.55

ANALYSIS REPORT

WP24-13302

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 24/04/2024
Job Number: WP24-13302
Report Number: 0000028112
Order Reference: 531085 DC41

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC41_016	WP24-13302.016	0.237	-1	-0.1	7.3
AMD_DC41_017	WP24-13302.017	0.018	1	0.1	0.56
AMD_DC41_018	WP24-13302.018	0.017	1	0.1	0.51
AMD_DC41_019	WP24-13302.019	0.019	1	0.1	0.59
AMD_DC41_020	WP24-13302.020	0.178	0	0.0	5.4
AMD_DC41_021	WP24-13302.021	0.091	42	4.3	2.8
AMD_DC41_009	WP24-13302.009	0.786	1	0.1	24

ANALYSIS REPORT

WP24-13302

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 24/04/2024
Job Number: WP24-13302
Report Number: 0000028112
Order Reference: 531085 DC41

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC41_001	WP24-13302.001	-2	5.8	0	17
AMD_DC41_002	WP24-13302.002	-1	6.0	0	14
AMD_DC41_003	WP24-13302.003	-2	6.0	0	13
AMD_DC41_004	WP24-13302.004	38	3.1	22	35
AMD_DC41_005	WP24-13302.005	20	3.5	9	15
AMD_DC41_006	WP24-13302.006	-1	5.9	0	15
AMD_DC41_007	WP24-13302.007	0	5.6	0	17
AMD_DC41_008	WP24-13302.008	51	2.9	29	42
AMD_DC41_009	WP24-13302.009	23	3.4	10	16

ANALYSIS REPORT

WP24-13302

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 24/04/2024
Job Number: WP24-13302
Report Number: 0000028112
Order Reference: 531085 DC41

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC41_010	WP24-13302.010	12	4.0	3	12
AMD_DC41_011	WP24-13302.011	5	5.3	0	11
AMD_DC41_012	WP24-13302.012	0	6.1	0	10
AMD_DC41_013	WP24-13302.013	0	6.0	0	12
AMD_DC41_014	WP24-13302.014	22	3.4	10	19
AMD_DC41_015	WP24-13302.015	-2	6.2	0	10

ANALYSIS REPORT

WP24-13302

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 24/04/2024
Job Number: WP24-13302
Report Number: 0000028112
Order Reference: 531085 DC41

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC41_016	WP24-13302.016	7	5.3	0	7
AMD_DC41_017	WP24-13302.017	-1	6.2	0	9
AMD_DC41_018	WP24-13302.018	0	6.0	0	15
AMD_DC41_019	WP24-13302.019	-1	5.8	0	18
AMD_DC41_020	WP24-13302.020	5	5.0	0	16
AMD_DC41_021	WP24-13302.021	-40	7.4	0	0
AMD_DC41_009	WP24-13302.009	23	3.3	11	16

ANALYSIS REPORT

WP24-13302

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 24/04/2024
Job Number: WP24-13302
Report Number: 0000028112
Order Reference: 531085 DC41

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC41_001	WP24-13302.001	99	6.0
AMD_DC41_002	WP24-13302.002	68	6.0
AMD_DC41_003	WP24-13302.003	18	5.7
AMD_DC41_004	WP24-13302.004	22	5.1
AMD_DC41_005	WP24-13302.005	110	4.3
AMD_DC41_006	WP24-13302.006	19	5.9
AMD_DC41_007	WP24-13302.007	18	5.2
AMD_DC41_008	WP24-13302.008	110	4.3
AMD_DC41_009	WP24-13302.009	290	4.0

ANALYSIS REPORT

WP24-13302

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 24/04/2024
Job Number: WP24-13302
Report Number: 0000028112
Order Reference: 531085 DC41

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC41_010	WP24-13302.010	140	4.3
AMD_DC41_011	WP24-13302.011	200	3.9
AMD_DC41_012	WP24-13302.012	62	4.6
AMD_DC41_013	WP24-13302.013	8	5.3
AMD_DC41_014	WP24-13302.014	160	4.1
AMD_DC41_015	WP24-13302.015	17	5.5

ANALYSIS REPORT

WP24-13302

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 24/04/2024
Job Number: WP24-13302
Report Number: 0000028112
Order Reference: 531085 DC41

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC41_016	WP24-13302.016	19	5.4
AMD_DC41_017	WP24-13302.017	15	5.8
AMD_DC41_018	WP24-13302.018	15	6.2
AMD_DC41_019	WP24-13302.019	17	5.7
AMD_DC41_020	WP24-13302.020	84	4.5
AMD_DC41_021	WP24-13302.021	-	-
AMD_DC41_009	WP24-13302.009	-	-

Date Start/End Analysis (25/3/2024 - 24/4/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank is 5.8 to 5.9

ANALYSIS REPORT

WP24-13302



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 26-Jan-2024
Completed: 24/04/2024
Job Number: WP24-13302
Report Number: 0000028112
Order Reference: 531085 DC41

APPLIED METHODS:

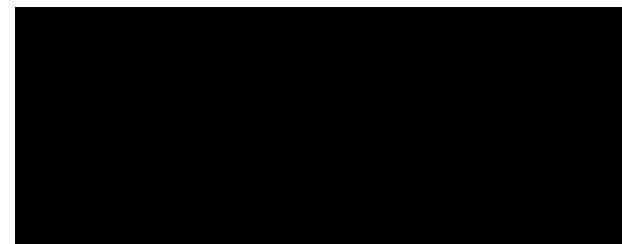
ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

Signed and dated on 24-Apr-2024



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ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC43_001	WP24-13326.001	0.019	2	0.2	0.57
AMD_DC43_002	WP24-13326.002	0.179	1	0.1	5.5
AMD_DC43_003	WP24-13326.003	0.027	1	0.1	0.83
AMD_DC43_004	WP24-13326.004	0.014	3	0.3	0.43
AMD_DC43_005	WP24-13326.005	0.014	2	0.2	0.42
AMD_DC43_006	WP24-13326.006	0.747	1	0.1	23
AMD_DC43_007	WP24-13326.007	0.656	0	0.0	20
AMD_DC43_008	WP24-13326.008	0.902	1	0.1	28
AMD_DC43_009	WP24-13326.009	0.532	-1	-0.1	16

ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC43_010	WP24-13326.010	0.576	2	0.2	18
AMD_DC43_011	WP24-13326.011	0.357	1	0.1	11
AMD_DC43_012	WP24-13326.012	0.508	0	0.0	16
AMD_DC43_013	WP24-13326.013	2.34	0	0.0	72
AMD_DC43_014	WP24-13326.014	0.655	0	0.0	20
AMD_DC43_015	WP24-13326.015	0.015	2	0.2	0.45

ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC43_016	WP24-13326.016	0.063	1	0.1	1.9
AMD_DC43_017	WP24-13326.017	0.014	1	0.1	0.43
AMD_DC43_018	WP24-13326.018	0.014	1	0.1	0.44
AMD_DC43_019	WP24-13326.019	0.016	1	0.1	0.48
AMD_DC43_020	WP24-13326.020	0.021	1	0.1	0.65
AMD_DC43_021	WP24-13326.021	0.013	1	0.1	0.39
AMD_DC43_022	WP24-13326.022	0.014	1	0.1	0.44
AMD_DC43_023	WP24-13326.023	0.021	0	0.0	0.66
AMD_DC43_024	WP24-13326.024	0.295	52	5.3	9.0

ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC43_009	WP24-13326.009	0.551	0	0.0	17

ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC43_001	WP24-13326.001	-1	5.9	0	15
AMD_DC43_002	WP24-13326.002	4	5.0	0	16
AMD_DC43_003	WP24-13326.003	0	6.2	0	18
AMD_DC43_004	WP24-13326.004	-2	5.9	0	17
AMD_DC43_005	WP24-13326.005	-2	6.3	0	19
AMD_DC43_006	WP24-13326.006	22	3.5	13	28
AMD_DC43_007	WP24-13326.007	20	3.5	9	17
AMD_DC43_008	WP24-13326.008	27	3.3	13	21
AMD_DC43_009	WP24-13326.009	16	3.8	5	12

ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC43_010	WP24-13326.010	16	3.7	6	13
AMD_DC43_011	WP24-13326.011	10	4.3	1	10
AMD_DC43_012	WP24-13326.012	15	3.7	6	15
AMD_DC43_013	WP24-13326.013	71	2.8	44	58
AMD_DC43_014	WP24-13326.014	20	3.5	9	17
AMD_DC43_015	WP24-13326.015	-2	6.2	0	12

ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC43_016	WP24-13326.016	1	5.2	0	16
AMD_DC43_017	WP24-13326.017	0	5.9	0	13
AMD_DC43_018	WP24-13326.018	-1	6.1	0	10
AMD_DC43_019	WP24-13326.019	-1	6.0	0	11
AMD_DC43_020	WP24-13326.020	0	5.9	0	12
AMD_DC43_021	WP24-13326.021	0	5.8	0	14
AMD_DC43_022	WP24-13326.022	0	6.0	0	11
AMD_DC43_023	WP24-13326.023	0	6.1	0	10
AMD_DC43_024	WP24-13326.024	-43	7.2	0	0



ANALYSIS REPORT
WP24-13326



Client: BT Mining Ltd PO Box 79151 Avonhead Christchurch 8446 NEW ZEALAND [REDACTED]	Received: 07-Feb-2024 Completed: 23/04/2024 Job Number: WP24-13326 Report Number: 0000028094 Order Reference: 531085 DC43
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		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC43_009	WP24-13326.009	17	3.9	5	12

ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC43_001	WP24-13326.001	16	5.8
AMD_DC43_002	WP24-13326.002	100	4.3
AMD_DC43_003	WP24-13326.003	8	6.3
AMD_DC43_004	WP24-13326.004	10	5.9
AMD_DC43_005	WP24-13326.005	6	6.0
AMD_DC43_006	WP24-13326.006	32	4.8
AMD_DC43_007	WP24-13326.007	190	4.1
AMD_DC43_008	WP24-13326.008	130	4.2
AMD_DC43_009	WP24-13326.009	360	3.8

ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC43_010	WP24-13326.010	320	3.8
AMD_DC43_011	WP24-13326.011	200	4.1
AMD_DC43_012	WP24-13326.012	160	4.1
AMD_DC43_013	WP24-13326.013	140	4.2
AMD_DC43_014	WP24-13326.014	120	4.2
AMD_DC43_015	WP24-13326.015	7	5.7

ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC43_016	WP24-13326.016	6	5.8
AMD_DC43_017	WP24-13326.017	7	5.7
AMD_DC43_018	WP24-13326.018	6	5.6
AMD_DC43_019	WP24-13326.019	7	5.8
AMD_DC43_020	WP24-13326.020	5	5.7
AMD_DC43_021	WP24-13326.021	5	5.7
AMD_DC43_022	WP24-13326.022	6	5.8
AMD_DC43_023	WP24-13326.023	-	-
AMD_DC43_024	WP24-13326.024	-	-

ANALYSIS REPORT

WP24-13326

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 07-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13326
Report Number: 0000028094
Order Reference: 531085 DC43

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC43_009	WP24-13326.009	-	-

Date Start/End Analysis (25/3/2024 - 23/4/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank is 6

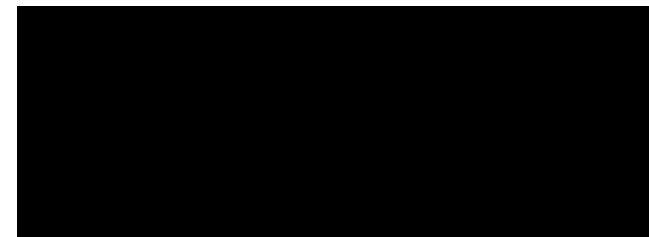
APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method
ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

Signed and dated on 23-Apr-2024



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ANALYSIS REPORT

WP24-13336

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 08-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13336
Report Number: 0000028098
Order Reference: 531085 DC20

Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC20_001	WP24-13336.001	0.030	0	0.0	0.93
AMD_DC20_002	WP24-13336.002	0.146	1	0.1	4.5
AMD_DC20_003	WP24-13336.003	0.210	2	0.2	6.4
AMD_DC20_004	WP24-13336.004	0.084	7	0.7	2.6
AMD_DC20_005	WP24-13336.005	0.290	75	7.7	8.9

ANALYSIS REPORT

WP24-13336

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 08-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13336
Report Number: 0000028098
Order Reference: 531085 DC20

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC20_001	WP24-13336.001	1	5.8	0	18
AMD_DC20_002	WP24-13336.002	4	5.9	0	15
AMD_DC20_003	WP24-13336.003	4	5.5	0	10
AMD_DC20_004	WP24-13336.004	-5	6.2	0	8
AMD_DC20_005	WP24-13336.005	-66	7.4	0	0

ANALYSIS REPORT

WP24-13336

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 08-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13336
Report Number: 0000028098
Order Reference: 531085 DC20

Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC20_001	WP24-13336.001	3	5.5
AMD_DC20_002	WP24-13336.002	10	4.7
AMD_DC20_003	WP24-13336.003	11	4.9
AMD_DC20_004	WP24-13336.004	23	4.7
AMD_DC20_005	WP24-13336.005	-	-

Date Start/End Analysis (25/3/2024 - 23/4/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank is 5.4

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

ANALYSIS REPORT

WP24-13336

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 08-Feb-2024
Completed: 23/04/2024
Job Number: WP24-13336
Report Number: 0000028098
Order Reference: 531085 DC20

Signed and dated on 23-Apr-2024

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ANALYSIS REPORT

WP24-13343

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
[REDACTED]

Received: 09-Feb-2024
Completed: 30/04/2024
Job Number: WP24-13343
Report Number: 0000028172
Order Reference: 531085 DC39

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC39_001	WP24-13343.001	0.022	1	0.1	0.66
AMD_DC39_002	WP24-13343.002	0.031	1	0.1	0.94
AMD_DC39_003	WP24-13343.003	0.027	0	0.0	0.82
AMD_DC39_004	WP24-13343.004	0.049	0	0.0	1.5
AMD_DC39_005	WP24-13343.005	0.023	0	0.0	0.69
AMD_DC39_006	WP24-13343.006	0.401	-2	-0.2	12
AMD_DC39_007	WP24-13343.007	2.20	0	0.0	67
AMD_DC39_008	WP24-13343.008	0.044	-1	-0.1	1.3
AMD_DC39_009	WP24-13343.009	0.094	-1	-0.1	2.9

ANALYSIS REPORT

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		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC39_010	WP24-13343.010	0.129	0	0.0	3.9
AMD_DC39_011	WP24-13343.011	0.694	0	0.0	21
AMD_DC39_012	WP24-13343.012	0.870	0	0.0	27
AMD_DC39_013	WP24-13343.013	0.630	-1	-0.1	19
AMD_DC39_014	WP24-13343.014	0.580	0	0.0	18
AMD_DC39_015	WP24-13343.015	0.051	0	0.0	1.6

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Sampled By:

		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC39_016	WP24-13343.016	0.017	0	0.0	0.51
AMD_DC39_017	WP24-13343.017	0.029	1	0.1	0.90
AMD_DC39_018	WP24-13343.018	0.013	1	0.1	0.41
AMD_DC39_019	WP24-13343.019	0.019	1	0.1	0.60
AMD_DC39_020	WP24-13343.020	0.056	1	0.1	1.7
AMD_DC39_021	WP24-13343.021	0.055	1	0.1	1.7
AMD_DC39_022	WP24-13343.022	0.092	2	0.2	2.8
AMD_DC39_023	WP24-13343.023	0.598	0	0.0	18
AMD_DC39_024	WP24-13343.024	0.205	2	0.2	6.3

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		ESO_CSA06V S % LOR 0.01	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
AMD_DC39_025	WP24-13343.025	0.382	3	0.3	12
AMD_DC39_009	WP24-13343.009	0.091	-2	-0.2	2.8

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Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC39_001	WP24-13343.001	-1	6.4	0	5
AMD_DC39_002	WP24-13343.002	0	6.4	0	9
AMD_DC39_003	WP24-13343.003	1	6.2	0	7
AMD_DC39_004	WP24-13343.004	2	6.2	0	8
AMD_DC39_005	WP24-13343.005	0	6.2	0	7
AMD_DC39_006	WP24-13343.006	12	4.6	0	7
AMD_DC39_007	WP24-13343.007	67	3.1	32	47
AMD_DC39_008	WP24-13343.008	1	5.9	0	12
AMD_DC39_009	WP24-13343.009	3	5.9	0	10

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		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC39_010	WP24-13343.010	4	5.7	0	9
AMD_DC39_011	WP24-13343.011	21	3.8	6	17
AMD_DC39_012	WP24-13343.012	27	3.8	7	18
AMD_DC39_013	WP24-13343.013	19	3.7	6	12
AMD_DC39_014	WP24-13343.014	18	3.7	6	13
AMD_DC39_015	WP24-13343.015	2	6.1	0	8

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Order Reference: 531085 DC39

Sampled By:

		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC39_016	WP24-13343.016	0	5.9	0	12
AMD_DC39_017	WP24-13343.017	0	6.1	0	9
AMD_DC39_018	WP24-13343.018	-1	6.2	0	9
AMD_DC39_019	WP24-13343.019	0	6.3	0	10
AMD_DC39_020	WP24-13343.020	1	5.8	0	11
AMD_DC39_021	WP24-13343.021	0	6.2	0	10
AMD_DC39_022	WP24-13343.022	1	5.9	0	8
AMD_DC39_023	WP24-13343.023	18	3.7	8	19
AMD_DC39_024	WP24-13343.024	4	5.1	0	11



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		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC39_025	WP24-13343.025	8	4.3	1	7
AMD_DC39_009	WP24-13343.009	3	6.0	0	10

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Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC39_001	WP24-13343.001	20	5.7
AMD_DC39_002	WP24-13343.002	24	5.5
AMD_DC39_003	WP24-13343.003	13	5.6
AMD_DC39_004	WP24-13343.004	33	4.6
AMD_DC39_005	WP24-13343.005	22	5.3
AMD_DC39_006	WP24-13343.006	15	5.1
AMD_DC39_007	WP24-13343.007	75	4.4
AMD_DC39_008	WP24-13343.008	11	5.4
AMD_DC39_009	WP24-13343.009	31	4.8

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		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC39_010	WP24-13343.010	15	5.5
AMD_DC39_011	WP24-13343.011	56	4.4
AMD_DC39_012	WP24-13343.012	120	4.2
AMD_DC39_013	WP24-13343.013	130	4.1
AMD_DC39_014	WP24-13343.014	220	3.9
AMD_DC39_015	WP24-13343.015	35	4.9

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Sampled By:

		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
Sample ID	Laboratory ID		
AMD_DC39_016	WP24-13343.016	23	5.2
AMD_DC39_017	WP24-13343.017	21	5.4
AMD_DC39_018	WP24-13343.018	22	5.1
AMD_DC39_019	WP24-13343.019	26	4.7
AMD_DC39_020	WP24-13343.020	48	4.4
AMD_DC39_021	WP24-13343.021	110	4.1
AMD_DC39_022	WP24-13343.022	96	4.1
AMD_DC39_023	WP24-13343.023	77	4.2
AMD_DC39_024	WP24-13343.024	130	4.0

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		ESO_RINSEPH Cond (1:5)* µS/cm LOR 2.00	ESO_RINSEPH Rinse pH 1:5* pH unit LOR 2.00
AMD_DC39_025	WP24-13343.025	-	-
AMD_DC39_009	WP24-13343.009	-	-

Date Start/End Analysis (25/3/2024 - 30/4/2024)

* - Denotes non accredited tests

REMARKS:

NAG pH for blank IS 5.6 to 6.0

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_RINSEPH: Rinse pH in AMD crush or pulp (1:5): Rinse pH

Signed and dated on 30-Apr-2024

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The scope and the period of MWM's services are as described in MWM's proposal, and are subject to restrictions and limitations. MWM did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in this Document. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by MWM in regards to it.

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MINE WASTE MANAGEMENT

GREENROAD GROUP

APPENDIX D FACTUAL REPORT: COLUMN LEACH TESTING - MFS

Factual Report: Column Leach Testing

Mount Frederick South Sub-area

20 July 2026

J-NZ0377-005-R-FINAL

Factual Report: Column Leach Testing

Mount Frederick South Sub-area

Document Number: J-NZ0377-005-R-FINAL

Document Date: 20 July 2026

Prepared for:

Bathurst Resources Limited

Bathurst Resources Limited
Level 12, 1 Willeston Street, Wellington 6011
PO Box 5963, Lambton Quay,
Wellington 6145, New Zealand

Prepared by:

Mine Waste Management Limited

5 Sir William Pickering Drive, Burnside, Christchurch 8053, New Zealand

+64 3 242 0221

www.minewaste.com.au

REVISION	DATE	AUTHOR	RECORD OF REVIEW
J-NZ0377-005-R-FINAL	20/07/2026	SH/PW	PW

EXECUTIVE SUMMARY

Bathurst Resources Limited (BRL) is seeking to obtain authorisation through the Fast-track Approvals Act (FTAA) to progress development and mining of the coal resources across the wider Buller Plateaux. This project is referred to as the Buller Plateaux Continuation Project (BPCP or Project).

The purpose of the BPCP is to re-consent the existing infrastructure and mining operations associated with the existing Stockton Mine and provide access to additional coal mining areas across the Buller Plateaux, as the coal resource in the current Stockton Mine is close to depletion, and further coal resources for blending are required. There are five key project sub-areas:

- Stockton mining area (Stockton)
- Mount Frederick South (MFS)
- Escarpment Extended (ESE)
- Upper Waimangaroa Haul Road (UWHR)
- Cypress mining area (Cypress)

Mine Waste Management Limited (MWM) has developed this factual report on column leach test results for the MFS sub-area to provide a comprehensive geochemical assessment and characterisation of materials associated with the MFS sub-area. Such data are used to understand geoenvironmental hazards and confirm whether materials are comparable to other Project areas (e.g., Stockton Coal Mine, existing Escarpment Coal Mine – currently on care and maintenance), which demonstrates risks associated with acid and metalliferous drainage (AMD) are similar and no unusual geochemical processes are expected.

General Background

Over 150 years of mining has occurred on the Stockton-Denniston Plateaux with earlier workings predominantly underground, and more recently by open cast activities. Historic mine workings are located within the MFS Project area and drainage from these workings discharge into Deep Stream, which then joins the Waimangaroa River lower down in the catchment.

Mining activities are within the Brunner Coal Measures (BCM), a lithological formation generally known for its ability to generate AMD. Within the MFS sub-area, the risks for AMD are expected to be lower than at the adjacent Stockton Coal Mine (Stockton) as the BCM have a lower sulfur content at MFS compared to similar overburden materials at Stockton. This is due to the depositional environment at MFS being influenced by fresh water fluvial sediments (low sulfur) with occasional periodic marine incursions (high sulfur), whereas the depositional environment at Stockton (e.g., Mangatini and Millerton catchments) was predominantly a marine-influenced environment with higher sulfur materials (e.g., estuarine depositional environment).

This report focuses on understanding the potential for AMD for the MFS sub-area using column leach test and shake flask results from material within the MFS sub-area that has been obtained from a recent drilling programme.

Sample Selection Rational

Samples were selected using initial ABA¹ data from drillhole DC16, located in the proposed MFS sub-area East Pit. This drillhole was selected as it was one of the first holes drilled (thereby providing samples early for column leach testing (CLT)) and provided a range of higher and lower sulfur materials and different lithologies, representative of the MFS sub-area and its potential geoenvironmental hazards. A total of 4 samples were selected for shake flask and CLT to provide a range of total sulfur values and lithologies to provide a representative range of potential geoenvironmental hazards. A total of 4 samples were selected for shake flask and CLT:

- Granule conglomerate (AMD-DC16-005-GRCG B) low sulfur (0.011 wt% S) fluvial material.
- Medium to fine sandstone (AMD-DC16-007-MSS) higher sulfur material (0.59 wt% S), potentially deposited during a marine incursion.
- Granule breccia (AMD-DC16-010-GRBX) lower sulfur content compared to sample AMD-DC16-007-MSS (0.15 wt% S), representative of coal roof material.
- Sandstone and high carbonaceous mudstone with minor coal (AMD-DC16-013-HCM) representative of the coal floor (0.09 wt% S).

Geochemical Investigation.

Selected samples were analysed for a typical ABA static testing suite. General findings are:

- Total sulfur content varies from 0.01 wt% to 0.59 wt%.
- Paste pH ranges 5.0 – 6.1 and paste EC varies from 190 to 850 $\mu\text{S}/\text{cm}$.
- NAG² pH ranges from 3.8 to 5.9.
- NAG acidity (to pH 7.0) ranges from 13 to 32 kg H₂SO₄/t.
- NAPP³ ranges from -1 to 18 kg H₂SO₄/t.

Variation was observed between original ABA data used to select the samples for column testing and more recent ABA data of the CLT sub-sample materials. The most conservative, i.e., lowest, NAG pH values have been used for classification purposes (Table E1). Further discussion is provided in Appendix C.

ABA data indicates that:

- Sample DC16-005 is non-acid forming (NAF).
- Sample DC16-007 is potentially acid forming (PAF)
- Sample DC16-010 is classified as Low Risk (LR).
- Sample DC16-013 is classified as LR.

¹ Acid base accounting (ABA) uses laboratory data to determine if materials are potentially acid forming or non-acid forming.

² Net Acid Generation (NAG) Test

³ Net Acid Producing Potential

Table E1. ABA data for AMIRA column leach test samples

COLUMN	PASTE pH	S (wt%)	MPA (kg / H ₂ SO ₄ /t)	ANC (kg / H ₂ SO ₄ /t)	NAPP (kg / H ₂ SO ₄ /t)	NAG pH	CLASS. ¹
DC16-005	6.1	0.011	0.34	1	-0.66	5.9	NAF
DC16-007	5.0	0.587	17.96	-1	17.96	3.8	PAF
DC16-010	5.1	0.174	5.3	1	4	4.5	LR
DC16-013	6.1	0.089	2.72	1	1.72	4.1	LR

1. Classification is based on the Process Flow Classification method (MWM, 2026a).

Shake Flask Testing

Shake Flask data provides an indication of the immediate water quality of the materials once wetted:

- DC16-005 results indicated the sample did not generate acidity with a pH of 6.4 and most metals were below the LOR⁴.
- DC16-007 results indicated the sample generated acidity with a pH of 3.7; acidity to pH 7.0 of 240 mg CaCO₃/L, and elevated metals, notably Al (30.1 mg/L), Co (0.361 mg/L), Cu (0.139 mg/L), Fe (19 mg/L), Ni (0.63 mg/L), Zn (3.92 mg/L).
- DC16-010 results indicated the sample generated acidity with a pH of 3.9 and elevated metals notably Al (6.52 mg/L), Fe (4.89 mg/L), Ni (0.026 mg/L), and Zn (0.33 mg/L).
- DC16-013 results indicated the sample did not generate acidity with a pH of 7 and most metals were below LOR. The notable high result was for Zn at 0.055 mg/L.

Column Leach Testing

CLT were run for eight months from April 2024 until November 2024 with results consistent with shake flask testing. Testing was halted as geochemical stability was achieved and geochemical trends confirmed AMD risk:

- DC16-005 data supported the classification of the sample as NAF with pH between 8 (month 1) and 5 (month 7); low acidity; low concentrations of trace metals; and a maximum sulfate of 14.2 mg/L. Data are representative of a low sulfur depositional environment (e.g., fluvial sediments).
- DC16-007 data supported the classification of the sample as acid forming with pH between 2 to 3; maximum sulfate of 5,300 mg/L; and elevated metals, notably maximum Ni of 11.8 mg/L and maximum Zn of 56.4 mg/L. Data indicates that all metals are elevated above Water Quality Reference Values (WQ Ref Values) (Table 1) for Al, Cd, Cr, Co, Cu, Fe + Mn, Pb, Ni, Zn; notably Al 660 mg/L (WQ Ref Value 0.5 mg/L), Ni 11.8 mg/L (WQ Ref Value 0.068 mg/L), and

⁴ Limit of Reporting.

Zn 56.4 mg/L (WQ Ref Value 0.054 mg/L). Data indicate that metals, acidity, and sulfate decrease over time.

- DC16-010 results supported the classification of the sample as acid-forming (Low Risk) with a pH between 2.8 to 2.5. Maximum sulfate was at month 4 (1,410 mg/L) then decreases. Data indicates metals are elevated above WQ Ref Value (Table 1) for Al, Cr, Cu, Fe + Mn, Ni, and Zn. Metals were elevated and decrease over time.
- DC16-013 results suggest the sample is lower risk for AMD, with pH decreasing from 6.6 to 5 (but not below pH 4.5), low sulfate (22 to 38 mg/L) and overall low metals. Data indicates metals are elevated above WQ Ref Values (Table 1) for Cd, Cu, Ni, and Zn, which suggests classification of the sample as Low Risk (as identified by more recent NAG pH data) is appropriate.

Additional CLT data were available (n=4) from earlier geochemistry studies for the existing Escarpment Mine (Pope et al., 2011; CRL, 2012). These data are also discussed in this report to provide a more comprehensive dataset.

Summary

A variety of PAF, NAF, and Low Risk materials were assessed by column leach testing. Results indicate that:

- Total sulfur remains the best indicator of AMD risk and is also the most reliable/rapid test. This is validated by higher sulfate loads (and higher acidity loads) from material that have a higher sulfur content. Hence, the use of total sulfur as the principal screening tool for AMD risk/classification using the Process Flow Classification approach (e.g., MWM, 2026a) is reasonable.
- MFS CLT data and the identified potential constituents of concern (PCOC) are similar to CLT data for the existing Escarpment Mine, collected for the consenting of the Escarpment Mine in ~2013. This suggests water quality effects are likely to be similar and the observations / water quality for the Barren Valley Engineered Landform at the existing Escarpment Mine can be transferred to the MFS sub-area and be considered a suitable analogue model.
- CLT data indicates that PCOC that may require management (as compared to WQ Ref Values) include Al, Cd, Co, Cu, Cr, Ni, and Zn.
- Low Risk materials (e.g., DC16-010) generate lower PCOC loads compared to PAF materials, yet still generate poor water quality (e.g., high sulfate, low pH) under laboratory conditions. However, Low Risk materials are likely to have better water quality in the longer term as the total reservoir of pyrite (i.e., wt% sulfur) is lower than PAF samples and will be exhausted (oxidised) faster than PAF samples. In this regard Low Risk material should be treated with caution and be managed in the same manner as PAF to avoid high acid generation rates on disturbance.

- CLT data were used to develop source terms for the project water and load balance model. A similar approach was undertaken for consenting the Escarpment Mine (Pope et al., 2011; CRL, 2012). These data are presented in this report.
- A highlevel of effort is required for the quality assurance / quality control (QA/QC) of laboratory ABA data to ensure the samples are classified correctly. A number of ABA lab results were retested to validate anomalous results. It is assumed the variability in early tests on composite core samples versus prepared CLT samples is related to sample preparation processes rather than laboratory analysis accuracy. The correct laboratory analysis and classification of samples will be critical for materials management at the BPCP. A QA/QC management process should be developed.

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1 INTRODUCTION

Bathurst Resources Limited (BRL) is seeking to obtain authorisation through the Fast-track Approvals Act 2024 (FTAA) to progress development and mining of the coal resources across the wider Buller Plateaux. This project is referred to as the Buller Plateaux Continuation Project (BPCP or Project).

1.1 Background

The purpose of the BPCP is to re-consent the existing infrastructure and mining operations associated with the existing Stockton Mine and provide access to additional coal mining areas across the Buller Plateaux, as the coal resource in the current Stockton Mine is close to depletion, and further coal resources for blending are required. There are five key project sub-areas:

- Stockton mining area (Stockton)
- Mount Frederick South (MFS)
- Escarpment Extended (ESE)
- Upper Waimangaroa Haul Road (UWHR)
- Cypress mining area (Cypress)

Mine Waste Management Limited (MWM) has developed this factual report on column leach test (CLT) results for the MFS sub-area to provide a comprehensive geochemical assessment and characterisation of materials associated with the MFS sub-area. Such data are used to understand geoenvironmental hazards and confirm whether materials are comparable to other Project areas (e.g., Stockton Coal Mine, the existing Escarpment Coal Mine – currently on care and maintenance), which demonstrates risks associated with acid and metalliferous drainage (AMD) are similar and no unusual geochemical processes are expected.

The information provided in this report will support an assessment of environmental effects (AEE) for the MFS sub-area.

BRL completed a drilling campaign across the MFS sub-area to define coal resources and assess the geoenvironmental hazards. The drilling programme consisted of 24 diamond drillholes completed during 2023/2024. Drillhole depths ranged between 13.5 and 61.7 m with non-coal material sampled for targeted laboratory analysis to support quantification of the AMD source hazard for the project. Acid base accounting (ABA) data from this drilling programme have previously been reported (MWM, 2026a).

1.2 Report Objectives

Four samples were selected for column leach and shake flask testing from drillhole DC16 to cover a range of total sulfur values (0.009, 0.084, 0.174 and 0.58 wt% sulfur). The objectives of this report are to:

- Summarise the rationale for sample selection.
- Summarise the ABA data for the column samples.

- Tabulate shake flask and CLT data and undertake QA/QC⁵ of these data to ensure they are suitable for subsequent analysis and interpretation.
- Present time series plots for the columns.
- Compare data to water quality criteria (the existing Escarpment Mine 2013 resource consent guidelines) to understand whether potential constituents of concern (PCOC) are elevated (noting such consent conditions may be superseded by future resource consent limits).
- Compare results to the Escarpment Mine AEE CLT data investigated during consenting of the Escarpment Mine (Pope et al., 2011; CRL, 2012).

1.3 Introduction to AMD

AMD refers to water contamination caused by mining activities, containing toxic metals, salts, and acidity. AMD is typically generated by the excavation of rocks that contain sulfide minerals, such as pyrite. When these minerals are exposed to oxygen and water, they undergo weathering processes and oxidise, generating acidity and releasing toxic metals. Microorganisms accelerate this process.

AMD can be categorised into Acid Rock Drainage (ARD) with high acidity, Neutral Metalliferous Drainage (NMD) with high metal concentrations but neutral pH, and Saline Drainage (SD) with elevated sulfate levels. Processes that generate AMD can also generate various health, safety, and environmental risks such as bioaccumulation of metals in the food chain, sedimentation in drainage channels, increased erosion, degradation of infrastructure, increase spontaneous combustion hazard, gas emissions, visual impacts, and negative perceptions, affecting business reputation and sustainability. Closing AMD affected sites and treating AMD can incur long-term costs and increase risks for successful closure.

⁵ *Quality Assurance / Quality Control*

2 BACKGROUND

The following section summarises relevant background information for the proposed MFS Project.

2.1 Historic Mining Activities

The Stockton coal mining region is part of the Buller coalfield that includes for instance, the Stockton mine, the Cypress mine, and historic workings on the Denniston plateau. The BPCP located 40 minutes' drive NNE of Westport on the West Coast of the South Island of New Zealand. Coal has been mined in the Buller Coalfield since 1872 (Flores and Sykes, 1996) and early operations were underground. The site has changed ownership several times, most recently from Solid Energy New Zealand Limited to BT Mining Limited in 2017.

Historic mining activities (mostly underground) also occurred within the MFS sub-area. A map of historic workings is shown in Figure 1.

2.2 AMD Studies

Overburden in the Deep Stream block consists of Brunner Coal Measures (BCM). This material is generally considered to have potential to develop AMD when mined and could contribute to AMD impacted waters to Deep Stream and ultimately the Waimangaroa River if disturbed. Solid Energy (2006) notes that:

- AMD emanating from historic underground mines in the Deep Stream area has low acidities and trace metals compared to historic workings in Millerton and the Mangatini Stream catchments.
- The overburden in the Deep Stream area may have lower sulfur levels compared to the overburden in the Mangatini and Millerton catchments.
- A comprehensive geochemical characterisation of overburden will be needed to determine the potential severity of AMD.

2.3 AMD Classification

Classification is typically based on either / both the AMIRA (2002) or Price (2009) classification schemes until site-specific classification systems are developed (e.g., Olds et al., 2015; Cavanagh et al., 2018). Examples are available in the GARD Guide (INAP, 2014) and the Leading Practice Sustainable Development Program for the Mining Industry - Preventing Acid and Metalliferous Drainage (DFAT, 2016).

AMIRA classification of waste rock from the nearby existing Escarpment Mine (currently on care and maintenance) resulted in many of the samples being considered of uncertain (UC) classification. To assist with categorisation of acid producing potential of the samples, a revised geochemical classification model was developed for the existing Escarpment Mine utilising a process flow approach that was validated by CLT data (Olds et al., 2015).

A process flow classification methodology was developed for the MFS sub-area (MWM, 2026a). The process flow classification model allows for incremental testing of samples with an initial focus on the total sulfur content (Figure 2), the best indication of AMD risk.

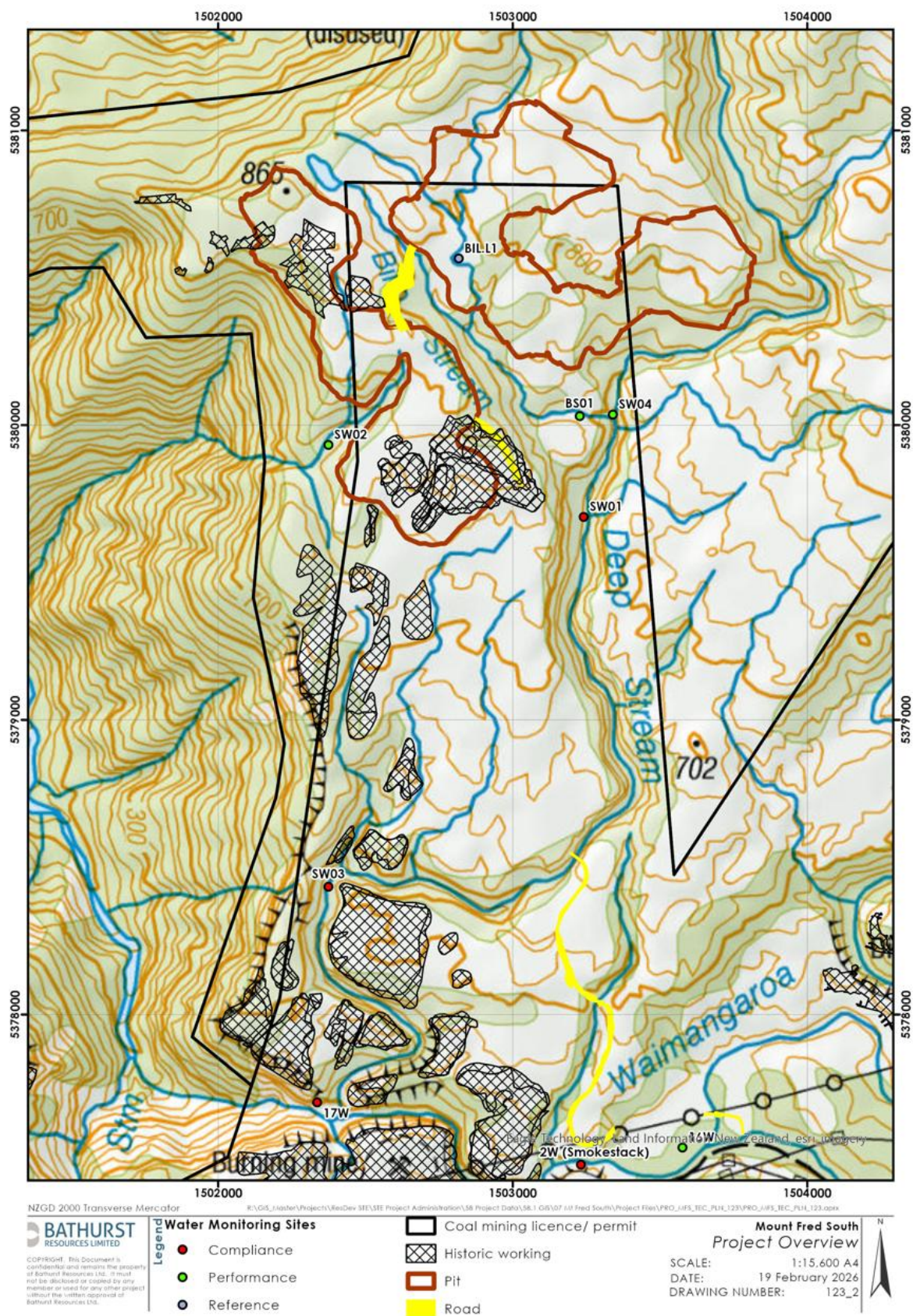


Figure 1: Areas of historic workings within the vicinity of the MFS sub-area.

Source: Bathurst Resources Limited.

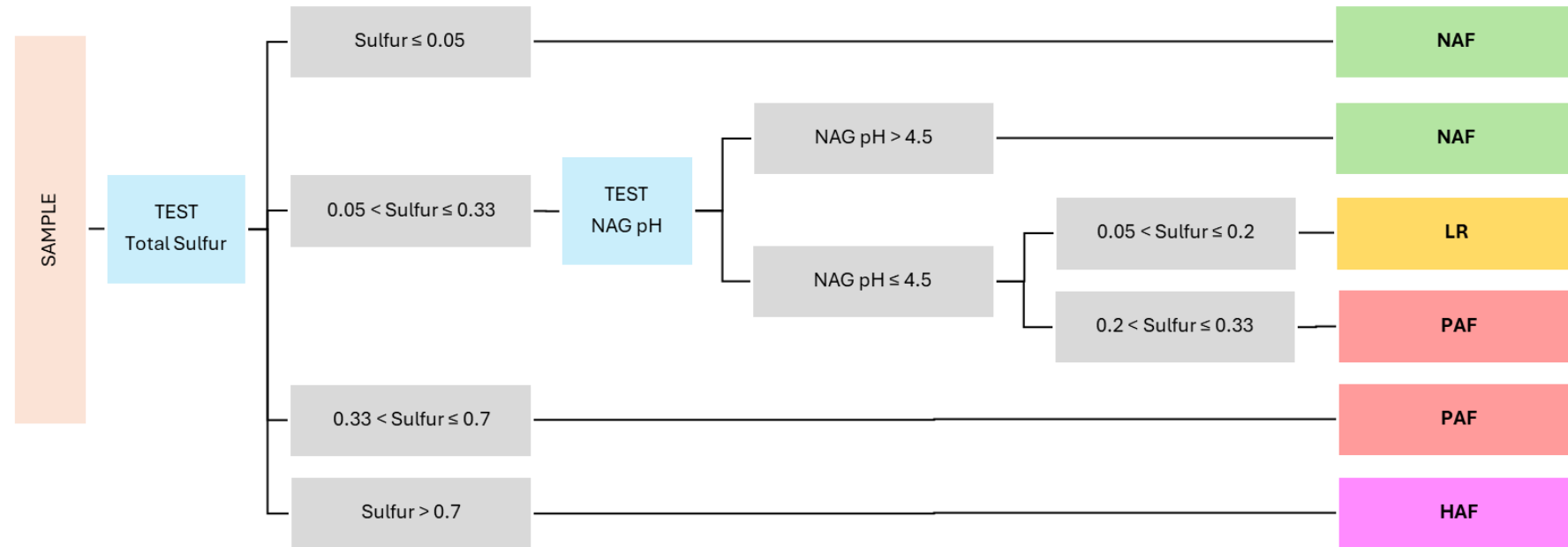


Figure 2: MFS process flow classification.

NAF = Non-acid forming; LR = Low risk; PAF = Potentially acid forming; HAF = High acid forming.

Source: MWM (2026a)

2.4 MFS Geoenvironmental Hazards

Proposed mining activities at the MFS sub-area are within the BCM, a lithological unit well known for its ability to generate AMD. Appropriate management of Potentially Acid Forming (PAF) units is necessary to minimise any long-term effects of the proposed project. Minor excavation into basement materials is also proposed to construct sumps for water management.

The MFS geoenvironmental hazards investigation focused on understanding the environmental implications and the potential for AMD for the MFS sub-area. ABA data from a drilling programme completed in the MFS sub-area during 2023/2024 was investigated to determine the AMD potential of the materials (MWM, 2026a).

A total of 472 samples from 24 drillholes (as shown in Figure 3) were analysed for a typical ABA static testing suite. All the drill holes are within a predominantly fluvial environment as proposed by Flores and Sykes (1996), however geological logging combined with ABA data suggest that there have also been marine incursions into this area (e.g., higher sulfur materials).

General findings of the geochemical analysis and characterisation include:

- Total sulfur content varies from <0.005 wt% (LOR⁶) to 13.1 wt%.
 - 95 % of samples ≤ 1.1 wt % sulfur.
 - 75 % of samples ≤ 0.34 wt % sulfur.
 - 50 % of samples ≤ 0.06 wt % sulfur.
 - 25 % of samples ≤ 0.019 wt % sulfur.
- Paste pH ranges from 3.3 to 8.2 and paste EC varies from 4 to 670 µS/cm.
- Non Acid Generating (NAG) pH ranges from 2.3 to 6.8.
- NAG acidity ranges from 2 to 297 kg H₂SO₄/t
- Nett Acid Production Potential (NAPP) ranges from -20 to 401 kg H₂SO₄/t.

BRL (2025) applied the MFS AMD process flow classification to construct the MFS block model identifying the following percentage of total waste rock:

- 69.1% non-acid forming (NAF)
- 14.5% low risk (LR)
- 14.4% potentially acid forming (PAF)
- 1.9% high acid forming (HAF) (>0.7 wt% S)

Laminated units and mudstone are more likely to be classified as HAF or PAF material. These observations are consistent with results for drillhole DC16 with a predominantly fluvial environment with marine incursions.

⁶ Limit of Reporting

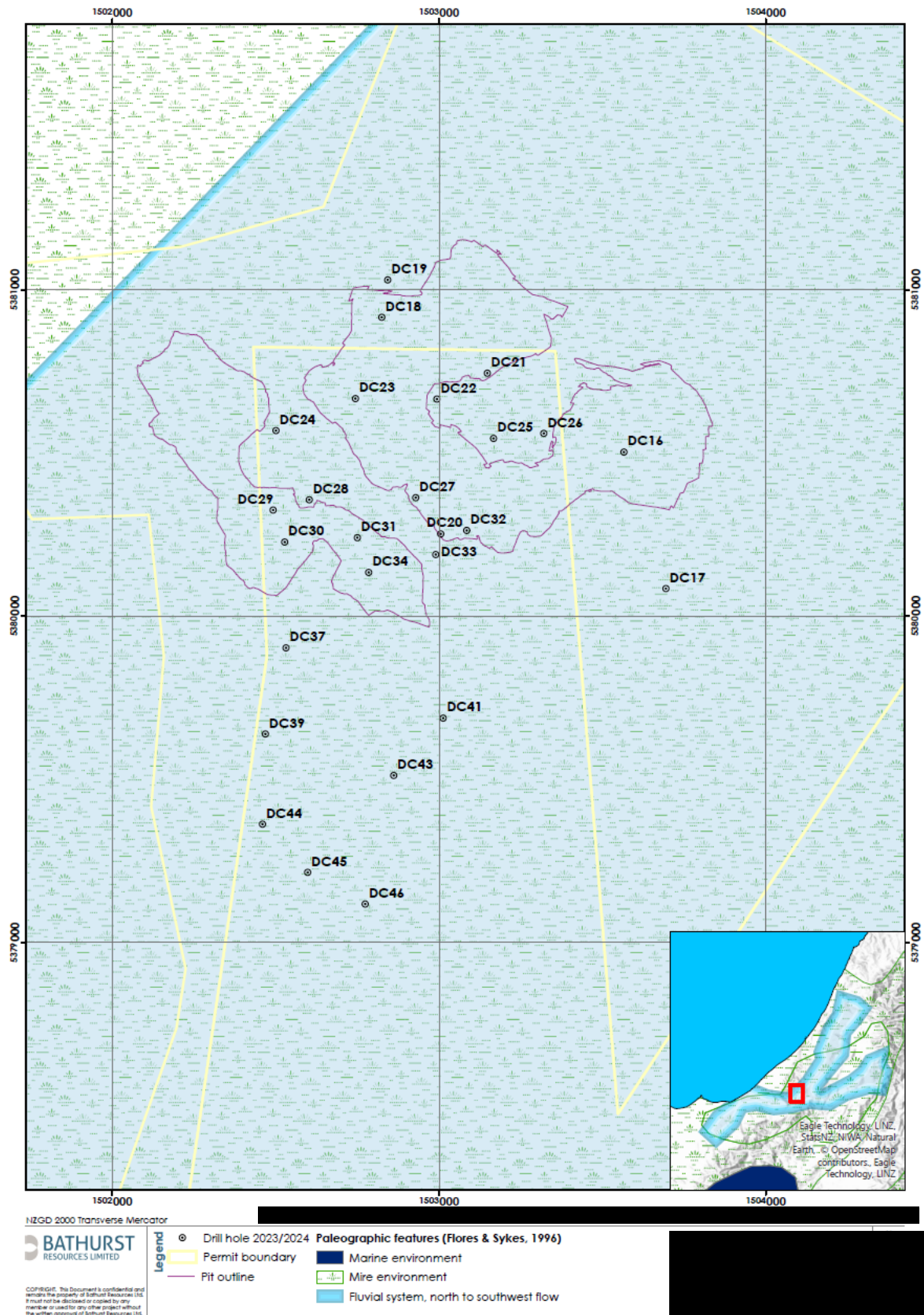


Figure 3: Palaeogeological environment for MFS with MFS AMD drill hole locations provided.

2.5 Water Quality Compliance Criteria

The water quality consent conditions (RC10193) for the existing Escarpment Mine (Table 1) provide water quality reference values (WQ Ref Values) to understand the CLT and shake flask water quality results. Although the consent conditions are for compliance monitoring, WQ Ref Values are useful for contextualising the potential impacts of AMD associated with the Project. Note: CLT concentrations can be significantly elevated compared to landform scale concentrations, so direct comparison of concentration values may not be representative

While these consent conditions were developed in 2013 they are a good guide for potential effects.

Table 1: Receiving waters median concentration compliance limits at monitoring site W-M2.

PARAMETER	WQ REF VALUE ¹	
pH (pH units)	4.5 – 6.5	
MEDIAN CONCENTRATIONS		
Total suspended solids (mg/L)	15	
Turbidity (NTU)	15	
Iron + manganese (mg/L)	1.1	
Aluminium (mg/L)	0.5	
Median pH	pH > 5.5	pH < 5.5
Cadmium (mg/L)	0.0003	0.0012
Chromium (mg/L)	0.05	0.20
Cobalt (mg/L)	0.044	0.18
Copper (mg/L)	0.002	0.0013
Lead (mg/L)	0.0065	0.026
Nickel (mg/L)	0.017	0.068
Zinc (mg/L)	0.012	0.054

¹RC10193 provides median and 95th percentile compliance limits for monitoring site W-M2. Only median compliance limits have been applied as a WQ Ref Value.

Limits for cadmium, copper, chromium, lead, nickel, and zinc are based on a median water hardness of 50 mg CaCO₃/L.

3 SAMPLING AND ANALYSIS PLAN

This section summarises the rationale for sample selection for column leach testing.

3.1 Sample Collection

Drillcore sampling for geochemical analysis was undertaken by BRL based on the following recommendations by MWM prior to drilling occurring:

- All drillcore samples should be collected to align with significant lithological units > 1 m intervals. If thicker units are present and are NAF, then selective mining of PAF units may be possible to selectively excavate these materials. This will be important to obtain sufficient quantities of NAF for rehabilitation purposes if the project was to proceed. Sampling needs to be reflective of such units.
- Composite samples across multiple lithologies should be avoided unless there is significant stratigraphic variation over short intervals (<1 m).
- Coal floor and coal roof can often be elevated in sulfides. These units should be sampled. If the coal floor is benign, there is the potential for this to be left as pavement, to possibly replicate the pre-mining environment.

3.2 Sample Selection

Drillhole DC16, located within the central region of the MFS East Pit shell, was selected for column leach test sampling after initial ABA analysis. The AMIRA (2002) classification system was applied to facilitate sample selection. Details are provided in Appendix C.

Four samples were selected for column leach testing from a range of sulfur content and geological characteristics. Rationale is provided for each sample:

- AMD-DC16-005-GRCG B
 - Granule conglomerate, sample width of 3.0 m.
 - Testing will provide water quality data and further understanding of the geochemistry for low sulfur fluvial materials.
 - Sample is referred to as column DC16-005.
- AMD-DC16-007-MSS
 - Medium to very fine sandstone and laminated sandstone, sample width of 1.7 m.
 - Provides water quality data and further understanding of the geochemistry for higher sulfur (PAF) materials associated with marine incursions into the fluvial environment. The sample also provides data for higher/similar sulfur materials in the coal roof. It is the thicker of the two marine incursion units therefore provided the largest quantity of sample for column leach testing.
 - This sample is referred to as column DC16-007.

- AMD-DC16-010-GRBX
 - Granule breccia, sample width of 3.2 m.
 - Coal roof sample with total S values between selected low and high total sulfur samples. This sample therefore also provides a range of maximum potential acidity (MPA) for selected samples that is useful to develop more reasonable geochemical models.
 - This sample is referred to as column DC16-010.
- AMD-DC16-013-HCM
 - Coarse to very fine sandstone, high carbonaceous mudstone, and minor coal, with a sample width of 3.0 m.
 - Sample from the coal floor to provide an indication of the risk for this material and the source term for water quality.
 - This sample is referred to as column DC16-013.

3.3 ABA Data Review

A subsequent round of ABA testing was completed on samples selected for column leach testing with variation between these material and the original ABA data, notably for NAG pH of DC16-010 and DC16-013. More detail is provided in Appendix C.

ABA data applied throughout this report is provided in Table 2. Data is 'as tested' ABA data with the exception of DC16-010 where the lowest, more conservative, NAG pH data is applied from original ABA data. MFS process flow classification was applied to Table 2 ABA data. The following comments are provided:

- Sample DC16-005 is non-acid forming (NAF).
- Sample DC16-007 is potentially acid forming (PAF).
- Sample DC16-010 is low risk (LR).
- Sample DC16-013 is low risk (LR).

Table 2: ABA data for Column Leach Test Samples

COLUMN	PASTE pH	S (wt%)	MPA (kg / H ₂ SO ₄ /t)	ANC (kg / H ₂ SO ₄ /t)	NAPP (kg / H ₂ SO ₄ /t)	NAG pH
DC16-005	6.1	0.011	0.34	1	-0.66	5.9
DC16-007	5.0	0.587	17.96	-1	17.96	3.8
DC16-010	5.2	0.148	4.53	0	4.53	4.5*
DC16-013	6.1	0.089	2.72	1	1.72	4.1

*Data from original round of ABA testing.

3.4 Quality Assurance / Quality Control

AMIRA (2002) column leach testing was undertaken by SGS Laboratory in Westport. ABA and shake-flask testing was undertaken on samples selected for column leach testing to provide additional supporting information.

To ensure data reliability, a brief QA/QC was undertaken on the data including:

- Basic geochemical principles were checked including:
 - Confirm that low pH samples ($\text{pH} < 4$) had elevated acidity, Fe, and Al; and
 - Circum-neutral pH samples have low acidity, low Fe, and Al.
- Data that was greatly elevated or significantly less than other CLT data recorded for the same sample analyte was asked to be retested or confirmed by the laboratory as being correct through their internal quality assurance processes.

A number of ABA lab results were retested to validate anomalous results. Retests were generally in agreement except for NAG pH data for two samples. It is assumed the variability in early test data on composite core samples versus prepared column samples is related to sample preparation processes rather than laboratory analysis accuracy. This highlights the importance of having and maintaining a representative sample through the preparation and analysis process.

4 SHAKE FLASK TESTING

4.1 Methodology

Shake flask testing was completed using deionised water at a 1:10 solid to liquid ratio. Leachates are acidified and analysed for a suite of major, trace, and ultra-trace elements using a combination of ICP-MS and ICP-AES.

Shake Flask data provides an indication of the immediate water quality of the materials once wetted. Samples were tested 13 months after drilling was completed so are not a true reflection of the immediate stored mobile PCOC load. Noting – whilst the shake flask testing was completed after 13 months, CLT testing commenced with a few months of drilling, which provides a good indication of the immediate geochemical nature of the materials.

4.2 Results

The four column samples underwent shake flask testing at SGS laboratories in Westport. Results are provided in Table 3. Key observations include:

- DC16-005 results indicated the sample did not generate acidity with a pH of 6.4 and most metals were below the LOR.
- DC16-007 results indicated the sample generated acidity with a pH of 3.7; acidity to pH 7.0 of 240 mg/L, and elevated metals, notably Al (30.1 mg/L), Co (0.361 mg/L), Cu (0.139 mg/L), Fe (19 mg/L), Ni (0.63 mg/L), Zn (3.92 mg/L).
- DC16-010 results indicated the sample generated acidity with a pH of 3.9 and elevated metals notably Al (6.52 mg/L), Fe (4.89 mg/L), Ni (0.026 mg/L), and Zn (0.33 mg/L).
- DC16-013 results indicated the sample did not generate acidity with a pH of 7 and most metals were below LOR. One notable result was for Zn at 0.055 mg/L.

Table 3: Shake Flask Data: DC16 CLT samples.

PARAMETER	DC16-005	DC16-007	DC16-010	DC16-013
pH	6.4	3.7	3.9	7
Conductivity ($\mu\text{S/cm}$)	20	450	170	32
Temperature ($^{\circ}\text{C}$)	16	15	15	14
Alkalinity as HCO_3	2.5	N.A.	N.A.	2.5
Alkalinity as CO_3	2.5	N.A.	N.A.	2.5
Total Alkalinity as CaCO_3	2.5	N.A.	N.A.	2.5
Acidity 4.0	0	17	5	0
Acidity 5.0	0	150	36	0
Acidity 7.0	8	240	64	6
Aluminium	0.028	30.1	6.52	0.0025
Arsenic	0.0005	0.007	0.005	0.003
Boron	0.015	0.015	0.015	0.015
Cadmium	0.0001	0.0018	0.0001	0.0001
Calcium	0.05	2.7	1.6	2.5
Chromium	0.0005	0.024	0.007	0.0005

PARAMETER	DC16-005	DC16-007	DC16-010	DC16-013
Cobalt	0.00025	0.361	0.006	0.003
Copper	0.00025	0.139	0.004	0.00025
Iron	0.02	19	4.89	0.005
Lead	0.00025	0.00025	0.00025	0.00025
Magnesium	0.005	1.44	0.31	0.21
Manganese	0.00025	0.911	0.411	0.027
Mercury	0.00025	0.00025	0.00025	0.00025
Nickel	0.00025	0.63	0.026	0.007
Potassium	1.5	10.2	1.5	3
Selenium	0.0025	0.0025	0.0025	0.0025
Sodium	0.25	0.25	0.25	0.7
Tin	0.00025	0.00025	0.00025	0.00025
Titanium	0.002	0.00025	0.00025	0.00025
Zinc	0.001	3.92	0.334	0.055
Silicon	0.85	2.1	0.95	1.8
Sulfate	1.5	230	64	9.4
Chloride	0.25	0.25	0.25	0.25

Note: All units in mg/L unless otherwise identified. Red data are less than the LOR and are reported as half the LOR.

4.3 Soluble Stored PCOC Load

Shake Flask test results provide an indication of water quality upon wetting of the materials. Such data can be converted into a load (i.e., mg/kg through multiplication of data by 10 (based on the ratio 1:10)), which can then be used to understand the stored water soluble PCOC. These data are presented below in Table 4. Such data can be used in contaminant load models.

Table 4: Stored water soluble PCOC load (mg/kg).

PARAMETER	DC16-005	DC16-007	DC16-010	DC16-013
Acidity 7.0	80	2400	640	60
Aluminium	0.28	301	65.2	0.025
Arsenic	0.005	0.07	0.05	0.03
Boron	0.15	0.15	0.15	0.15
Cadmium	0.001	0.018	0.001	0.001
Calcium	0.5	27	16	25
Chromium	0.005	0.24	0.07	0.005
Cobalt	0.0025	3.61	0.06	0.03
Copper	0.0025	1.39	0.04	0.0025
Iron	0.2	190	48.9	0.05
Lead	0.0025	0.0025	0.0025	0.0025
Magnesium	0.05	14.4	3.1	2.1
Manganese	0.0025	9.11	4.11	0.27
Mercury	0.0025	0.0025	0.0025	0.0025
Nickel	0.0025	6.3	0.26	0.07
Potassium	15	102	15	30
Selenium	0.025	0.025	0.025	0.025

PARAMETER	DC16-005	DC16-007	DC16-010	DC16-013
Sodium	2.5	2.5	2.5	7
Titanium	0.02	0.0025	0.0025	0.0025
Zinc	0.01	39.2	3.34	0.55
Silicon	8.5	21	9.5	18
Sulfate	15	2,300	640	94
Chloride	2.5	2.5	2.5	2.5
Total S content (wt%)	0.011	0.587	0.148	0.089
Total SO ₄ (mg/kg)	330	17,588	4,434	2,667
% of SO ₄ mobilised by shake Flask testing	4.6	13.1	14.4	3.5

Red data are less than the LOR and were calculated using half the LOR.

4.4 Analysis

These shake flask test data can be used to estimate the stored water soluble PCOC load based on the relationship with the sulfur content of the sample. Such data can be used to determine the stored water soluble PCOC load using average sulfur content for an engineered landform (ELF) and previously derived relationships of sulfate with other PCOC (e.g., MWM, 2026b). The relationship presented in Figure 4 is from aged drill core > 12 months, which would have generated ongoing oxidation, but at a rate much lesser than a column leach test.

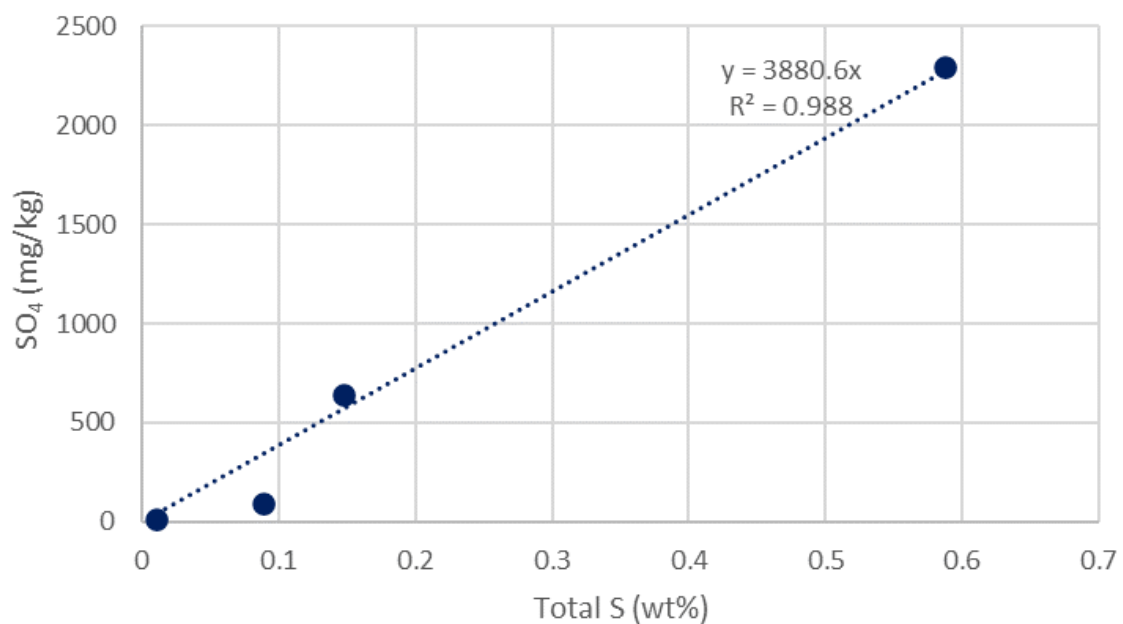


Figure 4: Sulfur content versus soluble sulfate load (shake flask) for MFS Column Samples.

5 COLUMN LEACH TESTING

Leach columns (AMIRA, 2002) are used to complement environmental geochemical investigations on mine rock and waste materials. The leach columns provide information on sulfide oxidation rates, neutralisation rates, metal solubility, and the leaching behaviour of the test materials. The CLT period varies depending on material characteristics and the investigation requirements. Columns are often run until geochemical trends are understood ~6-12 months, although for samples with a high Acid Neutralising Capacity (ANC) content that will have a time lag to acid onset this may be a number of years. For BCM materials, as tested here by CLT, a longer time frame is not required as the ANC is low (~1 kg H₂SO₄/t) and samples will become acid quickly if the sample was PAF (i.e., within the timeframe of the test).

5.1 Methodology

Free draining column leach tests are used to provide information on material reactivity and the leaching behaviour of materials under optimum oxidising conditions. This process is achieved by applying a weekly rinse cycle and a monthly flush cycle, which is analysed for PCOC. Heat lamps were used to ensure drying of the sample between wetting cycles.

Typically, 2.0 to 2.5 kg of crushed rock, tailings or sediment is required for the test (AMIRA, 2002). The test was operated for 8 months (8 cycles) to confirm the PCOC so that the acid forming capacities of the waste rock can be confirmed.

Testing was undertaken by SGS Laboratory from April 2024 to November 2024 for the following:

- Volume of leachate, pH, EC, acidity, and alkalinity.
- Dissolved metals / metalloids: Al, As, B, Cd, Cr, Co, Cu, Fe, Hg, Mn, Ni, Pb, Se, Sn, Ti, and Zn.
- Major anions / cations: Cl, SO₄, Ca, Mg, Na, K, and Si.

Material weights and leachate volumes are presented in Table 5. Results indicate a solid:liquid ratio of 0.22 – 0.37 (average of 0.31), which is lower than the shake flask test of 1:10.

Table 5: Sample weights and leachate volumes

COLUMN ID	SAMPLE WEIGHT (kg)	LEACHATE VOLUME PER MONTHLY FLUSH CYCLE (mL)								SOLID: LIQUID RATIO	
		1	2	3	4	5	6	7	8		MEAN
DC16-005	2,005.7	390	439	445	475	450	470	460	475	451	0.22
DC16-007	2,795.9	976	1,088	1,050	1,045	1,070	1,020	970	1,020	1,030	0.37
DC16-010	2,439.7	579	650	665	675	695	678	680	810	663	0.27
DC16-013	2,265.7	773	800	790	850	810	830	830	680	812	0.36

Note: Sample weight (g) at the beginning of testing

5.2 Results

This section summarises the key data from the column leach testing. Full tabulated data are provided in Appendix C.

5.2.1 pH and EC

Figure 5 and Figure 6 provide pH and Electrical Conductivity (EC) results over the 8 months of column leach testing, key observations include:

- DC16-005 has a pH between 5 to 8 (but not below pH 4.5). Conductivity remains stable between 11 and 40 $\mu\text{S}/\text{cm}$. Data confirms this sample is non-acid forming.
- DC16-007 has consistent pH across all months (between pH 2 and 3). Overall decreasing conductivity from a high of 7,200 $\mu\text{S}/\text{cm}$ at month 2 to 3,100 $\mu\text{S}/\text{cm}$ at month 8. Data confirms this sample is acid forming.
- DC16-010 has pH results between 2 and 3 over the reported 8-month period. A gradual decrease in conductivity from a maximum of 2,100 $\mu\text{S}/\text{cm}$ (month 2) to 1,200 $\mu\text{S}/\text{cm}$ (month 8) is observed. Data confirms this sample is acid forming.
- DC16-013 has a consistent pH between 6.6 and pH 7.3 before decreasing after month 4 to a low of 4.6 at month 7. Conductivity gradually increases from 62 $\mu\text{S}/\text{cm}$ in month 1 to 100 $\mu\text{S}/\text{cm}$ in month 8. pH data indicates this sample is non-acid forming.

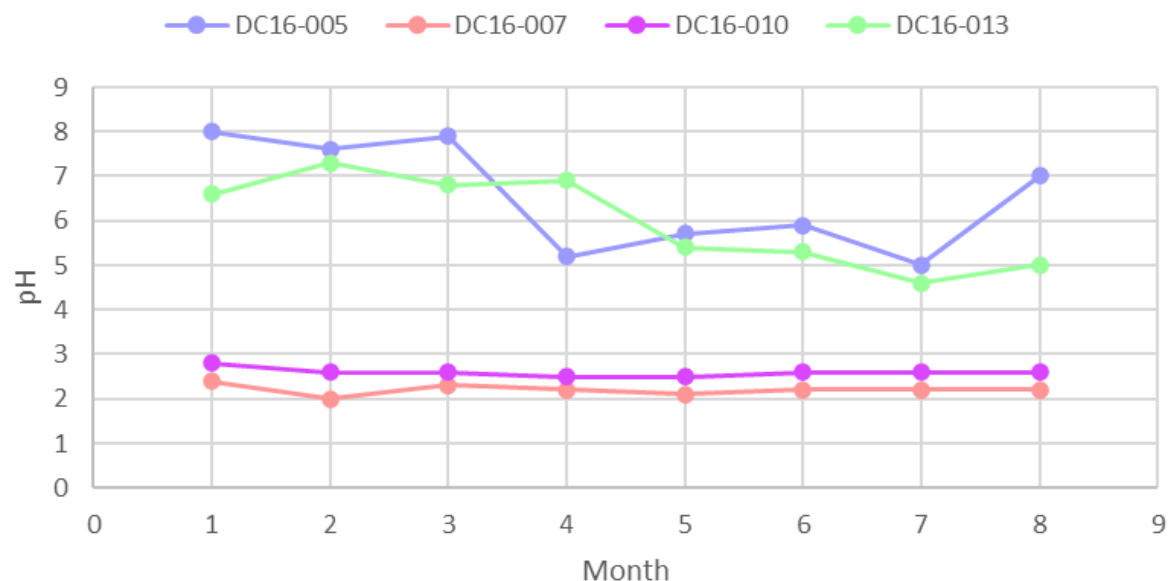


Figure 5: CLT results for pH over the 8-month period.

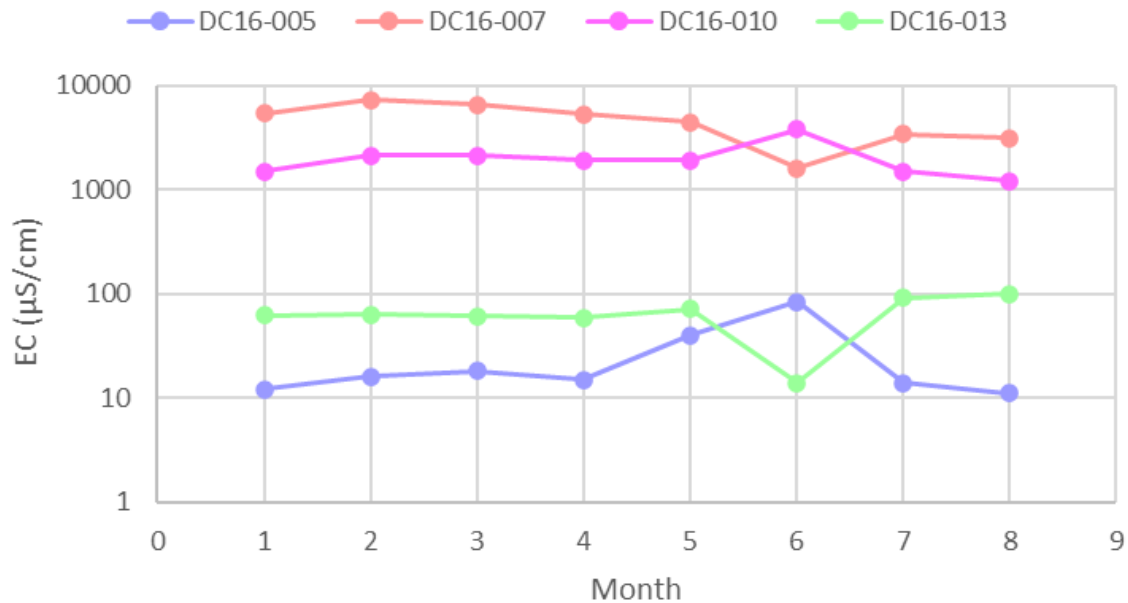


Figure 6: CLT results for conductivity (EC) over the 8-month period.

Note irregular EC results in month 6, samples are unable to be retested to confirm. It is likely these data are mixed up by the laboratory for DC16-005 and DC16-013 and for DC16-007 and DC-010.

5.2.2 Acidity

Acidity trends are presented in Figure 7 and key observations include:

- DC16-005 and DC26-013 have low acidity, decreasing slightly over the testing period.
- Acidity decreases quickly in DC16-007 over the first 5 months, then the decrease begins to plateau (note: difficult to observe on the log scale provided).
- Acidity is elevated after the first month for DC16-010 until month 5, then decreases gradually.

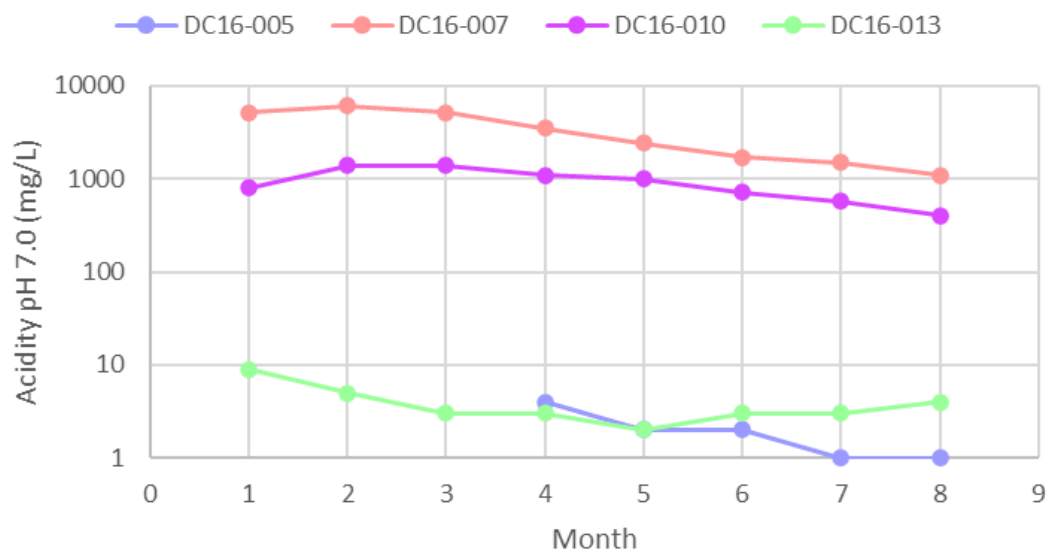


Figure 7: Column leach results for acidity titrated to 7.0 over the 8-month period.

Note: zero does not plot on the log scale.

5.2.3 Sulfate

Sulfate trends are presented in Figure 8, key observations include:

- Sulfate data remain low but increase over time for DC16-005 (between 1.8 and 14.2 mg/L) and DC16-013 (22 and 76 mg/L) for the duration of testing and are consistent with the low acidity data and classification as NAF and Low Risk material respectively. There is a notable spike in both columns during month 4.
- Sulfate is elevated in DC16-007 and decreases rapidly, similar to acidity.
- Sulfate in DC16-010 follows a similar trend to acidity where sulfate becomes elevated in month 2 then gradually decreases, only reaching a value below the initial month 1 result at month 8.

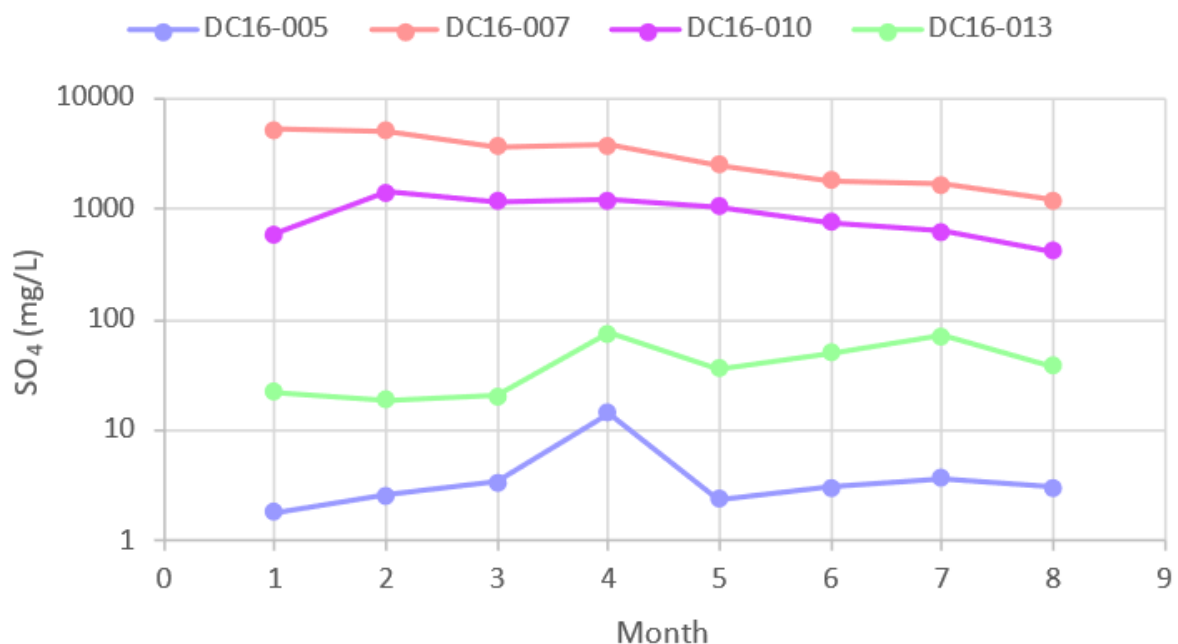


Figure 8: Column leach results for sulfate over the 8-month period.

5.2.4 Iron and Aluminium

Results for Al and Fe are provided in Figure 9 and Figure 10.

- Gradually increasing Al for DC16-005 until the last month where Al drops below LOR.
- Decreasing Al over the testing period for DC16-007 and DC16-010. Overall increase in Al for DC16-013 with a spike at month 4.
- Initial increase in Fe for DC16-007 and DC16-010 then gradually decreasing for the remainder of the testing period.

Both Al and Fe are key components of acidity and there is a strong correlation between Fe and acidity 7.0 as presented in Figure 11. At acidity values < 5000 mg/L there is a strong correlation with Al, this relationship is no longer evident with the highest acidity results.

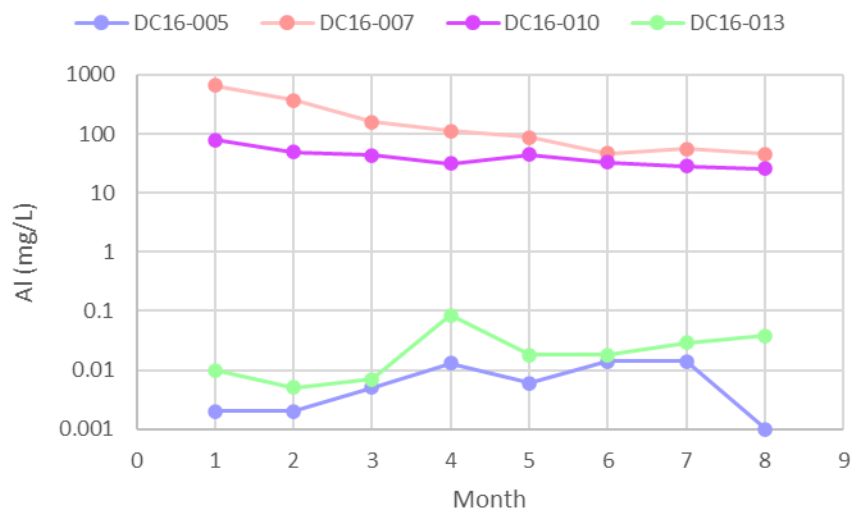


Figure 9: Column leach results for Al over the 8-month period.

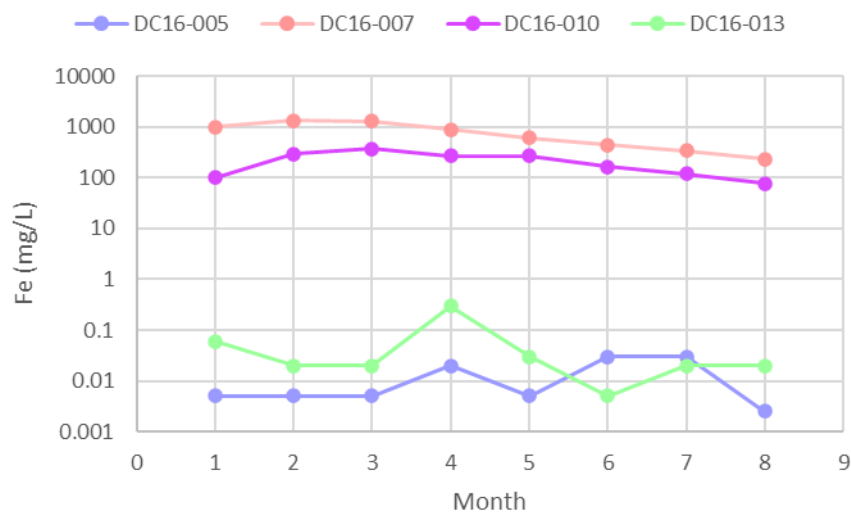


Figure 10: Column leach results for Fe over the 8-month period.

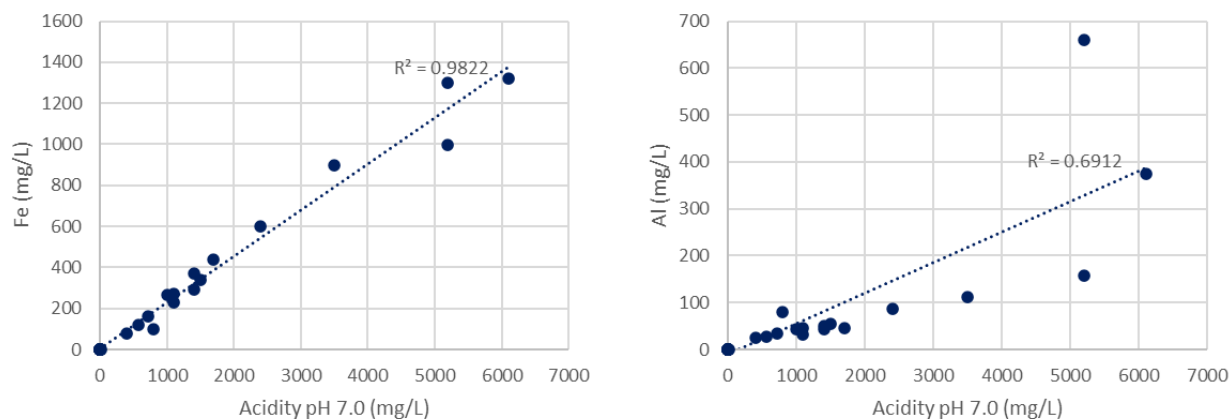


Figure 11: Relationship between Fe and Al with acidity 7.0 over the 8-month period.

5.2.5 PCOC

Results for select trace metals as related to WQ Ref Values (Cd, Cr, Co, Cu, Mn, Ni, Pb, and Zn) are provided in Figure 12. Comparison of WQ Ref Values provides a conservative approach for identification of PCOC for the Project. Key observations from trace metal analysis include:

- DC16-005 has low concentrations of dissolved trace metals, all results are below WQ Ref Values for the Escarpment Mine (Table 1).
- DC16-007 has the overall highest concentrations of trace metals across all 8 months, with concentrations decreasing with time. All results exceed Table 1 WQ Ref Values (Al, Cd, Cr, Co, Cu, Pb, Ni, and Zn).
- DC16-010 metal concentrations are elevated above Table 1 WQ Ref Values for Al, Cr, Cu, Ni, and Zn.
- DC16-013 concentrations for Cd, Cu, Ni, and Zn values exceed Table 1 WQ Ref Values. This suggest classification as Low Risk, which suggest the NAG pH data of 4.1 is correct and better than the NAG pH of 4.8.

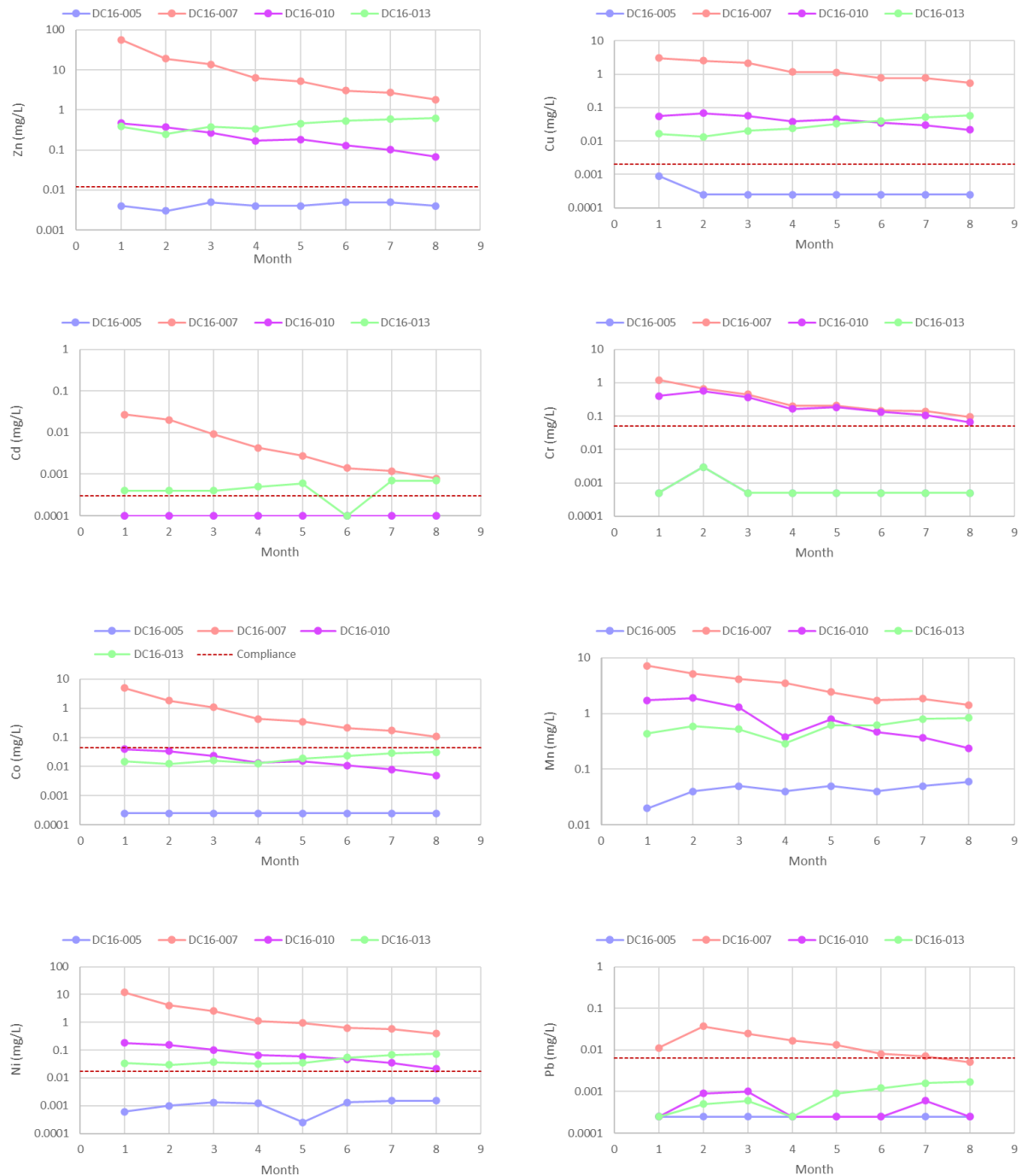


Figure 12: Time series plots of metals as related to WQ Ref Values.

Compliance limits for pH > 5.5 (Table 1) indicated by red dashed line.

Note: Zero does not plot on a log scale so some points do not appear. For raw data see Appendix D.

5.3 PCOC Load

Column leach testing results are converted to mg/kg/month to determine the PCOC load. The following process is applied to column leach test results to produce mg/kg/month:

$$\text{Equation 1} = ((C * (V / 1000) / 1)) * (1000 / w)$$

Where: C = Original value (g/m^3); V = Sample volume (ml); w = Sample weight (g).

Average mg/kg/month results for the column leach test samples over the 8 months are provided in Table 6. It is assumed that average results provide a fair representation of the shorter- and longer- term AMD effects and the associated PCOC loads.

Table 6: Average mg/kg/month of column leach test data.

SAMPLE ID	DC16-005	DC16-007	DC16-010	DC16-013
Acidity pH 4.0	0	789.3	159.6	0
Acidity pH 5.0	0	1,090.5	218.8	0.18
Acidity pH 7.0	0.29	1,238.8	250.5	1.42
Total Alkalinity CaCO ₃	0.057	0	0	0.13
Chloride	0.22	0.26	0.16	0.13
Sulfate	0.98	1,166.9	247.2	15.1
Dissolved Silicon	0.044	1.47	0.51	0.035
Aluminium	0.0016	70.3	11.2	0.0096
Arsenic	0.00011	0.36	0.17	0.00018
Boron	0.0068	0.0091	0.0041	0.0065
Cadmium	0.00002	0.0031	2.7E-05	0.00017
Calcium	0.010	1.91	0.73	2.47
Chromium	0.00018	0.14	0.067	0.00029
Cobalt	0.00006	0.42	0.0049	0.0071
Copper	0.00007	0.56	0.012	0.012
Iron	0.0029	284.7	56.6	0.022
Lead	0.00006	0.0058	0.00013	0.0003
Magnesium	0.010	1.27	0.24	0.21
Manganese	0.005	2.72	0.39	0.034
Mercury	0.00006	9.2E-05	6.8E-05	9.0E-05
Nickel	0.00025	1.00	0.022	0.016
Potassium	0.38	1.45	0.053	0.64
Selenium	0.0006	0.0027	0.0007	0.0059
Sodium	0.14	0.40	0.086	0.31
Titanium	0.00005	0.0027	5.93E-05	8.5E-05
Thallium	0.00006	0.0032	0.00033	0.00019
Zinc	0.0010	4.92	0.058	0.16

5.4 Analysis

This section reviews key data and trends for the column leach test:

5.4.1 Acidity, EC, and Sulfate Data

Figure 13 indicates the relatively linear relationship between acidity and sulfate. The relationship is stronger for DC06-007 and DC16-010 results (although this may be obscured by the plotting of log:log data on the graph). The relationship is less clear at lower acidity / SO_4 concentrations. However, the data confirms that sulfate is a good indicator of acidity, which affirms the relationship shown in Figure 4 that total sulfur content is a good indicator of AMD risk and acidity.

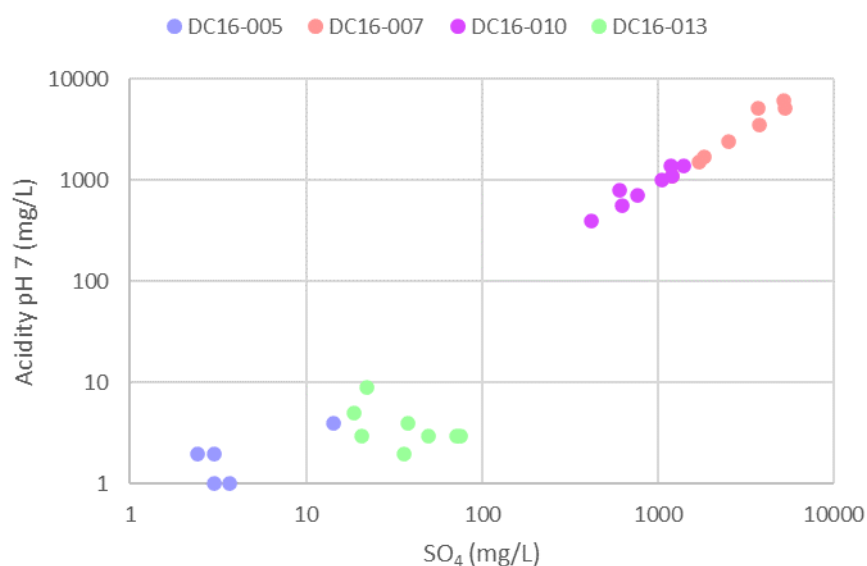


Figure 13: Acidity pH 7.0 and sulfate for column leach data (8 months).

Figure 14 shows the relationship between EC and acidity. As with SO_4 there is a stronger relationship between higher acidity and EC data. Two outlier points (indicated by arrows), one each for DC16-007 and DC16-010 are related to EC data from month 6 that was flagged as a possible laboratory error.

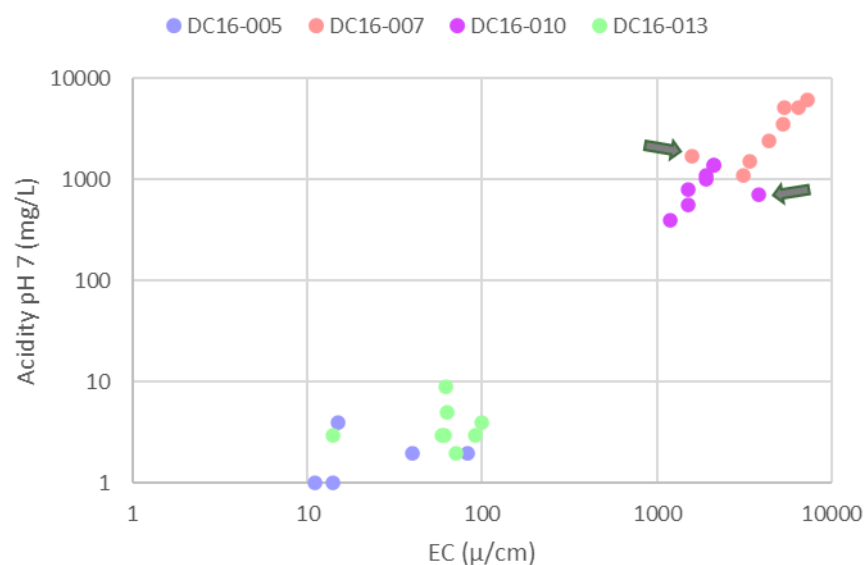


Figure 14: EC versus Acidity for the column leach test data (8 months).

Outlier points (indicated by arrows) are EC data flagged as likely to have been mixed up at the laboratory.

Figure 15 presents the percentage of remaining sulfur as calculated from total wt% S ABA data for the columns. The percentage of total sulfur remaining over the 8-month testing period is 47% for DC16-007 and 55% for DC-010. Although 98% and 96% of total sulfur remains for columns DC16-005 and DC16-013 respectively, these are low sulfur materials.

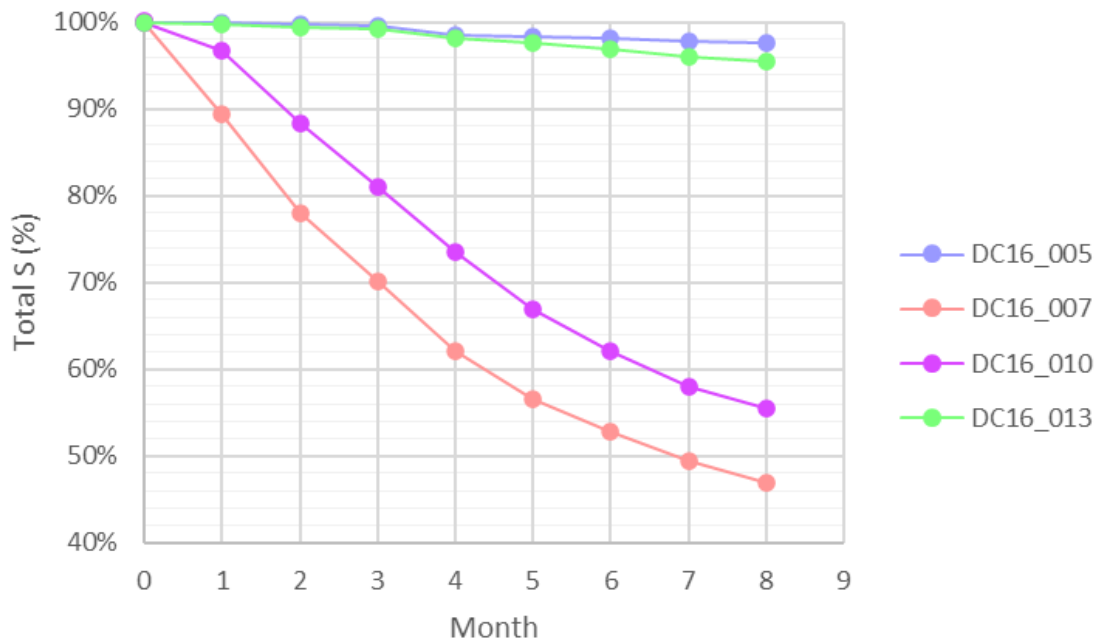


Figure 15: Sulfur decay over 8 months of column leach test data.

5.4.2 Shake Flask Data and Column Leach Test Data Analysis

Sulfate data from shake flask analysis are compared to data from column leach test (Month 1). Data are normalised to sulfate load (mg/kg) and are shown in Table 7.

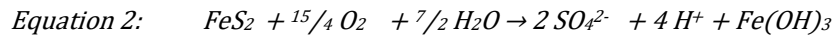
Table 7: Shake flask data and month 1 column leach test data.

	SHAKE FLASK		MONTH 1 COLUMN		RATIO SO ₄ Shake flask : Month 1 CLT
	SO ₄ mg/kg	pH	SO ₄ mg/kg	pH	
DC16-005	15	6.4	0.35	8	1 : 0.02
DC16-007	2,300	3.7	1,850	2.4	1 : 0.8
DC16-010	640	3.9	142	2.8	1 : 0.2
DC16-013	94	7	7.51	6.6	1 : 0.08

Shake flask sulfate data have higher sulfate concentrations compared to CLT data. The lower solid:liquid ratio of 1:10 in the shake flask test would favour dissolution. In the CLT with a lower solid:liquid ratio, the test would favour the precipitation of secondary minerals (as is commonly observed) and not all flow paths through the column are flushed by this process. In a waste rock storage facility, the solid:liquid ratios are higher again by several orders of magnitude (even on a yearly basis). Much of the rock in such facilities is not flushed and is immobile. Typically, lab results generate higher concentrations compared to field data for large waste rock storage facilities, and scaling of data are required.

5.4.3 Intrinsic Oxidation Rate

The intrinsic oxidation rate (IOR) (Bennett et al., 1995, Ritchie, 1994) can be derived by measuring the total oxygen consumption rate of samples where sulfate production rates of samples in columns are converted to pyritic oxidation rates using the stoichiometry of the pyritic oxidation reaction:



The laboratory based IOR for column leach tests provides a good indication of the pyrite reaction rate under laboratory conditions where oxygen is freely available. Application of the IOR to the field requires adjustments (scaling) due to the following influences:

- Sulfur mineralogy (if other minerals are present e.g., pyrrhotite, gypsum, jarosite, melanterite, etc).
- Assumption that Equation 2 proceeds to completion (e.g., no intermediate reaction products such as jarosite and melanterite).
- Water content
- Pore gas concentration (e.g., oxygen concentration)
- Particle size distribution and mineral surface area
- Bacterial effects
- Temperature, pH, ferric ion concentrations, etc

IOR rates for the column leach tests are reported in Table 8.

Table 8: IOR for MFS Column Leach test materials

		DC16-005	DC16-007	DC16-010	DC16-013
IOR kg O ₂ /m ³ /s	MONTH 1	8.4E-11	4.5E-07	3.4E-08	1.8E-09
	MONTH 1 TO 3	1.3E-10	4.2E-07	6.7E-08	1.7E-09
	AVERAGE	2.4E-10	2.8E-07	6.0E-08	3.6E-09
	8 MONTHS				

IOR do not normalise the reaction rates to the sulfide content, so it is difficult to apply the rate to materials of differing sulfur content or consider what the data means if this interpretation is not completed. To account for this, the wt% sulfur is plotted against the sulfate release rate (mg/kg) and the IOR as shown in Figure 16. The relationship derived can then be used to assign an IOR to a material of differing sulfur content, this can then be scaled with consideration for the above adjustment factors to consider reaction rates in the field.

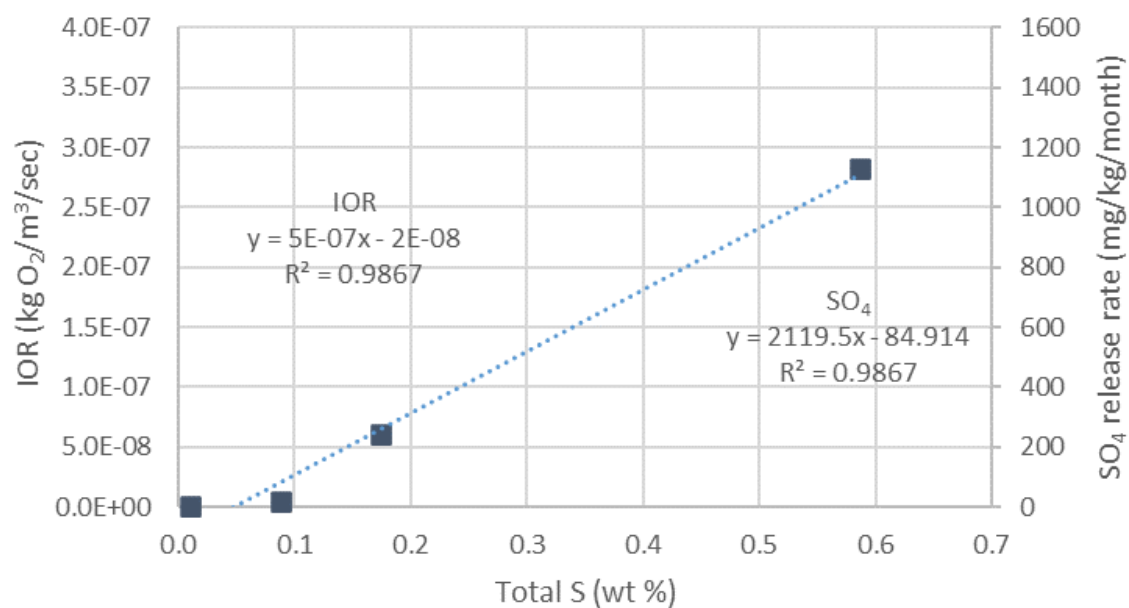


Figure 16: Sulfur Content (wt%) versus IOR for MFS Column Leach Test Data.

6 ESCARPMENT MINE GEOCHEMICAL INVESTIGATION

This section discusses CLT conducted on materials from the existing Escarpment Coal Mine and relationship to the MFS sub-area CLT data.

6.1 Escarpment Mine Column Leach Tests

CLT was completed on material sourced from the existing Escarpment Mine by CRL Energy Limited (CRL) in 2011 for a period of 56 weeks. Data were used for the AEE for existing Escarpment Mine resource consent application. AMIRA column leach test data are available from Pope et al. (2011) and CRL (2012). These data were reviewed to determine if MFS sub-area data are comparable and whether geoenvironmental AMD hazards are similar.

The Escarpment Mine columns were selected to assess the following four different rock types (Pope et al., 2011) found within the existing Escarpment Mine site:

- Column 1 – Rock type 1 – Sandstone (likely PAF). Composition of medium to granular sandstone with carbonaceous bands which contain pyrite.
- Column 3 – Rock type 2 – Mudstone (likely PAF). Composition of high carbonous mudstone with coal bands which contain pyrite.
- Column 5 – Rock type 4 – Blend, representative of expected waste material at the Escarpment Mine. The proportions of the mixture were based on the relative abundance of the rock types at the Escarpment Mine site based on drill hole data collected. It was found to have a composition of 40% sandstone, 38% carbonous mudstone, 15% conglomerate, 5% mudstone and 2% high ash coal.
- Column 7 – Rock type 3 – Sandstone (likely NAF). Composition of sandstone and fine carbonous sandstone.

6.2 MFS sub-area and Escarpment Mine Comparison

6.2.1 ABA Data

CLT data are available from the original work completed for consenting of the existing Escarpment Mine (Pope et al., 2011; CRL, 2012). ABA data for these sample is provided in Table 9 along with data from the 2024 MFS CLT ABA data.

Key observations from ABA data for the two projects include:

- Samples selected from MFS were generally of lower total sulfur ranging from 0.011 to 0.587 wt% compared to total sulfur for the Escarpment samples that range from 0.25 to 1.2 wt%.
- NAG pH ranged from 3.8 to 5.9 for MFS, and from 2.5 to 6.8 for the Escarpment Mine demonstrating that both datasets contained PAF and NAF samples.
- Paste pH is within the range of 5 to 6.1 for all samples.
- NAPP ranged from -1 kg H₂SO₄/t to 34 kg H₂SO₄/t for all the samples.
- NAF, Low Risk, PAF, and HAF samples are present in the dataset, with AMD classification determined by the process flow classification approach (MWM, 2026a).

Figure 17 presents NAPP and NAG pH data for the columns and illustrates sample AMD classification.

Table 9: ABA data for the Escarpment Mine CLT and MFS CLT.

	COLUMN	ROCK TYPE	NAG pH	TOTAL S	NAG pH 7	ANC	MPA	NAPP	PASTE pH	CLASSIFICATION
	UNITS		-	wt%		kg H ₂ SO ₄ /t			-	
MFS	DC16-005		5.9	0.011	13	1	0.34	-0.66	6.1	NAF ^a
	DC16-007		3.8	0.587	15	-1	17.96	17.96	5	PAF ^a
	DC16-010		4.5*	0.148	13	10	4.53	4.53	5.2	Low Risk ^a
	DC16-013		4.1	0.089	32	1	2.72	1.72	6.1	Low Risk ^a
Escarpment	Column 1	1	3.9	0.33	4	-1	10	10	6	PAF ^b
	Column 3	2	2.5	1.2	30	1	35	34	5.2	HAF ^b
	Column 7	3	6.8	0.25	0	2	8	6	5.7	NAF ^b
	Column 5	4	3.6	0.48	11	1	15	14	5.5	PAF ^b

* NAG pH data from first round of ABA testing.

^a MFS process flow classification (MWM, 2026a).

^b Escarpment process flow classification (Olds et al., 2015).

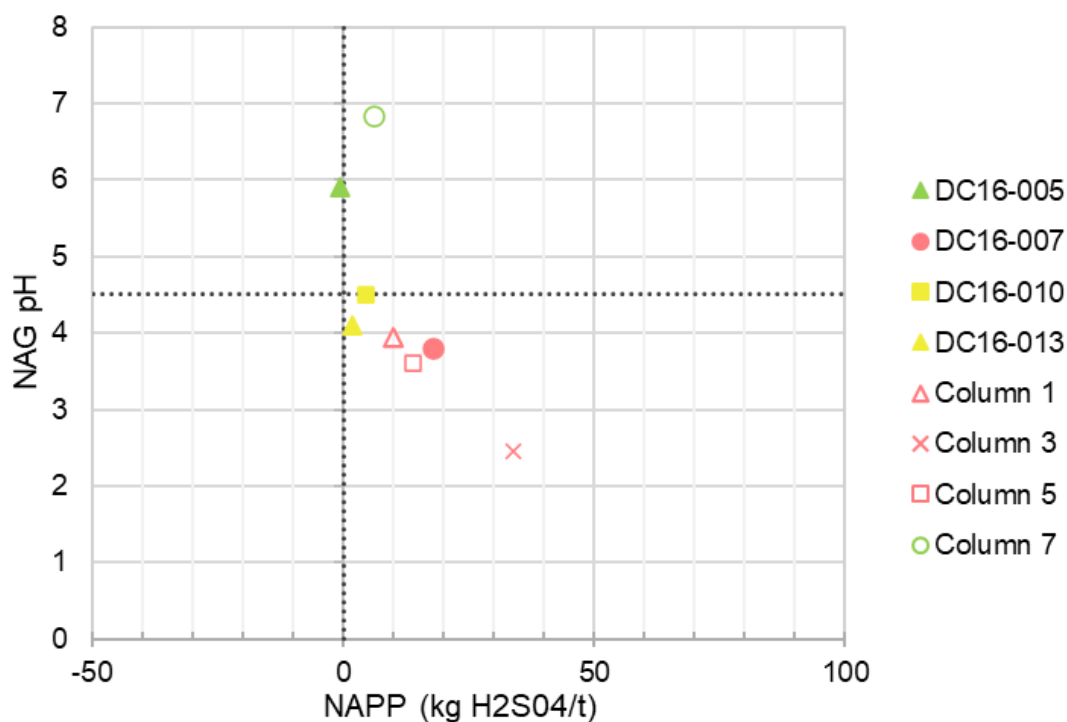


Figure 17: ABA data (NAG pH and NAPP) for MFS and Escarpment CLT samples.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

Figure 19 illustrates the MFS and Escarpment column samples with MFS ABA data (MWM, 2026a) classified using the MFS process flow classification.

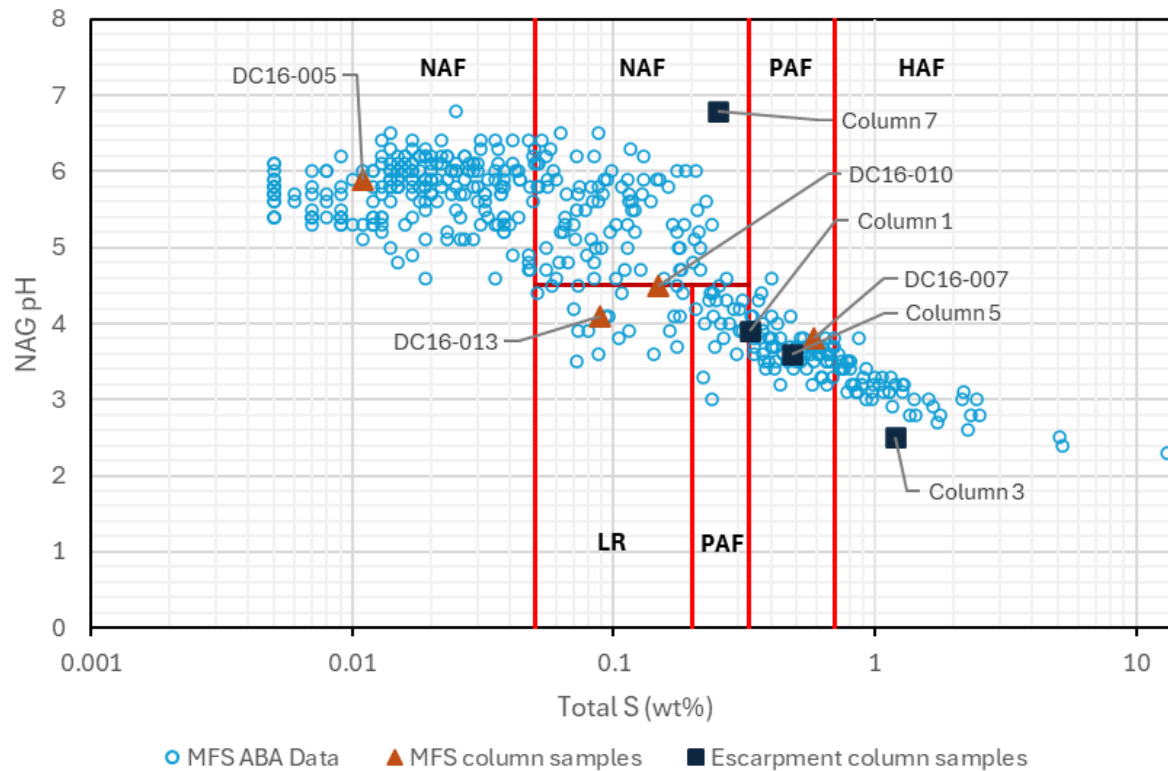


Figure 18: CLT samples and MFS ABA data classified as MFS processes flow classification.

6.2.2 Column Leach Data

Select column leach test results for the Escarpment Mine and MFS CLT are provided in Table 10. PAF samples (including Low Risk) are highlighted in grey; NAF samples are highlighted in green. The following observations are made:

- pH for NAF samples do not drop below pH 4.5, a common threshold for confirmation of acidic conditions.
- Sulfate in NAF samples can be up to 260 mg/L, which indicates sulfide oxidation is occurring, yet any acidity is being neutralised by the inherent ANC in sample.

Alkalinity is generally negligible, which is in agreement with the assumption that the BCM has very low ANC. The highest ANC is in the Escarpment Mine Column 7 sample, which will be related to the ANC and the neutralisation of acidity in this NAF sample.

Table 10: pH, alkalinity, and sulfate data for Escarpment CLT and MFS CLT

	COLUMN	PARAMETER	MONTH								AVG*
			1	2	3	4	5	6	7	8	
MFS	DC16-005	pH	8.0	7.6	7.9	5.2	5.7	5.9	5.0	7.0	5.6
		SO ₄ (mg/L)	1.8	2.58	3.36	14.2	2.4	3	3.7	3	4.3
		Alkalinity (CaCO ₃ /L)	0	0	0	0	1	1	0	0	0.3
	DC16-007	pH	2.4	2	2.3	2.2	2.1	2.2	2.2	2.2	2.2
		SO ₄ (mg/L)	5,300	5,170	3,720	3,800	2,500	1,840	1,700	1,200	3,154
		Alkalinity (CaCO ₃ /L)	0	0	0	0	0	0	0	0	0.0
	DC16-010	pH	2.8	2.6	2.6	2.5	2.5	2.6	2.6	2.6	2.6

COLUMN	PARAMETER	MONTH								AVG*
		1	2	3	4	5	6	7	8	
DC16-013	SO ₄ (mg/L)	600	1,410	1,180	1,200	1,050	770	630	420	908
	Alkalinity (CaCO ₃ /L)	0	0	0	0	0	0	0	0	0.0
	pH	6.6	7.3	6.8	6.9	5.4	5.3	4.6	5	5.3
	SO ₄ (mg/L)	22	18.7	20.6	76	36	50	72	38	42
	Alkalinity (CaCO ₃ /L)	1	0	1	0	1	0	0	0	0.4
Column 1	pH	2.59	2.63	2.75	2.73	2.72	2.66	2.55	2.46	2.6
	SO ₄ (mg/L)	700	580	810	730	510	560	560	540	624
	Alkalinity (CaCO ₃ /L)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Column 3	pH	2.65	2.39	2.49	2.39	2.39	2.35	2.34	2.29	2.4
	SO ₄ (mg/L)	1,660	3,100	11,400	4,700	3,300	4,500	2,600	3,000	4283
	Alkalinity (CaCO ₃ /L)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Column 7	pH	4.87	5.84	5.82	5.99	6.3	5.95	6.42	6.37	5.9
	SO ₄ (mg/L)	96	191	260	220	193	172	188	260	198
	Alkalinity (CaCO ₃ /L)	1.3	3.2	13.9	3.9	3.9	3.3	5.7	5.7	5.1
Column 5	pH	3.2	3.08	3.16	3.09	3.05	2.89	2.86	2.83	3.0
	SO ₄ (mg/L)	400	420	470	450	410	740	540	1,180	576
	Alkalinity (CaCO ₃ /L)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

*Average pH has been determined based on hydrogen ion concentration.

Figure 19 presents pH data for both the Escarpment Mine and MFS CLTs. The following are key observations:

- The very fine sandstones and conglomerate (DC16-005, DC16-013 and Column 7) have higher pH and are less consistent throughout the months compared to the other material. NAF samples often have a higher degree of pH variance due to circum-neutral conditions and the log-scale applied to hydrogen ions compared to PAF samples.
- PAF (and Low Risk) samples displayed consistent low pH values compared to the NAF samples.

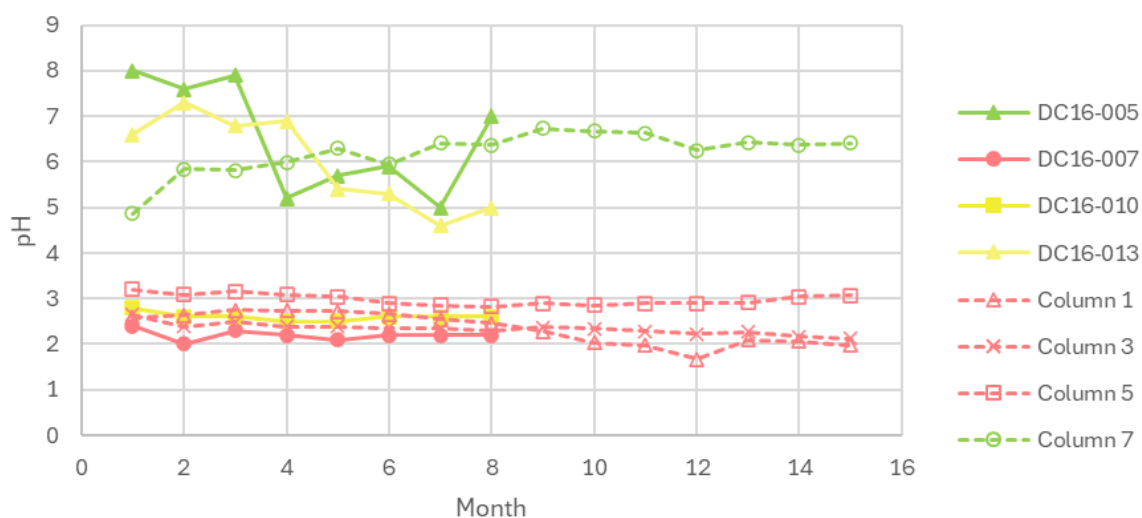


Figure 19: pH trend data for Escarpment CLT and MFS CLT.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

Dashed Data = Escarpment, Solid Data = MFS

Figure 20 presents sulfate data for MFS and the Escarpment Mine. Data indicates that PAF samples generate more sulfate and also more acidity (Figure 21). When the average sulfate concentration (over the total CLT operational period) is plotted against the sulfur content of a sample a relationship is developed that confirms that AMD risk is related to sulfur content (Figure 22).

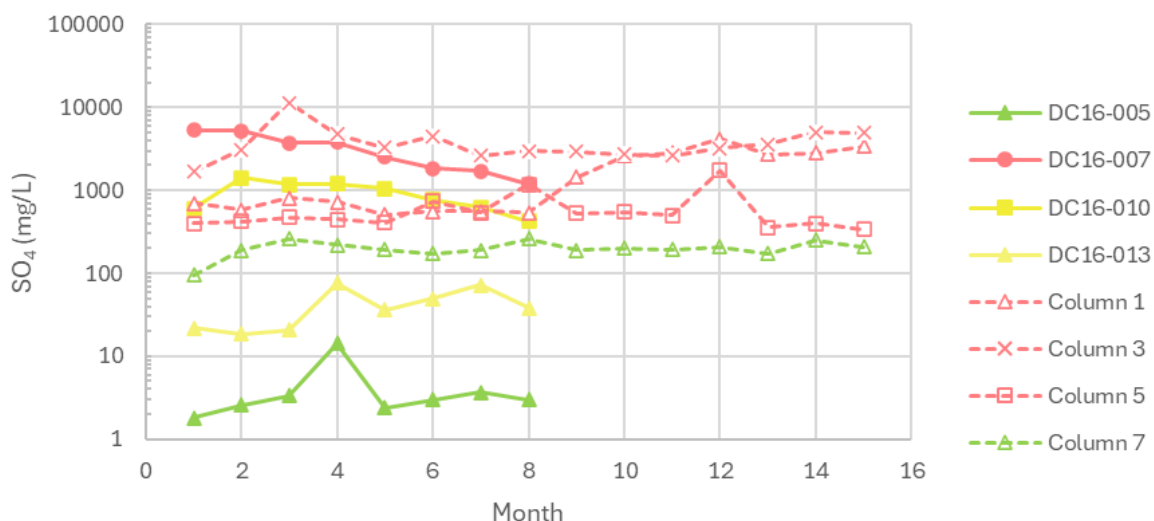


Figure 20: Sulfate CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

Dashed Data = Escarpment, Solid Data = MFS

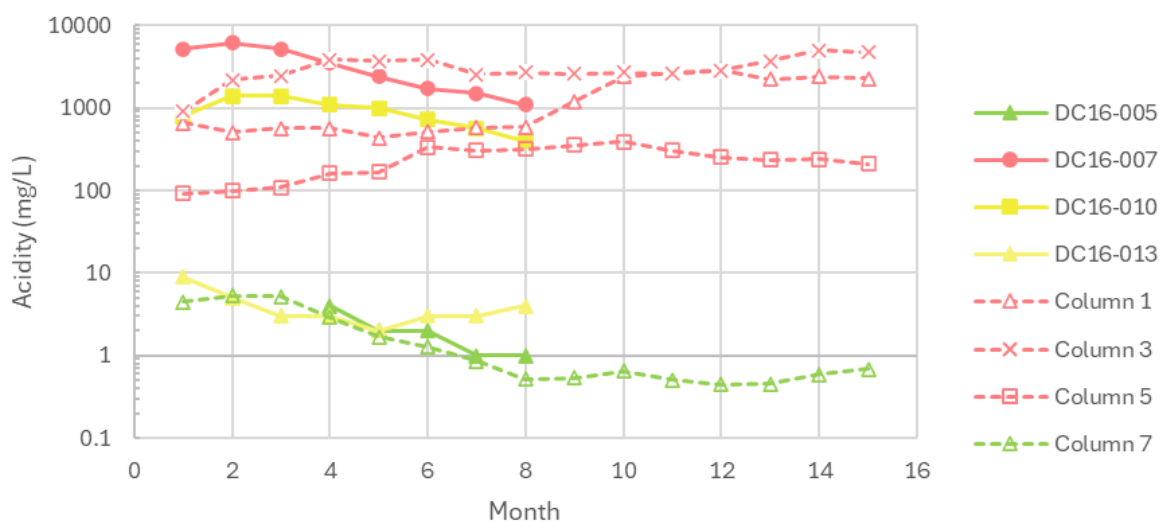


Figure 21: Acidity CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

Dashed Data = Escarpment, Solid Data = MFS

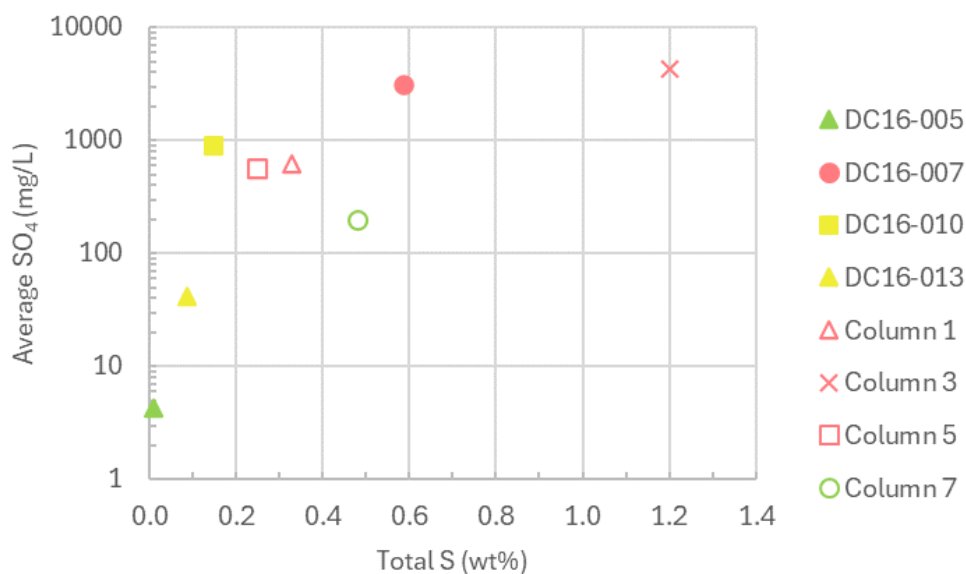


Figure 22: Sulfur content versus average sulfate concentration.

Average SO₄ (mg/L) over 8 months of column leach testing.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

Figure 23 to Figure 31 provide a summary of CLT data for MFS and the Escarpment Mine as related to WQ Ref Values for Escarpment Mine, indicated on each figure as a black dashed line. These compliance limits are useful as water quality reference values (WQ Ref Values) for contextualising CLT data. Although metals such as Zn are elevated well above WQ Ref Values, they are comparable between locations (e.g., MFS max Zn = 56.4 mg/L; and Escarpment max Zn = 45 mg/L). Similarly, Cu (MFS max Cu = 3.05 mg/L; and Escarpment max Cu = 3.4 mg/L), and Ni (MFS max Ni = 11.8 mg/L; and Escarpment max Ni = 7.9 mg/L).

There is a clear distinction between PAF samples and those that are NAF. For instance, this is shown in Figure 23 for dissolved aluminium. Of Note is sample DC16-013 that behaves like a NAF sample but has some elevated PCOC (e.g., Cd: Figure 24).

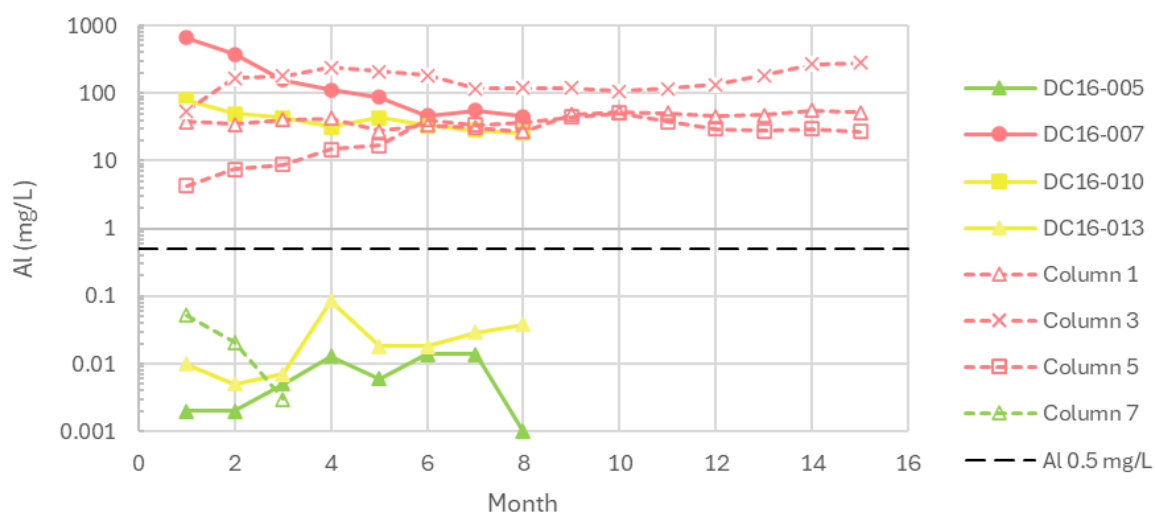


Figure 23: Aluminium CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

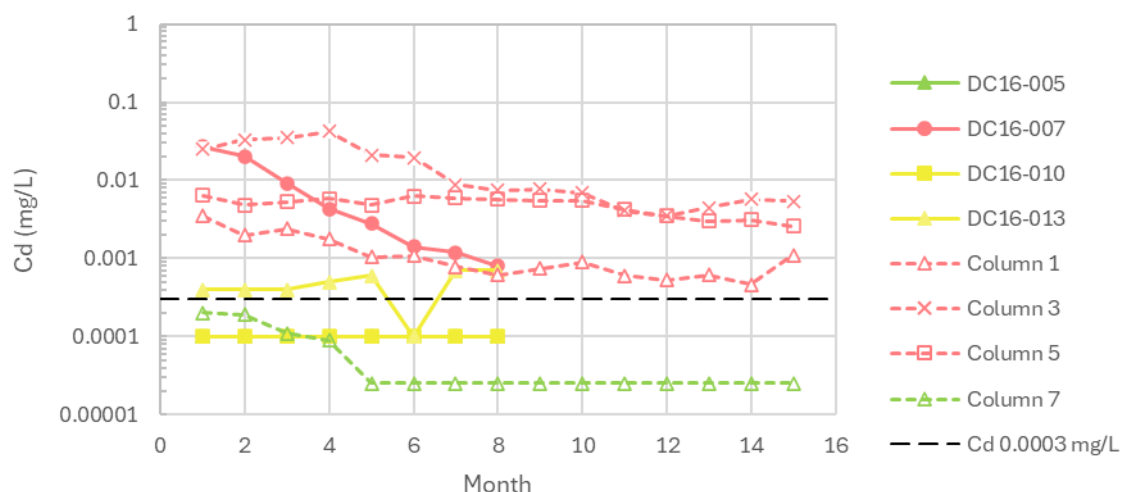


Figure 24: Cadmium CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

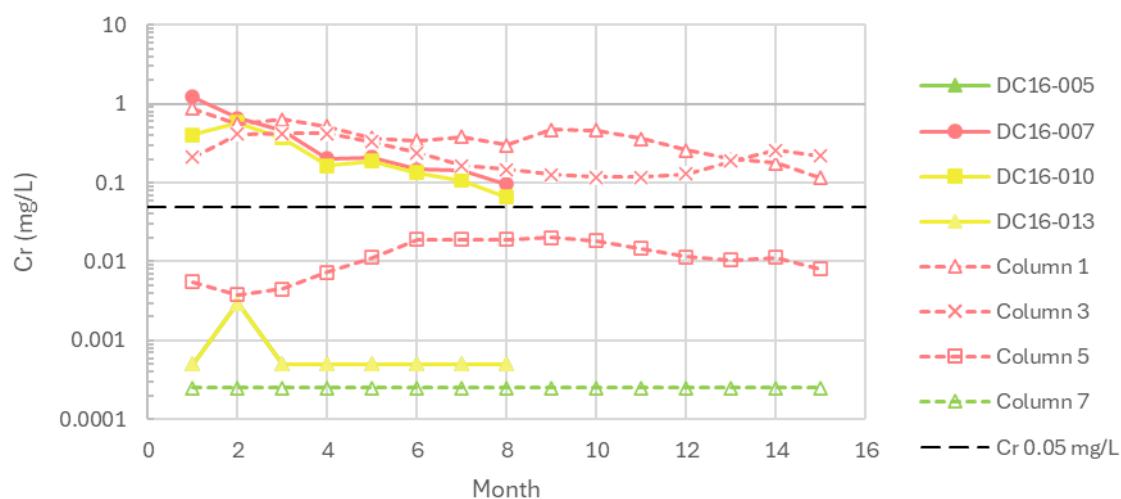


Figure 25: Chromium CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

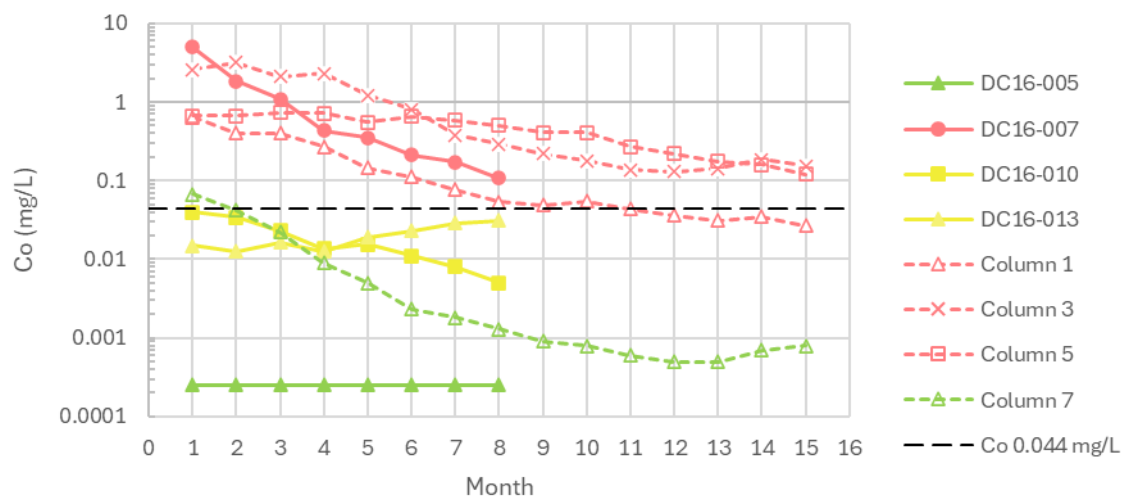


Figure 26: Cobalt CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

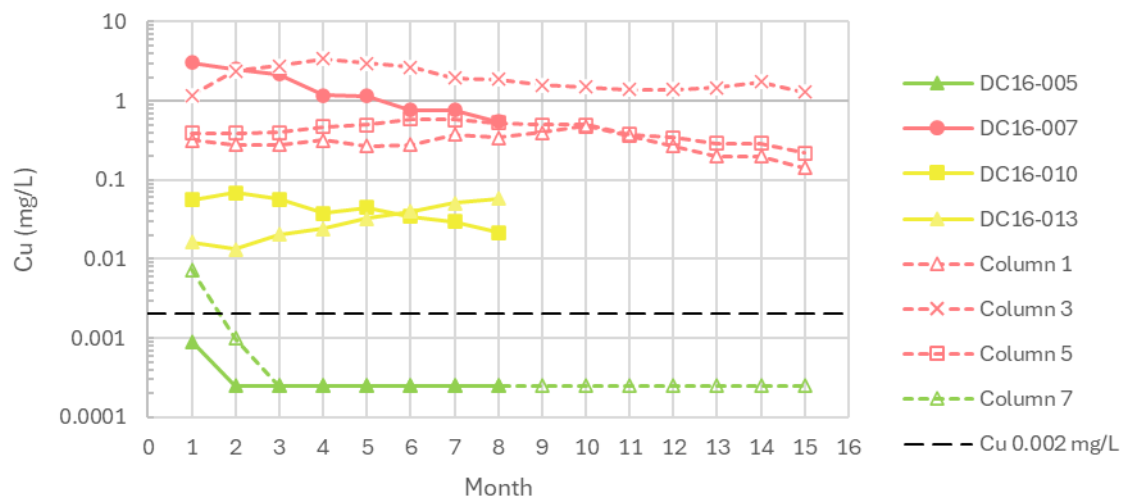


Figure 27: Copper CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

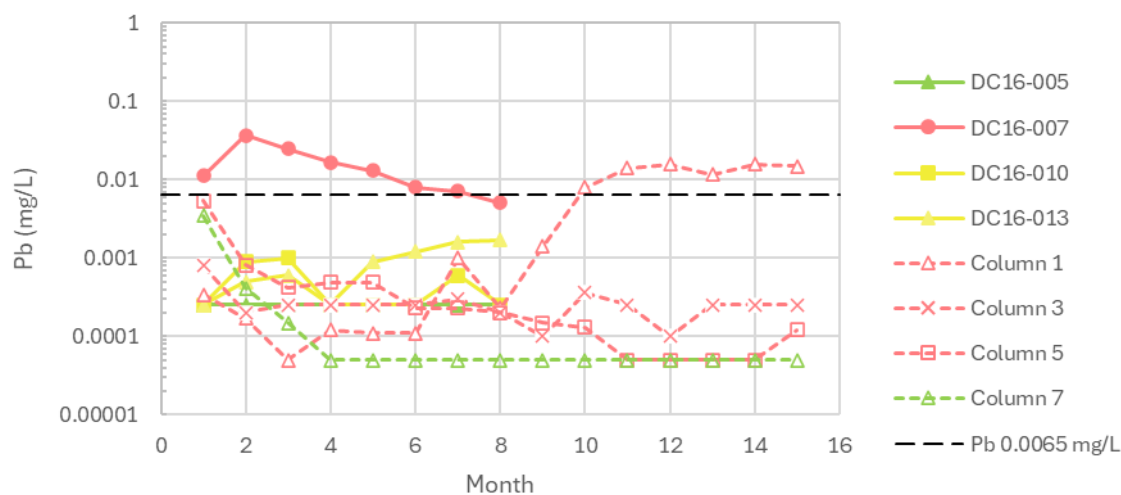


Figure 28: Lead CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

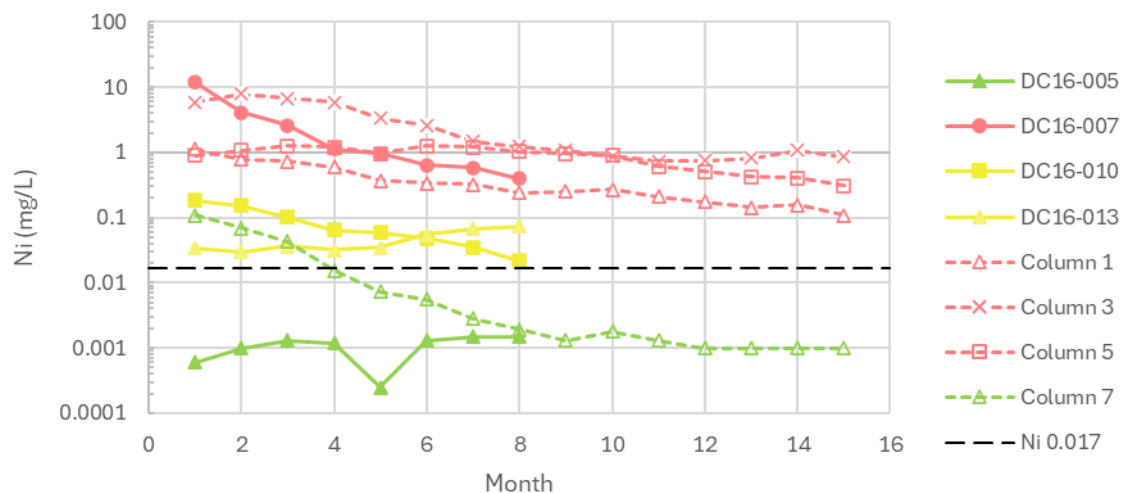


Figure 29: Nickel CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

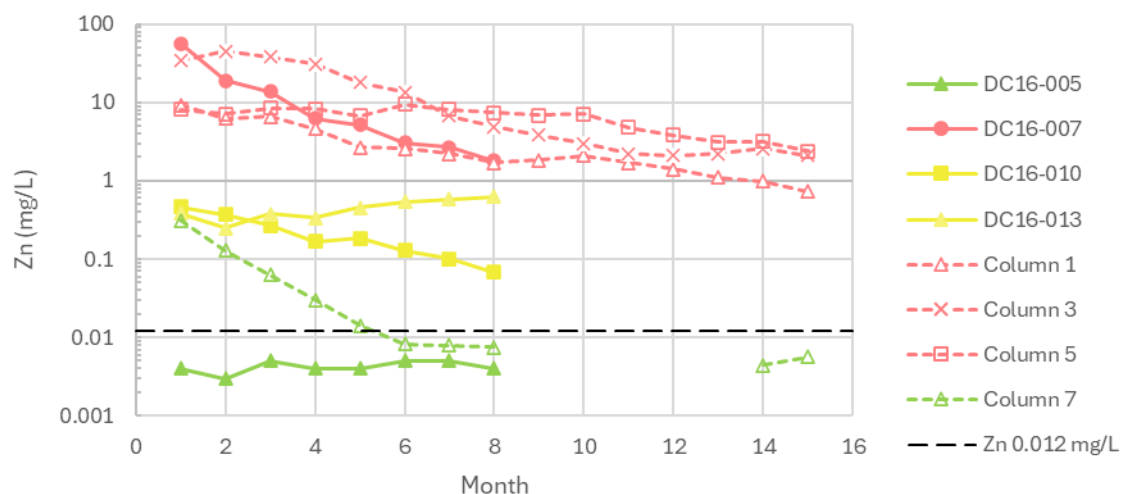


Figure 30: Zinc CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

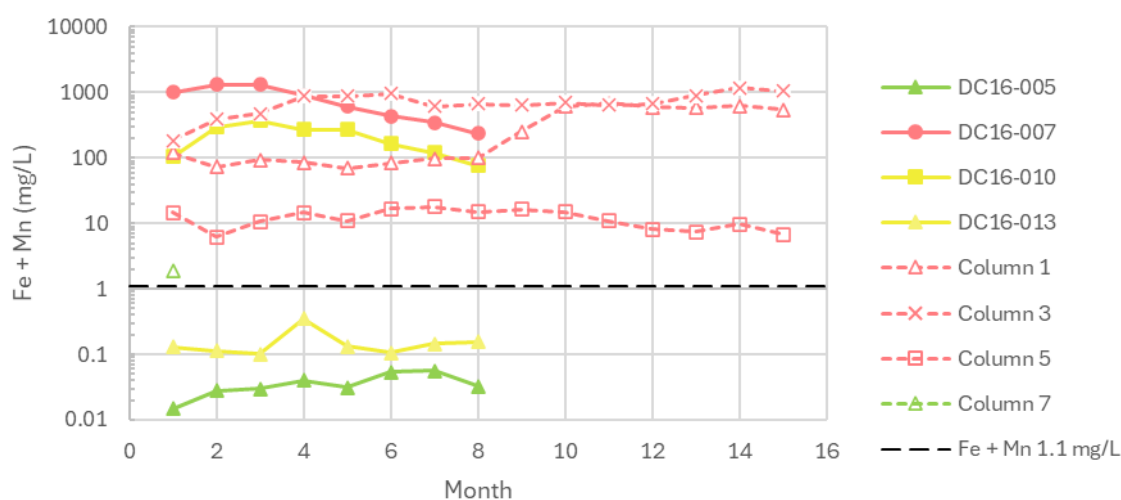


Figure 31: Iron and manganese CLT data Escarpment and MFS.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

Figure 32 presents the relationship between total sulfur and sulfate data for month 1 of the CLT. Results indicate a strong relationship ($R = 0.89$) when DC16-007 data (outlier) is excluded.

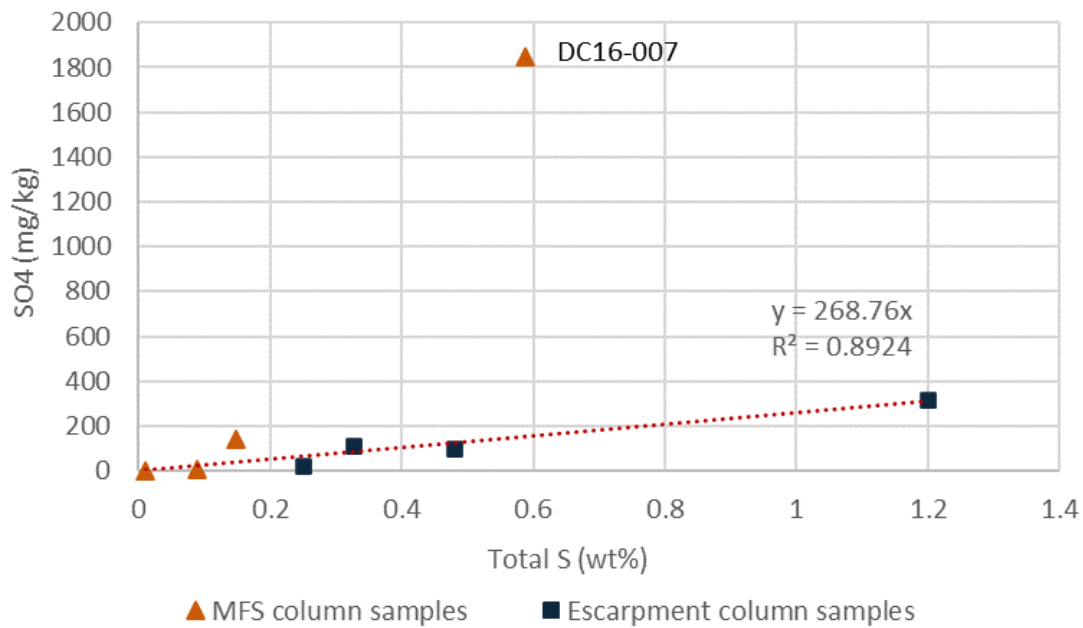


Figure 32: Month 1 CLT sulfate relationship with total S.

6.3 Summary

MFS CLT data and the identified PCOC are similar to CLT data for the existing Escarpment Mine, collected for the consenting of the Escarpment Mine in ~2011. This suggests water quality effects are likely to be similar and the observations / water quality for the Barren Valley Engineered Landform at the existing Escarpment Mine can be transferred to the MFS sub-area and be considered a suitable analogue model.

Key PCOC that will require management (as compared to WQ Ref Values) are: Al, Cu, Ni, and Zn. The relationship between sulfate and key PCOC is illustrated in Figure 33.

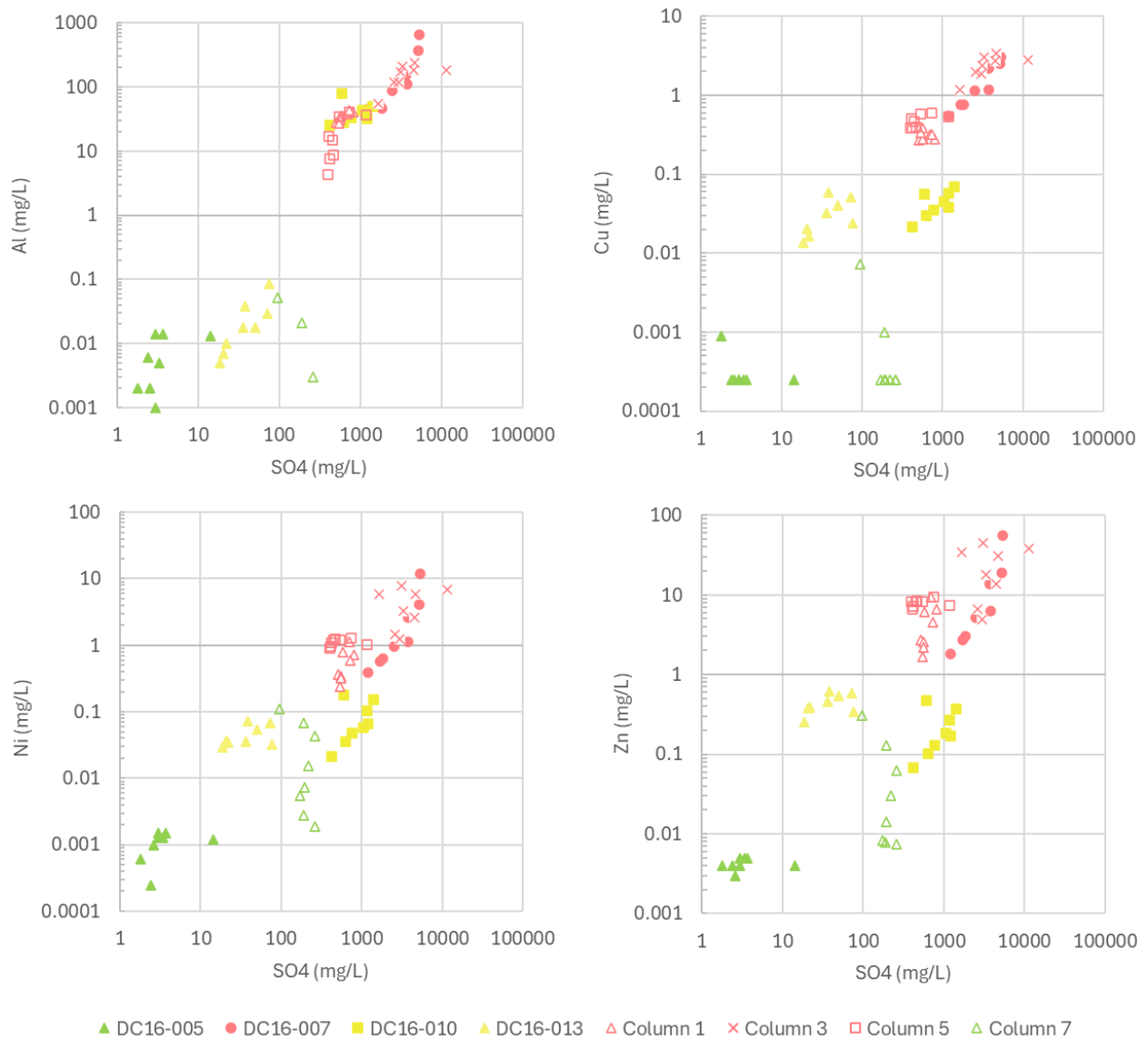


Figure 33: Relationship between sulfate and key PCOC for MFS and Escarpment CLT data.

Data from the first 8 months of CLT.

Data colour coded as ABA data classification, Green = NAF, Yellow = Low Risk, Red = PAF/HAF.

7 SUMMARY

This section summarises the findings of this factual report.

7.1 Introduction

CLT data are often used to develop geochemical models when no other empirical data are available. However, for the BPCP analogue data are available from the Barren Valley ELF located at the existing Escarpment Mine (MWM, 2026b). Hence, MFS column data was assessed to confirm that the rocks are comparable to ESE CLT data to confirm that Barren Valley ELF data provides a suitable empirical dataset to develop geochemical models at the MFS sub-area.

Data has also been obtained to improve the geochemical understanding of the MFS sub-area from shake flask test data, which provides an indication of the stored water soluble PCOC.

Such data from shake flask testing and CLT can be used to develop source terms. The data in this report has been used in other reports for this purpose (MWM, 2026b,c).

7.2 NAF Stockpile Runoff Source Terms

Previous studies have used column leach test data as a water quality source term for mine impacted run-off of various mine domains (e.g., Pope et al., 2012). This is a reasonable (and conservative⁷) assumption for NAF surfaces in that column leach test data provides a concentration for any incident water (e.g., laboratory flush water or rainfall in the field) that interacts with rocks. However, for PAF surfaces this may be too conservative, and would generate high loads irrespective of rainfall periodicity.

A runoff source term was required for modelling of NAF stockpiles for the BPCP (noting other terms are developed elsewhere (MWM, 2026c). Column leach test water quality data for NAF sample DC16-005 are provided in Table 11. This provides a run-off water quality result for NAF BCM materials and is used in the water and load balance model for the project.

Table 11: CLT data: NAF sample DC16-005.

PARAMETER	MONTH								AVG
	1	2	3	4	5	6	7	8	
pH	8.0	7.6	7.9	5.2	5.7	5.9	5.0	7.0	5.6
Acidity pH 7.0 mg/L	0	0	0	4	2	2	1	1	1.3
Alkalinity CaCO ₃ mg/L	0	0	0	0	1	1	0	0	0.3
Chloride	1.5	1.8	1.8	1.0	0.70	0.25	0.54	0.47	1.0
Sulfate	1.8	2.6	3.4	14.2	2.4	3.0	3.7	3.0	4.3
Silicon	0.28	0.18	0.18	0.12	0.17	0.21	0.19	0.24	0.20
Aluminium	0.002	0.002	0.005	0.013	0.006	0.014	0.014	0.001	0.007
Arsenic	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Boron	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.13	0.03
Cadmium	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

⁷ Noting this is conservative in higher flow events where dilution would be significant.

PARAMETER	MONTH								AVG
	1	2	3	4	5	6	7	8	
Calcium	0.05	0.05	0.05	0.05	0.05	0.05	0.025	0.025	0.044
Chromium	0.0005	0.0030	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0008
Cobalt	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Copper	0.0009	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Iron	0.005	0.005	0.005	0.02	0.005	0.03	0.03	0.0025	0.013
Lead	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Magnesium	0.02	0.04	0.05	0.04	0.05	0.04	0.05	0.06	0.04
Manganese	0.010	0.023	0.025	0.020	0.027	0.024	0.026	0.030	0.023
Mercury	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Nickel	0.0006	0.0010	0.0013	0.0012	0.00025	0.0013	0.0015	0.0015	0.0011
Potassium	1.42	1.71	2.07	1.50	1.83	1.69	1.58	1.78	1.70
Selenium	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Sodium	0.95	1.63	0.005	0.69	0.71	0.48	0.41	0.34	0.65
Titanium	0.00025	-	-	-	-	-	-	-	0.00025
Thallium	-	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Zinc	0.004	0.003	0.005	0.004	0.004	0.005	0.005	0.004	0.004

All data in mg/L unless otherwise stated. Values reported as < LOR are reported here as ½ LOR in red.

Hyphen “-” indicates no data are available.

7.3 Shake Flask Data

Shake Flask data provides an indication of the immediate water quality of the materials once wetted.

- DC16-005 results indicated the sample did not generate acidity with a pH of 6.4 and most metals were below the LOR⁸.
- DC16-007 results indicated the sample generated acidity with a pH of 3.7; acidity to pH 7.0 of 240 mg/L, and elevated metals, notably Al (30.1 mg/L), Co (0.361 mg/L), Cu (0.139 mg/L), Fe (19 mg/L), Ni (0.63 mg/L), Zn (3.92 mg/L).
- DC16-010 results indicated the sample generated acidity with a pH of 3.9 and elevated metals notably Al (6.52 mg/L), Fe (4.89 mg/L), Ni (0.026 mg/L), and Zn (0.33 mg/L).
- DC16-013 results indicated the sample did not generate acidity with a pH of 7 and most metals were below LOR, notable result for Zn at 0.055 mg/L.

Given the age of the sample (e.g., 13 months post drilling) they are unlikely to be representative of the stored mobile oxidation products that could be present in the sample. However, the data suggests what could occur if PAF materials are not managed appropriately (e.g., buried within the final ELF as soon as practicable). Column leach test data (month 1) are a better estimate of stored oxidation products within the ELF.

⁸ Limit of Reporting.

7.4 Column Leach Test Data

CLT were run for eight months from April 2024 until November 2024 with results consistent with shake flask testing. Testing was halted as geochemical trends agreed with ABA data:

- DC16-005 data supported the classification of the sample as NAF with pH between 8 (month 1) and 5 (month 7); low acidity; low concentrations of trace metals; and a maximum sulfate of 14.2 mg/L. Data are representative of a low sulfur depositional environment (e.g., fluvial sediments).
- DC16-007 data supported the classification of the sample as acid-forming with a pH between 2 to 3; maximum sulfate of 5,300 mg/L; and elevated metals, notably maximum Ni of 11.8 mg/L and maximum Zn of 56.4 mg/L. Data indicates that all metals are elevated above WQ Ref Values (Table 1) for Al, Cd, Cr, Co, Cu, Fe + Mn, Pb, Ni, Zn; notably Al 660 mg/L (WQ Ref Value 0.5 mg/L), Ni 11.8 mg/L (WQ Ref Value 0.068 mg/L), and Zn 56.4 mg/L (WQ Ref Value 0.054 mg/L). Data indicate that metals, acidity, and sulfate decrease over time.
- DC16-010 data supported the classification of the sample as acid-forming with a pH between 2.8 to 2.5. Maximum sulfate was at month 4 (1,410 mg/L) then decreasing. Data indicates metals are elevated above WQ Ref Values (Table 1) for Al, Cr, Cu, Fe + Mn, Ni, and Zn. Metals were elevated and decrease over time.
- DC16-013 results suggest the sample is lower risk for AMD with pH decreasing from 6.6 to 5 (but not below pH 4.5), low sulfate (22 to 38 mg/L) and overall low metals. Data indicates metals are elevated above WQ Ref Values (Table 1) for Cd, Cu, Ni, and Zn, which suggests classification of the sample as Low Risk (as identified by more recent NAG pH data).
- MFS CLT data and the identified PCOC are similar to CLT data for the existing Escarpment Mine, collected for the consenting of the Escarpment Mine in ~2011, although sulfate:PCOC relationships are different, and the variance should be considered for modelling. This suggests water quality effects are likely to be similar and the observations / water quality for the Barren Valley Engineered Landform at the existing Escarpment Mine can be transferred to the MFS sub-area and be considered a suitable analogue model.
- CLT data indicates what PCOC are higher risk (as compared to WQ Ref Values). These data suggest that Al, Cd, Co, Cu, Cr, Ni, and Zn could be elevated. However detailed water and load balance modelling is required to confirm whether these risks are present as CLT data can be conservative and scaling is required.

7.5 Quality Assurance / Quality Control

A greater level of effort is required for the QA/QC of laboratory ABA data to ensure the samples are classified correctly. A number of ABA lab results were retested to validate anomalous results. It is assumed the variability in early tests on composite core samples versus prepared column samples is related to sample preparation processes rather than analysis accuracy. The correct laboratory analysis and classification of samples will be critical for materials management at the MFS sub-area. A QA/QC management process should be developed for the testing and classification of samples.

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9 LIMITATIONS

Attention is drawn to the document “Limitations”, which is included in Appendix F of this report. The statements presented in this document are intended to provide advice on what the realistic expectations of this report should be, and to present recommendations on how to minimise the risks associated with this project. The document is not intended to reduce the level of responsibility accepted by Mine Waste Management, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in doing so.

APPENDIX A ABBREVIATIONS

ABBREVIATION	DEFINITION
ABA	Acid base accounting
AEE	Assessment of environmental effects
AMD	Acid and metalliferous drainage, which can also include low metal saline drainage
ANC	Acid neutralisation capacity
ARD	Acid rock drainage
BCM	Brunner Coal Measures
BPCP	Buller Plateau Continuation Project
BRL	Bathurst Resources Ltd
CLT	Column Leach Test
CRL	CRL Energy Limited
EC	Electrical Conductivity
ESE	Escarpment Extended
ELF	Engineered Landform
FTAA	Fast-track Approvals Act 2024
HAF	High Acid Forming
IOR	Intrinsic oxidation rate
LOR	Limit of reporting
LR	Low risk
MFS	Mount Frederick South
MPA	Maximum potential acidity
MWM	Mine Waste Management Limited
NAF	Non-acid forming
NAG	Net Acid Generation Capacity
NAPP	Net acid production potential
NMD	Neutral Metalliferous Drainage
PAF	Potentially acid forming
PCOC	Potential constituents of concern
QA/QC	Quality assurance and quality control
SD	Saline drainage
UC	Uncertain
UWHR	Upper Waimangaroa Haul Road
WQ Ref Value	Water Quality Reference Value, taken from the Escarpment Mine Resource Consent RC10193

APPENDIX B DEFINITIONS

TERM	DEFINITION
Acid Base Accounting	Conducted to predict acid generation and neutralisation characteristics of a waste rock material.
Acid Neutralisation Capacity	This is a measure of the insitu neutralising potential of a sample. Expressed as kg H ₂ SO ₄ equivalent per tonne.
Acid and Metalliferous Drainage	Includes both acidic drainages typically caused from the oxidation of exposed sulfides, and metalliferous drainage resulting from elevated levels of toxic metals and salinity. Saline drainage can also occur. In all instances sulfate is high.
Acid Rock Drainage	A form of AMD, characterised by low pH, elevated toxic metal concentrations, high sulfate concentrations and high salinity.
Interim Cover Layer	An engineered structure designed to inhibit oxygen and water transport (e.g. an internal cover layer placed during WRL construction which subsequently is buried within the WRL).
Maximum Potential Acidity	Is a measure of the insitu acid production of a sample. Expressed as kg H ₂ SO ₄ equivalent per tonne.
Neutral Metalliferous Drainage	A form of AMD characterised by near-neutral pH, elevated heavy metal concentrations, and high sulfate salinity.
Net Acid Production Potential	Is a measure of the samples overall acid generating capacity and is calculated by subtracting the ANC from MPA. A negative NAPP indicates a net neutralising capacity and a positive NAPP indicates a net acid generating capacity. NAPP, MPA, and ANC are expressed in kg H ₂ SO ₄ per tonne equivalent.
Non-Acid Forming	Is a measure that the samples are not likely to produce AMD.
Shake Flask Testing	Static solubility test where prepared sample is tumbled in solvent for a determined time, typically 18-hours, with resulting leachate analysed to understand the concentration of dissolved parameters. Leachates are acidified and analysed for a suite of major, trace, and ultra-trace elements using a combination of ICP-MS and ICP-AES.

APPENDIX C DC16 ABA DATA

ABA Data Review

Drillhole DC16 was selected for column leach test sampling after initial ABA analysis. The AMIRA (2002) classification system was applied to facilitate sample selection. ABA data from DC16 is summarised in Table C1.

Figure C1 illustrates NAG pH versus rinse pH of samples from drillhole DC16 with potential depositional environment indicated.

Further ABA testing was undertaken on samples selected for column leach testing to provide supporting ABA data to validate the material classification conducted previously (i.e., original ABA data in Table C1). These data are provided in Table C2.

Variation was observed between original ABA data used to select the samples for column testing and more recent ABA data of the CLT materials, notably NAG pH of DC16-010 and DC16-013.

Sample DC16-010 is classified as uncertain by the AMIRA classification having a positive NAPP and NAG pH > 4.5. Earlier data indicated a NAG pH of 4.5, which would classify it as Low Risk using MFS process flow classification. The conservative NAG pH value of 4.5 was used throughout this report for DC16-010. The sample is classified as Low Risk. Low risk samples can still generate acidity due to ANC being low in the BCM, however PCOC concentrations are lower compared to PAF samples.

Sample DC16-013 had a NAG pH of 4.1 but earlier data indicated a NAG pH of 4.8. This is likely a function of the ANC in the earlier data, with the NAG pH being higher than 'CLT tested' materials. This sample is considered Low Risk when the more conservative NAG pH value of 4.1 is applied through MFS process flow classification. Given the CLT data shows elevated metals, it is assumed that the NAG pH of 4.1 is the most accurate result, is a conservative result, and hence the sample is then classified as Low Risk.

Table C1: Original DC16 ABA data and sample selection for AMIRA (2002) column leach testing.

SAMPLE ID	DEPTH	TOTAL S	ANC	MPA	NAPP	NAG pH	RINSE pH (1:2)	AMIRA (2002) CRITERIA	PALAEO-ENVIRONMENT	LITHOLOGY*
UNITS	m	wt %		kg H ₂ SO ₄ /t		-	-	-	-	-
AMD-DC16-001-VCSS	2-4.2	0.005	4	0.15	-3	5.7	6.4	NAF	Fresh	Coarse SS, granule conglomerate, minor mudstone
AMD-DC16-002-GRCG	4.2-6.2	0.043	2	1.3	0	5.4	4.7	NAF	Fresh	Coarse-medium SS, granule conglomerate
AMD-DC16-003-CM/VFSS	6.2-7.5	0.522	-1	16	16	3.8	3.4	PAF	Marine	Carbonaceous mudstone, very fine SS
AMD-DC16-004-GRCG	7.5-10.5	0.025	0	0.76	0	5.8	4.4	NAF	Fresh	Very coarse-medium SS, granule conglomerate
AMD-DC16-005-GRCG B	10.5-13.5	0.009	0	0.28	0	5.8	4.4	NAF	Fresh	Granule conglomerate
AMD-DC16-006-GRCG	13.5-16.5	0.005	1	0.15	-1	5.7	5.1	NAF	Fresh	Granule breccia, very coarse SS, minor carbonaceous mudstone and pebble breccia
AMD-DC16-007-MSS	16.5-18.2	0.581	-1	18	18	3.5	3.3	PAF	Marine	Medium-fine SS, laminated very fine SS
AMD-DC16-008-VCSS	18.2-20.2	0.014	1	0.42	-1	5.8	4.3	NAF	Fresh	Very coarse-medium SS, minor fine SS
AMD-DC16-009-GRBX	20.2-22	0.007	0	0.2	0	6	4.9	NAF	Fresh	Granule breccia, minor high carbonaceous mudstone
AMD-DC16-010-GRBX	22-25.2	0.174	1	5.3	4	4.5	5.1	PAF	Marine	Granule breccia
AMD-DC16-011-MSS	25.2-27	0.24	0	7.4	7	4.1	3.9	PAF	Marine	Fine-medium SS, minor carbonaceous mudstone
AMD-DC16-012-FSS	27-27.8	0.549	0	17	16	3.4	4.7	PAF	Marine	Laminated fine and very fine SS
AMD-DC16-013-HCM	33.2-36.2	0.084	4	2.6	-2	4.8	5.9	NAF	Fresh / transitional	Coarse-very fine SS, high carbonaceous mudstone, minor coal
AMD-DC16-014-HCM/MSS	36.2-39.2	0.085	4	2.6	-1	5	5.7	NAF	Fresh / transitional	Very coarse-very fine SS, pebble conglomerate, minor carbonaceous mudstone
AMD-DC16-015-HCM/FSS	39.2-40.5	0.127	0	3.9	4	4.7	5.5	UC	Transitional	Fine SS, high carbonaceous mudstone, minor coal
AMD-DC16-016-PBCG	40.5-41.2	0.85	2	26	24	3.1	4.1	PAF	Marine	Pebble conglomerate
AMD-DC16-017-ARG	41.2-41.9	0.029	1	0.88	0	5.1	6.6	NAF	Fresh	Coarse-very fine SS, mudstone

Grey cells identify samples selected for column leach testing.

* Lithological descriptions provided by BRL. The term SS means sandstone.

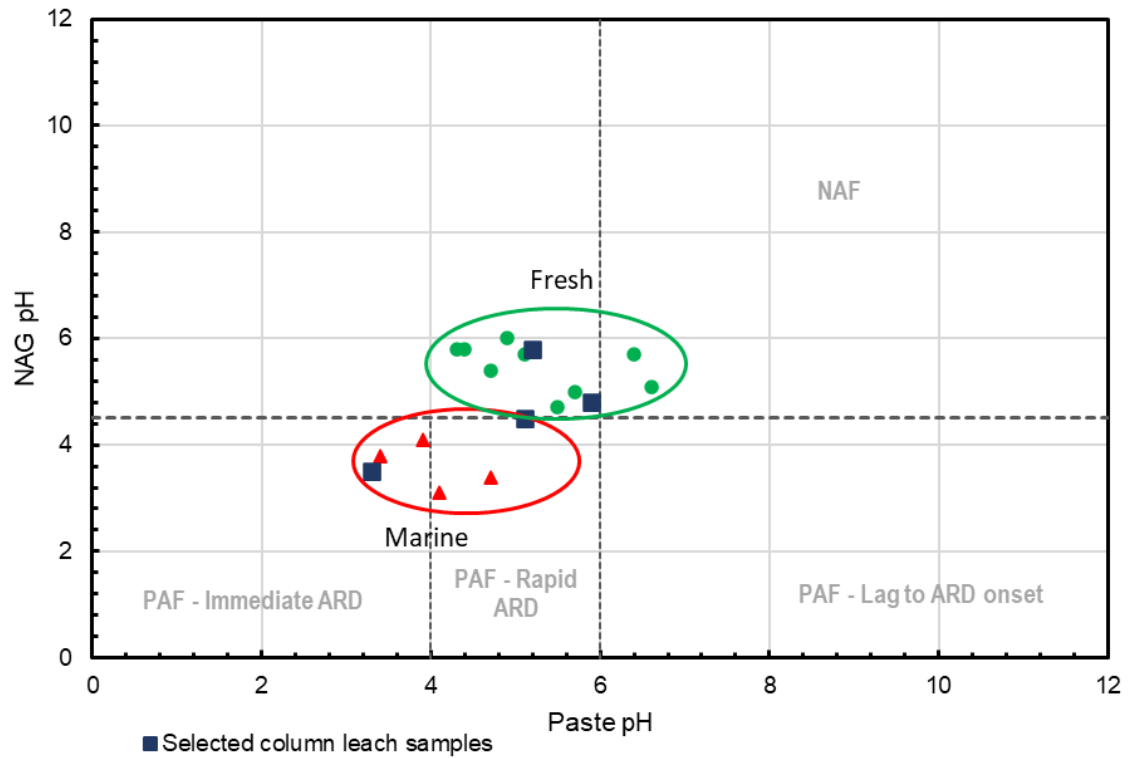


Figure C1: NAG pH vs. Rinse pH of samples from drillhole DC16.

Plotted as original ABA data as used for sample selection.

Note: Paleoenvironment highlighted (Marine environment versus freshwater environment).

Table C2: ABA data for Column Leach Test Samples

COLUMN	TESTING PHASE	PASTE pH	S (wt%)	MPA (kg / H ₂ SO ₄ /t)	ANC (kg / H ₂ SO ₄ /t)	NAPP (kg / H ₂ SO ₄ /t)	NAG pH
DC16-005	As tested	6.1	0.011	0.34	1	-0.66	5.9
	Original	4.4	0.009	0.3	0	0	5.8
DC16-007	As tested	5.0	0.587	17.96	-1	17.96	3.8
	Original	3.3	0.581	18	-1	18	3.5
DC16-010	As tested	5.2	0.148	4.53	0	4.53	5.4
	Original	5.1	0.174	5.3	1	4	4.5
DC16-013	As tested	6.1	0.089	2.72	1	1.72	4.1
	Original	5.9	0.084	2.6	4	-2	4.8

Red data indicates ABA data applied throughout this report.

APPENDIX D TABULATED LABORATORY DATA

Column Leach Test AMD-DC16-005-GRCG B								
Analyte Name	Week 4	Week 8	Week 12	Week 16	Week 20	Week 24	Week 28	Week 32
pH	8	7.6	7.9	5.2	5.7	5.9	5	7
Sample Volume ml	390	439	445	475	450	470	460	475
Acidity pH 4.0 mg/L	0	0	0	0	0	0	0	0
Acidity pH 5.0 mg/L	0	0	0	0	0	0	0	0
Acidity pH 7.0 mg/L	0	0	0	4	2	2	1	1
Total Alkalinity as mg/L CaCO3	0	0	0	0	1	1	0	0
Bicarbonate Alkalinity as mg/L CaCO3	0	0	0	0	1	1	0	0
Carbonate Alkalinity as mg/l CaCO3	0	0	0	0	0	0	0	0
Conductivity µS/cm @ 25 °C	12	16	18	15	40	83	14	11
Chloride g/m3	1.5	1.8	1.8	1.0	0.70	0.25	0.54	0.47
Sulphate, SO4 g/m3	1.8	2.6	3.4	14.2	2.4	3.0	3.7	3.0
Dissolved Silicon g/m3	0.28	0.18	0.18	0.12	0.17	0.21	0.19	0.24
Aluminium, Al g/m3	0.002	0.002	0.005	0.013	0.006	0.014	0.014	0.001
Arsenic, As g/m3	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Boron, B g/m3	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.13
Cadmium, Cd g/m3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Calcium, Ca g/m3	0.05	0.05	0.05	0.05	0.05	0.05	0.025	0.025
Chromium, Cr g/m3	0.0005	0.0030	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cobalt, Co g/m3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Copper, Cu g/m3	0.0009	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Iron, Fe g/m3	0.005	0.005	0.005	0.02	0.005	0.03	0.03	0.0025
Lead, Pb g/m3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Magnesium, Mg g/m3	0.02	0.04	0.05	0.04	0.05	0.04	0.05	0.06
Manganese, Mn g/m3	0.010	0.023	0.025	0.020	0.027	0.024	0.026	0.030
Mercury, Hg g/m3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Nickel, Ni g/m3	0.0006	0.0010	0.0013	0.0012	0.00025	0.0013	0.0015	0.0015
Potassium, K g/m3	1.42	1.71	2.07	1.50	1.83	1.69	1.58	1.78
Selenium, Se g/m3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Sodium, Na g/m3	0.95	1.63	0.005	0.69	0.71	0.48	0.41	0.34
Titanium, Ti g/m3	0.0003	-	-	-	-	-	-	-
Thallium, Tl g/m3	-	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Zinc, Zn g/m3	0.004	0.003	0.005	0.004	0.004	0.005	0.005	0.004

- hyphen denotes no data

Column Leach Test AMD-DC16-007-MSS								
Analyte Name	Week 4	Week 8	Week 12	Week 16	Week 20	Week 24	Week 28	Week 32
pH	2.4	2	2.3	2.2	2.1	2.2	2.2	2.2
Sample Volume ml	976	1088	1050	1045	1070	1020	970	1020
Acidity pH 4.0 mg/L	2000	3800	3600	2500	1800	1300	1100	840
Acidity pH 5.0 mg/L	4400	5300	4600	3100	2200	1500	1400	1000
Acidity pH 7.0 mg/L	5200	6100	5200	3500	2400	1700	1500	1100
Total Alkalinity as mg/L CaCO3 mg/L	0	0	0	N.A.	N.A.	N.A.	N.A.	N.A.
Bicarbonate Alkalinity as mg/L CaCO3	0	0	0	N.A.	N.A.	N.A.	N.A.	N.A.
Carbonate Alkalinity as mg/l CaCO3	0	0	0	N.A.	N.A.	N.A.	N.A.	N.A.
Conductivity µS/cm @ 25 °C	5400	7200	6500	5300	4400	1600	3400	3100
Chloride g/m3	0.21	0.1	0.21	1.7	0.5	0.25	1.7	1
Sulphate, SO4 g/m3	5300	5170	3720	3800	2500	1840	1700	1200
Dissolved Silicon g/m3	3.2	5.4	4.8	4	3.8	3.4	3.2	3.9
Aluminium, Al g/m3	660	374	157	112	87.1	46.1	55.3	45.3
Arsenic, As g/m3	1.91	2.41	1.69	0.683	0.464	0.243	0.174	0.095
Boron, B g/m3	0.015	0.015	0.015	0.015	0.015	0.015	0.04	0.07
Cadmium, Cd g/m3	0.027	0.0202	0.0091	0.0043	0.0028	0.0014	0.0012	0.0008
Calcium, Ca g/m3	17.9	8.4	5.6	2.6	2.7	1.8	1.6	1.2
Chromium, Cr g/m3	1.22	0.66	0.456	0.203	0.209	0.146	0.141	0.096
Cobalt, Co g/m3	5	1.83	1.09	0.433	0.35	0.213	0.173	0.108
Copper, Cu g/m3	3.05	2.54	2.17	1.17	1.15	0.763	0.766	0.55
Iron, Fe g/m3	998	1320	1300	897	602	436	341	232
Lead, Pb g/m3	0.0113	0.0371	0.0245	0.0167	0.0131	0.008	0.0071	0.0051
Magnesium, Mg g/m3	7.19	5.2	4.15	3.55	2.44	1.72	1.86	1.43
Manganese, Mn g/m3	17.1	9.77	9.4	4.84	6.49	4.27	4.25	3.2
Mercury, Hg g/m3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Nickel, Ni g/m3	11.8	4.05	2.59	1.13	0.95	0.634	0.579	0.392
Potassium, K g/m3	1.85	3.74	4.17	3.67	4.26	4.25	5.11	4.39
Selenium, Se g/m3	0.029	0.008	0.006	0.006	0.0025	0.0025	0.0025	0.0025
Sodium, Na g/m3	3.85	2.65	0.7	0.34	0.31	0.29	0.28	0.34
Titanium, Ti g/m3	0.0078	-	-	-	-	-	-	-
Thallium, Tl g/m3	-	0.0152	0.0112	0.0072	0.0077	0.006	0.0061	0.0055
Zinc, Zn g/m3	56.4	19.1	13.7	6.29	5.22	3.04	2.7	1.81

- hyphen denotes no data

Column Leach Test AMD-DC16-010-GRBX								
Analyte Name	Week 4	Week 8	Week 12	Week 16	Week 20	Week 24	Week 28	Week 32
pH	2.8	2.6	2.6	2.5	2.5	2.6	2.6	2.6
Sample Volume ml	579	650	665	675	695	678	680	680
Acidity pH 4.0 mg/L	350	830	890	720	710	500	400	280
Acidity pH 5.0 mg/L	690	1200	1200	940	900	640	520	360
Acidity pH 7.0 mg/L	800	1400	1400	1100	1000	720	570	400
Total Alkalinity as mg/L CaCO3 mg/L	0	0	0	N.A.	N.A.	N.A.	N.A.	N.A.
Bicarbonate Alkalinity as mg/L CaCO3	0	0	0	N.A.	N.A.	N.A.	N.A.	N.A.
Carbonate Alkalinity as mg/l CaCO3	0	0	0	N.A.	N.A.	N.A.	N.A.	N.A.
Conductivity μ S/cm @ 25 °C	1500	2100	2100	1900	1900	3800	1500	1200
Chloride g/m3	0.33	0.33	0.31	1.4	0.5	0.25	0.18	1.4
Sulphate, SO4 g/m3	600	1410	1180	1200	1050	770	630	420
Dissolved Silicon g/m3	1.4	1.6	2.1	1.8	2.4	2.2	1.6	1.7
Aluminium, Al g/m3	79.6	49.6	43.5	31.5	44	33.3	28.1	25.7
Arsenic, As g/m3	0.071	1.21	1.62	0.851	0.694	0.279	0.105	0.049
Boron, B g/m3	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
Cadmium, Cd g/m3	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Calcium, Ca g/m3	2.6	3.9	2.3	1.5	3.6	2.7	2.7	2.2
Chromium, Cr g/m3	0.406	0.573	0.366	0.165	0.186	0.135	0.106	0.066
Cobalt, Co g/m3	0.0394	0.0339	0.0232	0.0135	0.0154	0.011	0.0081	0.005
Copper, Cu g/m3	0.056	0.0688	0.057	0.038	0.0451	0.0347	0.0298	0.0215
Iron, Fe g/m3	101	292	368	271	267	163	120	76.4
Lead, Pb g/m3	0.00025	0.0009	0.001	0.00025	0.00025	0.00025	0.0006	0.00025
Magnesium, Mg g/m3	1.73	1.89	1.3	0.38	0.79	0.47	0.37	0.24
Manganese, Mn g/m3	2.87	3.46	2.01	0.817	1.23	0.668	0.505	0.305
Mercury, Hg g/m3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Nickel, Ni g/m3	0.181	0.154	0.102	0.0649	0.0586	0.0475	0.0351	0.0215
Potassium, K g/m3	0.12	0.49	0.15	0.04	0.1	0.11	0.2	0.36
Selenium, Se g/m3	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025
Sodium, Na g/m3	0.46	1.43	0.21	0.06	0.1	0.09	0.12	0.13
Titanium, Ti g/m3	0.00025	-	-	-	-	-	-	-
Thallium, Tl g/m3	-	0.0013	0.0012	0.00025	0.0013	0.0012	0.0013	0.0017
Zinc, Zn g/m3	0.467	0.369	0.269	0.169	0.184	0.13	0.101	0.068

- hyphen denotes no data

Column Leach Test AMD-DC16-013-HCM								
Analyte Name	Week 4	Week 8	Week 12	Week 16	Week 20	Week 24	Week 28	Week 32
pH	6.6	7.3	6.8	6.9	5.4	5.3	4.6	5
Sample Volume ml	773	800	790	850	810	830	830	810
Acidity pH 4.0 mg/L	0	0	0	0	0	0	0	0
Acidity pH 5.0 mg/L	0	0	0	0	0	0	2	2
Acidity pH 7.0 mg/L	9	5	3	3	2	3	3	4
Total Alkalinity as mg/L CaCO3 mg/L	1	0	1	0	1	0	0	0
Bicarbonate Alkalinity as mg/L CaCO3	1	0	1	0	1	0	0	0
Carbonate Alkalinity as mg/l CaCO3	0	0	0	0	0	0	0	0
Conductivity µS/cm @ 25 °C	62	63	61	59	71	14	91	100
Chloride g/m3	0.08	0.09	1.52	0.13	0.5	0.25	0.14	0.26
Sulphate, SO4 g/m3	22	18.7	20.6	76	36	50	72	38
Dissolved Silicon g/m3	0.15	0.07	0.08	0.03	0.07	0.12	0.12	0.14
Aluminium, Al g/m3	0.01	0.005	0.007	0.085	0.018	0.018	0.029	0.038
Arsenic, As g/m3	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Boron, B g/m3	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.04
Cadmium, Cd g/m3	0.0004	0.0004	0.0004	0.0005	0.0006	0.0001	0.0007	0.0007
Calcium, Ca g/m3	5.6	5.3	5.4	2.5	6.2	8	9.9	12.3
Chromium, Cr g/m3	0.0005	0.003	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005
Cobalt, Co g/m3	0.015	0.013	0.016	0.013	0.019	0.023	0.029	0.0313
Copper, Cu g/m3	0.016	0.013	0.020	0.024	0.033	0.040	0.051	0.0582
Iron, Fe g/m3	0.06	0.02	0.02	0.3	0.03	0.005	0.02	0.02
Lead, Pb g/m3	0.00025	0.0005	0.0006	0.00025	0.0009	0.0012	0.0016	0.0017
Magnesium, Mg g/m3	0.44	0.59	0.52	0.29	0.62	0.62	0.80	0.84
Manganese, Mn g/m3	0.071	0.092	0.082	0.054	0.104	0.102	0.124	0.136
Mercury, Hg g/m3	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025
Nickel, Ni g/m3	0.034	0.030	0.037	0.032	0.035	0.054	0.067	0.074
Potassium, K g/m3	1.32	1.39	1.70	0.95	1.84	2.22	2.33	2.57
Selenium, Se g/m3	0.010	0.018	0.017	0.014	0.018	0.014	0.019	0.021
Sodium, Na g/m3	0.60	1.65	1.11	0.51	0.79	0.78	0.86	0.75
Titanium, Ti g/m3	0.00025	-	-	-	-	-	-	-
Thallium, Tl g/m3	-	0.0006	0.00025	0.00025	0.0005	0.0005	0.0005	0.001
Zinc, Zn g/m3	0.39	0.25	0.38	0.34	0.46	0.54	0.59	0.62

- hyphen denotes no data



APPENDIX E LABORATORY CERTIFICATES OF ANALYSIS



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		ESO_CSA06V S % LOR 0.01	ESO_CSA06V C* % LOR 0.01	ESO_CSA08V Sulphide S* % LOR 0.01	ESO_NEPM103_1_2 pH 1:2 aged* pH unit LOR 2.00
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	0.011	0.07	<0.01	6.1
AMD_DC16_007_MSS	WP24-14140.002	0.587	0.53	0.33	5.0
AMD_DC16_010_GRBX	WP24-14140.003	0.148	0.09	0.07	5.2
AMD_DC16_013_HCM	WP24-14140.004	0.089	6.08	0.09	6.1



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00	ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	200	1	0.1	0.32
AMD_DC16_007_MSS	WP24-14140.002	850	-1	-0.1	18
AMD_DC16_010_GRBX	WP24-14140.003	350	0	0.0	4.5
AMD_DC16_013_HCM	WP24-14140.004	190	1	0.1	2.7



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00	ESO_CLA49V NAG* KGH2SO4/T	ESO_CLA49V NAG to pH 4.5* KGH2SO4/T
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	-1	5.9	13	0
AMD_DC16_007_MSS	WP24-14140.002	18	3.8	15	0
AMD_DC16_010_GRBX	WP24-14140.003	4	5.4	13	0
AMD_DC16_013_HCM	WP24-14140.004	2	4.1	32	0



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		EWAPH_APHA4500H PH pH unit LOR 2.00	EWAEC_APHA2510 Conductivity µS/cm LOR 2.00	EWAEC_APHA2510 Temp* °C	EWA_APHA2320 AlkbicarHCO3 mg/l LOR 5.00
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	6.4	20	16	<5
AMD_DC16_007_MSS	WP24-14140.002	3.7	450	15	-
AMD_DC16_010_GRBX	WP24-14140.003	3.9	170	15	-
AMD_DC16_013_HCM	WP24-14140.004	7.0	32	14	<5



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		EWA_APHA2320 AlkcarCO3 mg/l LOR 5.00	EWA_APHA2320 AlkTOT mg/l CaCO3 LOR 5.00	EWA_APHA2310 Acidity pH4 mg/l LOR 5.00	EWA_APHA2310 Acidity pH5 mg/l LOR 5.00
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	<5	<5	<5	<5
AMD_DC16_007_MSS	WP24-14140.002	-	-	17	150
AMD_DC16_010_GRBX	WP24-14140.003	-	-	5	36
AMD_DC16_013_HCM	WP24-14140.004	<5	<5	<5	<5



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		EWA_APHA2310 Acidity pH7 mg/l LOR 5.00	EW_APHA3125_DIS_ELS Al* g/m3 LOR 0.01	EW_APHA3125_DIS_ELS As* g/m3	EW_APHA3125_DIS_ELS B* g/m3 LOR 0.01
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	8	0.028	<0.001	<0.03
AMD_DC16_007_MSS	WP24-14140.002	240	30.1	0.007	<0.03
AMD_DC16_010_GRBX	WP24-14140.003	64	6.52	0.005	<0.03
AMD_DC16_013_HCM	WP24-14140.004	6	<0.005	0.003	<0.03



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		EW_APHA3125_DIS_ELS Cd* g/m3	EW_APHA3125_DIS_ELS Ca* g/m3 LOR 0.10	EW_APHA3125_DIS_ELS Cr* g/m3	EW_APHA3125_DIS_ELS Co* g/m3
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	<0.0002	<0.1	<0.001	<0.0005
AMD_DC16_007_MSS	WP24-14140.002	0.0018	2.7	0.024	0.361
AMD_DC16_010_GRBX	WP24-14140.003	<0.0002	1.6	0.007	0.006
AMD_DC16_013_HCM	WP24-14140.004	<0.0002	2.5	<0.001	0.003



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		EW_APHA3125_DIS_ELS Cu* g/m3	EW_APHA3125_DIS_ELS Fe* g/m3 LOR 0.01	EW_APHA3125_DIS_ELS Pb* g/m3	EW_APHA3125_DIS_ELS Mg* g/m3 LOR 0.02
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	<0.0005	0.020	<0.0005	<0.01
AMD_DC16_007_MSS	WP24-14140.002	0.139	19.0	<0.0005	1.44
AMD_DC16_010_GRBX	WP24-14140.003	0.004	4.89	<0.0005	0.31
AMD_DC16_013_HCM	WP24-14140.004	<0.0005	<0.01	<0.0005	0.21



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		EW_APHA3125_DIS_ELS Mn* g/m3	EW_APHA3125_DIS_ELS Hg* g/m3	EW_APHA3125_DIS_ELS Ni* g/m3	EW_APHA3125_DIS_ELS K* g/m3 LOR 0.10
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	<0.0005	<0.0005	<0.0005	1.5
AMD_DC16_007_MSS	WP24-14140.002	0.911	<0.0005	0.630	10.2
AMD_DC16_010_GRBX	WP24-14140.003	0.411	<0.0005	0.026	1.5
AMD_DC16_013_HCM	WP24-14140.004	0.027	<0.0005	0.007	3.0



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		EW_APHA3125_DIS_ELS Se* g/m3	EW_APHA3125_DIS_ELS Na* g/m3 LOR 0.50	EW_APHA3125_DIS_ELS Sn* g/m3	EW_APHA3125_DIS_ELS Ti* g/m3
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	<0.005	<0.5	<0.0005	0.002
AMD_DC16_007_MSS	WP24-14140.002	<0.005	<0.5	<0.0005	<0.0005
AMD_DC16_010_GRBX	WP24-14140.003	<0.005	<0.5	<0.0005	<0.0005
AMD_DC16_013_HCM	WP24-14140.004	<0.005	0.7	<0.0005	<0.0005



ANALYSIS REPORT

Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Sampled By:		EW_APHA3125_DIS_ELS Zn* g/m3 LOR 0.01	EWAELM_APHA3120B_DIS SI g/m3 LOR 0.02	EWAIC_APHA4110_HILL SO4* g/m3 LOR 0.01	EWAIC_APHA4110_HILL CL* mg/l LOR 0.05
Sample ID	Laboratory ID				
AMD_DC16_005_GRCGB	WP24-14140.001	<0.002	0.85	1.50	<0.5
AMD_DC16_007_MSS	WP24-14140.002	3.92	2.1	230	<0.5
AMD_DC16_010_GRBX	WP24-14140.003	0.334	0.95	64.0	<0.5
AMD_DC16_013_HCM	WP24-14140.004	0.055	1.8	9.40	<0.5

Date Start/End Analysis (2/8/2024 -)

* - Denotes non accredited tests

REMARKS:

NAG Blank ph= 5.8

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method
ESO_CLA49V: Net Acid Generation Test: SGS Global method

EWA_APHA2320: Alkalinity: APHA 2320B

EWAELM_APHA3120B_DIS: Metals in water dissolved by
ICP-OES subcontracted ELS APHA 3120B subcontracted ELS

ESO_NEPM103_1_2: Paste pH in soil: NEPM103 1:2 extraction

EWAPH_APHA4500H: pH in water by APHA4500H: APHA 4500
H SGS Westport

EWA_APHA2310: Acidity includes Free CO2: APHA 2310

EWAIC_APHA4110_HILL: Anions by Ion Chromatography in
Water: APHA 4110B subcontracted HILLS

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method
EWAEC_APHA2510: Conductivity and TDS by Calculation -
Water: APHA 2510 SGS Westport
EW_APHA3125_DIS_ELS: Trace metals (dissolved) in water by
APHA3125 (modified): APHA 3125 subcontracted ELS



ANALYSIS REPORT

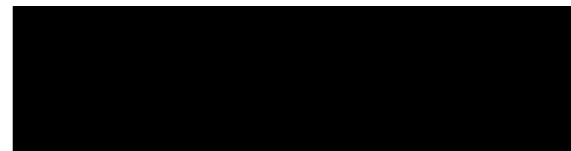
Draft Report: WP24-14140



Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 01-Aug-2024
Completed:
Job Number: WP24-14140
Report Number: 0000029296
Order Reference: J-NZ0348

Signed and dated on 03-Sep-2024



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ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By: [REDACTED]

		ESO_CSA06V S % LOR 0.01	ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00
Sample ID	Laboratory ID				
AMD_DC16_001_VCSS - 2 4.2	WP23-12453.001	<0.005	6.4	260	4
AMD_DC16_002_GRCG - 4.2 6.2	WP23-12453.002	0.043	4.7	86	2
AMD_DC16_003_CM/VFSS - 6.2 7.5	WP23-12453.003	0.522	3.4	490	-1
AMD_DC16_004_GRCG - 7.5 10.5	WP23-12453.004	0.025	4.4	65	0
AMD_DC16_005_GRCG - 10.5 13.5	WP23-12453.005	0.014	4.4	58	1
AMD_DC16_005_GRCG B - 10.5 13.5	WP23-12453.006	0.009	5.2	44	0
AMD_DC16_006_GRCG - 13.5 16.5	WP23-12453.007	<0.005	5.1	31	1
AMD_DC16_007_MSS - 16.5 18.2	WP23-12453.008	0.581	3.3	670	-1
AMD_DC16_008_VCSS - 18.2 20.2	WP23-12453.009	0.014	4.3	39	1

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED] n

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

		ESO_CSA06V S % LOR 0.01	ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00
AMD_DC16_009_GRBX - 20.2 22	WP23-12453.010	0.007	4.9	26	0
AMD_DC16_010_GRBX - 22 25.2	WP23-12453.011	0.174	5.1	28	1
AMD_DC16_011_Mss - 25.2 27	WP23-12453.012	0.240	3.9	250	0
AMD_DC16_012_FSS - 27 27.8	WP23-12453.013	0.549	4.7	87	0
AMD_DC16_013_HCM - 33.2 36.2	WP23-12453.014	0.084	5.9	27	4
AMD_DC16_014_HCM/MSS - 36.2 39.2	WP23-12453.015	0.085	5.7	41	4

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By: [REDACTED]

		ESO_CSA06V S % LOR 0.01	ESO_NEPM103_1_2 pH 1:2* pH unit LOR 2.00	ESO_NEPM103_1_2 Cond (1:2)* µS/cm LOR 2.00	ESO_CLA48V ANC H2SO4* KGH2SO4/T LOR -1,000.00
Sample ID	Laboratory ID				
AMD_DC16_015_HCM/FSS - 39.2 40.5	WP23-12453.016	0.127	5.5	42	0
AMD_DC16_016_PBCG - 40.5 41.15	WP23-12453.017	0.850	4.1	150	2
AMD_DC16_017_ARG - 41.15 41.95	WP23-12453.018	0.029	6.6	5	1
AMD_DC16_008_VCSSL - 18.2 20.2	WP23-12453.009	0.016	4.7	36	2
AMD_DC16_018_ARG - 41.95 43.7	WP23-12453.019	0.043	6.3	71	2

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By: [REDACTED]

		ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15	ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00
Sample ID	Laboratory ID				
AMD_DC16_001_VCSS - 2 4.2	WP23-12453.001	0.4	<0.15	-3	5.7
AMD_DC16_002_GRCG - 4.2 6.2	WP23-12453.002	0.2	1.3	0	5.4
AMD_DC16_003_CM/VFSS - 6.2 7.5	WP23-12453.003	-0.1	16	16	3.8
AMD_DC16_004_GRCG - 7.5 10.5	WP23-12453.004	0.0	0.76	0	5.8
AMD_DC16_005_GRCG - 10.5 13.5	WP23-12453.005	0.1	0.42	-1	6.0
AMD_DC16_005_GRCG B - 10.5 13.5	WP23-12453.006	0.0	0.28	0	5.8
AMD_DC16_006_GRCG - 13.5 16.5	WP23-12453.007	0.1	0.15	-1	5.7
AMD_DC16_007_MSS - 16.5 18.2	WP23-12453.008	-0.1	18	18	3.5
AMD_DC16_008_VCSS - 18.2 20.2	WP23-12453.009	0.1	0.42	-1	5.8

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

		ESO_CLA48V ANC CaCO3* % LOR -100.00	ESO_CLA48V TAP* KGH2SO4/T LOR 0.15	ESO_CLA48V NAPP* KGH2SO4/T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00
AMD_DC16_009_GRBX - 20.2 22	WP23-12453.010	0.0	0.20	0	6.0
AMD_DC16_010_GRBX - 22 25.2	WP23-12453.011	0.1	5.3	4	4.5
AMD_DC16_011_Mss - 25.2 27	WP23-12453.012	0.0	7.4	7	4.1
AMD_DC16_012_FSS - 27 27.8	WP23-12453.013	0.0	17	16	3.4
AMD_DC16_013_HCM - 33.2 36.2	WP23-12453.014	0.4	2.6	-2	4.8
AMD_DC16_014_HCM/MSS - 36.2 39.2	WP23-12453.015	0.4	2.6	-1	5.0

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By: [REDACTED]

		ESO_CLA48V ANC CaCO ₃ * % LOR -100.00	ESO_CLA48V TAP* KGH ₂ SO ₄ /T LOR 0.15	ESO_CLA48V NAPP* KGH ₂ SO ₄ /T LOR -1,000.00	ESO_CLA49V NAG pH* pH unit LOR 2.00
Sample ID	Laboratory ID				
AMD_DC16_015_HCM/FSS - 39.2 40.5	WP23-12453.016	0.0	3.9	4	4.7
AMD_DC16_016_PBCG - 40.5 41.15	WP23-12453.017	0.2	26	24	3.1
AMD_DC16_017_ARG - 41.15 41.95	WP23-12453.018	0.1	0.88	0	5.1
AMD_DC16_008_VCSSL - 18.2 20.2	WP23-12453.009	0.2	0.49	-1	5.8
AMD_DC16_018_ARG - 41.95 43.7	WP23-12453.019	0.2	1.3	-1	6.0

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By: [REDACTED]

		ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID		
AMD_DC16_001_VCSS - 2 4.2	WP23-12453.001	0	14
AMD_DC16_002_GRCG - 4.2 6.2	WP23-12453.002	0	13
AMD_DC16_003_CM/VFSS - 6.2 7.5	WP23-12453.003	4	12
AMD_DC16_004_GRCG - 7.5 10.5	WP23-12453.004	0	11
AMD_DC16_005_GRCG - 10.5 13.5	WP23-12453.005	0	11
AMD_DC16_005_GRCG B - 10.5 13.5	WP23-12453.006	0	13
AMD_DC16_006_GRCG - 13.5 16.5	WP23-12453.007	0	18
AMD_DC16_007_MSS - 16.5 18.2	WP23-12453.008	6	13
AMD_DC16_008_VCSS - 18.2 20.2	WP23-12453.009	0	14

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

		ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
AMD_DC16_009_GRBX - 20.2 22	WP23-12453.010	0	13
AMD_DC16_010_GRBX - 22 25.2	WP23-12453.011	0	4
AMD_DC16_011_Mss - 25.2 27	WP23-12453.012	2	5
AMD_DC16_012_FSS - 27 27.8	WP23-12453.013	7	14
AMD_DC16_013_HCM - 33.2 36.2	WP23-12453.014	0	10
AMD_DC16_014_HCM/MSS - 36.2 39.2	WP23-12453.015	0	7

ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 16-Aug-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Sampled By: [REDACTED]

		ESO_CLA49V NAG to pH 4.5* KGH2SO4/T	ESO_CLA49V NAG* KGH2SO4/T
Sample ID	Laboratory ID		
AMD_DC16_015_HCM/FSS - 39.2 40.5	WP23-12453.016	0	8
AMD_DC16_016_PBCG - 40.5 41.15	WP23-12453.017	12	20
AMD_DC16_017_ARG - 41.15 41.95	WP23-12453.018	0	14
AMD_DC16_008_VCSSL - 18.2 20.2	WP23-12453.009	0	17
AMD_DC16_018_ARG - 41.95 43.7	WP23-12453.019	0	10

Date Start/End Analysis (27/10/2023 - 24/11/2023)

* - Denotes non accredited tests

REMARKS:

Note: Rinse pH analysis is reported under the pH 1:2 analyte.

Blank NAG pH= 6.82

APPLIED METHODS:

ESO_CSA06V: Total sulphur/carbon, LECO Method: SGS
Global method
ESO_CLA49V: Net Acid Generation Test: SGS Global method

ESO_NEPM103_1_2: Paste pH in soil: NEPM103 1:2 extraction

ESO_CLA48V: Determination of ANC, TAP and NAPP of
Soils/Rocks: SGS inhouse method

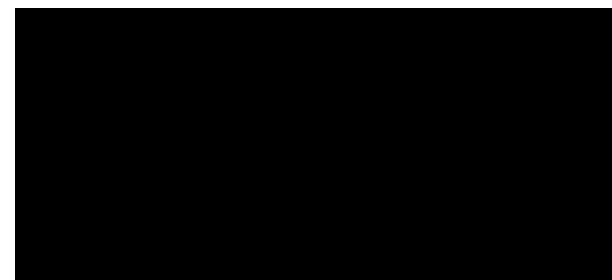
ANALYSIS REPORT

WP23-12453

Client: BT Mining Ltd
PO Box 79151
Avonhead
Christchurch 8446 NEW ZEALAND
Attention: [REDACTED]

Received: 30-Oct-2023
Completed: 24/11/2023
Job Number: WP23-12453
Report Number: 0000026668
Order Reference: QCHEM0053

Signed and dated on 24-Nov-2023



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ANALYSIS REPORT

WP24-13648.001

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-005-GRCG B

Received: 17/04/2024

Completed: 04/09/2024

Job Number: WP24-13648

Report Number: 0000029326

Order Reference: AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	8.0	pH unit
Sample Volume	APHA 2310	390	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	12	µS/cm
Chloride	APHA 4110 B	1.5	g/m ³
Sulphate as SO ₄	APHA 4110 B	1.8	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	0.28	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.002	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	<0.1	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0009	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.02	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0099	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0006	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.42	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.95	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.004	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 were titrated according to the low-alkalinity procedure and calculation in the APHA manual, which gives a zero result for sample 1 as volume to pH 4.5 is half the total volume to 4.2.
AR-24-NW-025088-01 & AR-24-NW-025088-02

This amended report dated 04/09/2024 replaces earlier report WP24-13648 (0000029206), issued 21/08/24. Report now includes TI
Date Start/End Analysis (26/4/2024 - 4/9/2024)

Reported: 4/09/2024 9:39:02AM

ANALYSIS REPORT

WP24-13648.002

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-007-MSS

Received: 17/04/2024

Completed: 04/09/2024

Job Number: WP24-13648

Report Number: 0000029326

Order Reference: AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.4	pH unit
Sample Volume	APHA 2310	976	ml
Acidity to pH 4.0	APHA 2310	2000	mg/l
Acidity to pH 5.0	APHA 2310	4400	mg/l
Acidity to pH 7.0	APHA 2310	5200	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	5400	µS/cm
Chloride	APHA 4110 B	0.21	g/m ³
Sulphate as SO ₄	APHA 4110 B	5300	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	3.2	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	660	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	1.91	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0270	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	17.9	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	1.22	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	5.00	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	3.05	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	998	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0113	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	7.19	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	17.1	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	11.8	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.85	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.029	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	3.85	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0094	g/m ³
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	0.0078	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	56.4	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 were titrated according to the low-alkalinity procedure and calculation in the APHA manual, which gives a zero result for sample 1 as volume to pH 4.5 is half the total volume to 4.2.
AR-24-NW-025088-01 & AR-24-NW-025088-02

This amended report dated 04/09/2024 replaces earlier report WP24-13648 (0000029206), issued 21/08/24. Report now includes TI
Date Start/End Analysis (26/4/2024 - 4/9/2024)

Reported: 4/09/2024 9:39:02AM

ANALYSIS REPORT

WP24-13648.003

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 17/04/2024

Completed: 04/09/2024

Job Number: WP24-13648

Report Number: 0000029326

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-010-GRBX

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.8	pH unit
Sample Volume	APHA 2310	579	ml
Acidity to pH 4.0	APHA 2310	350	mg/l
Acidity to pH 5.0	APHA 2310	690	mg/l
Acidity to pH 7.0	APHA 2310	800	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	1500	µS/cm
Chloride	APHA 4110 B	0.33	g/m ³
Sulphate as SO ₄	APHA 4110 B	600	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	1.4	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	79.6	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.071	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	2.6	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.406	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0394	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0560	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	101	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.73	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	2.87	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.181	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	0.12	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.46	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.467	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 were titrated according to the low-alkalinity procedure and calculation

in the APHA manual, which gives a zero result for sample 1 as volume to pH 4.5 is half the total volume to 4.2.

AR-24-NW-025088-01 & AR-24-NW-025088-02

This amended report dated 04/09/2024 replaces earlier report WP24-13648 (0000029206), issued 21/08/24. Report now includes TI

Date Start/End Analysis (26/4/2024 - 4/9/2024)

Reported: 4/09/2024 9:39:02AM

ANALYSIS REPORT

WP24-13648.004

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-013-HCM

Received: 17/04/2024

Completed: 04/09/2024

Job Number: WP24-13648

Report Number: 0000029326

Order Reference: AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	6.6	pH unit
Sample Volume	APHA 2310	773	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	9	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	1	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	1	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	62	µS/cm
Chloride	APHA 4110 B	0.08	g/m ³
Sulphate as SO ₄	APHA 4110 B	22	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	0.15	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.010	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0004	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	5.6	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0150	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0163	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.06	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.44	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0712	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0342	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.32	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.010	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.60	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Titanium (Ti) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.387	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 were titrated according to the low-alkalinity procedure and calculation in the APHA manual, which gives a zero result for sample 1 as volume to pH 4.5 is half the total volume to 4.2.
AR-24-NW-025088-01 & AR-24-NW-025088-02

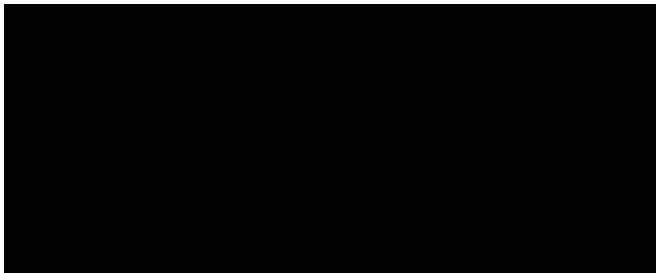
This amended report dated 04/09/2024 replaces earlier report WP24-13648 (0000029206), issued 21/08/24. Report now includes TI
Date Start/End Analysis (26/4/2024 - 4/9/2024)

Reported: 4/09/2024 9:39:02AM



Analysis Report:
WP24-13648.004

Signed and dated on 04-Sep-2024



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ANALYSIS REPORT

WP24-13773.001

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-005-GRCG B Week 8

Received: 10/05/2024

Completed: 07/06/2024

Job Number: WP24-13773

Report Number: 0000029208

Order Reference: AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.6	pH unit
Sample Volume	APHA 2310	439	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	16	µS/cm
Chloride	APHA 4110 B subcontracted ELS	1.75	g/m ³
Sulphate as SO ₄	APHA 4110 B subcontracted ELS	2.58	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	0.18	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.002	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	<0.1	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.003	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.04	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0230	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0010	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.71	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	1.63	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.003	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Date Start/End Analysis (17/5/2024 - 7/6/2024)

Reported: 21/08/2024 11:08:52AM

ANALYSIS REPORT

WP24-13773.002

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-007-MSS Week 8

Received: 10/05/2024

Completed: 07/06/2024

Job Number: WP24-13773

Report Number: 0000029208

Order Reference: AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.0	pH unit
Sample Volume	APHA 2310	1088	ml
Acidity to pH 4.0	APHA 2310	3800	mg/l
Acidity to pH 5.0	APHA 2310	5300	mg/l
Acidity to pH 7.0	APHA 2310	6100	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	7200	µS/cm
Chloride	APHA 4110 B subcontracted ELS	<0.2	g/m ³
Sulphate as SO ₄	APHA 4110 B subcontracted ELS	5170	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	5.4	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	374	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	2.41	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0202	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	8.4	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.660	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	1.83	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	2.54	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	1320	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0371	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	5.20	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	9.77	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	4.05	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	3.74	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.008	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	2.65	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0152	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	19.1	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Date Start/End Analysis (17/5/2024 - 7/6/2024)

Reported: 21/08/2024 11:08:52AM

ANALYSIS REPORT

WP24-13773.003

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-010-GRBX Week 8

Received: 10/05/2024

Completed: 07/06/2024

Job Number: WP24-13773

Report Number: 0000029208

Order Reference: AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.6	pH unit
Sample Volume	APHA 2310	650	ml
Acidity to pH 4.0	APHA 2310	830	mg/l
Acidity to pH 5.0	APHA 2310	1200	mg/l
Acidity to pH 7.0	APHA 2310	1400	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	2100	µS/cm
Chloride	APHA 4110 B subcontracted ELS	0.33	g/m ³
Sulphate as SO ₄	APHA 4110 B subcontracted ELS	1410	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	1.6	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	49.6	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	1.21	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	3.9	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.573	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0339	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0688	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	292	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0009	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.89	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	3.46	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.154	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	0.49	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	1.43	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0013	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.369	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Date Start/End Analysis (17/5/2024 - 7/6/2024)

Reported: 21/08/2024 11:08:52AM

ANALYSIS REPORT

WP24-13773.004

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-013-HCM Week 8

Received: 10/05/2024

Completed: 07/06/2024

Job Number: WP24-13773

Report Number: 0000029208

Order Reference: AMIRA columns

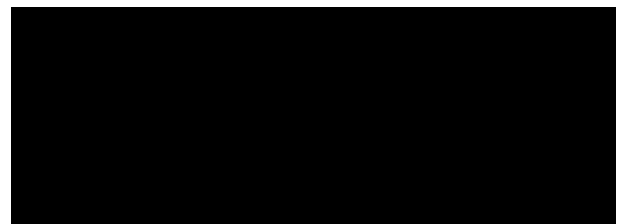
Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.3	pH unit
Sample Volume	APHA 2310	800	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	5	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	63	µS/cm
Chloride	APHA 4110 B subcontracted ELS	0.09	g/m ³
Sulphate as SO ₄	APHA 4110 B subcontracted ELS	18.7	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	0.07	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.005	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0004	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	5.3	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.003	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0126	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0134	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.02	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0005	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.59	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0922	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0297	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.39	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.018	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	1.65	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0006	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.251	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Date Start/End Analysis (17/5/2024 - 7/6/2024)

Reported: 21/08/2024 11:08:52AM

Signed and dated on 21-Aug-2024



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ANALYSIS REPORT

WP24-13903.001

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 13/06/2024

Completed: 21/08/2024

Job Number: WP24-13903

Report Number: 0000029207

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-005-GRCG B Week 12

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.9	pH unit
Sample Volume	APHA 2310	445	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	0	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	<0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	<0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	18	µS/cm
Chloride	APHA 4110 B subcontracted ELS	1.75	g/m3
Sulphate as SO ₄	APHA 4110 B subcontracted ELS	3.36	g/m3
Dissolved Silicon	APHA 3120B subcontracted ELS	0.18	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.005	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	<0.1	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.05	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0249	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0013	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	2.07	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.005	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Date Start/End Analysis (21/6/2024 - 21/8/2024)

Reported: 21/08/2024 10:36:08AM

ANALYSIS REPORT

WP24-13903.002

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-007-MSS Week 12

Received: 13/06/2024

Completed: 21/08/2024

Job Number: WP24-13903

Report Number: 0000029207

Order Reference: AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.3	pH unit
Sample Volume	APHA 2310	1050	ml
Acidity to pH 4.0	APHA 2310	3600	mg/l
Acidity to pH 5.0	APHA 2310	4600	mg/l
Acidity to pH 7.0	APHA 2310	5200	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	6500	µS/cm
Chloride	APHA 4110 B subcontracted ELS	0.21	g/m ³
Sulphate as SO ₄	APHA 4110 B subcontracted ELS	3720	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	4.8	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	157	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	1.69	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0091	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	5.6	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.456	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	1.09	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	2.17	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	1300	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0245	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	4.15	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	9.40	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	2.59	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	4.17	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.006	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.70	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0112	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	13.7	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Date Start/End Analysis (21/6/2024 - 21/8/2024)

Reported: 21/08/2024 10:36:08AM

ANALYSIS REPORT

WP24-13903.003

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-010-GRBX Week 12

Received: 13/06/2024

Completed: 21/08/2024

Job Number: WP24-13903

Report Number: 0000029207

Order Reference: AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.6	pH unit
Sample Volume	APHA 2310	665	ml
Acidity to pH 4.0	APHA 2310	890	mg/l
Acidity to pH 5.0	APHA 2310	1200	mg/l
Acidity to pH 7.0	APHA 2310	1400	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	2100	µS/cm
Chloride	APHA 4110 B subcontracted ELS	0.31	g/m3
Sulphate as SO ₄	APHA 4110 B subcontracted ELS	1180	g/m3
Dissolved Silicon	APHA 3120B subcontracted ELS	2.1	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	43.5	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	1.62	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	2.3	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.366	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0232	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0570	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	368	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0010	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.30	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	2.01	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.102	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	0.15	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.21	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0012	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.269	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Date Start/End Analysis (21/6/2024 - 21/8/2024)

Reported: 21/08/2024 10:36:08AM



ANALYSIS REPORT

WP24-13903.004

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-013-HCM Week 12

Received: 13/06/2024

Completed: 21/08/2024

Job Number: WP24-13903

Report Number: 0000029207

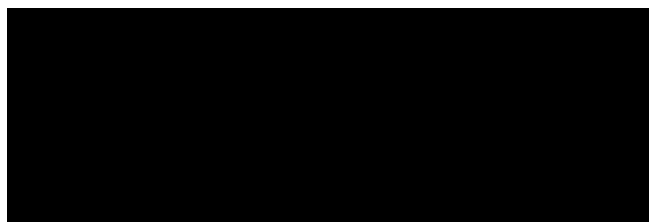
Order Reference: AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	6.8	pH unit
Sample Volume	APHA 2310	790	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	3	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	1	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	1	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	61	µS/cm
Chloride	APHA 4110 B subcontracted ELS	1.52	g/m ³
Sulphate as SO ₄	APHA 4110 B subcontracted ELS	20.6	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	0.08	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.007	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0004	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	5.4	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0164	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0203	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.02	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0006	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.52	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0823	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0369	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.70	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.017	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	1.11	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.380	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Date Start/End Analysis (21/6/2024 - 21/8/2024)

Reported: 21/08/2024 10:36:08AM



Signed and dated on 21-Aug-2024

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ANALYSIS REPORT

WP24-14042.001

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 10/07/2024

Completed: 26/09/2024

Job Number: WP24-14042

Report Number: 0000029552

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-005-GRCG B Week 16

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	5.2	pH unit
Sample Volume	APHA 2310	475	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	4	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	15	µS/cm
Chloride	APHA 4110 B subcontracted ELS	0.95	g/m ³
Sulphate as SO ₄	APHA 4110 B subcontracted ELS	14.2	g/m ³
Dissolved Silicon	APHA 3120B subcontracted ELS	0.12	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.013	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	<0.1	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.02	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.04	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0202	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0012	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.50	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.69	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.004	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Anions (1x) and Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-044631-01

Date Start/End Analysis (11/7/2024 - 26/9/2024)

Reported: 26/09/2024 11:33:51AM

ANALYSIS REPORT

WP24-14042.002

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 10/07/2024

Completed: 26/09/2024

Job Number: WP24-14042

Report Number: 0000029552

Order Reference: AMIRA columns

Description:

Sample ID: AMD-DC16-007-MSS Week 16

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.2	pH unit
Sample Volume	APHA 2310	1045	ml
Acidity to pH 4.0	APHA 2310	2500	mg/l
Acidity to pH 5.0	APHA 2310	3100	mg/l
Acidity to pH 7.0	APHA 2310	3500	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	5300	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	4.0	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	112	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.683	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0043	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	2.6	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.203	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.433	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	1.17	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	897	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0167	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	3.55	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	4.84	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	1.13	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	3.67	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.006	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.34	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0072	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	6.29	g/m3
Chloride	APHA 4110 B	1.7	g/m3
Sulphate as SO4	APHA 4110 B	3800	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Anions (1x) and Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-044631-01

Date Start/End Analysis (11/7/2024 - 26/9/2024)

Reported: 26/09/2024 11:33:51AM

ANALYSIS REPORT

WP24-14042.003

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 10/07/2024

Completed: 26/09/2024

Job Number: WP24-14042

Report Number: 0000029552

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-010-GRBX Week 16

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.5	pH unit
Sample Volume	APHA 2310	675	ml
Acidity to pH 4.0	APHA 2310	720	mg/l
Acidity to pH 5.0	APHA 2310	940	mg/l
Acidity to pH 7.0	APHA 2310	1100	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	1900	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	1.8	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	31.5	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.851	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	1.5	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.165	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0135	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0380	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	271	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.38	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.817	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0649	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	0.04	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.06	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.169	g/m3
Chloride	APHA 4110 B	1.4	g/m3
Sulphate as SO4	APHA 4110 B	1200	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Anions (1x) and Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-044631-01

Date Start/End Analysis (11/7/2024 - 26/9/2024)

Reported: 26/09/2024 11:33:51AM

ANALYSIS REPORT

WP24-14042.004

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 10/07/2024

Completed: 26/09/2024

Job Number: WP24-14042

Report Number: 0000029552

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-013-HCM Week 16

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	6.9	pH unit
Sample Volume	APHA 2310	850	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	3	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	59	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	0.03	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.085	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0005	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	2.5	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0127	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0240	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.30	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.29	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0536	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0322	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	0.95	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.014	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.51	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.340	g/m3
Chloride	APHA 4110 B	0.13	g/m3
Sulphate as SO ₄	APHA 4110 B	76	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Anions (1x) and Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-044631-01

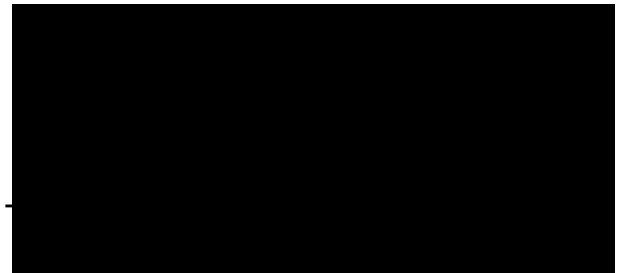
Date Start/End Analysis (11/7/2024 - 26/9/2024)

Reported: 26/09/2024 11:33:51AM



Analysis Report:
WP24-14042.004

Signed and dated on 26-Sep-2024



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ANALYSIS REPORT

WP24-14184.001

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 8/08/2024**Completed:** 06/09/2024**Job Number:** WP24-14184**Report Number:** 0000029366**Order Reference:** AMIRA columns**Description:****Sample ID:** AMD-DC16-005-GRCG B Week 20

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	5.7	pH unit
Sample Volume	APHA 2310	450	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	2	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	1	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	1	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	40	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	0.17	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.006	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	<0.1	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.05	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0265	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.83	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.71	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.004	g/m ³
Chloride	APHA 4110B subcontracted HILLS	0.70	mg/l
Sulphate as SO ₄	APHA 4110B subcontracted HILLS	2.40	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Anions sent to RJ Hills Laboratory Hamilton Report# 3641935

Note: Chloride results <1.0 Due to these samples a dilution was performed prior to analysis, resulting in a detection limit higher than that normally achieved for the Cl analysis

Analysis of Dissolved/Total metals subcontracted to Eurofins ELS 85 port road seaview lower hutt wellington 5010 report # AR-24-NW-048287-01

Date Start/End Analysis (10/8/2024 - 6/9/2024)

Reported: 6/09/2024 4:04:49PM



ANALYSIS REPORT

WP24-14184.002

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Description:

Sample ID: AMD-DC16-007-MSS Week 20

Received: 8/08/2024

Completed: 06/09/2024

Job Number: WP24-14184

Report Number: 0000029366

Order Reference: AMIRA columns

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.1	pH unit
Sample Volume	APHA 2310	1070	ml
Acidity to pH 4.0	APHA 2310	1800	mg/l
Acidity to pH 5.0	APHA 2310	2200	mg/l
Acidity to pH 7.0	APHA 2310	2400	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	4400	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	3.8	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	87.1	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.464	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0028	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	2.7	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.209	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.350	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	1.15	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	602	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0131	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	2.44	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	6.49	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.950	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	4.26	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0077	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.31	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	5.22	g/m3
Chloride	APHA 4110B subcontracted HILLS	<1.0	mg/l
Sulphate as SO4	APHA 4110B subcontracted HILLS	2500	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Anions sent to RJ Hills Laboratory Hamilton Report# 3641935

Note: Chloride results <1.0 Due to these samples a dilution was performed prior to analysis, resulting in a detection limit higher than that normally achieved for the Cl analysis

Analysis of Dissolved/Total metals subcontracted to Eurofins ELS 85 port road seaview lower hutt wellington 5010 report # AR-24-NW-048287-01

Date Start/End Analysis (10/8/2024 - 6/9/2024)

Reported: 6/09/2024 4:04:49PM

ANALYSIS REPORT

WP24-14184.003

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 8/08/2024

Completed: 06/09/2024

Job Number: WP24-14184

Report Number: 0000029366

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-010-GRBX Week 20

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.5	pH unit
Sample Volume	APHA 2310	695	ml
Acidity to pH 4.0	APHA 2310	710	mg/l
Acidity to pH 5.0	APHA 2310	900	mg/l
Acidity to pH 7.0	APHA 2310	1000	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	1900	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	2.4	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	44.0	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.694	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	3.6	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.186	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0154	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0451	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	267	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.79	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	1.23	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0586	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	0.10	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0013	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.10	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.184	g/m3
Chloride	APHA 4110B subcontracted HILLS	<1.0	mg/l
Sulphate as SO4	APHA 4110B subcontracted HILLS	1050	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Anions sent to RJ Hills Laboratory Hamilton Report# 3641935

Note: Chloride results <1.0 Due to these samples a dilution was performed prior to analysis, resulting in a detection limit higher than that normally achieved for the Cl analysis

Analysis of Dissolved/Total metals subcontracted to Eurofins ELS 85 port road seaview lower hutt wellington 5010 report # AR-24-NW-048287-01

Date Start/End Analysis (10/8/2024 - 6/9/2024)

Reported: 6/09/2024 4:04:49PM

ANALYSIS REPORT

WP24-14184.004

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 8/08/2024

Completed: 06/09/2024

Job Number: WP24-14184

Report Number: 0000029366

Order Reference: AMIRA columns

Description:

Sample ID: AMD-DC16-013-HCM Week 20

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	5.4	pH unit
Sample Volume	APHA 2310	810	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	2	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	1	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	1	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	71	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	0.07	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.018	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0006	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	6.2	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0189	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0325	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.03	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0009	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.62	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.104	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0351	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.84	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.018	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.79	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.460	g/m ³
Chloride	APHA 4110B subcontracted HILLS	<1.0	mg/l
Sulphate as SO ₄	APHA 4110B subcontracted HILLS	36.0	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

Anions sent to RJ Hills Laboratory Hamilton Report# 3641935

Note: Chloride results <1.0 Due to these samples a dilution was performed prior to analysis, resulting in a detection limit higher than that normally achieved for the Cl analysis

Analysis of Dissolved/Total metals subcontracted to Eurofins ELS 85 port road seaview lower hutt wellington 5010 report # AR-24-NW-048287-01

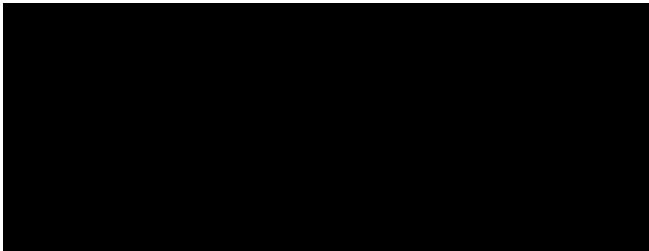
Date Start/End Analysis (10/8/2024 - 6/9/2024)

Reported: 6/09/2024 4:04:49PM



Analysis Report:
WP24-14184.004

Signed and dated on 06-Sep-2024



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ANALYSIS REPORT

WP24-14299.001

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 5/09/2024

Completed: 12/02/2025

Job Number: WP24-14299

Report Number: 0000030625

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-005-GRCG B Week 24

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	5.9	pH unit
Sample Volume	APHA 2310	470	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	2	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	1	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	1	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	83	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	0.21	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.014	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	<0.1	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.03	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.04	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0236	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0013	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.69	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.48	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.005	g/m3
Chloride	APHA 4110B subcontracted HILLS	<0.5	mg/l
Sulphate as SO ₄	APHA 4110B subcontracted HILLS	3.00	g/m3

Note that the standard alkalinity detection limit (5 mg/L) has been lowered for informational purposes only at request.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Anions sent to RJ Hills Laboratory Hamilton Report# 3665800

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-055305-01

This amended report dated 12/02/2025 replaces earlier report WP24-14299 (0000029555), issued 26/09/2024 with below comment added.

Comparison of conductivity results with previous samples from the same columns is strongly indicative that the results are swapped for samples 005 / 013 and 007 / 010. Without sample to retest, this cannot be proven, but most likely order of results is as below.

DC16-005 14 uS/cm

DC16-007 3800 uS/cm

DC16-010 1600 uS/cm

DC16-013 83 uS/cm

Date Start/End Analysis (5/9/2024 - 12/2/2025)

Reported: 12/02/2025 5:12:45PM

ANALYSIS REPORT

WP24-14299.002

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 5/09/2024

Completed: 12/02/2025

Job Number: WP24-14299

Report Number: 0000030625

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-007-MSS Week 24

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.2	pH unit
Sample Volume	APHA 2310	1020	ml
Acidity to pH 4.0	APHA 2310	1300	mg/l
Acidity to pH 5.0	APHA 2310	1500	mg/l
Acidity to pH 7.0	APHA 2310	1700	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	1600	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	3.4	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	46.1	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.243	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0014	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	1.8	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.146	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.213	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.763	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	436	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0080	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.72	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	4.27	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.634	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	4.25	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.006	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.29	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	3.04	g/m3
Chloride	APHA 4110B subcontracted HILLS	<0.5	mg/l
Sulphate as SO4	APHA 4110B subcontracted HILLS	1840	g/m3

Note that the standard alkalinity detection limit (5 mg/L) has been lowered for informational purposes only at request.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Anions sent to RJ Hills Laboratory Hamilton Report# 3665800

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-055305-01

This amended report dated 12/02/2025 replaces earlier report WP24-14299 (0000029555), issued 26/09/2024 with below comment added.

Comparison of conductivity results with previous samples from the same columns is strongly indicative that the results are swapped for samples 005 / 013 and 007 / 010. Without sample to retest, this cannot be proven, but most likely order of results is as below.

DC16-005 14 uS/cm

DC16-007 3800 uS/cm

DC16-010 1600 uS/cm

DC16-013 83 uS/cm

Date Start/End Analysis (5/9/2024 - 12/2/2025)

Reported: 12/02/2025 5:12:45PM

ANALYSIS REPORT

WP24-14299.003

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 5/09/2024

Completed: 12/02/2025

Job Number: WP24-14299

Report Number: 0000030625

Order Reference: AMIRA columns

Description:

Sample ID: AMD-DC16-010-GRBX Week 24

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.6	pH unit
Sample Volume	APHA 2310	678	ml
Acidity to pH 4.0	APHA 2310	500	mg/l
Acidity to pH 5.0	APHA 2310	640	mg/l
Acidity to pH 7.0	APHA 2310	720	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	3800	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	2.2	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	33.3	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.279	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	2.7	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.135	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0110	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0347	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	163	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.47	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.668	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0475	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	0.11	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0012	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.09	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.130	g/m3
Chloride	APHA 4110B subcontracted HILLS	<0.5	mg/l
Sulphate as SO4	APHA 4110B subcontracted HILLS	770	g/m3

Note that the standard alkalinity detection limit (5 mg/L) has been lowered for informational purposes only at request.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Anions sent to RJ Hills Laboratory Hamilton Report# 3665800

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-055305-01

This amended report dated 12/02/2025 replaces earlier report WP24-14299 (0000029555), issued 26/09/2024 with below comment added.

Comparison of conductivity results with previous samples from the same columns is strongly indicative that the results are swapped for samples 005 / 013 and 007 / 010. Without sample to retest, this cannot be proven, but most likely order of results is as below.

DC16-005 14 uS/cm

DC16-007 3800 uS/cm

DC16-010 1600 uS/cm

DC16-013 83 uS/cm

Date Start/End Analysis (5/9/2024 - 12/2/2025)

Reported: 12/02/2025 5:12:45PM

ANALYSIS REPORT

WP24-14299.004

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 5/09/2024

Completed: 12/02/2025

Job Number: WP24-14299

Report Number: 0000030625

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-013-HCM Week 24

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	5.3	pH unit
Sample Volume	APHA 2310	830	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	3	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	14	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	0.12	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.018	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	8.0	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0232	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0398	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.01	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0012	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.62	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.102	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0544	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	2.22	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.014	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.78	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.538	g/m3
Chloride	APHA 4110B subcontracted HILLS	<0.5	mg/l
Sulphate as SO ₄	APHA 4110B subcontracted HILLS	50.0	g/m3

Note that the standard alkalinity detection limit (5 mg/L) has been lowered for informational purposes only at request.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Anions sent to RJ Hills Laboratory Hamilton Report# 3665800

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-055305-01

This amended report dated 12/02/2025 replaces earlier report WP24-14299 (0000029555), issued 26/09/2024 with below comment added.

Comparison of conductivity results with previous samples from the same columns is strongly indicative that the results are swapped for samples 005 / 013 and 007 / 010. Without sample to retest, this cannot be proven, but most likely order of results is as below.

DC16-005 14 uS/cm

DC16-007 3800 uS/cm

DC16-010 1600 uS/cm

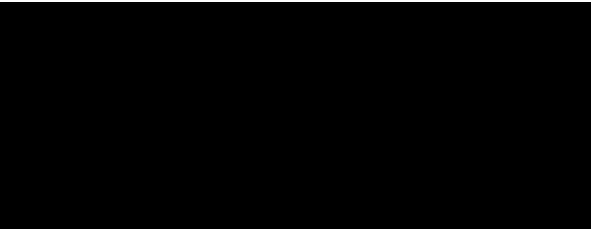
DC16-013 83 uS/cm

Date Start/End Analysis (5/9/2024 - 12/2/2025)

Reported: 12/02/2025 5:12:45PM



Analysis Report:
WP24-14299.004



Signed and dated on 12-Feb-2025

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ANALYSIS REPORT

WP24-14454.001

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 4/10/2024

Completed: 14/10/2024

Job Number: WP24-14454

Report Number: 0000029693

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-005-GRCG B Week 28

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	5.0	pH unit
Sample Volume	APHA 2310	460	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	1	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	<0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	<0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	14	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	0.19	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.014	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	<0.05	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.03	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.05	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0262	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0015	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.58	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.41	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.005	g/m3
Chloride	APHA 4110 B	0.54	g/m3
Sulphate as SO ₄	APHA 4110 B	3.7	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-062043-01.

Date Start/End Analysis (4/10/2024 - 14/10/2024)

Reported: 14/10/2024 8:59:12AM

ANALYSIS REPORT

WP24-14454.002

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 4/10/2024

Completed: 14/10/2024

Job Number: WP24-14454

Report Number: 0000029693

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-007-MSS Week 28

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.2	pH unit
Sample Volume	APHA 2310	970	ml
Acidity to pH 4.0	APHA 2310	1100	mg/l
Acidity to pH 5.0	APHA 2310	1400	mg/l
Acidity to pH 7.0	APHA 2310	1500	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	3400	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	3.2	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	55.3	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.174	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.04	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0012	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	1.6	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.141	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.173	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.766	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	341	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0071	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.86	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	4.25	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.579	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	5.11	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0061	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.28	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	2.70	g/m3
Chloride	APHA 4110 B	1.7	g/m3
Sulphate as SO4	APHA 4110 B	1700	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-062043-01.

Date Start/End Analysis (4/10/2024 - 14/10/2024)

Reported: 14/10/2024 8:59:12AM

ANALYSIS REPORT

WP24-14454.003

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 4/10/2024

Completed: 14/10/2024

Job Number: WP24-14454

Report Number: 0000029693

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-010-GRBX Week 28

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.6	pH unit
Sample Volume	APHA 2310	680	ml
Acidity to pH 4.0	APHA 2310	400	mg/l
Acidity to pH 5.0	APHA 2310	520	mg/l
Acidity to pH 7.0	APHA 2310	570	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	1500	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	1.6	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	28.1	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.105	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	2.7	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.106	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0081	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0298	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	120	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0006	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.37	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.505	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0351	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	0.20	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0013	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.12	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.101	g/m3
Chloride	APHA 4110 B	0.18	g/m3
Sulphate as SO4	APHA 4110 B	630	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-062043-01.

Date Start/End Analysis (4/10/2024 - 14/10/2024)

Reported: 14/10/2024 8:59:12AM

ANALYSIS REPORT

WP24-14454.004

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 4/10/2024

Completed: 14/10/2024

Job Number: WP24-14454

Report Number: 0000029693

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-013-HCM Week 28

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	4.6	pH unit
Sample Volume	APHA 2310	830	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	2	mg/l
Acidity to pH 7.0	APHA 2310	3	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	91	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	0.12	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.029	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0007	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	9.9	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0287	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0512	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.02	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0016	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.80	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.124	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0673	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	2.33	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.019	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.86	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.586	g/m3
Chloride	APHA 4110 B	0.14	g/m3
Sulphate as SO ₄	APHA 4110 B	72	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-062043-01.

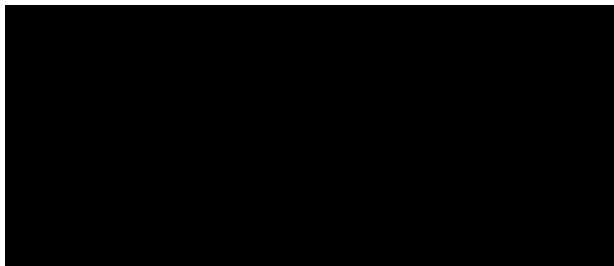
Date Start/End Analysis (4/10/2024 - 14/10/2024)

Reported: 14/10/2024 8:59:12AM



Analysis Report:
WP24-14454.004

Signed and dated on 14-Oct-2024



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ANALYSIS REPORT

WP24-14567.001

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 30/10/2024

Completed: 13/11/2024

Job Number: WP24-14567

Report Number: 0000030007

Order Reference: AMIRA columns

Description:

Sample ID: AMD-DC16-005-GRCG B Week 32

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	7.0	pH unit
Sample Volume	APHA 2310	475	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	0	mg/l
Acidity to pH 7.0	APHA 2310	1	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	11	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	0.24	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	<0.002	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.13	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	<0.05	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.06	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.0300	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0015	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	1.78	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.34	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.004	g/m3
Chloride	APHA 4110 B	0.47	g/m3
Sulphate as SO ₄	APHA 4110 B	3.0	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-068468-01.

This amended report replaces earlier report #29980 issued on 12/11/24.

Sample # 3 and #4 were mixed at the time of sample collection mistakenly, which caused a subsequent anomaly in the analyses results of these samples.

The results are fixed now in this amended report.

Date Start/End Analysis (30/10/2024 - 13/11/2024)

Reported: 13/11/2024 12:48:57PM



ANALYSIS REPORT

WP24-14567.002

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 30/10/2024**Completed:** 13/11/2024**Job Number:** WP24-14567**Report Number:** 0000030007**Order Reference:** AMIRA columns**Description:****Sample ID:** AMD-DC16-007-MSS Week 32

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.2	pH unit
Sample Volume	APHA 2310	1020	ml
Acidity to pH 4.0	APHA 2310	840	mg/l
Acidity to pH 5.0	APHA 2310	1000	mg/l
Acidity to pH 7.0	APHA 2310	1100	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	3100	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	3.9	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	45.3	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.095	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.07	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0008	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	1.2	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.096	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.108	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.550	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	232	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0051	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	1.43	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	3.20	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.392	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	4.39	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0055	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.34	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	1.81	g/m3
Chloride	APHA 4110 B	1.0	g/m3
Sulphate as SO4	APHA 4110 B	1200	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-068468-01.

This amended report replaces earlier report #29980 issued on 12/11/24.

Sample # 3 and #4 were mixed at the time of sample collection mistakenly, which caused a subsequent anomaly in the analyses results of these samples.

The results are fixed now in this amended report.

Date Start/End Analysis (30/10/2024 - 13/11/2024)

Reported: 13/11/2024 12:48:57PM

ANALYSIS REPORT

WP24-14567.003

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 30/10/2024

Completed: 13/11/2024

Job Number: WP24-14567

Report Number: 0000030007

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-010-GRBX Week 32

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	2.6	pH unit
Sample Volume	APHA 2310	680	ml
Acidity to pH 4.0	APHA 2310	280	mg/l
Acidity to pH 5.0	APHA 2310	360	mg/l
Acidity to pH 7.0	APHA 2310	400	mg/l
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	1200	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	1.7	g/m3
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	25.7	g/m3
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	0.049	g/m3
Boron (B) dissolved	APHA 3125 subcontracted ELS	<0.03	g/m3
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	<0.0002	g/m3
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	2.2	g/m3
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	0.066	g/m3
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0050	g/m3
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0215	g/m3
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	76.4	g/m3
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.24	g/m3
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.305	g/m3
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m3
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0215	g/m3
Potassium (K) dissolved	APHA 3125 subcontracted ELS	0.36	g/m3
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	<0.005	g/m3
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.0017	g/m3
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.13	g/m3
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.068	g/m3
Chloride	APHA 4110 B	1.4	g/m3
Sulphate as SO4	APHA 4110 B	420	g/m3

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-068468-01.

This amended report replaces earlier report #29980 issued on 12/11/24.

Sample # 3 and #4 were mixed at the time of sample collection mistakenly, which caused a subsequent anomaly in the analyses results of these samples.

The results are fixed now in this amended report.

Date Start/End Analysis (30/10/2024 - 13/11/2024)

Reported: 13/11/2024 12:48:57PM

ANALYSIS REPORT

WP24-14567.004

Client:

BT Mining Ltd
PO Box 79151
Avonhead
8446 Christchurch NEW ZEALAND
Attention:

Received: 30/10/2024

Completed: 13/11/2024

Job Number: WP24-14567

Report Number: 0000030007

Order Reference: AMIRA columns

Description:
Sample ID: AMD-DC16-013-HCM Week 32

Analysis	Method	Result	Unit
pH in Water (analysed outside 6 hour holding time)	APHA 4500 H SGS Westport	5.0	pH unit
Sample Volume	APHA 2310	810	ml
Acidity to pH 4.0	APHA 2310	0	mg/l
Acidity to pH 5.0	APHA 2310	2	mg/l
Acidity to pH 7.0	APHA 2310	4	mg/l
Total Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Bicarbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Carbonate Alkalinity as CaCO ₃	APHA 2320B	0	mg/l CaCO ₃
Electrical conductivity at 25 °C	APHA 2510 SGS Westport	100	µS/cm
Dissolved Silicon	APHA 3120B subcontracted ELS	0.14	g/m ³
Aluminium (Al) dissolved	APHA 3125 subcontracted ELS	0.038	g/m ³
Arsenic (As) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Boron (B) dissolved	APHA 3125 subcontracted ELS	0.04	g/m ³
Cadmium (Cd) dissolved	APHA 3125 subcontracted ELS	0.0007	g/m ³
Calcium (Ca) dissolved	APHA 3125 subcontracted ELS	12.3	g/m ³
Chromium (Cr) dissolved	APHA 3125 subcontracted ELS	<0.001	g/m ³
Cobalt (Co) dissolved	APHA 3125 subcontracted ELS	0.0313	g/m ³
Copper (Cu) dissolved	APHA 3125 subcontracted ELS	0.0582	g/m ³
Iron (Fe) dissolved	APHA 3125 subcontracted ELS	0.02	g/m ³
Lead (Pb) dissolved	APHA 3125 subcontracted ELS	0.0017	g/m ³
Magnesium (Mg) dissolved	APHA 3125 subcontracted ELS	0.84	g/m ³
Manganese (Mn) dissolved	APHA 3125 subcontracted ELS	0.136	g/m ³
Mercury (Hg) dissolved	APHA 3125 subcontracted ELS	<0.0005	g/m ³
Nickel (Ni) dissolved	APHA 3125 subcontracted ELS	0.0735	g/m ³
Potassium (K) dissolved	APHA 3125 subcontracted ELS	2.57	g/m ³
Selenium (Se) dissolved	APHA 3125 subcontracted ELS	0.021	g/m ³
Thallium (Tl) dissolved	APHA 3125 subcontracted ELS	0.001	g/m ³
Sodium (Na) dissolved	APHA 3125 subcontracted ELS	0.75	g/m ³
Zinc (Zn) dissolved	APHA 3125 subcontracted ELS	0.624	g/m ³
Chloride	APHA 4110 B	0.26	g/m ³
Sulphate as SO ₄	APHA 4110 B	38	g/m ³

Note that the standard alkalinity detection limit has been lowered for informational purposes only at request. Samples 1 and 4 are zero by the APHA alkalinity low-alkalinity convention and calculation.

pH of samples 2 & 3 is < 4.5, alkalinity analysis was not done for these samples.

Dissolved Metals analysed at Eurofins Els 85 Port Road Seaview Lower Hutt Wellington 5010 Report AR-24-NW-068468-01.

This amended report replaces earlier report #29980 issued on 12/11/24.

Sample # 3 and #4 were mixed at the time of sample collection mistakenly, which caused a subsequent anomaly in the analyses results of these samples.

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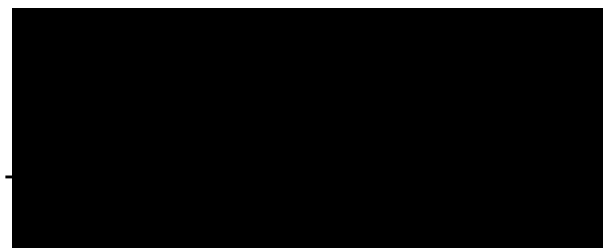
Date Start/End Analysis (30/10/2024 - 13/11/2024)

Reported: 13/11/2024 12:48:57PM



Analysis Report:
WP24-14567.004

Signed and dated on 13-Nov-2024



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APPENDIX F LIMITATIONS

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MWM acknowledges that this report will be relied on by a Panel appointed under the Fast-track Approvals Act 2024 and these disclaimers do not prevent that reliance.



MINE WASTE MANAGEMENT

GREENROAD GROUP

APPENDIX E UPPER WAIMANGAROA HAUL ROAD ACID BASE ACCOUNTING SUMMARY

MEMORANDUM

Recipient: [REDACTED] – Bathurst Resources Limited

[REDACTED] [REDACTED]

Date: 2 March 2026

Cc: [REDACTED]

Document Number: J-NZ0453-009-M-Rev2

Document Title: Upper Waimangaroa Haul Road Acid Base Accounting Summary

Bathurst Resources Limited (BRL) is seeking to obtain authorisation through the Fast-track Approvals Act (FTAA) to progress development and mining of the coal resources across the wider Buller Plateaux. This project is referred to as the Buller Plateaux Continuation Project (BPCP or Project).

BACKGROUND

The purpose of the BPCP is to re-consent the existing infrastructure and mining operations associated with the existing Stockton Mine and provide access to additional coal mining areas across the Buller Plateaux, as the coal resource in the current Stockton Mine is close to depletion, and further coal resources for blending are required. There are five key project sub-areas:

- Stockton mining area (Stockton)
- Mount Frederick South (MFS)
- Escarpment Extended (ESE)
- Upper Waimangaroa Haul Road (UWHR)
- Cypress mining area (Cypress)

To support the FTAA approval process, Mine Waste Management Limited (MWM) was engaged by BRL to undertake an assessment of environmental effects (AEE). Part of this study was the assessment of Acid and metalliferous drainage (AMD) hazards for MFS, ESE, and UWHR sub-areas.

The information presented in this memorandum pertains only to the UWHR transport corridor that is proposed to provide access between Stockton and the additional mining areas within the Buller Plateaux.

OBJECTIVES AND SCOPE

Understanding the environmental geochemistry of materials that require management will be an important aspect of the Project. The objective of this memo is to:

- Present available Acid Base Accounting (ABA) data (surface and drillhole samples) from the proposed UWHR transport corridor; and
- Assess ABA data utilising AMIRA (2002) and Price (2009) guidelines as a screening tool to assess the acid generation risk across the main lithologies in the UWHR area.

PROJECT DESCRIPTION

The proposed UWHR is located within the Waimangaroa Valley, on the western side of the Mount William Range and will be constructed between the ESE sub-area and the existing Cypress Mine and from there will use the existing haul road to the Stockton Coal Handling and Preparation Plant. This report addresses the AMD issues around the yet to built sections of the UWHR.

The UWHR will also provide access for service and other vehicles to move between the various BPCP sub-areas. The UWHR is an essential link between the various BPCP sub-areas to prevent the need for heavy machinery and trucks to utilise the public road network. The UWHR has been selected as the preferred coal haulage option, based on an extended optioneering assessment that considered multiple criteria such as footprint, technical risk, closure requirements, permitting, environmental effects, capital and operating cost (BRL, 2025).

INTRODUCTION TO AMD

AMD refers to water impacted by mining activities, containing toxic metals, salts, and acidity. AMD is typically generated by the excavation of rocks that contain sulfide minerals, such as pyrite. When these minerals are exposed to oxygen and water, they undergo weathering processes and oxidise, generating acidity and releasing toxic metals. Microorganisms accelerate this process.

Classification of materials is important to understand the quantities of AMD-generating materials that require management. Classification is typically based on either (or both) the AMIRA (2002) or Price (2009) classification schemes until site-specific classification systems are developed.

CLASSIFICATION SYSTEMS

The AMIRA classification system uses net acid producing potential (NAPP) and net acidity generation (NAG) pH to classify samples as Potentially Acid Forming (PAF), Non-Acid Forming (NAF) or Uncertain (UC) (Figure 1). NAG testing of carbonaceous materials associated with coal mines can often be compromised by the generation of organic acidity creating low NAG pH and high acidities, resulting in UC classification (AMIRA, 2002).

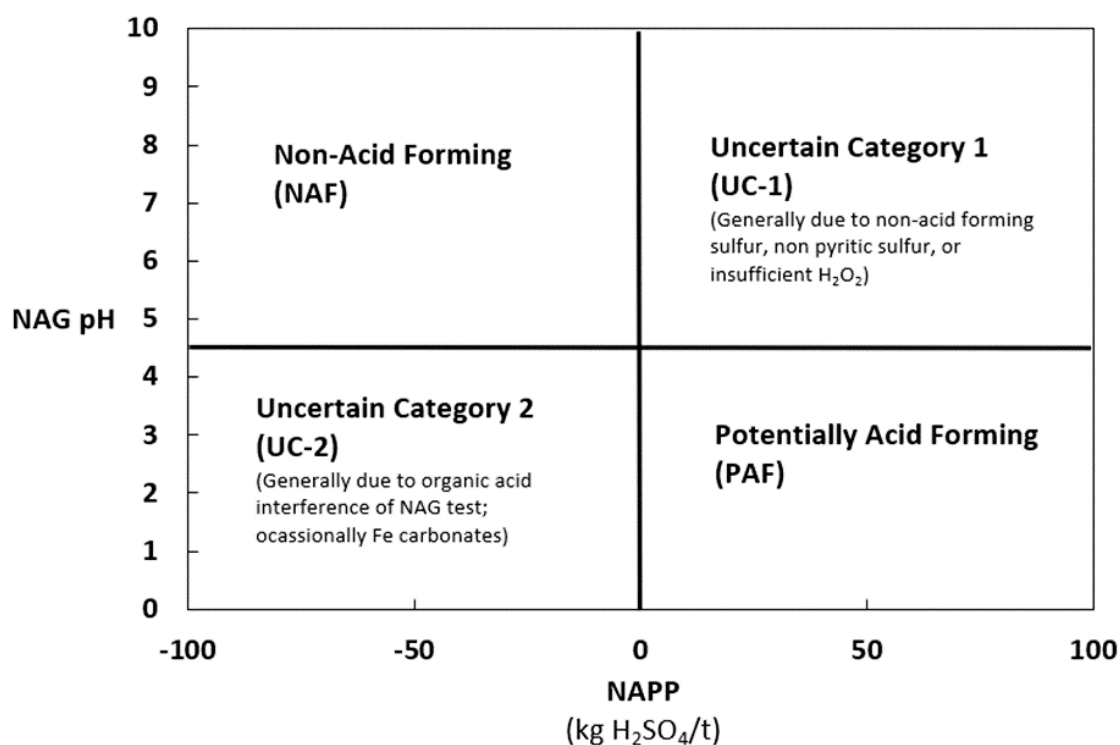


Figure 1: AMIRA (2002) AMD classification scheme for rock samples.

Source: Olds et al. (2015).

The Price classification system (Figure 2) uses the ratio between acid neutralising capacity (ANC) and maximum potential acidity (MPA) to classify samples as PAF, NAF or UC, where the neutralisation potential ratio (NPR) = ANC/MPA (Price, 2009).

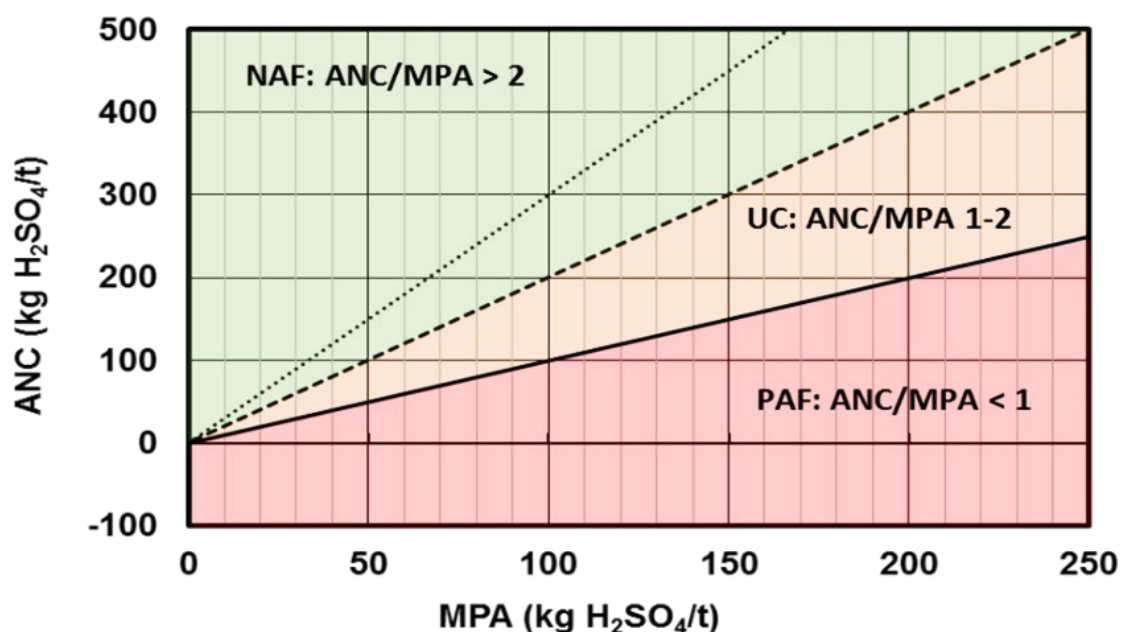


Figure 2: Price (2009) acid base accounting classification scheme for rock samples.

Source: Olds et al. (2015).

These criteria for the AMIRA (2002) and Price (2009) classification schemes can be presented in tabular form as shown in Table 1 and Table 2. Generally, both criteria are used to provide guidance on AMD risks for material types.

Table 1: AMIRA (2002) acid base accounting classification system.

CLASSIFICATION	CRITERIA	COMMENTS
Potentially Acid Forming (PAF)	NAPP ≥ 0 NAG pH ≤ 4.5	Sample always has a significant sulfur content, the acid generating potential of which exceeds the inherent acid neutralising capacity of the material.
Non-Acid Forming (NAF)	NAPP < 0 NAG pH > 4.5	Sample may, or may not, have a significant sulfur content but the ANC availability is more than adequate to neutralise the acid that theoretically could be produced.
Uncertain (UC)	NAPP ≥ 0 ; NAG pH > 4.5 NAPP < 0 ; NAG pH ≤ 4.5	An uncertain classification is used when there is an apparent conflict between the NAPP and NAG results.

Table 2: Price, 2009 acid base accounting classification system.

CLASSIFICATION	CRITERIA	COMMENTS
Potentially Acid Forming (PAF)	ANC/MPA < 1	Potentially acid generating material, unless sulfide minerals are non-reactive, or ANC is preferentially exposed on surfaces.
Non-Acid Forming (NAF)	ANC/MPA > 2	Non-potentially acid generation material, unless ANC is insufficiently reactive, extremely reactive sulfides are present, or preferential exposure of sulfides is found in the material.
Uncertain (UC)	$1 \leq \text{ANC/MPA} \leq 2$	Possibly PAF if ANC is insufficiently reactive or is depleted at a faster rate than sulfides.

Understanding the geochemical characteristics of overburden material within the Project area and assessment of materials against both the AMIRA (2002) and Price (2009) classification schemes allows the development of site-specific classification systems.

GEOCHEMICAL DATA

Two datasets were available to understand the AMD hazards for the UWHR project area:

- Surface rock samples were collected (n= 12) along the southern length of the UWHR. Sample locations are shown in Figure 3. These data have been presented in MWM (2026).
- ABA data are available from drillholes, and results were obtained from the BRL geological database. This included:
 - 18 Drillholes as shown in Figure 3.
 - 435 samples having a range of ABA data including wt% sulfur, ANC, and NAG data
 - 179 samples from the Kaiata Mudstone (KMS).
 - 234 samples from the Brunner Coal Measures (BCM).
 - 21 miscellaneous samples.

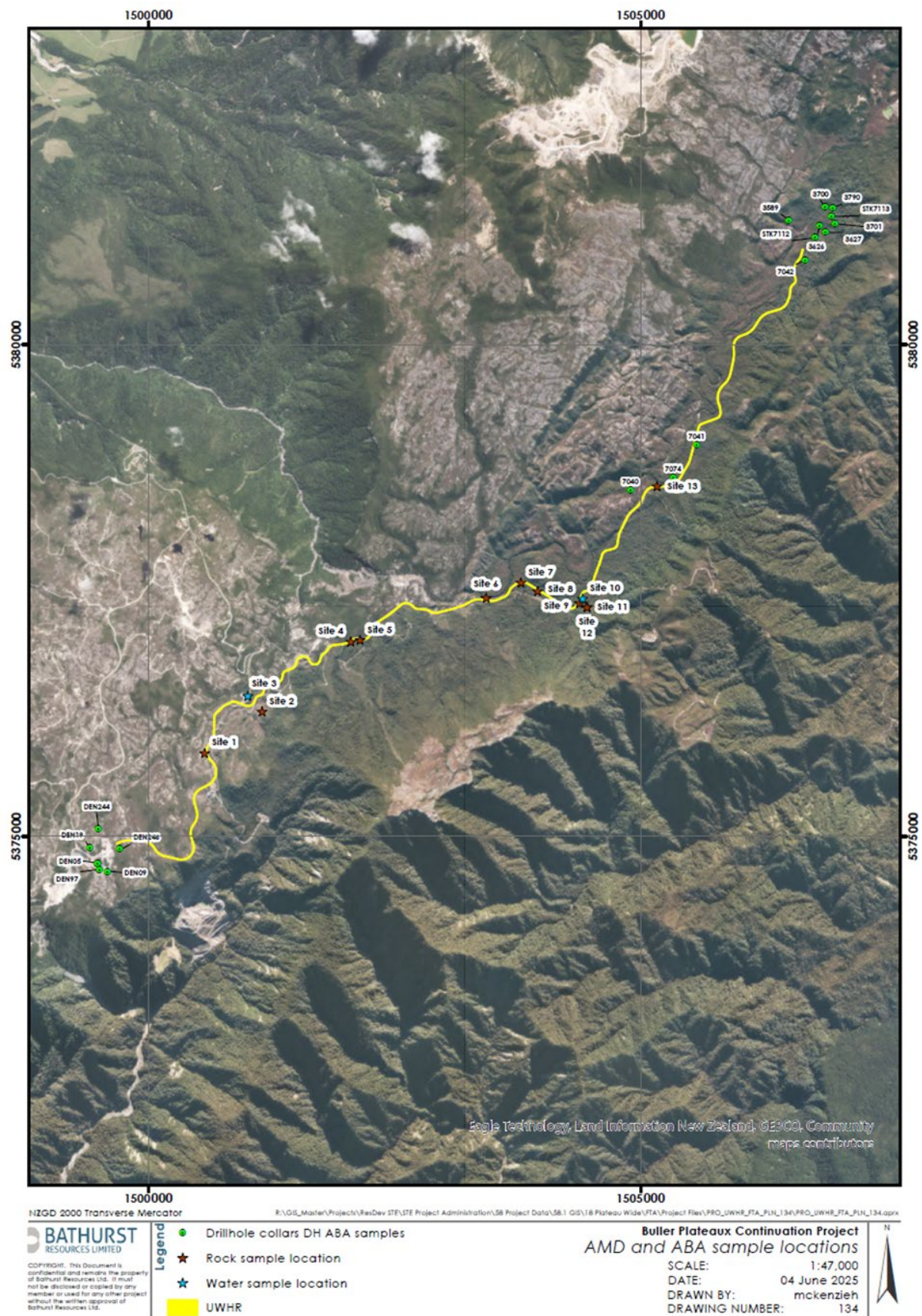


Figure 3: Map of sampling locations for the UWHR

RESULTS

ABA sampling was undertaken on select drillhole samples to further understand the AMD hazards for the UWHR. The following section presents the acid base accounting results of the UWHR. Full Results are presented in Attachment A. Results are presented in Figure 4, Figure 5, and Table 3.

The miscellaneous samples plot data from SUP (superficial soils), BSM (undifferentiated basement), QUAT and QT (quaternary materials). Mostly these are NAF.

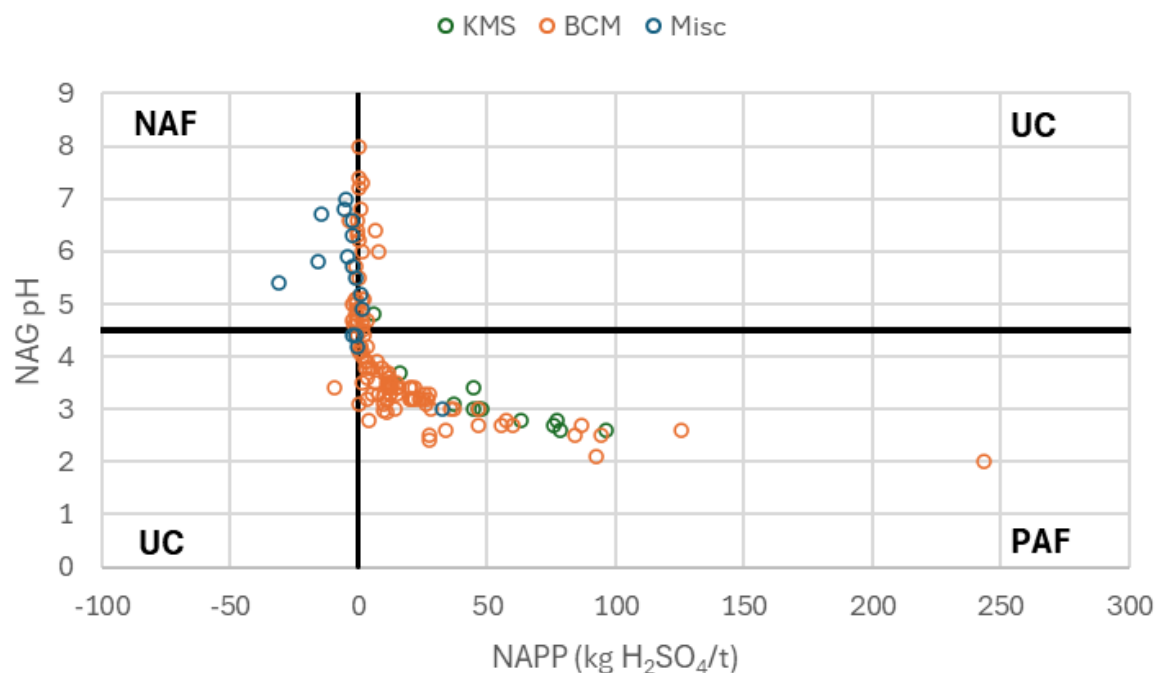


Figure 4: AMIRA (2002) ABA data classification of drill core samples

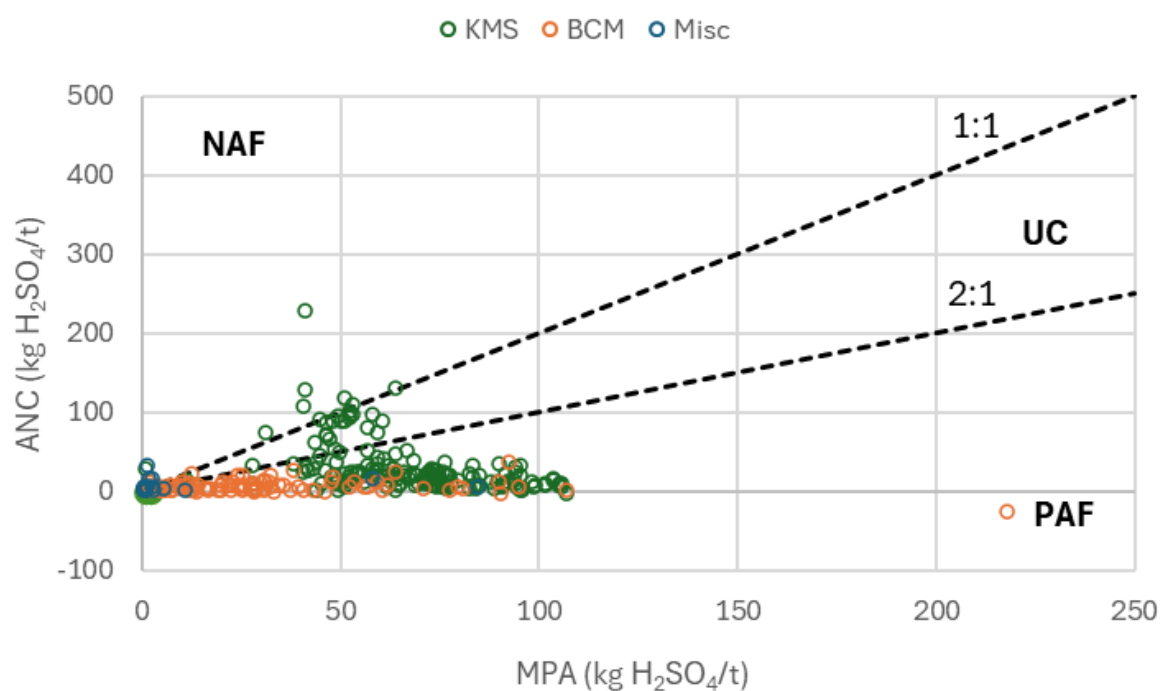


Figure 5: Price (2009) ABA classification of drillhole samples.

Table 3: ABA Summary of drillhole samples

		TOTAL S (wt%)			ANC (kg H ₂ SO ₄ /t)			MPA (kg H ₂ SO ₄ /t)			NAG (kg H ₂ SO ₄ /t)			NAG pH			NAPP (kg H ₂ SO ₄ /t)			PASTE pH	
	#	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Max
BCM	234	0.008	0.82	7.12	-25.2	4.54	36	0.245	25.03	217.87	1	31.52	129	2	4	8	-10.47	21.4	243.07	2.3	8.08
KMS	179	0.016	2.13	3.49	-2	29.02	228	0.490	65.22	106.79	5	56.67	100	2.6	3.13	4.8	-187	36.5	108.79	4.55	8.05
Misc	21	0.012	0.33	2.76	1	6.90	32	0.367	10.02	84.46	1	11.38	35	3	5.49	7	-30.7	3.45	78.46	4.56	6.87

= Number of samples

Misc: SUP, BSM, QUAT, QT

SUMMARY

Screening was undertaken using the AMIRA (2002) and Price (2009) guidelines to assess the acid generation risk across the main lithologies in the UWHR area. The following observations are provided:

- BCM has an average sulfur content of 0.82 wt% and a maximum of 7.12 wt%, which indicates a high acid generating potential. KMS have the highest risk for acid generation with an average total sulfur of 2.13 wt% and a maximum of 3.49 wt%. The miscellaneous samples have the lowest average sulfur of 0.33%.
- ANC is highest in KMS (average of 29 kg H₂SO₄/t which can generate a time delay before acid onset due to carbonate mineral buffering of acidity. BCM has a low average ANC of 4.54 kg H₂SO₄/t indicating limited acid buffering capacity.
- BCM materials had a minimum paste pH of 2.3 indicating the potential for immediate acid generation. Both KMS and miscellaneous samples have a higher minimum paste pH (4.55 and 4.56 respectively).
- The classification of the sample (Figure 1 and Figure 2) is based on standard screening protocols for AMD hazard assessment.

The distribution of samples provided in this memorandum is skewed toward the ends of the UWHR and there is less data from the central parts of the proposed transport corridor. Further work is required during construction of the haul road including:

- Additional sampling is required for classification of materials and operational decision making as the proposed haul road is constructed.
- The management of these materials, once classified, is dealt with as set out in the relevant management plans (BRL, 2026a,b).

CLOSING REMARKS

Please do not hesitate to contact Paul Weber at +64 3 241 0221 or paul.weber@minewaste.com.au should you wish to discuss this matter in greater detail.

Attachments: Attachment A – Raw Data Excel File

REFERENCES

- AMIRA, 2002. ARD Test Handbook - Project P387A Prediction and Kinetic Control of Acid Mine Drainage. AMIRA International Limited. Melbourne, Australia.
- BRL (Bathurst Resources Limited), 2025. Coal Haulage Project, Upper Waimangaroa Haul Road (UWHR) - Design Criteria, pp 63. Dated January 2025.
- BRL (Bathurst Resources Limited), 2026a. AMD Water Management Plan. Bathurst Resources Limited Document: BPCP-ENV-PLN-010.
- BRL (Bathurst Resources Limited), 2026b. AMD ELF Management Plan. Bathurst Resources Limited Document: BPCP-ENV-PLN-011.
- MWM (Mine Waste Management), 2026. Upper Waimangaroa Haul Road Site Visit. Mine Waste Management Report J-NZ0453- 001-M-Rev2.
- Price, W., 2009. Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials. Mine Environment Neutral Drainage (MEND) Program, Smithers, British Columbia.

ATTACHMENT A – RAW DATA EXCEL FILE

BCM

SAMPLEID	Lab_SampleID	HOLEID	SAMPFROM	SAMPTO	Samp_Lith_D	Formation_D	ABA_Sul_T	ABA_ANC_hrs	ABA_MPA	MWM MPA Calc	ABA_NAG	ABA_NAG_pH	ABA_PASTE_pH	MWM NAPP Calc
GC-BU3538-015	A09-4251	3538	32	35	BCSS	BCM	2.01	8	61.506	61.506			5.05	53.51
GC-BU3538-016	A09-4252	3538	35	38	VCSS	BCM	1.22	2	37.332	37.332			5.08	35.33
GC-BU3538-017	A09-4253	3538	38	41	LCSS	BCM	1.41	2	43.146	43.146			4.94	41.15
GC-BU3588-021	A09-8375	3588	42	44	BMSS	BCM	1.74	12	53.244	53.244			5.69	41.24
GC-BU3588-022	A09-8376	3588	44	46	LMSS	BCM	1.04	13	31.824	31.824			6.88	18.82
GC-BU3588-023	A09-8377	3588	46	48	BMSS	BCM	1.57	18	48.042	48.042			6.96	30.04
GC-BU3588-024	A09-8378	3588	48	50	MSS	BCM	2.94	12	89.964	89.964			6.45	77.96
GC-BU3588-025	A09-8379	3588	50	52	LMSS	BCM	1	14	30.6	30.6			7.04	16.60
GC-BU3588-026	A09-8390	3588	52	54	LMSS	BCM	0.33	13	10.098	10.098			7.78	-2.90
GC-BU3589-001	A09-9187	3589		2	VCSS	BCM	0.03	4	0.918	0.918			6.04	-3.08
GC-BU3589-002	A09-9188	3589	2	4	VCSS	BCM	0.03	2	0.918	0.918			7.13	-1.08
GC-BU3589-003	A09-9189	3589	4	6	VCSS	BCM	0.03	2	0.918	0.918			7.21	-1.08
GC-BU3589-004	A09-9190	3589	6	8	VCSS	BCM	0.06	4	1.836	1.836			6.55	-2.16
GC-BU3589-005	A09-9191	3589	8	10	VCSS	BCM	0.03	4	0.918	0.918			6.82	-3.08
GC-BU3589-006	A09-9192	3589	10	12	VCSS	BCM	0.03	3	0.918	0.918			6.72	-2.08
GC-BU3589-007	A09-9193	3589	12	14	CSS	BCM	0.05	3	1.53	1.53			5.97	-1.47
GC-BU3625-018	A09-9183	3625	42	44	BMSS	BCM	0.9	8	27.54	27.54			7.28	19.54
GC-BU3625-019	A09-9184	3625	44	46	MSS	BCM	2.6	5	79.56	79.56			6.35	74.56
GC-BU3625-020	A09-9185	3625	46	48	MSS	BCM	0.65	7	19.89	19.89			7.28	12.89
GC-BU3625-021	A09-9186	3625	48	50	LMSS	BCM	0.04	8	1.224	1.224			7.09	-6.78
GC-BU3626-001	A09-9194	3626	4	6	BMSS	BCM	0.55	3	16.83	16.83			5.8	13.83
GC-BU3626-002	A09-9195	3626	6	8	LFSS	BCM	1.97	2	60.282	60.282			5.01	58.28
GC-BU3626-003	A09-9196	3626	8	10	LFSS	BCM	3.49	2	106.794	106.794			5.71	104.79
GC-BU3626-004	A09-9197	3626	10	12	LMSS	BCM	0.25	2	7.65	7.65			6.81	5.65
GC-BU3626-005	A09-9198	3626	16	18	MST	BCM	0.54	2	16.524	16.524			6.91	14.52
GC-BU3626-006	A09-9199	3626	18	20	LMSS	BCM	0.16	2	4.896	4.896			7.29	2.90
GC-BU3626-007	A09-9200	3626	20	22	LMSS	BCM	0.25	2	7.65	7.65			7.31	5.65
GC-BU3626-008	A09-9201	3626	22	24	LMSS	BCM	0.29	6	8.874	8.874			7.57	2.87
GC-BU3627-006	A09-9664	3627	12	14	BMSS	BCM	0.92	10	28.152	28.152			6.87	18.15
GC-BU3627-007	A09-9665	3627	14	16	BMSS	BCM	0.66	12	20.196	20.196			7.18	8.20
GC-BU3627-008	A09-9666	3627	16	18	BFSS	BCM	0.84	7	25.704	25.704			6.01	18.70
GC-BU3627-009	A09-9667	3627	18	20	BMSS	BCM	0.73	8	22.338	22.338			6.74	14.34
GC-BU3627-010	A09-9668	3627	20	22	BFSS	BCM	1.83	5	55.998	55.998			5.03	51.00
GC-BU3627-011	A09-9669	3627	22	24	CO	BCM	1.28	6	39.168	39.168			5.35	33.17
GC-BU3627-012	A09-9670	3627	24	26	LFSS	BCM	0.46	8	14.076	14.076			7.05	6.08
GC-BU3627-013	A09-9671	3627	26	28	LFSS	BCM	0.43	6	13.158	13.158			7.44	7.16
GC-BU3628-018	A09-11014	3628	40	42	BMSS	BCM	1.56	12	47.736	47.736			7	35.74
GC-BU3628-019	A09-11015	3628	42	44	BFSS	BCM	0.93	2	28.458	28.458			5.64	26.46
GC-BU3628-020	A09-11016	3628	44	46	BFSS	BCM	0.92	2	28.152	28.152			5.46	26.15
GC-BU3628-021	A09-11017	3628	46	48	BFSS	BCM	0.51	3	15.606	15.606			5.49	12.61
GC-BU3628-022	A09-11018	3628	48	50	LFSS	BCM	0.92	2	28.152	28.152			5.62	26.15
GC-BU3628-023	A09-11019	3628	50	52	CO	BCM	0.34	3	10.404	10.404			6.64	7.40
GC-BU3628-024	A09-11020	3628	52	54	LZSS	BCM	0.17	2	5.202	5.202			6.82	3.20
GC-BU3700-001	A09-9694	3700	4	6	LFSS	BCM	1.13	7	34.578	34.578			5.11	27.58
GC-BU3700-002	A09-9695	3700	6	8	CO	BCM	0.82	4	25.092	25.092			5.7	21.09
GC-BU3700-003	A09-9696	3700	8	10	LFSS	BCM	0.11	5	3.366	3.366			7.71	-1.63
GC-BU3700-004	A09-9697	3700	10	12	CO	BCM	0.13	5	3.978	3.978			7.79	-1.02
GC-BU3700-005	A09-9698	3700	16	18	FSS	BCM	0.31	7	9.486	9.486			7.72	2.49
GC-BU3700-006	A09-9921	3700	24	26	MSS	BCM	0.14	2	4.284	4.284			7.36	2.28
GC-BU3701-015	A09-9686	3701	30	32	BMSS	BCM	0.83	8	25.398	25.398			6.58	17.40
GC-BU3701-016	A09-9687	3701	32	34	BMSS	BCM	0.71	7	21.726	21.726			6.33	14.73
GC-BU3701-017	A09-9688	3701	34	36	BMSS	BCM	0.79	5	24.174	24.174			6.06	19.17
GC-BU3701-018	A09-9689	3701	36	38	BMSS	BCM	0.62	2	18.972	18.972			6.69	16.97
GC-BU3701-019	A09-9690	3701	38	40	BFSS	BCM	1.05	6	32.13	32.13			5.93	26.13
GC-BU3701-020	A09-9691	3701	40	42	LVFS	BCM	3.1	6	94.86	94.86			5.07	88.86
GC-BU3701-021	A09-9692	3701	42	44	LVFS	BCM	0.23	7	7.038	7.038			7.49	0.04

BCM

SAMPLEID	Lab_SampleID	HOLEID	SAMPFROM	SAMPTO	Samp_Lith_D	Formation_D	ABA_Sul_T	ABA_ANC_hrs	ABA_MPA	MWM MPA Calc	ABA_NAG	ABA_NAG_pH	ABA_PASTE_pH	MWM NAPP Calc
GC-BU3701-022	A09-9693	3701	44	45.55	LFSS	BCM	0.13	6	3.978	3.978			7.72	-2.02
GC-BU3702-006	A09-10329	3702	14	16	MST	BCM	2.31	4	70.686	70.686			5.33	66.69
GC-BU3702-007	A09-10330	3702	16	18	MSS	BCM	1	2	30.6	30.6			6.07	28.60
GC-BU3702-008	A09-10331	3702	18	20	BMSS	BCM	1.86	6	56.916	56.916			6.13	50.92
GC-BU3702-009	A09-10332	3702	20	22	BMSS	BCM	1.33	2	40.698	40.698			5.59	38.70
GC-BU3702-010	A09-10333	3702	22	24	BFSS	BCM	1	3	30.6	30.6			5.56	27.60
GC-BU3702-011	A09-10334	3702	24	26	LC	BCM	0.09	4	2.754	2.754			7.72	-1.25
GC-BU3702-012	A09-10335	3702	26	28	LZSS	BCM	0.32	4	9.792	9.792			7.69	5.79
GC-BU3705-013	A09-15251	3705	32	34	FSS	BCM	2.64	4	80.784	80.784			6.39	76.78
GC-BU3705-014	A09-15252	3705	34	36	BMSS	BCM	0.91	3	27.846	27.846			6.17	24.85
GC-BU3705-015	A09-15253	3705	36	38	BFSS	BCM	0.83	2	25.398	25.398			6.04	23.40
GC-BU3705-016	A09-15254	3705	38	40	BFSS	BCM	0.73	2	22.338	22.338			5.69	20.34
GC-BU3705-017	A09-15255	3705	40	42	BFSS	BCM	0.65	2	19.89	19.89			6.17	17.89
GC-BU3705-018	A09-15256	3705	42	43	CSS	BCM	2.53	2	77.418	77.418			6.12	75.42
GC-BU3705-019	A09-15257	3705	44	47	LVFS	BCM	0.08	4	2.448	2.448			6.06	-1.55
GC-BU3790-007	A09-12851	3790	18	20	BFSS	BCM	1.7	5	52.02	52.02			5.29	47.02
GC-BU3790-008	A09-12852	3790	20	22	CSS	BCM	0.78	20	23.868	23.868			6.45	3.87
GC-BU3790-009	A09-12853	3790	22	24	BFSS	BCM	1.25	26	38.25	38.25			5.58	12.25
GC-BU3790-010	A09-12854	3790	24	26	BFSS	BCM	1.06	21	32.436	32.436			4.75	11.44
GC-BU3790-011	A09-12855	3790	26	28	BCSS	BCM	0.83	20	25.398	25.398			5.08	5.40
GC-BU3790-012	A09-12856	3790	29	31	LVFS	BCM	0.19	2	5.814	5.814			7.48	3.81
GC-BU3791-013	A09-12839	3791	28	30	MST	BCM	3.02	36	92.412	92.412			6.65	56.41
GC-BU3791-014	A09-12840	3791	30	32	MSS	BCM	1.17	8	35.802	35.802			6.58	27.80
GC-BU3791-015	A09-12841	3791	32	34	FSS	BCM	2.09	24	63.954	63.954			6.11	39.95
GC-BU3791-016	A09-12842	3791	34	36	LC	BCM	0.41	22	12.546	12.546			7.46	-9.45
GC-BU3791-017	A09-12843	3791	36	38	MST	BCM	0.19	6	5.814	5.814			8.08	-0.19
GC-BU3791-018	A09-12844	3791	38	40	MST	BCM	0.39	9	11.934	11.934			7.92	2.93
GC-BU3793-018	A09-14332	3793	36	38	BCSS	BCM	1.93	13	59.058	59.058			6.11	46.06
GC-BU3793-019	A09-14333	3793	38	40	BFSS	BCM	1	12	30.6	30.6			5.74	18.60
GC-BU3793-020	A09-14334	3793	40	43	BFSS	BCM	0.74	11	22.644	22.644			5.95	11.64
GC-BU3793-021	A09-14335	3793	45	48	LFSS	BCM	0.05	12	1.53	1.53			7.19	-10.47
AMD_Bu7040_001		7040		2.33	CSS	BCM	0.469	2		14.3514		3.3		12.35
AMD_Bu7040_002		7040	3.02	3.69	LVFS	BCM	0.971			29.7126				29.71
AMD_Bu7040_003		7040	3.69	5.57	ZST	BCM	1.08			33.048				33.05
AMD_Bu7040_004		7040	5.57	8	CSS	BCM	0.133	1		4.0698		4.7		3.07
AMD_Bu7040_005		7040	8	10.56	VCSS	BCM	0.064			1.9584		5.1		1.96
AMD_Bu7040_006		7040	10.56	12	VCSS	BCM	0.084	1		2.5704		5.1		1.57
AMD_Bu7040_007		7040	12.8	14.14	LZSS	BCM	0.417			12.7602		3.5		12.76
AMD_Bu7040_008		7040	14.14	17	VCSS	BCM	0.026	2		0.7956		5		-1.20
AMD_Bu7040_009		7040	17	19.71	VCSS	BCM	0.008	1		0.2448		4.9		-0.76
AMD_Bu7040_010		7040	19.71	22	ZST	BCM	1.34			41.004				41.00
AMD_Bu7040_011		7040	22	25	MST	BCM	0.84			25.704				25.70
AMD_Bu7040_012		7040	30.48	33.11	SZN	BCM	0.026	3		0.7956		4.7		-2.20
AMD_Bu7041_006		7041	13.7	16.8	VFSS	BCM	2.91	5		89.046	84	2.5		84.05
AMD_Bu7041_007		7041	16.8	19.8	LFSS	BCM	1.52	11		46.512	34	3		35.51
AMD_Bu7041_008		7041	19.8	21.89	LVFS	BCM	3.16	2		96.696	97	2.5		94.70
AMD_Bu7041_009		7041	21.89	24.05	LFSS	BCM	1.96			59.976	63	2.7		59.98
AMD_Bu7041_010		7041	24.05	25.8	LC	BCM	0.745	1		22.797	26	3.2		21.80
AMD_Bu7041_011		7041	25.8	28	VCSS	BCM	0.766	2		23.4396	23	3.2		21.44
AMD_Bu7041_012		7041	28	30.3	VCSS	BCM	0.456	3		13.9536	13	3.4		10.95
AMD_Bu7041_013		7041	30.3	32	VCSS	BCM	0.587	3		17.9622	18	3.3		14.96
AMD_Bu7041_014		7041	32	33.35	LVFS	BCM	0.167	5		5.1102	23	4.1		0.11
AMD_Bu7041_015		7041	33.35	35	MSS	BCM	0.512	3		15.6672	18	3.4		12.67
AMD_Bu7041_016		7041	35	38.42	LMSS	BCM	0.455	3		13.923	16	3.5		10.92
AMD_Bu7041_017		7041	44.93	48	ZST	BCM	0.107	3		3.2742	70	3.1		0.27
AMD_Bu7041_018		7041	48	50.71	ZST	BCM	0.228	3		6.9768	109	2.8		3.98

BCM

SAMPLEID	Lab_SampleID	HOLEID	SAMPFROM	SAMPTO	Samp_Lith_D	Formation_D	ABA_Sul_T	ABA_ANC_hrs	ABA_MPA	MWM MPA Calc	ABA_NAG	ABA_NAG_pH	ABA_PASTE_pH	MWM NAPP Calc
AMD_Bu7041_019		7041	53.7	56	ZST	BCM	0.549	2		16.7994	21	3.4		14.80
AMD_Bu7041_020		7041	56	58.8	LVFS	BCM	0.952	1		29.1312	31	3		28.13
AMD_Bu7041_021		7041	58.8	60.5	VFSS	BCM	0.41	1		12.546	20	3.5		11.55
AMD_Bu7041_022		7041	60.5	62.51	LVFS	BCM	0.435	1		13.311	19	3.4		12.31
AMD_Bu7041_023		7041	62.51	64.27	VFSS	BCM	0.17	2		5.202	12	4.2		3.20
AMD_Bu7041_024		7041	64.27	65.24	PBCG	BCM	0.403	1		12.3318	13	3.6		11.33
AMD_Bu7042_006		7042	18.83	21.4	BVFS	BCM	1.98	5		60.588	57	2.7		55.59
AMD_Bu7042_007		7042	21.4	23.17	BVFS	BCM	0.917	3		28.0602	24	3.2		25.06
AMD_Bu7042_008		7042	23.17	25.63	BVFS	BCM	0.962	6		29.4372	25	3.2		23.44
AMD_Bu7042_009		7042	25.63	27.69	LVFS	BCM	1.95	2		59.67	58	2.8		57.67
AMD_Bu7042_010		7042	28.48	30.22	LZSS	BCM	0.772	4		23.6232	24	3.2		19.62
AMD_Bu7042_011		7042	30.22	33.4	LVFS	BCM	0.927	2		28.3662	37	3.1		26.37
AMD_Bu7042_012		7042	36.9	38.8	VFSS	BCM	0.14	3		4.284	22	4.1		1.28
AMD_Bu7042_013		7042	44.8	47.17	FSS	BCM	0.291	2		8.9046	15	3.9		6.90
GC-BU7063-003	WP19-0329	7063	13	18.98	MSS	BCM	2.1			64.26				64.26
GC-BU7064-002	WP19-0330	7064	8	12	MSS	BCM	1.4			42.84				42.84
GC-BU7069-007	WP20-0447	7069	23.44	27.42	MSS	BCM	1.89	-4		57.834				61.83
AMD_Bu7074_004		7074	11	13.85	MST	BCM	3.2	11		97.92	96	2.7		86.92
AMD_Bu7074_005		7074	13.85	16.2	VCSS	BCM	1.52			46.512	45	3		46.51
AMD_Bu7074_006		7074	16.75	17.73	CM	BCM	4.17	2		127.602	117	2.6		125.60
AMD_Bu7074_007		7074	17.73	18.5	VCSS	BCM	0.328	1		10.0368	13	3.8		9.04
AMD_Bu7074_008		7074	18.5	20	CSS	BCM	0.573	3		17.5338	18	3.5		14.53
AMD_Bu7074_009		7074	20	21.3	CSS	BCM	0.533	1		16.3098	15	3.4		15.31
AMD_Bu7074_010		7074	21.3	23.5	LFSS	BCM	1.24	1		37.944	39	3		36.94
AMD_Bu7074_011		7074	23.5	26.8	LZSS	BCM	0.966	2		29.5596	26	3.3		27.56
AMD_Bu7074_012		7074	26.8	27.4	MST	BCM	1.1	7		33.66	37	3.2		26.66
AMD_Bu7074_013		7074	27.4	30	VCSS	BCM	0.798	4		24.4188	24	3.4		20.42
AMD_Bu7074_014		7074	30	31	LZSS	BCM	0.918	6		28.0908	34	3.4		22.09
AMD_Bu7074_015		7074	31	32.8	GRCG	BCM	0.449	2		13.7394	11	3.7		11.74
AMD_Bu7074_016		7074	32.8	36.12	LFSS	BCM	0.894	2		27.3564	27	3.3		25.36
AMD_Bu7074_017		7074	36.12	38.02	HCM	BCM	0.859	6		26.2854	34	3.2		20.29
AMD_Bu7074_018		7074	38.02	41.5	VCSS	BCM	0.707	2		21.6342	21	3.4		19.63
AMD_Bu7074_019		7074	41.5	44	MST	BCM	0.767	33		23.4702	30	3.4		-9.53
AMD_Bu7074_020		7074	44	46	ZSS	BCM	0.122	3		3.7332	26	4.2		0.73
AMD_Bu7074_021		7074	46	46.58	LFSS	BCM	0.043	3		1.3158	25	4.6		-1.68
AMD_Bu7074_022		7074	57.95	58.9	ZSS	BCM	0.024	3		0.7344	18	5		-2.27
GC-BU7080-001	WP20-0449	7080	3.76	8.9	CSS	BCM	1.55	-2		47.43				49.43
GC-BU7081-005	WP20-0447	7081	22.24	26	CSS	BCM	1.36	-3		41.616				44.62
GC-BU7081-006	WP20-0447	7081	26	29.57	MST	BCM	2.09	-1		63.954				64.95
GC-BU7082-005	WP19-0410	7082	16.5	22.23	MSS	BCM	1.64	1		50.184				49.18
GC-BU7082-006	WP19-0410	7082	22.23	27.12	VFSS	BCM	1.43	6		43.758				37.76
GC-BU7087-002	WP19-0385	7087	2	6	FSS	BCM	1.44			44.064				44.06
GC-BU7087-003	WP19-0385	7087	6	9.38	CSS	BCM	1.27			38.862				38.86
GC-BU7088-007	WP20-0447	7088	28.24	34.09	CSS	BCM	1.46	-2		44.676				46.68
AMD_H_DEN-10-4	93/513	DEN05	37.53	37.63	HCM	BCM	0.44	-0.9	13.5	13.464	15	3	3.7	14.36
AMD_H_DEN-10-4	93/514	DEN05	38.05	38.25	HCM	BCM	0.92	0.3	28.2	28.152	41	2.5	3.8	27.85
AMD_H_DEN-10-4	93/515	DEN05	38.25	38.39	CQ	BCM	2.95	-2.4	90.3	90.27	74	2.1	3.1	92.67
AMD_H_DEN-10-4	93/516	DEN05	39.1	39.5	MST	BCM	0.13	0.9	4	3.978	13	3.6	3.9	3.08
AMD_H_DEN-10-4	93/517	DEN05	40.2	40.3	LC	BCM	7.12	-25.2	217.9	217.872	129	2	2.3	243.07
AMD_H_DEN-10-4	93/518	DEN05	41.27	41.47	HCM	BCM	0.09	1.6	2.8	2.754	20	3.5	4.2	1.15
AMD_H_DEN-10-4	93/519	DEN05	44.43	44.57	MSS	BCM	0.13	0.7	4	3.978	23	3.2	4	3.28
AMD_H_den08_08	84/662	DEN09	7	11	MSS	BCM	0.44	1	13	13.464	11	3.3	5.3	12.46
AMD_H_den08_09	84/822	DEN09	15	18	MSS	BCM	1.49	-1	46	45.594	27	2.7	6.2	46.59
AMD_H_den08_10	84/661	DEN09	30	34	MSS	BCM	0.38	1	12	11.628	10	3.7	5.9	10.63
AMD_H_den08_11	84/660	DEN09	35	37.2	HCM	BCM	1.07	-1	33	32.742	21	2.6	4.5	33.74
AMD_H_DEN19-10	96/322	DEN19	20.51	25.43	VCSS	BCM	0.01			0.306		7.4	6.3	0.31

BCM

SAMPLEID	Lab_SampleID	HOLEID	SAMPFROM	SAMPTO	Samp_Lith_D	Formation_D	ABA_Sul_T	ABA_ANC_1hs	ABA_MPA	MWM MPA Calc	ABA_NAG	ABA_NAG_pH	ABA_PASTE_pH	MWM NAPP Calc
AMD_H_DEN19-1196/323	DEN19	28.71	31.35	MSS	BCM	0.21			6	6.426	2	6.4	5.5	6.43
AMD_H_DEN19-1296/324	DEN19	33.75	35.85	ZST	BCM	0.25			8	7.65	2	6	4.8	7.65
AMD_H_DEN19-1396/325	DEN19	43.4	45.76	MSS	BCM	0.01				0.306		7.2	6.5	0.31
AMD_H_DEN19-1496/326	DEN19	47.72	50.11	MSS	BCM	0.05			2	1.53		7.3	6.4	1.53
AMD_H_DEN19-1596/327	DEN19	51.27	53.38	MSS	BCM	0.01				0.306		8	6.8	0.31
AMD_H_DEN19-1696/328	DEN19	54.52	57.73	MSS	BCM	0.04			1	1.224	5	6	6.5	1.22
AMD_H_DEN19-Cc96/329	DEN19		6	VCSS	BCM	0.03			1	0.918	1	6.8	7.3	0.92
AMD_H_DEN19-Cc96/330	DEN19	6	10	VCSS	BCM	0.01				0.306	6	6.2	7.1	0.31
AMD_BuDEN244_CMNG1348-1	DEN244	0.4	1.46	VCSS	BCM	0.115	1			3.519		3.9	6.13	2.52
AMD_BuDEN244_CMNG1348-1	DEN244	1.46	3.5	VCSS	BCM	0.635				19.431				19.43
AMD_BuDEN244_CMNG1348-1	DEN244	3.5	5.7	MST	BCM	0.829				25.3674				25.37
AMD_BuDEN244_CMNG1348-1	DEN244	5.7	6.42	VCSS	BCM	0.05				1.53		4.8	6.54	1.53
AMD_BuDEN244_CMNG1348-1	DEN244	6.42	8.1	LVFS	BCM	0.751				22.9806				22.98
AMD_BuDEN244_CMNG1348-1	DEN244	8.1	10.1	FSS	BCM	0.455				13.923				13.92
AMD_BuDEN244_CMNG1348-1	DEN244	12.07	13.54	CSS	BCM	0.083	1			2.5398		4.5	6.58	1.54
AMD_BuDEN244_CMNG1348-1	DEN244	13.54	15.54	GRCG	BCM	0.078	1			2.3868		4.6	6.2	1.39
AMD_BuDEN244_CMNG1348-1	DEN244	18.46	19.62	MSS	BCM	0.343	1			10.4958		3.1	5.31	9.50
AMD_BuDEN244_CMNG1348-1	DEN244	19.62	21.62	CSS	BCM	0.028	1			0.8568		6.4	7.02	-0.14
AMD_BuDEN244_CMNG1348-1	DEN244	23.94	25.3	GRCG	BCM	0.021	1			0.6426		6.6	6.31	-0.36
AMD_BuDEN244_CMNG1348-1	DEN244	25.84	27.88	LMSS	BCM	1.27				38.862				38.86
AMD_BuDEN244_CMNG1348-1	DEN244	28.23	30.23	CSS	BCM	0.136	1			4.1616		3.9	5.92	3.16
AMD_BuDEN244_CMNG1348-1	DEN244	31.7	32.83	MST	BCM	0.535				16.371				16.37
AMD_BuDEN244_CMNG1348-1	DEN244	34	34.5	VCSS	BCM	0.017	1			0.5202		6.3	6.62	-0.48
AMD_BuDEN244_CMNG1348-1	DEN244	37	38	FSS	BCM	0.63				19.278				19.28
AMD_BuDEN244_CMNG1348-1	DEN244	40.3	42	ZST	BCM	1.24				37.944				37.94
AMD_BuDEN244_CMNG1348-1	DEN244	42	43	CSS	BCM	0.152	2			4.6512		3.8	5.83	2.65
AMD_BuDEN244_CMNG1348-1	DEN244	45	46.85	VCSS	BCM	0.037	1			1.1322		5.5	6.6	0.13
AMD_BuDEN244_CMNG1348-1	DEN244	46.85	47.91	LFSS	BCM	0.838				25.6428				25.64
EX_R_BuDEN244_C106/337	DEN244	27.89	28.23	LMSS	BCM	1.18				36.108				36.11
AMD_BuDEN246_CMNG1348-1	DEN246	1.3	3.3	MST	BCM	0.829				25.3674				25.37
AMD_BuDEN246_CMNG1348-1	DEN246	3.3	5.3	CSS	BCM	0.016	4			0.4896		6.6	6.62	-3.51
AMD_BuDEN246_CMNG1348-1	DEN246	5.98	7.97	LFSS	BCM	0.133	2			4.0698		4.4	5	2.07
AMD_BuDEN246_CMNG1348-1	DEN246	10.42	11.7	CSS	BCM	0.07	1			2.142		4.7	5.83	1.14
AMD_BuDEN246_CMNG1348-1	DEN246	11.7	13.7	MSS	BCM	0.351				10.7406		3.16	5.02	10.74
AMD_BuDEN246_CMNG1348-1	DEN246	17.74	18.74	FSS	BCM	0.229	2			7.0074		3.8	5.33	5.01
AMD_BuDEN246_CMNG1348-1	DEN246	19.57	20.57	FSS	BCM	0.79				24.174				24.17
AMD_BuDEN246_CMNG1348-1	DEN246	21.8	22.8	CZN	BCM	0.283	1			8.6598		3.3	6.49	7.66
AMD_BuDEN246_CMNG1348-1	DEN246	22.8	23.8	VCSS	BCM	0.031	2			0.9486		5.1	6.47	-1.05
AMD_BuDEN246_CMNG1348-1	DEN246	26.86	27.86	ZST	BCM	1.29				39.474				39.47
AMD_BuDEN246_CMNG1348-1	DEN246	33.57	35.57	LFSS	BCM	1.05				32.13				32.13
AMD_BuDEN246_CMNG1348-1	DEN246	38	39	MSS	BCM	1.99				60.894				60.89
AMD_BuDEN246_CMNG1348-1	DEN246	40.27	41.27	FSS	BCM	0.974				29.8044				29.80
AMD_BuDEN246_CMNG1348-1	DEN246	42	43.1	LFSS	BCM	0.787				24.0822				24.08
AMD_BuDEN246_CMNG1348-1	DEN246	44	46	CSS	BCM	0.044	2			1.3464		4.7	5.9	-0.65
AMD_BuDEN246_CMNG1348-1	DEN246	50.7	52.7	MST	BCM	0.907				27.7542				27.75
AMD_BuDEN246_CMNG1348-1	DEN246	53.95	55.3	VFSS	BCM	0.368				11.2608		2.95	4.42	11.26
AMD_BuDEN246_CMNG1348-1	DEN246	55.3	56.3	VFSS	BCM	0.513				15.6978				15.70
AMD_BuDEN246_CMNG1348-1	DEN246	57.53	58.74	LFSS	BCM	0.195	1			5.967		3.3	4.76	4.97
AMD_BuDEN246_CMNG1348-1	DEN246	63.77	64.77	ZST	BCM	0.172	1			5.2632		3.8	5.14	4.26
AMD_BuDEN246_CMNG1348-1	DEN246	65.45	66.45	FSS	BCM	0.024	2			0.7344		5.1	6.24	-1.27
AMD_BuDEN246_CMNG1348-1	DEN246	66.45	67.83	LCSS	BCM	0.028	2			0.8568		4.8	5.69	-1.14
AMD_BuDEN246_CMNG1348-1	DEN246	67.83	69.3	VFSS	BCM	0.036	2			1.1016		4.7	5.76	-0.90
AMD_BuDEN246_CMNG1348-1	DEN246	69.94	71.1	VFSS	BCM	0.116	2			3.5496		4	5.54	1.55
AMD_BuDEN246_CMNG1348-1	DEN246	72.45	74.45	LFSS	BCM	0.325				9.945		2.99	4.58	9.95
AMD_BuDEN246_CMNG1348-1	DEN246	74.45	75.89	ZST	BCM	0.253	1			7.7418		3.5	5.2	6.74
AMD_BuDEN246_CMNG1348-1	DEN246	75.89	77.52	LCSS	BCM	0.056	1			1.7136		4.2	5.05	0.71

BCM

SAMPLEID	Lab_SampleID	HOLEID	SAMPFROM	SAMPTO	Samp_Lith_D	Formation_D	ABA_Sul_T	ABA_ANC_Is	ABA_MPA	MWM MPA Calc	ABA_NAG	ABA_NAG_pH	ABA_PASTE_pH	MWM NAPP Calc
AMD_BuDEN246_CMNG1348-1	DEN246	DEN246	77.52	78.16	ZST	BCM	0.311			9.5166		3.25	4.81	9.52
EX_R_BuDEN246_C106/338	DEN246	DEN246	19.27	19.57	FSS	BCM	1.06			32.436				32.44
AMD_H_DEN97_Cc12-71104	DEN97	DEN97		6	VCSS	BCM	0.02	2	1	0.612	6	5.7	6.6	-1.39
AMD_H_DEN97_Cc12-71105	DEN97	DEN97	6	12	FSS	BCM	0.44	2	13	13.464	7	3.5	5.7	11.46
AMD_H_DEN97-0712-71084	DEN97	DEN97	13.9	19.5	FSS	BCM	0.9		28	27.54	24	2.4	4.6	27.54
AMD_H_DEN97-0812-71085	DEN97	DEN97	19.5	32.2	VCSS	BCM	0.01	1		0.306	15	4.4	6.3	-0.69
AMD_STK7112_004	STK7112	STK7112	18.28	23.5	CSS	BCM	1.01	7		30.906				23.91
AMD_STK7112_005	STK7112	STK7112	23.5	28.5	CSS	BCM	1.22	11		37.332				26.33
AMD_STK7113_007	STK7113	STK7113	28	33	MSS	BCM	0.845	11		25.857				14.86
AMD_STK7113_008	STK7113	STK7113	33	38	MSS	BCM	0.889	6		27.2034				21.20

Kaiata Mudstone															
SAMPLEID	Lab_SampleID	HOLEID	SAMPFROM	SAMPTO	Samp_Lith_D	Formation_D	ABA_Sul_T	ABA_ANC_hs	ABA_MPA	MWM MPA Calc	ABA_NAG	ABA_NAG_pH	ABA_PASTE_pH	MWM NAPP Calc	
GC-BU3538-002	A09-4238	3538	6	8	MST	KMS	1.66	6	50.80	50.80			5.99	44.80	
GC-BU3538-003	A09-4239	3538	8	10	MST	KMS	2.72	18	83.23	83.23			7.16	65.23	
GC-BU3538-004	A09-4240	3538	10	12	MST	KMS	1.73	17	52.94	52.94			7.63	35.94	
GC-BU3538-005	A09-4241	3538	12	14	MST	KMS	1.94	18	59.36	59.36			7.66	41.36	
GC-BU3538-006	A09-4242	3538	14	16	MST	KMS	2.1	17	64.26	64.26			7.78	47.26	
GC-BU3538-007	A09-4243	3538	16	18	MST	KMS	2.34	17	71.60	71.60			7.82	54.60	
GC-BU3538-008	A09-4244	3538	18	20	MST	KMS	2.38	14	72.83	72.83			7.73	58.83	
GC-BU3538-009	A09-4245	3538	20	22	MST	KMS	2.38	7	72.83	72.83			7.28	65.83	
GC-BU3538-010	A09-4246	3538	22	24	MST	KMS	2.33	12	71.30	71.30			7.4	59.30	
GC-BU3538-011	A09-4247	3538	24	26	MST	KMS	2.33	9	71.30	71.30			7.58	62.30	
GC-BU3538-012	A09-4248	3538	26	28	MST	KMS	2.39	7	73.13	73.13			6.98	66.13	
GC-BU3538-013	A09-4249	3538	28	30	MST	KMS	3.11	2	95.17	95.17			6.97	93.17	
GC-BU3538-014	A09-4250	3538	30	32	MST	KMS	3.13	2	95.78	95.78			5.75	93.78	
GC-BU3588-001	A09-8355	3588	2	4	MST	KMS	1.37	26	41.92	41.92			7.57	15.92	
GC-BU3588-002	A09-8356	3588	4	6	MST	KMS	1.33	25	40.70	40.70			7.76	15.70	
GC-BU3588-003	A09-8357	3588	6	8	MST	KMS	1.36	30	41.62	41.62			7.77	11.62	
GC-BU3588-004	A09-8358	3588	8	10	MST	KMS	1.63	49	49.88	49.88			7.81	0.88	
GC-BU3588-005	A09-8359	3588	10	12	MST	KMS	1.66	22	50.80	50.80			7.87	28.80	
GC-BU3588-006	A09-8360	3588	12	14	MST	KMS	1.76	25	53.86	53.86			7.82	28.86	
GC-BU3588-007	A09-8361	3588	14	16	MST	KMS	1.89	29	57.83	57.83			7.94	28.83	
GC-BU3588-008	A09-8362	3588	16	18	MST	KMS	2.03	14	62.12	62.12			7.84	48.12	
GC-BU3588-009	A09-8363	3588	18	20	MST	KMS	1.71	14	52.33	52.33			7.75	38.33	
GC-BU3588-010	A09-8364	3588	20	22	MST	KMS	1.6	12	48.96	48.96			7.73	36.96	
GC-BU3588-011	A09-8365	3588	22	24	MST	KMS	2.11	7	64.57	64.57			7.74	57.57	
GC-BU3588-012	A09-8366	3588	24	26	MST	KMS	2.02	7	61.81	61.81			7.84	54.81	
GC-BU3588-013	A09-8367	3588	26	28	MST	KMS	2.25	8	68.85	68.85			7.38	60.85	
GC-BU3588-014	A09-8368	3588	28	30	MST	KMS	2.47	7	75.58	75.58			7.71	68.58	
GC-BU3588-015	A09-8369	3588	30	32	MST	KMS	2.55	7	78.03	78.03			7.74	71.03	
GC-BU3588-016	A09-8370	3588	32	34	MST	KMS	2.42	5	74.05	74.05			7.91	69.05	
GC-BU3588-017	A09-8371	3588	34	36	MST	KMS	2.48	5	75.89	75.89			8.05	70.89	
GC-BU3588-018	A09-8372	3588	36	38	MST	KMS	2.96	5	90.58	90.58			7.73	85.58	
GC-BU3588-019	A09-8373	3588	38	40	MST	KMS	2.75	4	84.15	84.15			7.59	80.15	
GC-BU3588-020	A09-8374	3588	40	42	MST	KMS	3.39	16	103.73	103.73			7.52	87.73	
GC-BU3625-001	A09-9166	3625	8	10	MST	KMS	1.01	75	30.91	30.91			7.16	-44.09	
GC-BU3625-002	A09-9167	3625	10	12	MST	KMS	1.86	81	56.92	56.92			7.37	-24.08	
GC-BU3625-003	A09-9168	3625	12	14	MST	KMS	2.09	47	63.95	63.95			7.71	16.95	
GC-BU3625-004	A09-9169	3625	14	16	MST	KMS	1.89	97	57.83	57.83			7.66	-39.17	
GC-BU3625-005	A09-9170	3625	16	18	MST	KMS	1.93	74	59.06	59.06			7.64	-14.94	
GC-BU3625-006	A09-9171	3625	18	20	MST	KMS	1.51	71	46.21	46.21			7.67	-24.79	
GC-BU3625-007	A09-9172	3625	20	22	MST	KMS	1.61	2	49.27	49.27			7.75	47.27	
GC-BU3625-008	A09-9173	3625	22	24	MST	KMS	1.85	33	56.61	56.61			7.7	23.61	
GC-BU3625-009	A09-9174	3625	24	26	MST	KMS	1.42	62	43.45	43.45			7.74	-18.55	
GC-BU3625-010	A09-9175	3625	26	28	MST	KMS	1.6	37	48.96	48.96			7.71	11.96	
GC-BU3625-011	A09-9176	3625	28	30	MST	KMS	1.77	23	54.16	54.16			7.54	31.16	
GC-BU3625-012	A09-9177	3625	30	32	MST	KMS	2.07	18	63.34	63.34			7.6	45.34	
GC-BU3625-013	A09-9178	3625	32	34	MST	KMS	2.19	16	67.01	67.01			7.61	51.01	
GC-BU3625-014	A09-9179	3625	34	36	MST	KMS	2.45	18	74.97	74.97			7.65	56.97	
GC-BU3625-015	A09-9180	3625	36	38	MST	KMS	2.38	23	72.83	72.83			7.56	49.83	
GC-BU3625-016	A09-9181	3625	38	40	MST	KMS	2.08	2	63.65	63.65			7.66	61.65	
GC-BU3625-017	A09-9182	3625	40	42	MST	KMS	1.43	2	43.76	43.76			7.41	41.76	
GC-BU3627-002	A09-9660	3627	4	6	MST	KMS	2.78	7	85.07	85.07			4.57	78.07	
GC-BU3627-003	A09-9661	3627	6	8	MST	KMS	3.01	11	92.11	92.11			4.85	81.11	
GC-BU3627-004	A09-9662	3627	8	10	MST	KMS	3.31	9	101.29	101.29			5.26	92.29	
GC-BU3627-005	A09-9663	3627	10	12	MST	KMS	3.07	9	93.94	93.94			5.2	84.94	
GC-BU3628-001	A09-10997	3628	6	8	MST	KMS	1.73	97	52.94	52.94			7.23	-44.06	
GC-BU3628-002	A09-10998	3628	8	10	MST	KMS	1.7	93	52.02	52.02			7.55	-40.98	

Kaiata Mudstone															
SAMPLEID	Lab_SampleID	HOLEID	SAMPFROM	SAMPTO	Samp_Lith_D	Formation_D	ABA_Sul_T	ABA_ANC_hs	ABA_MPA	MWM MPA Calc	ABA_NAG	ABA_NAG_pH	ABA_PASTE_pH	MWM NAPP Calc	
GC-BU3628-003	A09-10999	3628	10	12	CZN	KMS	1.66	88	50.80	50.80			7.62	-37.20	
GC-BU3628-004	A09-11000	3628	12	14	MST	KMS	1.52	73	46.51	46.51			7.5	-26.49	
GC-BU3628-005	A09-11001	3628	14	16	MST	KMS	1.34	128	41.00	41.00			7.53	-87.00	
GC-BU3628-006	A09-11002	3628	16	18	MST	KMS	1.98	90	60.59	60.59			7.65	-29.41	
GC-BU3628-007	A09-11003	3628	18	20	MST	KMS	1.67	118	51.10	51.10			7.67	-66.90	
GC-BU3628-008	A09-11004	3628	20	22	MST	KMS	1.33	108	40.70	40.70			7.59	-67.30	
GC-BU3628-009	A09-11005	3628	22	24	MST	KMS	1.54	66	47.12	47.12			7.5	-18.88	
GC-BU3628-010	A09-11006	3628	24	26	MST	KMS	1.46	45	44.68	44.68			7.57	-0.32	
GC-BU3628-011	A09-11007	3628	26	28	MST	KMS	1.5	26	45.90	45.90			7.58	19.90	
GC-BU3628-012	A09-11008	3628	28	30	MST	KMS	1.72	25	52.63	52.63			7.62	27.63	
GC-BU3628-013	A09-11009	3628	30	32	MST	KMS	2.03	32	62.12	62.12			7.51	30.12	
GC-BU3628-014	A09-11010	3628	32	34	MST	KMS	2.32	16	70.99	70.99			7.61	54.99	
GC-BU3628-015	A09-11011	3628	34	36	MST	KMS	2.36	15	72.22	72.22			7.62	57.22	
GC-BU3628-016	A09-11012	3628	36	38	MST	KMS	2.39	16	73.13	73.13			7.5	57.13	
GC-BU3628-017	A09-11013	3628	38	40	MST	KMS	2.27	10	69.46	69.46			7.32	59.46	
GC-BU3701-001	A09-9672	3701	2	4	LC	KMS	1.66	12	50.80	50.80			6.09	38.80	
GC-BU3701-002	A09-9673	3701	4	6	LC	KMS	0.91	10	27.85	27.85			6.52	17.85	
GC-BU3701-003	A09-9674	3701	6	8	MST	KMS	0.44	8	13.46	13.46			6.97	5.46	
GC-BU3701-004	A09-9675	3701	8	10	CZN	KMS	0.37	14	11.32	11.32			7.37	-2.68	
GC-BU3701-005	A09-9676	3701	10	12	LC	KMS	1.57	88	48.04	48.04			7.54	-39.96	
GC-BU3701-006	A09-9677	3701	12	14	MST	KMS	1.46	91	44.68	44.68			7.81	-46.32	
GC-BU3701-007	A09-9678	3701	14	16	MST	KMS	1.61	95	49.27	49.27			7.86	-45.73	
GC-BU3701-008	A09-9679	3701	16	18	MST	KMS	1.64	90	50.18	50.18			7.73	-39.82	
GC-BU3701-009	A09-9680	3701	18	20	MST	KMS	1.71	102	52.33	52.33			7.82	-49.67	
GC-BU3701-010	A09-9681	3701	20	22	MST	KMS	1.73	110	52.94	52.94			7.7	-57.06	
GC-BU3701-011	A09-9682	3701	22	24	MST	KMS	2.98	9	91.19	91.19			7.77	82.19	
GC-BU3701-012	A09-9683	3701	24	26	MST	KMS	2.94	34	89.96	89.96			7.81	55.96	
GC-BU3701-013	A09-9684	3701	26	28	MST	KMS	3.44	9	105.26	105.26			7.52	96.26	
GC-BU3701-014	A09-9685	3701	28	30	MST	KMS	3.09	6	94.55	94.55			5.96	88.55	
GC-BU3702-003	A09-10326	3702	8	10	MST	KMS	2.02	6	61.81	61.81			6.27	55.81	
GC-BU3702-004	A09-10327	3702	10	12	MST	KMS	2.78	8	85.07	85.07			6.55	77.07	
GC-BU3702-005	A09-10328	3702	12	14	MST	KMS	3.32	8	101.59	101.59			5.92	93.59	
GC-BU3705-001	A09-15239	3705	8	10	MST	KMS	1.43	37	43.76	43.76			7.21	6.76	
GC-BU3705-002	A09-15240	3705	10	12	MST	KMS	1.79	25	54.77	54.77			7.29	29.77	
GC-BU3705-003	A09-15241	3705	12	14	MST	KMS	2.02	20	61.81	61.81			7.38	41.81	
GC-BU3705-004	A09-15242	3705	14	16	MST	KMS	2.52	20	77.11	77.11			7.49	57.11	
GC-BU3705-005	A09-15243	3705	16	18	MST	KMS	2.24	39	68.54	68.54			7.62	29.54	
GC-BU3705-006	A09-15244	3705	18	20	MST	KMS	2.15	20	65.79	65.79			7.49	45.79	
GC-BU3705-007	A09-15245	3705	20	22	MST	KMS	2.42	19	74.05	74.05			7.55	55.05	
GC-BU3705-008	A09-15246	3705	22	24	MST	KMS	2.39	21	73.13	73.13			7.47	52.13	
GC-BU3705-009	A09-15247	3705	24	26	MST	KMS	2.09	130	63.95	63.95			7.91	-66.05	
GC-BU3705-010	A09-15248	3705	26	28	MST	KMS	2.6	14	79.56	79.56			7.54	65.56	
GC-BU3705-011	A09-15249	3705	28	30	MST	KMS	2.7	4	82.62	82.62			7.2	78.62	
GC-BU3705-012	A09-15250	3705	30	32	MST	KMS	3.22	5	98.53	98.53			6.78	93.53	
GC-BU3790-001	A09-12845	3790	6	8	MST	KMS	2.24	22	68.54	68.54			4.55	46.54	
GC-BU3790-002	A09-12846	3790	8	10	MST	KMS	2.72	32	83.23	83.23			5.36	51.23	
GC-BU3790-003	A09-12847	3790	10	12	MST	KMS	2.38	29	72.83	72.83			6.07	43.83	
GC-BU3790-004	A09-12848	3790	12	14	MST	KMS	2.99	23	91.49	91.49			5.75	68.49	
GC-BU3790-005	A09-12849	3790	14	16	MST	KMS	3.07	25	93.94	93.94			5.82	68.94	
GC-BU3790-006	A09-12850	3790	16	18	FSS	KMS	2.97	7	90.88	90.88			4.98	83.88	
GC-BU3791-001	A09-12827	3791	4	6	MST	KMS	0.03	29	0.92	0.92			6.08	-28.08	
GC-BU3791-002	A09-12828	3791	6	8	MST	KMS	0.91	33	27.85	27.85			5.89	-5.15	
GC-BU3791-003	A09-12829	3791	8	10	MST	KMS	1.24	35	37.94	37.94			6.32	2.94	
GC-BU3791-004	A09-12830	3791	10	12	MST	KMS	1.41	28	43.15	43.15			7.07	15.15	
GC-BU3791-005	A09-12831	3791	12	14	MST	KMS	2.08	22	63.65	63.65			6.17	41.65	
GC-BU3791-006	A09-12832	3791	14	16	MST	KMS	2.18	51	66.71	66.71			7.16	15.71	

Kaiata Mudstone															
SAMPLEID	Lab_SampleID	HOLEID	SAMPFROM	SAMPTO	Samp_Lith_D	Formation_D	ABA_Sul_T	ABA_ANC_hs	ABA_MPA	MWM MPA Calc	ABA_NAG	ABA_NAG_pH	ABA_PASTE_pH	MWM NAPP Calc	
GC-BU3791-007	A09-12833	3791	16	18	MST	KMS	2.48	25	75.89	75.89			7.33	50.89	
GC-BU3791-008	A09-12834	3791	18	20	MST	KMS	2.53	20	77.42	77.42			7.32	57.42	
GC-BU3791-009	A09-12835	3791	20	22	MST	KMS	2.48	6	75.89	75.89			7.58	69.89	
GC-BU3791-010	A09-12836	3791	22	24	MST	KMS	2.49	37	76.19	76.19			7.56	39.19	
GC-BU3791-011	A09-12837	3791	24	26	MST	KMS	3.07	30	93.94	93.94			6.89	63.94	
GC-BU3791-012	A09-12838	3791	26	28	MST	KMS	3.11	32	95.17	95.17			6.75	63.17	
GC-BU3793-002	A09-14316	3793	4	6	MST	KMS	1.7	18	52.02	52.02			6.34	34.02	
GC-BU3793-003	A09-14317	3793	6	8	MST	KMS	1.51	86	46.21	46.21			7.5	-39.79	
GC-BU3793-004	A09-14318	3793	8	10	MST	KMS	1.34	228	41.00	41.00			6.78	-187.00	
GC-BU3793-005	A09-14319	3793	10	12	MST	KMS	1.94	34	59.36	59.36			7.14	25.36	
GC-BU3793-006	A09-14320	3793	12	14	MST	KMS	1.58	54	48.35	48.35			7.24	-5.65	
GC-BU3793-007	A09-14321	3793	14	16	MST	KMS	1.71	97	52.33	52.33			7.29	-44.67	
GC-BU3793-008	A09-14322	3793	16	18	MST	KMS	1.94	26	59.36	59.36			7.27	33.36	
GC-BU3793-009	A09-14323	3793	18	20	MST	KMS	2.15	24	65.79	65.79			7.39	41.79	
GC-BU3793-010	A09-14324	3793	20	22	MST	KMS	2.36	24	72.22	72.22			7.51	48.22	
GC-BU3793-011	A09-14325	3793	22	24	MST	KMS	2.4	26	73.44	73.44			7.54	47.44	
GC-BU3793-012	A09-14326	3793	24	26	MST	KMS	2.42	26	74.05	74.05			7.59	48.05	
GC-BU3793-013	A09-14327	3793	26	28	MST	KMS	2.37	24	72.52	72.52			7.55	48.52	
GC-BU3793-014	A09-14328	3793	28	30	MST	KMS	2.51	20	76.81	76.81			7.55	56.81	
GC-BU3793-015	A09-14329	3793	30	32	MST	KMS	2.78	20	85.07	85.07			7.37	65.07	
GC-BU3793-016	A09-14330	3793	32	34	MST	KMS	3.06	15	93.64	93.64			7.28	78.64	
GC-BU3793-017	A09-14331	3793	34	36	MST	KMS	3.38	15	103.43	103.43			7.07	88.43	
AMD_Bu7041_001		7041		3	MST	KMS	1.83	11		56.00	45	3		45.00	
AMD_Bu7041_002		7041	3	6	MST	KMS	1.89	21		57.83	40	3.1		36.83	
AMD_Bu7041_003		7041	6	9.3	MST	KMS	2.21	21		67.63	50	3		46.63	
AMD_Bu7041_004		7041	9.3	11.34	MST	KMS	2.46	12		75.28	68	2.8		63.28	
AMD_Bu7041_005		7041	11.34	13.7	MST	KMS	2.87	12		87.82	79	2.7		75.82	
AMD_Bu7042_001		7042	7.86	9.5	MST	KMS	1.94	43		59.36	17	3.7		16.36	
AMD_Bu7042_002		7042	9.5	11.5	MST	KMS	1.86	51		56.92	5	4.8		5.92	
AMD_Bu7042_003		7042	11.5	14.9	MST	KMS	2.26	21		69.16	51	3		48.16	
AMD_Bu7042_004		7042	14.9	16.9	MST	KMS	3	13		91.80	85	2.6		78.80	
AMD_Bu7042_005		7042	16.9	18.83	MST	KMS	3.45	9		105.57	100	2.6		96.57	
GC-BU7063-001	WP19-0329	7063	4.6	9	MST	KMS	2.5	3		76.50				73.50	
GC-BU7063-002	WP19-0329	7063	9	13	MST	KMS	3.1	4		94.86				90.86	
GC-BU7064-001	WP19-0330	7064	3	8	MST	KMS	2.9	4		88.74				84.74	
GC-BU7069-001	WP20-0447	7069	1.5	2.13	CLAY	KMS	0.016	3		0.49				-2.51	
GC-BU7069-002	WP20-0447	7069	2.13	5	MST	KMS	0.922	3		28.21				25.21	
GC-BU7069-003	WP20-0447	7069	5	9	MST	KMS	1.6	10		48.96				38.96	
GC-BU7069-004	WP20-0447	7069	9	14	MST	KMS	2.07	28		63.34				35.34	
GC-BU7069-005	WP20-0447	7069	14	19	MST	KMS	2.54	13		77.72				64.72	
GC-BU7069-006	WP20-0447	7069	19	23.44	MST	KMS	3.45	6		105.57				99.57	
AMD_Bu7074_002		7074	5	8	MST	KMS	2.06	18		63.04	55	3.4		45.04	
AMD_Bu7074_003		7074	8	11	MST	KMS	2.92	12		89.35	85	2.8		77.35	
GC-BU7081-001	WP20-0447	7081	4.5	9	MST	KMS	1.66	8		50.80				42.80	
GC-BU7081-002	WP20-0447	7081	9	13	MST	KMS	2.12	10		64.87				54.87	
GC-BU7081-003	WP20-0447	7081	13	17	MST	KMS	2.43	8		74.36				66.36	
GC-BU7081-004	WP20-0447	7081	17	22.24	MST	KMS	3.42	7		104.65				97.65	
GC-BU7082-001	WP19-0410	7082	1.49	5	MST	KMS	0.229			7.01				7.01	
GC-BU7082-002	WP19-0410	7082	5	9	MST	KMS	1.03			31.52				31.52	
GC-BU7082-003	WP19-0410	7082	9	13	MST	KMS	2.73	8		83.54				75.54	
GC-BU7082-004	WP19-0410	7082	13	16.5	MST	KMS	3.23	8		98.84				90.84	
GC-BU7087-001	WP19-0385	7087	1.85	2	MST	KMS	3.49	-2		106.79				108.79	
GC-BU7088-001	WP20-0447	7088	6.28	6.67	CLAY	KMS	0.018	2		0.55				-1.45	
GC-BU7088-002	WP20-0447	7088	6.67	9	MST	KMS	1.47	9		44.98				35.98	
GC-BU7088-003	WP20-0447	7088	9	13	MST	KMS	1.78	25		54.47				29.47	
GC-BU7088-004	WP20-0447	7088	13	18	MST	KMS	1.91	25		58.45				33.45	

Kaiata Mudstone														
SAMPLEID	Lab_SampleID	HOLEID	SAMPFROM	SAMPTO	Samp_Lith_D	Formation_D	ABA_Sul_T	ABA_ANC_hs	ABA_MPA	MWM MPA Calc	ABA_NAG	ABA_NAG_pH	ABA_PASTE_pH	MWM NAPP Calc
GC-BU7088-005	WP20-0447	7088	18	23	MST	KMS	2.43	15		74.36				59.36
GC-BU7088-006	WP20-0447	7088	23	28.24	MST	KMS	2.54	8		77.72				69.72
AMD_STK7112_001		STK7112	5.5	8.5	MST	KMS	1.81	20		55.39				35.39
AMD_STK7112_002		STK7112	8.5	13.5	MST	KMS	1.99	41		60.89				19.89
AMD_STK7112_003		STK7112	13.5	18.28	MST	KMS	3.11	20		95.17				75.17
AMD_STK7113_001		STK7113	4	6	MST	KMS	1.55	18		47.43				29.43
AMD_STK7113_002		STK7113	6	9	MST	KMS	1.59	21		48.65				27.65
AMD_STK7113_003		STK7113	9	13	MST	KMS	1.95	14		59.67				45.67
AMD_STK7113_004		STK7113	13	18	MST	KMS	2.4	16		73.44				57.44
AMD_STK7113_005		STK7113	18	23	MST	KMS	2.7	22		82.62				60.62
AMD_STK7113_006		STK7113	23	28	MST	KMS	3.21	13		98.23				85.23

Miscellaneous

SAMPLEID	Lab_SampleID	HOLEID	SAMPFROM	SAMPTO	Samp_Lith_D	Formation_D	ABA_Sul_T	ABA_ANC_hs	ABA_MPA	MWM MPA Calc	ABA_NAG	ABA_NAG_pH	ABA_PASTE_pH	MWM NAPP Calc
GC-BU3538-001	A09-4237	3538	4	6	LC	SUP	0.35	2	10.71	10.71			6	8.7
GC-BU3627-001	A09-9659	3627	2	4	LC	QUAT	2.76	6	84.456	84.46			4.56	78.5
GC-BU3702-001	A09-10324	3702	4	6	COL	QUAT	0.03	2	0.918	0.92			6.23	-1.1
GC-BU3702-002	A09-10325	3702	6	8	COL	QUAT	0.03	4	0.918	0.92			6.87	-3.1
GC-BU3793-001	A09-14315	3793	2	4	MST	QUAT	1.89	16	57.834	57.83			4.65	41.8
AMD_Bu7040_013		7040	33.11	35.3	GGB	BSM	0.032	5		0.98		5.9		-4.0
AMD_Bu7041_025		7041	65.24	67.8	GGB	BSM	1.06			32.44	35	3		32.4
AMD_Bu7042_014		7042	47.17	49	VFSS	BSM	0.095	2		2.91	9	5.2		0.9
AMD_Bu7042_015		7042	49	52.5	VFSS	BSM	0.05	17		1.53	4	5.8		-15.5
AMD_Bu7042_016		7042	52.5	54.92	ARG	BSM	0.028	3		0.86	7	5.7		-2.1
AMD_Bu7042_017		7042	54.92	57.8	CZN	BSM	0.082	17		2.51	1	6.7		-14.5
AMD_Bu7042_018		7042	57.8	61	ARG	BSM	0.04	6		1.22		7		-4.8
AMD_Bu7042_019		7042	61	63.3	MSS	BSM	0.018	3		0.55	2	6.3		-2.4
AMD_Bu7042_020		7042	63.3	64.9	MSS	BSM	0.012	3		0.37	2	6.6		-2.6
AMD_Bu7074_001		7074		5	LC	QT	0.081	5		2.48	24	4.4		-2.5
AMD_Bu7074_023		7074	58.9	61	GWK	BSM	0.027	2		0.83	17	5.5		-1.2
AMD_Bu7074_024		7074	61	63	GWK	BSM	0.041	32		1.25	17	5.4		-30.7
AMD_Bu7074_025		7074	63	64.9	GWK	BSM	0.182	4		5.57	12	4.9		1.6
AMD_H_DEN05-01	12-71065	DEN05	45	47.4	GRC	BSM	0.02	1	1	0.61	6	4.2	5.8	-0.4
AMD_H_DEN97-09	12-71086	DEN97	39.2	41.5	BQP	BSM	0.03	2	1	0.92	12	4.4	5.8	-1.1
AMD_H_DEN97-10	12-71087	DEN97	41.5	42.8	BQP	BSM	0.02	6	1	0.61		6.8	6.7	-5.4

ABA test results - Job 24-000676 Mine Waste Management

Location	Description	Sample No	Rinse pH	Rinse EC	Sulphur	ANC	ANC	ANC	ANC	NAG pH	NAG pH 4.5	NAG pH 7
					%w	Fizz rating*	Digested pH	kg H2SO4/t	%CaCO3	after digest	kg H2SO4/t	kg H2SO4/t
Site 1	Brunner Coal Measures- laminated sandstone/siltstone	WHR#1	3.12	546	2.46	0	1.97	0.00	0.00	2.35	55.05	64.45
Site 1	Brunner Coal Measures- siltstone pavement	WHR#2	4.90	13.4	0.055	0	1.98	1.71	0.17	4.75	-	5.67
Site 2	Brunner Coal Measures- siltstone/mudstone/carbonaceous materials	WHR#3	3.58	122	0.28	0	2.05	0.24	0.02	3.31	8.42	22.72
Site 4	Dark Brown friable Kaiata Mudstone	WHR#4	3.47	203	1.39	2	1.39	0.00	0.00	2.68	18.80	31.14
Site 5	Dark Brown friable Kaiata Mudstone	WHR#5	3.61	238	1.64	2	1.52	3.69	0.38	2.57	25.47	43.49
Site 6	Weatherd dark grey Kaiata Mudstone	WHR#6	3.49	305	0.68	2	1.63	0.00	0.00	3.25	6.45	17.01
Site 7	Grey/brown Kaiata Mudstone	WHR#7	4.53	92.0	1.17	2	1.66	17.21	1.76	2.83	13.67	29.29
Site 8	Grey Kaiata	WHR#8	3.84	236	2.04	2	1.48	14.64	1.49	2.46	35.64	55.62
Site 9	Grey Kaiata	WHR#9	7.98	365	1.86	2	1.92	92.92	9.48	6.62	-	0.59
Site 11	Grey Kaiata	WHR#11	5.29	129	1.72	2	1.52	25.63	2.61	2.58	26.82	43.85
Site 12	Grey Kaiata	WHR#12	4.14	75.3	0.087	2	1.40	2.44	0.25	4.18	1.37	16.23
Site 13	Grey Kaiata	WHR#13	3.61	318	2.83	2	1.34	11.00	1.12	2.24	54.54	77.8