

Appendix H

Crawford Geochemistry Characterization



REPORT

Crawford Geochemistry Characterization
Geochemical Characterization Report

Submitted to:

Canada Nickel Company

Submitted by:

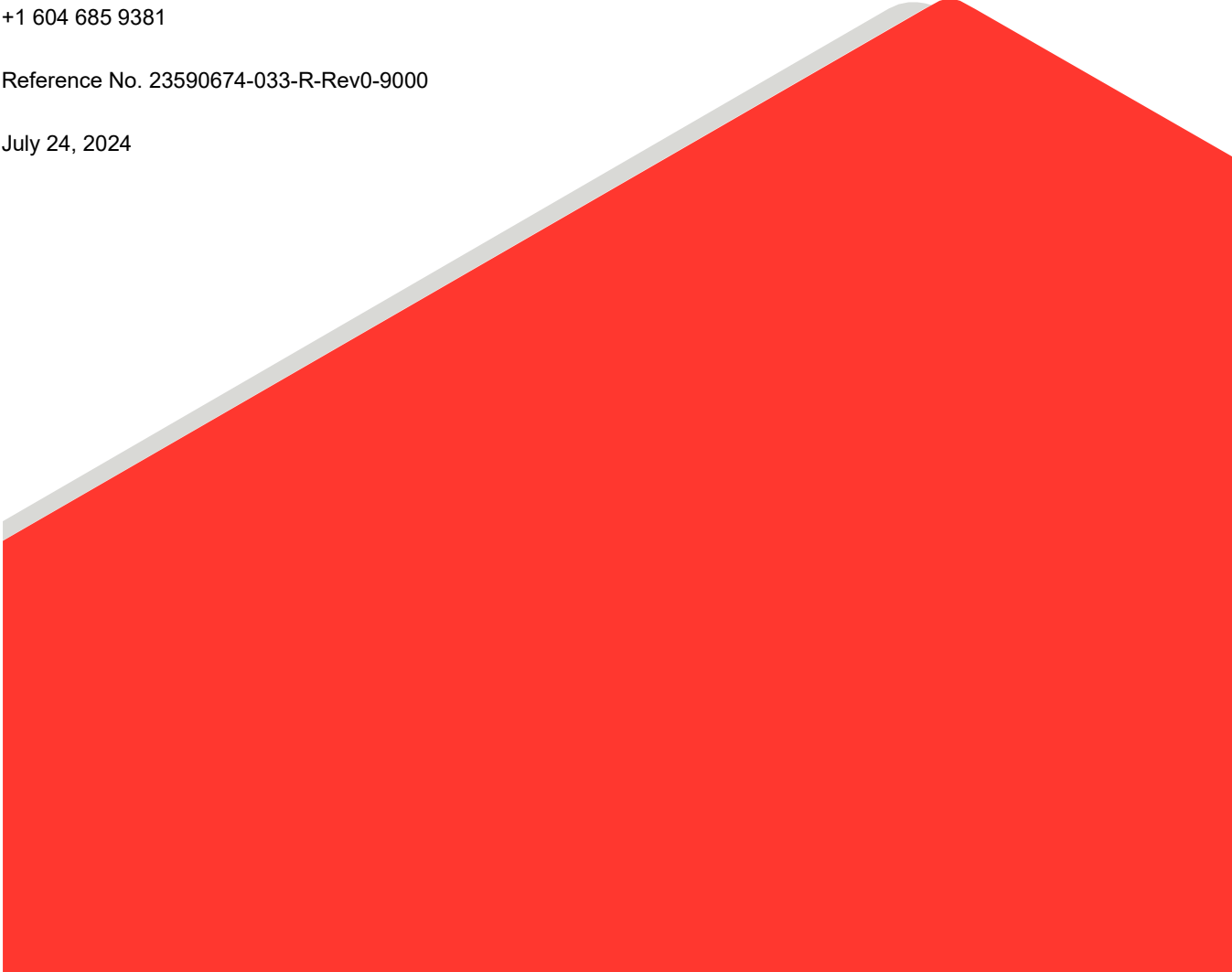
WSP Canada Inc.

237 - 4th Avenue SW, Calgary, Alberta, T2P 4K3, Canada

+1 604 685 9381

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A large, solid red abstract shape that resembles a stylized mountain or a large arrow pointing upwards and to the right. It occupies the lower half of the page, starting from the left margin and extending towards the right edge. The top edge of the shape is a straight line sloping upwards from left to right, while the bottom edge is a straight line sloping downwards from left to right.

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Executive Summary

Canadian Nickel Company (CNC) retained WSP to study the baseline geochemical conditions for the Crawford project as part of the Tailored Impact Statement Guidelines received from the Impact Assessment Agency of Canada. The purpose of this report is to assess the geochemical conditions including the potential for acid rock drainage (ARD) and metal leaching (ML) from materials generated and stored at the Crawford project.

Assessment of ARD and ML potential included the collection of 299 waste rock samples, 109 ore samples, four tailings samples, and 50 overburden samples. Samples were submitted for:

- acid-base accounting (ABA) – all samples
- bulk metals analysis – all samples
- Shake flask extraction (SFE) testing - 152 waste rock samples, 73 ore samples, one tailing sample, all overburden samples
- Net acid generation testing - nine waste rock samples and one ore sample selected for having carbonate values from ABA testing at, or near detection limits
- Mineralogy by X-ray diffraction (XRD) with Rietveld refinement and Quantitative Evaluation of Materials by Scanning Electron Microscope (QEMSCAN) - 14 samples of waste rock, four samples of ore, and all tailings samples
- Whole rock analysis (WRA) - 15 waste rock samples, three ore samples, and all tailings samples

All tailings samples had the supernatant liquid (SNL) collect during the metallurgical process and the chemistry was analyzed. Humidity cell tests (HCTs) of five samples representing each ore and waste rock lithology were run for 99 weeks allowing metal release rates to stabilize. Additionally, two ore, eight waste rock, and four tailings HCTs remain ongoing. These additional HCTs were selected to supplement the completed HCTs and reflect the proportion of each lithology.

Results of the ARD assessment based on static ABA testing show a large discrepancy between neutralization potential (NP) measured from carbonate content ($\text{CO}_3\text{-NP}$), an NP measured analytically using the modified Sobek method (MEND, 2009). Using $\text{CO}_3\text{-NP}$ 22% of waste rock is assessed as potentially acid generating (PAG) and 7% as uncertain; 5% of ore was classified as PAG, and 6% as uncertain; no tailings samples were classified as PAG and 75% of tailings were classified as uncertain; all samples of overburden were classified as not potentially acid generating (NPAG). Using the modified Sobek NP, 1% of waste rock is assessed as PAG and 1% as uncertain; all samples of ore are classified as NPAG; all samples of tailings are classified as NPAG; 4% of overburden is classified as PAG, and 4% is classified as uncertain. This discrepancy is thought to be driven by the relatively low abundance of both sulphides and carbonates in the materials, and an abundance of silicate minerals. Samples subject to NAG testing indicate all samples tested are NPAG, and no HCT has shown a pH of less than 6.7 in any week of testing for all materials.

Metal leaching potential was examined using results from the bulk metals analysis, SFE, and HCT results in the context of the Ontario Provincial Water Quality Objectives (PWQO) (MOEE 1999), and the Canadian Council of Ministers of the Environment (CCME) water quality guidelines for the protection of aquatic life (CCME 2019).

In all materials, chromium VI was identified as having a potential for metal leaching. The pH in HCTs in all materials also shows the potential to be alkaline and exceeds CCME and PWQO. Metavolcanic waste shows the potential for metal leaching of aluminum and arsenic. Dunite ore and waste rock shows the potential for metal leaching of boron in the initial flush, and chromium VI in the long-term release. Similarly, the dunite and peridotite tailings show the potential for chromium VI metal leaching. Additionally uranium shows the potential for metal leaching in the dunite tailings if current HCT trends persist. Kinetic testing shows that the long term metal leaching rates of all other constituents under neutral drainage conditions in the ore, waste rock, and tailings are below both CCME and PWQO. No long-term kinetic tests of overburden material have been completed, but SFE results indicate potentially elevated values of fluoride, aluminum, boron, chromium VI, copper, selenium, and zinc. It should be noted that SFE results of the other materials on site were generally higher in most constituents than the first flush phase of all HCT tests.

Study Limitations

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APPENDICES

APPENDIX A

Crawford Site Map

APPENDIX B

Geochemistry Baseline Study – April 2022 Update and Sampling Plan

APPENDIX C

Crawford Borehole Sampling Map

APPENDIX D

Static Testing Certificates of Analysis

APPENDIX E

Crawford Static Geochemical Data

APPENDIX F

Crawford Kinetic Geochemical Data

APPENDIX G

Waste Rock and Ore HCT Time Series Plots

APPENDIX H

Tailings HCT Time Series Plots

List of Acronyms

Acronym	Definition
ABA	acid base accounting
AP	acid potential
ARD	acid rock drainage
ASTM	American Society for Testing and Materials
CCME	Canadian Council of Ministers of the Environment
CNC	Canadian Nickel Company
COA	certificate of analysis
CaCO ₃	calcium carbonate
CO ₃	carbonate
CO ₃ -NP	carbonate neutralization potential
CO ₃ -NPR	carbonate neutralization potential ratio
CRM	customer relationship management
DI	de-ionized
HCT	humidity cell test
H ₂ O ₂	hydrogen peroxide
H ₂ SO ₄	sulphuric acid
ICP-MS	Inductively Coupled Plasma Mass Spectrometry
MEND	Mine Environment Neutral Drainage Program
ML	metal leaching
ML/ARD	metal leaching and acid rock drainage
Mod. NP	Modified Sobek NP
n	count
NAG	net acid generation
NaOH	sodium hydroxide
NP	neutralization potential
NPAG	non potentially acid generating
NPR	neutralization potential ratio
ON	Ontario
PAG	potentially acid generating
PWQO	Provincial Water Quality Objectives
QA/QC	quality assurance/quality control
QEMSCAN	Quantitative Evaluation of Materials by Scanning Electron Microscope
RPD	relative percent difference
SEM	scanning electron microscope
SFE	shake flask extraction
SNL	supernatant liquid
WRA	whole rock analysis
WSP	WSP Canada Inc.
XRD	X-ray diffraction

List of Units

Abbreviation	Definition
°C	degrees Celsius
>	greater than
<	less than
≥	greater than or equal to
≤	less than or equal to
%	percent
µg	microgram
µm	micrometre
ft	foot
g	gram
kg	kilogram
kg CaCO ₃ /t	kilograms of calcium carbonate per tonne
km	kilometre
L	litre
m	metre
mg	milligram
mL	millilitre
Mt	megaton
N	normality
ppm	parts per million
t	tonne
wt%	weight percent

1.0 INTRODUCTION

WSP Canada Inc. (WSP) was retained by Canadian Nickel Company (CNC) to conduct a geochemical investigation of their Crawford site (“the Project”) as part of their baseline report to support ongoing and future geochemical modelling efforts. The Project is situated in the Cochrane district of Northern Ontario (ON), approximately 40 kilometres (km) north of the city of Timmins ON, adjacent to Ontario provincial highway 655. Current mining plans include two open pit zones: a main zone and saddled east zone. Lithologies in each zone are continuous and mining in each zone centered around mafic and ultra mafic nickel sulphides. The ore and future areas such as the waste rock pile, the tailing facility, and the overburden piles will be managed directly on the mine site. The planned infrastructure includes a waste rock stockpile, organic overburden stockpiles, a clay overburden stockpile, and mineral soil overburden stockpile, the development of ore stockpiles, and the development of a tailings management facility. A map of the site plan is provided in Appendix A.

1.1 Objectives

This report serves to evaluate the potential for acid rock drainage (ARD) and the potential for metal leaching (ML) from mine rock, tailings, and overburden materials to be managed at the Project. This work was carried out over three phases beginning in 2021. This report summarizes the data available from all phases and includes results presented in previous technical memos (WSP Golder 2022, WSP 2023, WSP 2024).

1.2 Site Plan and Lithologies

Lithological units are described below, according to core logging observations and geochemical analyses carried out by CNC. Lithologies are not exclusive to either ore or waste rock and common terms are used, the differential between ore and waste rock is dependent on chemical and ore mineral percentage thresholds determined by CNC. Proportions of planned waste rock and ore by lithology are presented in Table 1 and Table 2. The lithologies’ descriptions and associated codes are summarized as:

- Dunite: olivine and serpentine dominated ultramafic rocks, with minor brucite, wustite, and hematite;
- Pyroxenite: minor ultramafic unit present in reef structures dominated by diopside and actinolite, and minor chlorite;
- Peridotite: ultramafic unit dominated by serpentine with minor diopside and chlorite;
- Metavolcanic: extrusive igneous rocks (basalts, andesite), dominated by major quartz and plagioclase, and minor forsterite and diopside;
- Gabbro: mafic intrusive (gabbro and some andesite), major diopside, plagioclase, zoisite, and actinolite, with minor chlorite.

Table 1: Proportion of Waste Rock Generated by Lithology over the Life of Mine

Lithology	Waste Rock Generated (Mt)	Percentage of Total Waste Rock (%)
Dunite	150	5
Peridotite	374	13
Pyroxenite	156	5
Gabbro	842	29
Basalt	1432	48

Mt = megaton, % = percent.

Table 2: Proportion of Ore Generated by Lithology over the Life of Mine

Lithology	Ore Generated (Mt)	Percentage of Total Ore (%)
Dunite	1372	85
Peridotite	230	14
Pyroxenite	4	0.2
Gabbro	1	0.1
Basalt	3	0.2

Mt = megaton, % = percent.

Tailings on site will be sourced proportionately by lithology with the percentage of ore generated by lithology. Overburden on site will be segregated by broad classifications referred to in this report as:

- Clay: plastic index greater than 10 and/or 25% or greater of the material mass passing through a size 200 sieve, potentially mixed with lime for slope stabilization.
- Mineral: rocky soils with high silt and sand and some till, with low amounts of organics.
- Organic: primarily peat and topsoil, stockpiled separately to use for reclamation.

2.0 METHODS

2.1 Study Design

The geochemical characterization program was initiated in three phases beginning in 2021 and this report summarizes all data collected to date and assesses the potential for ARD and/or ML from the mine rock, tailings, and overburden material to be managed at the Project. Samples included the collection of 299 waste rock samples, 109 ore samples, four tailings samples, and 50 overburden samples. This study design is meant to fulfill the requirements outlined below taken from section 8.3.1 in the Tailored Impact Statement Guidelines for the Project (Impact Assessment Agency of Canada, 2023):

The Impact Statement must:

- provide a geochemical characterization of expected mined or excavated materials (and historical waste, if applicable), such as waste rock, ore, low grade ore, pit wall materials, tailings, overburden and potential construction material (i.e., mine rock, quarries, unconsolidated material).

In particular:

- provide a detailed summary of analytical methods used to evaluate mineralogy, acid rock drainage and metal(loid) leaching. The Mine Environment Neutral Drainage report 1.20.1 is recommended as guidance to support study design;
- describe the representativeness of samples collected for acid rock drainage and metal(loid) leaching assessment. Present cross sections or block model images at an appropriate scale that include mine rock samples, geology, mineralized zones, the approximate location of all open pit and underground mine development, borehole traces and identification numbers, and a scale and legend;
- describe the representativeness of tailings solids and process water. Provide a schematic process flow chart including the location that each tested sample represents if various processing streams are tested;
- describe the approach and methods for the prediction of acid rock drainage and metal(loid) leaching, including identification of potential parameters of concern. Provide initial leaching potential results based on short term leach tests and an analysis of the representativeness of laboratory and field kinetic tests based on static tests results;
- describe the quality assurance/quality control procedures. Provide laboratory certificates of analysis that include information related to analytical methodology and quality assurance/quality control;
- provide estimates of the potential for all materials to be sources of acid drainage, neutral mine drainage, and/or metal(loid) leaching, timing to its onset, and short- and long-term loading rates calculated from kinetic testing for both neutral and acidic conditions, with consideration for the use of a proxy (i.e., historical mine waste, analytical tests replicating acidic conditions) if kinetic tests have not produced acidic leachate, if applicable;

After the completion of phase 1 and the receipt of the mine plan in spring 2022, a detailed sampling plan for the baseline study was presented in a technical memo (WSP Golder 2022). This memo was used to guide study design for phase 2 and 3 of the baseline characterization program. The sampling plan also provided rationale for approximate sample counts and prescribed analytical analysis using other similarly sized programs as a reference (APPENDIX B).

Waste rock, ore, tailings, and overburden samples were collected concurrently with each other over the course of the three phases of sampling. CNC collected all samples and shipped them to SGS Lakefield for analysis. Sample counts of ore and waste rock were informed based on the proportions of each lithology in both the waste and ore stockpiles as shown Table 1 and Table 2. Samples were selected with the intent to represent the potential spatial variability of each lithology. Selection of waste rock samples included locations near the expected pit wall; however, at this stage of the Project boreholes may not align with the actual pit wall. However, waste rock and pit wall rock will have the same lithology. Samples taken can be seen in Figure 1 and Figure 2 plotted in the leapfrog model of the site. Sample counts were informed using the exemplary method outlined in Mine Environment Neutral Drainage Program (MEND) (2009) and comparisons to sample counts for other projects in similar jurisdictions, as outlined in the sampling plan memo (WSP Golder, 2022) attached as APPENDIX B.

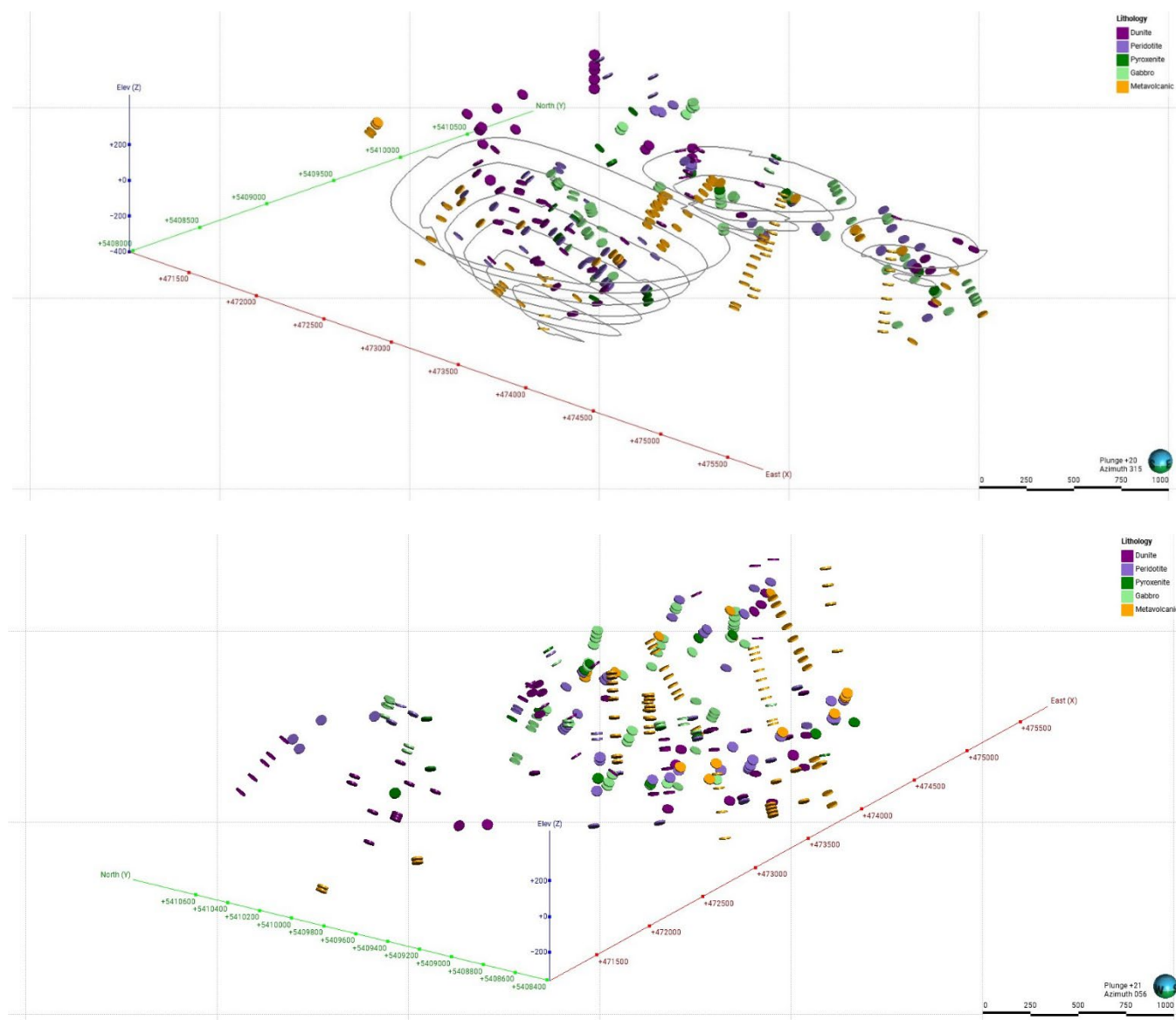


Figure 1: Samples Collected of Both Ore and Waste Rock by Lithology From Two Angles

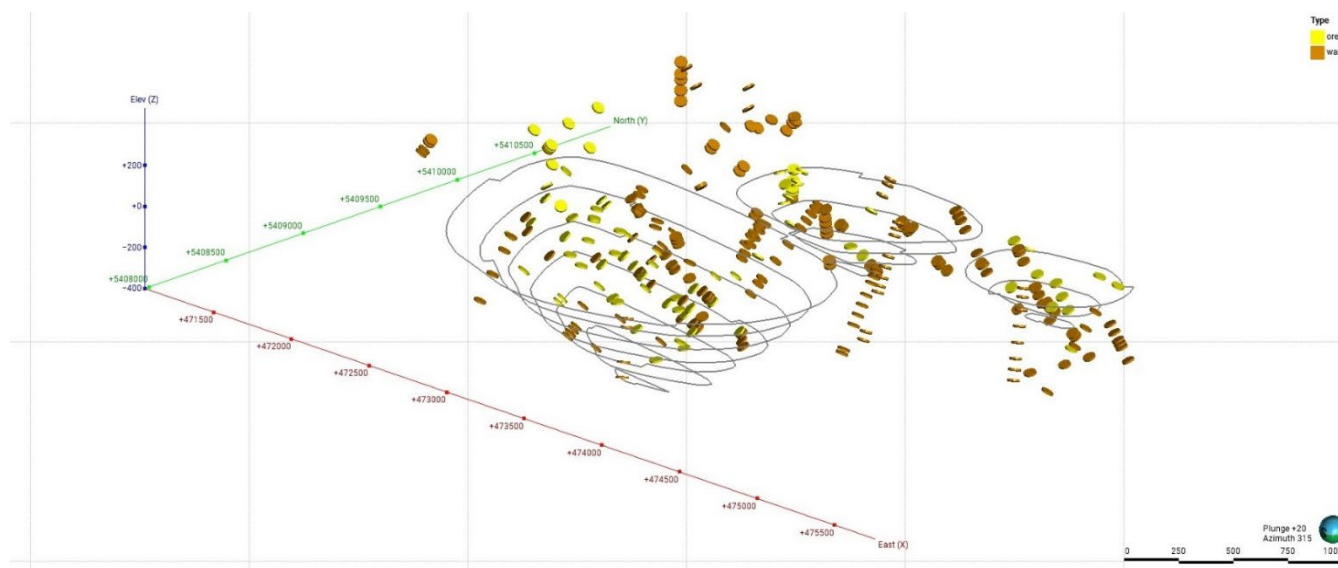


Figure 2: Samples Collected by Ore and Waste Rock

Tailings samples were generated using parent material sourced from different ore grade and zones on site. Lithologies of the parent material was selected on a basis of representing major ore lithologies, with three samples generated from dunite, and one peridotite.

Overburden samples were collected in two phases. The first sampling, which occurred in 2022, collected overburden samples spatially distributed across the site. A second phase of sampling was conducted to increase the number of organic overburden samples as the mine plan evolved to include segregated waste piles for overburden, including a stockpile for organic soils intended to be used for reclamation, and additional piles for the mineral soils, larger comprised of clay. It should be noted that terms like “mineral” and “organic” are not meant to be used as soil taxonomy classifications but are instead meant to be broad headings to classify each soil into a corresponding pile for storage.

2.2 Analytical Testing Selection

2.2.1 Acid Base Accounting and Bulk Metals Sample Selection

All samples of waste rock, ore, tailings, and overburden were subject to acid-base accounting (ABA) and bulk metals analysis.

2.2.2 Shake Flask Extraction Sample Selection

Shake flask extraction (SFE) testing was conducted on 152 waste rock samples, 73 ore samples, one tailings sample, and all overburden samples. Sample selection for waste rock and ore was done on a representative basis proportional to predicted lithology proportions generated for both groups. Only the peridotite tailing sample was selected for SFE testing as an initial screening for metal leaching to compare against the ongoing dunite sample humidity cell test (HCT) which were begun earlier.

2.2.3 Mineralogy Sample Selection

Samples selected for mineralogical analysis include 15 waste rock, three ore, and four tailings samples. All waste rock and ore samples selected for the phase 2 HCT program were also selected for mineralogy testing, this was supplemented with additional samples to proportionally represent each lithological unit.

2.2.4 Net Acid Generation Sample Selection

The net acid generation (NAG) testing was conducted on a subset of 20 samples (19 waste rock and 1 ore sample) which reported carbonate neutralization potential ($\text{CO}_3\text{-NP}$) below or near the method detection limit. In some samples, calculated carbonate neutralization potential ratio ($\text{CO}_3\text{-NPR}$) values were less than 1 due to the reliance of inorganic carbon concentrations at or below the method detection limit, resulting in a classification of ARD potential which may be unreliable. To address this uncertainty, samples with negligible $\text{CO}_3\text{-NP}$ were selected and included materials with a range of Modified Sobek neutralization potential (Mod. NP) values, and samples from all lithologies were included to refine the certainty of material characterization for sample from the Project with low reported $\text{CO}_3\text{-NP}$.

2.2.5 HCT Selection

At the initiation of phase 2 of the study five samples, one of each rock lithology, were selected from the batch 1 samples. These samples were selected as median representatives for initial screening constituents with a potential for metal leaching based on the SFE test results. As part of phase 3, and additional ten waste rock and ore samples were selected to ensure spatial coverage as seen in Figure 3, to better represent anticipated masses of each lithology, and to specifically target constituents with a potential for metal leaching identified as part of the SFE testing by choosing samples in the 60th to 96th percentile in these select constituents in the overall dataset of waste rock and ore by lithology at the time of selection. These percentiles are discussed further in the results section, Table 16 and Table 23. Additionally, all tailings samples were subject to ongoing HCT testing.

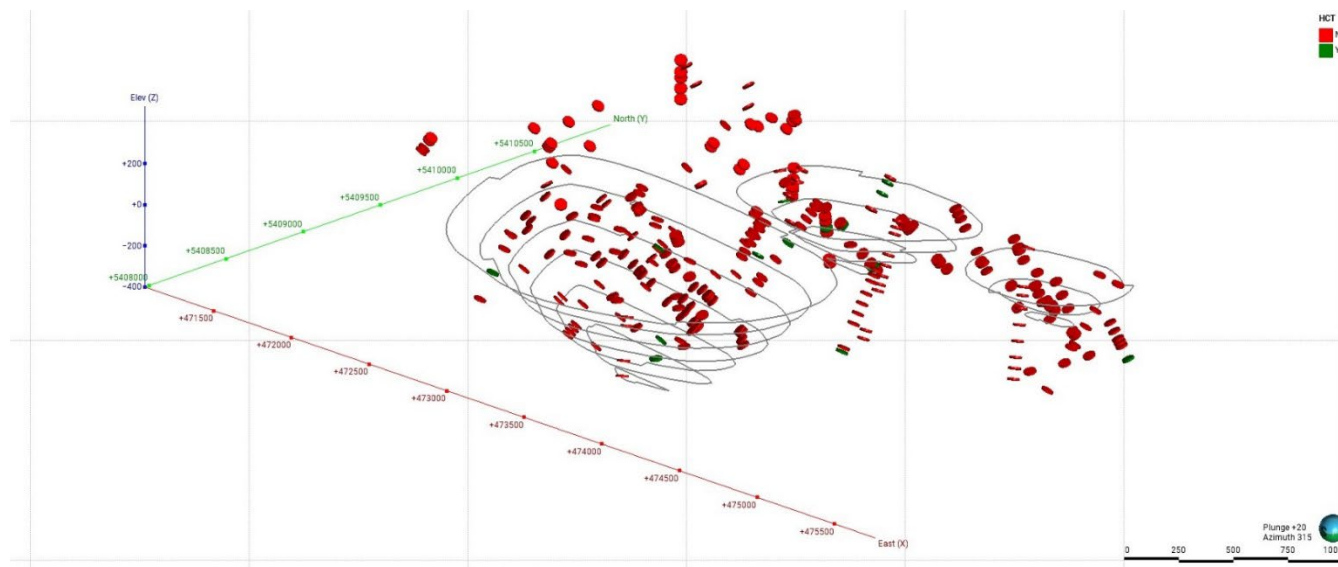


Figure 3: Spatial Distribution of All Samples Subject to Humidity Cell Testing

2.2.6 Lime Amended Clay

An additional five clay samples were collected and stored in Shelby tubes to preserve field moisture content. These samples were intended to be used as parent samples to different lime addition rates. These samples were collected from across the site and at different depths. Samples were selected from a previous soil report (SRK 2023), samples were chosen based off availability, spatial distribution, and condition of the Shelby tubes. A summary of selected samples is presented below in Table 3, and a map of sample sources is presented in APPENDIX C. Shelby tubes were inspected onsite for cracks to ensure field moisture content was maintained. A “clay” in this context refers to a soil with a plastic index greater than 10 and/or 25% or greater than the material mass passing through a size 200 sieve.

Table 3. Summary of Samples Taken for Lime Addition to Clay Analysis

Sample ID	Borehole ID	From (ft)	To (ft)	Mass
035279	NWR-BH-07	48	50	5.5 ± 0.3 kg
167356	HG-BH-01	28	30	5.3 ± 0.3 kg
035223	OP-BH-04	28	30	4.5 ± 0.3 kg
167688	TSF-BH-13	36	38	4.9 ± 0.3 kg
058403	SOS-BH-05	38	40	4.3 ± 0.3 kg

ft = foot, kg = kilogram.

2.2.7 Tailings Process Water

In spring 2021 four samples of tailings were generated using the metallurgical process that CNC expected to be used for ore refinement. These samples include three dunite samples, and one peridotite sample. Two of the dunite samples (CBS-003, CANA-13) and the peridotite sample (CBS-001) were sourced from material in the main zone of the of the mine, and the third dunite sample (CDS-003) was sourced from the east zone of the site. Process water resulting from the metallurgical process was also collected from each sample.

2.3 Analytical Methods

The selected samples underwent static and kinetic geochemical testing to characterize their metal leaching and acid rock drainage (ML/ARD) potential including:

- ABA.
- Single addition NAG pH testing.
- Elemental analysis by strong acid digestion.
- Whole rock analysis (WRA).
- Mineralogical analysis by X-ray diffraction (XRD) with Rietveld refinement and Quantitative Evaluation of Materials by Scanning Electron Microscope (QEMSCAN).
- Supernatant liquid (SNL) analysis.
- Short-term leach testing by SFE.
- Kinetic testing by HCT.

The following sections describe each testing method and provide an overview of the method of interpretation of each test result.

2.3.1 Acid Base Accounting

ABA qualifies the potential of a material to generate acid and to neutralize acid generated. It is assessed through the measurement of acid generating minerals and neutralizing minerals present. The capacity of a sample to generate acidity or neutralize acid is referred to as the acid potential (AP) and the neutralization potential (NP) respectively. This is qualified using the paste pH, sulphur species (total sulphur, sulphide sulphur and sulphate sulphur), NP and carbon species (total carbon and carbonate (CO₃) content). The methodology used is thoroughly described in MEND (2009). Table 4 summarizes the measured parameters and their methodology, and Table 4 presents calculated ABA parameters.

The potential for a material to generate AP is commonly evaluated by considering ratio of NP to AP, referred to the neutralization potential ratio (NPR). Table 6 represents the recommended guidelines for interpreting NPR according to MEND (2009) to classify samples as potentially acid generating (PAG), Uncertain or non potentially acid generating (NPAG).

Table 4: Summary of Measured Acid Base Accounting Parameters and Analytical Methods

Measured Parameter	Acronym	Units	Analytical Method
Paste pH	-	-	pH of a slurry of solid sample and de-ionized water.
Total sulphur	-	%	LECO furnace.
Sulphide sulphur	-	%	Pyrolysis at 550°C, followed by LECO furnace, measure difference from original total sulphur content.
Sulphate Sulphur	-	%	React with hydrochloric acid, and measure residue by spectrophotometer.
Total carbon	C	%	LECO furnace.
Carbonate (CO ₃)	CO ₃	%	Pyrolysis at 550°C, residue after roasting contains carbonate carbon

CO₂ = carbon dioxide, CaCO₃ = calcium carbonate, % = percent.

Table 5: Calculated Acid Base Accounting Parameters

Parameter	Acronym	Units	Calculation
Acid potential	AP	kg CaCO ₃ /t	AP = sulphide sulphur ^(a) × 31.25
Modified Sobek neutralization potential	Mod. NP	kg CaCO ₃ /t	Mod NP = [50 × (N of HCl × Volume of HCl) – (N of NaOH × Volume NaOH)] / weight of sample (g)
Carbonate neutralization potential	CO ₃ -NP	kg CaCO ₃ /t	CO ₃ NP = [Carbonate (CO ₃) / 60.01] × 100.09 × 10
Modified Sobek neutralization potential ratio	Mod. NPR	-	Mod NP/AP = Mod NPR
Carbonate neutralization potential ratio	CO ₃ -NPR	-	CO ₃ -NP/AP = CO ₃ NPR

(a) Where sulphide sulphur is below detection, result for total sulphur is used in calculation. If sulphide sulphur and total sulphur are below detection, detection limit of total sulphur (0.005%) is used in calculation.

CaCO₃ = calcium carbonate, CO₂ = carbon dioxide, HCl = hydrochloric acid, NaOH = sodium hydroxide.

Sulphide sulphur content was used to calculate the AP. By convention, the calculation of AP uses the stoichiometry of pyrite oxidation to calculate the amount of sulphuric acid that could be generated by the amount of sulphur present in a sample, which requires neutralization by a corresponding amount of calcite.

The NP may be calculated two ways, the Mod. NP or the CO₃-NP, the latter accounting for the fraction of NP contributed by carbonate minerals, while the former includes contributions from other aluminosilicate minerals. In ultramafic lithologies such as those present at the Project, the magnesium endmember of olivine, forsterite, may be a primary source of NP. The reaction rate of these minerals is generally orders of magnitude slower than the reaction with carbonate minerals (MEND 2009). This CO₃-NPR value allows for a more conservative view of NPR as it only relies on the well understood reaction between carbonates and any potential acid generated.

Table 6: Guidelines for Determining Acid Generating Using NPR (MEND 2009)

Acid Generation Potential Classification	Criteria	Comments
Potentially Acid Generating (PAG)	NPR <1	Potentially acid generating depending on reactivity of the sulphide minerals
Uncertain	$1 \leq \text{NPR} \leq 2$	Possibly acid generating depending on the reactivity of the neutralizing minerals and sulphides
Non-Potentially Acid Generating (NPAG)	NPR >2	Not expected to be net acid generating

Source: MEND (2009).

NPR = neutralization potential ratio; <= less than; >= greater than; ≤ = less than or equal to.

2.3.2 Net Acid Generation Testing

NAG testing results are used to evaluate the available buffering capacity of samples and the ability for silicate minerals present to neutralize any potential acidity released. The NAG test (AMIRA 2002) involves addition of hydrogen peroxide (H₂O₂) to the sample at a 1:1 (v/w) ratio (1.5 g and 150 mL of H₂O₂) to induce rapid oxidation of sulphide minerals; the sulphuric acid produced by oxidation is buffered concurrently by available neutralizing minerals in the sample. The resulting leachate is captured and titrated as necessary with sodium hydroxide (NaOH, 0.1 N) to achieve a pH of 7. The pH of the oxidized solution is measured after the reaction is complete to determine the NAG pH. The initial pH, the NAG pH and the equivalent mass of sulphuric acid (H₂SO₄) generated (representing the total acidity generated) is calculated to evaluate the ability, if any, of the material to neutralize acidity generated. Unlike ABA results, NAG tests do not provide an estimate of NP relative to AP, but rather indicate the net effect of sulphide oxidation and buffering reactions within a sample. The guidelines for interpretation of NAG pH are presented in Table 7 (AMIRA 2002).

Table 7: Guidelines for Interpretation of Acid Generation Potential from NAG Testing Results

NAG pH	Acid Generation Potential
≥ 4.5	NPAG
<4.5	PAG

Source: AMIRA 2002.

NPAG = non acid generating; PAG = potentially acid generating; ≥ = greater than or equal to; <= less than.

2.3.3 Elemental Analysis

Elemental Analysis was conducted using a 4-acid digest followed by Inductively Coupled Plasma Mass Spectrometry (ICP-MS). Metal concentrations were compared to the average crustal abundance of metals in crustal rock (Price 1997). For screening purposes, samples containing greater than ten times the average crustal abundance of each element were considered to have elevated concentrations of that parameter. The objective of this comparison was to identify parameters that may require further consideration with respect to environmental significance. It should be noted that solid phase element concentrations are not an indication of ML potential.

2.3.4 Whole Rock Analysis

WRA was conducted on a subset of samples to quantify the elemental composition of the materials. WRA determines the concentrations of major oxide species by lithium meta-borate fusion, followed by ICP-MS analysis to determine the percentage of the following major elements, reported as oxides: aluminum oxide (Al_2O_3), calcium oxide (CaO), chromium oxide (Cr_2O_3), iron oxide (Fe_2O_3), potassium oxide (K_2O), magnesium oxide (MgO), manganese oxide (MnO), sodium oxide (Na_2O), phosphorous oxide (P_2O_5), silicon dioxide (SiO_2), titanium dioxide (TiO_2), and vanadium oxide (V_2O_5).

2.3.5 Mineralogical Analysis

Mineralogical analysis was used to determine the bulk mineralogical composition of the samples and identify minerals that provide buffering capacity and acidification potential to the samples. XRD with Rietveld pattern interpretation allows for quantitative evaluation of the crystalline mineral phases to concentrations of approximately 0.5 – 2% dependent on crystallinity. Mineral phases present at concentrations less than 1% can be identified but quantification is imprecise. Moreover, the results are often only semi-quantitative due to the presence of unknown clays (illite-smectite) and/or amorphous material.

QEMSCAN was used to perform mineralogical analysis of the tailings materials. QEMSCAN is a quantitative mineralogy technique that uses automated visual element mapping via scanning electron microscope (SEM) to capture data and powerful software analysis to output particle composition, size, and liberation. Mineral crystallinity is not detected by these methods, and it must be used in conjunction with another mineralogical technique to distinguish chemically and morphologically similar minerals. QEMSCAN also allows for broad identification of chemically mixed species or solid solutions (e.g., plagioclase feldspar with different calcium-sodium proportions).

2.3.6 Supernatant Liquid

SNL from the tailings samples was extracted and chemistry analyzed. The results of the SNL testing were used to estimate the potential concentrations of dissolved constituents discharged as part of a tailings slurry to a tailings impoundment.

The SNL concentrations were compared to the Provincial Water Quality Objectives (PWQO) for Ontario (MOEE 1999) and Canadian Council of Ministers of the Environment (CCME) guidelines for the protection of aquatic life (CCME 2023), for the purpose of identifying parameters of potential environmental concern. Where available, interim guideline values for PWQO were used in the screenings. Although the results are compared to the PWQO and CCME, it is important to note that these objectives do not apply the managed internal site water and therefore should not be interpreted within a regulatory context. Rather, these comparisons are conducted herein to qualitatively identify parameters that may be present at concentrations that require further evaluation in the context of the overall site water quality. Specific effluent limits developed based on the assimilative capacity of the receiver would be applied to the discharge from the project.

2.3.7 Shake Flask Extraction

Short-term leach testing is commonly used as a qualitative screening tool that is useful for identifying the soluble metals that can be readily leached from the test material. These results can be used to identify elements of potential environmental concern. However, the results do not directly translate to the expected environmental behaviour of materials due to:

- Small sample volumes.
- The short duration of testing, which may not account for representative water-rock interaction times and mineral reaction rates (e.g., sulphide oxidation).
- The enhanced dissolution of some mineral phases due to lab-imposed conditions (e.g., pH, redox, agitation).

SFE testing was performed according to the method in MEND (2009). Pulverized subsamples were mixed with distilled water (3:1 solution to solid ratio), placed in a flask, and shaken for 24 hours using a variable-speed shaker table. Leachate was collected from a pump through a 0.45- μm filter and analyzed for the following parameters: pH, conductivity, major cations and anions, nitrogen species, and dissolved metals including aluminum filtered used 0.2- μm filter, to align with PWQO for a clay free sample.

Leachate concentrations were compared to PWQO and CCME for the purpose of identifying parameters of potential environmental concern. Although, it is important to note that these objectives do not apply to short term leach test results and therefore should not be interpreted within a regulatory context. Rather, these comparisons are conducted herein to qualitatively identify parameters that may be present at concentrations that require further evaluation in the context of the overall site water quality.

2.3.8 Humidity Cell Testing

HCTs were conducted according to the method outlined in American Society for Testing and Materials (ASTM 2013) *D5744-13, Standard Test Method for Laboratory Weathering of Solid Materials Using a Humidity Cell* and MEND (2009). A humidity cell is a chamber designed to provide control over air, temperature, and moisture while allowing for the removal of weathering products (principally oxidation products) in solution. The HCTs consisted of a 1-kg sample (dry equivalent). The samples were leached with 1 L of de-ionized (DI) water prior to the regular weekly cycle. This initial leach was considered the first flush, or week 0. The weekly cycles consisted of a 3-day period where dry air was circulated in the cell, a 3-day period where humid air was circulated in the cell, and a final leach day when the cell was flooded with 1 L of distilled water (1:1 liquid to solid ratio by weight). After one hour of retention, the leach water was drained from the bottom of the cell, passed through a 0.45- μm filter, and collected for analysis of the following parameters: pH, conductivity, major cations and anions, nitrogen species, and dissolved metals including aluminum filtered used 0.2- μm filter, to align with PWQO for a clay free sample.

The long-term acid generation potential of the HCTs was also assessed using the results of sulphide and Mod. NP / CO_3 -NP depletion calculations following methods described in MEND (2009). Average sulphate production rates from the last 10 weeks of testing data were used to calculate sulphide depletion using sulphide sulphur concentrations. Neutralization potential depletion calculations were based on empirical NP consumption rates averaged over the last 10 weeks of testing data and NP values calculated from Modified Sobek method and carbonate concentrations. The empirical NP consumption calculations reflect theoretical NP consumption (i.e., expected NP consumption based on the amount of sulphate produced, assuming one mole of sulphate produced equates to one mole of buffering carbonate mineral dissolved) plus alkalinity produced (dissolution of carbonic acid above pH 6) minus acidity produced (for example, from release of metals) during each leach cycle.

Sulphate and alkalinity production rates provide an indication of how fast sulphides are oxidizing and how quickly neutralizing phases (carbonates, aluminosilicates) are buffering the acid generated, respectively. These calculations do not account for sources of AP and NP that are insufficiently reactive under current test conditions such as silicate minerals.

2.3.9 Clay with Lime Addition

As part of this program an evaluation of the effects on geochemical characteristics of the clay stockpile by the addition of lime for structural stability were evaluated. As part of this program five samples of clay from across the site were collected and sealed in Shelby tubes to conserve field water content. Moisture content of each sample was measured at the time of receipt by the lab and each sample was divided into four sub samples, one control (0% addition), and of each prescribed lime additions (2%, 3%, and 4%). A prescribed treatment of lime (2%, 3%, and 4%) was added to the sub samples on a dry weight basis, and standard ABA and SFE testing was conducted on the 20 sub samples.

A statistical analysis of each measured parameter was conducted using R version 4.2.2. (R Core Team, 2021), and nonparametric analysis of variance was performed using a Kruskal Wallis test (Kruskal and Wallis, 1952) and a pairwise Wilcoxon test (Rosner et al. 2006) was used to generate p ($\alpha=0.05$) values to compare treatment groups.

2.3.10 Quality Assurance/Quality Control

All ABA and elemental analysis results were evaluated against the following quality assurance/quality control (QA/QC) criteria:

- Sulphate sulphur results were less than or equal to total sulphur results within a 30% margin.
- For each fizz rating, NP results did not exceed the maximum indicated by acid strength and volume guidelines in MEND (2009).
- Laboratory duplicate relative percent difference (RPD) values were less than 20% for ABA and less than 30% for metals. This criterion was applied for samples with concentrations at or greater than 5 times the detection limit. For concentrations below five times the detection limit, the absolute difference between the original and duplicate values did not exceed twice the reported detection limit.
- Each analysis batch included analysis of certified reference materials, and the results were within the tolerance ranges established for the customer relationship management (CRM).

Short-term leach testing results and SNL analyses were evaluated against the following QA/QC criteria:

- For leachates with parameter concentrations greater than five times the detection limit, the duplicate values have RPD values less than 20%.
- Each analysis batch included control reference materials, and results were within the tolerance ranges established for the CRM.
- One method blank was analyzed per batch of 20 samples and results do not exceed specified detection limits.

All data met the QA/QC criteria described and were therefore considered acceptable for use in this geochemical dataset.

3.0 RESULTS

Analytical tests completed is summarized by lithology and material type in Table 8.

Table 8: Summary of All Analytical Tests Completed to Date

Material Type	Lithology / Type	Acid Base Accounting	Net Acid Generation	Elemental Analysis	Whole Rock Analysis	Mineralogy	Supernatant Liquid	Shake Flask Extraction	Humidity Cell Tests
Waste Rock	Dunite	15	-	15	1	1	-	8	-
	Gabbro	85	9	85	4	4	-	44	3
	Pyroxenite	37	1	37	2	2	-	18	1
	Metavolcanic	117	3	117	6	6	-	59	5
	Peridotite	45	6	45	2	2	-	23	2
Ore	Dunite	66	1	66	2	2	-	37	3
	Gabbro	4	-	4	-	-	-	3	-
	Pyroxenite	3	-	3	-	-	-	2	-
	Metavolcanic	4	-	4	-	-	-	3	-
	Peridotite	32	-	32	1	1	-	25	1
Tailings	Dunite	3	-	3	3	3	3	-	3
	Peridotite	1	-	1	1	1	1	1	1
Overburden	Organics	26	-	26	-	-	-	26	-
	Mineral	24	-	24	-	-	-	24	-
Clay	-	20	-	-	-	-	-	20	-
Total		482	20	462	22	26	4	283	19

3.1 STATIC

3.1.1 Waste Rock

As detailed in section 2.2.1, waste rock material for the Project was chosen to represent the dunite, gabbro, pyroxenite, metavolcanic, and peridotite waste rock lithologies. The following sections contain a summary of the data collected for waste rock samples and is divided into ABA, NAG, elemental analysis, mineralogy, and SFE static results. The certificates of analysis (COAs) for these results are in APPENDIX D.

3.1.1.1 Acid Base Accounting

The ABA analysis of the waste rock samples ($n = 299$) is summarized in Table 9 through Table 11. Waste rock material samples for the Project represent dunite, gabbro, pyroxenite, metavolcanic materials, and peridotite lithologies, with most samples representing the gabbro and metavolcanic lithologies. A full report of results for ABA are available in APPENDIX E.

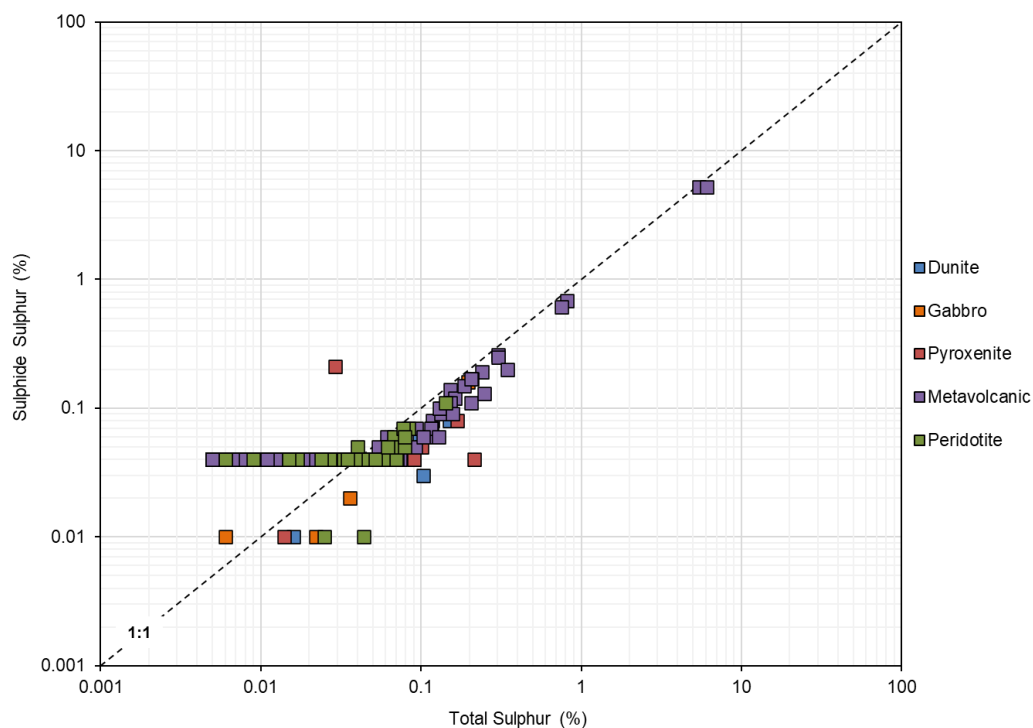
Table 9: Sulphur and Carbon Speciation of Waste Rock Material

Lithology	Statistic	Paste pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbon as CO ₃
	Unit	-	%	%	%	%	%
Dunite (n = 15)	Minimum	9.0	0.006	<0.04	<0.04	0.024	<0.04
	Maximum	9.5	0.15	0.08	0.07	2.4	12
	Median	9.4	0.025	<0.04	0.04	0.21	0.93
Gabbro (n = 85)	Minimum	8.8	<0.005	<0.01	<0.04	<0.005	<0.025
	Maximum	10	0.2	0.16	0.09	2.2	11
	Median	9.5	0.024	<0.04	<0.04	0.041	0.06
Pyroxenite (n = 37)	Minimum	9.1	<0.005	<0.01	<0.04	<0.005	<0.025
	Maximum	10.0	0.22	0.21	0.22	3.1	13
	Median	9.6	0.042	<0.04	<0.04	0.034	<0.04
Metavolcanic (n = 117)	Minimum	8.4	<0.005	<0.04	<0.04	0.018	<0.04
	Maximum	10	6.1	5.2	0.81	3.8	19
	Median	9.6	0.013	<0.04	<0.04	0.63	3.0
Peridotite (n = 45)	Minimum	8.1	0.006	<0.01	<0.04	<0.005	<0.04
	Maximum	9.9	0.14	0.11	0.06	4.3	19
	Median	9.5	0.044	<0.04	<0.04	0.066	0.18

Note: Detection limit varies with different phases of testing.

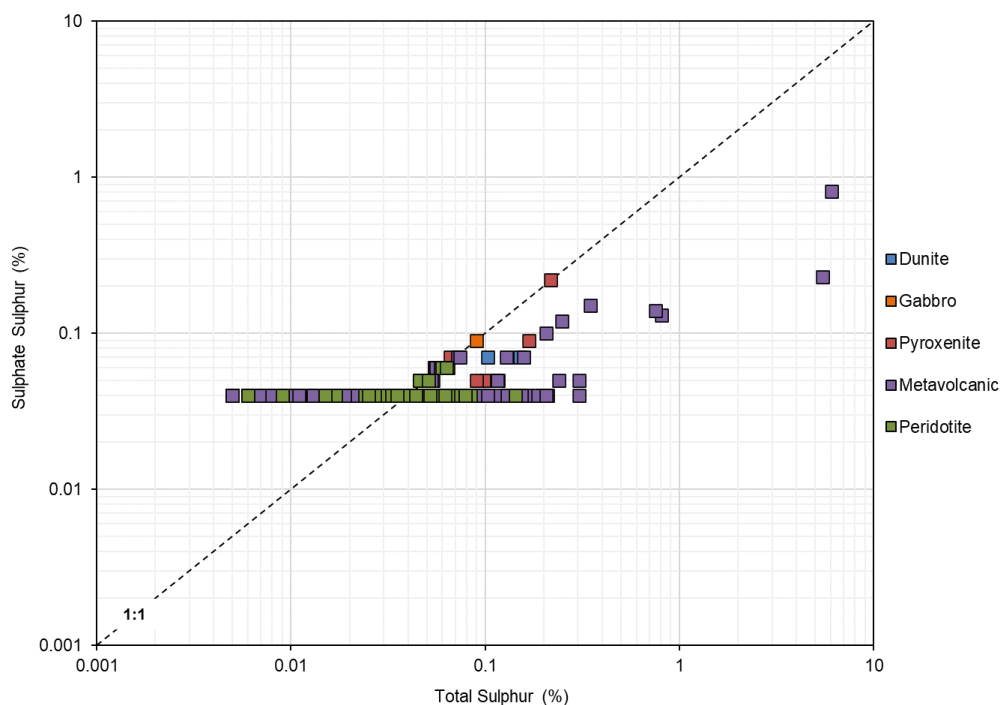
CO₃ = carbonate; % = percent; <= less than.

Samples from the metavolcanic lithology were the only lithology that exhibited total sulphur concentrations greater than 1%. However, the median total sulphur value was between 0.025 and 0.044% for all lithologies, with the highest value reported in the peridotite lithology. As presented in Figure 4 and Figure 5, metavolcanic samples had a larger range of total sulphur compared to the other lithologies. A majority of lithologies had a higher total sulphur that was dominated by sulphide sulphur rather than sulphate sulphur with gabbro being the only exception with a more inconsistent relationship. Samples from the metavolcanic and peridotite lithologies mostly followed the 1:1 relationship, with the exceptions to this generalization being the samples that were below the detection limit. The detection limit for sulphide sulphur is reported for many of the peridotite and metavolcanics samples (0.04%) and similarly for sulphate sulphur (0.04%).



Note: Non-detect values are plotted as 1x the analytical method detection limit. % = percent

Figure 4: Total Sulphur Versus Sulphide Sulphur of Waste Rock Material



Note: Non-detect values are plotted as 1x the analytical method detection limit. % = percent.

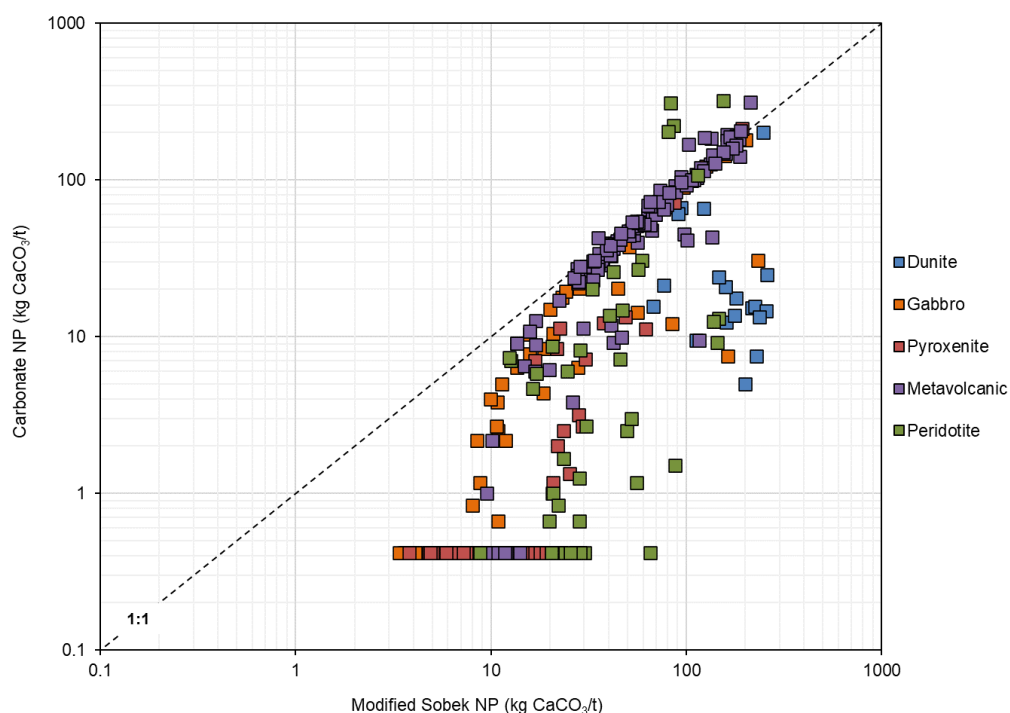
Figure 5: Total Sulphur Versus Sulphate Sulphur of Waste Rock Material

As detailed in Table 10, the dunite, pyroxenite, metavolcanic, and peridotite lithologies had higher median Mod. NPR and CO₃-NPR than the gabbro samples. The Mod. NP and NPR values were higher than the CO₃-NP and NPR values across the lithologies apart from the metavolcanic samples, which, as detailed in Figure 6, trended more towards a 1:1 ratio than the other lithologies.

Table 10: Summary of Neutralization Potential for Waste Rock

Lithology	Statistic	Mod. NP	CO ₃ -NP	AP	Mod. NPR	CO ₃ -NPR
	Unit	kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	-	-
Dunite (n = 15)	Minimum	9.2	0.42	0.19	6.6	0.11
	Maximum	258	200	2.5	1344	93
	Median	176	16	0.78	146	10
Gabbro (n = 85)	Minimum	3.4	0.42	0.16	5.2	0.38
	Maximum	233	180	5.0	11	296
	Median	14	1.0	0.75	5.8	0.91
Pyroxenite (n = 37)	Minimum	3.8	0.42	0.16	30	1.5
	Maximum	193	213	6.8	112	70
	Median	19	0.42	1.3	65	6.2
Metavolcanic (n = 117)	Minimum	9.5	0.42	0.16	21	8.4
	Maximum	212	314	164	86	147
	Median	56	49	0.41	59	30
Peridotite (n = 45)	Minimum	8.7	0.42	0.19	25	1.1
	Maximum	154	319	3.4	521	1723
	Median	29	3.0	1.3	112	34

AP = acid potential, CaCO₃ = calcium carbonate, NP = neutralization potential, NPR = neutralization potential ratio.



Note: Non-detect values are plotted as 1x the analytical method detection limit
 NP = neutralization potential; kg = kilograms; t = tonne; CaCO_3 = calcium carbonate

Figure 6: Modified Sobek NP Versus Carbonate NP of Waste Rock Material

A higher percentage of samples were determined to be Uncertain and PAG across the lithologies using the CO_3 -NPR rather than the Mod. NPR. 71% of all waste rock samples were classified as NPAG using the CO_3 -NPR parameter compared to 98% that were classified as NPAG using the Mod. NPR. The summary of ARD classification for each lithology is presented in Table 11. Gabbro, pyroxenite, and peridotite lithologies have a high percentage of PAG waste rock materials using the CO_3 -NPR. More pyroxenite samples were determined to be PAG than NPAG using the CO_3 -NPR. The metavolcanic lithology is the only lithology containing PAG samples using the Mod. NPR, however due to the nearly similar values of Mod. NP to CO_3 -NP greater than 10 kg CaCO_3/t (86 - 98% of the samples) detailed in Figure 6, it does not show a significantly higher percentage of PAG materials between the two NPR values. Figure 7 and Figure 8 show the difference in NPR values between the Modified Sobek and carbonate methods.

Table 11: ARD Classification of the Waste Rock Lithologies

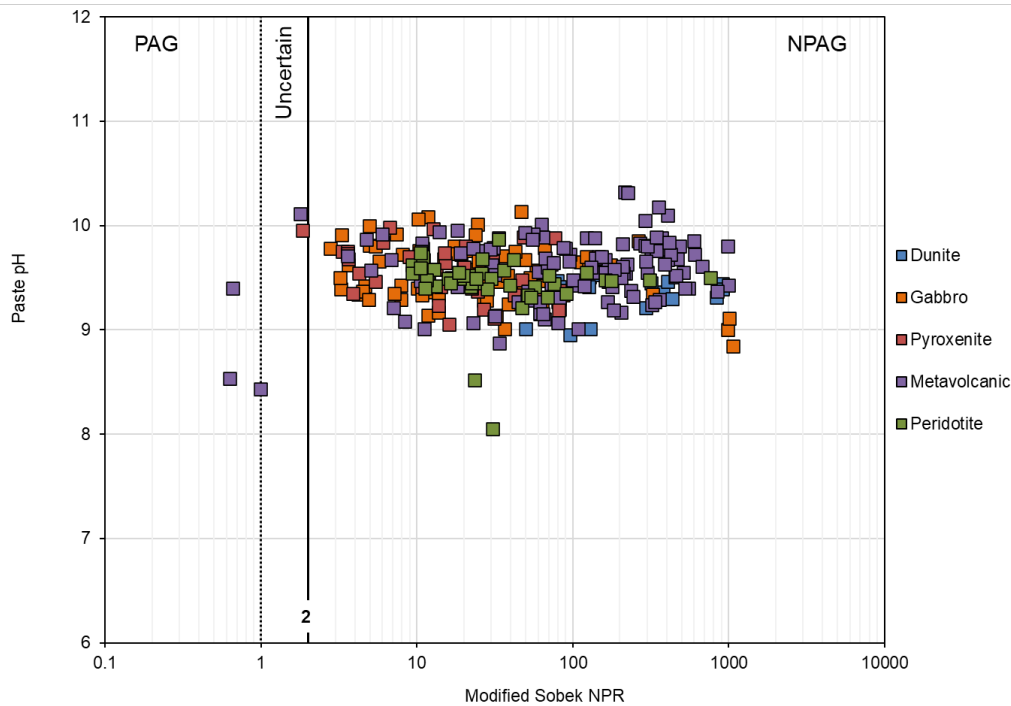
Lithology	ARD Classification - Mod. NPR			ARD Classification - CO_3 -NPR		
	NPAG	Uncertain	PAG	NPAG	Uncertain	PAG
Dunite (n = 19)	19 (100%)	0	0	19 (100%)	0	0
Gabbro (n = 85)	85 (100%)	0	0	47 (55%)	8 (9%)	30 (35%)
Pyroxenite (n = 37)	36 (97%)	1 (3%)	0	15 (41%)	5 (14%)	17 (46%)

Table 11: ARD Classification of the Waste Rock Lithologies

Lithology	ARD Classification - Mod. NPR			ARD Classification - CO ₃ -NPR		
	NPAG	Uncertain	PAG	NPAG	Uncertain	PAG
Metavolcanic (n = 117)	113 (97%)	1 (1%)	3 (3%)	109 (93%)	4 (3%)	4 (3%)
Peridotite (n = 45)	45 (100%)	0	0	25 (56%)	3 (7%)	17 (38%)
Total (n = 303)	298 (98%)	2 (1%)	3 (1%)	215 (71%)	20 (7%)	68 (22%)

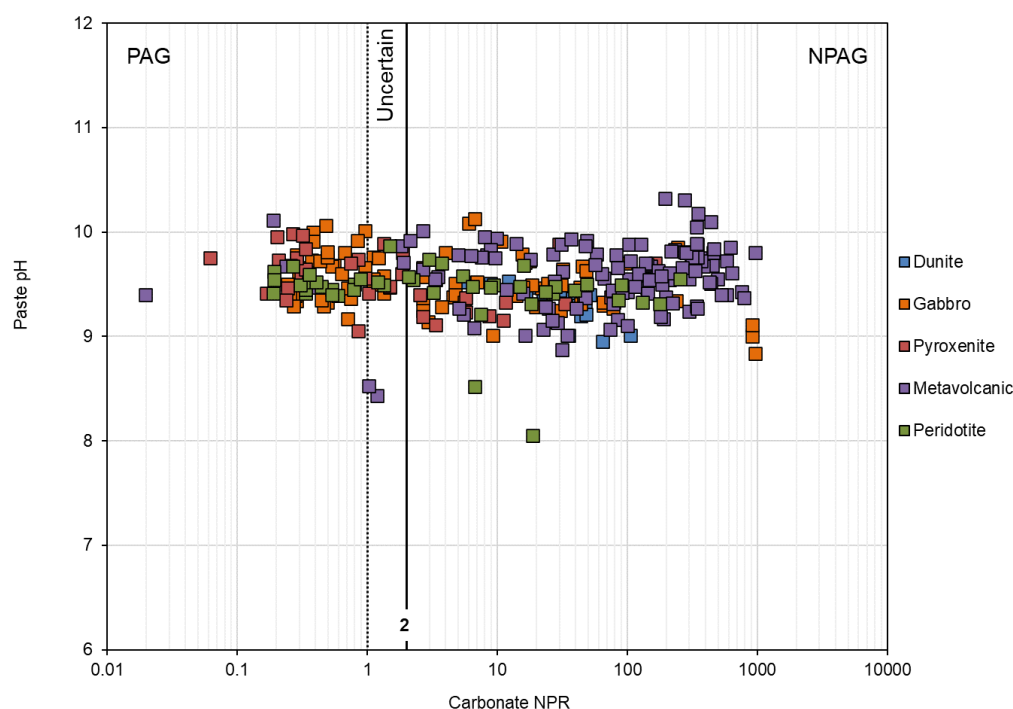
Note: ARD Classification is based on criteria in Table 6.

% = percent; ARD = Acid Rock Drainage; NPR = neutralization potential ratio; NPAG = non potentially acid generating; PAG = potentially acid generating; CaCO₃ = calcium carbonate.



NPR = neutralization potential ratio; NPAG = non potential acid generating; PAG = potentially acid generating.

Figure 7: Modified Sobek NPR Versus Paste pH of Waste Rock Material



NPR = neutralization potential ratio; NPAG = non potential acid generating; PAG = potentially acid generating.

Figure 8: Carbonate NPR Versus Paste pH of Waste Rock Material

3.1.1.2 Net Acid Generation

NAG testing was conducted on a subset of 20 samples which reported CO₃-NP below or near the method detection limit. In some samples, calculated CO₃-NPR values are less than 1 due to the reliance on inorganic carbon concentrations at or below the method detection limit, resulting in a classification of ARD potential which may be unreliable. To address this uncertainty, samples with negligible CO₃-NP were selected and included materials with a range of Mod. NP values, and samples from all lithologies were included to refine certainty of material characterization for samples from the Project with low reported CO₃-NP. A summary of NAG testing is in Table 12. All samples are classified as NPAG according to the criteria in Table 7.

Table 12: NAG Summary for Waste Rock Materials

Lithology	Statistic	Final pH	Volume NaOH to pH 4.5	Volume NaOH to pH 7.0	NAG (pH 7.0)
	Unit	-	mL	mL	kg H ₂ SO ₄ /t
Gabbro (n = 9)	Minimum	7.61	0	0	0
	Maximum	9.01	0	0	0
	Median	7.72	0	0	0
Pyroxenite (n = 1)	-	7.43	0	0	0
Metavolcanic (n = 3)	Minimum	6.66	0	0	0
	Maximum	7.7	0	0.03	0.1
	Median	7.18	0	0.015	0.05
Peridotite (n = 6)	Minimum	8.38	0	0	0
	Maximum	8.65	0	0	0
	Median	8.4	0	0	0

NAG = net acid generation; NaOH = sodium hydroxide; mL = millilitre; kg H₂SO₄/tonne = kilogram sulphuric acid per tonne.

3.1.1.3 Elemental Analysis

Elemental analysis for waste rock lithologies were compared to 10 times the average crustal abundance for metals as stated in Price (1997). Samples containing greater than the 10 times the average crustal abundance threshold were determined to have elevated concentration for screening purposes. Metals with concentrations above this threshold for the waste rock lithologies including arsenic, bismuth, chromium, magnesium, nickel, antimony, selenium, and tin (Table 13). Bismuth and selenium were consistently high across all the lithologies.

WRA was conducted on all waste rock lithology samples. Due to a small number of samples tested ($n = 14$), the data for these samples is present in APPENDIX E.

Table 13: Summary of Select Metal Content of Waste Rock Samples

Lithology	Statistic	As	Bi	Cr	Mg	Ni	Sb	Se	Sn
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
<i>10 x Average Continental Crust</i>		1.8	0.0085	102	23300	84	0.2	0.05	2.3
Dunite ($n = 15$)	Minimum	<0.5	<0.09	290	180000	2200	<0.8	<0.1	<6
	Maximum	3.7	0.14	4800	290000	3600	<0.8	0.7	7.7
	Median	0.5	0.09	730	240000	2526	<0.8	0.7	6
Gabbro ($n = 85$)	Minimum	<0.5	<0.09	31	23000	9.9	<0.8	<0.1	<6
	Maximum	73	0.18	1500	240000	2800	1	0.7	6.7
	Median	0.5	0.09	460	68000	120	0.8	0.7	6
Pyroxenite ($n = 37$)	Minimum	<0.5	<0.09	410	83000	220	<0.8	<0.1	<6
	Maximum	11	<0.09	4200	170000	1400	1.3	0.7	7.1
	Median	0.5	<0.09	1500	120000	280	0.8	0.6	6
Metavolcanic ($n = 117$)	Minimum	<0.5	<0.09	12	1700	3.1	<0.8	<0.1	<6
	Maximum	174	12	530	160000	1000	2.1	1.1	44
	Median	1.6	0.09	78	11000	23	0.8	0.7	6
Peridotite ($n = 45$)	Minimum	<0.5	<0.09	520	110000	240	<0.8	<0.1	<6
	Maximum	17	<0.09	3200	270000	2582	4.9	0.7	6.4
	Median	0.5	<0.09	1100	170000	1200	0.8	0.7	6

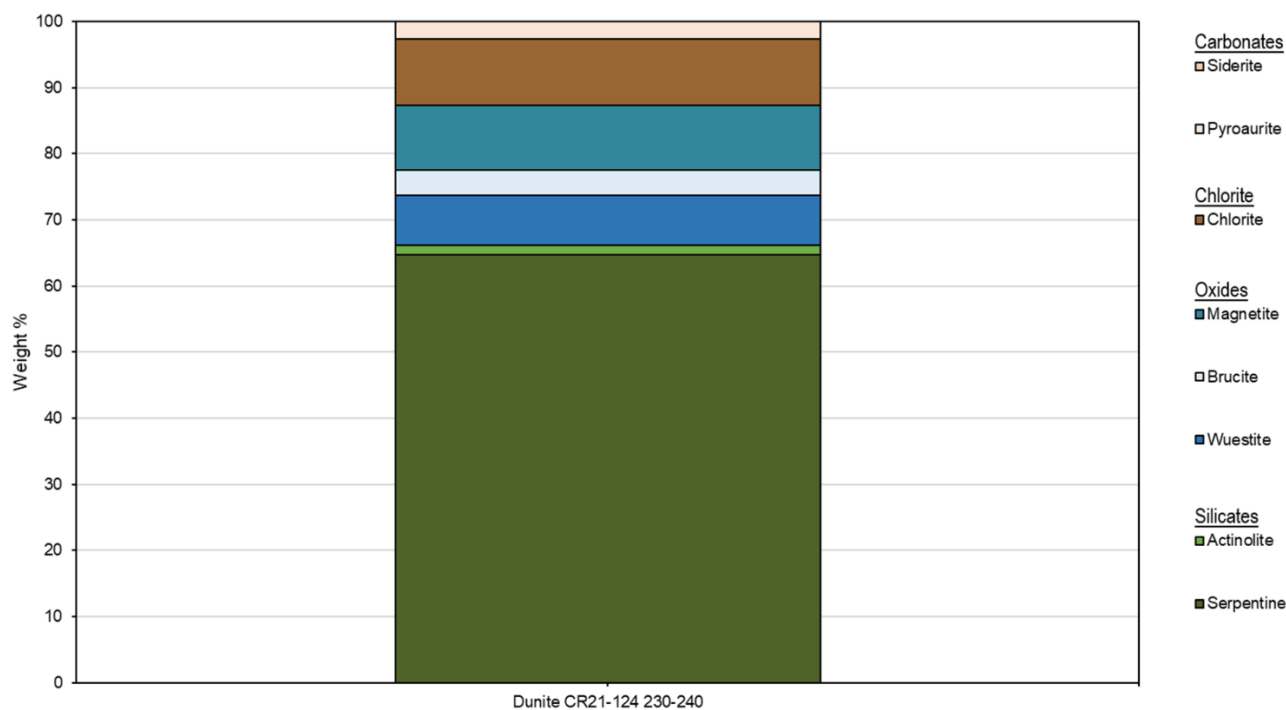
Source: Price (1997).

ppm = parts per million, <= less than.

3.1.1.4 Mineralogy

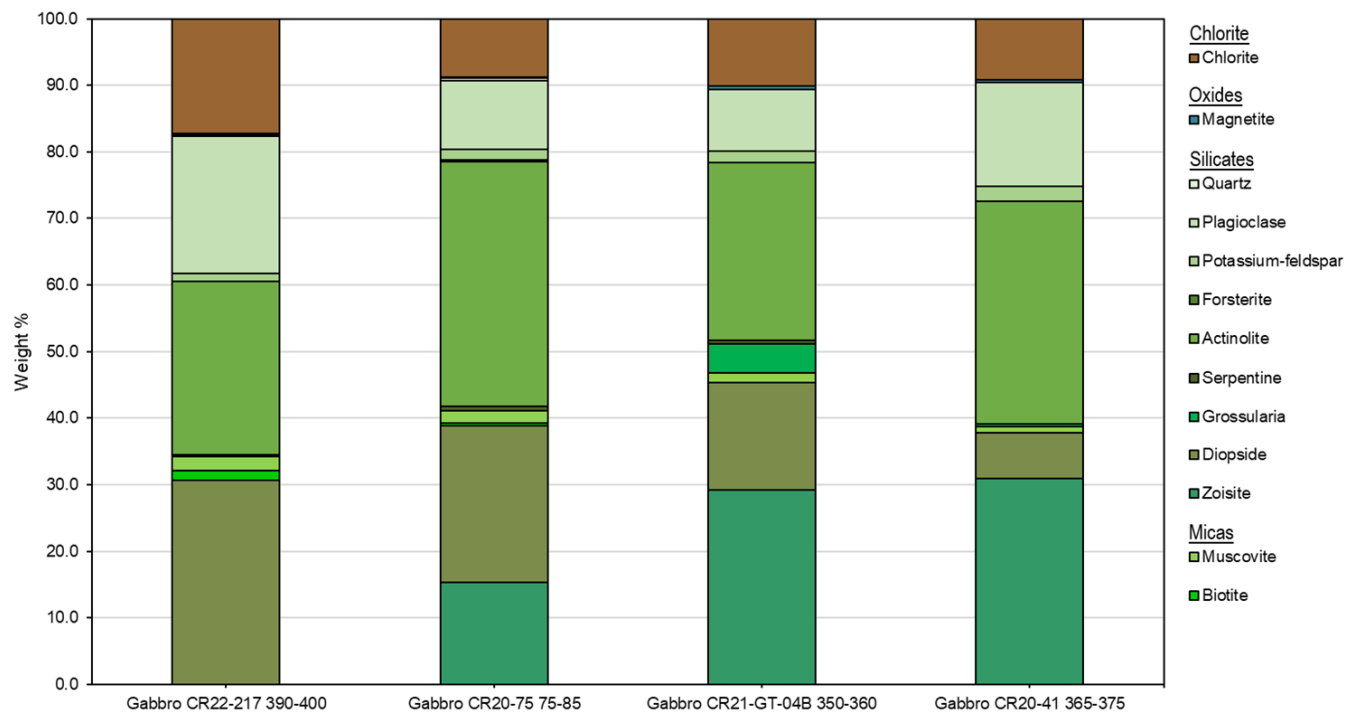
Mineralogical study of 14 waste rock samples was conducted using QEMSCAN. Mineral abundances for the dunite, gabbro, pyroxenite, metavolcanic, and peridotite lithologies are presented in Figure 9 through Figure 13. Data for these high-resolution scans are available in APPENDIX E.

The metavolcanic lithology was the only examined waste rock lithology that had carbonate mineral weight percents greater than 5 wt% for half of the samples. None of the samples had siderite greater than 0.4 wt%. The peridotite lithology has a significant abundance of serpentinite compared with the other lithologies. The peridotite samples also contained greater amounts of oxides, specifically magnetite.



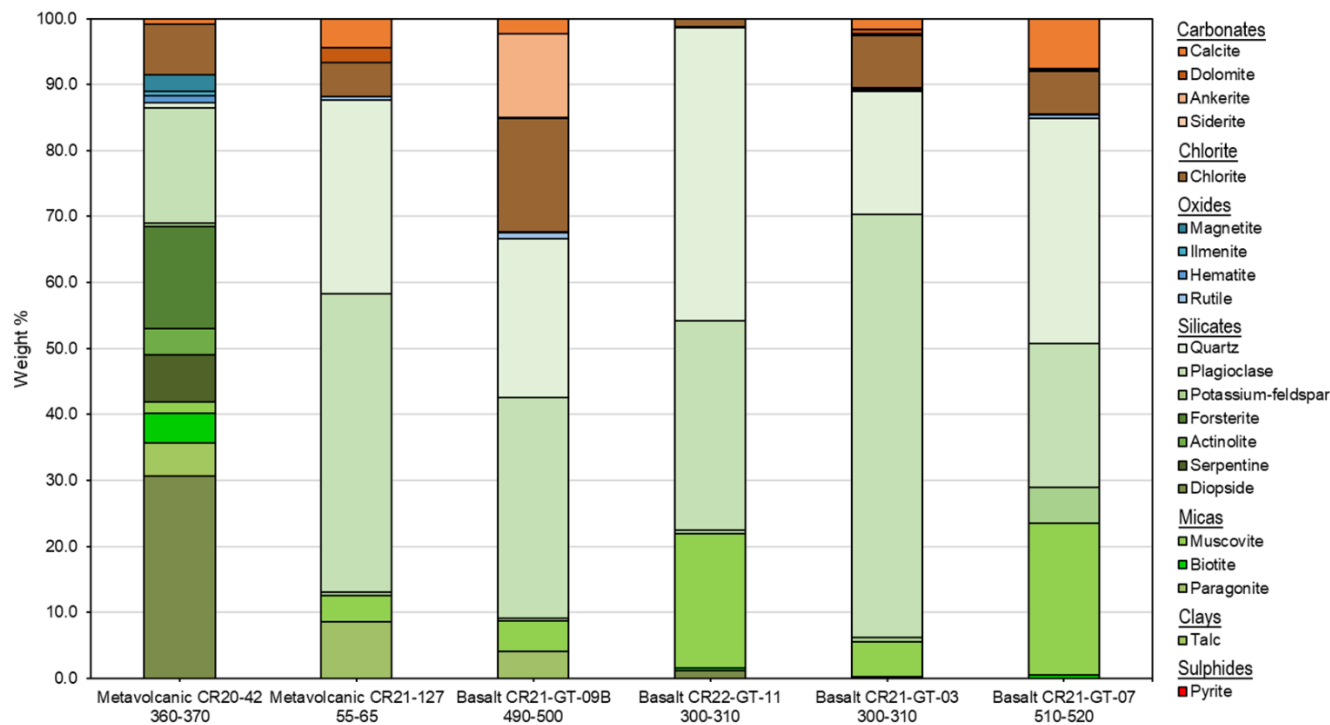
% = percent.

Figure 9: Mineral Abundance for Waste Rock Dunite Samples



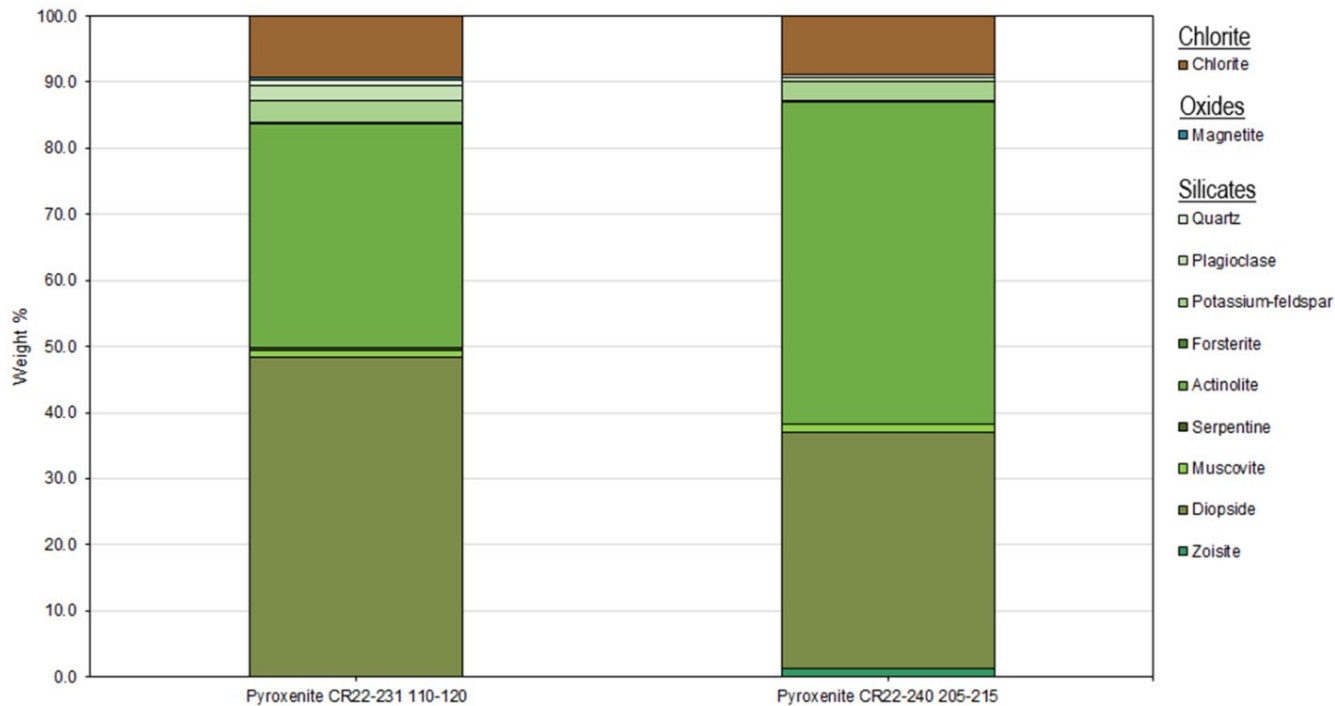
% = percent.

Figure 10: Mineral Abundance for Waste Rock Gabbro Samples



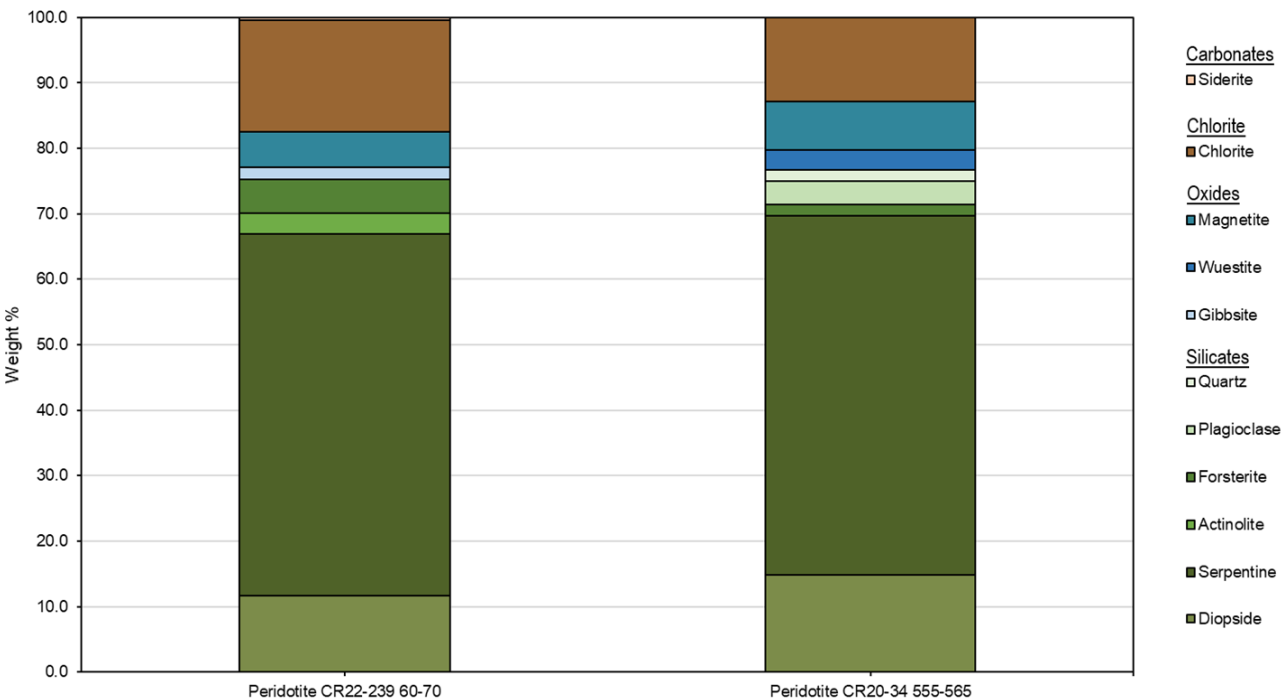
% = percent.

Figure 11: Mineral Abundance for Waste Rock Metavolcanic Samples



% = percent.

Figure 12: Mineral Abundance for Waste Rock Pyroxenite Samples



% = percent.

Figure 13: Mineral Abundance for Waste Rock Peridotite Samples

3.1.1.5 Shake Flask Extraction

SFE results of waste rock material were compared to PWQO and CCME guidelines that are described in Section 2.3.7 to screen for ML potential. A summary of exceedances of PWQO guidelines is Table 14 while complimentary summary of exceedances for CCME is in Table 15. Full results for SFE for the waste rock material samples are reported in APPENDIX E.

Table 16 summarizes the SFE percentile by lithology for the samples chosen for HCTs. Constituents with a potential for metal leaching are listed in this table do not necessarily exceed guidelines listed Table 14 and Table 15.

Table 14: Shake Flask Extraction Summary for PWQO Guidelines for Waste Rock Materials

Lithology	Statistic	Aluminum (0.2µm) ^(a)	Arsenic	Boron	Cadmium ^(b)	Chromium	Chromium VI	Copper ^(b)	Iron	Uranium	Vanadium
	Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<i>PWQO Guideline</i>		<i>0.015 – 0.075</i>	<i>0.005</i>	<i>0.2</i>	<i>0.0001 – 0.0005</i>	<i>0.0089</i>	<i>0.001</i>	<i>0.001 – 0.005</i>	<i>0.3</i>	<i>0.005</i>	<i>0.006</i>
Dunite (n = 8)	Minimum	<0.001	<0.0002	0.002	<0.000003	<0.00008	<0.0002	<0.0002	<0.007	<0.000002	0.00002
	Maximum	0.009	0.0008	0.82	<0.000003	0.002	0.0018	0.002	<0.007	0.00012	0.00017
	Median	0.003	0.0002	0.15	<0.000003	0.00019	<0.0002	0.0003	<0.007	0.000003	0.000045
	Exceedances	0	0	4	0	0	2	1	0	0	0
Gabbro (n = 44)	Minimum	0.028	<0.0002	0.006	<0.000003	<0.00008	<0.0002	<0.0002	<0.007	<0.000002	0.00002
	Maximum	1.2	0.0053	0.77	0.000028	0.0063	0.003	0.002	0.26	0.0062	0.03
	Median	0.16	0.0009	0.027	<0.000003	0.00064	0.0005	0.0003	0.0095	0.000004	0.0063
	Exceedances	39	1	2	0	0	8	5	0	1	24
Pyroxenite (n = 18)	Minimum	0.006	<0.0002	0.012	<0.000003	<0.00008	<0.0002	<0.0002	<0.007	<0.000002	0.00013
	Maximum	0.069	0.0042	0.27	0.00013	0.012	0.01	0.002	0.27	0.0018	0.042
	Median	0.018	0.0004	0.054	<0.000003	0.0021	0.0012	0.0005	0.013	0.0000055	0.0078
	Exceedances	10	0	3	1	2	9	5	0	0	11
Metavolcanic (n = 59)	Minimum	0.03	<0.0002	0.004	<0.000003	<0.00008	<0.0002	<0.0002	<0.007	<0.000002	0.00023
	Maximum	2.0	0.082	0.16	0.000016	0.0017	0.0008	0.002	0.22	0.00067	0.062
	Median	0.72	0.0008	0.017	<0.000003	<0.00008	<0.0002	0.0003	<0.007	0.000014	0.004
	Exceedances	52	20	0	0	0	0	4	0	0	17
Peridotite (n = 23)	Minimum	<0.001	<0.0002	0.017	<0.000003	0.00015	<0.0002	<0.0002	<0.007	<0.000002	0.00006
	Maximum	0.033	0.0036	0.83	0.00023	0.0039	0.0017	0.002	0.55	0.00077	0.071
	Median	0.007	0.0005	0.069	<0.000003	0.00078	0.0005	0.0003	<0.007	0.0000035	0.001
	Exceedances	3	0	3	6	0	2	4	1	0	2

(a) Guideline is variable and dependent on pH values. Refer to MOEE (1999) for method of calculation.

(b) Guideline is variable and dependent on hardness values. Refer to MOEE (1999) for method of calculation.

PWQO = Provincial Water Quality Objectives, mg/L = milligrams per litre, µm = micrometre, <= less than

Table 15: Shake Flask Extraction Summary for CCME Guidelines for Waste Rock Materials

Lithology	Statistic	Chloride	Fluoride	Aluminum (0.2µm) ^(a)	Arsenic	Cadmium ^(b)	Chromium	Chromium VI	Iron	Selenium	Zinc ^(c)
	Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CCME Guideline		120	0.12	0.005 – 0.1	0.005	0.00004 – 0.00037	0.0089	0.001	0.3	0.001	0.002 – 0.5
Dunite (n = 8)	Minimum	<2.0	<0.06	< 0.001	<0.0002	<0.000003	<0.00008	<0.0002	<0.007	<0.00004	<0.002
	Maximum	198	0.29	0.009	0.0008	<0.000003	0.002	0.0018	<0.007	0.00026	<0.002
	Median	39	<0.06	0.003	<0.0002	<0.000003	0.00019	<0.0002	<0.007	<0.00004	<0.002
	Exceedances	2	1	1	0	0	0	2	0	0	0
Gabbro (n = 44)	Minimum	<1.0	<0.06	0.028	<0.0002	<0.000003	<0.00008	<0.0002	<0.007	<0.00004	<0.002
	Maximum	89	0.47	1.2	0.0053	0.000028	0.0063	0.003	0.26	0.0015	<0.002
	Median	2.0	<0.06	0.16	0.0009	<0.000003	0.00064	0.0005	0.0095	0.00007	<0.002
	Exceedances	0	2	39	1	0	0	8	0	2	0
Pyroxenite (n = 18)	Minimum	1.9	<0.06	0.006	<0.0002	<0.000003	<0.00008	<0.0002	<0.007	<0.00004	<0.002
	Maximum	64	0.28	0.069	0.0042	0.00013	0.012	0.01	0.27	0.0032	0.004
	Median	2.0	<0.06	0.018	0.0004	<0.000003	0.0021	0.0012	0.013	0.0001	<0.002
	Exceedances	0	1	17	0	2	2	9	0	2	1
Metavolcanic (n = 59)	Minimum	<2.0	<0.06	0.03	<0.0002	<0.000003	<0.00008	<0.0002	<0.007	<0.00004	<0.002
	Maximum	18	0.3	2.0	0.082	0.000016	0.0017	0.0008	0.22	0.0012	0.003
	Median	<2.0	<0.06	0.72	0.0008	<0.000003	<0.00008	<0.0002	<0.007	0.00005	<0.002
	Exceedances	0	3	52	20	0	0	0	0	1	1
Peridotite (n = 23)	Minimum	<2.0	<0.06	<0.001	<0.0002	<0.000003	0.00015	<0.0002	<0.007	<0.00004	<0.002
	Maximum	95	0.3	0.033	0.0036	0.00023	0.0039	0.0017	0.55	0.0053	<0.002
	Median	<2.0	<0.06	0.007	0.0005	<0.000003	0.00078	0.0005	<0.007	0.00013	<0.002
	Exceedances	0	1	11	0	7	0	2	1	6	0

(a) Guideline is variable and dependent on pH values. Refer to CCME (2019) for method of calculation.

(b) Guideline is variable and dependent on hardness values. Refer to CCME (2019) for method of calculation.

(c) Guideline is variable and dependent on pH, hardness, and/or dissolved organic carbon values. Refer to CCME (2019) for method of calculation.

CCME = Canadian Council of Ministers of the Environment, mg/L = milligrams per litre, µm = micrometre, <= less than

Table 16: Summary of Percentiles of Constituents with a Potential for Metal Leaching in Waste Rock Samples Selected for HCTs

Sample ID	Lithology	SFE Percentile by Lithology (%)							
		Aluminum	Chromium (VI)	Vanadium	Selenium	Nickel	Cadmium	Arsenic	Fluoride
Gabbro CR20-41 365-375	Gabbro	35	21	75	96	48	2	60	2
Gabbro CR21-GT-04B 350-360	Gabbro	75	2	54	52	25	2	46	2
Basalt CR21-GT-03 300-310	Metavolcanic	50	2	35	90	32	2	39	2
Basalt CR21-GT-07 510-520	Metavolcanic	40	2	92	68	32	2	76	2
Basalt CR21-GT-09B 490-500	Metavolcanic	35	2	2	47	32	2	2	90
Basalt CR22-GT-11 300-310	Metavolcanic	27	2	66	84	61	90	97	2
Peridotite CR20-34 555-565	Peridotite	75	67	71	88	58	85	71	2

Notes: Bolded values indicate key parameters for HCT selection process (between 60 and 96%)

% = percent.

3.1.2 Ore

As detailed in section 2.2.1, samples were chosen to represent the dunite, gabbro, pyroxenite, metavolcanic, and peridotite ore lithologies. The following sections contain a summary of the data collected for ore samples and is divided into ABA, NAG, elemental analysis, mineralogy, and SFE static results. The COAs for these results are in APPENDIX D.

3.1.2.1 Acid Base Accounting

The ABA analysis of the ore samples (n = 109) is summarized in Table 17 through Table 19.. A full report of results for ABA are available in APPENDIX E.

Table 17: Summary of Sulphide Speciation for Ore Materials

Lithology	Statistics	Paste pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbon as CO ₃
	Unit	-	%	%	%	%	%
Dunite (n = 66)	Minimum	9.0	0.006	<0.04	<0.04	0.024	0.04
	Maximum	9.8	1.6	0.99	0.72	2.2	5.9
	Median	9.5	0.04	<0.04	0.04	0.14	0.56
Gabbro (n = 4)	Minimum	9.7	0.013	<0.01	<0.04	0.006	0.04
	Maximum	10.0	0.038	<0.04	<0.04	4.2	21
	Median	9.8	0.026	<0.04	<0.04	0.016	0.04
Pyroxenite (n = 3)	Minimum	9.4	0.006	<0.01	<0.04	0.027	0.04
	Maximum	9.7	0.047	<0.04	0.05	2.4	6.2
	Median	9.6	0.014	<0.04	<0.04	0.028	0.07
Metavolcanic (n = 4)	Minimum	8.9	0.061	0.04	<0.04	0.12	0.63
	Maximum	9.7	0.091	0.08	0.07	4.5	22
	Median	9.2	0.069	0.04	<0.04	0.47	2.3
Peridotite (n = 32)	Minimum	8.9	0.007	<0.04	<0.04	0.019	0.04
	Maximum	9.9	0.23	0.1	0.13	5.8	23
	Median	9.4	0.023	<0.04	<0.04	0.31	1.3

Note: Some samples were tested with a different detection limit.

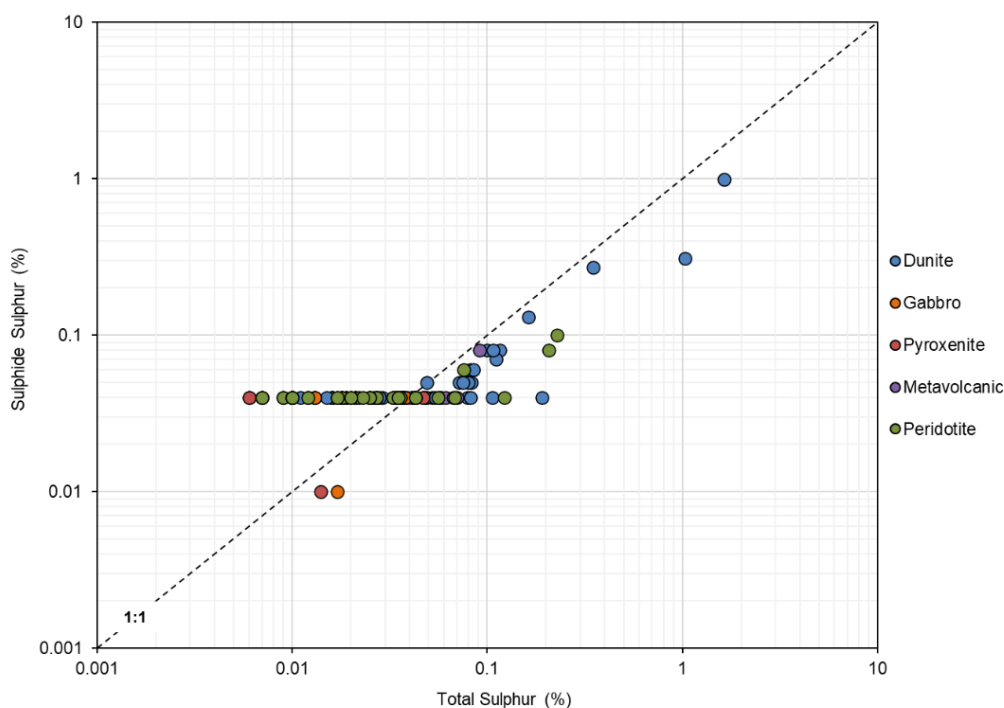
CO₃ = carbonate; <= less than; % = percent.

The greatest sulphide sulphur concentrations in the ore samples occur in the dunite lithology of 0.99%. Whereas the other ore lithologies sulphide sulphur values are mostly below the detection limit (0.01%). Similarly, the total sulphur concentrations in the dunite lithology were an order of magnitude greater than the other lithologies.

Table 18: Summary of Acid Generation and Neutralization Potential for Ore Materials

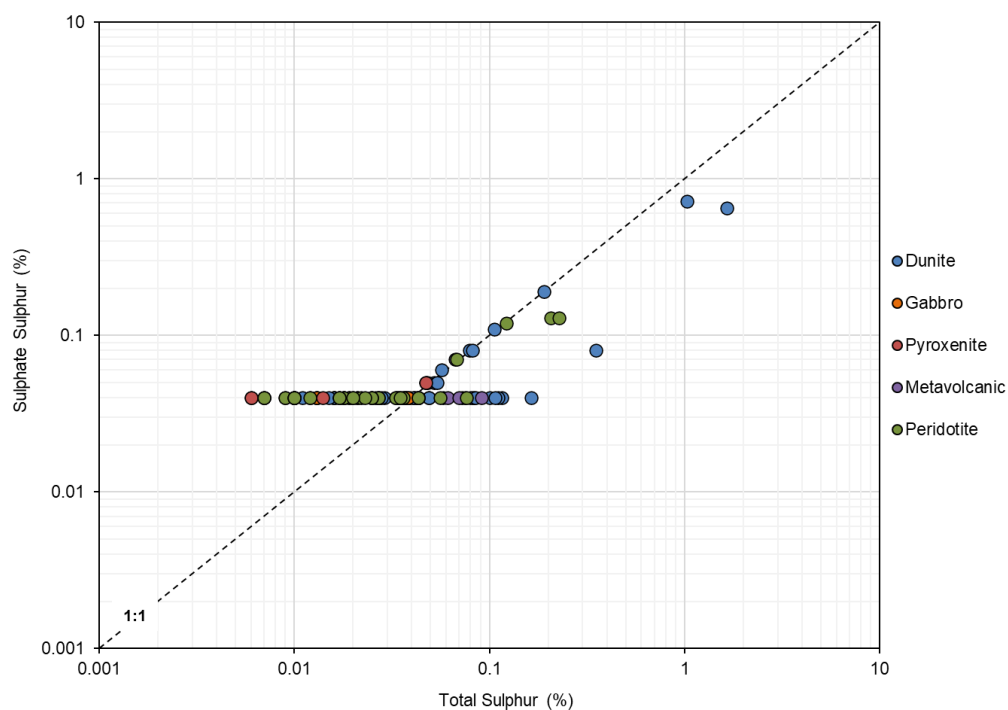
Lithology	Statistic	Mod. NP	CO ₃ -NP	AP	Mod. NPR	CO ₃ -NPR
	Unit	kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	-	-
Dunite (n = 66)	Minimum	9.2	0.42	0.19	6.6	0.11
	Maximum	342	98	31	1344	93
	Median	186	9.4	1.3	146	10.0
Gabbro (n = 4)	Minimum	3.3	0.42	0.41	5.2	0.38
	Maximum	6.4	352	1.2	11	296
	Median	5.0	0.42	0.81	5.8	0.91
Pyroxenite (n = 3)	Minimum	12	0.67	0.19	30	1.5
	Maximum	165	103	1.5	112	70
	Median	13	1.2	0.44	65	6.2
Metavolcanic (n = 4)	Minimum	26	11	1.3	21	8.4
	Maximum	212	369	2.5	86	147
	Median	75	38	1.3	59	30
Peridotite (n = 32)	Minimum	35	0.67	0.22	25	1.1
	Maximum	266	377	3.8	521	1723
	Median	84	21	0.7	112	34

AP = acid potential; CaCO₃ = calcium carbonate; NP = neutralization potential; NPR = neutralization potential ratio.



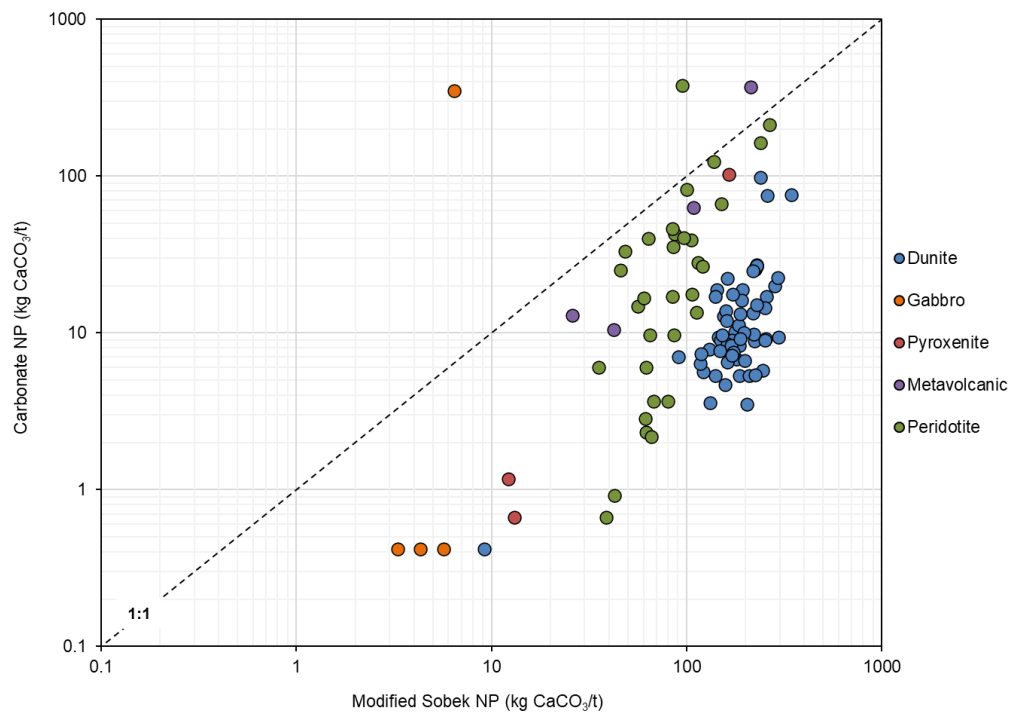
Note: Non-detect values are plotted as 1x the analytical method detection limit. % = percent

Figure 14: Total Sulphur Versus Sulphide Sulphur of Ore Material



Note: Non-detect values are plotted as 1x the analytical method detection limit. % = percent.

Figure 15: Total Sulphur Versus Sulphate Sulphur of Ore Material



NP = neutralization potential; kg = kilograms; t = tonne; CaCO₃ = calcium carbonate.

Figure 16: Modified Sobek NP Versus Carbonate NP of Ore Material

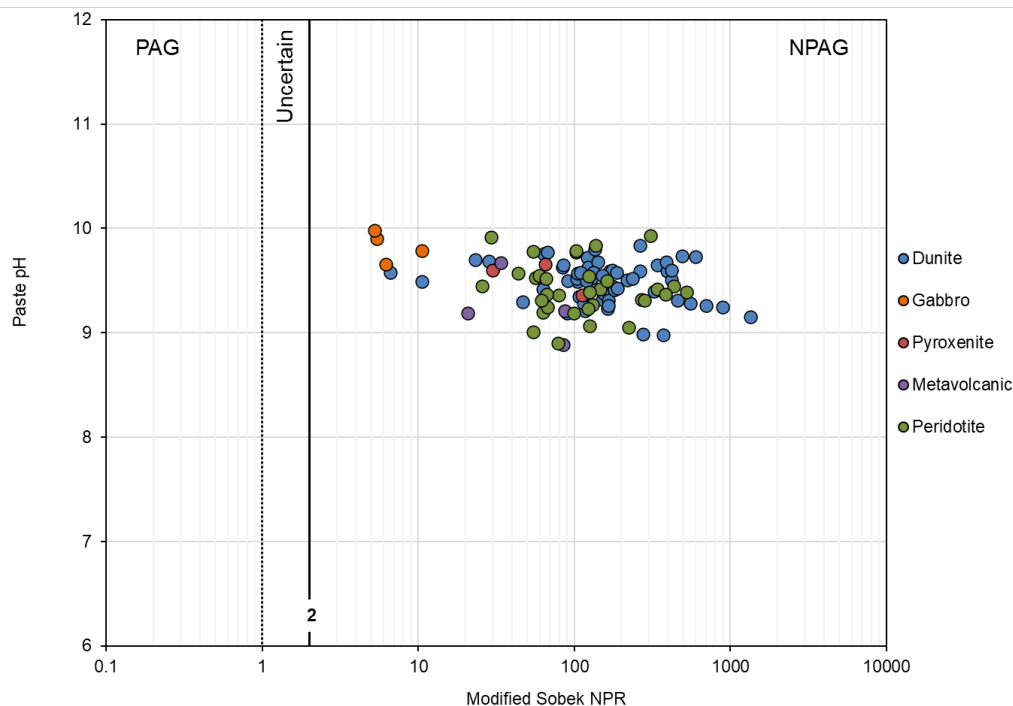
No ore samples across the five lithologies were classified as Uncertain or PAG using the Mod. NPR. Using the CO₃-NPR classifies more samples as Uncertain or PAG. Notably, half of the gabbro samples were determined to be PAG using the CO₃-NPR.

Table 19: Summary of ARD Potential for Ore Materials

Lithology	ARD Classification - Mod. NPR			ARD Classification - CO ₃ -NPR		
	NPAG	Uncertain	PAG	NPAG	Uncertain	PAG
Dunite (n = 62)	62 (100%)	0	0	57 (92%)	2 (3%)	3 (5%)
Gabbro (n = 4)	4 (100%)	0	0	1 (25%)	1 (25%)	2 (50%)
Pyroxenite (n = 3)	3 (100%)	0	0	2 (67%)	1 (33%)	0
Metavolcanic (n = 4)	4 (100%)	0	0	4 (100%)	0	0
Peridotite (n = 32)	32 (100%)	0	0	30 (94%)	2 (6%)	0
Total (n = 105)	105 (100%)	0	0	94 (90%)	6 (6%)	5 (5%)

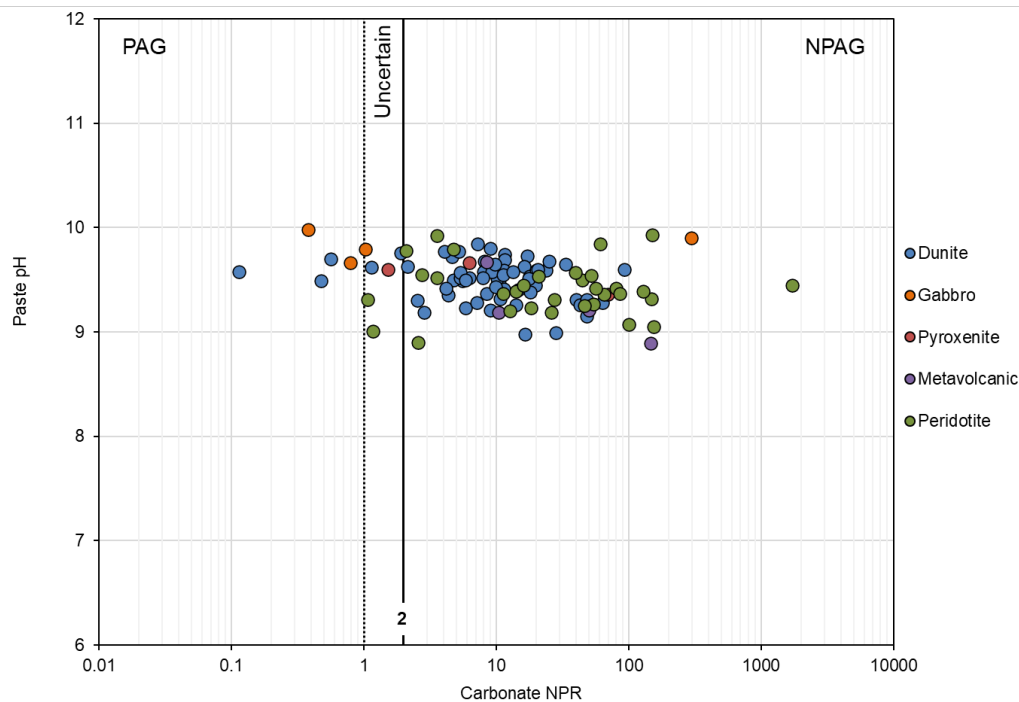
Note: ARD Classification is based on criteria in Table 6.

ARD = Acid Rock Drainage; NPR = neutralization potential ratio; NPAG = non potentially acid generating; PAG = potentially acid generating; CaCO₃ = calcium carbonate; % = percent.



NPR = neutralization potential ratio; NPAG = non potential acid generating; PAG = potentially acid generating.

Figure 17: Modified Sobek NPR Versus Paste pH of Ore Material



NPR = neutralization potential ratio; NPAG = non potential acid generating; PAG = potentially acid generating.

Figure 18: Carbonate NPR Versus Paste pH of Ore Material

3.1.2.2 NAG

One sample of high grade dunite ore from the main zone with both sulphide sulfur and carbonate values in ABA testing measured below detection limits was subjected to NAG testing. The pH of the tested sample after the addition of the H_2O_2 was 7.91, classifying it as NPAG.

3.1.2.3 Elemental Analysis

Elemental analysis for different lithologies representing the ore materials were compared to 10 times the average crustal abundance for metals as stated in Price (1997). A summary of results from this analysis are present in Table 20. Samples containing greater than the 10 times average crustal abundance were determined to have elevated concentration for screening purposes. Arsenic, bismuth, chromium, magnesium, nickel, and selenium were found to be elevated for the lithologies present (Table 20). Bismuth was consistently high across all the lithologies.

WRA was conducted on dunite and peridotite ore lithology samples ($n = 3$). The results for these samples are presented in APPENDIX E.

Table 20: Summary of Metals Analysis for Ore Materials

Lithology	Statistic	As	Bi	Cr	Mg	Ni	Sb	Se	Sn
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
<i>10 x Average Continental Crust</i>		1.8	0.0085	102	23300	84	0.2	0.05	2.3
Dunite (n = 66)	Minimum	<0.5	<0.09	250	63000	120	<0.8	<0.1	<6
	Maximum	4.9	<0.09	4700	280000	3700	<0.8	0.7	7.5
	Median	0.5	<0.09	1000	235000	2450	<0.8	0.7	6
Gabbro (n = 4)	Minimum	<0.5	<0.09	160	65000	120	<0.8	<0.1	<6
	Maximum	<0.5	<0.09	510	72000	130	1.4	0.2	<6
	Median	<0.5	<0.09	385	71000	120	0.8	0.15	<6
Pyroxenite (n = 3)	Minimum	<0.5	<0.09	230	84000	290	<0.8	<0.1	<6
	Maximum	2.6	<0.09	1500	180000	1700	<0.8	<0.1	<6
	Median	0.5	<0.09	490	86000	310	<0.8	<0.1	<6
Metavolcanic (n = 4)	Minimum	<0.5	<0.09	360	96000	750	<0.8	<0.1	<6
	Maximum	177	<0.09	1300	150000	1200	<0.8	0.4	<6
	Median	11	<0.09	635	110000	800	<0.8	0.25	<6
Peridotite (n = 32)	Minimum	<0.5	<0.09	370	84000	550	<0.8	<0.1	<6
	Maximum	27	<0.09	3700	250000	3300	0.9	0.8	8.4
	Median	0.5	<0.09	1600	200000	1300	0.8	0.7	6

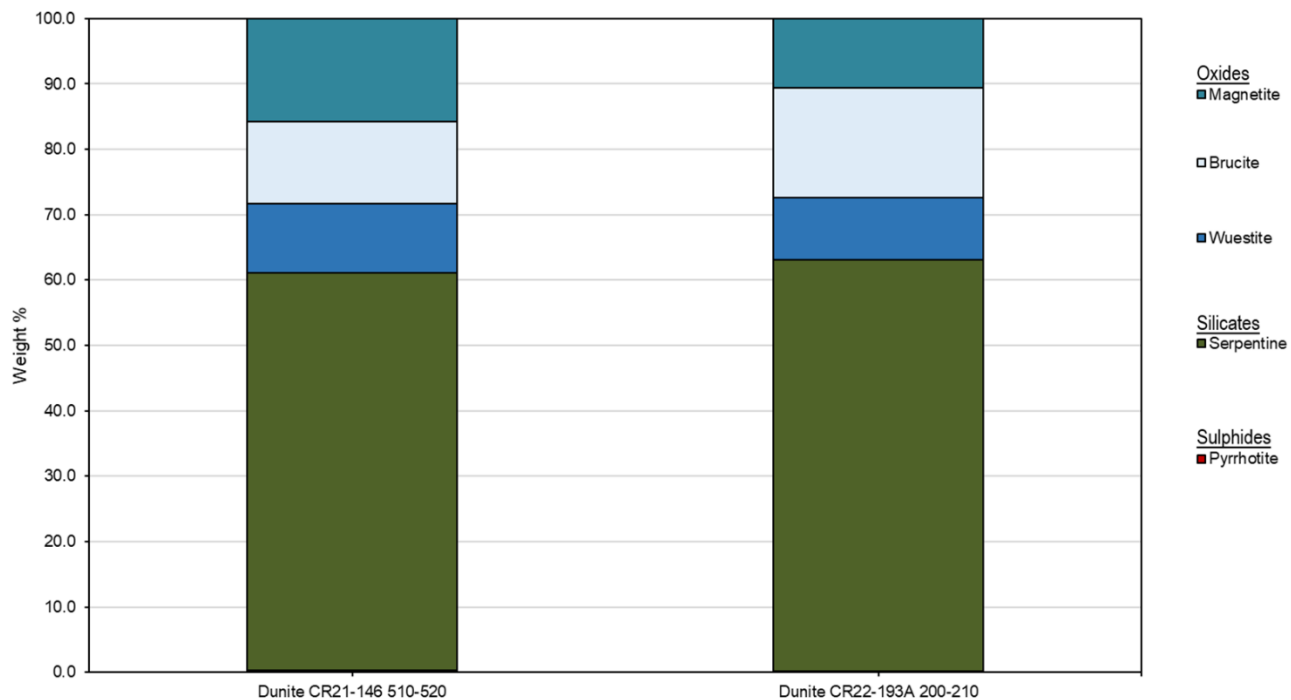
ppm = parts per million; <= less than.

Source: Price (1997).

3.1.2.4 Mineralogy

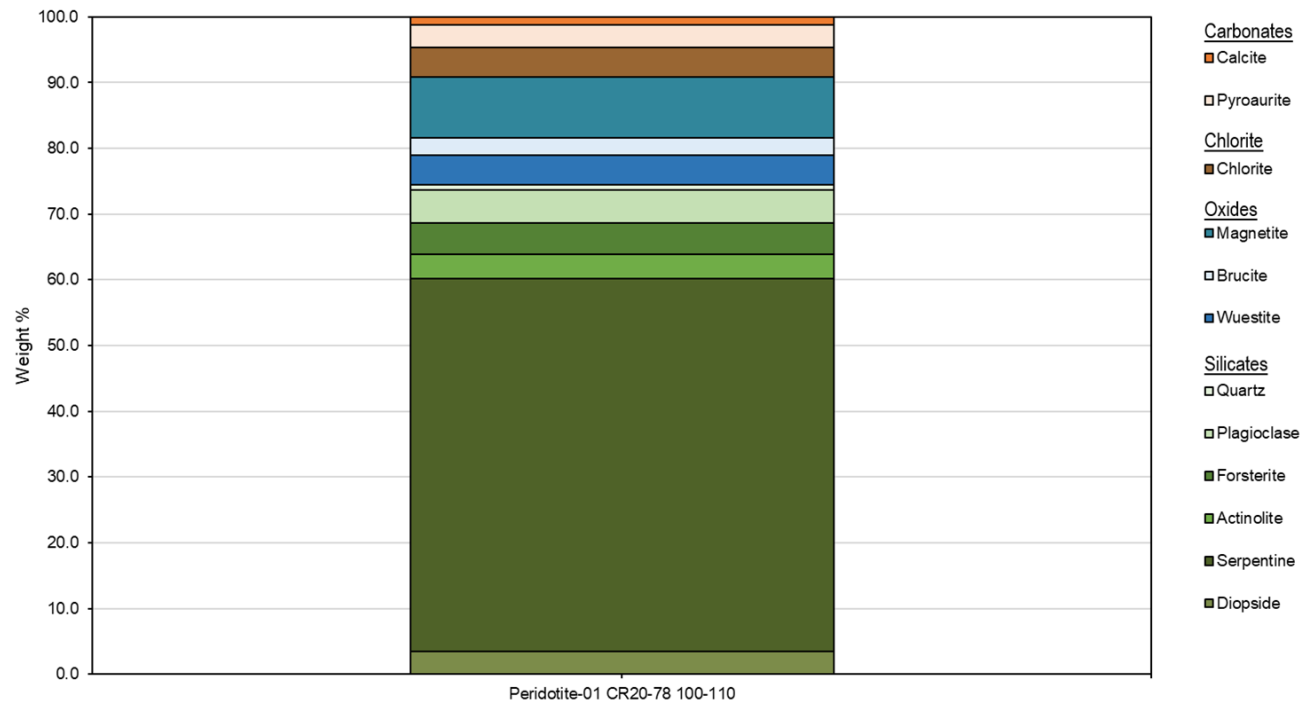
Four samples were studied using QEMSCAN of the ore material Mineral abundances for the dunite and peridotite lithologies are presented in Figure 19 and Figure 20. Results for the analysis are available in APPENDIX E.

Both lithologies had high abundances of serpentine as well as oxide minerals. The peridotite sample paralleled the mineralogy present in the peridotite waste rock samples. Neither lithology had measurable siderite nor did either lithology have sulphide mineralization greater than 0.2 wt%.



% = percent.

Figure 19: Mineral Abundance for Ore Dunite Samples



% = percent.

Figure 20: Mineral Abundance for Ore Peridotite Sample

3.1.2.5 *Shake Flask Extraction*

SFE results of waste rock material were compared to PWQO and CCME guidelines that are described in Section 2.3.7 to screen for ML potential. A summary of exceedances of PWQO guidelines is in Table 21 and a summary of exceedances for CCME is in Table 22. Full results for SFE for the waste rock material samples are reported in APPENDIX E.

Table 23 summarizes the SFE percentile by lithology for the samples chosen for HCTs. Constituents identified to have a potential for metal leaching listed in this table do not necessarily exceed guidelines listed in Table 21 and Table 22.

Table 21: Summary of Shake Flask Extraction Exceedances for PWQO Guidelines for Ore Materials

Lithology	Statistic	Aluminum (0.2µm) ^(a)	Antimony	Arsenic	Boron	Cadmium ^(b)	Chromium VI	Copper ^(b)	Thallium	Tungsten	Vanadium
	Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO Guideline		0.015 – 0.075	0.02	0.005	0.2	0.0001 – 0.0005	0.001	0.001 – 0.005	0.0003	0.03	0.006
Dunite (n = 38)	Minimum	<0.001	<0.0009	<0.0002	0.006	<0.000003	<0.0002	<0.0002	<0.000005	0.00005	0.00001
	Maximum	0.17	0.0032	0.0014	1.7	0.000011	0.0057	0.002	0.00082	0.00032	0.0066
	Median	0.004	<0.0009	<0.0002	0.18	<0.000003	0.0003	<0.0002	<0.000005	0.00008	0.00004
	Exceedances	2	0	0	18	0	5	1	2	0	1
Gabbro (n = 4)	Minimum	0.15	<0.0009	0.0003	0.032	<0.000003	0.001	0.0003	<0.000005	0.00062	0.0051
	Maximum	0.15	0.12	0.0012	0.073	0.000007	0.001	0.002	<0.000005	0.0032	0.0099
	Median	0.15	0.036	0.0008	0.051	0.0000045	0.0008	0.00055	<0.000005	0.00085	0.0072
	Exceedances	1	2	0	0	0	0	1	0	0	3
Pyroxenite (n = 3)	Minimum	0.002	<0.0009	<0.0002	0.045	<0.000003	0.0005	<0.0002	<0.000005	0.00005	0.00012
	Maximum	0.003	0.002	0.0003	0.06	0.000004	0.001	0.002	0.000007	0.00048	0.00043
	Median	0.0025	<0.0009	<0.0002	0.059	<0.000003	0.00075	0.0003	<0.000005	0.0002	0.00032
	Exceedances	0	0	0	0	0	0	1	0	0	0
Metavolcanic (n = 3)	Minimum	-	<0.0009	<0.0002	0.015	<0.000003	-	<0.0002	<0.000005	0.00003	0.001
	Maximum	-	0.0047	0.6	0.022	<0.000003	-	0.0003	0.00059	0.0017	0.0057
	Median	-	0.0018	0.032	0.018	<0.000003	-	<0.0002	0.000018	0.0003	0.004
	Exceedances	-	0	2	0	0	-	0	1	0	0
Peridotite (n = 25)	Minimum	<0.001	<0.0009	<0.0002	0.008	<0.000003	<0.0002	<0.0002	<0.000005	0.00008	0.00001
	Maximum	0.016	0.002	0.028	0.43	0.00011	0.0021	0.0007	0.000056	0.082	0.0029
	Median	0.004	<0.0009	0.0005	0.052	<0.000003	0.0004	<0.0002	<0.000005	0.00052	0.00037
	Exceedances	1	0	2	3	1	2	0	0	1	0

(a) Guideline is variable and dependent on pH values. Refer to MOEE (1999) for method of calculation.
(b) Guideline is variable and dependent on hardness values. Refer to MOEE (1999) for method of calculation.
PWQO = Provincial Water Quality Objectives; mg/L = milligrams per litre; µm = micrometre; <= less than.

Table 22: Summary of Shake Flask Extraction Exceedances for CCME Guidelines for Ore Materials

Lithology	Statistic	Chloride	Aluminum (0.2µm) ^(a)	Arsenic	Boron	Cadmium ^(b)	Chromium VI	Thallium	Mercury	Selenium	Zinc ^(c)
	Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CCME Guideline		120	0.005 – 0.1	0.005	1.5	0.00004 – 0.00037	0.001	0.0008	0.000026	0.001	0.002 – 0.5
Dunite (n = 38)	Minimum	<2.0	<0.001	<0.0002	0.006	<0.000003	<0.0002	<0.000005	<0.00001	<0.00004	<0.002
	Maximum	431	0.17	0.0014	1.7	0.000011	0.0057	0.00082	0.00009	0.00084	0.004
	Median	66	0.004	<0.0002	0.18	<0.000003	0.0003	<0.000005	<0.00001	0.000045	<0.002
	Exceedances	9	6	0	1	0	5	1	1	0	1
Gabbro (n = 4)	Minimum	<2.0	0.15	0.0003	0.032	<0.000003	0.001	<0.000005	<0.00001	<0.00004	<0.002
	Maximum	<2.0	0.15	0.0012	0.073	0.000007	0.001	<0.000005	<0.00001	<0.00004	<0.002
	Median	<2.0	0.15	0.0008	0.051	0.0000045	0.0008	<0.000005	<0.00001	<0.00004	<0.002
	Exceedances	0	1	0	0	0	0	0	0	0	0
Pyroxenite (n = 3)	Minimum	<2.0	0.002	<0.0002	0.045	<0.000003	0.0005	<0.000005	<0.00001	<0.00004	<0.002
	Maximum	41	0.003	0.0003	0.06	0.000004	0.001	0.000007	<0.00001	0.00006	<0.002
	Median	2.2	0.0025	<0.0002	0.059	<0.000003	0.00075	<0.000005	<0.00001	<0.00004	<0.002
	Exceedances	0	1	0	0	0	-	0	0	0	0
Metavolcanic (n = 3)	Minimum	<2.0	-	<0.0002	0.015	<0.000003	-	<0.000005	<0.00001	0.00008	<0.002
	Maximum	4.7	-	0.6	0.022	<0.000003	-	0.00059	<0.00001	0.0058	<0.002
	Median	2.4	-	0.032	0.018	<0.000003	-	0.000018	<0.00001	0.00013	<0.002
	Exceedances	0	-	2	0	0	-	0	0	1	0
Peridotite (n = 25)	Minimum	<1.0	<0.001	<0.0002	0.008	<0.000003	<0.0002	<0.000005	<0.00001	<0.00004	<0.002
	Maximum	174	0.016	0.028	0.43	0.00011	0.0021	<0.000056	<0.00001	0.0029	<0.002
	Median	2.0	0.004	0.0005	0.052	<0.000003	0.0004	<0.000005	<0.00001	0.00006	<0.002
	Exceedances	2	8	2	0	2	2	0	0	2	0

(a) Guideline is variable and dependent on pH values. Refer to CCME (2019) for method of calculation.

(b) Guideline is variable and dependent on hardness values. Refer to CCME (2019) for method of calculation.

(c) Guideline is variable and dependent on pH, hardness, and/or dissolved organic carbon values. Refer to CCME (2019) for method of calculation.

CCME = Canadian Council of Ministers of the Environment; mg/L = milligrams per litre; µm = micrometre; <= less than.

Table 23: Summary of Percentiles of Constituents with a Potential for Metal Leaching for Tailings Samples Selected for HCTs

Sample ID	Lithology	SFE Percentile by Lithology (%)							
		Al	Cr (VI)	V	Se	Ni	Cd	As	Fluoride
Dunite CR21-146 510-520	Dunite	37	63	13	2	52	2	2	2
Dunite CR22-193A 200-210	Dunite	59	2	67	54	80	2	2	2
Peridotite-01 CR20-78 100-110	Peridotite	42	19	15	67	38	2	2	2

Notes: Bolded values indicate key parameters for HCT selection process (between 60 and 96%)

% = percent.

3.1.3 Tailings

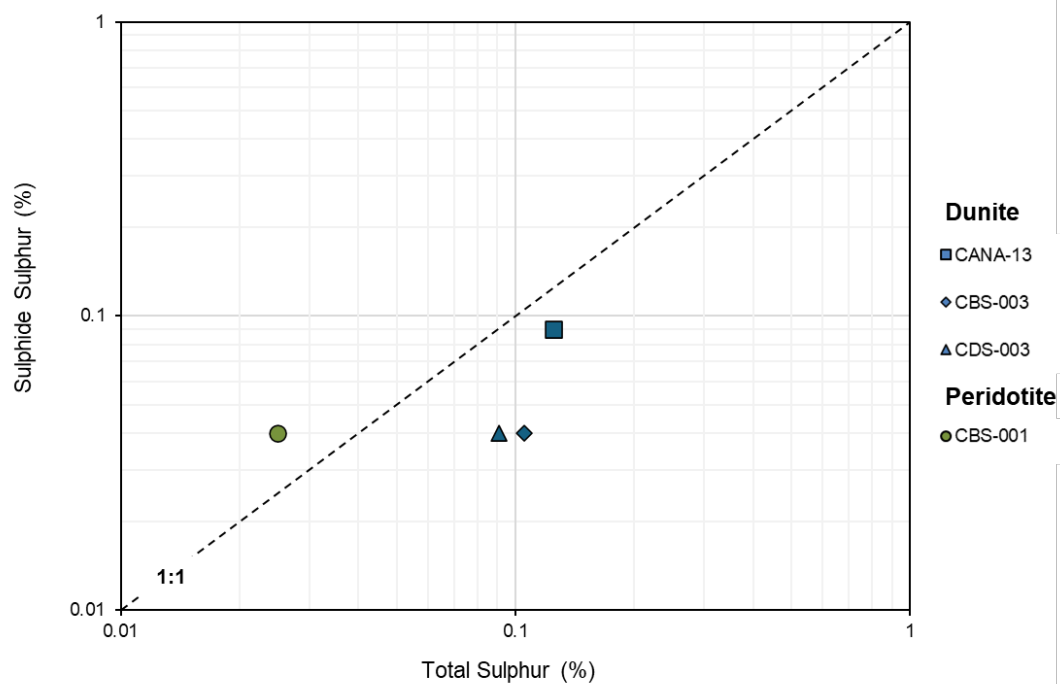
3.1.3.1 Acid Base Accounting

The ABA analysis of the tailings samples (n = 4) is summarized in Table 24 through Table 26. Tailings material consists of either the dunite or peridotite lithology. Acid base accounting results are reported in full in Appendix E and COAs for the tailings analyses are available in Appendix D.

Table 24: Sulphur and Carbon Speciation of Tailings Material

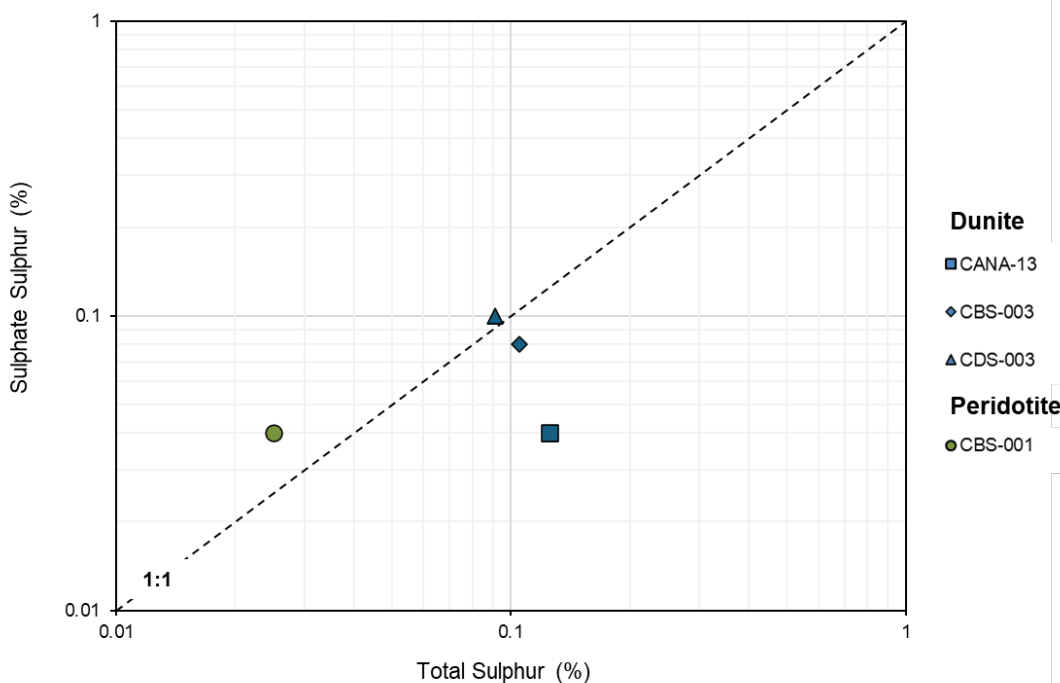
Lithology	Statistic	Paste pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbon as CO ₃
	Unit	-	%	%	%	%	%
Dunite (n = 3)	Minimum	9.7	0.091	<0.04	<0.04	0.14	0.29
	Maximum	9.8	0.13	0.09	0.1	0.2	0.32
	Median	9.7	0.11	0.04	0.08	0.15	0.3
Peridotite (n = 1)	-	9.6	0.025	<0.04	<0.04	0.28	0.97

CO₃ = carbonate, % = percent, <= less than.



Note: Non-detect values are plotted as 1x the analytical method detection limit. % = percent.

Figure 21: Total Sulphur Versus Sulphide Sulphur of Tailings



Note: Non-detect values are plotted as 1x the analytical method detection limit. % = percent.

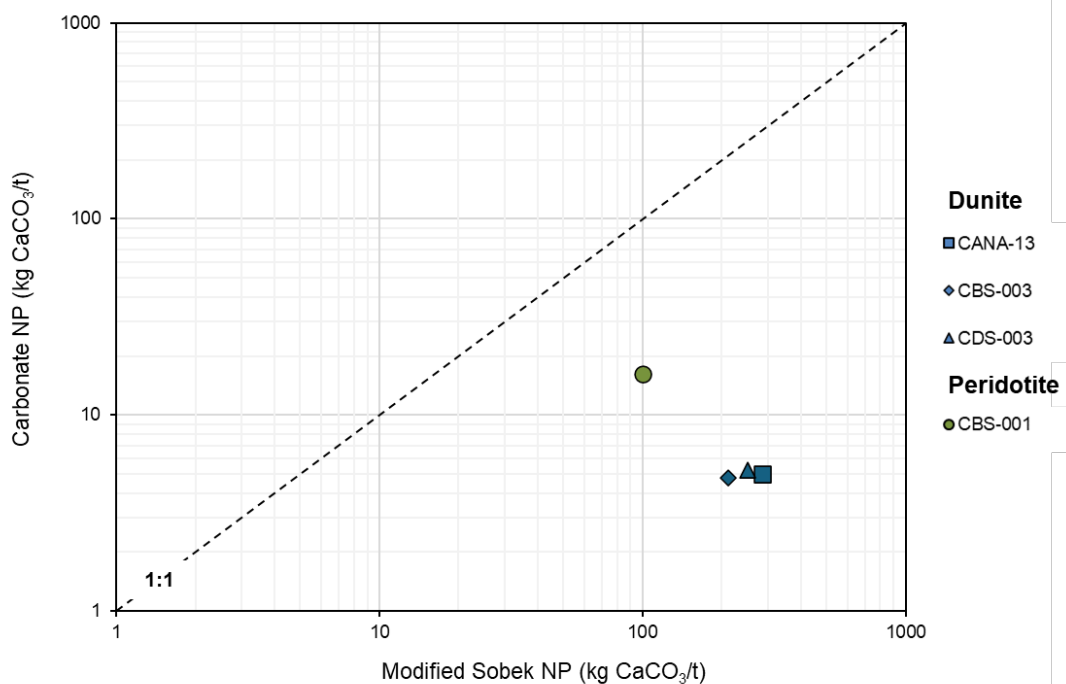
Figure 22: Total Sulphur Versus Sulphate Sulphur of Tailings

Table 25: Summary of Neutralization Potential for Tailings

Lithology	Statistic	Mod. NP	CO ₃ -NP	AP	Mod. NPR	CO ₃ -NPR
	Unit	kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	-	-
Dunite (n = 3)	Minimum	212	4.8	2.8	65	1.4
	Maximum	285	5.3	3.3	101	1.8
	Median	251	5.0	2.8	88	1.8
Peridotite (n = 1)	-	100	16	0.78	128	21

AP = acid potential; CaCO₃ = calcium carbonate; NP = neutralization potential; NPR = neutralization potential ratio; kg = kilograms; t = tonne.

The Mod. NP is greater than the CO₃-NP measured in all tailings samples, indicating a presence of NP minerals other than carbonate (e.g., calcite, dolomite) are the primary source of NP (Figure 23).



NP = neutralization potential; kg = kilogram; t = tonne; CaCO₃ = calcium carbonate.

Figure 23: Modified Sobek NP Versus Carbonate NP for Tailings

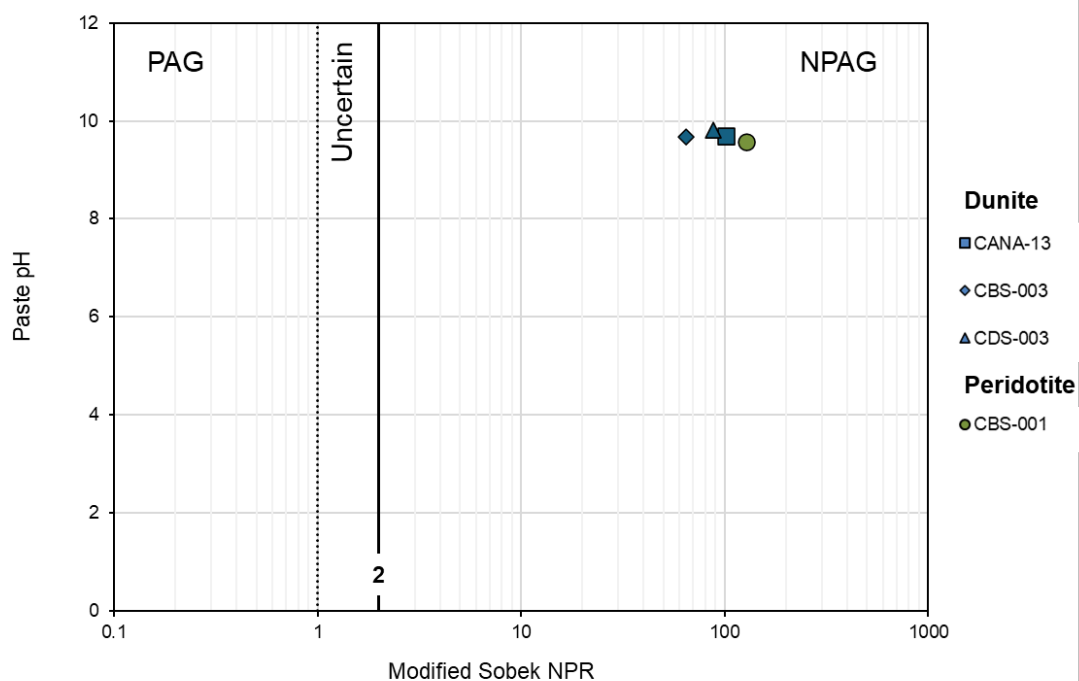
The ARD classification of the samples based on the site-specific criteria (Table 6) is plotted in Figure 24 and Figure 25 and is summarized in Table 26. Using the Mod. NPR, all tailings samples are classified as NPAG. Using the CO₃-NPR, the dunite samples are classified as uncertain whereas the peridotite sample remains classified as NPAG.

Table 26: ARD Classification of the Tailings Material

Lithology	ARD Classification - Mod. NPR			ARD Classification - CO ₃ -NPR		
	NPAG	Uncertain	PAG	NPAG	Uncertain	PAG
Dunite (n = 3)	3 (100%)	0	0	0	3 (100%)	0
Peridotite (n = 1)	1 (100%)	0	0	1 (100%)	0	0

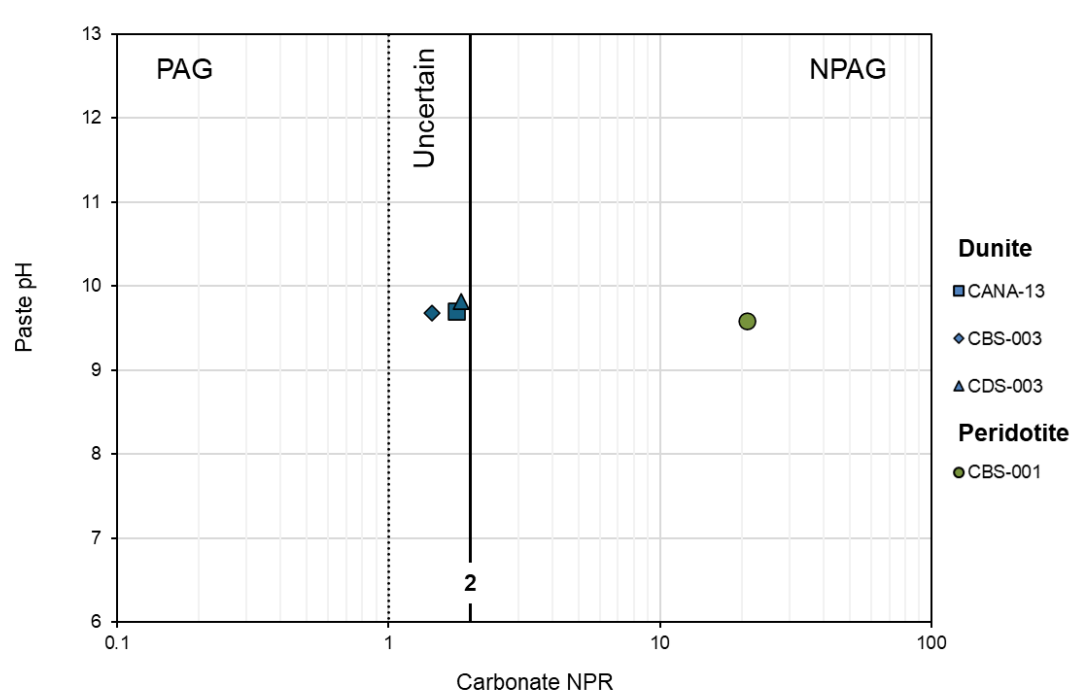
Note: ARD Classification is based on criteria in Table 6.

ARD = Acid Rock Drainage; NPR = neutralization potential ratio; NPAG = non potentially acid generating; PAG = potentially acid generating; CaCO₃ = calcium carbonate; % = percent.



NPR = neutralization potential ratio; NPAG = non potential acid generating; PAG = potentially acid generating.

Figure 24: ARD Classification by Modified Sobek NPR



NPR = neutralization potential ratio; NPAG = non potential acid generating; PAG = potentially acid generating.

Figure 25: ARD Classification by Carbonate NPR

3.1.3.2 Elemental Analysis

Total metals analysis for the tailings material were compared to 10 times the average crustal abundance values in Price (1997). For screening purposes, samples containing greater than ten times the average crustal abundance were considered to have elevated concentrations of that parameter. Elements present in the tailings material at contents greater than average crustal abundance are chromium, magnesium and nickel (Table 27). Elemental analysis results are compiled in APPENDIX E.

Table 27: Summary of Select Metal Content of Tailings Samples

Lithology	Statistic	Chromium (ppm)	Magnesium (ppm)	Nickel (ppm)
10 x Average Continental Crust		102	23300	84
Dunite (n = 3)	Minimum	1100	250000	980
	Maximum	2300	280000	1900
	Count	3	3	3
Peridotite (n = 1)	Minimum	2000	170000	520
	Maximum	2300	280000	1900
	Count	1	0	0

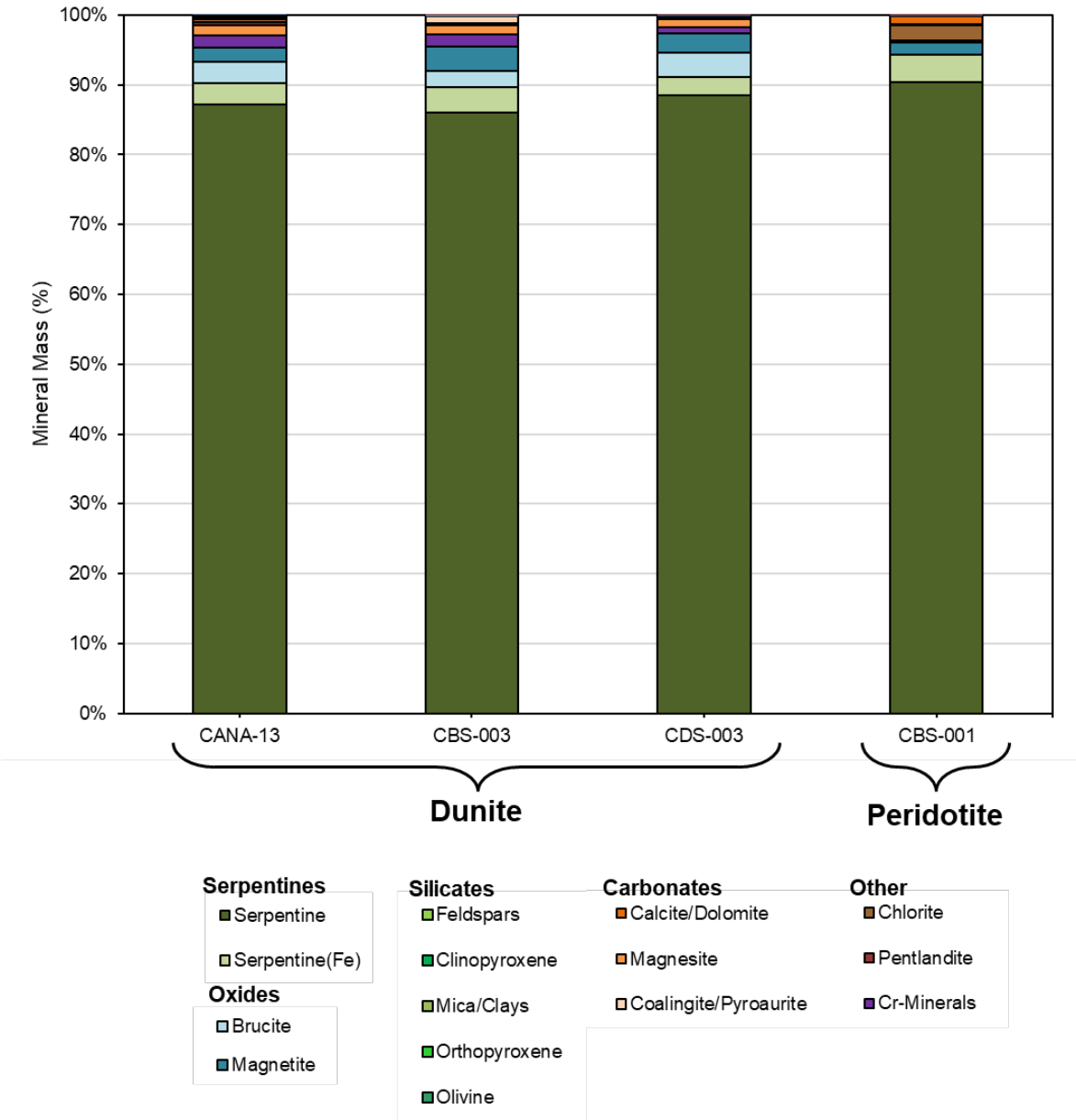
Source: Price (1997).
ppm = parts per million.

3.1.3.3 Whole Rock Analysis

WRA determined the concentrations of major oxide species for the tailings samples, results are available in APPENDIX E. Major oxide phases in dunite and peridotite samples are MgO an SiO₂.

3.1.3.4 Mineralogy

QEMSCAN analysis was performed on the tailings samples (n = 4). Mineral abundance for the tailings is shown in Figure 26. The predominant mineral phase in the tailings sample is serpentine. Identified sulphide minerals are pentlandite, pyrrhotite, chalcopyrite and pyrite with the greatest abundance in sample CANA-13 with a pentlandite content of 0.5%. The entire high-definition mineralogical analysis using QEMSCAN is available in APPENDIX E.



% = percent.

Figure 26: Mineral Abundance of Tailings Samples

3.1.3.5 Shake Flask Extraction

One tailings sample of the peridotite lithology was submitted for SFE analysis. The results of peridotite material were compared to the receiving environment water quality objectives described in Section 2.3.7 to screen for ML potential. The peridotite sample has concentrations above the PWQO in boron, cadmium and chromium (VI) and concentrations above the CCME guidelines in cadmium and chromium (VI). A summary of exceedances of guidelines is in Table 28. Results in full for SFE analysis are reported in APPENDIX E.

Table 28: Summary of SFE Results Exceeding PWQO and CCME Guidelines

Parameter	Boron	Cadmium ^(a)	Chromium VI
Unit	mg/L	mg/L	mg/L
<i>PWQO Guideline</i>	0.2	0.0001 – 0.0005	0.001
<i>CCME Guideline</i>	1.5	0.00004 – 0.00037	0.001
Peridotite (n = 1)	0.31	0.0002	0.0039

(a) Guideline is variable and dependent on hardness values. Refer to MOEE (1999) or CCME (2019) for method of calculation.

CCME = Canadian Council of Ministers of the Environment, PWQO = Provincial Water Quality Objectives, mg/L = milligrams per litre.

3.1.3.6 Supernatant Liquid Test

The simulated tailings samples were subjected to a centrifuge separation and the resulting water was collected from the top for SNL analysis. The collected water provides an indication of the process water of the tailings.

SNL of tailings material were compared to the receiving environment water quality objectives described in Section 2.3.7 to screen for ML potential. It should be noted that the guidelines used are not meant to be applied at this scale and are intended to serve as a relative reference. A summary of exceedances of PWQO guidelines is in Table 29. A summary of exceedances of CCME guidelines is in Table 30. There are no exceedances in CCME guidelines for peridotite samples. Notably there are no exceedances of either guideline for Chromium (VI) for SFE tailings results. Results in full for SNL analysis are reported in APPENDIX E.

Table 29: PWQO Exceedances for Tailings Samples

Lithology	Statistic	pH	Boron	Chromium ^(a)	Cobalt	Copper ^(b)	Iron	Nickel	Zinc
	Unit	-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<i>PWQO Guideline</i>		6.5 - 8.5	0.2	0.0089	0.0009	0.001 - 0.005	0.3	0.025	0.02
Dunite (n = 3)	Minimum	8.3	0.031	0.015	0.00048	0.0008	0.11	0.0061	0.002
	Maximum	9.6	0.19	0.16	0.012	0.016	3.1	0.29	0.006
	Exceedances	1	0	3	1	2	1	1	0
Peridotite (n = 1)	-	8.2	0.22	0.0023	0.000025	0.0002	0.01	0.0022	0.002
	Exceedances	0	1	0	0	0	0	0	0

(a) Chromium guideline for Cr (III)

(b) Guideline is variable and dependent on hardness values. Refer to MOEE (1999) for method of calculation.

PWQO = Provincial Water Quality Objectives; mg/L = milligrams per litre.

Table 30: CCME Exceedances for Tailings Samples

Lithology	Statistic	pH	Chromium ^(a)	Copper ^(b)	Iron	Nickel ^(b)	Zinc ^(c)
	Unit	-	mg/L	mg/L	mg/L	mg/L	mg/L
<i>CCME Guideline</i>		6.5 - 9.0	0.0089	0.002 - 0.004	0.3	0.025 - 0.15	0.002 - 0.5
Dunite (n = 3)	Minimum	8.3	0.015	0.0008	0.11	0.0061	0.002
	Maximum	9.6	0.16	0.016	3.1	0.29	0.006
	Exceedances	1	3	2	1	1	2

(a) Chromium guideline for Cr (III)

(b) Guideline is variable and dependent on hardness values. Refer to CCME (2019) for method of calculation.

(c) Guideline is variable and dependent on pH, hardness, and/or dissolved organic carbon values. Refer to CCME (2019) for method of calculation.

CCME = Canadian Council of Ministers of the Environment; mg/L = milligrams per litre.

3.1.4 Overburden

3.1.4.1 Acid Base Accounting

The ABA analysis of the overburden samples (n = 50) is summarized in Table 31 through Table 33. Overburden material is divided into two groups based on how it is proposed to be stockpiled: organic material and mineral soil material. The former is composed of largely organics, the latter is composed of clay, silt sand and till. Acid base account results are reported in full in APPENDIX E. Figure 28 and Figure 29 show the sulphur speciation of the overburden material.

Table 31: Sulphur and Carbon Speciation of Overburden Material

Material Type	Statistic	Paste pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbon as CO ₃
	Unit	-	%	%	%	%	%
Organics (n = 26)	Minimum	3.3	0.028	<0.04	<0.04	5.7	5.9
	Maximum	6.7	0.31	0.09	0.20	50	39
	Median	5.5	0.14	0.06	0.14	45	10
Mineral Soil (n = 24)	Minimum	3.1	<0.005	<0.04	<0.04	2.2	9.1
	Maximum	8.5	0.13	0.05	0.08	30	27
	Median	8.2	0.025	0.04	0.05	3.8	18

CO₃ = carbonate; % = percent; <= less than.

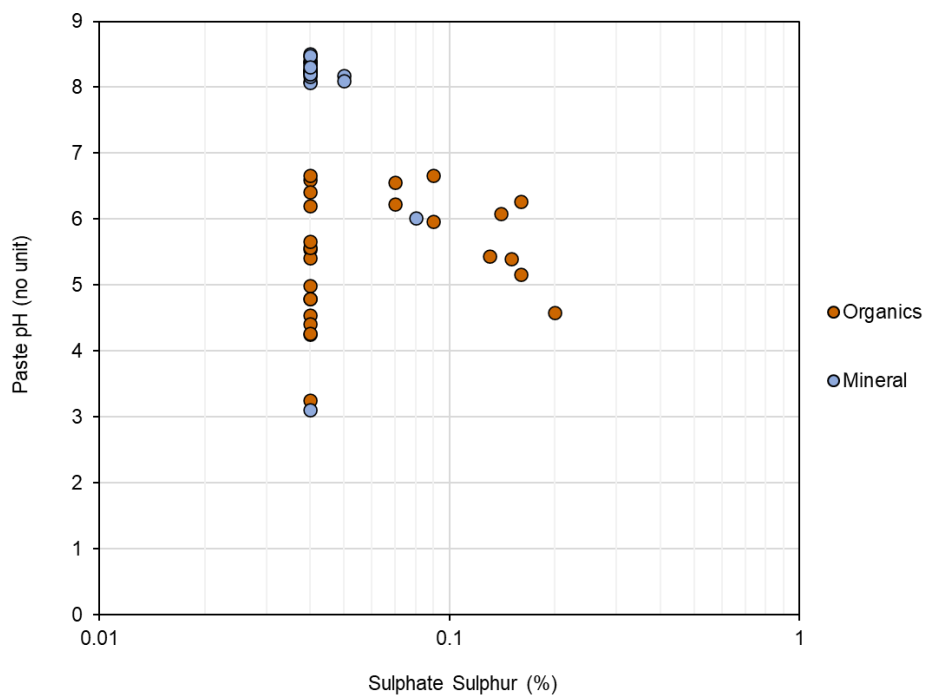
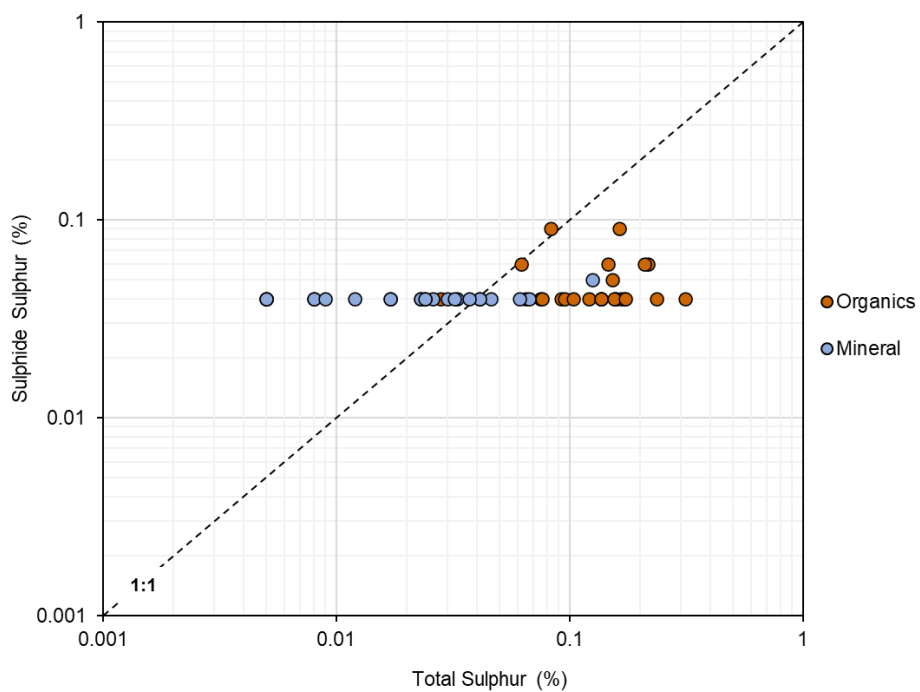
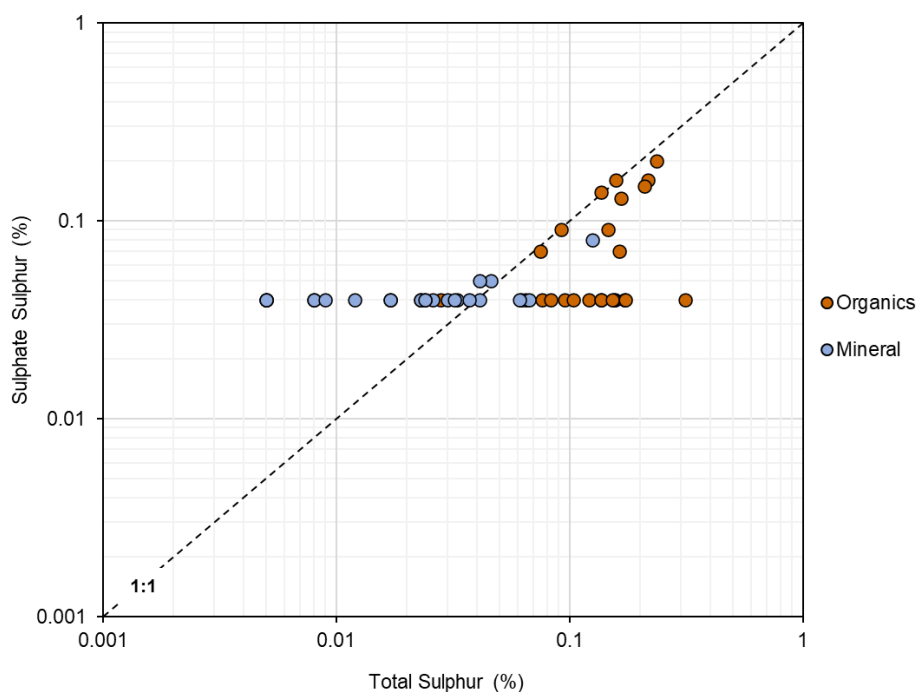


Figure 27: Paste PH versus Sulphate Sulphur for Overburden Samples



Note: Non-detect values are plotted as 1x the analytical method detection limit. % = percent

Figure 28: Total Sulphur Versus Sulphide Sulphur for Overburden Material



Note: Non-detect values are plotted as 1x the analytical method detection limit. % = percent.

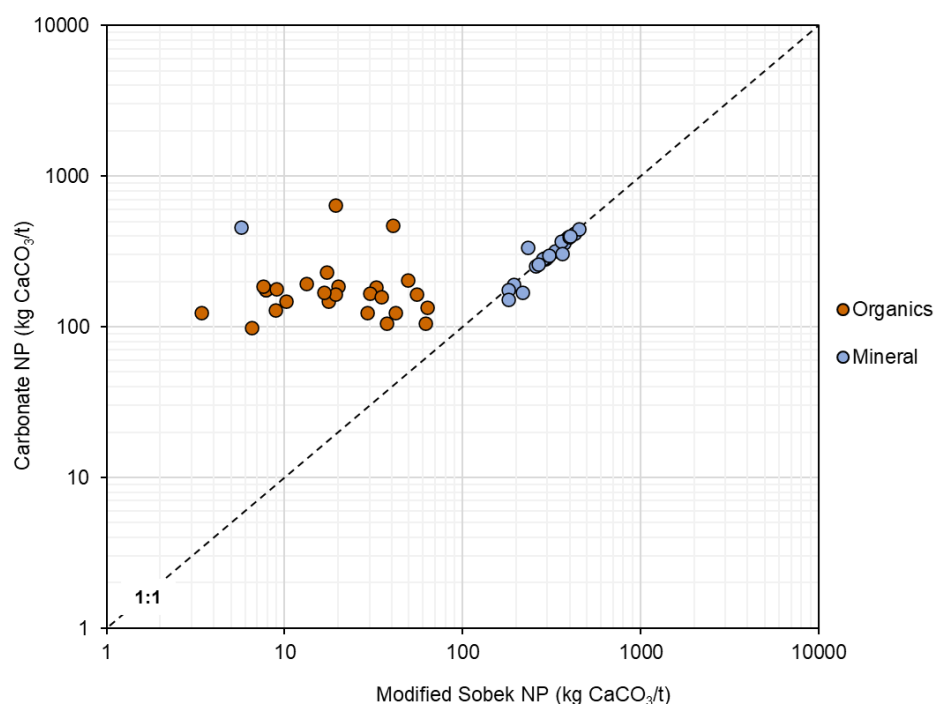
Figure 29: Total Sulphur Versus Sulphate Sulphur for Overburden Material

Table 32: NP and AP of Overburden Material

Material Type	Statistic	Mod. NPR	CO ₃ -NPR	AP	Mod. NPR	CO ₃ -NPR
	Unit	kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	-	-
Organics (n = 26)	Minimum	-3.5	99	0.88	-0.71	17
	Maximum	63	644	9.8	50	343
	Median	19	166	2.8	7.2	58
Mineral Soil (n = 24)	Minimum	5.7	152	0.16	3.6	131
	Maximum	448	457	1.6	2714	2466
	Median	294	301	0.75	327	310

AP = acid potential; CaCO₃ = calcium carbonate; NP = neutralization potential; NPR = neutralization potential ratio; kg = kilogram; t = tonne.

A large proportion of mineral overburden samples plot along or close to the 1 to 1 line in Figure 30, suggesting that neutralizing silicate minerals are the primary source of NP in the mineral material type. Whereas the organics samples plot above the 1 to 1 line, indicating that neutralizing carbonate minerals (e.g., calcite and dolomite) are the primary source of NP in the organics overburden.



NP = neutralization potential; kg = kilograms; t = tonne.

Figure 30: Modified Sobek NP Versus Carbonate NP

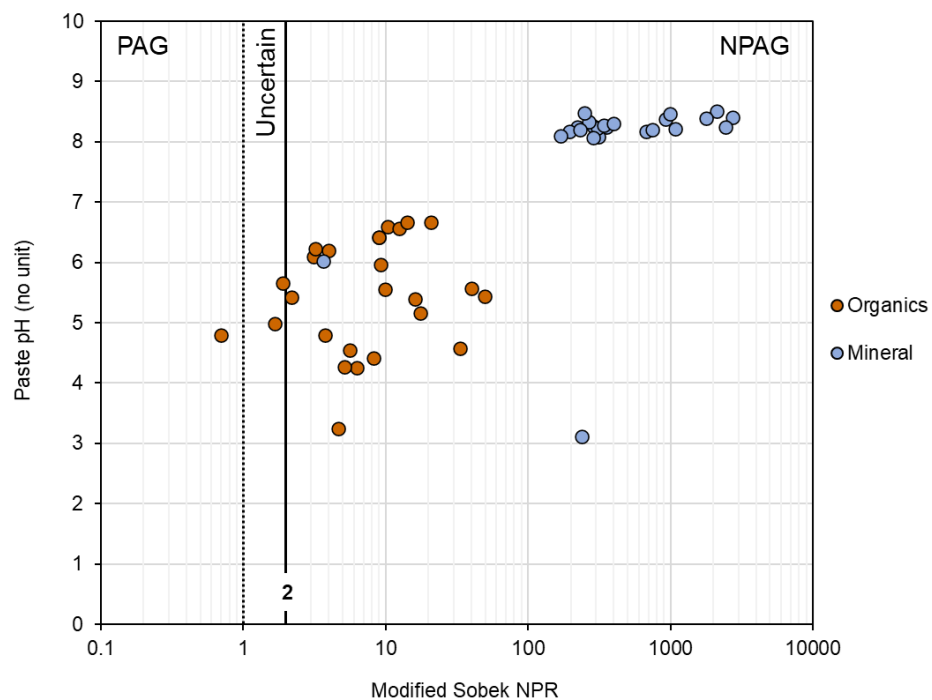
The ARD classification of the samples based on the site-specific criteria (Table 6) is plotted in Figure 31 and Figure 32 and is summarized in Table 33. There is one sample classified as PAG and one sample classified as uncertain using the Mod. NPR, both samples are of organic material. When classified using the CO₃-NPR, all samples are classified as NPAG.

Table 33: Summary of ARD Classification for Overburden Material

Material Type	ARD Classification – Mod. NPR			ARD Classification – CO ₃ -NPR		
	NPAG	Uncertain	PAG	NPAG	Uncertain	PAG
Organics (n = 26)	22 (85%)	2 (7.7%)	2 (7.7%)	26 (100%)	0	0
Mineral Soil (n = 24)	24 (100%)	0	0	24 (100%)	0	0

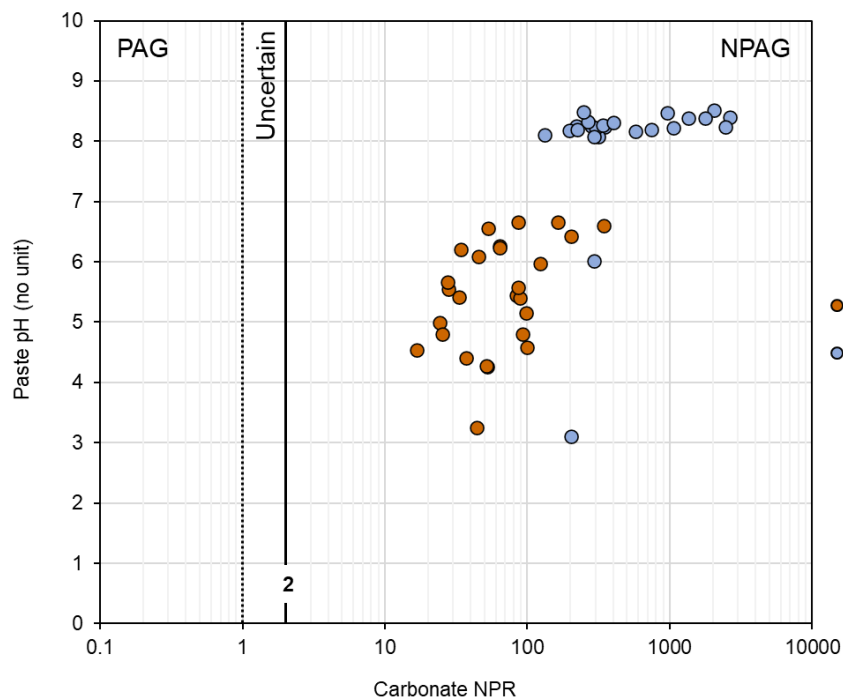
Note: ARD Classification is based on criteria in Table 6.

ARD = acid rock drainage; NPR = neutralization potential ratio; NPAG = non potentially acid generating; PAG = potentially acid generating; CaCO₃ = calcium carbonate; % = percent.



Note: One Organics sample is not plotted as modified Sobek NPR is negative, this sample classifies as PAG.
 NPR = neutralization potential ratio; NPAG = non potential acid generating; PAG = potentially acid generating.

Figure 31: ARD Classification by Modified Sobek NPR



NPR = neutralization potential ratio; NPAG = non potential acid generating; PAG = potentially acid generating.

Figure 32: ARD Classification by Carbonate NPR

3.1.4.2 Elemental Analysis

Total metals analysis for the overburden material were compared to 10 times the average crustal abundance values in Price (1997). For screening purposes, samples containing greater than ten times the average crustal abundance were considered to have elevated concentrations of that parameter. Elements present in the overburden material at contents greater than average crustal abundance are bismuth and selenium (Table 34). Elemental analysis results are compiled in APPENDIX E.

Table 34: Summary of Select Metal Content of Overburden Samples

Material Type	Bismuth (ppm)	Selenium (ppm)
<i>10 x Average Continental Crust</i>	<i>0.085</i>	<i>0.5</i>
Organics	0.09 – 0.45 (n = 26)	0.4 – 1.8 (n = 19)
Mineral Soil	0.09 – 0.34 (n = 24)	0.7 – 1.0 (n = 24)

Source: Price (1997).

ppm = parts per million.

3.1.4.3 Shake Flask Extraction

SFE results of overburden material were compared to the receiving environment water quality objectives described in Section 2.3.7 to screen for ML potential. It should be noted that the guidelines used are intended to serve as a relative reference. A summary of exceedances of PWQO guidelines is in Table 35. A summary of exceedances of CCME guidelines is in Table 36. Results in full for SFE analysis are reported in APPENDIX E.

The Organics overburden samples have a paste pH below 6.7Table 31, whereas the minimum SFE leachate pH obtained from the Organics samples is 7.2. Similarly, the minimum Mineral Soil overburden samples SFE leachate pH is circumneutral at pH 7.7. Of the 24 Mineral samples, two obtain an acidic paste pH of 3.1 and 6. The SFE results for these samples are displaying in the Table 35 and Table 36 as “Mineral (Acidic)”.

Table 35: PWQO Summary for Overburden Samples

Material Type	Statistic	Aluminum (0.2µm) ^(a)	Aluminum ^(a)	Boron	Cadmium ^(b)	Chromium VI	Cobalt	Copper ^(b)	Iron	Lead ^(b)	Vanadium	Zinc
	Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO Guideline		0.015 – 0.075	0.015 – 0.075	0.2	0.0001 – 0.0005	0.001	0.0009	0.001 – 0.005	0.3	0.001 - 0.005	0.006	0.02
Organics (n = 26)	Minimum	0.17	0.058	0.27	0.000007	0.0015	0.000067	0.0016	0.06	<0.00009	0.00043	<0.002
	Maximum	0.68	2.5	1.8	0.00047	0.0036	0.0018	0.036	1.2	0.011	0.0078	0.052
	Median	0.53	0.2	0.68	0.000057	0.0025	0.00029	0.0081	0.2	0.00042	0.0011	0.005
	Exceedances	26	26	26	5	26	4	26	8	6	2	4
Mineral Soil (n = 22)	Minimum	0.007	0.03	0.081	0.000003	0.0003	0.000013	0.0011	<0.007	<0.00009	0.0021	<0.002
	Maximum	0.52	0.3	0.6	0.00003	0.0047	0.0002	0.02	0.3	0.00049	0.012	0.003
	Median	0.018	0.17	0.33	0.0000075	0.0017	0.00011	0.0057	0.1	<0.00009	0.0046	<0.002
	Exceedances	12	22	19	0	20	0	22	0	0	9	0
Mineral (Acidic) (n = 2)	Minimum	0.005	0.01	0.25	0.000006	0.0013	0.000043	0.0033	<0.007	<0.00009	0.0019	<0.002
	Maximum	0.72	0.36	1.1	0.0001	0.0026	0.0013	0.13	0.34	0.0019	0.01	0.054
	Median	0.36	0.19	0.68	0.000053	0.002	0.00067	0.065	0.17	0.0010	0.006	0.028
	Exceedances	1	1	2	0	2	1	2	1	1	1	1

(a) Guideline is variable and dependent on pH values. Refer to MOEE (1999) for method of calculation.
(b) Guideline is variable and dependent on hardness values. Refer to MOEE (1999) for method of calculation.
PWQO = Provincial Water Quality Objectives; mg/L = milligrams per litre; µm = micrometre; <= less than

Table 36: CCME Summary for Overburden Samples

Material Type	Statistic	Aluminum (0.2µm) ^(a)	Aluminum ^(a)	Fluoride	Arsenic	Boron	Cadmium ^(b)	Chromium VI	Copper ^(b)	Manganese ^(c)	Mercury	Iron	Lead ^(b)	Selenium	Zinc ^(c)
	Unit	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CCME Guideline		0.005 - 0.1	0.005 - 0.1	0.12	0.005	1.5	0.00004 - 0.00037	0.001	0.002 - 0.004	0.09 - 1.5	0.000026	0.3	0.001 - 0.007	0.001	0.002 - 0.5
Organics (n = 26)	Minimum	0.17	0.058	0.15	0.0012	0.27	0.000007	0.0015	0.0016	0.0014	<0.00001	0.06	<0.00009	0.00009	<0.002
	Maximum	0.68	2.5	0.3	0.018	1.8	0.00047	0.0036	0.036	0.23	0.00005	1.2	0.011	0.0019	0.052
	Median	0.53	0.2	0.2	0.0033	0.68	0.000057	0.0025	0.0081	0.012	0.000015	0.2	0.00042	0.00021	0.005
	Exceedances	26	26	26	5	1	16	26	25	4	3	8	6	2	22
Mineral Soil (n = 22)	Minimum	0.007	0.03	0.19	0.0016	0.081	0.000003	0.0003	0.0011	0.00059	<0.00001	<0.007	<0.00009	0.00015	<0.002
	Maximum	0.52	0.28	1.5	0.013	0.62	0.000031	0.0047	0.024	0.0094	0.00002	0.25	0.00049	0.0036	0.003
	Median	0.018	0.17	1.0	0.0032	0.33	0.0000075	0.0017	0.0057	0.0018	0.00001	0.1	0.00009	0.0014	<0.002
	Exceedances	22	22	22	3	0	0	20	20	0	0	0	0	13	2
Mineral (Acidic) (n = 2)	Minimum	0.005	0.01	0.2	0.0034	0.25	0.000006	0.0013	0.0033	0.0012	<0.00001	<0.007	<0.00009	0.0012	<0.002
	Maximum	0.72	0.36	0.41	0.0053	1.1	0.0001	0.0026	0.13	0.11	0.00002	0.34	0.0019	0.0038	0.054
	Median	0.36	0.19	0.31	0.0044	0.68	0.000053	0.002	0.065	0.058	0.000015	0.17	0.0010	0.0025	0.028
	Exceedances	1	2	2	1	0	1	2	2	1	0	1	1	2	1

(a) Guideline is variable and dependent on pH values. Refer to CCME (2019) for method of calculation.
(b) Guideline is variable and dependent on hardness values. Refer to CCME (2019) for method of calculation.
(c) Guideline is variable and dependent on pH, hardness, and/or dissolved organic carbon values. Refer to CCME (2019) for method of calculation.
CCME = Canadian Council of Ministers of the Environment; mg/L = milligrams per litre; µm = micrometre; <= less than.

3.1.5 Clay

3.1.5.1 Acid Base Accounting

All results are present in APPENDIX B and summary statistics are presented in Table 37. All samples in all treatment groups are evaluated as NPAG. Results of this experiment were evaluated using a Kruskal-Wallis test as described in section 2.3.9. to look evaluate for statistically significant ($\alpha = 0.05$) differences between treatment groups. Within the dataset, pH was found to have significant differences between treatment groups. All other parameters measured in the ABA testing were found to not have any statistically significant differences between groups.

Paste pH: A p value of 0.004 was measured for this parameter using the Kruskal-Wallis method, and within the groups a p value of 0.02 was measured between the control group and the other treatments using a pairwise Wilcoxon test, no other significant differences were observed. This result is found to be significantly different than the other three treatments. The mean value for the control group was pH of 8.3, while the 2%, 3%, and 4% groups had mean pH values of 11.3, 10.4, and 12.0 respectively.

3.1.5.2 Shake Flask Extraction

All SFE results are presented in APPENDIX E and summary statistics of parameters that showed a statistically significant ($\alpha = 0.05$) difference between any treatment group using the Kruskal-Wallis method and Wilcoxon pairwise method are presented in Table 39. Results are screened against PWQO and CCME guidelines as a reference for relative increases or decreases in concentration in runoff when lime is added to the stockpiled material. All other parameters measured in the SFE testing were found to not have any statistically significant differences between groups.

Table 37: Mean Results of ABA Testing by Lime Addition Treatment

Treatment	Paste pH	Total Sulphur	Sulphide Sulphur	Sulphate Sulphur	Total Carbon	Carbon as CO ₃	CO ₃ -NP ^(a)	Modified Sobek NP	AP	Net NP ^(b)	Net CO ₃ -NP ^(c)	NPR	CO ₃ -NPR
Units	-	%	%	%	%	%	kg CaCO ₃ /t				-	-	
Control	8.3	0.018	0.04	0.04	3.4	16	260	253	1.3	251	259	479	208
2% Lime	11	0.017	0.04	0.04	3.6	16	273	276	1.3	274	272	544	218
3% Lime	10	0.018	0.04	0.04	3.5	16	271	271	1.3	269	270	488	217
4% Lime	12	0.02	0.04	0.04	3.7	17	280	295	1.3	294	279	495	224

(a) Carbonate neutralization potential (CO₃-NP) = (Carbonate (CO₃) /44.01) x 100.09 x 10
(b) Net neutralization potential = NP – AP
(c) Net carbonate neutralization potential = CO₃-NP – AP
AP = acid potential; CO₃ = carbonate; NP = neutralization potential; NPR = neutralization potential ratio (NP/AP); % = percent; kg CaCO₃/t = kilograms calcium carbonate per tonne.

Table 38: Summary of Mean Values of Parameters that Showed Statistically Significant (α = 0.05) Differences Between Groups in SFE Testing

Treatment	pH	Aluminum (0.2µm)	Arsenic	Barium	Boron	Calcium	Chromium	Copper	Lithium	Magnesium	Manganese	Potassium	Strontium	Uranium
Units	-	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CCME Guideline	9	0.005	0.005	-	1.5	-	0.0089	0.002	-	-	-	-	-	0.015
PWQO Guideline	8.5	0.015	0.005	-	0.2	-	0.0089	0.001	-	-	-	-	-	0.005
Control	8.6 ^a	0.43 ^a	0.0018 ^a	0.014 ^a	0.48 ^a	18 ^a	0.0018 ^a	0.0037 ^a	0.0056 ^a	3.5 ^a	0.01 ^a	3.1 ^a	0.095 ^a	0.0014 ^a
2% Lime	12 ^b	3.0 ^b	0.00096 ^b	0.033 ^b	0.033 ^b	332 ^b	0.0093 ^b	0.025 ^b	0.00022 ^b	0.02 ^b	0.00023 ^b	7.8 ^b	0.61 ^b	0.00001 ^b
3% Lime	12 ^b	2.2 ^{bc}	0.00066 ^{ac}	0.055 ^b	0.022 ^b	518 ^b	0.0086 ^b	0.025 ^b	0.00016 ^b	0.021 ^b	0.00027 ^b	9.9 ^b	0.8 ^b	0.0000056 ^b
4% Lime	12 ^b	1.3 ^c	0.0006 ^{ac}	0.065 ^b	0.019 ^b	631 ^b	0.0094 ^b	0.024 ^b	0.00026 ^b	0.021 ^b	0.00038 ^b	12 ^b	0.99 ^b	0.00012 ^b

Notes: ^{a,b,c} Statistically significant groups, α = 0.05
CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives; mg/: = milligrams per litre; µm = micrometre.

3.2 Kinetic

3.2.1 Waste Rock

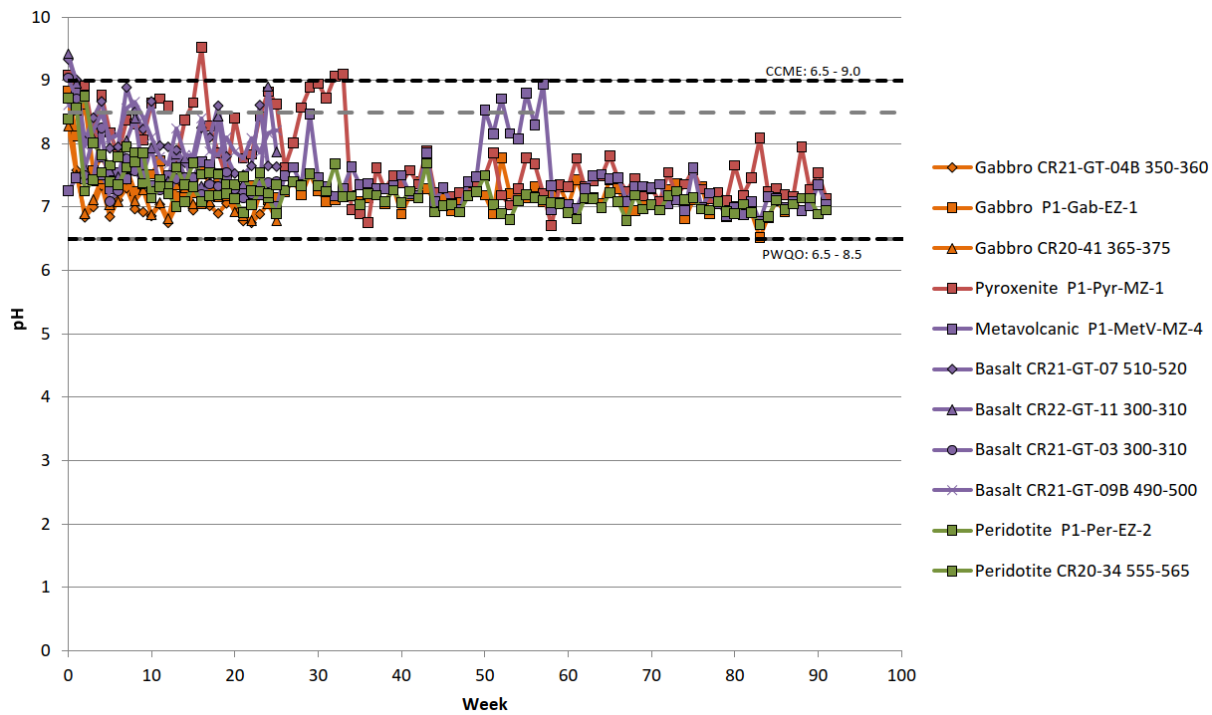
The following section presents the results for the 11 waste rock HCTs, seven of which are active at the time of reporting. Results through 28 February 2024 are summarized in this report and are available in full in APPENDIX F. Relevant static testing for the HCTs, including ABA results are included in Table 40 to provide context for the kinetic testing results. Figure 33 through Figure 37 present time series plots for pH, dissolved aluminum, dissolved arsenic, dissolved chromium (VI) in the HCT leachates as potential constituents of concern. The time series plots for the other parameters are included in APPENDIX G. Results for the SFE extraction that exceed water quality guidelines but do not exceed water quality guidelines in the HCTs include chloride, fluoride, dissolved boron, dissolved copper, dissolved iron, dissolved antimony, dissolved selenium, dissolved thallium, dissolved uranium, dissolved vanadium and dissolved zinc. Given the nature of the SFE analysis, the SFE concentration can be associated with a first flush of a material, with similar concentrations seen in the first weeks of a kinetic test. Table 39 summarizes the range of concentrations in the first 5 weeks of HCT leachate compared to the SFE concentrations for parameters of interest.

Table 39: Summary of Waste Rock HCTs First 5 Weeks versus SFE

HCT ID	Parameter	pH	Aluminum	Aluminum (0.2µm)	Arsenic	Chromium VI	Chromium
	Unit	-	mg/L	mg/L	mg/L	mg/L	mg/L
Gabbro P1-Gab-EZ-1	SFE	9.9	0.16	0.17	0.0006	0.0007	0.00083
	First 5 Weeks-HCT	7.6 - 8.8	-	0.005 - 0.048	0.0002	0.0002 - 0.0003	0.00008 - 0.00014
Gabbro CR21-GT-04B 350-360	SFE	8.4	0.21	0.21	0.0006	0.0005	0.00067
	First 5 Weeks-HCT	6.8 - 8.8	0.016 - 0.047	0.016 - 0.048	0.0004 - 0.001	0.0002 - 0.0005	0.00016 - 0.00057
Gabbro CR20-41 365-375	SFE	9.3	0.26	0.24	0.0003	0.0006	0.0011
	First 5 Weeks-HCT	6.9 - 8.3	0.023 - 0.037	0.021 - 0.051	0.0003 - 0.0008	0.0002 - 0.0005	0.00017 - 0.00047
Pyroxenite P1-Pyr-MZ-1	SFE	9.3	-	0.007	0.0005	0.0012	0.0021
	First 5 Weeks-HCT	8.2 - 9.1	-	0.001 - 0.012	0.0028 - 0.0048	0.0002 - 0.0007	0.00041 - 0.00099
Metavolcanic P1-MetV-MZ-4	SFE	8.6	-	0.48	0.04	<0.0002	0.00013
	First 5 Weeks-HCT	7.3 - 7.5	-	0.001 - 0.073	0.0004 - 0.0005	0.0002 - 0.0003	0.00008 - 0.00019
Basalt CR21-GT-07 510-520	SFE	8.8	1.2	1.1	0.0019	<0.0002	<0.00008
	First 5 Weeks-HCT	8.0 - 9.3	0.071 - 0.092	0.076 - 0.185	0.0011 - 0.0058	0.0002	0.00008 - 0.00017
Basalt CR22-GT-11 300-310	SFE	9.0	0.91	0.9	0.019	<0.0003	<0.00008
	First 5 Weeks-HCT	7.6 - 9.4	0.066 - 0.18	0.067 - 0.179	0.0048 - 0.0245	0.0002	0.00008 - 0.0002
Basalt CR21-GT-03 300-310	SFE	8.4	0.89	0.9	0.012	<0.0004	<0.00008
	First 5 Weeks-HCT	7.4 - 9.0	0.064 - 0.293	0.058 - 0.134	0.0006 - 0.0253	0.0002	0.00008 - 0.0002
Basalt CR21-GT-09B 490-500	SFE	8.1	0.52	0.52	0.0003	<0.0005	<0.00008
	First 5 Weeks-HCT	8.0 - 8.6	0.112 - 0.318	0.114 - 0.306	0.0003 - 0.0007	0.0002	0.00008 - 0.00114
Peridotite P1-Per-EZ-2	SFE	9.6	0.005	0.006	<0.0002	0.0000004	0.00037
	First 5 Weeks-HCT	7.8 - 8.8	-	0.001 - 0.007	0.0002 - 0.0003	0.0003 - 0.001	0.00042 - 0.00059
Peridotite CR20-34 555-565	SFE	8.7	0.009	0.011	0.0012	0.0008	0.0011
	First 5 Weeks-HCT	7.3 - 8.6	0.002 - 0.011	0.004 - 0.012	0.0002 - 0.0006	0.0005 - 0.0021	0.00013 - 0.00228

Note: Bolded SFE values are greater than the maximum concentration seen in the first 5 weeks of HCT leachate.

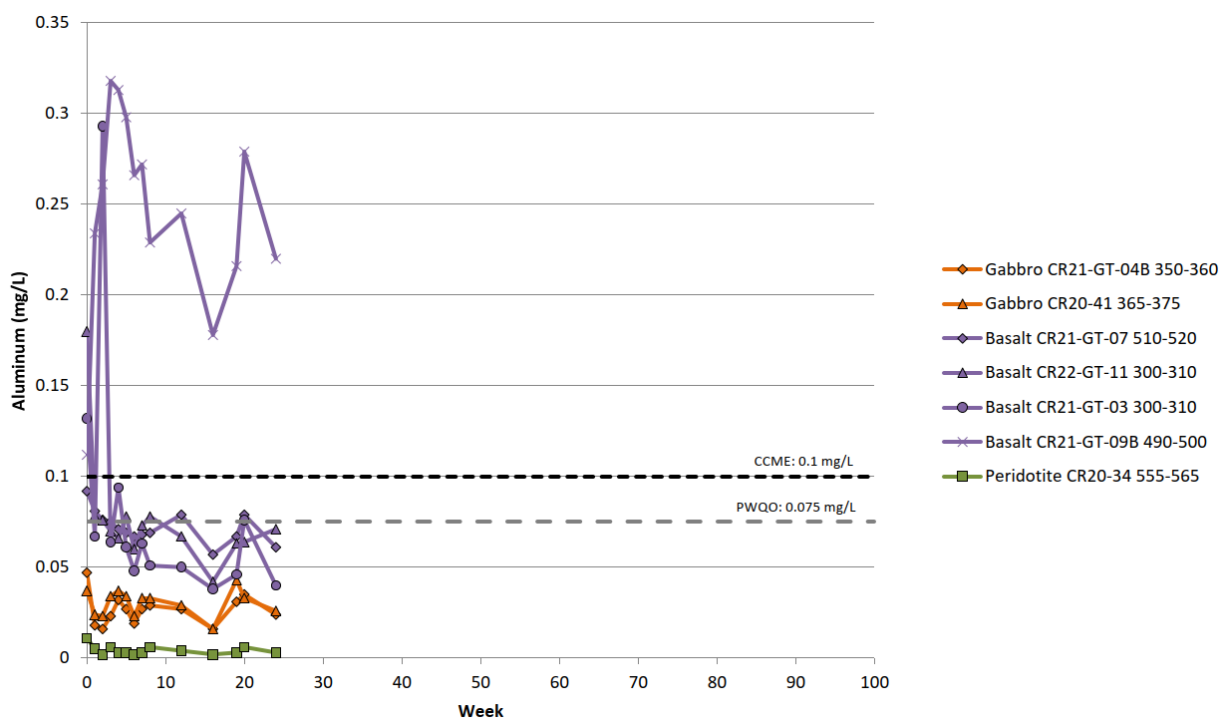
HCT = Humidity cell test; mg/L = milligrams per litre; µg/L = micrograms per litre; µm = micrometre; SFE = shake flask extraction; <= less than.



CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 33: Time series of pH for Waste Rock HCTs

The pH of waste rock HCTs has been relatively stable. For HCTs with 91 weeks of testing, the pH in the most recent week of testing ranged from 6.9 to 7.1. For HCTs with 25 weeks of testing pH ranged from 6.9 to 8.2.

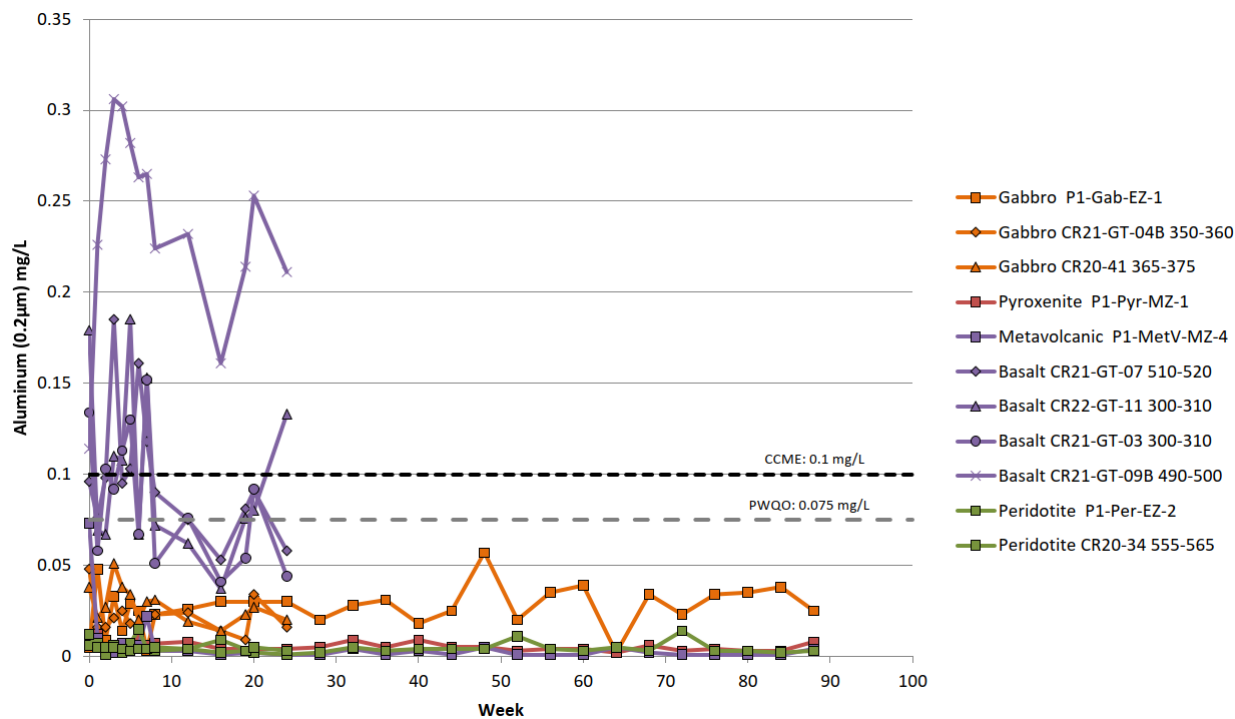


Note: Non-detect values are plotted as 1x the analytical method detection limit.

mg = milligram; L = litre; CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives

Figure 34: Time series of Aluminum for Waste Rock HCTs

Aluminum concentrations display similar trends by lithology. The Metavolcanic lithology has the greatest aluminum concentrations, with first flush values above the CCME guideline of 0.1 mg/L. The concentrations after the first flush maintain a concentration of 0.04 mg/L to 0.6 mg/L except in HCT Basalt CR21-GT-09B 490-500 where the aluminum concentrations remain above both PWQO and CCME guidelines and remain at 0.22 mg/L at the most recent week of testing. HCTs that have 91 weeks of testing were not tested for aluminum.

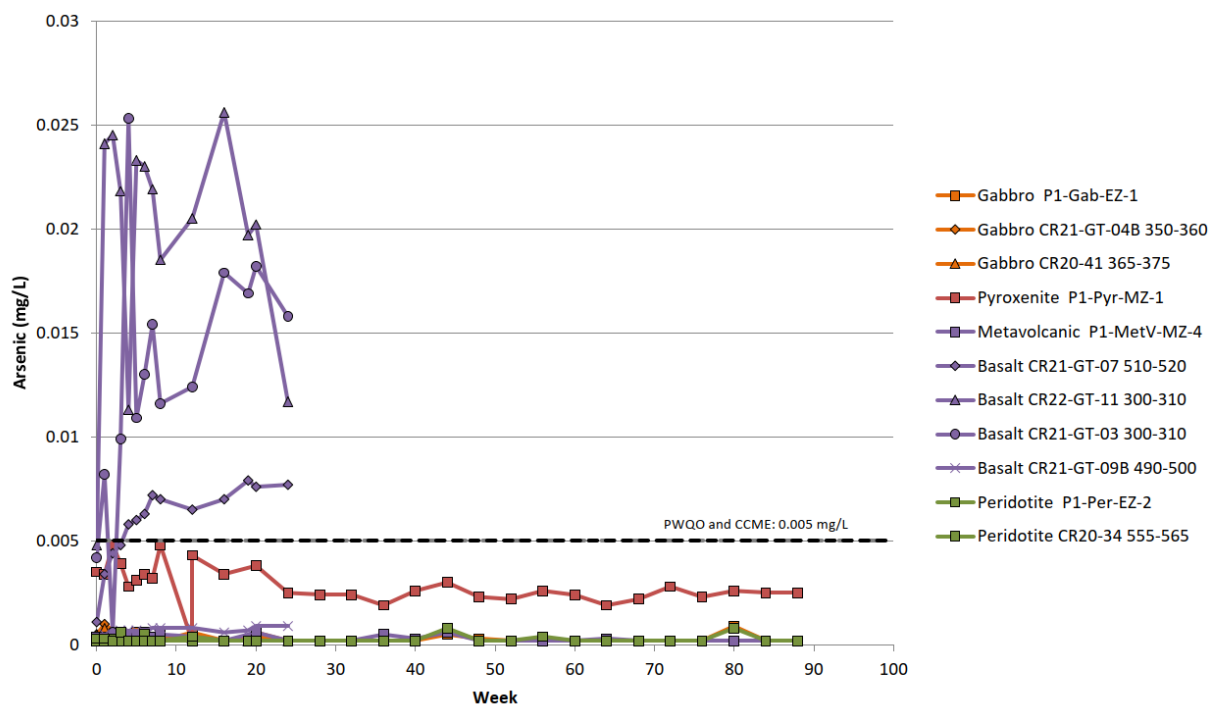


Note: Non-detect values are plotted as 1x the analytical method detection limit.

µm = micrometres; mg = milligram; L = litre; CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 35: Time series for Aluminum (0.2 µm) for Waste Rock HCTs

Aluminum (0.2 µm) concentrations for HCTs that have 91 weeks of testing have remained stable in the last 10 weeks of testing and below PWQO and CCME guidelines. A similar trend as observed with aluminum concentrations for HCTs with 25 weeks of testing for aluminum (0.2 µm).

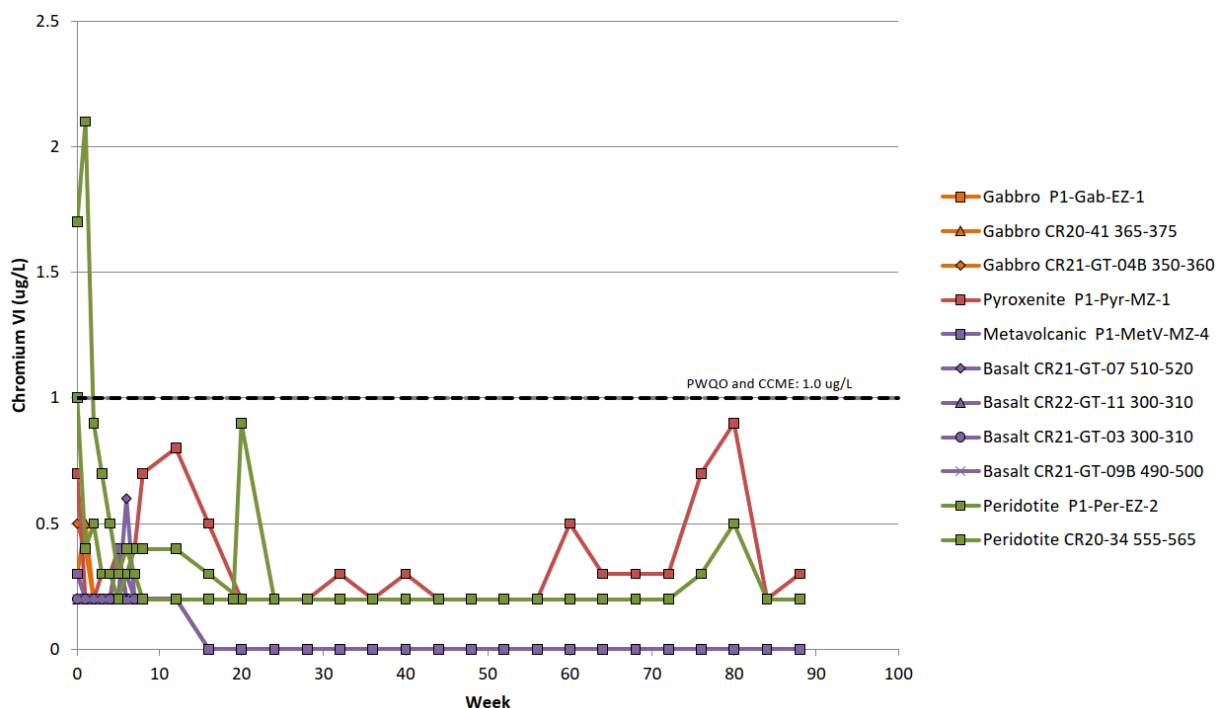


Note: Non-detect values are plotted as 1x the analytical method detection limit.

mg = milligram; L = litre; CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 36: Time series of Arsenic for Waste Rock HCTs

The arsenic concentrations in three of the five metabasalt HCTs has concentrations above PWQO and CCME guideline values of 0.0005 mg/L. Concentrations for other HCTs of the gabbro, peridotite, and pyroxenite lithology remain below the PWQO and CCME guidelines and have reached a steady state release.

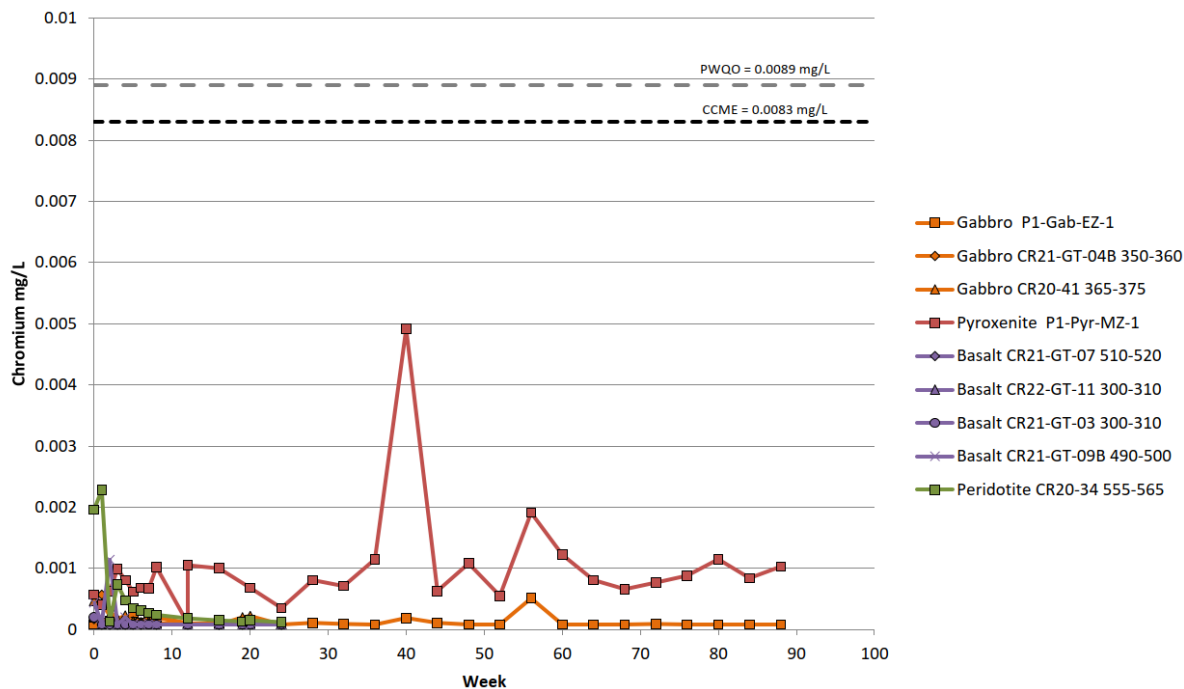


Note: Non-detect values are plotted as 1x the analytical method detection limit. Testing for Chromium VI in Metavolcanic P1-MetV-MZ-4 was discontinued in week 12.

µg = microgram; L = litre; CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 37: Time series of Chromium (VI) for Waste Rock HCTs

Concentrations of chromium (VI) in the first flush of waste rock HCTs exceed CCME and PWQO guidelines in HCT Peridotite CR20-34 555-565 with a maximum concentration of 2.1 µg/L. The other HCTs are below PQWO and CCME guidelines of 1.0 µg/L for the duration of current available testing.



Note: Non-detect values are plotted as 1x the analytical method detection limit.

mg = milligram; L = litre; CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 38: Time series for Chromium in Waste Rock HCTs

Chromium concentrations for waste rock HCTs remain well below the PWQO and CCME guidelines for the duration of current testing. Maximum concentrations are reached in week 2 of testing of cell Peridotite CR20-34 555-565 of 0.0023 mg/L. The concentrations observed in 40 of HCT Pyroxenite P1-Pyr-MZ-1 can be attributed to a laboratory artifact given the trend of leachate concentrations prior and after week 40.

Table 40: Summary of Waste Rock HCT ABA Results

HCT ID	Lithology	AP	Mod. NP	CO ₃ - NP	Mod. NPR	CO ₃ -NPR	ARD Classification- Mod. NPR	ARD Classification- CO ₃ -NPR
		kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	-	-	-	-
Gabbro P1-Gab-EZ-1	Gabbro	1.8	21	10	12	6.0	NPAG	NPAG
Gabbro CR21-GT-04B 350-360	Gabbro	1.6	7.4	0.42	4.6	0.26	NPAG	PAG
Gabbro CR20-41 365-375	Gabbro	1.1	19	0.42	17	0.37	NPAG	PAG
Pyroxenite P1-Pyr-MZ-1	Pyroxenite	1.6	87	72	56	46	NPAG	NPAG
Metavolcanic P1-MetV-MZ-4	Metavolcanic	0.25	73	85	293	342	NPAG	NPAG
Basalt CR21-GT-07 510-520	Metavolcanic	1.2	77	65	66	56	NPAG	NPAG
Basalt CR22-GT-11 300-310	Metavolcanic	0.5	28	25	56	49	NPAG	NPAG
Basalt CR21-GT-03 300-310	Metavolcanic	4.7	17	8.8	3.6	1.9	NPAG	Uncertain
Basalt CR21-GT-09B 490-500	Metavolcanic	1.9	136	144	73	77	NPAG	NPAG
Peridotite P1-Per-EZ-2	Peridotite	0.84	28	1.3	34	1.5	NPAG	Uncertain
Peridotite CR20-34 555-565	Peridotite	1.3	28	0.42	22	0.33	NPAG	PAG

Note: highlighted rows indicate active kinetic test. ARD Classification is based on criteria in Table 6.

AP = acid potential; ARD = acid rock drainage; CaCO₃ = calcium carbonate; kg = kilogram; t = tonne; HCT = humidity cell test; NP = neutralization potential; NPR = neutralization potential ratio; NPAG = non potentially acid generating; PAG = potentially acid generating

Sulphide sulphur, Mod. NP and CO₃-NP depletion calculations were performed using the last 10 weeks of HCT data. These calculations are using in combination with static testing results to predict the long-term projection of ARD potential. The sulphide sulphur depletion rate was estimated using the sulphate production rate (mg/kg/week). Mod. NP and CO₃-NP depletion was estimated considering the rate of sulphate and acidity production, relative to the production of alkalinity in each cell (empirical NP consumption rate, as described in MEND (2009)).

A summary of the depletion estimates of the waste rock HCTs in Table 41. The Mod. NP in the waste rock HCTs is estimated to deplete at a minimum in 32 years and a maximum of 280 years. In contrast the CO₃-NP in the waste rock HCTs is estimated to deplete in as soon as 6 months. Sulphide depletion estimates range from 10 to 22 years. In the waste rock HCTs, the sulphide is estimated to deplete before the Modified Sobek NP classifying the HCTs as NPAG. However, in five HCTs the CO₃-NP is estimated to deplete before the sulphide will deplete, classifying these HCTs as PAG.

Table 41: Summary of Waste Rock HCT Depletion Estimates

Sample ID	Lithology	Time to Sulphide Depletion	Time to Mod. NP Depletion	Time to CO ₃ -NP Depletion	ARD Classification-Mod. NP	ARD Classification-CO ₃ -NP
		years	years	years	-	-
Gabbro P1-Gab-EZ-1	Gabbro	10	125	62	NPAG	NPAG
Gabbro CR21-GT-04B 350-360	Gabbro	12	43	1.7	NPAG	PAG
Gabbro CR20-41 365-375	Gabbro	12	110	1.7	NPAG	PAG
Peridotite P1-Per-EZ-2	Peridotite	10	129	3.0	NPAG	PAG
Peridotite CR20-34 555-565	Peridotite	11	81	0.5	NPAG	PAG
Metavolcanic P1-MetV-MZ-4	Metavolcanic	10	280	327	NPAG	NPAG
Basalt CR21-GT-07 510-520	Metavolcanic	11	118	100	NPAG	NPAG
Basalt CR22-GT-11 300-310	Metavolcanic	11	64	56	NPAG	NPAG
Basalt CR21-GT-03 300-310	Metavolcanic	22	32	16	NPAG	PAG
Basalt CR21-GT-09B 490-500	Metavolcanic	11	125	132	NPAG	NPAG
Pyroxenite P1-Pyr-MZ-1	Pyroxenite	13	274	226	NPAG	NPAG

ARD = acid rock drainage; NP = neutralization potential; NPAG = non-potentially acid generating; PAG = potentially acid generating.

3.2.2 Ore

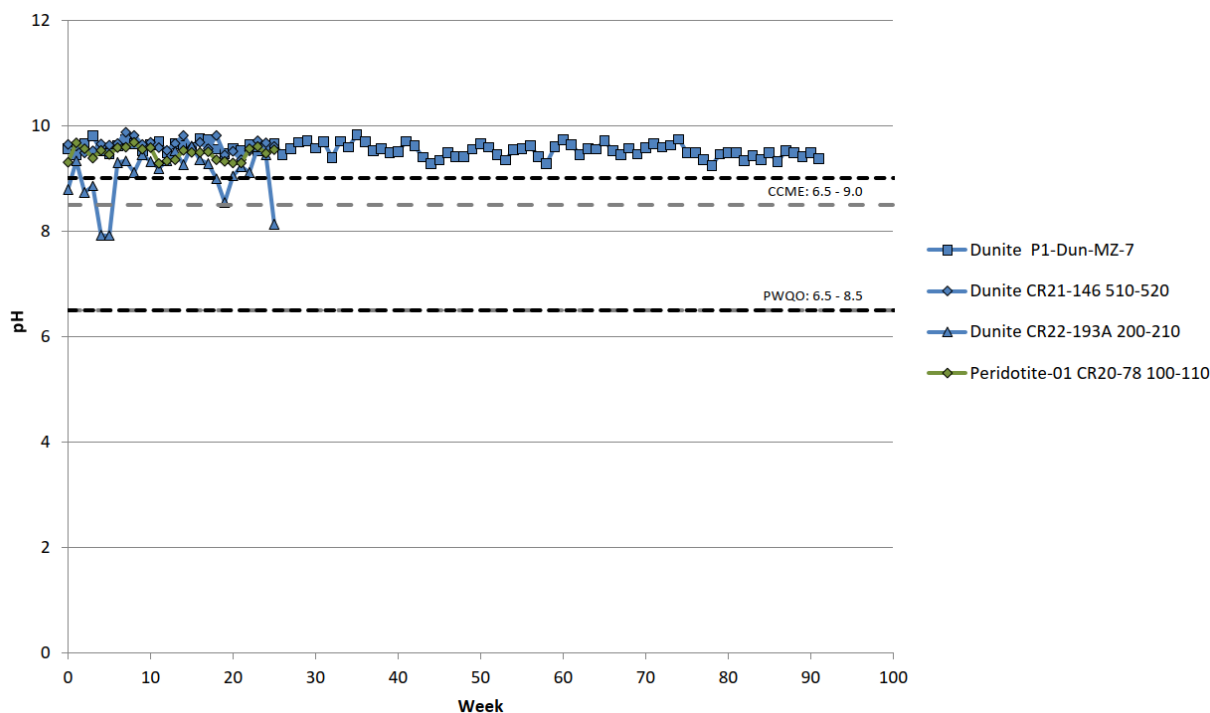
The following section presents the results for the four ore HCTs, three of which are active at the time of reporting. Results through 28 February 2024 are summarized in this report and are available in full in APPENDIX F. Relevant static testing for the HCTs, including ABA results are included in Table 40 to provide context for the kinetic testing results. Figure 39 through Figure 41 present time series plots for pH, dissolved boron, dissolved chromium (VI) and dissolved chromium in the HCT leachate. The time series plots for the other parameters are included in Appendix G. Table 42 summarizes the range of concentrations in the first 5 weeks of HCT leachate compared to the SFE concentrations for parameters of interest.

Table 42: Summary of Ore HCTs First 5 Weeks versus SFE

HCT ID	Parameter	pH	Boron	Chromium VI	Chromium
	Unit	-	mg/L	mg/L	mg/L
Dunite P1-Dun-MZ-7	SFE	9.8	0.25	<0.0002	0.00031
	First 5 Weeks-HCT	9.4 - 9.8	0.059 - 0.08	0.0002	0.00008 - 0.00021
Dunite CR21-146 510-520	SFE	9.7	0.43	0.0018	0.002
	First 5 Weeks-HCT	9.5 - 9.7	0.19 - 0.25	0.0005 - 0.0016	0.00057 - 0.0024
Dunite CR22-193A 200-210	SFE	9.1	0.4	0.0008	0.00089
	First 5 Weeks-HCT	8.0 - 9.3	0.27 - 0.33	0.0003 - 0.0009	0.00026 - 0.0012
Peridotite-01 CR20-78 100-110	SFE	9.5	0.045	0.0003	0.00031
	First 5 Weeks-HCT	9.3 - 9.7	0.004 - 0.009	0.0002 - 0.0003	0.00008 - 0.00043

Note: Bolded SFE values are greater than the maximum concentration seen in the first 5 weeks of HCT leachate.

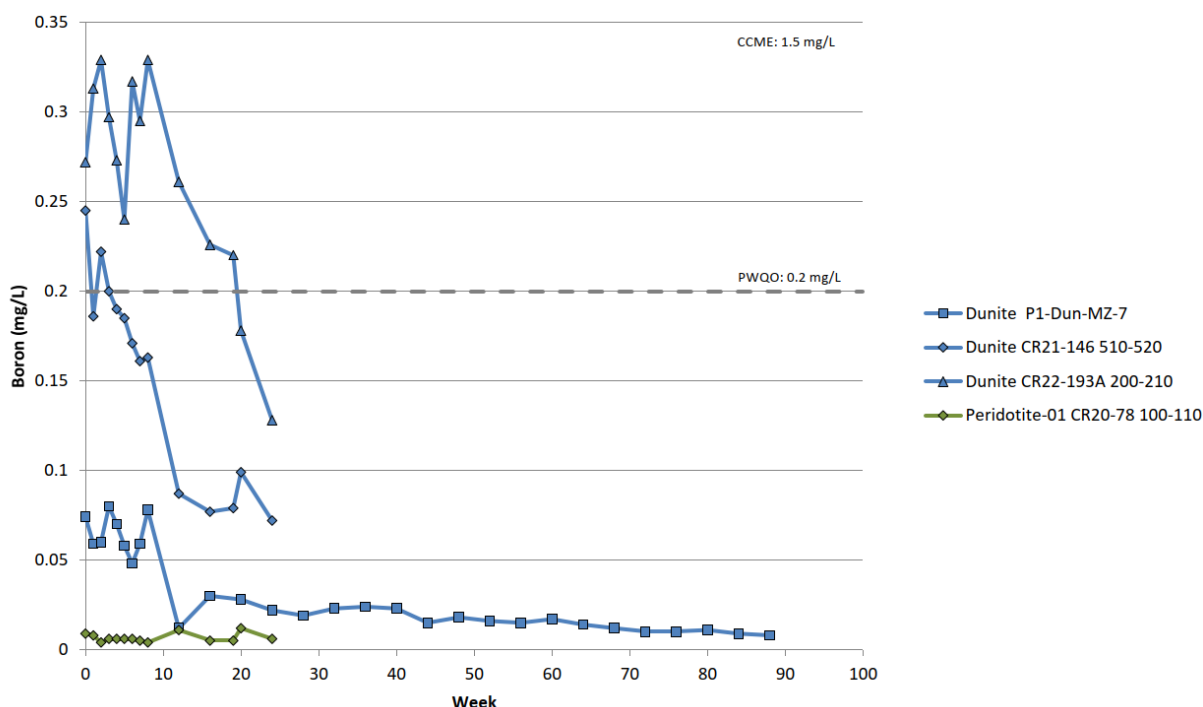
HCT = Humidity cell test; mg/L = milligrams per litre; SFE = shake flask extraction; <= less than; µg/L = microgram per litre.



CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 39: Time series for pH in Ore HCTs

The pH of waste rock HCTs has been relatively stable for the duration of testing maintaining a pH between 8.1 and 9.4. The pH in the ore HCTs is above the CCME guideline of 9.0 for a majority of testing.

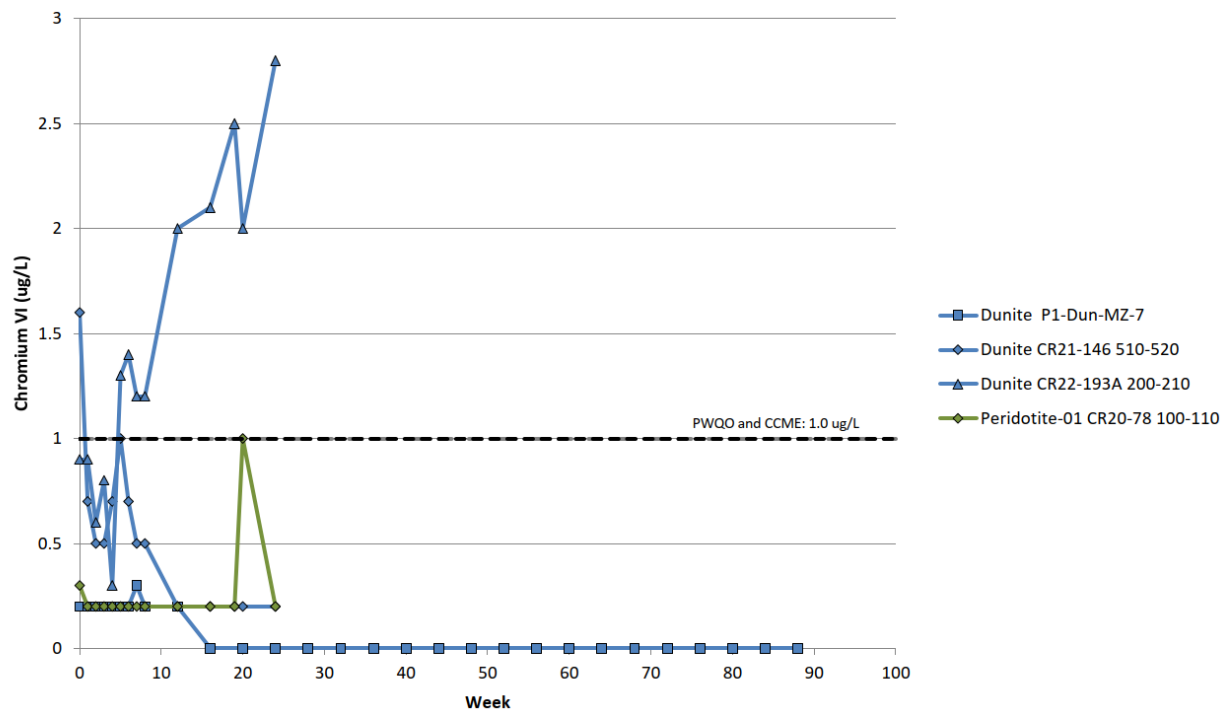


Note: Non-detect values are plotted as 1x the analytical method detection limit.

mg = milligram; L = litre; CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 40: Time series of Boron in Ore HCTs

Dunite ore HCTs exhibit a first flush of boron in the first ~20 weeks of testing. Given the 25-week duration of testing in HCTs Dunite CR21-146 510-520 and Dunite CR22-193A 200-210, the leachate has not yet reached a steady state. Maximum concentrations in these two HCTs reached 0.25 and 0.33 mg/L respectively and has steadily decreased since.



Note: Non-detect values are plotted as 1x the analytical method detection limit. Testing for Chromium VI in Dunite P1-Dun-MZ-7 was discontinued in week 12.

µg = microgram; L = litre; CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 41: Time series of Chromium (VI) in Ore HCTs

Chromium VI concentrations in the HCT Dunite CR22-193A 200-210 are increasing and above the PWQO and CCME guidelines with a maximum concentration of 2.8 µg/L. The other ore HCTs remain below the guidelines following initial first flush and are trending towards a steady state concentration. The total chromium leachate concentrations in the ore HCTs are practically identical to the chromium VI concentrations, indicating that the soluble chromium is in the form chromium VI.

Table 43: Summary of Ore HCTs ABA Results

HCT ID	Lithology	AP	Mod. NP	CO ₃ -NP	Mod. NPR	CO ₃ -NPR	ARD Classification-Mod. NPR	ARD Classification-CO ₃ - NPR
		kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	-	-	-	-
Dunite P1-Dun-MZ-7	Dunite	8.4	239	98	28	12	NPAG	NPAG
Dunite CR21-146 510-520	Dunite	0.91	169	8.3	186	9.2	NPAG	NPAG
Dunite CR22-193A 200-210	Dunite	1.9	197	10	105	5.3	NPAG	NPAG
Peridotite-01 CR20-78 100-110	Peridotite	0.22	114	28	521	128	NPAG	NPAG

Note: highlighted rows indicate active kinetic test. ARD Classification is based on criteria in Table 6.

AP = acid potential; ARD = acid rock drainage; CaCO₃ = calcium carbonate; kg = kilogram; t = tonne; HCT = humidity cell test; NP = neutralization potential; NPR = neutralization potential ratio; NPAG = non potentially acid generating; PAG = potentially acid generating.

Sulphide sulphur, Mod. NP and CO₃-NP depletion calculations were performed using the last 10 weeks of HCT data. These calculations are used in combination with static testing results to predict the long-term projection of ARD potential. The sulphide sulphur depletion rate was estimated using the sulphate production rate (mg/kg/week). Mod. NP and CO₃-NP depletion was estimated considering the rate of sulphate and acidity production, relative to the production of alkalinity in each cell (empirical NP consumption rate, as described in MEND (2009)).

A summary of the depletion estimations for the ore HCTs is provided in Table 44. The Mod. NP in the ore HCTs is estimated to deplete at a minimum in 21 years and a maximum of 58 years. In contrast the CO₃-NP in the ore HCTs is estimated to deplete in as soon as 1.4 years. Sulphide depletion estimates range from 0 to 54 years. In the ore HCTs, the sulphide is estimated to deplete before the Modified Sobek NP in three of the four HCTs, classifying them as NPAG. However, in all four ore HCTs the CO₃-NP is estimated to deplete before the sulphide will deplete, classifying these HCTs as PAG.

Table 44: Summary of Ore HCT Depletion Estimates

Sample ID	Lithology	Time to Sulphide Depletion	Time to Mod. NP Depletion	Time to CO ₃ -NP Depletion	ARD Classification- Mod. NP	ARD Classification- CO ₃ -NP
		years	years	years	-	-
Dunite P1-Dun-MZ-7	Dunite	54	43	16	PAG	PAG
Dunite CR21-146 510-520	Dunite	7	40	1.4	NPAG	PAG
Dunite CR22-193A 200-210	Dunite	15	58	2.6	NPAG	PAG
Peridotite-01 CR20-78 100-110	Peridotite	8	21	4.8	NPAG	PAG

ARD = acid rock drainage; NP = neutralization potential; NPAG = non-potentially acid generating; PAG = potentially acid generating.

3.2.3 Tailings

The tailings kinetic testing comprises of four active HCTs. Results through 28 February 2024 are summarized in this report and are available in full in APPENDIX F. Relevant static testing for the HCTs, including ABA results are included in Table 46 to provide context for the kinetic testing results. Figure 42 through Figure 45 present time series plots for pH, dissolved chromium (VI) and dissolved chromium, dissolved copper, and dissolved uranium in the tailings HCT leachates as potential constituents of concern. The time series plots for the other parameters are included in APPENDIX H. Table 45 summarizes the range of concentrations in the first 5 weeks of HCT leachate compared to the SFE concentrations for parameters of interest.

Table 45: Summary of Tailings HCTs First 5 Weeks versus SFE

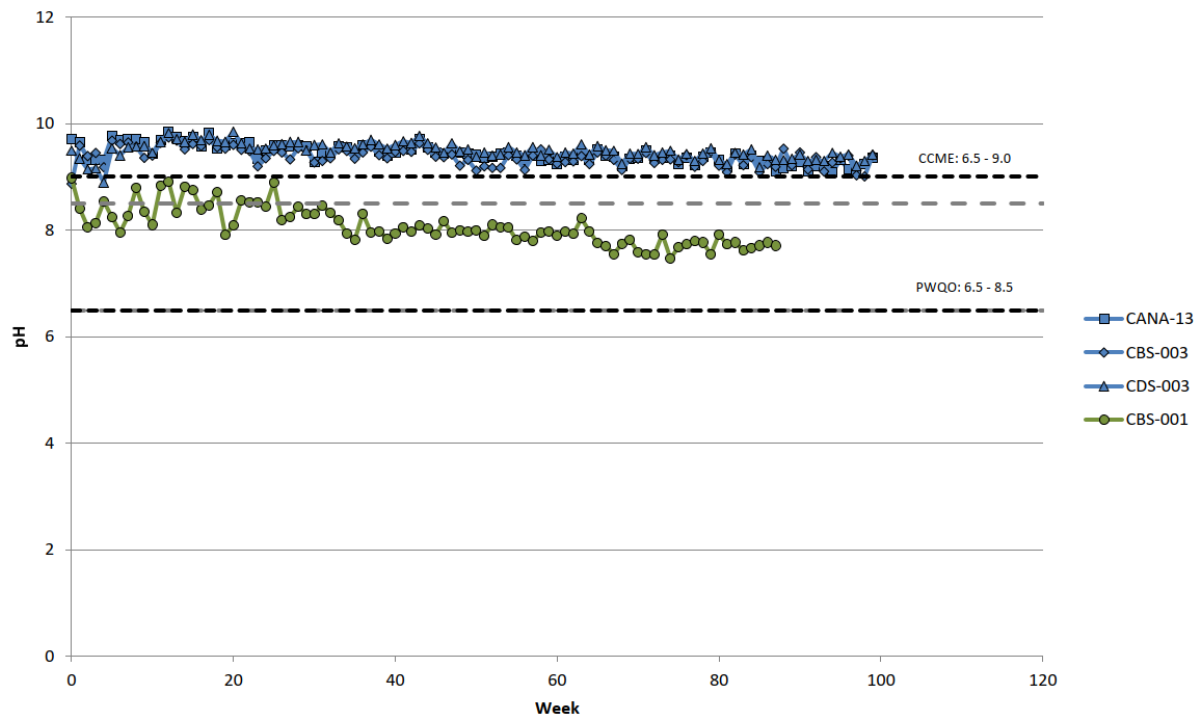
HCT ID	Parameter	pH	Chromium VI	Chromium	Copper	Uranium
	Unit	-	mg/L	mg/L	mg/L	mg/L
CANA-13	SFE	9.6	<0.0002	0.16	0.016	0.000002
	First 5 Weeks-HCT	9.3 - 9.7	0.001 – 0.011	0.0016 - 0.011	0.0002 - 0.0004	0.000002 - 0.00016
CBS-003	SFE	8.3	0.0004	0.015	0.0025	<0.000002
	First 5 Weeks-HCT	8.9 - 9.6	0.0002 – 0.0014	0.00026 - 0.0014	0.0002 - 0.0014	0.000004 - 0.00018

Table 45: Summary of Tailings HCTs First 5 Weeks versus SFE

HCT ID	Parameter	pH	Chromium VI	Chromium	Copper	Uranium
	Unit	-	mg/L	mg/L	mg/L	mg/L
CDS-003	SFE	8.3	0.001	0.019	0.0008	<0.000002
	First 5 Weeks-HCT	8.9 - 9.5	0.0007 – 0.0016	0.00077 - 0.0017	0.0002 - 0.0011	0.000008 - 0.00021
CBS-001	SFE	8.5	-	0.004	0.0004	3.9
	First 5 Weeks-HCT	8.1 – 9.0	0.0015 – 0.008	0.0015 - 0.0082	0.0002 - 0.0009	0.000035 - 0.0069

Note: Bolded SFE values are greater than the maximum concentration seen in the first 5 weeks of HCT leachate.

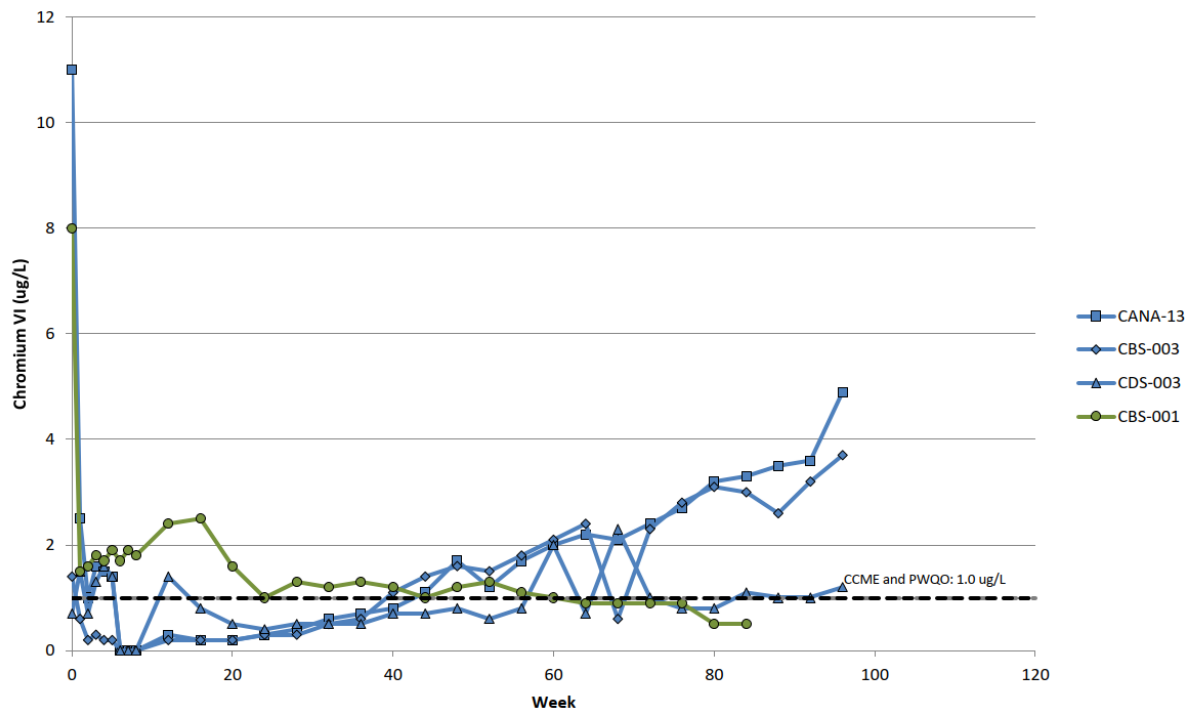
HCT = Humidity cell test; mg/L = milligrams per litre; SFE = shake flask extraction; µg/L = micrograms per litre; <= less than.



CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 42: Time series of pH for Tailings HCTs

The dunite tailings HCTs pH has remained above PQWO and CCME guidelines for the duration of testing. The pH is steadily decreasing compared to the first few weeks of testing with a minimum of 8.9. The peridotite tailings HCT (CBS 001) is also steadily decreasing in pH with a minimum of 7.5.

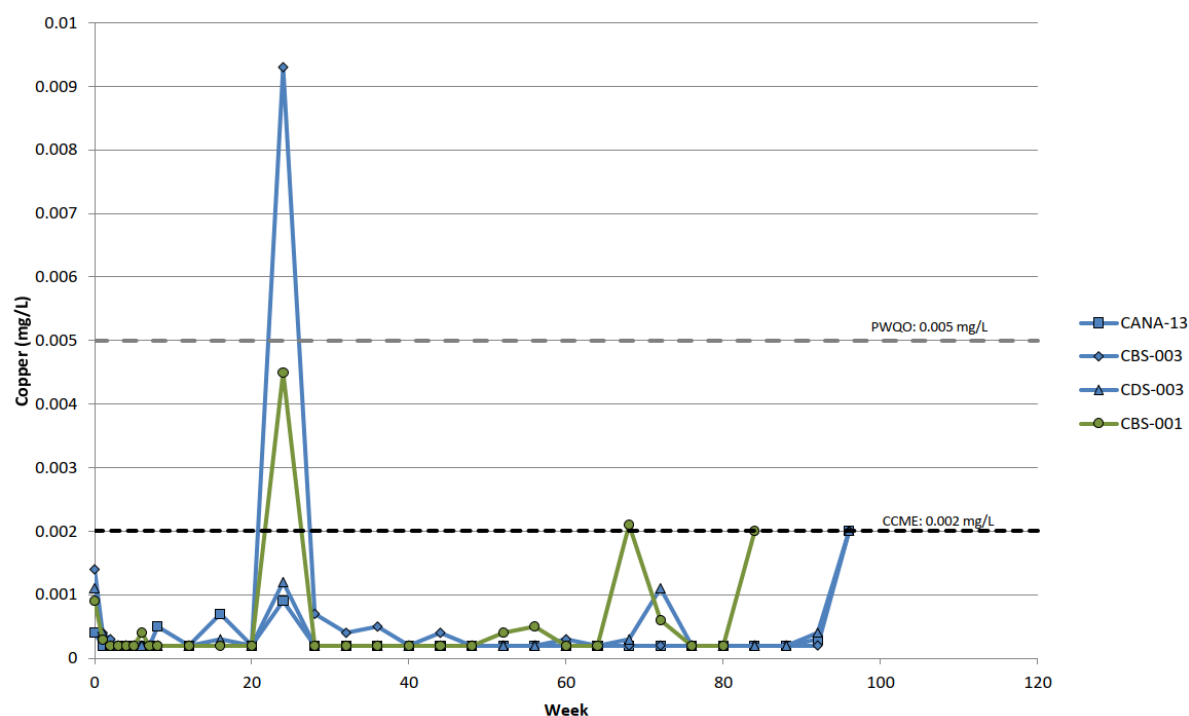


Note: Non-detect values are plotted as 1x the analytical method detection limit.

µg = microgram; L = litre; CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 43: Time series of Chromium VI for Tailings HCTs

The chromium VI concentrations for the tailings HCTs exhibited a first flush period of ~5 weeks. Following a first flush, the dunite tailings HCTs concentration of chromium VI have continuously increased over the duration of testing, exceeding the CCME and PWQO guideline of 1.0 µg/L. The concentration in the peridotite HCT has steadily decreased below the CCME and PWQO guideline however was above 1.0 µg/L for the first ~60 weeks of testing. The total chromium leachate concentrations in the tailings HCTs are practically identical to the chromium VI concentrations, indicating that the soluble chromium is in the form chromium VI.

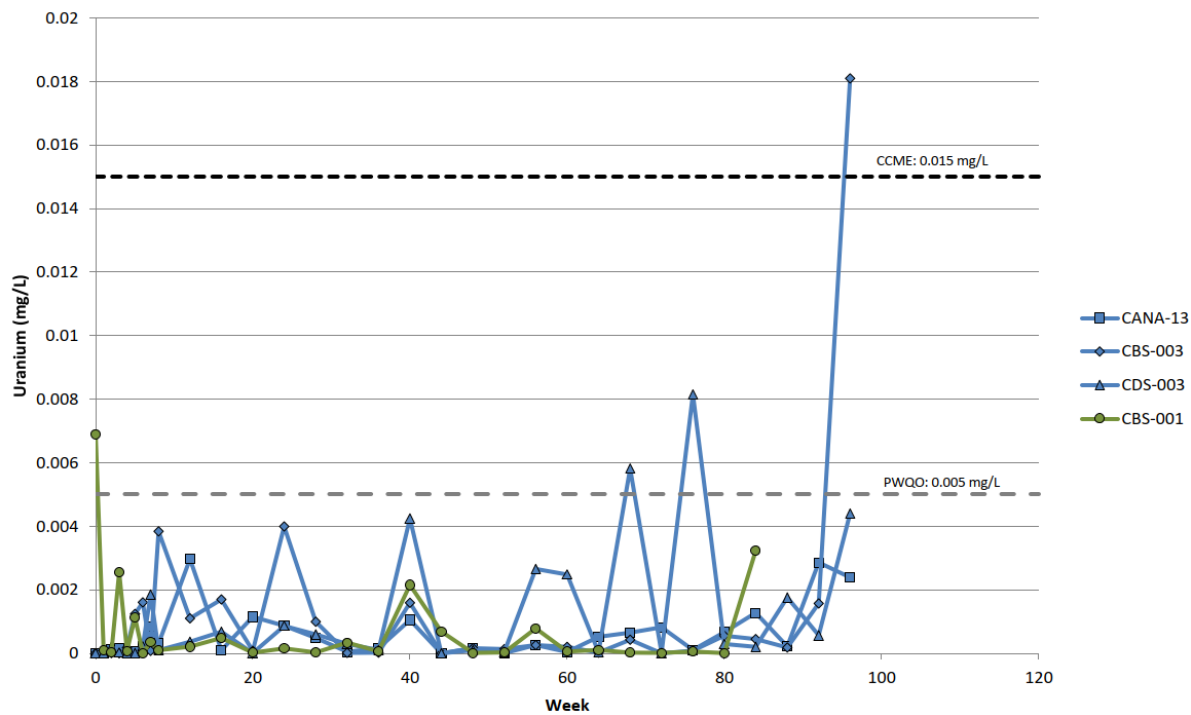


Note: Non-detect values are plotted as 1x the analytical method detection limit.

mg = milligram; L = litre; CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 44: Time series for Copper in Tailings HCTs

Copper concentrations in the tailings HCTs have remained steady and mostly below the CCME and PWQO guidelines except for a spike around week 20. Given the low concentration and proximity to the limit of detection for the analysis, these concentrations can be attributed to the lab interference.



Note: Non-detect values are plotted as 1x the analytical method detection limit.

mg = milligram; L = litre; CCME = Canadian Council of Ministers of the Environment; PWQO = Provincial Water Quality Objectives.

Figure 45: Time series for Uranium in Tailings HCTs

Uranium concentrations in the dunite tailings HCTs have remained constant for the first 80 weeks of testing. After week 80, the concentrations increase, with a maximum value of 0.18 mg/L, exceeding both PWQO and CCME guidelines.

Table 46: Tailings HCTs ABA Summary

HCT ID	Lithology	AP	Mod. NP	CO ₃ -NP	Mod. NPR	CO ₃ -NPR	ARD Classification- Mod. NPR	ARD Classification- CO ₃ -NPR
		kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	-	-	-	-
CANA-13	Dunite	2.8	285	5.0	101	1.8	NPAG	Uncertain
CBS-003	Dunite	3.3	212	4.8	65	1.4	NPAG	Uncertain
CDS-003	Dunite	2.8	251	5.3	88	1.8	NPAG	Uncertain
CBS-001	Peridotite	0.78	100	16	128	21	NPAG	NPAG

Note: highlighted rows indicate active kinetic test. ARD Classification is based on criteria in Table 6.

AP = acid potential; ARD = acid rock drainage; CaCO₃ = calcium carbonate; kg = kilogram; t = tonne; HCT = humidity cell test; NP = neutralization potential; NPR = neutralization potential ratio; NPAG = non potentially acid generating; PAG = potentially acid generating.

Sulphide sulphur, Mod. NP and CO₃-NP depletion calculations were performed using the last 10 weeks of HCT data. These calculations are using in combination with static testing results to predict the long-term projection of ARD potential. The sulphide sulphur depletion rate was estimated using the sulphate production rate (mg/kg/week). Mod. NP and CO₃-NP depletion was estimated considering the rate of sulphate and acidity production, relative to the production of alkalinity in each cell (empirical NP consumption rate, as described in MEND (2009)).

A summary of the depletion estimations for the tailings HCTs is provided in Table 47. The three dunite tailings HCTs are depleted in sulphide at the time of reporting (week 99) and depleted in CO₃-NP. Mod. NP is estimated to deplete at a minimum of 41 years and a maximum of 80 years, classifying the tailings HCTs as NPAG utilizing the Mod. NP. Using the CO₃-NP, the peridotite tailings HCT is classified as NPAG whereas the dunite HCTs are classified as PAG. The pH of the tailings HCTs have not become acidic at weeks 99 and 91 of testing despite the estimated depletion of CO₃-NP.

Table 47: Summary of Tailings HCT Depletion Estimates

Sample ID	Lithology	Time to Sulphide Depletion	Time to Mod. NP Depletion	Time to CO ₃ -NP Depletion	ARD Classification- Mod. NP	ARD Classification CO ₃ -NP
		years	years	years	-	-
CANA-13	Dunite	0	48	0	NPAG	PAG
CBS-003	Dunite	0	53	0	NPAG	PAG
CDS-003	Dunite	0	41	0	NPAG	PAG
CBS-001	Peridotite	7	80	11	NPAG	NPAG

ARD = acid rock drainage; NP = neutralization potential; NPAG = non-potentially acid generating; PAG = potentially acid generating.

4.0 DISCUSSION

4.1 ARD and ML Potential

Static testing of the waste rock (n = 299) ore (n = 109) and tailings (n = 4) materials exhibited a discrepancy in classifying the materials, pertaining to which method of NP was used as illustrated in Table 48. When considering the Mod. Sobek NP and the NPR, most waste rock, ore and tailings materials classified as NPAG whereas when considering the CO₃-NP, more samples classified as PAG or Uncertain. This is attributed to the lack of carbonates in the samples, which is supported by mineralogical analysis.

Kinetic testing of the waste rock, ore and tailings materials comprises of 19 HCTs initiated between 2021 and 2023. Kinetic test duration for active and terminated cells ranges from 25 weeks to 99 weeks. A review of the HCT dataset confirmed the findings of the static testing results, displaying a large discrepancy between estimated Mod. NP and CO₃-NP. While the depletion estimates indicate a potential onset of acidity using the CO₃-NP, none of the HCTs have a leachate pH below 6.7. The lack of AP produced in the HCTs is also something to note and is attributed to the low amount of sulphur bearing minerals present in samples. The HCT results should be continuously monitored to evaluate the long-term ARD characteristics of waste rock, ore, and tailings.

Overburden materials containing Organics had acidic paste pH in all samples however leachate pH obtained from the SFE analysis was circumneutral. Runoff of the overburden organic stockpile should be continuously monitored to evaluate the ARD characteristics.

Table 48: Summary of ML/ARD Potential for Waste Rock and Ore

Material Type	Lithology	Percentage of Lithology in Material Type	% PAG or Uncertain (Mod. NPR <2)	% PAG or Uncertain (CO ₃ -NPR <2)	Potential for Metal Leaching
Waste Rock	Dunite	5%	0%	0%	Cr (VI), B
	Gabbro	29%	0%	45%	
	Pyroxenite	5%	3%	59%	
	Metavolcanic	48%	3%	7%	Al (0.2µm), Al, As
	Peridotite	13%	0%	44%	
Ore	Dunite	85%	0%	8%	Cr (VI), B
	Gabbro	0.1%	0%	75%	
	Peridotite	14%	0%	6%	
	Metavolcanic	0.2%	0%	0%	
	Pyroxenite	0.2%	0%	33%	
Tailings	Dunite	-	0%	100%	Cr (VI), U
	Peridotite	-	0%	0%	Cr (VI)

NPR = neutralization potential ratio; PAG = potentially acid generating; % = percent; CO₃-NPR = carbonate neutralization potential ratio; <= less than.

4.1.1 Ore and Waste Rock

When considering the Mod. Sobek NPR all lithologies of waste rock and ore can be classified as NPAG, this is driven by the relative lack of sulphides present in any lithology and the high potential for silicate buffering.

The CO₃-NPR classification differs significantly due to the relative lack of carbonates in all materials.

As discussed above results from the HCT and NAG testing suggests the minor carbonate and high amount of silicate buffering is sufficient to neutralize any potential acid drainage.

Despite the circumneutral to alkaline drainage of all lithologies in HCT results, several select constituents have been screened to show consistent exceedances of CCME and/or PWQO guidelines in HCTs in certain lithological units. These include aluminum (0.2µm) and arsenic in the metavolcanic material. The dunite ore unit shows the potential for metal leaching of boron in the initial flush, and chromium VI in the long term.

4.1.2 Tailings

Tailings samples of all lithologies present NPR greater than 2 when evaluating with the Mod. NP, classifying all samples as NPAG, and uncertain to NPAG values when evaluating with the CO₃-NPR. Similarly to the waste rock and ore, a large discrepancy in these NP values is observed. This difference is driven by the lack of carbonate and sulphide minerals present, and the abundance of silicates with some buffering capacity. The current results of the HCTs estimate that CANA-13 is depleted in CO₃-NP in week 41, but pH values have remained steadily circumneutral to alkaline since this potential depletion for an additional 58 weeks of testing. This is a strong indication that the silicate weathering rates produce sufficient NP to buffer the AP measured in these materials.

Despite the circumneutral to alkaline drainage of all tailings in HCT results, Cr (VI) been screened to show consistent exceedances of CCME and/or PWQO guidelines. This is consistent with the dunite ore leachate results. The dunite tailings also exhibit a potential for metal leaching of uranium in current long-term trends in the HCTs continue. The peridotite tailings show a potential for metal leaching for Cr (VI) during the first flush.

4.2 Overburden

Overburden samples of Organics material show little potential for acid generation when evaluating either Mod. NPR or CO₃-NPR. The paste pH obtained from ABA was acidic in all Organics samples (n = 26) and in two Mineral samples. However, the leachate pH obtained from the SFE analysis was >7 in all overburden samples. There is minimal correlation between the maximum leachate concentration of parameters with a potential for metal leaching in the samples with an acidic paste pH sample. Parameters with potential for metal leaching in the Organics samples based off a majority of SFE samples exceeding either CCME or PWQO include aluminum (0.2µm), aluminum, fluoride, boron, chromium VI, copper, and zinc. Parameters with potential for metal leaching in the Mineral Soils samples include aluminum (0.2µm), aluminum, fluoride, cadmium, chromium VI, copper, selenium, and zinc. Without kinetic results to compare to for overburden material, there are more parameters with potential for metal leaching compared to the waste rock, ore and tailings materials. This is consistent with observations in the waste rock, ore and tailings materials as the SFE concentrations were typically greater than the first flush of HCT concentrations.

4.3 Lime Addition to Clay

The addition of any amount of lime to the clay stockpile is likely to result in potentially alkaline drainage (pH >10) from the stockpile. Several parameters showed statistically significant changes in measured mobility in SFE testing. Notably, copper and chromium showed the potential to exceed PWQO and/or CCME guidelines with the addition of any amount of lime, and aluminum, which was already exceeding guidelines showed maximum mobility with 2% wt. lime addition. Uranium exceeded PWQO guidelines but showed concentrations reduced below this guideline with any amount of lime addition.

5.0 CLOSURE

Contributors to this memo other than the undersigned included Adriana Taylor (Environmental Scientist, WSP Canada Inc.) and Natalie Rose (Environmental Scientist, WSP Canada Inc.).

We trust this information is sufficient for your needs at this time. Should you have any questions or concerns please do not hesitate to contact the undersigned.

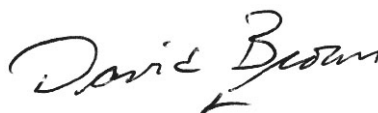
Signature Page

WSP Canada Inc.



Nathan Logan
Junior Geochemist

NL/DB/AT/hp/anr



David G. Brown, P.Geo.
Geochemist

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APPENDIX A

Crawford Site Map

APPENDIX B

**Geochemistry Baseline Study –
April 2022 Update
and Sampling Plan**

TECHNICAL MEMORANDUM

DATE 25 April 2022

Reference No. 20446343-013-TM-RevA

TO Mathieu Boucher
Canada Nickel Co.

CC Priyanka Patel (Golder), Pierre-Philippe Dupont (CNC)

FROM Bret Timmis and David Brown

EMAIL Bret_Timmis@golder.com

GEOCHEMISTRY BASELINE STUDY – APRIL 2022 UPDATE AND SAMPLING PLAN

1.0 INTRODUCTION

Golder Associates Ltd. (Golder) was retained by Canada Nickel Company (CNC) to conduct baseline geochemical studies to assess acid rock drainage and metal leaching (ARD/ML) potential associated with mine waste materials which may be generated from future mining at the Crawford Project site (the Project). Geochemical results will be used to support site water quality modelling and engineering design for mine waste storage facilities and water treatment. The Project will be designated for assessment under a federal Impact Assessment process; guidelines for preparation of an Environmental Impact Statement for mining projects typically establish requirements with respect to geochemical characterization, specifying a requirement for characterization of waste rock, ore, low grade ore, tailings, overburden, and rock to be used as construction material.

An initial phase of sampling and analysis was initiated in Spring 2021, with a preliminary group of drill core samples (Batch 1) collected to establish the general range of geochemical characteristics for each major lithology within the proposed mining zone. Tailings samples were collected in Winter 2022 as material became available from metallurgical testing. Overburden sampling was conducted by SRK Consulting Ltd. (SRK) during Winter 2022 and samples remain stored at the Project site. A larger 2nd phase of drill core sampling (Batch 2) was planned to proceed once a sufficiently reliable mine plan was available; this mine plan was received in late March 2022. Based on the March 2022 mine plan, a geochemical sampling plan has been developed and is reported herein for CNCs review. Subject to CNCs approval of this proposed approach, Golder will develop a sampling list of drill core intervals for collection of ore and waste rock as well as overburden samples from materials stored on-site.

2.0 GENERAL APPROACH

Evaluation of ARD/ML potential is conducted in accordance with nationally recognized guidance described in MEND (2009). Requirements for geochemical sampling and analysis were evaluated in the context of the following factors:

- the mine geology and environment;
- the anticipated volumes of each waste type by lithology to be generated through mining;

- the proposed configuration of the Project, associated waste storage facilities, waste storage methods;
- the requirement for selection of a sufficient number of adequate and representative samples (spatially and compositionally); and
- regulatory requirements and expectations.

According to the mine plan provided by CNC, three primary geologic waste types will be generated. The anticipated production of each type is as follows:

- Overburden: 560 million tonnes
- Tailings: 1,586 million tonnes
- Waste Rock: 2,954 million tonnes

Additionally, 1,672 million tonnes of ore are anticipated to be generated, with on-site stockpiling of ore prior to processing. A breakdown of contributing lithologies to each waste type is provided in the following sections applicable to each waste type. Batch 1 sampling completed in Spring 2021 was comprised of 55 samples distributed roughly equally among the five lithologies reported by CNC geologists to be present within the proposed mining zone. Depending on the results determined after completion of Batch 2 analyses, collection of additional samples may be recommended to resolve sources of uncertainty and/or risk.

All samples for geochemical testing are submitted to SGS Canada Inc. (SGS) in Lakefield, Ontario. Samples submitted for laboratory analysis are subjected to analytical tests in a phased process (Figure 1) to allow for progressive reduction in the number of samples submitted for progressively more complex test methods. All samples are submitted for static testing of bulk geochemical properties (Phase 1), via Acid Base Accounting (ABA) and Elemental analysis, to establish the composition of samples and the presence of materials which may contribute to ARD/ML potential. Approximately half of the samples collected are selected for Phase 2 testing, in which the leachable phases of materials are assessed in a single leaching event. Phase 2 sampling is comprised of Shake Flask Extraction (SFE), which measures the concentrations of readily soluble phases, and the Net Acid Generation (NAG) test which measures the concentrations in solution after complete dissolution of sulphide mineral phases along with the resultant solution pH to assess mineral buffering capacity. Based on Batch 1 ABA results which indicated negligible potential for acid generation, NAG testing was not completed for Batch 1 samples. The necessity of NAG testing for Batch 2 samples will be evaluated following receipt of ABA results for those samples; however, within the scope of this sampling plan, it is assumed that no NAG testing will be required. In Phase 3, a further subset of samples are selected for kinetic testing, in which samples are subjected to long-term repetitive leaching cycles in a Humidity Cell Test (HCT), along with mineralogical analysis.

In addition to the geochemical analyses described above which correspond to samples of solid mine wastes, the composition of process water generated during tailings processing is evaluated to understand the potential for chemical mass loading via this pathway. This analysis is necessary to support site water quality modelling and to establish requirements for water treatment prior to discharge to the environment.

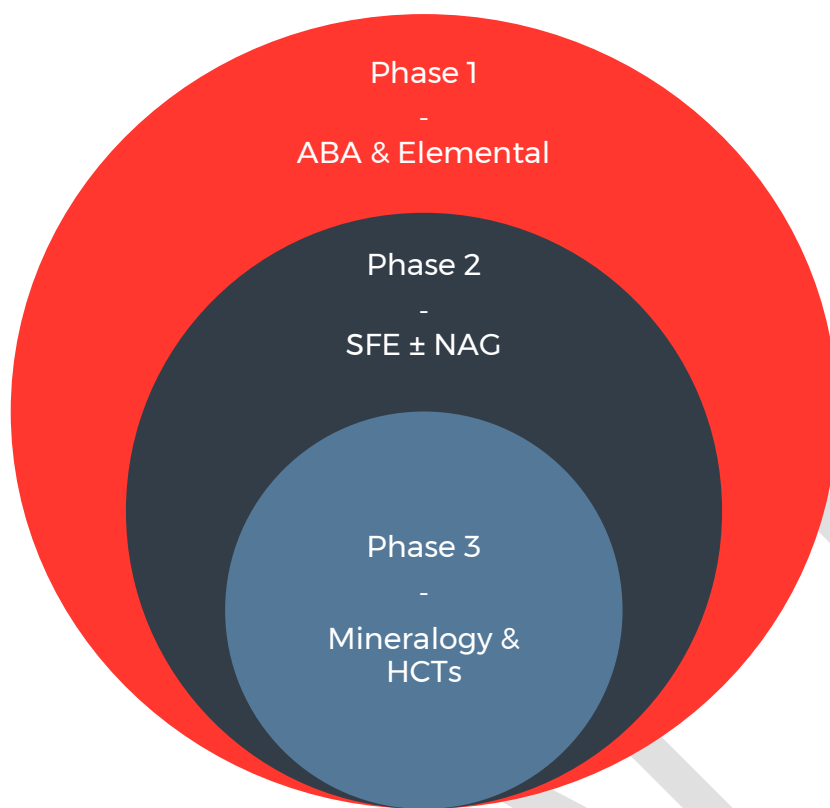


Figure 1 : Phasing of Solids Geochemical Analysis

The volume of sampling required is influenced by the anticipated production of each waste type, the number of lithologies contributing to each waste type, and geochemical heterogeneity within each lithology. Although no prescriptive numerical criteria for sample frequency have been established, MEND (2009) provides the values presented in Table 1 as a point of reference for initial sampling volumes per lithology when sampling without prior information. These frequencies can be refined by considering the ARD/ML potential indicated by various sources of information such as previous geochemical investigations, geochemical heterogeneity, and waste storage methods. With respect to the materials under evaluation in the present study, overburden and tailings typically have relatively low geochemical heterogeneity compared to waste rock, and sample frequency is adjusted accordingly, however, this assumption should be validated through geochemical test results and supplemental samples collected if necessary to resolve uncertainty. While site-specific refinement of the values presented in Table 1 is required, Price (1997) notes that very large pits may lead to more than 1,000 ABA samples.

Table 1: Suggested Initial Sample Frequencies When Sampling Without Prior Information (MEND 2009)

Tonnage of Unit (metric tonnes)	Minimum Number of Samples
<10,000	3
<100,000	8
<1,000,000	26
<10,000,000	80

3.0 OVERBURDEN

CNC has indicated that a total of 560 million tonnes of overburden will be removed and stored as part of development of the Project, comprised of a mixture of organic material, till, sand, silt, and clay. This material has the potential to influence runoff chemistry from the storage facility during mine operations as well as from rehabilitated facilities during later stages of mine life and closure.

Overburden samples were collected by SRK as part of geotechnical test pitting and drilling. No overburden samples have been submitted for laboratory analysis to date. As Golder was not directly involved in the sampling process, Golder requested that SRK collect excess samples for storage on-site until samples for laboratory analysis could be selected based on the material characteristics described by SRK.

Overburden typically has very low compositional variability within a Project area as compared to waste rock. Generally, this is due to the homogenizing effects of bedrock erosion, fluvial sediment transport, and glacial sediment transport processes that collectively contribute to the overburden present at the Project.

Each major overburden lithology will be sampled at a rate of 10 samples per major lithology, for a total of 50 samples. It is noted that Golder and SRK are currently refining classification of overburden lithologies and the estimated volumes of each, therefore number of samples assigned to each lithology and the number of lithologies samples may be revised. The estimated total of 50 overburden samples is considered to be adequate to capture variability among overburden material. Overburden samples are planned to be submitted for ABA, Elemental, and SFE analyses only, unless concerns are identified which require further investigation. Overburden materials collected from similar environments in northern Ontario typically have low ARD/ML potential.

4.0 ORE

CNC has indicated that a total of 1,672 million tonnes of ore will be extracted over the life-of-mine. Tonnages by ore lithology are described in Section 4.0, with the majority of tailings derived from dunite and a minority from peridotite. During mine operations, ore will be stored in stockpiles prior to processing. Runoff from ore stockpiles may influence water treatment requirements during operations. Ore stockpiles are anticipated to be eliminated prior to closure. Ore produced over the life-of-mine will be derived from five lithologies as follows:

- Dunite: 1,372 million tonnes
- Peridotite: 230 million tonnes
- Pyroxenite: 4 million tonnes
- Gabbro: 1 million tonnes
- Basalt: 3 million tonnes

The ore stockpiles anticipated to be developed and their anticipated maximum stored tonnage are as follows:

- High Grade stockpile: 15 million tonnes
- Medium Grade stockpile: 22 million tonnes
- Low Grade stockpile: 57 million tonnes

No ore samples have been submitted for laboratory analysis to date. Based on the ore tonnages described above, the dunite and peridotite lithologies are recommended to be the focus of geochemical sampling and

analysis. As compared to waste rock, ore is only stored during the operations period and therefore characterization is primarily required to establish requirements for managing the material during operations, rather than permanent storage. However, low grade ore will be processed at the end of operations; therefore, it is possible that some ore could be stored for much of the expected approximate 30-year Project. In addition, mineralization associated with ore may result in different geochemical characteristics and management requires as compared to waste rock.

For the purpose of determining sample volumes, ore is considered as a single lithology with respect to Table 1, which indicates that a minimum of 80 samples should be collected. The following 80 samples are recommended to support characterization of ore stored on surface during the mine operational period:

- Dunite: 55 samples
- Peridotite: 10 samples
- Pyroxenite: 5 samples
- Gabbro: 5 samples
- Basalt: 5 samples.

5.0 TAILINGS

CNC has indicated that a total of 1,586 million tonnes of tailings will be generated over the life-of-mine and stored permanently in the Tailings Management Facility (TMF) or mined out pits. Runoff from exposed tailings during mine operations may influence water treatment requirements, and the composition of seepage during closure has the potential to impact water quality in the receiving environment.

Tailings produced over the life-of-mine will be derived from five ore lithologies described in Section 4.0. The majority of tailings will be derived from dunite, with a minority from the peridotite lithology. The dunite and peridotite lithologies are recommended to be the focus of geochemical sampling and analysis. Pyroxenite, gabbro, and basalt represent less than 1% of all tailings to be produced and given the homogenizing effects of milling and slurry deposition, are not considered necessary to evaluate as tailings at this stage. These three lithologies will be evaluated as part of the waste rock and ore assessment, and any important geochemical variability relative to dunite and peridotite will be identified and reviewed to determine whether supplemental investigation of those lithologies is appropriate.

Analytical methods for geochemical characterization should take into account the planned deposition strategy for each mine waste stream. CNC plans to manage tailings in two ways; in earlier phases of mining as a TMF on-surface where tailings will be stored in a non-saturated state, and in later phases of mining via in-pit disposal with development of a water cover during closure. Water saturation and oxygen availability can be important controls on long-term mineral reactivity and consideration of these differences will be reflected in the analytical testing completed discussed later in this section. The volumes of tailings to be managed in each storage method are as follows:

- TMF: 565 million tonnes
- Main zone in-pit: 454 million tonnes
- East zone in-pit: 568 million tonnes

Golder coordinated with CNC during Q4 2021 and Q1 2022 regarding the metallurgical flowsheet process development to identify availability of tailings representative of the metallurgical process expected to be used in the Project. Three samples were collected in February 2021 as described in Table 2. Golder and CNC will review the geochemical characterization data along with continued refinement of the metallurgical process to determine if additional sampling and analysis of tailings samples is necessary.

Table 2: Tailings Samples Collected to Date

Sample ID	Lithology	Ore Zone
CBS001	Peridotite	Main Zone
CDS011	Dunite	East Zone
CANA-13	Dunite	Main Zone

Due to the limited number of tailings samples collected, analyses were not conducted in the phased process illustrated in Figure 1. Rather, all three samples were submitted for ABA, Elemental, NAG, mineralogy, and HCTs. A strategy for assessment of tailings via submerged column tests is currently being developed in consultation with SGS to confirm test methods and material availability.

6.0 WASTE ROCK

CNC has indicated that a total of 2,954 million tonnes of waste rock will be generated over the life-of-mine and stored permanently in two waste rock stockpiles. Waste rock will be derived from the following lithologies:

- Dunite: 150 million tonnes
- Peridotite: 374 million tonnes
- Pyroxenite: 156 million tonnes
- Gabbro: 842 million tonnes
- Basalt: 1,432 million tonnes

The majority of waste rock will be derived from basalt and gabbro, while the remaining three lithologies each comprise 5 to 13% of the total waste rock tonnage.

Batch 1 sampling was completed in Spring 2021 and was comprised of 55 samples distributed roughly equally among the five lithologies reported by CNC geologists to be present within the proposed mining zone. All samples were classified as non-potentially acid generating (non-PAG) based on MEND (2009) criteria. Metal leaching potential was relatively low, with elevated leachate concentrations were reported in a minority of samples for aluminum, boron, chromium, copper, and vanadium. The metal leaching potential of these samples is being further evaluated through kinetic testing (1 HCT per lithology) which is currently ongoing.

Batch 2 sampling is proposed to be conducted during Q2 2022. The volume of samples to be collected as part of Batch 2 is proposed to represent the difference between total anticipated sampling requirements at this stage of mine development, and the number of samples collected as part of Batch 1. Determination of appropriate sample volumes considered the reported ARD/ML potential among samples collected to date, and the planned approach to waste storage.

The negligible potential for ARD and relatively low potential for metal leaching provides a basis for relatively lower sampling frequencies (relative to mass) than may be inferred from Table 1. Given the relatively small number of samples collected as part of Batch 1, it is unknown as to how well heterogeneity within each lithology has been captured. Review of Batch 2 results should consider the adequacy of sampling completed relative to the refined ARD/ML potential and the reported extent of sample heterogeneity.

Regulator expectations regarding the scope of geochemical sampling completed may be influenced by geochemical testing completed for comparable mining projects which were also subject to a federal Impact Assessment process. Regulators will also expect that the number of samples collected be sufficient to statistically describe a dataset. Golder reviewed publicly available geochemical data for mining projects presented as part of a federal Impact Assessment process within the last ten years and compiled applicable information on sampling completed (Table 3). In several cases the type of analyses completed, or the number of samples analysed for specific tests was not readily available. These sample volumes refer to sampling completed prior to development of the proposed projects. All these projects are noted to have lower anticipated volumes of waste rock than the Crawford Project. However, some of these projects have been reported to have greater potential for ARD/ML, which may be partially responsible for higher sample volumes at those projects.

Table 3: Reported Sample Volumes from Recently Completed Impact Assessments

Project	Estimated Waste Rock Tonnage (Mt)	Number of Static Samples	Number of Kinetic Samples
Dumont Nickel Mine Project	1,159	146 (ABA, Metals, SFE)	13 (HCT) 5 (Column)
New Prosperity Gold-Copper Mine Project	886	>700 (ABA)	13 (HCT)
Ajax Mine Project	550	1048 (ABA) 286 (Metals)	4 (HCT) 12 (Column)
Rainy River Resources Ltd.	543	362	20 (HCT)
Hardrock Gold Mine Project	527	212	15 (HCT)
Hammond Reef	420	133 (ABA)	10 (HCT)
Blackwater Gold Project	372	890 (ABA) 190 (Metals)	19 (HCT)
Rose Lithium-Tantalum Mining Project	240	21	unknown
Côté Gold Mine Project	186	408 (ABA) 396 (Metals)	14 (HCT)
Grassy Mountain Coal Project	154	167	18 (HCT)
Murray River Coal Project	150	176 (ABA) 51 (SFE)	18 (HCT)

The review of geochemical characterization completed for mining projects which have recently completed the Impact Assessment process demonstrates the site-specific nature of geochemical investigations, in that some projects with relatively low volumes of waste rock completed a large volume of sampling, and some projects with larger volumes of waste rock completed a proportionately lesser volume of sampling. The closest project

analogue for the Crawford Project is the Dumont project, which had a total waste rock tonnage that is 39% of the anticipated total waste rock tonnage for Crawford. As well, four unique waste rock lithologies were identified for Dumont, as compared to five for Crawford. If scaled accordingly, overall sample volumes for Crawford should be somewhat larger than that completed for Dumont.

The proposed waste rock sampling program is indicated in Table 4. A total of 300 waste rock samples are recommended for analysis. Lithologies with the lowest anticipated tonnage (~150 million tonnes) are assigned 30 samples as a minimum sample population to establish a reliable dataset for lithologies in this study.

Table 4: Proposed Waste Rock Sample Volumes by Lithology

Lithology	Anticipated Tonnage Generated (Mt)	Proportion by Tonnage	Total Sample Count	Proportion of Samples	Batch 1 Sample Count (complete)	Batch 2 Sample Count (planned)
Dunite	150	5%	30	10%	10	20
Peridotite	374	13%	50	17%	9	41
Pyroxenite	156	5%	30	10%	15	15
Gabbro	842	29%	80	27%	11	69
Basalt	1,432	48%	110	37%	10	100
Totals			300	100%	55	245

Golder will coordinate with CNC geologists to achieve a spatially and compositionally representative distribution of samples from each lithology. Selection of waste rock samples for Batch 2 will consider the spatial distribution of Batch 1 samples to ensure appropriate spatial distribution of the overall sample group.

7.0 SUMMARY

This sampling plan has established recommended sample volumes for overburden, ore, tailings, and waste rock based on the March 2022 mine plan. These sample volumes are described by lithology and analytical tests (Table 5) and samples already collected vs. proposed (Table 6). It is noted that the recommended sample volumes differ from Golder's approved scope of work.

Given the scale of analytical testing that is proposed, Golder recommends that 22 laboratory-blinded duplicate samples (i.e., 5% of the overall study sample volume) be submitted in addition to those listed in Table 4 to facilitate a QA/QC review of the analytical results.

Golder requires approval from CNC to move forward with the proposed geochemical sampling plan. The approach described herein can be discussed at CNC's convenience.

Table 5: Summary of Total Recommended Sampling and Analysis

Waste Type	Tonnage (Mt)	Number of Samples by Analysis Type					
		ABA	Elemental	SFE	Mineralogy	HCT	Column
Overburden	560	50	50	25	-	-	-
Tailings	1,586	3	3	3	3	3	3
Ore	1,672	80	80	40	3	3	-
Waste Rock	2,954	300	300	150	15	15	-
QA/QC	-	22	22	11	-	-	-

Table 6: Summary of Samples Collected vs. Proposed

Waste Type	Total Samples Recommended	Samples Collected to Date	Sample Proposed for Collection
Overburden	50	-	50
Tailings	3	3	-
Ore	80	-	80
Waste Rock	300	55	245
QA/QC	22	-	22
Totals	455	58	397

8.0 CLOSURE

We trust that this memorandum meets your present requirements. Please do not hesitate to contact the undersigned if you have any questions or comments.

Golder Associates Ltd.

Bret Timmis, MSc, PGeo
Geochemist

BT/DB

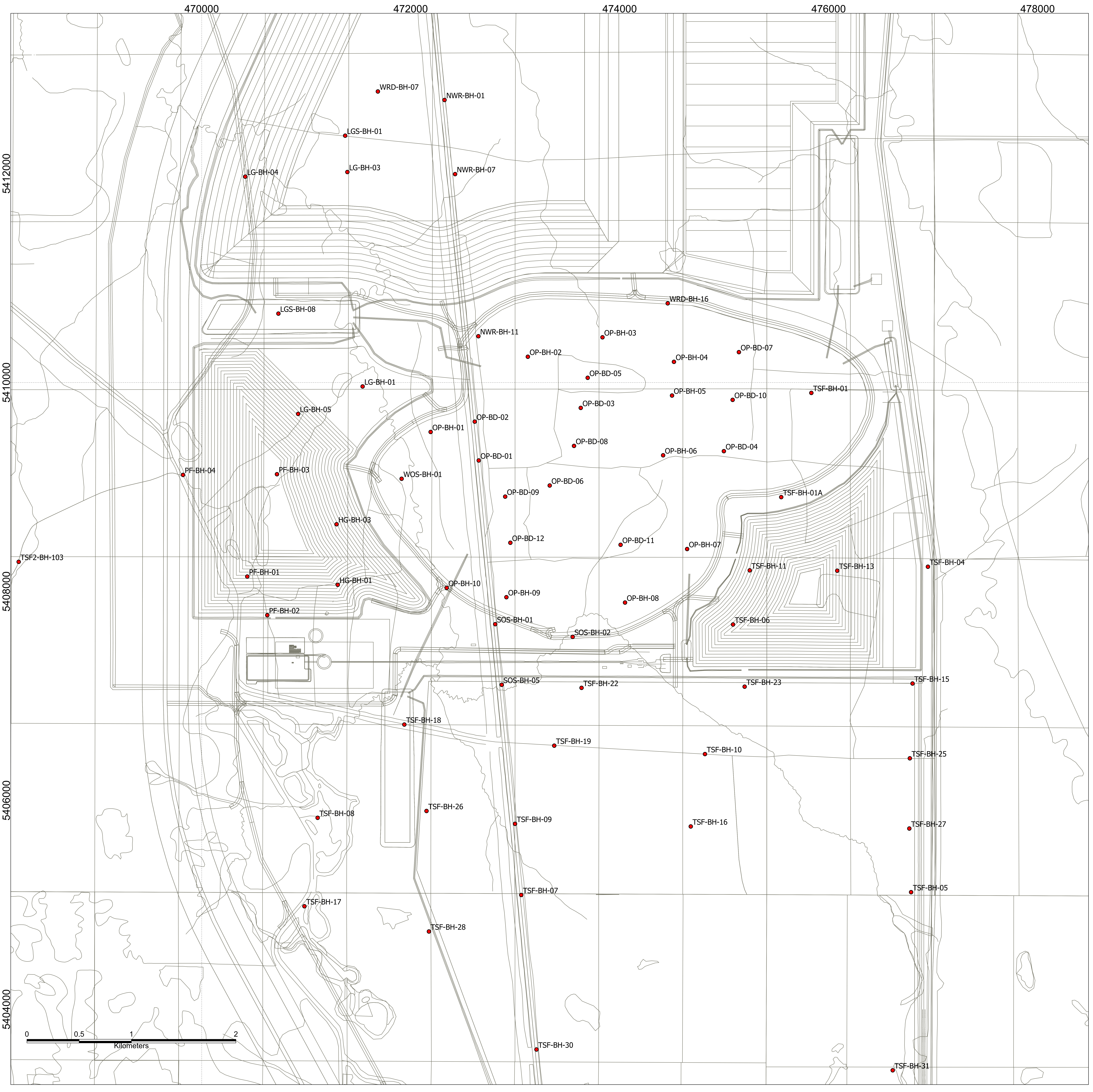
David Brown, MSc, PGeo
Principal, Environmental Geochemist

9.0 REFERENCES

- MEND, 2009. Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials. MEND Report 1.20.1. Mining Environment Neutral Drainage Program, Natural Resources Canada. December 2009.
- Price, W.A. 1997. Draft Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia, Ministry of Energy and Mines. 159p.

APPENDIX C

Crawford Borehole Sampling Map



APPENDIX D

**Static Testing
Certificates of Analysis**



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Jennifer Gignac

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, Ontario
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

ABA - Modified Sobek

Project : Crawford - Project # 20446343

15-June-2021

Date Rec. : 07 May 2021

LR Report: CA14953-MAY21

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: P1-MetV-EZ-2-P1-Dun-EZ-1-B1 B19501	7: P1-Pyr-EZ-2-B1 9503	8: P1-Per-EZ-2-B1 9504	9: P1-Gab-EZ-1-B1 9505	10: P1-Pyr-EZ-3-B1 9506	11: P1-Gab-EZ-2-B1 9507	12: P1-Pyr-EZ-4 9508	13: B19509
Paste pH [no unit]	14-May-21	09:30	17-May-21	06:51	9.67	9.73	9.89	9.87	10.08	9.75	10.06	9.97
Fizz Rate [no unit]	14-May-21	09:30	17-May-21	06:51	3	3	2	1	2	1	1	1
Sample weight [g]	14-May-21	09:30	17-May-21	06:51	1.90	1.99	1.96	2.01	2.02	1.96	1.97	2.01
HCl Added [mL]	14-May-21	09:30	17-May-21	06:51	85.60	112.00	20.00	20.00	20.00	20.00	20.00	20.00
HCl [Normality]	14-May-21	09:30	17-May-21	06:51	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	14-May-21	09:30	17-May-21	06:51	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	14-May-21	09:30	17-May-21	06:51	45.24	37.76	14.13	8.60	11.65	11.20	16.48	13.25
Final pH [no unit]	14-May-21	09:30	17-May-21	06:51	1.55	1.56	1.30	1.64	1.55	1.64	1.26	1.41
NP [t CaCO3/1000 t]	14-May-21	09:30	17-May-21	06:51	106	186	15.0	28.3	20.7	22.5	8.9	16.8
AP [t CaCO3/1000 t]	11-Jun-21	14:16	11-Jun-21	14:17	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO3/1000 t]	11-Jun-21	14:17	11-Jun-21	14:17	105	185	13.8	27.0	19.4	21.2	7.65	15.6
NP/AP [ratio]	11-Jun-21	14:17	11-Jun-21	14:17	85.0	149	12.0	22.6	16.6	18.0	7.12	13.4
Sulphur (total) [%]	10-Jun-21	07:22	11-Jun-21	14:16	0.021	0.010	0.010	0.027	0.056	0.216	0.028	0.042
Acid Leachable SO4-S [%]	11-Jun-21	13:10	11-Jun-21	14:16	< 0.04	< 0.04	< 0.04	< 0.04	0.06	0.22	< 0.04	0.04
Sulphide [%]	11-Jun-21	13:10	11-Jun-21	14:16	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	10-Jun-21	07:22	10-Jun-21	14:53	1.34	0.108	0.030	0.047	0.188	0.034	0.026	0.037
Carbonate [%]	10-Jun-21	11:55	10-Jun-21	14:53	5.92	0.320	< 0.025	0.075	0.629	< 0.025	< 0.025	< 0.025

Analysis	14: P1-Pyr-MZ-8 B195010	15: P1-Pez-MZ-1 B195011	16: P1-Dun-MZ-3 B195012	17: P1-Per-MZ-4 B195013	18: P1-MetV-MZ-8 B195014	19: P1-Pyr-MZ-6 B195015	20: P1-Metv-EZ-1 B195016	21: P1-Dun-EZ-2 B195017	22: P1-Dun-MZ-4 B195018	23: P1-Pyr-MZ-8 B195019	24: P1-Pyr-MZ-4 B195020
Paste pH [no unit]	9.78	9.92	9.76	9.70	9.55	9.57	9.79	9.72	9.74	9.84	9.70
Fizz Rate [no unit]	2	3	2	2	3	2	3	3	1	1	1
Sample weight [g]	2.03	1.98	1.98	2.02	2.01	1.97	2.02	2.01	1.98	1.99	2.02
HCl Added [mL]	43.00	56.00	101.00	149.00	55.00	100.00	50.00	88.00	168.00	105.00	111.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	18.00	11.64	38.79	58.53	28.23	46.05	18.62	31.70	71.32	45.14	32.93
Final pH [no unit]	1.58	1.90	1.57	1.60	1.58	1.55	1.70	1.57	1.62	1.56	1.83
NP [t CaCO3/1000 t]	61.6	112	157	224	66.6	137	77.7	140	244	150	193
AP [t CaCO3/1000 t]	1.25	1.25	1.25	9.69	1.25	3.12	2.50	1.25	1.25	1.25	1.25
Net NP [t CaCO3/1000 t]	60.4	111	156	214	65.4	134	75.2	139	243	149	192
NP/AP [ratio]	49.3	89.6	126	23.1	53.3	43.8	31.1	112	195	120	155
Sulphur (total) [%]	0.036	0.122	0.079	1.03	0.015	0.227	0.118	0.037	0.016	0.035	0.042
Acid Leachable SO4-S [%]	< 0.04	0.12	0.08	0.72	< 0.04	0.13	< 0.04	< 0.04	< 0.04	< 0.04	0.04
Sulphide [%]	< 0.04	< 0.04	< 0.04	0.31	< 0.04	0.10	0.08	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	0.076	0.277	0.112	0.117	0.682	1.69	0.922	0.119	0.133	1.08	3.10
Carbonate [%]	0.140	0.809	0.280	0.325	2.87	7.42	4.02	0.320	0.345	3.99	12.8

Analysis	25: P1-Per-MZ-3 B195021	26: P1-Dun-MZ-1 B195023	27: P1-Per-MZ-6 B195024	28: P1-Gab-MZ-3 B195025	29: P1-Gab-MZ-6 B195026	30: P1-Gab-MZ-1 B195027
Paste pH [no unit]	9.93	9.84	9.79	10.01	10.13	9.98
Fizz Rate [no unit]	1	1	1	1	1	1
Sample weight [g]	2.02	2.02	2.00	2.04	2.02	2.01
HCl Added [mL]	54.00	71.00	39.00	20.00	70.00	20.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	18.96	17.48	14.58	15.62	35.98	15.80
Final pH [no unit]	1.55	1.86	1.54	1.20	1.57	1.16
NP [t CaCO3/1000 t]	86.7	132	61.1	10.7	84.2	10.4
AP [t CaCO3/1000 t]	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO3/1000 t]	85.4	131	59.8	9.45	83.0	9.15
NP/AP [ratio]	69.4	106	48.9	8.56	67.4	8.32
Sulphur (total) [%]	0.009	0.016	0.019	0.014	0.058	0.050
Acid Leachable SO4-S [%]	< 0.04	< 0.04	< 0.04	< 0.04	0.06	0.05

Analysis	25: P1-Per-MZ-3 B195021	26: P1-Dun-MZ-1 B195023	27: P1-Per-MZ-6 B195024	28: P1-Gab-MZ-3 B195025	29: P1-Gab-MZ-6 B195026	30: P1-Gab-MZ-1 B195027
Sulphide [%]	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	5.81	0.086	0.070	0.017	0.197	0.020
Carbonate [%]	2.55	0.215	0.170	< 0.025	0.724	< 0.025

*NP (Neutralization Potential)
= 50 x (N of HCL x Total HCL added - N NaOH x NaOH added)

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

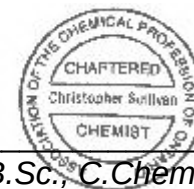
*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.02 will be calculated using a 0.02 value.

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Jennifer Gignac

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

ABA - Modified Sobek

Project : Crawford - Project# 20446343

22-June-2021

Date Rec. : 17 May 2021
LR Report: CA14969-MAY21
Reference: P.O# 20446343

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: P1-Pyr-EZ-1A B19529	6: P1-Pyr-MZ-5_B 19530	7: P1-Pyr-MZ-10 B19531	8: P1-Dun-MZ-6 B19532	9: P1-Per-EZ-1_B 19533	10: P1-Pyr-MZ-11 B19534	11: P1-Pyr-MZ-3_B 19535	12: P1-MetV-MZ-3 B19538
Paste pH [no unit]	03-Jun-21	14:15	07-Jun-21	07:51	9.46	9.31	9.01	9.19	9.27	9.20	9.45	9.88
Fizz Rate [no unit]	03-Jun-21	14:15	07-Jun-21	07:51	1	1	2	2	2	3	3	2
Sample weight [g]	03-Jun-21	14:15	07-Jun-21	07:51	2.08	2.03	2.06	2.11	1.96	2.05	2.07	2.14
HCl Added [mL]	04-Jun-21	12:45	07-Jun-21	07:51	20.00	25.10	24.10	188.90	42.40	33.30	39.00	33.40
HCl [Normality]	03-Jun-21	14:15	07-Jun-21	07:51	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	03-Jun-21	14:15	07-Jun-21	07:51	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	04-Jun-21	14:20	07-Jun-21	07:51	16.11	8.70	6.57	64.05	8.94	17.85	12.64	10.49
Final pH [no unit]	04-Jun-21	14:20	07-Jun-21	07:51	1.23	1.65	1.82	1.75	1.97	1.69	1.71	1.80
NP [t CaCO3/1000 t]	04-Jun-21	14:20	07-Jun-21	07:51	9.3	40.4	42.6	296	85.4	37.7	63.7	53.5
AP [t CaCO3/1000 t]	10-Jun-21	07:22	18-Jun-21	10:32	1.25	1.25	1.25	1.25	1.25	1.25	2.50	1.25
Net NP [t CaCO3/1000 t]	10-Jun-21	07:22	18-Jun-21	10:32	8.05	39.2	41.4	295	84.2	36.4	61.2	52.2
NP/AP [ratio]	10-Jun-21	07:22	18-Jun-21	10:32	7.44	32.3	34.1	237	68.3	30.2	25.5	42.8
Sulphur (total) [%]	10-Jun-21	07:22	18-Jun-21	10:31	0.055	0.024	0.025	0.106	0.021	0.045	0.206	0.014
Acid Leachable SO4-S [%]	11-Jun-21	14:17	18-Jun-21	10:31	0.06	< 0.04	< 0.04	0.11	< 0.04	0.04	0.13	< 0.04
Sulphide [%]	11-Jun-21	13:47	18-Jun-21	10:31	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.08	< 0.04
Carbon (total) [%]	10-Jun-21	07:22	10-Jun-21	17:36	0.018	0.212	0.082	0.266	0.748	0.186	0.551	0.594
Carbonate [%]	10-Jun-21	11:55	10-Jun-21	17:36	< 0.025	0.814	0.055	0.565	2.12	0.729	2.40	2.68

Analysis	13: P1-Dun-MZ-5_B B19539	14: P1-MetV-MZ-7_ B B19540	15: P1-Gab-MZ-5_B 19541	16: P1-Per-MZ-7_B 19542	17: P1-Pyr-MZ-9_B 19543	18: P1-Gab-MZ-4_1 9544	19: P1-Pyr-MZ-1_B 19545	20: P1-Gab-MZ-2_B 19546	21: P1-Dun-MZ-8 B19550	22: P1-MetV-MZ-5_ B B19551	23: P1-MetV-MZ-1_ B B19552	24: P1-Pyr-MZ-7A_ B B19553
Paste pH [no unit]	9.62	9.95	9.51	9.19	9.35	9.49	9.39	9.54	9.58	9.88	9.78	9.36
Fizz Rate [no unit]	2	2	2	2	2	3	3	1	1	3	3	3
Sample weight [g]	2.01	2.14	2.03	1.99	2.08	2.04	1.99	1.95	2.00	1.98	2.07	2.01
HCl Added [mL]	102.50	20.00	20.00	30.70	73.00	20.00	44.30	20.00	122.40	42.00	23.00	85.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	30.03	13.65	15.56	8.43	25.59	13.54	9.66	16.26	40.65	12.24	7.55	18.77
Final pH [no unit]	1.68	1.42	1.24	1.73	1.64	1.32	1.80	1.19	1.85	1.82	1.85	1.84
NP [t CaCO3/1000 t]	180	14.8	10.9	55.9	114	15.8	87.0	9.6	204	75.2	37.3	165
AP [t CaCO3/1000 t]	1.25	1.25	1.25	1.25	1.25	1.25	1.56	1.25	30.9	1.25	3.44	1.25
Net NP [t CaCO3/1000 t]	179	13.6	9.65	54.6	113	14.6	85.4	8.35	173	74.0	33.9	163
NP/AP [ratio]	144	11.8	8.72	44.7	91.2	12.6	55.7	7.68	6.61	60.2	10.9	132
Sulphur (total) [%]	0.191	0.026	0.017	0.018	0.058	0.008	0.101	0.012	1.64	0.072	0.206	0.047
Acid Leachable SO4-S [%]	0.19	0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.05	< 0.04	0.65	0.07	0.10	0.05
Sulphide [%]	< 0.04	< 0.04	< 0.04	< 0.04	0.04	< 0.04	0.05	< 0.04	0.99	< 0.04	0.11	< 0.04
Carbon (total) [%]	0.105	0.105	0.050	0.231	1.39	0.117	0.933	0.018	0.092	0.898	0.400	2.43
Carbonate [%]	0.410	0.390	0.150	0.884	6.43	0.465	4.32	< 0.025	0.210	4.16	1.72	6.16

Analysis	25: P1-MetV-MZ-4_ B B19554	26: P1-Dun-MZ-2_ B B19555	27: P1-MetV-MZ-6_ B B190556	28: P1-Dun-MZ-7_ B B19557	29: P1-MetV-MZ-2_ B B19560	30: P1-Per-MZ-2_B 19561	31: P1-Pyr-MZ-2A_ B B19562	32: P1-Gab-MZ-7A_ B B19563	33: P1-Per-MZ-5_B 19564	34: P1-Gab-MZ-8A
Paste pH [no unit]	10.05	9.40	9.27	9.69	9.94	9.36	9.25	9.34	9.07	9.47
Fizz Rate [no unit]	3	3	3	3	3	3	3	3	3	3
Sample weight [g]	2.04	2.01	2.05	1.96	1.99	2.02	2.03	2.05	2.01	2.13
HCl Added [mL]	52.50	89.60	20.00	113.80	33.40	55.60	31.50	33.00	145.90	20.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	22.65	23.90	9.30	20.21	10.98	15.30	11.86	12.23	39.03	7.97
Final pH [no unit]	1.59	1.75	1.98	1.98	1.94	1.71	1.64	1.63	1.73	1.59
NP [t CaCO3/1000 t]	73.2	163	26.1	239	56.3	99.8	48.4	50.7	266	28.2
AP [t CaCO3/1000 t]	1.25	1.25	1.25	8.44	4.06	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO3/1000 t]	72.0	162	24.8	230	52.2	98.6	47.2	49.4	265	27.0
NP/AP [ratio]	58.6	131	20.9	28.3	13.9	79.8	38.7	40.6	213	22.6
Sulphur (total) [%]	0.008	0.016	< 0.005	0.350	0.248	0.056	0.023	0.005	0.068	0.015
Acid Leachable SO4-S [%]	< 0.04	< 0.04	< 0.04	0.08	0.12	< 0.04	< 0.04	< 0.04	0.07	< 0.04



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - K0L 2H0

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : Crawford - Project# 20446343

LR Report : CA14969-MAY21

Analysis	25: P1-MetV-MZ-4 B19554	26: P1-Dun-MZ-2 B19555	27: P1-MetV-MZ-6 B190556	28: P1-Dun-MZ-7 B19557	29: P1-MetV-MZ-2 B19560	30: P1-Per-MZ-2_B 19561	31: P1-Pyr-MZ-2A B19562	32: P1-Gab-MZ-7A B19563	33: P1-Per-MZ-5_B 19564	34: P1-Gab-MZ-8A
Sulphide [%]	< 0.04	< 0.04	< 0.04	0.27	0.13	0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	1.12	0.117	0.071	2.24	0.551	4.93	0.434	0.504	3.12	0.276
Carbonate [%]	5.12	0.440	0.230	5.85	2.40	4.90	1.99	2.24	12.7	1.22

*NP (Neutralization Potential)

= $50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})$

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur $\times$ 31.25

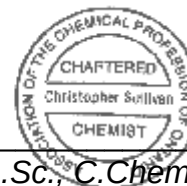
*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.02 will be calculated using a 0.02 value.

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#20446343

28-September-2022

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
 Toronto, ON
 M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Date Rec. : 02 August 2022
 LR Report: CA19000-AUG22
 Reference: Crawford Project

Copy: #2

CERTIFICATE OF ANALYSIS

Final Report - Revised

Sample ID	Sample Date & Time	Paste pH no unit	Fizz Rate no unit	Sample weight g	HCl_add mL	HCl Normality
1: Analysis Start Date		14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22
2: Analysis Start Time		14:30	14:30	14:30	14:30	14:30
3: Analysis Completed Date		21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22
4: Analysis Completed Time		16:22	16:22	16:22	16:22	16:22
5: Gabbro CR20-33 480-490	06-Jul-22	9.68	1	1.99	20.00	0.10
6: Gabbro-01 CR20-34 510-520	06-Jul-22	9.67	1	1.99	20.00	0.10
7: Gabbro CR20-34 530-540	06-Jul-22	9.43	1	2.00	20.00	0.10
8: Basalt CR20-60 380-390	06-Jul-22	9.89	2	1.98	40.00	0.10
9: Gabbro CR20-66 95-105	06-Jul-22	9.36	1	2.02	20.00	0.10
10: Gabbro CR20-66 120-130	06-Jul-22	9.25	1	2.01	20.00	0.10
11: Gabbro CR20-66 180-190	06-Jul-22	9.39	1	1.99	20.00	0.10
12: Basalt CR20-70A 560-570	06-Jul-22	9.55	2	1.99	30.00	0.10
13: Basalt CR20-70A 540-550	06-Jul-22	9.67	2	2.00	20.00	0.10
15: Basalt CR20-79 380-390	06-Jul-22	9.64	2	2.01	20.00	0.10
16: Dunite CR20-83 440-450	06-Jul-22	9.46	2	1.97	105.00	0.10
17: Dunite CR20-86 445-455	06-Jul-22	9.63	2	2.00	80.00	0.10
18: Dunite CR21-104 160-170	06-Jul-22	9.38	2	1.99	140.00	0.10
19: Dunite CR21-104 335-345	06-Jul-22	9.68	2	1.98	120.00	0.10
20: Dunite CR21-104 350-360	06-Jul-22	9.49	2	2.00	115.00	0.10
21: Dunite CR21-106A 150-160	06-Jul-22	9.28	2	2.00	135.00	0.10
22: Dunite CR21-111A 300-310	06-Jul-22	9.51	2	1.99	75.00	0.10
23: Dunite CR21-118 30-40	06-Jul-22	9.77	2	2.00	55.00	0.10
24: Dunite CR21-120 400-410	06-Jul-22	9.53	2	1.98	110.00	0.10
25: Basalt-01 CR19-31 90-100	06-Jul-22	9.63	3	2.00	30.00	0.10
26: Dunite CR19-11A 65-75	06-Jul-22	9.65	2	1.99	95.00	0.10
27: Basalt CR19-09 590-600	06-Jul-22	9.88	3	2.03	30.00	0.10
28: Basalt CR19-09 570-580	06-Jul-22	9.75	3	2.00	30.00	0.10
29: Basalt CR19-09 550-560	06-Jul-22	9.82	3	2.02	40.00	0.10

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek**Project : PO#20446343****LR Report : CA19000-AUG22**

Sample ID	Sample Date & Time	Paste pH no unit	Fizz Rate no unit	Sample weight g	HCl_add mL	HCl Normality
30: Dunite CR19-08 80-90	06-Jul-22	9.59	2	1.98	95.00	0.10
31: Dunite CR18-04 95-105	06-Jul-22	9.45	2	1.98	60.00	0.10
32: Dunite CR18-01 550-560	06-Jul-22	9.68	2	2.00	85.00	0.10
33: Basalt CR21-129 45-55	06-Jul-22	9.24	3	2.00	30.00	0.10
34: Basalt CR21-129A 45-55	06-Jul-22	9.29	3	1.98	40.00	0.10
35: Gabbro CR21-129A 395-405	06-Jul-22	9.33	1	1.99	20.00	0.10
36: Dunite CR21-130 70-80	06-Jul-22	9.31	2	2.01	105.00	0.10
37: Dunite-01 CR21-130 190-200	06-Jul-22	9.59	3	2.00	120.00	0.10
38: Dunite CR21-130 530-540	06-Jul-22	9.35	2	2.02	110.00	0.10
39: Dunite-01 CR21-135 75-85	06-Jul-22	9.26	2	1.98	130.00	0.10
40: Dunite CR21-135 145-155	06-Jul-22	9.31	3	1.98	150.00	0.10
41: Gabbro CR21-140 220-230	06-Jul-22	9.57	2	1.99	95.00	0.10
42: Gabbro CR21-140 245-255	06-Jul-22	9.01	1	2.02	55.00	0.10
43: Dunite-01 CR21-146 50-60	06-Jul-22	9.58	2	2.01	85.00	0.10
44: Dunite CR21-146 65-75	06-Jul-22	9.50	2	1.98	85.00	0.10
45: Dunite CR21-146 120-130	06-Jul-22	9.52	2	2.02	95.00	0.10
46: Dunite CR21-146 200-210	06-Jul-22	9.60	3	2.01	120.00	0.10
47: Dunite CR21-146 510-520	06-Jul-22	9.58	3	2.02	95.00	0.10
48: Dunite CR21-170 40-50	06-Jul-22	9.46	3	2.02	139.80	0.10
49: Dunite CR21-170 150-160	06-Jul-22	9.51	3	1.98	146.60	0.10
50: Dunite CR21-170 200-210	06-Jul-22	9.40	3	1.99	157.70	0.10
51: Dunite CR21-170 300-310	06-Jul-22	9.44	3	2.00	152.40	0.10
52: Dunite CR21-170 400-410	06-Jul-22	9.39	2	2.00	138.20	0.10
53: Dunite CR21-178 40-50	06-Jul-22	9.59	3	1.99	100.00	0.10
54: Dunite CR21-178 150-160	06-Jul-22	9.42	3	2.01	168.00	0.10
55: Dunite CR21-180 120-130	06-Jul-22	9.55	3	2.00	90.40	0.10
56: Dunite CR21-180 200-210	06-Jul-22	9.52	2	2.01	110.00	0.10
57: Gabbro CR21-180 480-490	06-Jul-22	9.62	3	2.02	20.00	0.10
58: Gabbro CR21-GT-06 75-85	06-Jul-22	9.58	1	2.02	20.00	0.10
59: Gabbro CR21-GT-06 95-105	06-Jul-22	9.47	1	1.97	20.00	0.10
60: Gabbro CR21-GT-06 300-310	06-Jul-22	9.46	3	2.03	20.00	0.10
61: Gabbro CR21-GT-06 350-360	06-Jul-22	9.33	3	2.02	40.00	0.10
62: Gabbro CR21-GT-06 400-410	06-Jul-22	9.27	3	1.98	75.00	0.10
63: Gabbro CR21-GT-06 500-510	06-Jul-22	9.72	4	2.03	65.00	0.10
64: Peridotite CR19-12 535-545	06-Jul-22	9.49	2	2.00	20.00	0.10
65: Peridotite CR19-12 550-560	06-Jul-22	9.50	2	2.01	20.00	0.10
66: Peridotite CR20-38 265-275	06-Jul-22	9.48	2	1.99	20.00	0.10
67: Peridotite-01 CR20-38 290-300	06-Jul-22	9.49	2	2.02	20.00	0.10
68: Peridotite CR20-68 65-75	06-Jul-22	9.42	2	2.01	20.00	0.10
69: Peridotite-01 CR20-78 100-110	06-Jul-22	9.39	3	1.99	69.90	0.10
70: Peridotite CR20-78 147-157	06-Jul-22	9.23	2	2.02	42.00	0.10
71: Pyroxenite CR21-124 535-553	06-Jul-22	9.31	1	2.00	20.00	0.10

Sample ID	Sample Date & Time	Paste pH no unit	Fizz Rate no unit	Sample weight g	HCl_add mL	HCl Normality
72: Basalt-02 CR19-31 90-100	06-Jul-22	9.60	3	1.99	30.00	0.10
73: Gabbro-02 CR20-34 510-520	06-Jul-22	9.51	3	1.98	135.00	0.10
74: Dunite-02 CR21-130 190-200	06-Jul-22	9.49	2	2.00	20.00	0.10
75: Dunite-02 CR21-135 75-85	06-Jul-22	9.25	3	2.01	169.00	0.10
76: Dunite-02 CR21-146 50-60	06-Jul-22	9.41	3	1.99	91.10	0.10
77: Peridotite-02 CR20-38 290-300	06-Jul-22	9.52	1	1.99	20.00	0.10
78: Peridotite-02 CR20-78 100-110	06-Jul-22	9.37	3	2.00	74.40	0.10
79: Basalt CR20-79 360-370	06-Jul-22	9.47	2	1.99	20.00	0.10
80: Gabbro CR21-GT-05 60-70	06-Jul-22	9.25	3	2.00	30.00	0.10
81: Gabbro CR21-GT-05 90-100	06-Jul-22	9.31	4	2.02	40.00	0.10
82: Gabbro CR21-GT-05 120-130	06-Jul-22	9.49	3	1.99	20.00	0.10
83: Gabbro CR21-GT-05 170-180	06-Jul-22	9.67	3	1.98	35.00	0.10
84: Gabbro CR21-GT-05 300-310	06-Jul-22	9.47	3	1.98	20.00	0.10
85: Gabbro CR21-GT-05 370-380	06-Jul-22	9.21	2	2.01	29.00	0.10
86: Basalt CR21-GT-05 410-420	06-Jul-22	10.11	1	1.98	20.00	0.10
87: Gabbro CR22-GT-13 40-50	06-Jul-22	9.29	1	1.98	20.00	0.10
88: Gabbro CR22-GT-13 100-110	06-Jul-22	9.37	1	2.00	20.00	0.10
89: Gabbro CR22-GT-13 130-140	06-Jul-22	9.29	1	2.03	20.00	0.10
90: Gabbro CR22-GT-13 390-400	06-Jul-22	9.28	1	1.99	20.00	0.10
91: Gabbro CR22-GT-13 450-460	06-Jul-22	9.17	1	1.99	20.00	0.10
92: Gabbro CR22-GT-13 480-490	06-Jul-22	9.35	1	2.02	20.00	0.10

Sample ID	NaOH Normality	Vol NaOH to pH=8.3 mL	Final pH no unit	NP CaCO3/1000t t	AP CaCO3/1000t t	Net NP CaCO3/1000 t
1: Analysis Start Date	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	21-Sep-22	21-Sep-22
2: Analysis Start Time	14:30	14:30	14:30	14:30	16:21	16:21
3: Analysis Completed Date	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22
4: Analysis Completed Time	16:22	16:22	16:22	16:22	16:22	16:22
5: Gabbro CR20-33 480-490	0.10	15.53	1.34	11.2	1.25	9.95
6: Gabbro-01 CR20-34 510-520	0.10	16.56	1.26	8.6	1.25	7.35
7: Gabbro CR20-34 530-540	0.10	16.02	1.30	9.9	1.25	8.65
8: Basalt CR20-60 380-390	0.10	18.83	1.55	53.5	1.25	52.2
9: Gabbro CR20-66 95-105	0.10	16.96	1.22	7.5	1.25	6.25
10: Gabbro CR20-66 120-130	0.10	16.00	1.24	10.0	1.25	8.75
11: Gabbro CR20-66 180-190	0.10	16.62	1.22	8.5	1.25	7.25
12: Basalt CR20-70A 560-570	0.10	22.12	1.51	19.8	1.25	18.6
13: Basalt CR20-70A 540-550	0.10	15.18	1.70	12.0	1.25	10.8
15: Basalt CR20-79 380-390	0.10	15.24	1.53	11.8	1.25	10.6
16: Dunite CR20-83 440-450	0.10	44.34	1.58	154	1.25	153
17: Dunite CR20-86 445-455	0.10	23.09	1.65	142	1.25	141

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek**Project : PO#20446343****LR Report : CA19000-AUG22**

Sample ID	NaOH Normality	Vol NaOH to pH=8.3 mL	Final pH no unitt	NP CaCO3/1000t t	AP CaCO3/1000t t	Net NP CaCO3/1000 t
18: Dunite CR21-104 160-170	0.10	49.25	1.69	228	1.25	227
19: Dunite CR21-104 335-345	0.10	50.12	1.61	176	1.25	175
20: Dunite CR21-104 350-360	0.10	46.53	1.58	171	1.25	170
21: Dunite CR21-106A 150-160	0.10	45.32	1.87	224	1.25	223
22: Dunite CR21-111A 300-310	0.10	26.64	1.55	122	1.25	120
23: Dunite CR21-118 30-40	0.10	18.67	1.53	90.8	1.25	89.6
24: Dunite CR21-120 400-410	0.10	45.66	1.60	162	1.25	161
25: Basalt-01 CR19-31 90-100	0.10	16.02	1.60	35.0	1.25	33.8
26: Dunite CR19-11A 65-75	0.10	18.67	1.90	192	1.25	191
27: Basalt CR19-09 590-600	0.10	14.19	1.60	38.9	1.25	37.6
28: Basalt CR19-09 570-580	0.10	16.71	1.57	33.2	1.25	32.0
29: Basalt CR19-09 550-560	0.10	13.65	1.84	65.2	1.25	64.0
30: Dunite CR19-08 80-90	0.10	21.99	1.87	184	1.25	183
31: Dunite CR18-04 95-105	0.10	22.46	1.52	94.8	1.25	93.6
32: Dunite CR18-01 550-560	0.10	26.82	1.59	145	1.25	144
33: Basalt CR21-129 45-55	0.10	9.82	1.92	50.5	1.25	49.2
34: Basalt CR21-129A 45-55	0.10	17.66	1.61	56.4	1.25	55.2
35: Gabbro CR21-129A 395-405	0.10	16.37	1.27	9.1	1.25	7.85
36: Dunite CR21-130 70-80	0.10	41.63	1.61	158	1.25	156
37: Dunite-01 CR21-130 190-200	0.10	28.62	1.88	228	1.25	227
38: Dunite CR21-130 530-540	0.10	44.92	1.63	161	1.25	160
39: Dunite-01 CR21-135 75-85	0.10	43.71	1.70	218	1.25	217
40: Dunite CR21-135 145-155	0.10	48.00	1.64	258	1.25	256
41: Gabbro CR21-140 220-230	0.10	30.12	1.59	163	1.25	162
42: Gabbro CR21-140 245-255	0.10	32.29	1.55	56.2	1.25	55.0
43: Dunite-01 CR21-146 50-60	0.10	25.02	1.61	149	1.25	148
44: Dunite CR21-146 65-75	0.10	21.20	1.72	161	1.25	160
45: Dunite CR21-146 120-130	0.10	19.73	1.81	186	1.25	185
46: Dunite CR21-146 200-210	0.10	28.51	1.72	228	1.25	226
47: Dunite CR21-146 510-520	0.10	26.63	1.64	169	1.25	168
48: Dunite CR21-170 40-50	0.10	52.06	1.61	217	1.25	216
49: Dunite CR21-170 150-160	0.10	57.95	1.60	224	1.25	223
50: Dunite CR21-170 200-210	0.10	55.67	1.59	256	1.25	255
51: Dunite CR21-170 300-310	0.10	60.98	1.57	229	1.25	227
52: Dunite CR21-170 400-410	0.10	58.24	1.62	200	1.25	199
53: Dunite CR21-178 40-50	0.10	31.20	1.70	173	1.25	172
54: Dunite CR21-178 150-160	0.10	65.14	1.57	256	1.25	255
55: Dunite CR21-180 120-130	0.10	26.26	1.61	160	1.25	159
56: Dunite CR21-180 200-210	0.10	30.35	1.64	198	1.25	197
57: Gabbro CR21-180 480-490	0.10	6.78	1.72	32.7	1.25	31.4
58: Gabbro CR21-GT-06 75-85	0.10	16.99	1.24	7.4	1.25	6.15
59: Gabbro CR21-GT-06 95-105	0.10	16.71	1.23	8.4	1.25	7.15

Sample ID	NaOH Normality	Vol NaOH to pH=8.3 mL	Final pH no unitt	NP CaCO ₃ /1000t t	AP CaCO ₃ /1000t t	Net NP CaCO ₃ /1000 t
60: Gabbro CR21-GT-06 300-310	0.10	13.60	1.67	15.8	1.25	14.6
61: Gabbro CR21-GT-06 350-360	0.10	15.94	1.60	59.6	1.25	58.4
62: Gabbro CR21-GT-06 400-410	0.10	24.90	1.65	126	1.25	125
63: Gabbro CR21-GT-06 500-510	0.10	25.93	1.66	96.2	1.25	95.0
64: Peridotite CR19-12 535-545	0.10	10.63	1.44	23.4	1.25	22.2
65: Peridotite CR19-12 550-560	0.10	11.70	1.40	20.7	1.25	19.4
66: Peridotite CR20-38 265-275	0.10	11.22	1.41	22.0	1.25	20.8
67: Peridotite-01 CR20-38 290-300	0.10	11.17	1.42	21.9	1.25	20.6
68: Peridotite CR20-68 65-75	0.10	10.09	1.50	24.6	1.25	23.4
69: Peridotite-01 CR20-78 100-110	0.10	24.49	1.56	114	1.25	113
70: Peridotite CR20-78 147-157	0.10	15.86	1.57	64.7	1.25	63.4
71: Pyroxenite CR21-124 535-553	0.10	10.99	1.42	22.5	1.25	21.2
72: Basalt-02 CR19-31 90-100	0.10	13.72	1.66	40.9	1.25	39.6
73: Gabbro-02 CR20-34 510-520	0.10	42.87	1.68	233	1.25	231
74: Dunite-02 CR21-130 190-200	0.10	16.31	1.26	9.2	1.25	7.95
75: Dunite-02 CR21-135 75-85	0.10	67.98	1.63	251	1.25	250
76: Dunite-02 CR21-146 50-60	0.10	30.56	1.55	152	1.25	151
77: Peridotite-02 CR20-38 290-300	0.10	11.83	1.39	20.5	1.25	19.2
78: Peridotite-02 CR20-78 100-110	0.10	26.31	1.59	120	1.25	119
79: Basalt CR20-79 360-370	0.10	15.68	1.45	10.9	1.25	9.65
80: Gabbro CR21-GT-05 60-70	0.10	16.42	1.46	34.0	1.25	32.8
81: Gabbro CR21-GT-05 90-100	0.10	10.48	1.88	73.1	1.25	71.8
82: Gabbro CR21-GT-05 120-130	0.10	10.80	1.51	23.1	1.25	21.8
83: Gabbro CR21-GT-05 170-180	0.10	14.31	1.60	52.2	1.25	51.0
84: Gabbro CR21-GT-05 300-310	0.10	10.43	1.60	24.2	1.25	23.0
85: Gabbro CR21-GT-05 370-380	0.10	16.62	1.59	30.8	1.25	29.6
86: Basalt CR21-GT-05 410-420	0.10	16.25	1.40	9.5	1.25	8.25
87: Gabbro CR22-GT-13 40-50	0.10	17.14	1.22	7.2	1.25	5.95
88: Gabbro CR22-GT-13 100-110	0.10	17.04	1.19	7.4	1.25	6.15
89: Gabbro CR22-GT-13 130-140	0.10	16.97	1.19	7.5	1.25	6.25
90: Gabbro CR22-GT-13 390-400	0.10	16.48	1.24	8.8	1.25	7.55
91: Gabbro CR22-GT-13 450-460	0.10	16.73	1.21	8.2	1.25	6.95
92: Gabbro CR22-GT-13 480-490	0.10	17.30	1.18	6.7	1.25	5.45

Sample ID	NP/AP ratio	S %	Acid Leachable SO ₄ -S %	Sulphide %	C %	CO ₃ (HCl) %
1: Analysis Start Date	21-Sep-22	07-Sep-22	21-Sep-22	09-Sep-22	07-Sep-22	12-Sep-22
2: Analysis Start Time	16:22	19:17	16:06	16:51	19:17	08:08
3: Analysis Completed Date	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	12-Sep-22	12-Sep-22
4: Analysis Completed Time	16:22	16:20	16:20	16:20	10:54	10:54

Sample ID	NP/AP ratio	S %	Acid Leachable SO ₄ -S %	Sulphide %	C %	CO ₃ (HCl) %
5: Gabbro CR20-33 480-490	8.96	0.024	< 0.04	< 0.04	0.034	< 0.04
6: Gabbro-01 CR20-34 510-520	6.88	0.025	< 0.04	< 0.04	0.024	< 0.04
7: Gabbro CR20-34 530-540	7.92	0.040	0.04	< 0.04	0.023	< 0.04
8: Basalt CR20-60 380-390	42.8	< 0.005	< 0.04	< 0.04	0.716	3.20
9: Gabbro CR20-66 95-105	6.00	< 0.005	< 0.04	< 0.04	0.022	< 0.04
10: Gabbro CR20-66 120-130	8.00	< 0.005	< 0.04	< 0.04	0.032	< 0.04
11: Gabbro CR20-66 180-190	6.80	< 0.005	< 0.04	< 0.04	0.047	0.13
12: Basalt CR20-70A 560-570	15.8	0.061	< 0.04	0.06	0.121	0.37
13: Basalt CR20-70A 540-550	9.60	0.056	0.06	< 0.04	0.018	< 0.04
15: Basalt CR20-79 380-390	9.44	0.005	< 0.04	< 0.04	0.058	< 0.04
16: Dunite CR20-83 440-450	123	0.039	< 0.04	< 0.04	0.179	0.77
17: Dunite CR20-86 445-455	114	0.037	< 0.04	< 0.04	0.254	1.13
18: Dunite CR21-104 160-170	182	0.047	0.05	< 0.04	0.345	1.59
19: Dunite CR21-104 335-345	141	0.058	< 0.04	0.04	0.154	0.61
20: Dunite CR21-104 350-360	137	0.052	0.05	< 0.04	0.137	0.54
21: Dunite CR21-106A 150-160	179	0.013	< 0.04	< 0.04	0.343	1.55
22: Dunite CR21-111A 300-310	97.2	0.018	< 0.04	< 0.04	0.086	0.34
23: Dunite CR21-118 30-40	72.6	0.043	0.04	< 0.04	0.100	0.42
24: Dunite CR21-120 400-410	130	0.049	< 0.04	0.04	0.289	1.33
25: Basalt-01 CR19-31 90-100	28.0	0.005	< 0.04	< 0.04	0.354	1.61
26: Dunite CR19-11A 65-75	153	0.018	< 0.04	< 0.04	0.245	1.13
27: Basalt CR19-09 590-600	31.1	0.009	< 0.04	< 0.04	0.462	2.14
28: Basalt CR19-09 570-580	26.6	0.130	< 0.04	0.10	0.395	1.81
29: Basalt CR19-09 550-560	52.2	0.010	< 0.04	< 0.04	0.862	4.05
30: Dunite CR19-08 80-90	148	0.015	< 0.04	< 0.04	0.158	0.67
31: Dunite CR18-04 95-105	75.8	0.007	< 0.04	< 0.04	5.79	22.6
32: Dunite CR18-01 550-560	116	0.012	< 0.04	< 0.04	0.144	0.56
33: Basalt CR21-129 45-55	40.4	< 0.005	< 0.04	< 0.04	0.593	2.81
34: Basalt CR21-129A 45-55	45.1	< 0.005	< 0.04	< 0.04	0.664	3.18
35: Gabbro CR21-129A 395-405	7.28	0.027	< 0.04	< 0.04	0.026	< 0.04
36: Dunite CR21-130 70-80	126	0.011	< 0.04	< 0.04	0.190	0.83
37: Dunite-01 CR21-130 190-200	183	0.043	0.04	< 0.04	0.346	1.62
38: Dunite CR21-130 530-540	129	0.048	0.05	< 0.04	0.100	0.39
39: Dunite-01 CR21-135 75-85	174	0.010	< 0.04	< 0.04	0.184	0.80
40: Dunite CR21-135 145-155	206	0.083	< 0.04	0.05	0.927	4.49
41: Gabbro CR21-140 220-230	130	0.090	0.09	< 0.04	0.117	0.45
42: Gabbro CR21-140 245-255	45.0	0.049	0.05	< 0.04	0.204	0.85
43: Dunite-01 CR21-146 50-60	119	0.036	< 0.04	< 0.04	0.133	0.54
44: Dunite CR21-146 65-75	129	0.057	0.06	< 0.04	0.121	0.51
45: Dunite CR21-146 120-130	149	0.080	< 0.04	0.05	0.123	0.50
46: Dunite CR21-146 200-210	182	0.042	0.04	< 0.04	0.343	1.61
47: Dunite CR21-146 510-520	135	0.029	< 0.04	< 0.04	0.128	0.50

Sample ID	NP/AP ratio	S %	Acid Leachable SO ₄ -S %	Sulphide %	C %	CO ₃ (HCl) %
48: Dunite CR21-170 40-50	174	0.017	< 0.04	< 0.04	0.209	0.91
49: Dunite CR21-170 150-160	179	0.056	0.06	< 0.04	0.208	0.93
50: Dunite CR21-170 200-210	205	0.009	< 0.04	< 0.04	0.187	0.87
51: Dunite CR21-170 300-310	183	0.008	< 0.04	< 0.04	0.110	0.45
52: Dunite CR21-170 400-410	160	0.007	< 0.04	< 0.04	0.077	0.30
53: Dunite CR21-178 40-50	138	0.021	< 0.04	< 0.04	0.110	0.45
54: Dunite CR21-178 150-160	205	0.163	< 0.04	0.13	0.223	1.02
55: Dunite CR21-180 120-130	128	0.034	< 0.04	< 0.04	0.159	0.72
56: Dunite CR21-180 200-210	158	0.027	< 0.04	< 0.04	0.093	0.40
57: Gabbro CR21-180 480-490	26.2	0.006	< 0.04	< 0.04	0.331	1.54
58: Gabbro CR21-GT-06 75-85	5.92	0.010	< 0.04	< 0.04	0.020	< 0.04
59: Gabbro CR21-GT-06 95-105	6.72	0.009	< 0.04	< 0.04	0.020	< 0.04
60: Gabbro CR21-GT-06 300-310	12.6	0.015	< 0.04	< 0.04	0.143	0.62
61: Gabbro CR21-GT-06 350-360	47.7	0.022	< 0.04	< 0.04	0.674	3.25
62: Gabbro CR21-GT-06 400-410	101	0.063	< 0.04	0.05	1.50	7.31
63: Gabbro CR21-GT-06 500-510	77.0	0.197	< 0.04	0.16	1.09	5.34
64: Peridotite CR19-12 535-545	18.7	0.058	< 0.04	0.04	0.035	0.10
65: Peridotite CR19-12 550-560	16.6	0.063	< 0.04	0.04	0.027	0.06
66: Peridotite CR20-38 265-275	17.6	0.077	< 0.04	0.06	0.024	0.05
67: Peridotite-01 CR20-38 290-300	17.5	0.044	0.04	< 0.04	0.018	< 0.04
68: Peridotite CR20-68 65-75	19.7	0.068	< 0.04	0.06	0.089	0.36
69: Peridotite-01 CR20-78 100-110	91.3	0.007	< 0.04	< 0.04	0.365	1.68
70: Peridotite CR20-78 147-157	51.8	0.017	< 0.04	< 0.04	0.133	0.58
71: Pyroxenite CR21-124 535-553	18.0	0.011	< 0.04	< 0.04	0.159	0.68
72: Basalt-02 CR19-31 90-100	32.7	0.010	< 0.04	< 0.04	0.489	2.29
73: Gabbro-02 CR20-34 510-520	186	0.043	< 0.04	0.04	0.384	1.83
74: Dunite-02 CR21-130 190-200	7.36	0.028	< 0.04	< 0.04	0.024	< 0.04
75: Dunite-02 CR21-135 75-85	201	0.009	< 0.04	< 0.04	0.196	0.87
76: Dunite-02 CR21-146 50-60	122	0.027	< 0.04	< 0.04	0.138	0.58
77: Peridotite-02 CR20-38 290-300	16.4	0.033	< 0.04	< 0.04	0.024	< 0.04
78: Peridotite-02 CR20-78 100-110	96.2	0.010	< 0.04	< 0.04	0.343	1.60
79: Basalt CR20-79 360-370	8.72	0.033	< 0.04	< 0.04	0.027	< 0.04
80: Gabbro CR21-GT-05 60-70	27.2	0.028	< 0.04	< 0.04	0.344	1.60
81: Gabbro CR21-GT-05 90-100	58.5	0.052	0.05	< 0.04	0.884	4.25
82: Gabbro CR21-GT-05 120-130	18.5	0.031	< 0.04	< 0.04	0.240	1.07
83: Gabbro CR21-GT-05 170-180	41.8	0.034	< 0.04	< 0.04	0.599	2.85
84: Gabbro CR21-GT-05 300-310	19.4	0.040	0.04	< 0.04	0.264	1.17
85: Gabbro CR21-GT-05 370-380	24.6	0.153	< 0.04	0.14	0.315	1.44
86: Basalt CR21-GT-05 410-420	7.60	0.206	< 0.04	0.17	0.032	0.06
87: Gabbro CR22-GT-13 40-50	5.76	0.029	< 0.04	< 0.04	0.022	< 0.04
88: Gabbro CR22-GT-13 100-110	5.92	0.053	0.05	< 0.04	0.024	< 0.04
89: Gabbro CR22-GT-13 130-140	6.00	0.049	0.05	< 0.04	0.030	< 0.04

Sample ID	NP/AP ratio	S %	Acid Leachable SO ₄ -S %	Sulphide %	C %	CO ₃ (HCl) %
90: Gabbro CR22-GT-13 390-400	7.04	0.010	< 0.04	< 0.04	0.041	0.07
91: Gabbro CR22-GT-13 450-460	6.56	0.019	< 0.04	< 0.04	0.029	< 0.04
92: Gabbro CR22-GT-13 480-490	5.36	0.030	< 0.04	< 0.04	0.022	< 0.04

*NP (Neutralization Potential)

= $50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})$

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur $\times$ 31.25

*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.02 will be calculated using a 0.02 value.

Revised report with sample ID corrected.

Catharine Arnold

 Catharine Arnold, B.Sc., C.Chem
 Project Specialist,
 Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

ABA - Modified Sobek

Project : PO#20446343

17-October-2022

Date Rec. : 01 September 2022

LR Report: CA19000-SEP22

Reference: Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Dunite CR19-20CR20-57 220-230	6: Gabbro 35-45	7: Pyroxenite CR20-57 60-70	8: Peridotite CR21-115CR21-138 430-440	9: Peridotite 55-65	10: Pyroxenite-01 CR21-138 390-400	11: Pyroxenite-02 CR21-138 390-400	12: Pyroxenite CR21-172 650-660
Sample Date & Time					25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Paste pH [no unit]	04-Oct-22	08:30	06-Oct-22	09:12	9.30	9.46	9.40	9.20	9.50	9.58	9.64	9.79
Fizz Rate [rating]	04-Oct-22	08:30	06-Oct-22	09:12	1	1	1	2	1	1	1	1
Sample weight [g]	04-Oct-22	08:30	06-Oct-22	09:12	1.97	1.92	2.03	1.99	2.02	1.95	2.01	2.09
HCl Added [mL]	05-Oct-22	06:35	06-Oct-22	09:12	68.60	20.00	27.00	52.70	39.40	20.00	20.00	20.00
HCl [Normality]	04-Oct-22	08:30	06-Oct-22	09:12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	04-Oct-22	08:30	06-Oct-22	09:12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	05-Oct-22	08:36	06-Oct-22	09:12	22.41	13.70	15.58	18.98	14.94	13.04	12.31	12.26
Final pH [no unit]	05-Oct-22	08:36	06-Oct-22	09:12	1.55	1.58	1.50	1.52	1.51	1.41	1.49	1.60
NP [t CaCO ₃ /1000 t]	05-Oct-22	08:36	06-Oct-22	09:12	117	16.4	28.1	84.7	60.5	17.8	19.1	18.5
AP [t CaCO ₃ /1000 t]	13-Oct-22	10:40	13-Oct-22	10:42	2.50	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	13-Oct-22	10:40	13-Oct-22	10:42	115	15.2	26.8	83.4	59.2	16.6	17.8	17.2
NP/AP [ratio]	13-Oct-22	10:40	13-Oct-22	10:42	46.9	13.1	22.5	67.8	48.4	14.2	15.3	14.8
Sulphur (total) [%]	11-Oct-22	11:37	13-Oct-22	10:40	0.107	0.019	0.040	0.043	0.012	0.043	0.062	0.009
Acid Leachable SO ₄ -S [%]	13-Oct-22	10:39	13-Oct-22	10:40	< 0.04	< 0.04	0.04	0.04	< 0.04	0.04	< 0.04	< 0.04
Sulphide [%]	12-Oct-22	09:19	13-Oct-22	10:40	0.08	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.04	< 0.04
Carbon (total) [%]	11-Oct-22	11:37	13-Oct-22	10:40	0.097	0.021	0.059	0.221	0.217	0.023	0.026	0.071
Carbonate (HCl) [%]	14-Oct-22	09:48	14-Oct-22	13:57	0.38	< 0.04	0.19	1.02	1.00	< 0.04	< 0.04	0.26



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#20446343

LR Report : CA19000-SEP22

Analysis	13: Dunite CR21-181 55-65	14: Dunite CR21-181CR21-184 500-510	15: Basalt CR21-184 60-70	16: Gabbro CR21-184 430-440	17: Pyroxenite-01 CR21-GT-05 35-45	18: Pyroxenite-02 CR21-GT-05CR22-191 35-45 60-70	19: Peridotite CR22-193A 60-70	20: Dunite CR22-193A 60-70	21: Dunite CR22-193ACR22-199 200-210 50-60	22: Dunite CR22-199 130-140	23: Dunite CR22-199 130-140	24: Peridotite CR22-199 185-195
Sample Date & Time	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Paste pH [no unit]	9.26	8.98	9.54	9.65	9.11	9.05	9.53	9.52	9.57	9.50	9.28	9.55
Fizz Rate [rating]	2	2	2	1	1	1	2	2	2	2	2	2
Sample weight [g]	1.97	2.06	1.99	1.97	1.93	1.99	2.03	2.01	2.01	2.03	1.95	2.03
HCl Added [mL]	96.50	121.10	27.60	20.00	26.40	26.50	61.70	119.50	109.00	106.80	65.60	49.60
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	21.28	30.22	14.44	13.11	17.28	16.48	18.92	67.29	29.95	30.84	19.51	17.10
Final pH [no unit]	1.95	1.99	1.95	1.61	1.67	1.91	1.58	1.61	1.62	1.60	1.59	1.55
NP [t CaCO ₃ /1000 t]	191	221	33.1	17.5	23.6	25.2	105	130	197	187	118	80.0
AP [t CaCO ₃ /1000 t]	1.25	1.25	1.25	1.25	1.25	1.56	1.88	1.25	1.88	1.56	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	190	219	31.8	16.2	22.4	23.6	104	129	195	186	117	78.8
NP/AP [ratio]	153	176	26.5	14.0	18.9	16.1	56.2	104	105	120	94.6	64.0
Sulphur (total) [%]	0.037	0.019	< 0.005	0.005	0.024	0.072	0.076	0.038	0.085	0.072	0.033	0.043
Acid Leachable SO ₄ -S [%]	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.04
Sulphide [%]	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.05	0.06	0.04	0.06	0.05	< 0.04	< 0.04
Carbon (total) [%]	0.213	0.132	0.299	0.021	0.039	0.033	0.488	0.109	0.132	0.132	0.100	0.061
Carbonate (HCl) [%]	0.97	0.59	1.37	< 0.04	0.15	0.08	2.34	0.47	0.60	0.55	0.44	0.22

Analysis	25: Peridotite CR22-199 205-215	26: Pyroxenite CR22-199CR22-201 250-260 20-30	27: Dunite CR22-201 20-30	28: Dunite CR22-201 400-410	29: Dunite CR22-203B 22-32	30: Pyroxenite CR22-204 330-340	31: Gabbro CR22-228 230-240	32: Gabbro CR22-228CR22-231 260-270 40-50	33: Gabbro CR22-231 40-50	34: Gabbro CR22-231 70-80	35: Gabbro CR22-234 60-70	36: Gabbro CR22-234 100-110
Sample Date & Time	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Paste pH [no unit]	9.52	9.41	9.65	9.37	9.80	9.33	9.80	9.71	9.66	9.55	9.50	9.60
Fizz Rate [rating]	2	1	1	2	2	2	2	2	1	1	1	1
Sample weight [g]	2.02	2.04	1.93	1.96	2.00	2.09	2.03	2.04	2.04	1.95	2.11	1.96
HCl Added [mL]	35.40	20.00	105.00	87.10	109.80	39.20	26.50	37.40	20.00	26.80	24.60	20.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	7.95	8.97	20.80	13.44	18.08	18.86	15.20	19.25	15.55	17.96	16.12	12.22
Final pH [no unit]	1.97	1.79	1.88	1.93	1.92	1.88	1.62	1.55	1.98	1.57	1.65	1.82
NP [t CaCO ₃ /1000 t]	67.9	27.0	218	188	229	48.7	27.8	44.5	10.9	22.7	20.1	19.9
AP [t CaCO ₃ /1000 t]	1.25	2.50	0.94	1.56	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	66.6	24.5	217	186	228	47.4	26.6	43.2	9.65	21.4	18.8	18.6
NP/AP [ratio]	54.3	10.8	233	120	183	39.0	22.2	35.6	8.72	18.2	16.1	15.9

Online LIMS

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Analysis	25: Peridotite CR22-199 205-215	26: Pyroxenite CR22-199CR22-201 250-260	27: Dunite 20-30	28: Dunite CR22-201 400-410	29: Dunite CR22-203B 22-32	30: Pyroxenite CR22-204 330-340	31: Gabbro CR22-228 230-240	32: Gabbro CR22-228CR22-231 260-270	33: Gabbro 40-50CR22-231 70-80CR22-234 60-70	34: Gabbro 70-80CR22-234 60-70	35: Gabbro 60-70	36: Gabbro CR22-234 100-110
Sulphur (total) [%]	0.033	0.168	0.082	0.075	0.054	0.037	0.051	0.069	0.061	0.012	0.012	< 0.005
Acid Leachable SO ₄ -S [%]	< 0.04	0.09	0.05	< 0.04	0.05	< 0.04	0.05	< 0.04	0.06	< 0.04	< 0.04	< 0.04
Sulphide [%]	< 0.04	0.08	0.03	0.05	< 0.04	< 0.04	< 0.04	0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	0.060	0.021	0.312	0.188	0.205	0.174	0.106	0.293	0.026	0.024	0.023	0.020
Carbonate (HCl) [%]	0.22	< 0.04	1.49	0.79	0.91	0.80	0.38	1.22	0.04	< 0.04	< 0.04	< 0.04

Analysis	37: Peridotite CR22-240 60-70	38: Peridotite CR22-240 90-100	39: Dunite CR22-243 465-475	40: Pyroxenite CR19-16 30-40	41: Dunite CR21-162 315-325	42: Peridotite CR21-GT-03 600-610	43: Pyroxenite CR21-GT-04A 275-285	44: Peridotite CR21-GT-06 25-35	45: Peridotite CR22-243 490-500	46: Dunite CR20-32 500-510	47: Dunite CR20-32 540-550	48: Gabbro CR20-41 345-355
Sample Date & Time	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Paste pH [no unit]	9.39	9.52	9.58	9.74	9.15	9.47	9.80	9.39	9.54	9.45	9.31	9.76
Fizz Rate [rating]	1	1	2	1	2	2	1	2	2	2	2	1
Sample weight [g]	1.99	2.06	1.97	2.04	1.98	1.99	2.06	2.00	2.03	1.96	2.01	1.94
HCl Added [mL]	47.00	58.10	75.50	20.00	163.20	38.40	27.10	49.70	52.20	94.80	146.10	20.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	24.88	21.94	20.41	11.54	63.59	18.60	15.00	15.16	13.03	32.02	51.12	12.01
Final pH [no unit]	1.60	1.59	1.59	1.53	1.60	1.56	1.57	1.60	1.90	1.60	1.61	1.98
NP [t CaCO ₃ /1000 t]	55.6	87.8	140	20.7	252	49.7	29.4	86.3	96.5	160	236	20.6
AP [t CaCO ₃ /1000 t]	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	54.4	86.6	139	19.4	250	48.4	28.2	85.0	95.2	159	235	19.4
NP/AP [ratio]	44.5	70.2	112	16.6	201	39.8	23.5	69.0	77.2	128	189	16.5
Sulphur (total) [%]	0.063	0.070	0.041	0.044	0.006	0.009	0.046	0.022	0.025	0.016	0.009	0.029
Acid Leachable SO ₄ -S [%]	0.06	< 0.04	0.04	0.04	< 0.04	< 0.04	0.05	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Sulphide [%]	< 0.04	0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	0.030	0.030	0.214	0.034	0.116	0.047	0.054	0.132	0.499	0.162	0.172	0.024
Carbonate (HCl) [%]	0.07	0.09	1.02	0.07	0.54	0.15	0.16	0.58	2.43	0.74	0.80	0.06

Analysis	49: Gabbro CR20-41CR20-78 365-375	50: Pyroxenite 375-385	51: Dunnite CR21-153 250-260	52: Peridotite CR21-GT-06 150-160	53: Basalt CR22-GT-01C 100-110
Sample Date & Time	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Paste pH [no unit]	9.73	9.60	9.51	9.57	9.50

Analysis	49: Gabbro CR20-41CR20-78 365-375	50: Pyroxenite 375-385	51: Dunnite CR21-153 250-260	52: Peridotite CR21-GT-06 150-160	53: Basalt CR22-GT-01C 100-110
Fizz Rate [rating]	1	1	2	2	3
Sample weight [g]	1.98	2.03	2.11	1.95	2.02
HCl Added [mL]	20.00	20.00	100.50	28.70	80.30
HCl [Normality]	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	12.40	11.11	28.79	8.33	23.79
Final pH [no unit]	1.77	1.62	1.60	1.93	1.89
NP [t CaCO3/1000 t]	19.2	21.9	170	52.2	140
AP [t CaCO3/1000 t]	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO3/1000 t]	18.0	20.6	169	51.0	139
NP/AP [ratio]	15.4	17.5	136	41.8	112
Sulphur (total) [%]	0.036	0.035	0.013	0.046	0.022
Acid Leachable SO4-S [%]	< 0.04	< 0.04	< 0.04	0.05	< 0.04
Sulphide [%]	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	0.019	0.037	0.098	0.058	1.55
Carbonate (HCl) [%]	< 0.04	0.12	0.43	0.18	7.65

*NP (Neutralization Potential)
= 50 x (N of HCL x Total HCL added - N NaOH x NaOH added)

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.04 will be calculated using a 0.04 value.

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acid Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-019	ASTM E1915-07A
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-020	ASTM E1915-07A
Neutralization Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Paste pH	ME-CA-[ENV]ARD-LAK-AN-005	ARD Prediction Manual, 2009



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

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ABA - Modified Sobek

Project : PO#20446343

LR Report : CA19000-SEP22

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



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Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
Carbon/Sulphur - QCBatchID: ECS0010-OCT22													
Sulphide	0.04	%	< 0.04			3	20	111	80	120			
Carbon/Sulphur - QCBatchID: ECS0020-OCT22													
Carbon (total)	0.005	%	<0.005			2	20				96	70	130
Sulphur (total)	0.005	%	<0.005			3	20				96	70	130
Carbon/Sulphur - QCBatchID: ECS0031-OCT22													
Carbonate (HCl)	0.04	%	<0.04			1	20	98	80	120			

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#20446343

28-September-2022

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
 Toronto, ON
 M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Date Rec. : 19 August 2022
 LR Report: CA19125-AUG22
 Reference: Crawford Project

Copy: #2

CERTIFICATE OF ANALYSIS

Final Report - Revised

Sample ID	Sample Date & Time	Paste pH no unit	Fizz Rate rating	Sample weight g	HCl_add mL	HCl Normality	NaOH Normality
1: Analysis Start Date		22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22
2: Analysis Start Time		16:10	16:10	16:10	16:10	16:10	16:10
3: Analysis Completed Date		26-Sep-22	26-Sep-22	26-Sep-22	26-Sep-22	26-Sep-22	26-Sep-22
4: Analysis Completed Time		10:48	10:51	10:48	10:48	10:48	10:48
5: Basalt CR21-GT-08 75-85	15-Jul-22	9.38	3	1.98	30.00	0.10	0.10
6: Basalt CR21-GT-08 115-125	15-Jul-22	9.55	3	2.03	30.00	0.10	0.10
7: Basalt CR21-GT-08 175-185	15-Jul-22	9.75	3	1.98	45.60	0.10	0.10
8: Basalt CR21-GT-08 250-260	15-Jul-22	9.80	3	1.99	47.40	0.10	0.10
9: Basalt CR21-GT-08 325-335	15-Jul-22	8.43	3	2.01	105.50	0.10	0.10
10: Basalt CR21-GT-08 400-410	15-Jul-22	9.62	3	2.02	110.12	0.10	0.10
11: Basalt CR21-GT-08 450-460	15-Jul-22	9.55	3	2.01	117.80	0.10	0.10
12: Basalt CR21-GT-08 500-510	15-Jul-22	9.72	3	2.03	124.90	0.10	0.10
13: Basalt CR21-GT-09A 80-90	15-Jul-22	9.55	3	2.00	67.10	0.10	0.10
14: Basalt CR21-GT-09A 110-120	15-Jul-22	9.83	3	1.97	40.00	0.10	0.10
15: Basalt CR21-GT-09A 140-150	15-Jul-22	9.68	3	2.01	53.40	0.10	0.10
16: Basalt CR21-GT-09B 80-90	15-Jul-22	9.81	3	2.02	40.00	0.10	0.10
17: Basalt CR21-GT-09B 140-150	15-Jul-22	9.67	3	2.00	40.00	0.10	0.10
18: Basalt CR21-GT-09B 200-210	15-Jul-22	9.72	3	2.02	76.90	0.10	0.10
19: Basalt CR21-GT-09B 250-260	15-Jul-22	9.88	3	1.98	40.00	0.10	0.10
20: Basalt CR21-GT-09B 300-310	15-Jul-22	9.77	3	2.03	40.00	0.10	0.10
21: Basalt CR21-GT-09B 350-360	15-Jul-22	9.16	3	2.01	108.50	0.10	0.10
22: Basalt CR21-GT-09B 470-480	15-Jul-22	9.56	3	2.02	77.00	0.10	0.10
23: Basalt CR21-GT-09B 490-500	15-Jul-22	9.44	3	1.97	87.30	0.10	0.10
24: Basalt CR22-GT-01C 140-150	15-Jul-22	9.07	3	1.97	97.70	0.10	0.10
25: Basalt CR22-GT-01C 180-190	15-Jul-22	9.32	3	1.99	30.30	0.10	0.10
26: Basalt CR22-GT-01C 220-230	15-Jul-22	9.51	3	1.99	52.30	0.10	0.10
27: Basalt CR22-GT-01C 270-280	15-Jul-22	9.54	3	2.03	29.00	0.10	0.10
28: Basalt CR22-GT-01C 300-310	15-Jul-22	9.46	3	1.98	30.00	0.10	0.10
29: Basalt CR22-GT-11 100-110	15-Jul-22	9.45	2	2.01	20.00	0.10	0.10
30: Basalt CR22-GT-11 175-185	15-Jul-22	9.74	3	2.01	30.00	0.10	0.10



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

LR Report : CA19125-AUG22

Sample ID	Sample Date & Time	Paste pH no unit	Fizz Rate rating	Sample weight g	HCl add mL	HCl Normality	NaOH Normality
31: Basalt CR22-GT-11 300-310	15-Jul-22	9.92	3	1.98	20.00	0.10	0.10
32: Basalt CR22-GT-11 440-450	15-Jul-22	9.43	2	2.03	31.00	0.10	0.10
33: Gabbro CR22-GT-15 50-60	15-Jul-22	9.38	1	2.03	20.00	0.10	0.10
34: Gabbro CR22-GT-15 70-80	15-Jul-22	9.41	1	2.03	20.00	0.10	0.10
35: Gabbro CR22-GT-15 95-105	15-Jul-22	9.40	1	2.00	20.00	0.10	0.10
36: Gabbro CR22-GT-15 310-320	15-Jul-22	9.14	1	2.03	20.00	0.10	0.10
37: Gabbro CR22-GT-15 550-560	15-Jul-22	9.34	1	2.00	20.00	0.10	0.10
38: Basalt CR22-GT-22 60-70	15-Jul-22	9.72	1	1.98	43.30	0.10	0.10
39: Basalt CR22-GT-22 150-160	15-Jul-22	9.43	4	2.03	98.20	0.10	0.10
40: Basalt CR22-GT-22 250-260	15-Jul-22	9.48	3	2.00	98.80	0.10	0.10
41: Basalt CR22-GT-22 500-510	15-Jul-22	9.76	3	2.00	130.00	0.10	0.10
42: Basalt CR21-GT-02 200-210	15-Jul-22	9.69	4	2.03	70.00	0.10	0.10
43: Basalt CR21-GT-02 250-260	15-Jul-22	9.78	3	1.98	20.00	0.10	0.10
44: Basalt CR21-GT-02 300-310	15-Jul-22	9.76	3	1.99	40.00	0.10	0.10
45: Basalt CR21-GT-02 340-350	15-Jul-22	9.31	3	1.99	30.00	0.10	0.10
46: Basalt CR21-GT-02 370-380	15-Jul-22	9.70	3	1.99	30.00	0.10	0.10
47: Basalt CR21-GT-02 560-570	15-Jul-22	9.52	3	2.00	40.00	0.10	0.10
48: Basalt CR21-GT-02 600-610	15-Jul-22	9.37	4	2.02	85.00	0.10	0.10
49: Basalt CR22-GT-10 280-290	15-Jul-22	9.41	3	1.99	20.00	0.10	0.10
50: Basalt CR22-GT-10 320-330	15-Jul-22	9.60	4	2.01	40.00	0.10	0.10
51: Basalt CR22-GT-10 480-490	15-Jul-22	9.83	3	2.01	30.00	0.10	0.10
52: Basalt CR22-GT-10 550-560	15-Jul-22	9.93	3	2.00	20.00	0.10	0.10
53: Basalt CR21-GT-01 100-110	15-Jul-22	8.87	4	2.03	110.00	0.10	0.10
54: Basalt CR21-GT-01 120-130	15-Jul-22	9.07	4	2.01	65.00	0.10	0.10
55: Basalt CR21-GT-01 160-170	15-Jul-22	9.37	4	2.01	70.00	0.10	0.10
56: Basalt CR21-GT-01 180-190	15-Jul-22	9.13	4	1.99	65.00	0.10	0.10
57: Basalt CR21-GT-01 225-235	15-Jul-22	9.08	4	2.00	54.30	0.10	0.10
58: Basalt CR21-GT-01A 95-105	15-Jul-22	9.17	4	1.99	100.00	0.10	0.10
59: Basalt CR21-GT-02 70-80	15-Jul-22	9.61	4	2.03	70.00	0.10	0.10
60: Basalt CR21-GT-02 100-110	15-Jul-22	9.80	4	2.01	90.00	0.10	0.10
61: Basalt CR21-GT-03 60-70	15-Jul-22	9.80	4	2.00	65.00	0.10	0.10
62: Basalt CR21-GT-03 85-95	15-Jul-22	9.41	3	2.00	40.00	0.10	0.10
63: Basalt CR21-GT-03 115-125	15-Jul-22	9.57	3	2.00	20.00	0.10	0.10
64: Basalt CR21-GT-03 155-165	15-Jul-22	9.27	4	2.02	40.00	0.10	0.10
65: Basalt CR21-GT-03 200-210	15-Jul-22	9.42	3	1.99	20.00	0.10	0.10
66: Basalt CR21-GT-03 300-310	15-Jul-22	9.71	3	1.99	20.00	0.10	0.10
67: Basalt CR21-GT-03 400-410	15-Jul-22	9.79	3	2.01	20.00	0.10	0.10
68: Basalt CR21-GT-03 510-520	15-Jul-22	9.87	3	1.98	30.00	0.10	0.10
69: Basalt CR21-GT-03 540-550	15-Jul-22	9.53	4	1.99	40.00	0.10	0.10
70: Pyroxenite CR21-GT-04B 275-285	15-Jul-22	9.35	1	2.02	20.00	0.10	0.10
71: Gabbro CR21-GT-04B 310-320	15-Jul-22	9.36	1	2.00	20.00	0.10	0.10
72: Gabbro CR21-GT-04B 350-360	15-Jul-22	9.42	1	1.99	20.00	0.10	0.10
73: Gabbro CR21-GT-04B 380-390	15-Jul-22	9.39	1	2.01	20.00	0.10	0.10
74: Gabbro CR21-GT-04B 550-560	15-Jul-22	9.14	2	1.98	27.30	0.10	0.10
75: Gabbro CR21-GT-04B 580-590	15-Jul-22	9.28	2	2.01	20.00	0.10	0.10

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343
LR Report : CA19125-AUG22

Sample ID	Sample Date & Time	Paste pH no unit	Fizz Rate rating	Sample weight g	HCl add mL	HCl Normality	NaOH Normality
76: Basalt CR22-197 105-115	15-Jul-22	9.66	3	2.01	30.00	0.10	0.10
77: Peridotite CR21-102 80-90	15-Jul-22	9.48	2	2.01	85.00	0.10	0.10
78: Dunite CR21-104 365-375	15-Jul-22	9.36	2	1.99	115.00	0.10	0.10
79: Gabbro CR21-GT-07 315-325	15-Jul-22	9.11	4	2.03	85.00	0.10	0.10
80: Gabbro CR21-GT-07 360-370	15-Jul-22	9.30	3	2.00	30.00	0.10	0.10
81: Gabbro CR21-GT-07 400-410	15-Jul-22	9.33	2	2.03	20.00	0.10	0.10
82: Gabbro CR21-GT-07 420-430	15-Jul-22	8.84	4	1.99	115.00	0.10	0.10
83: Gabbro CR21-GT-07 440-450	15-Jul-22	9.33	3	1.97	20.00	0.10	0.10
84: Basalt CR21-GT-07 510-520	15-Jul-22	9.69	4	2.00	55.00	0.10	0.10
85: Peridotite CR22-197 130-140	15-Jul-22	9.42	3	1.99	30.00	0.10	0.10
86: Pyroxenite CR20-37 420-430	15-Jul-22	9.23	2	2.02	20.00	0.10	0.10
87: Basalt CR21-GT-02 40-50	15-Jul-22	9.63	4	2.00	40.00	0.10	0.10

Sample ID	Vol NaOH to pH=8.3 mL	Final pH no unit	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	S %
1: Analysis Start Date	22-Sep-22	22-Sep-22	22-Sep-22	26-Sep-22	26-Sep-22	26-Sep-22	15-Sep-22
2: Analysis Start Time	16:10	16:10	16:10	10:48	10:48	10:49	09:58
3: Analysis Completed Date	26-Sep-22	26-Sep-22	26-Sep-22	26-Sep-22	26-Sep-22	26-Sep-22	22-Sep-22
4: Analysis Completed Time	10:48	10:48	10:48	10:49	10:49	10:49	16:42
5: Basalt CR21-GT-08 75-85	15.40	1.47	36.9	1.25	35.6	29.5	< 0.005
6: Basalt CR21-GT-08 115-125	15.71	1.46	35.2	1.25	34.0	28.2	0.007
7: Basalt CR21-GT-08 175-185	16.56	1.66	73.3	1.25	72.0	58.6	0.006
8: Basalt CR21-GT-08 250-260	17.11	1.62	76.1	1.25	74.8	60.9	< 0.005
9: Basalt CR21-GT-08 325-335	40.41	1.66	162	163	-1.22	0.99	5.45
10: Basalt CR21-GT-08 400-410	37.50	1.67	180	5.94	174	30.3	0.239
11: Basalt CR21-GT-08 450-460	49.81	1.55	169	1.25	168	135	0.018
12: Basalt CR21-GT-08 500-510	58.92	1.53	162	1.25	161	130	0.054
13: Basalt CR21-GT-09A 80-90	22.38	1.65	112	1.25	111	89.4	0.007
14: Basalt CR21-GT-09A 110-120	23.43	1.40	42.1	1.25	40.8	33.7	0.005
15: Basalt CR21-GT-09A 140-150	18.00	1.66	88.1	1.25	86.8	70.5	0.006
16: Basalt CR21-GT-09B 80-90	14.33	1.64	63.5	1.25	62.2	50.8	0.007
17: Basalt CR21-GT-09B 140-150	14.50	1.65	63.7	1.25	62.4	51.0	< 0.005
18: Basalt CR21-GT-09B 200-210	23.19	1.65	133	1.25	132	106	0.007
19: Basalt CR21-GT-09B 250-260	17.10	1.54	57.8	1.25	56.6	46.2	0.005
20: Basalt CR21-GT-09B 300-310	17.27	1.65	56.0	1.25	54.8	44.8	0.005
21: Basalt CR21-GT-09B 350-360	54.66	1.75	134	2.19	132	61.2	0.117
22: Basalt CR21-GT-09B 470-480	39.05	1.61	93.9	1.56	92.3	60.1	0.092
23: Basalt CR21-GT-09B 490-500	33.84	1.69	136	1.25	134	109	0.060
24: Basalt CR22-GT-01C 140-150	24.36	1.81	186	8.12	178	22.9	0.304
25: Basalt CR22-GT-01C 180-190	12.04	1.77	45.9	1.25	44.6	36.7	0.006
26: Basalt CR22-GT-01C 220-230	24.20	1.52	70.6	1.25	69.4	56.5	0.005
27: Basalt CR22-GT-01C 270-280	12.41	1.67	40.9	1.25	39.6	32.7	0.006
28: Basalt CR22-GT-01C 300-310	17.46	1.51	31.7	1.25	30.4	25.4	0.006



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

LR Report : CA19125-AUG22

Sample ID	Vol NaOH to pH=8.3 mL	Final pH no unit t	NP CaCO ₃ /1000 t	AP CaCO ₃ /1000 t	Net NP CaCO ₃ /1000 t	NP/AP ratio	S %
29: Basalt CR22-GT-11 100-110	8.94	1.83	27.5	1.25	26.2	22.0	0.074
30: Basalt CR22-GT-11 175-185	15.65	1.45	35.7	1.88	33.8	19.0	0.114
31: Basalt CR22-GT-11 300-310	8.95	1.48	27.9	1.25	26.6	22.3	0.016
32: Basalt CR22-GT-11 440-450	13.07	1.58	44.2	1.25	43.0	35.4	0.013
33: Gabbro CR22-GT-15 50-60	15.61	1.15	10.8	1.25	9.55	8.64	0.027
34: Gabbro CR22-GT-15 70-80	16.75	1.09	8.0	1.25	6.75	6.40	0.020
35: Gabbro CR22-GT-15 95-105	14.61	1.06	13.5	1.25	12.2	10.8	0.043
36: Gabbro CR22-GT-15 310-320	15.65	1.14	10.7	1.25	9.45	8.56	0.029
37: Gabbro CR22-GT-15 550-560	17.53	1.04	6.2	1.25	4.95	4.96	0.047
38: Basalt CR22-GT-22 60-70	11.85	1.76	79.4	1.25	78.2	63.5	0.006
39: Basalt CR22-GT-22 150-160	21.80	1.72	188	1.25	187	151	0.006
40: Basalt CR22-GT-22 250-260	32.10	1.83	167	1.25	166	133	0.053
41: Basalt CR22-GT-22 500-510	53.80	1.57	190	1.25	189	152	0.019
42: Basalt CR21-GT-02 200-210	22.30	1.71	118	1.25	116	94.0	0.027
43: Basalt CR21-GT-02 250-260	7.82	1.79	30.8	1.25	29.6	24.6	0.011
44: Basalt CR21-GT-02 300-310	18.72	1.50	53.5	1.25	52.2	42.8	< 0.005
45: Basalt CR21-GT-02 340-350	13.57	1.64	41.3	1.25	40.0	33.0	0.016
46: Basalt CR21-GT-02 370-380	12.85	1.59	43.1	1.25	41.8	34.5	0.009
47: Basalt CR21-GT-02 560-570	11.35	1.77	71.6	1.25	70.4	57.3	< 0.005
48: Basalt CR21-GT-02 600-610	21.15	1.82	158	1.25	157	126	0.006
49: Basalt CR22-GT-10 280-290	8.87	1.81	28.0	1.25	26.8	22.4	0.005
50: Basalt CR22-GT-10 320-330	13.05	1.76	67.0	1.25	65.8	53.6	0.031
51: Basalt CR22-GT-10 480-490	13.69	1.57	40.6	3.75	36.8	10.8	0.163
52: Basalt CR22-GT-10 550-560	13.26	1.42	16.9	1.25	15.6	13.5	0.011
53: Basalt CR21-GT-01 100-110	36.92	1.58	180	5.31	175	33.9	0.209
54: Basalt CR21-GT-01 120-130	24.69	1.62	100	1.25	99.0	80.2	0.053
55: Basalt CR21-GT-01 160-170	24.72	1.68	113	2.19	110	51.5	0.093
56: Basalt CR21-GT-01 180-190	21.44	1.73	109	3.44	106	31.8	0.153
57: Basalt CR21-GT-01 225-235	28.28	1.55	65.0	7.81	57.2	8.32	0.303
58: Basalt CR21-GT-01A 95-105	31.58	1.62	172	1.25	171	138	0.027
59: Basalt CR21-GT-02 70-80	26.78	1.59	106	1.25	105	85.1	< 0.005
60: Basalt CR21-GT-02 100-110	27.94	1.62	154	1.25	153	124	0.005
61: Basalt CR21-GT-03 60-70	15.72	1.83	123	1.25	122	98.6	0.013
62: Basalt CR21-GT-03 85-95	19.61	1.50	51.0	2.81	48.2	18.1	0.133
63: Basalt CR21-GT-03 115-125	13.68	1.50	15.8	3.12	12.7	5.06	0.133
64: Basalt CR21-GT-03 155-165	17.46	1.60	55.8	1.25	54.6	44.6	0.065
65: Basalt CR21-GT-03 200-210	11.16	1.61	22.2	1.25	21.0	17.8	0.006
66: Basalt CR21-GT-03 300-310	13.26	1.51	16.9	4.69	12.2	3.61	0.186
67: Basalt CR21-GT-03 400-410	14.55	1.29	13.6	1.25	12.4	10.9	< 0.005
68: Basalt CR21-GT-03 510-520	12.25	1.58	44.8	1.25	43.6	35.8	0.026
69: Basalt CR21-GT-03 540-550	12.30	1.88	69.6	2.19	67.4	31.8	0.116
70: Pyroxenite CR21-GT-04B 275-285	17.25	1.17	6.8	1.25	5.55	5.44	0.056
71: Gabbro CR21-GT-04B 310-320	17.10	1.22	7.2	1.25	5.95	5.76	0.018
72: Gabbro CR21-GT-04B 350-360	17.07	1.22	7.4	1.25	6.15	5.92	0.051
73: Gabbro CR21-GT-04B 380-390	18.04	1.16	4.9	1.25	3.65	3.92	0.048

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343
LR Report : CA19125-AUG22

Sample ID	Vol NaOH to pH=8.3 mL	Final pH no unit t	NP CaCO ₃ /1000 t	AP CaCO ₃ /1000 t	Net NP CaCO ₃ /1000 t	NP/AP ratio	S %
74: Gabbro CR21-GT-04B 550-560	11.63	1.56	39.6	1.25	38.4	31.7	0.039
75: Gabbro CR21-GT-04B 580-590	11.91	1.43	20.1	1.25	18.8	16.1	0.024
76: Basalt CR22-197 105-115	11.55	1.70	45.9	1.25	44.6	36.7	< 0.005
77: Peridotite CR21-102 80-90	29.78	1.55	137	1.25	136	110	0.027
78: Dunite CR21-104 365-375	43.92	1.60	179	1.25	177	143	0.015
79: Gabbro CR21-GT-07 315-325	21.39	1.76	157	1.25	155	125	< 0.005
80: Gabbro CR21-GT-07 360-370	13.55	1.58	41.1	1.25	39.8	32.9	0.016
81: Gabbro CR21-GT-07 400-410	15.96	1.27	9.9	1.25	8.65	7.92	0.023
82: Gabbro CR21-GT-07 420-430	34.87	1.62	201	1.25	200	161	0.006
83: Gabbro CR21-GT-07 440-450	7.39	1.74	32.0	1.25	30.8	25.6	0.013
84: Basalt CR21-GT-07 510-520	24.31	1.54	76.7	1.25	75.4	61.4	0.037
85: Peridotite CR22-197 130-140	11.82	1.53	45.7	1.25	44.4	36.6	0.010
86: Pyroxenite CR20-37 420-430	13.26	1.38	16.7	1.25	15.4	13.4	0.039
87: Basalt CR21-GT-02 40-50	15.76	1.61	60.6	1.25	59.4	48.5	< 0.005

Sample ID	Acid Leachable SO ₄ -S %	Sulphide %	C %	CO ₃ (HCl) %	Weight g
1: Analysis Start Date	22-Sep-22	22-Sep-22	15-Sep-22	12-Sep-22	31-Aug-22
2: Analysis Start Time	16:41	10:08	09:58	08:31	---
3: Analysis Completed Date	22-Sep-22	22-Sep-22	21-Sep-22	21-Sep-22	31-Aug-22
4: Analysis Completed Time	16:42	16:42	16:26	16:26	---
5: Basalt CR21-GT-08 75-85	<0.04	< 0.04	0.402	1.84	11948
6: Basalt CR21-GT-08 115-125	<0.04	< 0.04	0.381	1.76	11550
7: Basalt CR21-GT-08 175-185	<0.04	< 0.04	0.865	4.10	12020
8: Basalt CR21-GT-08 250-260	<0.04	< 0.04	0.893	4.26	10958
9: Basalt CR21-GT-08 325-335	0.23	5.22	2.38	11.6	12329
10: Basalt CR21-GT-08 400-410	0.05	0.19	2.36	11.4	12152
11: Basalt CR21-GT-08 450-460	<0.04	< 0.04	2.07	10.1	11540
12: Basalt CR21-GT-08 500-510	0.05	< 0.04	2.25	10.7	12349
13: Basalt CR21-GT-09A 80-90	<0.04	< 0.04	1.35	6.49	11096
14: Basalt CR21-GT-09A 110-120	<0.04	< 0.04	0.468	2.18	11205
15: Basalt CR21-GT-09A 140-150	<0.04	< 0.04	1.04	5.05	12049
16: Basalt CR21-GT-09B 80-90	<0.04	< 0.04	0.753	3.59	12259
17: Basalt CR21-GT-09B 140-150	<0.04	< 0.04	0.749	3.58	11962
18: Basalt CR21-GT-09B 200-210	<0.04	< 0.04	1.57	7.59	14810
19: Basalt CR21-GT-09B 250-260	<0.04	< 0.04	0.688	3.24	12386
20: Basalt CR21-GT-09B 300-310	<0.04	< 0.04	0.674	3.20	13143
21: Basalt CR21-GT-09B 350-360	0.05	0.07	2.23	11.0	12741
22: Basalt CR21-GT-09B 470-480	0.04	0.05	1.28	6.24	12804
23: Basalt CR21-GT-09B 490-500	0.06	< 0.04	1.76	8.63	11949
24: Basalt CR22-GT-01C 140-150	0.04	0.26	2.24	10.9	11065
25: Basalt CR22-GT-01C 180-190	<0.04	< 0.04	0.529	2.49	12482
26: Basalt CR22-GT-01C 220-230	<0.04	< 0.04	0.869	4.12	12040

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek**Project : PO#20446343****LR Report : CA19125-AUG22**

Sample ID	Acid Leachable SO ₄ -S %	Sulphide %	C %	CO ₃ (HCl) %	Weight g
27: Basalt CR22-GT-01C 270-280	<0.04	< 0.04	0.499	2.36	11810
28: Basalt CR22-GT-01C 300-310	<0.04	< 0.04	0.342	1.58	12343
29: Basalt CR22-GT-11 100-110	0.07	< 0.04	0.351	1.62	12598
30: Basalt CR22-GT-11 175-185	0.05	0.06	0.434	2.03	11548
31: Basalt CR22-GT-11 300-310	<0.04	< 0.04	0.339	1.47	12342
32: Basalt CR22-GT-11 440-450	<0.04	< 0.04	0.521	2.44	12174
33: Gabbro CR22-GT-15 50-60	<0.04	< 0.04	0.084	0.23	13369
34: Gabbro CR22-GT-15 70-80	<0.04	< 0.04	0.043	0.05	13172
35: Gabbro CR22-GT-15 95-105	0.04	< 0.04	0.120	0.38	14135
36: Gabbro CR22-GT-15 310-320	<0.04	< 0.04	0.072	0.16	12144
37: Gabbro CR22-GT-15 550-560	0.05	< 0.04	0.032	< 0.04	13508
38: Basalt CR22-GT-22 60-70	<0.04	< 0.04	0.868	4.16	12348
39: Basalt CR22-GT-22 150-160	<0.04	< 0.04	1.73	8.48	11888
40: Basalt CR22-GT-22 250-260	0.05	< 0.04	2.32	11.3	12849
41: Basalt CR22-GT-22 500-510	<0.04	< 0.04	2.50	12.3	11923
42: Basalt CR21-GT-02 200-210	<0.04	< 0.04	1.48	7.16	8067
43: Basalt CR21-GT-02 250-260	<0.04	< 0.04	0.366	1.68	7562
44: Basalt CR21-GT-02 300-310	<0.04	< 0.04	0.623	2.96	9526
45: Basalt CR21-GT-02 340-350	<0.04	< 0.04	0.496	2.32	7719
46: Basalt CR21-GT-02 370-380	<0.04	< 0.04	0.500	2.33	9729
47: Basalt CR21-GT-02 560-570	<0.04	< 0.04	0.843	4.01	8252
48: Basalt CR21-GT-02 600-610	<0.04	< 0.04	1.81	8.88	5994
49: Basalt CR22-GT-10 280-290	<0.04	< 0.04	0.336	1.35	14228
50: Basalt CR22-GT-10 320-330	<0.04	< 0.04	0.776	3.70	7696
51: Basalt CR22-GT-10 480-490	<0.04	0.12	0.442	1.99	11227
52: Basalt CR22-GT-10 550-560	<0.04	< 0.04	0.181	0.76	14756
53: Basalt CR21-GT-01 100-110	< 0.04	0.17	2.05	9.98	8839
54: Basalt CR21-GT-01 120-130	< 0.04	0.04	1.15	5.52	11340
55: Basalt CR21-GT-01 160-170	< 0.04	0.07	1.29	6.21	10302
56: Basalt CR21-GT-01 180-190	0.04	0.11	1.27	6.00	9848
57: Basalt CR21-GT-01 225-235	0.05	0.25	0.654	3.08	11860
58: Basalt CR21-GT-01A 95-105	<0.04	< 0.04	1.95	9.54	9962
59: Basalt CR21-GT-02 70-80	<0.04	< 0.04	1.24	5.97	9455
60: Basalt CR21-GT-02 100-110	<0.04	< 0.04	1.83	8.99	10667
61: Basalt CR21-GT-03 60-70	<0.04	< 0.04	1.41	6.87	10788
62: Basalt CR21-GT-03 85-95	0.04	0.09	0.556	2.64	11730
63: Basalt CR21-GT-03 115-125	< 0.04	0.10	0.160	0.65	10174
64: Basalt CR21-GT-03 155-165	<0.04	0.04	0.634	3.04	10717
65: Basalt CR21-GT-03 200-210	<0.04	< 0.04	0.226	1.02	11327
66: Basalt CR21-GT-03 300-310	< 0.04	0.15	0.134	0.53	10232
67: Basalt CR21-GT-03 400-410	<0.04	< 0.04	0.136	0.54	11301
68: Basalt CR21-GT-03 510-520	<0.04	< 0.04	0.609	2.31	11181
69: Basalt CR21-GT-03 540-550	0.05	0.07	0.846	3.61	11307
70: Pyroxenite CR21-GT-04B 275-285	0.06	< 0.04	0.033	< 0.04	14076
71: Gabbro CR21-GT-04B 310-320	<0.04	< 0.04	0.025	< 0.04	13713

Sample ID	Acid Leachable SO ₄ -S %	Sulphide %	C %	CO ₃ (HCl) %	Weight g
72: Gabbro CR21-GT-04B 350-360	0.05	< 0.04	0.039	< 0.04	14170
73: Gabbro CR21-GT-04B 380-390	0.05	< 0.04	0.026	< 0.04	12715
74: Gabbro CR21-GT-04B 550-560	<0.04	< 0.04	0.422	1.95	13255
75: Gabbro CR21-GT-04B 580-590	<0.04	< 0.04	0.213	0.89	14451
76: Basalt CR22-197 105-115	<0.04	< 0.04	0.539	2.49	7300
77: Peridotite CR21-102 80-90	<0.04	< 0.04	0.186	0.75	7627
78: Dunite CR21-104 365-375	<0.04	< 0.04	0.249	1.06	9408
79: Gabbro CR21-GT-07 315-325	<0.04	< 0.04	1.75	8.59	13820
80: Gabbro CR21-GT-07 360-370	<0.04	< 0.04	0.435	1.97	11956
81: Gabbro CR21-GT-07 400-410	<0.04	< 0.04	0.082	0.24	12766
82: Gabbro CR21-GT-07 420-430	<0.04	< 0.04	2.21	10.8	12679
83: Gabbro CR21-GT-07 440-450	<0.04	< 0.04	0.348	1.60	14566
84: Basalt CR21-GT-07 510-520	<0.04	< 0.04	0.814	3.90	11591
85: Peridotite CR22-197 130-140	<0.04	< 0.04	0.341	1.51	6409
86: Pyroxenite CR20-37 420-430	<0.04	< 0.04	0.116	0.42	6746
87: Basalt CR21-GT-02 40-50	<0.04	< 0.04	0.815	3.11	9259

*NP (Neutralization Potential)

= $50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})$

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur $\times$ 31.25

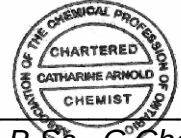
*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.04 will be calculated using a 0.04 value.

Revised report with sample ID corrected.



 Catharine Arnold, B.Sc., C.Chem
 Project Specialist,
 Environment, Health & Safety

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

28-September-2022

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Date Rec. : 19 August 2022
LR Report: CA19130-AUG22
Reference: 20446363 - Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Paste pH no unit	Fizz Rate no unit	Sample weight g	HCl_add mL	HCl Normality
1: Analysis Start Date		30-Aug-22	30-Aug-22	30-Aug-22	31-Aug-22	30-Aug-22
2: Analysis Start Time		08:45	08:45	08:45	06:45	08:45
3: Analysis Completed Date		31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22
4: Analysis Completed Time		14:08	14:08	14:08	14:08	14:08
5: Peridotite CR21-177 33-43	15-Jul-22	9.32	3	1.99	50.00	0.10
6: Basalt CR19-09 530-540	15-Jul-22	9.40	3	1.98	70.00	0.10
7: Gabbro CR19-29 155-165	15-Jul-22	9.00	4	1.99	90.00	0.10
8: Peridotite CR20-34 451-461	15-Jul-22	8.90	2	2.02	45.00	0.10
9: Peridotite CR20-34 555-565	15-Jul-22	9.41	1	2.00	20.00	0.10
10: Peridotite CR20-34 575-585	15-Jul-22	9.45	1	1.99	20.00	0.10
11: Peridotite CR20-34 595-605	15-Jul-22	9.52	1	2.01	20.00	0.10
12: Peridotite CR20-36 380-390	15-Jul-22	9.41	1	2.02	20.00	0.10
13: Peridotite CR20-36 405-415	15-Jul-22	9.54	1	2.02	20.00	0.10
14: Peridotite CR20-37 340-350	15-Jul-22	9.49	2	2.00	30.00	0.10
15: Peridotite CR20-37 375-385	15-Jul-22	9.44	3	2.01	35.00	0.10
16: Peridotite CR20-67 170-180	15-Jul-22	9.41	3	2.00	35.00	0.10
17: Peridotite CR20-73 100-110	15-Jul-22	9.45	1	2.02	20.00	0.10
18: Peridotite CR20-78 180-190	15-Jul-22	9.42	3	2.03	60.00	0.10
19: Peridotite CR20-78 510-520	15-Jul-22	9.31	1	2.00	55.00	0.10
20: Dunite CR21-162 90-100	15-Jul-22	9.32	3	2.00	170.00	0.10
21: Dunite CR21-162 35-45	15-Jul-22	9.45	3	2.00	120.00	0.10
22: Dunite CR21-162 80-90	15-Jul-22	9.21	3	2.02	175.00	0.10
23: Dunite CR21-162 190-200	15-Jul-22	9.23	2	2.03	160.00	0.10
24: Peridotite CR21-171 54-64	15-Jul-22	9.50	3	2.00	90.00	0.10
25: Peridotite CR21-171 150-160	15-Jul-22	9.48	2	2.01	85.00	0.10
26: Peridotite CR21-177 550-560	15-Jul-22	9.33	2	2.03	55.00	0.10
27: Peridotite CR21-180 40-50	15-Jul-22	9.31	2	2.00	40.00	0.10

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - K0L 2H0

Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA19130-AUG22

Sample ID	Sample Date & Time	Paste pH no unit	Fizz Rate no unit	Sample weight g	HCl_add mL	HCl Normality
28: Peridotite CR21-96 80-90	15-Jul-22	9.21	2	2.00	30.00	0.10
29: Dunite CR22-196B 100-110	15-Jul-22	9.63	2	2.01	100.00	0.10
30: Dunite CR22-196B 45-55	15-Jul-22	9.77	2	2.00	125.00	0.10
31: Basalt CR22-197 90-100	15-Jul-22	10.01	1	2.02	20.00	0.10
32: Peridotite CR22-197 325-335	15-Jul-22	9.05	3	2.00	125.00	0.10
33: Pyroxenite CR22-197 342-352	15-Jul-22	9.15	3	2.02	45.00	0.10
34: Basalt CR22-197 55-65	15-Jul-22	9.89	1	2.01	20.00	0.10
35: Pyroxenite CR22-200 75-85	15-Jul-22	9.19	2	2.02	20.00	0.10
36: Pyroxenite CR22-200 350-360	15-Jul-22	9.37	2	2.01	30.00	0.10

Sample ID	NaOH Normality	Vol NaOH to pH=8.3 mL	Final pH no unit	NP tt CaCO3/1000 t	AP CaCO3/1000 t	Net NP CaCO3/1000 t
1: Analysis Start Date	30-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22
2: Analysis Start Time	08:45	08:45	08:45	08:45	08:45	08:45
3: Analysis Completed Date	31-Aug-22	31-Aug-22	31-Aug-22	31-Aug-22	12-Sep-22	12-Sep-22
4: Analysis Completed Time	14:08	14:08	14:08	14:08	14:12	14:12
5: Peridotite CR21-177 33-43	0.10	16.52	1.67	84.1	1.25	82.8
6: Basalt CR19-09 530-540	0.10	35.50	1.50	87.1	1.25	85.8
7: Gabbro CR19-29 155-165	0.10	28.81	1.65	154	1.25	152
8: Peridotite CR20-34 451-461	0.10	18.35	1.53	66.0	1.25	64.8
9: Peridotite CR20-34 555-565	0.10	8.97	1.86	27.6	1.25	26.4
10: Peridotite CR20-34 575-585	0.10	8.03	1.78	30.1	1.25	28.8
11: Peridotite CR20-34 595-605	0.10	8.52	1.77	28.6	1.25	27.4
12: Peridotite CR20-36 380-390	0.10	9.69	1.94	25.5	1.25	24.2
13: Peridotite CR20-36 405-415	0.10	7.59	1.90	30.7	1.25	29.4
14: Peridotite CR20-37 340-350	0.10	11.22	1.73	47.0	1.56	45.4
15: Peridotite CR20-37 375-385	0.10	11.19	1.83	59.2	1.25	58.0
16: Peridotite CR20-67 170-180	0.10	12.29	1.76	56.8	1.25	55.6
17: Peridotite CR20-73 100-110	0.10	8.61	1.90	28.2	1.25	27.0
18: Peridotite CR20-78 180-190	0.10	17.00	1.82	106	1.25	105
19: Peridotite CR20-78 510-520	0.10	20.47	1.56	86.3	1.25	85.0
20: Dunite CR21-162 90-100	0.10	56.69	1.69	283	1.88	281
21: Dunite CR21-162 35-45	0.10	30.35	1.93	224	1.25	223
22: Dunite CR21-162 80-90	0.10	56.67	1.72	293	2.50	290
23: Dunite CR21-162 190-200	0.10	56.34	1.69	255	1.56	254
24: Peridotite CR21-171 54-64	0.10	32.61	1.66	144	1.25	142
25: Peridotite CR21-171 150-160	0.10	26.12	1.71	146	1.25	145
26: Peridotite CR21-177 550-560	0.10	22.15	1.52	80.9	1.56	79.3
27: Peridotite CR21-180 40-50	0.10	15.32	1.54	61.7	1.25	60.4
28: Peridotite CR21-96 80-90	0.10	11.66	1.53	45.8	1.25	44.6

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA19130-AUG22

Sample ID	NaOH Normality	Vol NaOH to pH=8.3 mL	Final pH no unit	NP tt CaCO3/1000 t	AP CaCO3/1000 t	Net NP CaCO3/1000 t
29: Dunite CR22-196B 100-110	0.10	16.12	1.94	209	2.50	206
30: Dunite CR22-196B 45-55	0.10	35.81	1.61	223	2.19	221
31: Basalt CR22-197 90-100	0.10	16.05	1.47	9.8	1.25	8.55
32: Peridotite CR22-197 325-335	0.10	29.93	1.69	238	1.25	236
33: Pyroxenite CR22-197 342-352	0.10	20.00	1.56	61.9	1.25	60.6
34: Basalt CR22-197 55-65	0.10	15.94	1.38	10.1	1.25	8.85
35: Pyroxenite CR22-200 75-85	0.10	14.86	1.41	12.7	1.25	11.4
36: Pyroxenite CR22-200 350-360	0.10	17.76	1.50	30.5	1.25	29.2

Sample ID	NP/AP ratio	S %	Acid Leachable SO4-S %	Sulphide %	C %	CO3 (HCl) %
1: Analysis Start Date	31-Aug-22	07-Sep-22	08-Sep-22	08-Sep-22	07-Sep-22	08-Sep-22
2: Analysis Start Time	08:45	15:29	18:23	18:23	15:29	16:19
3: Analysis Completed Date	12-Sep-22	09-Sep-22	09-Sep-22	09-Sep-22	09-Sep-22	09-Sep-22
4: Analysis Completed Time	14:12	10:32	10:32	10:32	10:30	10:30
5: Peridotite CR21-177 33-43	67.3	0.010	<0.04	< 0.04	0.595	2.78
6: Basalt CR19-09 530-540	69.7	0.005	<0.04	< 0.04	1.24	5.47
7: Gabbro CR19-29 155-165	123	< 0.005	<0.04	< 0.04	1.75	8.56
8: Peridotite CR20-34 451-461	52.8	0.027	<0.04	< 0.04	0.056	0.13
9: Peridotite CR20-34 555-565	22.1	0.060	0.06	0.04	0.041	< 0.04
10: Peridotite CR20-34 575-585	24.1	0.040	0.04	< 0.04	0.025	< 0.04
11: Peridotite CR20-34 595-605	22.9	0.038	<0.04	< 0.04	0.033	< 0.04
12: Peridotite CR20-36 380-390	20.4	0.071	<0.04	< 0.04	0.020	< 0.04
13: Peridotite CR20-36 405-415	24.6	0.038	0.04	< 0.04	0.066	0.16
14: Peridotite CR20-37 340-350	30.1	0.040	< 0.04	0.05	0.203	0.88
15: Peridotite CR20-37 375-385	47.4	0.025	< 0.04	< 0.04	0.397	1.84
16: Peridotite CR20-67 170-180	45.4	0.032	< 0.04	< 0.04	0.353	1.60
17: Peridotite CR20-73 100-110	22.6	0.044	< 0.04	0.04	0.031	0.04
18: Peridotite CR20-78 180-190	84.7	0.010	< 0.04	< 0.04	0.246	1.06
19: Peridotite CR20-78 510-520	69.0	0.040	0.04	< 0.04	2.99	13.3
20: Dunite CR21-162 90-100	151	0.082	< 0.04	0.06	0.265	1.20
21: Dunite CR21-162 35-45	179	0.041	0.04	< 0.04	0.330	1.52
22: Dunite CR21-162 80-90	117	0.100	< 0.04	0.08	0.292	1.35
23: Dunite CR21-162 190-200	163	0.049	< 0.04	0.05	0.131	0.55
24: Peridotite CR21-171 54-64	115	0.006	< 0.04	< 0.04	0.132	0.55
25: Peridotite CR21-171 150-160	117	0.015	< 0.04	< 0.04	0.178	0.78
26: Peridotite CR21-177 550-560	51.8	0.064	< 0.04	0.05	2.70	12.2
27: Peridotite CR21-180 40-50	49.4	0.007	< 0.04	< 0.04	0.093	0.36
28: Peridotite CR21-96 80-90	36.6	0.031	< 0.04	< 0.04	0.107	0.43
29: Dunite CR22-196B 100-110	83.5	0.116	< 0.04	0.08	0.103	0.32

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA19130-AUG22

Sample ID	NP/AP ratio	S %	Acid Leachable SO ₄ -S %	Sulphide %	C %	CO ₃ (HCl) %
30: Dunite CR22-196B 45-55	102	0.111	0.04	0.07	0.126	0.53
31: Basalt CR22-197 90-100	7.84	< 0.005	< 0.04	< 0.04	0.020	< 0.04
32: Peridotite CR22-197 325-335	190	0.034	< 0.04	< 0.04	1.98	9.78
33: Pyroxenite CR22-197 342-352	49.5	0.032	< 0.04	< 0.04	0.164	0.67
34: Basalt CR22-197 55-65	8.08	< 0.005	< 0.04	< 0.04	0.051	0.13
35: Pyroxenite CR22-200 75-85	10.2	0.005	< 0.04	< 0.04	0.102	< 0.04
36: Pyroxenite CR22-200 350-360	24.4	0.067	< 0.04	0.04	0.107	0.43

Sample ID	Weight g
1: Analysis Start Date	25-Aug-22
2: Analysis Start Time	---
3: Analysis Completed Date	25-Aug-22
4: Analysis Completed Time	---
5: Peridotite CR21-177 33-43	7800
6: Basalt CR19-09 530-540	8115
7: Gabbro CR19-29 155-165	12782
8: Peridotite CR20-34 451-461	7232
9: Peridotite CR20-34 555-565	7609
10: Peridotite CR20-34 575-585	7250
11: Peridotite CR20-34 595-605	7190
12: Peridotite CR20-36 380-390	6101
13: Peridotite CR20-36 405-415	5935
14: Peridotite CR20-37 340-350	7349
15: Peridotite CR20-37 375-385	7829
16: Peridotite CR20-67 170-180	7475
17: Peridotite CR20-73 100-110	5676
18: Peridotite CR20-78 180-190	9089
19: Peridotite CR20-78 510-520	10090
20: Dunite CR21-162 90-100	5775
21: Dunite CR21-162 35-45	5359
22: Dunite CR21-162 80-90	6257
23: Dunite CR21-162 190-200	6604
24: Peridotite CR21-171 54-64	8550
25: Peridotite CR21-171 150-160	8256
26: Peridotite CR21-177 550-560	10050
27: Peridotite CR21-180 40-50	7955
28: Peridotite CR21-96 80-90	11868
29: Dunite CR22-196B 100-110	8968
30: Dunite CR22-196B 45-55	8624

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA19130-AUG22

Sample ID	Weight g
31: Basalt CR22-197 90-100	11892
32: Peridotite CR22-197 325-335	7536
33: Pyroxenite CR22-197 342-352	7586
34: Basalt CR22-197 55-65	12304
35: Pyroxenite CR22-200 75-85	9573
36: Pyroxenite CR22-200 350-360	6938

*NP (Neutralization Potential)

$$= 50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})$$

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

*Net NP (Net Neutralization Potential) = NP-AP

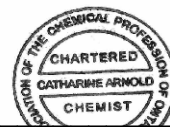
NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.04 will be calculated using a 0.04 value.

Revised report with sample ID corrected.

Catharine Arnold



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2HO
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

ABA - Modified Sobek

Project : PO#23590674

05-February-2024

Date Rec. : 07 November 2023

LR Report: CA19068-NOV23

Reference: Crawford Project - PO#23590674 (Set 1)

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: C00374709	6: C00374710	7: C00374711	8: C00374712	9: C00374713	10: C00374714	11: C00374718	12: C00374715
Sample Date & Time					26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Paste pH [no unit]	02-Feb-24	20:25	05-Feb-24	16:42	9.67	9.76	9.61	10.10	8.99	9.27	9.43	9.28
Fizz Rate [rating]	01-Feb-24	17:33	05-Feb-24	16:42	2	3	3	3	3	3	3	3
Sample weight [g]	31-Jan-24	17:01	05-Feb-24	16:42	2.07	1.97	1.98	1.96	1.98	1.97	1.96	1.95
HCl Added [mL]	02-Feb-24	16:25	05-Feb-24	16:42	37.40	35.20	48.20	40.90	102.80	59.90	97.60	104.70
HCl [Normality]	01-Feb-24	17:49	05-Feb-24	16:42	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	01-Feb-24	17:49	05-Feb-24	16:42	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	02-Feb-24	21:39	05-Feb-24	16:42	19.88	18.94	19.74	15.88	34.53	14.02	39.49	66.72
Final pH [no unit]	02-Feb-24	17:54	05-Feb-24	16:42	1.72	1.70	1.73	1.65	1.72	1.71	1.70	1.71
NP [t CaCO ₃ /1000 t]	02-Feb-24	21:39	05-Feb-24	16:42	42.3	41.3	71.9	63.8	172	116	148	97.4
AP [t CaCO ₃ /1000 t]	05-Feb-24	16:43	05-Feb-24	16:43	1.25	1.56	1.25	1.25	1.25	1.88	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	05-Feb-24	16:43	05-Feb-24	16:43	41.0	39.7	70.6	62.6	171	115	147	96.2
NP/AP [ratio]	05-Feb-24	16:43	05-Feb-24	16:43	33.8	26.4	57.5	51.0	138	62.1	119	77.9
Sulphur (total) [%]	15-Jan-24	06:01	16-Jan-24	09:21	0.061	0.071	0.011	< 0.005	0.020	0.103	0.025	0.061
Acid Leachable SO ₄ -S [%]	16-Jan-24	09:21	16-Jan-24	09:21	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.04	< 0.04	0.06
Sulphide [%]	15-Jan-24	17:16	16-Jan-24	09:21	0.04	0.05	< 0.04	< 0.04	< 0.04	0.06	< 0.04	< 0.04
Carbon (total) [%]	15-Jan-24	06:01	16-Jan-24	09:21	0.122	0.147	0.862	0.904	0.212	0.125	0.080	0.536
Carbonate (HCl) as %CO ₃ [%]	16-Jan-24	12:03	16-Jan-24	12:06	0.63	0.71	4.35	4.13	1.06	0.57	0.46	2.69

Analysis	13: C00374716	14: C00374717	15: C00374719	16: C00374720	17: C00374723	18: C00374724	19: C00374725	20: C00374726	21: C00374727	22: C00374728	23: C00374729	24: C00374731
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Paste pH [no unit]	9.01	9.21	9.87	9.40	9.30	9.47	9.41	9.84	9.85	9.70	9.60	9.78
Fizz Rate [rating]	3	3	3	2	3	3	3	3	3	3	3	2
Sample weight [g]	1.97	2.06	1.96	1.98	1.99	1.98	1.97	1.99	1.97	1.97	2.02	1.98
HCl Added [mL]	86.80	80.20	39.20	25.90	143.40	58.00	47.40	39.30	40.00	25.00	163.50	33.50
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	33.52	35.71	27.59	20.34	40.55	31.29	17.17	13.37	13.95	11.42	25.46	16.70
Final pH [no unit]	1.73	1.66	1.72	1.61	1.74	1.50	1.55	1.92	1.66	1.60	1.93	1.93
NP [t CaCO ₃ /1000 t]	135	108	29.6	14.0	258	67.4	76.7	65.2	66.1	34.5	342	42.4
AP [t CaCO ₃ /1000 t]	1.25	1.25	6.25	21.2	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	134	107	23.4	-7.25	257	66.2	75.4	64.0	64.8	33.2	340	41.2
NP/AP [ratio]	108	86.4	4.74	0.66	207	53.9	61.4	52.2	52.9	27.6	273	33.9
Sulphur (total) [%]	0.034	0.070	0.346	0.811	0.019	0.027	0.030	< 0.005	0.008	0.009	0.026	0.059
Acid Leachable SO ₄ -S [%]	< 0.04	< 0.04	0.15	0.13	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.06
Sulphide [%]	0.04	0.04	0.20	0.68	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	0.516	0.757	0.143	0.040	0.297	0.181	0.250	0.885	0.728	0.320	0.913	0.119
Carbonate (HCl) as %CO ₃ [%]	2.58	3.77	0.68	< 0.04	1.49	0.93	1.27	4.35	3.66	1.61	4.54	0.55

Analysis	25: C00374734	26: C00374735	27: C00374737	28: C00374738	29: C00374739	30: C00374740	31: C00374741	32: C00374742	33: C00374743	34: C00374744	35: C00374745	36: C00374746
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Paste pH [no unit]	10.18	10.32	9.27	9.66	9.72	9.76	9.63	9.58	9.64	9.53	9.66	9.85
Fizz Rate [rating]	3	3	3	3	2	2	2	3	2	2	2	3
Sample weight [g]	2.00	1.95	1.97	2.00	2.04	1.97	1.99	1.98	2.02	2.00	1.96	1.96
HCl Added [mL]	38.10	20.00	35.70	20.00	20.00	20.00	20.00	27.70	20.00	58.10	20.00	64.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	15.84	6.80	15.00	9.33	16.81	16.58	14.60	9.41	15.42	13.35	15.78	27.15
Final pH [no unit]	1.55	1.84	1.58	1.77	1.13	1.11	1.26	1.83	1.11	1.62	1.26	1.53
NP [t CaCO ₃ /1000 t]	55.6	33.8	52.5	26.7	7.8	8.7	13.6	46.2	11.3	112	10.8	94.0
AP [t CaCO ₃ /1000 t]	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	54.4	32.6	51.2	25.4	6.55	7.45	12.4	45.0	10.0	111	9.55	92.8
NP/AP [ratio]	44.5	27.0	42.0	21.4	6.24	6.96	10.9	37.0	9.04	89.5	8.64	75.2
Sulphur (total) [%]	< 0.005	< 0.005	< 0.005	0.009	0.031	0.027	0.006	0.008	< 0.005	0.025	0.014	< 0.005
Acid Leachable SO ₄ -S [%]	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04

Analysis	25: C00374734	26: C00374735	27: C00374737	28: C00374738	29: C00374739	30: C00374740	31: C00374741	32: C00374742	33: C00374743	34: C00374744	35: C00374745	36: C00374746
Sulphide [%]	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	0.670	0.421	0.864	0.280	0.019	0.030	0.099	0.560	0.054	0.113	0.019	1.17
Carbonate (HCl) as %CO3 [%]	3.27	1.83	3.22	1.42	< 0.04	< 0.04	0.54	2.73	0.30	0.57	< 0.04	5.80

Analysis	37: C00374747	38: C00374749	39: C00374751	40: C00374752	41: C00374753	42: C00374754	43: C00374755	44: C00374756
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Paste pH [no unit]	10.31	9.19	9.49	9.92	9.48	9.91	9.60	9.19
Fizz Rate [rating]	3	2	2	2	2	2	2	3
Sample weight [g]	2.03	1.98	2.04	1.97	1.95	2.04	2.04	2.05
HCl Added [mL]	27.90	26.10	51.30	25.00	20.00	20.00	20.00	25.60
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	13.61	15.86	17.58	18.39	14.86	12.39	14.70	13.86
Final pH [no unit]	1.55	1.58	1.56	1.53	1.32	1.63	1.29	1.78
NP [t CaCO3/1000 t]	35.2	25.9	82.7	16.8	13.2	18.6	13.0	28.6
AP [t CaCO3/1000 t]	1.25	1.25	3.44	2.81	1.25	1.25	1.25	1.25
Net NP [t CaCO3/1000 t]	34.0	24.6	79.3	14.0	12.0	17.4	11.8	27.4
NP/AP [ratio]	28.2	20.7	24.1	5.97	10.6	14.9	10.4	22.9
Sulphur (total) [%]	< 0.005	0.067	0.143	0.158	0.009	0.025	0.021	< 0.005
Acid Leachable SO4-S [%]	<0.04	0.07	< 0.04	0.07	<0.04	<0.04	<0.04	<0.04
Sulphide [%]	< 0.04	0.04	0.11	0.09	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	0.617	0.191	4.30	0.090	0.023	0.108	0.031	0.367
Carbonate (HCl) as %CO3 [%]	2.57	0.78	18.6	0.36	< 0.04	0.50	< 0.04	1.68

*NP (Neutralization Potential)
= 50 x (N of HCL x Total HCL added - N NaOH x NaOH added)

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.04 will be calculated using a 0.04 value.



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

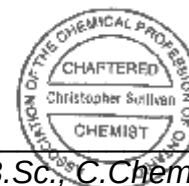
Project : PO#23590674

LR Report : CA19068-NOV23

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acid Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-019	ASTM E1915-07A
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-020	ASTM E1915-07A
Neutralization Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Paste pH	ME-CA-[ENV]ARD-LAK-AN-005	ARD Prediction Manual, 2009

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#23590674

LR Report : CA19068-NOV23

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
Carbon/Sulphur - QCBatchID: ECS0027-JAN24													
Carbon (total)	0.005	%	<0.005			4	20				101	70	130
Sulphur (total)	0.005	%	<0.005			2	20				102	70	130
Carbon/Sulphur - QCBatchID: ECS0036-JAN24													
Sulphide	0.04	%	< 0.01			55	20	113	80	120			
Carbon/Sulphur - QCBatchID: ECS0044-JAN24													
Carbonate (HCl) as %CO3	0.04	%	<0.04			7	20	99	80	120			



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

ABA - Modified Sobek

Project : PO#23590674

30-January-2024

Date Rec. : 07 November 2023

LR Report: CA19071-NOV23

Reference: Crawford Project - PO#23590674 (Set 2)

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: C00374757	6: C00374758	7: C00374759	8: C00374760	9: C00374761	10: C00374762	11: C00374763
Sample Date & Time					26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Paste pH [no unit]	26-Jan-24	09:42	29-Jan-24	13:01	9.40	8.89	9.62	9.54	9.75	9.41	9.45
Fizz Rate [rating]	25-Jan-24	17:04	29-Jan-24	13:01	4	1	1	1	1	1	1
Sample weight [g]	25-Jan-24	11:34	29-Jan-24	13:01	2.10	2.10	2.00	2.00	2.30	2.50	2.30
HCl Added [mL]	26-Jan-24	17:06	29-Jan-24	13:01	50.10	109.10	20.00	20.00	20.00	20.00	20.00
HCl [Normality]	25-Jan-24	17:04	29-Jan-24	13:01	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	25-Jan-24	17:04	29-Jan-24	13:01	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	26-Jan-24	17:06	29-Jan-24	13:01	15.78	20.18	11.85	11.82	17.57	17.08	16.01
Final pH [no unit]	26-Jan-24	17:06	29-Jan-24	13:01	1.58	1.89	1.54	1.74	1.04	1.06	1.18
NP [t CaCO ₃ /1000 t]	26-Jan-24	17:06	29-Jan-24	13:01	81.7	212	20.4	20.4	5.3	5.8	8.7
AP [t CaCO ₃ /1000 t]	08-Jan-24	14:19	29-Jan-24	13:03	1.25	2.50	2.19	2.19	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	08-Jan-24	14:19	29-Jan-24	13:03	80.4	209	18.2	18.2	4.05	4.55	7.45
NP/AP [ratio]	08-Jan-24	14:19	29-Jan-24	13:03	65.4	84.7	9.33	9.33	4.24	4.64	6.96
Sulphur (total) [%]	08-Jan-24	14:19	09-Jan-24	13:56	< 0.005	0.091	0.084	0.077	0.047	0.013	0.017
Acid Leachable SO ₄ -S [%]	09-Jan-24	13:55	09-Jan-24	13:56	< 0.04	< 0.04	< 0.04	< 0.04	0.05	< 0.04	< 0.04
Sulphide [%]	09-Jan-24	12:19	09-Jan-24	13:56	< 0.04	0.08	0.07	0.07	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	08-Jan-24	14:19	09-Jan-24	13:56	1.07	4.47	0.006	0.016	0.006	0.010	< 0.005
Carbonate (HCl) as %CO ₃ [%]	09-Jan-24	12:29	09-Jan-24	13:56	4.96	22.1	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04

Analysis	12: C00374764	13: C00374766	14: C00374767	15: C00374768	16: C00374769	17: C00374770	18: C00374771	19: C00374773	20: C00374774	21: C00374775	22: C00374776	23: C00374777
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Paste pH [no unit]	9.68	9.58	9.38	9.70	9.74	9.41	9.84	9.55	9.55	9.90	9.98	8.05
Fizz Rate [rating]	1	1	4	3	3	1	1	1	1	1	1	3
Sample weight [g]	2.00	2.30	2.00	2.10	2.10	2.00	2.00	2.10	2.00	2.00	2.00	2.03
HCl Added [mL]	20.00	20.00	40.00	20.00	20.00	84.20	20.00	20.00	78.50	20.00	20.00	34.50
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	17.64	10.54	17.52	12.84	13.10	20.60	16.97	16.33	16.91	17.43	17.72	17.38
Final pH [no unit]	1.04	1.35	1.45	1.20	1.16	1.71	1.06	1.08	1.73	1.00	0.91	1.52
NP [t CaCO3/1000 t]	5.9	20.6	56.2	17.0	16.4	159	7.6	8.7	154	6.4	5.7	42.2
AP [t CaCO3/1000 t]	1.25	1.25	1.25	1.56	1.56	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO3/1000 t]	4.65	19.4	55.0	15.4	14.8	158	6.35	7.45	153	5.15	4.45	41.0
NP/AP [ratio]	4.72	16.5	45.0	10.9	10.5	127	6.08	6.96	123	5.12	4.56	33.8
Sulphur (total) [%]	0.052	0.051	0.022	0.075	0.079	0.040	0.090	0.015	0.040	0.038	0.035	0.044
Acid Leachable SO4-S [%]	0.05	0.05	< 0.04	< 0.04	< 0.04	0.04	0.05	< 0.04	0.04	< 0.04	< 0.04	0.04
Sulphide [%]	< 0.04	< 0.04	< 0.04	0.05	0.05	< 0.04	0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	0.010	0.120	0.717	0.081	0.074	0.263	< 0.005	< 0.005	4.27	4.24	0.006	0.342
Carbonate (HCl) as %CO3 [%]	< 0.04	0.52	3.09	0.35	0.28	1.24	< 0.04	< 0.04	19.1	21.1	< 0.04	1.55

Analysis	24: C00374778	25: C00374789	26: C00374790	27: C00374791	28: C00374792	29: C00374793	30: C00374794	31: C00374795	32: C00374796	33: C00374797	34: C00374798	35: C00374802
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Paste pH [no unit]	9.01	9.73	9.75	9.48	9.68	9.70	9.67	9.66	9.37	9.31	9.95	9.92
Fizz Rate [rating]	4	1	1	1	3	1	4	1	3	1	1	1
Sample weight [g]	1.99	2.02	2.06	2.08	2.00	1.98	2.04	2.07	2.03	2.03	1.98	2.04
HCl Added [mL]	50.00	20.00	20.00	20.00	20.00	20.00	40.00	20.00	20.00	20.00	20.00	20.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	12.80	17.08	13.95	14.75	6.84	18.00	13.34	18.00	5.65	4.36	18.50	18.50
Final pH [no unit]	1.65	1.03	1.01	1.11	1.41	0.94	1.14	0.97	1.54	1.78	0.88	0.99
NP [t CaCO3/1000 t]	93.5	7.2	14.7	12.6	32.9	5.0	65.4	4.8	35.3	38.5	3.8	3.7
AP [t CaCO3/1000 t]	1.88	1.25	1.25	1.25	1.25	1.25	1.56	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO3/1000 t]	91.6	5.95	13.4	11.4	31.6	3.75	63.8	3.55	34.0	37.2	2.55	2.45
NP/AP [ratio]	49.9	5.76	11.8	10.1	26.3	4.00	41.9	3.84	28.2	30.8	3.04	2.96
Sulphur (total) [%]	0.098	0.064	0.011	0.035	0.052	0.018	0.062	< 0.005	0.017	0.020	0.066	0.016
Acid Leachable SO4-S [%]	< 0.04	0.06	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.07	< 0.04

Analysis	24: C00374778	25: C00374789	26: C00374790	27: C00374791	28: C00374792	29: C00374793	30: C00374794	31: C00374795	32: C00374796	33: C00374797	34: C00374798	35: C00374802
Sulphide [%]	0.06	< 0.04	< 0.04	< 0.04	0.04	< 0.04	0.05	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	0.819	0.013	< 0.005	0.103	0.258	< 0.005	0.008	< 0.005	0.084	0.019	< 0.005	< 0.005
Carbonate (HCl) as %CO ₃ [%]	4.00	< 0.04	< 0.04	0.42	1.20	< 0.04	< 0.04	< 0.04	0.36	0.04	< 0.04	< 0.04

Analysis	36: C00374799	37: C00374803	38: C00374804	39: C00374805	40: C00374806	41: C00374807	42: C00374808	43: C00374809	44: C00374779	45: C00374780	46: C00374781	47: C00374782
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Paste pH [no unit]	9.52	10.00	9.91	9.10	9.01	8.53	9.88	9.57	9.01	8.52	9.20	9.54
Fizz Rate [rating]	3	1	1	4	4	4	3	3	3	3	4	3
Sample weight [g]	2.07	1.99	2.03	2.09	1.98	2.06	1.98	2.05	1.99	1.99	1.98	2.01
HCl Added [mL]	89.90	20.00	20.00	80.20	132.70	75.50	20.00	20.00	110.30	25.00	70.20	20.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	17.18	17.84	18.55	28.30	48.58	32.94	11.42	10.67	11.81	13.62	21.43	8.83
Final pH [no unit]	1.71	1.01	0.96	1.77	1.70	1.58	1.12	1.00	1.95	1.64	1.58	1.51
NP [t CaCO ₃ /1000 t]	176	5.4	3.6	124	212	103	21.7	22.8	248	28.6	123	27.8
AP [t CaCO ₃ /1000 t]	2.50	1.25	1.25	1.88	19.1	164	1.25	1.25	1.25	1.25	1.25	6.56
Net NP [t CaCO ₃ /1000 t]	173	4.15	2.35	122	193	-60.45	20.4	21.6	246	27.4	122	21.2
NP/AP [ratio]	70.2	4.32	2.88	66.2	11.1	0.63	17.4	18.2	198	22.9	98.5	4.24
Sulphur (total) [%]	0.151	0.035	0.035	0.129	0.753	6.05	0.009	0.005	0.061	0.039	0.048	0.029
Acid Leachable SO ₄ -S [%]	0.07	< 0.04	< 0.04	0.07	0.14	0.81	< 0.04	< 0.04	0.06	< 0.04	0.05	< 0.04
Sulphide [%]	0.08	< 0.04	< 0.04	0.06	0.61	5.24	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.21
Carbon (total) [%]	0.185	< 0.005	< 0.005	2.34	3.82	2.09	0.120	< 0.005	2.43	0.121	0.804	0.283
Carbonate (HCl) as %CO ₃ [%]	0.82	< 0.04	< 0.04	11.2	18.8	10.1	0.50	< 0.04	12.0	0.49	3.93	1.32

Analysis	48: C00374783	49: C00374784	50: C00374785	51: C00374786	52: C00374787	53: C00374788
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Paste pH [no unit]	9.66	9.81	9.62	9.50	9.78	9.79
Fizz Rate [rating]	1	1	1	1	1	1
Sample weight [g]	2.07	2.08	1.98	2.08	2.02	2.02
HCl Added [mL]	20.00	20.00	20.00	20.00	20.00	20.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#23590674

LR Report : CA19071-NOV23

Analysis	48: C00374783	49: C00374784	50: C00374785	51: C00374786	52: C00374787	53: C00374788
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	14.95	18.25	17.99	17.71	18.35	18.28
Final pH [no unit]	1.09	0.98	1.02	1.01	0.97	0.96
NP [t CaCO3/1000 t]	12.2	4.2	5.1	5.5	4.1	4.3
AP [t CaCO3/1000 t]	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO3/1000 t]	11.0	2.95	3.85	4.25	2.85	3.05
NP/AP [ratio]	9.76	3.36	4.08	4.40	3.28	3.44
Sulphur (total) [%]	0.006	0.027	0.045	0.055	0.047	0.013
Acid Leachable SO4-S [%]	< 0.04	< 0.04	0.04	0.06	0.05	< 0.04
Sulphide [%]	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	0.028	0.012	0.012	0.015	0.012	0.012
Carbonate (HCl) as %CO3 [%]	0.07	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04

*NP (Neutralization Potential)

= $50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})$

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

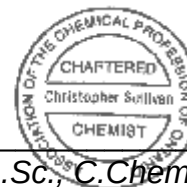
*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.04 will be calculated using a 0.04 value.

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#23590674

LR Report : CA19071-NOV23

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acid Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-019	ASTM E1915-07A
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-020	ASTM E1915-07A
Neutralization Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Paste pH	ME-CA-[ENV]ARD-LAK-AN-005	ARD Prediction Manual, 2009

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Carbon/Sulphur - QCBatchID: ECS0003-JAN24													
Carbonate (HCl) as %CO3	0.04	%	<0.04			0	20	99	80	120			
Carbon/Sulphur - QCBatchID: ECS0023-JAN24													
Carbon (total)	0.005	%	<0.005			1	20				100	70	130
Sulphur (total)	0.005	%	<0.005			MDL	20				97	70	130
Carbon/Sulphur - QCBatchID: ECS0026-JAN24													
Sulphide	0.04	%	< 0.01			ND	20	106	80	120			



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower

Toronto, ON

M5X 1E3, Canada

Phone: 807-620-2207

Fax:

ABA - Modified Sobek

Project : PO#20446343

28-February-2024

Date Rec. : 23 January 2024

LR Report: CA19011-JAN24

Reference: PO#20446343

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: C00374710	6: C00374755	7: C00374759	8: C00374715	9: C00374723	10: C00374727	11: C00374763	12: C00374778
Paste pH [no unit]	08-Feb-24	20:17	10-Feb-24	13:43	9.77	9.52	9.59	9.15	9.21	9.76	9.40	8.95
Fizz Rate [rating]	08-Feb-24	15:24	10-Feb-24	13:43	3	3	2	2	3	3	3	2
Sample weight [g]	08-Feb-24	14:05	10-Feb-24	13:43	1.98	2.04	2.01	2.01	2.00	1.97	1.96	2.01
HCl Added [mL]	09-Feb-24	13:30	10-Feb-24	13:43	37.00	20.00	20.00	105.20	85.30	41.70	20.00	53.60
HCl [Normality]	08-Feb-24	15:37	10-Feb-24	13:43	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	08-Feb-24	15:37	10-Feb-24	13:43	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	09-Feb-24	21:21	10-Feb-24	13:43	18.61	15.14	12.03	64.64	26.53	16.35	16.54	17.24
Final pH [no unit]	09-Feb-24	15:49	10-Feb-24	13:43	1.62	1.28	1.41	1.59	1.62	1.55	1.10	1.52
NP [t CaCO ₃ /1000 t]	09-Feb-24	21:21	10-Feb-24	13:43	46.4	11.9	19.8	101	147	64.3	8.8	90.4
AP [t CaCO ₃ /1000 t]	28-Feb-24	10:45	28-Feb-24	10:45	1.56	0.31	1.88	1.56	1.25	1.25	1.25	0.94
Net NP [t CaCO ₃ /1000 t]	28-Feb-24	10:45	28-Feb-24	10:45	44.8	11.6	17.9	99.3	146	63.0	7.55	89.5
NP/AP [ratio]	28-Feb-24	10:45	28-Feb-24	10:45	29.7	38.1	10.6	64.6	118	51.4	7.04	96.4
Sulphur (total) [%]	26-Feb-24	16:01	28-Feb-24	10:45	0.066	0.022	0.079	0.054	0.016	0.006	0.025	0.103
Acid Leachable SO ₄ -S [%]	23-Feb-24	16:36	28-Feb-24	10:45	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	0.07
Sulphide [%]	27-Feb-24	16:37	28-Feb-24	10:45	0.05	0.01	0.06	0.05	< 0.01	< 0.01	< 0.01	0.03
Carbon (total) [%]	26-Feb-24	16:01	28-Feb-24	10:43	0.146	0.044	0.024	0.521	0.305	0.717	0.018	0.758
Carbonate (HCl) as %CO ₃ [%]	27-Feb-24	15:13	28-Feb-24	10:43	0.59	0.13	0.04	2.48	1.44	3.48	< 0.04	3.63



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#20446343

LR Report : CA19011-JAN24

Analysis	13: C00374783	14: C00374788	15: C00374791	16: C00374795	17: C00374804
Paste pH [no unit]	9.60	9.66	9.43	9.56	9.80
Fizz Rate [rating]	3	2	2	2	2
Sample weight [g]	1.99	2.01	2.04	1.98	1.99
HCl Added [mL]	20.00	20.00	20.00	20.00	20.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	14.80	18.66	14.93	18.07	18.63
Final pH [no unit]	0.96	0.88	1.07	0.93	0.88
NP [t CaCO ₃ /1000 t]	13.1	3.3	12.4	4.9	3.4
AP [t CaCO ₃ /1000 t]	1.25	1.25	0.31	1.25	0.62
Net NP [t CaCO ₃ /1000 t]	11.8	2.05	12.1	3.65	2.78
NP/AP [ratio]	10.5	2.64	39.7	3.92	5.44
Sulphur (total) [%]	0.014	0.017	0.044	0.014	0.036
Acid Leachable SO ₄ -S [%]	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Sulphide [%]	< 0.01	< 0.01	0.01	< 0.01	0.02
Carbon (total) [%]	0.027	0.019	0.114	0.012	0.015
Carbonate (HCl) as %CO ₃ [%]	0.04	< 0.04	0.44	< 0.04	< 0.04

*NP (Neutralization Potential)
= 50 x (N of HCL x Total HCL added - N NaOH x NaOH added)

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.04 will be calculated using a 0.04 value.



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#20446343

LR Report : CA19011-JAN24

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acid Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-019	ASTM E1915-07A
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-020	ASTM E1915-07A
Neutralization Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Paste pH	ME-CA-[ENV]ARD-LAK-AN-005	ARD Prediction Manual, 2009

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Carbon/Sulphur - QCBatchID: ECS0075-FEB24													
Carbonate (HCl) as %CO3	0.04	%	<0.04			0	20	101	80	120			
Carbon/Sulphur - QCBatchID: ECS0076-FEB24													
Sulphide	0.01	%	< 0.01			ND	20	113	80	120			
Carbon/Sulphur - QCBatchID: ECS0077-FEB24													
Sulphide	0.01	%	< 0.01			ND	20	98	80	120			
Carbon/Sulphur - QCBatchID: ECS0079-FEB24													
Carbon (total)	0.005	%	<0.005			0	20				98	70	
Sulphur (total)	0.005	%	<0.005			16	20				101	70	
Carbon/Sulphur - QCBatchID: ECS0084-FEB24													
Carbon (total)	0.005	%	<0.005			1	20				99	70	
Sulphur (total)	0.005	%	<0.005			4	20				105	70	



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Jennifer Gignac

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, Ontario
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Strong 4-Acid Digest Metals

Project : Crawford - Project # 20446343

05-July-2021

Date Rec. : 07 May 2021
LR Report: CA14952-MAY21

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: P1-MetV-EZ-2-B19501	7: P1-Dun-EZ-1-B19503	8: P1-Pyr-EZ-2-B19504	9: P1-Per-EZ-2-B19505	10: P1-Gab-EZ-1-B19506	11: P1-Pyr-EZ-3-B19507	12: P1-Gab-EZ-2-B19508	13: P1-Pyr-EZ-4-B19509
Silver [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	12000	3000	23000	17000	62000	20000	66000	42000
Arsenic [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Boron [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	39	44	2.5	20	12	6.5	1.7	< 1
Barium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	215	0.52	10	2.5	25	8.5	22	26
Beryllium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	0.49	< 0.02	0.05	0.03	0.03	0.03	< 0.02	0.03
Bismuth [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	33000	620	65000	20000	78000	62000	79000	76000
Cadmium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	0.03	< 0.02	0.05	< 0.02	0.05	0.06	0.05	0.09
Cobalt [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	18	120	51	130	41	71	34	55
Chromium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	31	1100	2500	1300	420	2600	630	660
Copper [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	93	17	19	23	130	200	76	140
Iron [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	23000	51000	48000	99000	34000	53000	31000	48000
Potassium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	16000	93	300	94	790	490	1300	730
Lithium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	4.1	< 2	7.3	< 2	9.9	5.2	7.3	10
Magnesium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	3100	220000	94000	160000	49000	110000	53000	83000
Manganese [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	380	800	1100	1600	840	1300	750	1200
Molybdenum [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	0.9	< 0.1	< 0.1	< 0.1	0.1	0.2	0.1	< 0.1
Sodium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	16000	120	2600	190	8200	1100	8900	7000
Nickel [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	48	2400	260	1100	100	280	100	230
Lead [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	1.5	< 0.05	< 0.05	0.06	< 0.05	< 0.05	< 0.05	< 0.05



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Strong 4-Acid Digest Metals

Project : Crawford - Project # 20446343

LR Report : CA14952-MAY21

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: P1-MetV-EZ-2-B19501	7: P1-Dun-EZ-1-B19503	8: P1-Pyr-EZ-2-B19504	9: P1-Per-EZ-2-B19505	10: P1-Gab-EZ-1-B19506	11: P1-Pyr-EZ-3-B19507	12: P1-Gab-EZ-2-B19508	13: P1-Pyr-EZ-4-B19509
Antimony [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Silicon [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	24000	16	16	< 3	480	< 3	190	49
Selenium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.4	< 0.1	0.2
Tin [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	76	0.49	16	2.4	89	19	85	38
Titanium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	1800	170	1200	590	670	830	600	960
Thallium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	0.05	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Thorium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	0.78	0.22	1.1	0.62	1.5	0.21	0.44	0.15
Uranium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	0.53	0.024	0.019	0.011	0.012	0.019	0.010	0.012
Vanadium [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	79	15	130	55	100	110	83	130
Tungsten [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	0.08	0.07	0.06	0.17	0.07	0.08	0.07	0.06
Zinc [µg/g]	02-Jun-21	21:05	05-Jul-21	13:08	21	33	37	60	25	35	21	35

Analysis	14: P1-Pyr-MZ-8 B195010	15: P1-Pez-MZ-1 B195011	16: P1-Dun-MZ-3 B195012	17: P1-Per-MZ-4 B195013	18: P1-MetV-MZ-8 B195014	19: P1-Pyr-MZ-6 B195015	20: P1-Metv-EZ-1 B195016	21: P1-Dun-EZ-2 B195017	22: P1-Dun-MZ-4 B195018	23: P1-Pyr-MZ-8 B195019	24: P1-Pyr-MZ-4 B195020	25: P1-Per-MZ-3 B195021
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	12000	6500	2600	1500	61000	25000	81000	5100	1000	6100	14000	4600
Arsenic [µg/g]	< 0.5	1.7	< 0.5	0.5	5.3	7.5	0.6	< 0.5	< 0.5	14	5.4	0.5
Boron [µg/g]	2.3	5.0	5.9	7.7	24	15	22	6.7	3.6	1.4	< 1	1.0
Barium [µg/g]	1.1	0.62	0.49	0.27	199	4.1	132	0.69	0.27	10	1.8	2.0
Beryllium [µg/g]	0.02	0.02	< 0.02	< 0.02	0.66	0.07	0.47	< 0.02	< 0.02	< 0.02	0.03	< 0.02
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	12000	6600	130	400	24000	33000	30000	920	1700	14000	49000	4800
Cadmium [µg/g]	< 0.02	0.02	< 0.02	0.04	0.10	0.07	0.12	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Cobalt [µg/g]	140	140	130	200	21	100	17	110	130	120	78	110
Chromium [µg/g]	550	790	880	1200	100	2900	78	3100	1000	470	640	720
Copper [µg/g]	4.8	28	41	340	36	120	67	41	1.8	2.5	8.1	8.6
Iron [µg/g]	71000	69000	60000	61000	42000	70000	29000	50000	63000	54000	46000	61000
Potassium [µg/g]	67	21	68	38	9200	250	6400	35	28	21	18	120
Lithium [µg/g]	< 2	< 2	< 2	< 2	10	2.8	16	< 2	< 2	< 2	2.4	3.0
Magnesium [µg/g]	180000	190000	200000	210000	15000	120000	5400	200000	210000	180000	120000	170000
Manganese [µg/g]	970	940	890	670	690	1100	200	810	970	1100	1000	980
Molybdenum [µg/g]	< 0.1	< 0.1	< 0.1	< 0.1	1.2	0.1	1.8	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Sodium [µg/g]	82	27	65	47	22000	620	15000	33	72	23	82	150



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Strong 4-Acid Digest Metals

Project : Crawford - Project # 20446343

LR Report : CA14952-MAY21

Analysis	14: P1-Pyr-MZ-8 B195010	15: P1-Pez-MZ-1 B195011	16: P1-Dun-MZ-3 B195012	17: P1-Per-MZ-4 B195013	18: P1-MetV-MZ-8 B195014	19: P1-Pyr-MZ-6 B195015	20: P1-Metv-EZ-1 B195016	21: P1-Dun-EZ-2 B195017	22: P1-Dun-MZ-4 B195018	23: P1-Pyr-MZ-8 B195019	24: P1-Pyr-MZ-4 B195020	25: P1-Per-MZ-3 B195021
Nickel [µg/g]	920	2200	2600	3700	40	1300	15	2200	2000	1100	270	1500
Lead [µg/g]	0.09	< 0.05	< 0.05	0.33	3.0	0.25	3.3	< 0.05	< 0.05	0.34	0.24	< 0.05
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Silicon [µg/g]	< 3	5.4	32	3.8	5.9	240	9.7	< 3	< 3	5.5	6.7	< 3
Selenium [µg/g]	< 0.1	< 0.1	< 0.1	0.2	< 0.1	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	1.4	2.7	0.49	0.58	127	13	115	0.95	0.48	183	41	2.2
Titanium [µg/g]	360	320	150	110	5000	1500	2600	250	65	280	480	210
Thallium [µg/g]	< 0.02	< 0.02	0.04	< 0.02	0.14	0.02	0.03	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Thorium [µg/g]	< 0.01	< 0.01	< 0.01	< 0.01	1.2	0.54	4.0	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Uranium [µg/g]	0.009	0.009	0.006	0.005	0.30	0.040	0.62	0.014	0.002	0.006	0.017	0.006
Vanadium [µg/g]	31	23	16	13	87	110	71	18	8.4	17	42	19
Tungsten [µg/g]	0.34	0.05	0.05	0.05	1.1	0.19	0.33	0.07	< 0.04	0.10	0.10	< 0.04
Zinc [µg/g]	38	34	40	23	98	76	51	37	42	29	29	21

Analysis	26: P1-Dun-MZ-1 B195023	27: P1-Per-MZ-6 B195024	28: P1-Gab-MZ-3 B195025	29: P1-Gab-MZ-6 B195026	30: P1-Gab-MZ-1 B195027
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	4900	9300	62000	30000	21000
Arsenic [µg/g]	< 0.5	< 0.5	< 0.5	1.1	< 0.5
Boron [µg/g]	5.1	6.1	5.8	2.0	< 1
Barium [µg/g]	0.95	1.4	38	199	10.0
Beryllium [µg/g]	< 0.02	0.03	0.03	0.63	0.04
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	1400	5500	71000	57000	93000
Cadmium [µg/g]	< 0.02	< 0.02	0.03	0.11	0.05
Cobalt [µg/g]	110	150	44	87	56
Chromium [µg/g]	440	790	730	770	1700
Copper [µg/g]	2.4	8.1	110	160	270
Iron [µg/g]	57000	72000	30000	84000	41000
Potassium [µg/g]	76	100	960	3600	210
Lithium [µg/g]	< 2	< 2	12	17	6.0
Magnesium [µg/g]	210000	190000	57000	100000	92000
Manganese [µg/g]	890	1100	700	1500	1000



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

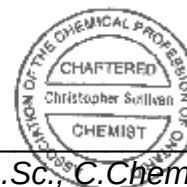
Strong 4-Acid Digest Metals

Project : Crawford - Project # 20446343

LR Report : CA14952-MAY21

Analysis	26: P1-Dun-MZ-1 B195023	27: P1-Per-MZ-6 B195024	28: P1-Gab-MZ-3 B195025	29: P1-Gab-MZ-6 B195026	30: P1-Gab-MZ-1 B195027
Molybdenum [µg/g]	0.2	< 0.1	1.2	0.4	< 0.1
Sodium [µg/g]	140	73	8300	8700	1700
Nickel [µg/g]	1900	800	140	1100	280
Lead [µg/g]	< 0.05	0.52	< 0.05	3.2	0.09
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Silicon [µg/g]	6.1	< 3	390	3.4	< 3
Selenium [µg/g]	< 0.1	< 0.1	< 0.1	0.2	0.4
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	0.76	1.1	103	249	44
Titanium [µg/g]	170	390	570	5600	1100
Thallium [µg/g]	< 0.02	< 0.02	< 0.02	0.06	< 0.02
Thorium [µg/g]	< 0.01	0.05	0.70	2.6	0.14
Uranium [µg/g]	0.006	0.010	0.016	0.42	0.018
Vanadium [µg/g]	13	24	72	130	110
Tungsten [µg/g]	0.05	0.11	0.13	0.24	0.05
Zinc [µg/g]	35	37	20	92	25

Chris Sullivan
Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety





SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Jennifer Gignac

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Strong 4-Acid Digest Metals

Project : Crawford Project #20446343

08-July-2021

Date Rec. : 17 May 2021
LR Report: CA14970-MAY21
Reference: P.O# 20446343

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: P1-Pyr-EZ-1A B19529	6: P1-Pyr-MZ-5_B 19530	7: P1-Pyr-MZ-10 B19531	8: P1-Dun-MZ-6 B19532	9: P1-Per-EZ-1_B 19533	10: P1-Pyr-MZ-11 B19534	11: P1-Pyr-MZ-3_B 19535	12: P1-MetV-MZ-3 B19538
Silver [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	4800	2000	4600	810	2700	23000	6900	73000
Arsenic [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	0.8	1.6	< 0.5	< 0.5	2.5	1.0	5.5	174
Boron [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	4.2	41	65	24	40	11	34	23
Barium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	17	4	2	1	5	180	9	180
Beryllium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	0.04	0.04	0.05	< 0.02	0.05	0.68	0.09	0.59
Bismuth [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	75000	17000	6800	290	9200	57000	33000	29000
Cadmium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	0.09	0.04	0.04	0.06	< 0.02	0.07	0.05	0.04
Cobalt [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	59	120	150	130	100	82	110	13
Chromium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	3300	1100	1500	1100	2000	1100	1600	48
Copper [µg/g]	17-Jun-21	15:23	08-Jul-21	09:26	380	38	5.4	69	4.4	140	260	16
Iron [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	46000	62000	70000	48000	66000	77000	64000	31000
Potassium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	180	60	60	39	78	3400	290	6000
Lithium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	8.8	< 2	< 2	< 2	< 2	26	< 2	10
Magnesium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	100000	170000	190000	230000	190000	100000	150000	6000
Manganese [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	1300	970	1000	820	1100	1300	970	480
Molybdenum [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	0.3	< 0.1	0.1	0.2	< 0.1	0.6	0.1	1.1
Sodium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	1400	67	42	63	34	4000	300	36000
Nickel [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	270	570	790	2500	1600	1000	3300	17
Lead [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	0.14	0.36	0.37	0.21	0.41	3.3	0.73	1.6



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Strong 4-Acid Digest Metals

Project : Crawford Project #20446343

LR Report : CA14970-MAY21

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: P1-Pyr-EZ-1A_ B B19529	6: P1-Pyr-MZ-5_ B 19530	7: P1-Pyr-MZ-10_ B B19531	8: P1-Dun-MZ-6_ B B19532	9: P1-Per-EZ-1_ B 19533	10: P1-Pyr-MZ-11_ B B19534	11: P1-Pyr-MZ-3_ B 19535	12: P1-MetV-MZ-3_ B B19538
Silicon [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	13700	10700	10300	12900	22500	23300	17600	28300
Antimony [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	1.3	1.0	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	0.8	< 0.7
Tin [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	5	3	0.96	1	30	130	15	160
Thorium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	2.6	1.8	1.5	0.95	0.91	3.0	0.91	2.8
Titanium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	900	370	350	50	380	5400	1000	3000
Thallium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.15	< 0.02	0.04
Uranium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	0.037	0.028	0.026	0.016	0.018	0.42	0.054	0.54
Vanadium [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	130	33	31	6.2	29	140	58	84
Tungsten [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	0.12	2.0	1.1	0.25	0.11	0.31	0.08	0.87
Zinc [µg/g]	17-Jun-21	15:23	08-Jul-21	09:27	27	25	31	31	12	81	18	40

Analysis	13: P1-Dun-MZ-5_ B B19539	14: P1-MetV-MZ-7_ B B19540	15: P1-Gab-MZ-5_ B 19541	16: P1-Per-MZ-7_ B 19542	17: P1-Pyr-MZ-9_ B 19543	18: P1-Gab-MZ-4_ 1 9544	19: P1-Pyr-MZ-1_ B 19545	20: P1-Gab-MZ-2_ B 19546	21: P1-Dun-MZ-8_ B B19550	22: P1-MetV-MZ-5_ B B19551	23: P1-MetV-MZ-1_ B B19552	24: P1-Pyr-MZ-7A_ B B19553
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	1900	69000	70000	2800	14000	76000	11000	63000	820	70000	78000	4500
Arsenic [µg/g]	< 0.5	3.2	< 0.5	< 0.5	2.6	< 0.5	1.8	< 0.5	< 0.5	1.8	27	2.6
Boron [µg/g]	33	22	6.7	29	29	17	24	9.1	49	24	33	28
Barium [µg/g]	0.38	160	32	2	4	220	3	45	0.31	230	280	11
Beryllium [µg/g]	< 0.02	0.78	0.04	0.03	0.04	0.04	0.04	0.03	< 0.02	0.62	0.61	0.02
Bismuth [µg/g]	< 0.09	0.12	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	0.14	< 0.09
Calcium [µg/g]	85	8900	86000	13000	26000	89000	110000	92000	71	29000	18000	20000
Cadmium [µg/g]	< 0.02	0.17	0.05	0.04	0.03	0.02	0.16	0.04	0.07	0.03	0.23	< 0.02
Cobalt [µg/g]	120	14	32	120	130	34	55	38	140	13	35	110
Chromium [µg/g]	1700	72	780	1100	1200	680	2500	1200	960	49	49	1500
Copper [µg/g]	38	24	88	42	79	100	330	77	240	22	160	37
Iron [µg/g]	57000	30000	28000	69000	77000	28000	39000	30000	84000	29000	33000	61000
Potassium [µg/g]	28	5000	1000	80	72	2900	150	1100	36	6500	7300	70
Lithium [µg/g]	< 2	16	9.9	< 2	< 2	17	9.4	9.3	< 2	8.9	16	< 2
Magnesium [µg/g]	220000	11000	54000	180000	140000	60000	97000	58000	220000	7100	13000	180000
Manganese [µg/g]	910	690	690	1100	1400	670	1100	740	960	470	660	1000
Molybdenum [µg/g]	< 0.1	0.9	0.4	< 0.1	< 0.1	0.3	0.3	0.6	< 0.1	0.8	0.9	< 0.1
Sodium [µg/g]	49	36000	9200	190	130	9000	1100	6100	40	34000	34000	110
Nickel [µg/g]	3200	20	120	570	1000	110	250	130	2900	29	27	1700



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Strong 4-Acid Digest Metals

Project : Crawford Project #20446343

LR Report : CA14970-MAY21

Analysis	13: P1-Dun-MZ-5 B19539	14: P1-MetV-MZ-7 B19540	15: P1-Gab-MZ-5_B 19541	16: P1-Per-MZ-7_B 19542	17: P1-Pyr-MZ-9_B 19543	18: P1-Gab-MZ-4_1 9544	19: P1-Pyr-MZ-1_B 19545	20: P1-Gab-MZ-2_B 19546	21: P1-Dun-MZ-8 B19550	22: P1-MetV-MZ-5 B19551	23: P1-MetV-MZ-1 B19552	24: P1-Pyr-MZ-7A B19553
Lead [µg/g]	0.10	2.7	0.49	0.18	0.26	0.41	2.4	0.12	< 0.05	0.96	3.0	< 0.05
Silicon [µg/g]	12800	29900	18500	7080	15200	17600	22100	7430	2580	1250	4070	6680
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	1.0	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	0.28	200	82	2	11	420	18	200	0.26	180	150	130
Thorium [µg/g]	0.68	3.0	0.42	0.40	0.38	0.19	0.44	0.18	2.5	1.0	2.8	2.6
Titanium [µg/g]	120	2800	600	320	410	520	860	600	69	2600	3000	220
Thallium [µg/g]	< 0.02	0.04	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.10	0.04	< 0.02
Uranium [µg/g]	0.013	0.59	0.023	0.020	0.021	0.015	0.018	0.013	< 0.002	0.42	0.53	< 0.002
Vanadium [µg/g]	13	64	91	27	47	92	120	96	7.7	83	91	18
Tungsten [µg/g]	0.08	0.67	0.14	0.13	0.20	0.14	0.16	0.18	< 0.04	0.31	1.4	0.07
Zinc [µg/g]	19	170	19	33	27	22	44	20	57	28	130	14

Analysis	25: P1-MetV-MZ-4 B19554	26: P1-Dun-MZ-2 B19555	27: P1-MetV-MZ-6 B190556	28: P1-Dun-MZ-7 B19557	29: P1-MetV-MZ-2 B19560	30: P1-Per-MZ-2_B 19561	31: P1-Pyr-MZ-2A B19562	32: P1-Gab-MZ-7A B19563	33: P1-Per-MZ-5_B 19564	34: P1-Gab-MZ-8A
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	68000	4100	72000	1900	70000	9000	6900	7500	3300	8900
Arsenic [µg/g]	14	< 0.5	6.3	3.8	18	10	< 0.5	< 0.5	12	0.7
Boron [µg/g]	18	38	64	22	4.8	3.3	17	9.7	51	5.8
Barium [µg/g]	260	0.73	360	45	260	4	160	330	9	75
Beryllium [µg/g]	0.85	< 0.02	0.86	< 0.02	0.80	0.03	0.14	0.03	0.02	0.04
Bismuth [µg/g]	< 0.09	< 0.09	0.17	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	22000	900	5700	24000	42000	11000	44000	69000	67000	86000
Cadmium [µg/g]	0.02	< 0.02	0.08	0.03	0.20	0.06	0.04	0.03	0.04	< 0.02
Cobalt [µg/g]	7	120	11	120	23	100	76	38	100	36
Chromium [µg/g]	56	1700	63	1500	100	2300	2200	360	1100	630
Copper [µg/g]	7.7	3.4	6.2	120	38	37	34	56	47	73
Iron [µg/g]	10000	56000	20000	38000	42000	58000	58000	31000	39000	27000
Potassium [µg/g]	10000	59	17000	57	3400	89	1500	2600	86	1400
Lithium [µg/g]	5.1	< 2	8.2	< 2	8.7	4.4	6.2	25	5.3	8.6
Magnesium [µg/g]	3800	220000	14000	200000	15000	170000	84000	34000	130000	26000
Manganese [µg/g]	290	910	370	700	650	960	1100	850	770	680
Molybdenum [µg/g]	1.2	< 0.1	0.5	0.2	2.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3
Sodium [µg/g]	37000	44	19000	120	31000	220	1900	12000	100	1600



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - K0L 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Strong 4-Acid Digest Metals

Project : Crawford Project #20446343

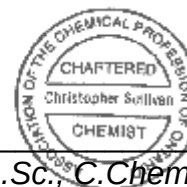
LR Report : CA14970-MAY21

Analysis	25: P1-MetV-MZ-4 B19554	26: P1-Dun-MZ-2 B19555	27: P1-MetV-MZ-6 B190556	28: P1-Dun-MZ-7 B19557	29: P1-MetV-MZ-2 B19560	30: P1-Per-MZ-2_B 19561	31: P1-Pyr-MZ-2A B19562	32: P1-Gab-MZ-7A B19563	33: P1-Per-MZ-5_B 19564	34: P1-Gab-MZ-8A
Nickel [µg/g]	21	2100	19	2800	43	1400	820	130	550	100
Lead [µg/g]	2.1	< 0.05	3.5	0.28	2.2	< 0.05	0.49	0.11	0.36	< 0.05
Silicon [µg/g]	21000	1240	6100	2400	2600	3160	221	< 3	1690	616
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	180	0.80	120	480	290	20	39	540	120	270
Thorium [µg/g]	3.5	1.3	2.8	0.60	1.4	0.54	0.15	0.04	< 0.01	0.05
Titanium [µg/g]	1400	190	1500	82	5400	430	1400	520	310	650
Thallium [µg/g]	0.04	< 0.02	0.11	< 0.02	0.04	< 0.02	0.05	0.05	0.02	< 0.02
Uranium [µg/g]	0.63	< 0.002	0.50	< 0.002	0.29	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Vanadium [µg/g]	36	16	66	8.5	100	33	100	94	28	97
Tungsten [µg/g]	0.21	< 0.04	0.62	0.04	0.35	0.06	< 0.04	0.05	0.16	0.07
Zinc [µg/g]	23	30	59	9.7	61	20	51	28	16	21

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-007	EPA 3052/200.8
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-013	EPA 3052/200.8
Metals in Soil - ICP-OES	ME-CA-[ENV]SPE-LAK-AN-002	EPA 3051/EPA 3050

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Metals - Microwave/ICP-MS - QCBatchID: EMS0113-JUN21													
Aluminum	3	µg/g	<3			6	20	101	70	130			
Antimony	0.8	µg/g	<0.8			ND	20	98	70	130			
Arsenic	0.5	µg/g	<0.5			7	20	100	70	130			
Barium	0.01	µg/g	<0.01			1	20	109	70	130			
Beryllium	0.02	µg/g	<0.02			ND	20	93	70	130			
Bismuth	0.09	µg/g	<0.09			ND	20	103	70	130			
Boron	1	µg/g	<1			ND	20	98	70	130			
Cadmium	0.02	µg/g	<0.02			ND	20	104	70	130			
Chromium	0.5	µg/g	<0.5			ND	20	103	70	130			
Cobalt	0.01	µg/g	<0.01			ND	20	104	70	130			
Copper	0.1	µg/g	<0.1			1	20	103	70	130			
Iron	3	µg/g	<3			ND	20	99	70	130			
Lead	0.05	µg/g	<0.05			ND	20	101	70	130			
Lithium	2	µg/g	<2			ND	20	106	70	130			
Magnesium	3	µg/g	<0.1			2	20	100	70	130			
Manganese	0.1	µg/g	<0.1			ND	20	104	70	130			
Molybdenum	0.1	µg/g	<0.1			10	20	95	70	130			
Nickel	0.1	µg/g	<0.1			ND	20	103	70	130			
Selenium	0.7	µg/g	<0.7			ND	20	97	70	130			
Silver	0.5	µg/g	<0.01			14	20	96	70	130			
Strontium	0.02	µg/g	<0.02			4	20	99	70	130			
Thallium	0.02	µg/g	<0.02			ND	20	103	70	130			
Thorium	0.01	µg/g	<0.01			ND	20	103	70	130			
Tin	6	µg/g	<6			ND	20	109	70	130			
Titanium	0.1	µg/g	<0.1			ND	20	100	70	130			
Tungsten	0.04	µg/g	<0.04			9	20	107	70	130			
Uranium	0.002	µg/g	<0.002			ND	20	101	70	130			
Vanadium	1	µg/g	<1			ND	20	102	70	130			
Zinc	0.7	µg/g	<0.7			2	20	97	70	130			
Metals - Microwave/ICP-MS - QCBatchID: EMS0189-JUN21													
Aluminum	3	µg/g	<3			2	20	110	70	130			
Antimony	0.8	µg/g	<0.8			ND	20	95	70	130			
Arsenic	0.5	µg/g	<0.5			ND	20	101	70	130			
Barium	0.01	µg/g	<0.01			0	20	105	70	130			
Beryllium	0.02	µg/g	<0.02			5	20	100	70	130			

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Bismuth	0.09	µg/g	<0.09			ND	20	101	70	130			
Boron	1	µg/g	<1			1	20	97	70	130			
Cadmium	0.02	µg/g	<0.02			ND	20	104	70	130			
Chromium	0.5	µg/g	<0.5			2	20	103	70	130			
Cobalt	0.01	µg/g	<0.01			2	20	101	70	130			
Copper	0.1	µg/g	<0.1			2	20	101	70	130			
Iron	3	µg/g	<3			2	20	100	70	130			
Lead	0.05	µg/g	<0.05			7	20	107	70	130			
Lithium	2	µg/g	<2			1	20	100	70	130			
Magnesium	3	µg/g	<0.1			2	20	102	70	130			
Manganese	0.1	µg/g	<0.1			2	20	102	70	130			
Molybdenum	0.1	µg/g	<0.1			7	20	92	70	130			
Nickel	0.1	µg/g	<0.1			2	20	98	70	130			
Selenium	0.7	µg/g	<0.7			ND	20	101	70	130			
Silver	0.5	µg/g	<0.01			ND	20	100	70	130			
Strontium	0.02	µg/g	<0.02			1	20	99	70	130			
Thallium	0.02	µg/g	<0.02			ND	20	104	70	130			
Thorium	0.01	µg/g	<0.01			9	20	105	70	130			
Tin	6	µg/g	<6			ND	20	105	70	130			
Titanium	0.1	µg/g	<0.1			1	20	99	70	130			
Tungsten	0.04	µg/g	<0.04			4	20	103	70	130			
Uranium	0.002	µg/g	<0.002			10	20	100	70	130			
Vanadium	1	µg/g	<1			2	20	103	70	130			
Zinc	0.7	µg/g	<0.7			1	20	98	70	130			
Metals in Soil - ICP-OES - QCBatchID: EMS0113-JUN21													
Silicon	3	µg/g	<3			0	20	102	80	120			
Metals in Soil - ICP-OES - QCBatchID: EMS0189-JUN21													
Silicon	3	µg/g	<3			20	20	100	80	120			

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Aqua Regia Digest, ICP-MS

Project : PO#20446343

28-September-2022

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
 Toronto, ON
 M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Date Rec. : 02 August 2022
 LR Report: CA19001-AUG22
 Reference: Crawford Project

Copy: #2

CERTIFICATE OF ANALYSIS

Final Report - Revised

Sample ID	Sample Date & Time	Ag µg/g	As µg/g	Al µg/g	Ba µg/g	Be µg/g
1: Analysis Start Date		19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22
2: Analysis Start Time		18:42	18:42	18:42	18:42	18:42
3: Analysis Completed Date		21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22
4: Analysis Completed Time		10:07	10:07	10:07	10:07	10:07
5: Gabbro CR20-33 480-490	06-Jul-22	< 1	2.1	19000	49	< 0.02
6: Gabbro-01 CR20-34 510-520	06-Jul-22	< 1	< 0.5	16000	7.0	< 0.02
7: Gabbro CR20-34 530-540	06-Jul-22	< 1	< 0.5	17000	4.4	< 0.02
8: Basalt CR20-60 380-390	06-Jul-22	< 1	7.1	5800	17	0.13
9: Gabbro CR20-66 95-105	06-Jul-22	< 1	0.7	15000	41	< 0.02
10: Gabbro CR20-66 120-130	06-Jul-22	< 1	< 0.5	19000	5.4	< 0.02
11: Gabbro CR20-66 180-190	06-Jul-22	< 1	< 0.5	13000	33	< 0.02
12: Basalt CR20-70A 560-570	06-Jul-22	< 1	1.1	22000	33	0.11
13: Basalt CR20-70A 540-550	06-Jul-22	< 1	0.6	23000	46	0.08
14: Basalt CR20-79 360-370						
15: Basalt CR20-79 380-390	06-Jul-22	< 1	0.5	18000	40	0.11
16: Dunite CR20-83 440-450	06-Jul-22	< 1	< 0.5	650	1.5	< 0.02
17: Dunite CR20-86 445-455	06-Jul-22	< 1	0.8	1200	9.2	0.14
18: Dunite CR21-104 160-170	06-Jul-22	< 1	< 0.5	600	0.74	0.03
19: Dunite CR21-104 335-345	06-Jul-22	< 1	0.8	5500	114	< 0.02
20: Dunite CR21-104 350-360	06-Jul-22	< 1	< 0.5	530	0.64	< 0.02
21: Dunite CR21-106A 150-160	06-Jul-22	< 1	< 0.5	460	2.4	< 0.02
22: Dunite CR21-111A 300-310	06-Jul-22	< 1	0.7	3700	0.57	0.05
23: Dunite CR21-118 30-40	06-Jul-22	< 1	< 0.5	5100	0.42	< 0.02
24: Dunite CR21-120 400-410	06-Jul-22	< 1	< 0.5	810	3.4	< 0.02
25: Basalt-01 CR19-31 90-100	06-Jul-22	< 1	< 0.5	26000	16	0.13
26: Dunite CR19-11A 65-75	06-Jul-22	< 1	< 0.5	1800	0.34	< 0.02
27: Basalt CR19-09 590-600	06-Jul-22	< 1	2.4	10000	20	0.09
28: Basalt CR19-09 570-580	06-Jul-22	< 1	1.8	13000	17	0.16
29: Basalt CR19-09 550-560	06-Jul-22	< 1	4.6	8400	7.6	0.10

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Aqua Regia Digest, ICP-MS**Project : PO#20446343****LR Report : CA19001-AUG22**

Sample ID	Sample Date & Time	Ag µg/g	As µg/g	Al µg/g	Ba µg/g	Be µg/g
30: Dunite CR19-08 80-90	06-Jul-22	< 1	< 0.5	2100	0.30	< 0.02
31: Dunite CR18-04 95-105	06-Jul-22	< 1	21	4500	2.2	0.03
32: Dunite CR18-01 550-560	06-Jul-22	< 1	< 0.5	1900	0.36	< 0.02
33: Basalt CR21-129 45-55	06-Jul-22	< 1	< 0.5	20000	22	0.09
34: Basalt CR21-129A 45-55	06-Jul-22	< 1	< 0.5	18000	20	0.08
35: Gabbro CR21-129A 395-405	06-Jul-22	< 1	< 0.5	15000	21	< 0.02
36: Dunite CR21-130 70-80	06-Jul-22	< 1	< 0.5	2700	17	< 0.02
37: Dunite-01 CR21-130 190-200	06-Jul-22	< 1	< 0.5	800	1.3	0.05
38: Dunite CR21-130 530-540	06-Jul-22	< 1	< 0.5	450	0.45	< 0.02
39: Dunite-01 CR21-135 75-85	06-Jul-22	< 1	< 0.5	570	1.0	< 0.02
40: Dunite CR21-135 145-155	06-Jul-22	< 1	0.6	1200	2.9	0.07
41: Gabbro CR21-140 220-230	06-Jul-22	< 1	< 0.5	2200	0.44	0.03
42: Gabbro CR21-140 245-255	06-Jul-22	< 1	0.7	26000	37	0.36
43: Dunite-01 CR21-146 50-60	06-Jul-22	< 1	< 0.5	2900	0.59	< 0.02
44: Dunite CR21-146 65-75	06-Jul-22	< 1	< 0.5	3200	0.32	< 0.02
45: Dunite CR21-146 120-130	06-Jul-22	< 1	< 0.5	2300	0.61	0.03
46: Dunite CR21-146 200-210	06-Jul-22	< 1	0.5	2200	1.1	0.03
47: Dunite CR21-146 510-520	06-Jul-22	< 1	0.6	1900	0.45	< 0.02
48: Dunite CR21-170 40-50	06-Jul-22	< 1	< 0.5	800	3.7	< 0.02
49: Dunite CR21-170 150-160	06-Jul-22	< 1	2.2	12000	583	0.57
50: Dunite CR21-170 200-210	06-Jul-22	< 1	< 0.5	560	3.0	< 0.02
51: Dunite CR21-170 300-310	06-Jul-22	< 1	< 0.5	580	2.1	< 0.02
52: Dunite CR21-170 400-410	06-Jul-22	< 1	< 0.5	450	1.7	< 0.02
53: Dunite CR21-178 40-50	06-Jul-22	< 1	< 0.5	1700	0.18	< 0.02
54: Dunite CR21-178 150-160	06-Jul-22	< 1	< 0.5	1100	0.21	< 0.02
55: Dunite CR21-180 120-130	06-Jul-22	< 1	< 0.5	3800	0.32	< 0.02
56: Dunite CR21-180 200-210	06-Jul-22	< 1	< 0.5	2300	0.21	< 0.02
57: Gabbro CR21-180 480-490	06-Jul-22	< 1	2.5	7000	1.8	< 0.02
58: Gabbro CR21-GT-06 75-85	06-Jul-22	< 1	< 0.5	14000	9.9	< 0.02
59: Gabbro CR21-GT-06 95-105	06-Jul-22	< 1	1.0	14000	5.5	< 0.02
60: Gabbro CR21-GT-06 300-310	06-Jul-22	< 1	1.1	15000	6.9	< 0.02
61: Gabbro CR21-GT-06 350-360	06-Jul-22	< 1	6.7	15000	8.7	0.03
62: Gabbro CR21-GT-06 400-410	06-Jul-22	< 1	14	27000	9.9	< 0.02
63: Gabbro CR21-GT-06 500-510	06-Jul-22	< 1	56	36000	34	0.04
64: Peridotite CR19-12 535-545	06-Jul-22	< 1	0.5	8000	0.80	< 0.02
65: Peridotite CR19-12 550-560	06-Jul-22	< 1	< 0.5	8200	1.0	< 0.02
66: Peridotite CR20-38 265-275	06-Jul-22	< 1	< 0.5	13000	1.4	< 0.02
67: Peridotite-01 CR20-38 290-300	06-Jul-22	< 1	< 0.5	12000	1.3	0.02
68: Peridotite CR20-68 65-75	06-Jul-22	< 1	0.9	12000	3.0	0.03
69: Peridotite-01 CR20-78 100-110	06-Jul-22	< 1	1.3	5600	1.5	< 0.02
70: Peridotite CR20-78 147-157	06-Jul-22	< 1	< 0.5	7900	2.4	0.03
71: Pyroxenite CR21-124 535-553	06-Jul-22	< 1	< 0.5	15000	11	< 0.02
72: Basalt-02 CR19-31 90-100	06-Jul-22	< 1	2.3	25000	18	0.12

Sample ID	Sample Date & Time	Ag µg/g	As µg/g	Al µg/g	Ba µg/g	Be µg/g
73: Gabbro-02 CR20-34 510-520	06-Jul-22	< 1	< 0.5	950	3.7	0.05
74: Dunite-02 CR21-130 190-200	06-Jul-22	< 1	< 0.5	15000	11	< 0.02
75: Dunite-02 CR21-135 75-85	06-Jul-22	< 1	< 0.5	440	0.66	< 0.02
76: Dunite-02 CR21-146 50-60	06-Jul-22	< 1	< 0.5	3200	0.43	< 0.02
77: Peridotite-02 CR20-38 290-300	06-Jul-22	< 1	< 0.5	14000	2.4	0.02
78: Peridotite-02 CR20-78 100-110	06-Jul-22	< 1	< 0.5	4300	0.94	< 0.02
79: Basalt CR20-79 360-370	06-Jul-22	< 1	2.3	29000	22	0.04
80: Gabbro CR21-GT-05 60-70	06-Jul-22	< 1	0.7	19000	6.4	< 0.02
81: Gabbro CR21-GT-05 90-100	06-Jul-22	< 1	6.3	15000	4.1	< 0.02
82: Gabbro CR21-GT-05 120-130	06-Jul-22	< 1	4.7	15000	7.0	< 0.02
83: Gabbro CR21-GT-05 170-180	06-Jul-22	< 1	1.8	12000	7.8	< 0.02
84: Gabbro CR21-GT-05 300-310	06-Jul-22	< 1	4.7	16000	10	< 0.02
85: Gabbro CR21-GT-05 370-380	06-Jul-22	< 1	1.3	26000	5.5	< 0.02
86: Basalt CR21-GT-05 410-420	06-Jul-22	< 1	1.4	22000	48	0.03
87: Gabbro CR22-GT-13 40-50	06-Jul-22	< 1	< 0.5	17000	13	< 0.02
88: Gabbro CR22-GT-13 100-110	06-Jul-22	< 1	< 0.5	15000	19	< 0.02
89: Gabbro CR22-GT-13 130-140	06-Jul-22	< 1	< 0.5	15000	6.0	< 0.02
90: Gabbro CR22-GT-13 390-400	06-Jul-22	< 1	0.9	21000	9.7	< 0.02
91: Gabbro CR22-GT-13 450-460	06-Jul-22	< 1	1.3	20000	4.7	< 0.02
92: Gabbro CR22-GT-13 480-490	06-Jul-22	< 1	0.8	14000	7.2	< 0.02

Sample ID	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
1: Analysis Start Date	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22
2: Analysis Start Time	18:42	18:42	18:42	18:42	18:42	18:42
3: Analysis Completed Date	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22
4: Analysis Completed Time	10:07	10:07	10:07	10:08	10:08	10:08
5: Gabbro CR20-33 480-490	< 0.09	3300	0.03	20	250	120
6: Gabbro-01 CR20-34 510-520	< 0.09	3600	0.03	19	170	130
7: Gabbro CR20-34 530-540	< 0.09	2500	0.05	27	130	180
8: Basalt CR20-60 380-390	< 0.09	17000	0.06	7.4	64	3.7
9: Gabbro CR20-66 95-105	< 0.09	4900	< 0.02	12	150	100
10: Gabbro CR20-66 120-130	< 0.09	8400	< 0.02	14	180	91
11: Gabbro CR20-66 180-190	< 0.09	5000	< 0.02	12	160	97
12: Basalt CR20-70A 560-570	< 0.09	10000	0.24	27	110	120
13: Basalt CR20-70A 540-550	< 0.09	7000	0.07	27	120	71
14: Basalt CR20-79 360-370						
15: Basalt CR20-79 380-390	< 0.09	8000	0.03	20	91	27
16: Dunite CR20-83 440-450	< 0.09	1100	< 0.02	160	690	5.5
17: Dunite CR20-86 445-455	< 0.09	4300	< 0.02	150	1400	8.3
18: Dunite CR21-104 160-170	< 0.09	380	< 0.02	120	910	3.1
19: Dunite CR21-104 335-345	< 0.09	4700	0.03	140	430	52

Sample ID	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
20: Dunite CR21-104 350-360	< 0.09	1600	0.03	150	460	43
21: Dunite CR21-106A 150-160	< 0.09	1200	< 0.02	140	390	2.8
22: Dunite CR21-111A 300-310	< 0.09	450	< 0.02	140	1700	58
23: Dunite CR21-118 30-40	< 0.09	1700	< 0.02	130	2200	3.7
24: Dunite CR21-120 400-410	< 0.09	4400	< 0.02	150	810	22
25: Basalt-01 CR19-31 90-100	< 0.09	13000	0.04	21	71	100
26: Dunite CR19-11A 65-75	< 0.09	3600	< 0.02	120	1800	34
27: Basalt CR19-09 590-600	< 0.09	16000	0.15	7.7	90	14
28: Basalt CR19-09 570-580	0.09	14000	0.24	8.1	76	24
29: Basalt CR19-09 550-560	0.23	23000	0.18	8.5	55	26
30: Dunite CR19-08 80-90	< 0.09	950	0.02	120	730	3.2
31: Dunite CR18-04 95-105	< 0.09	13000	0.03	64	870	11
32: Dunite CR18-01 550-560	< 0.09	930	< 0.02	120	750	3.1
33: Basalt CR21-129 45-55	< 0.09	22000	0.03	17	62	18
34: Basalt CR21-129A 45-55	< 0.09	24000	0.04	14	53	12
35: Gabbro CR21-129A 395-405	< 0.09	2900	0.04	17	170	140
36: Dunite CR21-130 70-80	< 0.09	2300	< 0.02	150	330	13
37: Dunite-01 CR21-130 190-200	< 0.09	1100	< 0.02	110	1100	6.4
38: Dunite CR21-130 530-540	< 0.09	1500	< 0.02	160	420	180
39: Dunite-01 CR21-135 75-85	< 0.09	1300	< 0.02	120	450	3.7
40: Dunite CR21-135 145-155	< 0.09	21000	< 0.02	93	2000	12
41: Gabbro CR21-140 220-230	< 0.09	250	< 0.02	150	1500	38
42: Gabbro CR21-140 245-255	< 0.09	13000	0.05	69	110	160
43: Dunite-01 CR21-146 50-60	< 0.09	220	< 0.02	140	1700	7.6
44: Dunite CR21-146 65-75	< 0.09	210	< 0.02	140	2300	5.8
45: Dunite CR21-146 120-130	< 0.09	730	< 0.02	150	1500	39
46: Dunite CR21-146 200-210	< 0.09	6600	< 0.02	100	1200	21
47: Dunite CR21-146 510-520	< 0.09	130	< 0.02	130	1400	49
48: Dunite CR21-170 40-50	< 0.09	1600	< 0.02	120	500	1.3
49: Dunite CR21-170 150-160	< 0.09	7300	< 0.02	110	1400	33
50: Dunite CR21-170 200-210	< 0.09	1200	< 0.02	120	390	1.1
51: Dunite CR21-170 300-310	< 0.09	910	< 0.02	120	410	1.0
52: Dunite CR21-170 400-410	< 0.09	840	< 0.02	130	280	1.7
53: Dunite CR21-178 40-50	< 0.09	80	< 0.02	140	710	3.0
54: Dunite CR21-178 150-160	< 0.09	310	< 0.02	140	550	54
55: Dunite CR21-180 120-130	< 0.09	1900	< 0.02	120	2300	15
56: Dunite CR21-180 200-210	< 0.09	510	< 0.02	110	2200	23
57: Gabbro CR21-180 480-490	< 0.09	16000	0.09	6.3	150	50
58: Gabbro CR21-GT-06 75-85	< 0.09	3300	0.03	15	150	110
59: Gabbro CR21-GT-06 95-105	< 0.09	3900	< 0.02	12	84	160
60: Gabbro CR21-GT-06 300-310	< 0.09	7700	0.05	16	370	94
61: Gabbro CR21-GT-06 350-360	< 0.09	24000	0.04	19	160	94
62: Gabbro CR21-GT-06 400-410	< 0.09	53000	0.04	38	71	76

Sample ID	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
63: Gabbro CR21-GT-06 500-510	< 0.09	41000	< 0.02	88	17	28
64: Peridotite CR19-12 535-545	< 0.09	1100	< 0.02	120	400	66
65: Peridotite CR19-12 550-560	< 0.09	760	< 0.02	120	460	110
66: Peridotite CR20-38 265-275	< 0.09	910	< 0.02	130	600	55
67: Peridotite-01 CR20-38 290-300	< 0.09	840	< 0.02	110	430	25
68: Peridotite CR20-68 65-75	< 0.09	3300	< 0.02	130	540	43
69: Peridotite-01 CR20-78 100-110	< 0.09	8900	< 0.02	140	680	11
70: Peridotite CR20-78 147-157	< 0.09	2600	0.02	150	620	9.2
71: Pyroxenite CR21-124 535-553	< 0.09	4000	< 0.02	28	1900	30
72: Basalt-02 CR19-31 90-100	0.09	18000	0.04	26	39	160
73: Gabbro-02 CR20-34 510-520	< 0.09	2400	< 0.02	110	1500	9.0
74: Dunite-02 CR21-130 190-200	< 0.09	4800	0.03	18	150	150
75: Dunite-02 CR21-135 75-85	< 0.09	840	< 0.02	110	390	3.6
76: Dunite-02 CR21-146 50-60	< 0.09	160	< 0.02	130	1800	7.7
77: Peridotite-02 CR20-38 290-300	< 0.09	880	< 0.02	120	370	23
78: Peridotite-02 CR20-78 100-110	< 0.09	7200	< 0.02	150	670	10
79: Basalt CR20-79 360-370	< 0.09	3500	0.20	41	690	60
80: Gabbro CR21-GT-05 60-70	< 0.09	11000	0.03	29	580	71
81: Gabbro CR21-GT-05 90-100	< 0.09	27000	0.04	20	510	94
82: Gabbro CR21-GT-05 120-130	< 0.09	8600	0.02	19	370	50
83: Gabbro CR21-GT-05 170-180	< 0.09	18000	0.03	17	140	63
84: Gabbro CR21-GT-05 300-310	< 0.09	12000	0.05	28	67	64
85: Gabbro CR21-GT-05 370-380	< 0.09	15000	< 0.02	53	32	47
86: Basalt CR21-GT-05 410-420	0.10	6000	< 0.02	58	33	48
87: Gabbro CR22-GT-13 40-50	< 0.09	3300	0.03	20	200	190
88: Gabbro CR22-GT-13 100-110	< 0.09	4200	0.04	18	120	150
89: Gabbro CR22-GT-13 130-140	< 0.09	4200	0.04	19	110	150
90: Gabbro CR22-GT-13 390-400	< 0.09	3600	< 0.02	20	630	45
91: Gabbro CR22-GT-13 450-460	< 0.09	2600	< 0.02	24	510	92
92: Gabbro CR22-GT-13 480-490	< 0.09	3500	0.04	16	250	78

Sample ID	Fe µg/g	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g
1: Analysis Start Date	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22
2: Analysis Start Time	18:42	18:42	18:42	18:42	18:42	18:42
3: Analysis Completed Date	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22
4: Analysis Completed Time	10:08	10:08	10:08	10:08	10:08	10:08
5: Gabbro CR20-33 480-490	14000	3900	8	23000	240	0.3
6: Gabbro-01 CR20-34 510-520	13000	370	7	19000	230	0.2
7: Gabbro CR20-34 530-540	17000	340	8	21000	280	0.2
8: Basalt CR20-60 380-390	9400	670	4	8100	350	0.5
9: Gabbro CR20-66 95-105	10000	830	6	15000	200	0.2

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

LR Report : CA19001-AUG22

Sample ID	Fe µg/g	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g
10: Gabbro CR20-66 120-130	11000	190	9	20000	190	0.1
11: Gabbro CR20-66 180-190	9200	640	5	15000	170	0.2
12: Basalt CR20-70A 560-570	42000	1800	10	14000	720	0.6
13: Basalt CR20-70A 540-550	45000	2600	12	15000	720	0.7
14: Basalt CR20-79 360-370						
15: Basalt CR20-79 380-390	31000	2300	7	12000	550	0.8
16: Dunite CR20-83 440-450	76000	45	< 2	290000	1100	0.2
17: Dunite CR20-86 445-455	87000	17	< 2	270000	1400	0.2
18: Dunite CR21-104 160-170	63000	19	< 2	270000	1000	0.2
19: Dunite CR21-104 335-345	77000	390	3	230000	1100	0.1
20: Dunite CR21-104 350-360	77000	21	< 2	270000	1200	0.1
21: Dunite CR21-106A 150-160	82000	26	< 2	260000	1200	0.1
22: Dunite CR21-111A 300-310	78000	52	< 2	260000	1100	< 0.1
23: Dunite CR21-118 30-40	60000	30	< 2	170000	1100	< 0.1
24: Dunite CR21-120 400-410	60000	17	< 2	210000	1100	0.2
25: Basalt-01 CR19-31 90-100	42000	1100	12	20000	420	2.0
26: Dunite CR19-11A 65-75	52000	14	< 2	200000	1000	< 0.1
27: Basalt CR19-09 590-600	19000	550	8	5500	490	0.7
28: Basalt CR19-09 570-580	21000	620	9	7100	520	0.6
29: Basalt CR19-09 550-560	16000	290	6	8700	530	0.7
30: Dunite CR19-08 80-90	39000	30	< 2	210000	960	< 0.1
31: Dunite CR18-04 95-105	44000	30	< 2	93000	1200	< 0.1
32: Dunite CR18-01 550-560	51000	16	< 2	170000	830	< 0.1
33: Basalt CR21-129 45-55	40000	910	7	10000	360	0.3
34: Basalt CR21-129A 45-55	35000	830	7	8600	320	0.3
35: Gabbro CR21-129A 395-405	13000	1100	6	17000	190	0.4
36: Dunite CR21-130 70-80	78000	400	< 2	250000	1300	< 0.1
37: Dunite-01 CR21-130 190-200	58000	20	< 2	270000	940	< 0.1
38: Dunite CR21-130 530-540	79000	28	< 2	280000	1200	0.1
39: Dunite-01 CR21-135 75-85	70000	30	< 2	290000	1100	0.1
40: Dunite CR21-135 145-155	49000	8.1	< 2	180000	810	0.1
41: Gabbro CR21-140 220-230	55000	23	< 2	210000	960	< 0.1
42: Gabbro CR21-140 245-255	66000	4100	18	65000	610	0.8
43: Dunite-01 CR21-146 50-60	58000	38	< 2	200000	970	< 0.1
44: Dunite CR21-146 65-75	60000	26	< 2	200000	940	< 0.1
45: Dunite CR21-146 120-130	57000	28	< 2	210000	970	< 0.1
46: Dunite CR21-146 200-210	35000	12	< 2	200000	630	< 0.1
47: Dunite CR21-146 510-520	61000	29	< 2	190000	1100	< 0.1
48: Dunite CR21-170 40-50	43000	40	< 2	210000	780	0.1
49: Dunite CR21-170 150-160	40000	6700	10	170000	700	< 0.1
50: Dunite CR21-170 200-210	33000	16	< 2	220000	580	< 0.1
51: Dunite CR21-170 300-310	49000	11	< 2	220000	1000	0.1
52: Dunite CR21-170 400-410	56000	21	< 2	220000	1100	0.1

Sample ID	Fe µg/g	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g
53: Dunite CR21-178 40-50	62000	21	< 2	250000	840	< 0.1
54: Dunite CR21-178 150-160	40000	36	< 2	270000	730	< 0.1
55: Dunite CR21-180 120-130	49000	17	< 2	190000	880	< 0.1
56: Dunite CR21-180 200-210	43000	8.2	< 2	200000	840	< 0.1
57: Gabbro CR21-180 480-490	3300	17	4	6300	130	0.3
58: Gabbro CR21-GT-06 75-85	11000	680	7	16000	190	0.3
59: Gabbro CR21-GT-06 95-105	9700	140	6	16000	180	0.2
60: Gabbro CR21-GT-06 300-310	15000	290	8	16000	270	0.3
61: Gabbro CR21-GT-06 350-360	13000	380	7	12000	300	0.3
62: Gabbro CR21-GT-06 400-410	43000	460	13	27000	820	0.2
63: Gabbro CR21-GT-06 500-510	96000	850	8	22000	1200	0.1
64: Peridotite CR19-12 535-545	95000	65	< 2	93000	750	< 0.1
65: Peridotite CR19-12 550-560	99000	86	< 2	89000	720	< 0.1
66: Peridotite CR20-38 265-275	90000	82	< 2	120000	1000	0.1
67: Peridotite-01 CR20-38 290-300	80000	89	< 2	100000	730	< 0.1
68: Peridotite CR20-68 65-75	82000	230	< 2	100000	770	< 0.1
69: Peridotite-01 CR20-78 100-110	61000	51	< 2	180000	1100	< 0.1
70: Peridotite CR20-78 147-157	67000	110	< 2	170000	1500	< 0.1
71: Pyroxenite CR21-124 535-553	24000	660	6	48000	310	< 0.1
72: Basalt-02 CR19-31 90-100	44000	1300	11	16000	520	2.2
73: Gabbro-02 CR20-34 510-520	50000	19	< 2	210000	810	0.1
74: Dunite-02 CR21-130 190-200	12000	1100	6	17000	200	0.3
75: Dunite-02 CR21-135 75-85	53000	17	< 2	220000	1100	0.1
76: Dunite-02 CR21-146 50-60	56000	33	< 2	200000	920	0.1
77: Peridotite-02 CR20-38 290-300	84000	110	< 2	110000	840	< 0.1
78: Peridotite-02 CR20-78 100-110	60000	34	< 2	190000	1100	< 0.1
79: Basalt CR20-79 360-370	41000	1200	14	37000	570	0.3
80: Gabbro CR21-GT-05 60-70	15000	140	12	21000	350	0.2
81: Gabbro CR21-GT-05 90-100	13000	150	9	15000	430	0.3
82: Gabbro CR21-GT-05 120-130	12000	250	10	13000	270	0.4
83: Gabbro CR21-GT-05 170-180	12000	310	9	11000	300	0.3
84: Gabbro CR21-GT-05 300-310	22000	630	10	15000	330	0.3
85: Gabbro CR21-GT-05 370-380	64000	290	10	16000	670	0.2
86: Basalt CR21-GT-05 410-420	68000	1700	7	14000	930	0.2
87: Gabbro CR22-GT-13 40-50	13000	460	8	21000	180	0.2
88: Gabbro CR22-GT-13 100-110	12000	490	7	17000	200	0.2
89: Gabbro CR22-GT-13 130-140	12000	340	7	17000	180	0.3
90: Gabbro CR22-GT-13 390-400	18000	260	16	27000	320	0.1
91: Gabbro CR22-GT-13 450-460	18000	190	14	27000	290	0.1
92: Gabbro CR22-GT-13 480-490	14000	300	9	15000	230	0.4

Sample ID	Ni µg/g	Pb µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g
1: Analysis Start Date	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22
2: Analysis Start Time	18:42	18:42	18:42	18:42	18:42	18:42
3: Analysis Completed Date	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22
4: Analysis Completed Time	10:08	10:08	10:08	10:08	10:08	10:08
5: Gabbro CR20-33 480-490	76	0.17	< 6	< 0.7	< 2	5.7
6: Gabbro-01 CR20-34 510-520	53	0.10	< 6	< 0.7	< 2	4.0
7: Gabbro CR20-34 530-540	69	0.12	< 6	< 0.7	< 2	2.9
8: Basalt CR20-60 380-390	13	0.53	< 6	< 0.7	< 2	17
9: Gabbro CR20-66 95-105	38	0.20	< 6	< 0.7	< 2	15
10: Gabbro CR20-66 120-130	53	0.26	< 6	< 0.7	< 2	25
11: Gabbro CR20-66 180-190	47	0.12	< 6	< 0.7	< 2	14
12: Basalt CR20-70A 560-570	56	0.44	< 6	< 0.7	< 2	10
13: Basalt CR20-70A 540-550	67	0.38	< 6	< 0.7	< 2	10
14: Basalt CR20-79 360-370						
15: Basalt CR20-79 380-390	40	0.26	< 6	< 0.7	< 2	14
16: Dunite CR20-83 440-450	2600	0.13	< 6	< 0.7	< 2	0.70
17: Dunite CR20-86 445-455	2400	0.26	< 6	< 0.7	< 2	15
18: Dunite CR21-104 160-170	2800	0.29	< 6	< 0.7	< 2	1.6
19: Dunite CR21-104 335-345	2500	0.35	< 6	< 0.7	< 2	55
20: Dunite CR21-104 350-360	2800	0.21	< 6	< 0.7	< 2	1.2
21: Dunite CR21-106A 150-160	2200	0.14	< 6	< 0.7	< 2	2.8
22: Dunite CR21-111A 300-310	2800	0.23	< 6	< 0.7	< 2	0.44
23: Dunite CR21-118 30-40	1900	0.13	< 6	< 0.7	< 2	0.52
24: Dunite CR21-120 400-410	2700	0.21	< 6	< 0.7	< 2	53
25: Basalt-01 CR19-31 90-100	37	0.82	< 6	< 0.7	< 2	17
26: Dunite CR19-11A 65-75	2600	0.16	< 6	< 0.7	< 2	1.9
27: Basalt CR19-09 590-600	12	0.81	< 6	< 0.7	< 2	17
28: Basalt CR19-09 570-580	13	1.1	< 6	< 0.7	< 2	17
29: Basalt CR19-09 550-560	29	0.80	< 6	< 0.7	< 2	15
30: Dunite CR19-08 80-90	2400	0.09	< 6	< 0.7	< 2	0.40
31: Dunite CR18-04 95-105	310	0.33	< 6	< 0.7	< 2	12
32: Dunite CR18-01 550-560	2200	0.24	< 6	< 0.7	< 2	0.45
33: Basalt CR21-129 45-55	26	0.68	< 6	< 0.7	< 2	13
34: Basalt CR21-129A 45-55	15	0.73	< 6	< 0.7	< 2	13
35: Gabbro CR21-129A 395-405	65	0.14	< 6	< 0.7	< 2	5.0
36: Dunite CR21-130 70-80	2100	0.15	< 6	< 0.7	< 2	5.9
37: Dunite-01 CR21-130 190-200	2600	0.42	< 6	< 0.7	< 2	3.6
38: Dunite CR21-130 530-540	2500	0.12	< 6	< 0.7	< 2	0.65
39: Dunite-01 CR21-135 75-85	3100	0.16	< 6	< 0.7	< 2	2.3
40: Dunite CR21-135 145-155	2900	0.50	< 6	< 0.7	< 2	20
41: Gabbro CR21-140 220-230	2800	0.55	< 6	< 0.7	< 2	0.96
42: Gabbro CR21-140 245-255	700	3.3	< 6	< 0.7	< 2	57
43: Dunite-01 CR21-146 50-60	2500	0.35	< 6	< 0.7	< 2	1.0

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

LR Report : CA19001-AUG22

Sample ID	Ni µg/g	Pb µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g
44: Dunite CR21-146 65-75	2500	0.37	< 6	< 0.7	< 2	0.92
45: Dunite CR21-146 120-130	2800	0.52	< 6	< 0.7	< 2	1.2
46: Dunite CR21-146 200-210	2800	0.19	< 6	< 0.7	< 2	22
47: Dunite CR21-146 510-520	2400	0.27	< 6	< 0.7	< 2	0.36
48: Dunite CR21-170 40-50	2500	0.17	< 6	< 0.7	< 2	9.7
49: Dunite CR21-170 150-160	2400	3.4	< 6	< 0.7	< 2	176
50: Dunite CR21-170 200-210	3100	0.13	< 6	< 0.7	< 2	8.5
51: Dunite CR21-170 300-310	3100	0.12	< 6	< 0.7	< 2	3.0
52: Dunite CR21-170 400-410	3100	0.13	< 6	< 0.7	< 2	2.2
53: Dunite CR21-178 40-50	2500	0.05	< 6	< 0.7	< 2	0.24
54: Dunite CR21-178 150-160	3600	0.08	< 6	< 0.7	< 2	0.43
55: Dunite CR21-180 120-130	2400	0.15	< 6	< 0.7	< 2	0.91
56: Dunite CR21-180 200-210	2900	0.13	< 6	< 0.7	< 2	0.81
57: Gabbro CR21-180 480-490	44	0.21	< 6	< 0.7	< 2	7.5
58: Gabbro CR21-GT-06 75-85	54	0.12	< 6	< 0.7	< 2	6.1
59: Gabbro CR21-GT-06 95-105	40	0.20	< 6	< 0.7	< 2	8.7
60: Gabbro CR21-GT-06 300-310	72	0.12	< 6	< 0.7	< 2	5.9
61: Gabbro CR21-GT-06 350-360	69	0.13	< 6	< 0.7	< 2	6.6
62: Gabbro CR21-GT-06 400-410	61	0.12	< 6	< 0.7	< 2	15
63: Gabbro CR21-GT-06 500-510	9.3	0.17	< 6	< 0.7	< 2	13
64: Peridotite CR19-12 535-545	1100	0.13	< 6	< 0.7	< 2	0.94
65: Peridotite CR19-12 550-560	1100	0.21	< 6	< 0.7	< 2	1.0
66: Peridotite CR20-38 265-275	1300	0.25	< 6	< 0.7	< 2	1.2
67: Peridotite-01 CR20-38 290-300	820	0.13	< 6	< 0.7	< 2	1.4
68: Peridotite CR20-68 65-75	1000	0.30	< 6	< 0.7	< 2	1.6
69: Peridotite-01 CR20-78 100-110	1500	0.17	< 6	< 0.7	< 2	2.3
70: Peridotite CR20-78 147-157	1200	0.22	< 6	< 0.7	< 2	0.79
71: Pyroxenite CR21-124 535-553	81	0.24	< 6	< 0.7	< 2	6.6
72: Basalt-02 CR19-31 90-100	19	0.83	< 6	< 0.7	< 2	23
73: Gabbro-02 CR20-34 510-520	2600	0.72	< 6	< 0.7	< 2	7.9
74: Dunite-02 CR21-130 190-200	66	0.10	< 6	< 0.7	< 2	5.2
75: Dunite-02 CR21-135 75-85	3000	0.09	< 6	< 0.7	< 2	1.9
76: Dunite-02 CR21-146 50-60	2400	0.27	< 6	< 0.7	< 2	0.79
77: Peridotite-02 CR20-38 290-300	850	0.22	< 6	< 0.7	< 2	1.3
78: Peridotite-02 CR20-78 100-110	1300	0.16	< 6	< 0.7	< 2	1.3
79: Basalt CR20-79 360-370	300	0.25	< 6	< 0.7	< 2	3.0
80: Gabbro CR21-GT-05 60-70	160	0.14	< 6	< 0.7	< 2	5.0
81: Gabbro CR21-GT-05 90-100	79	0.21	< 6	< 0.7	< 2	5.7
82: Gabbro CR21-GT-05 120-130	78	0.37	< 6	< 0.7	< 2	4.3
83: Gabbro CR21-GT-05 170-180	59	0.27	< 6	< 0.7	< 2	4.5
84: Gabbro CR21-GT-05 300-310	36	0.44	< 6	< 0.7	< 2	5.8
85: Gabbro CR21-GT-05 370-380	13	0.17	< 6	< 0.7	< 2	4.5
86: Basalt CR21-GT-05 410-420	6.7	0.30	< 6	< 0.7	< 2	5.5

Sample ID	Ni µg/g	Pb µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g
87: Gabbro CR22-GT-13 40-50	89	0.26	< 6	< 0.7	< 2	8.6
88: Gabbro CR22-GT-13 100-110	55	0.78	< 6	< 0.7	< 2	19
89: Gabbro CR22-GT-13 130-140	56	0.42	< 6	< 0.7	< 2	9.8
90: Gabbro CR22-GT-13 390-400	88	0.25	< 6	< 0.7	< 2	6.3
91: Gabbro CR22-GT-13 450-460	140	0.15	< 6	< 0.7	< 2	4.5
92: Gabbro CR22-GT-13 480-490	69	0.16	< 6	< 0.7	< 2	5.5

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g
1: Analysis Start Date	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22	19-Sep-22
2: Analysis Start Time	18:42	18:42	18:42	18:42	18:42	18:42
3: Analysis Completed Date	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22	21-Sep-22
4: Analysis Completed Time	10:09	10:09	10:09	10:09	10:09	10:09
5: Gabbro CR20-33 480-490	220	0.02	0.015	14	0.32	12
6: Gabbro-01 CR20-34 510-520	190	< 0.02	0.004	14	0.26	10
7: Gabbro CR20-34 530-540	210	< 0.02	0.003	14	0.23	13
8: Basalt CR20-60 380-390	11	< 0.02	0.11	8	5.4	33
9: Gabbro CR20-66 95-105	200	< 0.02	0.003	11	0.44	11
10: Gabbro CR20-66 120-130	260	< 0.02	0.003	16	0.53	8.9
11: Gabbro CR20-66 180-190	160	< 0.02	0.003	8	0.43	7.3
12: Basalt CR20-70A 560-570	2700	0.02	0.026	62	3.7	86
13: Basalt CR20-70A 540-550	3200	0.03	0.045	59	6.6	67
14: Basalt CR20-79 360-370						
15: Basalt CR20-79 380-390	3000	< 0.02	0.051	51	4.2	46
16: Dunite CR20-83 440-450	69	< 0.02	< 0.002	7	0.20	33
17: Dunite CR20-86 445-455	60	< 0.02	0.017	14	0.24	31
18: Dunite CR21-104 160-170	40	< 0.02	< 0.002	7	0.12	32
19: Dunite CR21-104 335-345	240	< 0.02	0.023	18	0.75	36
20: Dunite CR21-104 350-360	41	< 0.02	< 0.002	6	0.17	44
21: Dunite CR21-106A 150-160	40	< 0.02	< 0.002	5	0.14	38
22: Dunite CR21-111A 300-310	170	< 0.02	0.023	21	1.0	28
23: Dunite CR21-118 30-40	80	< 0.02	0.006	23	1.4	23
24: Dunite CR21-120 400-410	23	< 0.02	< 0.002	8	0.18	34
25: Basalt-01 CR19-31 90-100	120	< 0.02	0.058	33	3.8	33
26: Dunite CR19-11A 65-75	44	< 0.02	0.009	14	0.49	24
27: Basalt CR19-09 590-600	29	< 0.02	0.13	12	4.9	81
28: Basalt CR19-09 570-580	17	< 0.02	0.12	12	4.1	130
29: Basalt CR19-09 550-560	8.3	< 0.02	0.11	7	3.2	110
30: Dunite CR19-08 80-90	60	< 0.02	0.003	9	0.84	36
31: Dunite CR18-04 95-105	24	< 0.02	0.007	15	2.4	8.0
32: Dunite CR18-01 550-560	45	< 0.02	0.002	11	0.62	20
33: Basalt CR21-129 45-55	620	< 0.02	0.13	28	7.4	33

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g
34: Basalt CR21-129A 45-55	570	< 0.02	0.12	26	6.8	29
35: Gabbro CR21-129A 395-405	170	< 0.02	0.002	10	0.18	9.6
36: Dunite CR21-130 70-80	85	< 0.02	0.004	8	0.52	44
37: Dunite-01 CR21-130 190-200	43	< 0.02	< 0.002	9	0.14	22
38: Dunite CR21-130 530-540	39	< 0.02	< 0.002	5	0.14	42
39: Dunite-01 CR21-135 75-85	50	< 0.02	0.002	5	0.18	40
40: Dunite CR21-135 145-155	21	< 0.02	< 0.002	14	0.12	16
41: Gabbro CR21-140 220-230	49	0.02	0.012	13	0.69	25
42: Gabbro CR21-140 245-255	2900	0.14	0.24	66	7.3	81
43: Dunite-01 CR21-146 50-60	76	< 0.02	0.014	16	0.98	27
44: Dunite CR21-146 65-75	70	< 0.02	0.009	19	0.85	25
45: Dunite CR21-146 120-130	54	< 0.02	0.013	13	0.72	25
46: Dunite CR21-146 200-210	42	< 0.02	0.020	11	0.47	19
47: Dunite CR21-146 510-520	53	< 0.02	0.020	13	0.69	29
48: Dunite CR21-170 40-50	34	< 0.02	0.002	6	0.40	20
49: Dunite CR21-170 150-160	390	0.19	0.67	38	6.4	32
50: Dunite CR21-170 200-210	27	< 0.02	< 0.002	4	0.27	17
51: Dunite CR21-170 300-310	25	< 0.02	< 0.002	6	0.18	36
52: Dunite CR21-170 400-410	24	< 0.02	< 0.002	5	0.16	39
53: Dunite CR21-178 40-50	120	< 0.02	0.002	10	0.71	26
54: Dunite CR21-178 150-160	98	< 0.02	< 0.002	7	0.50	23
55: Dunite CR21-180 120-130	87	< 0.02	0.013	21	1.2	12
56: Dunite CR21-180 200-210	44	< 0.02	0.008	15	0.54	13
57: Gabbro CR21-180 480-490	26	< 0.02	0.002	6	0.17	5.9
58: Gabbro CR21-GT-06 75-85	150	< 0.02	0.003	8	0.20	8.1
59: Gabbro CR21-GT-06 95-105	180	< 0.02	< 0.002	11	0.23	8.6
60: Gabbro CR21-GT-06 300-310	360	< 0.02	0.004	13	0.45	12
61: Gabbro CR21-GT-06 350-360	360	< 0.02	0.012	22	2.4	13
62: Gabbro CR21-GT-06 400-410	600	< 0.02	0.004	110	1.2	29
63: Gabbro CR21-GT-06 500-510	1500	< 0.02	0.005	434	1.8	44
64: Peridotite CR19-12 535-545	160	< 0.02	0.006	24	1.1	14
65: Peridotite CR19-12 550-560	170	< 0.02	0.007	27	1.6	13
66: Peridotite CR20-38 265-275	180	< 0.02	0.006	38	1.7	27
67: Peridotite-01 CR20-38 290-300	250	< 0.02	0.008	34	2.3	23
68: Peridotite CR20-68 65-75	180	< 0.02	0.012	31	1.9	14
69: Peridotite-01 CR20-78 100-110	88	< 0.02	0.004	18	1.1	32
70: Peridotite CR20-78 147-157	110	< 0.02	0.005	23	1.6	43
71: Pyroxenite CR21-124 535-553	100	< 0.02	0.008	46	0.97	8.1
72: Basalt-02 CR19-31 90-100	350	< 0.02	0.092	27	4.4	39
73: Gabbro-02 CR20-34 510-520	22	< 0.02	0.003	10	0.15	19
74: Dunite-02 CR21-130 190-200	200	< 0.02	0.002	13	0.21	9.5
75: Dunite-02 CR21-135 75-85	19	< 0.02	< 0.002	5	0.18	37
76: Dunite-02 CR21-146 50-60	77	< 0.02	0.008	16	0.98	25

SGS Canada Inc.

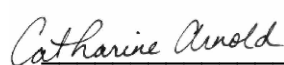
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

LR Report : CA19001-AUG22

Sample ID	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g
77: Peridotite-02 CR20-38 290-300	250	< 0.02	0.009	35	2.2	31
78: Peridotite-02 CR20-78 100-110	69	< 0.02	0.004	18	0.96	24
79: Basalt CR20-79 360-370	1100	0.02	0.035	51	2.5	75
80: Gabbro CR21-GT-05 60-70	130	< 0.02	0.004	16	0.46	12
81: Gabbro CR21-GT-05 90-100	160	< 0.02	0.004	17	1.4	12
82: Gabbro CR21-GT-05 120-130	140	< 0.02	0.004	13	0.40	11
83: Gabbro CR21-GT-05 170-180	180	< 0.02	0.005	14	0.76	12
84: Gabbro CR21-GT-05 300-310	560	< 0.02	0.008	24	1.1	17
85: Gabbro CR21-GT-05 370-380	2600	< 0.02	0.005	298	0.97	33
86: Basalt CR21-GT-05 410-420	3400	< 0.02	0.008	250	1.7	39
87: Gabbro CR22-GT-13 40-50	150	< 0.02	0.003	11	0.23	12
88: Gabbro CR22-GT-13 100-110	190	< 0.02	0.003	12	0.33	9.2
89: Gabbro CR22-GT-13 130-140	190	< 0.02	0.010	13	0.35	9.4
90: Gabbro CR22-GT-13 390-400	380	< 0.02	0.003	20	0.58	16
91: Gabbro CR22-GT-13 450-460	380	< 0.02	0.004	17	0.48	14
92: Gabbro CR22-GT-13 480-490	330	< 0.02	0.005	11	0.53	13

Revised report with sample ID corrected.



Catharine Arnold, B.Sc., C.Chem
 Project Specialist,
 Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

18-October-2022

Date Rec. : 01 September 2022

LR Report: CA19001-SEP22

Reference: Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Dunite CR19-20 220-230	6: Gabbro CR20-57 35-45	7: Pyroxenite CR20-57 60-70	8: Peridotite CR21-115 430-440	9: Peridotite CR21-138 55-65	10: Pyroxenite-01 CR21-138 390-400	11: Pyroxenite-02 CR21-138 390-400	12: Pyroxenite CR21-172 650-660
Sample Date & Time					25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Silver [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	5700	74000	20000	8100	8200	21000	21000	93000
Arsenic [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	< 0.5	< 0.5	< 0.5	< 0.5	1.6	< 0.5	< 0.5	< 0.5
Barium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	0.71	63	3	0.97	4	3	7	130
Beryllium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	0.03	0.03	0.06	0.08	0.04	0.03	0.05	0.03
Bismuth [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	180	92000	120000	3300	8400	110000	120000	100000
Cadmium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	0.03	0.04	0.09	0.03	< 0.02	0.07	0.07	0.04
Cobalt [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	140	36	72	120	120	59	63	33
Chromium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	2700	840	3500	3700	3200	3800	4200	1500
Copper [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	37	100	200	5.8	25	310	360	81
Iron [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	72000	34000	56000	81000	80000	50000	52000	32000
Potassium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	87	2000	92	42	270	240	380	3200
Lithium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	< 2	10	6.2	< 2	< 2	8.2	7.4	12
Magnesium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	230000	49000	110000	220000	210000	120000	120000	60000
Manganese [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	1100	780	2000	1000	1300	1300	1400	690
Molybdenum [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	0.1	0.3	0.2	0.1	< 0.1	< 0.1	< 0.1	0.1
Nickel [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	2000	110	300	2000	1900	280	300	120
Lead [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	0.20	0.15	0.53	0.20	0.17	0.18	0.22	0.23

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	5: Dunite CR19-20 220-230	6: Gabbro CR20-57 35-45	7: Pyroxenite CR20-57 60-70	8: Peridotite CR21-115 430-440	9: Peridotite CR21-138 55-65	10: Pyroxenite-01 CR21-138 390-400	11: Pyroxenite-02 CR21-138 390-400	12: Pyroxenite CR21-172 650-660
Antimony [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	< 6	< 6	< 6	< 6	< 6	< 6	< 6	6.4
Strontium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	0.51	160	23	2	4	16	20	140
Titanium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	270	620	1200	400	760	1000	1100	530
Thallium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	< 0.02	0.03	0.03	< 0.02	< 0.02	< 0.02	< 0.02	0.04
Uranium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	0.015	0.022	0.033	0.041	0.030	0.016	0.015	0.011
Vanadium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	25	95	140	37	57	170	180	87
Yttrium [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	1.29	2.40	5.47	1.61	2.67	4.72	4.97	2.28
Zinc [µg/g]	13-Oct-22	03:56	17-Oct-22	14:00	34	20	41	27	40	33	35	26

Analysis	13: Dunite CR21-181 55-65	14: Dunite CR21-181 500-510	15: Basalt CR21-184 60-70	16: Gabbro CR21-184 430-440	17: Pyroxenite-01 CR21-GT-05 35-45	18: Pyroxenite-02 CR21-GT-05 35-45	19: Peridotite CR22-191 60-70	20: Dunite CR22-193A 60-70	21: Dunite CR22-193A 200-210	22: Dunite CR22-199 50-60	23: Dunite CR22-199 130-140	24: Peridotite CR22-199 185-195
Sample Date & Time	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	1500	1900	83000	91000	46000	8000	3300	6100	2700	3500	5300	15000
Arsenic [µg/g]	< 0.5	< 0.5	3.5	< 0.5	< 0.5	< 0.5	2.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Barium [µg/g]	0.51	2	120	79	5	2	3	9	0.50	0.65	0.96	0.73
Beryllium [µg/g]	< 0.02	0.03	0.56	0.04	0.06	0.04	0.04	0.24	< 0.02	0.03	0.02	0.03
Bismuth [µg/g]	< 0.09	< 0.09	0.17	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	340	3000	15000	110000	70000	57000	18000	3100	1600	450	410	24000
Cadmium [µg/g]	< 0.02	< 0.02	0.05	0.04	0.05	0.05	0.04	0.05	0.03	0.02	< 0.02	0.03
Cobalt [µg/g]	130	120	21	40	85	88	130	86	140	140	120	140
Chromium [µg/g]	2000	1400	74	880	1400	1400	2000	2100	3000	2400	2200	2100
Copper [µg/g]	6.0	4.0	66	110	47	38	21	120	260	82	9.8	29
Iron [µg/g]	72000	68000	48000	38000	69000	72000	88000	40000	59000	68000	68000	74000
Potassium [µg/g]	47	72	7200	2100	300	230	170	13000	80	150	110	50
Lithium [µg/g]	< 2	< 2	9.1	16	11	5.2	< 2	9.7	< 2	< 2	< 2	< 2
Magnesium [µg/g]	250000	230000	17000	69000	130000	100000	190000	130000	250000	250000	240000	210000
Manganese [µg/g]	1100	930	420	870	1300	1300	1300	560	830	1000	990	1200
Molybdenum [µg/g]	< 0.1	0.1	0.5	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel [µg/g]	2400	2200	74	120	530	560	1700	2100	3300	2500	1900	800
Lead [µg/g]	0.09	0.31	2	0.44	0.26	0.17	0.56	3	0.26	0.46	0.22	0.47

Analysis	13: Dunite CR21-181 55-65	14: Dunite CR21-181 500-510	15: Basalt CR21-184 60-70	16: Gabbro CR21-184 430-440	17: Pyroxenite-01 CR21-GT-05 35-45	18: Pyroxenite-02 CR21-GT-05 35-45	19: Peridotite CR22-191 60-70	20: Dunite CR22-193A 60-70	21: Dunite CR22-193A 200-210	22: Dunite CR22-199 50-60	23: Dunite CR22-199 130-140	24: Peridotite CR22-199 185-195
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	7.5	7.0	7.4	< 6	< 6	< 6	7.0	< 6	< 6	6.0	< 6	< 6
Strontium [µg/g]	0.76	1	100	180	34	6	15	28	2	5	0.76	2
Titanium [µg/g]	140	130	2700	770	1000	1000	710	160	170	240	260	440
Thallium [µg/g]	< 0.02	< 0.02	0.04	0.03	< 0.02	< 0.02	0.03	0.23	< 0.02	0.03	< 0.02	0.03
Uranium [µg/g]	0.006	0.009	0.48	0.019	0.017	0.017	0.025	0.060	0.010	0.046	0.014	0.009
Vanadium [µg/g]	13	12	100	100	110	100	49	14	18	16	26	43
Yttrium [µg/g]	0.39	0.54	15.7	3.02	4.33	3.61	2.58	1.55	0.59	1.00	1.14	2.01
Zinc [µg/g]	44	41	72	33	56	58	35	31	36	43	38	43

Analysis	25: Peridotite CR22-199 205-215	26: Pyroxenite CR22-199 250-260	27: Dunite CR22-201 20-30	28: Dunite CR22-201 400-410	29: Dunite CR22-203B 22-32	30: Pyroxenite CR22-204 330-340	31: Gabbro CR22-228 230-240	32: Gabbro CR22-228 260-270	33: Gabbro CR22-231 40-50	34: Gabbro CR22-231 70-80	35: Gabbro CR22-234 60-70	36: Gabbro CR22-234 100-110	37: Peridotite CR22-240 60-70
Sample Date & Time	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	10000	14000	3500	1900	1300	32000	62000	68000	82000	83000	79000	77000	23000
Arsenic [µg/g]	< 0.5	< 0.5	4.9	2.0	3.9	0.8	< 0.5	0.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Barium [µg/g]	0.51	1	0.54	0.34	0.35	20	36	62	64	117	83	138	4
Beryllium [µg/g]	< 0.02	0.02	< 0.02	< 0.02	< 0.02	0.70	0.02	0.04	0.03	0.03	0.03	0.03	< 0.02
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	10000	31000	5800	870	1300	110000	110000	110000	110000	100000	110000	100000	38000
Cadmium [µg/g]	< 0.02	0.06	< 0.02	< 0.02	< 0.02	0.10	0.06	0.03	0.05	0.02	0.02	0.02	0.03
Cobalt [µg/g]	140	95	110	110	110	81	51	54	41	39	40	33	120
Chromium [µg/g]	1600	2700	4000	3700	3100	1300	320	510	430	710	470	790	1700
Copper [µg/g]	5.2	460	23	2.9	41	150	110	130	130	97	130	92	64
Iron [µg/g]	74000	64000	58000	51000	54000	92000	47000	41000	41000	34000	41000	33000	110000
Potassium [µg/g]	100	440	660	200	100	710	2000	5000	2800	3600	2100	4300	360
Lithium [µg/g]	< 2	< 2	< 2	< 2	< 2	16	13	19	6.4	11	5.2	5.7	< 2
Magnesium [µg/g]	230000	170000	250000	260000	250000	120000	93000	87000	72000	70000	61000	61000	170000
Manganese [µg/g]	1100	1300	770	540	700	1800	1100	840	920	710	870	710	1700
Molybdenum [µg/g]	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.3	0.1	0.2	0.2	0.1	< 0.1	0.1	< 0.1
Nickel [µg/g]	760	420	2800	2600	2500	940	110	160	100	130	99	96	1100
Lead [µg/g]	0.20	0.31	0.29	0.18	0.18	2	0.24	0.27	0.22	0.26	0.74	0.86	0.20



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19001-SEP22

Analysis	25: Peridotite CR22-199 205-215	26: Pyroxenite CR22-199 250-260	27: Dunite CR22-201 20-30	28: Dunite CR22-201 400-410	29: Dunite CR22-203B 22-32	30: Pyroxenite CR22-204 330-340	31: Gabbro CR22-228 230-240	32: Gabbro CR22-228 260-270	33: Gabbro CR22-231 40-50	34: Gabbro CR22-231 70-80	35: Gabbro CR22-234 60-70	36: Gabbro CR22-234 100-110	37: Peridotite CR22-240 60-70
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	6.3	< 6	< 6	6.3	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	1	5	4	2	2	41	82	96	120	170	200	320	11
Titanium [µg/g]	410	670	160	130	86	6100	1000	890	750	640	850	790	480
Thallium [µg/g]	< 0.02	0.04	< 0.02	< 0.02	< 0.02	0.06	0.02	0.07	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Uranium [µg/g]	0.027	0.022	0.018	0.016	0.012	0.42	0.016	0.017	0.013	0.013	0.016	0.015	0.011
Vanadium [µg/g]	34	75	15	13	11	170	150	120	110	92	110	100	64
Yttrium [µg/g]	1.33	2.04	0.43	0.37	0.24	12.6	3.16	3.26	2.89	2.50	3.04	2.72	1.79
Zinc [µg/g]	35	38	37	33	33	90	32	28	31	24	35	26	68

Analysis	38: Peridotite CR22-240 90-100	39: Dunite CR22-243 465-475	40: Pyroxenite CR19-16 30-40	41: Dunite CR21-162 315-325	42: Peridotite CR21-GT-03 600-610	43: Pyroxenite CR21-GT-04A 275-285	44: Peridotite CR21-GT-06 25-35	45: Peridotite CR22-243 490-500	46: Dunite CR20-32 500-510	47: Dunite CR20-32 540-550	48: Gabbro CR20-41 345-355	49: Gabbro CR20-41 365-375	50: Pyroxenite CR20-78 375-385
Sample Date & Time	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	9900	6000	19000	1700	22000	18000	11000	15000	3700	2100	100000	99000	38000
Arsenic [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.5	2.8	1.9	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Barium [µg/g]	2	0.97	13	2	6	17	3	2	0.73	1	32	28	16
Beryllium [µg/g]	< 0.02	< 0.02	0.04	< 0.02	0.07	0.03	0.03	0.06	0.04	0.05	0.06	0.06	0.14
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	17000	3800	120000	3400	60000	120000	5500	29000	1200	1400	120000	110000	130000
Cadmium [µg/g]	< 0.02	< 0.02	0.08	< 0.02	0.04	0.12	< 0.02	0.05	< 0.02	< 0.02	0.08	0.07	0.08
Cobalt [µg/g]	140	120	58	120	100	55	120	170	150	130	41	43	67
Chromium [µg/g]	1700	3600	3700	1100	3200	3700	3700	1900	4800	2600	1100	650	3700
Copper [µg/g]	53	3.4	360	2.5	18	270	48	19	17	5.4	120	130	230
Iron [µg/g]	120000	76000	49000	77000	87000	50000	81000	98000	67000	68000	41000	44000	55000
Potassium [µg/g]	230	180	630	150	660	790	430	580	160	160	1400	1300	910
Lithium [µg/g]	< 2	< 2	5.5	< 2	2.0	4.6	< 2	2.3	< 2	< 2	9.6	8.1	12
Magnesium [µg/g]	200000	240000	120000	250000	170000	120000	230000	250000	290000	290000	76000	74000	120000
Manganese [µg/g]	1700	1000	1200	1000	1400	1300	1100	1800	1100	1000	1000	1100	1200
Molybdenum [µg/g]	< 0.1	< 0.1	< 0.1	0.1	< 0.1	0.2	< 0.1	< 0.1	0.1	0.1	0.2	0.1	0.1
Nickel [µg/g]	1300	1900	270	2100	1200	260	1900	1000	3000	2900	130	110	270
Lead [µg/g]	0.40	0.27	0.32	0.06	0.46	0.18	0.46	0.41	0.26	0.18	0.37	0.35	0.38

Online LIMS



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Project : PO#20446343

LR Report : CA19001-SEP22

Analysis	38: Peridotite CR22-240 90-100	39: Dunite CR22-243 465-475	40: Pyroxenite CR19-16 30-40	41: Dunite CR21-162 315-325	42: Peridotite CR21-GT-03 600-610	43: Pyroxenite CR21-GT-04A 275-285	44: Peridotite CR21-GT-06 25-35	45: Peridotite CR22-243 490-500	46: Dunite CR20-32 500-510	47: Dunite CR20-32 540-550	48: Gabbro CR20-41 345-355	49: Gabbro CR20-41 365-375	50: Pyroxenite CR20-78 375-385
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	0.9	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	8.4	7.6	7.7	6.6	6.7	7.1
Strontium [µg/g]	3	2	21	31	13	9	2	7	0.86	1	110	100	17
Titanium [µg/g]	410	340	1100	160	1600	1100	650	520	190	90	760	770	1500
Thallium [µg/g]	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02
Uranium [µg/g]	0.009	0.011	0.017	0.009	0.040	0.014	0.018	0.027	0.022	0.033	0.016	0.016	0.050
Vanadium [µg/g]	52	30	170	11	110	170	47	48	23	13	130	130	180
Yttrium [µg/g]	1.91	1.15	4.61	0.48	5.53	4.64	2.24	2.29	0.67	0.35	3.72	3.59	7.22
Zinc [µg/g]	62	37	33	37	63	33	31	37	52	44	37	42	43

Analysis	51: Dunnite CR21-153 250-260	52: Peridotite CR21-GT-06 150-160	53: Basalt CR22-GT-01C 100-110
Sample Date & Time	25-Jul-22	25-Jul-22	25-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	4900	12000	99000
Arsenic [µg/g]	< 0.5	0.9	12
Barium [µg/g]	0.61	1	251
Beryllium [µg/g]	0.04	0.05	0.59
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	1200	19000	64000
Cadmium [µg/g]	< 0.02	0.05	0.09
Cobalt [µg/g]	140	160	39
Chromium [µg/g]	4700	1500	170
Copper [µg/g]	46	28	69
Iron [µg/g]	64000	120000	52000
Potassium [µg/g]	69	130	9000
Lithium [µg/g]	< 2	< 2	14
Magnesium [µg/g]	280000	210000	12000
Manganese [µg/g]	1100	1700	1100
Molybdenum [µg/g]	< 0.1	< 0.1	0.4
Nickel [µg/g]	2900	1600	65
Lead [µg/g]	0.24	0.24	2



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Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19001-SEP22

Analysis	51: Dunnite CR21-153 250-260	52: Peridotite CR21-GT-06 150-160	53: Basalt CR22-GT-01C 100-110
Antimony [µg/g]	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7
Tin [µg/g]	6.5	6.2	6.4
Strontium [µg/g]	1	2	300
Titanium [µg/g]	290	400	3600
Thallium [µg/g]	< 0.02	< 0.02	0.10
Uranium [µg/g]	0.023	0.013	0.23
Vanadium [µg/g]	24	49	230
Yttrium [µg/g]	0.96	1.88	18.2
Zinc [µg/g]	58	58	98

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-007	EPA 3052/200.8
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-013	EPA 3052/200.8

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Metals - Microwave/ICP-MS - QCBatchID: EMS0031-OCT22													
Aluminum	3	µg/g	<3			10	20	90	70	130			
Antimony	0.8	µg/g	<0.8			ND	20	92	70	130			
Arsenic	0.5	µg/g	<0.5			ND	20	94	70	130			
Barium	0.01	µg/g	<0.01			8	20	98	70	130			
Beryllium	0.02	µg/g	<0.02			15	20	91	70	130			
Bismuth	0.09	µg/g	<0.09			ND	20	94	70	130			
Cadmium	0.02	µg/g	<0.02			ND	20	94	70	130			
Chromium	0.5	µg/g	<0.5			3	20	94	70	130			
Cobalt	0.01	µg/g	<0.01			3	20	95	70	130			
Copper	0.1	µg/g	<0.1			1	20	94	70	130			
Iron	3	µg/g	<3			3	20	100	70	130			
Lead	0.05	µg/g	<0.05			ND	20	97	70	130			
Lithium	2	µg/g	<2			ND	20	96	70	130			
Magnesium	3	µg/g	<0.1			3	20	98	70	130			
Manganese	0.1	µg/g	<0.1			4	20	95	70	130			
Molybdenum	0.1	µg/g	<0.1			ND	20	95	70	130			
Nickel	0.1	µg/g	<0.1			3	20	92	70	130			
Selenium	0.7	µg/g	<0.7			ND	20	99	70	130			
Silver	0.5	µg/g	<0.01			2	20	94	70	130			
Strontium	0.02	µg/g	<0.02			2	20	95	70	130			
Thallium	0.02	µg/g	<0.02			ND	20	91	70	130			
Tin	6	µg/g	<6			14	20	102	70	130			
Titanium	0.1	µg/g	<0.1			1	20	95	70	130			
Uranium	0.002	µg/g	<0.002			ND	20	93	70	130			
Vanadium	1	µg/g	<1			3	20	93	70	130			
Yttrium	0.004	µg/g	<0.004			3	20	96	70	130			
Zinc	0.7	µg/g	<0.7			20	20	96	70	130			
Metals - Microwave/ICP-MS - QCBatchID: EMS0032-OCT22													
Aluminum	3	µg/g	<3			15	20	93	70	130			
Antimony	0.8	µg/g	<0.8			ND	20	93	70	130			
Arsenic	0.5	µg/g	<0.5			ND	20	92	70	130			
Barium	0.01	µg/g	<0.01			5	20	98	70	130			
Beryllium	0.02	µg/g	<0.02			16	20	92	70	130			
Bismuth	0.09	µg/g	<0.09			ND	20	93	70	130			
Cadmium	0.02	µg/g	<0.02			ND	20	95	70	130			

Inorganic Analysis												
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material	
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)
									Low	High		
Chromium	0.5	µg/g	<0.5			1	20	92	70	130		
Cobalt	0.01	µg/g	<0.01			1	20	96	70	130		
Copper	0.1	µg/g	<0.1			2	20	94	70	130		
Iron	3	µg/g	<3			0	20	104	70	130		
Lead	0.05	µg/g	<0.05			1	20	99	70	130		
Lithium	2	µg/g	<2			ND	20	91	70	130		
Magnesium	3	µg/g	<0.1			1	20	104	70	130		
Manganese	0.1	µg/g	<0.1			1	20	91	70	130		
Molybdenum	0.1	µg/g	<0.1			ND	20	93	70	130		
Nickel	0.1	µg/g	<0.1			3	20	91	70	130		
Selenium	0.7	µg/g	<0.7			ND	20	99	70	130		
Silver	0.5	µg/g	<0.01			ND	20	91	70	130		
Strontium	0.02	µg/g	<0.02			2	20	95	70	130		
Thallium	0.02	µg/g	<0.02			ND	20	94	70	130		
Tin	6	µg/g	<6			7	20	107	70	130		
Titanium	0.1	µg/g	<0.1			18	20	92	70	130		
Uranium	0.002	µg/g	<0.002			ND	20	95	70	130		
Vanadium	1	µg/g	<1			0	20	91	70	130		
Yttrium	0.004	µg/g	<0.004			2	20	91	70	130		
Zinc	0.7	µg/g	<0.7			14	20	99	70	130		
Metals - Microwave/ICP-MS - QCBatchID: EMS0033-OCT22												
Aluminum	3	µg/g	<3			14	20	92	70	130		
Antimony	0.8	µg/g	<0.8			ND	20	97	70	130		
Arsenic	0.5	µg/g	<0.5			18	20	94	70	130		
Barium	0.01	µg/g	<0.01			14	20	98	70	130		
Beryllium	0.02	µg/g	<0.02			6	20	91	70	130		
Bismuth	0.09	µg/g	<0.09			ND	20	94	70	130		
Cadmium	0.02	µg/g	<0.02			ND	20	94	70	130		
Chromium	0.5	µg/g	<0.5			11	20	94	70	130		
Cobalt	0.01	µg/g	<0.01			7	20	95	70	130		
Copper	0.1	µg/g	<0.1			10	20	94	70	130		
Iron	3	µg/g	<3			8	20	100	70	130		
Lead	0.05	µg/g	<0.05			12	20	97	70	130		
Lithium	2	µg/g	<2			3	20	96	70	130		
Magnesium	3	µg/g	<0.1			5	20	98	70	130		
Manganese	0.1	µg/g	<0.1			6	20	95	70	130		
Molybdenum	0.1	µg/g	<0.1			ND	20	95	70	130		
Nickel	0.1	µg/g	<0.1			10	20	92	70	130		
Selenium	0.7	µg/g	<0.7			ND	20	99	70	130		



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Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19001-SEP22

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Silver	0.5	µg/g	<0.01			ND	20	92	70	130			
Strontium	0.02	µg/g	<0.02			9	20	95	70	130			
Thallium	0.02	µg/g	<0.02			ND	20	91	70	130			
Tin	6	µg/g	<6			12	20	102	70	130			
Titanium	0.1	µg/g	<0.1			10	20	95	70	130			
Uranium	0.002	µg/g	<0.002			20	20	93	70	130			
Vanadium	1	µg/g	<1			8	20	93	70	130			
Yttrium	0.004	µg/g	<0.004			5	20	96	70	130			
Zinc	0.7	µg/g	<0.7			11	20	96	70	130			



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

01-November-2022

Date Rec. : 29 September 2022

LR Report: CA19003-SEP22

Reference: Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Gabbro CR20-33 480-490	6: Gabbro-01 CR20-34 510-520	7: Gabbro CR20-34 530-540	8: Basalt CR20-60 380-390	9: Gabbro CR20-66 95-105	10: Gabbro CR20-66 120-130	11: Gabbro CR20-66 180-190	12: Basalt CR20-70A 560-570
Sample Date & Time					06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Silver [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	55000	35000	60000	63000	89000	84000	83000	76000
Arsenic [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	1.1	< 0.5	< 0.5	5.1	0.9	< 0.5	< 0.5	2.0
Barium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	58	8	21	190	720	200	420	130
Beryllium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	0.07	0.04	0.05	0.80	0.17	0.04	0.05	0.53
Bismuth [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	51000	22000	91000	17000	100000	110000	99000	63000
Cadmium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	0.03	0.04	0.12	0.13	0.12	0.07	0.05	0.29
Cobalt [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	29	23	60	7	40	41	39	38
Chromium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	140	84	120	88	290	200	200	100
Copper [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	120	130	180	4.5	110	95	95	110
Iron [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	25000	18000	54000	10000	39000	38000	37000	76000
Potassium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	3600	220	840	7300	12000	4900	7000	3600
Lithium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	11	8.0	8.7	5.4	7.9	9.2	5.8	8.9
Magnesium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	41000	23000	83000	7300	68000	68000	65000	26000
Manganese [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	510	330	1300	310	1000	890	850	1500
Molybdenum [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	0.4	0.3	0.3	0.8	0.3	0.2	0.3	0.8
Nickel [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	100	63	120	15	120	130	130	80
Lead [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	0.51	0.39	0.41	2	1	1	0.40	2

Online LIMS



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Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19003-SEP22

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis Date Completed	4: Analysis Time Completed	5: Gabbro CR20-33 480-490	6: Gabbro-01 CR20-34 510-520	7: Gabbro CR20-34 530-540	8: Basalt CR20-60 380-390	9: Gabbro CR20-66 95-105	10: Gabbro CR20-66 120-130	11: Gabbro CR20-66 180-190	12: Basalt CR20-70A 560-570
Antimony [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	77	31	58	150	240	320	180	160
Titanium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	540	370	910	820	890	890	830	8700
Thallium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	0.04	0.02	< 0.02	0.07	0.08	0.03	0.06	0.06
Uranium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	0.081	0.036	0.037	0.49	0.092	0.032	0.043	0.20
Vanadium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	44	20	130	32	96	93	88	190
Yttrium [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	2.64	1.57	4.23	8.36	4.09	4.14	4.04	27.7
Zinc [µg/g]	26-Oct-22	17:51	01-Nov-22	07:52	26	22	43	43	44	36	33	136

Analysis	13: Basalt CR20-70A 540-550	15: Basalt CR20-79 380-390	16: Dunite CR20-83 440-450	17: Dunite CR20-86 445-455	18: Dunite CR21-104 160-170	19: Dunite CR21-104 335-345	20: Dunite CR21-104 350-360	21: Dunite CR21-106A 150-160	22: Dunite CR21-111ACR21-118 300-310	23: Dunite 30-40	24: Dunite CR21-120 400-410	25: Basalt-01 CR19-31 90-100
Sample Date & Time	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	79000	82000	1100	1400	680	6800	820	680	4400	6900	1100	65000
Arsenic [µg/g]	0.7	0.8	< 0.5	0.9	< 0.5	0.6	< 0.5	< 0.5	0.5	< 0.5	< 0.5	< 0.5
Barium [µg/g]	260	260	2	9	1	110	1	4	2	2	4	170
Beryllium [µg/g]	0.57	0.55	< 0.02	0.12	0.03	0.05	< 0.02	< 0.02	0.05	0.03	< 0.02	0.58
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	55000	62000	1300	4000	440	8500	1600	1300	660	2100	5200	12000
Cadmium [µg/g]	0.13	0.07	0.02	0.02	< 0.02	0.04	0.03	0.02	< 0.02	< 0.02	0.03	0.07
Cobalt [µg/g]	40	38	150	140	110	130	140	130	130	130	140	22
Chromium [µg/g]	99	93	570	720	520	260	370	300	790	980	640	37
Copper [µg/g]	70	25	5.2	7.5	3.0	49	40	2.6	55	3.7	19	100
Iron [µg/g]	80000	75000	78000	87000	64000	79000	77000	80000	77000	83000	77000	46000
Potassium [µg/g]	6000	6500	100	63	58	450	89	79	120	110	58	13000
Lithium [µg/g]	11	8.3	< 2	< 2	< 2	3.6	< 2	< 2	< 2	< 2	< 2	12
Magnesium [µg/g]	28000	27000	260000	240000	240000	220000	240000	220000	230000	220000	240000	20000
Manganese [µg/g]	1500	1600	1200	1400	1000	1100	1200	1100	1100	1100	1100	400
Molybdenum [µg/g]	0.9	1.0	0.3	0.3	0.2	0.2	0.2	0.2	< 0.1	< 0.1	0.3	2.2
Nickel [µg/g]	92	76	2500	2300	2800	2400	2800	2100	2800	1900	2700	39
Lead [µg/g]	2	1	0.19	0.31	0.36	0.49	0.24	0.19	0.24	0.19	0.24	1
Antimony [µg/g]	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8

Analysis	13: Basalt CR20-70A 540-550	15: Basalt CR20-79 380-390	16: Dunite CR20-83 440-450	17: Dunite CR20-86 445-455	18: Dunite CR21-104 160-170	19: Dunite CR21-104 335-345	20: Dunite CR21-104 350-360	21: Dunite CR21-106A 150-160	22: Dunite CR21-111A 300-310	23: Dunite CR21-118 30-40	24: Dunite CR21-120 400-410	25: Basalt-01 CR19-31 90-100
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	190	200	1	15	2	57	2	3	0.90	1	50	77
Titanium [µg/g]	9300	9400	320	190	120	430	100	84	300	340	99	1500
Thallium [µg/g]	0.08	0.08	0.02	0.02	< 0.02	0.03	0.03	0.02	0.02	< 0.02	< 0.02	0.06
Uranium [µg/g]	0.20	0.20	0.005	0.061	0.004	0.037	0.004	0.017	0.11	0.014	0.041	0.36
Vanadium [µg/g]	190	190	9.5	13	6.6	22	6.2	5.8	20	25	9.9	73
Yttrium [µg/g]	27.5	28.6	0.37	0.38	0.25	1.74	0.31	0.25	1.27	1.59	0.33	7.72
Zinc [µg/g]	121	98	54	63	53	51	61	50	56	57	54	42

Analysis	26: Dunite CR19-11A 65-75	27: Basalt CR19-09 590-600	28: Basalt CR19-09 570-580	29: Basalt CR19-09 550-560	30: Dunite CR19-08 80-90	31: Dunite CR18-04 95-105	32: Dunite CR18-01 550-560	33: Basalt CR21-129 45-55	34: Basalt CR21-129A 45-55	35: Gabbro CR21-129A 395-405	36: Dunite CR21-130 70-80	37: Dunite-01 CR21-130 190-200	38: Dunite CR21-130 530-540
Sample Date & Time	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	2500	63000	74000	46000	3500	7900	3000	62000	61000	86000	4000	840	620
Arsenic [µg/g]	< 0.5	1.7	2.6	4.0	< 0.5	22	< 0.5	0.6	0.6	< 0.5	< 0.5	< 0.5	< 0.5
Barium [µg/g]	2	220	210	80	1	2	1.00	320	290	86	19	2	2
Beryllium [µg/g]	0.02	0.83	0.93	0.80	< 0.02	0.04	< 0.02	0.55	0.52	0.03	< 0.02	0.04	0.02
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	0.79	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	4400	18000	15000	22000	1700	15000	1200	24000	27000	93000	5400	1100	2100
Cadmium [µg/g]	< 0.02	0.16	0.24	0.21	< 0.02	0.02	< 0.02	0.07	0.05	0.06	< 0.02	0.02	< 0.02
Cobalt [µg/g]	120	7	8	9	120	110	130	16	14	41	130	110	150
Chromium [µg/g]	1000	91	61	56	430	830	680	43	48	190	310	580	320
Copper [µg/g]	35	15	25	27	3.3	12	3.3	18	12	130	11	6.6	170
Iron [µg/g]	70000	19000	22000	17000	50000	73000	68000	40000	37000	40000	76000	59000	77000
Potassium [µg/g]	100	5200	6800	3000	110	74	74	14000	12000	2800	420	59	66
Lithium [µg/g]	< 2	7.8	10	18	< 2	2.7	< 2	7.7	7.3	9.4	< 2	< 2	< 2
Magnesium [µg/g]	240000	4900	7000	7700	240000	180000	230000	9600	8400	66000	230000	230000	240000
Manganese [µg/g]	1100	450	480	470	930	1200	930	340	300	860	1200	960	1100
Molybdenum [µg/g]	0.1	0.9	0.9	1.0	< 0.1	< 0.1	< 0.1	0.5	0.4	0.5	0.1	< 0.1	0.2
Nickel [µg/g]	2700	13	13	32	2500	1300	2300	26	16	120	2100	2300	2400
Lead [µg/g]	0.22	3	3	3	0.12	0.41	0.32	1	2	0.27	0.18	0.41	0.24
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7



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Lakefield - Ontario - KOL 2HO

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Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19003-SEP22

Analysis	26: Dunite CR19-11A 65-75	27: Basalt CR19-09 590-600	28: Basalt CR19-09 570-580	29: Basalt CR19-09CR19-08 550-560	30: Dunite 80-90	31: Dunite CR18-04 95-105	32: Dunite CR18-01CR21-129 550-560	33: Basalt 45-55	34: Basalt CR21-129A 45-55	35: Gabbro CR21-129ACR21-130 395-405	36: Dunite 70-80	37: Dunite-01 CR21-130 190-200	38: Dunite CR21-130 530-540
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	3	160	160	110	1	12	0.81	83	86	120	7	4	0.98
Titanium [µg/g]	200	980	470	770	230	860	200	3500	3300	970	170	84	75
Thallium [µg/g]	0.02	0.06	0.08	0.04	0.03	0.03	0.03	0.07	0.07	0.04	0.04	0.03	0.03
Uranium [µg/g]	0.020	0.77	0.84	0.35	0.031	0.023	0.004	0.31	0.27	0.018	0.005	0.002	0.009
Vanadium [µg/g]	14	27	28	28	10	29	14	70	71	85	10	7.0	5.6
Yttrium [µg/g]	0.72	10.2	9.39	4.88	1.05	3.36	0.81	12.5	12.8	3.84	0.82	0.23	0.31
Zinc [µg/g]	61	87	132	121	49	43	47	42	38	33	56	43	52

Analysis	39: Dunite-01 CR21-135 75-85	40: Dunite CR21-135 145-155	41: Gabbro CR21-140 220-230	42: Gabbro CR21-140CR21-146 245-255	43: Dunite-01 50-60CR21-146	44: Dunite 65-75	45: Dunite CR21-146 120-130	46: Dunite CR21-146 200-210	47: Dunite CR21-146CR21-170 510-520	48: Dunite 40-50	49: Dunite CR21-170 150-160	50: Dunite CR21-170 200-210
Sample Date & Time	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	680	1300	2600	36000	3800	4000	2600	2500	2100	1300	14000	950
Arsenic [µg/g]	< 0.5	0.7	< 0.5	1.0	< 0.5	< 0.5	< 0.5	0.7	0.6	< 0.5	3.7	0.7
Barium [µg/g]	1	3	0.84	180	1	0.71	1	2	0.93	4	480	3
Beryllium [µg/g]	< 0.02	0.06	0.03	0.80	< 0.02	< 0.02	0.03	0.03	< 0.02	< 0.02	0.80	0.02
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	0.14	< 0.09
Calcium [µg/g]	1300	24000	360	49000	370	300	390	7800	210	1900	22000	1700
Cadmium [µg/g]	< 0.02	< 0.02	0.02	0.09	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.05	0.02
Cobalt [µg/g]	100	110	140	79	140	130	140	110	130	110	110	110
Chromium [µg/g]	340	1000	880	500	1100	1200	1100	1100	680	380	640	300
Copper [µg/g]	3.7	16	38	150	7.8	5.8	39	21	46	1.4	31	1.9
Iron [µg/g]	65000	62000	70000	93000	72000	76000	70000	49000	73000	52000	53000	42000
Potassium [µg/g]	61	45	75	5200	110	82	82	55	83	88	8200	130
Lithium [µg/g]	< 2	< 2	< 2	22	< 2	< 2	< 2	< 2	< 2	< 2	10	< 2
Magnesium [µg/g]	240000	210000	230000	97000	230000	230000	230000	230000	210000	230000	220000	270000
Manganese [µg/g]	1000	830	970	1300	950	960	960	700	1000	710	840	580
Molybdenum [µg/g]	0.2	0.1	< 0.1	0.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.2	0.2
Nickel [µg/g]	2800	3100	2800	910	2500	2500	2700	2900	2300	2400	2300	3100
Lead [µg/g]	0.17	0.59	0.54	4	0.35	0.25	0.52	0.21	0.29	0.21	4	0.30
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6



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Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19003-SEP22

Analysis	39: Dunite-01 CR21-135 75-85	40: Dunite CR21-135 145-155	41: Gabbro CR21-140 220-230	42: Gabbro CR21-140CR21-146 50-60CR21-146 65-75	43: Dunite-01 CR21-146 50-60CR21-146 65-75	44: Dunite CR21-146 65-75	45: Dunite CR21-146 120-130	46: Dunite CR21-146 200-210	47: Dunite CR21-146CR21-170 40-50 510-520	48: Dunite CR21-170 40-50	49: Dunite CR21-170 150-160	50: Dunite CR21-170 200-210
Strontium [µg/g]	3	20	1	180	1	1	1	23	0.58	10	500	9
Titanium [µg/g]	82	77	180	6800	350	290	200	180	170	120	1400	110
Thallium [µg/g]	0.03	0.03	0.06	0.20	0.03	0.02	0.06	0.04	0.03	0.03	0.21	< 0.02
Uranium [µg/g]	0.002	0.002	0.014	0.52	0.016	0.009	0.014	0.023	0.023	0.004	0.84	0.21
Vanadium [µg/g]	5.9	14	15	140	16	19	14	14	11	6.7	46	5.0
Yttrium [µg/g]	0.29	0.22	0.86	16.1	1.16	1.01	0.86	0.60	0.80	0.53	9.83	0.41
Zinc [µg/g]	50	57	51	105	47	54	50	48	48	34	53	25

Analysis	51: Dunite CR21-170 300-310	52: Dunite CR21-170CR21-178 40-50 400-410	53: Dunite CR21-178 40-50	54: Dunite CR21-178 150-160	55: Dunite CR21-180 120-130	56: Dunite CR21-180 200-210	57: Gabbro CR21-180 480-490	58: Gabbro CR21-GT-06 75-85	59: Gabbro CR21-GT-06 95-105	60: Gabbro CR21-GT-06 300-310	61: Gabbro CR21-GT-06 350-360	62: Gabbro CR21-GT-06 400-410
Sample Date & Time	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	710	710	2700	1900	5500	2900	66000	88000	76000	84000	72000	61000
Arsenic [µg/g]	< 0.5	< 0.5	< 0.5	0.5	0.9	0.5	3.1	0.8	1.3	1.7	8.4	22
Barium [µg/g]	2	2	0.49	0.48	0.61	0.66	4	43	88	62	74	63
Beryllium [µg/g]	< 0.02	< 0.02	0.02	0.03	0.03	0.03	0.09	0.04	0.03	0.07	0.16	0.10
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	1200	2100	140	570	2500	860	170000	99000	99000	88000	93000	84000
Cadmium [µg/g]	< 0.02	0.03	< 0.02	0.03	0.02	< 0.02	0.15	0.07	0.07	0.06	0.09	0.04
Cobalt [µg/g]	110	120	130	130	130	130	34	40	43	36	31	50
Chromium [µg/g]	340	290	500	530	1200	1300	250	220	100	450	200	80
Copper [µg/g]	1.6	2.0	3.2	46	15	20	49	100	150	86	83	69
Iron [µg/g]	60000	66000	63000	41000	68000	65000	30000	37000	41000	45000	43000	68000
Potassium [µg/g]	75	97	95	120	110	81	110	2000	1100	2500	3800	3400
Lithium [µg/g]	< 2	< 2	< 2	< 2	< 2	< 2	8.5	9.4	8.1	9.2	8.4	16
Magnesium [µg/g]	270000	250000	250000	260000	240000	250000	63000	65000	75000	56000	42000	46000
Manganese [µg/g]	960	980	820	710	990	890	1200	870	960	960	850	1200
Molybdenum [µg/g]	0.1	0.3	< 0.1	< 0.1	0.1	< 0.1	0.4	0.5	0.3	0.6	0.4	0.2
Nickel [µg/g]	3000	2900	2400	3400	2500	3000	140	120	120	160	120	85
Lead [µg/g]	0.22	0.27	0.24	0.22	0.27	0.72	0.51	0.42	0.84	0.49	0.60	0.18
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	3	2	0.42	0.66	1	1	72	140	150	89	62	62

Online LIMS

0003105354



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19003-SEP22

Analysis	51: Dunite CR21-170 300-310	52: Dunite CR21-170CR21-178 400-410	53: Dunite 40-50	54: Dunite CR21-178 150-160	55: Dunite CR21-180 120-130	56: Dunite CR21-180 200-210	57: Gabbro CR21-180 480-490	58: Gabbro CR21-GT-06 75-85	59: Gabbro CR21-GT-06 95-105	60: Gabbro CR21-GT-06 300-310	61: Gabbro CR21-GT-06 350-360	62: Gabbro CR21-GT-06 400-410
Titanium [µg/g]	63	85	180	140	310	170	470	670	700	1200	2900	2700
Thallium [µg/g]	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.03	0.03	0.05
Uranium [µg/g]	0.030	0.022	0.016	0.017	0.027	0.020	0.020	0.022	0.042	0.036	0.088	0.043
Vanadium [µg/g]	4.2	5.7	11	9.1	22	17	56	76	96	91	130	240
Yttrium [µg/g]	0.26	0.30	0.87	0.61	1.36	0.65	2.29	3.17	3.14	5.79	14.2	9.77
Zinc [µg/g]	43	46	38	37	52	52	32	29	36	38	37	44

Analysis	63: Gabbro CR21-GT-06 500-510	64: Peridotite CR19-12 535-545	65: Peridotite CR19-12 550-560	66: Peridotite CR20-38 265-275	67: Peridotite-01 CR20-38 290-300	68: Peridotite CR20-68 65-75	69: Peridotite-01 CR20-78 100-110	70: Peridotite CR20-78 147-157	71: Pyroxenite CR21-124 535-553	72: Basalt-02 CR19-31 90-100	73: Gabbro-02 CR20-34 510-520	74: Dunite-02 CR21-130 190-200
Sample Date & Time	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	58000	14000	13000	15000	16000	17000	11000	11000	19000	79000	1200	82000
Arsenic [µg/g]	73	0.8	< 0.5	0.7	< 0.5	1.3	< 0.5	< 0.5	1.7	4.7	0.6	< 0.5
Barium [µg/g]	49	1	1	2	2	5	3	4	15	240	4	39
Beryllium [µg/g]	0.20	0.03	0.03	0.03	0.06	0.07	0.03	0.05	0.05	0.61	0.05	0.03
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	0.12	< 0.09	< 0.09
Calcium [µg/g]	79000	10000	10000	24000	20000	15000	20000	5600	35000	18000	3100	100000
Cadmium [µg/g]	0.05	0.03	0.03	0.05	0.06	0.03	0.04	0.05	0.03	0.10	< 0.02	0.07
Cobalt [µg/g]	84	170	160	140	140	150	130	140	68	25	110	39
Chromium [µg/g]	31	1100	1000	990	790	670	370	460	1100	37	890	250
Copper [µg/g]	26	63	100	50	20	36	10	9.1	30	140	8.4	140
Iron [µg/g]	130000	130000	120000	110000	110000	110000	74000	82000	61000	45000	63000	38000
Potassium [µg/g]	1300	120	120	110	120	310	160	180	930	18000	80	1700
Lithium [µg/g]	7.9	< 2	< 2	< 2	< 2	< 2	< 2	< 2	7.7	11	< 2	8.7
Magnesium [µg/g]	29000	190000	180000	170000	170000	180000	200000	210000	140000	16000	240000	63000
Manganese [µg/g]	1600	1800	1700	1800	1700	1600	1100	1500	1300	500	820	910
Molybdenum [µg/g]	0.2	< 0.1	< 0.1	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	2.2	0.1	0.4
Nickel [µg/g]	9.9	1500	1400	1300	1000	1200	1300	1100	220	19	2400	120
Lead [µg/g]	0.43	0.16	0.36	0.40	0.26	0.43	0.31	0.38	0.41	2	0.80	0.30
Antimony [µg/g]	1.0	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	100	2	2	3	2	4	9	1	21	83	8	92
Titanium [µg/g]	9400	690	620	690	1100	720	370	420	870	2300	120	820



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19003-SEP22

Analysis	63: Gabbro CR21-GT-06 500-510	64: Peridotite CR19-12 535-545	65: Peridotite CR19-12 550-560	66: Peridotite CR20-38 265-275	67: Peridotite-01 CR20-38 290-300	68: Peridotite CR20-68 65-75	69: Peridotite-01 CR20-78 100-110	70: Peridotite CR20-78 147-157	71: Pyroxenite CR21-124 535-553	72: Basalt-02 CR19-31 90-100	73: Gabbro-02 CR20-34 510-520	74: Dunite-02 CR21-130 190-200
Thallium [µg/g]	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	0.07	< 0.02	< 0.02
Uranium [µg/g]	0.065	0.019	0.017	0.017	0.020	0.023	0.013	0.014	0.028	0.63	0.012	0.023
Vanadium [µg/g]	960	50	51	60	62	48	23	24	70	70	11	100
Yttrium [µg/g]	15.3	2.10	2.43	3.07	4.29	3.15	1.73	2.09	3.48	16.5	0.25	3.80
Zinc [µg/g]	59	68	65	70	84	56	49	60	47	47	50	31

Analysis	75: Dunite-02 CR21-135 75-85	76: Dunite-02 CR21-146 50-60	77: Peridotite-02 CR20-38 290-300	78: Peridotite-02 CR20-78 100-110	79: Basalt CR20-79 360-370	80: Gabbro CR21-GT-05 60-70	81: Gabbro CR21-GT-05 90-100	82: Gabbro CR21-GT-05 120-130	83: Gabbro CR21-GT-05 170-180	84: Gabbro CR21-GT-05 300-310	85: Gabbro CR21-GT-05 370-380	86: Basalt CR21-GT-05 410-420
Sample Date & Time	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	780	4300	19000	6000	52000	61000	71000	89000	75000	92000	61000	59000
Arsenic [µg/g]	< 0.5	< 0.5	0.5	< 0.5	3.1	1.8	9.7	6.4	2.5	4.8	2.2	2.8
Barium [µg/g]	0.93	0.79	2	1	130	59	38	70	61	79	23	72
Beryllium [µg/g]	< 0.02	0.02	0.05	0.03	0.24	0.07	0.09	0.07	0.08	0.12	0.11	0.19
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	0.11
Calcium [µg/g]	1100	470	18000	13000	54000	81000	100000	91000	98000	84000	77000	73000
Cadmium [µg/g]	0.04	0.03	0.03	< 0.02	0.28	0.08	0.05	0.06	0.05	0.06	0.07	0.08
Cobalt [µg/g]	100	130	150	140	73	64	38	32	36	39	82	91
Chromium [µg/g]	590	1100	800	520	530	460	420	470	180	68	41	48
Copper [µg/g]	3.8	7.2	22	8.0	56	68	81	47	58	59	44	41
Iron [µg/g]	65000	71000	110000	73000	86000	59000	47000	41000	49000	53000	130000	150000
Potassium [µg/g]	70	100	130	83	3200	1600	1500	2800	3000	4700	1200	2400
Lithium [µg/g]	< 2	< 2	< 2	< 2	16	16	13	13	11	12	9.1	6.4
Magnesium [µg/g]	250000	230000	180000	210000	91000	90000	62000	51000	54000	38000	38000	35000
Manganese [µg/g]	1100	890	1600	1000	1500	1300	1100	870	1100	950	1500	1900
Molybdenum [µg/g]	0.2	0.1	< 0.1	< 0.1	0.3	0.3	0.4	0.5	0.5	0.5	0.3	0.3
Nickel [µg/g]	2900	2300	1000	1200	540	340	180	140	130	57	18	8.7
Lead [µg/g]	0.20	0.35	0.35	0.27	0.55	0.49	0.46	0.55	0.43	1	0.41	0.55
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	0.9	< 0.8	0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	2	1	2	2	58	87	79	89	71	130	72	84
Titanium [µg/g]	92	250	940	260	4000	1500	1500	1200	1600	2000	8200	11000
Thallium [µg/g]	< 0.02	< 0.02	< 0.02	< 0.02	0.04	< 0.02	0.02	0.05	0.04	0.06	< 0.02	0.02



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19003-SEP22

Analysis	75: Dunite-02 CR21-135 75-85	76: Dunite-02 CR21-146 50-60	77: Peridotite-02 CR20-38 290-300	78: Peridotite-02 CR20-78 100-110	79: Basalt CR20-79 360-370	80: Gabbro CR21-GT-05 60-70	81: Gabbro CR21-GT-05 90-100	82: Gabbro CR21-GT-05 120-130	83: Gabbro CR21-GT-05 170-180	84: Gabbro CR21-GT-05 300-310	85: Gabbro CR21-GT-05 370-380	86: Basalt CR21-GT-05 410-420
Uranium [µg/g]	0.007	0.015	0.018	0.012	0.13	0.039	0.036	0.037	0.049	0.050	0.042	0.15
Vanadium [µg/g]	7.6	17	60	18	150	100	110	100	110	130	1100	1100
Yttrium [µg/g]	0.23	1.16	3.70	1.38	16.0	6.65	9.51	6.20	8.81	9.60	10.9	14.0
Zinc [µg/g]	53	46	82	40	113	45	39	28	36	41	71	83

Analysis	87: Gabbro CR22-GT-13 40-50	88: Gabbro CR22-GT-13 100-110	89: Gabbro CR22-GT-13 130-140	90: Gabbro CR22-GT-13 390-400	91: Gabbro CR22-GT-13 450-460	92: Gabbro CR22-GT-13 480-490
Sample Date & Time	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	78000	82000	80000	77000	67000	84000
Arsenic [µg/g]	0.5	0.5	0.6	1.4	1.6	1.3
Barium [µg/g]	110	260	57	120	53	60
Beryllium [µg/g]	0.03	0.03	0.03	0.08	0.06	0.08
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	100000	96000	100000	71000	75000	88000
Cadmium [µg/g]	0.07	0.05	0.08	0.04	0.03	0.06
Cobalt [µg/g]	44	40	42	43	55	35
Chromium [µg/g]	360	140	140	500	360	370
Copper [µg/g]	170	140	140	41	82	70
Iron [µg/g]	40000	40000	40000	50000	55000	45000
Potassium [µg/g]	2900	4600	2400	2600	1800	2400
Lithium [µg/g]	10	9.6	8.3	20	18	11
Magnesium [µg/g]	72000	65000	65000	78000	87000	54000
Manganese [µg/g]	870	940	930	1000	1100	910
Molybdenum [µg/g]	0.3	0.4	0.4	0.2	0.2	0.5
Nickel [µg/g]	150	100	100	180	290	140
Lead [µg/g]	0.43	0.96	0.67	0.45	0.46	0.41
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	190	350	130	110	73	100
Titanium [µg/g]	1300	900	800	1100	1300	1300
Thallium [µg/g]	0.04	0.04	0.02	0.02	< 0.02	0.04
Uranium [µg/g]	0.047	0.033	0.026	0.037	0.12	0.037



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Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

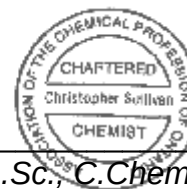
LR Report : CA19003-SEP22

Analysis	87: Gabbro CR22-GT-13 40-50	88: Gabbro CR22-GT-13 100-110	89: Gabbro CR22-GT-13 130-140	90: Gabbro CR22-GT-13 390-400	91: Gabbro CR22-GT-13 450-460	92: Gabbro CR22-GT-13 480-490
Vanadium [µg/g]	86	86	94	92	100	90
Yttrium [µg/g]	3.71	3.56	3.35	4.61	5.81	6.15
Zinc [µg/g]	32	33	31	48	43	41

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-007	EPA 3052/200.8
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-013	EPA 3052/200.8

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Metals - Microwave/ICP-MS - QCBatchID: EMS0166-OCT22													
Aluminum	3	µg/g	<3			4	20	95	70	130	92	70	130
Antimony	0.8	µg/g	<0.8			ND	20	96	70	130	104	70	130
Arsenic	0.5	µg/g	<0.5			13	20	89	70	130	103	70	130
Barium	0.01	µg/g	<0.01			7	20	97	70	130	94	70	130
Beryllium	0.02	µg/g	<0.02			87	20	90	70	130	75	70	130
Bismuth	0.09	µg/g	<0.09			ND	20	96	70	130	NV	70	130
Cadmium	0.02	µg/g	<0.02			ND	20	92	70	130	NV	70	130
Chromium	0.5	µg/g	<0.5			2	20	91	70	130	NV	70	130
Cobalt	0.01	µg/g	<0.01			3	20	92	70	130	94	70	130
Copper	0.1	µg/g	<0.1			3	20	94	70	130	104	70	130
Iron	3	µg/g	<3			1	20	101	70	130	102	70	130
Lead	0.05	µg/g	<0.05			10	20	100	70	130	98	70	130
Lithium	2	µg/g	<2			4	20	93	70	130	82	70	130
Magnesium	3	µg/g	<3			3	20	99	70	130	96	70	130
Manganese	0.1	µg/g	<0.1			3	20	93	70	130	96	70	130
Molybdenum	0.1	µg/g	<0.1			17	20	95	70	130	96	70	130
Nickel	0.1	µg/g	<0.1			3	20	90	70	130	110	70	130
Selenium	0.7	µg/g	<0.7			ND	20	98	70	130	NV	70	130
Silver	0.5	µg/g	<0.01			2	20	103	70	130	NV	70	130
Strontium	0.02	µg/g	<0.02			3	20	91	70	130	101	70	130
Thallium	0.02	µg/g	<0.02			ND	20	91	70	130	NV	70	130
Tin	6	µg/g	<6			ND	20	104	70	130	NV	70	130
Titanium	0.1	µg/g	<0.1			9	20	94	70	130	72	70	130
Uranium	0.002	µg/g	<0.002			3	20	103	70	130	83	70	130
Vanadium	1	µg/g	<1			0	20	93	70	130	90	70	130
Yttrium	0.004	µg/g	<0.004			1	20	98	70	130	NV	70	130
Zinc	0.7	µg/g	<0.7			2	20	93	70	130	102	70	130
Metals - Microwave/ICP-MS - QCBatchID: EMS0167-OCT22													
Aluminum	3	µg/g	<3			3	20	102	70	130	100	70	130
Antimony	0.8	µg/g	<0.8			ND	20	90	70	130	105	70	130
Arsenic	0.5	µg/g	<0.5			ND	20	95	70	130	108	70	130
Barium	0.01	µg/g	<0.01			8	20	97	70	130	84	70	130
Beryllium	0.02	µg/g	<0.02			4	20	91	70	130	77	70	130
Bismuth	0.09	µg/g	<0.09			6	20	94	70	130	NV	70	130
Cadmium	0.02	µg/g	<0.02			2	20	95	70	130	NV	70	130



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19003-SEP22

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Chromium	0.5	µg/g	<0.5			19	20	95	70	130	NV	70	130
Cobalt	0.01	µg/g	<0.01			5	20	94	70	130	93	70	130
Copper	0.1	µg/g	<0.1			3	20	94	70	130	101	70	130
Iron	3	µg/g	<3			3	20	102	70	130	102	70	130
Lead	0.05	µg/g	<0.05			4	20	96	70	130	90	70	130
Lithium	2	µg/g	<2			4	20	93	70	130	76	70	130
Magnesium	3	µg/g	<3			5	20	100	70	130	101	70	130
Manganese	0.1	µg/g	<0.1			4	20	98	70	130	100	70	130
Molybdenum	0.1	µg/g	<0.1			ND	20	93	70	130	97	70	130
Nickel	0.1	µg/g	<0.1			3	20	90	70	130	105	70	130
Selenium	0.7	µg/g	<0.7			ND	20	100	70	130	NV	70	130
Silver	0.5	µg/g	<0.01			9	20	91	70	130	NV	70	130
Strontium	0.02	µg/g	<0.02			5	20	93	70	130	104	70	130
Thallium	0.02	µg/g	<0.02			6	20	92	70	130	NV	70	130
Tin	6	µg/g	<6			ND	20	102	70	130	NV	70	130
Titanium	0.1	µg/g	<0.1			1	20	98	70	130	80	70	130
Uranium	0.002	µg/g	<0.002			7	20	96	70	130	75	70	130
Vanadium	1	µg/g	<1			2	20	93	70	130	90	70	130
Yttrium	0.004	µg/g	<0.004			5	20	93	70	130	NV	70	130
Zinc	0.7	µg/g	<0.7			5	20	95	70	130	101	70	130

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

28-September-2022

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Date Rec. : 19 August 2022
LR Report: CA19126-AUG22
Reference: Crawford Project

Copy: #2

Phone: 807-620-2207e
Fax:

CERTIFICATE OF ANALYSIS

Final Report - Revised

Sample ID	Sample Date & Time	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g
1: Analysis Start Date		14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22
2: Analysis Start Time		22:06	22:06	22:06	22:06	22:06	22:06
3: Analysis Completed Date		22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22
4: Analysis Completed Time		13:10	13:10	13:10	13:10	13:10	13:10
5: Basalt CR21-GT-08 75-85	15-Jul-22	< 0.5	96000	0.5	440	0.69	0.16
6: Basalt CR21-GT-08 115-125	15-Jul-22	< 0.5	93000	0.5	260	0.59	< 0.09
7: Basalt CR21-GT-08 175-185	15-Jul-22	< 0.5	110000	< 0.5	250	0.66	< 0.09
8: Basalt CR21-GT-08 250-260	15-Jul-22	< 0.5	85000	0.7	240	0.50	< 0.09
9: Basalt CR21-GT-08 325-335	15-Jul-22	< 0.5	87000	1.6	240	0.51	0.13
10: Basalt CR21-GT-08 400-410	15-Jul-22	< 0.5	93000	1.7	180	0.44	< 0.09
11: Basalt CR21-GT-08 450-460	15-Jul-22	< 0.5	84000	0.5	100	0.36	< 0.09
12: Basalt CR21-GT-08 500-510	15-Jul-22	< 0.5	94000	4.3	190	0.44	< 0.09
13: Basalt CR21-GT-09A 80-90	15-Jul-22	< 0.5	71000	1.0	150	0.38	< 0.09
14: Basalt CR21-GT-09A 110-120	15-Jul-22	< 0.5	97000	1.2	220	0.62	< 0.09
15: Basalt CR21-GT-09A 140-150	15-Jul-22	< 0.5	91000	0.8	230	0.53	< 0.09
16: Basalt CR21-GT-09B 80-90	15-Jul-22	< 0.5	88000	1.1	200	0.61	< 0.09
17: Basalt CR21-GT-09B 140-150	15-Jul-22	< 0.5	98000	0.8	220	0.63	< 0.09
18: Basalt CR21-GT-09B 200-210	15-Jul-22	< 0.5	88000	0.7	170	0.60	< 0.09
19: Basalt CR21-GT-09B 250-260	15-Jul-22	< 0.5	90000	0.6	300	0.65	0.13
20: Basalt CR21-GT-09B 300-310	15-Jul-22	< 0.5	91000	0.5	220	0.59	< 0.09
21: Basalt CR21-GT-09B 350-360	15-Jul-22	< 0.5	71000	1.2	130	0.53	< 0.09
22: Basalt CR21-GT-09B 470-480	15-Jul-22	< 0.5	93000	1.5	230	0.47	< 0.09
23: Basalt CR21-GT-09B 490-500	15-Jul-22	< 0.5	85000	3.0	120	0.62	< 0.09
24: Basalt CR22-GT-01C 140-150	15-Jul-22	< 0.5	91000	17	160	0.49	< 0.09
25: Basalt CR22-GT-01C 180-190	15-Jul-22	< 0.5	95000	< 0.5	310	0.59	0.09
26: Basalt CR22-GT-01C 220-230	15-Jul-22	< 0.5	81000	< 0.5	180	0.55	< 0.09
27: Basalt CR22-GT-01C 270-280	15-Jul-22	< 0.5	85000	0.7	140	0.54	< 0.09
28: Basalt CR22-GT-01C 300-310	15-Jul-22	< 0.5	110000	1.6	450	0.67	< 0.09
29: Basalt CR22-GT-11 100-110	15-Jul-22	< 0.5	86000	25	770	1	< 0.09
30: Basalt CR22-GT-11 175-185	15-Jul-22	< 0.5	86000	3.3	250	0.84	0.11
31: Basalt CR22-GT-11 300-310	15-Jul-22	< 0.5	84000	5.3	340	0.91	< 0.09

Online LIMS

0003064938



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - K0L 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

LR Report : CA19126-AUG22

Sample ID	Sample Date & Time	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g
32: Basalt CR22-GT-11 440-450	15-Jul-22	< 0.5	93000	1.9	410	0.58	0.09
33: Gabbro CR22-GT-15 50-60	15-Jul-22	< 0.5	100000	0.6	110	0.02	< 0.09
34: Gabbro CR22-GT-15 70-80	15-Jul-22	< 0.5	69000	< 0.5	88	< 0.02	< 0.09
35: Gabbro CR22-GT-15 95-105	15-Jul-22	< 0.5	91000	< 0.5	36	< 0.02	< 0.09
36: Gabbro CR22-GT-15 310-320	15-Jul-22	< 0.5	56000	0.6	39	0.05	< 0.09
37: Gabbro CR22-GT-15 550-560	15-Jul-22	< 0.5	94000	< 0.5	67	0.08	< 0.09
38: Basalt CR22-GT-22 60-70	15-Jul-22	< 0.5	91000	< 0.5	160	0.49	0.10
39: Basalt CR22-GT-22 150-160	15-Jul-22	< 0.5	78000	2.0	180	0.51	0.15
40: Basalt CR22-GT-22 250-260	15-Jul-22	< 0.5	86000	1.0	230	0.50	< 0.09
41: Basalt CR22-GT-22 500-510	15-Jul-22	< 0.5	89000	0.8	220	0.41	< 0.09
42: Basalt CR21-GT-02 200-210	15-Jul-22	< 0.5	84000	0.5	130	0.71	< 0.09
43: Basalt CR21-GT-02 250-260	15-Jul-22	< 0.5	91000	0.7	150	0.58	< 0.09
44: Basalt CR21-GT-02 300-310	15-Jul-22	< 0.5	88000	< 0.5	470	0.56	< 0.09
45: Basalt CR21-GT-02 340-350	15-Jul-22	< 0.5	92000	< 0.5	510	0.61	< 0.09
46: Basalt CR21-GT-02 370-380	15-Jul-22	< 0.5	91000	0.6	380	0.61	0.32
47: Basalt CR21-GT-02 560-570	15-Jul-22	< 0.5	90000	< 0.5	370	0.57	0.10
48: Basalt CR21-GT-02 600-610	15-Jul-22	< 0.5	85000	< 0.5	300	0.54	< 0.09
49: Basalt CR22-GT-10 280-290	15-Jul-22	< 0.5	84000	18	520	0.65	< 0.09
50: Basalt CR22-GT-10 320-330	15-Jul-22	< 0.5	87000	11	260	0.56	< 0.09
51: Basalt CR22-GT-10 480-490	15-Jul-22	< 0.5	86000	1.8	160	0.85	< 0.09
52: Basalt CR22-GT-10 550-560	15-Jul-22	< 0.5	84000	4.2	52	0.68	< 0.09
53: Basalt CR21-GT-01 100-110	15-Jul-22	< 0.5	89000	3.5	180	0.55	< 0.09
54: Basalt CR21-GT-01 120-130	15-Jul-22	< 0.5	95000	9.8	250	0.54	< 0.09
55: Basalt CR21-GT-01 160-170	15-Jul-22	< 0.5	100000	0.7	170	0.56	< 0.09
56: Basalt CR21-GT-01 180-190	15-Jul-22	< 0.5	92000	6.1	230	0.52	< 0.09
57: Basalt CR21-GT-01 225-235	15-Jul-22	< 0.5	89000	11	680	0.58	< 0.09
58: Basalt CR21-GT-01A 95-105	15-Jul-22	< 0.5	92000	1.1	160	0.45	< 0.09
59: Basalt CR21-GT-02 70-80	15-Jul-22	< 0.5	87000	< 0.5	140	0.53	< 0.09
60: Basalt CR21-GT-02 100-110	15-Jul-22	< 0.5	84000	< 0.5	120	0.52	< 0.09
61: Basalt CR21-GT-03 60-70	15-Jul-22	< 0.5	98000	< 0.5	110	0.59	< 0.09
62: Basalt CR21-GT-03 85-95	15-Jul-22	< 0.5	85000	0.5	170	0.53	< 0.09
63: Basalt CR21-GT-03 115-125	15-Jul-22	< 0.5	90000	0.6	260	0.56	0.10
64: Basalt CR21-GT-03 155-165	15-Jul-22	< 0.5	83000	0.6	300	0.60	0.10
65: Basalt CR21-GT-03 200-210	15-Jul-22	< 0.5	96000	3.5	310	0.66	< 0.09
66: Basalt CR21-GT-03 300-310	15-Jul-22	< 0.5	99000	24	200	0.71	0.44
67: Basalt CR21-GT-03 400-410	15-Jul-22	< 0.5	89000	< 0.5	220	0.79	< 0.09
68: Basalt CR21-GT-03 510-520	15-Jul-22	< 0.5	81000	7.3	160	1	< 0.09
69: Basalt CR21-GT-03 540-550	15-Jul-22	< 0.5	78000	6.5	110	0.97	< 0.09
70: Pyroxenite CR21-GT-04B 275-285	15-Jul-22	< 0.5	17000	< 0.5	12	0.02	< 0.09
71: Gabbro CR21-GT-04B 310-320	15-Jul-22	< 0.5	84000	3.6	29	0.03	< 0.09
72: Gabbro CR21-GT-04B 350-360	15-Jul-22	< 0.5	76000	< 0.5	27	0.03	< 0.09
73: Gabbro CR21-GT-04B 380-390	15-Jul-22	< 0.5	87000	< 0.5	36	< 0.02	< 0.09
74: Gabbro CR21-GT-04B 550-560	15-Jul-22	< 0.5	71000	< 0.5	86	0.06	< 0.09
75: Gabbro CR21-GT-04B 580-590	15-Jul-22	< 0.5	87000	< 0.5	55	0.06	< 0.09
76: Basalt CR22-197 105-115	15-Jul-22	< 0.5	85000	4.1	180	0.58	< 0.09
77: Peridotite CR21-102 80-90	15-Jul-22	< 0.5	5800	< 0.5	0.70	< 0.02	< 0.09

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

LR Report : CA19126-AUG22

Sample ID	Sample Date & Time	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g
78: Dunite CR21-104 365-375	15-Jul-22	< 0.5	390	< 0.5	0.75	< 0.02	< 0.09
79: Gabbro CR21-GT-07 315-325	15-Jul-22	< 0.5	96000	< 0.5	680	0.07	< 0.09
80: Gabbro CR21-GT-07 360-370	15-Jul-22	< 0.5	96000	10	89	0.11	< 0.09
81: Gabbro CR21-GT-07 400-410	15-Jul-22	< 0.5	94000	1.4	18	0.07	< 0.09
82: Gabbro CR21-GT-07 420-430	15-Jul-22	< 0.5	66000	4.4	26	0.06	< 0.09
83: Gabbro CR21-GT-07 440-450	15-Jul-22	< 0.5	88000	5.1	110	0.07	< 0.09
84: Basalt CR21-GT-07 510-520	15-Jul-22	< 0.5	81000	2.0	850	0.58	< 0.09
85: Peridotite CR22-197 130-140	15-Jul-22	< 0.5	13000	< 0.5	6	0.03	< 0.09
86: Pyroxenite CR20-37 420-430	15-Jul-22	< 0.5	45000	< 0.5	47	0.04	< 0.09
87: Basalt CR21-GT-02 40-50	15-Jul-22	< 0.5	84000	0.6	360	0.64	< 0.09

Sample ID	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g
1: Analysis Start Date	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22
2: Analysis Start Time	22:06	22:06	22:06	22:06	22:06	22:06	22:06
3: Analysis Completed Date	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22
4: Analysis Completed Time	13:10	13:10	13:10	13:10	13:10	13:10	13:10
5: Basalt CR21-GT-08 75-85	20000	0.04	19	57	35	62000	22000
6: Basalt CR21-GT-08 115-125	29000	0.06	18	95	39	43000	8900
7: Basalt CR21-GT-08 175-185	46000	0.09	16	48	49	38000	21000
8: Basalt CR21-GT-08 250-260	41000	0.03	7	120	37	20000	14000
9: Basalt CR21-GT-08 325-335	67000	0.46	52	160	95	110000	14000
10: Basalt CR21-GT-08 400-410	69000	0.11	44	92	53	81000	8100
11: Basalt CR21-GT-08 450-460	68000	0.04	31	50	20	77000	4200
12: Basalt CR21-GT-08 500-510	63000	0.06	36	50	36	68000	8200
13: Basalt CR21-GT-09A 80-90	60000	0.03	16	61	37	42000	8600
14: Basalt CR21-GT-09A 110-120	34000	0.03	13	48	52	38000	14000
15: Basalt CR21-GT-09A 140-150	45000	1	20	32	41	48000	14000
16: Basalt CR21-GT-09B 80-90	42000	0.09	12	51	32	36000	13000
17: Basalt CR21-GT-09B 140-150	41000	0.16	20	51	34	48000	13000
18: Basalt CR21-GT-09B 200-210	63000	0.06	13	58	27	38000	9200
19: Basalt CR21-GT-09B 250-260	34000	0.08	11	74	46	32000	14000
20: Basalt CR21-GT-09B 300-310	25000	0.06	14	62	45	40000	12000
21: Basalt CR21-GT-09B 350-360	47000	0.09	34	35	18	120000	2000
22: Basalt CR21-GT-09B 470-480	32000	0.08	27	67	36	77000	7600
23: Basalt CR21-GT-09B 490-500	42000	0.12	30	94	25	75000	2300
24: Basalt CR22-GT-01C 140-150	80000	0.71	41	130	52	60000	8300
25: Basalt CR22-GT-01C 180-190	37000	0.07	19	44	41	63000	7300
26: Basalt CR22-GT-01C 220-230	44000	0.07	13	54	37	48000	6900
27: Basalt CR22-GT-01C 270-280	24000	0.02	7	96	42	49000	6600
28: Basalt CR22-GT-01C 300-310	19000	0.05	13	71	42	42000	18000
29: Basalt CR22-GT-11 100-110	10000	0.06	19	150	140	33000	17000
30: Basalt CR22-GT-11 175-185	17000	0.06	5	120	12	22000	15000
31: Basalt CR22-GT-11 300-310	13000	0.03	5	97	4.0	13000	23000
32: Basalt CR22-GT-11 440-450	32000	0.08	15	130	140	43000	12000

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

LR Report : CA19126-AUG22

Sample ID	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g
33: Gabbro CR22-GT-15 50-60	96000	0.05	42	500	140	40000	3800
34: Gabbro CR22-GT-15 70-80	89000	0.04	38	430	160	32000	2000
35: Gabbro CR22-GT-15 95-105	110000	0.08	42	460	160	39000	1300
36: Gabbro CR22-GT-15 310-320	76000	0.05	70	1400	66	62000	1100
37: Gabbro CR22-GT-15 550-560	100000	0.03	39	310	93	51000	2600
38: Basalt CR22-GT-22 60-70	46000	0.06	13	53	40	35000	7600
39: Basalt CR22-GT-22 150-160	59000	0.19	10	62	34	40000	7700
40: Basalt CR22-GT-22 250-260	61000	0.08	33	79	26	74000	5600
41: Basalt CR22-GT-22 500-510	67000	0.09	31	96	42	60000	6600
42: Basalt CR21-GT-02 200-210	54000	0.09	22	89	34	46000	5000
43: Basalt CR21-GT-02 250-260	18000	0.04	12	120	100	39000	8900
44: Basalt CR21-GT-02 300-310	27000	0.09	8	98	35	40000	22000
45: Basalt CR21-GT-02 340-350	22000	0.05	19	57	180	72000	26000
46: Basalt CR21-GT-02 370-380	31000	0.11	14	87	140	43000	14000
47: Basalt CR21-GT-02 560-570	51000	0.06	10	94	40	28000	9900
48: Basalt CR21-GT-02 600-610	76000	0.07	19	35	40	62000	6800
49: Basalt CR22-GT-10 280-290	15000	0.03	18	84	4.7	43000	18000
50: Basalt CR22-GT-10 320-330	33000	0.04	14	130	16	36000	8200
51: Basalt CR22-GT-10 480-490	20000	0.07	7	220	61	19000	6400
52: Basalt CR22-GT-10 550-560	25000	0.07	8	310	74	17000	2000
53: Basalt CR21-GT-01 100-110	78000	0.14	42	160	64	52000	7600
54: Basalt CR21-GT-01 120-130	48000	0.12	42	170	59	47000	9800
55: Basalt CR21-GT-01 160-170	56000	0.10	34	140	68	61000	8000
56: Basalt CR21-GT-01 180-190	53000	0.14	39	160	52	54000	11000
57: Basalt CR21-GT-01 225-235	55000	0.19	39	210	52	77000	7600
58: Basalt CR21-GT-01A 95-105	76000	0.11	36	140	62	69000	5400
59: Basalt CR21-GT-02 70-80	45000	0.07	10	100	18	40000	5600
60: Basalt CR21-GT-02 100-110	63000	0.05	6	68	59	13000	5200
61: Basalt CR21-GT-03 60-70	55000	0.07	13	74	65	24000	6800
62: Basalt CR21-GT-03 85-95	25000	0.12	22	81	95	47000	13000
63: Basalt CR21-GT-03 115-125	15000	0.28	21	100	81	52000	13000
64: Basalt CR21-GT-03 155-165	25000	0.09	15	80	81	45000	20000
65: Basalt CR21-GT-03 200-210	14000	0.05	28	56	36	76000	17000
66: Basalt CR21-GT-03 300-310	15000	0.19	52	140	330	40000	4400
67: Basalt CR21-GT-03 400-410	12000	0.06	9	130	33	19000	5500
68: Basalt CR21-GT-03 510-520	23000	0.27	6	210	52	11000	5000
69: Basalt CR21-GT-03 540-550	34000	0.54	23	180	62	24000	3300
70: Pyroxenite CR21-GT-04B 275-285	120000	0.08	60	4000	320	51000	570
71: Gabbro CR21-GT-04B 310-320	110000	0.04	45	1300	100	38000	1200
72: Gabbro CR21-GT-04B 350-360	120000	0.05	41	760	150	35000	2000
73: Gabbro CR21-GT-04B 380-390	110000	0.06	41	560	140	42000	1700
74: Gabbro CR21-GT-04B 550-560	92000	< 0.02	50	1500	73	54000	2500
75: Gabbro CR21-GT-04B 580-590	95000	0.03	39	1500	92	49000	1700
76: Basalt CR22-197 105-115	28000	< 0.02	13	150	18	33000	7700
77: Peridotite CR21-102 80-90	3600	< 0.02	118	3000	8.9	62000	72
78: Dunite CR21-104 365-375	6000	< 0.02	136	490	2.8	77000	32

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
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Project : PO#20446343

LR Report : CA19126-AUG22

Sample ID	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g
79: Gabbro CR21-GT-07 315-325	96000	0.05	34	890	29	46000	12000
80: Gabbro CR21-GT-07 360-370	91000	0.05	38	940	98	51000	3900
81: Gabbro CR21-GT-07 400-410	100000	0.05	36	1200	70	49000	650
82: Gabbro CR21-GT-07 420-430	93000	0.05	46	680	37	57000	740
83: Gabbro CR21-GT-07 440-450	92000	0.03	42	460	92	58000	4100
84: Basalt CR21-GT-07 510-520	38000	0.05	13	84	27	34000	30000
85: Peridotite CR22-197 130-140	28000	< 0.02	119	1900	21	84000	270
86: Pyroxenite CR20-37 420-430	77000	0.05	78	2400	120	68000	2500
87: Basalt CR21-GT-02 40-50	30000	0.27	12	110	31	37000	17000

Sample ID	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	Sb µg/g
1: Analysis Start Date	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22
2: Analysis Start Time	22:06	22:06	22:06	22:06	22:06	22:06	22:06
3: Analysis Completed Date	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22
4: Analysis Completed Time	13:10	13:10	13:10	13:10	13:10	13:10	13:10
5: Basalt CR21-GT-08 75-85	17	16000	1500	0.8	19	5	< 0.8
6: Basalt CR21-GT-08 115-125	17	20000	580	1.1	22	4	< 0.8
7: Basalt CR21-GT-08 175-185	16	11000	710	0.5	24	3	< 0.8
8: Basalt CR21-GT-08 250-260	9.7	6200	590	2.6	12	2	< 0.8
9: Basalt CR21-GT-08 325-335	13	13000	1500	1.3	87	5	< 0.8
10: Basalt CR21-GT-08 400-410	16	23000	1500	0.6	91	2	< 0.8
11: Basalt CR21-GT-08 450-460	13	17000	1400	0.5	28	1	< 0.8
12: Basalt CR21-GT-08 500-510	13	21000	1700	0.6	84	2	< 0.8
13: Basalt CR21-GT-09A 80-90	10	12000	770	1.2	28	2	< 0.8
14: Basalt CR21-GT-09A 110-120	10	10000	550	1.9	12	3	< 0.8
15: Basalt CR21-GT-09A 140-150	12	13000	770	0.5	41	2	< 0.8
16: Basalt CR21-GT-09B 80-90	9.5	11000	540	0.8	12	2	< 0.8
17: Basalt CR21-GT-09B 140-150	12	12000	710	0.5	31	4	< 0.8
18: Basalt CR21-GT-09B 200-210	12	13000	810	0.5	19	2	< 0.8
19: Basalt CR21-GT-09B 250-260	7.0	5900	510	1.6	11	4	< 0.8
20: Basalt CR21-GT-09B 300-310	8.0	8700	500	0.4	12	2	< 0.8
21: Basalt CR21-GT-09B 350-360	7.7	15000	2000	0.8	13	1	< 0.8
22: Basalt CR21-GT-09B 470-480	11	12000	1100	0.6	19	2	0.8
23: Basalt CR21-GT-09B 490-500	26	32000	1200	0.6	45	2	< 0.8
24: Basalt CR22-GT-01C 140-150	13	14000	1600	1.1	77	137	< 0.8
25: Basalt CR22-GT-01C 180-190	18	20000	1000	0.7	23	3	< 0.8
26: Basalt CR22-GT-01C 220-230	12	10000	1100	1.0	14	2	< 0.8
27: Basalt CR22-GT-01C 270-280	6.7	6800	880	0.7	11	1	< 0.8
28: Basalt CR22-GT-01C 300-310	6.6	8700	750	0.6	21	0.94	< 0.8
29: Basalt CR22-GT-11 100-110	13	11000	310	1.1	14	2	< 0.8
30: Basalt CR22-GT-11 175-185	5.3	4000	500	5.9	3.9	2	< 0.8
31: Basalt CR22-GT-11 300-310	4.6	2800	230	0.5	3.1	2	< 0.8
32: Basalt CR22-GT-11 440-450	11	12000	2100	1.4	22	2	< 0.8
33: Gabbro CR22-GT-15 50-60	12	74000	980	0.5	116	0.22	< 0.8

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS**Project : PO#20446343****LR Report : CA19126-AUG22**

Sample ID	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	Sb µg/g
34: Gabbro CR22-GT-15 70-80	17	40000	750	0.6	106	0.34	< 0.8
35: Gabbro CR22-GT-15 95-105	11	74000	1000	0.7	107	0.20	< 0.8
36: Gabbro CR22-GT-15 310-320	20	100000	1300	0.2	389	0.29	< 0.8
37: Gabbro CR22-GT-15 550-560	8.9	55000	1000	0.6	115	0.29	< 0.8
38: Basalt CR22-GT-22 60-70	8.6	10000	620	0.5	22	3	< 0.8
39: Basalt CR22-GT-22 150-160	5.5	4800	2000	5.9	8.0	4	< 0.8
40: Basalt CR22-GT-22 250-260	11	19000	1100	0.5	47	2	< 0.8
41: Basalt CR22-GT-22 500-510	8.4	19000	1100	0.3	57	2	< 0.8
42: Basalt CR21-GT-02 200-210	13	4900	380	0.5	22	2	< 0.8
43: Basalt CR21-GT-02 250-260	8.2	7600	280	1.7	6.7	2	< 0.8
44: Basalt CR21-GT-02 300-310	6.5	6400	930	0.9	7.4	2	< 0.8
45: Basalt CR21-GT-02 340-350	12	8600	1300	0.9	12	2	< 0.8
46: Basalt CR21-GT-02 370-380	9.7	9500	1900	0.5	11	4	< 0.8
47: Basalt CR21-GT-02 560-570	8.4	7000	640	0.6	15	3	< 0.8
48: Basalt CR21-GT-02 600-610	18	15000	1400	0.6	21	3	< 0.8
49: Basalt CR22-GT-10 280-290	12	11000	530	1.0	21	0.90	< 0.8
50: Basalt CR22-GT-10 320-330	10	11000	910	1.3	30	2	< 0.8
51: Basalt CR22-GT-10 480-490	4.3	4000	500	1.0	9.2	2	< 0.8
52: Basalt CR22-GT-10 550-560	8.4	3900	350	1.3	11	3	< 0.8
53: Basalt CR21-GT-01 100-110	11	10000	1500	0.8	110	3	< 0.8
54: Basalt CR21-GT-01 120-130	10	12000	1300	0.5	99	2	< 0.8
55: Basalt CR21-GT-01 160-170	13	12000	1500	0.5	53	2	< 0.8
56: Basalt CR21-GT-01 180-190	11	12000	1400	0.6	87	2	< 0.8
57: Basalt CR21-GT-01 225-235	11	19000	1800	0.9	78	2	< 0.8
58: Basalt CR21-GT-01A 95-105	12	15000	1400	0.5	64	2	< 0.8
59: Basalt CR21-GT-02 70-80	15	8500	490	0.4	23	2	< 0.8
60: Basalt CR21-GT-02 100-110	15	12000	560	0.2	57	1	< 0.8
61: Basalt CR21-GT-03 60-70	15	5800	320	0.5	13	3	< 0.8
62: Basalt CR21-GT-03 85-95	13	9000	320	0.9	14	2	< 0.8
63: Basalt CR21-GT-03 115-125	11	8600	400	1.2	17	9	< 0.8
64: Basalt CR21-GT-03 155-165	9.4	7900	260	0.8	21	10	< 0.8
65: Basalt CR21-GT-03 200-210	14	11000	340	0.4	14	2	< 0.8
66: Basalt CR21-GT-03 300-310	8.5	12000	350	1.2	20	4	< 0.8
67: Basalt CR21-GT-03 400-410	9.9	10000	350	0.2	30	3	< 0.8
68: Basalt CR21-GT-03 510-520	5.4	2700	160	1.7	10	3	< 0.8
69: Basalt CR21-GT-03 540-550	5.6	5600	380	8.2	8.3	13	< 0.8
70: Pyroxenite CR21-GT-04B 275-285	5.6	120000	1300	0.2	280	0.20	< 0.8
71: Gabbro CR21-GT-04B 310-320	10	72000	760	0.6	152	0.18	< 0.8
72: Gabbro CR21-GT-04B 350-360	8.9	58000	810	0.5	116	0.21	< 0.8
73: Gabbro CR21-GT-04B 380-390	4.1	62000	930	0.4	99	0.15	< 0.8
74: Gabbro CR21-GT-04B 550-560	12	81000	1100	0.2	236	0.19	< 0.8
75: Gabbro CR21-GT-04B 580-590	11	59000	1000	0.4	179	0.17	< 0.8
76: Basalt CR22-197 105-115	18	9200	360	0.7	26	2	< 0.8
77: Peridotite CR21-102 80-90	< 2	270000	930	< 0.1	2582	0.14	< 0.8
78: Dunite CR21-104 365-375	< 2	260000	1200	0.1	2526	0.05	< 0.8
79: Gabbro CR21-GT-07 315-325	24	56000	930	0.2	150	1	< 0.8

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P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
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Project : PO#20446343

LR Report : CA19126-AUG22

Sample ID	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	Sb µg/g
80: Gabbro CR21-GT-07 360-370	12	55000	940	0.5	147	0.39	< 0.8
81: Gabbro CR21-GT-07 400-410	8.2	55000	940	0.6	143	0.28	< 0.8
82: Gabbro CR21-GT-07 420-430	14	72000	1300	0.1	159	0.41	< 0.8
83: Gabbro CR21-GT-07 440-450	9.9	56000	1200	0.3	125	0.29	< 0.8
84: Basalt CR21-GT-07 510-520	13	12000	300	0.5	21	3	< 0.8
85: Peridotite CR22-197 130-140	< 2	210000	1100	< 0.1	1657	0.31	< 0.8
86: Pyroxenite CR20-37 420-430	12	120000	1300	< 0.1	428	0.29	< 0.8
87: Basalt CR21-GT-02 40-50	8.0	11000	390	0.4	17	2	< 0.8

Sample ID	Se µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g
1: Analysis Start Date	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22	14-Sep-22
2: Analysis Start Time	22:06	22:06	22:06	22:06	22:06	22:06	22:06
3: Analysis Completed Date	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22	22-Sep-22
4: Analysis Completed Time	13:10	13:10	13:10	13:10	13:10	13:10	13:10
5: Basalt CR21-GT-08 75-85	< 0.7	< 6	83	3800	0.07	0.36	98
6: Basalt CR21-GT-08 115-125	< 0.7	< 6	310	4000	0.04	0.31	110
7: Basalt CR21-GT-08 175-185	< 0.7	< 6	180	4200	0.09	0.39	110
8: Basalt CR21-GT-08 250-260	< 0.7	< 6	150	1700	0.10	0.31	82
9: Basalt CR21-GT-08 325-335	1.1	< 6	210	1400	0.39	0.23	190
10: Basalt CR21-GT-08 400-410	< 0.7	< 6	230	1400	0.12	0.21	190
11: Basalt CR21-GT-08 450-460	< 0.7	< 6	180	2600	0.07	0.17	170
12: Basalt CR21-GT-08 500-510	< 0.7	< 6	240	1700	0.11	0.19	190
13: Basalt CR21-GT-09A 80-90	< 0.7	< 6	120	2700	0.06	0.35	72
14: Basalt CR21-GT-09A 110-120	< 0.7	< 6	180	3500	0.10	0.42	79
15: Basalt CR21-GT-09A 140-150	< 0.7	44	120	2100	0.09	0.37	80
16: Basalt CR21-GT-09B 80-90	< 0.7	< 6	160	3300	0.09	0.38	80
17: Basalt CR21-GT-09B 140-150	< 0.7	< 6	200	1800	0.10	0.42	93
18: Basalt CR21-GT-09B 200-210	< 0.7	< 6	130	1900	0.07	0.39	85
19: Basalt CR21-GT-09B 250-260	< 0.7	< 6	210	1000	0.14	0.51	89
20: Basalt CR21-GT-09B 300-310	< 0.7	< 6	130	2100	0.11	0.44	87
21: Basalt CR21-GT-09B 350-360	< 0.7	< 6	200	8900	< 0.02	0.22	160
22: Basalt CR21-GT-09B 470-480	< 0.7	< 6	170	4300	0.07	0.25	210
23: Basalt CR21-GT-09B 490-500	< 0.7	< 6	280	3000	0.03	0.22	180
24: Basalt CR22-GT-01C 140-150	< 0.7	< 6	190	4900	0.13	0.23	210
25: Basalt CR22-GT-01C 180-190	< 0.7	< 6	180	3900	0.11	0.48	110
26: Basalt CR22-GT-01C 220-230	< 0.7	< 6	150	3400	0.06	0.39	84
27: Basalt CR22-GT-01C 270-280	< 0.7	< 6	91	3500	0.04	0.43	94
28: Basalt CR22-GT-01C 300-310	< 0.7	< 6	140	4200	0.09	0.54	110
29: Basalt CR22-GT-11 100-110	< 0.7	< 6	160	2900	0.11	0.61	72
30: Basalt CR22-GT-11 175-185	< 0.7	< 6	170	1800	0.10	0.75	24
31: Basalt CR22-GT-11 300-310	< 0.7	< 6	100	1800	0.12	0.74	26
32: Basalt CR22-GT-11 440-450	< 0.7	< 6	220	3600	0.08	0.50	97
33: Gabbro CR22-GT-15 50-60	< 0.7	< 6	140	740	< 0.02	0.010	110
34: Gabbro CR22-GT-15 70-80	< 0.7	< 6	180	620	< 0.02	0.006	98

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Lakefield - Ontario - K0L 2H0
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Project : PO#20446343

LR Report : CA19126-AUG22

Sample ID	Se µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Ti µg/g	U µg/g	V µg/g
35: Gabbro CR22-GT-15 95-105	< 0.7	< 6	120	690	< 0.02	0.006	130
36: Gabbro CR22-GT-15 310-320	< 0.7	< 6	65	1100	< 0.02	0.020	110
37: Gabbro CR22-GT-15 550-560	< 0.7	< 6	77	1800	< 0.02	0.032	160
38: Basalt CR22-GT-22 60-70	< 0.7	< 6	220	3700	0.04	0.46	110
39: Basalt CR22-GT-22 150-160	< 0.7	< 6	180	1800	0.05	0.41	100
40: Basalt CR22-GT-22 250-260	< 0.7	< 6	190	2500	0.06	0.20	180
41: Basalt CR22-GT-22 500-510	< 0.7	< 6	220	2700	0.06	0.25	190
42: Basalt CR21-GT-02 200-210	< 0.7	< 6	110	2300	< 0.02	0.58	78
43: Basalt CR21-GT-02 250-260	< 0.7	< 6	130	3500	0.04	0.50	72
44: Basalt CR21-GT-02 300-310	< 0.7	< 6	130	3500	0.10	0.51	80
45: Basalt CR21-GT-02 340-350	< 0.7	< 6	57	3600	0.13	0.51	92
46: Basalt CR21-GT-02 370-380	< 0.7	< 6	210	3600	0.10	0.51	88
47: Basalt CR21-GT-02 560-570	< 0.7	< 6	230	3500	0.11	0.48	86
48: Basalt CR21-GT-02 600-610	< 0.7	< 6	230	3500	0.18	0.44	100
49: Basalt CR22-GT-10 280-290	< 0.7	< 6	100	3800	0.15	0.61	100
50: Basalt CR22-GT-10 320-330	< 0.7	< 6	150	2300	0.07	0.54	85
51: Basalt CR22-GT-10 480-490	< 0.7	< 6	150	1900	0.04	0.76	41
52: Basalt CR22-GT-10 550-560	< 0.7	< 6	240	2200	< 0.02	0.84	41
53: Basalt CR21-GT-01 100-110	< 0.7	< 6	250	2100	0.07	0.24	190
54: Basalt CR21-GT-01 120-130	< 0.7	< 6	200	5800	0.11	0.25	220
55: Basalt CR21-GT-01 160-170	< 0.7	< 6	220	6900	0.11	0.27	230
56: Basalt CR21-GT-01 180-190	< 0.7	< 6	160	6900	0.19	0.25	210
57: Basalt CR21-GT-01 225-235	< 0.7	< 6	280	6900	0.10	0.26	210
58: Basalt CR21-GT-01A 95-105	< 0.7	< 6	160	5000	0.04	0.25	210
59: Basalt CR21-GT-02 70-80	< 0.7	< 6	120	2300	< 0.02	0.41	89
60: Basalt CR21-GT-02 100-110	< 0.7	< 6	140	2000	< 0.02	0.15	58
61: Basalt CR21-GT-03 60-70	< 0.7	< 6	140	3000	0.02	0.58	92
62: Basalt CR21-GT-03 85-95	< 0.7	< 6	60	3200	0.06	0.49	81
63: Basalt CR21-GT-03 115-125	< 0.7	< 6	120	3500	0.06	0.52	93
64: Basalt CR21-GT-03 155-165	< 0.7	< 6	96	3300	0.10	0.51	86
65: Basalt CR21-GT-03 200-210	< 0.7	< 6	160	3800	0.09	0.56	100
66: Basalt CR21-GT-03 300-310	< 0.7	< 6	210	4000	< 0.02	0.71	110
67: Basalt CR21-GT-03 400-410	< 0.7	< 6	150	2600	0.02	0.54	63
68: Basalt CR21-GT-03 510-520	< 0.7	< 6	160	1300	0.02	0.60	18
69: Basalt CR21-GT-03 540-550	< 0.7	< 6	130	1700	0.04	0.79	19
70: Pyroxenite CR21-GT-04B 275-285	< 0.7	< 6	13	1300	< 0.02	0.018	180
71: Gabbro CR21-GT-04B 310-320	< 0.7	< 6	99	820	< 0.02	0.009	94
72: Gabbro CR21-GT-04B 350-360	< 0.7	< 6	94	840	< 0.02	0.007	100
73: Gabbro CR21-GT-04B 380-390	< 0.7	< 6	110	820	< 0.02	0.006	120
74: Gabbro CR21-GT-04B 550-560	< 0.7	< 6	66	1300	< 0.02	0.016	120
75: Gabbro CR21-GT-04B 580-590	< 0.7	< 6	85	1400	< 0.02	0.019	130
76: Basalt CR22-197 105-115	< 0.7	< 6	220	3100	0.04	0.44	90
77: Peridotite CR21-102 80-90	< 0.7	< 6	0.79	380	< 0.02	0.004	21
78: Dunite CR21-104 365-375	< 0.7	< 6	6	56	< 0.02	< 0.002	4.9
79: Gabbro CR21-GT-07 315-325	< 0.7	< 6	130	1300	0.07	0.021	130
80: Gabbro CR21-GT-07 360-370	< 0.7	< 6	110	1500	0.03	0.026	140

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

LR Report : CA19126-AUG22

Sample ID	Se µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Ti µg/g	U µg/g	V µg/g
81: Gabbro CR21-GT-07 400-410	< 0.7	< 6	120	1500	< 0.02	0.035	130
82: Gabbro CR21-GT-07 420-430	< 0.7	< 6	69	1700	< 0.02	0.024	150
83: Gabbro CR21-GT-07 440-450	< 0.7	< 6	110	1800	0.04	0.021	150
84: Basalt CR21-GT-07 510-520	< 0.7	< 6	110	3300	0.10	0.43	71
85: Peridotite CR22-197 130-140	< 0.7	< 6	6	1000	< 0.02	0.019	55
86: Pyroxenite CR20-37 420-430	< 0.7	< 6	48	980	0.04	0.004	130
87: Basalt CR21-GT-02 40-50	< 0.7	< 6	140	3200	0.06	0.55	82

Sample ID	Y µg/g	Zn µg/g
1: Analysis Start Date	14-Sep-22	14-Sep-22
2: Analysis Start Time	22:06	22:06
3: Analysis Completed Date	22-Sep-22	22-Sep-22
4: Analysis Completed Time	13:10	13:10
5: Basalt CR21-GT-08 75-85	14.2	81
6: Basalt CR21-GT-08 115-125	12.8	75
7: Basalt CR21-GT-08 175-185	15.1	65
8: Basalt CR21-GT-08 250-260	11.8	35
9: Basalt CR21-GT-08 325-335	8.86	250
10: Basalt CR21-GT-08 400-410	9.46	140
11: Basalt CR21-GT-08 450-460	13.0	99
12: Basalt CR21-GT-08 500-510	9.18	94
13: Basalt CR21-GT-09A 80-90	12.2	72
14: Basalt CR21-GT-09A 110-120	14.1	65
15: Basalt CR21-GT-09A 140-150	12.8	79
16: Basalt CR21-GT-09B 80-90	12.8	62
17: Basalt CR21-GT-09B 140-150	15.8	79
18: Basalt CR21-GT-09B 200-210	13.2	56
19: Basalt CR21-GT-09B 250-260	13.6	54
20: Basalt CR21-GT-09B 300-310	11.1	70
21: Basalt CR21-GT-09B 350-360	22.3	130
22: Basalt CR21-GT-09B 470-480	14.5	86
23: Basalt CR21-GT-09B 490-500	11.9	98
24: Basalt CR22-GT-01C 140-150	19.7	290
25: Basalt CR22-GT-01C 180-190	17.4	91
26: Basalt CR22-GT-01C 220-230	14.2	69
27: Basalt CR22-GT-01C 270-280	16.5	38
28: Basalt CR22-GT-01C 300-310	19.0	39
29: Basalt CR22-GT-11 100-110	11.5	42
30: Basalt CR22-GT-11 175-185	12.5	86
31: Basalt CR22-GT-11 300-310	12.2	31
32: Basalt CR22-GT-11 440-450	15.6	110
33: Gabbro CR22-GT-15 50-60	2.63	26
34: Gabbro CR22-GT-15 70-80	1.59	18
35: Gabbro CR22-GT-15 95-105	2.66	25

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P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS**Project :** PO#20446343**LR Report :** CA19126-AUG22

Sample ID	Y µg/g	Zn µg/g
36: Gabbro CR22-GT-15 310-320	4.27	51
37: Gabbro CR22-GT-15 550-560	7.28	33
38: Basalt CR22-GT-22 60-70	16.5	66
39: Basalt CR22-GT-22 150-160	16.5	57
40: Basalt CR22-GT-22 250-260	13.1	92
41: Basalt CR22-GT-22 500-510	9.99	70
42: Basalt CR21-GT-02 200-210	13.3	39
43: Basalt CR21-GT-02 250-260	16.2	22
44: Basalt CR21-GT-02 300-310	15.1	98
45: Basalt CR21-GT-02 340-350	15.6	52
46: Basalt CR21-GT-02 370-380	15.7	300
47: Basalt CR21-GT-02 560-570	14.1	49
48: Basalt CR21-GT-02 600-610	16.4	86
49: Basalt CR22-GT-10 280-290	10.8	40
50: Basalt CR22-GT-10 320-330	14.6	56
51: Basalt CR22-GT-10 480-490	14.6	37
52: Basalt CR22-GT-10 550-560	14.8	53
53: Basalt CR21-GT-01 100-110	20.5	93
54: Basalt CR21-GT-01 120-130	19.2	91
55: Basalt CR21-GT-01 160-170	20.4	89
56: Basalt CR21-GT-01 180-190	19.3	120
57: Basalt CR21-GT-01 225-235	20.0	130
58: Basalt CR21-GT-01A 95-105	20.0	97
59: Basalt CR21-GT-02 70-80	12.6	46
60: Basalt CR21-GT-02 100-110	7.80	43
61: Basalt CR21-GT-03 60-70	19.8	36
62: Basalt CR21-GT-03 85-95	14.0	61
63: Basalt CR21-GT-03 115-125	15.8	83
64: Basalt CR21-GT-03 155-165	14.0	50
65: Basalt CR21-GT-03 200-210	18.2	36
66: Basalt CR21-GT-03 300-310	16.3	68
67: Basalt CR21-GT-03 400-410	14.7	40
68: Basalt CR21-GT-03 510-520	12.7	76
69: Basalt CR21-GT-03 540-550	13.5	190
70: Pyroxenite CR21-GT-04B 275-285	5.17	26
71: Gabbro CR21-GT-04B 310-320	3.20	23
72: Gabbro CR21-GT-04B 350-360	2.86	24
73: Gabbro CR21-GT-04B 380-390	3.11	26
74: Gabbro CR21-GT-04B 550-560	5.03	34
75: Gabbro CR21-GT-04B 580-590	5.36	30
76: Basalt CR22-197 105-115	14.2	29
77: Peridotite CR21-102 80-90	1.11	34
78: Dunite CR21-104 365-375	0.11	41
79: Gabbro CR21-GT-07 315-325	5.42	31
80: Gabbro CR21-GT-07 360-370	6.46	34
81: Gabbro CR21-GT-07 400-410	6.58	34

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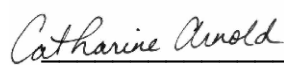
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

LR Report : CA19126-AUG22

Sample ID	Y µg/g	Zn µg/g
82: Gabbro CR21-GT-07 420-430	7.15	42
83: Gabbro CR21-GT-07 440-450	7.44	40
84: Basalt CR21-GT-07 510-520	11.4	90
85: Peridotite CR22-197 130-140	3.46	26
86: Pyroxenite CR20-37 420-430	3.60	50
87: Basalt CR21-GT-02 40-50	17.0	74

Revised report with sample ID corrected.



Catharine Arnold, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

29-September-2022

Date Rec. : 19 August 2022
LR Report: CA19131-AUG22
Reference: Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Peridotite CR21-177 33-43	6: Basalt CR19-09 530-540	7: Gabbro CR19-29 155-165	8: Peridotite CR20-34 451-461	9: Peridotite CR20-34 555-565	10: Peridotite CR20-34 575-585	11: Peridotite CR20-34 595-605	12: Peridotite CR20-36 380-390
Sample Date & Time					15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22
Silver [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	10000	83000	87000	12000	12000	10000	17000	15000
Arsenic [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	27	31	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6
Barium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	2.5	300	650	0.86	1.6	0.98	1.8	1.0
Beryllium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	0.04	0.84	0.03	0.02	< 0.02	0.02	0.03	0.03
Bismuth [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	< 0.09	12	0.18	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	14000	27000	78000	15000	24000	17000	26000	27000
Cadmium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	0.03	0.17	< 0.02	< 0.02	0.03	0.03	< 0.02	0.05
Cobalt [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	120	23	37	140	140	140	130	130
Chromium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	1700	12	670	1300	1600	1600	1500	2100
Copper [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	13	16	100	8.5	95	76	7.9	73
Iron [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	86000	24000	35000	77000	100000	120000	96000	110000
Potassium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	160	11000	15000	61	80	74	92	92
Lithium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	< 2	11	31	< 2	< 2	< 2	< 2	< 2
Magnesium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	220000	12000	67000	210000	170000	170000	180000	160000
Manganese [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	1200	630	770	1000	1600	1500	1500	1700
Molybdenum [µg/g]	27-Sep-22	14:10	28-Sep-22	15:48	< 0.1	0.4	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1
Nickel [µg/g]	27-Sep-22	14:10	28-Sep-22	15:49	1600	16	110	590	1300	1300	1200	1100
Lead [µg/g]	27-Sep-22	14:10	28-Sep-22	15:49	0.36	3	0.25	0.12	0.16	0.11	0.11	0.13
Antimony [µg/g]	27-Sep-22	14:10	28-Sep-22	15:49	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	1.0	< 0.8



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19131-AUG22

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Peridotite CR21-177 33-43	6: Basalt CR19-09 530-540	7: Gabbro CR19-29 155-165	8: Peridotite CR20-34 451-461	9: Peridotite CR20-34 555-565	10: Peridotite CR20-34 575-585	11: Peridotite CR20-34 595-605	12: Peridotite CR20-36 380-390
Selenium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:49	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	27-Sep-22	14:10	28-Sep-22	15:49	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:49	11	180	240	1.1	2.0	1.5	2.7	3.3
Titanium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:49	580	1300	670	520	370	430	400	510
Thallium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:49	< 0.02	0.07	0.05	< 0.02	0.02	< 0.02	< 0.02	0.02
Uranium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:49	0.013	0.80	0.010	0.008	0.008	0.007	0.008	0.010
Vanadium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:50	36	42	110	36	46	46	42	72
Yttrium [µg/g]	27-Sep-22	14:10	28-Sep-22	15:50	2.5	11.1	2.8	2.4	1.5	1.9	1.7	2.1
Zinc [µg/g]	27-Sep-22	14:10	28-Sep-22	15:50	24	101	28	29	57	45	56	61

Analysis	13: Peridotite CR20-36 405-415	14: Peridotite CR20-37 340-350	15: Peridotite CR20-37 375-385	16: Peridotite CR20-67 170-180	17: Peridotite CR20-73 100-110	18: Peridotite CR20-78 180-190	19: Peridotite CR20-78 510-520	20: Dunite CR21-162CR21-162 90-100	21: Dunite CR21-162 35-45CR21-162 80-90	22: Dunite CR21-162 80-90	23: Dunite CR21-162CR21-171 190-200	24: Peridotite CR21-171 54-64
Sample Date & Time	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	14000	12000	16000	13000	12000	7600	16000	1500	4000	1600	630	5500
Arsenic [µg/g]	< 0.5	3.7	1.6	1.2	< 0.5	< 0.5	1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Barium [µg/g]	1.7	1.7	2.2	0.85	1.0	0.53	1.0	0.32	0.31	0.24	0.36	6.3
Beryllium [µg/g]	0.03	0.02	0.03	0.03	< 0.02	0.02	0.04	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	24000	15000	13000	14000	23000	3600	14000	310	1200	620	1200	7800
Cadmium [µg/g]	0.02	0.02	0.02	< 0.02	< 0.02	0.02	0.04	0.03	< 0.02	0.03	< 0.02	0.03
Cobalt [µg/g]	120	130	140	150	140	130	150	140	130	140	120	130
Chromium [µg/g]	1800	1700	1500	1800	1500	1100	1600	870	1600	910	740	730
Copper [µg/g]	17	82	5.7	14	26	9.8	31	27	2.2	35	25	6.1
Iron [µg/g]	110000	120000	97000	98000	110000	85000	120000	67000	57000	61000	68000	78000
Potassium [µg/g]	110	75	130	95	82	66	60	37	37	35	26	170
Lithium [µg/g]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Magnesium [µg/g]	190000	190000	200000	190000	180000	230000	180000	250000	250000	240000	260000	250000
Manganese [µg/g]	1500	1700	1300	1200	1500	1300	1700	910	800	780	990	1100
Molybdenum [µg/g]	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1
Nickel [µg/g]	1300	1500	1300	1400	1300	1300	1300	2400	2300	2600	3600	2100
Lead [µg/g]	0.10	0.18	0.19	0.15	0.12	0.19	0.28	0.08	0.09	0.07	0.06	0.10
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	6.4	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	2.4	3.1	4.4	2.3	1.5	0.69	5.4	0.63	0.56	0.73	1.9	9.9



SGS Canada Inc.

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Lakefield - Ontario - K0L 2H0
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Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19131-AUG22

Analysis	13: Peridotite CR20-36 405-415	14: Peridotite CR20-37 340-350	15: Peridotite CR20-37 375-385	16: Peridotite CR20-67 170-180	17: Peridotite CR20-73 100-110	18: Peridotite CR20-78 180-190	19: Peridotite CR20-78 510-520	20: Dunite CR21-162 90-100	21: Dunite CR21-162 35-45	22: Dunite CR21-162 80-90	23: Dunite CR21-162CR21-171 54-64 190-200	24: Peridotite CR21-171 54-64
Titanium [µg/g]	660	350	680	600	400	410	700	120	150	110	65	150
Thallium [µg/g]	< 0.02	< 0.02	< 0.02	0.02	0.03	< 0.02	< 0.02	< 0.02	0.02	0.02	0.02	0.02
Uranium [µg/g]	0.010	0.007	0.011	0.008	0.006	0.005	0.011	< 0.002	< 0.002	< 0.002	< 0.002	0.003
Vanadium [µg/g]	65	42	58	51	50	23	58	8.4	14	9.4	6.2	16
Yttrium [µg/g]	3.0	1.5	2.7	2.7	1.7	1.6	1.9	0.4	0.7	0.5	0.2	0.8
Zinc [µg/g]	46	47	38	29	38	39	56	29	29	25	34	41

Analysis	25: Peridotite CR21-171 150-160	26: Peridotite CR21-177CR21-180 40-50 550-560	27: Peridotite CR21-96 80-90	28: Peridotite CR21-96 80-90	29: Dunite CR22-196B 100-110	30: Dunite CR22-196B 45-55	31: Basalt CR22-197 90-100	32: Peridotite CR22-197 325-335	33: Pyroxenite CR22-197CR22-197 342-352	34: Basalt CR22-197 55-65	35: Pyroxenite CR22-200 75-85	36: Pyroxenite CR22-200 350-360
Sample Date & Time	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	6000	13000	13000	11000	1800	1800	74000	2700	20000	80000	30000	25000
Arsenic [µg/g]	< 0.5	0.7	< 0.5	< 0.5	< 0.5	< 0.5	2.8	6.3	1.7	1.5	< 0.5	< 0.5
Barium [µg/g]	7.8	0.79	7.7	1.0	0.30	0.22	160	30	15	270	4.5	39
Beryllium [µg/g]	< 0.02	0.03	0.05	0.02	0.03	< 0.02	0.46	0.02	0.38	0.53	0.03	0.05
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	5800	11000	17000	2000	330	200	20000	37000	47000	37000	76000	34000
Cadmium [µg/g]	0.02	< 0.02	< 0.02	< 0.02	0.07	0.03	0.06	< 0.02	0.25	0.07	0.09	0.03
Cobalt [µg/g]	140	120	120	150	140	150	14	110	90	15	66	120
Chromium [µg/g]	940	1100	2200	1600	2300	2900	48	1900	1600	55	3300	1700
Copper [µg/g]	13	48	6.1	8.5	78	59	23	5.5	91	41	50	97
Iron [µg/g]	78000	110000	93000	67000	67000	62000	38000	60000	71000	40000	72000	80000
Potassium [µg/g]	250	39	800	92	35	32	4000	59	1000	9400	220	2100
Lithium [µg/g]	< 2	< 2	< 2	< 2	< 2	< 2	17	< 2	16	6.1	10	< 2
Magnesium [µg/g]	230000	170000	210000	230000	240000	250000	9200	210000	160000	11000	120000	160000
Manganese [µg/g]	1200	1400	1100	1000	860	820	570	1200	1500	590	1500	1300
Molybdenum [µg/g]	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.8	< 0.1	0.2	0.5	< 0.1	< 0.1
Nickel [µg/g]	1500	1300	1400	980	3400	3700	29	2100	1400	35	390	1100
Lead [µg/g]	0.38	0.21	0.17	0.18	0.62	0.25	2	0.72	3	2	0.16	0.98
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	5.9	3.6	2.0	1.4	0.93	0.76	180	850	37	210	14	81
Titanium [µg/g]	210	500	760	450	140	130	3400	290	3800	3800	1300	650
Thallium [µg/g]	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.06	< 0.02	0.06
Uranium [µg/g]	0.008	0.013	0.009	0.008	0.006	0.006	0.49	0.015	0.26	0.52	0.013	0.027



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

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Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

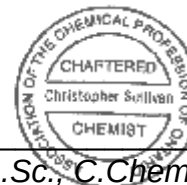
LR Report : CA19131-AUG22

Analysis	25: Peridotite CR21-171 150-160	26: Peridotite CR21-177CR21-180 40-50 550-560	27: Peridotite CR21-96 80-90	28: Peridotite CR21-96 80-90	29: Dunite CR22-196B 100-110	30: Dunite CR22-196B 45-55	31: Basalt CR22-197 90-100	32: Peridotite CR22-197 325-335	33: Pyroxenite CR22-197CR22-197 55-65 342-352	34: Basalt CR22-200 75-85	35: Pyroxenite CR22-200 75-85	36: Pyroxenite CR22-200 350-360
Vanadium [µg/g]	19	45	52	26	12	11	87	17	100	92	150	69
Yttrium [µg/g]	0.9	2.0	3.2	1.9	0.5	0.5	13	0.7	8.7	15	4.3	2.3
Zinc [µg/g]	34	24	31	40	30	31	52	45	74	68	53	38

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-007	EPA 3052/200.8
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-013	EPA 3052/200.8

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Metals - Microwave/ICP-MS - QCBatchID: EMS0137-SEP22													
Aluminum	3	µg/g	<3			2	20	94	70	130			
Antimony	0.8	µg/g	<0.8			ND	20	107	70	130			
Arsenic	0.5	µg/g	<0.5			11	20	94	70	130			
Barium	0.01	µg/g	<0.01			1	20	98	70	130			
Beryllium	0.02	µg/g	<0.02			1	20	91	70	130			
Bismuth	0.09	µg/g	<0.09			ND	20	92	70	130			
Cadmium	0.02	µg/g	<0.02			ND	20	95	70	130			
Chromium	0.5	µg/g	<0.5			2	20	94	70	130			
Cobalt	0.01	µg/g	<0.01			3	20	94	70	130			
Copper	0.1	µg/g	<0.1			17	20	92	70	130			
Iron	3	µg/g	<3			3	20	91	70	130			
Lead	0.05	µg/g	<0.05			5	20	99	70	130			
Lithium	2	µg/g	<2			ND	20	94	70	130			
Magnesium	3	µg/g	<0.1			3	20	94	70	130			
Manganese	0.1	µg/g	<0.1			3	20	95	70	130			
Molybdenum	0.1	µg/g	<0.1			96	20	90	70	130			
Nickel	0.1	µg/g	<0.1			2	20	94	70	130			
Selenium	0.7	µg/g	<0.7			ND	20	99	70	130			
Silver	0.5	µg/g	<0.01			12	20	91	70	130			
Strontium	0.02	µg/g	<0.02			5	20	91	70	130			
Thallium	0.02	µg/g	<0.02			ND	20	91	70	130			
Tin	6	µg/g	<6			ND	20	95	70	130			
Titanium	0.1	µg/g	<0.1			4	20	96	70	130			
Uranium	0.002	µg/g	<0.002			ND	20	96	70	130			
Vanadium	1	µg/g	<1			0	20	91	70	130			
Yttrium	0.004	µg/g	<0.004			3	20	93	70	130			
Zinc	0.7	µg/g	<0.7			4	20	93	70	130			
Metals - Microwave/ICP-MS - QCBatchID: EMS0138-SEP22													
Aluminum	3	µg/g	<3			12	20	94	70	130			
Antimony	0.8	µg/g	<0.8			ND	20	107	70	130			
Arsenic	0.5	µg/g	<0.5			ND	20	94	70	130			
Barium	0.01	µg/g	<0.01			6	20	98	70	130			
Beryllium	0.02	µg/g	<0.02			ND	20	92	70	130			
Bismuth	0.09	µg/g	<0.09			ND	20	93	70	130			
Cadmium	0.02	µg/g	<0.02			5	20	95	70	130			



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19131-AUG22

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Chromium	0.5	µg/g	<0.5			20	20	94	70	130			
Cobalt	0.01	µg/g	<0.01			1	20	94	70	130			
Copper	0.1	µg/g	<0.1			12	20	92	70	130			
Iron	3	µg/g	<3			1	20	91	70	130			
Lead	0.05	µg/g	<0.05			16	20	99	70	130			
Lithium	2	µg/g	<2			ND	20	94	70	130			
Magnesium	3	µg/g	<0.1			2	20	94	70	130			
Manganese	0.1	µg/g	<0.1			1	20	95	70	130			
Molybdenum	0.1	µg/g	<0.1			15	20	91	70	130			
Nickel	0.1	µg/g	<0.1			2	20	94	70	130			
Selenium	0.7	µg/g	<0.7			ND	20	99	70	130			
Silver	0.5	µg/g	<0.01			ND	20	91	70	130			
Strontium	0.02	µg/g	<0.02			1	20	91	70	130			
Thallium	0.02	µg/g	<0.02			ND	20	91	70	130			
Tin	6	µg/g	<6			ND	20	95	70	130			
Titanium	0.1	µg/g	<0.1			7	20	92	70	130			
Uranium	0.002	µg/g	<0.002			ND	20	96	70	130			
Vanadium	1	µg/g	<1			3	20	91	70	130			
Yttrium	0.004	µg/g	<0.004			1	20	93	70	130			
Zinc	0.7	µg/g	<0.7			6	20	93	70	130			



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P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

12-January-2024

Date Rec. : 07 November 2023

LR Report: CA19069-NOV23

Reference: Crawford Project - PO#23590674 (Set 1)

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: C00374709	6: C00374710	7: C00374711	8: C00374712	9: C00374713	10: C00374714	11: C00374718	12: C00374715	13: C00374716
Sample Date & Time					26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Silver [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	38000	34000	75000	70000	1700	66000	570	59000	27000
Arsenic [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	1.7	2.1	1.6	< 0.5	< 0.5	2.5	< 0.5	< 0.5	0.5
Barium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	210	210	120	48	1	1300	1	670	31
Beryllium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	1.1	0.94	1.0	0.94	< 0.02	0.44	< 0.02	0.37	0.56
Bismuth [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	80000	65000	30000	29000	1500	53000	1600	65000	19000
Cadmium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	0.09	0.08	0.13	0.10	< 0.02	0.07	< 0.02	0.06	0.10
Cobalt [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	78	79	5.3	3.4	130	50	140	56	70
Chromium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	420	380	32	58	1200	390	470	460	290
Copper [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	160	150	45	29	3.2	89	30	62	98
Iron [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	90000	86000	13000	8000	65000	73000	71000	68000	98000
Potassium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	3600	3800	6000	3300	55	3300	56	2500	440
Lithium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	38	29	14	6.9	< 2	34	< 2	40	39
Magnesium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	100000	100000	6800	7100	240000	95000	250000	97000	160000
Manganese [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	1400	1400	320	300	1000	1200	1100	1100	1100
Molybdenum [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	0.6	0.6	0.3	0.4	< 0.1	0.1	0.1	0.1	0.2
Nickel [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	840	960	37	17	2200	210	2100	390	290
Lead [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	4	3	2	2	0.20	2	0.25	1	2

Online LIMS

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: C00374709	6: C00374710	7: C00374711	8: C00374712	9: C00374713	10: C00374714	11: C00374718	12: C00374715	13: C00374716
Antimony [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	0.3	0.3	0.1	< 0.1	< 0.1	0.3	0.1	0.2	0.3
Tin [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	200	210	110	120	3	150	1	370	14
Titanium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	6400	5800	970	1100	87	3000	45	2500	4200
Thallium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	0.06	0.06	< 0.02	< 0.02	< 0.02	0.06	< 0.02	0.04	0.10
Uranium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	0.51	0.46	0.49	0.53	0.002	0.35	< 0.002	0.29	0.50
Vanadium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	150	130	37	13	14	180	6.2	160	230
Yttrium [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	13	12	11	8.7	0.26	13.1	0.13	11	19
Zinc [µg/g]	11-Jan-24	11:58	12-Jan-24	15:43	97	96	45	51	48	63	46	53	90

Analysis	14: C00374717	15: C00374719	16: C00374720	17: C00374723	18: C00374724	19: C00374725	20: C00374726	21: C00374727	22: C00374728	23: C00374729	24: C00374731	25: C00374734	26: C00374735
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	32000	85000	81000	5800	6200	8900	75000	58000	87000	3200	33000	68000	68000
Arsenic [µg/g]	< 0.5	3.0	5.0	< 0.5	< 0.5	< 0.5	0.6	< 0.5	1.1	< 0.5	1.3	< 0.5	0.6
Barium [µg/g]	1200	540	260	2	1	0.66	63	57	90	2	140	77	140
Beryllium [µg/g]	0.19	1.0	0.88	< 0.02	< 0.02	0.02	0.52	0.04	0.03	< 0.02	0.92	0.72	0.94
Bismuth [µg/g]	< 0.09	< 0.09	0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	45000	36000	38000	4300	980	8300	22000	94000	87000	23000	87000	26000	18000
Cadmium [µg/g]	0.04	0.11	0.12	< 0.02	< 0.02	< 0.02	0.09	0.04	0.06	0.04	0.11	0.04	0.05
Cobalt [µg/g]	80	25	29	130	140	150	11	45	40	120	81	7.7	3.6
Chromium [µg/g]	360	72	85	600	830	900	39	600	210	1000	490	46	70
Copper [µg/g]	38	79	78	6.0	6.8	6.5	50	180	82	19	130	27	15
Iron [µg/g]	66000	54000	61000	63000	63000	82000	17000	38000	36000	55000	88000	14000	7200
Potassium [µg/g]	1400	20000	11000	100	66	48	2800	2000	3300	83	2700	4400	4200
Lithium [µg/g]	14	15	13	< 2	< 2	< 2	12	14	18	< 2	30	12	4.8
Magnesium [µg/g]	150000	16000	19000	230000	230000	210000	11000	88000	71000	250000	110000	9200	3900
Manganese [µg/g]	1200	740	960	980	1000	1100	320	910	910	1200	1500	350	170
Molybdenum [µg/g]	< 0.1	1.2	1.1	< 0.1	0.2	< 0.1	0.3	0.1	0.2	< 0.1	0.5	0.3	0.6
Nickel [µg/g]	1200	41	39	1400	1300	950	35	190	100	2400	1000	47	15
Lead [µg/g]	1	2	2	0.23	0.36	0.41	2	0.68	0.37	7	3	1	2
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	0.2	0.3	0.3	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.2	< 0.1	0.2	< 0.1	0.1



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Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

LR Report : CA19069-NOV23

Analysis	14: C00374717	15: C00374719	16: C00374720	17: C00374723	18: C00374724	19: C00374725	20: C00374726	21: C00374727	22: C00374728	23: C00374729	24: C00374731	25: C00374734	26: C00374735
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	140	180	220	2	0.85	1	100	65	100	20	150	99	120
Titanium [µg/g]	1400	5600	5200	220	250	300	960	600	560	170	5700	2400	970
Thallium [µg/g]	0.02	0.38	0.19	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	0.05	< 0.02	< 0.02
Uranium [µg/g]	0.17	0.41	0.43	0.005	0.005	0.008	0.21	0.010	0.007	0.007	0.47	0.28	0.55
Vanadium [µg/g]	82	93	87	17	21	28	31	80	87	13	130	39	10
Yttrium [µg/g]	6.20	18	18	0.90	0.98	1.2	3.8	2.7	2.4	0.72	12.0	10	11.0
Zinc [µg/g]	55	94	98	50	44	49	35	28	33	33	100	41	24

Analysis	27: C00374737	28: C00374738	29: C00374739	30: C00374740	31: C00374741	32: C00374742	33: C00374743	34: C00374744	35: C00374745	36: C00374746	37: C00374747	38: C00374749	39: C00374751
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	72000	81000	60000	70000	83000	75000	85000	5200	86000	62000	63000	46000	15000
Arsenic [µg/g]	7.9	1.3	< 0.5	< 0.5	< 0.5	3.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	19	2.6
Barium [µg/g]	140	240	31	34	68	76	51	0.80	36	55	31	19	0.49
Beryllium [µg/g]	0.75	0.70	0.05	0.03	0.03	0.64	0.04	< 0.02	0.04	0.68	0.92	0.20	0.03
Bismuth [µg/g]	0.28	< 0.09	< 0.09	< 0.09	< 0.09	0.11	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	20000	27000	100000	110000	90000	23000	85000	470	99000	36000	21000	56000	13000
Cadmium [µg/g]	0.34	0.07	0.07	0.06	0.05	0.09	0.04	< 0.02	< 0.02	0.08	0.03	0.26	< 0.02
Cobalt [µg/g]	25	15	48	46	45	22	38	120	32	7.5	3.1	89	140
Chromium [µg/g]	32	39	280	110	110	40	470	1600	420	33	90	1300	1400
Copper [µg/g]	110	21	190	150	92	110	69	8.7	96	33	15	120	32
Iron [µg/g]	44000	36000	42000	42000	42000	33000	39000	58000	32000	14000	7000	84000	89000
Potassium [µg/g]	9400	6100	940	1100	2700	3900	4900	84	1400	2600	1100	1500	34
Lithium [µg/g]	27	15	13	16	16	22	12	< 2	14	14	4.8	22	< 2
Magnesium [µg/g]	11000	12000	89000	78000	74000	13000	71000	250000	65000	7300	3500	120000	170000
Manganese [µg/g]	500	630	1100	1100	990	660	920	960	740	430	160	1400	1400
Molybdenum [µg/g]	0.2	0.9	0.2	0.2	< 0.1	0.4	0.1	< 0.1	0.1	0.2	0.5	1.0	< 0.1
Nickel [µg/g]	100	20	110	95	83	48	120	2200	110	41	14	760	1400
Lead [µg/g]	2	2	0.23	0.29	0.25	8	0.32	0.18	0.23	1	1	0.47	0.21
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	0.1	0.2	0.3	0.2	0.1	0.1	< 0.1	< 0.1	0.2	0.1	< 0.1	0.4	0.2
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	68	170	68	86	94	120	88	0.53	71	97	140	11	8

Online LIMS

0003590662



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Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

LR Report : CA19069-NOV23

Analysis	27: C00374737	28: C00374738	29: C00374739	30: C00374740	31: C00374741	32: C00374742	33: C00374743	34: C00374744	35: C00374745	36: C00374746	37: C00374747	38: C00374749	39: C00374751
Titanium [µg/g]	980	2900	990	720	680	2700	750	250	580	1300	1000	2600	410
Thallium [µg/g]	0.06	0.05	< 0.02	< 0.02	< 0.02	0.03	0.02	< 0.02	< 0.02	< 0.02	0.02	0.13	< 0.02
Uranium [µg/g]	0.39	0.54	0.016	0.006	0.008	0.55	0.013	0.006	0.007	0.24	0.40	0.14	0.010
Vanadium [µg/g]	65	73	140	120	110	65	88	24	94	32	9.0	150	45
Yttrium [µg/g]	8.9	14	4.2	3.1	2.8	13	3.1	0.88	2.5	9.6	9.9	10	1.3
Zinc [µg/g]	96	96	39	30	30	110	32	55	27	41	13	160	35

Analysis	40: C00374752	41: C00374753	42: C00374754	43: C00374755	44: C00374756
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	73000	32000	69000	52000	75000
Arsenic [µg/g]	3.7	< 0.5	0.6	< 0.5	1.3
Barium [µg/g]	410	4	80	45	390
Beryllium [µg/g]	0.99	0.08	0.04	0.05	0.77
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	25000	69000	98000	83000	13000
Cadmium [µg/g]	0.04	0.04	0.06	0.06	0.06
Cobalt [µg/g]	18	64	46	56	14
Chromium [µg/g]	73	1300	73	190	31
Copper [µg/g]	43	55	130	150	13
Iron [µg/g]	33000	70000	41000	48000	39000
Potassium [µg/g]	9500	290	2400	1800	18000
Lithium [µg/g]	16	9.4	18	29	15
Magnesium [µg/g]	14000	120000	73000	100000	11000
Manganese [µg/g]	460	1400	1100	1300	630
Molybdenum [µg/g]	0.8	< 0.1	0.1	< 0.1	0.3
Nickel [µg/g]	33	330	87	120	23
Lead [µg/g]	3	0.12	0.18	0.21	1
Antimony [µg/g]	1.3	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	0.2	0.2	0.2	0.2	0.1
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	250	31	130	59	83
Titanium [µg/g]	3400	1700	790	890	3100
Thallium [µg/g]	0.09	< 0.02	0.02	< 0.02	0.15



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

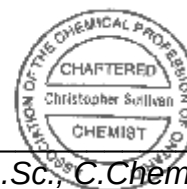
LR Report : CA19069-NOV23

Analysis	40: C00374752	41: C00374753	42: C00374754	43: C00374755	44: C00374756
Uranium [µg/g]	0.56	0.019	0.011	0.013	0.48
Vanadium [µg/g]	63	130	110	120	78
Yttrium [µg/g]	13	6.5	3.2	3.8	11
Zinc [µg/g]	40	47	29	34	61

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-007	EPA 3052/200.8
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-013	EPA 3052/200.8

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
QCR_SubCategory - QCBatchID: EMS0087-JAN24													
Calcium	3	µg/g	<3			0		98			NV		
Potassium	3	µg/g	<3			2		102			NV		
Metals - Microwave/ICP-MS - QCBatchID: EMS0087-JAN24													
Aluminum	3	µg/g	<3			0	20	100	70	130	81	70	130
Antimony	0.8	µg/g	<0.8			ND	20	94	70	130	115	70	130
Arsenic	0.5	µg/g	<0.5			7	20	98	70	130	92	70	130
Barium	0.01	µg/g	<0.01			1	20	95	70	130	100	70	130
Beryllium	0.02	µg/g	<0.02			2	20	98	70	130	91	70	130
Bismuth	0.09	µg/g	<0.09			2	20	100	70	130	NV	70	130
Cadmium	0.02	µg/g	<0.02			8	20	104	70	130	NV	70	130
Chromium	0.5	µg/g	<0.5			ND	20	100	70	130	NV	70	130
Cobalt	0.01	µg/g	<0.01			14	20	103	70	130	87	70	130
Copper	0.1	µg/g	<0.1			2	20	104	70	130	97	70	130
Iron	3	µg/g	<3			1	20	104	70	130	91	70	130
Lead	0.05	µg/g	<0.05			3	20	96	70	130	78	70	130
Lithium	2	µg/g	<2			2	20	97	70	130	97	70	130
Magnesium	3	µg/g	<3			2	20	106	70	130	84	70	130
Manganese	0.1	µg/g	<0.1			1	20	100	70	130	84	70	130
Molybdenum	0.1	µg/g	<0.1			13	20	98	70	130	74	70	130
Nickel	0.1	µg/g	<0.1			0	20	105	70	130	102	70	130
Selenium	0.1	µg/g	<0.1			2	20	102	70	130	NV	70	130
Silver	0.5	µg/g	<0.5			ND	20	105	70	130	NV	70	130
Strontium	0.02	µg/g	<0.02			2	20	95	70	130	84	70	130
Thallium	0.02	µg/g	<0.02			3	20	NV	70	130	NV	70	130
Tin	6	µg/g	<6			ND	20	96	70	130	NV	70	130
Titanium	0.1	µg/g	<0.1			1	20	93	70	130	75	70	130
Uranium	0.002	µg/g	<0.002			17	20	100	70	130	88	70	130
Vanadium	1	µg/g	<1			0	20	99	70	130	74	70	130
Yttrium	0.004	µg/g	<0.004			3	20	100	70	130	NV	70	130
Zinc	0.7	µg/g	<0.7			2	20	101	70	130	89	70	130



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

17-January-2024

Date Rec. : 07 November 2023

LR Report: CA19072-NOV23

Reference: Crawford Project - PO#23590674 (Set 2)

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis TimeCompleted	5: C00374757	6: C00374758	7: C00374759	8: C00374760	9: C00374761	10: C00374762	11: C00374763	12: C00374764
Sample Date & Time					26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Silver [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	65000	35000	20000	22000	26000	33000	50000	19000
Arsenic [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	15	177	< 0.5	< 0.5	1.6	2.1	< 0.5	< 0.5
Barium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	180	41	3	2	42	3	99	5
Beryllium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	0.75	0.37	0.03	0.03	0.06	0.04	0.04	0.04
Bismuth [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	29000	81000	21000	24000	110000	99000	50000	100000
Cadmium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	0.03	0.02	0.02	< 0.02	0.06	0.04	0.04	0.07
Cobalt [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	5.2	72	130	120	54	58	89	60
Chromium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	35	850	680	700	820	780	780	1300
Copper [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	9.7	32	63	52	320	200	69	410
Iron [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	7600	62000	100000	99000	40000	46000	76000	46000
Potassium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	7500	4200	120	88	790	130	3100	210
Lithium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	3.3	53	< 2	< 2	12	7.3	10	8.0
Magnesium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	1700	96000	170000	170000	110000	110000	130000	120000
Manganese [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	190	1600	1900	1900	1100	1200	1600	1400
Molybdenum [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	2.0	0.5	0.2	0.5	0.3	0.7	< 0.1	0.9
Nickel [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	18	750	1200	1200	260	280	720	270



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

LR Report : CA19072-NOV23

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	5: C00374757	6: C00374758	7: C00374759	8: C00374760	9: C00374761	10: C00374762	11: C00374763	12: C00374764
Lead [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	2	1	0.36	0.49	0.28	0.58	0.33	0.40
Antimony [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	< 0.8	< 0.8	< 0.8	4.9	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	0.1	0.1	0.3	0.3	0.5	0.3	0.2	0.6
Tin [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	170	160	4	2	20	45	83	21
Titanium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	990	250	460	380	1100	860	760	1100
Thallium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	0.05	0.05	< 0.02	< 0.02	< 0.02	< 0.02	0.10	< 0.02
Uranium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	0.52	0.060	0.016	0.018	0.018	0.024	0.032	0.016
Vanadium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	33	100	55	52	130	110	81	140
Yttrium [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	7.3	6.6	2.3	1.7	5.4	4.2	2.8	4.7
Zinc [µg/g]	16-Jan-24	14:05	17-Jan-24	13:23	9.8	53	71	72	24	33	69	31

Analysis	13: C00374766	14: C00374767	15: C00374768	16: C00374769	17: C00374770	18: C00374771	19: C00374773	20: C00374774	21: C00374775	22: C00374776	23: C00374777	24: C00374778
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	23000	63000	20000	18000	1200	29000	29000	14000	93000	99000	38000	10000
Arsenic [µg/g]	< 0.5	11	2.1	0.7	< 0.5	< 0.5	< 0.5	17	< 0.5	< 0.5	0.8	0.6
Barium [µg/g]	3	63	1.00	2	0.42	12	2	3	31	28	39	6
Beryllium [µg/g]	0.05	0.08	0.03	0.03	< 0.02	0.03	0.04	< 0.02	0.03	0.04	0.82	0.18
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	22000	69000	10000	17000	150	93000	36000	37000	100000	100000	39000	24000
Cadmium [µg/g]	0.03	0.03	< 0.02	0.02	< 0.02	0.21	0.03	0.03	0.04	0.05	0.11	0.18
Cobalt [µg/g]	150	65	150	150	120	67	71	120	37	37	75	130
Chromium [µg/g]	1100	600	1100	520	640	1100	1100	790	510	410	610	1900
Copper [µg/g]	98	74	58	55	10	360	110	27	61	130	120	63
Iron [µg/g]	83000	56000	87000	110000	67000	47000	59000	61000	31000	31000	82000	66000
Potassium [µg/g]	180	1400	77	82	37	240	200	45	1500	1600	2100	260
Lithium [µg/g]	< 2	35	< 2	< 2	< 2	11	2.4	2.7	13	10	56	11
Magnesium [µg/g]	180000	110000	190000	190000	240000	130000	150000	170000	71000	65000	130000	200000
Manganese [µg/g]	1500	1200	1500	1700	1000	1300	1500	1000	830	810	1500	770
Molybdenum [µg/g]	< 0.1	0.5	0.3	0.2	< 0.1	0.5	< 0.1	< 0.1	2.7	4.4	0.5	0.1
Nickel [µg/g]	1200	380	1400	1400	2700	250	240	580	120	130	930	2200
Lead [µg/g]	0.72	0.28	0.25	0.54	0.14	0.29	0.65	0.30	0.26	0.21	2	17



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

LR Report : CA19072-NOV23

Analysis	13: C00374766	14: C00374767	15: C00374768	16: C00374769	17: C00374770	18: C00374771	19: C00374773	20: C00374774	21: C00374775	22: C00374776	23: C00374777	24: C00374778
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	1.4	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	0.3	0.2	0.3	0.3	0.1	0.5	0.1	0.1	0.1	0.2	0.2	0.1
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	19	37	2	5	0.63	51	7	64	110	98	96	46
Titanium [µg/g]	750	940	420	310	80	840	710	430	560	590	5400	910
Thallium [µg/g]	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.10	< 0.02
Uranium [µg/g]	0.015	0.015	0.014	0.016	0.003	0.011	0.012	0.014	0.013	0.012	0.47	0.079
Vanadium [µg/g]	59	91	45	37	10	100	73	30	81	84	130	38
Yttrium [µg/g]	2.9	3.9	1.7	1.4	0.2	3.7	2.2	1.9	2.7	2.7	12	2.5
Zinc [µg/g]	52	50	48	71	47	47	45	34	25	23	90	60

Analysis	25: C00374789	26: C00374790	27: C00374791	28: C00374792	29: C00374793	30: C00374794	31: C00374795	32: C00374796	33: C00374797	34: C00374798	35: C00374802	36: C00374799
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	29000	98000	51000	20000	28000	16000	51000	17000	19000	24000	95000	2300
Arsenic [µg/g]	< 0.5	< 0.5	0.6	6.5	2.5	1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Barium [µg/g]	14	70	11	1	1	2	17	2	2	12	70	0.42
Beryllium [µg/g]	0.04	0.05	0.06	0.03	0.05	0.03	0.09	0.05	0.04	0.05	0.04	0.03
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	90000	89000	55000	13000	100000	9800	64000	22000	18000	100000	94000	170
Cadmium [µg/g]	0.10	0.03	0.07	< 0.02	0.07	< 0.02	0.03	< 0.02	< 0.02	0.08	0.03	< 0.02
Cobalt [µg/g]	58	41	83	130	54	160	75	110	130	57	36	140
Chromium [µg/g]	1400	260	600	1100	1500	1300	550	2500	710	1500	390	1500
Copper [µg/g]	410	93	91	44	220	76	27	53	6.1	400	83	98
Iron [µg/g]	41000	34000	70000	88000	45000	110000	63000	68000	66000	47000	31000	68000
Potassium [µg/g]	860	2700	450	85	140	77	790	130	130	330	2600	31
Lithium [µg/g]	11	16	32	< 2	8.6	< 2	16	< 2	< 2	10	8.7	< 2
Magnesium [µg/g]	110000	72000	130000	190000	120000	180000	130000	200000	210000	110000	71000	240000
Manganese [µg/g]	1200	860	1400	1500	1400	1800	1300	1100	1100	1300	780	880
Molybdenum [µg/g]	0.5	2.3	0.3	0.1	0.6	0.2	0.2	0.1	< 0.1	0.8	3.3	0.1
Nickel [µg/g]	290	130	460	1500	270	1400	480	1200	930	280	110	3600
Lead [µg/g]	0.28	0.28	0.24	0.31	0.38	0.23	0.23	0.21	0.18	0.26	0.21	0.53
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

LR Report : CA19072-NOV23

Analysis	25: C00374789	26: C00374790	27: C00374791	28: C00374792	29: C00374793	30: C00374794	31: C00374795	32: C00374796	33: C00374797	34: C00374798	35: C00374802	36: C00374799
Selenium [µg/g]	0.6	0.2	0.2	0.2	0.3	0.3	< 0.1	< 0.1	< 0.1	0.6	0.2	0.2
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	35	120	9	5	6	2	27	0.98	1	9	78	0.57
Titanium [µg/g]	910	650	950	370	990	360	1000	410	410	1000	730	130
Thallium [µg/g]	0.03	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Uranium [µg/g]	0.026	0.015	0.016	0.012	0.016	0.011	0.020	0.011	0.014	0.019	0.015	0.005
Vanadium [µg/g]	110	74	84	38	130	43	100	47	33	130	82	18
Yttrium [µg/g]	4.1	2.9	3.9	1.7	4.8	1.7	5.5	2.0	2.2	4.8	3.3	0.4
Zinc [µg/g]	30	25	55	58	38	60	50	50	41	33	20	38

Analysis	37: C00374803	38: C00374804	39: C00374805	40: C00374806	41: C00374807	42: C00374808	43: C00374809	44: C00374779	45: C00374780	46: C00374781	47: C00374782	48: C00374783
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	97000	94000	80000	63000	81000	36000	100000	6100	45000	15000	44000	62000
Arsenic [µg/g]	< 0.5	< 0.5	19	66	86	< 0.5	< 0.5	1.6	3.7	0.7	< 0.5	< 0.5
Barium [µg/g]	47	27	260	190	240	56	8	8	320	17	4	5
Beryllium [µg/g]	0.03	0.04	0.84	0.45	0.72	0.09	0.03	0.07	1.0	0.30	0.06	0.13
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	0.12	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	97000	96000	36000	57000	26000	95000	120000	73000	45000	42000	62000	170000
Cadmium [µg/g]	0.04	0.03	0.06	0.09	0.10	0.09	0.02	< 0.02	0.10	0.05	0.05	0.04
Cobalt [µg/g]	39	38	13	24	85	46	39	120	75	110	89	43
Chromium [µg/g]	260	210	38	58	100	2300	610	2600	810	1500	760	490
Copper [µg/g]	150	120	25	42	140	63	79	47	150	63	36	2.2
Iron [µg/g]	33000	35000	36000	54000	93000	51000	36000	66000	85000	69000	70000	36000
Potassium [µg/g]	2300	940	9600	7700	8900	850	110	280	5400	350	230	95
Lithium [µg/g]	12	6.6	6.9	9.3	15	14	11	3.4	42	13	2.9	< 2
Magnesium [µg/g]	69000	65000	11000	18000	9400	100000	74000	180000	110000	190000	140000	86000
Manganese [µg/g]	910	930	780	1300	540	1400	890	950	1400	1100	1500	1200
Molybdenum [µg/g]	4.2	3.6	2.2	2.4	2.6	0.6	1.3	0.2	0.7	0.3	0.2	1.9
Nickel [µg/g]	110	93	14	53	100	240	110	2200	850	2200	600	290
Lead [µg/g]	0.16	0.19	3	2	7	0.28	0.47	0.63	4	1	0.82	0.20
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	2.1	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	0.2	0.2	0.2	0.4	1.1	0.1	0.1	0.1	0.3	< 0.1	0.1	0.1



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

LR Report : CA19072-NOV23

Analysis	37: C00374803	38: C00374804	39: C00374805	40: C00374806	41: C00374807	42: C00374808	43: C00374809	44: C00374779	45: C00374780	46: C00374781	47: C00374782	48: C00374783
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	84	90	200	180	150	30	200	130	250	120	16	90
Titanium [µg/g]	710	700	1100	580	930	1700	780	640	6800	1900	1100	4300
Thallium [µg/g]	< 0.02	< 0.02	0.35	0.18	0.49	< 0.02	< 0.02	< 0.02	0.19	< 0.02	< 0.02	< 0.02
Uranium [µg/g]	0.011	0.034	0.42	0.23	0.40	0.022	0.057	0.059	0.59	0.17	0.019	0.20
Vanadium [µg/g]	89	98	63	110	120	210	110	36	170	59	100	150
Yttrium [µg/g]	3.1	3.0	11	6.4	8.7	7.6	3.5	1.9	15.0	4.5	4.3	14
Zinc [µg/g]	23	24	66	85	85	48	28	55	97	61	54	33

Analysis	49: C00374784	50: C00374785	51: C00374786	52: C00374787	53: C00374788
Sample Date & Time	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23	26-Oct-23
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	99000	91000	61000	100000	100000
Arsenic [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Barium [µg/g]	61	98	16	24	130
Beryllium [µg/g]	0.04	0.04	0.06	0.04	0.04
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	98000	92000	67000	100000	98000
Cadmium [µg/g]	0.04	0.15	0.07	0.04	0.04
Cobalt [µg/g]	37	39	78	38	38
Chromium [µg/g]	480	350	760	520	360
Copper [µg/g]	160	180	92	110	90
Iron [µg/g]	33000	39000	57000	36000	34000
Potassium [µg/g]	1900	3900	600	1200	4000
Lithium [µg/g]	12	23	23	11	10
Magnesium [µg/g]	65000	73000	120000	70000	71000
Manganese [µg/g]	850	970	1200	900	850
Molybdenum [µg/g]	2.0	1.4	0.3	2.7	2.6
Nickel [µg/g]	120	110	450	110	120
Lead [µg/g]	0.17	0.13	0.28	0.18	0.21
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	0.2	0.3	0.1	0.2	0.1
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - K0L 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

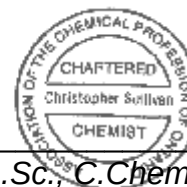
LR Report : CA19072-NOV23

Analysis	49: C00374784	50: C00374785	51: C00374786	52: C00374787	53: C00374788
Strontium [µg/g]	110	61	93	77	120
Titanium [µg/g]	700	770	980	670	760
Thallium [µg/g]	< 0.02	< 0.02	< 0.02	< 0.02	0.03
Uranium [µg/g]	0.016	0.014	0.017	0.011	0.019
Vanadium [µg/g]	100	110	100	100	100
Yttrium [µg/g]	3.1	3.4	4.0	3.0	3.3
Zinc [µg/g]	22	38	51	25	21

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-007	EPA 3052/200.8
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-013	EPA 3052/200.8

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
QCR_SubCategory - QCBatchID: EMS0133-JAN24													
Calcium	3	µg/g	<3			1		95			91		
Potassium	3	µg/g	<3			3		104			93		
Metals - Microwave/ICP-MS - QCBatchID: EMS0133-JAN24													
Aluminum	3	µg/g	<3			7	20	101	70	130	106	70	130
Antimony	0.8	µg/g	<0.8			ND	20	105	70	130	106	70	130
Arsenic	0.5	µg/g	<0.5			0	20	102	70	130	94	70	130
Barium	0.01	µg/g	<0.01			4	20	105	70	130	110	70	130
Beryllium	0.02	µg/g	<0.02			1	20	96	70	130	91	70	130
Bismuth	0.09	µg/g	<0.09			ND	20	101	70	130	NV	70	130
Cadmium	0.02	µg/g	<0.02			1	20	103	70	130	NV	70	130
Chromium	0.5	µg/g	<0.5			10	20	104	70	130	NV	70	130
Cobalt	0.01	µg/g	<0.01			2	20	103	70	130	89	70	130
Copper	0.1	µg/g	<0.1			3	20	104	70	130	98	70	130
Iron	3	µg/g	<3			4	20	103	70	130	93	70	130
Lead	0.05	µg/g	<0.05			0	20	106	70	130	112	70	130
Lithium	2	µg/g	<2			0	20	93	70	130	110	70	130
Magnesium	3	µg/g	<3			6	20	106	70	130	95	70	130
Manganese	0.1	µg/g	<0.1			1	20	103	70	130	99	70	130
Molybdenum	0.1	µg/g	<0.1			5	20	101	70	130	95	70	130
Nickel	0.1	µg/g	<0.1			0	20	101	70	130	100	70	130
Selenium	0.1	µg/g	<0.1			9	20	105	70	130	NV	70	130
Silver	0.5	µg/g	<0.5			ND	20	109	70	130	NV	70	130
Strontium	0.02	µg/g	<0.02			9	20	102	70	130	100	70	130
Thallium	0.02	µg/g	<0.02			3	20	NV	70	130	NV	70	130
Tin	6	µg/g	<6			ND	20	94	70	130	NV	70	130
Titanium	0.1	µg/g	<0.1			2	20	96	70	130	82	70	130
Uranium	0.002	µg/g	<0.002			19	20	106	70	130	100	70	130
Vanadium	1	µg/g	<1			2	20	101	70	130	90	70	130
Yttrium	0.004	µg/g	<0.004			6	20	106	70	130	NV	70	130
Zinc	0.7	µg/g	<0.7			2	20	102	70	130	91	70	130



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

13-February-2024

Date Rec. : 23 January 2024

LR Report: CA19012-JAN24

Reference: PO#20446343

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: C00374710	6: C00374755	7: C00374759	8: C00374715	9: C00374723	10: C00374727	11: C00374763
Silver [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	37000	54000	17000	63000	5500	63000	45000
Arsenic [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	2.2	< 0.5	< 0.5	< 0.5	0.8	< 0.5	< 0.5
Barium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	220	46	3	750	2	61	88
Beryllium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	0.92	0.05	0.03	0.36	< 0.02	0.04	0.03
Bismuth [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	66000	78000	22000	65000	3600	93000	49000
Cadmium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	0.09	0.07	0.02	0.05	< 0.02	0.06	0.05
Cobalt [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	82	55	130	59	130	46	85
Chromium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	250	200	520	320	360	490	700
Copper [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	150	140	57	65	4.7	180	64
Iron [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	90000	46000	110000	69000	63000	38000	73000
Potassium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	3700	1700	120	2600	85	2000	2700
Lithium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	29	26	< 2	38	< 2	14	9.5
Magnesium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	110000	100000	170000	100000	230000	91000	130000
Manganese [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	1500	1200	1900	1100	970	900	1500
Molybdenum [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	0.6	< 0.1	0.2	0.2	< 0.1	0.1	< 0.1
Nickel [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	970	120	1200	400	1400	200	710
Lead [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	4	0.69	0.80	2	0.71	1	0.60

Online LIMS

0003619545



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

LR Report : CA19012-JAN24

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: C00374710	6: C00374755	7: C00374759	8: C00374715	9: C00374723	10: C00374727	11: C00374763
Antimony [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	0.2	0.2	0.3	0.3	< 0.1	0.2	0.2
Tin [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	230	61	4	380	2	69	76
Titanium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	5600	820	400	2400	190	580	630
Thallium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	0.06	< 0.02	< 0.02	0.04	< 0.02	< 0.02	0.09
Uranium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	0.49	0.014	0.013	0.34	0.006	0.011	0.015
Vanadium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	150	130	51	160	13	91	77
Yttrium [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	13	3.7	2.2	11	0.9	2.7	2.5
Zinc [µg/g]	10-Feb-24	02:43	13-Feb-24	12:20	98	33	66	56	38	28	64

Analysis	12: C00374778	13: C00374783	14: C00374788	15: C00374791	16: C00374795	17: C00374804
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	8800	56000	92000	49000	48000	89000
Arsenic [µg/g]	0.6	< 0.5	< 0.5	< 0.5	0.6	< 0.5
Barium [µg/g]	6	4	120	10	16	24
Beryllium [µg/g]	0.18	0.12	0.03	0.05	0.08	0.04
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	25000	160000	92000	57000	62000	94000
Cadmium [µg/g]	0.28	0.03	0.03	0.09	0.03	0.04
Cobalt [µg/g]	120	42	39	84	75	39
Chromium [µg/g]	730	230	160	1000	410	340
Copper [µg/g]	53	1.3	90	87	25	130
Iron [µg/g]	66000	34000	34000	70000	63000	37000
Potassium [µg/g]	240	71	3800	430	750	910
Lithium [µg/g]	10	< 2	10	31	16	6.5
Magnesium [µg/g]	200000	84000	72000	130000	130000	68000
Manganese [µg/g]	690	1000	800	1300	1200	900
Molybdenum [µg/g]	0.1	1.8	2.2	0.2	0.3	3.9
Nickel [µg/g]	2200	310	120	480	500	100



SGS Canada Inc.

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Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#20446343

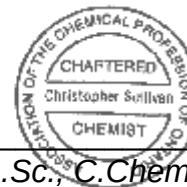
LR Report : CA19012-JAN24

Analysis	12: C00374778	13: C00374783	14: C00374788	15: C00374791	16: C00374795	17: C00374804
Lead [µg/g]	13	0.58	0.56	0.61	0.62	0.54
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.1	0.1	0.2	0.2	< 0.1	0.3
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	44	90	120	9	30	89
Titanium [µg/g]	790	4200	690	870	910	640
Thallium [µg/g]	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Uranium [µg/g]	0.071	0.11	0.020	0.017	0.049	0.013
Vanadium [µg/g]	29	110	87	96	96	100
Yttrium [µg/g]	2.2	13	3.1	3.7	5.2	2.8
Zinc [µg/g]	57	29	21	52	47	24

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-007	EPA 3052/200.8
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-013	EPA 3052/200.8

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
QCR_SubCategory - QCBatchID: EMS0072-FEB24													
Calcium	3	µg/g	<3			4		102			88		
Potassium	3	µg/g	<3			3		101			98		
Metals - Microwave/ICP-MS - QCBatchID: EMS0072-FEB24													
Aluminum	3	µg/g	<3			3	20	102	70	130	97	70	130
Antimony	0.8	µg/g	<0.8			ND	20	91	70	130	126	70	130
Arsenic	0.5	µg/g	<0.5			4	20	106	70	130	94	70	130
Barium	0.01	µg/g	<0.01			2	20	97	70	130	104	70	130
Beryllium	0.02	µg/g	<0.02			1	20	95	70	130	87	70	130
Bismuth	0.09	µg/g	<0.09			ND	20	100	70	130	NV	70	130
Cadmium	0.02	µg/g	<0.02			ND	20	108	70	130	NV	70	130
Chromium	0.5	µg/g	<0.5			18	20	105	70	130	85	70	130
Cobalt	0.01	µg/g	<0.01			3	20	105	70	130	96	70	130
Copper	0.1	µg/g	<0.1			4	20	106	70	130	103	70	130
Iron	3	µg/g	<3			2	20	106	70	130	99	70	130
Lead	0.05	µg/g	<0.05			2	20	100	70	130	111	70	130
Lithium	2	µg/g	<2			0	20	94	70	130	103	70	130
Magnesium	3	µg/g	<3			4	20	105	70	130	104	70	130
Manganese	0.1	µg/g	<0.1			3	20	104	70	130	95	70	130
Molybdenum	0.1	µg/g	<0.1			2	20	99	70	130	102	70	130
Nickel	0.1	µg/g	<0.1			3	20	108	70	130	110	70	130
Selenium	0.1	µg/g	<0.1			8	20	99	70	130	NV	70	130
Silver	0.5	µg/g	<0.5			ND	20	106	70	130	NV	70	130
Strontium	0.02	µg/g	<0.02			4	20	105	70	130	100	70	130
Thallium	0.02	µg/g	<0.02			2	20	NV	70	130	NV	70	130
Tin	6	µg/g	<6			ND	20	109	70	130	NV	70	130
Titanium	0.1	µg/g	<0.1			2	20	98	70	130	78	70	130
Uranium	0.002	µg/g	<0.002			8	20	99	70	130	97	70	130
Vanadium	1	µg/g	<1			3	20	101	70	130	97	70	130
Yttrium	0.004	µg/g	<0.004			1	20	102	70	130	NV	70	130
Zinc	0.7	µg/g	<0.7			4	20	105	70	130	96	70	130

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

NAG Test**Project : PO#20446343****30-November-2022****Canada Nickel Company****Attn : Mathieu Boucher**

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
 Toronto, ON
 M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Date Rec. : 23 November 2022**LR Report: CA19241-NOV22****Copy: #1**

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Sample weight g	Vol H2O2 mL	Final pH no unit	NaOH Normality	Vol NaOH to PH 4.5 mL	Vol NaOH to PH 7.0 mL	NAG (pH 4.5) kg H2SO4/tonne	NAG (pH 7.0) kg H2SO4/tonne
1: Analysis Start Date		30-Nov-22	30-Nov-22	30-Nov-22	30-Nov-22	30-Nov-22	30-Nov-22	30-Nov-22	30-Nov-22
2: Analysis Start Time		10:45	10:45	10:45	10:45	10:45	10:45	10:45	10:45
3: Analysis Completed Date		30-Nov-22	30-Nov-22	30-Nov-22	30-Nov-22	30-Nov-22	30-Nov-22	30-Nov-22	30-Nov-22
4: Analysis Completed Time		11:17	11:17	11:17	11:17	11:17	11:17	11:17	11:17
7: Gabbro CR20-66 95-105	06-Jul-22	1.55	150	7.61	0.10	0.00	0.00	0.0	0.0
31: Gabbro CR21-GT-06 75-85	06-Jul-22	1.54	150	7.72	0.10	0.00	0.00	0.0	0.0
36: Peridotite CR20-38 265-275	06-Jul-22	1.51	150	8.38	0.10	0.00	0.00	0.0	0.0
40: Dunite-02 CR21-130 190-200	06-Jul-22	1.47	150	7.91	0.10	0.00	0.00	0.0	0.0
46: Basalt CR21-GT-05 410-420	06-Jul-22	1.55	150	6.66	0.10	0.00	0.03	0.0	0.1
47: Gabbro CR22-GT-13 100-110	06-Jul-22	1.50	150	7.75	0.10	0.00	0.00	0.0	0.0
49: Gabbro CR22-GT-13 480-490	06-Jul-22	1.53	150	7.70	0.10	0.00	0.00	0.0	0.0
54: Pyroxenite-02 CR21-GT-05 35-45	25-Jul-22	1.51	150	7.43	0.10	0.00	0.00	0.0	0.0
63: Gabbro CR22-231 70-80	25-Jul-22	1.52	150	8.50	0.10	0.00	0.00	0.0	0.0
64: Gabbro CR22-234 60-70	25-Jul-22	1.49	150	9.01	0.10	0.00	0.00	0.0	0.0
65: Peridotite CR22-240 90-100	25-Jul-22	1.48	150	8.63	0.10	0.00	0.00	0.0	0.0
70: Gabbro CR20-41 365-375	25-Jul-22	1.48	150	8.65	0.10	0.00	0.00	0.0	0.0
88: Gabbro CR22-GT-15 550-560	15-Jul-22	1.49	150	7.64	0.10	0.00	0.00	0.0	0.0
103: Basalt CR21-GT-03 300-310	15-Jul-22	1.48	150	9.76	0.10	0.00	0.00	0.0	0.0
106: Gabbro CR21-GT-04B 350-360	15-Jul-22	1.52	150	7.66	0.10	0.00	0.00	0.0	0.0
124: Peridotite CR20-34 555-565	15-Jul-22	1.46	150	8.40	0.10	0.00	0.00	0.0	0.0
125: Peridotite CR20-34 595-605	15-Jul-22	1.51	150	8.65	0.10	0.00	0.00	0.0	0.0
126: Peridotite CR20-36 380-390	15-Jul-22	1.54	150	8.40	0.10	0.00	0.00	0.0	0.0
127: Peridotite CR20-73 100-110	15-Jul-22	1.50	150	8.38	0.10	0.00	0.00	0.0	0.0
131: Basalt CR22-197 90-100	15-Jul-22	1.50	150	7.70	0.10	0.00	0.00	0.0	0.0

NAG = (49 x Vol. of base x N of base)/sample weight
 kg H2SO4/tonne

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

NAG Test**Project :** PO#20446343**LR Report :** CA19241-NOV22

Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Jennifer Gignac

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, Ontario
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : Crawford - Project # 20446343

22-June-2021

Date Rec. : 07 May 2021

LR Report: CA14954-MAY21

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: P1-MetV-EZ-2-B19501	7: P1-Dun-EZ-1-B19503	8: P1-Pyr-EZ-2-B19504	9: P1-Per-EZ-2-B19505	10: P1-Gab-EZ-1-B19506	11: P1-Pyr-EZ-3-B19507	12: P1-Gab-EZ-2-B19508	13: P1-Pyr-EZ-4-B19509
Sample weight [g]	18-May-21	07:00	20-May-21	09:14	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	18-May-21	07:00	20-May-21	09:14	750	750	750	750	750	750	750	750
Final pH [no unit]	19-May-21	06:10	20-May-21	09:14	9.00	9.89	10.12	9.89	10.24	10.21	10.27	10.10
pH [No unit]	19-May-21	13:45	26-May-21	16:06	8.49	9.67	9.81	9.55	9.88	9.91	9.99	9.84
Conductivity [uS/cm]	19-May-21	13:45	26-May-21	16:06	128	600	73	64	78	82	78	87
Alkalinity [mg/L as CaCO ₃]	19-May-21	13:45	26-May-21	16:06	59	85	35	28	32	35	37	34
Acidity [mg/L as CaCO ₃]	19-May-21	13:45	26-May-21	16:06	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	21-May-21	23:52	01-Jun-21	11:55	< 0.3	3.8	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Chloride [mg/L]	28-May-21	14:12	02-Jun-21	11:37	6	190	2	2	3	4	< 1	6
Sulphate [mg/L]	31-May-21	14:11	02-Jun-21	11:37	3	< 2	< 2	2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	19-May-21	20:34	21-May-21	08:02	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [mg/L]	20-May-21	13:00	25-May-21	13:17	< 0.0002	0.0005	0.0032	0.0004	0.0007	0.0042	0.0020	0.0018
Mercury [mg/L]	25-May-21	15:53	27-May-21	16:26	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	21-May-21	18:05	27-May-21	16:26	0.234	0.006	0.025	0.005	0.155	0.016	0.199	0.031
Aluminum (0.2µm) [mg/L]	21-May-21	18:05	27-May-21	16:26	0.273	0.001	0.018	0.006	0.167	0.017	0.203	0.032
Arsenic [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.0002	0.0005	0.0006	< 0.0002	0.0006	0.0004	0.0004	0.0004
Barium [mg/L]	21-May-21	18:05	27-May-21	16:26	0.00135	0.0202	0.00228	0.00426	0.00081	0.00370	0.00084	0.00262
Boron [mg/L]	21-May-21	18:05	27-May-21	16:26	0.014	0.720	0.022	0.041	0.069	0.070	0.023	0.070
Beryllium [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: P1-MetV-EZ-2-B19501	7: P1-Dun-EZ-1-B19503	8: P1-Pyr-EZ-2-B19504	9: P1-Per-EZ-2-B19505	10: P1-Gab-EZ-1-B19506	11: P1-Pyr-EZ-3-B19507	12: P1-Gab-EZ-2-B19508	13: P1-Pyr-EZ-4-B19509
Calcium [mg/L]	21-May-21	18:05	27-May-21	16:26	8.96	4.18	10.2	4.82	8.37	11.3	9.30	11.2
Cadmium [mg/L]	21-May-21	18:05	27-May-21	16:26	0.000003	< 0.000003	< 0.000003	< 0.000003	0.000006	0.000014	< 0.000003	0.000017
Cobalt [mg/L]	21-May-21	18:05	27-May-21	16:26	0.000036	0.000055	0.000069	0.000034	0.000048	0.000037	0.000064	0.000029
Chromium [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.00008	0.00072	0.00526	0.00037	0.00083	0.00454	0.00302	0.00204
Copper [mg/L]	21-May-21	18:05	27-May-21	16:26	0.0004	0.0004	0.0006	0.0003	0.0005	0.0016	0.0009	0.0014
Iron [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.007	< 0.007	0.035	0.008	0.013	0.007	0.031	< 0.007
Potassium [mg/L]	21-May-21	18:05	27-May-21	16:26	8.43	0.389	1.17	1.33	2.60	3.38	3.16	1.82
Lithium [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.0001	0.0001	< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Magnesium [mg/L]	21-May-21	18:05	27-May-21	16:26	6.04	74.9	1.19	4.38	0.636	0.663	0.618	1.56
Manganese [mg/L]	21-May-21	18:05	27-May-21	16:26	0.00070	0.00027	0.00094	0.00008	0.00031	0.00024	0.00082	0.00010
Molybdenum [mg/L]	21-May-21	18:05	27-May-21	16:26	0.00092	0.00099	0.00013	0.00013	0.00025	0.00025	0.00021	0.00030
Sodium [mg/L]	21-May-21	18:05	27-May-21	16:26	3.94	0.36	2.64	0.61	4.50	1.81	4.48	3.29
Nickel [mg/L]	21-May-21	18:05	27-May-21	16:26	0.0004	0.0007	0.0004	0.0007	0.0002	0.0001	0.0003	0.0002
Lead [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Silicon [mg/L]	21-May-21	18:05	27-May-21	16:26	1.68	0.09	14.3	5.95	10.4	12.2	10.4	12.5
Antimony [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium [mg/L]	21-May-21	18:05	27-May-21	16:26	0.00008	< 0.00004	0.00007	0.00006	0.00018	0.00010	0.00010	0.00043
Tin [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	21-May-21	18:05	27-May-21	16:26	0.0574	0.0131	0.0247	0.0259	0.0171	0.0320	0.0104	0.0194
Titanium [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.00005	< 0.00005	0.00054	< 0.00005	0.00026	0.00009	0.00033	0.00013
Thorium [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Thallium [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	0.000005
Uranium [mg/L]	21-May-21	18:05	27-May-21	16:26	0.000002	0.000015	0.000009	0.000003	0.000012	0.000023	0.000022	0.000002
Vanadium [mg/L]	21-May-21	18:05	27-May-21	16:26	0.00069	0.00021	0.0203	0.00094	0.0201	0.0144	0.0177	0.00880
Tungsten [mg/L]	21-May-21	18:05	27-May-21	16:26	0.00104	0.00006	0.00026	0.00070	0.00295	0.00064	0.00088	0.00032
Zinc [mg/L]	21-May-21	18:05	27-May-21	16:26	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	14: P1-Pyr-MZ-8 B195010	15: P1-Pez-MZ-1 B195011	16: P1-Dun-MZ-3 B195012	17: P1-Per-MZ-4 B195013	18: P1-Metv-MZ-8 B195014	19: P1-Pyr-MZ-6 B195015	20: P1-Metv-EZ-1 B195016	21: P1-Dun-EZ-2 B195017	22: P1-Dun-MZ-4 B195018	23: P1-Pyr-MZ-8 B195019	24: P1-Pyr-MZ-4 B195020
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.76	9.86	9.80	9.72	9.02	9.18	9.40	9.95	10.10	10.12	9.46
pH [No unit]	9.47	9.70	9.70	9.67	8.50	8.83	8.98	9.52	7.06	9.61	8.88
Conductivity [uS/cm]	89	379	1030	857	141	240	134	424	282	145	102

Analysis	14: P1-Pyr-MZ-8 B195010	15: P1-Pez-MZ-1 B195011	16: P1-Dun-MZ-3 B195012	17: P1-Per-MZ-4 B195013	18: P1-MetV-MZ-8 B195014	19: P1-Pyr-MZ-6 B195015	20: P1-Metv-EZ-1 B195016	21: P1-Dun-EZ-2 B195017	22: P1-Dun-MZ-4 B195018	23: P1-Pyr-MZ-8 B195019	24: P1-Pyr-MZ-4 B195020
Alkalinity [mg/L as CaCO ₃]	34	82	203	272	67	65	46	64	15	61	56
Acidity [mg/L as CaCO ₃]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	< 0.3	2.7	7.4	4.9	< 0.3	< 0.3	< 0.3	2.9	1.7	0.4	< 0.3
Chloride [mg/L]	5	95	330	230	2	31	18	120	72	14	2
Sulphate [mg/L]	< 2	4	3	14	< 2	39	< 2	< 2	< 2	3	< 2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	0.12	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [mg/L]	0.0010	0.0002	0.0004	< 0.0002	< 0.0002	0.0002	< 0.0002	0.0009	< 0.0002	0.0003	< 0.0002
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	< 0.001	0.001	0.001	0.001	0.079	0.005	0.869	0.002	0.013	< 0.001	0.005
Aluminum (0.2µm) [mg/L]	0.003	0.002	0.005	0.002	0.089	0.004	1.01	0.003	0.016	0.004	0.006
Arsenic [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0032	0.0010	0.0002	< 0.0002	0.0005	0.0005	0.0004
Barium [mg/L]	0.00647	0.00593	0.0103	0.00695	0.00342	0.0134	0.00073	0.0118	0.0148	0.0216	0.00240
Boron [mg/L]	0.070	0.432	0.174	0.206	0.035	0.019	0.056	0.168	0.018	0.054	0.028
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	4.80	3.63	3.33	2.28	6.19	15.1	4.52	6.50	20.1	5.03	6.27
Cadmium [mg/L]	< 0.000003	0.000003	< 0.000003	< 0.000003	0.000003	< 0.000003	< 0.000003	< 0.000003	0.000011	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000048	0.000029	0.000034	0.000035	0.000040	0.000110	0.000031	0.000036	0.000037	0.000023	0.000047
Chromium [mg/L]	0.00104	0.00025	0.00045	0.00011	< 0.00008	0.00015	< 0.00008	0.00094	< 0.00008	0.00027	< 0.00008
Copper [mg/L]	0.0003	0.0003	0.0008	0.0006	0.0003	0.0004	0.0002	0.0005	0.0008	< 0.0002	< 0.0002
Iron [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	0.013	< 0.007	< 0.007	< 0.007	< 0.007
Potassium [mg/L]	0.658	0.641	2.22	0.764	6.80	6.02	1.21	1.74	0.718	0.796	1.21
Lithium [mg/L]	< 0.0001	< 0.0001	< 0.0001	0.0004	0.0002	< 0.0001	0.0003	0.0001	0.0013	0.0002	< 0.0001
Magnesium [mg/L]	7.43	51.0	153	139	7.84	19.0	0.644	45.8	16.1	15.5	8.49
Manganese [mg/L]	0.00005	0.00008	0.00007	0.00025	0.00143	0.00061	0.00036	0.00005	0.00016	0.00004	0.00036
Molybdenum [mg/L]	0.00012	0.00012	0.00006	0.00014	0.00399	0.00112	0.00038	0.00010	0.00020	0.00012	0.00020
Sodium [mg/L]	0.60	0.26	0.39	0.25	9.43	2.18	24.5	0.44	0.53	1.14	1.26
Nickel [mg/L]	0.0006	0.0010	0.0039	0.0008	0.0002	0.0056	0.0002	0.0019	0.0002	0.0003	0.0011
Lead [mg/L]	< 0.00009	< 0.00009	0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	0.00019	< 0.00009	< 0.00009
Silicon [mg/L]	1.84	0.18	0.07	0.16	3.75	3.50	2.02	0.11	0.09	0.55	4.64
Antimony [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	0.0016	< 0.0009	< 0.0009	0.0014	< 0.0009
Selenium [mg/L]	0.00004	< 0.00004	0.00010	0.00011	< 0.00004	0.00110	0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.0046	0.0064	0.0190	0.0177	0.0194	0.0235	0.00899	0.0186	0.0206	0.163	0.0268
Titanium [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00006	< 0.00005	0.00021	< 0.00005	0.00005	< 0.00005	< 0.00005

Analysis	14: P1-Pyr-MZ-8 B195010	15: P1-Pez-MZ-1 B195011	16: P1-Dun-MZ-3 B195012	17: P1-Per-MZ-4 B195013	18: P1-MetV-MZ-8 B195014	19: P1-Pyr-MZ-6 B195015	20: P1-Metv-EZ-1 B195016	21: P1-Dun-EZ-2 B195017	22: P1-Dun-MZ-4 B195018	23: P1-Pyr-MZ-8 B195019	24: P1-Pyr-MZ-4 B195020
Thorium [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Thallium [mg/L]	< 0.000005	< 0.000005	0.000816	< 0.000005	< 0.000005	0.000023	< 0.000005	< 0.000005	< 0.000005	0.000008	< 0.000005
Uranium [mg/L]	< 0.000002	0.000002	0.000002	0.000010	0.000014	0.000004	0.000035	0.000007	0.000008	0.000002	0.000007
Vanadium [mg/L]	0.00014	0.00006	0.00011	0.00004	0.00236	0.00059	0.00691	0.00008	0.00021	0.00005	0.00118
Tungsten [mg/L]	0.00067	0.00005	0.00005	0.00020	0.00197	0.00019	0.00024	0.00008	0.00017	0.00022	0.00033
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	25: P1-Per-MZ-3 B195021	26: P1-Dun-MZ-1 B195023	27: P1-Per-MZ-6 B195024	28: P1-Gab-MZ-3 B195025	29: P1-Gab-MZ-6 B195026	30: P1-Gab-MZ-1 B195027
Sample weight [g]	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750
Final pH [no unit]	9.58	10.12	9.82	10.35	10.12	10.21
pH [No unit]	9.19	8.41	8.61	9.72	9.75	9.76
Conductivity [uS/cm]	148	246	187	80	159	84
Alkalinity [mg/L as CaCO3]	73	24	17	39	58	46
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	< 0.3	2.1	1.4	< 0.3	< 0.3	< 0.3
Chloride [mg/L]	< 1	65	48	2	3	2
Sulphate [mg/L]	3	< 2	< 2	< 2	4	< 2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06	0.22	< 0.06
Chromium VI [mg/L]	0.0003	< 0.0002	< 0.0002	0.0019	0.0005	0.0071
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	< 0.001	0.002	< 0.001	0.140	0.021	0.018
Aluminum (0.2µm) [mg/L]	0.003	0.005	0.001	0.155	0.028	0.012
Arsenic [mg/L]	0.0007	< 0.0002	< 0.0002	0.0004	0.0027	0.0004
Barium [mg/L]	0.0212	0.00387	0.00969	0.00137	0.00507	0.00135
Boron [mg/L]	0.008	0.072	0.204	0.023	0.071	0.012
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	2.30	7.28	16.2	9.46	2.51	13.2
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000106	0.000024	0.000041	0.000049	0.000040	0.000050
Chromium [mg/L]	0.00027	< 0.00008	0.00010	0.00219	0.00051	0.00862



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

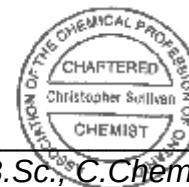
SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : Crawford - Project # 20446343

LR Report : CA14954-MAY21

Analysis	25: P1-Per-MZ-3 B195021	26: P1-Dun-MZ-1 B195023	27: P1-Per-MZ-6 B195024	28: P1-Gab-MZ-3 B195025	29: P1-Gab-MZ-6 B195026	30: P1-Gab-MZ-1 B195027
Copper [mg/L]	0.0002	< 0.0002	< 0.0002	< 0.0002	0.0003	0.0007
Iron [mg/L]	< 0.007	< 0.007	< 0.007	0.009	< 0.007	0.020
Potassium [mg/L]	8.44	0.939	1.74	3.24	36.5	0.932
Lithium [mg/L]	0.0005	< 0.0001	< 0.0001	< 0.0001	0.0011	< 0.0001
Magnesium [mg/L]	13.8	21.3	9.45	0.332	0.800	1.01
Manganese [mg/L]	0.00016	0.00009	0.00004	0.00024	0.00019	0.00049
Molybdenum [mg/L]	0.00014	0.00006	0.00004	0.00017	0.00076	0.00017
Sodium [mg/L]	2.57	0.43	0.34	4.28	6.48	1.75
Nickel [mg/L]	0.0026	0.0002	0.0003	0.0003	0.0009	0.0004
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Silicon [mg/L]	3.56	0.09	0.67	11.4	12.7	17.6
Antimony [mg/L]	0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium [mg/L]	< 0.00004	< 0.00004	< 0.00004	0.00004	0.00023	0.00010
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.00984	0.00804	0.0231	0.0132	0.0221	0.0143
Titanium [mg/L]	< 0.00005	< 0.00005	< 0.00005	0.00017	0.00021	0.00044
Thorium [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Thallium [mg/L]	0.000034	0.000006	0.000005	< 0.000005	0.000016	< 0.000005
Uranium [mg/L]	0.000010	0.000009	0.000009	0.000016	0.000003	0.000009
Vanadium [mg/L]	0.00090	0.00010	0.00005	0.0126	0.0141	0.0212
Tungsten [mg/L]	0.00031	0.00007	0.00008	0.00036	0.00091	0.00087
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Jennifer Gignac

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, Ontario
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : Crawford Project # 20446343

30-June-2021

Date Rec. : 17 May 2021
LR Report: CA14971-MAY21
Reference: P.O# 20446343

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: P1-Pyr-EZ-1A_B 19529	6: P1-Pyr-MZ-5_B 19530	7: P1-Pyr-MZ-10_B 19531	8: P1-Dun-MZ-6_B 19532	9: P1-Per-EZ-1_B 19533	10: P1-Pyr-MZ-11_B 19534	11: P1-Pyr-MZ-3_B 19535	12: P1-MetV-MZ-3_B 19538
Sample weight [g]	02-Jun-21	06:47	04-Jun-21	11:38	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	02-Jun-21	06:47	04-Jun-21	11:38	750	750	750	750	750	750	750	750
Final pH [no unit]	02-Jun-21	07:47	04-Jun-21	11:38	10.18	9.72	9.47	9.83	9.48	10.16	9.81	9.58
pH [No unit]	04-Jun-21	14:08	09-Jun-21	20:57	9.69	9.22	8.70	9.45	9.19	9.27	9.31	9.02
Conductivity [uS/cm]	04-Jun-21	14:08	09-Jun-21	14:42	86	103	259	491	154	141	63	74
Alkalinity [mg/L as CaCO3]	04-Jun-21	14:08	09-Jun-21	14:42	42	33	31	58	69	54	30	36
Acidity [mg/L as CaCO3]	04-Jun-21	14:08	09-Jun-21	14:42	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	10-Jun-21	14:04	21-Jun-21	09:55	< 0.3	< 0.3	1.7	3.4	< 0.3	< 0.3	< 0.3	< 0.3
Chloride [mg/L]	14-Jun-21	15:28	29-Jun-21	09:49	1.9	4.1	53	120	2.1	3.7	< 2	< 2
Sulphate [mg/L]	14-Jun-21	15:28	30-Jun-21	11:43	0.8	5.9	< 2	< 2	< 2	6.3	< 2	< 2
Fluoride [mg/L]	04-Jun-21	09:57	07-Jun-21	11:40	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	0.28	< 0.06	< 0.06
Chromium VI [ug/L]	07-Jun-21	12:00	13-Jun-21	19:51	5.9	0.3	0.5	< 0.2	0.7	0.7	0.6	< 0.2
Mercury [mg/L]	07-Jun-21	12:50	14-Jun-21	20:09	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum (0.2µm) [mg/L]	08-Jun-21	11:30	16-Jun-21	10:42	0.014	0.003	0.008	0.004	0.016	0.069	0.006	1.14
Silver [mg/L]	08-Jun-21	11:30	11-Jun-21	15:47	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Arsenic [mg/L]	08-Jun-21	11:30	11-Jun-21	15:47	0.0008	0.0012	0.0003	< 0.0002	0.0019	0.0042	0.0005	0.0820
Barium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	0.00380	0.00521	0.0149	0.0169	0.0180	0.00166	0.0101	0.0009
Boron [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	0.073	0.155	0.214	0.189	0.167	0.256	0.056	0.033
Beryllium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	0.00003
Calcium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	15.0	7.71	23.4	5.60	5.77	1.68	6.41	5.30

Online LIMS

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: P1-Pyr-EZ-1A_B 19529	6: P1-Pyr-MZ-5_B 19530	7: P1-Pyr-MZ-10_B 19531	8: P1-Dun-MZ-6_B 19532	9: P1-Per-EZ-1_B 19533	10: P1-Pyr-MZ-11_B 19534	11: P1-Pyr-MZ-3_B 19535	12: P1-MetV-MZ-3 B19538
Cadmium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000012	0.000004	< 0.000003	0.000003
Cobalt [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	0.000057	0.000054	0.000073	0.000048	0.000070	0.000333	0.000210	0.000042
Chromium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	0.00850	0.00053	0.00064	0.00011	0.00084	0.00205	0.00076	0.00010
Copper [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	0.0010	0.0005	0.0003	0.0003	0.0004	0.0011	< 0.0002	< 0.0002
Iron [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	0.019	< 0.007	< 0.007	< 0.007	< 0.007	0.271	< 0.007	< 0.007
Potassium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	2.48	2.91	10.2	3.69	2.51	12.5	2.36	4.24
Lithium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	< 0.0001	< 0.0001	< 0.0001	0.0002	0.0001	0.0002	< 0.0001	0.0002
Magnesium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	0.893	8.96	18.1	61.8	20.2	0.471	5.01	0.451
Manganese [mg/L]	08-Jun-21	11:30	11-Jun-21	15:48	0.00060	0.00022	0.00023	0.00010	0.00023	0.00344	0.00033	0.00033
Molybdenum [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	0.00017	0.00029	< 0.00004	0.00006	0.01858	0.00452	0.00011	0.00186
Sodium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	4.45	0.89	0.82	0.47	1.71	27.0	0.77	11.3
Nickel [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	0.0002	0.0007	0.0015	0.0008	0.0019	0.0046	0.0007	0.0002
Lead [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	0.0013	< 0.0009	< 0.0009	< 0.0009	0.0018	< 0.0009	< 0.0009	0.0046
Silicon [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	20.2	5.59	2.53	0.07	4.04	13.3	8.39	3.61
Selenium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	0.00010	0.00018	< 0.00004	0.00007	0.00005	0.00019	0.00005	< 0.00004
Tin [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	0.0878	0.0222	0.0209	0.00680	0.0383	0.0127	0.0272	0.0131
Thorium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Titanium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	0.00024	< 0.00005	< 0.00005	< 0.00005	0.00007	0.00523	0.00007	0.00012
Thallium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	< 0.000005	0.000011	< 0.000005	0.000012	< 0.000005	0.000022	< 0.000005	< 0.000005
Uranium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	0.000008	0.000003	0.000006	0.000002	0.000003	0.000016	0.000013	0.000088
Vanadium [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	0.02009	0.00032	0.00006	0.00002	0.00025	0.0417	0.00204	0.0160
Tungsten [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	0.00071	0.08244	0.00097	0.00014	0.00052	0.00073	0.00052	0.00165
Zinc [mg/L]	08-Jun-21	11:30	11-Jun-21	15:54	< 0.002	< 0.002	< 0.002	< 0.002	0.002	0.004	< 0.002	< 0.002

Analysis	13: P1-Dun-MZ-5_B 19539	14: P1-MetV-MZ-7_B B19540	15: P1-Gab-MZ-5_B 19541	16: P1-Per-MZ-7_B 19542	17: P1-Pyr-MZ-9_B 19543	18: P1-Gab-MZ-4_1 9544	19: P1-Pyr-MZ-1_B 19545	20: P1-Gab-MZ-2_B 19546	21: P1-Dun-MZ-8_B 19550	22: P1-MetV-MZ-5_B B19551	23: P1-MetV-MZ-1_B B19552
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.98	9.52	10.20	9.67	9.50	9.64	9.79	10.12	9.71	9.59	9.48
pH [No unit]	9.74	8.67	9.59	8.80	8.98	8.90	9.30	9.46	9.51	9.22	8.67
Conductivity [uS/cm]	225	76	69	148	103	78	72	71	772	96	72
Alkalinity [mg/L as CaCO3]	78	39	30	28	50	31	26	33	177	39	35
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	1.0	< 0.3	< 0.3	0.9	< 0.3	< 0.3	< 0.3	< 0.3	2.2	< 0.3	< 0.3



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : Crawford Project # 20446343

LR Report : CA14971-MAY21

Analysis	13: P1-Dun-MZ-5_B 19539	14: P1-MetV-MZ-7 B19540	15: P1-Gab-MZ-5_B 19541	16: P1-Per-MZ-7_B 19542	17: P1-Pyr-MZ-9_B 19543	18: P1-Gab-MZ-4_1 9544	19: P1-Pyr-MZ-1_B 19545	20: P1-Gab-MZ-2_B 19546	21: P1-Dun-MZ-8_B 19550	22: P1-MetV-MZ-5 B19551	23: P1-MetV-MZ-1 B19552
Chloride [mg/L]	26	< 2	2.2	32	< 2	4.7	< 2	< 2	57	< 2	< 2
Sulphate [mg/L]	3.5	< 2	< 2	< 2	< 2	< 2	3.1	< 2	54	< 2	< 2
Fluoride [mg/L]	< 0.06	0.12	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	0.08
Chromium VI [ug/L]	0.3	0.2	1.3	0.2	0.3	0.4	1.2	1.7	< 0.2	< 0.2	< 0.2
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	0.00001
Aluminum (0.2µm) [mg/L]	0.003	0.353	0.161	0.004	0.009	0.060	0.007	0.083	0.004	1.55	0.152
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Arsenic [mg/L]	< 0.0002	0.0077	0.0053	< 0.0002	0.0006	0.0021	0.0005	0.0013	< 0.0002	0.0008	0.0121
Barium [mg/L]	0.0103	0.00125	0.00071	0.0129	0.00535	0.00264	0.00231	0.00114	0.00838	0.00086	0.00147
Boron [mg/L]	0.213	0.022	0.048	0.086	0.035	0.053	0.063	0.039	0.945	0.033	0.037
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	1.97	4.80	11.0	10.1	10.6	7.14	10.6	14.4	1.62	5.13	6.00
Cadmium [mg/L]	0.000003	0.000005	< 0.000003	0.000009	< 0.000003	< 0.000003	< 0.000003	0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000026	0.000075	0.000049	0.000063	0.000041	0.000047	0.000045	0.000058	0.000066	0.000044	0.000047
Chromium [mg/L]	0.00020	0.00023	0.00203	0.00042	0.00027	0.00048	0.00213	0.00374	0.00016	0.00009	0.00010
Copper [mg/L]	0.0008	0.0018	0.0008	0.0005	0.0003	0.0005	0.0004	0.0004	0.0004	< 0.0002	0.0004
Iron [mg/L]	< 0.007	0.065	0.013	< 0.007	< 0.007	0.008	< 0.007	0.020	< 0.007	< 0.007	< 0.007
Potassium [mg/L]	0.499	3.18	1.43	1.19	1.55	3.20	1.07	2.60	0.535	8.74	4.04
Lithium [mg/L]	0.0001	0.0002	< 0.0001	< 0.0001	< 0.0001	0.0009	< 0.0001	< 0.0001	0.0001	0.0002	0.0001
Magnesium [mg/L]	34.0	1.18	0.368	13.6	8.97	2.52	3.52	0.882	134	0.333	0.746
Manganese [mg/L]	0.00003	0.00222	0.00040	0.00039	0.00040	0.00027	0.00011	0.00088	0.00069	0.00055	0.00085
Molybdenum [mg/L]	0.00007	0.00054	0.00021	0.00008	0.00028	0.00018	0.00062	0.00025	0.00105	0.00113	0.00058
Sodium [mg/L]	0.22	13.3	6.46	0.35	1.22	7.32	1.54	1.88	0.54	9.28	10.8
Nickel [mg/L]	0.0023	0.0001	0.0003	0.0004	0.0006	0.0002	0.0005	0.0003	0.0006	< 0.0001	0.0004
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	0.00010
Antimony [mg/L]	< 0.0009	0.0009	< 0.0009	< 0.0009	0.0012	0.0020	0.0015	< 0.0009	< 0.0009	0.0011	0.0024
Silicon [mg/L]	0.20	4.65	11.8	2.61	7.73	10.5	13.8	15.0	0.15	3.14	2.99
Selenium [mg/L]	0.00015	0.00005	0.00011	< 0.00004	0.00022	0.00035	0.00014	0.00004	0.00024	< 0.00004	< 0.00004
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.00496	0.00917	0.0249	0.00589	0.0177	0.026	0.02396	0.0313	0.00625	0.0159	0.0168
Thorium [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Titanium [mg/L]	0.00009	0.00292	0.00031	0.00006	< 0.00005	0.00020	0.00015	0.00047	< 0.00005	0.00008	0.00015
Thallium [mg/L]	0.000014	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium [mg/L]	0.000025	0.000121	0.000015	0.000002	0.000007	0.000009	0.000003	0.000024	0.000017	0.000046	0.000018
Vanadium [mg/L]	0.00003	0.0107	0.0140	0.00007	0.00293	0.0138	0.00761	0.01860	0.00006	0.01039	0.00679
Tungsten [mg/L]	0.00008	0.00126	0.00043	0.00029	0.00083	0.00040	0.00046	0.00047	0.00012	0.00070	0.00222
Zinc [mg/L]	< 0.002	0.002	0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : Crawford Project # 20446343

LR Report : CA14971-MAY21

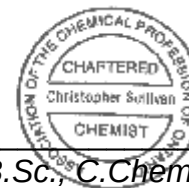
Analysis	24: P1-Pyr-MZ-7A B19553	25: P1-MetV-MZ-4 B19554	26: P1-Dun-MZ-2 B 19555	27: P1-MetV-MZ-6 B190556	28: P1-Dun-MZ-7 B 19557	29: P1-MetV-MZ-2 B B19560	30: P1-Per-MZ-2 B 19561	31: P1-Pyr-MZ-2A B19562	32: P1-Gab-MZ-7A B19563	33: P1-Per-MZ-5 B 19564	34: P1-Gab-MZ-8A
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.67	9.42	9.97	9.42	9.92	9.56	9.40	9.90	9.66	9.52	10.30
pH [No unit]	9.03	8.60	9.88	8.08	9.78	8.83	9.09	9.44	9.25	9.15	9.58
Conductivity [uS/cm]	222	132	478	95	541	99	173	66	75	133	78
Alkalinity [mg/L as CaCO ₃]	47	56	205	46	100	39	82	30	34	60	38
Acidity [mg/L as CaCO ₃]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	1.0	< 0.3	2.2	< 0.3	3.2	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Chloride [mg/L]	41	2.1	67	< 2	140	< 2	< 2	< 2	2.2	< 2	< 2
Sulphate [mg/L]	< 2	< 2	< 2	< 2	4.2	3.4	5.4	< 2	< 2	3.6	< 2
Fluoride [mg/L]	< 0.06	0.07	< 0.06	0.21	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	0.5	< 0.2	1.0	< 0.2	< 0.2	< 0.2	0.3	0.4	< 0.2	< 0.2	1.4
Mercury [mg/L]	< 0.00001	< 0.00001	0.00009	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	0.00001	< 0.00001
Aluminum (0.2µm) [mg/L]	0.002	0.484	0.014	0.056	0.008	0.150	0.006	0.015	0.053	0.005	0.177
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Arsenic [mg/L]	0.0003	0.0395	< 0.0002	0.0273	< 0.0002	0.0192	0.0281	0.0005	0.0003	0.0012	0.0013
Barium [mg/L]	0.0292	0.00337	0.00792	0.00212	0.0315	0.00638	0.0158	0.0954	0.00453	0.0104	0.00184
Boron [mg/L]	0.060	0.027	0.440	0.025	0.251	0.037	0.027	0.135	0.067	0.073	0.025
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	8.73	7.24	3.47	5.43	6.06	7.35	9.41	7.97	5.92	6.49	15.2
Cadmium [mg/L]	0.000003	0.000016	0.000003	< 0.000003	0.000004	0.000005	< 0.000003	< 0.000003	0.000028	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000069	0.000064	0.000083	0.000130	0.000030	0.000047	0.000122	0.000034	0.000031	0.000066	0.000051
Chromium [mg/L]	0.00085	0.00013	0.00147	0.00012	0.00031	0.00013	0.00025	0.00070	0.00015	0.00028	0.00184
Copper [mg/L]	< 0.0002	0.0002	0.0003	0.0009	0.0004	0.0004	0.0007	0.0002	0.0003	0.0002	0.0005
Iron [mg/L]	< 0.007	< 0.007	< 0.007	0.022	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	0.011
Potassium [mg/L]	0.915	10.3	0.727	4.88	1.10	3.40	3.56	4.01	5.60	2.68	4.09
Lithium [mg/L]	0.0003	0.0033	0.0001	0.0005	0.0010	0.0002	0.0003	< 0.0001	0.0004	0.0008	< 0.0001
Magnesium [mg/L]	25.4	2.88	83.5	4.66	78.1	3.76	19.8	3.55	3.33	16.4	0.999
Manganese [mg/L]	0.00007	0.00162	0.00008	0.00377	0.00003	0.00029	0.00012	0.00011	0.00017	0.00037	0.00047
Molybdenum [mg/L]	0.00008	0.00110	0.00014	0.00051	0.00006	0.0118	0.00021	0.00021	0.03839	0.00025	0.00040
Sodium [mg/L]	0.60	14.3	0.48	11.0	1.90	12.1	2.50	1.78	6.37	1.68	3.36
Nickel [mg/L]	0.0021	0.0003	0.0006	0.0004	0.0004	0.0003	0.0029	0.0006	0.0001	0.0011	0.0001
Lead [mg/L]	< 0.00009	< 0.00009	0.00015	0.00011	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	0.0020	0.0015	< 0.0009	0.0009	< 0.0009	0.0029	0.0020	< 0.0009	< 0.0009	< 0.0009	0.0009
Silicon [mg/L]	2.60	4.96	0.15	9.94	0.20	5.78	5.26	10.3	8.54	4.87	15.9
Selenium [mg/L]	0.00006	< 0.00004	0.00004	< 0.00004	0.00011	0.00007	0.00006	< 0.00004	< 0.00004	0.00004	0.00007
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006

Analysis	24: P1-Pyr-MZ-7A_B19553	25: P1-MetV-MZ-4_B19554	26: P1-Dun-MZ-2_B19555	27: P1-MetV-MZ-6_B190556	28: P1-Dun-MZ-7_B19557	29: P1-MetV-MZ-2_B19560	30: P1-Per-MZ-2_B19561	31: P1-Pyr-MZ-2A_B19562	32: P1-Gab-MZ-7A_B19563	33: P1-Per-MZ-5_B19564	34: P1-Gab-MZ-8A
Strontium [mg/L]	0.117	0.0439	0.00340	0.0143	0.117	0.0279	0.0414	0.0497	0.0230	0.0488	0.0186
Thorium [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Titanium [mg/L]	0.00005	0.00013	< 0.00005	0.00041	0.00006	0.00021	0.00007	0.00016	0.00010	0.00009	0.00035
Thallium [mg/L]	0.000007	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	0.000017	0.000006	0.000006	< 0.000005	< 0.000005
Uranium [mg/L]	< 0.000002	0.000074	0.000007	0.000057	< 0.000002	0.000004	0.000003	0.000003	< 0.000002	0.000003	0.000006
Vanadium [mg/L]	0.00012	0.00830	0.00005	0.00918	0.00006	0.00761	0.00088	0.00535	0.00337	0.00037	0.02460
Tungsten [mg/L]	0.00005	0.00279	0.00008	0.00126	0.00006	0.00105	0.00078	0.00055	0.00066	0.00035	0.00059
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	35: P1-MetV-MZ-4_B19554	36:BLK: \$D.I. Leachate Blank	37: P1-Gab-MZ-8A	38:BLK: \$D.I. Leachate Blank
Sample weight [g]	250	---	250	---
Volume D.I. Water [mL]	750	750	750	750
Final pH [no unit]	9.41	6.41	10.27	5.84
pH [No unit]	9.07	6.28	9.65	6.06
Conductivity [uS/cm]	111	3	80	2
Alkalinity [mg/L as CaCO3]	54	2	40	< 2
Acidity [mg/L as CaCO3]	< 2	2	< 2	4
Bromide [mg/L]	< 0.3	< 0.3	< 0.3	< 0.3
Chloride [mg/L]	< 2	< 0.2	< 2	< 0.2
Sulphate [mg/L]	< 2	< 0.2	< 2	< 0.2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	< 0.2	< 0.2	1.0	< 0.2
Mercury [mg/L]	0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum (0.2µm) [mg/L]	0.255	0.002	0.168	0.002
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Arsenic [mg/L]	0.0389	< 0.0002	0.0008	< 0.0002
Barium [mg/L]	0.00307	0.00410	0.00196	0.00558
Boron [mg/L]	0.022	< 0.002	0.024	< 0.002
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	7.12	0.10	14.2	0.12
Cadmium [mg/L]	< 0.000003	< 0.000003	0.000006	0.000005
Cobalt [mg/L]	0.000046	0.000041	0.000045	0.000086
Chromium [mg/L]	0.00010	< 0.00008	0.00183	< 0.00008
Copper [mg/L]	0.0003	0.0002	0.0004	0.0008

Analysis	35: P1-MetV-MZ-4 B19554	36:BLK: \$D.I. Leachate Blank	37: P1-Gab-MZ-8A \$D.I. Leachate Blank	38:BLK: \$D.I. Leachate Blank
Iron [mg/L]	< 0.007	< 0.007	0.012	< 0.007
Potassium [mg/L]	9.24	0.156	3.99	0.058
Lithium [mg/L]	0.0029	< 0.0001	< 0.0001	< 0.0001
Magnesium [mg/L]	2.54	0.007	1.10	0.010
Manganese [mg/L]	0.00167	0.00027	0.00036	0.00016
Molybdenum [mg/L]	0.00103	< 0.00004	0.00016	0.01679
Sodium [mg/L]	13.5	< 0.01	3.24	0.03
Nickel [mg/L]	0.0004	< 0.0001	0.0002	< 0.0001
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	0.0012	< 0.0009	< 0.0009	< 0.0009
Silicon [mg/L]	4.82	< 0.02	14.9	< 0.02
Selenium [mg/L]	< 0.00004	< 0.00004	0.00010	< 0.00004
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.0442	0.00020	0.0180	0.00025
Thorium [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Titanium [mg/L]	0.00028	< 0.00005	0.00034	< 0.00005
Thallium [mg/L]	0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium [mg/L]	0.000081	< 0.000002	0.000003	< 0.000002
Vanadium [mg/L]	0.00793	< 0.00001	0.02286	< 0.00001
Tungsten [mg/L]	0.00201	< 0.00002	0.00066	< 0.00002
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

01-February-2023

Date Rec. : 23 November 2022

LR Report: CA19242-NOV22

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	5: Gabbro-01 CR20-34 510-520	6: Basalt CR20-60 380-390	7: Gabbro CR20-66 95-105	8: Gabbro CR20-66 180-190	9: Basalt CR20-70A 540-550	10: Basalt CR20-79 380-390	11: Dunite CR20-83 440-450	12: Dunite CR21-104 335-345
Sample Date & Time					06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Sample weight [g]	20-Jan-23	06:36	22-Jan-23	15:39	250	250	251	251	250	250	251	251
Volume D.I. Water [mL]	20-Jan-23	06:36	22-Jan-23	15:39	750	750	750	750	750	750	750	750
Final pH [no unit]	20-Jan-23	06:36	22-Jan-23	15:39	9.81	9.45	9.62	9.63	9.80	9.86	9.68	9.87
pH [No unit]	09-Jan-23	12:46	25-Jan-23	10:32	8.80	8.28	8.14	8.08	7.97	7.87	9.49	9.13
Conductivity [uS/cm]	09-Jan-23	12:46	25-Jan-23	10:30	55	87	48	48	44	45	392	157
Alkalinity [mg/L as CaCO ₃]	09-Jan-23	12:46	25-Jan-23	10:30	24	39	23	23	18	22	205	71
Acidity [mg/L as CaCO ₃]	09-Jan-23	12:46	25-Jan-23	10:30	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	09-Jan-23	06:51	23-Jan-23	12:30	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	10-Jan-23	13:46	24-Jan-23	09:34	0.3	< 0.2	< 0.2	0.5	< 0.2	< 0.2	< 0.2	< 0.2
Sulphate [mg/L]	08-Jan-23	18:44	01-Feb-23	16:19	< 2	< 2	< 2	< 2	< 2	< 2	6.0	< 2
Chloride [mg/L]	08-Jan-23	18:44	01-Feb-23	16:19	< 2	< 2	< 2	< 2	< 2	< 2	17	5.7
Bromide [mg/L]	08-Jan-23	14:29	01-Feb-23	16:19	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Mercury [mg/L]	25-Jan-23	16:41	26-Jan-23	09:57	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	18-Jan-23	11:35	30-Jan-23	14:59	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	31-Jan-23	13:08	01-Feb-23	13:54	0.144	0.271	0.122	0.098	0.632	0.677	< 0.001	0.030
Aluminum (0.2µm) [mg/L]	31-Jan-23	13:08	01-Feb-23	13:24	0.068	0.113	0.102	0.107	0.631	0.641	0.004	0.005
Arsenic [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.0016	0.0418	0.0019	0.0009	0.0005	0.0019	< 0.0002	< 0.0002
Barium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.0115	0.00154	0.00172	0.00126	0.00144	0.00132	0.0248	0.0234
Boron [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.021	0.010	0.006	0.008	0.011	0.018	0.031	0.019
Beryllium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007

Online LIMS

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	5: Gabbro-01 CR20-34 510-520	6: Basalt CR20-60 380-390	7: Gabbro CR20-66 95-105	8: Gabbro CR20-66 180-190	9: Basalt CR20-70A 540-550	10: Basalt CR20-79 380-390	11: Dunite CR20-83 440-450	12: Dunite CR21-104 335-345
Bismuth [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	6.50	5.29	3.94	4.38	3.05	4.00	3.91	4.62
Cadmium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.000014	0.000018	0.000022	0.000016	0.000012	0.000045	0.000014	0.000024
Chromium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.00036	< 0.00008	0.00051	0.00027	0.00012	0.00023	< 0.00008	0.00030
Copper [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.0003	< 0.0002	0.0005	0.0005	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Iron [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.007	< 0.007	0.018	0.009	0.013	0.075	< 0.007	0.010
Potassium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	2.01	3.63	4.08	2.44	4.03	3.19	1.49	3.50
Lithium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	< 0.0001	0.0640	0.0002	0.0001	0.0001	0.0005	0.0041	0.0017
Magnesium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	1.05	4.28	1.81	2.26	0.431	0.451	62.4	17.4
Manganese [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.00028	0.00098	0.00078	0.00065	0.00041	0.00178	0.00011	0.00029
Molybdenum [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.00014	0.00128	0.00012	0.00012	0.00028	0.00049	0.00021	0.00012
Sodium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	1.74	5.42	1.03	1.14	2.25	3.93	1.72	1.65
Nickel [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.0003	0.0003	0.0004	0.0003	0.0003	0.0003	0.0013	0.0006
Lead [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	< 0.0009	< 0.0009	< 0.0009	< 0.0009	0.0027	0.0010	< 0.0009	< 0.0009
Selenium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.00005	< 0.00004	0.00004	0.00012	0.00007	0.00006	0.00045	0.00017
Silicon [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	5.41	3.48	5.74	5.42	3.00	3.65	0.20	0.48
Tin [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.0134	0.0124	0.00985	0.00823	0.0105	0.0114	0.0125	0.0353
Titanium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.00006	< 0.00005	0.00037	0.00015	0.00093	0.00566	< 0.00005	< 0.00005
Thallium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.000391	0.000112	0.001062	0.000723	0.000671	0.000002	< 0.000002	0.000019
Vanadium [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	0.00444	0.00229	0.00344	0.00234	0.00501	0.0138	0.00002	0.00005
Zinc [mg/L]	18-Jan-23	11:35	30-Jan-23	15:01	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	13: Dunite CR21-111A 300-310	14: Dunite CR21-120 400-410	15: Basalt CR19-09 590-600	16: Basalt CR19-09 550-560	17: Dunite CR19-08 80-90	18: Dunite CR18-04 95-105	19: Basalt CR21-129A 45-55	20: Dunite CR21-130 70-80	21: Dunite CR21-135 145-155	22: Gabbro CR21-140 220-230	23: Dunite CR21-146 65-75	24: Dunite CR21-146 120-130
Sample Date & Time	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Sample weight [g]	252	250	250	250	250	250	250	251	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.71	9.81	9.82	9.55	9.96	9.46	9.58	9.61	9.56	9.63	9.71	9.64
pH [No unit]	8.20	9.20	8.67	8.00	9.72	8.38	8.08	9.07	9.49	8.05	9.71	9.45



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Analysis	13: Dunite CR21-111A 300-310	14: Dunite CR21-120 400-410	15: Basalt CR19-09 590-600	16: Basalt CR19-09 550-560	17: Dunite CR19-08 80-90	18: Dunite CR18-04 95-105	19: Basalt CR21-129A 45-55	20: Dunite CR21-130 70-80	21: Dunite CR21-135 145-155	22: Gabbro CR21-140 220-230	23: Dunite CR21-146 65-75	24: Dunite CR21-146 120-130
Conductivity [uS/cm]	628	215	45	81	369	68	54	162	697	91	547	349
Alkalinity [mg/L as CaCO ₃]	35	68	24	43	216	31	27	84	330	37	284	68
Acidity [mg/L as CaCO ₃]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	0.47	< 0.06	< 0.06
Chromium VI [ug/L]	< 0.2	< 0.2	0.3	< 0.2	1.7	0.4	< 0.2	< 0.2	0.8	0.2	5.5	0.8
Sulphate [mg/L]	< 2	< 2	< 2	< 2	4.1	2.2	< 2	< 2	2.4	< 2	4.1	< 2
Chloride [mg/L]	184	28	< 2	< 2	7.1	< 2	< 2	< 2	72	< 2	49	73
Bromide [mg/L]	3.6	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	0.016	< 0.001	0.698	0.451	0.003	0.003	0.562	0.001	0.002	0.069	0.001	0.002
Aluminum (0.2µm) [mg/L]	0.007	0.003	0.718	0.354	0.003	0.004	0.566	0.003	0.004	0.031	0.004	0.004
Arsenic [mg/L]	< 0.0002	< 0.0002	0.0077	0.0149	< 0.0002	0.0158	0.0005	< 0.0002	< 0.0002	0.0029	< 0.0002	< 0.0002
Barium [mg/L]	0.0101	0.0251	0.00121	0.00065	0.00281	0.00754	0.00084	0.0303	0.00431	0.00151	0.00523	0.0141
Boron [mg/L]	0.149	0.006	0.005	0.021	0.159	0.011	0.010	0.008	0.058	0.715	0.790	0.565
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	14.3	4.59	5.84	5.64	2.55	3.83	5.76	2.89	1.98	4.80	2.59	5.30
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000026	0.000025	0.000006	0.000016	0.000111	0.000028	< 0.000004	0.000023	0.000066	0.000043	0.000030	0.000009
Chromium [mg/L]	0.00023	< 0.00008	0.00009	< 0.00008	0.00185	0.00015	< 0.00008	< 0.00008	0.00090	0.00072	0.00569	0.00086
Copper [mg/L]	0.0002	< 0.0002	0.0003	0.0004	< 0.0002	0.0004	< 0.0002	< 0.0002	0.0003	0.0004	< 0.0002	< 0.0002
Iron [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	0.091	< 0.007	< 0.007
Potassium [mg/L]	0.717	4.38	1.69	0.855	0.879	1.60	2.84	1.83	0.939	6.17	0.491	0.712
Lithium [mg/L]	0.0003	0.0199	0.0003	0.0013	0.0002	0.0002	< 0.0001	0.0003	0.0032	0.0003	0.0003	0.0002
Magnesium [mg/L]	64.8	20.4	0.998	2.49	62.1	6.23	1.16	21.9	120	0.513	94.4	42.5
Manganese [mg/L]	0.00023	0.00007	0.00034	0.00108	0.00014	0.00015	0.00011	0.00039	0.00031	0.00157	0.00009	0.00006
Molybdenum [mg/L]	0.00004	0.00012	0.00045	0.00062	0.00044	0.00019	0.00017	0.00014	0.00024	0.01014	0.00025	0.00036
Sodium [mg/L]	0.47	9.73	2.21	11.6	0.92	0.86	3.16	0.18	0.43	13.3	0.44	0.36
Nickel [mg/L]	0.0005	0.0003	0.0001	0.0003	0.0006	0.0008	0.0001	0.0003	0.0031	0.0011	0.0016	0.0008
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	< 0.0009	< 0.0009	< 0.0009	0.0012	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium [mg/L]	< 0.00004	0.00005	< 0.00004	< 0.00004	< 0.00004	0.00005	< 0.00004	0.00004	0.00015	0.00009	< 0.00004	< 0.00004
Silicon [mg/L]	0.07	0.18	2.26	3.28	0.08	2.54	2.64	0.42	0.05	7.38	0.06	0.04
Tin [mg/L]	0.00019	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	0.00012	< 0.00006	< 0.00006

Analysis	13: Dunite CR21-111A 300-310	14: Dunite CR21-120 400-410	15: Basalt CR19-09 590-600	16: Basalt CR19-09 550-560	17: Dunite CR19-08 80-90	18: Dunite CR18-04 95-105	19: Basalt CR21-129A 45-55	20: Dunite CR21-130 70-80	21: Dunite CR21-135 145-155	22: Gabbro CR21-140 220-230	23: Dunite CR21-146 65-75	24: Dunite CR21-146 120-130
Strontium [mg/L]	0.0124	0.119	0.0122	0.0112	0.00425	0.0145	0.00831	0.0125	0.0322	0.0501	0.00933	0.0164
Titanium [mg/L]	< 0.00005	< 0.00005	0.00011	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00205	< 0.00005	< 0.00005
Thallium [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	0.000241
Uranium [mg/L]	0.000005	< 0.000002	< 0.000002	< 0.000002	0.000002	< 0.000002	< 0.000002	< 0.000002	< 0.000002	0.000730	0.000015	< 0.000002
Vanadium [mg/L]	0.00005	0.00001	0.00145	0.00162	0.00007	0.00069	0.00264	0.00005	0.00004	0.0166	0.00004	0.00002
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	25: Dunite CR21-146 510-520	26: Dunite CR21-170 150-160	27: Dunite CR21-170 300-310	28: Dunite CR21-178 40-50	29: Dunite CR21-180 120-130	30: Gabbro CR21-180 480-490	31: Gabbro CR21-GT-06 75-85	32: Gabbro CR21-GT-06 300-310	33: Gabbro CR21-GT-06 400-410	34: Gabbro CR21-GT-06 500-510	35: Peridotite CR19-12 550-560	36: Peridotite CR20-38 265-275
Sample Date & Time	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Sample weight [g]	250	250	250	250	250	250	250	250	252	251	251	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.74	9.79	10.26	9.73	9.80	10.08	9.88	9.89	9.78	9.57	9.77	9.89
pH [No unit]	9.74	9.67	7.53	9.71	9.46	9.58	9.03	8.50	8.64	9.10	8.41	8.77
Conductivity [uS/cm]	1040	551	162	328	440	61	42	42	48	70	43	44
Alkalinity [mg/L as CaCO3]	403	282	14	196	65	24	21	21	23	36	21	20
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	< 0.06	0.29	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	1.8	1.4	< 0.2	0.6	0.2	0.6	0.5	0.5	0.4	< 0.2	0.6	0.7
Sulphate [mg/L]	< 2	22	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloride [mg/L]	198	29	40	3.0	98	4.0	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	3.8	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	< 0.001	0.004	0.003	0.001	0.002	0.159	0.200	0.317	0.653	1.59	0.004	0.008
Aluminum (0.2µm) [mg/L]	0.003	0.002	0.005	0.003	0.006	0.170	0.214	0.337	0.337	1.20	0.007	0.009
Arsenic [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0019	0.0007	0.0009	0.0019	0.0017	0.0003	0.0003
Barium [mg/L]	0.00677	0.329	0.0235	0.00767	0.00839	0.00294	0.00091	0.00047	0.00037	0.00163	0.00299	0.00640
Boron [mg/L]	0.429	0.038	0.006	0.076	1.69	0.062	0.011	0.014	0.019	0.030	0.020	0.033
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	2.08	5.60	16.4	1.25	5.61	7.01	5.59	5.84	4.58	2.55	4.21	3.26
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003

Analysis	25: Dunite CR21-146 510-520	26: Dunite CR21-170 150-160	27: Dunite CR21-170 300-310	28: Dunite CR21-178 40-50	29: Dunite CR21-180 120-130	30: Gabbro CR21-180 480-490	31: Gabbro CR21-GT-06 75-85	32: Gabbro CR21-GT-06 300-310	33: Gabbro CR21-GT-06 400-410	34: Gabbro CR21-GT-06 500-510	35: Peridotite CR19-12 550-560	36: Peridotite CR20-38 265-275
Cobalt [mg/L]	0.000033	0.000032	0.000012	0.000060	0.000010	< 0.000004	0.000010	0.000005	0.000006	0.000004	0.000011	0.000015
Chromium [mg/L]	0.00201	0.00164	< 0.00008	0.00048	0.00023	0.00048	0.00038	0.00051	< 0.00008	< 0.00008	0.00054	0.00077
Copper [mg/L]	0.0003	0.0002	0.0003	0.0002	< 0.0002	0.0002	0.0003	< 0.0002	< 0.0002	0.0003	0.0002	0.0002
Iron [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
Potassium [mg/L]	0.748	24.6	0.393	0.300	0.225	0.797	1.94	0.818	0.742	0.880	1.28	0.548
Lithium [mg/L]	0.0004	0.0037	0.0003	0.0003	0.0005	0.0016	< 0.0001	< 0.0001	< 0.0001	0.0001	0.0004	0.0006
Magnesium [mg/L]	177	83.3	8.17	56.6	52.3	1.14	0.906	0.647	0.407	0.140	2.59	3.23
Manganese [mg/L]	0.00008	0.00068	0.00023	0.00014	0.00006	0.00007	0.00022	0.00017	0.00011	0.00010	0.00005	0.00007
Molybdenum [mg/L]	0.00012	0.00022	0.00012	0.00026	0.00015	0.00012	0.00014	0.00017	0.00278	0.00012	0.00010	0.00044
Sodium [mg/L]	0.54	1.84	0.26	0.38	0.23	4.59	1.42	2.47	5.55	14.2	0.51	0.39
Nickel [mg/L]	0.0026	0.0053	0.0005	0.0008	0.0004	0.0001	0.0001	0.0002	0.0001	< 0.0001	0.0006	0.0008
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	0.0012	< 0.0009	0.0010	0.0017	0.0027
Selenium [mg/L]	0.00011	0.00026	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004	0.00005	< 0.00004	0.00006	0.00008	0.00006
Silicon [mg/L]	0.08	0.08	0.10	0.05	0.06	6.49	4.86	4.47	2.12	1.81	4.05	5.45
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.00669	0.0986	0.0337	0.00672	0.0151	0.142	0.0140	0.0270	0.0202	0.0124	0.0144	0.0111
Titanium [mg/L]	< 0.00005	0.00016	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00012	0.00006	< 0.00005	0.00010	< 0.00005	< 0.00005
Thallium [mg/L]	0.000005	0.000111	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium [mg/L]	< 0.000002	< 0.000002	0.002364	< 0.000002	0.000003	< 0.000002	< 0.000002	0.000608	0.006192	< 0.000002	< 0.000002	< 0.000002
Vanadium [mg/L]	0.00006	0.00006	0.00002	0.00003	0.00003	0.00149	0.00337	0.00415	0.00825	0.02996	0.00060	0.00108
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	37: Peridotite-01 CR20-38 290-300	38: Peridotite CR20-78 147-157	39: Pyroxenite CR21-124 535-553	40: Dunite-02 CR21-130 190-200	41: Dunite-02 CR21-146 50-60	42: Peridotite-01 CR20-78 100-110	43: Gabbro CR21-GT-05 90-100	44: Gabbro CR21-GT-05 170-180	45: Gabbro CR21-GT-05 370-380	46: Basalt CR21-GT-05 410-420	47: Gabbro CR22-GT-13 100-110
Sample Date & Time	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22	06-Jul-22
Sample weight [g]	250	250	251	252	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.91	9.21	9.53	9.88	9.76	9.70	9.92	10.00	9.80	10.27	9.66
pH [No unit]	9.08	8.51	7.74	9.07	9.64	9.50	8.15	8.27	8.07	8.25	7.64
Conductivity [uS/cm]	48	129	67	53	604	272	45	39	48	92	45
Alkalinity [mg/L as CaCO3]	22	66	28	54	389	187	23	23	25	48	23
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Analysis	37: Peridotite-01 CR20-38 290-300	38: Peridotite CR20-78 147-157	39: Pyroxenite CR21-124 535-553	40: Dunite-02 CR21-130 190-200	41: Dunite-02 CR21-146 50-60	42: Peridotite-01 CR20-78 100-110	43: Gabbro CR21-GT-05 90-100	44: Gabbro CR21-GT-05 170-180	45: Gabbro CR21-GT-05 370-380	46: Basalt CR21-GT-05 410-420	47: Gabbro CR22-GT-13 100-110
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	0.5	0.5	0.7	0.3	5.7	0.3	0.5	0.2	< 0.2	0.3	0.3
Sulphate [mg/L]	< 2	< 2	< 2	< 2	5.1	< 2	< 2	< 2	< 2	< 2	< 2
Chloride [mg/L]	< 2	< 2	< 2	2.0	21	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	0.005	0.001	0.007	0.187	0.002	0.006	0.283	0.451	0.799	1.60	0.203
Aluminum (0.2µm) [mg/L]	0.007	0.003	0.007	0.171	0.004	0.005	0.317	0.441	0.773	1.62	0.184
Arsenic [mg/L]	0.0005	< 0.0002	0.0002	0.0004	< 0.0002	< 0.0002	0.0018	0.0016	0.0002	0.0012	0.0010
Barium [mg/L]	0.00386	0.00642	0.0115	0.00296	0.0102	0.00571	0.00089	0.00050	0.00085	0.00141	0.00131
Boron [mg/L]	0.064	0.011	0.031	0.024	0.698	0.045	0.020	0.021	0.029	0.031	0.007
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	4.24	5.40	4.80	6.31	2.12	1.51	5.58	5.78	4.30	1.37	4.57
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000013	0.000101	0.000017	0.000007	0.000047	0.000194	0.000007	0.000011	0.000009	0.000154	0.000026
Chromium [mg/L]	0.00054	0.00024	0.00079	0.00035	0.00606	0.00031	0.00052	0.00021	< 0.00008	0.00014	0.00033
Copper [mg/L]	0.0002	0.0004	0.0004	0.0003	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	0.0002
Iron [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	0.204	0.065
Potassium [mg/L]	1.53	0.875	5.30	3.79	1.10	0.643	0.879	1.33	0.901	0.382	1.80
Lithium [mg/L]	0.0005	0.0001	0.0001	< 0.0001	0.0004	0.0003	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001
Magnesium [mg/L]	2.87	14.6	3.46	0.900	108	50.1	0.817	0.790	0.514	0.129	1.79
Manganese [mg/L]	0.00005	0.00047	0.00026	0.00011	0.00021	0.00030	0.00018	0.00018	0.00017	0.00261	0.00062
Molybdenum [mg/L]	0.00017	0.00008	0.00023	0.00008	0.00045	0.00026	0.00018	0.00018	0.00014	0.00026	0.00061
Sodium [mg/L]	0.93	0.55	1.75	1.84	0.64	0.49	2.10	2.08	6.66	21.0	1.37
Nickel [mg/L]	0.0006	0.0025	0.0004	0.0003	0.0016	0.0008	< 0.0001	< 0.0001	< 0.0001	0.0001	0.0002
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	0.0025	0.0041	0.0010	0.0023	0.0031
Selenium [mg/L]	< 0.00004	< 0.00004	< 0.00004	0.00005	< 0.00004	0.00013	< 0.00004	0.00007	0.00005	0.00016	0.00021
Silicon [mg/L]	5.10	1.85	6.86	5.60	0.06	0.17	4.90	4.39	2.10	4.39	5.10
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	0.00007	< 0.00006
Strontium [mg/L]	0.0242	0.00443	0.0265	0.0122	0.00929	0.00091	0.0166	0.0118	0.0136	0.00604	0.0109
Titanium [mg/L]	< 0.00005	< 0.00005	0.00008	0.00006	< 0.00005	0.00012	0.00008	0.00007	0.00018	0.00661	0.00029
Thallium [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005

Analysis	37: Peridotite-01 CR20-38 290-300	38: Peridotite CR20-78 147-157	39: Pyroxenite CR21-124 535-553	40: Dunite-02 CR21-130 190-200	41: Dunite-02 CR21-146 50-60	42: Peridotite-01 CR20-78 100-110	43: Gabbro CR21-GT-05 90-100	44: Gabbro CR21-GT-05 170-180	45: Gabbro CR21-GT-05 370-380	46: Basalt CR21-GT-05 410-420	47: Gabbro CR22-GT-13 100-110
Uranium [mg/L]	< 0.000002	< 0.000002	< 0.000002	0.000025	0.000005	0.000002	< 0.000002	< 0.000002	< 0.000002	0.000005	< 0.000002
Vanadium [mg/L]	0.00082	0.00008	0.00359	0.00322	0.00004	0.00006	0.00477	0.00540	0.0189	0.0622	0.00433
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	48: Gabbro CR22-GT-13 390-400	49: Gabbro CR22-GT-13 480-490	50: Dunite CR19-20 220-230	51: Peridotite CR21-115 430-440	52: Pyroxenite-01 CR21-138 390-400	53: Pyroxenite CR21-172 650-660	54: Pyroxenite-02 CR21-GT-05 35-45	55: Peridotite CR22-191 60-70	56: Dunite CR22-193A 200-210	57: Dunite CR22-199 50-60	58: Peridotite CR22-199 205-215	59: Dunite CR22-201 400-410
Sample Date & Time	06-Jul-22	06-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.62	9.67	9.64	9.47	10.13	9.94	9.69	9.76	9.89	9.83	9.57	9.59
pH [No unit]	7.49	9.21	9.49	9.41	9.77	8.19	8.85	8.95	9.12	9.78	8.33	9.13
Conductivity [uS/cm]	41	47	805	348	88	58	50	79	571	254	112	1230
Alkalinity [mg/L as CaCO3]	24	24	82	233	37	27	25	39	36	108	34	40
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	0.5	0.4	< 0.2	0.3	10	3.0	0.3	2.1	0.8	2.6	1.3	< 0.2
Sulphate [mg/L]	< 2	< 2	< 2	2.0	2.3	< 2	< 2	< 2	< 2	2.5	< 2	< 2
Chloride [mg/L]	< 2	< 2	231	8.7	2.6	2.8	< 2	< 2	176	32	18	431
Bromide [mg/L]	< 3	< 3	5.4	< 3	< 3	< 3	< 3	< 3	3.9	< 3	< 3	7.4
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	0.138	0.337	0.002	0.001	0.031	0.279	0.032	0.004	0.004	0.001	< 0.001	0.037
Aluminum (0.2µm) [mg/L]	0.132	0.316	0.005	0.004	0.026	0.295	0.038	0.004	0.003	0.001	0.002	0.004
Arsenic [mg/L]	0.0004	0.0011	< 0.0002	< 0.0002	0.0002	0.0003	< 0.0002	0.0007	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Barium [mg/L]	0.00114	0.00070	0.00726	0.00615	0.00281	0.00225	0.00108	0.00412	0.0127	0.00690	0.00281	0.0103
Boron [mg/L]	0.009	0.017	0.510	0.041	0.044	0.051	0.027	0.026	0.395	0.707	0.123	0.721
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	4.50	6.14	3.28	2.31	13.6	5.62	6.03	4.83	13.6	3.03	9.61	2.22
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000014	0.000048	0.000013	0.000048	0.000028	0.000041	0.000005	0.000022	0.000011	0.000019	0.000050	0.000016
Chromium [mg/L]	0.00063	0.00169	0.00038	0.00054	0.01232	0.00465	0.00038	0.00231	0.00089	0.00261	0.00142	0.00023
Copper [mg/L]	< 0.0002	0.0003	0.0002	< 0.0002	0.0006	0.0003	< 0.0002	< 0.0002	0.0003	0.0002	< 0.0002	< 0.0002



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Analysis	48: Gabbro CR22-GT-13 390-400	49: Gabbro CR22-GT-13 480-490	50: Dunite CR19-20 220-230	51: Peridotite CR21-115 430-440	52: Pyroxenite-01 CR21-138 390-400	53: Pyroxenite CR21-172 650-660	54: Pyroxenite-02 CR21-GT-05 35-45	55: Peridotite CR22-191 60-70	56: Dunite CR22-193A 200-210	57: Dunite CR22-199 50-60	58: Peridotite CR22-199 205-215	59: Dunite CR22-201 400-410
Iron [mg/L]	0.012	0.050	< 0.007	< 0.007	0.023	0.028	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
Potassium [mg/L]	0.972	1.50	1.65	2.01	2.86	5.89	0.755	1.28	0.319	0.646	0.493	0.626
Lithium [mg/L]	0.0001	< 0.0001	0.0003	0.0003	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0003	< 0.0001	< 0.0001	0.0005
Magnesium [mg/L]	1.67	0.853	94.2	67.1	1.50	0.560	2.38	7.92	58.1	38.7	9.30	145
Manganese [mg/L]	0.00037	0.00097	0.00016	0.00012	0.00059	0.00071	0.00014	0.00034	0.00019	0.00004	0.00008	0.00004
Molybdenum [mg/L]	0.00015	0.00025	0.00007	0.00041	0.00026	0.00013	0.00015	0.00019	0.00054	0.00028	0.00008	0.00018
Sodium [mg/L]	1.86	1.90	0.46	0.84	1.56	4.36	0.70	0.61	0.42	0.23	0.37	0.76
Nickel [mg/L]	0.0002	0.0004	0.0018	0.0023	0.0005	0.0004	0.0002	0.0014	0.0009	0.0008	0.0009	0.0011
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	0.0010	0.0026	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	0.0010	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium [mg/L]	0.00008	0.00005	0.00005	< 0.00004	0.00028	0.00006	< 0.00004	0.00008	< 0.00004	0.00011	0.00006	< 0.00004
Silicon [mg/L]	4.64	5.33	0.10	0.27	15.4	7.57	5.91	5.17	0.05	0.06	2.59	0.02
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.00804	0.0183	0.00637	0.0158	0.0235	0.0183	0.0236	0.0228	0.0333	0.0152	0.0101	0.0682
Titanium [mg/L]	0.00019	0.00078	< 0.00005	< 0.00005	0.00022	0.00037	0.00007	< 0.00005	0.00005	< 0.00005	< 0.00005	< 0.00005
Thallium [mg/L]	< 0.000005	< 0.000005	0.000056	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	0.000159	< 0.000005	< 0.000005
Uranium [mg/L]	0.000003	< 0.000002	0.000002	0.000005	0.000003	< 0.000002	< 0.000002	< 0.000002	< 0.000002	< 0.000002	< 0.000002	< 0.000002
Vanadium [mg/L]	0.00418	0.00618	0.00006	0.00002	0.0141	0.00872	0.00263	0.00074	0.00003	0.00002	0.00011	0.00003
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.004	< 0.002	< 0.002	< 0.002

Analysis	60: Dunite CR22-203B 22-32	61: Pyroxenite CR22-204 330-340	62: Gabbro CR22-228 230-240	63: Gabbro CR22-231 70-80	64: Gabbro CR22-234 60-70	65: Peridotite CR22-240 90-100	66: Pyroxenite CR19-16 30-40	67: Dunite CR21-162 315-325	68: Peridotite CR21-GT-06 25-35	69: Dunite CR20-32 500-510	70: Gabbro CR20-41 365-375	71: Peridotite CR21-GT-06 150-160
Sample Date & Time	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22	25-Jul-22
Sample weight [g]	250	250	250	250	250	250	250	252	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.90	9.67	9.71	9.73	9.86	9.73	9.82	9.84	9.78	9.82	10.10	10.03
pH [No unit]	9.85	8.87	8.98	8.90	8.71	9.16	9.33	6.69	8.99	9.78	9.33	9.11
Conductivity [uS/cm]	326	76	64	46	48	62	68	407	71	785	62	70
Alkalinity [mg/L as CaCO3]	215	32	28	22	25	27	33	5	37	406	31	28
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	1.6	0.3	0.3	0.5	0.3	0.5	6.9	< 0.2	0.4	0.6	0.6	0.9
Sulphate [mg/L]	16	< 2	5.0	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2

Online LIMS

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SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Analysis	60: Dunite CR22-203B 22-32	61: Pyroxenite CR22-204 330-340	62: Gabbro CR22-228 230-240	63: Gabbro CR22-231 70-80	64: Gabbro CR22-234 60-70	65: Peridotite CR22-240 90-100	66: Pyroxenite CR19-16 30-40	67: Dunite CR21-162 315-325	68: Peridotite CR21-GT-06 25-35	69: Dunite CR20-32 500-510	70: Gabbro CR20-41 365-375	71: Peridotite CR21-GT-06 150-160
Chloride [mg/L]	6.1	< 2	< 2	< 2	< 2	< 2	< 2	137	< 2	113	< 2	< 2
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	4.0	< 3	< 3
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	0.002	0.020	0.052	0.172	0.163	0.003	0.020	0.005	0.002	< 0.001	0.255	0.005
Aluminum (0.2µm) [mg/L]	0.001	0.018	0.043	0.150	0.151	0.007	0.014	0.009	0.007	< 0.001	0.236	0.004
Arsenic [mg/L]	< 0.0002	0.0003	< 0.0002	0.0004	0.0011	< 0.0002	0.0008	< 0.0002	0.0004	< 0.0002	0.0003	0.0009
Barium [mg/L]	0.0153	0.00446	0.00257	0.00097	0.00146	0.00136	0.00227	0.106	0.0144	0.00200	0.00047	0.0687
Boron [mg/L]	0.291	0.243	0.027	0.027	0.016	0.039	0.014	0.002	0.145	0.558	0.051	0.052
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	2.21	5.60	5.51	4.23	6.90	2.64	10.5	44.8	4.67	2.62	8.39	5.76
Cadmium [mg/L]	< 0.000003	< 0.000003	0.000004	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000034	0.000013	0.000021	0.000037	0.000050	0.000019	0.000043	0.000016	0.000022	0.000043	0.000044	0.000016
Chromium [mg/L]	0.00171	0.00018	0.00027	0.00081	0.00067	0.00081	0.00969	< 0.00008	0.00045	0.00064	0.00108	0.00099
Copper [mg/L]	0.0006	0.0003	0.0003	0.0004	0.0005	< 0.0002	0.0013	0.0003	< 0.0002	0.0002	0.0005	< 0.0002
Iron [mg/L]	< 0.007	< 0.007	0.012	0.024	0.039	< 0.007	0.031	< 0.007	< 0.007	< 0.007	0.032	< 0.007
Potassium [mg/L]	0.265	3.06	5.95	2.84	2.02	1.12	0.985	0.812	1.02	2.84	1.61	0.868
Lithium [mg/L]	0.0003	0.0001	0.0002	0.0001	< 0.0001	< 0.0001	< 0.0001	0.0022	< 0.0001	0.0003	< 0.0001	0.0003
Magnesium [mg/L]	64.0	1.60	2.35	1.26	1.43	5.70	2.43	20.5	6.96	140	0.990	3.15
Manganese [mg/L]	0.00011	0.00027	0.00035	0.00065	0.00106	0.00008	0.00083	0.00021	0.00012	0.00004	0.00077	0.00005
Molybdenum [mg/L]	0.00110	0.00160	0.00029	0.00019	0.00022	0.00015	0.00032	0.00006	0.00018	0.00019	0.00014	0.00020
Sodium [mg/L]	0.32	7.58	2.01	3.08	0.93	0.16	1.31	1.20	0.39	0.62	3.20	0.99
Nickel [mg/L]	0.0014	0.0010	0.0002	0.0004	0.0003	0.0014	0.0006	0.0005	0.0005	0.0011	0.0004	0.0007
Lead [mg/L]	0.00076	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	0.0032	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	0.0014
Selenium [mg/L]	0.00011	< 0.00004	0.00056	0.00007	0.00073	0.00029	0.00016	< 0.00004	0.00007	< 0.00004	0.00006	0.00006
Silicon [mg/L]	0.05	6.03	8.05	6.08	7.48	6.47	14.9	0.09	4.12	0.07	7.65	5.09
Tin [mg/L]	0.00008	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.0129	0.0612	0.00977	0.0128	0.0173	0.00683	0.0111	1.88	0.0206	0.00078	0.0190	0.0357
Titanium [mg/L]	< 0.00005	0.00024	0.00019	0.00037	0.00059	< 0.00005	0.00043	< 0.00005	< 0.00005	< 0.00005	0.00048	< 0.00005
Thallium [mg/L]	< 0.000005	0.000010	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium [mg/L]	0.000003	< 0.000002	< 0.000002	< 0.000002	0.000002	< 0.000002	< 0.000002	< 0.000002	< 0.000002	< 0.000002	0.000002	< 0.000002
Vanadium [mg/L]	0.00002	0.00805	0.00883	0.00494	0.01094	0.00073	0.0167	0.00003	0.00035	0.00001	0.0106	0.00053
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Online LIMS



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Analysis	72: Basalt CR21-GT-08 75-85	73: Basalt CR21-GT-08 175-185	74: Basalt CR21-GT-08 325-335	75: Basalt CR21-GT-08 450-460	76: Basalt CR21-GT-09A 80-90	77: Basalt CR21-GT-09A 140-150	78: Basalt CR21-GT-09B 140-150	79: Basalt CR21-GT-09B 250-260	80: Basalt CR21-GT-09B 350-360	81: Basalt CR21-GT-09B 490-500	82: Basalt CR22-GT-01C 180-190
Sample Date & Time	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22
Sample weight [g]	250	250	250	250	251	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.43	9.55	8.41	9.16	9.60	9.48	9.23	9.42	8.85	9.05	9.41
pH [No unit]	8.26	8.52	8.03	8.31	8.31	8.50	8.19	8.22	8.18	8.13	8.29
Conductivity [uS/cm]	59	56	242	86	56	65	58	60	105	86	52
Alkalinity [mg/L as CaCO ₃]	33	31	60	46	30	36	34	35	65	47	29
Acidity [mg/L as CaCO ₃]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	< 0.06	< 0.06	0.06	0.10	< 0.06	0.07	< 0.06	< 0.06	0.11	0.10	< 0.06
Chromium VI [ug/L]	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Sulphate [mg/L]	< 2	< 2	60	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	0.840	2.11	0.234	1.31	1.33	1.46	0.866	0.728	0.608	0.519	1.16
Aluminum (0.2µm) [mg/L]	0.804	2.01	0.211	1.23	1.23	1.32	0.865	0.245	0.612	0.518	1.22
Arsenic [mg/L]	0.0002	< 0.0002	< 0.0002	< 0.0002	0.0008	0.0019	0.0008	0.0007	< 0.0002	0.0003	0.0003
Barium [mg/L]	0.00129	0.00028	0.00348	0.00218	0.00161	0.00076	0.00109	0.00136	0.00309	0.00129	0.00154
Boron [mg/L]	0.015	0.023	0.027	0.014	0.019	0.019	0.012	0.020	0.004	0.006	0.013
Beryllium [mg/L]	< 0.000007	< 0.000007	0.000008	0.000008	0.000012	< 0.000007	< 0.000007	0.000012	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00009	0.00002	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	5.99	4.94	39.5	8.58	5.90	4.68	5.90	4.78	17.7	9.06	5.84
Cadmium [mg/L]	< 0.000003	< 0.000003	0.000003	< 0.000003	0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000011	0.000005	0.000053	0.000023	0.000024	0.000008	0.000004	0.000006	0.000008	0.000007	0.000005
Chromium [mg/L]	< 0.00008	< 0.00008	< 0.00008	0.00009	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008
Copper [mg/L]	< 0.0002	< 0.0002	0.0002	0.0003	0.0006	0.0003	0.0002	0.0002	< 0.0002	0.0002	0.0003
Iron [mg/L]	< 0.007	< 0.007	< 0.007	0.009	0.009	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
Potassium [mg/L]	5.23	3.63	3.64	1.50	2.44	3.77	2.31	4.11	1.39	0.755	2.86
Lithium [mg/L]	0.0002	0.0001	0.0007	0.0011	0.0009	< 0.0001	0.0002	0.0002	0.0004	0.0004	0.0001
Magnesium [mg/L]	1.21	0.325	4.23	1.62	0.793	0.650	0.913	0.321	3.98	3.61	0.435
Manganese [mg/L]	0.00176	0.00053	0.02420	0.00265	0.00122	0.00047	0.00087	0.00078	0.00623	0.00121	0.00047
Molybdenum [mg/L]	0.00039	0.00059	0.00071	0.00027	0.00144	0.00045	0.00051	0.00034	0.00077	0.00109	0.00055
Sodium [mg/L]	2.58	5.62	12.3	9.60	4.84	9.30	6.19	8.50	3.24	7.92	5.98
Nickel [mg/L]	< 0.0001	< 0.0001	0.0005	0.0001	0.0001	< 0.0001	< 0.0001	0.0001	0.0002	0.0002	< 0.0001

Analysis	72: Basalt CR21-GT-08 75-85	73: Basalt CR21-GT-08 175-185	74: Basalt CR21-GT-08 325-335	75: Basalt CR21-GT-08 450-460	76: Basalt CR21-GT-09A 80-90	77: Basalt CR21-GT-09A 140-150	78: Basalt CR21-GT-09B 140-150	79: Basalt CR21-GT-09B 250-260	80: Basalt CR21-GT-09B 350-360	81: Basalt CR21-GT-09B 490-500	82: Basalt CR22-GT-01C 180-190
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	0.0009	< 0.0009	0.0025	< 0.0009
Selenium [mg/L]	< 0.00004	< 0.00004	0.00031	< 0.00004	0.00004	< 0.00004	< 0.00004	< 0.00004	0.00005	0.00007	< 0.00004
Silicon [mg/L]	2.06	1.76	1.76	1.20	1.92	2.26	1.88	2.03	0.76	1.46	1.92
Tin [mg/L]	0.00009	< 0.00006	< 0.00006	0.00019	0.00022	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.00933	0.0178	0.113	0.0553	0.0108	0.0113	0.0123	0.0254	0.0931	0.0714	0.0272
Titanium [mg/L]	0.00024	0.00006	< 0.00005	0.00020	0.00021	0.00013	0.00007	0.00007	< 0.00005	< 0.00005	0.00015
Thallium [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium [mg/L]	0.000003	0.000019	0.000090	0.000004	0.000006	0.000018	0.000012	0.000022	0.000007	0.000002	0.000017
Vanadium [mg/L]	0.00243	0.00421	0.00033	0.00151	0.00258	0.00566	0.00249	0.00486	0.00023	0.00117	0.00385
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	83: Basalt CR22-GT-01C 270-280	84: Basalt CR22-GT-11 100-110	85: Basalt CR22-GT-11 300-310	86: Gabbro CR22-GT-15 50-60	87: Gabbro CR22-GT-15 95-105	88: Gabbro CR22-GT-15 550-560	89: Basalt CR22-GT-22 60-70	90: Basalt CR22-GT-22 250-260	91: Basalt CR21-GT-02 200-210	92: Basalt CR21-GT-02 300-310	93: Basalt CR21-GT-02 370-380
Sample Date & Time	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.49	9.44	9.71	9.74	9.73	9.90	9.57	9.24	9.51	9.62	9.65
pH [No unit]	8.27	8.23	9.04	8.44	8.81	8.88	8.07	8.26	8.35	8.29	8.26
Conductivity [uS/cm]	53	76	56	50	56	62	72	100	67	66	57
Alkalinity [mg/L as CaCO3]	29	32	30	26	27	22	39	51	36	34	30
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	< 0.2	< 0.2	< 0.2	< 0.2	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Sulphate [mg/L]	< 2	4.5	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloride [mg/L]	< 2	3.1	< 2	< 2	6.8	4.6	< 2	2.6	< 2	< 2	< 2
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	1.30	0.536	0.913	0.125	0.115	0.352	0.751	0.742	1.18	2.06	1.36
Aluminum (0.2µm) [mg/L]	1.30	0.504	0.898	0.121	0.108	0.343	0.540	0.750	1.01	1.35	1.36
Arsenic [mg/L]	0.0008	0.0790	0.0187	0.0009	0.0008	0.0009	0.0003	< 0.0002	0.0002	0.0005	0.0006
Barium [mg/L]	0.00128	0.00410	0.00136	0.00081	0.00234	0.04766	0.00022	0.00048	0.00033	0.00200	0.00109

Analysis	83: Basalt CR22-GT-01C 270-280	84: Basalt CR22-GT-11 100-110	85: Basalt CR22-GT-11 300-310	86: Gabbro CR22-GT-15 50-60	87: Gabbro CR22-GT-15 95-105	88: Gabbro CR22-GT-15 550-560	89: Basalt CR22-GT-22 60-70	90: Basalt CR22-GT-22 250-260	91: Basalt CR21-GT-02 200-210	92: Basalt CR21-GT-02 300-310	93: Basalt CR21-GT-02 370-380
Boron [mg/L]	0.010	0.013	0.012	0.010	0.015	0.010	0.013	0.015	0.015	0.018	0.010
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	5.40	7.49	5.10	5.53	6.08	7.63	4.46	7.37	4.93	4.68	5.03
Cadmium [mg/L]	0.000003	0.000004	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000006	0.000036	0.000016	0.000010	0.000012	0.000014	0.000005	0.000004	< 0.000004	0.000006	0.000008
Chromium [mg/L]	< 0.00008	< 0.00008	< 0.00008	0.00020	0.00028	0.00013	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008
Copper [mg/L]	0.0004	0.0005	0.0003	< 0.0002	0.0004	0.0003	0.0003	< 0.0002	0.0004	< 0.0002	0.0003
Iron [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	0.007	0.013	< 0.007	< 0.007	< 0.007	0.007	< 0.007
Potassium [mg/L]	3.30	5.83	6.87	1.10	1.97	1.02	1.70	0.904	0.653	11.0	6.22
Lithium [mg/L]	0.0001	0.0008	0.0004	0.0002	0.0001	< 0.0001	0.0001	0.0001	0.0002	0.0001	0.0002
Magnesium [mg/L]	0.289	1.78	0.630	1.83	1.80	0.878	0.914	1.60	0.253	0.244	0.326
Manganese [mg/L]	0.00049	0.00119	0.00074	0.00023	0.00033	0.00041	0.00043	0.00132	0.00035	0.00052	0.00110
Molybdenum [mg/L]	0.00232	0.00162	0.00128	0.00034	0.00112	0.00029	0.00046	0.00043	0.00058	0.00185	0.00043
Sodium [mg/L]	5.80	6.34	4.00	1.86	2.52	3.90	10.2	13.4	10.3	3.36	4.05
Nickel [mg/L]	0.0002	0.0003	0.0003	0.0003	0.0002	0.0002	< 0.0001	0.0001	0.0002	0.0001	0.0002
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	< 0.0009	0.0039	0.0013	0.0012	< 0.0009	< 0.0009	< 0.0009	0.0011	0.0012	0.0030	0.0013
Selenium [mg/L]	0.00005	0.00014	0.00006	0.00007	0.00006	0.00007	< 0.00004	< 0.00004	0.00008	< 0.00004	< 0.00004
Silicon [mg/L]	2.22	3.17	4.02	5.14	5.88	4.60	2.58	1.16	1.72	2.31	2.63
Tin [mg/L]	0.00006	< 0.00006	< 0.00006	< 0.00006	0.00006	< 0.00006	0.00007	0.00007	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.0359	0.0347	0.0208	0.0113	0.0164	0.160	0.0104	0.0213	0.0136	0.0222	0.0159
Titanium [mg/L]	0.00015	0.00026	0.00045	0.00010	0.00017	0.00041	0.00013	0.00010	0.00035	0.00022	0.00023
Thallium [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium [mg/L]	0.000039	0.000030	0.000081	< 0.000002	0.000002	0.000004	0.000013	0.000003	0.000018	0.000006	0.000002
Vanadium [mg/L]	0.00673	0.00552	0.00287	0.00345	0.00609	0.00705	0.00588	0.00125	0.00317	0.00476	0.00396
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	94: Basalt CR21-GT-02 600-610	95: Basalt CR22-GT-10 320-330	96: Basalt CR22-GT-10 550-560	97: Basalt CR21-GT-01 120-130	98: Basalt CR21-GT-01 180-190	99: Basalt CR21-GT-01A 95-105	100: Basalt CR21-GT-02 100-110	101: Basalt CR21-GT-03 85-95	102: Basalt CR21-GT-03 155-165	103: Basalt CR21-GT-03 300-310	104: Basalt CR21-GT-03 510-520
Sample Date & Time	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22
Sample weight [g]	250	250	250	250	250	250	250	250	250	150	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Analysis	94: Basalt CR21-GT-02 600-610	95: Basalt CR22-GT-10 320-330	96: Basalt CR22-GT-10 550-560	97: Basalt CR21-GT-01 120-130	98: Basalt CR21-GT-01 180-190	99: Basalt CR21-GT-01A 95-105	100: Basalt CR21-GT-02 100-110	101: Basalt CR21-GT-03 85-95	102: Basalt CR21-GT-03 155-165	103: Basalt CR21-GT-03 300-310	104: Basalt CR21-GT-03 510-520
Final pH [no unit]	9.54	9.64	9.80	9.20	8.98	9.29	9.58	9.47	9.42	9.73	9.82
pH [No unit]	8.25	8.75	8.54	8.10	7.92	8.04	8.73	8.20	7.98	8.36	7.94
Conductivity [uS/cm]	58	58	43	114	125	76	79	68	82	44	40
Alkalinity [mg/L as CaCO3]	33	31	24	33	36	32	42	31	33	26	28
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Sulphate [mg/L]	< 2	< 2	< 2	18	19	7.1	< 2	3.6	5.6	< 2	< 2
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	1.24	0.742	1.01	0.379	0.525	0.354	0.706	1.22	0.774	0.886	0.840
Aluminum (0.2µm) [mg/L]	0.956	0.789	0.882	0.310	0.518	0.342	0.715	1.25	0.803	0.899	0.812
Arsenic [mg/L]	< 0.0002	0.0156	0.0027	0.0036	0.0004	0.0004	0.0004	0.0005	0.0006	0.0117	0.0152
Barium [mg/L]	0.00040	0.00097	0.00059	0.00082	0.00094	0.00456	0.00095	0.00253	0.00121	0.01074	0.00144
Boron [mg/L]	0.014	0.017	0.007	0.010	0.011	0.008	0.017	0.009	0.023	0.006	0.005
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth [mg/L]	0.00004	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00005	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	5.38	5.47	6.12	10.9	13.9	8.03	4.08	6.87	7.05	6.10	6.61
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000004	0.000005	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	< 0.000004	0.000013	0.000017	0.000027	0.000042	0.000007	< 0.000004	0.000012	0.000009	0.000017	0.000009
Chromium [mg/L]	< 0.00008	< 0.00008	< 0.00008	0.00112	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008	< 0.00008
Copper [mg/L]	< 0.0002	0.0003	0.0003	0.0004	< 0.0002	< 0.0002	0.0003	0.0005	< 0.0002	0.0002	< 0.0002
Iron [mg/L]	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	0.015	< 0.007
Potassium [mg/L]	1.14	3.54	0.598	2.32	3.40	1.78	0.525	5.47	9.14	1.44	0.936
Lithium [mg/L]	0.0001	0.0001	0.0002	0.0002	0.0003	0.0001	0.0002	0.0002	0.0003	0.0001	0.0004
Magnesium [mg/L]	0.233	0.609	0.292	1.59	1.11	0.678	1.30	0.550	0.924	0.451	0.241
Manganese [mg/L]	0.00088	0.00074	0.00034	0.00288	0.00261	0.00106	0.00063	0.00041	0.00034	0.00036	0.00032
Molybdenum [mg/L]	0.00062	0.00046	0.00035	0.00107	0.00397	0.00574	0.00075	0.00248	0.00217	0.00156	0.00267
Sodium [mg/L]	7.16	4.44	3.10	9.05	8.52	6.49	12.5	4.22	3.33	2.59	2.19
Nickel [mg/L]	0.0002	0.0002	0.0002	0.0010	0.0005	0.0002	0.0003	0.0002	0.0002	0.0002	0.0001
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	< 0.0009	0.0010	0.0011	< 0.0009	< 0.0009	< 0.0009	0.0016	< 0.0009	0.0015	< 0.0009	0.0010
Selenium [mg/L]	< 0.00004	0.00005	< 0.00004	0.00095	0.00065	0.00037	0.00006	0.00015	0.00026	0.00023	0.00008

Analysis	94: Basalt CR21-GT-02 600-610	95: Basalt CR22-GT-10 320-330	96: Basalt CR22-GT-10 550-560	97: Basalt CR21-GT-01 120-130	98: Basalt CR21-GT-01 180-190	99: Basalt CR21-GT-01A 95-105	100: Basalt CR21-GT-02 100-110	101: Basalt CR21-GT-03 85-95	102: Basalt CR21-GT-03 155-165	103: Basalt CR21-GT-03 300-310	104: Basalt CR21-GT-03 510-520
Silicon [mg/L]	1.58	2.49	2.52	1.98	1.64	1.44	3.21	1.74	2.31	2.47	2.64
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.0133	0.0274	0.0275	0.0292	0.0450	0.0505	0.0174	0.0483	0.0190	0.0421	0.0205
Titanium [mg/L]	0.00005	0.00009	0.00017	0.00005	0.00008	0.00008	< 0.00005	0.00012	0.00012	0.00018	0.00007
Thallium [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium [mg/L]	0.000007	0.000002	0.000026	0.000005	0.000008	0.000008	0.000006	0.000022	0.000022	0.000007	0.000015
Vanadium [mg/L]	0.00238	0.00523	0.00284	0.00348	0.00187	0.00322	0.00538	0.00297	0.00298	0.00522	0.00364
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	105: Pyroxenite CR21-GT-04B 275-285	106: Gabbro CR21-GT-04B 350-360	107: Gabbro CR21-GT-04B 550-560	108: Basalt CR22-197 105-115	109: Peridotite CR21-102 80-90	110: Dunite CR21-104 365-375	111: Gabbro CR21-GT-07 315-325	112: Gabbro CR21-GT-07 400-410	113: Gabbro CR21-GT-07 440-450	114: Basalt CR21-GT-07 510-520	115: Peridotite CR22-197 130-140
Sample Date & Time	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	10.06	9.97	9.87	9.61	9.90	10.20	9.63	9.90	9.86	9.83	9.66
pH [No unit]	9.55	8.38	8.56	8.23	9.75	9.01	8.07	8.29	7.73	8.82	8.52
Conductivity [uS/cm]	61	52	41	73	324	100	47	45	30	66	70
Alkalinity [mg/L as CaCO3]	27	25	21	37	199	27	28	23	21	32	36
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	4.1	0.5	0.5	< 0.2	0.7	< 0.2	0.3	0.3	< 0.2	< 0.2	1.7
Sulphate [mg/L]	< 2	< 2	< 2	< 2	3.2	< 2	< 2	< 2	< 2	< 2	< 2
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	14	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	0.030	0.214	0.132	0.713	0.001	0.004	0.646	0.261	0.463	1.17	0.004
Aluminum (0.2µm) [mg/L]	0.041	0.211	0.161	0.703	0.004	0.005	0.680	0.262	0.471	1.14	0.006
Arsenic [mg/L]	0.0004	0.0006	0.0003	0.0078	< 0.0002	< 0.0002	< 0.0002	0.0009	0.0016	0.0019	0.0015
Barium [mg/L]	0.00246	0.00116	0.00066	0.00084	0.01153	0.03845	0.00109	0.00107	0.00422	0.00158	0.00628
Boron [mg/L]	0.023	0.028	0.046	0.017	0.014	0.008	0.018	0.015	0.019	0.017	0.069
Beryllium [mg/L]	< 0.000007	< 0.000007	< 0.000007	0.000009	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	0.000077
Bismuth [mg/L]	< 0.00001	0.00010	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	0.00006	< 0.00001

Analysis	105: Pyroxenite CR21-GT-04B 275-285	106: Gabbro CR21-GT-04B 350-360	107: Gabbro CR21-GT-04B 550-560	108: Basalt CR22-197 105-115	109: Peridotite CR21-102 80-90	110: Dunite CR21-104 365-375	111: Gabbro CR21-GT-07 315-325	112: Gabbro CR21-GT-07 400-410	113: Gabbro CR21-GT-07 440-450	114: Basalt CR21-GT-07 510-520	115: Peridotite CR22-197 130-140
Calcium [mg/L]	9.15	7.08	6.52	5.15	1.69	7.65	5.56	6.14	5.48	3.78	4.38
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000202
Cobalt [mg/L]	< 0.000004	0.000015	0.000011	0.000014	0.000037	0.000013	< 0.000004	0.000011	0.000004	0.000009	0.000064
Chromium [mg/L]	0.00445	0.00067	0.00065	0.00017	0.00074	< 0.00008	0.00021	0.00066	0.00018	< 0.00008	0.00218
Copper [mg/L]	< 0.0002	< 0.0002	0.0002	0.0004	0.0004	< 0.0002	< 0.0002	0.0008	< 0.0002	< 0.0002	0.0002
Iron [mg/L]	< 0.007	0.010	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	0.008	< 0.007	< 0.007	< 0.007
Potassium [mg/L]	1.03	3.27	0.760	3.86	0.461	0.315	7.13	0.509	1.92	13.4	1.44
Lithium [mg/L]	< 0.0001	< 0.0001	< 0.0001	0.0004	0.0002	0.0007	< 0.0001	< 0.0001	< 0.0001	0.0003	0.0008
Magnesium [mg/L]	1.39	0.666	0.968	0.782	48.8	6.63	0.780	1.09	0.687	0.237	4.88
Manganese [mg/L]	0.00014	0.00038	0.00024	0.00049	0.00015	0.00016	0.00033	0.00031	0.00026	0.00030	0.00029
Molybdenum [mg/L]	0.00023	0.00033	0.00020	0.00155	0.00061	0.00015	0.00014	0.00056	0.00018	0.00051	0.00041
Sodium [mg/L]	0.92	2.15	1.84	7.83	0.62	0.50	1.56	2.05	2.92	3.16	0.27
Nickel [mg/L]	0.0002	0.0002	0.0003	0.0002	0.0009	0.0002	0.0001	0.0002	0.0001	0.0002	0.0009
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	< 0.0009	< 0.0009	< 0.0009	0.0009	< 0.0009	< 0.0009	< 0.0009	0.0009	0.0016	< 0.0009	< 0.0009
Selenium [mg/L]	0.00017	0.00009	0.00008	0.00008	0.00010	< 0.00004	< 0.00004	0.00007	0.00005	0.00005	0.00319
Silicon [mg/L]	9.91	6.26	5.23	3.40	0.15	0.18	1.82	4.58	3.65	3.40	3.88
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.0282	0.0264	0.0328	0.0150	0.0106	0.0447	0.0222	0.0318	0.0616	0.0196	0.00940
Titanium [mg/L]	0.00008	0.00022	0.00012	0.00012	< 0.00005	< 0.00005	0.00005	0.00025	0.00007	0.00018	0.00349
Thallium [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	0.000010
Uranium [mg/L]	0.000002	0.000006	< 0.000002	0.000309	0.000033	0.000015	0.000009	0.000008	0.000006	0.000016	0.000089
Vanadium [mg/L]	0.00564	0.00581	0.00423	0.0122	0.00003	0.00002	0.00195	0.00370	0.00535	0.00855	0.00059
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	116: Peridotite CR20-34 451-461	117: Dunite CR21-162 90-100	118: Dunite CR21-162 35-45	119: Dunite CR21-162 190-200	120: Dunite CR22-196B 100-110	121: Peridotite CR22-197 325-335	122: Pyroxenite CR22-197 342-352	123: Pyroxenite CR22-200 75-85	124: Peridotite CR20-34 555-565	125: Peridotite CR20-34 595-605	126: Peridotite CR20-36 380-390	127: Peridotite CR20-73 100-110
Sample Date & Time	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22
Sample weight [g]	250	250	250	249	250	250	251	250	251	250	251	251
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Final pH [no unit]	9.09	9.50	9.62	9.83	9.80	8.97	8.85	9.57	9.65	9.72	9.75	9.72
pH [No unit]	7.09	9.12	9.51	7.26	9.08	8.12	7.83	8.37	8.71	8.30	8.56	8.25
Conductivity [uS/cm]	443	402	535	321	368	535	280	55	37	63	58	63



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Analysis	116: Peridotite CR20-34 451-461	117: Dunite CR21-162 90-100	118: Dunite CR21-162 35-45	119: Dunite CR21-162 190-200	120: Dunite CR22-196B 100-110	121: Peridotite CR22-197 325-335	122: Pyroxenite CR22-197 342-352	123: Pyroxenite CR22-200 75-85	124: Peridotite CR20-34 555-565	125: Peridotite CR20-34 595-605	126: Peridotite CR20-36 380-390	127: Peridotite CR20-73 100-110
Alkalinity [mg/L as CaCO ₃]	14	110	363	14	59	72	43	26	25	27	26	25
Acidity [mg/L as CaCO ₃]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	< 0.2	0.3	0.3	< 0.2	0.9	0.4	0.3	0.8	0.8	1.2	0.8	0.8
Sulphate [mg/L]	< 2	8.8	20	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	3.2
Chloride [mg/L]	153	189	3.1	113	118	174	64	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	< 3	4.9	< 3	< 3	< 3	3.2	< 3	< 3	< 3	< 3	< 3	< 3
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	0.003	0.004	0.003	0.002	0.003	0.003	0.003	0.021	0.009	0.007	0.014	0.004
Aluminum (0.2µm) [mg/L]	0.003	0.004	0.005	0.004	0.005	0.004	0.008	0.020	0.011	0.011	0.017	0.007
Arsenic [mg/L]	0.0006	0.0006	0.0002	< 0.0002	0.0014	0.0010	0.0012	0.0019	0.0012	0.0016	0.0016	0.0015
Barium [mg/L]	0.210	0.02810	0.110	0.03104	0.03309	0.06797	0.02326	0.00530	0.01379	0.01623	0.00378	0.00429
Boron [mg/L]	0.224	0.237	0.032	0.017	0.448	0.428	0.272	0.025	0.082	0.076	0.129	0.052
Beryllium [mg/L]	0.000023	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	0.000075	0.000024	0.000022	0.000026	0.000097	0.000107
Bismuth [mg/L]	< 0.00001	0.00010	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	0.00001
Calcium [mg/L]	33.2	4.03	1.20	16.4	5.81	15.7	12.8	5.18	3.52	4.68	4.36	4.03
Cadmium [mg/L]	0.000044	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000133	0.000055	0.000113	0.000230	0.000190	0.000185
Cobalt [mg/L]	0.000261	0.000020	0.000050	0.000010	0.000010	0.000020	0.000070	0.000041	0.000043	0.000093	0.000068	0.000074
Chromium [mg/L]	0.00037	0.00150	0.00163	0.00074	0.00159	0.00084	0.00076	0.00174	0.00108	0.00167	0.00141	0.00157
Copper [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0003	0.0003	0.0006	0.0003	0.0003	0.0003
Iron [mg/L]	< 0.007	0.030	0.240	0.020	0.020	0.020	< 0.007	0.028	< 0.007	< 0.007	< 0.007	< 0.007
Potassium [mg/L]	1.04	1.64	0.960	0.550	0.340	1.87	7.03	1.05	0.617	0.917	0.876	0.911
Lithium [mg/L]	0.0025	< 0.0001	< 0.0001	0.0010	< 0.0001	0.132	0.0015	0.0006	0.0007	0.0006	0.0008	0.0128
Magnesium [mg/L]	18.4	84.0	94.0	20.8	41.3	53.5	15.4	2.45	3.73	3.68	3.15	4.06
Manganese [mg/L]	0.00058	0.00037	0.00084	0.00036	0.00019	0.00029	0.00178	0.00088	0.00023	0.00028	0.00039	0.00042
Molybdenum [mg/L]	0.00009	0.00014	0.00058	< 0.00004	0.00023	< 0.00004	0.00021	0.00026	0.00027	0.00025	0.00033	0.00026
Sodium [mg/L]	0.42	0.71	0.89	0.54	0.25	0.85	4.48	1.91	0.53	0.75	1.25	0.58
Nickel [mg/L]	0.0022	0.0013	0.0052	< 0.0001	0.0006	0.0065	0.0030	0.0004	0.0010	0.0009	0.0008	0.0010
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	0.0012	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium [mg/L]	0.00106	0.00061	0.00084	0.00032	0.00010	0.00009	0.00315	0.00108	0.00287	0.00528	0.00307	0.00369
Silicon [mg/L]	1.02	0.03	0.03	0.13	0.04	0.37	1.60	8.34	5.77	4.61	6.30	5.53
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.115	0.0159	0.0601	0.0624	0.0292	0.327	0.139	0.0278	0.0221	0.0314	0.0314	0.0226

Online LIMS



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Analysis	116: Peridotite CR20-34 451-461	117: Dunite CR21-162 90-100	118: Dunite CR21-162 35-45	119: Dunite CR21-162 190-200	120: Dunite CR22-196B 100-110	121: Peridotite CR22-197 325-335	122: Pyroxenite CR22-197 342-352	123: Pyroxenite CR22-200 75-85	124: Peridotite CR20-34 555-565	125: Peridotite CR20-34 595-605	126: Peridotite CR20-36 380-390	127: Peridotite CR20-73 100-110
Titanium [mg/L]	0.00092	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00260	0.00128	0.00194	0.00442	0.00362	0.00320
Thallium [mg/L]	0.000056	0.000070	0.000010	0.000030	0.000380	0.000020	0.000028	0.000005	0.000007	< 0.000005	0.000012	0.000015
Uranium [mg/L]	0.000301	0.000020	0.000830	0.000050	0.000570	0.00434	0.000598	0.00177	0.00328	0.000297	0.000019	0.000038
Vanadium [mg/L]	0.00005	< 0.00001	0.00001	< 0.00001	0.00003	< 0.00001	0.00013	0.00677	0.00108	0.00059	0.00226	0.00106
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.002	< 0.002	< 0.002

Analysis	128: Peridotite CR20-78 510-520	129: Peridotite CR21-171 150-160	130: Peridotite CR21-180 40-50	131: Basalt CR22-197 90-100
Sample Date & Time	15-Jul-22	15-Jul-22	15-Jul-22	15-Jul-22
Sample weight [g]	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750
Final pH [no unit]	9.40	9.72	9.29	9.44
pH [No unit]	8.19	9.00	8.46	7.65
Conductivity [uS/cm]	82	94	113	59
Alkalinity [mg/L as CaCO3]	44	76	54	26
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2
Fluoride [mg/L]	< 0.06	< 0.06	< 0.06	< 0.06
Chromium VI [ug/L]	< 0.2	< 0.2	0.8	0.3
Sulphate [mg/L]	< 2	< 2	< 2	< 2
Chloride [mg/L]	< 2	2.0	< 2	< 2
Bromide [mg/L]	< 3	< 3	< 3	< 3
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	0.007	0.005	0.001	0.276
Aluminum (0.2µm) [mg/L]	0.005	0.005	0.001	0.265
Arsenic [mg/L]	0.0016	0.0022	0.0012	0.0057
Barium [mg/L]	0.00432	0.03490	0.01245	0.00581
Boron [mg/L]	0.026	0.017	0.101	0.022
Beryllium [mg/L]	0.000012	0.000432	< 0.000007	< 0.000007
Bismuth [mg/L]	0.00005	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	5.07	2.06	4.12	3.70
Cadmium [mg/L]	0.000142	0.000045	0.000167	< 0.000003
Cobalt [mg/L]	0.000064	0.000034	0.000053	0.000060



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Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

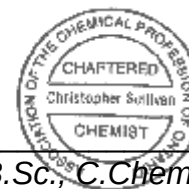
SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Analysis	128: Peridotite CR20-78 510-520	129: Peridotite CR21-171 150-160	130: Peridotite CR21-180 40-50	131: Basalt CR22-197 90-100
Chromium [mg/L]	0.00078	0.00019	0.00123	0.00097
Copper [mg/L]	0.0003	< 0.0002	0.0007	0.0002
Iron [mg/L]	0.008	< 0.007	< 0.007	0.030
Potassium [mg/L]	0.880	1.37	3.75	1.15
Lithium [mg/L]	0.0010	0.0012	0.0012	< 0.0001
Magnesium [mg/L]	7.31	18.1	9.49	2.00
Manganese [mg/L]	0.00044	0.00014	0.00075	0.00118
Molybdenum [mg/L]	0.00058	0.00023	0.00021	0.00435
Sodium [mg/L]	0.82	0.27	0.51	4.76
Nickel [mg/L]	0.0011	0.0006	0.0093	0.0002
Lead [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium [mg/L]	0.00055	0.00297	0.00026	0.00021
Silicon [mg/L]	5.38	0.42	2.49	3.41
Tin [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.0152	0.0114	0.00893	0.0268
Titanium [mg/L]	0.00246	0.00074	0.00275	0.00086
Thallium [mg/L]	< 0.000005	0.000016	< 0.000005	0.000020
Uranium [mg/L]	0.000019	0.000762	0.000770	0.000180
Vanadium [mg/L]	0.00099	0.00008	0.00025	0.00487
Zinc [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

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Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acidity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2310
Alkalinity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2320
Anions by IC	ME-CA-[ENV]IC-LAK-AN-001	EPA300/MA300-Ions1.3
Conductivity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2510
Fluoride by Specific Ion Electrode	ME-CA-[ENV]EWL-LAK-AN-014	SM 4500
Hexavalent Chromium by SFA	ME-CA-[ENV]SKA-LAK-AN-012	EPA218.6/EPA3060A
Inorganics-General	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/SM 3112B
Metals in aqueous samples - ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	SM 3030/EPA 200.8
pH	ME-CA-[ENV]EWL-LAK-AN-006	SM 4500

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Acidity - QCBatchID: EWL0112-JAN23													
Acidity	2	mg/L as Ca	< 2			ND	20	114	90	110	NA		
Acidity - QCBatchID: EWL0134-JAN23													
Acidity	2	mg/L as Ca	2			4	20	94	90	110	NA		
Acidity - QCBatchID: EWL0160-JAN23													
Acidity	2	mg/L as Ca	2			ND	20	94	90	110	NA		
Acidity - QCBatchID: EWL0182-JAN23													
Acidity	2	mg/L as Ca	< 2			0	20	96	90	110	NA		
Acidity - QCBatchID: EWL0214-JAN23													
Acidity	2	mg/L as Ca	< 2			ND	20	94	90	110	NA		
Acidity - QCBatchID: EWL0241-JAN23													
Acidity	2	mg/L as Ca	2			ND	20	102	90	110	NA		
Acidity - QCBatchID: EWL0261-JAN23													
Acidity	2	mg/L as Ca	2			ND	20	106	90	110	NA		
Acidity - QCBatchID: EWL0285-JAN23													
Acidity	2	mg/L as Ca	3			ND	20	100	90	110	NA		
Acidity - QCBatchID: EWL0310-JAN23													
Acidity	2	mg/L as Ca	3			ND	20	104	90	110	NA		
Acidity - QCBatchID: EWL0364-JAN23													
Acidity	2	mg/L as Ca	< 2			ND	20	98	90	110	NA		
Alkalinity - QCBatchID: EWL0112-JAN23													
Alkalinity	2	mg/L as Ca	< 2			0	20	100	80	120	NA		
Alkalinity - QCBatchID: EWL0134-JAN23													
Alkalinity	2	mg/L as Ca	< 2			ND	20	94	80	120	NA		
Alkalinity - QCBatchID: EWL0160-JAN23													
Alkalinity	2	mg/L as Ca	< 2			7	20	96	80	120	NA		
Alkalinity - QCBatchID: EWL0182-JAN23													
Alkalinity	2	mg/L as Ca	< 2			4	20	98	80	120	NA		
Alkalinity - QCBatchID: EWL0214-JAN23													
Alkalinity	2	mg/L as Ca	< 2			3	20	100	80	120	NA		
Alkalinity - QCBatchID: EWL0241-JAN23													
Alkalinity	2	mg/L as Ca	< 2			0	20	102	80	120	NA		
Alkalinity - QCBatchID: EWL0261-JAN23													
Alkalinity	2	mg/L as Ca	< 2			ND	20	100	80	120	NA		
Alkalinity - QCBatchID: EWL0285-JAN23													
Alkalinity	2	mg/L as Ca	< 2			5	20	98	80	120	NA		

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Alkalinity - QCBatchID: EWL0310-JAN23													
Alkalinity	2	mg/L as Ca	< 2			0	20	83	80	120	NA		
Alkalinity - QCBatchID: EWL0364-JAN23													
Alkalinity	2	mg/L as Ca	< 2			4	20	102	80	120	NA		
Anions by IC - QCBatchID: DIO0133-JAN23													
Bromide	0.3	mg/L	<0.3			ND	20	98	90	110	99	75	125
Anions by IC - QCBatchID: DIO0134-JAN23													
Bromide	0.3	mg/L	<0.3			ND	20	98	90	110	100	75	125
Anions by IC - QCBatchID: DIO0135-JAN23													
Bromide	0.3	mg/L	<0.3			ND	20	102	90	110	106	75	125
Anions by IC - QCBatchID: DIO0136-JAN23													
Chloride	0.2	mg/L	<0.2			5	20	97	90	110	98	75	125
Sulphate	0.2	mg/L	<0.2			20	20	99	90	110	92	75	125
Anions by IC - QCBatchID: DIO0137-JAN23													
Chloride	0.2	mg/L	<0.2			3	20	97	90	110	104	75	125
Sulphate	0.2	mg/L	<0.2			7	20	100	90	110	94	75	125
Anions by IC - QCBatchID: DIO0138-JAN23													
Chloride	0.2	mg/L	<0.2			2	20	94	90	110	121	75	125
Sulphate	0.2	mg/L	<0.2			6	20	96	90	110	93	75	125
Anions by IC - QCBatchID: DIO0182-JAN23													
Chloride	0.2	mg/L	<0.2			ND	20	97	90	110	95	75	125
Anions by IC - QCBatchID: DIO0196-JAN23													
Bromide	0.3	mg/L	<0.3			10	20	99	90	110	98	75	125
Anions by IC - QCBatchID: DIO0197-JAN23													
Bromide	0.3	mg/L	<0.3			ND	20	97	90	110	101	75	125
Anions by IC - QCBatchID: DIO0203-JAN23													
Chloride	0.2	mg/L	<0.2			1	20	91	90	110	99	75	125
Sulphate	0.2	mg/L	<0.2			2	20	95	90	110	93	75	125
Anions by IC - QCBatchID: DIO0204-JAN23													
Chloride	0.2	mg/L	<0.2			1	20	93	90	110	NV	75	125
Sulphate	0.2	mg/L	<0.2			0	20	98	90	110	NV	75	125
Anions by IC - QCBatchID: DIO0217-JAN23													
Chloride	0.2	mg/L	<0.2			1	20	92	90	110	97	75	125
Anions by IC - QCBatchID: DIO0247-JAN23													
Chloride	0.2	mg/L	<0.2			3	20	91	90	110	97	75	125
Sulphate	0.2	mg/L	<0.2			1	20	97	90	110	NV	75	125
Anions by IC - QCBatchID: DIO0293-JAN23													
Bromide	0.3	mg/L	<0.3			ND	20	98	90	110	96	75	125
Chloride	0.2	mg/L	<0.2			3	20	90	90	110	94	75	125

Parameter	Reporting Limit	Unit	Method Blank	Inorganic Analysis									
				Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Sulphate	0.2	mg/L	<0.2			19	20	94	90	110	95	75	125
<i>Anions by IC - QCBatchID: DIO0294-JAN23</i>													
Bromide	0.3	mg/L	<0.3			ND	20	97	90	110	95	75	125
Chloride	0.2	mg/L	<0.2			20	20	90	90	110	90	75	125
Sulphate	0.2	mg/L	<0.2			6	20	95	90	110	106	75	125
<i>Anions by IC - QCBatchID: DIO0358-JAN23</i>													
Chloride	0.2	mg/L	<0.2			1	20	94	90	110	100	75	125
<i>Anions by IC - QCBatchID: DIO0483-JAN23</i>													
Bromide	0.3	mg/L	<0.3			ND	20	102	90	110	98	75	125
Chloride	0.2	mg/L	<0.2			0	20	100	90	110	101	75	125
Sulphate	0.2	mg/L	<0.2			8	20	99	90	110	99	75	125
<i>Anions by IC - QCBatchID: DIO0636-JAN23</i>													
Chloride	0.2	mg/L	<0.2			ND	20	102	90	110	96	75	125
<i>Anions by IC - QCBatchID: DIO0677-JAN23</i>													
Bromide	0.3	mg/L	<0.3			ND	20	100	90	110	143	75	125
Chloride	0.2	mg/L	<0.2			1	20	95	90	110	102	75	125
Sulphate	0.2	mg/L	<0.2			1	20	94	90	110	101	75	125
<i>Conductivity - QCBatchID: EWL0112-JAN23</i>													
Conductivity	2	uS/cm	< 2			4	20	99	90	110	NA		
<i>Conductivity - QCBatchID: EWL0134-JAN23</i>													
Conductivity	2	uS/cm	< 2			1	20	98	90	110	NA		
<i>Conductivity - QCBatchID: EWL0160-JAN23</i>													
Conductivity	2	uS/cm	< 2			0	20	100	90	110	NA		
<i>Conductivity - QCBatchID: EWL0182-JAN23</i>													
Conductivity	2	uS/cm	< 2			0	20	98	90	110	NA		
<i>Conductivity - QCBatchID: EWL0214-JAN23</i>													
Conductivity	2	uS/cm	< 2			0	20	97	90	110	NA		
<i>Conductivity - QCBatchID: EWL0241-JAN23</i>													
Conductivity	2	uS/cm	< 2			0	20	100	90	110	NA		
<i>Conductivity - QCBatchID: EWL0261-JAN23</i>													
Conductivity	2	uS/cm	< 2			2	20	99	90	110	NA		
<i>Conductivity - QCBatchID: EWL0285-JAN23</i>													
Conductivity	2	uS/cm	< 2			0	20	100	90	110	NA		
<i>Conductivity - QCBatchID: EWL0310-JAN23</i>													
Conductivity	2	uS/cm	< 2			0	20	96	90	110	NA		
<i>Conductivity - QCBatchID: EWL0364-JAN23</i>													
Conductivity	2	uS/cm	< 2			3	20	103	90	110	NA		
<i>Fluoride by Specific Ion Electrode - QCBatchID: EWL0105-JAN23</i>													
Fluoride	0.06	mg/L	<0.06			ND	10	100	90	110	98	75	125

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
Fluoride by Specific Ion Electrode - QCBatchID: EWL0128-JAN23													
Fluoride	0.06	mg/L	<0.06			9	10	99	90	110	95	75	125
Fluoride by Specific Ion Electrode - QCBatchID: EWL0148-JAN23													
Fluoride	0.06	mg/L	<0.06			ND	10	100	90	110	99	75	125
Fluoride by Specific Ion Electrode - QCBatchID: EWL0158-JAN23													
Fluoride	0.06	mg/L	<0.06			ND	10	99	90	110	96	75	125
Fluoride by Specific Ion Electrode - QCBatchID: EWL0200-JAN23													
Fluoride	0.06	mg/L	<0.06			ND	10	99	90	110	NA	75	125
Fluoride by Specific Ion Electrode - QCBatchID: EWL0354-JAN23													
Fluoride	0.06	mg/L	<0.06			ND	10	99	90	110	114	75	125
Hexavalent Chromium by SFA - QCBatchID: SKA0089-JAN23													
Chromium VI	0.2	ug/L	<0.2			9	20	95	80	120	93	75	125
Hexavalent Chromium by SFA - QCBatchID: SKA0097-JAN23													
Chromium VI	0.2	ug/L	<0.2			9	20	96	80	120	95	75	125
Hexavalent Chromium by SFA - QCBatchID: SKA0125-JAN23													
Chromium VI	0.2	ug/L	<0.2			3	20	101	80	120	101	75	125
Hexavalent Chromium by SFA - QCBatchID: SKA0201-JAN23													
Chromium VI	0.2	ug/L	<0.2			5	20	96	80	120	95	75	125
Inorganics-General - QCBatchID: EHG0020-JAN23													
Mercury	0.00001	mg/L	< 0.00001			ND	20	84	80	120	127	70	130
Inorganics-General - QCBatchID: EHG0021-JAN23													
Mercury	0.00001	mg/L	< 0.00001			ND	20	97	80	120	NV	70	130
Inorganics-General - QCBatchID: EHG0023-JAN23													
Mercury	0.00001	mg/L	< 0.00001			18	20	111	80	120	96	70	130
Inorganics-General - QCBatchID: EHG0028-JAN23													
Mercury	0.00001	mg/L	< 0.00001			0	20	88	80	120	115	70	130
Inorganics-General - QCBatchID: EHG0043-JAN23													
Mercury	0.00001	mg/L	< 0.00001			0	20	100	80	120	123	70	130
Metals - QCBatchID: EMS0080-JAN23													
Cobalt	0.000004	mg/L	<0.000004			5	20	101	90	110	97	70	130
Metals - QCBatchID: EMS0092-JAN23													
Cobalt	0.000004	mg/L	<0.000004			6	20	100	90	110	104	70	130
Metals - QCBatchID: EMS0093-JAN23													
Cobalt	0.000004	mg/L	<0.000004			2	20	103	90	110	92	70	130
Metals - QCBatchID: EMS0163-JAN23													
Cobalt	0.000004	mg/L	<0.000004			ND	20	98	90	110	102	70	130
Metals - QCBatchID: EMS0193-JAN23													
Cobalt	0.000004	mg/L	<0.000004			5	20	103	90	110	115	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0080-JAN23													

Inorganic Analysis												
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material	
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)
									Low	High		
							%					
Aluminum	0.001	mg/L	<0.001			2	20	99	90	110	77	70 130
Aluminum (0.2µm)	0.001	mg/L	<0.001			2	20	99	90	110	77	70 130
Antimony	0.0009	mg/L	<0.0009			ND	20	102	90	110	89	70 130
Arsenic	0.0002	mg/L	<0.0002			0	20	102	90	110	97	70 130
Barium	0.00008	mg/L	<0.00002			3	20	101	90	110	96	70 130
Beryllium	0.000007	mg/L	<0.000007			10	20	100	90	110	96	70 130
Bismuth	0.00001	mg/L	<0.00001			ND	20	103	90	110	106	70 130
Boron	0.002	mg/L	<0.002			2	20	102	90	110	94	70 130
Cadmium	0.000003	mg/L	<0.000003			9	20	103	90	110	96	70 130
Calcium	0.01	mg/L	<0.01			1	20	93	90	110	93	70 130
Chromium	0.00008	mg/L	<0.00008			1	20	100	90	110	99	70 130
Copper	0.0002	mg/L	<0.0002			3	20	103	90	110	108	70 130
Iron	0.007	mg/L	<0.007			4	20	99	90	110	100	70 130
Lead	0.00009	mg/L	<0.00001			6	20	104	90	110	103	70 130
Lithium	0.0001	mg/L	<0.0001			3	20	99	90	110	105	70 130
Magnesium	0.001	mg/L	<0.001			1	20	98	90	110	98	70 130
Manganese	0.00001	mg/L	<0.00001			1	20	101	90	110	99	70 130
Molybdenum	0.00004	mg/L	<0.00004			4	20	106	90	110	102	70 130
Nickel	0.0001	mg/L	<0.0001			2	20	102	90	110	99	70 130
Potassium	0.003	mg/L	<0.009			2	20	97	90	110	101	70 130
Selenium	0.00004	mg/L	<0.00004			ND	20	104	90	110	110	70 130
Silicon	0.02	mg/L	<0.02			ND	20	99	90	110	NV	70 130
Silver	0.00005	mg/L	<0.00005			ND	20	105	90	110	105	70 130
Sodium	0.01	mg/L	<0.01			2	20	91	90	110	105	70 130
Strontium	0.00008	mg/L	<0.00002			0	20	102	90	110	96	70 130
Thallium	0.000005	mg/L	<0.000005			ND	20	102	90	110	97	70 130
Tin	0.00006	mg/L	<0.00006			ND	20	103	90	110	NV	70 130
Titanium	0.00005	mg/L	<0.00005			ND	20	103	90	110	NV	70 130
Uranium	0.000002	mg/L	<0.000002			4	20	103	90	110	98	70 130
Vanadium	0.00001	mg/L	<0.00001			7	20	102	90	110	98	70 130
Zinc	0.002	mg/L	<0.002			ND	20	99	90	110	98	70 130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0092-JAN23												
Aluminum	0.001	mg/L	<0.001			4	20	99	90	110	112	70 130
Aluminum (0.2µm)	0.001	mg/L	<0.001			4	20	99	90	110	112	70 130
Antimony	0.0009	mg/L	<0.0009			ND	20	94	90	110	114	70 130
Arsenic	0.0002	mg/L	<0.0002			3	20	105	90	110	109	70 130
Barium	0.00008	mg/L	<0.00002			5	20	99	90	110	101	70 130
Beryllium	0.000007	mg/L	<0.000007			19	20	97	90	110	103	70 130
Bismuth	0.00001	mg/L	<0.00001			0	20	97	90	110	99	70 130

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Boron	0.002	mg/L	<0.002			1	20	99	90	110	93	70	130
Cadmium	0.000003	mg/L	<0.000003			13	20	101	90	110	108	70	130
Calcium	0.01	mg/L	<0.01			1	20	101	90	110	106	70	130
Chromium	0.00008	mg/L	<0.00008			10	20	100	90	110	100	70	130
Copper	0.0002	mg/L	<0.0002			1	20	102	90	110	110	70	130
Iron	0.007	mg/L	<0.007			4	20	105	90	110	NV	70	130
Lead	0.00009	mg/L	<0.00001			13	20	104	90	110	108	70	130
Lithium	0.0001	mg/L	<0.0001			0	20	97	90	110	105	70	130
Magnesium	0.001	mg/L	<0.001			0	20	103	90	110	104	70	130
Manganese	0.00001	mg/L	<0.00001			2	20	103	90	110	101	70	130
Molybdenum	0.00004	mg/L	<0.00004			1	20	106	90	110	108	70	130
Nickel	0.0001	mg/L	<0.0001			15	20	103	90	110	102	70	130
Potassium	0.003	mg/L	<0.009			3	20	103	90	110	102	70	130
Selenium	0.00004	mg/L	<0.00004			ND	20	105	90	110	89	70	130
Silicon	0.02	mg/L	<0.02			1	20	94	90	110	NV	70	130
Silver	0.00005	mg/L	<0.00005			ND	20	100	90	110	118	70	130
Sodium	0.01	mg/L	<0.01			1	20	104	90	110	109	70	130
Strontium	0.00008	mg/L	<0.00002			1	20	100	90	110	103	70	130
Thallium	0.000005	mg/L	<0.000005			6	20	103	90	110	112	70	130
Tin	0.00006	mg/L	<0.00006			16	20	99	90	110	NV	70	130
Titanium	0.00005	mg/L	<0.00005			3	20	103	90	110	NV	70	130
Uranium	0.000002	mg/L	<0.000002			0	20	102	90	110	113	70	130
Vanadium	0.00001	mg/L	<0.00001			1	20	102	90	110	110	70	130
Zinc	0.002	mg/L	<0.002			0	20	97	90	110	101	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0093-JAN23													
Aluminum	0.001	mg/L	<0.001			1	20	101	90	110	101	70	130
Aluminum (0.2µm)	0.001	mg/L	<0.001			1	20	101	90	110	101	70	130
Antimony	0.0009	mg/L	<0.0009			0	20	96	90	110	110	70	130
Arsenic	0.0002	mg/L	<0.0002			2	20	105	90	110	99	70	130
Barium	0.00008	mg/L	<0.00002			2	20	99	90	110	96	70	130
Beryllium	0.000007	mg/L	<0.000007			ND	20	99	90	110	88	70	130
Bismuth	0.00001	mg/L	<0.00001			ND	20	101	90	110	89	70	130
Boron	0.002	mg/L	<0.002			14	20	100	90	110	91	70	130
Cadmium	0.000003	mg/L	<0.000003			0	20	103	90	110	100	70	130
Calcium	0.01	mg/L	<0.01			0	20	105	90	110	102	70	130
Chromium	0.00008	mg/L	<0.00008			5	20	103	90	110	96	70	130
Copper	0.0002	mg/L	<0.0002			5	20	103	90	110	81	70	130
Iron	0.007	mg/L	<0.007			13	20	103	90	110	100	70	130
Lead	0.00009	mg/L	<0.00001			1	20	105	90	110	87	70	130

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
Lithium	0.0001	mg/L	<0.0001			1	20	100	90	110	93	70	130
Magnesium	0.001	mg/L	<0.001			2	20	108	90	110	81	70	130
Manganese	0.00001	mg/L	1e-005			3	20	103	90	110	87	70	130
Molybdenum	0.00004	mg/L	<0.00004			2	20	102	90	110	98	70	130
Nickel	0.0001	mg/L	<0.0001			0	20	103	90	110	84	70	130
Potassium	0.003	mg/L	<0.009			0	20	109	90	110	98	70	130
Selenium	0.00004	mg/L	<0.00004			2	20	105	90	110	106	70	130
Silicon	0.02	mg/L	<0.02			1	20	109	90	110	NV	70	130
Silver	0.00005	mg/L	<0.00005			ND	20	102	90	110	84	70	130
Sodium	0.01	mg/L	<0.01			11	20	108	90	110	89	70	130
Strontium	0.00008	mg/L	<0.00002			0	20	102	90	110	97	70	130
Thallium	0.000005	mg/L	<0.000005			ND	20	103	90	110	76	70	130
Tin	0.00006	mg/L	<0.00006			13	20	102	90	110	NV	70	130
Titanium	0.00005	mg/L	<0.00005			9	20	102	90	110	NV	70	130
Uranium	0.000002	mg/L	<0.000002			3	20	102	90	110	95	70	130
Vanadium	0.00001	mg/L	<0.00001			2	20	103	90	110	99	70	130
Zinc	0.002	mg/L	<0.002			ND	20	109	90	110	92	70	130
<i>Metals in aqueous samples - ICP-MS - QCBatchID: EMS0127-JAN23</i>													
Silver	0.00005	mg/L	<0.00005			ND	20	100	90	110	99	70	130
<i>Metals in aqueous samples - ICP-MS - QCBatchID: EMS0151-JAN23</i>													
Aluminum (0.2µm)	0.001	mg/L	<0.001			4	20	99	90	110	111	70	130
<i>Metals in aqueous samples - ICP-MS - QCBatchID: EMS0162-JAN23</i>													
Aluminum (0.2µm)	0.001	mg/L	<0.001			2	20	94	90	110	99	70	130
<i>Metals in aqueous samples - ICP-MS - QCBatchID: EMS0163-JAN23</i>													
Aluminum	0.001	mg/L	<0.001			ND	20	108	90	110	112	70	130
Aluminum (0.2µm)	0.001	mg/L	<0.001			ND	20	108	90	110	112	70	130
Antimony	0.0009	mg/L	<0.0009			ND	20	90	90	110	121	70	130
Arsenic	0.0002	mg/L	<0.0002			ND	20	104	90	110	105	70	130
Barium	0.00008	mg/L	<0.00002			ND	20	100	90	110	104	70	130
Beryllium	0.000007	mg/L	<0.000007			ND	20	100	90	110	105	70	130
Bismuth	0.00001	mg/L	<0.00001			ND	20	96	90	110	100	70	130
Boron	0.002	mg/L	<0.002			ND	20	101	90	110	100	70	130
Cadmium	0.000003	mg/L	<0.000003			ND	20	102	90	110	107	70	130
Calcium	0.01	mg/L	<0.01			ND	20	90	90	110	86	70	130
Chromium	0.00008	mg/L	<0.00008			ND	20	103	90	110	100	70	130
Copper	0.0002	mg/L	<0.0002			ND	20	100	90	110	103	70	130
Iron	0.007	mg/L	<0.007			ND	20	101	90	110	114	70	130
Lead	0.00009	mg/L	<0.00001			ND	20	100	90	110	100	70	130
Lithium	0.0001	mg/L	<0.0001			ND	20	99	90	110	107	70	130

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
Magnesium	0.001	mg/L	<0.001			ND	20	97	90	110	100	70	130
Manganese	0.00001	mg/L	<0.00001			ND	20	103	90	110	102	70	130
Molybdenum	0.00004	mg/L	<0.00004			ND	20	101	90	110	92	70	130
Nickel	0.0001	mg/L	<0.0001			ND	20	99	90	110	98	70	130
Potassium	0.003	mg/L	<0.009			ND	20	94	90	110	98	70	130
Selenium	0.00004	mg/L	<0.00004			ND	20	110	90	110	124	70	130
Silicon	0.02	mg/L	<0.02			ND	20	91	90	110	NV	70	130
Silver	0.00005	mg/L	<0.00005			ND	20	103	90	110	95	70	130
Sodium	0.01	mg/L	<0.01			ND	20	92	90	110	92	70	130
Strontium	0.00008	mg/L	<0.00002			ND	20	100	90	110	98	70	130
Thallium	0.000005	mg/L	5e-006			ND	20	98	90	110	103	70	130
Tin	0.00006	mg/L	<0.00006			ND	20	98	90	110	NV	70	130
Titanium	0.00005	mg/L	<0.00005			ND	20	104	90	110	NV	70	130
Uranium	0.000002	mg/L	<0.000002			ND	20	98	90	110	102	70	130
Vanadium	0.00001	mg/L	<0.00001			ND	20	100	90	110	101	70	130
Zinc	0.002	mg/L	<0.002			ND	20	101	90	110	107	70	130
<i>Metals in aqueous samples - ICP-MS - QCBatchID: EMS0183-JAN23</i>													
Aluminum	0.001	mg/L	<0.001			1	20	97	90	110	109	70	130
Aluminum (0.2µm)	0.001	mg/L	< 1			1	20	97	90	110	109	70	130
<i>Metals in aqueous samples - ICP-MS - QCBatchID: EMS0193-JAN23</i>													
Antimony	0.0009	mg/L	<0.0009			ND	20	108	90	110	108	70	130
Arsenic	0.0002	mg/L	<0.0002			ND	20	105	90	110	110	70	130
Barium	0.00008	mg/L	<0.00002			2	20	101	90	110	111	70	130
Beryllium	0.000007	mg/L	<0.000007			ND	20	93	90	110	101	70	130
Bismuth	0.00001	mg/L	<0.00001			ND	20	96	90	110	114	70	130
Boron	0.002	mg/L	<0.002			13	20	104	90	110	98	70	130
Cadmium	0.000003	mg/L	<0.000003			18	20	105	90	110	120	70	130
Calcium	0.01	mg/L	<0.01			0	20	102	90	110	102	70	130
Chromium	0.00008	mg/L	<0.00008			4	20	105	90	110	122	70	130
Copper	0.0002	mg/L	<0.0002			4	20	105	90	110	115	70	130
Iron	0.007	mg/L	<0.007			6	20	106	90	110	125	70	130
Lead	0.00009	mg/L	<0.00001			3	20	99	90	110	107	70	130
Lithium	0.0001	mg/L	<0.0001			12	20	92	90	110	102	70	130
Magnesium	0.001	mg/L	<0.001			0	20	102	90	110	101	70	130
Manganese	0.00001	mg/L	<0.00001			1	20	107	90	110	112	70	130
Molybdenum	0.00004	mg/L	<0.00004			1	20	101	90	110	98	70	130
Nickel	0.0001	mg/L	<0.0001			1	20	105	90	110	112	70	130
Potassium	0.003	mg/L	<0.009			1	20	107	90	110	106	70	130
Selenium	0.00004	mg/L	<0.00004			14	20	100	90	110	121	70	130

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
Silicon	0.02	mg/L	<0.02			4	20	101	90	110	NV	70	130
Silver	0.00005	mg/L	<0.00005			ND	20	102	90	110	80	70	130
Sodium	0.01	mg/L	<0.01			1	20	104	90	110	110	70	130
Strontium	0.00008	mg/L	<0.00002			3	20	101	90	110	103	70	130
Thallium	0.000005	mg/L	<0.000005			ND	20	98	90	110	124	70	130
Tin	0.00006	mg/L	<0.00006			1	20	98	90	110	NV	70	130
Titanium	0.00005	mg/L	<0.00005			ND	20	100	90	110	NV	70	130
Uranium	0.000002	mg/L	<0.000002			ND	20	97	90	110	123	70	130
Vanadium	0.00001	mg/L	<0.00001			0	20	104	90	110	115	70	130
Zinc	0.002	mg/L	<0.002			0	20	103	90	110	111	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0199-JAN23													
Aluminum	0.001	mg/L	<0.001			5	20	104	90	110	113	70	130
Aluminum (0.2µm)	0.001	mg/L	<0.001			5	20	104	90	110	113	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0212-JAN23													
Aluminum	0.001	mg/L	<0.001			0	20	96	90	110	104	70	130
Aluminum (0.2µm)	0.001	mg/L	<0.001			0	20	96	90	110	104	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0218-JAN23													
Aluminum	0.001	mg/L	<0.001			ND	20	109	90	110	NV	70	130
Aluminum (0.2µm)	0.001	mg/L	<0.001			ND	20	109	90	110	NV	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0221-JAN23													
Aluminum	0.001	mg/L	<0.001			ND	20	101	90	110	110	70	130
Aluminum (0.2µm)	0.001	mg/L	<0.001			ND	20	101	90	110	110	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0224-JAN23													
Aluminum	0.001	mg/L	<0.001			3	20	105	90	110	101	70	130
pH - QCBatchID: EWL0112-JAN23													
pH	0.05	No unit	NA			1		100			NA		
pH - QCBatchID: EWL0134-JAN23													
pH	0.05	No unit	NA			1		101			NA		
pH - QCBatchID: EWL0160-JAN23													
pH	0.05	No unit	NA			0		101			NA		
pH - QCBatchID: EWL0182-JAN23													
pH	0.05	No unit	NA			1		101			NA		
pH - QCBatchID: EWL0214-JAN23													
pH	0.05	No unit	NA			0		101			NA		
pH - QCBatchID: EWL0241-JAN23													
pH	0.05	No unit	NA			0		100			NA		
pH - QCBatchID: EWL0261-JAN23													
pH	0.05	No unit	NA			0		101			NA		
pH - QCBatchID: EWL0285-JAN23													



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19242-NOV22

Inorganic Analysis											
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank		Matrix Spike / Reference Material	
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)
									Low	High	
pH	0.05	No unit	NA			0		100			NA
<i>pH - QCBatchID: EWL0310-JAN23</i>											
pH	0.05	No unit	NA			0		101			NA
<i>pH - QCBatchID: EWL0364-JAN23</i>											
pH	0.05	No unit	NA			1		99			NA



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P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

SFE 3:1 24hr

Project : PO#23590674

17-January-2024

Date Rec. : 07 November 2023

LR Report: CA19070-NOV23

Reference: Crawford Project - PO#23590674 (Set 1)

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	6: C00374710	8: C00374712	12: C00374715	14: C00374717	17: C00374723	19: C00374725	21: C00374727	24: C00374731
Sample weight [g]	11-Jan-24	14:02	16-Jan-24	12:23	249	250	250	250	250	249	249	249
Volume D.I. Water [mL]	14-Jan-24	11:00	16-Jan-24	12:23	750	750	750	750	750	750	750	750
PreFilt pH [no unit]	15-Jan-24	09:10	16-Jan-24	12:23	10.13	9.73	9.32	9.65	9.86	9.91	10.04	10.12
pH [No unit]	15-Jan-24	13:04	16-Jan-24	10:30	9.64	8.84	8.60	8.84	9.63	9.48	9.44	9.61
Alkalinity [mg/L as CaCO ₃]	15-Jan-24	13:04	16-Jan-24	10:30	41	29	49	34	162	104	22	31
Conductivity [uS/cm]	15-Jan-24	13:04	16-Jan-24	10:30	93	53	102	99	252	197	46	74
Acidity [mg/L as CaCO ₃]	15-Jan-24	13:04	16-Jan-24	10:30	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	15-Jan-24	19:01	16-Jan-24	11:00	< 2	< 2	3.5	9.8	4.5	< 2	< 2	< 2
Chloride [mg/L]	15-Jan-24	19:01	16-Jan-24	11:00	< 2	< 2	< 2	2.4	3.0	10	< 2	< 2
Bromide [mg/L]	15-Jan-24	19:01	16-Jan-24	11:00	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Fluoride [mg/L]	15-Jan-24	14:25	16-Jan-24	13:21	0.12	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Mercury [mg/L]	16-Jan-24	17:06	17-Jan-24	11:30	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.071	0.315	0.082	0.030	0.002	0.002	0.139	0.049
Arsenic (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.0024	0.0054	0.0003	< 0.0002	< 0.0002	< 0.0002	0.0004	0.0011
Barium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.00255	0.00098	0.01863	0.05395	0.00958	0.00607	0.00062	0.00450
Boron (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.051	0.006	0.023	0.018	0.014	0.014	0.029	0.035
Beryllium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	2.85	5.04	5.11	7.11	2.04	3.16	5.97	3.90

Online LIMS

0003594406

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	6: C00374710	8: C00374712	12: C00374715	14: C00374717	17: C00374723	19: C00374725	21: C00374727	24: C00374731
Cadmium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.000099	0.000008	0.000015	0.000011	0.000057	0.000043	< 0.000004	0.000007
Chromium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.00114	< 0.00008	< 0.00008	0.00011	< 0.00008	0.00018	0.00121	0.00071
Copper (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.0006	0.0002	< 0.0002	0.0002	< 0.0002	0.0003	< 0.0002	0.0003
Iron (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.117	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007	< 0.007
Potassium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	14.1	1.73	8.32	8.78	0.642	0.445	1.32	15.4
Lithium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.0011	0.0004	0.0010	0.0004	0.0002	0.0003	< 0.0001	0.0004
Magnesium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.499	1.82	3.82	1.91	40.9	26.6	0.735	0.464
Manganese (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.00188	0.00059	0.00022	0.00024	0.00017	0.00029	0.00015	0.00018
Molybdenum (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.00041	0.00029	0.00086	0.00016	0.00025	0.00006	0.00015	0.00028
Sodium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	8.64	2.35	6.29	7.05	0.35	0.30	1.61	1.84
Nickel (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.0013	0.0001	0.0003	0.0005	0.0005	0.0002	< 0.0001	0.0006
Lead (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.00012	< 0.00004	0.00011	0.00008	0.00007	0.00007	0.00005	0.00010
Tin (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.0129	0.0146	0.0649	0.149	0.00858	0.0109	0.0185	0.0174
Titanium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.00508	0.00009	< 0.00007	< 0.00007	< 0.00007	< 0.00007	0.00014	0.00028
Thallium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.000012	< 0.000005	0.000007	< 0.000005	0.000006	< 0.000005	< 0.000005	0.000018
Uranium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.000032	0.000002	0.000067	0.000003	0.000002	0.000002	0.000094	0.000003
Vanadium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.00710	0.00336	0.00292	0.00104	0.00003	0.00003	0.00346	0.00562
Tungsten (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	0.00041	0.00118	0.00010	0.00003	0.00007	0.00006	0.00011	0.00051
Yttrium (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Zinc (dissolved) [mg/L]	16-Jan-24	10:35	17-Jan-24	14:47	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	27: C00374737	29: C00374739	31: C00374741	34: C00374744	35: C00374745	37: C00374747	38: C00374749	39: C00374751
Sample weight [g]	250	251	249	249	250	250	250	249
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750
PreFilt pH [no unit]	9.38	9.89	9.85	9.96	10.04	9.60	9.24	9.66
pH [No unit]	8.79	9.46	9.55	9.65	9.69	8.98	8.46	8.86
Alkalinity [mg/L as CaCO3]	41	31	32	153	34	26	25	30
Conductivity [uS/cm]	78	68	65	339	75	45	163	64
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	< 2	3.6	< 2	< 2	< 2	< 2	49	2.1



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LR Report : CA19070-NOV23

Analysis	27: C00374737	29: C00374739	31: C00374741	34: C00374744	35: C00374745	37: C00374747	38: C00374749	39: C00374751
Chloride [mg/L]	< 2	< 2	< 2	< 2	2.2	< 2	< 2	< 2
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Fluoride [mg/L]	0.14	< 0.06	0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver (dissolved) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	0.318	0.087	0.113	0.001	0.417	1.18	0.010	0.005
Arsenic (dissolved) [mg/L]	0.0054	0.0005	0.0017	< 0.0002	< 0.0002	0.0008	0.0324	0.0004
Barium (dissolved) [mg/L]	0.00161	0.00085	0.00080	0.00457	0.00084	0.00146	0.01293	0.00207
Boron (dissolved) [mg/L]	0.014	0.030	0.036	0.258	0.057	0.007	0.022	0.027
Beryllium (dissolved) [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	0.000015	< 0.000007	< 0.000007
Bismuth (dissolved) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (dissolved) [mg/L]	6.20	4.62	3.72	3.75	6.07	5.16	5.46	3.76
Cadmium (dissolved) [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt (dissolved) [mg/L]	0.000007	0.000112	0.000182	0.000047	0.000284	0.000066	0.000043	0.000014
Chromium (dissolved) [mg/L]	< 0.00008	0.00147	0.00069	0.00054	0.00633	0.00026	0.00031	0.00028
Copper (dissolved) [mg/L]	0.0004	0.0015	0.0011	0.0003	0.0006	0.0015	0.0003	< 0.0002
Iron (dissolved) [mg/L]	< 0.007	0.070	0.080	< 0.007	0.261	0.064	< 0.007	< 0.007
Potassium (dissolved) [mg/L]	3.60	0.673	1.09	1.89	0.519	1.04	10.8	0.828
Lithium (dissolved) [mg/L]	0.0006	0.0005	0.0006	0.0003	0.0007	0.0006	0.0002	< 0.0001
Magnesium (dissolved) [mg/L]	2.61	1.66	1.30	51.2	1.05	0.964	11.5	4.70
Manganese (dissolved) [mg/L]	0.00077	0.00192	0.00204	0.00016	0.00587	0.00311	0.00036	0.00021
Molybdenum (dissolved) [mg/L]	0.00023	0.00013	0.00008	0.00069	0.00031	0.00013	0.00391	0.00021
Sodium (dissolved) [mg/L]	5.03	7.58	8.55	0.45	9.75	2.94	2.34	1.45
Nickel (dissolved) [mg/L]	0.0002	0.0006	0.0005	0.0006	0.0013	0.0006	0.0028	0.0004
Lead (dissolved) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	0.00010	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	0.0016	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	0.0018	0.0011
Selenium (dissolved) [mg/L]	< 0.00004	0.00117	0.00009	< 0.00004	0.00015	< 0.00004	0.00581	< 0.00004
Tin (dissolved) [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	0.0186	0.0113	0.00754	0.00414	0.0135	0.00929	0.0160	0.0739
Titanium (dissolved) [mg/L]	0.00020	0.00161	0.00128	< 0.00007	0.00392	0.00233	0.00011	0.00010
Thallium (dissolved) [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005	0.000590	< 0.000005
Uranium (dissolved) [mg/L]	0.000023	0.000004	0.000008	0.000004	0.000004	0.000008	0.000004	0.000104
Vanadium (dissolved) [mg/L]	0.00648	0.01031	0.00756	0.00003	0.00632	0.00213	0.00400	0.00109
Tungsten (dissolved) [mg/L]	0.00031	0.00021	0.00017	0.00009	0.00021	0.00020	0.00030	0.00160
Yttrium (dissolved) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00008	< 0.00002	< 0.00002
Zinc (dissolved) [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.002	< 0.002	< 0.002



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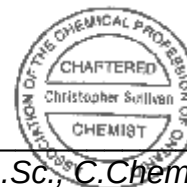
Project : PO#23590674

LR Report : CA19070-NOV23

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acidity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2310
Alkalinity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2320
Anions by IC	ME-CA-[ENV]IC-LAK-AN-001	EPA300/MA300-Ions1.3
Conductivity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2510
Fluoride by Specific Ion Electrode	ME-CA-[ENV]EWL-LAK-AN-014	SM 4500
Inorganics-General	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/SM 3112B
Metals in aqueous samples - ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	SM 3030/EPA 200.8
pH	ME-CA-[ENV]EWL-LAK-AN-006	SM 4500

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Acidity - QCBatchID: EWL0243-JAN24													
Acidity	2	mg/L as Ca	< 2			ND	20	96	90	110	NA		
Alkalinity - QCBatchID: EWL0243-JAN24													
Alkalinity	2	mg/L as Ca	< 2			0	20	96	80	120	NA		
Anions by IC - QCBatchID: DIO0387-JAN24													
Bromide	0.3	mg/L	<0.3			ND	20	97	90	110	97	75	125
Chloride	0.2	mg/L	<0.2			1	20	101	90	110	NV	75	125
Sulphate	0.2	mg/L	<0.2			0	20	99	90	110	99	75	125
Conductivity - QCBatchID: EWL0243-JAN24													
Conductivity	2	uS/cm	< 2			0	20	99	90	110	NA		
Fluoride by Specific Ion Electrode - QCBatchID: EWL0246-JAN24													
Fluoride	0.06	mg/L	<0.06			ND	10	100	90	110	84	75	125
Fluoride by Specific Ion Electrode - QCBatchID: EWL0257-JAN24													
Fluoride	0.06	mg/L	<0.06			ND	10	99	90	110	NV	75	125
Inorganics-General - QCBatchID: EHG0028-JAN24													
Mercury	0.00001	mg/L	< 0.00001			ND	20	81	80	120	91	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0134-JAN24													
Aluminum (dissolved)	0.001	mg/L	<0.001			5	20	99	90	110	114	70	130
Antimony (dissolved)	0.0009	mg/L	<0.0009			ND	20	96	90	110	106	70	130
Arsenic (dissolved)	0.0002	mg/L	<0.0002			ND	20	99	90	110	101	70	130
Barium (dissolved)	0.00008	mg/L	<0.00008			1	20	97	90	110	88	70	130
Beryllium (dissolved)	0.000007	mg/L	<0.000007			ND	20	99	90	110	103	70	130
Bismuth (dissolved)	0.00001	mg/L	<0.00001			7	20	99	90	110	107	70	130
Boron (dissolved)	0.002	mg/L	<0.002			ND	20	102	90	110	104	70	130
Cadmium (dissolved)	0.000003	mg/L	<0.000003			1	20	97	90	110	95	70	130
Calcium (dissolved)	0.01	mg/L	<0.01			0	20	99	90	110	79	70	130
Chromium (dissolved)	0.00008	mg/L	<0.00008			ND	20	98	90	110	98	70	130
Cobalt (dissolved)	0.000004	mg/L	<0.000004			1	20	97	90	110	97	70	130
Copper (dissolved)	0.0002	mg/L	<0.0002			5	20	98	90	110	104	70	130
Iron (dissolved)	0.007	mg/L	<0.007			ND	20	98	90	110	100	70	130
Lead (dissolved)	0.00009	mg/L	<0.00009			1	20	98	90	110	97	70	130
Lithium (dissolved)	0.0001	mg/L	<0.0001			1	20	105	90	110	105	70	130
Magnesium (dissolved)	0.001	mg/L	<0.001			1	20	97	90	110	90	70	130
Manganese (dissolved)	0.00001	mg/L	<0.00001			0	20	99	90	110	103	70	130
Molybdenum (dissolved)	0.00004	mg/L	<0.00004			4	20	93	90	110	80	70	130
Nickel (dissolved)	0.0001	mg/L	<0.0001			1	20	101	90	110	92	70	130



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Inorganic Analysis												
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material	
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)
									Low	High		
Potassium (dissolved)	0.009	mg/L	<0.009			1	20	100	90	110	93	70 130
Selenium (dissolved)	0.00004	mg/L	<0.00004			1	20	99	90	110	105	70 130
Silver (dissolved)	0.00005	mg/L	<0.00005			ND	20	96	90	110	76	70 130
Sodium (dissolved)	0.01	mg/L	<0.01			3	20	96	90	110	92	70 130
Strontium (dissolved)	0.00008	mg/L	<0.00008			1	20	100	90	110	97	70 130
Thallium (dissolved)	0.000005	mg/L	<0.000005			9	20	97	90	110	96	70 130
Tin (dissolved)	0.00006	mg/L	<0.00006			ND	20	92	90	110	NV	70 130
Titanium (dissolved)	0.00007	mg/L	<0.00005			ND	20	101	90	110	NV	70 130
Tungsten (dissolved)	0.00002	mg/L	<0.00002			ND	20	93	90	110	NV	70 130
Uranium (dissolved)	0.000002	mg/L	<0.000002			6	20	100	90	110	107	70 130
Vanadium (dissolved)	0.00001	mg/L	<0.00001			ND	20	100	90	110	101	70 130
Yttrium (dissolved)	0.00002	mg/L	<0.00002			14	20	94	90	110	NV	70 130
Zinc (dissolved)	0.002	mg/L	<0.002			2	20	98	90	110	114	70 130
pH - QCBatchID: EWL0243-JAN24												
pH	0.05	No unit	NA			0		100			NA	



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

SFE 3:1 24hr

Project : PO#23590674

17-January-2024

Date Rec. : 07 November 2023

LR Report: CA19073-NOV23

Reference: Crawford Project - PO#23590674 (Set 2)

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	5: C00374757	6: C00374758	7: C00374759	11: C00374763	15: C00374768	21: C00374775	22: C00374776	23: C00374777
Sample weight [g]	05-Jan-24	14:20	09-Jan-24	13:37	249	249	249	250	249	250	251	250
Volume D.I. Water [mL]	08-Jan-24	07:15	09-Jan-24	13:37	750	750	750	750	750	750	750	750
PreFilt pH [no unit]	09-Jan-24	07:10	09-Jan-24	13:37	8.94	9.04	9.84	9.92	9.92	10.20	9.99	9.29
pH [No unit]	09-Jan-24	14:32	10-Jan-24	11:19	8.59	8.56	9.09	9.34	9.46	9.75	9.51	9.40
Alkalinity [mg/L as CaCO ₃]	09-Jan-24	14:32	11-Jan-24	10:42	36	59	24	33	22	33	25	74
Conductivity [uS/cm]	09-Jan-24	14:32	10-Jan-24	11:19	94	151	56	81	50	80	64	155
Acidity [mg/L as CaCO ₃]	09-Jan-24	14:32	10-Jan-24	11:19	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	10-Jan-24	09:20	17-Jan-24	11:19	< 2	6.0	< 2	< 2	< 2	< 2	< 2	2.0
Chloride [mg/L]	10-Jan-24	09:20	17-Jan-24	11:19	3.4	4.7	< 2	< 2	< 2	< 2	< 2	< 2
Bromide [mg/L]	10-Jan-24	09:20	17-Jan-24	11:19	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Fluoride [mg/L]	10-Jan-24	09:59	11-Jan-24	09:09	< 0.06	< 0.06	< 0.06	0.07	< 0.06	< 0.06	< 0.06	0.30
Mercury [mg/L]	10-Jan-24	17:10	11-Jan-24	09:37	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.592	0.032	0.009	0.089	0.010	0.169	0.270	0.255
Arsenic (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.0415	0.598	0.0009	0.0004	0.0003	0.0006	0.0012	0.0036
Barium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.00245	0.0225	0.00502	0.00247	0.00130	0.00151	0.00167	0.00203
Boron (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.021	0.015	0.045	0.094	0.032	0.073	0.035	0.834
Beryllium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	8.31	9.51	4.78	1.67	5.38	5.65	6.67	5.16

Online LIMS

0003594409



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 24hr

Project : PO#23590674

LR Report : CA19073-NOV23

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	5: C00374757	6: C00374758	7: C00374759	11: C00374763	15: C00374768	21: C00374775	22: C00374776	23: C00374777
Cadmium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000007	0.000006
Cobalt (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.000028	0.000095	0.000016	0.000103	0.000010	0.000101	0.000079	0.000135
Chromium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.00009	0.00044	0.00072	0.00393	0.00104	0.00378	0.00131	0.00255
Copper (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.0008	0.0002	0.0002	0.0006	< 0.0002	0.0005	0.0006	0.0017
Iron (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	< 0.007	< 0.007	< 0.007	0.107	< 0.007	0.077	0.018	0.548
Potassium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	4.12	4.94	1.38	10.3	0.542	2.86	5.07	3.31
Lithium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.0008	0.0014	0.0001	0.0004	< 0.0001	0.0005	0.0001	0.0009
Magnesium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	2.95	10.2	4.14	1.21	2.59	0.588	0.470	1.67
Manganese (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.00106	0.00149	0.00019	0.00234	0.00013	0.00167	0.00051	0.0118
Molybdenum (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.00198	0.00217	0.00097	0.00019	0.00024	0.00061	0.00494	0.0120
Sodium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	5.20	5.41	0.27	8.63	0.71	9.72	3.27	31.1
Nickel (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.0005	0.0032	0.0011	0.0012	0.0006	0.0007	0.0010	0.0037
Lead (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.0022	0.0047	0.0084	< 0.0009	0.0029	0.0701	0.123	< 0.0009
Selenium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.00005	0.00013	0.00014	< 0.00004	0.00004	< 0.00004	< 0.00004	0.00012
Tin (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.0309	0.199	0.0144	0.00570	0.00837	0.0103	0.0128	0.0392
Titanium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.00014	< 0.00007	< 0.00007	0.00158	< 0.00007	0.00087	0.00025	0.00174
Thallium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	< 0.000005	0.000018	0.000006	0.000007	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.000077	0.000844	0.000003	0.000009	0.000002	0.000004	0.000014	< 0.000002
Vanadium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.00394	0.00570	0.00109	0.00504	0.00132	0.00743	0.00690	0.0705
Tungsten (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	0.00225	0.00170	0.00107	0.00091	0.00378	0.00081	0.00319	< 0.00002
Yttrium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	< 0.00002	< 0.00002	< 0.00002	0.00002	< 0.00002	< 0.00002	< 0.00002	0.00006
Zinc (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:10	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	24: C00374778	27: C00374791	31: C00374795	43: C00374809	44: C00374779	48: C00374783	53: C00374788
Sample weight [g]	251	250	250	251	249	250	251
Volume D.I. Water [mL]	750	750	750	750	750	750	750
PreFilt pH [no unit]	8.80	9.98	10.33	8.73	9.99	9.71	9.82
pH [No unit]	8.29	9.63	9.73	7.91	9.37	9.36	9.35
Alkalinity [mg/L as CaCO3]	43	32	32	32	16	25	17
Conductivity [uS/cm]	247	77	80	365	56	57	44
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloride [mg/L]	48	< 2	< 2	89	4.1	< 2	< 2



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

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SFE 3:1 24hr

Project : PO#23590674

LR Report : CA19073-NOV23

Analysis	24: C00374778	27: C00374791	31: C00374795	43: C00374809	44: C00374779	48: C00374783	53: C00374788
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Fluoride [mg/L]	0.10	0.07	0.07	< 0.06	< 0.06	< 0.06	< 0.06
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver (dissolved) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	0.002	0.061	0.046	0.003	0.244	0.007	0.247
Arsenic (dissolved) [mg/L]	0.0008	0.0005	0.0004	0.0018	0.0014	< 0.0002	0.0003
Barium (dissolved) [mg/L]	0.0176	0.00114	0.00171	0.0362	0.00136	0.00477	0.00083
Boron (dissolved) [mg/L]	0.815	0.058	0.069	0.773	0.031	0.045	0.032
Beryllium (dissolved) [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth (dissolved) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (dissolved) [mg/L]	17.5	5.03	4.65	32.2	9.12	6.76	4.35
Cadmium (dissolved) [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt (dissolved) [mg/L]	0.000021	0.000071	0.000070	0.000212	0.000012	0.000007	0.000023
Chromium (dissolved) [mg/L]	0.00019	0.00199	0.00131	0.00012	0.00092	0.00100	0.00084
Copper (dissolved) [mg/L]	0.0003	0.0004	0.0004	0.0003	0.0003	0.0003	0.0003
Iron (dissolved) [mg/L]	< 0.007	0.058	0.060	< 0.007	0.009	< 0.007	0.023
Potassium (dissolved) [mg/L]	3.79	1.43	3.32	4.05	0.560	0.586	3.32
Lithium (dissolved) [mg/L]	0.0005	0.0005	0.0004	0.0005	< 0.0001	0.0001	< 0.0001
Magnesium (dissolved) [mg/L]	11.4	0.710	0.671	22.4	0.562	2.96	1.07
Manganese (dissolved) [mg/L]	0.00918	0.00131	0.00150	0.00350	0.00026	0.00017	0.00067
Molybdenum (dissolved) [mg/L]	0.00047	0.00020	0.00023	0.00016	0.00047	0.00085	0.00081
Sodium (dissolved) [mg/L]	11.8	10.7	10.9	1.53	1.44	0.60	1.42
Nickel (dissolved) [mg/L]	0.0022	0.0006	0.0006	0.0126	0.0001	0.0005	0.0003
Lead (dissolved) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	< 0.0009	0.0010	0.0013	< 0.0009	< 0.0009	< 0.0009	0.0010
Selenium (dissolved) [mg/L]	< 0.00004	0.00009	< 0.00004	< 0.00004	< 0.00004	< 0.00004	< 0.00004
Tin (dissolved) [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	0.358	0.0413	0.0419	0.371	0.0338	0.00756	0.00973
Titanium (dissolved) [mg/L]	< 0.00007	0.00070	0.00111	< 0.00007	0.00015	< 0.00007	0.00036
Thallium (dissolved) [mg/L]	0.000005	< 0.000005	< 0.000005	0.000010	< 0.000005	< 0.000005	< 0.000005
Uranium (dissolved) [mg/L]	0.000114	0.000003	0.000004	< 0.000002	0.000003	0.000813	0.000507
Vanadium (dissolved) [mg/L]	0.00017	0.00493	0.00531	0.00002	0.00660	0.00043	0.00512
Tungsten (dissolved) [mg/L]	0.00014	0.00077	0.00094	0.00009	0.00032	0.00048	0.00088
Yttrium (dissolved) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Zinc (dissolved) [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 24hr

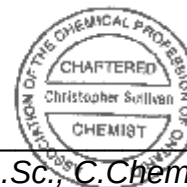
Project : PO#23590674

LR Report : CA19073-NOV23

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acidity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2310
Alkalinity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2320
Anions by IC	ME-CA-[ENV]IC-LAK-AN-001	EPA300/MA300-Ions1.3
Conductivity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2510
Fluoride by Specific Ion Electrode	ME-CA-[ENV]EWL-LAK-AN-014	SM 4500
Inorganics-General	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/SM 3112B
Metals in aqueous samples - ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	SM 3030/EPA 200.8
pH	ME-CA-[ENV]EWL-LAK-AN-006	SM 4500

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Acidity - QCBatchID: EWL0137-JAN24													
Acidity	2	mg/L as Ca	2			0	20	98	90	110	NA		
Alkalinity - QCBatchID: EWL0137-JAN24													
Alkalinity	2	mg/L as Ca	< 2			ND	20	94	80	120	NA		
Alkalinity - QCBatchID: EWL0169-JAN24													
Alkalinity	2	mg/L as Ca	< 2			ND	20	104	80	120	NA		
Anions by IC - QCBatchID: DIO0214-JAN24													
Bromide	0.3	mg/L	<0.3			ND	20	98	90	110	95	75	125
Chloride	0.2	mg/L	<0.2			0	20	102	90	110	105	75	125
Sulphate	0.2	mg/L	<0.2			0	20	96	90	110	92	75	125
Anions by IC - QCBatchID: DIO0280-JAN24													
Chloride	0.2	mg/L	<0.2			4	20	100	90	110	108	75	125
Conductivity - QCBatchID: EWL0137-JAN24													
Conductivity	2	uS/cm	< 2			2	20	100	90	110	NA		
Fluoride by Specific Ion Electrode - QCBatchID: EWL0154-JAN24													
Fluoride	0.06	mg/L	<0.06			ND	10	100	90	110	104	75	125
Fluoride by Specific Ion Electrode - QCBatchID: EWL0160-JAN24													
Fluoride	0.06	mg/L	<0.06			0	10	99	90	110	82	75	125
Inorganics-General - QCBatchID: EHG0019-JAN24													
Mercury	0.00001	mg/L	< 0.00001			ND	20	107	80	120	79	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0102-JAN24													
Aluminum (dissolved)	0.001	mg/L	<0.001			1	20	99	90	110	103	70	130
Antimony (dissolved)	0.0009	mg/L	<0.0009			ND	20	108	90	110	106	70	130
Arsenic (dissolved)	0.0002	mg/L	<0.0002			9	20	100	90	110	100	70	130
Barium (dissolved)	0.00008	mg/L	<0.00008			2	20	100	90	110	102	70	130
Beryllium (dissolved)	0.000007	mg/L	<0.000007			ND	20	98	90	110	109	70	130
Bismuth (dissolved)	0.00001	mg/L	<0.00001			ND	20	97	90	110	76	70	130
Boron (dissolved)	0.002	mg/L	<0.002			1	20	99	90	110	93	70	130
Cadmium (dissolved)	0.000003	mg/L	<0.000003			ND	20	99	90	110	97	70	130
Calcium (dissolved)	0.01	mg/L	<0.01			1	20	100	90	110	78	70	130
Chromium (dissolved)	0.00008	mg/L	<0.00008			12	20	102	90	110	98	70	130
Cobalt (dissolved)	0.000004	mg/L	<0.000004			10	20	94	90	110	90	70	130
Copper (dissolved)	0.0002	mg/L	<0.0002			1	20	98	90	110	96	70	130
Iron (dissolved)	0.007	mg/L	<0.007			ND	20	100	90	110	100	70	130
Lead (dissolved)	0.00009	mg/L	<0.00009			ND	20	98	90	110	98	70	130
Lithium (dissolved)	0.0001	mg/L	<0.0001			ND	20	102	90	110	105	70	130

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Magnesium (dissolved)	0.001	mg/L	<0.001			2	20	100	90	110	85	70	130
Manganese (dissolved)	0.00001	mg/L	<0.00001			18	20	102	90	110	93	70	130
Molybdenum (dissolved)	0.00004	mg/L	<0.00004			1	20	96	90	110	82	70	130
Nickel (dissolved)	0.0001	mg/L	<0.0001			9	20	98	90	110	95	70	130
Potassium (dissolved)	0.009	mg/L	<0.009			0	20	102	90	110	84	70	130
Selenium (dissolved)	0.00004	mg/L	<0.00004			16	20	96	90	110	109	70	130
Silver (dissolved)	0.00005	mg/L	<0.00005			ND	20	94	90	110	76	70	130
Sodium (dissolved)	0.01	mg/L	<0.01			3	20	98	90	110	89	70	130
Strontium (dissolved)	0.00008	mg/L	<0.00008			0	20	101	90	110	101	70	130
Thallium (dissolved)	0.000005	mg/L	<0.000005			ND	20	98	90	110	92	70	130
Tin (dissolved)	0.00006	mg/L	<0.00006			ND	20	97	90	110	NV	70	130
Titanium (dissolved)	0.00007	mg/L	<0.00005			5	20	94	90	110	NV	70	130
Tungsten (dissolved)	0.00002	mg/L	<0.00002			7	20	101	90	110	NV	70	130
Uranium (dissolved)	0.000002	mg/L	<0.000002			0	20	97	90	110	95	70	130
Vanadium (dissolved)	0.00001	mg/L	<0.00001			2	20	99	90	110	79	70	130
Yttrium (dissolved)	0.00002	mg/L	<0.00002			ND	20	99	90	110	NV	70	130
Zinc (dissolved)	0.002	mg/L	<0.002			ND	20	98	90	110	102	70	130
pH - QCBatchID: EWL0137-JAN24													
pH	0.05	No unit	NA			0		100			NA		



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

SFE 3:1 24hr

Project : PO#20446343

04-March-2024

Date Rec. : 23 January 2024

LR Report: CA19013-JAN24

Reference: Crawford Project - PO#20446343

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: C00374710	6: C00374755	7: C00374759	8: C00374715	9: C00374723	10: C00374727	11: C00374763	12: C00374778
Sample weight [g]	08-Feb-24	06:30	09-Feb-24	14:46	250	250	251	250	250	250	250	250
Volume D.I. Water [mL]	08-Feb-24	07:30	09-Feb-24	14:46	750	750	750	750	750	750	750	750
PreFilt pH [no unit]	09-Feb-24	06:31	09-Feb-24	14:46	10.10	9.91	9.74	9.23	9.80	10.01	9.75	8.91
Sample weight [g]	25-Feb-24	09:46	27-Feb-24	11:46	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	25-Feb-24	09:46	27-Feb-24	11:46	750	750	750	750	750	750	750	750
PreFilt pH [no unit]	26-Feb-24	08:22	27-Feb-24	11:46	10.11	9.92	9.82	9.33	9.83	10.04	9.84	8.93
pH [No unit]	09-Feb-24	13:31	15-Feb-24	10:55	9.58	9.47	8.88	8.28	9.56	9.40	9.48	7.92
Alkalinity [mg/L as CaCO3]	09-Feb-24	13:31	12-Feb-24	10:57	59	43	27	55	192	24	42	33
Conductivity [uS/cm]	09-Feb-24	13:31	15-Feb-24	10:56	163	103	73	138	349	60	106	294
Acidity [mg/L as CaCO3]	09-Feb-24	13:31	12-Feb-24	10:58	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	10-Feb-24	13:22	12-Feb-24	14:19	3.8	< 2	2.6	3.2	4.9	< 2	< 2	< 2
Chloride [mg/L]	10-Feb-24	13:22	12-Feb-24	14:19	2.4	< 2	< 2	2.8	3.8	< 2	< 2	73
Bromide [mg/L]	10-Feb-24	13:22	12-Feb-24	14:19	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Fluoride [mg/L]	09-Feb-24	11:14	13-Feb-24	13:42	0.30	0.12	< 0.06	< 0.06	< 0.06	< 0.06	0.11	0.11
Chromium VI [ug/L]	29-Feb-24	07:34	04-Mar-24	15:15	0.8	0.9	0.5	< 0.2	0.3	2.8	0.7	<0.2
Aluminum (0.2µm) [mg/L]	28-Feb-24	09:44	28-Feb-24	16:07	0.030	0.030	0.004	0.068	< 0.001	0.057	0.023	< 0.001
Mercury [mg/L]	12-Feb-24	15:04	13-Feb-24	10:04	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.112	0.084	0.011	0.098	0.004	0.084	0.051	0.002
Arsenic (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.0053	0.0023	0.0003	< 0.0002	< 0.0002	0.0006	0.0005	< 0.0002
Barium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.00157	0.00144	0.00455	0.02226	0.00666	0.00082	0.00215	0.01729

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis Date	4: Analysis Completed Time	5: C00374710	6: C00374755	7: C00374759	8: C00374715	9: C00374723	10: C00374727	11: C00374763	12: C00374778
Boron (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.155	0.117	0.049	0.041	0.011	0.045	0.092	0.761
Beryllium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	0.001034	0.001244	< 0.000007
Bismuth (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	1.92	4.14	4.25	5.79	1.88	7.80	2.09	19.4
Cadmium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.000011	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000003
Cobalt (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.000195	0.000105	0.000023	0.000018	0.000065	0.000021	0.000088	0.000043
Chromium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.00165	0.00172	0.00046	0.00010	0.00016	0.00459	0.00240	0.00017
Copper (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Iron (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.224	0.076	< 0.007	< 0.007	< 0.007	< 0.007	0.072	< 0.007
Potassium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	27.2	6.41	2.79	11.7	0.967	2.08	15.8	3.46
Lithium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.0009	0.0006	< 0.0001	0.0013	0.0003	0.0003	0.0006	0.0009
Magnesium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.496	0.760	4.83	4.06	51.4	0.776	0.866	16.8
Manganese (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.00281	0.00191	0.00024	0.00046	0.00018	0.00026	0.00149	0.00468
Molybdenum (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.02398	0.00051	0.00102	0.00135	0.00047	0.00389	0.00792	< 0.0004
Sodium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	16.3	14.5	0.36	11.4	0.43	2.69	9.91	6.33
Nickel (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.0025	0.0005	0.0009	0.0003	0.0005	0.0002	0.0008	0.0045
Lead (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	< 0.0009	< 0.0009	0.0082	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.00115	0.00150	0.00026	0.00009	< 0.00004	< 0.00004	< 0.00004	< 0.00004
Tin (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.00696	0.01566	0.01293	0.06609	0.00674	0.01933	0.00752	0.321
Titanium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.00704	0.00104	0.00010	0.00012	< 0.0001	0.00014	0.00079	< 0.0001
Thallium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	< 0.000005	< 0.000005	0.000011	0.000010	0.000008	< 0.000005	< 0.000005	0.000009
Uranium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.000052	0.000050	< 0.000002	< 0.000002	< 0.000002	0.000002	0.000006	0.000116
Vanadium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.01857	0.01767	0.00129	0.00382	0.00007	0.00895	0.00585	0.00008
Tungsten (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	0.00124	0.00074	0.00104	< 0.0002	< 0.0002	< 0.0002	0.00077	< 0.0002
Yttrium (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Zinc (dissolved) [mg/L]	13-Feb-24	07:00	14-Feb-24	11:58	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	13: C00374783	14: C00374788	15: C00374791	16: C00374795	17: C00374804
Sample weight [g]	251	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750
PreFilt pH [no unit]	9.78	9.96	9.92	9.97	10.12
Sample weight [g]	250	150	250	250	250
Volume D.I. Water [mL]	750	450	750	750	750



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 24hr

Project : PO#20446343

LR Report : CA19013-JAN24

Analysis	13: C00374783	14: C00374788	15: C00374791	16: C00374795	17: C00374804
PreFilt pH [no unit]	9.64	10.04	9.93	9.98	10.10
pH [No unit]	8.99	9.68	9.53	9.77	9.80
Alkalinity [mg/L as CaCO ₃]	28	35	34	39	32
Conductivity [uS/cm]	64	80	76	90	72
Acidity [mg/L as CaCO ₃]	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	< 2	< 2	< 2	< 2	< 2
Chloride [mg/L]	2.2	< 2	< 2	< 2	< 2
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3
Fluoride [mg/L]	< 0.06	< 0.06	0.11	0.10	< 0.06
Chromium VI [ug/L]	1.0	0.8	0.8	0.6	1.2
Aluminum (0.2µm) [mg/L]	0.003	0.151	0.033	0.046	0.149
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver (dissolved) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	0.005	0.168	0.039	0.036	0.198
Arsenic (dissolved) [mg/L]	< 0.0002	0.0010	0.0004	0.0005	0.0007
Barium (dissolved) [mg/L]	0.00445	0.00144	0.00058	0.00126	0.00098
Boron (dissolved) [mg/L]	0.059	0.066	0.069	0.072	0.068
Beryllium (dissolved) [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007
Bismuth (dissolved) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (dissolved) [mg/L]	7.04	4.80	4.33	3.51	6.68
Cadmium (dissolved) [mg/L]	0.000004	0.000006	0.000008	< 0.000003	0.000003
Cobalt (dissolved) [mg/L]	0.000006	0.000104	0.000040	0.000052	0.000111
Chromium (dissolved) [mg/L]	0.00101	0.00245	0.00134	0.00118	0.00274
Copper (dissolved) [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Iron (dissolved) [mg/L]	< 0.007	0.071	0.028	0.039	0.096
Potassium (dissolved) [mg/L]	1.07	2.98	1.40	4.37	0.656
Lithium (dissolved) [mg/L]	< 0.0001	0.0004	0.0003	0.0007	0.0003
Magnesium (dissolved) [mg/L]	2.98	0.732	0.493	0.369	0.665
Manganese (dissolved) [mg/L]	0.00017	0.00190	0.00109	0.00083	0.00224
Molybdenum (dissolved) [mg/L]	0.00409	0.00057	0.00757	< 0.0004	0.00580
Sodium (dissolved) [mg/L]	0.70	10.1	11.5	13.4	7.79
Nickel (dissolved) [mg/L]	0.0003	0.0006	0.0004	0.0004	0.0005
Lead (dissolved) [mg/L]	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony (dissolved) [mg/L]	< 0.0009	< 0.0009	0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	< 0.00004	0.00004	0.00006	0.00006	0.00028
Tin (dissolved) [mg/L]	0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	0.01083	0.00779	0.02924	0.02820	0.01686
Titanium (dissolved) [mg/L]	< 0.0001	0.00157	0.00029	0.00055	0.00154

Analysis	13: C00374783	14: C00374788	15: C00374791	16: C00374795	17: C00374804
Thallium (dissolved) [mg/L]	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium (dissolved) [mg/L]	0.000003	0.000012	0.000003	0.000013	0.000002
Vanadium (dissolved) [mg/L]	0.00032	0.00986	0.00622	0.00589	0.01428
Tungsten (dissolved) [mg/L]	< 0.0002	0.00062	0.00070	0.00153	0.00335
Yttrium (dissolved) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Zinc (dissolved) [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acidity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2310
Alkalinity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2320
Anions by IC	ME-CA-[ENV]IC-LAK-AN-001	EPA300/MA300-Ions1.3
Conductivity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2510
Fluoride by Specific Ion Electrode	ME-CA-[ENV]EWL-LAK-AN-014	SM 4500
Hexavalent Chromium by SFA	ME-CA-[ENV]SKA-LAK-AN-012	EPA218.6/EPA3060A
Inorganics-General	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/SM 3112B
Metals in aqueous samples - ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	SM 3030/EPA 200.8
pH	ME-CA-[ENV]EWL-LAK-AN-006	SM 4500

Chris Sullivan

Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Acidity - QCBatchID: EWL0162-FEB24													
Acidity	2	mg/L as Ca	2			ND	20	92	90	110	NA		
Alkalinity - QCBatchID: EWL0162-FEB24													
Alkalinity	2	mg/L as Ca	< 2			3	20	94	80	120	NA		
Anions by IC - QCBatchID: DIO0239-FEB24													
Bromide	0.3	mg/L	<0.3			ND	20	102	90	110	96	75	125
Chloride	0.2	mg/L	<0.2			2	20	98	90	110	106	75	125
Sulphate	0.2	mg/L	<0.2			4	20	103	90	110	100	75	125
Anions by IC - QCBatchID: DIO0240-FEB24													
Bromide	0.3	mg/L	<0.3			ND	20	103	90	110	105	75	125
Chloride	0.2	mg/L	<0.2			0	20	99	90	110	102	75	125
Sulphate	0.2	mg/L	<0.2			12	20	96	90	110	97	75	125
Conductivity - QCBatchID: EWL0162-FEB24													
Conductivity	2	uS/cm	< 2			1	20	100	90	110	NA		
Fluoride by Specific Ion Electrode - QCBatchID: EWL0159-FEB24													
Fluoride	0.06	mg/L	<0.06			ND	10	108	90	110	NV	75	125
Hexavalent Chromium by SFA - QCBatchID: SKA0007-MAR24													
Chromium VI	0.2	ug/L	<0.2			2	20	97	80	120	92	75	125
Inorganics-General - QCBatchID: EHG0028-FEB24													
Mercury	0.00001	mg/L	< 0.00001			1	20	97	80	120	91	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0098-FEB24													
Aluminum (dissolved)	0.001	mg/L	<0.001			10	20	95	90	110	105	70	130
Antimony (dissolved)	0.0009	mg/L	<0.0009			ND	20	103	90	110	109	70	130
Arsenic (dissolved)	0.0002	mg/L	<0.0002			ND	20	95	90	110	96	70	130
Barium (dissolved)	0.00008	mg/L	<0.00008			10	20	96	90	110	94	70	130
Beryllium (dissolved)	0.000007	mg/L	<0.000007			ND	20	99	90	110	101	70	130
Bismuth (dissolved)	0.00001	mg/L	<0.00001			ND	20	95	90	110	92	70	130
Boron (dissolved)	0.002	mg/L	<0.002			1	20	91	90	110	97	70	130
Cadmium (dissolved)	0.000003	mg/L	<0.000003			15	20	96	90	110	97	70	130
Calcium (dissolved)	0.01	mg/L	<0.01			8	20	102	90	110	104	70	130
Chromium (dissolved)	0.00008	mg/L	<0.00008			6	20	100	90	110	81	70	130
Cobalt (dissolved)	0.000004	mg/L	<0.000004			15	20	98	90	110	91	70	130
Copper (dissolved)	0.002	mg/L	<0.001			9	20	96	90	110	89	70	130
Iron (dissolved)	0.007	mg/L	<0.007			ND	20	103	90	110	75	70	130
Lead (dissolved)	0.00009	mg/L	<0.00009			ND	20	96	90	110	95	70	130
Lithium (dissolved)	0.0001	mg/L	<0.0001			ND	20	97	90	110	99	70	130

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Magnesium (dissolved)	0.001	mg/L	<0.001			13	20	101	90	110	95	70	130
Manganese (dissolved)	0.00001	mg/L	<0.00001			7	20	101	90	110	102	70	130
Molybdenum (dissolved)	0.0004	mg/L	<0.0004			17	20	98	90	110	101	70	130
Nickel (dissolved)	0.0001	mg/L	<0.0001			5	20	96	90	110	90	70	130
Potassium (dissolved)	0.009	mg/L	<0.009			1	20	101	90	110	102	70	130
Selenium (dissolved)	0.00004	mg/L	<0.00004			ND	20	94	90	110	100	70	130
Silver (dissolved)	0.00005	mg/L	<0.00005			ND	20	92	90	110	78	70	130
Sodium (dissolved)	0.01	mg/L	<0.01			4	20	97	90	110	94	70	130
Strontium (dissolved)	0.00008	mg/L	<0.00008			4	20	99	90	110	96	70	130
Thallium (dissolved)	0.000005	mg/L	<0.000005			0	20	95	90	110	93	70	130
Tin (dissolved)	0.00006	mg/L	<0.00006			4	20	96	90	110	NV	70	130
Titanium (dissolved)	0.0001	mg/L	<0.0001			18	20	95	90	110	NV	70	130
Tungsten (dissolved)	0.0002	mg/L	<0.0002			ND	20	91	90	110	NV	70	130
Uranium (dissolved)	0.000002	mg/L	<0.000002			0	20	96	90	110	92	70	130
Vanadium (dissolved)	0.00001	mg/L	<0.00001			14	20	97	90	110	99	70	130
Yttrium (dissolved)	0.00002	mg/L	<0.00002			ND	20	97	90	110	NV	70	130
Zinc (dissolved)	0.002	mg/L	<0.002			ND	20	95	90	110	99	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0242-FEB24													
Aluminum (0.2µm)	0.001	mg/L	<0.001			ND	20	94	90	110	106	70	130
pH - QCBatchID: EWL0162-FEB24													
pH	0.05	No unit	NA			1		100			NA		



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Project : PO#20446343

13-February-2024

Date Rec. : 23 January 2024

LR Report: CA19014-JAN24

Reference: PO#20446343

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
1: Analysis Start Date	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24	08-Feb-24
2: Analysis Start Time	14:57	14:57	14:57	14:57	14:57	14:57	14:57	14:57	14:57	14:57	14:57	14:57	14:57	14:57
3: Analysis Completed Date	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24	12-Feb-24
4: Analysis Completed Time	17:43	17:43	17:43	17:43	17:43	17:43	17:43	17:43	17:43	17:43	17:43	17:43	17:43	17:43
5: C00374710	46.0	6.66	13.0	18.2	10.2	1.37	0.48	1.07	0.12	0.19	0.19	0.03	3.03	100.5
6: C00374755	50.3	9.65	6.66	16.4	11.9	1.76	0.22	0.16	< 0.01	0.15	0.09	0.02	3.45	100.7
7: C00374759	39.8	3.35	15.8	29.0	3.42	0.05	0.02	0.10	0.01	0.24	0.55	0.02	8.07	100.4
18: C00374724	35.9	1.28	9.23	38.6	0.13	0.03	0.01	0.05	< 0.01	0.13	0.61	< 0.01	14.2	100.2
19: C00374726	65.5	15.7	2.49	1.86	3.32	5.64	0.39	0.58	0.02	0.04	0.02	< 0.01	4.98	100.5
20: C00374739	50.5	11.0	5.95	14.3	14.7	1.14	0.12	0.17	< 0.01	0.15	0.08	0.03	2.54	100.7
21: C00374761	51.8	4.62	5.84	18.4	16.6	0.41	0.10	0.18	0.01	0.14	0.52	0.03	2.20	100.9
22: C00374764	52.1	3.15	6.82	19.5	15.3	0.20	0.03	0.18	< 0.01	0.17	0.55	0.03	2.68	100.7
23: Dunite CR21-146 510-520	34.6	0.72	10.5	39.5	0.04	0.03	0.02	0.03	< 0.01	0.14	1.13	< 0.01	13.4	100.1
24: Dunite CR22-193A 200-210	34.7	0.67	8.20	40.4	0.20	0.02	0.01	0.03	< 0.01	0.10	1.09	< 0.01	14.4	99.8
25: Gabbro CR21-GT-04B 350-360	47.5	16.2	4.58	11.1	17.1	0.93	0.24	0.13	< 0.01	0.10	0.10	0.02	2.57	100.6
26: Gabbro CR20-41 365-375	49.1	16.3	5.29	10.8	14.2	1.64	0.15	0.12	< 0.01	0.11	0.07	0.02	2.89	100.6
27: Basalt CR21-GT-09B 490-500	51.5	14.6	9.35	5.05	5.31	3.81	0.27	1.05	0.30	0.14	0.01	0.03	8.95	100.4
28: Basalt CR22-GT-11 300-310	72.8	13.8	1.75	0.45	1.69	3.49	2.68	0.31	0.11	0.02	0.02	< 0.01	2.65	99.8
29: Basalt CR21-GT-03 300-310	65.0	16.1	5.18	1.76	1.95	6.84	0.52	0.63	0.21	0.04	0.02	0.01	1.88	100.1
30: Basalt CR21-GT-07 510-520	63.1	14.3	4.38	1.84	5.00	2.30	3.58	0.50	0.13	0.03	< 0.01	0.02	5.00	100.2
31: Peridotite CR20-34 555-565	39.2	3.72	14.8	29.3	3.49	0.05	< 0.01	0.08	< 0.01	0.22	0.60	0.01	9.09	100.5
32: Peridotite-01 CR20-78 100-110	36.5	2.44	10.3	34.2	2.82	0.13	0.02	0.07	0.01	0.14	0.68	< 0.01	12.8	100.3



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

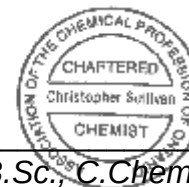
Project : PO#20446343

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Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Inorganics-General	GO/GC/GT_XRF76V/R	Borate Fusion XRF

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for: Canada Nickel Company
130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON M5X 1E3, Canada

Project Number/ LIMS No. Custom XRD/MI4503-FEB24/CA19015-JAN24

Sample Receipt: February 12, 2024

Sample Analysis: February 26, 2024

Reporting Date: March 12, 2024

Instrument: BRUKER AXS D8 Advance Diffractometer

Test Conditions: Co radiation, 35 kV, 40 mA; Detector: LYNXEYE_XE_T
Regular Scanning: Step: 0.02°, Step time: 0.5s, 2θ range: 6-80°

Interpretations : PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). Diffrac Eva and Topas software.

Detection Limit : 0.5-2%. Strongly dependent on crystallinity.

Contents:
1) Method Summary
2) Quantitative XRD Results
3) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Geo.
Senior Mineralogist

Huyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

ACCREDITATION: SGS Natural Resources Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada Inc. - Minerals: <https://www.scc.ca/en/search/palcan>.



Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Natural Resources is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Diffrac Topas 7 (Bruker), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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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 direction. 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.

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	C00374710 JAN9015-1 (wt %)	C00374755 JAN9015-2 (wt %)	C00374759 JAN9015-3 (wt %)	C00374724 JAN9015-4 (wt %)	C00374726 JAN9015-5 (wt %)	C00374739 JAN9015-6 (wt %)
Quartz	0.8	0.2	-	-	29.4	0.3
Plagioclase	17.4	20.6	0.0	0.0	45.2	10.4
Potassium-feldspar	0.5	1.2	-	-	0.5	1.6
Forsterite	15.5	0.1	5.3	-	-	0.1
Diopside	30.6	30.6	11.7	-	-	23.5
Actinolite	3.9	26.0	3.1	1.4	-	36.8
Chlorite	7.7	17.2	17.1	10.0	5.1	8.7
Muscovite	1.8	2.1	-	-	3.9	1.9
Biotite	4.5	1.5	-	-	-	0.5
Magnetite	2.5	0.3	5.4	9.9	0.0	0.2
Talc	5.0	-	-	-	-	-
Serpentine	7.1	0.3	55.3	64.8	0.0	0.6
Ilmenite	0.6	-	-	-	-	-
Calcite	0.8	-	-	-	4.4	-
Hematite	1.1	-	-	-	-	-
Brucite	-	-	-	3.8	-	-
Wuestite	-	-	-	7.5	-	-
Pyrrhotite	-	-	-	-	-	-
Zoisite	-	-	-	-	-	15.3
Grossularia	-	-	-	-	-	-
Dolomite	-	-	-	-	2.2	-
Paragonite	-	-	-	-	8.6	-
Rutile	-	-	-	-	0.5	-
Ankerite	-	-	-	-	-	-
Siderite	-	-	0.4	0.0	-	-
Pyrite	-	-	-	-	-	-
Pyroaurite	-	-	-	2.6	-	-
Gibbsite	-	-	1.7	-	-	-
TOTAL	100	100	100	100	100	100

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

Mineral/Compound	Formula
Quartz	SiO ₂
Plagioclase	(NaSi,CaAl)AlSi ₂ O ₈
Potassium-feldspar	KAlSi ₃ O ₈
Forsterite	Mg ₂ SiO ₄
Diopside	CaMgSi ₂ O ₆
Actinolite	Ca ₂ (Mg,Fe) ₅ Si ₈ O ₂₂ (OH) ₂
Chlorite	(Fe,(Mg,Mn) ₅ ,Al)(Si ₃ Al)O ₁₀ (OH) ₈
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Biotite	K(Mg,Fe) ₃ (AlSi ₃ O ₁₀)(OH) ₂
Magnetite	Fe ₃ O ₄
Talc	Mg ₃ Si ₄ O ₁₀ (OH) ₂
Serpentine	Mg ₃ Si ₂ O ₅ (OH) ₄
Ilmenite	FeTiO ₃
Calcite	CaCO ₃
Hematite	Fe ₂ O ₃
Brucite	Mg(OH) ₂
Wustite	FeO
Pyrrhotite	Fe ₉ S ₉
Zoisite	Ca ₂ Al ₃ Si ₃ O ₁₂ (OH)
Grossular	Ca ₃ Al ₂ Si ₃ O ₁₂
Dolomite	CaMg(CO ₃) ₂
Paragonite	NaAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Rutile	TiO ₂
Ankerite	CaFe(CO ₃) ₂
Siderite	FeCO ₃
Pyrite	FeS ₂
Pyroaurite	Mg ₆ Fe ³⁺ ₂ (CO ₃)(OH) ₁₆ ·4H ₂ O
Gibbsite	Al(OH) ₃

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	C00374761 JAN9015-7 (wt %)	C00374764 JAN9015-8 (wt %)	Dunite CR21-146 510-520 JAN9015-9 (wt %)	Dunite CR22- 193A 200-210 JAN9015-10 (wt %)	Gabbro CR21-GT 04B 350-360 JAN9015-11 (wt %)	Gabbro CR20-41 365-375 JAN9015-12 (wt %)
Quartz	0.7	0.3	-	-	0.0	0.0
Plagioclase	2.2	0.6	0.0	0.0	9.3	15.6
Potassium-feldspar	3.4	3.0	-	-	1.8	2.2
Forsterite	0.2	0.1	-	-	-	-
Diopside	48.4	35.8	-	-	16.1	6.8
Actinolite	33.8	48.8	-	-	26.7	33.5
Chlorite	9.2	9.0	-	-	10.2	9.1
Muscovite	1.0	1.2	-	-	1.5	1.0
Biotite	-	-	-	-	-	-
Magnetite	0.6	0.0	15.8	10.6	0.4	0.5
Talc	-	-	-	-	-	-
Serpentine	0.5	0.0	60.9	62.9	0.4	0.0
Ilmenite	-	-	-	-	-	-
Calcite	-	-	-	-	-	-
Hematite	-	-	-	-	-	-
Brucite	-	-	12.5	16.8	-	-
Wuestite	-	-	10.6	9.5	-	-
Pyrrhotite	-	-	0.2	0.1	-	-
Zoisite	-	1.3	-	-	29.2	30.9
Grossularia	-	-	-	-	4.4	0.3
Dolomite	-	-	-	-	-	-
Paragonite	-	-	-	-	-	-
Rutile	-	-	-	-	-	-
Ankerite	-	-	-	-	-	-
Siderite	-	-	-	-	-	-
Pyrite	-	-	-	-	-	-
Pyroaurite	-	-	-	-	-	-
Gibbsite	-	-	-	-	-	-
TOTAL	100	100	100	100	100	100

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

The weight percent quantities indicated have been normalized to a sum of 100%. The quantity of amorphous material has not been determined.

Mineral/Compound	Formula
Quartz	SiO ₂
Plagioclase	(NaSi,CaAl)AlSi ₂ O ₈
Potassium-feldspar	KAlSi ₃ O ₈
Forsterite	Mg ₂ SiO ₄
Diopside	CaMgSi ₂ O ₆
Actinolite	Ca ₂ (Mg,Fe) ₅ Si ₈ O ₂₂ (OH) ₂
Chlorite	(Fe,(Mg,Mn),Al)(Si ₃ Al)O ₁₀ (OH) ₈
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Biotite	K(Mg,Fe) ₃ (AlSi ₃ O ₁₀)(OH) ₂
Magnetite	Fe ₃ O ₄
Talc	Mg ₃ Si ₄ O ₁₀ (OH) ₂
Serpentine	Mg ₃ Si ₂ O ₅ (OH) ₄
Ilmenite	FeTiO ₃
Calcite	CaCO ₃
Hematite	Fe ₂ O ₃
Brucite	Mg(OH) ₂
Wustite	FeO
Pyrrhotite	Fe ₉ S ₉
Zoisite	Ca ₂ Al ₃ Si ₃ O ₁₂ (OH)
Grossular	Ca ₃ Al ₂ Si ₃ O ₁₂
Dolomite	CaMg(CO ₃) ₂
Paragonite	NaAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Rutile	TiO ₂
Ankerite	CaFe(CO ₃) ₂
Siderite	FeCO ₃
Pyrite	FeS ₂
Pyroaurite	Mg ₆ Fe ³⁺ ₂ (CO ₃)(OH) ₁₆ ·4H ₂ O
Gibbsite	Al(OH) ₃

Summary of Rietveld Quantitative Analysis X-Ray Diffraction Results

Mineral/Compound	Basalt CR21-GT-09B 490-500 JAN9015-13 (wt %)	Basalt CR22-GT-11 300-310 JAN9015-14 (wt %)	Basalt CR21-GT-03 300-310 JAN9015-15 (wt %)	Basalt CR21-GT-07 510-520 JAN9015-16 (wt %)	Peridotite CR20-34 555-565 JAN9015-17 (wt %)	Peridotite-01 CR20-78 100-110 JAN9015-18 (wt %)
Quartz	24.1	44.4	18.7	34.1	1.7	0.8
Plagioclase	33.4	31.8	64.1	21.8	3.6	5.0
Potassium-feldspar	0.3	0.5	0.7	5.5	-	-
Forsterite	-	-	-	-	1.7	4.8
Diopside	-	1.2	-	-	14.9	3.5
Actinolite	-	-	-	-	-	3.8
Chlorite	17.2	1.3	7.9	6.4	12.8	4.6
Muscovite	4.7	20.3	5.3	22.9	-	-
Biotite	-	0.4	0.2	0.6	-	-
Magnetite	0.2	0.0	0.3	0.1	7.4	9.3
Talc	-	-	-	-	-	-
Serpentine	0.0	0.0	0.0	0.0	54.9	56.7
Ilmenite	-	-	-	-	-	-
Calcite	2.3	-	1.7	7.6	-	1.3
Hematite	-	-	-	-	-	-
Brucite	-	-	-	-	-	2.6
Wuestite	-	-	-	-	3.1	4.5
Pyrrhotite	-	-	-	-	-	-
Zoisite	-	-	-	-	-	-
Grossularia	-	-	-	-	-	-
Dolomite	0.0	-	0.7	0.3	-	-
Paragonite	4.1	-	-	-	-	-
Rutile	1.0	0.1	0.2	0.5	-	-
Ankerite	12.7	-	0.1	0.1	-	-
Siderite	0.1	-	0.1	0.1	-	-
Pyrite	-	-	0.0	0.0	-	-
Pyroaurite	-	-	-	-	-	3.4
Gibbsite	-	-	-	-	-	-
TOTAL	100	100	100	100	100	100

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

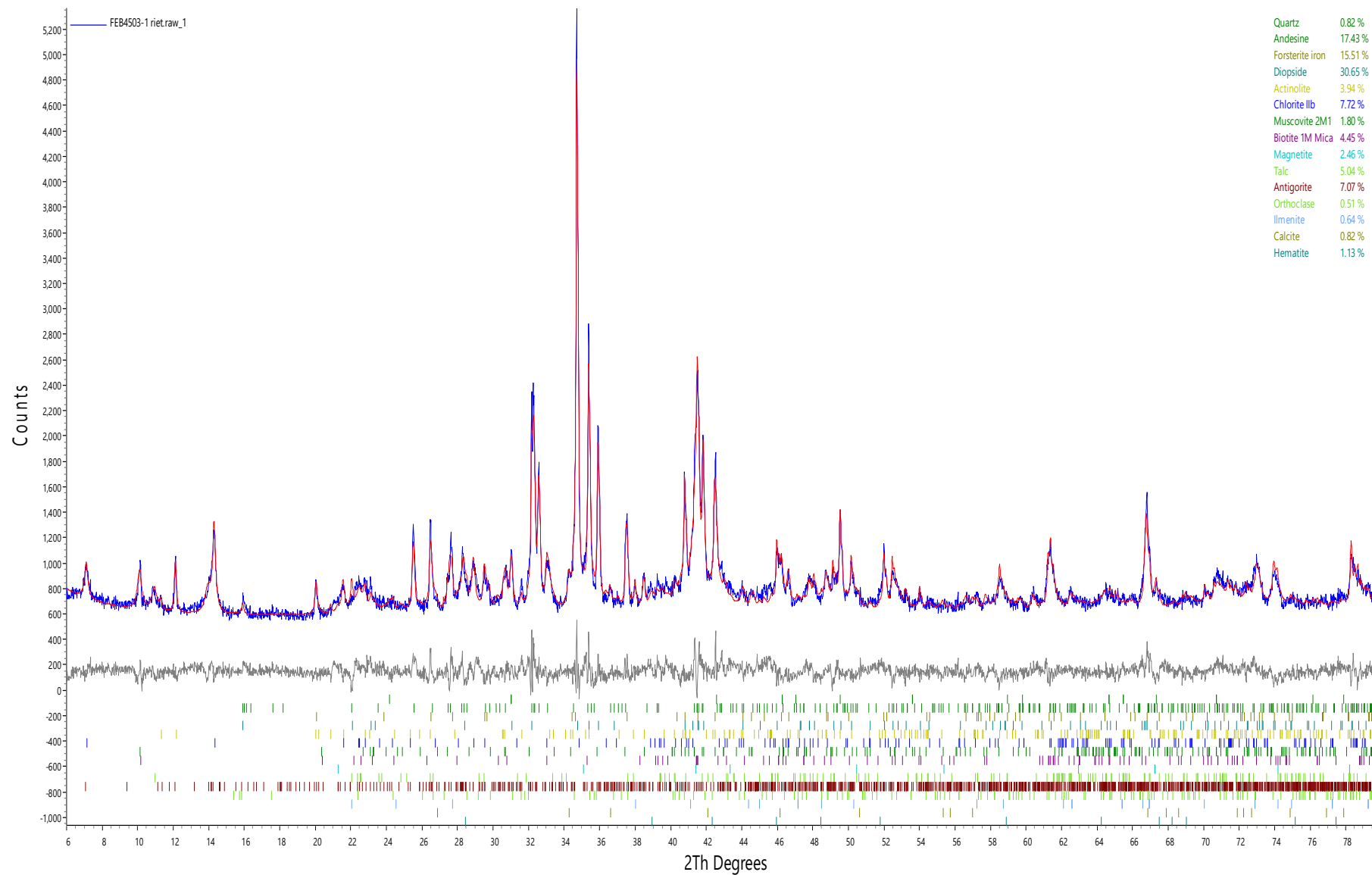
Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

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Mineral/Compound	Formula
Quartz	SiO ₂
Plagioclase	(NaSi ₃ CaAl)AlSi ₂ O ₈
Potassium-feldspar	KAlSi ₃ O ₈
Forsterite	Mg ₂ SiO ₄
Diopside	CaMgSi ₂ O ₆
Actinolite	Ca ₂ (Mg,Fe) ₅ Si ₈ O ₂₂ (OH) ₂
Chlorite	(Fe,(Mg,Mn) ₅ Al)(Si ₃ Al)O ₁₀ (OH) ₈
Muscovite	KAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Biotite	K(Mg,Fe) ₃ (AlSi ₃ O ₁₀)(OH) ₂
Magnetite	Fe ₃ O ₄
Talc	Mg ₃ Si ₄ O ₁₀ (OH) ₂
Serpentine	Mg ₃ Si ₂ O ₅ (OH) ₄
Ilmenite	FeTiO ₃
Calcite	CaCO ₃
Hematite	Fe ₂ O ₃
Brucite	Mg(OH) ₂
Wustite	FeO
Pyrrhotite	Fe ₉ S ₉
Zoisite	Ca ₂ Al ₂ Si ₃ O ₁₂ (OH)
Grossular	Ca ₃ Al ₂ Si ₃ O ₁₂
Dolomite	CaMg(CO ₃) ₂
Paragonite	NaAl ₂ (AlSi ₃ O ₁₀)(OH) ₂
Rutile	TiO ₂
Ankerite	CaFe(CO ₃) ₂
Siderite	FeCO ₃
Pyrite	FeS ₂
Pyroaurite	Mg ₆ Fe ³⁺ ₂ (CO ₃)(OH) ₁₆ ·4H ₂ O
Gibbsite	Al(OH) ₃

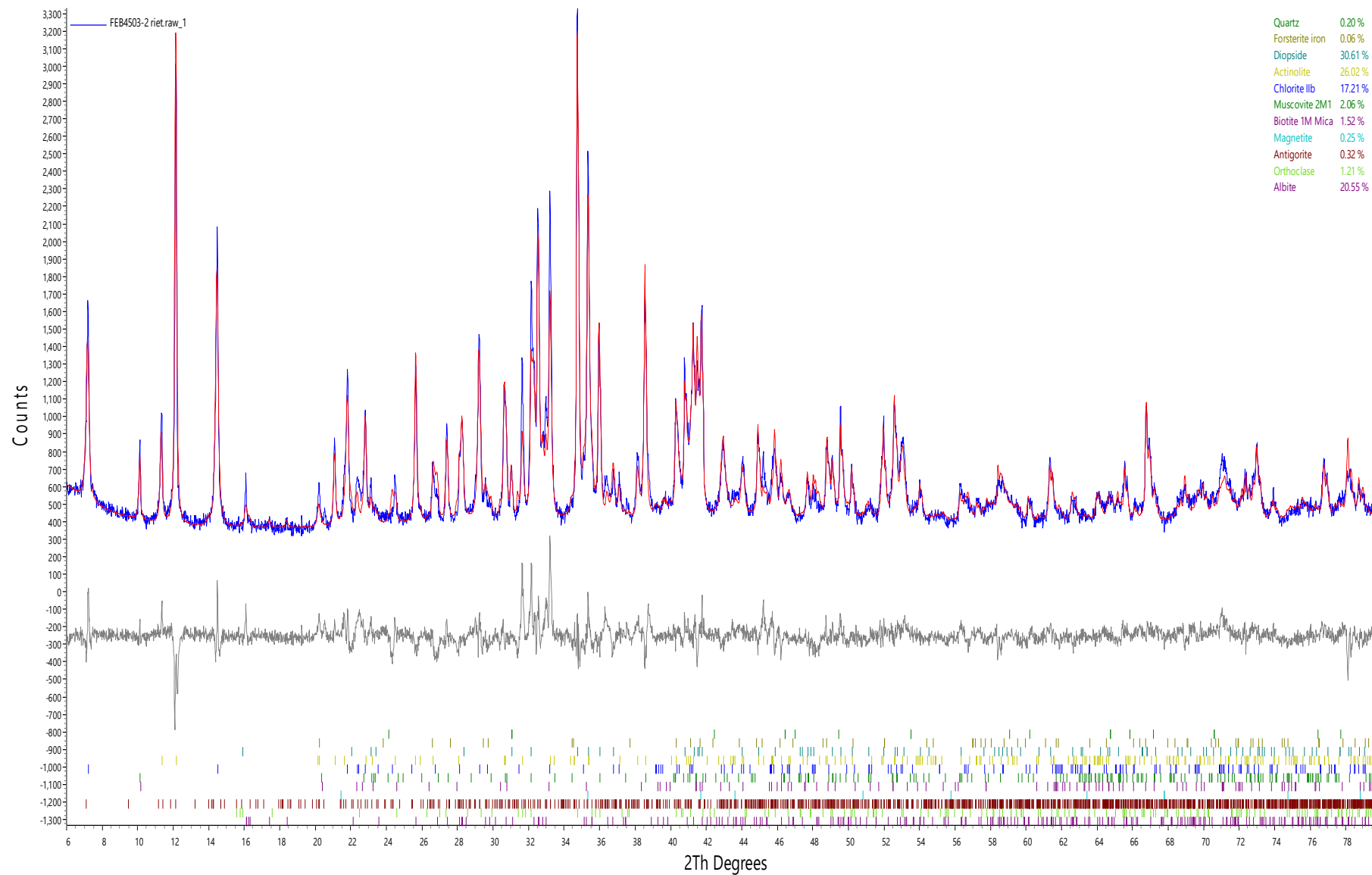


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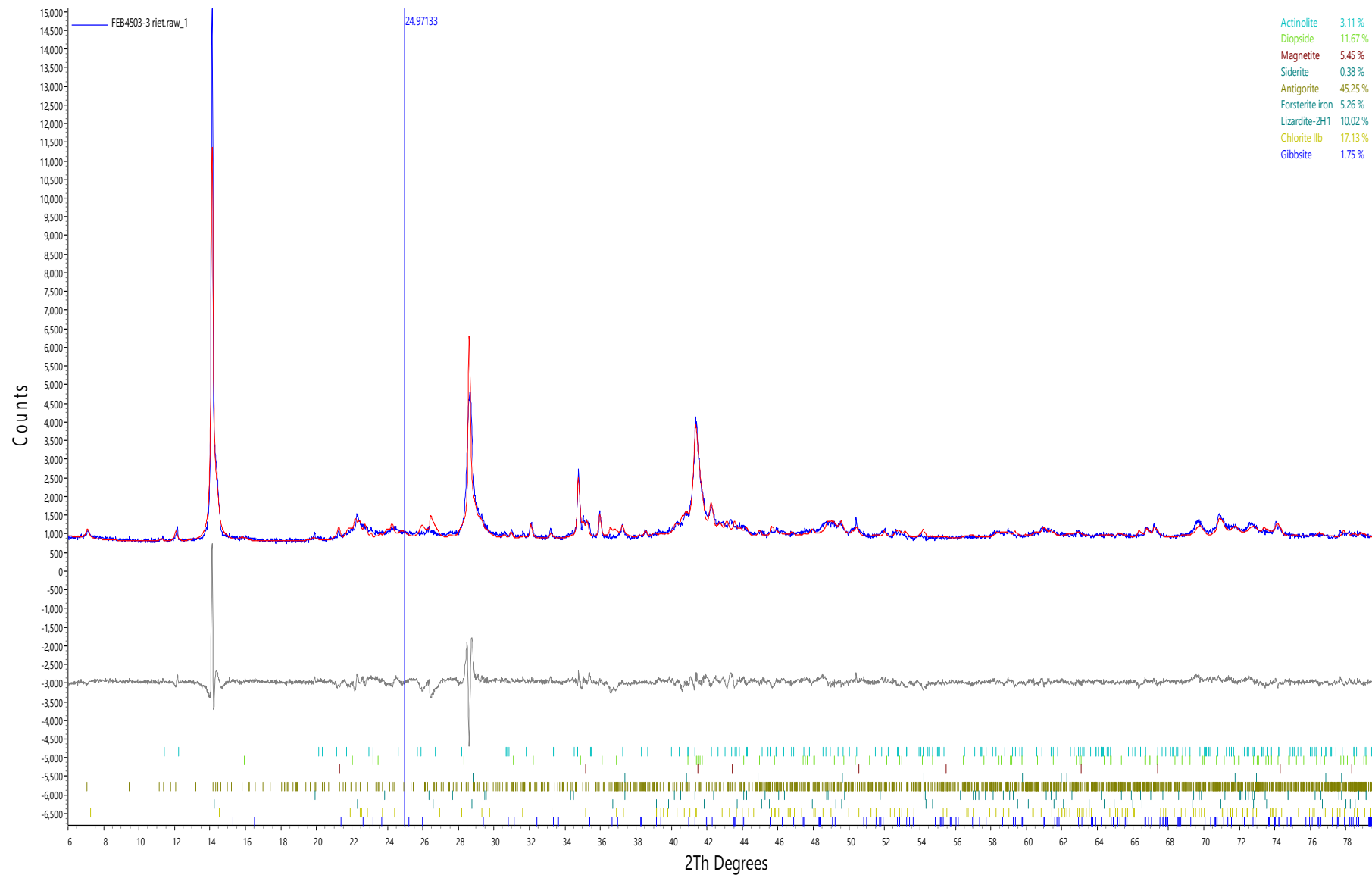


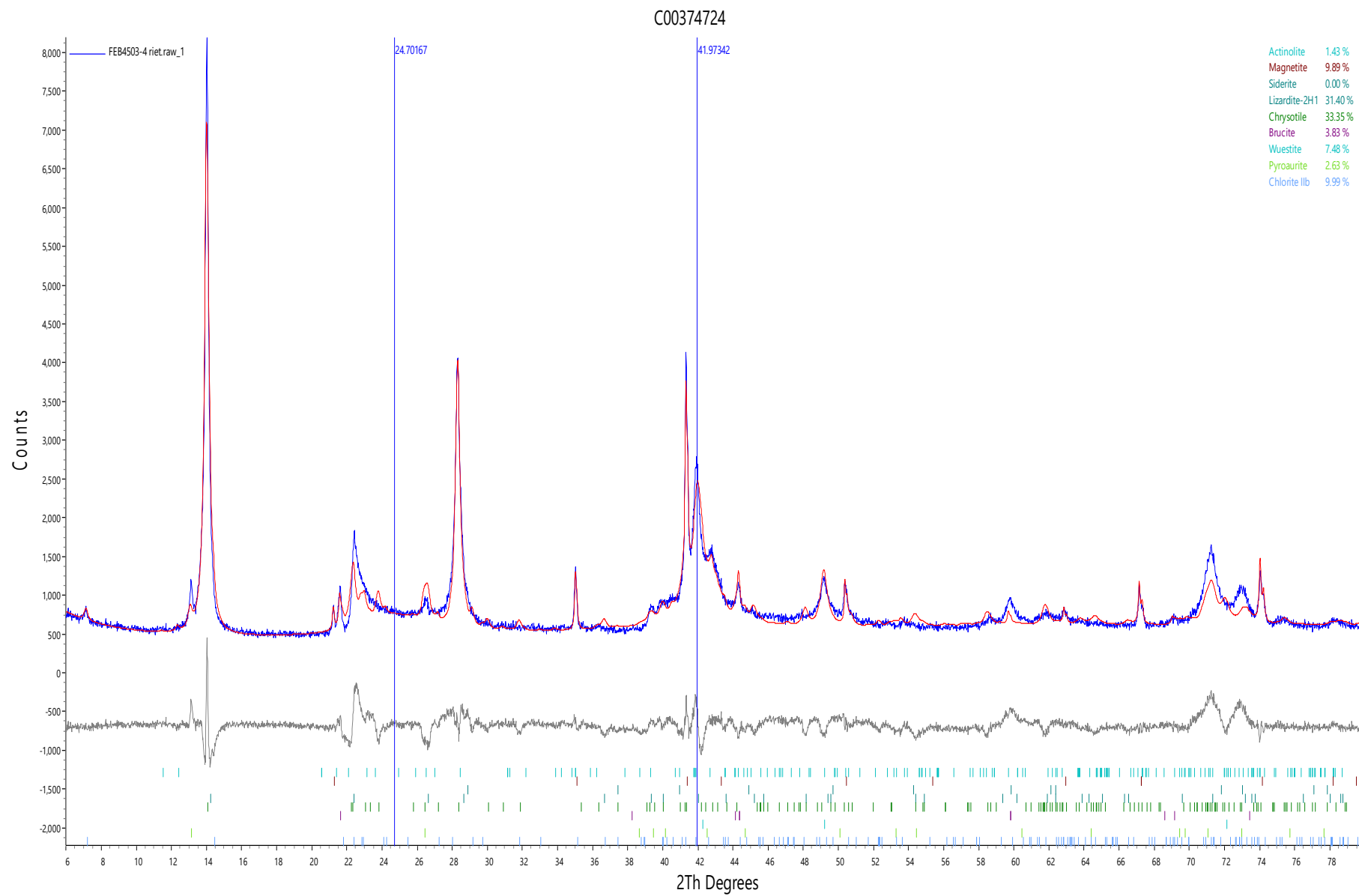
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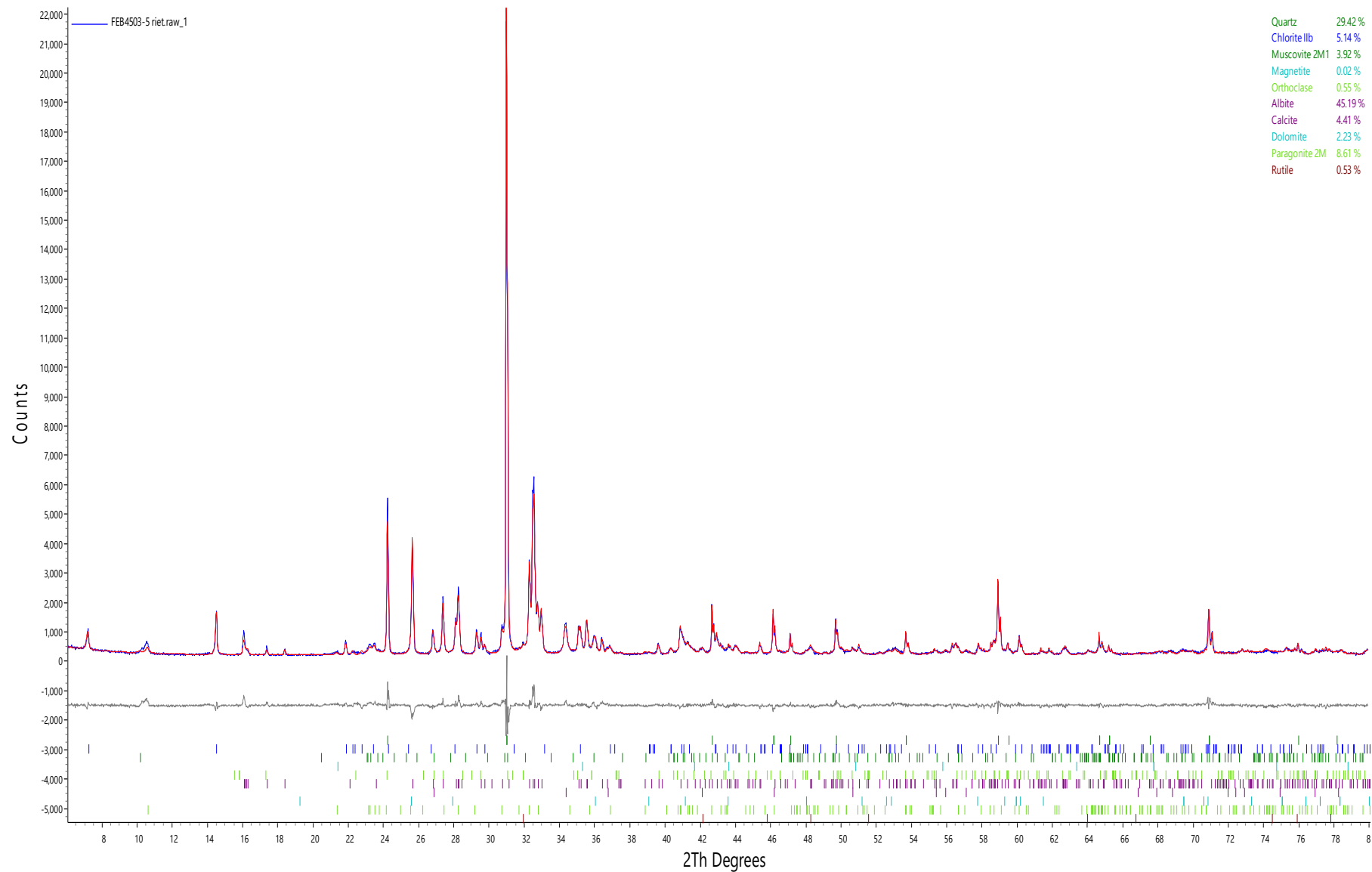
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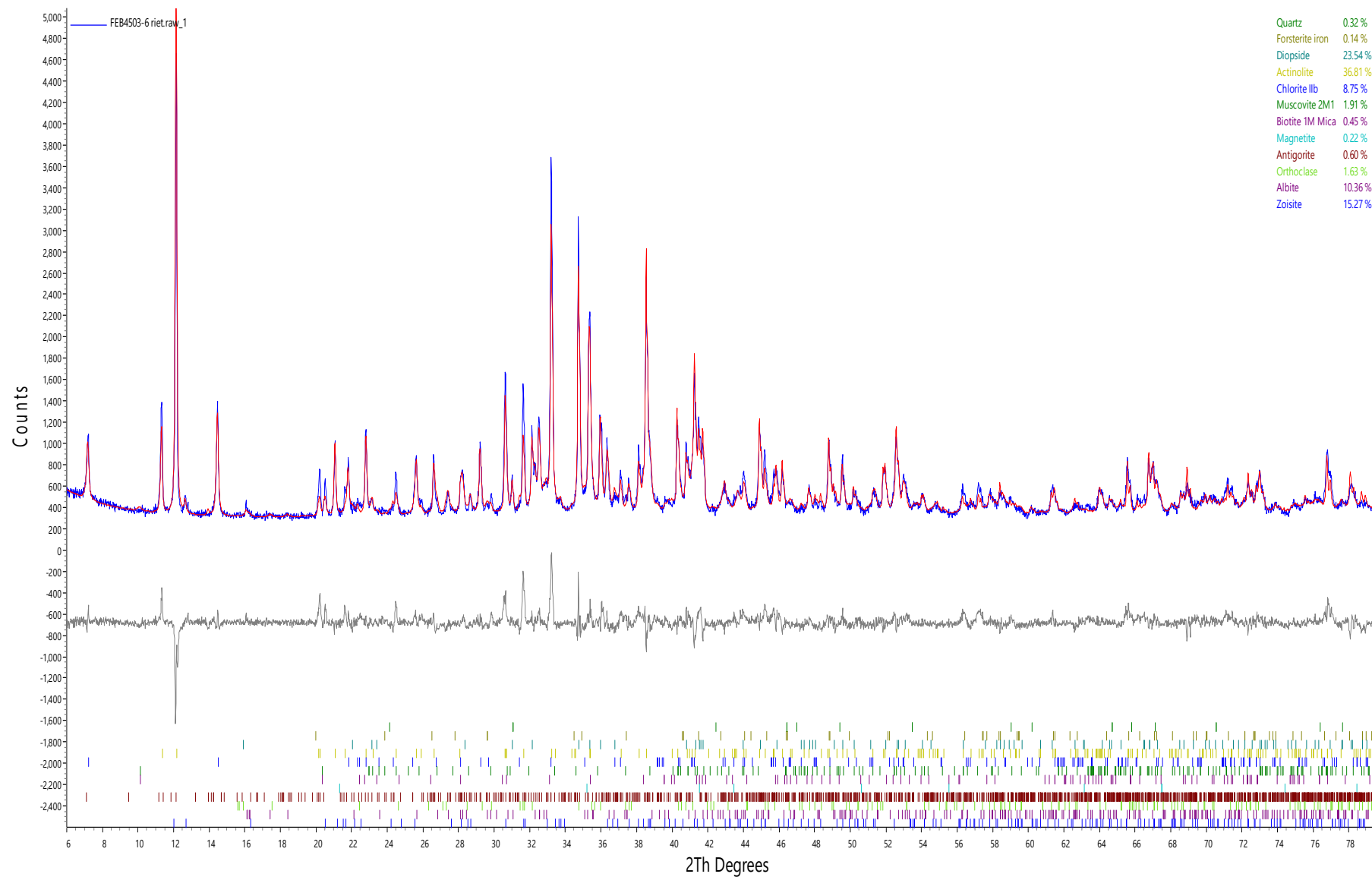


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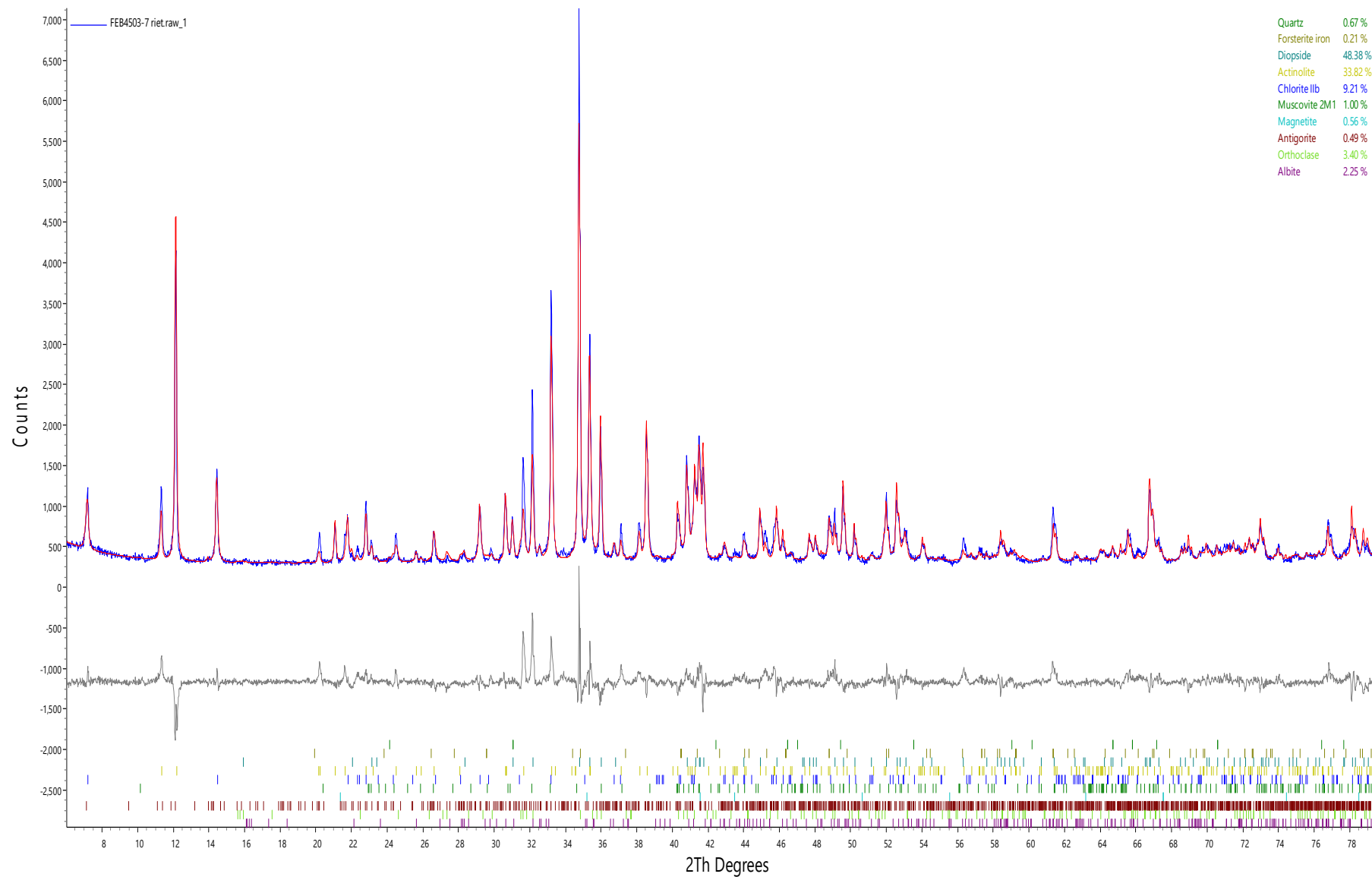


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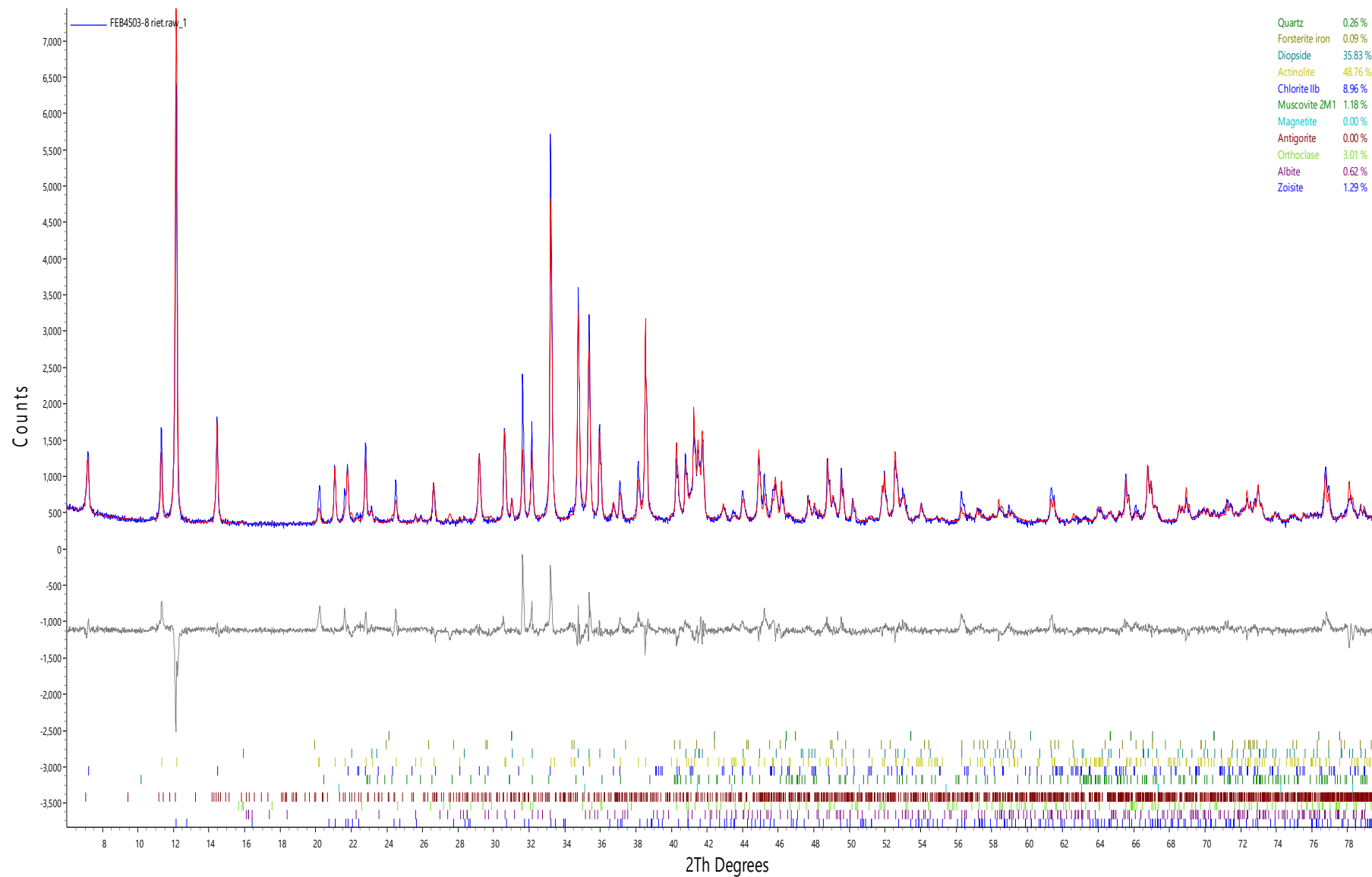


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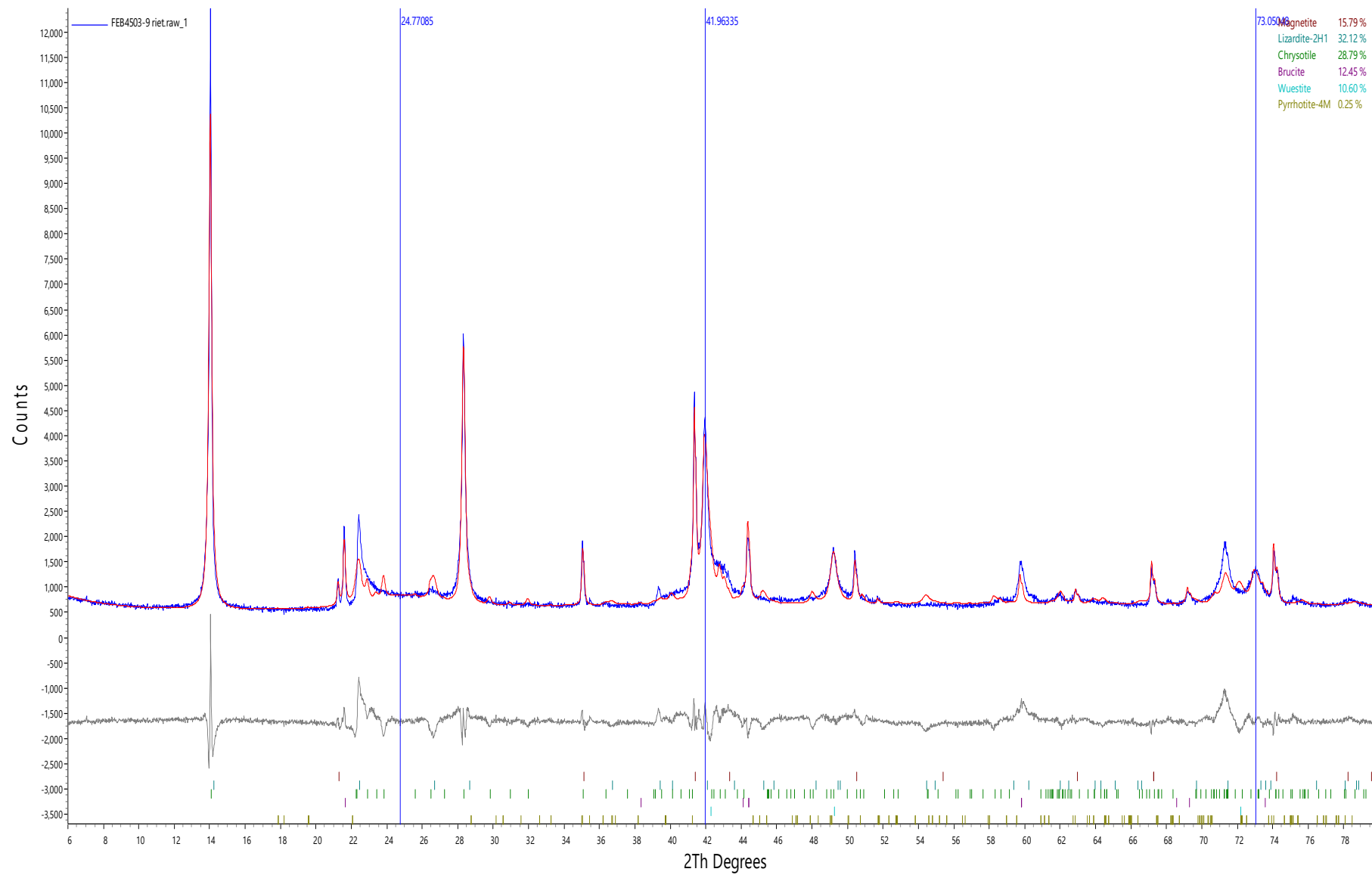


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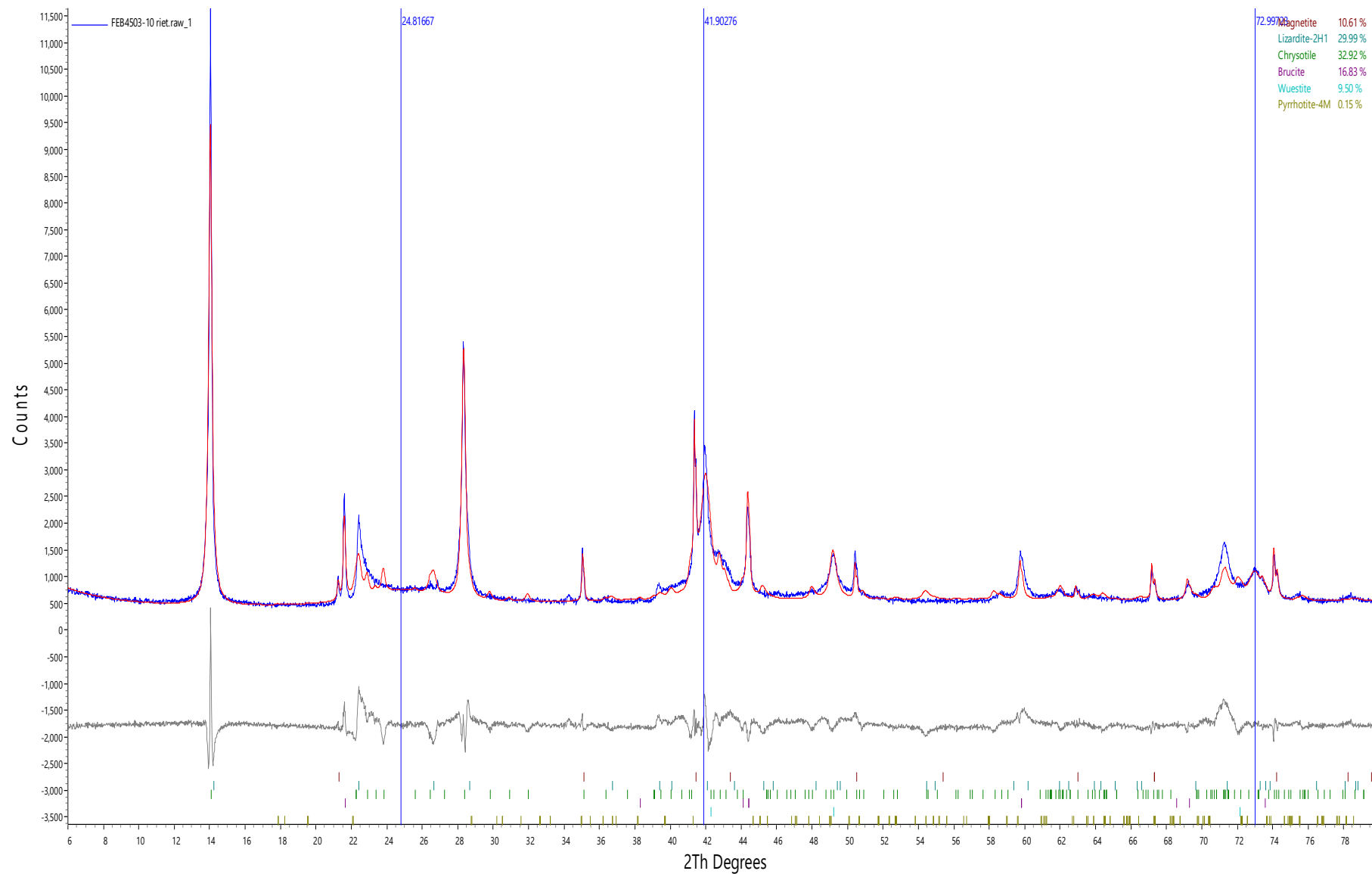


Dunite CR21-146 510-520



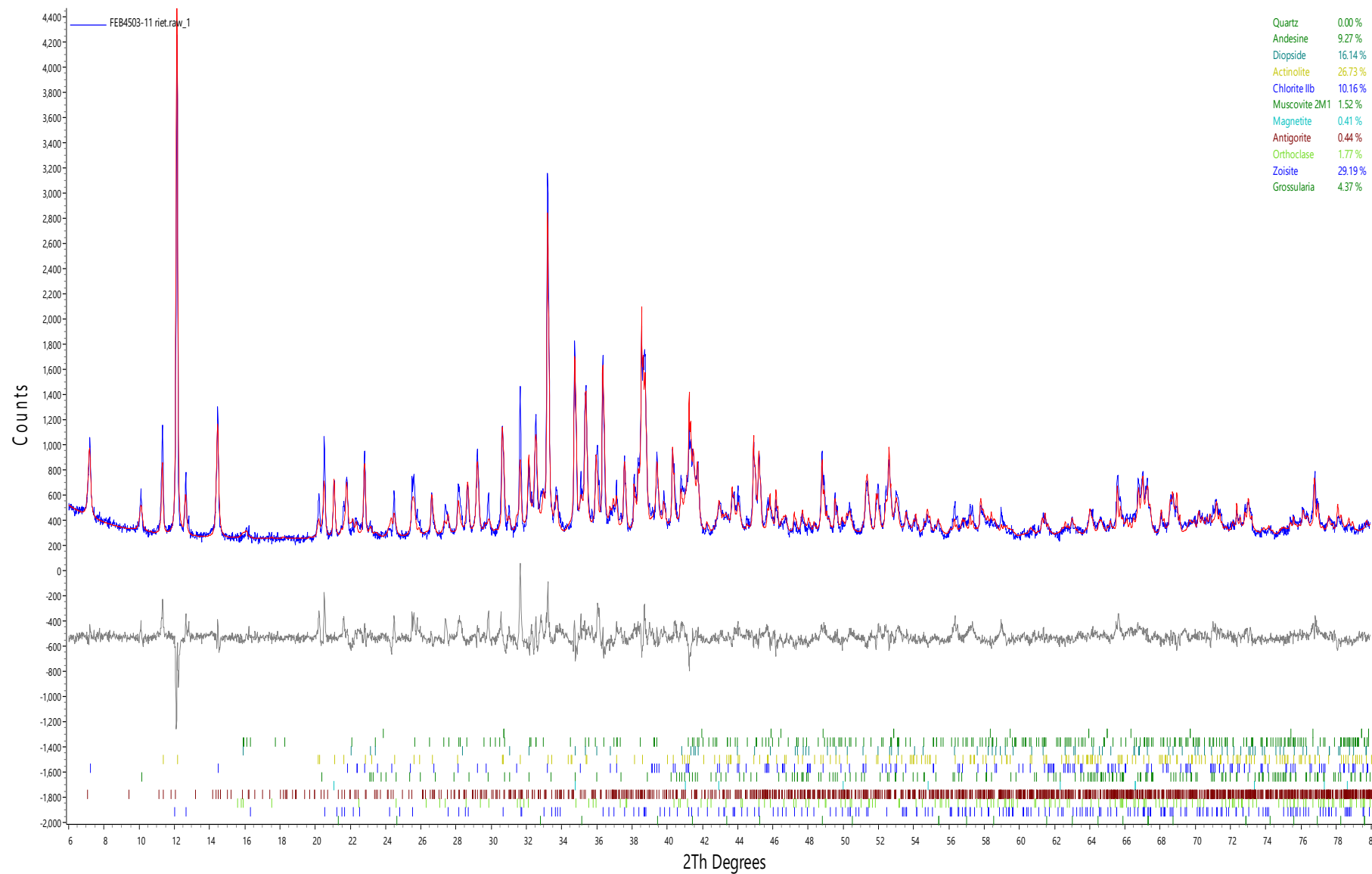


Dunite CR22-193A 200-210



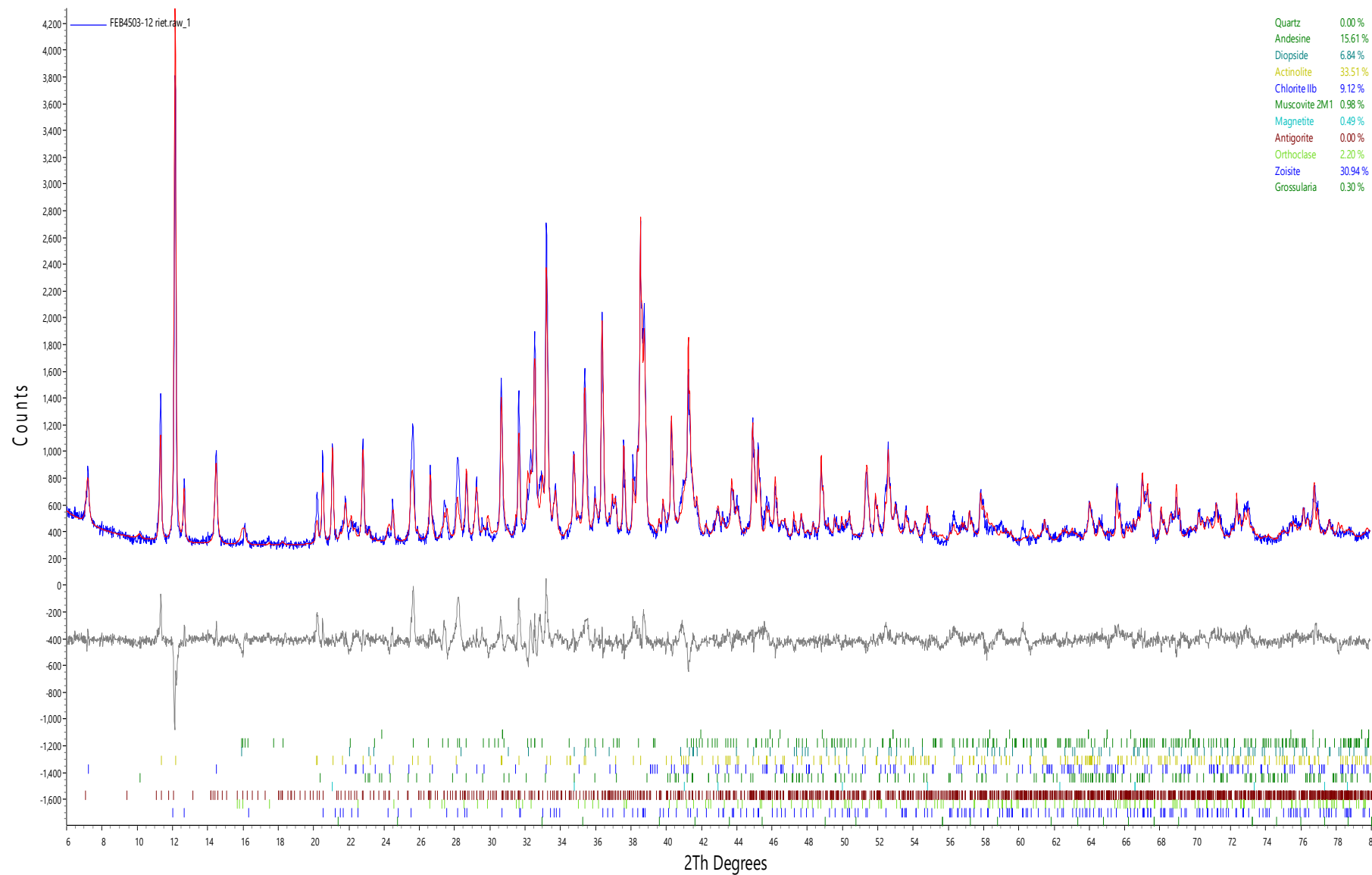


Gabbro CR21-GT-04B 350-360



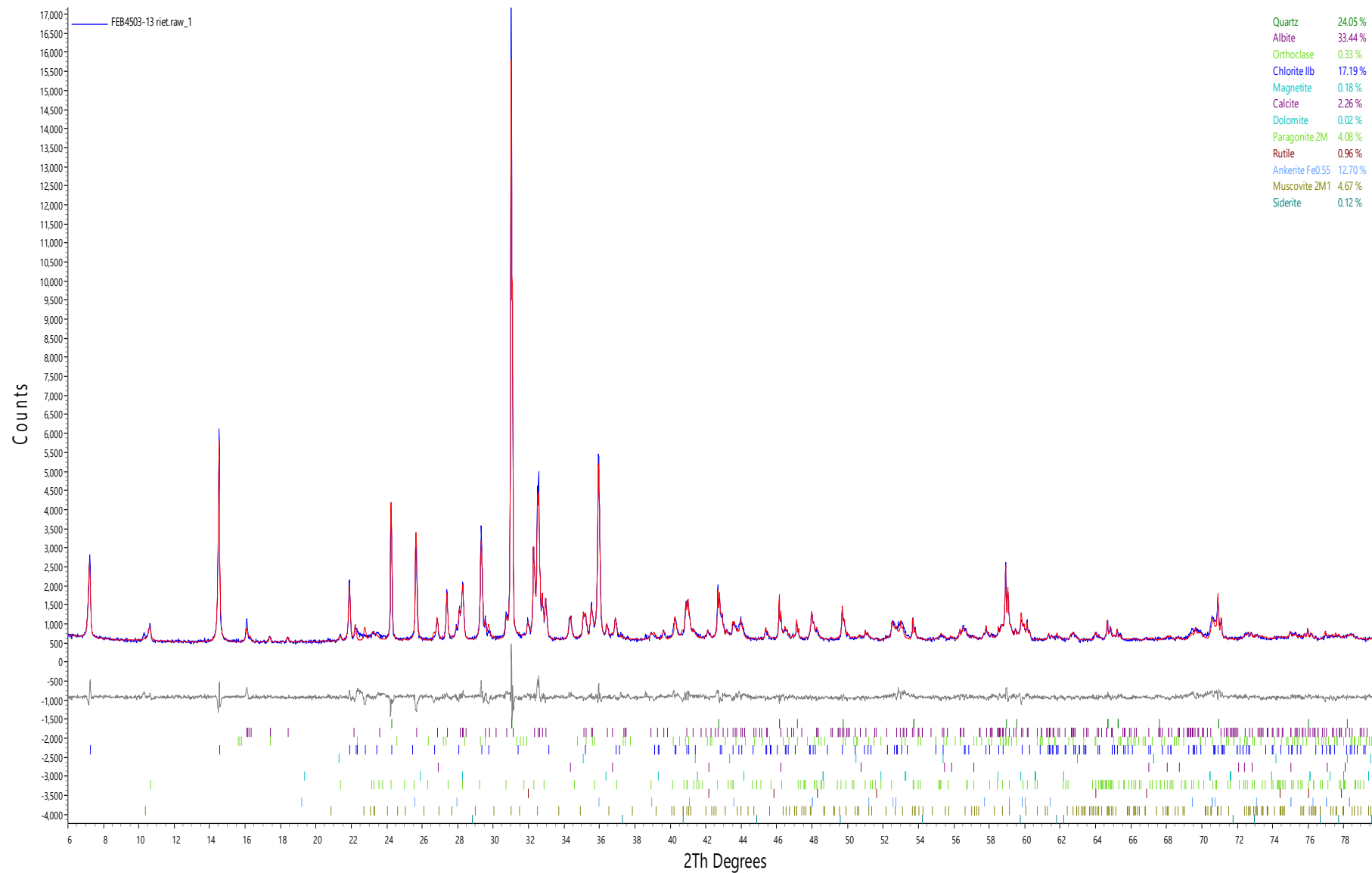


Gabbro CR20-41 365-375



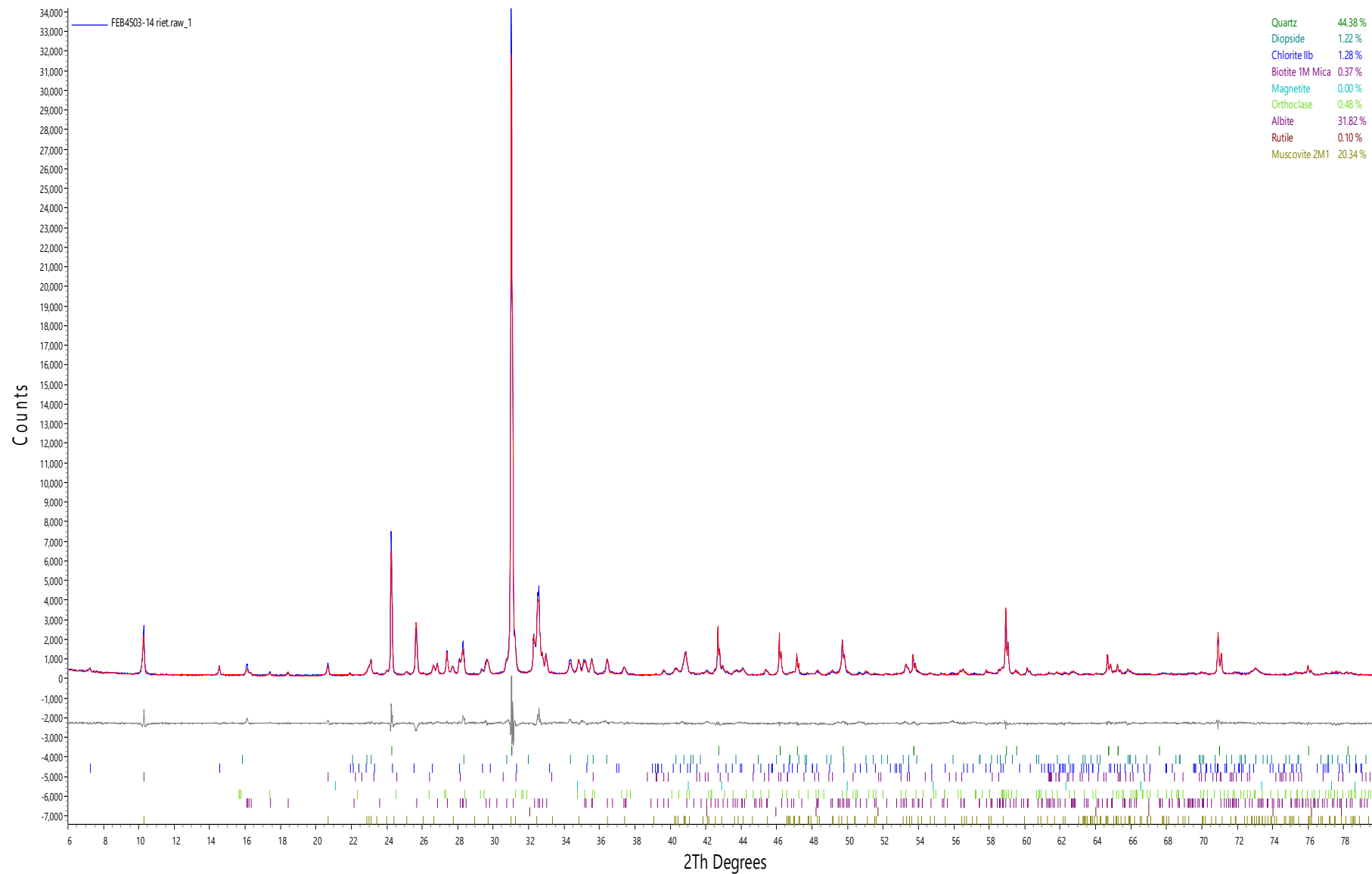


Basalt CR21-GT-09B 490-500

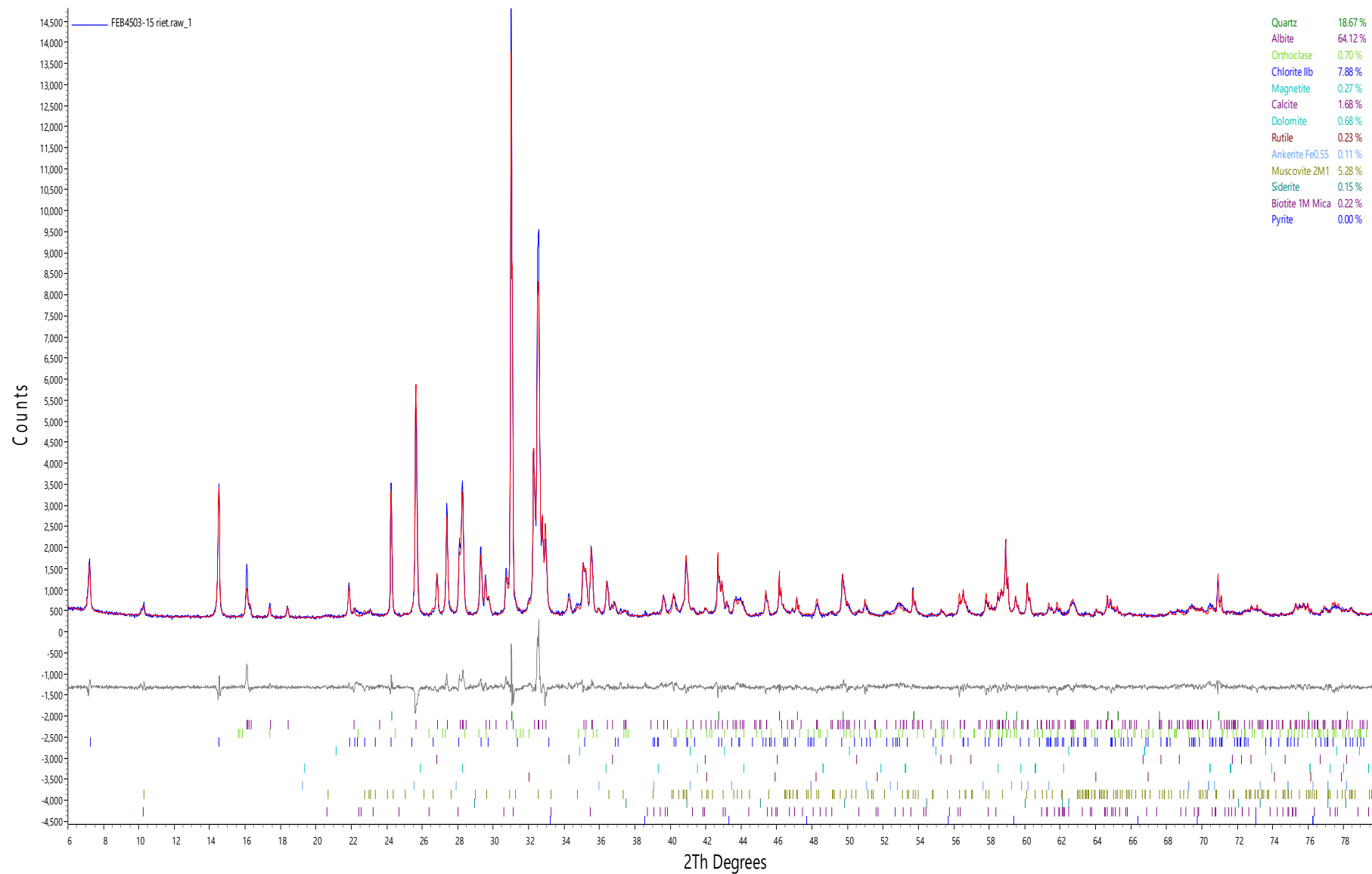




Basalt CR22-GT-11 300-310

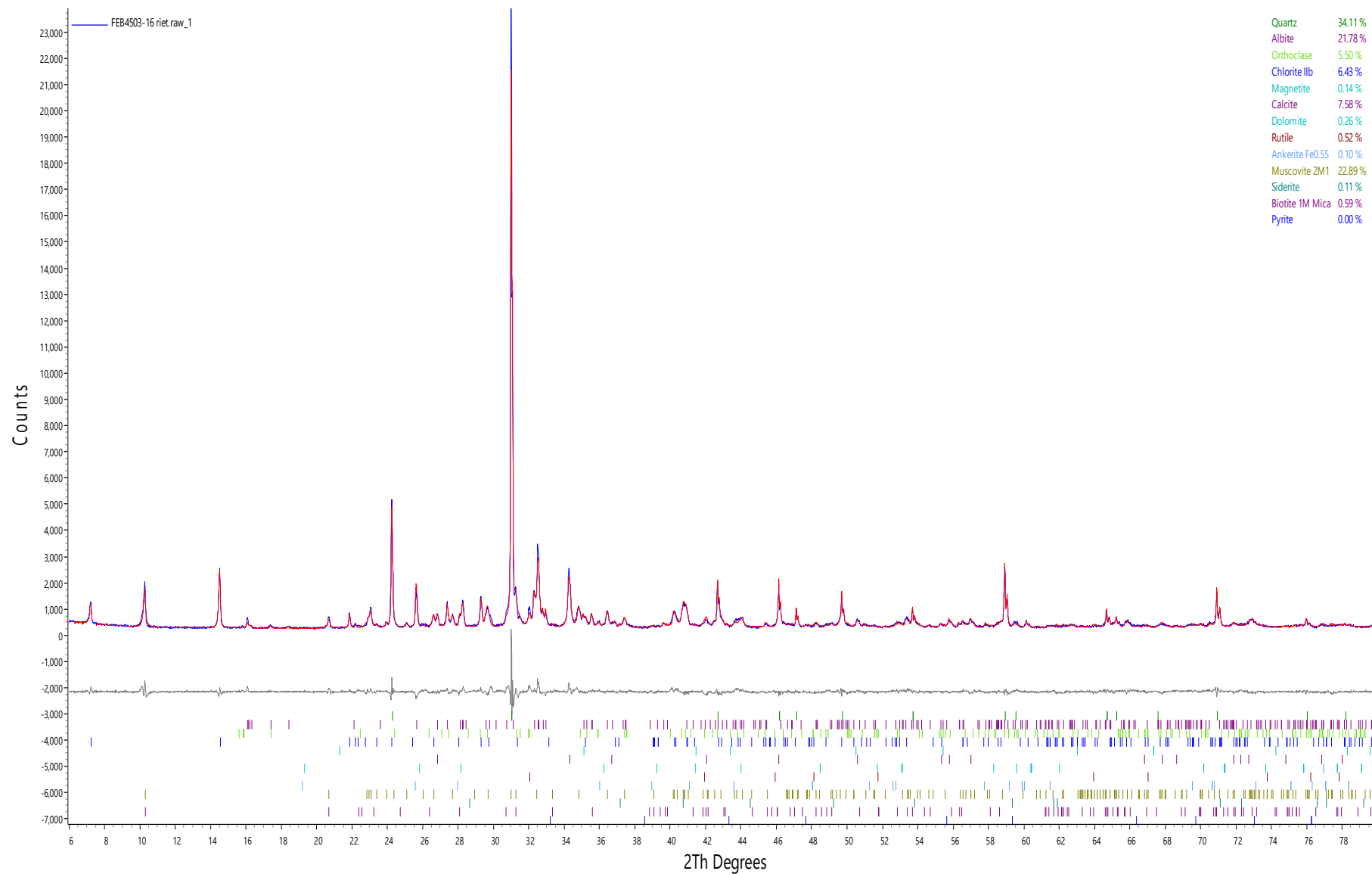


Basalt CR21-GT-03 300-310



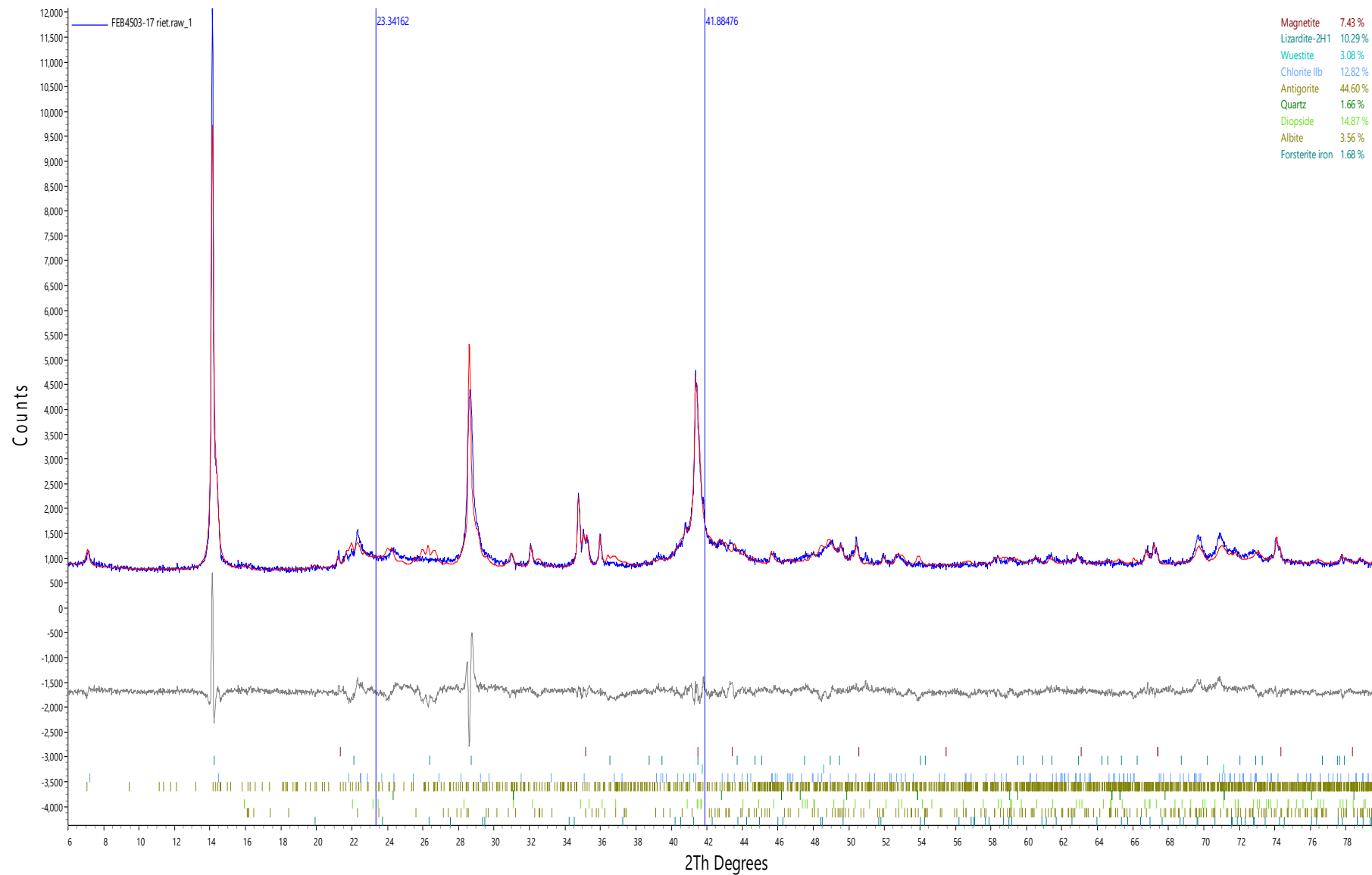


Basalt CR21-GT-07 510-520



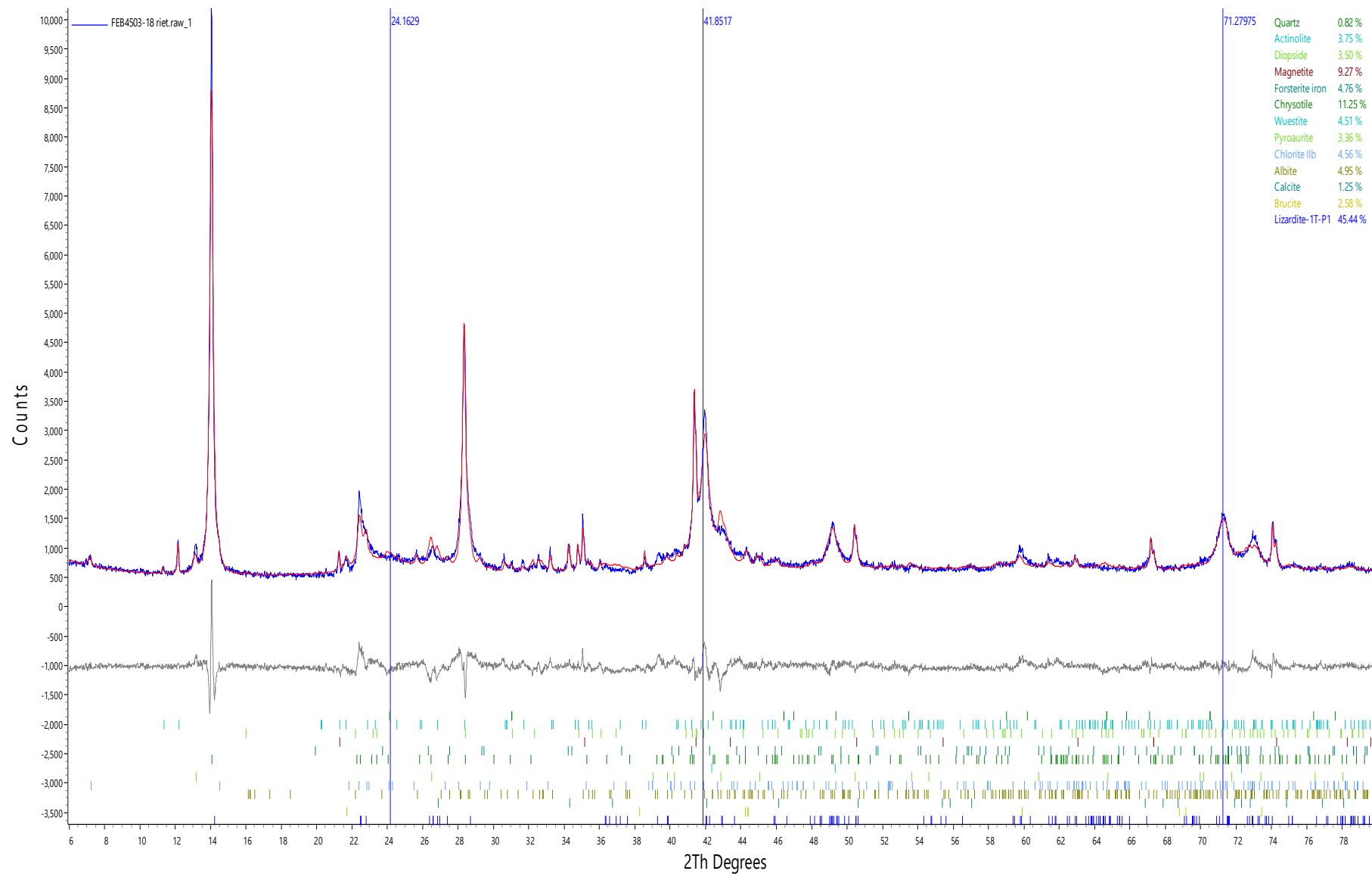


Peridotite CR20-34 555-565





Peridotite-01 CR20-78 100-110



12-April-2022

Canada Nickel Company

Attn : Jennifer Gignac

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Date Rec. : 01 March 2022
LR Report: CA19022-MAR22
Reference: Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: CANA-13	6: CBS-003	7: CDS-003
Paste pH [no unit]	07-Apr-22	08:45	11-Apr-22	14:04	9.70	9.68	9.82
Fizz Rate [no unit]	07-Apr-22	08:45	11-Apr-22	14:04	2	2	2
Sample weight [g]	07-Apr-22	08:45	11-Apr-22	14:04	1.92	1.85	2.10
HCl Added [mL]	08-Apr-22	06:45	11-Apr-22	14:04	130.00	100.00	147.00
HCl [Normality]	07-Apr-22	08:45	11-Apr-22	14:04	0.10	0.10	0.10
NaOH [Normality]	07-Apr-22	08:45	11-Apr-22	14:04	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	08-Apr-22	08:45	11-Apr-22	14:04	20.68	21.42	41.70
Final pH [no unit]	08-Apr-22	08:45	11-Apr-22	14:04	1.93	1.70	1.53
NP [t CaCO ₃ /1000 t]	08-Apr-22	08:45	11-Apr-22	14:04	285	212	251
AP [t CaCO ₃ /1000 t]	11-Apr-22	14:04	11-Apr-22	14:05	2.81	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	11-Apr-22	14:05	11-Apr-22	14:05	282	211	249
NP/AP [ratio]	11-Apr-22	14:05	11-Apr-22	14:05	101	170	201
Sulphur (total) [%]	08-Apr-22	14:05	08-Apr-22	17:08	0.125	0.105	0.091
Acid Leachable SO ₄ -S [%]	08-Apr-22	17:07	08-Apr-22	17:08	< 0.04	0.08	0.10
Sulphide [%]	07-Apr-22	10:06	08-Apr-22	17:08	0.09	< 0.04	< 0.04
Carbon (total) [%]	07-Apr-22	09:22	08-Apr-22	17:08	0.154	0.197	0.142
Carbonate (pyro) [%]	07-Apr-22	09:22	07-Apr-22	14:11	0.300	0.285	0.315

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

**Modified ABA with Peroxide addition
(siderite method)**

Project : PO#20446343

LR Report : CA19022-MAR22

*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.02 will be calculated using a 0.02 value.

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Carbon/Sulphur - QCBatchID: ECS0016-APR22													
Carbon (total)	0.005	%	<0.005			2	20				99	70	13
Sulphur (total)	0.005	%	<0.005			4	20				103	70	13
Carbon/Sulphur - QCBatchID: ECS0020-APR22													
Sulphide	0.04	%	< 0.04			4	20	102	80	120			
Carbon/Sulphur - QCBatchID: ECS0023-APR22													
Carbonate (pyro)	0.025	%	< 0.025			1	20				99	70	13

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Modified ABA with Peroxide addition
 (siderite method)

Project : PO#20446343

06-July-2022

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
 Toronto, ON
 M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Date Rec. : 19 May 2022
 LR Report: CA19142-MAY22
 Reference: Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: CBS-001
Sample Date & Time					11-May-22
Paste pH [no unit]	15-Jun-22	08:30	17-Jun-22	09:31	9.58
Fizz Rate [no unit]	15-Jun-22	08:30	17-Jun-22	09:31	2
Sample weight [g]	15-Jun-22	08:30	17-Jun-22	09:31	2.03
HCl Added [mL]	16-Jun-22	07:21	17-Jun-22	09:31	60.00
HCl [Normality]	15-Jun-22	08:30	17-Jun-22	09:31	0.10
NaOH [Normality]	15-Jun-22	08:30	17-Jun-22	09:31	0.10
NaOH to pH=8.3 [mL]	16-Jun-22	09:03	17-Jun-22	09:31	19.45
Final pH [no unit]	16-Jun-22	09:03	17-Jun-22	09:31	1.54
NP [t CaCO3/1000 t]	16-Jun-22	09:03	17-Jun-22	09:31	99.9
AP [t CaCO3/1000 t]	06-Jul-22	08:25	06-Jul-22	08:27	1.25
Net NP [t CaCO3/1000 t]	06-Jul-22	08:25	06-Jul-22	08:27	98.6
NP/AP [ratio]	06-Jul-22	08:25	06-Jul-22	08:27	79.9
Sulphur (total) [%]	28-Jun-22	09:33	06-Jul-22	08:25	0.025
Acid Leachable SO4-S [%]	29-Jun-22	16:50	06-Jul-22	08:25	<0.04
Sulphide [%]	05-Jul-22	12:05	06-Jul-22	08:25	< 0.04
Carbon (total) [%]	28-Jun-22	09:33	28-Jun-22	13:33	0.279
Carbonate (pyro) [%]	28-Jun-22	11:15	28-Jun-22	13:33	0.974



Chris Sullivan, B.Sc., C.Chem
 Project Specialist,
 Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

**Modified ABA with Peroxide addition
(siderite method)**

Project : PO#20446343

LR Report : CA19142-MAY22

*NP (Neutralization Potential)

$$= \frac{50 \times (N \text{ of HCL} \times \text{Total HCL added} - N \text{ NaOH} \times \text{NaOH added})}{\text{Weight of Sample}}$$

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.02 will be calculated using a 0.02 value.



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Modified ABA with Peroxide addition (siderite method)

Project : PO#20446343

LR Report : CA19142-MAY22

Quality Control Report

Inorganic Analysis																
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material					
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)				
													Low	High	Low	High
Carbon/Sulphur - QCBatchID: ECS0015-JUL22																
Sulphide	0.04	%	< 0.04			ND	20	111	80	120						
Carbon/Sulphur - QCBatchID: ECS0076-JUN22																
Carbon (total)	0.005	%	<0.005			1	20				99	70	130			
Sulphur (total)	0.005	%	<0.005			7	20				100	70	130			
Carbon/Sulphur - QCBatchID: ECS0077-JUN22																
Carbonate (pyro)	0.025	%	< 0.025			5	20				105	70	130			

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Aqua Regia Digest**Project : PO#20446343****08-April-2022****Canada Nickel Company****Attn : Jennifer Gignac**

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
 Toronto, ON
 M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Date Rec. : 01 March 2022
LR Report: CA19023-MAR22
Reference: Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: CANA-13	6: CBS-003	7: CDS-003
Mercury [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 0.05	< 0.05	< 0.05
Silver [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 1	< 1	< 1
Arsenic [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 0.5	< 0.5	< 0.5
Aluminum [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	1700	1600	2900
Barium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	0.30	0.45	0.49
Beryllium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 0.02	< 0.02	< 0.02
Bismuth [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 0.09	< 0.09	< 0.09
Calcium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	530	380	670
Cadmium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 0.02	< 0.02	< 0.02
Cobalt [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	70	80	83
Chromium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	1100	1600	2300
Copper [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	87	58	28
Iron [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	34000	45000	30000
Potassium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	39	28	34
Lithium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 2	< 2	< 2
Magnesium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	280000	250000	260000
Manganese [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	660	910	820
Molybdenum [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	0.2	0.2	0.1
Sodium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	79	79	62
Nickel [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	1900	1500	980
Phosphorus [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	150	120	170
Lead [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	0.17	0.10	0.77
Antimony [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 6	< 6	< 6
Selenium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 0.7	< 0.7	< 0.7
Tin [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 0.5	< 0.5	< 0.5
Strontium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	1.2	1.5	1.7
Titanium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	76	74	84
Thallium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	< 0.02	< 0.02	< 0.02
Uranium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	0.009	0.004	0.009
Vanadium [ug/g]	04-Apr-22	20:56	05-Apr-22	14:04	11	14	15

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Aqua Regia Digest

Project : PO#20446343

LR Report : CA19023-MAR22

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis Date Completed	4: Analysis Time Completed	5: CANA-13	6: CBS-003	7: CDS-003
Yttrium [µg/g]	04-Apr-22	20:56	05-Apr-22	14:04	0.56	0.46	0.71
Zinc [µg/g]	04-Apr-22	20:56	05-Apr-22	14:04	18	20	18
	31-Mar-22	---	31-Mar-22	---	1	1	1
Weight [g]	31-Mar-22	---	31-Mar-22	---	14326	1565	1504
Extra Split	31-Mar-22	---	31-Mar-22	---	11	<	<

Chris Sullivan

Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Mercury by CVAAS - QCBatchID: EMS0022-APR22													
Mercury	0.05	ug/g	<0.05			ND	20	94	80	120	NV	70	130
Metals in Soil - Aqua-regia/ICP-MS - QCBatchID: EMS0022-APR22													
Aluminum	3	µg/g	<3			2	20	100	70	130	Error!	70	130
Antimony	6	µg/g	<0.8			ND	20	98	70	130	NV	70	130
Arsenic	0.5	µg/g	<0.5			ND	20	98	70	130	100	70	130
Barium	0.01	µg/g	<0.01			10	20	101	70	130	97	70	130
Beryllium	0.02	µg/g	<0.02			ND	20	92	70	130	NV	70	130
Bismuth	0.09	µg/g	<0.09			ND	20	92	70	130	NV	70	130
Cadmium	0.02	µg/g	<0.02			ND	20	95	70	130	NV	70	130
Calcium	3	µg/g	<3			6	20	97	70	130	NV	70	130
Chromium	0.5	µg/g	<0.5			2	20	97	70	130	95	70	130
Cobalt	0.01	µg/g	<0.01			1	20	97	70	130	109	70	130
Copper	0.1	µg/g	<0.1			1	20	96	70	130	101	70	130
Iron	3	µg/g	<3			1	20	98	70	130	110	70	130
Lead	0.05	µg/g	<0.05			1	20	101	70	130	109	70	130
Lithium	2	µg/g	<2			ND	20	98	70	130	NV	70	130
Magnesium	3	µg/g	<3			2	20	100	70	130	NV	70	130
Manganese	0.1	µg/g	<0.1			1	20	98	70	130	114	70	130
Molybdenum	0.1	µg/g	<0.1			ND	20	92	70	130	NV	70	130
Nickel	0.1	µg/g	<0.1			0	20	96	70	130	105	70	130
Phosphorus	3	µg/g	<3			11	20	94	70	130	NV	70	130
Potassium	3	µg/g	<3			32	20	99	70	130	NV	70	130
Selenium	0.7	µg/g	<0.7			ND	20	100	70	130	NV	70	130
Silver	1	µg/g	<0.01			ND	20	101	70	130	123	70	130
Sodium	3	µg/g	<3			0	20	99	70	130	NV	70	130
Strontium	0.02	µg/g	<0.02			2	20	95	70	130	NV	70	130
Thallium	0.02	µg/g	<0.02			ND	20	101	70	130	NV	70	130
Tin	0.5	µg/g	<0.5			ND	20	108	70	130	NV	70	130
Titanium	0.1	µg/g	<0.1			5	20	95	70	130	NV	70	130
Uranium	0.002	µg/g	<0.002			6	20	96	70	130	NV	70	130
Vanadium	1	µg/g	<1			3	20	97	70	130	113	70	130
Yttrium	0.004	µg/g	<0.004			3	20	98	70	130	NV	70	130
Zinc	0.7	µg/g	<0.7			8	20	96	70	130	100	70	130

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Aqua Regia Digest**Project :** PO#20446343

04-July-2022

Canada Nickel Company**Attn :** Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Date Rec. : 19 May 2022
LR Report: CA19143-MAY22
Reference: Crawford Project

Copy: #1

Phone: 807-620-2207

Fax:

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: CBS-001
Sample Date & Time					11-May-22
Mercury [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	< 0.05
Silver [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	< 1
Arsenic [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	< 0.5
Aluminum [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	5400
Barium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	2.0
Beryllium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	0.048
Bismuth [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	< 0.09
Calcium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	6900
Cadmium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	< 0.02
Cobalt [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	44
Chromium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	2000
Copper [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	9.8
Iron [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	27000
Potassium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	71
Lithium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	< 2
Magnesium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	170000
Manganese [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	640
Molybdenum [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	2.4
Sodium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	24
Nickel [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	520
Phosphorus [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	140
Lead [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	0.51
Antimony [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	< 6
Selenium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	< 0.7
Tin [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	< 0.5
Strontium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	2.0
Titanium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	230
Thallium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	< 0.02
Uranium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	0.015
Vanadium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	23
Yttrium [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	1.9
Zinc [ug/g]	21-Jun-22	12:19	04-Jul-22	14:21	13

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Aqua Regia Digest

Project : PO#20446343

LR Report : CA19143-MAY22

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Mercury by CVAAS	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/EPA 245
Metals in Soil - Aqua-regia/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-005	EPA 3050/EPA 200.8

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Mercury by CVAAS - QCBatchID: EMS0292-JUN22													
Mercury	0.05	ug/g	<0.05			ND	20	106	80	120	NV	70	130
Metals in Soil - Aqua-regia/ICP-MS - QCBatchID: EMS0181-JUN22													
Aluminum	3	µg/g	<3			0	20	91	70	130	NV	70	130
Antimony	6	µg/g	<0.8			ND	20	105	70	130	NV	70	130
Arsenic	0.5	µg/g	<0.5			10	20	96	70	130	97	70	130
Barium	0.01	µg/g	<0.01			0	20	100	70	130	93	70	130
Beryllium	0.02	µg/g	<0.02			2	20	95	70	130	NV	70	130
Bismuth	0.09	µg/g	<0.09			8	20	90	70	130	NV	70	130
Cadmium	0.02	µg/g	<0.02			2	20	95	70	130	NV	70	130
Calcium	3	µg/g	3.8			0	20	97	70	130	NV	70	130
Chromium	0.5	µg/g	<0.5			1	20	99	70	130	90	70	130
Cobalt	0.01	µg/g	<0.01			1	20	98	70	130	105	70	130
Copper	0.1	µg/g	<0.1			0	20	97	70	130	97	70	130
Iron	3	µg/g	<3			0	20	100	70	130	112	70	130
Lead	0.05	µg/g	<0.05			4	20	102	70	130	108	70	130
Lithium	2	µg/g	<2			2	20	101	70	130	NV	70	130
Magnesium	3	µg/g	<3			0	20	101	70	130	NV	70	130
Manganese	0.1	µg/g	<0.1			0	20	98	70	130	118	70	130
Molybdenum	0.1	µg/g	<0.1			1	20	97	70	130	NV	70	130
Nickel	0.1	µg/g	<0.1			0	20	98	70	130	101	70	130
Phosphorus	3	µg/g	<3			4	20	94	70	130	NV	70	130
Potassium	3	µg/g	<3			0	20	100	70	130	NV	70	130
Selenium	0.7	µg/g	<0.7			ND	20	100	70	130	NV	70	130
Silver	1	µg/g	<0.01			6	20	90	70	130	119	70	130
Sodium	3	µg/g	<3			2	20	99	70	130	NV	70	130
Strontium	0.02	µg/g	<0.02			0	20	92	70	130	NV	70	130
Thallium	0.02	µg/g	<0.02			1	20	101	70	130	NV	70	130
Tin	0.5	µg/g				ND	20	103	70	130	NV	70	130
Titanium	0.1	µg/g	<0.1			0	20	101	70	130	NV	70	130
Uranium	0.002	µg/g	0.002			1	20	99	70	130	NV	70	130
Vanadium	1	µg/g	<1			0	20	99	70	130	109	70	130
Yttrium	0.004	µg/g	<0.004			0	20	98	70	130	NV	70	130
Zinc	0.7	µg/g	<0.7			0	20	101	70	130	95	70	130



QEMSCAN DATA

prepared for:

Golder

Canada Nickel - Crawford Project

Project Custom-Min

MI5018-AUG22

September 7, 2022

Prepared by:



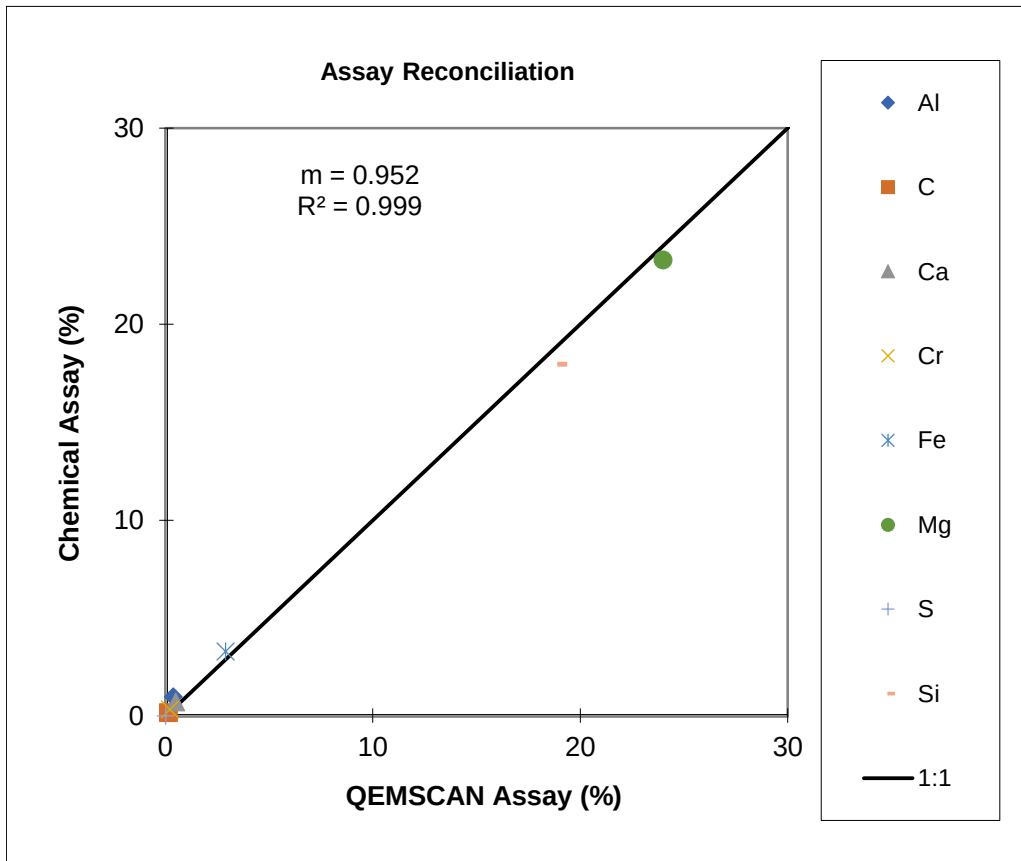
Kathryn sheridan
Senior Mineralogist

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy) (METH# 8.11.1) used by SGS Minerals Services

SGS Canada

P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0
Tel. (705) 652-6365 www.sgs.com www.sgs.com/met
Member of the SGS Group (SGS SA)

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)



Sample/Element	CBS-001
Al (QEMSCAN)	0.38
Al (Chemical)	1.00
C (QEMSCAN)	0.14
C (Chemical)*	0.19
Ca (QEMSCAN)	0.50
Ca (Chemical)	0.74
Cr (QEMSCAN)	0.22
Cr (Chemical)	0.34
Fe (QEMSCAN)	2.91
Fe (Chemical)	3.30
Mg (QEMSCAN)	24.0
Mg (Chemical)	23.3
S (QEMSCAN)	0.01
S (Chemical)**	0.03
Si (QEMSCAN)	18.9
Si (Chemical)	17.9

Notes:

* The chemical assay for carbon is from carbonate carbon.

QEMSCAN analysis can only detect carbon from a carbonate source.

** The chemical assay for sulphur is from total sulphur.

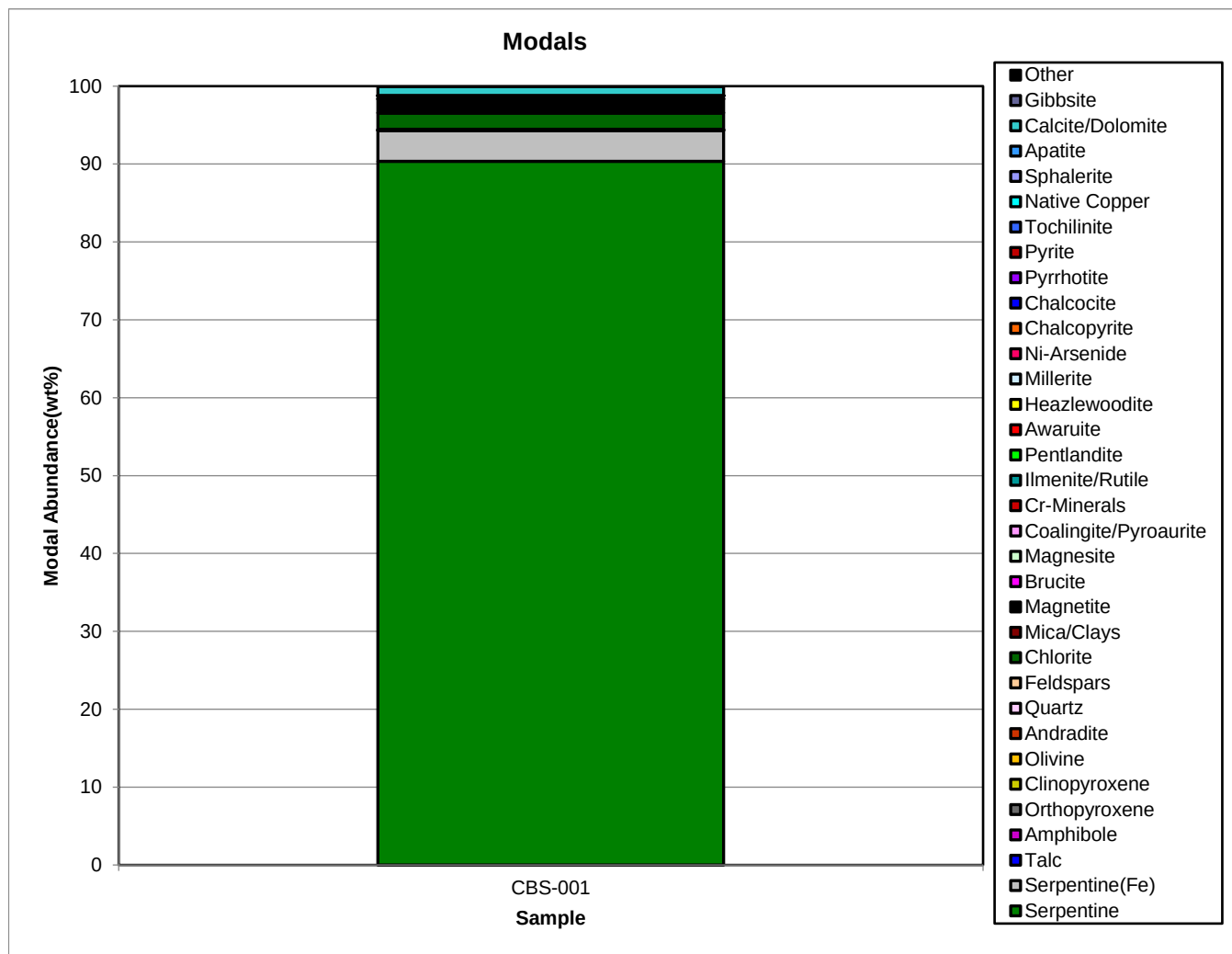
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Modals

Sample		CBS-001
Fraction		-300/+3um
Calculated ESD Particle Size (µm)		24
Mineral Mass (%)	Serpentine	90.4
	Serpentine(Fe)	3.91
	Talc	0.03
	Amphibole	0.01
	Orthopyroxene	0.02
	Clinopyroxene	0.07
	Olivine	0.00
	Andradite	0.00
	Quartz	0.02
	Feldspars	0.04
	Chlorite	2.10
	Mica/Clays	0.05
	Magnetite	1.72
	Brucite	0.01
	Magnesite	0.02
	Coalingite/Pyroaurite	0.03
	Cr-Minerals	0.36
	Ilmenite/Rutile	0.01
	Pentlandite	0.00
	Awaruite	0.00
	Heazlewoodite	0.02
	Millerite	0.00
	Ni-Arsenide	0.00
	Chalcopyrite	0.00
	Chalcocite	0.00
	Pyrrhotite	0.00
	Pyrite	0.00
	Tochilinite	0.00
	Native Copper	0.00
	Sphalerite	0.00
	Apatite	0.01
	Calcite/Dolomite	1.19
	Gibbsite	0.01
	Other	0.01
	Total	100.0
Mean Grain Size by Frequency (µm)	Serpentine	20
	Serpentine(Fe)	7
	Talc	6
	Amphibole	6
	Orthopyroxene	6
	Clinopyroxene	13
	Olivine	8
	Andradite	0
	Quartz	9
	Feldspars	8
	Chlorite	12
	Mica/Clays	9
	Magnetite	10
	Brucite	7
	Magnesite	8
	Coalingite/Pyroaurite	15
	Cr-Minerals	11
	Ilmenite/Rutile	8
	Pentlandite	8
	Awaruite	6
	Heazlewoodite	7
	Millerite	6
	Ni-Arsenide	0
	Chalcopyrite	6
	Chalcocite	6
	Pyrrhotite	6
	Pyrite	7
	Tochilinite	6
	Native Copper	0
	Sphalerite	7
	Apatite	12
	Calcite/Dolomite	9
	Gibbsite	10
	Other	8

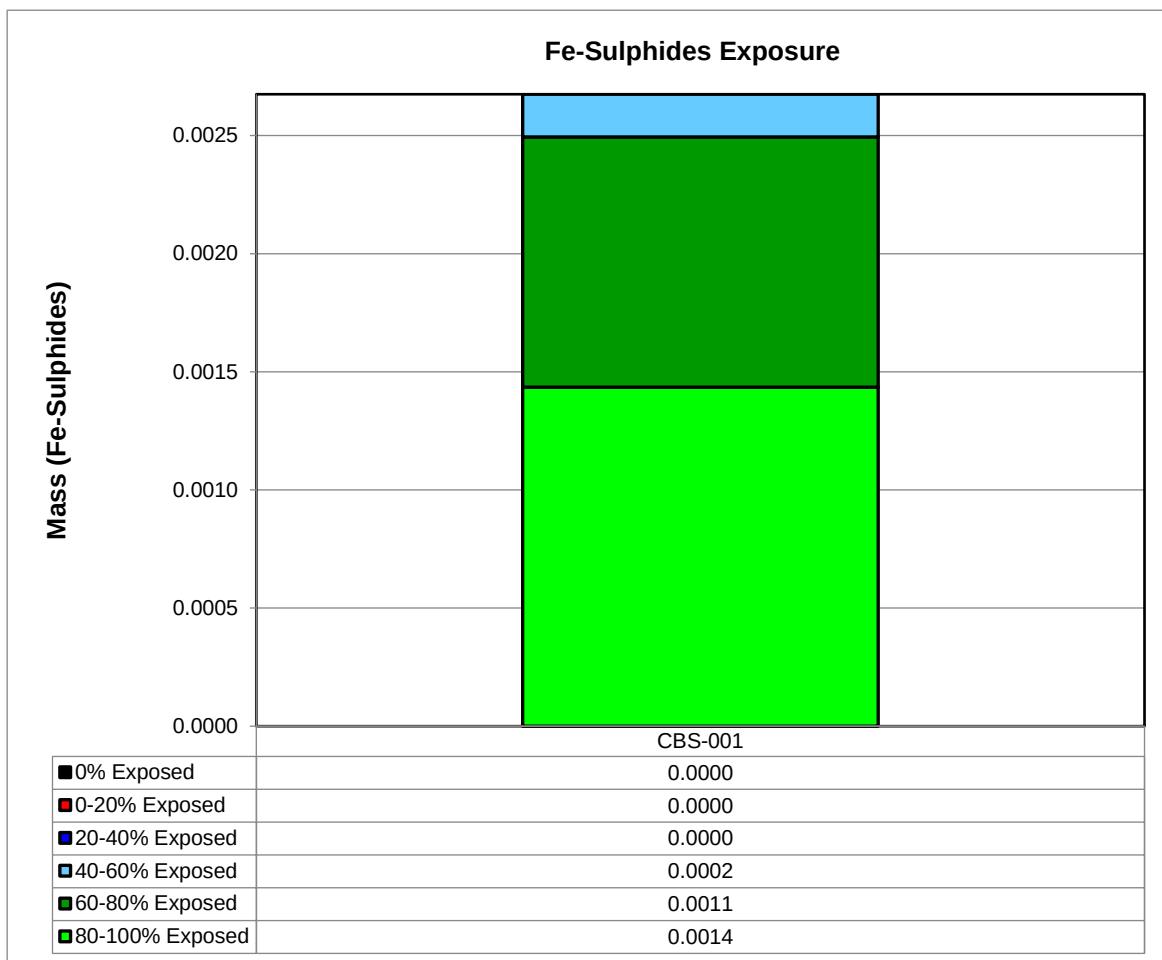
Canada Nickel
Custom-Min
MI5018-AUG22

High Definition Mineralogical Analysis using QEMSCAN
(Quantitative Evaluation of Materials by Scanning
Electron Microscopy)



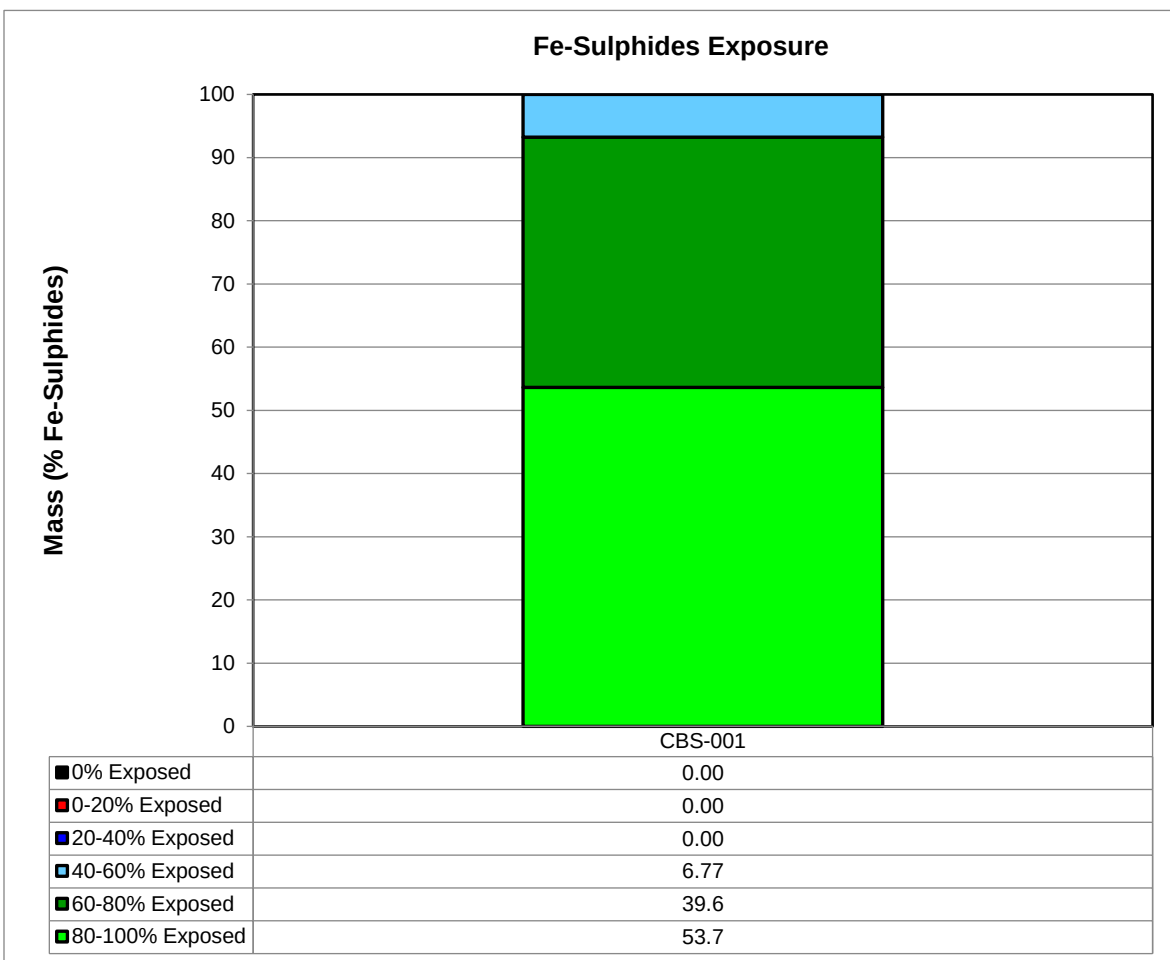
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Fe-Sulphides Exposure



Absolute Mass of Fe-Sulphides Across Samples

Mineral Name	CBS-001
80-100% Exposed	0.0014
60-80% Exposed	0.0011
40-60% Exposed	0.0002
20-40% Exposed	0.0000
0-20% Exposed	0.0000
0% Exposed	0.0000
Total	0.0027



Normalized Mass of Fe-Sulphides Across Samples

Mineral Name	CBS-001
80-100% Exposed	53.7
60-80% Exposed	39.6
40-60% Exposed	6.77
20-40% Exposed	0.00
0-20% Exposed	0.00
0% Exposed	0.00
Total	100.0
Total Exposed	100.0

Sample
CBS-001

Fe-Sulphides Liberation

FeS Liberated

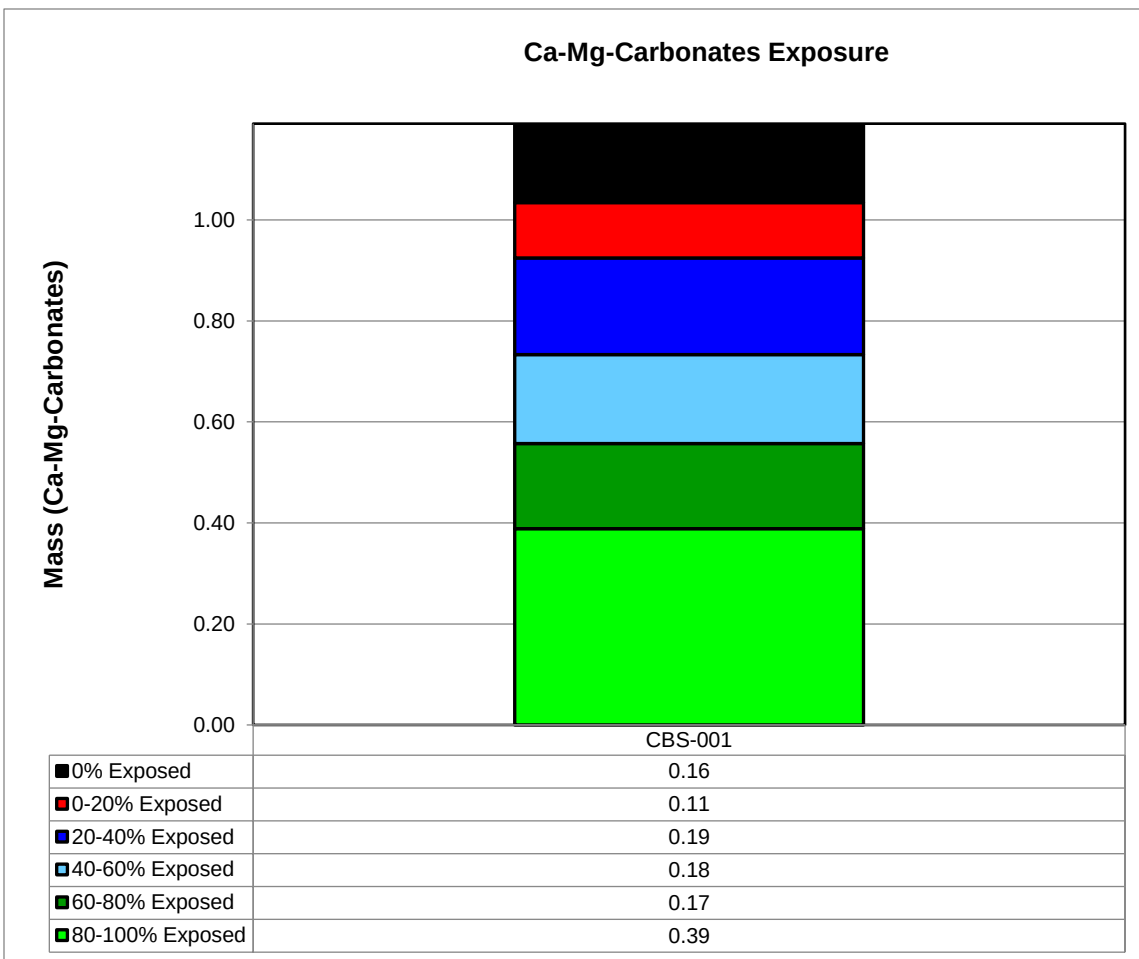
FeS Exposed

FeS Locked

- Background
- Fe-Sulphides
- Other Sulphides
- Serp/Talc/Olivine
- Qtz/Feld/Amph/Gnt
- Chlorite/Mica/Clays
- Mg-Ox/Hydrox/Carb
- Ca-Mg-Carbonates
- Oxides
- Other

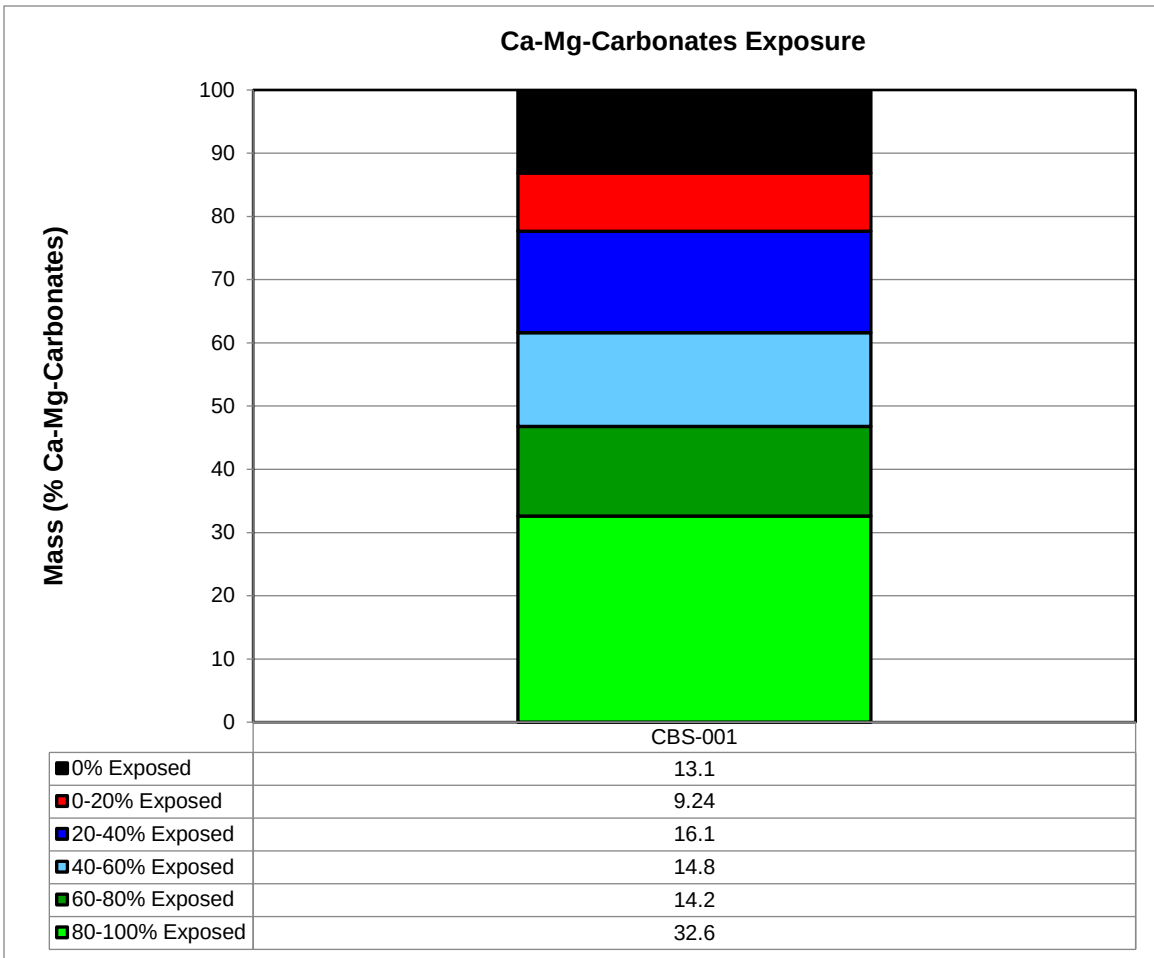
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Ca-Mg-Carbonates Exposure



Absolute Mass of Ca-Mg-Carbonates Across Samples

Mineral Name	CBS-001
80-100% Exposed	0.39
60-80% Exposed	0.17
40-60% Exposed	0.18
20-40% Exposed	0.19
0-20% Exposed	0.11
0% Exposed	0.16
Total	1.19



Normalized Mass of Ca-Mg-Carbonates Across Samples

Mineral Name	CBS-001
80-100% Exposed	32.6
60-80% Exposed	14.2
40-60% Exposed	14.8
20-40% Exposed	16.1
0-20% Exposed	9.24
0% Exposed	13.1
Total	100.0
Total Exposed	86.9

Sample
CBS-001

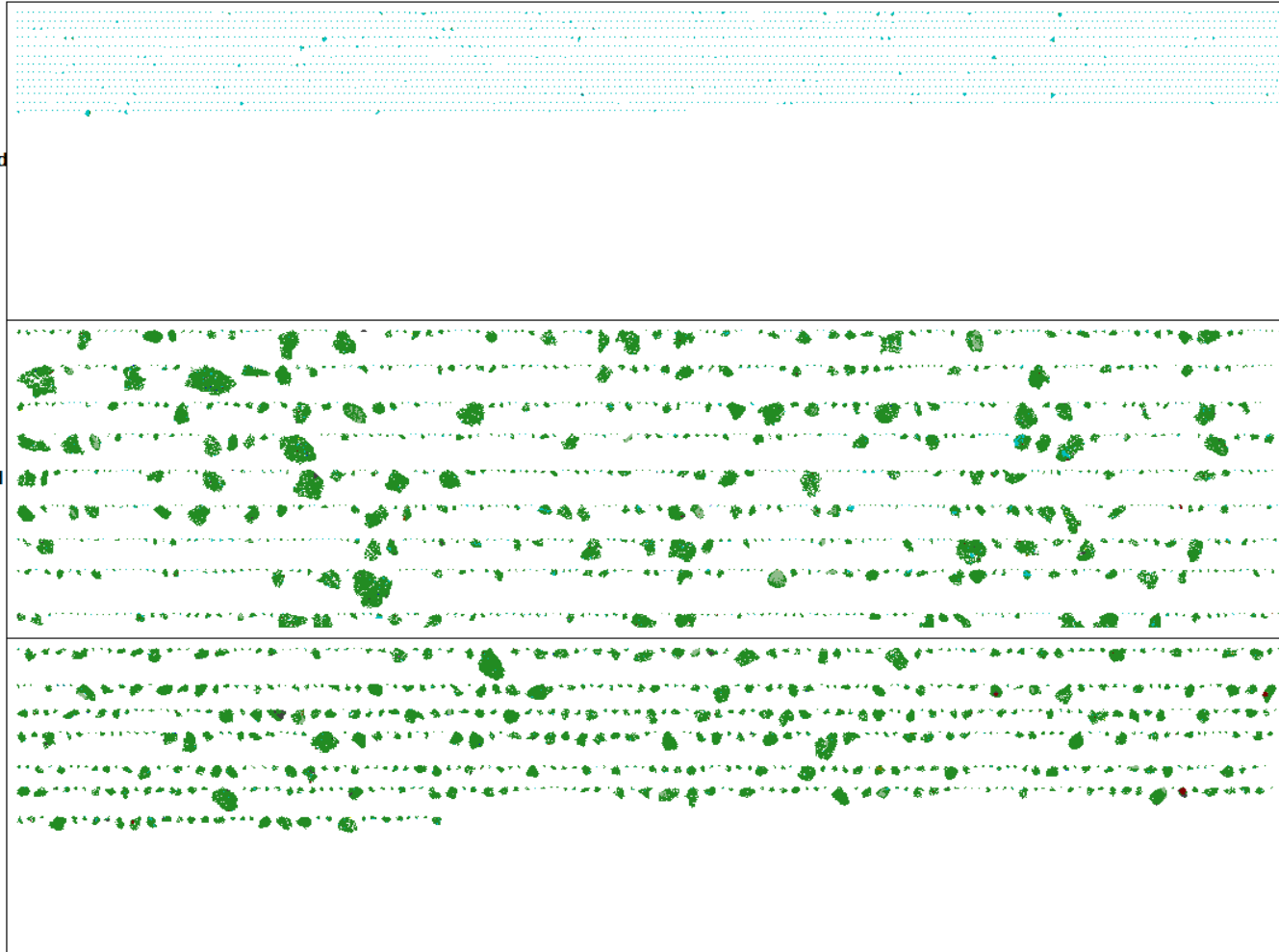
- Background
- Fe-Sulphides
- Other Sulphides
- Serp/Talc/Olivine
- Qtz/Feld/Amph/Gnt
- Chlorite/Mica/Clays
- Mg-Ox/Hydrox/Carb
- Ca-Mg-Carbonates
- Oxides
- Other

Ca-Mg-Carbonates Liberation

Ca-Mg-Carbs Liberated

Ca-Mg-Carbs Exposed

Ca-Mg-Carbs Locked



Canada Nickel
Custom-MIN
MI5018-AUG22

Mineralogical Acid-Base Accounting

Parameter	CBS-001
NP from Ca-Mg Carbonates (tonnes CaCO ₃ /1000 tonnes)	11.7
AP from Fe-Sulphides (tonnes CaCO ₃ /1000 tonnes)	0.1
NP/AP	104.7
Available NP/AP	91.0

Notes:

NP = Neutralization Potential

AP = Acid Generation Potential

"Available NP/AP" takes into account the exposure of Ca Mg-carbonates and Fe-sulphides

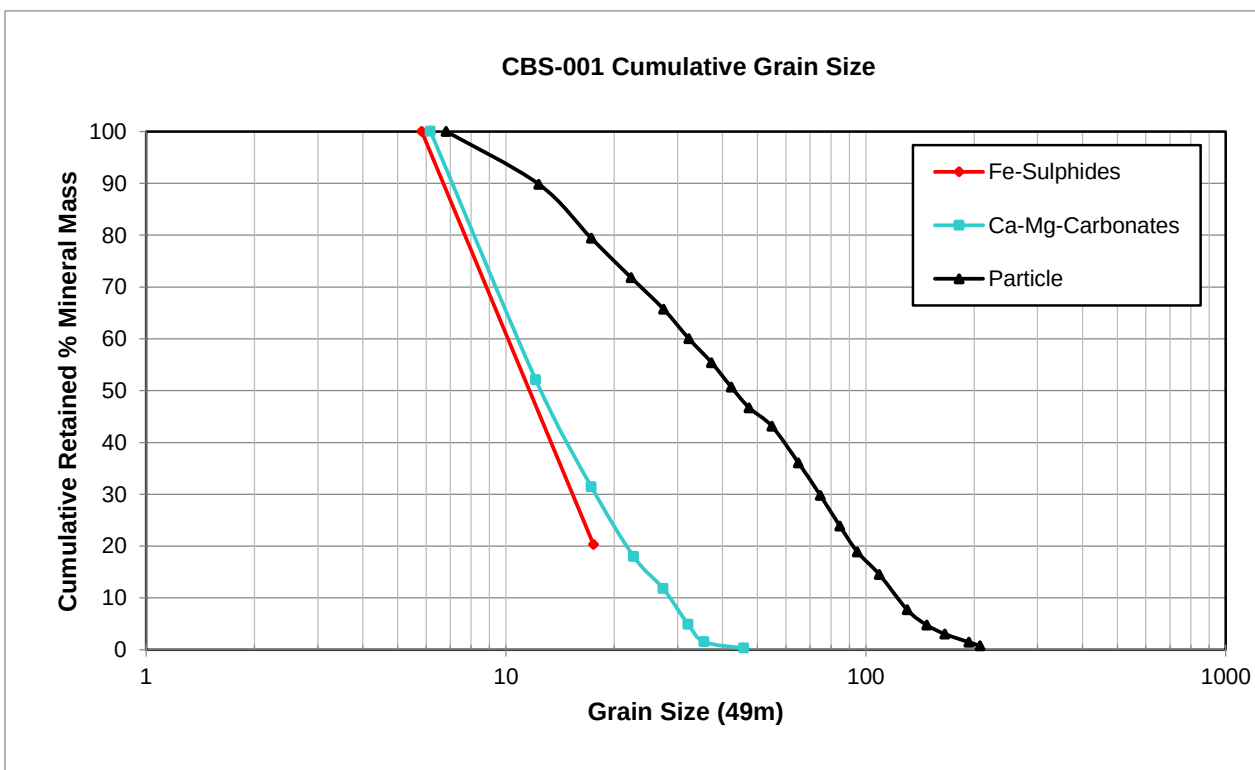
A carbonate/sulphide ratio > 2 indicates probable net neutralizing conditions. Only net acid consuming carbonates (Ca-Mg carbonates) are used for the mineralogical neutralization potential (NP) determination. Only Fe-sulphides are used for the mineralogical acid generation potential (AGP) as they are the main sulphides to contribute to net acidity.

In cases of low carbonate and sulphide abundance (typically <0.5 wt.% of each), values are only semi-quantitative due to low particle statistics for study. More replicate analyses are recommended to properly quantify the NP/AGP potential of these samples.

Calculations assume that Fe in ankerite doesn't oxidize

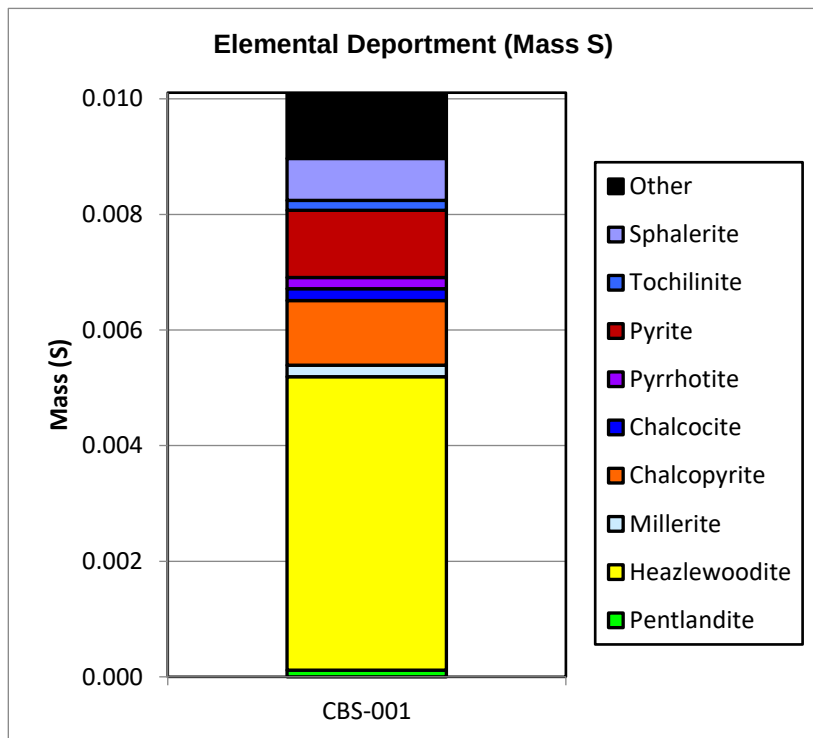
*High Definition Mineralogical Analysis using QEMSCAN (Quantitative
Evaluation of Materials by Scanning Electron Microscopy)*

Cumulative Retained Grain Size Distribution



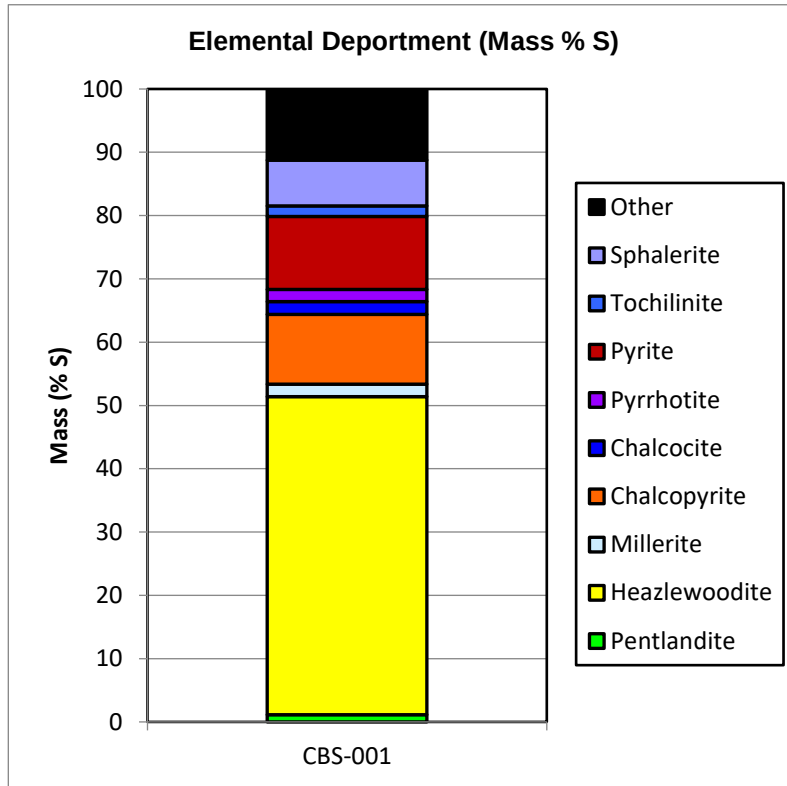
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

S Deportment - Absolute



	CBS-001
Pentlandite	0.000
Heazlewoodite	0.005
Millerite	0.000
Chalcopyrite	0.001
Chalcocite	0.000
Pyrrhotite	0.000
Pyrite	0.001
Tochilinite	0.000
Sphalerite	0.001
Other	0.001
Total	0.010

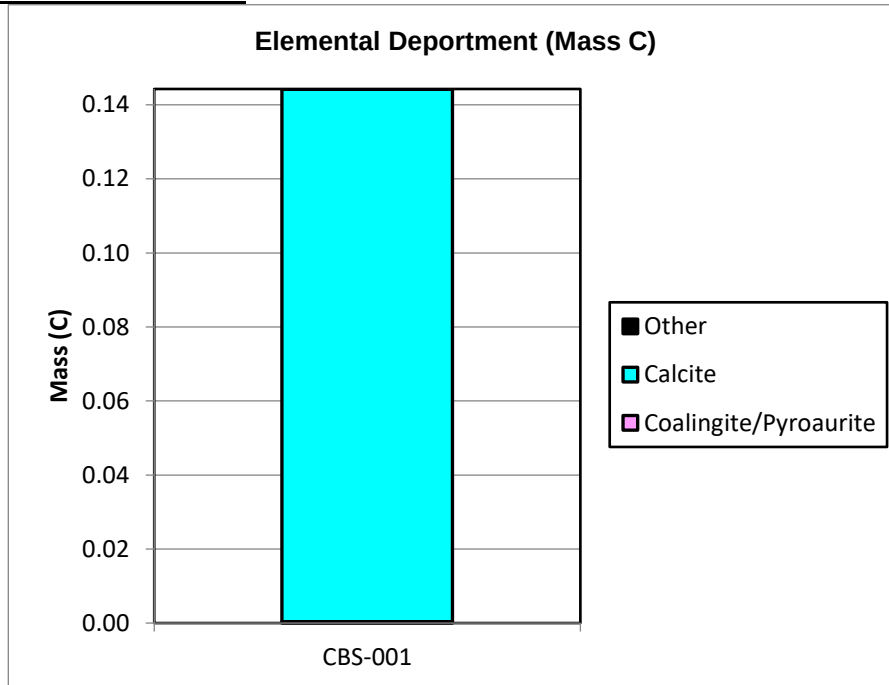
S Department - Normalized



	CBS-001
Pentlandite	1.13
Heazlewoodite	50.3
Millerite	1.98
Chalcopyrite	11.0
Chalcocite	2.04
Pyrrhotite	1.91
Pyrite	11.5
Tochilinite	1.71
Sphalerite	7.19
Other	11.3
Total	100.0

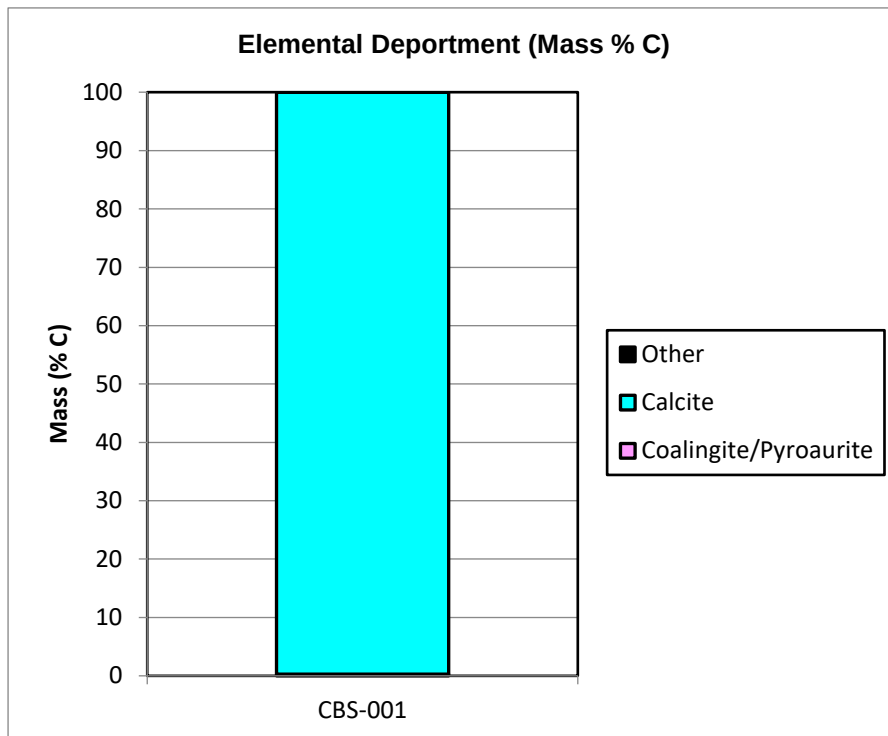
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

C Deportment - Absolute



	CBS-001
Coalingite/Pyroaurite	0.00
Calcite	0.14
Other	0.00
Total	0.14

C Depoartment - Normalized



	CBS-001
Coalingite/Pyroaurite	0.28
Calcite	99.7
Other	0.01
Total	100.0



QEMSCAN DATA

prepared for:

Canada Nickel

Project Custom-Min

MI5008-JAN23

January 23, 2023

Prepared by:



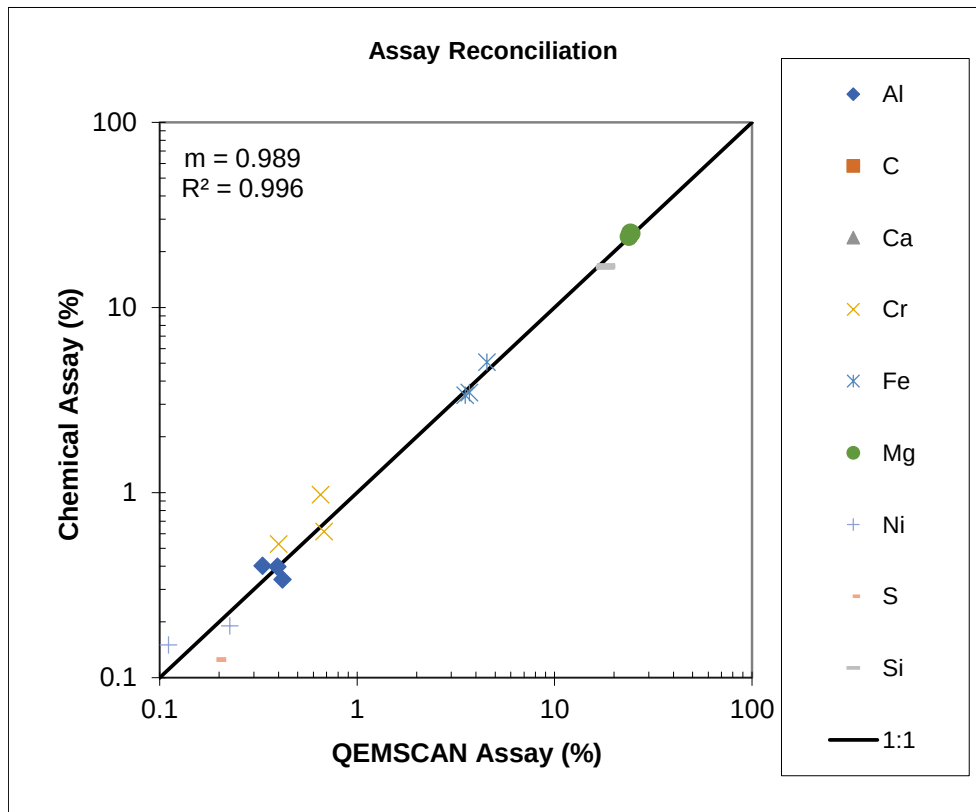
Kathryn sheridan
Senior Mineralogist

High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy) (METH# 8.11.1) used by SGS Minerals Services

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Tel. (705) 652-6365 www.sgs.com www.sgs.com/met
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High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)



Sample/Element	CANA-13	CBS-003	CDS-003
Al (QEMSCAN)	0.42	0.40	0.33
Al (Chemical)	0.34	0.40	0.40
C (QEMSCAN)	0.00	0.02	0.01
C (Chemical)*	0.06	0.06	0.06
Ca (QEMSCAN)	0.08	0.05	0.05
Ca (Chemical)	0.11	0.04	0.06
Cr (QEMSCAN)	0.68	0.65	0.40
Cr (Chemical)	0.62	0.97	0.53
Fe (QEMSCAN)	3.53	4.55	3.71
Fe (Chemical)	3.35	5.05	3.47
Mg (QEMSCAN)	24.2	23.8	24.4
Mg (Chemical)	25.3	24.1	25.1
Ni (QEMSCAN)	0.23	0.11	0.10
Ni (Chemical)	0.19	0.15	0.10
S (QEMSCAN)	0.20	0.05	0.02
S (Chemical)**	0.13	0.11	0.09
Si (QEMSCAN)	18.2	18.0	18.2
Si (Chemical)	16.5	16.5	16.8

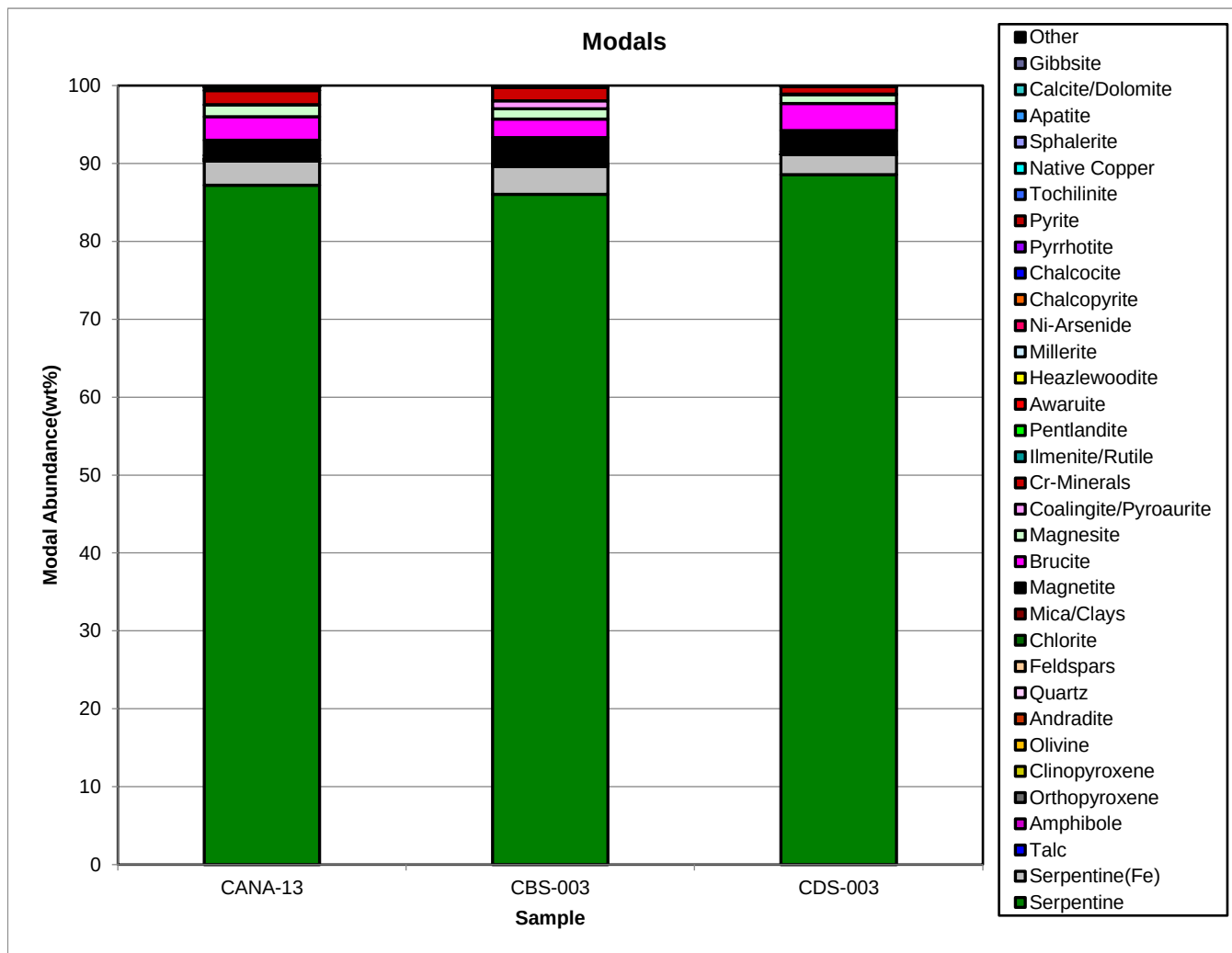
Notes:

* The chemical assay for carbon is from carbonate carbon.

QEMSCAN analysis can only detect carbon from a carbonate source.

** The chemical assay for sulphur is from total sulphur.

High Definition Mineralogical Analysis using QEMSCAN
(Quantitative Evaluation of Materials by Scanning
Electron Microscopy)



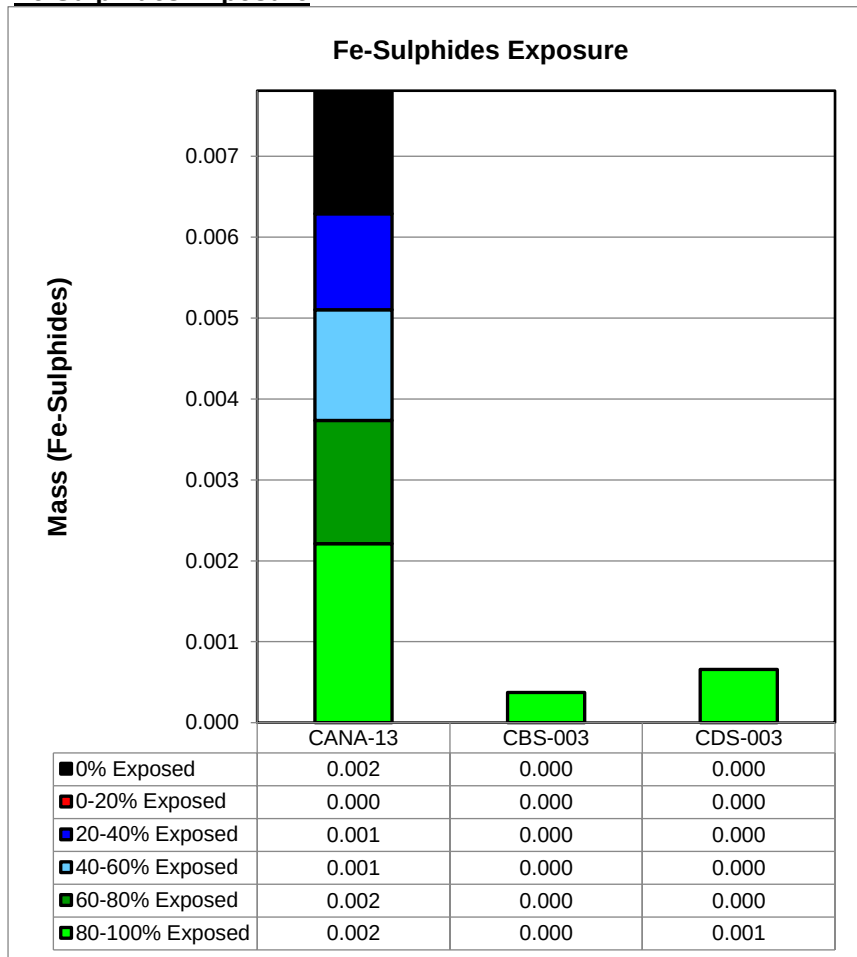
High Definition Mineralogical Analysis using QEMSCAN (Quantitative
Evaluation of Materials by Scanning Electron Microscopy)

Modals

Sample		CANA-13	CBS-003	CDS-003
Fraction		-300/+3um	-300/+3um	-300/+3um
Calculated ESD Particle Size (µm)		23	21	22
Mineral	Serpentine	87.2	86.0	88.6
Mass (%)	Serpentine(Fe)	3.09	3.61	2.57
	Talc	0.00	0.01	0.01
	Amphibole	0.01	0.00	0.01
	Orthopyroxene	0.01	0.03	0.02
	Clinopyroxene	0.23	0.01	0.01
	Olivine	0.01	0.01	0.01
	Andradite	0.01	0.00	0.00
	Quartz	0.00	0.02	0.01
	Feldspars	0.07	0.01	0.01
	Chlorite	0.38	0.17	0.30
	Mica/Clays	0.01	0.01	0.01
	Magnetite	1.95	3.43	2.72
	Brucite	3.02	2.36	3.48
	Magnesite	1.49	1.34	1.14
	Coalingite/Pyroaurite	0.04	1.02	0.07
	Cr-Minerals	1.82	1.72	0.94
	Ilmenite/Rutile	0.00	0.00	0.00
	Pentlandite	0.46	0.07	0.02
	Awaruite	0.00	0.00	0.02
	Heazlewoodite	0.00	0.02	0.01
	Millerite	0.00	0.00	0.00
	Ni-Arsenide	0.00	0.00	0.00
	Chalcopyrite	0.00	0.04	0.01
	Chalcocite	0.00	0.00	0.00
	Pyrrhotite	0.01	0.00	0.00
	Pyrite	0.00	0.00	0.00
	Tochilinite	0.12	0.01	0.00
	Native Copper	0.00	0.00	0.00
	Sphalerite	0.00	0.00	0.00
	Apatite	0.01	0.00	0.03
	Calcite/Dolomite	0.04	0.05	0.03
	Gibbsite	0.00	0.00	0.00
	Other	0.01	0.04	0.01
	Total	100.0	100.0	100.0
Mean Grain Size by Frequency (µm)	Serpentine	22	20	20
	Serpentine(Fe)	7	8	7
	Talc	6	6	6
	Amphibole	7	21	16
	Orthopyroxene	6	6	6
	Clinopyroxene	24	9	9
	Olivine	6	7	7
	Andradite	11	0	0
	Quartz	7	14	9
	Feldspars	19	8	8
	Chlorite	12	10	10
	Mica/Clays	8	7	9
	Magnetite	11	10	10
	Brucite	10	10	12
	Magnesite	11	10	12
	Coalingite/Pyroaurite	9	14	8
	Cr-Minerals	13	12	10
	Ilmenite/Rutile	6	7	9
	Pentlandite	8	9	8
	Awaruite	6	6	6
	Heazlewoodite	6	8	8
	Millerite	0	6	6
	Ni-Arsenide	0	0	0
	Chalcopyrite	11	10	12
	Chalcocite	6	0	0
	Pyrrhotite	6	0	6
	Pyrite	6	6	6
	Tochilinite	8	7	7
	Native Copper	6	0	0
	Sphalerite	8	8	0
	Apatite	10	6	12
	Calcite/Dolomite	8	9	8
	Gibbsite	20	0	13
	Other	10	11	10

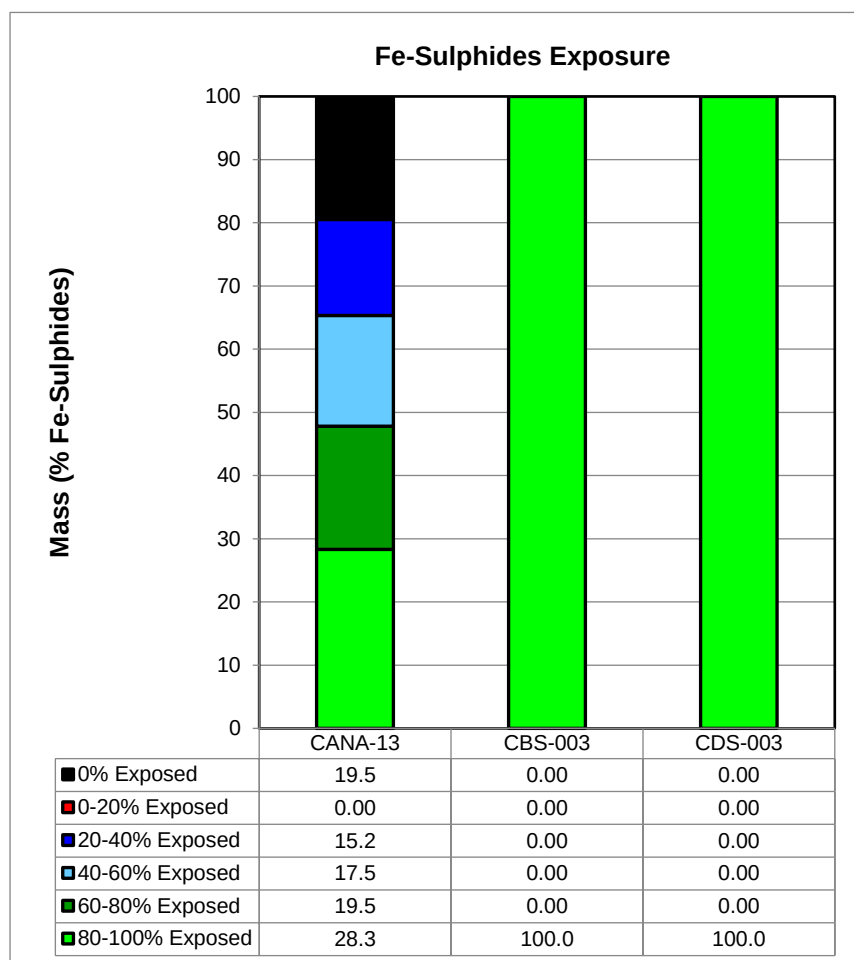
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Fe-Sulphides Exposure



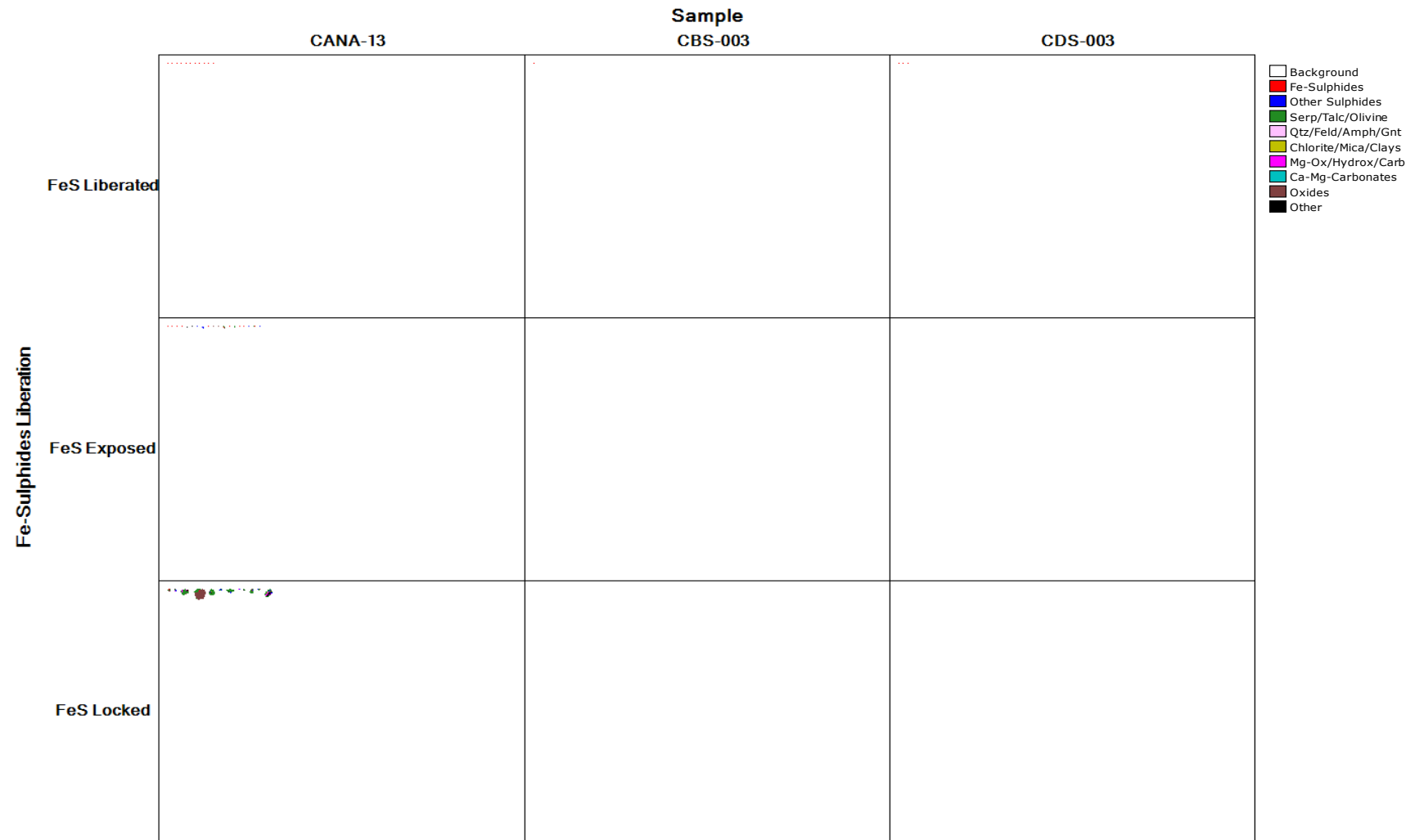
Absolute Mass of Fe-Sulphides Across Samples

Mineral Name	CANA-13	CBS-003	CDS-003
80-100% Exposed	0.002	0.000	0.001
60-80% Exposed	0.002	0.000	0.000
40-60% Exposed	0.001	0.000	0.000
20-40% Exposed	0.001	0.000	0.000
0-20% Exposed	0.000	0.000	0.000
0% Exposed	0.002	0.000	0.000
Total	0.008	0.000	0.001



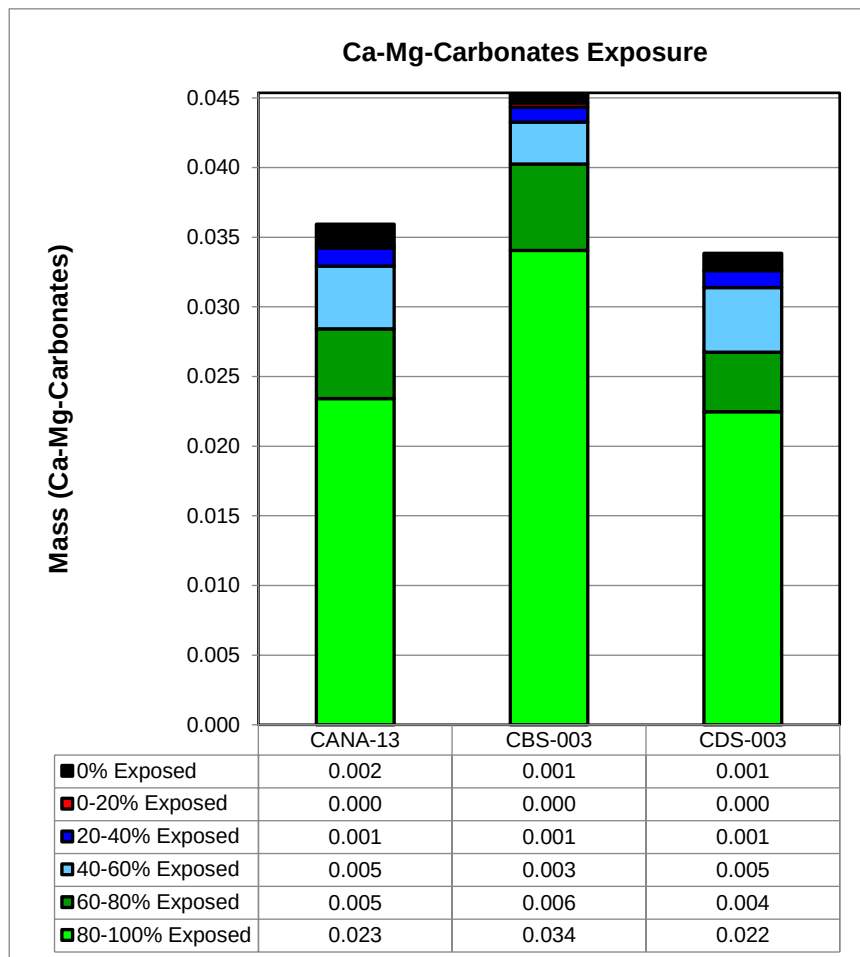
Normalized Mass of Fe-Sulphides Across Samples

Mineral Name	CANA-13	CBS-003	CDS-003
80-100% Exposed	28.3	100.0	100.0
60-80% Exposed	19.5	0.00	0.00
40-60% Exposed	17.5	0.00	0.00
20-40% Exposed	15.2	0.00	0.00
0-20% Exposed	0.00	0.00	0.00
0% Exposed	19.5	0.00	0.00
Total	100.0	100.0	100.0
Total Exposed	80.5	100.0	100.0



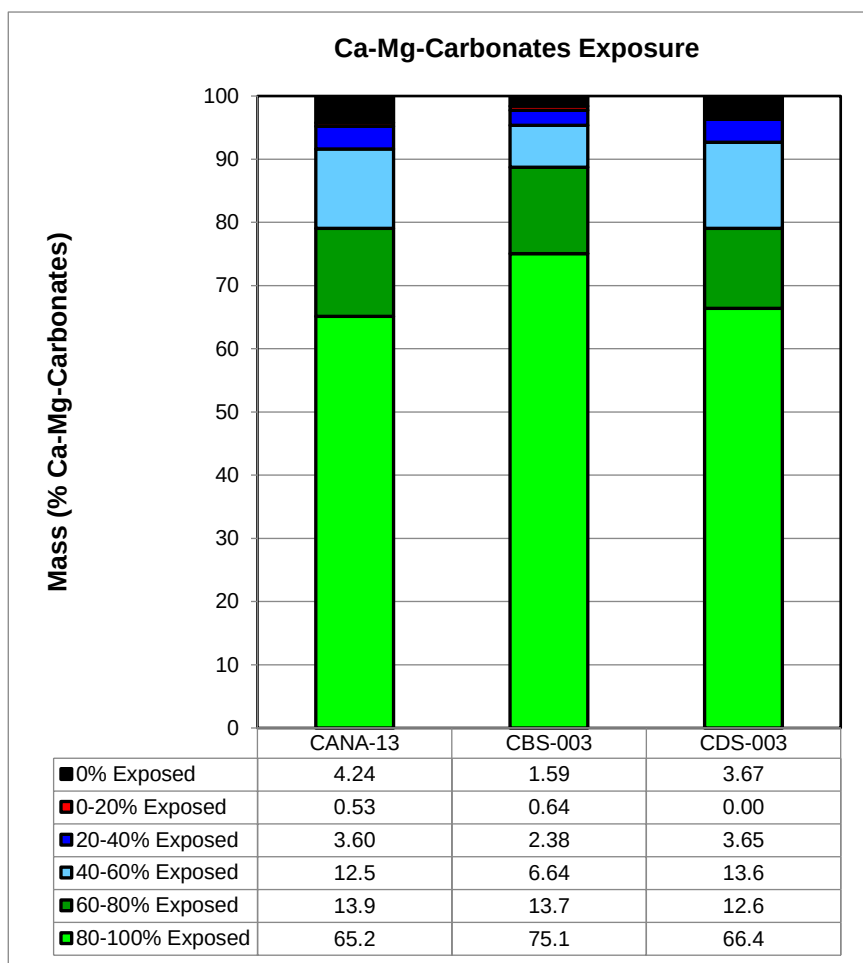
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

Ca-Mg-Carbonates Exposure



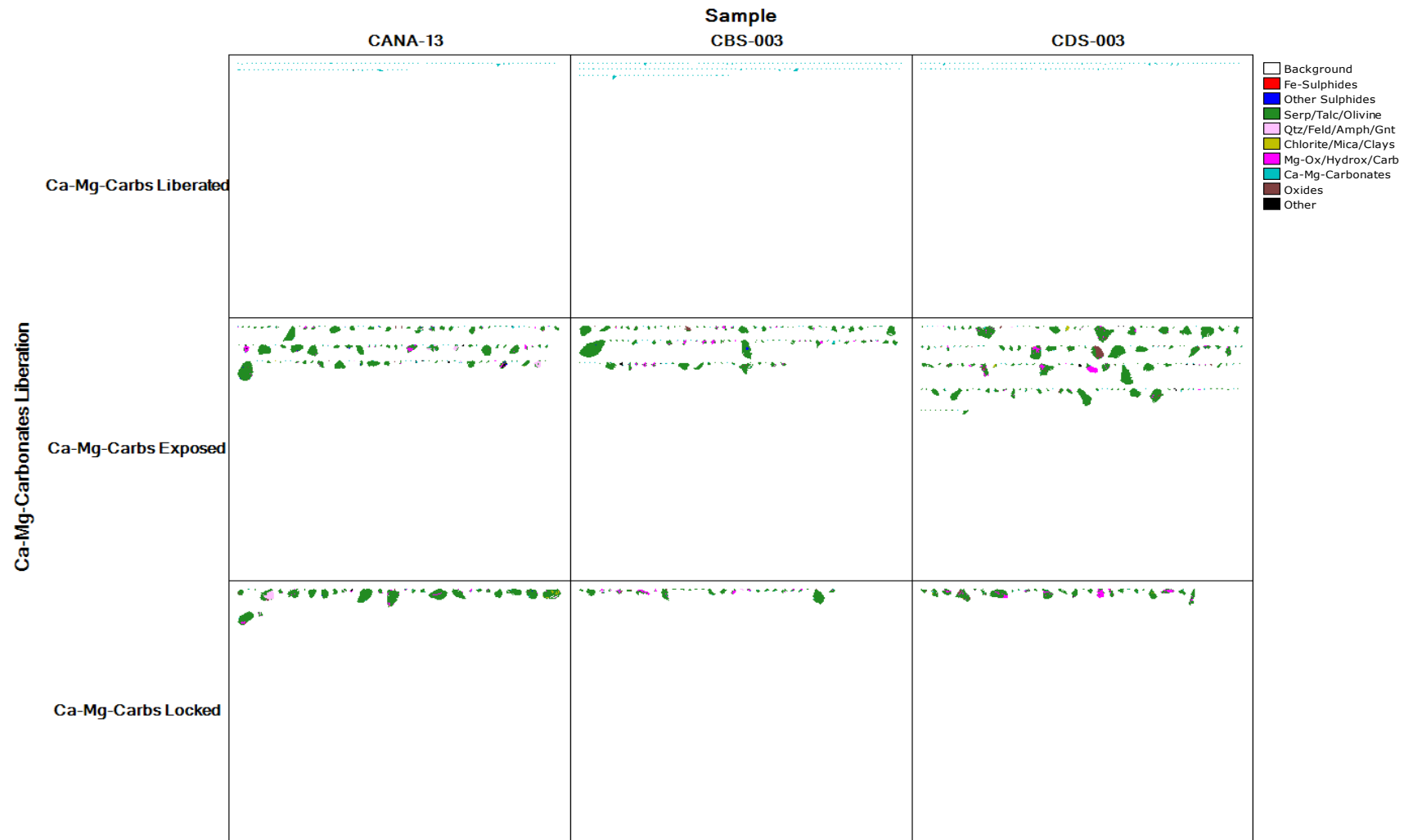
Absolute Mass of Ca-Mg-Carbonates Across Samples

Mineral Name	CANA-13	CBS-003	CDS-003
80-100% Exposed	0.023	0.034	0.022
60-80% Exposed	0.005	0.006	0.004
40-60% Exposed	0.005	0.003	0.005
20-40% Exposed	0.001	0.001	0.001
0-20% Exposed	0.000	0.000	0.000
0% Exposed	0.002	0.001	0.001
Total	0.036	0.045	0.034



Normalized Mass of Ca-Mg-Carbonates Across Samples

Mineral Name	CANA-13	CBS-003	CDS-003
80-100% Exposed	65.2	75.1	66.4
60-80% Exposed	13.9	13.7	12.6
40-60% Exposed	12.5	6.64	13.6
20-40% Exposed	3.60	2.38	3.65
0-20% Exposed	0.53	0.64	0.00
0% Exposed	4.24	1.59	3.67
Total	100.0	100.0	100.0
Total Exposed	95.8	98.4	96.3



Canada Nickel
Custom-MIN
MI5008-JAN23

Mineralogical Acid-Base Accounting

Parameter	CANA-13	CBS-003	CDS-003
NP from Ca-Mg Carbonates (tonnes CaCO ₃ /1000 tonnes)	0.4	0.5	0.3
AP from Fe-Sulphides (tonnes CaCO ₃ /1000 tonnes)	0.1	0.0	0.0
NP/AP	3.8	73.1	39.3
Available NP/AP	4.6	72.0	37.9

Notes:

NP = Neutralization Potential

AP = Acid Generation Potential

"Available NP/AP" takes into account the exposure of Ca Mg-carbonates and Fe-sulphides

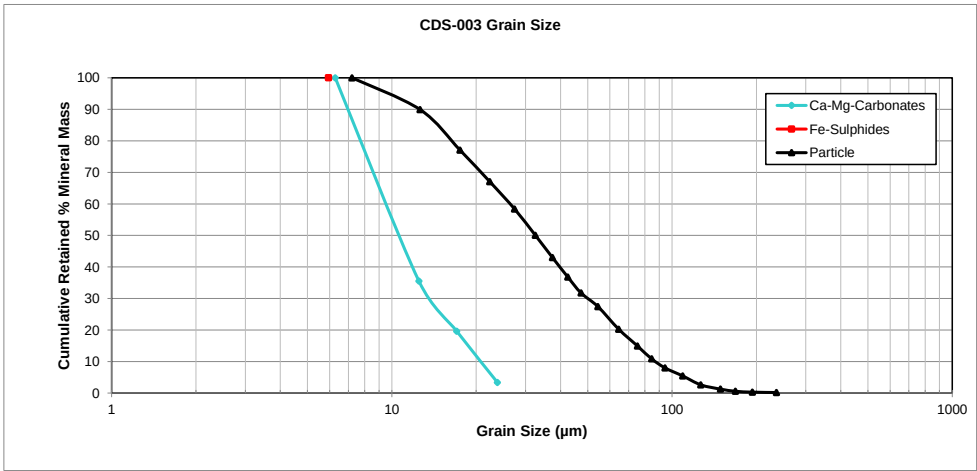
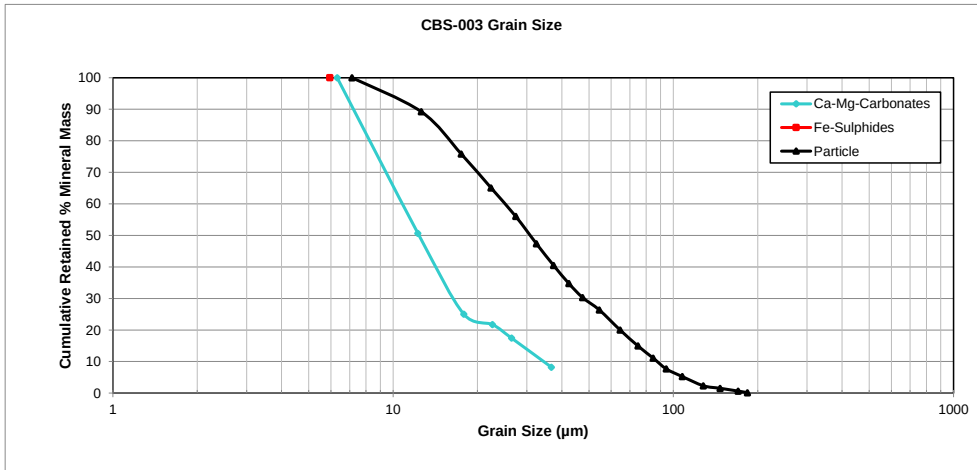
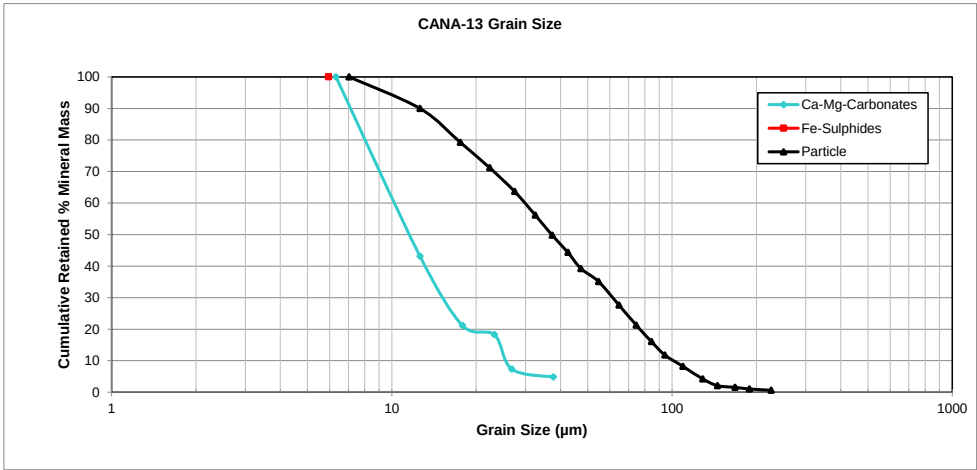
A carbonate/sulphide ratio > 2 indicates probable net neutralizing conditions. Only net acid consuming carbonates (Ca-Mg carbonates) are used for the mineralogical neutralization potential (NP) determination. Only Fe-sulphides are used for the mineralogical acid generation potential (AGP) as they are the main sulphides to contribute to net acidity.

In cases of low carbonate and sulphide abundance (typically <0.5 wt.% of each), values are only semi-quantitative due to low particle statistics for study. More replicate analyses are recommended to properly quantify the NP/AGP potential of these samples.

Calculations assume that Fe in ankerite doesn't oxidize

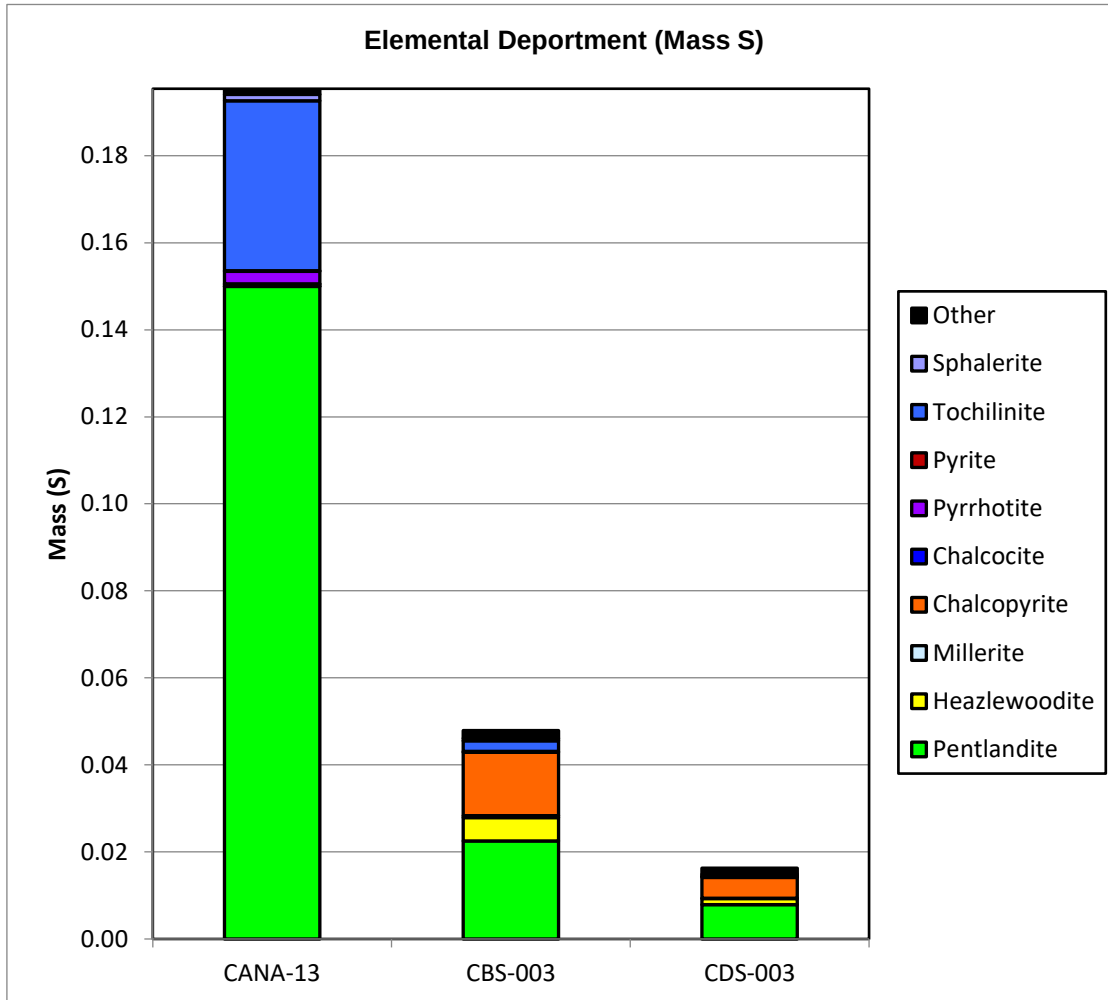
High Definition Mineralogical Analysis using QEMSCAN (Quantitative
Evaluation of Materials by Scanning Electron Microscopy)

Cumulative Retained Grain Size Distribution



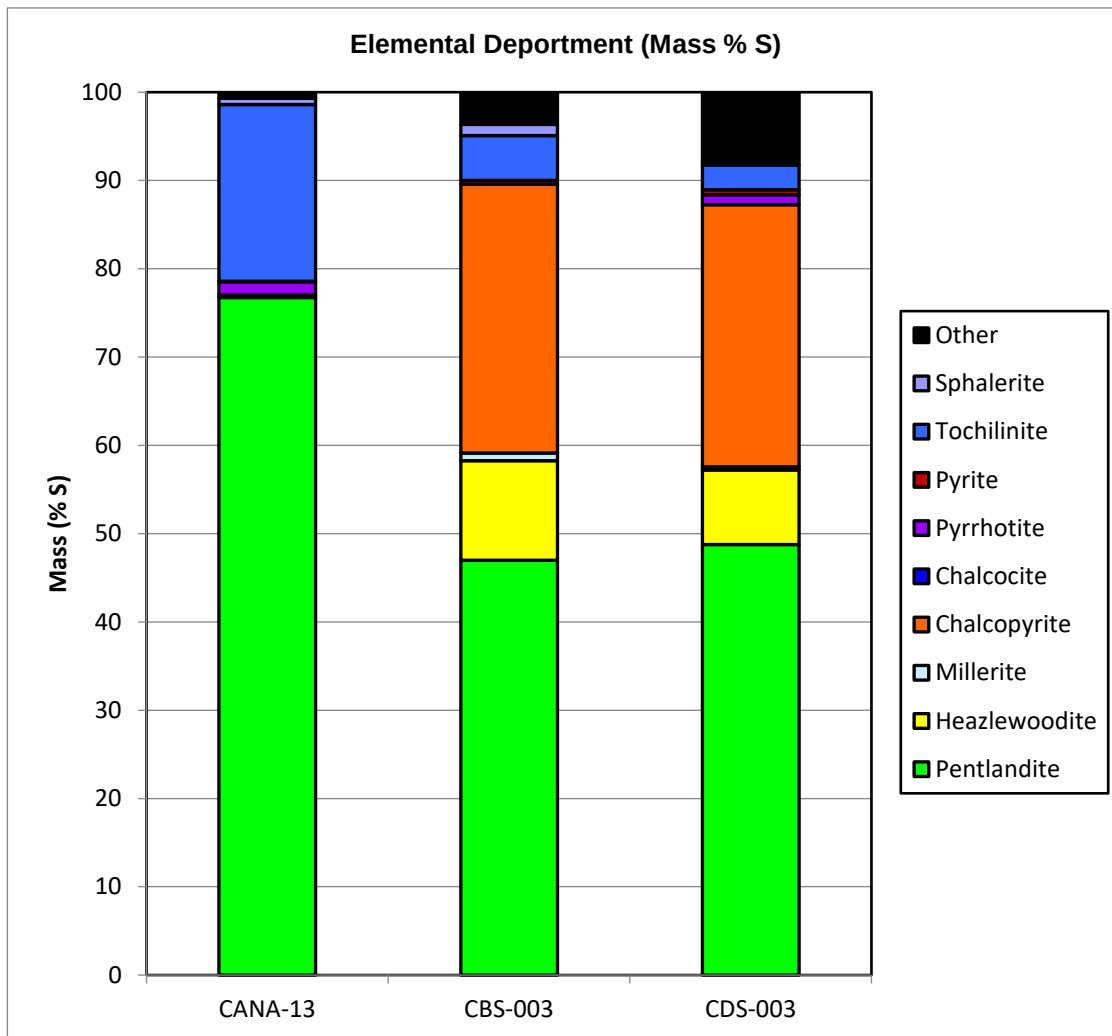
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

S Department - Absolute



	CANA-13	CBS-003	CDS-003
Pentlandite	0.15	0.02	0.01
Heazlewoodite	0.00	0.01	0.00
Millerite	0.00	0.00	0.00
Chalcopyrite	0.00	0.01	0.00
Chalcocite	0.00	0.00	0.00
Pyrrhotite	0.00	0.00	0.00
Pyrite	0.00	0.00	0.00
Tochilinite	0.04	0.00	0.00
Sphalerite	0.00	0.00	0.00
Other	0.00	0.00	0.00
Total	0.20	0.05	0.02

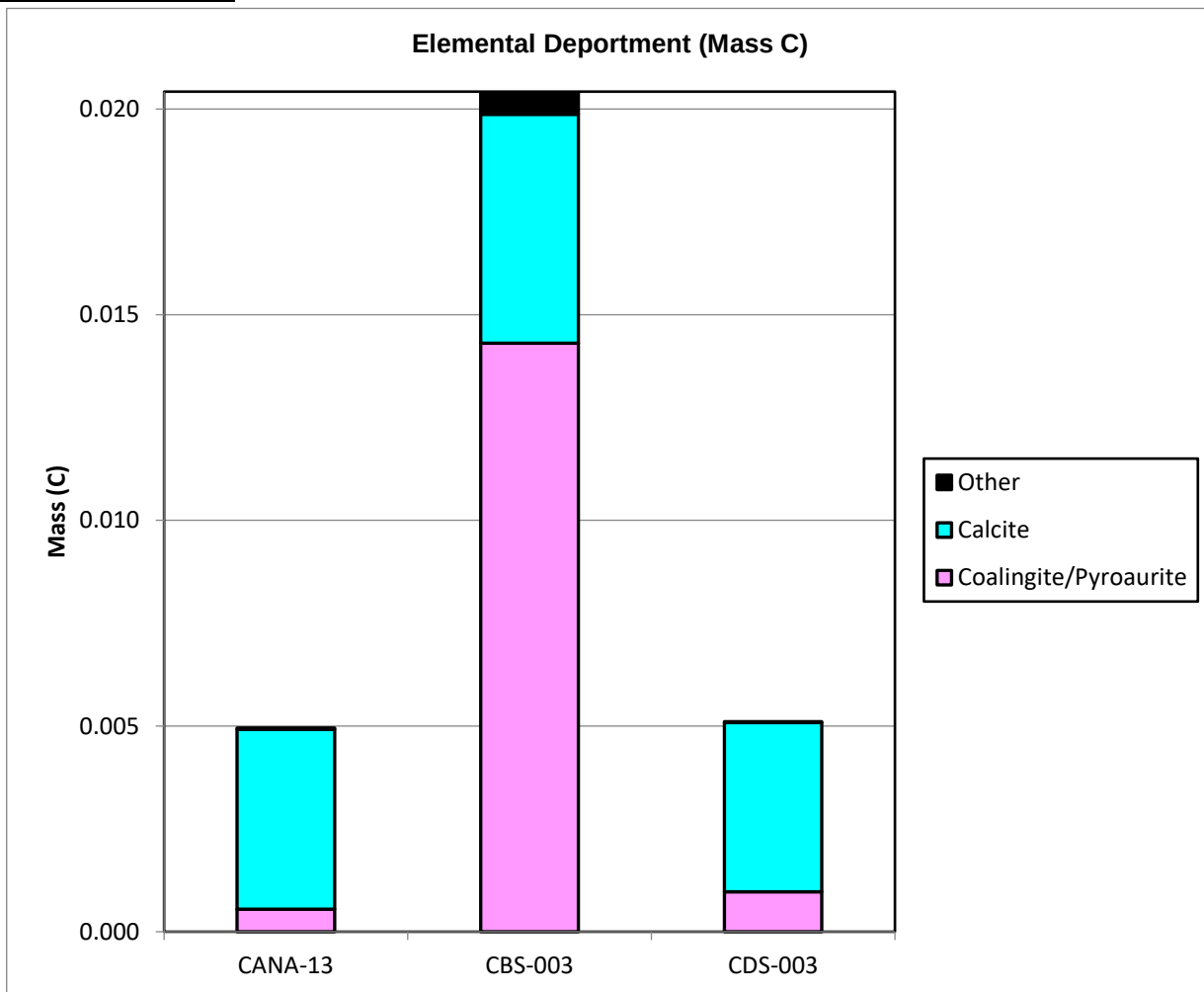
S Department - Normalized



	CANA-13	CBS-003	CDS-003
Pentlandite	76.7	47.0	48.8
Heazlewoodite	0.02	11.3	8.43
Millerite	0.00	0.86	0.40
Chalcopyrite	0.25	30.5	29.7
Chalcocite	0.02	0.00	0.00
Pyrrhotite	1.47	0.00	1.15
Pyrite	0.10	0.41	0.58
Tochilinite	20.0	5.10	2.77
Sphalerite	0.75	1.24	0.00
Other	0.66	3.66	8.26
Total	100.0	100.0	100.0

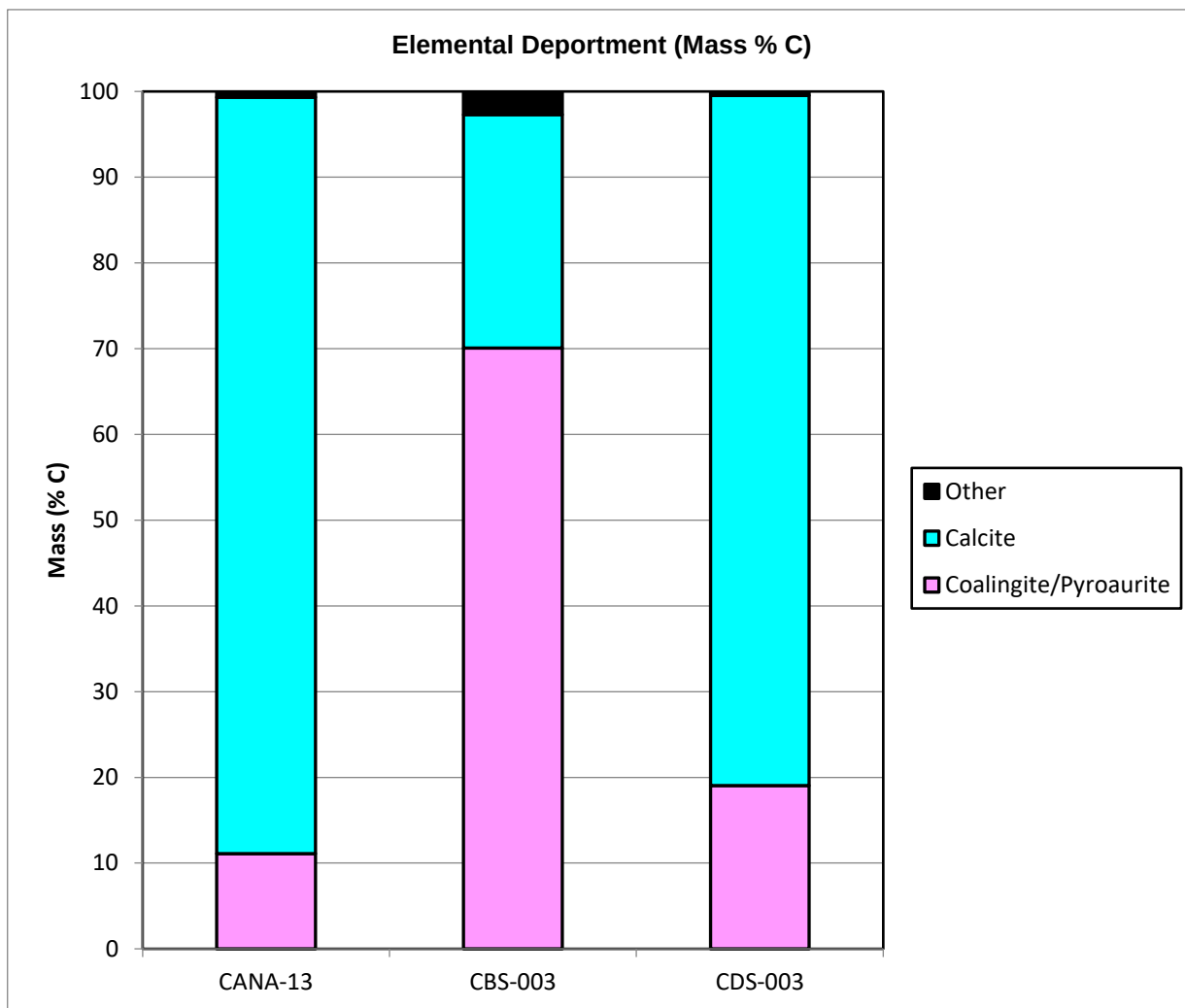
High Definition Mineralogical Analysis using QEMSCAN (Quantitative Evaluation of Materials by Scanning Electron Microscopy)

C Deportment - Absolute



	CANA-13	CBS-003	CDS-003
Coalingite/Pyroaurite	0.001	0.014	0.001
Calcite	0.004	0.006	0.004
Other	0.000	0.001	0.000
Total	0.005	0.020	0.005

C Department - Normalized



	CANA-13	CBS-003	CDS-003
Coalingite/Pyroaurite	11.1	70.1	19.0
Calcite	88.2	27.2	80.5
Other	0.68	2.71	0.47
Total	100.0	100.0	100.0

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Jennifer Gignac

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
 Toronto, ON
 M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Supernatant Liquid

Project : PO#20446343

08-April-2022

Date Rec. : 01 March 2022
 LR Report: CA19020-MAR22
 Reference: Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time Completed	5: CANA-13	6: CBS-003	7: CDS-003
Temperature Upon Receipt [°C]	---	---	---	---	5.5	5.5	5.5
pH [No unit]	29-Mar-22	13:16	29-Mar-22	11:47	9.60	8.28	8.27
Conductivity [uS/cm]	29-Mar-22	13:16	29-Mar-22	11:47	371	261	230
Alkalinity [mg/L as CaCO ₃]	29-Mar-22	13:16	29-Mar-22	11:47	65	68	39
Acidity [mg/L as CaCO ₃]	29-Mar-22	13:16	29-Mar-22	11:47	< 2	< 2	< 2
Fluoride [mg/L]	25-Mar-22	14:53	28-Mar-22	09:48	< 0.06	< 0.06	< 0.06
Sulphate [mg/L]	29-Mar-22	16:54	30-Mar-22	13:47	32	20	23
Chloride [mg/L]	29-Mar-22	16:54	30-Mar-22	13:47	92	56	66
Nitrite (as N) [mg/L]	29-Mar-22	15:58	30-Mar-22	17:37	< 0.03	< 0.03	< 0.03
Nitrate (as N) [mg/L]	29-Mar-22	15:58	30-Mar-22	17:37	< 0.06	0.41	0.42
Nitrate + Nitrite (as N) [mg/L]	29-Mar-22	15:58	30-Mar-22	17:37	< 0.06	0.41	0.42
Bromide [mg/L]	29-Mar-22	15:58	30-Mar-22	17:37	0.6	< 0.3	< 0.3
Chromium VI [mg/L]	28-Mar-22	12:00	28-Mar-22	16:20	< 0.0002	0.0004	0.0010
Aluminum (0.2µm) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.002	0.002	0.001
Metals-filt [Prep]	25-Mar-22	14:39	30-Mar-22	12:44	1	1	1
Mercury (total) [mg/L]	29-Mar-22	10:58	29-Mar-22	12:51	< 0.00001	< 0.00001	< 0.00001
Hardness [mg/L as CaCO ₃]	29-Mar-22	14:00	30-Mar-22	12:44	262	94	82
Silver (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	< 0.00005	< 0.00005	< 0.00005
Aluminum (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.204	0.019	0.019
Arsenic (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.0002	0.0004	< 0.0002
Barium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.00107	0.00709	0.00616
Beryllium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	< 0.000007	< 0.000007	< 0.000007
Boron (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.126	0.031	0.193
Bismuth (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	< 0.00001	< 0.00001	< 0.00001
Calcium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	2.84	13.0	14.7
Cadmium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.000012	0.000005	< 0.000003
Cobalt (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.0120	0.000561	0.000479
Chromium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.160	0.0152	0.0192
Copper (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.0160	0.0025	0.0008
Iron (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	3.12	0.191	0.110

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Supernatant Liquid
Project : PO#20446343
LR Report : CA19020-MAR22

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	5: CANA-13	6: CBS-003	7: CDS-003
Potassium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	2.72	1.39	1.35
Lithium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.0014	0.0007	0.0007
Magnesium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	62.0	15.0	11.0
Manganese (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.0828	0.00937	0.00809
Molybdenum (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.00332	0.00043	0.00033
Sodium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	31.7	26.3	25.1
Nickel (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.286	0.0129	0.0061
Phosphorus (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.042	0.017	0.007
Lead (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.00011	0.00011	< 0.00009
Antimony (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	< 0.0009	< 0.0009	< 0.0009
Selenium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.00020	< 0.00004	< 0.00004
Silicon (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	10.8	3.09	2.57
Tin (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.00025	0.00037	0.00068
Strontium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.00222	0.0531	0.0540
Titanium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.0113	0.00085	0.00069
Thallium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.000010	0.000009	0.000035
Uranium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.000002	< 0.000002	< 0.000002
Vanadium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.00117	0.00019	0.00012
Tungsten (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.00007	0.00005	0.00003
Yttrium (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.00005	0.00004	< 0.00002
Zinc (total) [mg/L]	29-Mar-22	14:00	30-Mar-22	12:44	0.006	0.003	< 0.002




Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Acidity - QCBatchID: EWL0496-MAR22													
Acidity	2	mg/L as Ca	< 2			ND	20	102	90	110	NA		
Alkalinity - QCBatchID: EWL0496-MAR22													
Alkalinity	2	mg/L as Ca	< 2			5	20	104	80	120	NA		
Anions by IC - QCBatchID: DIO0506-MAR22													
Bromide	0.3	mg/L	<0.3			ND	20	99	90	110	97	75	125
Nitrate (as N)	0.06	mg/L	<0.06			ND	20	98	90	110	95	75	125
Nitrate + Nitrite (as N)	0.06	mg/L	<0.06			NA		NA			NA		
Nitrite (as N)	0.03	mg/L	<0.03			ND	20	102	90	110	101	75	125
Anions by IC - QCBatchID: DIO0507-MAR22													
Chloride	0.2	mg/L	<0.2			0	20	104	90	110	NV	75	125
Sulphate	0.2	mg/L	<0.2			2	20	99	90	110	NV	75	125
Conductivity - QCBatchID: EWL0496-MAR22													
Conductivity	2	uS/cm	< 2			7	20	100	90	110	NA		
Fluoride by Specific Ion Electrode - QCBatchID: EWL0476-MAR22													
Fluoride	0.06	mg/L	<0.06			ND	10	99	90	110	103	75	125
Hexavalent Chromium by SFA - QCBatchID: SKA0238-MAR22													
Chromium VI	0.0002	mg/L	<0.0002			NV	20	105	80	120	NV	75	125
Mercury by CVAAS - QCBatchID: EHG0049-MAR22													
Mercury (total)	0.00001	mg/L	< 0.00001			ND	20	104	80	120	102	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0232-MAR22													
Aluminum (0.2µm)	0.001	mg/L	<0.001			4	20	100	90	110	90	70	130
Aluminum (total)	0.001	mg/L	<0.001			4	20	100	90	110	90	70	130
Antimony (total)	0.0009	mg/L	<0.0009			ND	20	107	90	110	118	70	130
Arsenic (total)	0.0002	mg/L	<0.0002			8	20	108	90	110	105	70	130
Barium (total)	0.00002	mg/L	<0.00002			1	20	102	90	110	110	70	130
Beryllium (total)	0.000007	mg/L	<0.000007			17	20	100	90	110	97	70	130
Bismuth (total)	0.00001	mg/L	<0.00001			ND	20	98	90	110	87	70	130
Boron (total)	0.002	mg/L	<0.002			2	20	101	90	110	100	70	130
Cadmium (total)	0.000003	mg/L	<0.000003			4	20	101	90	110	98	70	130
Calcium (total)	0.01	mg/L	<0.01			2	20	100	90	110	109	70	130
Chromium (total)	0.00008	mg/L	<0.00008			8	20	109	90	110	81	70	130
Cobalt (total)	0.000004	mg/L	<0.000004			2	20	104	90	110	109	70	130
Copper (total)	0.0002	mg/L	<0.0002			0	20	103	90	110	106	70	130
Iron (total)	0.007	mg/L	<0.007			2	20	110	90	110	100	70	130
Lead (total)	0.00009	mg/L	<0.00001			4	20	100	90	110	91	70	130



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Supernatant Liquid

Project : PO#20446343

LR Report : CA19020-MAR22

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Lithium (total)	0.0001	mg/L	<0.0001			8	20	104	90	110	96	70	130
Magnesium (total)	0.001	mg/L	<0.001			3	20	102	90	110	94	70	130
Manganese (total)	0.00001	mg/L	<0.00001			1	20	103	90	110	93	70	130
Molybdenum (total)	0.00004	mg/L	<0.00004			4	20	97	90	110	118	70	130
Nickel (total)	0.0001	mg/L	<0.0001			0	20	103	90	110	111	70	130
Phosphorus (total)	0.003	mg/L	<0.003			ND	20	101	90	110	NV	70	130
Potassium (total)	0.009	mg/L	<0.009			2	20	103	90	110	95	70	130
Selenium (total)	0.00004	mg/L	<0.00004			ND	20	105	90	110	110	70	130
Silicon (total)	0.02	mg/L	<0.02			6	20	92	90	110	NV	70	130
Silver (total)	0.00005	mg/L	<0.00005			ND	20	98	90	110	93	70	130
Sodium (total)	0.01	mg/L	<0.01			2	20	105	90	110	103	70	130
Strontium (total)	0.00002	mg/L	<0.00002			2	20	104	90	110	105	70	130
Thallium (total)	0.000005	mg/L	<0.000005			17	20	99	90	110	92	70	130
Tin (total)	0.00006	mg/L	<0.00006			19	20	101	90	110	NV	70	130
Titanium (total)	0.00005	mg/L	<0.00005			7	20	107	90	110	NV	70	130
Tungsten (total)	0.00002	mg/L	<0.00002			15	20	105	90	110	NV	70	130
Uranium (total)	0.000002	mg/L	<0.000002			2	20	96	90	110	91	70	130
Vanadium (total)	0.00001	mg/L	<0.00001			19	20	100	90	110	125	70	130
Yttrium (total)	0.00002	mg/L	<0.00002			0	20	102	90	110	NV	70	130
Zinc (total)	0.002	mg/L	<0.002			12	20	94	90	110	87	70	130
pH - QCBatchID: EWL0496-MAR22													
pH	0.05	No unit	NA			0		100			NA		

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
 Toronto, ON
 M5X 1E3, Canada

Phone: 807-620-2207

Fax:

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

28-June-2022

Date Rec. : 19 May 2022

LR Report: CA19144-MAY22

Reference: Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	5: CBS-001
Sample Date & Time					11-May-22
Sample weight [g]	10-Jun-22	09:00	13-Jun-22	07:58	250
Volume D.I. Water [mL]	10-Jun-22	09:00	13-Jun-22	07:58	750
Final pH [no unit]	11-Jun-22	07:27	13-Jun-22	07:58	8.86
pH [No unit]	13-Jun-22	13:55	14-Jun-22	11:18	8.48
Conductivity [uS/cm]	13-Jun-22	13:55	14-Jun-22	11:18	270
Alkalinity [mg/L as CaCO ₃]	13-Jun-22	13:55	14-Jun-22	11:18	119
Acidity [mg/L as CaCO ₃]	13-Jun-22	13:55	14-Jun-22	11:18	< 2
Bromide [mg/L]	17-Jun-22	01:32	20-Jun-22	07:31	< 3
Sulphate [mg/L]	21-Jun-22	20:13	22-Jun-22	16:19	26
Fluoride [mg/L]	13-Jun-22	07:58	13-Jun-22	12:39	< 0.06
Chloride [mg/L]	21-Jun-22	20:13	22-Jun-22	16:19	6.8
Nitrite (as N) [mg/L]	17-Jun-22	01:32	20-Jun-22	07:31	< 0.3
Nitrate (as N) [mg/L]	17-Jun-22	01:32	20-Jun-22	07:31	< 0.6
Nitrate + Nitrite (as N) [mg/L]	17-Jun-22	01:32	20-Jun-22	07:31	< 0.6
Aluminum (0.2µm) [mg/L]	16-Jun-22	22:01	20-Jun-22	12:36	0.004
Metals-filt [Prep]	14-Jun-22	12:46	20-Jun-22	12:36	1
Mercury [mg/L]	14-Jun-22	17:17	14-Jun-22	17:21	0.00002
Silver [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	< 0.00005
Aluminum [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.004
Arsenic [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.0004
Barium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.00958
Boron [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.313
Beryllium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	< 0.000007
Bismuth [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	< 0.00001
Calcium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	7.03
Cadmium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.000203
Cobalt [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.000101
Chromium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.00395
Chromium VI [mg/L]	13-Jun-22	09:00	14-Jun-22	10:31	0.0039
Copper [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.0003
Iron [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	< 0.007
Potassium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.929
Lithium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.0003

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time Completed	5: CBS-001
Magnesium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	30.7
Manganese [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.00084
Molybdenum [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.00517
Sodium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	2.58
Nickel [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.0062
Lead [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.00032
Antimony [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	< 0.0009
Selenium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.00014
Tin [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	< 0.00006
Strontium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.0379
Titanium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	< 0.00005
Thorium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	< 0.0001
Thallium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.000022
Uranium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.000026
Vanadium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.00007
Tungsten [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	0.00008
Yttrium [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	< 0.00002
Zinc [mg/L]	15-Jun-22	10:30	17-Jun-22	10:35	< 0.002

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acidity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2310
Alkalinity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2320
Anions by IC	ME-CA-[ENV]IC-LAK-AN-001	EPA300/MA300-Ions1.3
Conductivity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2510
Fluoride by Specific Ion Electrode	ME-CA-[ENV]EWL-LAK-AN-014	SM 4500
Hexavalent Chromium by SFA	ME-CA-[ENV]SKA-LAK-AN-012	EPA218.6/EPA3060A
Inorganics-General	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/SM 3112B
Metals in aqueous samples - ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	SM 3030/EPA 200.8
pH	ME-CA-[ENV]EWL-LAK-AN-006	SM 4500

Chris Sullivan

Chris Sullivan, B.Sc., C. Chem
Project Specialist,
Environment, Health & Safety



Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Acidity - QCBatchID: EWL0280-JUN22													
Acidity	2	mg/L as Ca	2			ND	20	110	90	110	NA		
Alkalinity - QCBatchID: EWL0280-JUN22													
Alkalinity	2	mg/L as Ca	< 2			0	20	17	80	120	NA		
Anions by IC - QCBatchID: DIO0391-JUN22													
Bromide	0.3	mg/L	<0.3			ND	20	98	90	110	103	75	125
Nitrate (as N)	0.06	mg/L	<0.06			ND	20	95	90	110	101	75	125
Nitrate + Nitrite (as N)	0.06	mg/L	<0.06			NA		NA			NA		
Nitrite (as N)	0.03	mg/L	<0.03			ND	20	95	90	110	100	75	125
Anions by IC - QCBatchID: DIO0509-JUN22													
Chloride	0.2	mg/L	<0.2			1	20	97	90	110	102	75	125
Sulphate	0.2	mg/L	<0.2			0	20	96	90	110	104	75	125
Conductivity - QCBatchID: EWL0280-JUN22													
Conductivity	2	uS/cm	< 2			1	20	100	90	110	NA		
Fluoride by Specific Ion Electrode - QCBatchID: EWL0269-JUN22													
Fluoride	0.06	mg/L	<0.06			0	10	101	90	110	97	75	125
Hexavalent Chromium by SFA - QCBatchID: SKA0117-JUN22													
Chromium VI	0.0002	mg/L	<0.0002			ND	20	99	80	120	86	75	125
Inorganics-General - QCBatchID: EHG0029-JUN22													
Mercury	0.00001	mg/L	< 0.00001			ND	20	NV	80	120	NV	70	130
Metals - QCBatchID: EMS0123-JUN22													
Cobalt	0.000004	mg/L	<0.000004			11	20	103	90	110	101	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0123-JUN22													
Aluminum	0.001	mg/L	<0.001			15	20	98	90	110	130	70	130
Antimony	0.0009	mg/L	<0.0009			ND	20	107	90	110	106	70	130
Arsenic	0.0002	mg/L	<0.0002			4	20	103	90	110	104	70	130
Barium	0.00008	mg/L	<0.00002			1	20	99	90	110	96	70	130
Beryllium	0.000007	mg/L	<0.000007			ND	20	96	90	110	96	70	130
Bismuth	0.00001	mg/L	<0.00001			ND	20	97	90	110	79	70	130
Boron	0.002	mg/L	<0.002			3	20	102	90	110	94	70	130
Cadmium	0.000003	mg/L	<0.000003			ND	20	103	90	110	102	70	130
Calcium	0.01	mg/L	<0.01			1	20	99	90	110	104	70	130
Chromium	0.00008	mg/L	<0.00008			20	20	102	90	110	108	70	130
Copper	0.0002	mg/L	<0.0002			0	20	100	90	110	99	70	130
Iron	0.007	mg/L	<0.007			18	20	94	90	110	100	70	130
Lead	0.00009	mg/L	<0.00001			7	20	102	90	110	101	70	130



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : PO#20446343

LR Report : CA19144-MAY22

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
Lithium	0.0001	mg/L	<0.0001			3	20	100	90	110	98	70	130
Magnesium	0.001	mg/L	<0.001			0	20	103	90	110	99	70	130
Manganese	0.00001	mg/L	<0.00001			12	20	104	90	110	105	70	130
Molybdenum	0.00004	mg/L	<0.00004			0	20	103	90	110	105	70	130
Nickel	0.0001	mg/L	<0.0001			3	20	104	90	110	103	70	130
Potassium	0.009	mg/L	<0.009			4	20	97	90	110	95	70	130
Selenium	0.00004	mg/L	<0.00004			5	20	102	90	110	108	70	130
Silver	0.00005	mg/L	<0.00005			ND	20	101	90	110	93	70	130
Sodium	0.01	mg/L	<0.01			0	20	95	90	110	73	70	130
Strontium	0.00008	mg/L	<0.00002			1	20	101	90	110	100	70	130
Thallium	0.000005	mg/L	<0.000005			0	20	99	90	110	103	70	130
Thorium	0.0001	mg/L	<0.0001			ND	20	104	90	110	NV	70	130
Tin	0.00006	mg/L	<0.00006			5	20	106	90	110	NV	70	130
Titanium	0.00005	mg/L	<0.00005			ND	20	102	90	110	NV	70	130
Tungsten	0.00002	mg/L	<0.00002			6	20	106	90	110	NV	70	130
Uranium	0.000002	mg/L	<0.000002			0	20	91	90	110	93	70	130
Vanadium	0.00001	mg/L	<0.00001			6	20	103	90	110	107	70	130
Yttrium	0.00002	mg/L	<0.00002			15	20	101	90	110	NV	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0136-JUN22													
Aluminum (0.2µm)	0.001	mg/L	<0.001			3	20	97	90	110	99	70	130
Zinc	0.002	mg/L	<0.002			6	20	93	90	110	91	70	130
pH - QCBatchID: EWL0280-JUN22													
pH	0.05	No unit	NA			1		99			NA		

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
 Lakefield - Ontario - K0L 2H0
 Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
 Toronto, ON
 M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Supernatant Liquid

Project : PO# 20446343

06-June-2022

Date Rec. : 19 May 2022

LR Report: CA19141-MAY22

Reference: Crawford Project PO#
 20446343

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Date Completed	4: Analysis Date Completed	5: CBS-001 Tailings Process Water
Sample Date & Time					11-May-22
Temperature Upon Receipt [°C]	---	---	---	---	15.0
pH [No unit]	24-May-22	14:42	26-May-22	11:27	8.17
Conductivity [uS/cm]	24-May-22	14:42	26-May-22	11:27	141
Alkalinity [mg/L as CaCO ₃]	24-May-22	14:42	26-May-22	11:27	42
Acidity [mg/L as CaCO ₃]	24-May-22	14:42	26-May-22	11:27	< 2
Fluoride [mg/L]	20-May-22	08:11	20-May-22	12:11	< 0.06
Sulphate [mg/L]	02-Jun-22	19:35	06-Jun-22	09:05	14
Chloride [mg/L]	02-Jun-22	19:35	03-Jun-22	09:18	21
Nitrite (as N) [mg/L]	20-May-22	12:05	26-May-22	12:06	< 0.03
Nitrate (as N) [mg/L]	20-May-22	12:05	26-May-22	12:06	0.21
Nitrate + Nitrite (as N) [mg/L]	20-May-22	12:05	26-May-22	12:06	0.21
Bromide [mg/L]	20-May-22	12:05	01-Jun-22	08:18	< 0.3
Chromium VI [mg/L]	20-May-22	11:55	24-May-22	13:08	0.0005
Aluminum (0.2µm) [mg/L]	26-May-22	16:00	27-May-22	13:37	< 0.001
Mercury (total) [mg/L]	27-May-22	07:21	31-May-22	15:10	< 0.00001
Hardness [mg/L as CaCO ₃]	26-May-22	16:00	27-May-22	13:38	68.4
Silver (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.00005
Aluminum (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.003
Arsenic (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.0002
Barium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.00781
Beryllium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.000007
Boron (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.216
Bismuth (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.00001
Calcium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	9.77
Cadmium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.000005
Cobalt (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.000025
Chromium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.00233
Copper (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.0002
Iron (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.010

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: CBS-001 Tailings Process Water
Potassium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	1.05
Lithium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.0004
Magnesium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	10.7
Manganese (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.00108
Molybdenum (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.00101
Sodium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	14.0
Nickel (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.0022
Phosphorus (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.003
Lead (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.00009
Antimony (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.0009
Selenium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.00010
Silicon (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	1.17
Tin (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.00006
Strontium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.0474
Titanium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.00012
Thallium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.000005
Uranium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.000002
Vanadium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.00007
Tungsten (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	0.00005
Yttrium (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.00002
Zinc (total) [mg/L]	26-May-22	16:00	27-May-22	13:38	< 0.002

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acidity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2310
Alkalinity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2320
Anions by IC	ME-CA-[ENV]IC-LAK-AN-001	EPA300/MA300-Ions1.3
Conductivity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2510
Fluoride by Specific Ion Electrode	ME-CA-[ENV]EWL-LAK-AN-014	SM 4500
Hexavalent Chromium by SFA	ME-CA-[ENV]SKA-LAK-AN-012	EPA218.6/EPA3060A
Mercury by CVAAS	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/SM 3112B
Metals in aqueous samples - ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	SM 3030/EPA 200.8
pH	ME-CA-[ENV]EWL-LAK-AN-006	SM 4500



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Acidity - QCBatchID: EWL0561-MAY22													
Acidity	2	mg/L as Ca	2			0	20	98	90	110	NA		
Alkalinity - QCBatchID: EWL0561-MAY22													
Alkalinity	2	mg/L as Ca	< 2			0	20	102	80	120	NA		
Anions by IC - QCBatchID: DIO0047-JUN22													
Chloride	0.2	mg/L	<0.2			NV	20	100	90	110	NV	75	125
Anions by IC - QCBatchID: DIO0089-JUN22													
Sulphate	0.2	mg/L	<0.2			1	20	100	90	110	NV	75	125
Anions by IC - QCBatchID: DIO0443-MAY22													
Bromide	0.3	mg/L	<0.3			ND	20	93	90	110	96	75	125
Nitrate (as N)	0.06	mg/L	<0.06			ND	20	102	90	110	104	75	125
Nitrate + Nitrite (as N)	0.06	mg/L	<0.06			NA		NA			NA		
Nitrite (as N)	0.03	mg/L	<0.03			ND	20	96	90	110	99	75	125
Conductivity - QCBatchID: EWL0532-MAY22													
Conductivity	2	uS/cm	< 2			2	20	100	90	110	NA		
Fluoride by Specific Ion Electrode - QCBatchID: EWL0486-MAY22													
Fluoride	0.06	mg/L	<0.06			ND	10	101	90	110	100	75	125
Hexavalent Chromium by SFA - QCBatchID: SKA0220-MAY22													
Chromium VI	0.0002	mg/L	<0.0002			ND	20	101	80	120	NV	75	125
Mercury by CVAAS - QCBatchID: EHG0050-MAY22													
Mercury (total)	0.00001	mg/L	< 0.00001			ND	20	91	80	120	NV	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0199-MAY22													
Aluminum (0.2µm)	0.001	mg/L	<0.001			ND	20	103	90	110	110	70	130
Aluminum (total)	0.001	mg/L	<0.001			ND	20	103	90	110	110	70	130
Antimony (total)	0.0009	mg/L	<0.0009			11	20	104	90	110	116	70	130
Arsenic (total)	0.0002	mg/L	<0.0002			0	20	108	90	110	121	70	130
Barium (total)	0.00008	mg/L	<0.00002			9	20	110	90	110	120	70	130
Beryllium (total)	0.000007	mg/L	<0.000007			0	20	101	90	110	101	70	130
Bismuth (total)	0.00001	mg/L	<0.00001			12	20	100	90	110	93	70	130
Boron (total)	0.002	mg/L	<0.002			9	20	103	90	110	81	70	130
Cadmium (total)	0.000003	mg/L	5e-006			9	20	105	90	110	106	70	130
Calcium (total)	0.01	mg/L	<0.01			10	20	108	90	110	122	70	130
Chromium (total)	0.00008	mg/L	<0.00008			ND	20	104	90	110	98	70	130
Cobalt (total)	0.000004	mg/L	<0.000004			11	20	104	90	110	118	70	130
Copper (total)	0.0002	mg/L	<0.0002			7	20	99	90	110	105	70	130
Iron (total)	0.007	mg/L	<0.007			11	20	96	90	110	125	70	130

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Lead (total)	0.00009	mg/L	<0.00001			10	20	109	90	110	124	70	130
Lithium (total)	0.0001	mg/L	<0.0001			4	20	101	90	110	103	70	130
Magnesium (total)	0.001	mg/L	<0.001			10	20	104	90	110	109	70	130
Manganese (total)	0.00001	mg/L	<0.00001			4	20	100	90	110	119	70	130
Molybdenum (total)	0.00004	mg/L	<0.00004			16	20	102	90	110	115	70	130
Nickel (total)	0.0001	mg/L	<0.0001			1	20	105	90	110	114	70	130
Phosphorus (total)	0.003	mg/L	<0.003			ND	20	101	90	110	NV	70	130
Potassium (total)	0.009	mg/L	<0.009			10	20	105	90	110	109	70	130
Selenium (total)	0.00004	mg/L	<0.00004			1	20	108	90	110	88	70	130
Silicon (total)	0.02	mg/L	<0.02			17	20	108	90	110	NV	70	130
Silver (total)	0.00005	mg/L	<0.00005			9	20	103	90	110	95	70	130
Sodium (total)	0.01	mg/L	0.01			5	20	110	90	110	103	70	130
Strontium (total)	0.00008	mg/L	5.7e-005			13	20	102	90	110	120	70	130
Thallium (total)	0.000005	mg/L	<0.000005			7	20	101	90	110	98	70	130
Tin (total)	0.00006	mg/L	<0.00006			1	20	106	90	110	NV	70	130
Titanium (total)	0.00005	mg/L	<0.00005			11	20	97	90	110	NV	70	130
Tungsten (total)	0.00002	mg/L	<0.00002			6	20	105	90	110	NV	70	130
Uranium (total)	0.000002	mg/L	<0.000002			12	20	103	90	110	105	70	130
Vanadium (total)	0.00001	mg/L	<0.00001			12	20	102	90	110	117	70	130
Yttrium (total)	0.00002	mg/L	2.5e-005			14	20	104	90	110	NV	70	130
Zinc (total)	0.002	mg/L	<0.002			5	20	100	90	110	112	70	130
pH - QCBatchID: EWL0561-MAY22													
pH	0.05	No unit	NA			1		100			NA		

08-April-2022

Canada Nickel Company

Attn : Jennifer Gignac

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207
Fax:

Date Rec. : 22 March 2022
LR Report: CA19094-MAR22
Reference: Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: CANA-13	6: CBS-003	7: CDS-003
SiO ₂ [%]	01-Apr-22	09:21	08-Apr-22	09:21	35.4	35.2	36.0
Al ₂ O ₃ [%]	01-Apr-22	09:21	08-Apr-22	09:21	0.64	0.75	0.76
Fe ₂ O ₃ [%]	01-Apr-22	09:21	08-Apr-22	09:21	4.79	7.22	4.96
MgO [%]	01-Apr-22	09:21	08-Apr-22	09:21	42.0	39.9	41.6
CaO [%]	01-Apr-22	09:21	08-Apr-22	09:21	0.16	0.05	0.08
Na ₂ O [%]	01-Apr-22	09:21	08-Apr-22	09:21	0.02	< 0.01	< 0.01
K ₂ O [%]	01-Apr-22	09:21	08-Apr-22	09:21	0.01	0.01	< 0.01
TiO ₂ [%]	01-Apr-22	09:21	08-Apr-22	09:21	0.03	0.03	0.04
P ₂ O ₅ [%]	01-Apr-22	09:21	08-Apr-22	09:21	0.03	0.03	0.04
MnO [%]	01-Apr-22	09:21	08-Apr-22	09:21	0.08	0.13	0.11
Cr ₂ O ₃ [%]	01-Apr-22	09:21	08-Apr-22	09:21	0.90	1.42	0.77
V ₂ O ₅ [%]	01-Apr-22	09:21	08-Apr-22	09:21	< 0.01	< 0.01	< 0.01
LOI [%]	01-Apr-22	09:21	08-Apr-22	09:21	15.8	15.0	15.3



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Project : PO#20446343

17-June-2022

Canada Nickel Company
Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Date Rec. : 19 May 2022
LR Report: CA19146-MAY22
Reference: Crawford Project

Copy: #1

Phone: 807-620-2207

Fax:

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Date Completed	4: Analysis Time Completed	5: CBS-001
Sample Date & Time					11-May-22
Borate Fusion [Prep]	10-Jun-22	11:03	15-Jun-22	14:11	1
SiO ₂ [%]	10-Jun-22	11:03	15-Jun-22	14:11	38.4
Al ₂ O ₃ [%]	10-Jun-22	11:03	15-Jun-22	14:11	1.89
Fe ₂ O ₃ [%]	10-Jun-22	11:03	15-Jun-22	14:11	4.72
MgO [%]	10-Jun-22	11:03	15-Jun-22	14:11	38.6
CaO [%]	10-Jun-22	11:03	15-Jun-22	14:11	1.03
Na ₂ O [%]	10-Jun-22	11:03	15-Jun-22	14:11	0.03
K ₂ O [%]	10-Jun-22	11:03	15-Jun-22	14:11	0.02
TiO ₂ [%]	10-Jun-22	11:03	15-Jun-22	14:11	0.08
P ₂ O ₅ [%]	10-Jun-22	11:03	15-Jun-22	14:11	0.04
MnO [%]	10-Jun-22	11:03	15-Jun-22	14:11	0.12
Cr ₂ O ₃ [%]	10-Jun-22	11:03	15-Jun-22	14:11	0.50
V ₂ O ₅ [%]	10-Jun-22	11:03	15-Jun-22	14:11	< 0.01
LOI [%]	10-Jun-22	11:03	15-Jun-22	14:11	14.2
Sum [%]	10-Jun-22	11:03	15-Jun-22	14:11	99.5

Chris Sullivan
Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety





SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

ABA - Modified Sobek

19-September-2022

Date Rec. : 19 August 2022
LR Report: CA19127-AUG22
Reference: 20446363 - Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: 58201	6: 58203	7: 58204	8: 58211	9: 58212	10: 58214	11: 58215	12: 58217	13: 58218
Paste pH [no unit]	15-Sep-22	08:40	16-Sep-22	17:31	8.51	8.26	8.24	6.60	8.40	8.08	8.23	8.24	6.56
Fizz Rate [no unit]	15-Sep-22	08:40	16-Sep-22	17:31	4	4	4	1	4	4	4	4	1
Sample weight [g]	15-Sep-22	08:40	16-Sep-22	17:31	2.00	1.99	1.99	2.01	2.00	1.98	1.99	2.02	2.03
HCl Added [mL]	15-Sep-22	08:40	16-Sep-22	17:31	186.00	183.20	176.60	69.60	206.80	210.10	173.20	214.00	54.90
HCl [Normality]	15-Sep-22	08:40	16-Sep-22	17:31	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	15-Sep-22	08:40	16-Sep-22	17:31	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	15-Sep-22	08:40	16-Sep-22	17:31	54.39	64.95	61.03	61.84	37.08	54.86	58.29	59.15	43.62
Final pH [no unit]	15-Sep-22	08:40	16-Sep-22	17:31	1.64	1.56	1.59	1.61	1.87	1.66	1.58	1.65	1.59
NP [t CaCO ₃ /1000 t]	13-Sep-22	10:00	16-Sep-22	17:31	329	297	290	19.3	424	392	289	383	29.0
AP [t CaCO ₃ /1000 t]	19-Sep-22	10:33	19-Sep-22	10:34	1.25	1.25	1.25	1.88	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	19-Sep-22	10:33	19-Sep-22	10:34	328	296	289	17.4	423	391	287	382	27.8
NP/AP [ratio]	19-Sep-22	10:33	19-Sep-22	10:34	263	238	232	10.3	339	314	231	307	23.2
Sulphur (total) [%]	08-Sep-22	19:43	12-Sep-22	10:49	< 0.005	0.033	0.026	0.062	< 0.005	0.067	0.030	0.005	0.075
Acid Leachable SO ₄ -S [%]	12-Sep-22	10:48	12-Sep-22	10:49	<0.04	<0.04	<0.04	< 0.04	<0.04	< 0.04	<0.04	<0.04	0.07
Sulphide [%]	09-Sep-22	15:40	12-Sep-22	10:49	< 0.04	< 0.04	< 0.04	0.06	< 0.04	0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	08-Sep-22	19:43	12-Sep-22	10:48	3.95	3.72	3.64	32.8	5.10	5.14	3.67	4.78	36.7
Carbonate (HCl) [%]	12-Sep-22	08:08	12-Sep-22	10:48	19.2	17.3	16.9	38.6	24.9	23.6	17.1	23.1	7.46



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - K0L 2H0

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

LR Report :

CA19127-AUG22

Analysis	14: 58219	15: 58220	16: 58221	17: 58223	18: 58224	19: 58230	20: 58231	21: 58233	22: 58241	23: 58243	24: 58360	25: 167367	26: 167370	27: 167378	28: 167380
Paste pH [no unit]	8.38	6.02	8.47	8.07	8.25	6.42	8.39	8.33	6.27	8.18	8.10	8.22	8.27	8.48	3.11
Fizz Rate [no unit]	4	1	4	4	4	1	4	4	1	4	4	4	4	4	4
Sample weight [g]	2.01	2.00	2.00	2.00	2.02	2.00	1.99	2.03	1.98	1.99	2.01	2.03	1.99	1.97	1.98
HCl Added [mL]	144.00	32.60	180.00	181.20	185.00	20.00	225.00	120.00	38.70	150.00	125.00	200.00	151.10	107.90	108.20
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	50.93	30.34	31.18	37.12	70.24	16.89	46.83	41.66	40.29	38.12	37.31	76.17	49.32	37.16	36.96
Final pH [no unit]	1.70	1.61	1.87	1.78	1.53	1.66	1.78	1.58	1.52	1.74	1.53	1.55	1.62	1.57	1.72
NP [t CaCO ₃ /1000 t]	232	5.7	372	360	284	7.8	448	193	-3.5	281	218	305	256	180	180
AP [t CaCO ₃ /1000 t]	1.25	1.56	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	230	4.14	371	359	283	6.55	446	192	-4.75	280	217	304	254	178	179
NP/AP [ratio]	185	3.65	298	288	227	6.24	358	154	-2.80	225	174	244	205	144	144
Sulphur (total) [%]	0.008	0.125	0.012	0.061	0.041	0.028	0.008	0.023	0.158	0.046	0.041	0.009	0.024	0.023	0.024
Acid Leachable SO ₄ -S [%]	<0.04	0.08	<0.04	<0.04	0.04	<0.04	<0.04	<0.04	0.16	0.05	0.05	<0.04	<0.04	<0.04	<0.04
Sulphide [%]	<0.04	0.05	<0.04	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Carbon (total) [%]	4.18	30.1	4.43	4.78	3.62	5.66	5.44	2.48	41.6	3.66	2.34	3.68	3.31	2.22	2.15
Carbonate (HCl) [%]	20.2	27.4	21.6	22.1	17.0	10.6	26.6	11.4	19.0	17.0	10.1	17.8	15.2	10.6	9.12

Analysis	29: 167729	30: 167730	31: 167731	32: 167733	33: 167738	34: 167739
Paste pH [no unit]	6.66	8.17	8.20	8.20	6.09	8.31
Fizz Rate [no unit]	1	4	4	4	1	4
Sample weight [g]	1.99	1.99	1.97	2.01	1.98	1.99
HCl Added [mL]	59.40	210.00	209.00	160.00	36.30	211.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	43.19	66.32	53.29	52.62	33.28	51.84
Final pH [no unit]	1.61	1.60	1.67	1.54	1.52	1.72
NP [t CaCO ₃ /1000 t]	40.7	361	395	267	13.2	400

Analysis	29: 167729	30: 167730	31: 167731	32: 167733	33: 167738	34: 167739
AP [t CaCO ₃ /1000 t]	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	39.4	360	394	266	12.0	399
NP/AP [ratio]	32.6	289	316	214	10.6	320
Sulphur (total) [%]	0.092	0.017	0.017	0.037	0.136	0.032
Acid Leachable SO ₄ -S [%]	0.09	<0.04	<0.04	<0.04	0.14	<0.04
Sulphide [%]	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	34.2	3.81	5.05	3.35	44.9	5.01
Carbonate (HCl) [%]	28.2	18.3	23.8	15.5	11.6	24.0

*NP (Neutralization Potential)

= 50 x (N of HCL x Total HCL added - N NaOH x NaOH added)

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

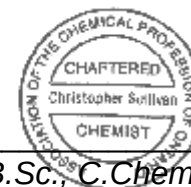
*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.04 will be calculated using a 0.04 value.

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

LR Report :

CA19127-AUG22

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acid Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-019	ASTM E1915-07A
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-020	ASTM E1915-07A
Neutralization Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Paste pH	ME-CA-[ENV]ARD-LAK-AN-005	ARD Prediction Manual, 2009



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

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Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
Carbon/Sulphur - QCBatchID: ECS0020-SEP22													
Sulphide	0.04	%	< 0.04			ND	20	103	80	120			
Carbon/Sulphur - QCBatchID: ECS0026-SEP22													
Carbon (total)	0.005	%	<0.005			1	20				98	70	130
Sulphur (total)	0.005	%	<0.005			ND	20				96	70	130
Carbon/Sulphur - QCBatchID: ECS0027-SEP22													
Carbonate (HCl)	0.04	%	<0.04			1	20	101	80	120			
Carbon/Sulphur - QCBatchID: ECS0030-SEP22													
Carbonate (HCl)	0.04	%	<0.04			8	20	100	80	120			



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

ABA - Modified Sobek

Project : PO#20446343

27-February-2024

Date Rec. : 07 December 2023

LR Report: CA19060-DEC23

Reference: Crawford Project - PO#20446343

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: CSA001	6: CSA002	7: CSA003	8: CSA004	9: CSA005	10: CSA006	11: CSA007	12: CSA009	13: CSA010
Sample Date & Time					10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23
Paste pH [no unit]	01-Feb-24	16:32	06-Feb-24	20:47	6.66	6.23	5.55	4.99	5.16	3.25	5.44	4.80	5.97
Fizz Rate [rating]	31-Jan-24	18:15	06-Feb-24	20:47	2	2	2	2	2	2	2	2	2
Sample weight [g]	31-Jan-24	17:59	06-Feb-24	20:47	2.00	1.98	1.99	1.98	2.01	1.98	2.00	2.10	2.07
HCl Added [mL]	01-Feb-24	16:41	06-Feb-24	20:47	38.70	34.60	33.70	20.00	29.50	20.00	38.60	20.00	20.00
HCl [Normality]	31-Jan-24	18:15	06-Feb-24	20:47	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	31-Jan-24	18:15	06-Feb-24	20:47	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	01-Feb-24	18:20	06-Feb-24	20:47	19.00	30.99	18.75	16.47	16.34	12.11	13.75	19.71	12.87
Final pH [no unit]	01-Feb-24	18:20	06-Feb-24	20:47	1.56	1.68	1.52	1.75	1.50	1.13	1.52	1.56	1.23
NP [t CaCO ₃ /1000 t]	01-Feb-24	18:29	06-Feb-24	20:47	49.3	9.0	37.6	8.9	32.7	19.9	62.1	3.4	17.2
AP [t CaCO ₃ /1000 t]	01-Feb-24	18:29	06-Feb-24	20:48	1.25	2.81	1.25	1.25	1.88	1.25	1.25	1.25	1.88
Net NP [t CaCO ₃ /1000 t]	01-Feb-24	18:29	06-Feb-24	20:48	48.0	6.19	36.4	7.65	30.8	18.6	60.8	2.15	15.3
NP/AP [ratio]	01-Feb-24	18:29	06-Feb-24	20:48	39.4	3.20	30.1	7.12	17.4	15.9	49.7	2.72	9.17
Sulphur (total) [%]	03-Jan-24	14:08	04-Jan-24	14:15	0.076	0.163	0.121	0.172	0.216	0.136	0.166	0.157	0.146
Acid Leachable SO ₄ -S [%]	04-Jan-24	08:44	04-Jan-24	14:15	< 0.04	0.07	< 0.04	< 0.04	0.16	< 0.04	0.13	< 0.04	0.09
Sulphide [%]	04-Jan-24	08:38	04-Jan-24	14:15	< 0.04	0.09	< 0.04	< 0.04	0.06	< 0.04	0.04	< 0.04	0.06
Carbon (total) [%]	03-Jan-24	14:08	04-Jan-24	14:14	43.2	28.6	44.0	46.6	46.0	47.1	45.1	45.1	46.0
Carbonate (HCl) as %CO ₃ [%]	04-Jan-24	12:50	04-Jan-24	14:14	12.2	10.7	6.35	7.75	11.0	11.2	6.29	7.44	13.8

Analysis	14: CSA011	15: CSA012	16: CSA013	17: CSA014	18: CSA015	19: CSA016	20: CSA017	21: CSA018	22: CSA019	23: CSA020	24: CSA008
Sample Date & Time	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23
Paste pH [no unit]	4.54	4.26	5.42	5.40	4.41	6.20	4.58	4.27	5.57	4.80	5.66
Fizz Rate [rating]	2	2	2	2	2	2	2	2	2	2	2
Sample weight [g]	1.99	1.98	1.99	2.07	1.98	1.97	1.99	1.91	1.91	2.00	1.97
HCl Added [mL]	40.00	20.00	20.00	32.50	32.00	20.00	36.10	20.00	41.20	20.00	20.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	18.14	13.02	17.38	20.00	18.13	12.39	19.45	13.60	17.17	16.96	15.99
Final pH [no unit]	1.50	1.19	1.60	1.67	1.50	1.17	1.55	1.18	1.54	1.14	1.20
NP [t CaCO ₃ /1000 t]	54.9	17.6	6.5	30.2	35.0	19.3	41.8	16.7	62.9	7.6	10.2
AP [t CaCO ₃ /1000 t]	1.25	2.81	1.25	1.88	1.25	1.25	1.25	1.25	1.56	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	53.6	14.8	5.25	28.3	33.8	18.0	40.6	15.4	61.3	6.35	8.95
NP/AP [ratio]	43.9	6.26	5.20	16.1	28.0	15.4	33.4	13.4	40.3	6.08	8.16
Sulphur (total) [%]	0.314	0.083	0.095	0.209	0.136	0.155	0.236	0.104	0.153	0.065	0.173
Acid Leachable SO ₄ -S [%]	< 0.04	< 0.04	< 0.04	0.15	< 0.04	< 0.04	0.20	< 0.04	< 0.04	< 0.04	< 0.04
Sulphide [%]	< 0.04	0.09	< 0.04	0.06	< 0.04	< 0.04	0.04	< 0.04	0.05	< 0.04	< 0.04
Carbon (total) [%]	45.9	47.5	45.6	35.0	43.0	49.5	39.1	37.9	44.2	45.8	48.6
Carbonate (HCl) as %CO ₃ [%]	9.88	8.84	5.93	10.0	9.50	9.93	7.44	10.1	8.10	11.2	8.86

*NP (Neutralization Potential)
= 50 x (N of HCL x Total HCL added - N NaOH x NaOH added)

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.04 will be calculated using a 0.04 value.



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#20446343

LR Report : CA19060-DEC23

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acid Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-019	ASTM E1915-07A
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-020	ASTM E1915-07A
Neutralization Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Paste pH	ME-CA-[ENV]ARD-LAK-AN-005	ARD Prediction Manual, 2009

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Carbon/Sulphur - QCBatchID: ECS0007-JAN24													
Carbonate (HCl) as %CO3	0.04	%	<0.04			5	20	104	80	120			
Carbon/Sulphur - QCBatchID: ECS0010-JAN24													
Carbon (total)	0.005	%	<0.005			4	20				101	70 13	
Sulphur (total)	0.005	%	<0.005			3	20				110	70 13	
Carbon/Sulphur - QCBatchID: ECS0011-JAN24													
Sulphide	0.04	%	< 0.01			13	20	103	80	120			



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Trace Metals - Strong Acid Digest, ICP-MS

19-October-2022

Date Rec. : 19 August 2022
LR Report: CA19128-AUG22
Reference: 20446363 - Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: 58201	6: 58203	7: 58204	8: 58211	9: 58212	10: 58214	11: 58215	12: 58217	13: 58218
Sample Date & Time					31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22
Silver [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	48000	56000	54000	12000	45000	44000	54000	48000	10000
Arsenic [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	2.4	3.2	2.6	1.4	2.5	2.4	2.4	2.1	1.5
Barium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	420	430	430	110	370	370	440	380	89
Beryllium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	0.91	1	1	0.33	0.87	0.79	1	0.96	0.29
Bismuth [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	0.23	0.22	0.19	0.12	0.14	0.13	0.18	0.17	< 0.09
Calcium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	84000	100000	98000	47000	140000	130000	100000	130000	34000
Cadmium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	0.07	0.08	0.07	0.39	0.08	0.07	0.09	0.10	0.19
Cobalt [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	8	11	11	2	8	6	10	9	2
Chromium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	45	63	62	14	46	39	59	53	13
Copper [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	17	56	20	33	22	34	20	24	10
Iron [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	20000	27000	26000	10000	19000	16000	25000	23000	6400
Potassium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	19000	20000	19000	3100	17000	16000	19000	18000	3100
Lithium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	18	28	26	5.0	20	16	27	25	5.0
Magnesium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	42000	27000	27000	6400	34000	34000	26000	32000	5100
Manganese [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	480	470	460	170	400	380	450	490	180
Molybdenum [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	0.6	1.7	0.5	1.1	0.3	1.2	0.4	0.5	0.7
Nickel [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	19	29	28	8.3	21	17	27	24	8.0
Lead [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	12	13	12	4	10	9	12	10	2

Online LIMS

0003089218



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

LR Report :

CA19128-AUG22

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time Completed	5: 58201	6: 58203	7: 58204	8: 58211	9: 58212	10: 58214	11: 58215	12: 58217	13: 58218
Antimony [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	< 0.7	< 0.7	< 0.7	1.8	< 0.7	< 0.7	< 0.7	< 0.7	0.8
Tin [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	6.0	6.2	< 6	< 6	< 6	6.1	6.0	< 6	< 6
Strontium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	200	240	240	100	230	250	250	220	86
Titanium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	2500	2200	2100	570	1900	1800	2000	2100	460
Thallium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Uranium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	1.28	1.42	1.50	3.08	1.18	1.69	1.34	1.34	0.52
Vanadium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	51	64	61	16	47	40	59	54	15
Yttrium [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc [µg/g]	24-Sep-22	04:33	18-Oct-22	16:43	35	53	50	17	38	31	49	42	22

Analysis	14: 58219	15: 58220	16: 58221	17: 58223	18: 58224	19: 58230	20: 58231	21: 58233	22: 58241	23: 58243	24: 58360	25: 167367	26: 167370	27: 167378
Sample Date & Time	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	48000	25000	48000	43000	53000	65000	42000	64000	4900	54000	55000	54000	62000	57000
Arsenic [µg/g]	2.5	1.5	2.5	2.2	2.5	3.4	2.4	1.8	1.5	2.4	1.6	3.7	2.8	1.7
Barium [µg/g]	430	200	390	370	420	500	350	440	57	430	420	470	440	410
Beryllium [µg/g]	0.96	0.49	0.88	0.78	1	1	0.77	1	0.11	1	0.73	1	1	0.96
Bismuth [µg/g]	0.21	0.14	0.16	0.12	0.16	0.22	0.13	0.15	< 0.09	0.18	< 0.09	0.32	0.22	0.12
Calcium [µg/g]	94000	23000	110000	120000	100000	17000	150000	73000	28000	100000	76000	84000	84000	64000
Cadmium [µg/g]	0.10	0.41	0.07	0.06	0.08	0.14	0.05	0.05	0.30	0.05	0.02	0.10	0.11	0.06
Cobalt [µg/g]	8	3	7	6	9	10	7	7	1	10	8	11	11	5
Chromium [µg/g]	44	28	44	37	52	66	40	38	5.6	57	46	68	63	38
Copper [µg/g]	26	8.7	23	11	25	11	15	13	9.0	18	25	21	22	9.0
Iron [µg/g]	20000	9300	19000	16000	22000	29000	18000	20000	4500	24000	18000	29000	27000	14000
Potassium [µg/g]	19000	7900	18000	16000	18000	23000	16000	20000	1100	18000	14000	17000	18000	16000
Lithium [µg/g]	19	11	20	15	23	28	18	33	< 2	25	10	39	35	12
Magnesium [µg/g]	43000	3800	38000	33000	24000	9500	38000	19000	2200	26000	12000	24000	23000	17000
Manganese [µg/g]	470	170	430	340	410	400	360	380	130	440	330	540	470	300
Molybdenum [µg/g]	0.7	0.4	0.6	0.4	0.6	0.3	0.3	0.5	0.7	0.4	0.7	0.9	0.7	0.6
Nickel [µg/g]	20	7.9	19	16	23	27	18	18	2.7	26	20	30	29	14
Lead [µg/g]	12	10	10	9	12	15	9	12	2	12	8	14	12	10
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8

Online LIMS

0003098218



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

LR Report :

CA19128-AUG22

Analysis	14: 58219	15: 58220	16: 58221	17: 58223	18: 58224	19: 58230	20: 58231	21: 58233	22: 58241	23: 58243	24: 58360	25: 167367	26: 167370	27: 167378
Selenium [µg/g]	< 0.7	1.0	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	0.9	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	6.3	< 6	< 6	< 6	6.0	< 6	< 6	< 6	< 6	6.1	< 6	6.6	8.2	7.7
Strontium [µg/g]	210	90	220	240	270	210	220	290	82	260	320	180	270	290
Titanium [µg/g]	2500	1200	2100	1600	1900	2700	1800	1700	240	2000	1300	2700	2200	1400
Thallium [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.50	< 0.5	< 0.5
Uranium [µg/g]	1.36	4.06	1.19	1.10	1.34	1.65	1.09	1.21	0.33	1.33	0.70	1.47	1.43	0.78
Vanadium [µg/g]	51	23	47	38	52	68	43	42	7.1	57	46	70	62	32
Yttrium [µg/g]	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc [µg/g]	35	36	35	29	43	64	29	46	8.9	46	24	51	51	20

Analysis	28: 167380	29: 167729	30: 167730	31: 167731	32: 167733	33: 167738	34: 167739
Sample Date & Time	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	81000	15000	63000	47000	61000	5200	47000
Arsenic [µg/g]	2.8	1.0	4.2	2.4	2.6	2.0	1.5
Barium [µg/g]	520	130	460	350	450	43	390
Beryllium [µg/g]	2	0.40	1	0.95	1	0.14	1
Bismuth [µg/g]	0.34	0.10	0.28	0.14	0.21	< 0.09	0.16
Calcium [µg/g]	58000	39000	99000	120000	86000	21000	120000
Cadmium [µg/g]	0.11	0.33	0.11	0.10	0.11	0.13	0.10
Cobalt [µg/g]	19	3	14	7	10	0.85	7
Chromium [µg/g]	130	16	76	43	60	5.6	46
Copper [µg/g]	37	9.5	26	13	19	6.6	15
Iron [µg/g]	48000	11000	33000	18000	26000	4200	19000
Potassium [µg/g]	20000	3200	19000	16000	18000	1100	15000
Lithium [µg/g]	54	4.9	46	25	34	2.1	28
Magnesium [µg/g]	24000	6000	30000	33000	24000	2500	33000
Manganese [µg/g]	630	280	900	350	460	39	420
Molybdenum [µg/g]	0.7	0.6	0.5	0.4	0.5	0.2	0.3
Nickel [µg/g]	65	8.6	37	19	28	2.9	20
Lead [µg/g]	14	4	14	9	12	2	10
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	0.8	< 0.7	< 0.7	< 0.7	0.7	< 0.7



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

LR Report :

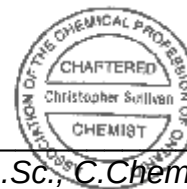
CA19128-AUG22

Analysis	28: 167380	29: 167729	30: 167730	31: 167731	32: 167733	33: 167738	34: 167739
Tin [µg/g]	7.8	< 6	7.8	7.2	6.9	< 6	7.0
Strontium [µg/g]	220	100	210	240	270	42	210
Titanium [µg/g]	3300	560	2800	1800	2200	270	2000
Thallium [µg/g]	0.54	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Uranium [µg/g]	1.62	1.38	1.38	1.10	1.39	0.43	1.25
Vanadium [µg/g]	110	14	77	42	60	6.7	47
Yttrium [µg/g]	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc [µg/g]	85	20	64	31	49	4.3	34

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-007	EPA 3052/200.8
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-013	EPA 3052/200.8

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

LR Report :

CA19128-AUG22

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Metals - Microwave/ICP-MS - QCBatchID: EMS0135-SEP22													
Aluminum	3	µg/g	<3			3	20	106	70	130			
Antimony	0.8	µg/g	<0.8			ND	20	103	70	130			
Arsenic	0.5	µg/g	<0.5			5	20	97	70	130			
Barium	0.01	µg/g	<0.01			3	20	100	70	130			
Beryllium	0.02	µg/g	<0.02			3	20	93	70	130			
Bismuth	0.09	µg/g	<0.09			3	20	93	70	130			
Cadmium	0.02	µg/g	<0.02			16	20	96	70	130			
Chromium	0.5	µg/g	<0.5			1	20	98	70	130			
Cobalt	0.01	µg/g	<0.01			2	20	100	70	130			
Copper	0.1	µg/g	<0.1			0	20	97	70	130			
Iron	3	µg/g	<3			0	20	99	70	130			
Lead	0.05	µg/g	<0.05			3	20	102	70	130			
Lithium	2	µg/g	<2			3	20	97	70	130			
Magnesium	3	µg/g	<0.1			1	20	95	70	130			
Manganese	0.1	µg/g	<0.1			2	20	101	70	130			
Molybdenum	0.1	µg/g	<0.1			3	20	91	70	130			
Nickel	0.1	µg/g	<0.1			3	20	96	70	130			
Selenium	0.7	µg/g	<0.7			ND	20	102	70	130			
Silver	0.5	µg/g	<0.01			12	20	95	70	130			
Strontium	0.02	µg/g	<0.02			2	20	97	70	130			
Thallium	0.5	µg/g	<0.02			4	20	97	70	130			
Tin	6	µg/g	<6			2	20	103	70	130			
Titanium	0.1	µg/g	<0.1			2	20	92	70	130			
Uranium	0.002	µg/g	<0.002			0	20	102	70	130			
Vanadium	1	µg/g	<1			2	20	99	70	130			
Yttrium	20	µg/g	<0.004			0	20	101	70	130			
Zinc	0.7	µg/g	<0.7			1	20	102	70	130			
Metals - Microwave/ICP-MS - QCBatchID: EMS0285-SEP22													
Aluminum	3	µg/g	<3			2	20	94	70	130			
Antimony	0.8	µg/g	<0.8			ND	20	91	70	130			
Arsenic	0.5	µg/g	<0.5			2	20	95	70	130			
Barium	0.01	µg/g	<0.01			0	20	98	70	130			
Beryllium	0.02	µg/g	<0.02			4	20	92	70	130			
Bismuth	0.09	µg/g	<0.09			6	20	91	70	130			
Cadmium	0.02	µg/g	<0.02			4	20	90	70	130			



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Lakefield - Ontario - KOL 2H0

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Trace Metals - Strong Acid Digest, ICP-MS

LR Report :

CA19128-AUG22

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Chromium	0.5	µg/g	<0.5			3	20	92	70	130			
Cobalt	0.01	µg/g	<0.01			3	20	93	70	130			
Copper	0.1	µg/g	<0.1			1	20	91	70	130			
Iron	3	µg/g	<3			1	20	96	70	130			
Lead	0.05	µg/g	<0.05			2	20	96	70	130			
Lithium	2	µg/g	<2			5	20	98	70	130			
Magnesium	3	µg/g	<0.1			3	20	95	70	130			
Manganese	0.1	µg/g	<0.1			3	20	91	70	130			
Molybdenum	0.1	µg/g	<0.1			1	20	91	70	130			
Nickel	0.1	µg/g	<0.1			3	20	93	70	130			
Selenium	0.7	µg/g	<0.7			ND	20	100	70	130			
Silver	0.5	µg/g	<0.01			3	20	91	70	130			
Strontium	0.02	µg/g	<0.02			3	20	93	70	130			
Thallium	0.5	µg/g	<0.02			3	20	91	70	130			
Tin	6	µg/g	<6			14	20	109	70	130			
Titanium	0.1	µg/g	<0.1			3	20	91	70	130			
Uranium	0.002	µg/g	<0.002			3	20	93	70	130			
Vanadium	1	µg/g	<1			2	20	94	70	130			
Yttrium	20	µg/g	<0.004			2	20	92	70	130			
Zinc	0.7	µg/g	<0.7			3	20	95	70	130			



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Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

09-January-2024

Date Rec. : 07 December 2023

LR Report: CA19061-DEC23

Reference: Crawford Project - PO#23590674

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis Time	5: CSA001	6: CSA002	7: CSA003	8: CSA004	9: CSA005	10: CSA006	11: CSA007	12: CSA009	13: CSA010	14: CSA011
Sample Date & Time					10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23
Silver [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	5800	28000	3500	3600	4700	1900	3700	4700	1700	4200
Arsenic [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	2.4	2.4	2.1	0.9	1.2	2.1	3.2	1.4	1.1	< 0.5
Barium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	58	240	43	47	61	35	45	49	35	64
Beryllium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	0.22	0.66	0.10	0.11	0.12	0.05	0.15	0.14	0.05	0.18
Bismuth [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	0.20	0.12	0.18	< 0.09	< 0.09	< 0.09	0.28	0.14	0.15	< 0.09
Calcium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	25000	22000	22000	18000	21000	8700	27000	14000	4500	28000
Cadmium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	0.66	0.38	0.71	0.20	0.26	0.61	0.48	1.2	0.43	0.37
Cobalt [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	1.1	5.9	0.46	0.57	0.90	0.48	0.90	1.2	0.30	0.82
Chromium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	13	43	11	34	16	14	12	34	13	13
Copper [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	8.7	13	15	4.4	6.1	4.9	9.2	9.1	12	12
Iron [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	3300	14000	1800	1700	3400	2100	1800	2900	990	4200
Potassium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	1400	9300	1100	770	1100	940	790	1300	580	800
Lithium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	3.7	14	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Magnesium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	3800	4700	3900	2200	2200	810	2600	1800	470	1800
Manganese [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	51	520	27	86	120	15	150	31	110	160
Molybdenum [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	0.5	0.6	0.6	0.5	0.7	1.3	2.6	0.5	0.4	0.7
Nickel [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	4.4	14	2.9	2.5	3.1	1.8	4.2	5.8	2.5	4.3
Lead [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	20	12	24	5	4	14	20	20	23	3



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

LR Report : CA19061-DEC23

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: CSA001	6: CSA002	7: CSA003	8: CSA004	9: CSA005	10: CSA006	11: CSA007	12: CSA009	13: CSA010	14: CSA011
Antimony [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	0.7	0.7	0.7	0.6	0.9	0.5	1.0	0.6	0.5	1.1
Tin [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	37	100	51	46	61	30	68	34	13	81
Titanium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	240	1100	220	180	270	80	140	190	46	180
Thallium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	0.08	0.24	0.06	0.07	0.09	0.05	0.10	0.07	0.04	0.07
Uranium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	0.4	1.3	0.4	0.3	0.8	0.1	0.4	0.2	0.1	3.1
Vanadium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	6.5	26	4.0	3.4	4.2	1.8	6.3	4.7	1.4	8.6
Yttrium [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	3.1	7.6	1.2	1.4	1.9	0.7	2.0	1.5	0.5	2.5
Zinc [µg/g]	08-Jan-24	11:24	08-Jan-24	16:45	31	55	41	14	12	24	20	27	48	19

Analysis	15: CSA012	16: CSA013	17: CSA014	18: CSA015	19: CSA016	20: CSA017	21: CSA018	22: CSA019	23: CSA020	24: CSA008
Sample Date & Time	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23
Silver [µg/g]	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Aluminum [µg/g]	4400	3600	23000	5200	2600	13000	16000	3600	2300	3000
Arsenic [µg/g]	1.8	2.8	1.1	1.8	0.6	1.6	2.4	1.1	0.9	1.1
Barium [µg/g]	51	47	200	52	30	120	180	59	32	39
Beryllium [µg/g]	0.13	0.09	0.48	0.11	0.07	0.30	0.28	0.12	0.06	0.08
Bismuth [µg/g]	0.15	0.33	0.11	0.16	< 0.09	0.11	0.45	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	8300	11000	21000	20000	5600	25000	7800	30000	5700	7600
Cadmium [µg/g]	0.41	0.82	0.45	0.38	0.15	0.58	0.79	0.44	0.38	0.30
Cobalt [µg/g]	0.89	0.63	2.8	0.83	0.23	2.3	1.3	0.72	0.27	0.34
Chromium [µg/g]	14	13	32	17	26	30	28	16	19	15
Copper [µg/g]	7.9	7.9	9.7	10	3.7	8.6	15	5.1	5.8	7.0
Iron [µg/g]	2700	1900	7200	2400	920	4600	4600	3800	900	1200
Potassium [µg/g]	1400	1100	6800	1500	820	3900	6000	680	800	700
Lithium [µg/g]	2.0	< 2	11	< 2	< 2	5.1	5.0	< 2	< 2	< 2
Magnesium [µg/g]	1600	1500	3100	2200	360	2900	1400	3100	940	570
Manganese [µg/g]	54	34	210	58	13	250	160	130	18	13
Molybdenum [µg/g]	0.4	0.5	0.4	0.6	3.9	7.0	1.7	3.0	1.3	1.9
Nickel [µg/g]	3.5	2.6	7.7	3.5	6.1	12	7.7	4.1	2.7	2.4
Lead [µg/g]	17	39	9	21	3	18	55	7	7	6
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - K0L 2H0

Phone: 705-652-2000 FAX: 705-652-6365

Trace Metals - Strong Acid Digest, ICP-MS

Project : PO#23590674

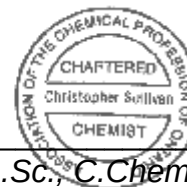
LR Report : CA19061-DEC23

Analysis	15: CSA012	16: CSA013	17: CSA014	18: CSA015	19: CSA016	20: CSA017	21: CSA018	22: CSA019	23: CSA020	24: CSA008
Selenium [µg/g]	0.5	0.8	0.9	0.5	0.5	0.9	0.8	0.7	0.4	0.5
Tin [µg/g]	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6	< 6
Strontium [µg/g]	24	28	90	62	19	76	59	71	22	23
Titanium [µg/g]	200	180	1100	190	100	570	770	170	85	190
Thallium [µg/g]	0.06	0.07	0.24	0.06	0.03	0.15	0.20	0.06	0.03	0.07
Uranium [µg/g]	0.4	0.3	1.6	0.2	0.2	0.9	0.6	0.4	0.2	0.3
Vanadium [µg/g]	4.0	3.8	21	5.5	9.0	23	14	6.5	3.8	4.7
Yttrium [µg/g]	1.9	1.2	5.7	1.2	0.8	3.4	2.5	1.7	0.6	1.0
Zinc [µg/g]	28	26	32	16	7.7	22	42	16	17	18

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-007	EPA 3052/200.8
Metals - Microwave/ICP-MS	ME-CA-[ENV]SPE-LAK-AN-013	EPA 3052/200.8

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
QCR_SubCategory - QCBatchID: EMS0045-JAN24													
Calcium	3	µg/g	<3			0		106			93		
Potassium	3	µg/g	<3			0		105			81		
Metals - Microwave/ICP-MS - QCBatchID: EMS0045-JAN24													
Aluminum	3	µg/g	<3			0	20	109	70	130	93	70	130
Antimony	0.8	µg/g	<0.8			ND	20	91	70	130	117	70	130
Arsenic	0.5	µg/g	<0.5			19	20	100	70	130	88	70	130
Barium	0.01	µg/g	<0.01			2	20	109	70	130	99	70	130
Beryllium	0.02	µg/g	<0.02			0	20	102	70	130	82	70	130
Bismuth	0.09	µg/g	<0.09			ND	20	105	70	130	NV	70	130
Cadmium	0.02	µg/g	<0.02			19	20	102	70	130	NV	70	130
Chromium	0.5	µg/g	<0.5			3	20	108	70	130	35	70	130
Cobalt	0.01	µg/g	<0.01			4	20	102	70	130	82	70	130
Copper	0.1	µg/g	<0.1			1	20	103	70	130	87	70	130
Iron	3	µg/g	<3			3	20	104	70	130	86	70	130
Lead	0.05	µg/g	<0.05			4	20	105	70	130	94	70	130
Lithium	2	µg/g	<2			1	20	94	70	130	92	70	130
Magnesium	3	µg/g	<3			2	20	102	70	130	84	70	130
Manganese	0.1	µg/g	<0.1			4	20	104	70	130	91	70	130
Molybdenum	0.1	µg/g	<0.1			6	20	106	70	130	85	70	130
Nickel	0.1	µg/g	<0.1			4	20	101	70	130	92	70	130
Selenium	0.1	µg/g	<0.1			1	20	103	70	130	NV	70	130
Silver	0.5	µg/g	<0.01			ND	20	106	70	130	NV	70	130
Strontium	0.02	µg/g	<0.02			0	20	104	70	130	94	70	130
Thallium	0.02	µg/g	<0.02			4	20	NV	70	130	NV	70	130
Tin	6	µg/g	<6			ND	20	108	70	130	NV	70	130
Titanium	0.1	µg/g	<0.1			10	20	106	70	130	77	70	130
Uranium	0.002	µg/g	<0.002			16	20	106	70	130	88	70	130
Vanadium	1	µg/g	<1			0	20	106	70	130	89	70	130
Yttrium	0.004	µg/g	<0.004			2	20	109	70	130	NV	70	130
Zinc	0.7	µg/g	<0.7			1	20	105	70	130	81	70	130



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : 20446363 - Crawford Project

16-September-2022

Date Rec. : 19 August 2022

LR Report: CA19129-AUG22

Reference: 20446363 - Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: 58201	6: 58203	7: 58204	8: 58211	9: 58212	10: 58214	11: 58215	12: 58217	13: 58218
Sample Date & Time					31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22
Sample weight [g]	31-Aug-22	07:40	06-Sep-22	12:39	250	250	250	190	250	250	250	250	150
Volume D.I. Water [mL]	31-Aug-22	07:40	06-Sep-22	12:39	750	750	750	570	750	750	750	750	450
Final pH [no unit]	01-Sep-22	07:40	06-Sep-22	12:39	8.28	8.17	8.32	5.98	8.60	8.23	8.29	8.38	5.94
pH [No unit]	02-Sep-22	13:10	06-Sep-22	11:47	8.42	8.56	8.49	7.74	8.66	8.53	8.56	8.78	7.80
Conductivity [uS/cm]	02-Sep-22	13:10	06-Sep-22	11:46	137	252	307	260	118	323	298	197	191
Alkalinity [mg/L as CaCO3]	02-Sep-22	13:10	06-Sep-22	11:46	61	65	62	82	59	54	79	71	66
Acidity [mg/L as CaCO3]	02-Sep-22	13:10	06-Sep-22	11:46	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	06-Sep-22	12:06	13-Sep-22	09:55	< 2	67	78	< 20	2	95	63	9	20
Chloride [mg/L]	06-Sep-22	11:44	08-Sep-22	21:52	< 1	< 1	< 1	6	< 1	< 1	< 1	< 1	5
Bromide [mg/L]	03-Sep-22	12:34	08-Sep-22	21:40	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Fluoride [mg/L]	06-Sep-22	08:52	06-Sep-22	13:03	0.99	1.32	1.22	0.27	1.52	1.26	1.25	1.15	0.27
Chromium VI [ug/L]	02-Sep-22	07:42	06-Sep-22	08:37	2.5	2.0	1.3	1.5	3.6	1.5	1.4	1.8	2.6
Aluminum (0.2µm) [mg/L]	07-Sep-22	20:16	15-Sep-22	16:19	0.015	0.010	0.010	0.509	0.033	0.007	0.012	0.020	0.169
Mercury [mg/L]	06-Sep-22	10:17	06-Sep-22	14:48	0.00001	< 0.00001	< 0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	07-Sep-22	20:16	09-Sep-22	10:24	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	07-Sep-22	20:16	09-Sep-22	10:24	0.256	0.030	0.051	0.641	0.193	0.044	0.175	0.210	0.117
Arsenic [mg/L]	07-Sep-22	20:16	09-Sep-22	10:24	0.0029	0.0016	0.0061	0.0042	0.0034	0.0033	0.0125	0.0039	0.0130
Barium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:24	0.00711	0.0267	0.0182	0.0185	0.00477	0.0208	0.0227	0.0130	0.0144
Boron [mg/L]	07-Sep-22	20:16	09-Sep-22	10:24	0.220	0.449	0.453	0.987	0.214	0.211	0.543	0.480	1.42
Beryllium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:24	0.000022	0.000013	< 0.000007	0.000110	0.000016	< 0.000007	0.000012	0.000012	0.000070

Online LIMS

0003051088

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis Date Completed	4: Analysis Time Completed	5: 58201	6: 58203	7: 58204	8: 58211	9: 58212	10: 58214	11: 58215	12: 58217	13: 58218
Bismuth [mg/L]	07-Sep-22	20:16	09-Sep-22	10:24	< 0.00001	< 0.00001	0.00005	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:24	19.0	35.4	34.5	40.8	14.3	45.3	32.3	27.6	24.9
Cadmium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:24	0.000004	0.000006	0.000015	0.000060	0.000008	0.000008	0.000031	0.000010	0.000070
Cobalt [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	0.000132	0.000052	0.000076	0.000420	0.000108	0.000054	0.000137	0.000132	0.000810
Chromium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	0.00356	0.00193	0.00128	0.00248	0.00426	0.00168	0.00177	0.00227	0.00180
Copper [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	0.0054	0.0052	0.0064	0.0269	0.0020	0.0036	0.0062	0.0071	0.0205
Iron [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	0.251	0.027	0.046	0.600	0.161	0.035	0.124	0.179	0.120
Potassium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	1.13	3.65	3.76	0.560	0.791	2.74	3.84	1.52	0.770
Lithium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	0.0034	0.0088	0.0065	0.0017	0.0030	0.0084	0.0081	0.0024	0.0016
Magnesium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	1.98	5.40	5.19	10.4	1.92	6.24	4.64	1.66	4.61
Manganese [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	0.00618	0.00088	0.00130	0.0294	0.00191	0.00154	0.00277	0.00240	0.0388
Molybdenum [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	0.00473	0.00935	0.00667	0.00296	0.00945	0.00886	0.00505	0.00680	0.00367
Sodium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	10.6	18.5	22.1	24.5	12.3	14.5	27.2	16.1	19.3
Nickel [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	0.0007	0.0012	0.0012	0.0027	0.0006	0.0009	0.0012	0.0010	0.0063
Lead [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	0.00029	< 0.00009	0.00049	0.00046	0.00010	< 0.00009	0.00022	0.00023	0.00014
Antimony [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	< 0.0009	< 0.0009	0.0009	0.0009	< 0.0009	0.0010	0.0011	< 0.0009	< 0.0009
Selenium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:25	0.00034	0.00309	0.00272	0.00194	0.00066	0.00341	0.00363	0.00193	0.00031
Silicon [mg/L]	07-Sep-22	20:16	09-Sep-22	10:26	4.82	10.8	8.88	3.49	4.99	3.18	8.96	9.12	6.80
Tin [mg/L]	07-Sep-22	20:16	09-Sep-22	10:26	0.00007	< 0.00006	0.00008	0.00048	< 0.00006	< 0.00006	0.00013	< 0.00006	0.00049
Strontium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:26	0.0385	0.247	0.261	0.0683	0.0328	0.343	0.308	0.0704	0.0548
Titanium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:26	0.0261	0.00127	0.00215	0.0344	0.00799	0.00148	0.00659	0.0114	0.00345
Thallium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:26	< 0.000005	< 0.000005	< 0.000005	0.000020	< 0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:26	0.00133	0.00123	0.00180	0.00108	0.000537	0.00291	0.00248	0.00107	0.000170
Vanadium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:26	0.00368	0.00472	0.0120	0.00781	0.00214	0.00263	0.0116	0.00629	0.00115
Yttrium [mg/L]	07-Sep-22	20:16	09-Sep-22	10:26	0.00025	< 0.00002	< 0.00002	0.00058	0.00008	< 0.00002	0.00007	0.00013	0.00046
Zinc [mg/L]	07-Sep-22	20:16	09-Sep-22	10:26	< 0.002	< 0.002	< 0.002	0.012	< 0.002	< 0.002	< 0.002	< 0.002	0.007

Analysis	14: 58219	15: 58220	16: 58221	17: 58223	18: 58224	19: 58230	20: 58231	21: 58233	22: 58241	23: 58243	24: 58360	25: 167367	26: 167370
Sample Date & Time	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22
Sample weight [g]	250	200	250	250	250	250	250	250	150	250	250	250	250
Volume D.I. Water [mL]	750	600	750	750	750	750	750	750	450	750	750	750	750
Final pH [no unit]	8.23	5.99	8.71	8.37	8.32	6.00	8.67	8.30	5.75	8.26	9.22	8.48	8.41
pH [No unit]	8.73	7.89	9.02	7.74	8.54	7.52	8.59	8.76	7.64	8.57	8.24	8.32	8.84
Conductivity [uS/cm]	175	286	121	277	282	343	122	289	204	305	144	160	281



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : 20446363 - Crawford Project

LR Report : CA19129-AUG22

Analysis	14: 58219	15: 58220	16: 58221	17: 58223	18: 58224	19: 58230	20: 58231	21: 58233	22: 58241	23: 58243	24: 58360	25: 167367	26: 167370
Alkalinity [mg/L as CaCO ₃]	65	109	61	57	82	63	59	74	59	94	32	81	99
Acidity [mg/L as CaCO ₃]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	46	< 2	89	< 2	< 2
Sulphate [mg/L]	10	< 20	< 2	78	58	< 20	< 2	68	< 20	68	38	< 2	49
Chloride [mg/L]	< 1	8	< 1	< 1	< 1	5	< 1	< 1	7	< 1	1	< 1	< 1
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Fluoride [mg/L]	1.09	0.20	1.04	1.07	0.98	0.17	0.47	1.09	0.22	1.14	0.19	0.97	0.89
Chromium VI [ug/L]	1.7	2.6	3.3	1.1	1.4	2.3	0.3	1.5	2.7	1.1	0.3	4.7	2.0
Aluminum (0.2µm) [mg/L]	0.041	0.720	0.018	0.008	0.007	0.682	0.026	0.025	0.180	0.011	0.284	0.259	0.017
Mercury [mg/L]	< 0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	0.00005	0.00001	< 0.00001	0.00002	0.00002	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	0.182	0.360	0.274	0.043	0.079	0.709	0.198	0.078	0.131	0.071	0.168	0.192	0.095
Arsenic [mg/L]	0.0021	0.0053	0.0033	0.0027	0.0033	0.0034	0.0024	0.0033	0.0096	0.0047	0.0016	0.0030	0.0070
Barium [mg/L]	0.0130	0.0316	0.00457	0.0181	0.0301	0.0304	0.00546	0.0270	0.0237	0.0210	0.00850	0.00667	0.0141
Boron [mg/L]	0.180	1.11	0.262	0.249	0.448	0.838	0.214	0.450	1.47	0.450	0.081	0.384	0.623
Beryllium [mg/L]	0.000010	0.000030	0.000017	0.000009	0.000009	0.000180	0.000007	0.000012	0.000110	< 0.000007	0.000011	0.000011	< 0.000007
Bismuth [mg/L]	< 0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	30.1	46.7	12.9	38.4	36.8	50.0	16.6	43.3	28.8	41.6	17.2	17.0	19.0
Cadmium [mg/L]	0.000012	0.000100	0.000010	0.000003	0.000003	0.000090	0.000005	0.000004	0.000080	0.000005	0.000003	0.000007	0.000004
Cobalt [mg/L]	0.000117	0.00130	0.000107	0.000070	0.000097	0.000830	0.000081	0.000114	0.000570	0.000125	0.000013	0.000088	0.000105
Chromium [mg/L]	0.00210	0.00279	0.00374	0.00116	0.00160	0.00421	0.00214	0.00162	0.00180	0.00152	0.00043	0.00556	0.00220
Copper [mg/L]	0.0071	0.127	0.0024	0.0047	0.0060	0.0073	0.0036	0.0069	0.0041	0.0087	0.0011	0.0026	0.0084
Iron [mg/L]	0.152	0.340	0.224	0.035	0.067	0.690	0.174	0.061	0.250	0.052	0.007	0.149	0.076
Potassium [mg/L]	1.68	1.16	0.747	3.06	4.40	1.24	0.462	4.22	0.680	5.36	2.67	1.06	3.23
Lithium [mg/L]	0.0044	0.0017	0.0019	0.0069	0.0078	0.0020	0.0011	0.0083	0.0017	0.0079	0.0028	0.0025	0.0077
Magnesium [mg/L]	1.89	10.7	1.58	4.70	5.72	11.7	1.88	5.41	4.47	5.78	2.17	2.98	3.30
Manganese [mg/L]	0.00691	0.114	0.00201	0.00103	0.00171	0.0937	0.00158	0.00196	0.0724	0.00149	0.00059	0.00131	0.00182
Molybdenum [mg/L]	0.0144	0.00686	0.01326	0.00742	0.00575	0.00132	0.00176	0.00626	0.00230	0.0133	0.00244	0.0173	0.00643
Sodium [mg/L]	10.7	18.4	13.7	14.6	17.1	13.8	10.7	13.7	18.9	18.4	7.23	14.8	39.0
Nickel [mg/L]	0.0006	0.0058	0.0005	0.0009	0.0013	0.0033	0.0005	0.0015	0.0028	0.0016	0.0002	0.0008	0.0013
Lead [mg/L]	0.00015	0.00190	0.00012	< 0.00009	0.00009	0.00036	0.00011	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Antimony [mg/L]	0.0011	< 0.0009	< 0.0009	0.0010	0.0011	0.0011	< 0.0009	0.0012	< 0.0009	0.0010	< 0.0009	< 0.0009	0.0011
Selenium [mg/L]	0.00125	0.00124	0.00016	0.00158	0.00182	0.00097	0.00019	0.00190	0.00092	0.00186	0.00040	0.00022	0.00185
Silicon [mg/L]	2.22	5.08	5.45	2.98	10.2	93.2	0.50	4.87	87.4	0.51	7.79	1.61	10.9
Tin [mg/L]	< 0.00006	0.00057	< 0.00006	< 0.00006	< 0.00006	0.00031	< 0.00006	< 0.00006	0.00025	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium [mg/L]	0.107	0.0673	0.0238	0.192	0.341	0.0728	0.0182	0.199	0.0669	0.357	0.0325	0.0313	0.169
Titanium [mg/L]	0.0219	0.0330	0.0119	0.00157	0.00268	0.0201	0.0130	0.00313	0.00547	0.00206	0.00019	0.00820	0.00374
Thallium [mg/L]	0.000006	< 0.000005	< 0.000005	< 0.000005	< 0.000005	0.000010	< 0.000005	< 0.000005	0.000010	< 0.000005	< 0.000005	< 0.000005	< 0.000005
Uranium [mg/L]	0.00182	0.00115	0.000222	0.000921	0.00248	0.000360	0.000264	0.00544	0.000350	0.00220	0.00130	0.000535	0.00393

Analysis	14: 58219	15: 58220	16: 58221	17: 58223	18: 58224	19: 58230	20: 58231	21: 58233	22: 58241	23: 58243	24: 58360	25: 167367	26: 167370
Vanadium [mg/L]	0.00261	0.00191	0.00349	0.00293	0.00988	0.00163	0.00305	0.00863	0.00109	0.00503	0.00792	0.00278	0.01207
Yttrium [mg/L]	0.00021	0.00092	0.00010	< 0.00002	0.00002	0.00164	0.00016	0.00003	0.00035	0.00002	< 0.00002	0.00017	0.00002
Zinc [mg/L]	< 0.002	0.054	< 0.002	< 0.002	< 0.002	0.012	< 0.002	< 0.002	0.011	0.003	< 0.002	< 0.002	< 0.002

Analysis	27: 167378	28: 167380	29: 167729	30: 167730	31: 167731	32: 167733	33: 167738	34: 167739
Sample Date & Time	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22	31-Mar-22
Sample weight [g]	250	250	140	250	250	250	120	250
Volume D.I. Water [mL]	750	750	420	750	750	750	360	750
Final pH [no unit]	8.79	8.41	5.59	8.42	8.34	8.24	5.64	8.28
pH [No unit]	8.60	8.77	7.50	9.13	8.52	9.05	7.67	8.87
Conductivity [uS/cm]	254	394	295	165	126	276	250	170
Alkalinity [mg/L as CaCO3]	58	90	94	97	58	91	103	78
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	60	110	33	< 2	< 2	49	10	< 20
Chloride [mg/L]	6	1	8	< 1	< 1	< 1	17	1
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Fluoride [mg/L]	0.49	0.41	0.17	0.97	1.02	0.91	0.30	0.68
Chromium VI [ug/L]	1.7	1.3	1.6	4.5	2.8	1.6	3.6	2.1
Aluminum (0.2µm) [mg/L]	0.021	0.005	0.550	0.044	0.014	0.524	0.556	0.015
Mercury [mg/L]	< 0.00001	0.00001	0.00004	0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum [mg/L]	0.048	0.010	1.07	0.217	0.245	0.104	0.455	0.282
Arsenic [mg/L]	0.0017	0.0034	0.0034	0.0026	0.0020	0.0037	0.0184	0.0019
Barium [mg/L]	0.0134	0.0430	0.0455	0.00698	0.00641	0.0123	0.0394	0.00968
Boron [mg/L]	0.179	0.251	0.906	0.433	0.269	0.445	1.81	0.262
Beryllium [mg/L]	< 0.000007	< 0.000007	0.000070	0.000009	< 0.000007	< 0.000007	0.000120	0.000028
Bismuth [mg/L]	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001
Calcium [mg/L]	22.1	25.4	41.8	12.7	14.3	22.2	33.9	22.9
Cadmium [mg/L]	0.000016	0.000006	0.000120	0.000005	0.000015	0.000008	0.000100	0.000010
Cobalt [mg/L]	0.000086	0.000043	0.00182	0.000204	0.000130	0.000102	0.00153	0.000198
Chromium [mg/L]	0.00198	0.00095	0.00180	0.00529	0.00346	0.00154	0.00264	0.00385
Copper [mg/L]	0.0034	0.0033	0.0247	0.0112	0.0035	0.0073	0.0112	0.0243
Iron [mg/L]	0.049	< 0.007	0.780	0.182	0.204	0.081	0.610	0.237
Potassium [mg/L]	5.66	6.09	1.21	0.914	0.899	2.60	1.22	0.696

Analysis	27: 167378	28: 167380	29: 167729	30: 167730	31: 167731	32: 167733	33: 167738	34: 167739
Lithium [mg/L]	0.0076	0.0069	0.0019	0.0025	0.0029	0.0066	0.0024	0.0014
Magnesium [mg/L]	5.62	17.9	9.87	2.16	1.50	3.65	6.84	1.86
Manganese [mg/L]	0.00156	0.00115	0.228	0.00221	0.00241	0.00167	0.0113	0.00939
Molybdenum [mg/L]	0.0610	0.0190	0.00701	0.01069	0.00770	0.00786	0.00220	0.00418
Sodium [mg/L]	18.3	24.8	14.5	23.6	12.2	32.0	26.0	16.3
Nickel [mg/L]	0.0023	0.0011	0.0060	0.0020	0.0010	0.0012	0.0071	0.0013
Lead [mg/L]	< 0.00009	< 0.00009	0.00031	< 0.00009	0.00011	< 0.00009	0.00035	0.00019
Antimony [mg/L]	< 0.0009	0.0017	< 0.0009	< 0.0009	< 0.0009	0.0010	< 0.0009	0.0012
Selenium [mg/L]	0.00067	0.00383	0.00112	0.00015	0.00038	0.00225	0.00058	0.00103
Silicon [mg/L]	7.20	2.86	28.3	0.18	4.94	5.90	48.6	0.51
Tin [mg/L]	< 0.00006	< 0.00006	0.00026	< 0.00006	< 0.00006	< 0.00006	0.00023	< 0.00006
Strontium [mg/L]	0.0676	0.282	0.114	0.0293	0.0377	0.189	0.0600	0.0298
Titanium [mg/L]	0.00217	0.00071	0.0300	0.0108	0.0104	0.00400	0.0183	0.0218
Thallium [mg/L]	0.000008	0.000011	0.000020	< 0.000005	< 0.000005	< 0.000005	0.000010	< 0.000005
Uranium [mg/L]	0.00244	0.00321	0.000660	0.000445	0.000416	0.00220	0.000320	0.00172
Vanadium [mg/L]	0.00447	0.01002	0.00285	0.00242	0.00236	0.00917	0.00266	0.00992
Yttrium [mg/L]	< 0.00002	< 0.00002	0.00084	0.00016	0.00013	0.00003	0.00086	0.00082
Zinc [mg/L]	< 0.002	< 0.002	0.021	< 0.002	< 0.002	< 0.002	0.012	0.003

Chris Sullivan

Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 ratio 24hr (MEND) prefilter pH

Project : 20446363 - Crawford Project

LR Report : CA19129-AUG22

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
	NA	Sample weight
	NA	Volume
Acidity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2310
Alkalinity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2320
Anions by discrete analyzer	ME-CA-[ENV]EWL-LAK-AN-026	US EPA 325.2
Anions by discrete analyzer	ME-CA-[ENV]EWL-LAK-AN-026	US EPA 375.4
Anions by IC	ME-CA-[ENV]IC-LAK-AN-001	EPA300/MA300-Ions1.3
Conductivity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2510
Fluoride by Specific Ion Electrode	ME-CA-[ENV]EWL-LAK-AN-014	SM 4500
Hexavalent Chromium by SFA	ME-CA-[ENV]SKA-LAK-AN-012	EPA218.6/EPA3060A
Inorganics-General	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/SM 3112B
Metals in aqueous samples - ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	SM 3030/EPA 200.8
pH	ME-CA-[ENV]EWL-LAK-AN-006	SM 4500

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Acidity - QCBatchID: EWL0051-SEP22													
Acidity	2	mg/L as Ca	< 2			ND	20	96	90	110	NA		
Acidity - QCBatchID: EWL0052-SEP22													
Acidity	2	mg/L as Ca	< 2			4	20	98	90	110	NA		
Alkalinity - QCBatchID: EWL0051-SEP22													
Alkalinity	2	mg/L as Ca	< 2			4	20	109	80	120	NA		
Alkalinity - QCBatchID: EWL0052-SEP22													
Alkalinity	2	mg/L as Ca	< 2			ND	20	96	80	120	NA		
Anions by discrete analyzer - QCBatchID: DIO5005-SEP22													
Chloride	1	mg/L	<1			ND	20	99	80	120	102	75	125
Sulphate	2	mg/L	<2			ND	20	112	80	120	109	75	125
Anions by discrete analyzer - QCBatchID: DIO5007-SEP22													
Sulphate	2	mg/L	<2			ND	20	110	80	120	109	75	125
Anions by IC - QCBatchID: DIO0076-SEP22													
Bromide	0.3	mg/L	<0.3			ND	20	100	90	110	105	75	125
Anions by IC - QCBatchID: DIO0077-SEP22													
Bromide	0.3	mg/L	<0.3			ND	20	92	90	110	91	75	125
Conductivity - QCBatchID: EWL0051-SEP22													
Conductivity	2	uS/cm	2			0	20	100	90	110	NA		
Conductivity - QCBatchID: EWL0052-SEP22													
Conductivity	2	uS/cm	5			2	20	99	90	110	NA		
Fluoride by Specific Ion Electrode - QCBatchID: EWL0070-SEP22													
Fluoride	0.06	mg/L	<0.06			ND	10	103	90	110	97	75	125
Hexavalent Chromium by SFA - QCBatchID: SKA0023-SEP22													
Chromium VI	0.2	ug/L	<0.2			1	20	107	80	120	115	75	125
Inorganics-General - QCBatchID: EHG0004-SEP22													
Mercury	0.00001	mg/L	< 0.00001			0	20	85	80	120	83	70	130
Metals - QCBatchID: EMS0018-SEP22													
Cobalt	0.000004	mg/L	<0.000004			10	20	103	90	110	109	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0018-SEP22													
Aluminum	0.001	mg/L	<0.001			4	20	105	90	110	121	70	130
Aluminum (0.2µm)	0.001	mg/L	<0.001			4	20	105	90	110	121	70	130
Antimony	0.0009	mg/L	<0.0009			ND	20	110	90	110	126	70	130
Arsenic	0.0002	mg/L	<0.0002			2	20	95	90	110	112	70	130
Barium	0.00008	mg/L	<0.00002			11	20	105	90	110	113	70	130
Beryllium	0.000007	mg/L	<0.000007			19	20	106	90	110	70	70	130

Inorganic Analysis												
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material	
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)
									Low	High		
Bismuth	0.00001	mg/L	<0.00001			ND	20	105	90	110	120	70 130
Boron	0.002	mg/L	<0.002			11	20	105	90	110	115	70 130
Cadmium	0.000003	mg/L	<0.000003			7	20	102	90	110	122	70 130
Calcium	0.01	mg/L	<0.01			3	20	99	90	110	74	70 130
Chromium	0.00008	mg/L	<0.00008			ND	20	103	90	110	104	70 130
Copper	0.0002	mg/L	<0.0002			2	20	99	90	110	103	70 130
Iron	0.007	mg/L	<0.007			0	20	97	90	110	75	70 130
Lead	0.00009	mg/L	<0.00001			0	20	106	90	110	117	70 130
Lithium	0.0001	mg/L	<0.0001			ND	20	109	90	110	94	70 130
Magnesium	0.001	mg/L	<0.001			18	20	99	90	110	93	70 130
Manganese	0.00001	mg/L	<0.00001			9	20	103	90	110	101	70 130
Molybdenum	0.00004	mg/L	<0.00004			ND	20	100	90	110	122	70 130
Nickel	0.0001	mg/L	<0.0001			ND	20	101	90	110	107	70 130
Potassium	0.003	mg/L	<0.009			ND	20	97	90	110	101	70 130
Selenium	0.00004	mg/L	<0.00004			9	20	91	90	110	97	70 130
Silicon	0.02	mg/L	<0.02			2	20	107	90	110	NV	70 130
Silver	0.00005	mg/L	<0.00005			ND	20	104	90	110	123	70 130
Sodium	0.01	mg/L	<0.01			ND	20	101	90	110	98	70 130
Strontium	0.00008	mg/L	<0.00002			1	20	104	90	110	113	70 130
Thallium	0.000005	mg/L	<0.000005			ND	20	101	90	110	116	70 130
Tin	0.00006	mg/L	<0.00006			2	20	96	90	110	NV	70 130
Titanium	0.00005	mg/L	<0.00005			4	20	102	90	110	NV	70 130
Uranium	0.000002	mg/L	<0.000002			4	20	107	90	110	99	70 130
Vanadium	0.00001	mg/L	<0.00001			ND	20	103	90	110	109	70 130
Yttrium	0.00002	mg/L	<0.00002			ND	20	105	90	110	NV	70 130
Zinc	0.002	mg/L	<0.002			16	20	97	90	110	74	70 130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0099-SEP22												
Aluminum (0.2µm)	0.001	mg/L	<0.001			3	20	101	90	110	111	70 130
pH - QCBatchID: EWL0051-SEP22												
pH	0.05	No unit	NA			0		100			NA	
pH - QCBatchID: EWL0052-SEP22												
pH	0.05	No unit	NA			0		100			NA	



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

SFE 3:1 24hr

Project : PO#23590674

10-January-2024

Date Rec. : 07 December 2023

LR Report: CA19062-DEC23

Reference: Crawford Project - PO#23590674

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time Completed	3: Analysis DateCompleted	4: Analysis TimeCompleted	5: CSA001	6: CSA002	7: CSA003	8: CSA004	9: CSA005	10: CSA006	11: CSA007	12: CSA009
Sample Date & Time					10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23
Sample weight [g]	03-Jan-24	12:00	05-Jan-24	10:49	249	249	249	251	250	250	249	250
Volume D.I. Water [mL]	04-Jan-24	06:00	05-Jan-24	10:49	750	750	750	750	750	750	750	750
PreFilt pH [no unit]	05-Jan-24	06:30	05-Jan-24	10:49	6.73	6.48	6.27	5.86	5.62	4.26	5.71	5.38
pH [No unit]	05-Jan-24	13:58	08-Jan-24	11:03	8.72	8.41	8.13	7.84	8.10	7.33	7.71	7.63
Conductivity [uS/cm]	05-Jan-24	13:58	08-Jan-24	11:03	136	165	200	97	77	82	136	82
Alkalinity [mg/L as CaCO3]	05-Jan-24	13:58	08-Jan-24	11:03	68	88	60	45	38	38	53	37
Acidity [mg/L as CaCO3]	05-Jan-24	13:58	08-Jan-24	11:03	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Fluoride [mg/L]	08-Jan-24	08:03	08-Jan-24	13:08	0.20	0.23	0.20	0.18	0.17	0.20	0.20	0.19
Bromide [mg/L]	07-Jan-24	17:16	08-Jan-24	09:57	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloride [mg/L]	07-Jan-24	17:16	10-Jan-24	12:45	5.8	2.5	32	3.0	< 2	< 2	< 2	< 2
Sulphate [mg/L]	07-Jan-24	17:16	08-Jan-24	09:57	< 2	< 2	3.4	< 2	< 2	2.7	2.2	< 2
Mercury [mg/L]	08-Jan-24	15:13	09-Jan-24	11:47	0.00001	< 0.00001	0.00001	0.00002	0.00001	0.00002	0.00002	< 0.00001
Silver (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.206	0.610	0.204	0.094	0.107	0.379	0.133	0.294
Arsenic (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.0017	0.0013	0.0027	0.0042	0.0013	0.0024	0.0037	0.0018
Barium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.00649	0.0124	0.0108	0.00709	0.00435	0.0145	0.0136	0.00717
Boron (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.302	0.538	0.456	0.449	0.488	0.793	0.603	0.571
Beryllium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.000007	0.000014	0.000011	0.000008	< 0.000007	0.000019	0.000012	0.000013
Bismuth (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	0.00004	0.00001	0.00001
Calcium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	8.26	14.4	10.2	7.22	5.55	5.17	16.2	6.54



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 24hr

Project : PO#23590674

LR Report : CA19062-DEC23

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: CSA001	6: CSA002	7: CSA003	8: CSA004	9: CSA005	10: CSA006	11: CSA007	12: CSA009
Cadmium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.000022	0.000026	0.000030	0.000047	0.000007	0.000104	0.000060	0.000055
Cobalt (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.000083	0.000492	0.000168	0.000213	0.000086	0.000264	0.000409	0.000282
Chromium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.00076	0.00153	0.00107	0.00093	0.00101	0.00174	0.00102	0.00376
Copper (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.0052	0.0036	0.0054	0.0030	0.0016	0.0230	0.0073	0.0107
Iron (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.106	0.901	0.120	0.067	0.206	0.295	0.093	0.305
Potassium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.949	7.27	1.84	1.35	0.834	3.27	2.09	2.24
Lithium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.0007	0.0021	0.0009	0.0010	0.0011	0.0016	0.0008	0.0013
Magnesium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	2.52	3.82	3.48	2.33	1.51	1.81	4.74	1.74
Manganese (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.00176	0.0328	0.00150	0.0120	0.00321	0.0105	0.0540	0.00514
Molybdenum (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.00384	0.00047	0.00031	0.00055	0.00031	0.00572	0.00065	0.00027
Sodium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	27.8	18.5	39.6	15.2	13.6	15.7	13.7	14.0
Nickel (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.0014	0.0020	0.0015	0.0017	0.0010	0.0029	0.0024	0.0029
Lead (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.00022	0.00136	0.00038	0.00054	0.00009	0.00159	0.00048	0.00068
Antimony (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.00014	0.00011	0.00026	0.00019	0.00012	0.00034	0.00030	0.00015
Silicon (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	3.75	6.34	4.24	4.36	3.23	2.95	3.21	6.05
Tin (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	0.00014	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.00870	0.0187	0.0142	0.0113	0.00831	0.00847	0.0329	0.0117
Titanium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.00544	0.0190	0.00638	0.00154	0.00348	0.0116	0.00198	0.00816
Thallium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.000007	0.000011	< 0.000005	0.000006	< 0.000005	0.000025	0.000009	0.000008
Uranium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.000012	0.000086	0.000037	0.000014	0.000028	0.000046	0.000039	0.000055
Vanadium (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	0.00067	0.00274	0.00047	0.00044	0.00048	0.00115	0.00109	0.00113
Zinc (dissolved) [mg/L]	08-Jan-24	12:50	09-Jan-24	14:10	< 0.002	0.005	0.003	0.005	< 0.002	0.024	0.007	0.004

Analysis	13: CSA010	14: CSA011	15: CSA012	16: CSA013	17: CSA014	18: CSA015	19: CSA016	20: CSA017	21: CSA018	22: CSA019	23: CSA020	24: CSA008
Sample Date & Time	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23	10-18-23
Sample weight [g]	250	249	248	250	249	249	252	250	249	252	251	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
PreFilt pH [no unit]	4.50	5.87	4.77	4.79	5.77	6.44	4.84	6.34	4.67	5.57	4.25	5.32
pH [No unit]	7.77	7.88	7.37	7.97	7.81	7.89	8.01	8.01	7.19	7.51	7.43	8.00
Conductivity [uS/cm]	68	102	103	115	110	233	81	185	147	89	79	77
Alkalinity [mg/L as CaCO3]	34	48	39	59	52	67	39	94	50	38	27	38
Acidity [mg/L as CaCO3]	< 2	< 2	12	< 2	< 2	< 2	< 2	< 2	27	< 2	< 2	< 2
Fluoride [mg/L]	0.18	0.19	0.21	0.30	0.20	0.15	0.23	0.18	0.20	0.15	0.17	0.19

Analysis	13: CSA010	14: CSA011	15: CSA012	16: CSA013	17: CSA014	18: CSA015	19: CSA016	20: CSA017	21: CSA018	22: CSA019	23: CSA020	24: CSA008
Bromide [mg/L]	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloride [mg/L]	< 2	< 2	2.6	< 2	2.2	44	< 2	< 2	6.1	< 2	5.1	< 2
Sulphate [mg/L]	< 2	2.7	< 2	< 2	< 2	< 2	< 2	< 2	3.0	< 2	< 2	< 2
Mercury [mg/L]	< 0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	< 0.00001	0.00002	0.00004	0.00001	0.00001	< 0.00001
Silver (dissolved) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	0.058	0.106	1.15	0.617	0.178	0.189	0.070	0.213	2.53	0.125	0.165	0.070
Arsenic (dissolved) [mg/L]	0.0014	0.0035	0.0033	0.0025	0.0039	0.0020	0.0032	0.0072	0.0058	0.0026	0.0031	0.0012
Barium (dissolved) [mg/L]	0.00288	0.00774	0.0226	0.0101	0.00857	0.00911	0.00301	0.0120	0.0456	0.00808	0.0112	0.00544
Boron (dissolved) [mg/L]	0.748	0.548	0.825	0.960	0.684	0.268	0.754	0.632	1.10	0.399	0.666	0.667
Beryllium (dissolved) [mg/L]	< 0.000007	0.000011	0.000082	0.000021	0.000014	0.000009	0.000009	0.000008	0.000089	0.000011	0.000015	0.000007
Bismuth (dissolved) [mg/L]	0.00001	< 0.00001	0.00006	0.00003	0.00002	< 0.00001	< 0.00001	0.00003	0.00017	< 0.00001	0.00002	< 0.00001
Calcium (dissolved) [mg/L]	2.32	9.04	7.24	6.16	7.07	11.3	2.41	17.0	9.52	8.97	3.00	3.96
Cadmium (dissolved) [mg/L]	0.000013	0.000020	0.000141	0.000058	0.000050	0.000034	0.000015	0.000162	0.000470	0.000028	0.000071	0.000012
Cobalt (dissolved) [mg/L]	0.000067	0.000111	0.000686	0.000290	0.000358	0.000078	0.000082	0.00141	0.00114	0.000099	0.000165	0.000120
Chromium (dissolved) [mg/L]	0.00127	0.00095	0.00345	0.00223	0.00124	0.00064	0.00118	0.00112	0.00493	0.00052	0.00134	0.00103
Copper (dissolved) [mg/L]	0.0074	0.0023	0.0129	0.0202	0.0087	0.0024	0.0189	0.0156	0.0355	0.0029	0.0099	0.0067
Iron (dissolved) [mg/L]	0.060	0.194	0.632	0.298	0.147	0.161	0.092	0.107	1.17	0.148	0.200	0.122
Potassium (dissolved) [mg/L]	0.709	1.83	4.21	2.01	2.96	1.26	2.17	6.56	12.3	1.00	4.82	1.06
Lithium (dissolved) [mg/L]	0.0008	0.0008	0.0031	0.0021	0.0009	0.0009	0.0008	0.0012	0.0035	0.0007	0.0016	0.0007
Magnesium (dissolved) [mg/L]	0.732	2.28	2.46	1.85	2.40	2.46	0.767	5.29	2.64	2.67	1.02	0.985
Manganese (dissolved) [mg/L]	0.00623	0.0124	0.0215	0.0318	0.0296	0.00287	0.00136	0.144	0.107	0.00871	0.00475	0.00255
Molybdenum (dissolved) [mg/L]	0.00010	0.00595	0.00038	0.00021	0.00042	0.00112	0.00021	0.00099	0.00038	0.00059	0.00466	0.00028
Sodium (dissolved) [mg/L]	13.8	15.1	21.0	23.9	16.5	45.9	15.3	14.0	17.7	12.3	11.9	14.3
Nickel (dissolved) [mg/L]	0.0013	0.0014	0.0042	0.0027	0.0048	0.0013	0.0018	0.0037	0.0080	0.0015	0.0022	0.0012
Lead (dissolved) [mg/L]	0.00031	0.00026	0.00269	0.00116	0.00052	0.00046	0.00026	0.00090	0.01074	0.00020	0.00143	0.00025
Antimony (dissolved) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	0.00013	0.00014	0.00042	0.00023	0.00009	0.00020	0.00015	0.00020	0.00066	0.00017	0.00021	0.00010
Silicon (dissolved) [mg/L]	1.99	4.14	6.79	5.71	6.21	4.66	2.88	6.88	9.23	4.51	2.96	2.64
Tin (dissolved) [mg/L]	< 0.00006	< 0.00006	0.00013	0.00014	< 0.00006	0.00007	< 0.00006	< 0.00006	0.00047	< 0.00006	0.00008	< 0.00006
Strontium (dissolved) [mg/L]	0.00255	0.0169	0.0117	0.00940	0.0109	0.0189	0.00258	0.0306	0.0176	0.0137	0.00443	0.00522
Titanium (dissolved) [mg/L]	0.00164	0.00267	0.0253	0.0220	0.00441	0.00635	0.00193	0.00893	0.124	0.00218	0.00482	0.00233
Thallium (dissolved) [mg/L]	< 0.000005	0.000005	0.000017	0.000014	0.000017	0.000007	0.000012	0.000020	0.000043	0.000008	0.000011	0.000005
Uranium (dissolved) [mg/L]	0.000019	0.000031	0.000188	0.000065	0.000031	0.000023	0.000021	0.000071	0.000152	0.000010	0.000059	0.000012
Vanadium (dissolved) [mg/L]	0.00051	0.00093	0.00284	0.00159	0.00096	0.00069	0.00090	0.00138	0.00619	0.00043	0.00096	0.00068
Zinc (dissolved) [mg/L]	0.003	0.003	0.034	0.007	0.003	0.002	0.003	0.004	0.052	0.002	0.012	0.004



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 24hr

Project : PO#23590674

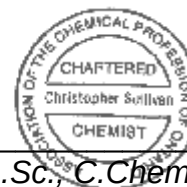
LR Report : CA19062-DEC23

Pre-Filter pH is completed after extraction and prior to filtration, lab pH is processed on a filtered portion.

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acidity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2310
Alkalinity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2320
Anions by IC	ME-CA-[ENV]IC-LAK-AN-001	EPA300/MA300-Ions1.3
Conductivity	ME-CA-[ENV]EWL-LAK-AN-006	SM 2510
Fluoride by Specific Ion Electrode	ME-CA-[ENV]EWL-LAK-AN-014	SM 4500
Inorganics-General	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/SM 3112B
Metals in aqueous samples - ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	SM 3030/EPA 200.8
pH	ME-CA-[ENV]EWL-LAK-AN-006	SM 4500

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Acidity - QCBatchID: EWL0078-JAN24													
Acidity	2	mg/L as Ca	2			0	20	100	90	110	NA		
Alkalinity - QCBatchID: EWL0078-JAN24													
Alkalinity	2	mg/L as Ca	< 2			ND	20	98	80	120	NA		
Anions by IC - QCBatchID: DIO0154-JAN24													
Bromide	0.3	mg/L	<0.3			ND	20	98	90	110	94	75	125
Chloride	0.2	mg/L	<0.2			0	20	101	90	110	101	75	125
Sulphate	0.2	mg/L	<0.2			4	20	98	90	110	95	75	125
Anions by IC - QCBatchID: DIO0177-JAN24													
Chloride	0.2	mg/L	<0.2			0	20	101	90	110	99	75	125
Conductivity - QCBatchID: EWL0078-JAN24													
Conductivity	2	uS/cm	< 2			0	20	98	90	110	NA		
Fluoride by Specific Ion Electrode - QCBatchID: EWL0095-JAN24													
Fluoride	0.06	mg/L	<0.06			ND	10	100	90	110	102	75	125
Inorganics-General - QCBatchID: EHG0011-JAN24													
Mercury	0.00001	mg/L	< 0.00001			ND	20	82	80	120	80	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0055-JAN24													
Aluminum (dissolved)	0.001	mg/L	<0.001			5	20	100	90	110	118	70	130
Antimony (dissolved)	0.0009	mg/L	<0.0009			ND	20	101	90	110	98	70	130
Arsenic (dissolved)	0.0002	mg/L	<0.0002			ND	20	101	90	110	103	70	130
Barium (dissolved)	0.00008	mg/L	<0.00008			0	20	101	90	110	86	70	130
Beryllium (dissolved)	0.000007	mg/L	<0.000007			ND	20	100	90	110	103	70	130
Bismuth (dissolved)	0.00001	mg/L	<0.00001			ND	20	94	90	110	71	70	130
Boron (dissolved)	0.002	mg/L	<0.002			ND	20	100	90	110	103	70	130
Cadmium (dissolved)	0.000003	mg/L	<0.000003			12	20	100	90	110	101	70	130
Calcium (dissolved)	0.01	mg/L	<0.01			0	20	96	90	110	93	70	130
Chromium (dissolved)	0.00008	mg/L	<0.00008			ND	20	99	90	110	110	70	130
Cobalt (dissolved)	0.000004	mg/L	<0.000004			1	20	98	90	110	96	70	130
Copper (dissolved)	0.0002	mg/L	<0.0002			13	20	100	90	110	109	70	130
Iron (dissolved)	0.007	mg/L	<0.007			13	20	100	90	110	75	70	130
Lead (dissolved)	0.00009	mg/L	<0.00009			ND	20	95	90	110	92	70	130
Lithium (dissolved)	0.0001	mg/L	<0.0001			3	20	100	90	110	85	70	130
Magnesium (dissolved)	0.001	mg/L	<0.001			1	20	102	90	110	86	70	130
Manganese (dissolved)	0.00001	mg/L	<0.00001			1	20	99	90	110	106	70	130
Molybdenum (dissolved)	0.00004	mg/L	<0.00004			9	20	98	90	110	93	70	130
Nickel (dissolved)	0.0001	mg/L	<0.0001			4	20	102	90	110	97	70	130



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 24hr

Project : PO#23590674

LR Report : CA19062-DEC23

Inorganic Analysis												
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material	
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)
									Low	High		
Potassium (dissolved)	0.009	mg/L	<0.009			1	20	95	90	110	93	70 130
Selenium (dissolved)	0.00004	mg/L	<0.00004			2	20	96	90	110	107	70 130
Silicon (dissolved)	0.02	mg/L	<0.02			0	20	96	90	110	NV	70 130
Silver (dissolved)	0.00005	mg/L	<0.00005			ND	20	100	90	110	84	70 130
Sodium (dissolved)	0.01	mg/L	<0.01			0	20	95	90	110	86	70 130
Strontium (dissolved)	0.00008	mg/L	<0.00008			1	20	100	90	110	93	70 130
Thallium (dissolved)	0.000005	mg/L	<0.000005			ND	20	94	90	110	95	70 130
Tin (dissolved)	0.00006	mg/L	<0.00006			ND	20	97	90	110	NV	70 130
Titanium (dissolved)	0.00007	mg/L	<0.00005			19	20	97	90	110	NV	70 130
Uranium (dissolved)	0.000002	mg/L	<0.000002			7	20	93	90	110	99	70 130
Vanadium (dissolved)	0.00001	mg/L	<0.00001			ND	20	103	90	110	104	70 130
Zinc (dissolved)	0.002	mg/L	<0.002			20	20	107	90	110	109	70 130
pH - QCBatchID: EWL0078-JAN24												
pH	0.05	No unit	NA			0		100			NA	



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

ABA - Modified Sobek

Project : PO#20446343

30-January-2024

Date Rec. : 20 November 2023

LR Report: CA19142-NOV23

Reference: Project:23590674, Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: 035279	6: 035279 2% Lime	7: 035279 3% Lime	8: 035279 4% Lime	9: 167356	10: 167356 2% Lime	11: 167356 3% Lime	12: 167356 4% Lime
Sample Date & Time					03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23
Paste pH [no unit]	29-Jan-24	19:47	30-Jan-24	12:35	8.47	12.62	12.59	12.64	8.34	11.82	10.76	11.49
Fizz Rate [rating]	26-Jan-24	14:24	30-Jan-24	12:35	3	3	3	3	3	3	3	3
Sample weight [g]	26-Jan-24	10:21	30-Jan-24	12:35	1.99	1.98	2.05	1.98	2.00	2.03	1.99	2.01
HCl Added [mL]	29-Jan-24	12:29	30-Jan-24	12:35	69.30	76.20	82.10	105.30	141.20	136.10	144.50	156.25
HCl [Normality]	28-Jan-24	12:02	30-Jan-24	12:35	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	28-Jan-24	12:02	30-Jan-24	12:35	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	29-Jan-24	12:29	30-Jan-24	12:35	14.99	25.24	21.04	14.15	44.17	22.95	43.70	44.61
Final pH [no unit]	29-Jan-24	12:29	30-Jan-24	12:35	1.88	1.73	1.85	1.58	1.56	1.91	1.54	1.54
NP [t CaCO ₃ /1000 t]	29-Jan-24	12:29	30-Jan-24	12:35	136	129	149	230	243	279	253	278
AP [t CaCO ₃ /1000 t]	29-Jan-24	12:29	30-Jan-24	12:36	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	29-Jan-24	12:29	30-Jan-24	12:36	135	127	148	229	241	277	252	276
NP/AP [ratio]	29-Jan-24	12:29	30-Jan-24	12:36	109	103	119	184	194	223	203	222
Sulphur (total) [%]	07-Dec-23	11:57	08-Dec-23	09:40	0.017	0.015	0.018	0.017	0.028	0.023	0.024	0.029
Acid Leachable SO ₄ -S [%]	08-Dec-23	09:40	08-Dec-23	09:40	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Sulphide [%]	08-Dec-23	06:53	08-Dec-23	09:40	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	07-Dec-23	11:57	08-Dec-23	09:40	1.97	1.90	1.99	2.03	3.28	3.42	3.29	3.34
Carbonate (HCl) as %CO ₃ [%]	08-Dec-23	08:50	08-Dec-23	09:40	8.82	8.53	9.11	9.25	15.0	15.7	15.2	15.4



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#20446343

LR Report : CA19142-NOV23

Analysis	13: 035223	14: 035223 2% Lime	15: 035223 3% Lime	16: 035223 4% Lime	17: 167688	18: 167688 2% Lime	19: 167688 3% Lime	20: 167688 4% Lime	21: 058403	22: 058403 2% Lime	23: 058403 3% Lime	24: 058403 4% Lime
Sample Date & Time	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23
Paste pH [no unit]	8.25	11.21	9.50	11.21	8.14	10.20	9.75	12.31	8.34	10.86	9.62	12.18
Fizz Rate [rating]	3	3	3	3	3	3	3	3	3	3	3	3
Sample weight [g]	2.01	2.03	1.99	1.99	2.03	2.00	2.06	1.99	1.98	2.00	2.05	2.02
HCl Added [mL]	136.20	186.95	203.45	177.40	191.75	202.50	188.70	207.80	160.00	140.00	158.70	160.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	28.90	55.17	73.68	46.78	45.63	58.25	56.91	68.45	58.18	26.29	33.67	43.02
Final pH [no unit]	1.80	1.59	1.55	1.57	1.57	1.54	1.53	1.62	1.45	1.89	1.73	1.63
NP [t CaCO ₃ /1000 t]	267	325	326	328	360	361	320	350	257	284	305	290
AP [t CaCO ₃ /1000 t]	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Net NP [t CaCO ₃ /1000 t]	266	323	325	327	359	359	319	349	256	283	304	288
NP/AP [ratio]	214	260	261	263	288	288	256	280	206	227	244	232
Sulphur (total) [%]	0.018	0.018	0.019	0.018	0.018	0.016	0.016	0.023	0.011	0.012	0.015	0.014
Acid Leachable SO ₄ -S [%]	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Sulphide [%]	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04	< 0.04
Carbon (total) [%]	4.00	4.54	4.21	4.39	4.42	4.65	4.42	4.83	3.46	3.66	3.78	3.70
Carbonate (HCl) as %CO ₃ [%]	18.1	19.3	19.3	19.7	20.4	21.6	20.5	22.7	15.7	16.7	17.1	16.9

*NP (Neutralization Potential)

= 50 x (N of HCL x Total HCL added - N NaOH x NaOH added)

Weight of Sample

*AP (Acid Potential) = % Sulphide Sulphur x 31.25

*Net NP (Net Neutralization Potential) = NP-AP

NP/AP Ratio = NP/AP

*Results expressed as tonnes CaCO₃ equivalent/1000 tonnes of material

Samples with a % Sulphide value of <0.04 will be calculated using a 0.04 value.



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

ABA - Modified Sobek

Project : PO#20446343

LR Report : CA19142-NOV23

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Acid Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-019	ASTM E1915-07A
Carbon/Sulphur	ME-CA-[ENV]ARD-LAK-AN-020	ASTM E1915-07A
Neutralization Potential	ME-CA-[ENV]ARD-LAK-AN-001/003	MEND PROJECT 1.16.1B
Paste pH	ME-CA-[ENV]ARD-LAK-AN-005	ARD Prediction Manual, 2009

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
Carbon/Sulphur - QCBatchID: ECS0018-DEC23													
Carbonate (HCl) as %CO3	0.04	%	<0.04			0	20	102	80	120			
Carbon/Sulphur - QCBatchID: ECS0019-DEC23													
Carbon (total)	0.005	%	<0.005			1	20				100	70	
Sulphur (total)	0.005	%	<0.005			3	20				102	70	
Carbon/Sulphur - QCBatchID: ECS0020-DEC23													
Sulphide	0.04	%	< 0.01			9	20	94	80	120			



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Canada Nickel Company

Attn : Mathieu Boucher

130 King St., West Suite 1900, First Canadian Place Exchanger Tower
Toronto, ON
M5X 1E3, Canada

Phone: 807-620-2207

Fax:

SFE 3:1 24hr

Project : PO#20446343

17-January-2024

Date Rec. : 20 November 2023

LR Report: CA19143-NOV23

Reference: Project;23590674, Crawford Project

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: 035279	6: 035279 2% Lime	7: 035279 3% Lime	8: 035279 4% Lime	9: 167356	10: 167356 2% Lime	11: 167356 3% Lime	12: 167356 4% Lime
Sample Date & Time					03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23
Sample weight [g]	05-Jan-24	14:20	09-Jan-24	13:37	249	250	249	249	248	248	249	250
Volume D.I. Water [mL]	08-Jan-24	07:15	09-Jan-24	13:37	750	750	750	750	750	750	750	750
PreFilt pH [no unit]	09-Jan-24	07:10	09-Jan-24	13:37	8.98	12.39	12.40	12.40	8.43	12.24	12.34	12.33
Mercury [mg/L]	10-Jan-24	17:10	11-Jan-24	09:37	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:07	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:07	0.278	1.52	0.961	0.583	0.368	2.64	1.43	1.23
Arsenic (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:07	0.0005	0.0008	0.0007	0.0007	0.0031	0.0009	0.0008	0.0005
Barium (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:16	0.0154	0.0647	0.0842	0.0985	0.0152	0.0394	0.0485	0.0659
Boron (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:16	0.132	0.008	0.014	0.013	0.534	0.024	0.010	0.011
Beryllium (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:16	0.000019	< 0.000007	< 0.000007	< 0.000007	0.000040	< 0.000007	< 0.000007	< 0.000007
Bismuth (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:16	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:07	27.4	660	724	813	21.7	437	538	573
Cadmium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:07	< 0.000003	< 0.000003	0.000003	< 0.000003	0.000004	< 0.000003	< 0.000003	0.000004
Cobalt (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:07	0.000155	0.000428	0.000528	0.000591	0.000240	0.000148	0.000210	0.000262
Chromium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	0.00106	0.00790	0.00766	0.00961	0.00137	0.00684	0.00529	0.00757
Copper (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	0.0023	0.0215	0.0222	0.0193	0.0062	0.0256	0.0235	0.0242
Iron (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	0.411	< 0.007	< 0.007	< 0.007	0.484	< 0.007	< 0.007	< 0.007
Potassium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	3.87	11.1	12.2	13.1	3.33	7.22	11.4	15.0
Lithium (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:15	0.0033	0.0001	0.0002	0.0002	0.0049	0.0005	0.0002	0.0002
Magnesium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	3.76	0.024	0.023	0.029	2.70	0.042	0.019	0.017

Online LIMS

0003593233

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: 035279	6: 035279 2% Lime	7: 035279 3% Lime	8: 035279 4% Lime	9: 167356	10: 167356 2% Lime	11: 167356 3% Lime	12: 167356 4% Lime
Manganese (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	0.00656	0.00024	0.00021	0.00021	0.00956	0.00011	0.00021	0.00021
Molybdenum (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	0.00471	0.00581	0.00534	0.00434	0.00514	0.00997	0.00792	0.00655
Sodium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	15.4	3.81	4.58	4.99	39.0	27.3	19.0	25.5
Nickel (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	0.0011	0.0055	0.0072	0.0083	0.0013	0.0018	0.0021	0.0023
Lead (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:15	0.00017	0.00025	0.00043	< 0.00009	0.00032	0.00099	0.00015	0.00021
Antimony (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:15	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	0.00053	0.00081	0.00063	0.00065	0.00069	0.00161	0.00108	0.00095
Tin (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:15	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	0.0717	0.762	0.878	1.12	0.115	0.976	0.947	1.28
Titanium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	0.0134	< 0.00007	< 0.00007	< 0.00007	0.0151	< 0.00007	< 0.00007	< 0.00007
Thallium (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:15	< 0.000005	0.000012	0.000016	0.000020	0.000011	< 0.000005	0.000005	0.000012
Uranium (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:15	0.000982	0.000002	< 0.000002	< 0.000002	0.00183	0.000010	0.000005	0.000549
Vanadium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:08	0.00127	0.00025	0.00014	0.00008	0.00183	0.00070	0.00026	0.00022
Tungsten (dissolved) [mg/L]	12-Jan-24	12:00	16-Jan-24	12:15	0.00018	0.00006	0.00002	< 0.00002	0.00040	0.00019	0.00005	0.00002
Yttrium (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:09	0.00012	< 0.00002	< 0.00002	< 0.00002	0.00016	< 0.00002	< 0.00002	< 0.00002
Zinc (dissolved) [mg/L]	12-Jan-24	12:00	15-Jan-24	13:09	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002

Analysis	13: 035223	14: 035223 2% Lime	15: 035223 3% Lime	16: 035223 4% Lime	17: 167688	18: 167688 2% Lime	19: 167688 3% Lime	20: 167688 4% Lime	21: 058403	22: 058403 2% Lime	23: 058403 3% Lime	24: 058403 4% Lime
Sample Date & Time	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23	03-Nov-23
Sample weight [g]	249	248	251	250	251	250	250	250	249	252	251	249
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
PreFilt pH [no unit]	8.16	11.93	12.01	12.36	8.34	12.02	12.35	12.31	8.86	11.77	12.25	12.35
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver (dissolved) [mg/L]	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	0.154	4.04	3.94	1.21	0.205	3.73	2.20	1.58	1.14	3.16	2.37	1.74
Arsenic (dissolved) [mg/L]	0.0008	0.0008	0.0006	0.0006	0.0014	0.0013	0.0007	0.0005	0.0032	0.0010	0.0005	0.0007
Barium (dissolved) [mg/L]	0.00885	0.0201	0.0245	0.0586	0.0129	0.0224	0.0719	0.0617	0.0170	0.0180	0.0439	0.0420
Boron (dissolved) [mg/L]	0.655	0.035	0.031	0.020	0.592	0.040	0.004	0.006	0.501	0.056	0.051	0.043
Beryllium (dissolved) [mg/L]	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	< 0.000007	0.000100	< 0.000007	< 0.000007	< 0.000007
Bismuth (dissolved) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (dissolved) [mg/L]	16.1	194	271	615	16.6	219	545	562	10.1	149	510	594
Cadmium (dissolved) [mg/L]	< 0.000003	0.000005	0.000003	< 0.000003	< 0.000003	0.000006	0.000004	< 0.000003	0.000013	< 0.000003	0.000008	0.000003
Cobalt (dissolved) [mg/L]	0.000077	0.000191	0.000141	0.000264	0.000101	0.000217	0.000166	0.000203	0.000992	0.000209	0.000356	0.000366
Chromium (dissolved) [mg/L]	0.00129	0.00753	0.00729	0.00676	0.00127	0.00779	0.00683	0.00891	0.00391	0.0166	0.0158	0.0142
Copper (dissolved) [mg/L]	0.0021	0.0297	0.0272	0.0327	0.0019	0.0276	0.0234	0.0195	0.0060	0.0209	0.0262	0.0246



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 24hr

Project : PO#20446343

LR Report : CA19143-NOV23

Analysis	13: 035223	14: 035223 2% Lime	15: 035223 3% Lime	16: 035223 4% Lime	17: 167688	18: 167688 2% Lime	19: 167688 3% Lime	20: 167688 4% Lime	21: 058403	22: 058403 2% Lime	23: 058403 3% Lime	24: 058403 4% Lime
Iron (dissolved) [mg/L]	0.149	< 0.007	0.007	< 0.007	0.181	< 0.007	< 0.007	< 0.007	1.56	0.007	< 0.007	< 0.007
Potassium (dissolved) [mg/L]	3.37	8.27	8.58	13.3	3.44	6.45	9.27	7.64	1.44	5.83	8.23	9.29
Lithium (dissolved) [mg/L]	0.0042	0.0001	0.0001	0.0002	0.0081	0.0001	0.0001	0.0005	0.0075	0.0003	0.0002	0.0002
Magnesium (dissolved) [mg/L]	3.23	0.014	0.023	0.021	5.52	0.013	0.018	0.020	2.42	0.008	0.020	0.019
Manganese (dissolved) [mg/L]	0.00237	0.00025	0.00031	0.00060	0.00313	0.00037	0.00044	0.00064	0.02921	0.00018	0.00019	0.00025
Molybdenum (dissolved) [mg/L]	0.00618	0.01027	0.0120	0.00718	0.00621	0.0130	0.00898	0.00691	0.00142	0.00509	0.0183	0.00331
Sodium (dissolved) [mg/L]	40.3	17.1	18.2	21.0	34.5	14.4	16.6	13.8	60.4	26.5	23.3	26.3
Nickel (dissolved) [mg/L]	0.0007	0.0024	0.0022	0.0036	0.0008	0.0025	0.0026	0.0019	0.0028	0.0011	0.0018	0.0020
Lead (dissolved) [mg/L]	< 0.00009	< 0.00009	< 0.00009	0.00037	0.00009	< 0.00009	0.00038	0.00044	0.00134	< 0.00009	0.00017	0.00033
Antimony (dissolved) [mg/L]	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	0.00066	0.00224	0.00199	0.00122	0.00102	0.00221	0.00112	0.00104	0.00118	0.00273	0.00203	0.00156
Tin (dissolved) [mg/L]	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	0.138	0.528	0.606	1.00	0.122	0.505	1.01	1.00	0.0303	0.267	0.553	0.574
Titanium (dissolved) [mg/L]	0.00569	< 0.00007	< 0.00007	< 0.00007	0.00743	< 0.00007	< 0.00007	< 0.00007	0.0299	< 0.00007	< 0.00007	< 0.00007
Thallium (dissolved) [mg/L]	< 0.000005	0.000006	0.000009	0.000010	0.000005	0.000009	0.000016	0.000009	0.000014	0.000007	0.000010	0.000006
Uranium (dissolved) [mg/L]	0.00130	0.000007	0.000004	0.000006	0.00135	0.000006	0.000012	0.000005	0.00154	0.000026	0.000005	0.000045
Vanadium (dissolved) [mg/L]	0.00095	0.00466	0.00252	0.00034	0.00244	0.00886	0.00125	0.00091	0.00591	0.0136	0.00079	0.00069
Tungsten (dissolved) [mg/L]	0.00050	0.00021	0.00017	0.00003	0.00043	0.00042	0.00028	0.00018	0.00026	0.00036	0.00011	0.00006
Yttrium (dissolved) [mg/L]	0.00003	< 0.00002	< 0.00002	< 0.00002	0.00005	< 0.00002	< 0.00002	< 0.00002	0.00092	< 0.00002	< 0.00002	< 0.00002
Zinc (dissolved) [mg/L]	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.007	< 0.002	< 0.002	< 0.002

Analysis	25: ~167356 (Duplicate)	26: ~167688 (Duplicate)	27:BLK: SD.I. Leachate Blank
Sample Date & Time			
Sample weight [g]	248	249	---
Volume D.I. Water [mL]	750	750	750
PreFilt pH [no unit]	8.47	8.33	6.30
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001
Silver (dissolved) [mg/L]	< 0.00005	< 0.00005	< 0.00005
Aluminum (dissolved) [mg/L]	0.330	0.143	0.002
Arsenic (dissolved) [mg/L]	0.0064	0.0018	< 0.0002
Barium (dissolved) [mg/L]	0.00835	0.0118	0.00011
Boron (dissolved) [mg/L]	0.570	0.540	< 0.002
Beryllium (dissolved) [mg/L]	0.000014	0.000014	< 0.000007
Bismuth (dissolved) [mg/L]	< 0.00001	< 0.00001	< 0.00001
Calcium (dissolved) [mg/L]	14.5	21.6	0.10

Analysis	25: ~167356 (Duplicate)	26: ~167688 (Duplicate)	27:BLK: SD.I. Leachate Blank
Cadmium (dissolved) [mg/L]	0.000003	0.000006	< 0.000003
Cobalt (dissolved) [mg/L]	0.000164	0.000135	0.000006
Chromium (dissolved) [mg/L]	0.00186	0.00120	< 0.00008
Copper (dissolved) [mg/L]	0.0052	0.0022	0.0006
Iron (dissolved) [mg/L]	0.356	0.230	< 0.007
Potassium (dissolved) [mg/L]	3.02	3.58	0.115
Lithium (dissolved) [mg/L]	0.0040	0.0074	< 0.0001
Magnesium (dissolved) [mg/L]	2.47	5.90	0.006
Manganese (dissolved) [mg/L]	0.00532	0.0133	0.00015
Molybdenum (dissolved) [mg/L]	0.00697	0.00794	0.00206
Sodium (dissolved) [mg/L]	42.0	32.2	0.02
Nickel (dissolved) [mg/L]	0.0012	0.0009	0.0001
Lead (dissolved) [mg/L]	0.00016	0.00015	< 0.00009
Antimony (dissolved) [mg/L]	< 0.0009	< 0.0009	< 0.0009
Selenium (dissolved) [mg/L]	0.00061	0.00070	< 0.00004
Tin (dissolved) [mg/L]	< 0.00006	< 0.00006	< 0.00006
Strontium (dissolved) [mg/L]	0.0872	0.111	0.00020
Titanium (dissolved) [mg/L]	0.0113	0.0126	< 0.00007
Thallium (dissolved) [mg/L]	< 0.000005	0.000009	< 0.000005
Uranium (dissolved) [mg/L]	0.00116	0.00175	0.000003
Vanadium (dissolved) [mg/L]	0.00209	0.00215	0.00002
Tungsten (dissolved) [mg/L]	0.00053	0.00041	< 0.00002
Yttrium (dissolved) [mg/L]	0.00009	0.00020	< 0.00002
Zinc (dissolved) [mg/L]	< 0.002	< 0.002	< 0.002



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 24hr

Project : PO#20446343

LR Report : CA19143-NOV23

Method Descriptions

Parameter	SGS Method Code	Reference Method Code
Inorganics-General	ME-CA-[ENV]SPE-LAK-AN-004	EPA 7471A/SM 3112B
Metals in aqueous samples - ICP-MS	ME-CA-[ENV]SPE-LAK-AN-006	SM 3030/EPA 200.8

Chris Sullivan



Chris Sullivan, B.Sc., C.Chem
Project Specialist,
Environment, Health & Safety

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Inorganics-General - QCBatchID: EHG0019-JAN24													
Mercury	0.00001	mg/L	< 0.00001			ND	20	107	80	120	79	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0102-JAN24													
Aluminum (dissolved)	0.001	mg/L	<0.001			1	20	99	90	110	103	70	130
Antimony (dissolved)	0.0009	mg/L	<0.0009			ND	20	108	90	110	106	70	130
Arsenic (dissolved)	0.0002	mg/L	<0.0002			9	20	100	90	110	100	70	130
Barium (dissolved)	0.00008	mg/L	<0.00008			2	20	100	90	110	102	70	130
Beryllium (dissolved)	0.000007	mg/L	<0.000007			ND	20	98	90	110	109	70	130
Bismuth (dissolved)	0.00001	mg/L	<0.00001			ND	20	97	90	110	76	70	130
Boron (dissolved)	0.002	mg/L	<0.002			1	20	99	90	110	93	70	130
Cadmium (dissolved)	0.000003	mg/L	<0.000003			ND	20	99	90	110	97	70	130
Calcium (dissolved)	0.01	mg/L	<0.01			1	20	100	90	110	78	70	130
Chromium (dissolved)	0.00008	mg/L	<0.00008			12	20	102	90	110	98	70	130
Cobalt (dissolved)	0.000004	mg/L	<0.000004			10	20	94	90	110	90	70	130
Copper (dissolved)	0.0002	mg/L	<0.0002			1	20	98	90	110	96	70	130
Iron (dissolved)	0.007	mg/L	<0.007			ND	20	100	90	110	100	70	130
Lead (dissolved)	0.00009	mg/L	<0.00009			ND	20	98	90	110	98	70	130
Lithium (dissolved)	0.0001	mg/L	<0.0001			ND	20	102	90	110	105	70	130
Magnesium (dissolved)	0.001	mg/L	<0.001			2	20	100	90	110	85	70	130
Manganese (dissolved)	0.00001	mg/L	<0.00001			18	20	102	90	110	93	70	130
Molybdenum (dissolved)	0.00004	mg/L	<0.00004			1	20	96	90	110	82	70	130
Nickel (dissolved)	0.0001	mg/L	<0.0001			9	20	98	90	110	95	70	130
Potassium (dissolved)	0.009	mg/L	<0.009			0	20	102	90	110	84	70	130
Selenium (dissolved)	0.00004	mg/L	<0.00004			16	20	96	90	110	109	70	130
Silver (dissolved)	0.00005	mg/L	<0.00005			ND	20	94	90	110	76	70	130
Sodium (dissolved)	0.01	mg/L	<0.01			3	20	98	90	110	89	70	130
Strontium (dissolved)	0.00008	mg/L	<0.00008			0	20	101	90	110	101	70	130
Thallium (dissolved)	0.000005	mg/L	<0.000005			ND	20	98	90	110	92	70	130
Tin (dissolved)	0.00006	mg/L	<0.00006			ND	20	97	90	110	NV	70	130
Titanium (dissolved)	0.00007	mg/L	<0.00005			5	20	94	90	110	NV	70	130
Tungsten (dissolved)	0.00002	mg/L	<0.00002			7	20	101	90	110	NV	70	130
Uranium (dissolved)	0.000002	mg/L	<0.000002			0	20	97	90	110	95	70	130
Vanadium (dissolved)	0.00001	mg/L	<0.00001			2	20	99	90	110	79	70	130
Yttrium (dissolved)	0.00002	mg/L	<0.00002			ND	20	99	90	110	NV	70	130
Zinc (dissolved)	0.002	mg/L	<0.002			ND	20	98	90	110	102	70	130
Metals in aqueous samples - ICP-MS - QCBatchID: EMS0118-JAN24													



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2H0

Phone: 705-652-2000 FAX: 705-652-6365

SFE 3:1 24hr

Project : PO#20446343

LR Report : CA19143-NOV23

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
							%		Low	High		Low	High
Antimony (dissolved)	0.0009	mg/L	<0.0009			1	20	96	90	110	107	70	130
Barium (dissolved)	0.00008	mg/L	<0.00008			1	20	105	90	110	101	70	130
Beryllium (dissolved)	0.000007	mg/L	<0.000007			10	20	102	90	110	110	70	130
Bismuth (dissolved)	0.00001	mg/L	<0.00001			3	20	97	90	110	95	70	130
Boron (dissolved)	0.002	mg/L	<0.002			ND	20	101	90	110	93	70	130
Lead (dissolved)	0.00009	mg/L	<0.00009			ND	20	95	90	110	94	70	130
Lithium (dissolved)	0.0001	mg/L	<0.0001			0	20	102	90	110	90	70	130
Thallium (dissolved)	0.000005	mg/L	<0.000005			ND	20	97	90	110	86	70	130
Tin (dissolved)	0.00006	mg/L	<0.00006			ND	20	94	90	110	NV	70	130
Tungsten (dissolved)	0.00002	mg/L	<0.00002			3	20	96	90	110	NV	70	130
Uranium (dissolved)	0.000002	mg/L	<0.000002			2	20	97	90	110	100	70	130

APPENDIX E

Crawford Static Geochemical Data

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	2023 Lithology	Internal Sample ID	Batch	Type	Zone	Duplicate	Grade	Specific Lithology Code	Borehole ID	From	To	ABA									ABA	
												Paste pH	Fizz Rate	Sample Weight	HCl Added	HCl	NaOH	NaOH to pH 8.3	Final pH	Sulphur (total)		
												No Unit	No Unit	g	mL	Normality	Normality	mL	no unit	%		
Dun-1-1	Dunite	P1-Dun-EZ-1	1	Ore	EZ	-	HG	Dun	CR20-33	246	255.9	9.7	3.0	2.0	112	0.1	0.1	38	1.6	0.01		
Dun-1-10	Dunite	P1-Dun-MZ-8	1	Ore	MZ	-	HG	Dun	CR19-10	213	223.5	9.6	1.0	2.0	122	0.1	0.1	41	1.9	1.6		
Dun-1-2	Dunite	P1-Dun-EZ-2	1	Ore	EZ	-	HG	Dun	CR20-39	123	133.5	9.7	3.0	2.0	88	0.1	0.1	32	1.6	0.037		
Dun-1-3	Dunite	P1-Dun-MZ-1	1	Ore	MZ	-	LG	Dun	CR20-61	300	310.5	9.8	1.0	2.0	71	0.1	0.1	17	1.9	0.016		
Dun-1-36	Dunite	P1-Per-MZ-4	1	Ore	MZ	-	HG	Dun	CR19-05	456	466.5	9.7	2.0	2.0	149	0.1	0.1	59	1.6	1.0		
Dun-1-4	Dunite	P1-Dun-MZ-2	1	Ore	MZ	-	LG	Dun	CR19-17	150	160.5	9.4	3.0	2.0	90	0.1	0.1	24	1.8	0.016		
Dun-1-5	Dunite	P1-Dun-MZ-3	1	Ore	MZ	-	HG	Dun	CR19-20	411	421.5	9.8	2.0	2.0	101	0.1	0.1	39	1.6	0.079		
Dun-1-6	Dunite	P1-Dun-MZ-4	1	Ore	MZ	-	HG	Dun	CR20-54	288	298	9.7	1.0	2.0	168	0.1	0.1	71	1.6	0.016		
Dun-1-7	Dunite	P1-Dun-MZ-5	1	Ore	MZ	-	HG	Dun	CR19-14A	302	312	9.6	2.0	2.0	103	0.1	0.1	30	1.7	0.19		
Dun-1-8	Dunite	P1-Dun-MZ-6	1	Ore	MZ	-	HG	Dun	CR20-56	171	181.5	9.2	2.0	2.1	189	0.1	0.1	64	1.8	0.11		
Dun-1-9	Dunite	P1-Dun-MZ-7	1	Ore	MZ	-	HG	Dun	CR19-24	543	553.5	9.7	3.0	2.0	114	0.1	0.1	20	2.0	0.35		
Dun-2-1	Dunite	Dunite CR21-162 90-100	2	Ore	MZ	-	HG	Dun	CR21-162	90	100	9.3	3.0	2.0	170	0.1	0.1	57	1.7	0.082		
Dun-2-10	Dunite	Dunite CR21-104 160-170	2	Ore	MZ	-	HG	Dun	CR21-104	160	170	9.4	2.0	2.0	140	0.1	0.1	49	1.7	0.047		
Dun-2-11	Dunite	Dunite CR21-104 335-345	2	Ore	MZ	-	HG	Dun	CR21-104	335	345	9.7	2.0	2.0	120	0.1	0.1	50	1.6	0.058		
Dun-2-12	Dunite	Dunite CR21-104 350-360	2	Ore	MZ	-	HG	Dun	CR21-104	350	360	9.5	2.0	2.0	115	0.1	0.1	47	1.6	0.052		
Dun-2-13	Dunite	Dunite CR21-106A 150-160	2	Ore	MZ	-	LG	Dun	CR21-106A	150	160	9.3	2.0	2.0	135	0.1	0.1	45	1.9	0.013		
Dun-2-14	Dunite	Dunite CR21-111A 300-310	2	Ore	EZ	-	HG	Dun	CR21-111A	300	310	9.5	2.0	2.0	75	0.1	0.1	27	1.6	0.018		
Dun-2-15	Dunite	Dunite CR21-118 30-40	2	Ore	EZ	-	LG	Dun	CR21-118	30	40	9.8	2.0	2.0	55	0.1	0.1	19	1.5	0.043		
Dun-2-16	Dunite	Dunite CR21-120 400-410	2	Ore	MZ	-	HG	Dun	CR21-120	400	410	9.5	2.0	2.0	110	0.1	0.1	46	1.6	0.049		
Dun-2-17	Dunite	Dunite CR19-11A 65-75	2	Ore	MZ	-	LG	Dun	CR19-11	65	75	9.7	2.0	2.0	95	0.1	0.1	19	1.9	0.018		
Dun-2-18	Dunite	Dunite CR19-08 80-90	2	Ore	MZ	-	LG	Dun	CR19-08	80	90	9.6	2.0	2.0	95	0.1	0.1	22	1.9	0.015		
Dun-2-2	Dunite	Dunite CR21-162 35-45	2	Ore	MZ	-	LG	Dun	CR21-162	35	45	9.5	3.0	2.0	120	0.1	0.1	30	1.9	0.041		
Dun-2-20	Dunite	Dunite CR18-01 550-560	2	Ore	MZ	-	LG	Dun	CR18-01	550	560	9.7	2.0	2.0	85	0.1	0.1	27	1.6	0.012		
Dun-2-21	Dunite	Dunite CR21-130 70-80	2	Ore	MZ	-	LG	Dun	CR21-130	70	80	9.3	2.0	2.0	105	0.1	0.1	42	1.6	0.011		
Dun-2-22	Dunite	Dunite-01 CR21-130 190-200	2	Ore	MZ	-	HG	Dun	CR21-130	190	200	9.6	3.0	2.0	120	0.1	0.1	29	1.9	0.043		
Dun-2-23	Dunite	Dunite CR21-130 530-540	2	Ore	MZ	-	LG	Dun	CR21-130	530	540	9.4	2.0	2.0	110	0.1	0.1	45	1.6	0.048		
Dun-2-24	Dunite	Dunite-01 CR21-135 75-85	2	Ore	MZ	-	HG	Dun	CR21-135	75	85	9.3	2.0	2.0	130	0.1	0.1	44	1.7	0.01		
Dun-2-25	Dunite	Dunite CR21-135 145-155	2	Ore	MZ	-	HG	Dun	CR21-135	145	155	9.3	3.0	2.0	150	0.1	0.1	48	1.6	0.083		
Dun-2-26	Dunite	Dunite-01 CR21-146 50-60	2	Ore	EZ	-	HG	Dun	CR21-146	50	60	9.6	2.0	2.0	85	0.1	0.1	25	1.6	0.036		
Dun-2-27	Dunite	Dunite CR21-146 65-75	2	Ore	EZ	-	HG	Dun	CR21-146	65	75	9.5	2.0	2.0	85	0.1	0.1	21	1.7	0.057		
Dun-2-28	Dunite	Dunite CR21-146 120-130	2	Ore	EZ	-	HG	Dun	CR21-146	120	130	9.5	2.0	2.0	95	0.1	0.1	20	1.8	0.08		
Dun-2-29	Dunite	Dunite CR21-146 200-210	2	Ore	EZ	-	HG	Dun	CR21-146	200	210	9.6	3.0	2.0	120	0.1	0.1	29	1.7	0.042		
Dun-2-3	Dunite	Dunite CR21-162 80-90	2	Ore	MZ	-	HG	Dun	CR21-162	80	90	9.2	3.0	2.0	175	0.1	0.1	57	1.7	0.1		
Dun-2-30	Dunite	Dunite CR21-146 510-520	2	Ore	EZ	-	HG	Dun	CR21-146	510	520	9.6	3.0	2.0	95	0.1	0.1	27	1.6	0.029		
Dun-2-36	Dunite	Dunite CR21-178 40-50	2	Ore	MZ	-	LG	Dun	CR21-178	40	50	9.6	3.0	2.0	100	0.1	0.1	31	1.7	0.021		
Dun-2-37	Dunite	Dunite CR21-178 150-160	2	Ore	MZ	-	HG	Dun	CR21-178	150	160	9.4	3.0	2.0	168	0.1	0.1	65	1.6	0.16		
Dun-2-38	Dunite	Dunite CR21-180 120-130	2	Ore	EZ	-	HG	Dun	CR21-180	120	130	9.6	3.0	2.0	90	0.1	0.1	26	1.6	0.034		
Dun-2-39	Dunite	Dunite CR21-180 200-210	2	Ore	EZ	-	HG	Dun	CR21-180	200	210	9.5	2.0	2.0	110	0.1	0.1	30	1.6	0.027		
Dun-2-4	Dunite	Dunite CR21-162 190-200	2	Ore	MZ	-	HG	Dun	CR21-162	190	200	9.2	2.0	2.0	160	0.1	0.1	56	1.7	0.049		
Dun-2-40	Dunite	Dunite CR19-20 220-230	2	Ore	MZ	-	LG	Dun	CR19-20	220	230	9.3	1.0	2.0	69	0.1	0.1	22	1.6	0.11		
Dun-2-41	Dunite	Dunite CR21-181 55-65	2	Ore	MZ	-	HG	Dun	CR21-181	55	65	9.3	2.0	2.0	97	0.1	0.1	21	2.0	0.037		
Dun-2-42	Dunite	Dunite CR21-181 500-510	2	Ore	MZ	-	LG	Dun	CR21-181	500	510	9.0	2.0	2.1	121	0.1	0.1	30	2.0	0.019		
Dun-2-43	Dunite	Dunite CR22-193A 60-70	2	Ore	EZ	-	HG	Dun	CR22-193A	60	70	9.5	2.0	2.0	120	0.1	0.1	67	1.6	0.038		
Dun-2-44	Dunite	Dunite CR22-193A 200-210	2	Ore	EZ	-	HG	Dun	CR22-193A	200	210	9.6	2.0	2.0	109	0.1	0.1	30	1.6	0.085		
Dun-2-45																						

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	2023 Lithology	Internal Sample ID	Batch	Type	Zone	Duplicate	Grade	Specific Lithology Code	Borehole ID	From	To	ABA									ABA	
												Paste pH	Fizz Rate	Sample Weight	HCl Added	HCl	NaOH	NaOH to pH 8.3	Final pH	Sulphur (total)		
												No Unit	No Unit	g	mL	Normality	Normality	mL	no unit	%		
Dun-3-6	Dunite	Dunite CR20-41 95-105	3	Ore	EZ	-	HG	Dun	CR20-41	105	95	9.6	3.0	2.0	164	0.1	0.1	25	1.9	0.026		
Dun-3-10	Dunite	Dunite CR22-279 165-175	3	Waste	Waste	-	Waste	Dun	CR22-279	175	165	9.0	3.0	2.0	110	0.1	0.1	12	2.0	0.061		
Dun-3-11	Dunite	Dunite CR22-279 235-245	3	Waste	Waste	-	Waste	Dun	CR22-279	245	235	9.2	4.0	2.0	70	0.1	0.1	21	1.6	0.048		
Dun-3-12	Dunite	Dunite CR19-26 36-46	3	Waste	Waste	-	Waste	Dun	CR19-26	46	36	9.5	3.0	2.1	90	0.1	0.1	17	1.7	0.15		
Dun-3-3	Dunite	Dunite CR21-124 200-210	3	Waste	MZ	-	VLG	Dun	CR21-124	210	200	9.3	3.0	2.0	143	0.1	0.1	41	1.7	0.019		
Dun-3-4	Dunite	Dunite CR21-124 230-240	3	Waste	MZ	-	VLG	Dun	CR21-124	240	230	9.5	3.0	2.0	58	0.1	0.1	31	1.5	0.027		
Dun-3-5	Dunite	Dunite CR21-124 300-310	3	Waste	MZ	-	VLG	Dun	CR21-124	310	300	9.4	3.0	2.0	47	0.1	0.1	17	1.6	0.03		
Dun-3-7	Dunite	Dunite CR20-32 445-455	3	Waste	Waste	-	Waste	Dun	CR20-32	455	445	9.5	2.0	2.0	58	0.1	0.1	13	1.6	0.025		
Dun-3-8	Dunite	Dunite CR22-247 28-38	3	Waste	Waste	-	Waste	Dun	CR22-247	38	28	9.4	1.0	2.0	84	0.1	0.1	21	1.7	0.04		
Dun-3-9	Dunite	Dunite CR22-279 140-150	3	Waste	Waste	-	Waste	Dun	CR22-279	150	140	9.0	4.0	2.0	50	0.1	0.1	13	1.7	0.098		
Dun-3-3-Dup	Dunite	Dunite CR21-124 200-210-dup	3	Waste	MZ	Dup	VLG	Dun	CR21-124	210	200	9.2	3.0	2.0	85	0.1	0.1	27	1.6	0.016		
Dun-3-9-Dup	Dunite	Dunite CR22-279 140-150-dup	3	Waste	Waste	Dup	Waste	Dun	CR22-279	150	140	9.0	2.0	2.0	54	0.1	0.1	17	1.5	0.1		
Gab-1-11	Gabbro	P1-Gab-EZ-1	1	Waste	Waste	-	Waste	Gab	CR19-28	117	127	10	2.0	2.0	20	0.1	0.1	12	1.6	0.056		
Gab-1-12	Gabbro	P1-Gab-EZ-2	1	Waste	Waste	-	Waste	Gab	CR20-38	213	223.5	10	1.0	2.0	20	0.1	0.1	16	1.3	0.028		
Gab-1-14	Gabbro	P1-Gab-MZ-2	1	Waste	Waste	-	Waste	Gab	CR19-13	50	63	9.5	1.0	2.0	20	0.1	0.1	16	1.2	0.012		
Gab-1-15	Gabbro	P1-Gab-MZ-3	1	Waste	Waste	-	Waste	Gab	CR20-61	495.6	504	10	1.0	2.0	20	0.1	0.1	16	1.2	0.014		
Gab-1-16	Gabbro	P1-Gab-MZ-4	1	Waste	Waste	-	Waste	Gab	CR19-29	170	180	9.5	3.0	2.0	20	0.1	0.1	14	1.3	0.008		
Gab-1-17	Gabbro	P1-Gab-MZ-5	1	Waste	Waste	-	Waste	Gab	CR19-15	567.6	577.5	9.5	2.0	2.0	20	0.1	0.1	16	1.2	0.017		
Gab-1-18	Gabbro	P1-Gab-MZ-6	1	Waste	Waste	-	Waste	Gab	CR19-19	61.5	71.4	10	1.0	2.0	70	0.1	0.1	36	1.6	0.058		
Gab-1-19	Gabbro	P1-Gab-MZ-7A	1	Waste	Waste	-	Waste	Gab	CR19-29	145.5	156	9.3	3.0	2.1	33	0.1	0.1	12	1.6	0.005		
Gab-1-20	Gabbro	P1-Gab-MZ-8A	1	Waste	Waste	-	Waste	Gab	CR20-59	471	481.5	9.5	3.0	2.1	20	0.1	0.1	8.0	1.6	0.015		
Gab-2-100	Gabbro	Gabbro CR21-184 430-440	2	Waste	Waste	-	Waste	Gab	CR21-184	430	440	9.7	1.0	2.0	20	0.1	0.1	13	1.6	0.005		
Gab-2-101	Gabbro	Gabbro CR22-228 230-240	2	Waste	Waste	-	Waste	Gab	CR22-228	230	240	9.8	2.0	2.0	27	0.1	0.1	15	1.6	0.051		
Gab-2-102	Gabbro	Gabbro CR22-228 260-270	2	Waste	Waste	-	Waste	Gab	CR22-228	260	270	9.7	2.0	2.0	37	0.1	0.1	19	1.6	0.069		
Gab-2-103	Gabbro	Gabbro CR22-231 40-50	2	Waste	Waste	-	Waste	Gab	CR22-231	40	50	9.7	1.0	2.0	20	0.1	0.1	16	2.0	0.061		
Gab-2-104	Gabbro	Gabbro CR22-231 70-80	2	Waste	Waste	-	Waste	Gab	CR22-231	70	80	9.6	1.0	2.0	27	0.1	0.1	18	1.6	0.012		
Gab-2-105	Gabbro	Gabbro CR22-234 60-70	2	Waste	Waste	-	Waste	Gab	CR22-234	60	70	9.5	1.0	2.1	25	0.1	0.1	16	1.7	0.012		
Gab-2-106	Gabbro	Gabbro CR22-234 100-110	2	Waste	Waste	-	Waste	Gab	CR22-234	100	110	9.6	1.0	2.0	20	0.1	0.1	12	1.8	< 0.005		
Gab-2-107	Gabbro	Gabbro CR20-41 345-355	2	Waste	Waste	-	Waste	Gab	CR20-41	345	355	9.8	1.0	1.9	20	0.1	0.1	12	2.0	0.029		
Gab-2-108	Gabbro	Gabbro CR20-41 365-375	2	Waste	Waste	-	Waste	Gab	CR20-41	365	375	9.7	1.0	2.0	20	0.1	0.1	12	1.8	0.036		
Gab-2-236	Gabbro	Pyroxenite CR21-172 650-660	2	Waste	Waste	-	Waste	Gab	CR21-172	650	660	9.8	1.0	2.1	20	0.1	0.1	12	1.6	0.009		
Gab-2-55	Gabbro	Gabbro CR19-29 155-165	2	Waste	Waste	-	Waste	Gab	CR19-29	155	165	9.0	4.0	2.0	90	0.1	0.1	29	1.7	< 0.005		
Gab-2-56	Gabbro	Gabbro CR22-GT-15 50-60	2	Waste	Waste	-	Waste	Gab	CR22-GT-15	50	60	9.4	1.0	2.0	20	0.1	0.1	16	1.2	0.027		
Gab-2-57	Gabbro	Gabbro CR22-GT-15 70-80	2	Waste	Waste	-	Waste	Gab	CR22-GT-15	70	80	9.4	1.0	2.0	20	0.1	0.1	17	1.1	0.02		
Gab-2-58	Gabbro	Gabbro CR22-GT-15 95-105	2	Waste	Waste	-	Waste	Gab	CR22-GT-15	95	105	9.4	1.0	2.0	20	0.1	0.1	15	1.1	0.043		
Gab-2-59	Gabbro	Gabbro CR22-GT-15 310-320	2	Waste	Waste	-	Waste	Gab	CR22-GT-15	310	320	9.1	1.0	2.0	20	0.1	0.1	16	1.1	0.029		
Gab-2-60	Gabbro	Gabbro CR22-GT-15 550-560	2	Waste	Waste	-	Waste	Gab	CR22-GT-15	550	560	9.3	1.0	2.0	20	0.1	0.1	18	1.0	0.047		
Gab-2-61	Gabbro	Gabbro CR21-GT-04B 310-320	2	Waste	Waste	-	Waste	Gab	CR21-GT-04B	310	320	9.4	1.0	2.0	20	0.1	0.1	17	1.2	0.018		
Gab-2-62	Gabbro	Gabbro CR21-GT-04B 350-360	2	Waste	Waste	-	Waste	Gab	CR21-GT-04B	350	360	9.4	1.0	2.0	20	0.1	0.1	17	1.2	0.051		
Gab-2-63	Gabbro	Gabbro CR21-GT-04B 380-390	2	Waste	Waste	-	Waste	Gab	CR21-GT-04B	380	390	9.4	1.0	2.0	20	0.1	0.1	18	1.2	0.048		
Gab-2-64	Gabbro	Gabbro CR21-GT-04B 550-560	2	Waste	Waste	-	Waste	Gab	CR21-GT-04B	550	560	9.1	2.0	2.0	27	0.1	0.1	12	1.6	0.039		
Gab-2-65	Gabbro	Gabbro CR21-GT-04B 580-590	2	Waste	Waste	-	Waste	Gab	CR21-GT-04B	580	590	9.3	2.0	2.0	20	0.1	0.1	12	1.4	0.024		
Gab-2-66	Gabbro	Gabbro CR21-GT-07 315-325	2	Waste	Waste	-	Waste	Gab	CR21-GT-07	315	325	9.1	4.0	2.0	85	0.1	0.1	21	1.8	< 0.005		

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	2023 Lithology	Internal Sample ID	Batch	Type	Zone	Duplicate	Grade	Specific Lithology Code	Borehole ID	From	To	ABA								ABA	
												Paste pH	Fizz Rate	Sample Weight	HCl Added	HCl	NaOH	NaOH to pH 8.3	Final pH	Sulphur (total)	
												No Unit	No Unit	g	mL	Normality	Normality	mL	no unit	%	
Gab-2-94	Gabbro	Gabbro CR22-GT-13 100-110	2	Waste	Waste	-	Waste	Gab	CR22-GT-13	100	110	9.4	1.0	2.0	20	0.1	0.1	17	1.2	0.053	
Gab-2-95	Gabbro	Gabbro CR22-GT-13 130-140	2	Waste	Waste	-	Waste	Gab	CR22-GT-13	130	140	9.3	1.0	2.0	20	0.1	0.1	17	1.2	0.049	
Gab-2-96	Gabbro	Gabbro CR22-GT-13 390-400	2	Waste	Waste	-	Waste	Gab	CR22-GT-13	390	400	9.3	1.0	2.0	20	0.1	0.1	16	1.2	0.01	
Gab-2-97	Gabbro	Gabbro CR22-GT-13 450-460	2	Waste	Waste	-	Waste	Gab	CR22-GT-13	450	460	9.2	1.0	2.0	20	0.1	0.1	17	1.2	0.019	
Gab-2-98	Gabbro	Gabbro CR22-GT-13 480-490	2	Waste	Waste	-	Waste	Gab	CR22-GT-13	480	490	9.4	1.0	2.0	20	0.1	0.1	17	1.2	0.03	
Gab-2-99	Gabbro	Gabbro CR20-57 35-45	2	Waste	Waste	-	Waste	Gab	CR20-57	35	45	9.5	1.0	1.9	20	0.1	0.1	14	1.6	0.019	
Gab-2-246	Gabbro	Gabbro-02 CR20-34 510-520	2	Waste	Waste	Dup	Waste	Gab	CR20-34	510	520	9.5	3.0	2.0	135	0.1	0.1	43	1.7	0.043	
Gab-3-22	Gabbro	Gabbro CR22-267 230-240	3	Ore	EZ	-	NLG	Gab	CR22-267	240	230	9.9	1.0	2.0	20	0.1	0.1	17	1.0	0.038	
Gab-3-23	Gabbro	Gabbro CR22-267 290-300	3	Ore	EZ	-	NLG	Gab	CR22-267	300	290	10.0	1.0	2.0	20	0.1	0.1	18	0.91	0.035	
Gab-3-28	Gabbro	Gabbro CR22-296 172-175	3	Ore	MZ	-	NLG	Gab	CR22-296	175	172	9.8	1.0	2.0	20	0.1	0.1	18	0.96	0.013	
Gab-3-28-Dup	Gabbro	Gabbro CR22-296 172-175-dup	3	Ore	MZ	Dup	NLG	Gab	CR22-296	175	172	9.7	2.0	2.0	20	0.1	0.1	19	0.88	0.017	
Gab-3-13	Gabbro	Gabbro CR21-127 370-380	3	Waste	Waste	-	Waste	Gab	CR21-127	380	370	9.9	3.0	2.0	40	0.1	0.1	14	1.7	0.008	
Gab-3-14	Gabbro	Gabbro CR21-127 395-405	3	Waste	Waste	-	Waste	Gab	CR21-127	405	395	9.7	3.0	2.0	25	0.1	0.1	11	1.6	0.009	
Gab-3-15	Gabbro	Gabbro CR20-75 75-85	3	Waste	Waste	-	Waste	Gab	CR20-75	85	75	9.7	2.0	2.0	20	0.1	0.1	17	1.1	0.031	
Gab-3-16	Gabbro	Gabbro CR20-75 150-160	3	Waste	Waste	-	Waste	Gab	CR20-75	160	150	9.8	2.0	2.0	20	0.1	0.1	17	1.1	0.027	
Gab-3-17	Gabbro	Gabbro CR20-67 95-105	3	Waste	Waste	-	Waste	Gab	CR20-67	105	95	9.6	2.0	2.0	20	0.1	0.1	15	1.3	0.006	
Gab-3-18	Gabbro	Gabbro CR20-32 80-90	3	Waste	Waste	-	Waste	Gab	CR20-32	90	80	9.6	2.0	2.0	20	0.1	0.1	15	1.1	< 0.005	
Gab-3-19	Gabbro	Gabbro CR19-15 545-555	3	Waste	Waste	-	Waste	Gab	CR19-15	555	545	9.7	2.0	2.0	20	0.1	0.1	16	1.3	0.014	
Gab-3-20	Gabbro	Gabbro CR22-217 360-370	3	Waste	Waste	-	Waste	Gab	CR22-217	370	360	9.9	2.0	2.0	20	0.1	0.1	12	1.6	0.025	
Gab-3-21	Gabbro	Gabbro CR22-217 390-400	3	Waste	Waste	-	Waste	Gab	CR22-217	400	390	9.6	2.0	2.0	20	0.1	0.1	15	1.3	0.021	
Gab-3-24	Gabbro	Gabbro CR22-305 100-110	3	Waste	Waste	-	Waste	Gab	CR22-305	110	100	9.8	1.0	2.1	20	0.1	0.1	18	0.98	0.027	
Gab-3-25	Gabbro	Gabbro CR22-300 140-150	3	Waste	Waste	-	Waste	Gab	CR22-300	150	140	9.6	1.0	2.0	20	0.1	0.1	18	1.0	0.045	
Gab-3-26	Gabbro	Gabbro CR22-300 275-285	3	Waste	Waste	-	Waste	Gab	CR22-300	285	275	9.5	1.0	2.1	20	0.1	0.1	18	1.0	0.055	
Gab-3-27	Gabbro	Gabbro CR22-299 175-185	3	Waste	Waste	-	Waste	Gab	CR22-299	185	175	9.8	1.0	2.0	20	0.1	0.1	18	0.97	0.047	
Gab-3-29	Gabbro	Gabbro CR22-287 110-120	3	Waste	Waste	-	Waste	Gab	CR22-287	120	110	9.8	1.0	2.1	20	0.1	0.1	14	1.0	0.011	
Gab-3-30	Gabbro	Gabbro CR21-GT-04A 315-325	3	Waste	Waste	-	Waste	Gab	CR21-GT-04A	325	315	9.9	1.0	2.0	20	0.1	0.1	19	0.99	0.016	
Gab-3-31	Gabbro	Gabbro CR21-GT-04A 340-350	3	Waste	Waste	-	Waste	Gab	CR21-GT-04A	350	340	10	1.0	2.0	20	0.1	0.1	18	1.0	0.035	
Gab-3-32	Gabbro	Gabbro CR21-GT-04A 370-380	3	Waste	Waste	-	Waste	Gab	CR21-GT-04A	380	370	9.9	1.0	2.0	20	0.1	0.1	19	0.96	0.035	
Gab-3-33	Gabbro	Gabbro CR22-GT-14 152-160	3	Waste	Waste	-	Waste	Gab	CR22-GT-14	160	152	9.6	3.0	2.1	20	0.1	0.1	11	1.0	0.005	
Gab-3-21-Dup	Gabbro	Gabbro CR22-217 390-400-dup	3	Waste	Waste	Dup	Waste	Gab	CR22-217	400	390	9.5	3.0	2.0	20	0.1	0.1	15	1.3	0.022	
Gab-3-13-Dup	Gabbro	Gabbro CR21-127 370-380-dup	3	Waste	Waste	Dup	Waste	Gab	CR21-127	380	370	9.8	3.0	2.0	42	0.1	0.1	16	1.6	0.006	
Gab-3-32-Dup	Gabbro	Gabbro CR21-GT-04A 370-380-dup	3	Waste	Waste	Dup	Waste	Gab	CR21-GT-04A	380	370	9.8	2.0	2.0	20	0.1	0.1	19	0.88	0.036	
IMV-1-21	Metavolcanic	P1-MetV-EZ-1	1	Waste	Waste	-	Waste	IMV	CR20-34	79.5	90	9.8	3.0	2.0	50	0.1	0.1	19	1.7	0.12	
IMV-1-23	Metavolcanic	P1-MetV-MZ-1	1	Waste	Waste	-	Waste	IMV	CR19-10	571.5	582	9.8	3.0	2.1	23	0.1	0.1	7.6	1.9	0.21	
IMV-1-30	Metavolcanic	P1-MetV-MZ-8	1	Waste	Waste	-	Waste	IMV	CR19-07	90	100.5	9.6	3.0	2.0	55	0.1	0.1	28	1.6	0.015	
MaMv-1-22	Metavolcanic	P1-MetV-EZ-2	1	Waste	Waste	-	Waste	MaMv	CR20-33	84	93.8	9.7	3.0	1.9	86	0.1	0.1	45	1.6	0.021	
MaMv-1-24	Metavolcanic	P1-MetV-MZ-2	1	Waste	Waste	-	Waste	MaMv	CR18-03	241.7	251.5	9.9	3.0	2.0	33	0.1	0.1	11	1.9	0.25	
MaMv-1-25	Metavolcanic	P1-MetV-MZ-3	1	Waste	Waste	-	Waste	MaMv	CR19-06	153	163.5	9.9	2.0	2.1	33	0.1	0.1	10	1.8	0.014	
MaMv-1-26	Metavolcanic	P1-MetV-MZ-4	1	Waste	Waste	-	Waste	MaMv	CR19-11	459	469.5	10	3.0	2.0	53	0.1	0.1	23	1.6	0.008	
MaMv-1-27	Metavolcanic	P1-MetV-MZ-5	1	Waste	Waste	-	Waste	MaMv	CR19-10	396	406.5	9.9	3.0	2.0	42	0.1	0.1	12	1.8	0.072	
MaMv-1-28	Metavolcanic	P1-MetV-MZ-6	1	Waste	Waste	-	Waste	MaMv	CR18-04	51.75	61.5	9.3	3.0	2.1	20	0.1	0.1	9.3	2.0	< 0.005	
MaMv-1-29	Metavolcanic	P1-MetV-MZ-7	1	Waste	Waste	-	Waste	MaMv	CR18-03	80.34	88.56	10.0	2.0	2.1	20	0.1	0.1	14	1.4	0.026	
IM																					

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	2023 Lithology	Internal Sample ID	Batch	Type	Zone	Duplicate	Grade	Specific Lithology Code	Borehole ID	From	To	ABA									ABA	
												Paste pH	Fizz Rate	Sample Weight	HCl Added	HCl	NaOH	NaOH to pH 8.3	Final pH	Sulphur (total)		
												No Unit	No Unit	g	mL	Normality	Normality	mL	no unit	%		
IMV-2-181	Metavolcanic	Basalt CR19-09 590-600	2	Waste	Waste	-	Waste	IMV	CR19-09	590	600	9.9	3.0	2.0	30	0.1	0.1	14	1.6	0.009		
IMV-2-182	Metavolcanic	Basalt CR19-09 570-580	2	Waste	Waste	-	Waste	IMV	CR19-09	570	580	9.8	3.0	2.0	30	0.1	0.1	17	1.6	0.13		
IMV-2-183	Metavolcanic	Basalt CR19-09 550-560	2	Waste	Waste	-	Waste	IMV	CR19-09	550	560	9.8	3.0	2.0	40	0.1	0.1	14	1.8	0.01		
IMV-2-184	Metavolcanic	Basalt CR21-129 45-55	2	Waste	Waste	-	Waste	IMV	CR21-129	45	55	9.2	3.0	2.0	30	0.1	0.1	9.8	1.9	< 0.005		
IMV-2-185	Metavolcanic	Basalt CR21-129A 45-55	2	Waste	Waste	-	Waste	IMV	CR21-129A	45	55	9.3	3.0	2.0	40	0.1	0.1	18	1.6	< 0.005		
IMV-2-186	Metavolcanic	Basalt CR21-GT-05 410-420	2	Waste	Waste	-	Waste	IMV	CR21-GT-05	410	420	10	1.0	2.0	20	0.1	0.1	16	1.4	0.21		
MaMv-2-110	Metavolcanic	Basalt CR22-197 90-100	2	Waste	Waste	-	Waste	MaMv	CR22-197	90	100	10	1.0	2.0	20	0.1	0.1	16	1.5	< 0.005		
MaMv-2-111	Metavolcanic	Basalt CR22-197 55-65	2	Waste	Waste	-	Waste	MaMv	CR22-197	55	65	9.9	1.0	2.0	20	0.1	0.1	16	1.4	< 0.005		
MaMv-2-112	Metavolcanic	Basalt CR21-GT-08 75-85	2	Waste	Waste	-	Waste	MaMv	CR21-GT-08	75	85	9.4	3.0	2.0	30	0.1	0.1	15	1.5	< 0.005		
MaMv-2-113	Metavolcanic	Basalt CR21-GT-08 115-125	2	Waste	Waste	-	Waste	MaMv	CR21-GT-08	115	125	9.6	3.0	2.0	30	0.1	0.1	16	1.5	0.007		
MaMv-2-114	Metavolcanic	Basalt CR21-GT-08 175-185	2	Waste	Waste	-	Waste	MaMv	CR21-GT-08	175	185	9.8	3.0	2.0	46	0.1	0.1	17	1.7	0.006		
MaMv-2-115	Metavolcanic	Basalt CR21-GT-08 250-260	2	Waste	Waste	-	Waste	MaMv	CR21-GT-08	250	260	9.8	3.0	2.0	47	0.1	0.1	17	1.6	< 0.005		
MaMv-2-116	Metavolcanic	Basalt CR21-GT-08 325-335	2	Waste	Waste	-	Waste	MaMv	CR21-GT-08	325	335	8.4	3.0	2.0	106	0.1	0.1	40	1.7	5.5		
MaMv-2-117	Metavolcanic	Basalt CR21-GT-08 400-410	2	Waste	Waste	-	Waste	MaMv	CR21-GT-08	400	410	9.6	3.0	2.0	110	0.1	0.1	38	1.7	0.24		
MaMv-2-118	Metavolcanic	Basalt CR21-GT-08 450-460	2	Waste	Waste	-	Waste	MaMv	CR21-GT-08	450	460	9.6	3.0	2.0	118	0.1	0.1	50	1.6	0.018		
MaMv-2-119	Metavolcanic	Basalt CR21-GT-08 500-510	2	Waste	Waste	-	Waste	MaMv	CR21-GT-08	500	510	9.7	3.0	2.0	125	0.1	0.1	59	1.5	0.054		
MaMv-2-120	Metavolcanic	Basalt CR21-GT-09A 80-90	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09A	80	90	9.6	3.0	2.0	67	0.1	0.1	22	1.7	0.007		
MaMv-2-121	Metavolcanic	Basalt CR21-GT-09A 110-120	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09A	110	120	9.8	3.0	2.0	40	0.1	0.1	23	1.4	0.005		
MaMv-2-122	Metavolcanic	Basalt CR21-GT-09A 140-150	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09A	140	150	9.7	3.0	2.0	53	0.1	0.1	18	1.7	0.006		
MaMv-2-123	Metavolcanic	Basalt CR21-GT-09B 80-90	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09B	80	90	9.8	3.0	2.0	40	0.1	0.1	14	1.6	0.007		
MaMv-2-124	Metavolcanic	Basalt CR21-GT-09B 140-150	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09B	140	150	9.7	3.0	2.0	40	0.1	0.1	15	1.7	< 0.005		
MaMv-2-125	Metavolcanic	Basalt CR21-GT-09B 200-210	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09B	200	210	9.7	3.0	2.0	77	0.1	0.1	23	1.7	0.007		
MaMv-2-126	Metavolcanic	Basalt CR21-GT-09B 250-260	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09B	250	260	9.9	3.0	2.0	40	0.1	0.1	17	1.5	0.005		
MaMv-2-127	Metavolcanic	Basalt CR21-GT-09B 300-310	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09B	300	310	9.8	3.0	2.0	40	0.1	0.1	17	1.7	0.005		
MaMv-2-128	Metavolcanic	Basalt CR21-GT-09B 350-360	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09B	350	360	9.2	3.0	2.0	109	0.1	0.1	55	1.8	0.12		
MaMv-2-129	Metavolcanic	Basalt CR21-GT-09B 470-480	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09B	470	480	9.6	3.0	2.0	77	0.1	0.1	39	1.6	0.092		
MaMv-2-130	Metavolcanic	Basalt CR21-GT-09B 490-500	2	Waste	Waste	-	Waste	MaMv	CR21-GT-09B	490	500	9.4	3.0	2.0	87	0.1	0.1	34	1.7	0.06		
MaMv-2-131	Metavolcanic	Basalt CR22-GT-01C 140-150	2	Waste	Waste	-	Waste	MaMv	CR22-GT-01C	140	150	9.1	3.0	2.0	98	0.1	0.1	24	1.8	0.3		
MaMv-2-134	Metavolcanic	Basalt CR22-GT-01C 270-280	2	Waste	Waste	-	Waste	MaMv	CR22-GT-01C	270	280	9.5	3.0	2.0	29	0.1	0.1	12	1.7	0.006		
MaMv-2-135	Metavolcanic	Basalt CR22-GT-01C 300-310	2	Waste	Waste	-	Waste	MaMv	CR22-GT-01C	300	310	9.5	3.0	2.0	30	0.1	0.1	17	1.5	0.006		
MaMv-2-136	Metavolcanic	Basalt CR22-GT-11 100-110	2	Waste	Waste	-	Waste	MaMv	CR22-GT-11	100	110	9.5	2.0	2.0	20	0.1	0.1	8.9	1.8	0.074		
MaMv-2-137	Metavolcanic	Basalt CR22-GT-11 175-185	2	Waste	Waste	-	Waste	MaMv	CR22-GT-11	175	185	9.7	3.0	2.0	30	0.1	0.1	16	1.5	0.11		
MaMv-2-138	Metavolcanic	Basalt CR22-GT-11 300-310	2	Waste	Waste	-	Waste	MaMv	CR22-GT-11	300	310	9.9	3.0	2.0	20	0.1	0.1	9.0	1.5	0.016		
MaMv-2-139	Metavolcanic	Basalt CR22-GT-11 440-450	2	Waste	Waste	-	Waste	MaMv	CR22-GT-11	440	450	9.4	2.0	2.0	31	0.1	0.1	13	1.6	0.013		
MaMv-2-140	Metavolcanic	Basalt CR22-GT-22 60-70	2	Waste	Waste	-	Waste	MaMv	CR22-GT-22	60	70	9.7	1.0	2.0	43	0.1	0.1	12	1.8	0.006		
MaMv-2-141	Metavolcanic	Basalt CR22-GT-22 150-160	2	Waste	Waste	-	Waste	MaMv	CR22-GT-22	150	160	9.4	4.0	2.0	98	0.1	0.1	22	1.7	0.006		
MaMv-2-142	Metavolcanic	Basalt CR22-GT-22 250-260	2	Waste	Waste	-	Waste	MaMv	CR22-GT-22	250	260	9.5	3.0	2.0	99	0.1	0.1	32	1.8	0.053		
MaMv-2-143	Metavolcanic	Basalt CR22-GT-22 500-510	2	Waste	Waste	-	Waste	MaMv	CR22-GT-22	500	510	9.8	3.0	2.0	130	0.1	0.1	54	1.6	0.019		
MaMv-2-146	Metavolcanic	Basalt CR21-GT-02 300-310	2	Waste	Waste	-	Waste	MaMv	CR21-GT-02	300	310	9.8	3.0	2.0	40	0.1	0.1	19	1.5	< 0.005		
MaMv-2-147	Metavolcanic	Basalt CR21-GT-02 340-350	2	Waste	Waste	-	Waste	MaMv	CR21-GT-02	340	350	9.3	3.0	2.0	30	0.1	0.1	14	1.6	0.016		
MaMv-2-148	Metavolcanic	Basalt CR21-GT-02 370-380	2																			

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	2023 Lithology	Internal Sample ID	Batch	Type	Zone	Duplicate	Grade	Specific Lithology Code	Borehole ID	From	To	ABA									ABA	
												Paste pH	Fizz Rate	Sample Weight	HCl Added	HCl	NaOH	NaOH to pH 8.3	Final pH	Sulphur (total)		
												No Unit	No Unit	g	mL	Normality	Normality	mL	no unit	%		
MaMv-3-46	Metavolcanic	Metavolcanic CR21-134A 60-70	3	Waste	Waste	-	Waste	MaMv	CR21-134A	70	60	10	3.0	2.0	38	0.1	0.1	16	1.6	< 0.005		
MaMv-3-47	Metavolcanic	Metavolcanic CR21-134A 80-90	3	Waste	Waste	-	Waste	MaMv	CR21-134A	90	80	10	3.0	2.0	20	0.1	0.1	6.8	1.8	< 0.005		
MaMv-3-48	Metavolcanic	Metavolcanic CR21-125 40-50	3	Waste	Waste	-	Waste	MaMv	CR21-125	50	40	9.3	3.0	2.0	36	0.1	0.1	15	1.6	< 0.005		
MaMv-3-49	Metavolcanic	Metavolcanic CR19-10 475-485	3	Waste	Waste	-	Waste	MaMv	CR19-10	485	475	9.7	3.0	2.0	20	0.1	0.1	9.3	1.8	0.009		
MaMv-3-50	Metavolcanic	Metavolcanic CR19-06 60-70	3	Waste	Waste	-	Waste	MaMv	CR19-06	70	60	9.6	3.0	2.0	28	0.1	0.1	9.4	1.8	0.008		
MaMv-3-51	Metavolcanic	Metavolcanic CR21-153 40-50	3	Waste	Waste	-	Waste	MaMv	CR21-153	50	40	9.9	3.0	2.0	64	0.1	0.1	27	1.5	< 0.005		
MaMv-3-52	Metavolcanic	Metavolcanic CR21-153 60-70	3	Waste	Waste	-	Waste	MaMv	CR21-153	70	60	10	3.0	2.0	28	0.1	0.1	14	1.6	< 0.005		
MaMv-3-54	Metavolcanic	Metavolcanic CR22-191 40-50	3	Waste	Waste	-	Waste	MaMv	CR22-191	50	40	9.9	2.0	2.0	25	0.1	0.1	18	1.5	0.16		
MaMv-3-55	Metavolcanic	Metavolcanic CR22-204 65-75	3	Waste	Waste	-	Waste	MaMv	CR22-204	75	65	9.2	3.0	2.1	26	0.1	0.1	14	1.8	< 0.005		
MaMv-3-56	Metavolcanic	Metavolcanic CR22-204 150-160	3	Waste	Waste	-	Waste	MaMv	CR22-204	160	150	9.4	4.0	2.1	50	0.1	0.1	16	1.6	< 0.005		
MaMv-3-58	Metavolcanic	Metavolcanic CR22-GT-14 275-285	3	Waste	Waste	-	Waste	MaMv	CR22-GT-14	285	275	9.1	4.0	2.1	80	0.1	0.1	28	1.8	0.13		
MaMv-3-59	Metavolcanic	Metavolcanic CR22-GT-14 390-400	3	Waste	Waste	-	Waste	MaMv	CR22-GT-14	400	390	9.0	4.0	2.0	133	0.1	0.1	49	1.7	0.75		
MaMv-3-60	Metavolcanic	Metavolcanic CR22-GT-14 475-485	3	Waste	Waste	-	Waste	MaMv	CR22-GT-14	485	475	8.5	4.0	2.1	76	0.1	0.1	33	1.6	6.1		
MaMv-3-35-Dup	Metavolcanic	Metavolcanic CR20-42 360-370-dup	3	Waste	Waste	Dup	Waste	MaMv	CR20-42	370	360	9.8	3.0	2.0	37	0.1	0.1	19	1.6	0.066		
MaMv-3-39-Dup	Metavolcanic	Metavolcanic CR20-72 116-126-dup	3	Waste	Waste	Dup	Waste	MaMv	CR20-72	126	116	9.2	2.0	2.0	105	0.1	0.1	65	1.6	0.054		
Per-1-31	Peridotite	P1-Per-EZ-1	1	Ore	EZ	-	LG	Per	CR19-31	162	172.5	9.3	2.0	2.0	42	0.1	0.1	8.9	2.0	0.021		
Per-1-33	Peridotite	P1-Per-MZ-1	1	Ore	MZ	-	LG	Per	CR19-20	162	172.5	9.9	3.0	2.0	56	0.1	0.1	12	1.9	0.12		
Per-1-38	Peridotite	P1-Per-MZ-6	1	Ore	MZ	-	VLG	Per	CR20-61	435	445.5	9.8	1.0	2.0	39	0.1	0.1	15	1.5	0.019		
Per-1-39	Peridotite	P1-Per-MZ-7	1	Ore	MZ	-	VLG	Per	CR19-15	468	478	9.2	2.0	2.0	31	0.1	0.1	8.4	1.7	0.018		
Per-1-40	Peridotite	P1-Per-MZ-8	1	Ore	MZ	-	VLG	Per	CR19-18	72	82.5	9.8	2.0	2.0	43	0.1	0.1	18	1.6	0.036		
Per-1-46	Peridotite	P1-Pyr-MZ-10	1	Ore	MZ	-	VLG	Per	CR19-12	452	462	9.0	2.0	2.1	24	0.1	0.1	6.6	1.8	0.025		
Per-1-48	Peridotite	P1-Pyr-MZ-2A	1	Ore	MZ	-	LG	Per	CR19-06	205	214.5	9.3	3.0	2.0	32	0.1	0.1	12	1.6	0.023		
Per-1-49	Peridotite	P1-Pyr-MZ-3	1	Ore	MZ	-	LG	Per	CR19-27	82.5	92	9.5	3.0	2.1	39	0.1	0.1	13	1.7	0.21		
Per-1-54	Peridotite	P1-Pyr-MZ-8	1	Ore	MZ	-	VLG	Per	CR20-59	420	426	9.8	1.0	2.0	105	0.1	0.1	45	1.6	0.035		
TaU-1-34	Peridotite	P1-Per-MZ-2	1	Ore	MZ	-	LG	TaU	CR19-22	477	487.5	9.4	3.0	2.0	56	0.1	0.1	15	1.7	0.056		
TaU-1-35	Peridotite	P1-Per-MZ-3	1	Ore	MZ	-	LG	TaU	CR20-60	261	271.5	9.9	1.0	2.0	54	0.1	0.1	19	1.6	0.009		
TaU-1-37	Peridotite	P1-Per-MZ-5	1	Ore	MZ	-	VLG	TaU	CR19-29	205.5	215	9.1	3.0	2.0	146	0.1	0.1	39	1.7	0.068		
TaU-1-52	Peridotite	P1-Pyr-MZ-6	1	Ore	MZ	-	LG	TaU	CR19-07	129	133.5	9.6	2.0	2.0	100	0.1	0.1	46	1.6	0.23		
Per-1-32	Peridotite	P1-Per-EZ-2	1	Waste	Waste	-	Waste	Per	CR19-28	60	70.5	9.9	1.0	2.0	20	0.1	0.1	8.6	1.6	0.027		
Per-1-51	Peridotite	P1-Pyr-MZ-5	1	Waste	Waste	-	Waste	Per	CR19-12	509.5	519	9.3	1.0	2.0	25	0.1	0.1	8.7	1.7	0.024		
Per-1-55	Peridotite	P1-Pyr-MZ-9	1	Waste	Waste	-	Waste	Per	CR19-29	90	100.5	9.4	2.0	2.1	73	0.1	0.1	26	1.6	0.058		
Per-2-189	Peridotite	Peridotite CR21-177 33-43	2	Ore	EZ	-	LG	Per	CR21-177	33	43	9.3	3.0	2.0	50	0.1	0.1	17	1.7	0.01		
Per-2-19	Peridotite	Dunite CR18-04 95-105	2	Ore	MZ	-	LG	Per	CR18-04	95	105	9.5	2.0	2.0	60	0.1	0.1	22	1.5	0.007		
Per-2-190	Peridotite	Peridotite CR20-34 451-461	2	Ore	EZ	-	LG	Per	CR20-34	451	461	8.9	2.0	2.0	45	0.1	0.1	18	1.5	0.027		
Per-2-200	Peridotite	Peridotite CR20-78 180-190	2	Ore	MZ	-	VLG	Per	CR20-78	180	190	9.4	3.0	2.0	60	0.1	0.1	17	1.8	0.01		
Per-2-205	Peridotite	Peridotite CR21-180 40-50	2	Ore	EZ	-	LG	Per	CR21-180	40	50	9.3	2.0	2.0	40	0.1	0.1	15	1.5	0.007		
Per-2-207	Peridotite	Peridotite CR22-197 325-335	2	Ore	MZ	-	LG	Per	CR22-197	325	335	9.1	3.0	2.0	125	0.1	0.1	30	1.7	0.034		
Per-2-209	Peridotite	Peridotite CR22-197 130-140	2	Ore	MZ	-	LG	Per	CR22-197	130	140	9.4	3.0	2.0	30	0.1	0.1	12	1.5	0.01		
Per-2-215	Peridotite	Peridotite-01 CR20-78 100-110	2	Ore	MZ	-	LG	Per	CR20-78	100	110	9.4	3.0	2.0	70	0.1	0.1	24	1.6	0.007		
Per-2-216	Peridotite	Peridotite CR20-78 147-157	2	Ore	MZ	-	VLG	Per	CR20-78	147	157	9.2	2.0	2.0	42	0.1	0.1	16	1.6	0.017		
Per-2-217	Peridotite	Peridotite CR21-115 430-440	2	Ore	MZ	-	LG	Per	CR21-115	430	440	9.2	2.0	2.0	53	0.1	0.1	19	1.5	0.043		
Per-2-218	Peridotite	Peridotite CR21-138 55-65	2	Ore	EZ	-	LG	Per	CR21-138	55	65	9.5	1.0	2.0	39	0.1	0.1	15	1.5	0.012		
Per-2-219	Peridotite	Peridotite CR22-191 60-70	2	Ore	MZ	-	LG	Per	CR22-191	60	70	9.5	2.0	2								

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	2023 Lithology	Internal Sample ID	Batch	Type	Zone	Duplicate	Grade	Specific Lithology Code	Borehole ID	From	To	ABA								ABA	
												Paste pH	Fizz Rate	Sample Weight	HCl Added	HCl	NaOH	NaOH to pH 8.3	Final pH	Sulphur (total)	
												No Unit	No Unit	g	mL	Normality	Normality	mL	no unit	%	
Per-2-223	Peridotite	Peridotite CR22-240 90-100	2	Waste	Waste	-	Waste	Per	CR22-240	90	100	9.5	1.0	2.1	58	0.1	0.1	22	1.6	0.07	
Per-2-224	Peridotite	Peridotite CR21-GT-03 600-610	2	Waste	Waste	-	Waste	Per	CR21-GT-03	600	610	9.5	2.0	2.0	38	0.1	0.1	19	1.6	0.009	
Per-2-227	Peridotite	Peridotite CR21-GT-06 150-160	2	Waste	Waste	-	Waste	Per	CR21-GT-06	150	160	9.6	2.0	2.0	29	0.1	0.1	8.3	1.9	0.046	
Per-2-248	Peridotite	Peridotite-02 CR20-38 290-300	2	Waste	Waste	Dup	Waste	Per	CR20-38	290	300	9.5	1.0	2.0	20	0.1	0.1	12	1.4	0.033	
Per-3-75	Peridotite	Peridotite CR22-282 45-55	3	Ore	EZ	-	NLG	Per	CR22-282	55	45	9.4	3.0	2.0	20	0.1	0.1	5.7	1.5	0.017	
Per-3-76	Peridotite	Peridotite CR22-282 155-165	3	Ore	EZ	-	NLG	Per	CR22-282	165	155	9.3	1.0	2.0	20	0.1	0.1	4.4	1.8	0.02	
Per-3-61	Peridotite	Peridotite CR21-177 520-530	3	Waste	Waste	-	Waste	Per	CR21-177	530	520	9.5	2.0	2.0	51	0.1	0.1	18	1.6	0.14	
Per-3-62	Peridotite	Peridotite CR22-239 60-70	3	Waste	Waste	-	Waste	Per	CR22-239	70	60	9.6	1.0	2.0	20	0.1	0.1	12	1.5	0.084	
Per-3-63	Peridotite	Peridotite CR22-239 70-75	3	Waste	Waste	-	Waste	Per	CR22-239	75	70	9.5	1.0	2.0	20	0.1	0.1	12	1.7	0.077	
Per-3-64	Peridotite	Peridotite CR22-240 30-40	3	Waste	Waste	-	Waste	Per	CR22-240	40	30	9.5	1.0	2.3	20	0.1	0.1	16	1.2	0.017	
Per-3-65	Peridotite	Peridotite CR22-256 245-255	3	Waste	Waste	-	Waste	Per	CR22-256	255	245	9.6	1.0	2.3	20	0.1	0.1	11	1.4	0.051	
Per-3-66	Peridotite	Peridotite CR22-257 210-220	3	Waste	Waste	-	Waste	Per	CR22-257	220	210	9.7	3.0	2.1	20	0.1	0.1	13	1.2	0.075	
Per-3-67	Peridotite	Peridotite CR22-257 300-310	3	Waste	Waste	-	Waste	Per	CR22-257	310	300	9.7	3.0	2.1	20	0.1	0.1	13	1.2	0.079	
Per-3-68	Peridotite	Peridotite CR22-265 60-70	3	Waste	Waste	-	Waste	Per	CR22-265	70	60	9.6	1.0	2.1	20	0.1	0.1	16	1.1	0.015	
Per-3-69	Peridotite	Peridotite CR22-267 110-120	3	Waste	Waste	-	Waste	Per	CR22-267	120	110	9.6	1.0	2.0	79	0.1	0.1	17	1.7	0.04	
Per-3-70	Peridotite	Peridotite CR22-279 115-125	3	Waste	Waste	-	Waste	Per	CR22-279	125	115	8.1	3.0	2.0	35	0.1	0.1	17	1.5	0.044	
Per-3-71	Peridotite	Peridotite CR22-279 190-220	3	Waste	Waste	-	Waste	Per	CR22-279	220	190	8.5	3.0	2.0	25	0.1	0.1	14	1.6	0.039	
Per-3-72	Peridotite	Peridotite CR22-287 220-230	3	Waste	Waste	-	Waste	Per	CR22-287	230	220	9.5	1.0	2.1	20	0.1	0.1	15	1.1	0.035	
Per-3-73	Peridotite	Peridotite CR22-289 165-175	3	Waste	Waste	-	Waste	Per	CR22-289	175	165	9.7	3.0	2.0	20	0.1	0.1	6.8	1.4	0.052	
Per-3-74	Peridotite	Peridotite CR22-284 150-160	3	Waste	Waste	-	Waste	Per	CR22-284	160	150	9.7	4.0	2.0	40	0.1	0.1	13	1.1	0.062	
Per-3-62-Dup	Peridotite	Peridotite CR22-239 60-70-dup	3	Waste	Waste	Dup	Waste	Per	CR22-239	70	60	9.6	1.0	2.0	20	0.1	0.1	12	1.4	0.079	
Per-3-64-Dup	Peridotite	Peridotite CR22-240 30-40-dup	3	Waste	Waste	Dup	Waste	Per	CR22-240	40	30	9.4	3.0	2.0	20	0.1	0.1	17	1.1	0.025	
Per-3-72-Dup	Peridotite	Peridotite CR22-287 220-230-dup	3	Waste	Waste	Dup	Waste	Per	CR22-287	230	220	9.4	2.0	2.0	20	0.1	0.1	15	1.1	0.044	
Pyx-1-53	Pyroxenite	P1-Pyr-MZ-7A	1	Ore	MZ	-	LG	Pyx	CR20-65	377.14	387	9.4	3.0	2.0	85	0.1	0.1	19	1.8	0.047	
Pyx-1-13	Pyroxenite	P1-Gab-MZ-1	1	Waste	Waste	-	Waste	Pyx	CR19-16	27	37.5	10.0	1.0	2.0	20	0.1	0.1	16	1.2	0.05	
Pyx-1-41	Pyroxenite	P1-Pyr-EZ-1A	1	Waste	Waste	-	Waste	Pyx	CR20-33	455.4	465	9.5	1.0	2.1	20	0.1	0.1	16	1.2	0.055	
Pyx-1-42	Pyroxenite	P1-Pyr-EZ-2	1	Waste	Waste	-	Waste	Pyx	CR19-28	34.5	45	9.9	2.0	2.0	20	0.1	0.1	14	1.3	0.01	
Pyx-1-43	Pyroxenite	P1-Pyr-EZ-3	1	Waste	Waste	-	Waste	Pyx	CR20-38	189	198.8	9.8	1.0	2.0	20	0.1	0.1	11	1.6	0.22	
Pyx-1-44	Pyroxenite	P1-Pyr-EZ-4	1	Waste	Waste	-	Waste	Pyx	CR20-38	246	256.5	10.0	1.0	2.0	20	0.1	0.1	13	1.4	0.042	
Pyx-1-45	Pyroxenite	P1-Pyr-MZ-1	1	Waste	Waste	-	Waste	Pyx	CR19-29	195	205	9.4	3.0	2.0	44	0.1	0.1	9.7	1.8	0.1	
Pyx-1-47	Pyroxenite	P1-Pyr-MZ-11	1	Waste	Waste	-	Waste	Pyx	CR19-27	431	441	9.2	3.0	2.1	33	0.1	0.1	18	1.7	0.045	
Pyx-1-50	Pyroxenite	P1-Pyr-MZ-4	1	Waste	Waste	-	Waste	Pyx	CR20-59	460.5	466.5	9.7	1.0	2.0	111	0.1	0.1	33	1.8	0.042	
Pyx-2-228	Pyroxenite	Pyroxenite CR22-197 342-352	2	Waste	Waste	-	Waste	Pyx	CR22-197	342	352	9.2	3.0	2.0	45	0.1	0.1	20	1.6	0.032	
Pyx-2-229	Pyroxenite	Pyroxenite CR22-200 75-85	2	Waste	Waste	-	Waste	Pyx	CR22-200	75	85	9.2	2.0	2.0	20	0.1	0.1	15	1.4	0.005	
Pyx-2-230	Pyroxenite	Pyroxenite CR22-200 350-360	2	Waste	Waste	-	Waste	Pyx	CR22-200	350	360	9.4	2.0	2.0	30	0.1	0.1	18	1.5	0.067	
Pyx-2-231	Pyroxenite	Pyroxenite CR21-GT-04B 275-285	2	Waste	Waste	-	Waste	Pyx	CR21-GT-04B	275	285	9.4	1.0	2.0	20	0.1	0.1	17	1.2	0.056	
Pyx-2-232	Pyroxenite	Pyroxenite CR20-37 420-430	2	Waste	Waste	-	Waste	Pyx	CR20-37	420	430	9.2	2.0	2.0	20	0.1	0.1	13	1.4	0.039	
Pyx-2-233	Pyroxenite	Pyroxenite CR21-124 535-553	2	Waste	Waste	-	Waste	Pyx	CR21-124	535	553	9.3	1.0	2.0	20	0.1	0.1	11	1.4	0.011	
Pyx-2-234	Pyroxenite	Pyroxenite CR20-57 60-70	2	Waste	Waste	-	Waste	Pyx	CR20-57	60	70	9.4	1.0	2.0	27	0.1	0.1	16	1.5	0.04	
Pyx-2-235	Pyroxenite	Pyroxenite-01 CR21-138 390-400	2	Waste	Waste	-	Waste	Pyx	CR21-138	390	400	9.6	1.0	2.0	20	0.1	0.1	13	1.4	0.043	
Pyx-2-237	Pyroxenite	Pyroxenite-01 CR21-GT-05 35-45	2	Waste	Waste	-	Waste	Pyx	CR21-GT-05	35	45	9.1	1.0	1.9	26	0.1	0.1	17	1.7	0.024	
Pyx-2-238	Pyroxenite	Pyroxenite CR22-199 250-260	2	Waste	Waste	-	Waste	Pyx	CR22-199	250	260	9.4	1.0	2.0	20	0.1	0.1	9.0	1.8	0.17	
Pyx-2-239	Pyroxenite	Pyroxenite CR22-204 330-340	2	Waste	Waste	-	Waste	Pyx	CR22-204	330	340	9.3	2.0	2.1	39	0.1	0.1	19	1.9	0.037	
Pyx-2-240	Pyroxenite	Pyroxenite CR19-16 30-40	2	Waste	Waste	-	Waste	Pyx	CR19-16	30	40	9.7	1.0	2.0	20	0.1	0.1	12	1.5	0.044	
Pyx-2-241	Pyroxenite	Pyroxenite CR21-GT-04A 275-285	2	Waste	Waste	-	Waste	Pyx	CR21-GT-04A	275	285	9.8	1.0	2.1	27	0.1	0.1	15	1.6	0.046	
Pyx-2-242	Pyroxenite	Pyroxenite CR20-78 375-385	2	Waste	Waste	-	Waste	Pyx	CR20-78	375	385	9.6	1.0	2.0	20	0.1	0.1	11	1.6	0.035	
Pyx-2-250	Pyroxenite	Pyroxenite-02 CR21-138 390-400	2	Waste	Waste	Dup	Waste	Pyx	CR21-138	390	400	9.6	1.0	2.0	20	0.1	0.1	12	1.5	0.062	
Pyx-2-251	Pyroxenite	Pyroxenite-02 CR21-GT-05 35-45	2	Waste	Waste	Dup	Waste	Pyx	CR21-GT-05	35	45	9.1	1.0	2.0	27	0.1	0.1	16	1.9	0.072	
Pyx-3-84	Pyroxenite	Pyroxenite CR22-261 35.5-43	3	Ore	EZ	-	NLG	Pyx	CR22-261	43	35.5	9.7	1.0	2.1	20	0.1	0.1	15	1.1	0.006	
Pyx-3-84-Dup	Pyroxenite	Pyroxenite CR22-261 35.5-43-dup	3	Ore	EZ	Dup	NLG	Pyx	CR22-261	43	35.5	9.6	3.0	2.0	20	0.1	0.1	15	0.96	0.014	
Pyx-3-77	Pyroxenite	Pyroxenite CR22-217 60-70	3	Waste	Waste	-	Waste	Pyx	CR22-217	70	60	9.5	2.0	2.0	20	0.1	0.1	15	1.3	0.009	
Pyx-3-78	Pyroxenite	Pyroxenite CR22-231 110-120	3	Waste	Waste	-	Waste	Pyx	CR22-231	120	110	9.8	1.0	2.3	20	0.1	0.1	18	1.0	0.047	
Pyx-3-79	Pyroxenite	Pyroxenite CR22-236 110-120	3	Waste	Waste	-	Waste	Pyx	CR22-236	120	110	9.4	1.0	2.5	20	0.1	0.1	17	1.1	0.013	
Pyx-3-80	Pyroxenite	Pyroxenite CR22-240 205-215	3	Waste	Waste	-	Waste	Pyx	CR22-240	215	205	9.7	1.0	2.0	20	0.1	0.1	18	1.0	0.052	
Pyx-3-81	Pyroxenite	Pyroxenite CR22-256 343-353	3	Waste	Waste	-	Waste	Pyx	CR22-256	353	343	9.4	4.0	2.0	40	0.1	0.1	18	1.5	0.022	
Pyx-3-82	Pyroxenite	Pyroxenite CR22-272 50-60	3	Waste	Waste	-	Waste	Pyx	CR22-272	60	50	9.8	1.0	2.0	20	0.1	0.1	17	1.1	0.09	
Pyx-3-83	Pyroxenite	Pyroxenite CR22-281 200-210	3	Waste	Waste	-	Waste	Pyx	CR22-281	210	200	9.5	3.0	2.0	20	0.1	0.1	8.8	1.5	0.029	

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID									Elemental													Elemental				
	Acid Leachable SO ₄ -S	Sulphide	Carbon (total)	Carbonate	Mod. NP	AP	Net NP	Mod. NPR	Silver	Aluminum	Arsenic	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese		
	%	%	%	%	kg CaCO ₃ / t	kg CaCO ₃ / t	kg CaCO ₃ / t	-	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Dun-1-1	< 0.04	< 0.04	0.11	0.32	186	0.3	185	595	< 0.5	3000	< 0.5	0.52	< 0.02	< 0.09	620	< 0.02	120	1100	17	51000	93	< 2	220000	800		
Dun-1-10	0.65	0.99	0.092	0.21	204	31	173	6.6	< 0.5	820	< 0.5	0.31	< 0.02	< 0.09	71	0.07	140	960	240	84000	36	< 2	220000	960		
Dun-1-2	< 0.04	< 0.04	0.12	0.32	140	1.2	139	121	< 0.5	5100	< 0.5	0.69	< 0.02	< 0.09	920	< 0.02	110	3100	41	50000	35	< 2	200000	810		
Dun-1-3	< 0.04	< 0.04	0.086	0.22	132	0.5	131	264	< 0.5	4900	< 0.5	0.95	< 0.02	< 0.09	1400	< 0.02	110	440	2.4	57000	76	< 2	210000	890		
Dun-1-36	0.72	0.31	0.12	0.33	224	9.7	214	23	< 0.5	1500	0.5	0.27	< 0.02	< 0.09	400	0.04	200	1200	340	61000	38	< 2	210000	670		
Dun-1-4	< 0.04	< 0.04	0.12	0.44	163	0.5	162	326	< 0.5	4100	< 0.5	0.73	< 0.02	< 0.09	900	< 0.02	120	1700	3.4	56000	59	< 2	220000	910		
Dun-1-5	0.08	< 0.04	0.11	0.28	157	2.5	156	64	< 0.5	2600	< 0.5	0.49	< 0.02	< 0.09	130	< 0.02	130	880	41	60000	68	< 2	200000	890		
Dun-1-6	< 0.04	< 0.04	0.13	0.35	244	0.5	243	488	< 0.5	1000	< 0.5	0.27	< 0.02	< 0.09	1700	< 0.02	130	1000	1.8	63000	28	< 2	210000	970		
Dun-1-7	0.19	< 0.04	0.11	0.41	180	6.0	179	30	< 0.5	1900	< 0.5	0.38	< 0.02	< 0.09	85	< 0.02	120	1700	38	57000	28	< 2	220000	910		
Dun-1-8	0.11	< 0.04	0.27	0.57	296	3.3	295	89	< 0.5	810	< 0.5	1.0	< 0.02	< 0.09	290	0.06	130	1100	69	48000	39	< 2	230000	820		
Dun-1-9	0.08	0.27	2.2	5.9	239	8.4	230	28	< 0.5	1900	3.8	45	< 0.02	< 0.09	24000	0.03	120	1500	120	38000	57	< 2	200000	700		
Dun-2-1	< 0.04	0.06	0.27	1.2	283	1.9	281	151	< 0.5	1500	< 0.5	0.32	< 0.02	< 0.09	310	0.03	140	870	27	67000	37	< 2	250000	910		
Dun-2-10	0.05	< 0.04	0.35	1.6	228	1.5	227	155	< 0.5	680	< 0.5	1.0	0.03	< 0.09	440	< 0.02	110	520	3.0	64000	58	< 2	240000	1000		
Dun-2-11	< 0.04	0.04	0.15	0.61	176	1.3	175	141	< 0.5	6800	0.6	110	0.05	< 0.09	8500	0.04	130	260	49	79000	450	3.6	220000	1100		
Dun-2-12	0.05	< 0.04	0.14	0.54	171	1.6	170	105	< 0.5	820	< 0.5	1.0	< 0.02	< 0.09	1600	0.03	140	370	40	77000	89	< 2	240000	1200		
Dun-2-13	< 0.04	< 0.04	0.34	1.6	224	0.4	223	551	< 0.5	680	< 0.5	4.0	< 0.02	< 0.09	1300	0.02	130	300	2.6	80000	79	< 2	220000	1100		
Dun-2-14	< 0.04	< 0.04	0.086	0.34	122	0.6	120	217	< 0.5	4400	0.5	2.0	0.05	< 0.09	660	< 0.02	130	790	55	77000	120	< 2	230000	1100		
Dun-2-15	0.04	< 0.04	0.1	0.42	91	1.3	90	68	< 0.5	6900	< 0.5	2.0	0.03	< 0.09	2100	< 0.02	130	980	3.7	83000	110	< 2	220000	1100		
Dun-2-16	< 0.04	0.04	0.29	1.3	162	1.3	161	130	< 0.5	1100	< 0.5	4.0	< 0.02	< 0.09	5200	0.03	140	640	19	77000	58	< 2	240000	1100		
Dun-2-17	< 0.04	< 0.04	0.25	1.1	192	0.6	191	341	< 0.5	2500	< 0.5	2.0	0.02	< 0.09	4400	< 0.02	120	1000	35	70000	100	< 2	240000	1100		
Dun-2-18	< 0.04	< 0.04	0.16	0.67	184	0.5	183	393	< 0.5	3500	< 0.5	1.0	< 0.02	< 0.09	1700	< 0.02	120	430	3.3	50000	110	< 2	240000	930		
Dun-2-2	0.04	< 0.04	0.33	1.5	224	1.3	223	175	< 0.5	4000	< 0.5	0.31	< 0.02	< 0.09	1200	< 0.02	130	1600	2.2	57000	37	< 2	250000	800		
Dun-2-20	< 0.04	< 0.04	0.14	0.56	145	0.4	144	387	< 0.5	3000	< 0.5	1.0	< 0.02	< 0.09	1200	< 0.02	130	680	3.3	68000	74	< 2	230000	930		
Dun-2-21	< 0.04	< 0.04	0.19	0.83	158	0.3	156	460	< 0.5	4000	< 0.5	19	< 0.02	< 0.09	5400	< 0.02	130	310	11	76000	420	< 2	230000	1200		
Dun-2-22	0.04	< 0.04	0.35	1.6	228	1.3	227	170	< 0.5	840	< 0.5	2.0	0.04	< 0.09	1100	0.02	110	580	6.6	59000	59	< 2	230000	960		
Dun-2-23	0.05	< 0.04	0.1	0.39	161	1.5	160	107	< 0.5	620	< 0.5	2.0	0.02	< 0.09	2100	< 0.02	150	320	170	77000	66	< 2	240000	1100		
Dun-2-24	< 0.04	< 0.04	0.18	0.8	218	0.3	217	698	< 0.5	680	< 0.5	1.0	< 0.02	< 0.09	1300	< 0.02	100	340	3.7	65000	61	< 2	240000	1000		
Dun-2-25	< 0.04	0.05	0.93	4.5	258	1.6	256	165	< 0.5	1300	0.7	3.0	0.06	< 0.09	24000	< 0.02	110	1000	16	62000	45	< 2	210000	830		
Dun-2-26	< 0.04	< 0.04	0.13	0.54	149	1.1	148	132	< 0.5	3800	< 0.5	1.0	< 0.02	< 0.09	370	< 0.02	140	1100	7.8	72000	110	< 2	230000	950		
Dun-2-27	0.06	< 0.04	0.12	0.51	161	1.8	160	90	< 0.5	4000	< 0.5	0.71	< 0.02	< 0.09	300	< 0.02	130	1200	5.8	76000	82	< 2	230000	960		
Dun-2-28	< 0.04	0.05	0.12	0.5	186	1.6	185	119	< 0.5	2600	< 0.5	1.0	0.03	< 0.09	390	< 0.02	140	1100	39	70000	82	< 2	230000	960		
Dun-2-29	0.04	< 0.04	0.34	1.6	228	1.3	226	174	< 0.5	2500	0.7	2.0	0.03	< 0.09	780											

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	Elemental																							Elemental		
	Acid Leachable SO ₄ -S	Sulphide	Carbon (total)	Carbonate	Mod. NP	AP	Net NP	Mod. NPR	Silver	Aluminum	Arsenic	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese		
	%	%	%	%	kg CaCO ₃ / t	kg CaCO ₃ / t	kg CaCO ₃ / t	-	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Dun-3-6	<0.04	< 0.04	0.91	4.5	342	0.8	340	421	< 0.5	3200	< 0.5	2.0	< 0.02	< 0.09	23000	0.04	120	1000	19	55000	83	< 2	250000	1200		
Dun-3-10	0.06	< 0.04	2.4	12	248	1.9	246	130	< 0.5	6100	1.6	8.0	0.07	< 0.09	73000	< 0.02	120	2600	47	66000	280	3.4	180000	950		
Dun-3-11	0.05	< 0.04	0.8	3.9	123	1.5	122	82	< 0.5	15000	0.7	17	0.3	< 0.09	42000	0.05	110	1500	63	69000	350	13	190000	1100		
Dun-3-12	0.07	0.08	0.19	0.82	176	2.5	173	70	< 0.5	2300	< 0.5	0.42	0.03	< 0.09	170	< 0.02	140	1500	98	68000	31	< 2	240000	880		
Dun-3-3	<0.04	< 0.04	0.3	1.5	258	0.6	257	435	< 0.5	5800	< 0.5	2.0	< 0.02	< 0.09	4300	< 0.02	130	600	6.0	63000	100	< 2	230000	980		
Dun-3-4	<0.04	< 0.04	0.18	0.93	67	0.8	66	80	< 0.5	6200	< 0.5	1.0	< 0.02	< 0.09	980	< 0.02	140	830	6.8	63000	66	< 2	230000	1000		
Dun-3-5	<0.04	< 0.04	0.25	1.3	77	0.9	75	82	< 0.5	8900	< 0.5	0.66	0.02	< 0.09	8300	< 0.02	150	900	6.5	82000	48	< 2	210000	1100		
Dun-3-7	<0.04	< 0.04	0.11	0.57	112	0.8	111	143	< 0.5	5200	< 0.5	0.8	< 0.02	< 0.09	470	< 0.02	120	1600	8.7	58000	84	< 2	250000	960		
Dun-3-8	0.04	< 0.04	0.26	1.2	159	1.3	158	127	< 0.5	1200	< 0.5	0.42	< 0.02	< 0.09	150	< 0.02	120	640	10	67000	37	< 2	240000	1000		
Dun-3-9	< 0.04	0.06	0.82	4.0	94	1.9	92	50	< 0.5	10000	0.6	6.0	0.18	< 0.09	24000	0.18	130	1900	63	66000	260	11	200000	770		
Dun-3-3-Dup	< 0.04	< 0.01	0.31	1.4	147	0.5	146	294	< 0.5	5500	0.8	2.0	< 0.02	< 0.09	3600	< 0.02	130	360	4.7	63000	85	< 2	230000	970		
Dun-3-9-Dup	0.07	0.03	0.76	3.6	90	0.94	90	96	< 0.5	8800	0.6	6.0	0.18	< 0.09	25000	0.28	120	730	53	66000	240	10	200000	690		
Gab-1-11	0.06	< 0.04	0.19	0.63	21	1.8	19	12	< 0.5	62000	< 0.5	25	0.03	< 0.09	78000	0.05	41	420	130	34000	790	9.9	49000	840		
Gab-1-12	< 0.04	< 0.04	0.026	< 0.025	8.9	0.9	7.7	10.2	< 0.5	66000	< 0.5	22	< 0.02	< 0.09	79000	0.05	34	630	76	31000	1300	7.3	53000	750		
Gab-1-14	< 0.04	< 0.04	0.018	< 0.025	9.6	0.4	8.4	25.6	< 0.5	63000	< 0.5	45	0.03	< 0.09	92000	0.04	38	1200	77	30000	1100	9.3	58000	740		
Gab-1-15	< 0.04	< 0.04	0.017	< 0.025	11	0.4	9.5	24.5	< 0.5	62000	< 0.5	38	0.03	< 0.09	71000	0.03	44	730	110	30000	960	12	57000	700		
Gab-1-16	< 0.04	< 0.04	0.12	0.47	16	0.3	15	63	< 0.5	76000	< 0.5	220	0.04	< 0.09	89000	0.02	34	680	100	28000	2900	17	60000	670		
Gab-1-17	< 0.04	< 0.04	0.05	0.15	11	0.5	9.7	20.5	< 0.5	70000	< 0.5	32	0.04	< 0.09	86000	0.05	32	780	88	28000	1000	9.9	54000	690		
Gab-1-18	0.06	< 0.04	0.2	0.72	84	1.8	83	46	< 0.5	30000	1.1	199	0.63	< 0.09	57000	0.11	87	770	160	84000	3600	17	100000	1500		
Gab-1-19	< 0.04	< 0.04	0.5	2.2	51	0.2	49	324	< 0.5	7500	< 0.5	330	0.03	< 0.09	69000	0.03	38	360	56	31000	2600	25	34000	850		
Gab-1-20	< 0.04	< 0.04	0.28	1.2	28	0.5	27	60	< 0.5	8900	0.7	75	0.04	< 0.09	86000	< 0.02	36	630	73	27000	1400	8.6	26000	680		
Gab-2-100	< 0.04	< 0.04	0.021	< 0.04	18	0.2	16	112	< 0.5	91000	< 0.5	79	0.04	< 0.09	110000	0.04	40	880	110	38000	2100	16	69000	870		
Gab-2-101	0.05	< 0.04	0.11	0.38	28	1.6	27	17	< 0.5	62000	< 0.5	36	0.02	< 0.09	110000	0.06	51	320	110	47000	2000	13	93000	1100		
Gab-2-102	< 0.04	0.04	0.29	1.2	45	1.3	43	36	< 0.5	68000	0.7	62	0.04	< 0.09	110000	0.03	54	510	130	41000	5000	19	87000	840		
Gab-2-103	0.06	< 0.04	0.026	0.04	11	1.9	9.7	5.7	< 0.5	82000	< 0.5	64	0.03	< 0.09	110000	0.05	41	430	130	41000	2800	6.4	72000	920		
Gab-2-104	< 0.04	< 0.04	0.024	< 0.04	23	0.4	21	61	< 0.5	83000	< 0.5	117	0.03	< 0.09	100000	0.02	39	710	97	34000	3600	11	70000	710		
Gab-2-105	< 0.04	< 0.04	0.023	< 0.04	20	0.4	19	54	< 0.5	79000	< 0.5	83	0.03	< 0.09	110000	0.02	40	470	130	41000	2100	5.2	61000	870		
Gab-2-106	< 0.04	< 0.04	0.02	< 0.04	20	0.2	19	127	< 0.5	77000	< 0.5	138	0.03	< 0.09	100000	0.02	33	790	92	33000	4300	5.7	61000	710		
Gab-2-107	< 0.04	< 0.04	0.024	0.06	21	0.9	19	23	< 0.5	100000	< 0.5	32	0.06	< 0.09	120000	0.08	41	1100	120	41000	1400	9.6	76000	1000		
Gab-2-108	< 0.04	< 0.04	0.019	< 0.04	19	1.1	18	17	< 0.5	99000	< 0.5	28	0.06	< 0.09	110000	0.07	43	650	130	44000	1300	8.1	74000	1100		
Gab-2-236	< 0.04	< 0.04	0.071	0.26	19	0.3	17	66	< 0.5	93000	< 0.5	130	0.03	< 0.09	100000	0.04	33	1500	81	32000	3200	12	60000	690		
Gab-2-55	<0.04	< 0.04	1.8	8.6	154	0.2	152	986	< 0.5	87000	< 0.5	650	0.03	0.18	78000	< 0.02	37	670	100	35000	15000	31</				

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID									Elemental													Elemental				
	Acid Leachable SO ₄ -S	Sulphide	Carbon (total)	Carbonate	Mod. NP	AP	Net NP	Mod. NPR	Silver	Aluminum	Arsenic	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese		
	%	%	%	%	kg CaCO ₃ / t	kg CaCO ₃ / t	kg CaCO ₃ / t	-	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Gab-2-94	0.05	< 0.04	0.024	< 0.04	7.4	1.7	6.2	4.5	< 0.5	82000	0.5	260	0.03	< 0.09	96000	0.05	40	140	140	40000	4600	9.6	65000	940		
Gab-2-95	0.05	< 0.04	0.03	< 0.04	7.5	1.5	6.3	4.9	< 0.5	80000	0.6	57	0.03	< 0.09	100000	0.08	42	140	140	40000	2400	8.3	65000	930		
Gab-2-96	< 0.04	< 0.04	0.041	0.07	8.8	0.3	7.6	28.2	< 0.5	77000	1.4	120	0.08	< 0.09	71000	0.04	43	500	41	50000	2600	20	78000	1000		
Gab-2-97	< 0.04	< 0.04	0.029	< 0.04	8.2	0.6	7.0	13.8	< 0.5	67000	1.6	53	0.06	< 0.09	75000	0.03	55	360	82	55000	1800	18	87000	1100		
Gab-2-98	< 0.04	< 0.04	0.022	< 0.04	6.7	0.9	5.5	7.1	< 0.5	84000	1.3	60	0.08	< 0.09	88000	0.06	35	370	70	45000	2400	11	54000	910		
Gab-2-99	< 0.04	< 0.04	0.021	< 0.04	16	0.6	15	28	< 0.5	74000	< 0.5	63	0.03	< 0.09	92000	0.04	36	840	100	34000	2000	10	49000	780		
Gab-2-246	< 0.04	0.04	0.38	1.8	233	1.3	231	186	< 0.5	1200	0.6	4.0	0.05	< 0.09	3100	< 0.02	110	890	8.4	63000	80	< 2	240000	820		
Gab-3-22	< 0.04	< 0.04	4.2	21	6.4	1.2	5.2	5.4	< 0.5	93000	< 0.5	31	0.03	< 0.09	100000	0.04	37	510	61	31000	1500	13	71000	830		
Gab-3-23	< 0.04	< 0.04	0.006	< 0.04	5.7	1.1	4.5	5.2	< 0.5	99000	< 0.5	28	0.04	< 0.09	100000	0.05	37	410	130	31000	1600	10	65000	810		
Gab-3-28	< 0.04	< 0.04	0.012	< 0.04	4.3	0.4	3.1	10.6	< 0.5	100000	< 0.5	130	0.04	< 0.09	98000	0.04	38	360	90	34000	4000	10	71000	850		
Gab-3-28-Dup	< 0.04	< 0.01	0.019	< 0.04	3.3	0.5	2.1	6.2	< 0.5	92000	< 0.5	120	0.03	< 0.09	92000	0.03	39	160	90	34000	3800	10	72000	800		
Gab-3-13	< 0.04	< 0.04	0.73	3.7	66	0.3	65	264	< 0.5	58000	< 0.5	57	0.04	< 0.09	94000	0.04	45	600	180	38000	2000	14	88000	910		
Gab-3-14	< 0.04	< 0.04	0.32	1.6	35	0.3	33	123	< 0.5	87000	1.1	90	0.03	< 0.09	87000	0.06	40	210	82	36000	3300	18	71000	910		
Gab-3-15	< 0.04	< 0.04	0.019	< 0.04	7.8	1.0	6.6	8.1	< 0.5	60000	< 0.5	31	0.05	< 0.09	100000	0.07	48	280	190	42000	940	13	89000	1100		
Gab-3-16	< 0.04	< 0.04	0.03	< 0.04	8.7	0.8	7.5	10.3	< 0.5	70000	< 0.5	34	0.03	< 0.09	110000	0.06	46	110	150	42000	1100	16	78000	1100		
Gab-3-17	< 0.04	< 0.04	0.099	0.54	14	0.2	12	73	< 0.5	83000	< 0.5	68	0.03	< 0.09	90000	0.05	45	110	92	42000	2700	16	74000	990		
Gab-3-18	< 0.04	< 0.04	0.054	0.3	11	0.2	10	72.3	< 0.5	85000	< 0.5	51	0.04	< 0.09	85000	0.04	38	470	69	39000	4900	12	71000	920		
Gab-3-19	< 0.04	< 0.04	0.019	< 0.04	11	0.4	9.6	24.7	< 0.5	86000	< 0.5	36	0.04	< 0.09	99000	< 0.02	32	420	96	32000	1400	14	65000	740		
Gab-3-20	< 0.04	< 0.04	0.11	0.5	19	0.8	17	24	< 0.5	69000	0.6	80	0.04	< 0.09	98000	0.06	46	73	130	41000	2400	18	73000	1100		
Gab-3-21	< 0.04	< 0.04	0.031	< 0.04	13	0.7	12	20	< 0.5	52000	< 0.5	45	0.05	< 0.09	83000	0.06	56	190	150	48000	1800	29	100000	1300		
Gab-3-24	< 0.04	< 0.04	0.012	< 0.04	4.2	0.8	3.0	5.0	< 0.5	99000	< 0.5	61	0.04	< 0.09	98000	0.04	37	480	160	33000	1900	12	65000	850		
Gab-3-25	0.04	< 0.04	0.012	< 0.04	5.1	1.4	3.9	3.6	< 0.5	91000	< 0.5	98	0.04	< 0.09	92000	0.15	39	350	180	39000	3900	23	73000	970		
Gab-3-26	0.06	< 0.04	0.015	< 0.04	5.5	1.7	4.3	3.2	< 0.5	61000	< 0.5	16	0.06	< 0.09	67000	0.07	78	760	92	57000	600	23	120000	1200		
Gab-3-27	0.05	< 0.04	0.012	< 0.04	4.1	1.5	2.9	2.8	< 0.5	100000	< 0.5	24	0.04	< 0.09	100000	0.04	38	520	110	36000	1200	11	70000	900		
Gab-3-29	< 0.04	< 0.04	< 0.005	< 0.04	15	0.3	13	43	< 0.5	98000	< 0.5	70	0.05	< 0.09	89000	0.03	41	260	93	34000	2700	16	72000	860		
Gab-3-30	< 0.04	< 0.04	< 0.005	< 0.04	3.7	0.5	2.5	7.4	< 0.5	95000	< 0.5	70	0.04	< 0.09	94000	0.03	36	390	83	31000	2600	8.7	71000	780		
Gab-3-31	< 0.04	< 0.04	< 0.005	< 0.04	5.4	1.1	4.2	4.9	< 0.5	97000	< 0.5	47	0.03	< 0.09	97000	0.04	39	260	150	33000	2300	12	69000	910		
Gab-3-32	< 0.04	< 0.04	< 0.005	< 0.04	3.6	1.1	2.4	3.3	< 0.5	94000	< 0.5	27	0.04	< 0.09	96000	0.03	38	210	120	35000	940	6.6	65000	930		
Gab-3-33	< 0.04	< 0.04	< 0.005	< 0.04	23	0.2	22	146	< 0.5	100000	< 0.5	8.0	0.03	< 0.09	120000	0.02	39	610	79	36000	110	11	74000	890		
Gab-3-21-Dup	< 0.04	0.01	0.044	0.13	12	0.31	12	38	< 0.5	54000	< 0.5	46	0.05	< 0.09	78000	0.07	55	200	140	46000	1700	26	100000	1200		
Gab-3-13-Dup	< 0.04	< 0.01	0.72	3.5	64	0.2	63	343	< 0.5	63000	< 0.5	61	0.04	< 0.09	93000	0.06	46	490	180	38000	2000	14	91000	900		
Gab-3-32-Dup	< 0.04	0.02	0.015	< 0.04	3.4	0.63	2.8	5.4	< 0.5	89000	< 0.5	24	0.04	< 0.09												

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID									Elemental													Elemental				
	Acid Leachable SO ₄ -S	Sulphide	Carbon (total)	Carbonate	Mod. NP	AP	Net NP	Mod. NPR	Silver	Aluminum	Arsenic	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese		
	%	%	%	%	kg CaCO ₃ / t	kg CaCO ₃ / t	kg CaCO ₃ / t	-	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
IMV-2-181	< 0.04	< 0.04	0.46	2.1	39	0.3	38	138	< 0.5	63000	1.7	220	0.83	< 0.09	18000	0.16	7.0	91	15	19000	5200	7.8	4900	450		
IMV-2-182	< 0.04	0.1	0.4	1.8	33	3.1	32	11	< 0.5	74000	2.6	210	0.93	< 0.09	15000	0.24	8.0	61	25	22000	6800	10	7000	480		
IMV-2-183	< 0.04	< 0.04	0.86	4.1	65	0.3	64	209	< 0.5	46000	4.0	80	0.8	0.79	22000	0.21	9.0	56	27	17000	3000	18	7700	470		
IMV-2-184	< 0.04	< 0.04	0.59	2.8	51	0.2	49	323	< 0.5	62000	0.6	320	0.55	< 0.09	24000	0.07	16	43	18	40000	14000	7.7	9600	340		
IMV-2-185	< 0.04	< 0.04	0.66	3.2	56	0.2	55	361	< 0.5	61000	0.6	290	0.52	< 0.09	27000	0.05	14	48	12	37000	12000	7.3	8400	300		
IMV-2-186	< 0.04	0.17	0.032	0.06	9.5	5.3	8.3	1.8	< 0.5	59000	2.8	72	0.19	0.11	73000	0.08	91	48	41	150000	2400	6.4	35000	1900		
MaMv-2-110	< 0.04	< 0.04	0.02	< 0.04	9.8	0.2	8.6	62.7	< 0.5	74000	2.8	160	0.46	< 0.09	20000	0.06	14	48	23	38000	4000	17	9200	570		
MaMv-2-111	< 0.04	< 0.04	0.051	0.13	10	0.2	8.9	64.6	< 0.5	80000	1.5	270	0.53	< 0.09	37000	0.07	15	55	41	40000	9400	6.1	11000	590		
MaMv-2-112	<0.04	< 0.04	0.4	1.8	37	0.2	36	236	< 0.5	96000	0.5	440	0.69	0.16	20000	0.04	19	57	35	62000	22000	17	16000	1500		
MaMv-2-113	<0.04	< 0.04	0.38	1.8	35	0.2	34	161	< 0.5	93000	0.5	260	0.59	< 0.09	29000	0.06	18	95	39	43000	8900	17	20000	580		
MaMv-2-114	<0.04	< 0.04	0.87	4.1	73	0.2	72	391	< 0.5	110000	< 0.5	250	0.66	< 0.09	46000	0.09	16	48	49	38000	21000	16	11000	710		
MaMv-2-115	<0.04	< 0.04	0.89	4.3	76	0.2	75	487	< 0.5	85000	0.7	240	0.5	< 0.09	41000	0.03	7.0	120	37	20000	14000	9.7	6200	590		
MaMv-2-116	0.23	5.2	2.4	12	162	163	-1.2	0.99	< 0.5	87000	1.6	240	0.51	0.13	67000	0.46	52	160	95	110000	14000	13	13000	1500		
MaMv-2-117	0.05	0.19	2.4	11	180	5.9	174	30	< 0.5	93000	1.7	180	0.44	< 0.09	69000	0.11	44	92	53	81000	8100	16	23000	1500		
MaMv-2-118	<0.04	< 0.04	2.1	10	169	0.6	168	300	< 0.5	84000	0.5	100	0.36	< 0.09	68000	0.04	31	50	20	77000	4200	13	17000	1400		
MaMv-2-119	0.05	< 0.04	2.3	11	162	1.7	161	96	< 0.5	94000	4.3	190	0.44	< 0.09	63000	0.06	36	50	36	68000	8200	13	21000	1700		
MaMv-2-120	<0.04	< 0.04	1.4	6.5	112	0.2	111	512	< 0.5	71000	1.0	150	0.38	< 0.09	60000	0.03	16	61	37	42000	8600	10	12000	770		
MaMv-2-121	<0.04	< 0.04	0.47	2.2	42	0.2	41	269	< 0.5	97000	1.2	220	0.62	< 0.09	34000	0.03	13	48	52	38000	14000	10	10000	550		
MaMv-2-122	<0.04	< 0.04	1.0	5.1	88	0.2	87	470	< 0.5	91000	0.8	230	0.53	< 0.09	45000	1.0	20	32	41	48000	14000	12	13000	770		
MaMv-2-123	<0.04	< 0.04	0.75	3.6	64	0.2	62	290	< 0.5	88000	1.1	200	0.61	< 0.09	42000	0.09	12	51	32	36000	13000	9.5	11000	540		
MaMv-2-124	<0.04	< 0.04	0.75	3.6	64	0.2	62	408	< 0.5	98000	0.8	220	0.63	< 0.09	41000	0.16	20	51	34	48000	13000	12	12000	710		
MaMv-2-125	<0.04	< 0.04	1.6	7.6	133	0.2	132	608	< 0.5	88000	0.7	170	0.6	< 0.09	63000	0.06	13	58	27	38000	9200	12	13000	810		
MaMv-2-126	<0.04	< 0.04	0.69	3.2	58	0.2	57	370	< 0.5	90000	0.6	300	0.65	0.13	34000	0.08	11	74	46	32000	14000	7.0	5900	510		
MaMv-2-127	<0.04	< 0.04	0.67	3.2	56	0.2	55	358	< 0.5	91000	0.5	220	0.59	< 0.09	25000	0.06	14	62	45	40000	12000	8.0	8700	500		
MaMv-2-128	0.05	0.07	2.2	11	134	2.2	132	61	< 0.5	71000	1.2	130	0.53	< 0.09	47000	0.09	34	35	18	120000	2000	7.7	15000	2000		
MaMv-2-129	0.04	0.05	1.3	6.2	94	1.6	92	60	< 0.5	93000	1.5	230	0.47	< 0.09	32000	0.08	27	67	36	77000	7600	11	12000	1100		
MaMv-2-130	0.06	< 0.04	1.8	8.6	136	1.9	134	73	< 0.5	85000	3.0	120	0.62	< 0.09	42000	0.12	30	94	25	75000	2300	26	32000	1200		
MaMv-2-131	0.04	0.26	2.2	11	186	8.1	178	23	< 0.5	91000	17	160	0.49	< 0.09	80000	0.71	41	130	52	60000	8300	13	14000	1600		
MaMv-2-134	<0.04	< 0.04	0.5	2.4	41	0.2	40	218	< 0.5	85000	0.7	140	0.54	< 0.09	24000	0.02	7.0	96	42	49000	6600	6.7	6800	880		
MaMv-2-135	<0.04	< 0.04	0.34	1.6	32	0.2	30	169	< 0.5	110000	1.6	450	0.67	< 0.09	19000	0.05	13	71	42	42000	18000	6.6	8700	750		
MaMv-2-136	0.07	< 0.04	0.35	1.6	28	2.3	26	12	< 0.5	86000	25	770	1.0	< 0.09	10000	0.06	19	150	140	33000	17000	13	11000	310		
MaMv-2-137	0.05	0.06	0.43	2.0	36	1.9	34	19	< 0.5	86000	3.3	250	0.84	0.11	17000	0.06	5.0	120	12	22000	15000	5.3	4000	500		
MaMv-2-138	<0.04	< 0.04	0.34	1.5	28	0.5	27	56	< 0.5	84000	5.3	340	0.91	< 0.09												

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID									Elemental													Elemental				
	Acid Leachable SO ₄ -S	Sulphide	Carbon (total)	Carbonate	Mod. NP	AP	Net NP	Mod. NPR	Silver	Aluminum	Arsenic	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese		
	%	%	%	%	kg CaCO ₃ / t	kg CaCO ₃ / t	kg CaCO ₃ / t	-	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
MaMv-3-46	<0.04	<0.04	0.67	3.3	56	0.2	54	356	<0.5	68000	<0.5	77	0.72	<0.09	26000	0.04	7.7	46	27	14000	4400	12	9200	350		
MaMv-3-47	<0.04	<0.04	0.42	1.8	34	0.2	33	216	<0.5	68000	0.6	140	0.94	<0.09	18000	0.05	3.6	70	15	7200	4200	4.8	3900	170		
MaMv-3-48	<0.04	<0.04	0.86	3.2	53	0.2	51	336	<0.5	72000	7.9	140	0.75	0.28	20000	0.34	25	32	110	44000	9400	27	11000	500		
MaMv-3-49	<0.04	<0.04	0.28	1.4	27	0.3	25	95	<0.5	81000	1.3	240	0.7	<0.09	27000	0.07	15	39	21	36000	6100	15	12000	630		
MaMv-3-50	<0.04	<0.04	0.56	2.7	46	0.3	45	185	<0.5	75000	3.8	76	0.64	0.11	23000	0.09	22	40	110	33000	3900	22	13000	660		
MaMv-3-51	<0.04	<0.04	1.2	5.8	94	0.2	93	602	<0.5	62000	<0.5	55	0.68	<0.09	36000	0.08	7.5	33	33	14000	2600	14	7300	430		
MaMv-3-52	<0.04	<0.04	0.62	2.6	35	0.2	34	225	<0.5	63000	<0.5	31	0.92	<0.09	21000	0.03	3.1	90	15	7000	1100	4.8	3500	160		
MaMv-3-54	0.07	0.09	0.09	0.36	17	2.8	14	6.0	<0.5	73000	3.7	410	0.99	<0.09	25000	0.04	18	73	43	33000	9500	16	14000	460		
MaMv-3-55	<0.04	<0.04	0.37	1.7	29	0.2	27	183	<0.5	75000	1.3	390	0.77	<0.09	13000	0.06	14	31	13	39000	18000	15	11000	630		
MaMv-3-56	<0.04	<0.04	1.1	5.0	82	0.2	80	523	<0.5	65000	15	180	0.75	<0.09	29000	0.03	5.2	35	9.7	7600	7500	3.3	1700	190		
MaMv-3-58	0.07	0.06	2.3	11	124	1.9	122	66	<0.5	80000	19	260	0.84	<0.09	36000	0.06	13	38	25	36000	9600	6.9	11000	780		
MaMv-3-59	0.14	0.61	3.8	19	212	19	193	11	<0.5	63000	66	190	0.45	<0.09	57000	0.09	24	58	42	54000	7700	9.3	18000	1300		
MaMv-3-60	0.81	5.2	2.1	10	103	164	-60	0.63	<0.5	81000	86	240	0.72	0.12	26000	0.1	85	100	140	93000	8900	15	9400	540		
MaMv-3-35-Dup	<0.04	0.05	0.15	0.59	46	1.6	45	30	<0.5	37000	2.2	220	0.92	<0.09	66000	0.09	82	250	150	90000	3700	29	110000	1500		
MaMv-3-39-Dup	<0.04	0.05	0.52	2.5	101	1.6	99	65	<0.5	63000	<0.5	750	0.36	<0.09	65000	0.05	59	320	65	69000	2600	38	100000	1100		
Per-1-31	<0.04	<0.04	0.75	2.1	85	0.7	84	130	<0.5	2700	2.5	5.0	0.05	<0.09	9200	<0.02	100	2000	4.4	66000	78	<2	190000	1100		
Per-1-33	0.12	<0.04	0.28	0.81	112	3.8	111	29	<0.5	6500	1.7	0.62	0.02	<0.09	6600	0.02	140	790	28	69000	21	<2	190000	940		
Per-1-38	<0.04	<0.04	0.07	0.17	61	0.6	60	103	<0.5	9300	<0.5	1.4	0.03	<0.09	5500	<0.02	150	790	8.1	72000	100	<2	190000	1100		
Per-1-39	<0.04	<0.04	0.23	0.88	56	0.6	55	99	<0.5	2800	<0.5	2.0	0.03	<0.09	13000	0.04	120	1100	42	69000	80	<2	180000	1100		
Per-1-40	<0.04	<0.04	0.076	0.14	62	1.1	60	55	<0.5	12000	<0.5	1.1	0.02	<0.09	12000	<0.02	140	550	4.8	71000	67	<2	180000	970		
Per-1-46	<0.04	<0.04	0.082	0.055	43	0.8	41	55	<0.5	4600	<0.5	2.0	0.05	<0.09	6800	0.04	150	1500	5.4	70000	60	<2	190000	1000		
Per-1-48	<0.04	<0.04	0.43	2.0	48	0.7	47	67	<0.5	6900	<0.5	160	0.14	<0.09	44000	0.04	76	2200	34	58000	1500	6.2	84000	1100		
Per-1-49	0.13	0.08	0.55	2.4	64	2.5	61	25	<0.5	6900	5.5	9.0	0.09	<0.09	33000	0.05	110	1600	260	64000	290	<2	150000	970		
Per-1-54	<0.04	<0.04	1.1	4.0	150	1.1	149	137	<0.5	6100	14	10	<0.02	<0.09	14000	<0.02	120	470	2.5	54000	21	<2	180000	1100		
TaU-1-34	<0.04	0.04	4.9	4.9	100	1.3	99	80	<0.5	9000	10	4.0	0.03	<0.09	11000	0.06	100	2300	37	58000	89	4.4	170000	960		
TaU-1-35	<0.04	<0.04	5.8	2.6	87	0.3	85	308	<0.5	4600	0.5	2.0	<0.02	<0.09	4800	<0.02	110	720	8.6	61000	120	3.0	170000	980		
TaU-1-37	0.07	<0.04	3.1	13	266	2.1	265	125	<0.5	3300	12	9.0	0.02	<0.09	67000	0.04	100	1100	47	39000	86	5.3	130000	770		
TaU-1-52	0.13	0.1	1.7	7.4	137	3.1	134	44	<0.5	25000	7.5	4.1	0.07	<0.09	33000	0.07	100	2900	120	70000	250	2.8	120000	1100		
Per-1-32	<0.04	<0.04	0.047	0.075	28	0.8	27	34	<0.5	17000	<0.5	2.5	0.03	<0.09	20000	<0.02	130	1300	23	99000	94	<2	160000	1600		
Per-1-51	<0.04	<0.04	0.21	0.81	40	0.8	39	54	<0.5	2000	1.6	4.0	0.04	<0.09	17000	0.04	120	1100	38	62000	60	<2	170000	970		
Per-1-55	<0.04	0.04	1.4	6.4	114	1.3	113	91	<0.5	14000	2.6	4.0	0.04	<0.09	26000	0.03	130	1200	79	77000	72	<2	140000	1400		
Per-2-189	<0.04	<0.04	0.6	2.8	84	0.3	83	269	<0.5	10000	27	2.5	0.04	<0.09	14000	0.03	120	1700	13	86000	160	<2	220000	1200		
Per-2-19	<0.04	<0.04	5.8	23	95	0.2	94	433	<0.5	7900	22	2.0	0.04	<0.09	15000	0.02	110	830	12	73000	74	2.7	180000	1200		
Per-2-190																										

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID									Elemental													Elemental				
	Acid Leachable SO ₄ -S	Sulphide	Carbon (total)	Carbonate	Mod. NP	AP	Net NP	Mod. NPR	Silver	Aluminum	Arsenic	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese		
	%	%	%	%	kg CaCO ₃ / t	kg CaCO ₃ / t	kg CaCO ₃ / t	-	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Per-2-223	< 0.04	0.04	0.03	0.09	88	1.3	87	70	< 0.5	9900	< 0.5	2.0	< 0.02	< 0.09	17000	< 0.02	140	1700	53	120000	230	< 2	200000	1700		
Per-2-224	< 0.04	< 0.04	0.047	0.15	50	0.3	48	177	< 0.5	22000	< 0.5	6.0	0.07	< 0.09	60000	0.04	100	3200	18	87000	660	2.0	170000	1400		
Per-2-227	0.05	< 0.04	0.058	0.18	52	1.4	51	36	< 0.5	12000	0.9	1.0	0.05	< 0.09	19000	0.05	160	1500	28	120000	130	< 2	210000	1700		
Per-2-248	< 0.04	< 0.04	0.024	< 0.04	21	1.0	19	20	< 0.5	19000	0.5	2.0	0.05	< 0.09	18000	0.03	150	800	22	110000	130	< 2	180000	1600		
Per-3-75	< 0.04	< 0.04	0.084	0.36	35	0.5	34	66	< 0.5	17000	< 0.5	2.0	0.05	< 0.09	22000	< 0.02	110	2500	53	68000	130	< 2	200000	1100		
Per-3-76	< 0.04	< 0.04	0.019	0.04	39	0.6	37	62	< 0.5	19000	< 0.5	2.0	0.04	< 0.09	18000	< 0.02	130	710	6.1	66000	130	< 2	210000	1100		
Per-3-61	< 0.04	0.11	4.3	19	83	3.4	79	24	< 0.5	15000	2.6	0.49	0.03	< 0.09	13000	< 0.02	140	1400	32	89000	34	< 2	170000	1400		
Per-3-62	< 0.04	0.07	0.006	< 0.04	20	2.2	18	9.3	< 0.5	20000	< 0.5	3.0	0.03	< 0.09	21000	0.02	130	680	63	100000	120	< 2	170000	1900		
Per-3-63	< 0.04	0.07	0.016	< 0.04	20	2.2	18	9.3	< 0.5	22000	< 0.5	2.0	0.03	< 0.09	24000	< 0.02	120	700	52	99000	88	< 2	170000	1900		
Per-3-64	< 0.04	< 0.04	< 0.005	< 0.04	8.7	0.5	7.5	16.4	< 0.5	50000	< 0.5	99	0.04	< 0.09	50000	0.04	89	780	69	76000	3100	10	130000	1600		
Per-3-65	0.05	< 0.04	0.12	0.52	21	1.6	19	13	< 0.5	23000	< 0.5	3.0	0.05	< 0.09	22000	0.03	150	1100	98	83000	180	< 2	180000	1500		
Per-3-66	< 0.04	0.05	0.081	0.35	17	1.6	15	11	< 0.5	20000	2.1	1.0	0.03	< 0.09	10000	< 0.02	150	1100	58	87000	77	< 2	190000	1500		
Per-3-67	< 0.04	0.05	0.074	0.28	16	1.6	15	10	< 0.5	18000	0.7	2.0	0.03	< 0.09	17000	0.02	150	520	55	110000	82	< 2	190000	1700		
Per-3-68	< 0.04	< 0.04	< 0.005	< 0.04	8.7	0.5	7.5	18.6	< 0.5	29000	< 0.5	2.0	0.04	< 0.09	36000	0.03	71	1100	110	59000	200	2.4	150000	1500		
Per-3-69	0.04	< 0.04	4.3	19	154	1.3	153	123	< 0.5	14000	17	3.0	< 0.02	< 0.09	37000	0.03	120	790	27	61000	45	2.7	170000	1000		
Per-3-70	0.04	< 0.04	0.34	1.6	42	1.4	41	31	< 0.5	38000	0.8	39	0.82	< 0.09	39000	0.11	75	610	120	82000	2100	56	130000	1500		
Per-3-71	< 0.04	< 0.04	0.12	0.49	29	1.2	27	23	< 0.5	45000	3.7	320	1.0	< 0.09	45000	0.1	75	810	150	85000	5400	42	110000	1400		
Per-3-72	< 0.04	< 0.04	0.1	0.42	13	1.1	11	12	< 0.5	51000	0.6	11	0.06	< 0.09	55000	0.07	83	600	91	70000	450	32	130000	1400		
Per-3-73	< 0.04	0.04	0.26	1.2	33	1.3	32	26	< 0.5	20000	6.5	1.0	0.03	< 0.09	13000	< 0.02	130	1100	44	88000	85	< 2	190000	1500		
Per-3-74	< 0.04	0.05	0.008	< 0.04	65	1.6	64	42	< 0.5	16000	1.2	2.0	0.03	< 0.09	9800	< 0.02	160	1300	76	110000	77	< 2	180000	1800		
Per-3-62-Dup	< 0.04	0.06	0.024	0.04	20	1.9	18	11	< 0.5	17000	< 0.5	3.0	0.03	< 0.09	22000	0.02	130	520	57	110000	120	< 2	170000	1900		
Per-3-64-Dup	< 0.04	< 0.01	0.018	< 0.04	8.8	0.8	7.6	11.3	< 0.5	45000	< 0.5	88	0.03	< 0.09	49000	0.05	85	700	64	73000	2700	9.5	130000	1500		
Per-3-72-Dup	< 0.04	0.01	0.11	0.44	12	0.31	12	40	< 0.5	49000	< 0.5	10	0.05	< 0.09	57000	0.09	84	1000	87	70000	430	31	130000	1300		
Pyx-1-53	0.05	< 0.04	2.4	6.2	165	1.5	163	112	< 0.5	4500	2.6	11	0.02	< 0.09	20000	< 0.02	110	1500	37	61000	70	< 2	180000	1000		
Pyx-1-13	0.05	< 0.04	0.02	< 0.025	10	1.6	9.2	6.7	< 0.5	21000	< 0.5	10	0.04	< 0.09	93000	0.05	56	1700	270	41000	210	6.0	92000	1000		
Pyx-1-41	0.06	< 0.04	0.018	< 0.025	9.3	1.7	8.1	5.4	< 0.5	4800	0.8	17	0.04	< 0.09	75000	0.09	59	3300	380	46000	180	8.8	100000	1300		
Pyx-1-42	< 0.04	< 0.04	0.03	< 0.025	15	0.3	14	48	< 0.5	23000	< 0.5	10	0.05	< 0.09	65000	0.05	51	2500	19	48000	300	7.3	94000	1100		
Pyx-1-43	0.22	< 0.04	0.034	< 0.025	23	6.8	21	3	< 0.5	20000	< 0.5	8.5	0.03	< 0.09	62000	0.06	71	2600	200	53000	490	5.2	110000	1300		
Pyx-1-44	0.04	< 0.04	0.037	< 0.025	17	1.3	16	13	< 0.5	42000	< 0.5	26	0.03	< 0.09	76000	0.09	55	660	140	48000	730	10	83000	1200		
Pyx-1-45	0.05	0.05	0.93	4.3	87	1.6	85	56	< 0.5	11000	1.8	3.0	0.04	< 0.09	110000	0.16	55	2500	330	39000	150	9.4	97000	1100		
Pyx-1-47	0.04	< 0.04	0.19	0.73	38	1.4	36	27	< 0.5	23000	1.0	180	0.68	< 0.09	57000	0.07	82	1100	140	77000	3400	26	100000	1300		
Pyx-1-50	0.04	< 0.04	3.1	13	193	1.3	192	147	< 0.5	14000	5.4	1.8	0.03	< 0.09	49000	< 0.02	78	640	8.1	46000	18	2.4	120000	1000		
Pyx-2-228	< 0.04	< 0.04	0.16	0.67	62	1.0	61	62	< 0.5	20000	1.7	15	0.38	< 0.09	47000	0.25	90	1600	91	71000	1000	16	160000	1500		
Pyx-2-229	< 0.04	< 0.04	0.1	< 0.04	13	0.2	11	81	< 0.5	30000	< 0.5	4.5	0.03	< 0.09												

Waste Rock & Ore Sample ID	WRA																			WRA								
	Molybdenum	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Yttrium	Zinc	Boron	Sodium	Silicon	Thorium	Tungsten	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	P ₂ O ₅	MnO
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%
Dun-1-1	< 0.1	2400	< 0.05	< 0.8	< 0.1	< 6	0.49	170	< 0.02	0.024	15	-	33	44	120	16	0.22	0.07	-	-	-	-	-	-	-	-	-	-
Dun-1-10	< 0.1	2900	< 0.05	< 0.8	0.3	< 6	0.26	69	< 0.02	< 0.002	7.7	-	57	49	40	2580	2.5	< 0.04	-	-	-	-	-	-	-	-	-	-
Dun-1-2	< 0.1	2200	< 0.05	< 0.8	< 0.1	< 6	0.95	250	< 0.02	0.014	18	-	37	6.7	33	< 3	< 0.01	0.07	-	-	-	-	-	-	-	-	-	-
Dun-1-3	0.2	1900	< 0.05	< 0.8	< 0.1	< 6	0.76	170	< 0.02	0.006	13	-	35	5.1	140	6.1	< 0.01	0.05	-	-	-	-	-	-	-	-	-	-
Dun-1-36	< 0.1	3700	0.33	< 0.8	0.2	< 6	0.58	110	< 0.02	0.005	13	-	23	7.7	47	3.8	< 0.01	0.05	-	-	-	-	-	-	-	-	-	-
Dun-1-4	< 0.1	2100	< 0.05	< 0.8	< 0.1	< 6	0.8	190	< 0.02	< 0.002	16	-	30	38	44	1240	1.3	< 0.04	-	-	-	-	-	-	-	-	-	-
Dun-1-5	< 0.1	2600	< 0.05	< 0.8	< 0.1	< 6	0.49	150	0.04	0.006	16	-	40	5.9	65	32	< 0.01	0.05	-	-	-	-	-	-	-	-	-	-
Dun-1-6	< 0.1	2000	< 0.05	< 0.8	< 0.1	< 6	0.48	65	< 0.02	0.002	8.4	-	42	3.6	72	< 3	< 0.01	< 0.04	-	-	-	-	-	-	-	-	-	-
Dun-1-7	< 0.1	3200	0.1	< 0.8	0.3	< 6	0.28	120	< 0.02	0.013	13	-	19	33	49	12800	0.68	0.08	-	-	-	-	-	-	-	-	-	-
Dun-1-8	0.2	2500	0.21	< 0.8	0.2	< 6	1.0	50	< 0.02	0.016	6.2	-	31	24	63	12900	0.95	0.25	-	-	-	-	-	-	-	-	-	-
Dun-1-9	0.2	2800	0.28	< 0.8	0.2	< 6	480	82	< 0.02	< 0.002	8.5	-	9.7	22	120	2400	0.6	0.04	-	-	-	-	-	-	-	-	-	-
Dun-2-1	< 0.1	2400	0.08	< 0.8	< 0.7	< 6	0.63	120	< 0.02	< 0.002	8.4	0.4	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-10	0.2	2800	0.36	< 0.8	< 0.7	< 6	2.0	120	< 0.02	0.004	6.6	0.25	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-11	0.2	2400	0.49	< 0.8	< 0.7	< 6	57	430	0.03	0.037	22	1.7	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-12	0.2	2800	0.24	< 0.8	< 0.7	< 6	2.0	100	0.03	0.004	6.2	0.31	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-13	0.2	2100	0.19	< 0.8	< 0.7	< 6	3.0	84	0.02	0.017	5.8	0.25	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-14	< 0.1	2800	0.24	< 0.8	< 0.7	< 6	0.9	300	0.02	0.11	20	1.3	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-15	< 0.1	1900	0.19	< 0.8	< 0.7	< 6	1.0	340	< 0.02	0.014	25	1.6	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-16	0.3	2700	0.24	< 0.8	< 0.7	< 6	50	99	< 0.02	0.041	9.9	0.33	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-17	0.1	2700	0.22	< 0.8	< 0.7	< 6	3.0	200	0.02	0.02	14	0.72	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-18	< 0.1	2500	0.12	< 0.8	< 0.7	< 6	1.0	230	0.03	0.031	10	1.1	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-2	< 0.1	2300	0.09	< 0.8	< 0.7	< 6	0.56	150	0.02	< 0.002	14	0.7	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-20	< 0.1	2300	0.32	< 0.8	< 0.7	< 6	0.81	200	0.03	0.004	14	0.81	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-21	0.1	2100	0.18	< 0.8	< 0.7	< 6	7.0	170	0.04	0.005	10	0.82	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-22	< 0.1	2300	0.41	< 0.8	< 0.7	< 6	4.0	84	0.03	0.002	7.0	0.23	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-23	0.2	2400	0.24	< 0.8	< 0.7	< 6	0.98	75	0.03	0.009	5.6	0.31	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-24	0.2	2800	0.17	< 0.8	< 0.7	< 6	3.0	82	0.03	0.002	5.9	0.29	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-25	0.1	3100	0.59	< 0.8	< 0.7	< 6	20	77	0.03	0.002	14	0.22	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-26	< 0.1	2500	0.35	< 0.8	< 0.7	< 6	1.0	350	0.03	0.016	16	1.2	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-27	< 0.1	2500	0.25	< 0.8	< 0.7	< 6	1.0	290	0.02	0.009	19	1.0	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-28	< 0.1	2700	0.52	< 0.8	< 0.7	< 6	1.0	200	0.06	0.014	14	0.86	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-29	< 0.1	2900	0.21	< 0.8	< 0.7	< 6	23	180	0.04	0.023	14	0.6	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-3	< 0.1	2600	0.07	< 0.8	< 0.7	< 6	0.73	110	0.02	< 0.002	9.4	0.5	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-30	< 0.1	2300	0.29	< 0.8	< 0.7	< 6	0.58	170	0.03	0.023	11	0.8	48	-	-	-	-	-	35	0.72	11	40	0.04	0.03	0.02	0.03	< 0.01	0.14
Dun-2-36	< 0.1	2400	0.24	< 0.8	< 0.7	< 6	0.42	180	< 0.02	0.016	11	0.87	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-37	< 0.1	3400	0.22	< 0.8	< 0.7	< 6	0.66	140	< 0.02	0.017	9.1	0.61	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-38	0.1	2500	0.27	< 0.8	< 0.7	< 6	1.0	310	< 0.02	0.027	22	1.4	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-39	< 0.1	3000	0.72	< 0.8	< 0.7	< 6	1.0	170	< 0.02	0.02	17	0.65	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-4	0.2	3600	0.06	< 0.8	< 0.7	< 6	1.9	65	0.02	< 0.002	6.2	0.2	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-40	0.1	2000	0.2	< 0.8	< 0.7	< 6	0.51	270	< 0.02	0.015	25	1.3	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-41	< 0.1	2400	0.09	< 0.8	< 0.7	7.5	0.76	140	< 0.02	0.006	13	0.39	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-42	0.1	2200	0.31	< 0.8	< 0.7	7.0	1.0	130	< 0.02	0.009	12	0.54	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-43	< 0.1	2100	3.0	< 0.8	< 0.7	< 6	28	160	0.23	0.06	14	1.6	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-44	< 0.1	3300	0.26	< 0.8	< 0.7	< 6	2.0	170	< 0.02	0.01	18	0.59	36	-	-	-	-	-	35	0.67	8.2	40	0.2	0.02	0.01	0.03	< 0.01	0.1
Dun-2-45	< 0.1	2500	0.46	< 0.8	< 0.7	6.0	5.0	240	0.03	0.046	16	1.0	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-46	< 0.1	1900	0.22	< 0.8	< 0.7	< 6	0.76	260	< 0.02	0.014	26	1.1	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-47	< 0.1	2800	0.29	< 0.8	< 0.7	6.3	4.0	160	< 0.02	0.018	15	0.43	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-48	< 0.1	2600	0.18	< 0.8	< 0.7	< 6	2.0	130	< 0.02	0.016	13	0.37	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-49	0.1	2500	0.18	< 0.8	< 0.7	< 6	2.0	86	< 0.02	0.012	11	0.24	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-5	< 0.1	3400	0.62	< 0.8	< 0.7	< 6	0.93	140	< 0.02	0.006	12	0.5	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-50	< 0.1	1900	0.27	< 0.8	< 0.7	< 6	2.0	340	< 0.02	0.011	30	1.2	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-51	0.1	2100	0.06	< 0.8	< 0.7	< 6	31	160	< 0.02	0.009	11	0.48	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-54	< 0.1	2900	0.24	< 0.8	< 0.7	6.5	1.0	290	< 0.02	0.023	24	0.96	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-6	< 0.1	3700	0.25	< 0.8	< 0.7	< 6	0.76	130	< 0.02	0.006	11	0.5	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-8	0.3	2500	0.19	< 0.8	< 0.7	< 6	1.0	320	0.02	0.005	9.5	0.37	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-9	0.3	2300	0.31	< 0.8	< 0.7	< 6	15	190	0.02	0.061	13	0.38	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	WRA																			WRA									
	Molybdenum ppm	Nickel ppm	Lead ppm	Antimony ppm	Selenium ppm	Tin ppm	Strontium ppm	Titanium ppm	Thallium ppm	Uranium ppm	Vanadium ppm	Yttrium ppm	Zinc ppm	Boron ppm	Sodium ppm	Silicon ppm	Thorium ppm	Tungsten ppm	SiO ₂ %	Al ₂ O ₃ %	Fe ₂ O ₃ %	MgO %	CaO %	Na ₂ O %	K ₂ O %	TiO ₂ %	P ₂ O ₅ %	MnO %	
Dun-3-6	< 0.1	2400	7.0	< 0.8	< 0.1	< 6	20	170	< 0.02	0.007	13	0.72	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-10	0.2	2200	0.63	< 0.8	0.1	< 6	130	640	< 0.02	0.059	36	1.9	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-11	0.3	2200	1.0	< 0.8	< 0.1	< 6	120	1900	< 0.02	0.17	59	4.5	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-12	0.1	3600	0.53	< 0.8	0.2	< 6	0.57	130	< 0.02	0.005	18	0.4	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-3	< 0.1	1400	0.23	< 0.8	< 0.1	< 6	2.0	220	< 0.02	0.005	17	0.9	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-4	0.2	1300	0.36	< 0.8	< 0.1	< 6	0.85	250	< 0.02	0.005	21	0.98	44	-	-	-	-	-	36	1.3	9.2	39	0.13	0.03	0.01	0.05	< 0.01	0.13	
Dun-3-5	< 0.1	950	0.41	< 0.8	< 0.1	< 6	1.0	300	< 0.02	0.008	28	1.2	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-7	< 0.1	2200	0.18	< 0.8	< 0.1	< 6	0.53	250	< 0.02	0.006	24	0.88	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-8	< 0.1	2700	0.14	< 0.8	0.1	< 6	0.63	80	< 0.02	0.003	10	0.2	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-9	0.1	2200	17	< 0.8	0.1	< 6	46	910	< 0.02	0.079	38	2.5	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-3-Dup	< 0.1	1400	0.71	< 0.8	< 0.1	< 6	2.0	190	< 0.02	0.006	13	0.9	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-9-Dup	0.1	2200	13	< 0.8	< 0.1	< 6	44	790	< 0.02	0.071	29	2.2	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-11	0.1	100	< 0.05	< 0.8	0.2	< 6	89	670	< 0.02	0.012	100	-	25	12	8200	480	1.5	0.07	-	-	-	-	-	-	-	-	-	-	-
Gab-1-12	0.1	100	< 0.05	< 0.8	< 0.1	< 6	85	600	< 0.02	0.01	83	-	21	1.7	8900	190	0.44	0.07	-	-	-	-	-	-	-	-	-	-	-
Gab-1-14	0.6	130	0.12	< 0.8	0.1	< 6	200	600	< 0.02	0.013	96	-	20	9.1	6100	7430	0.18	0.18	-	-	-	-	-	-	-	-	-	-	-
Gab-1-15	1.2	140	< 0.05	< 0.8	< 0.1	< 6	103	570	< 0.02	0.016	72	-	20	5.8	8300	390	0.7	0.13	-	-	-	-	-	-	-	-	-	-	-
Gab-1-16	0.3	110	0.41	< 0.8	0.1	< 6	420	520	< 0.02	0.015	92	-	22	17	9000	17600	0.19	0.14	-	-	-	-	-	-	-	-	-	-	-
Gab-1-17	0.4	120	0.49	< 0.8	0.1	< 6	82	600	< 0.02	0.023	91	-	19	6.7	9200	18500	0.42	0.14	-	-	-	-	-	-	-	-	-	-	-
Gab-1-18	0.4	1100	3.2	< 0.8	0.2	< 6	249	5600	0.06	0.42	130	-	92	2.0	8700	3.4	2.6	0.24	-	-	-	-	-	-	-	-	-	-	-
Gab-1-19	< 0.1	130	0.11	< 0.8	< 0.1	< 6	540	520	0.05	< 0.002	94	-	28	9.7	12000	< 3	0.04	0.05	-	-	-	-	-	-	-	-	-	-	-
Gab-1-20	0.3	100	< 0.05	< 0.8	0.1	< 6	270	650	< 0.02	< 0.002	97	-	21	5.8	1600	616	0.05	0.07	-	-	-	-	-	-	-	-	-	-	-
Gab-2-100	0.1	120	0.44	< 0.8	< 0.7	< 6	180	770	0.03	0.019	100	3.0	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-101	0.1	110	0.24	< 0.8	< 0.7	< 6	82	1000	0.02	0.016	150	3.2	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-102	0.2	160	0.27	< 0.8	< 0.7	< 6	96	890	0.07	0.017	120	3.3	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-103	0.2	100	0.22	< 0.8	< 0.7	< 6	120	750	< 0.02	0.013	110	2.9	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-104	0.1	130	0.26	< 0.8	< 0.7	< 6	170	640	< 0.02	0.013	92	2.5	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-105	< 0.1	99	0.74	< 0.8	< 0.7	< 6	200	850	< 0.02	0.016	110	3.0	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-106	0.1	96	0.86	< 0.8	< 0.7	< 6	320	790	< 0.02	0.015	100	2.7	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-107	0.2	130	0.37	< 0.8	< 0.7	6.6	110	760	< 0.02	0.016	130	3.7	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-108	0.1	110	0.35	< 0.8	< 0.7	6.7	100	770	0.02	0.016	130	3.6	42	-	-	-	-	-	49	16	5.3	11	14	1.6	0.15	0.12	< 0.01	0.11	
Gab-2-236	0.1	120	0.23	< 0.8	< 0.7	6.4	140	530	0.04	0.011	87	2.3	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-55	< 0.1	110	0.25	< 0.8	< 0.7	< 6	240	670	0.05	0.01	110	2.8	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-56	0.5	116	0.22	< 0.8	< 0.7	< 6	140	740	< 0.02	0.01	110	2.6	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-57	0.6	106	0.34	< 0.8	< 0.7	< 6	180	620	< 0.02	0.006	98	1.6	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-58	0.7	107	0.2	< 0.8	< 0.7	< 6	120	690	< 0.02	0.006	130	2.7	25	-	-	-	-	-	-	-	-	-	-	-					

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID																				WRA										WRA					
	Molybdenum	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Yttrium	Zinc	Boron	Sodium	Silicon	Thorium	Tungsten	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	P ₂ O ₅	MnO							
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%							
Gab-2-94	0.4	100	0.96	< 0.8	< 0.7	< 6	350	900	0.04	0.033	86	3.6	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-2-95	0.4	100	0.67	< 0.8	< 0.7	< 6	130	800	0.02	0.026	94	3.4	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-2-96	0.2	180	0.45	< 0.8	< 0.7	< 6	110	1100	0.02	0.037	92	4.6	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-2-97	0.2	290	0.46	< 0.8	< 0.7	< 6	73	1300	< 0.02	0.12	100	5.8	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-2-98	0.5	140	0.41	< 0.8	< 0.7	< 6	100	1300	0.04	0.037	90	6.2	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-2-99	0.3	110	0.15	< 0.8	< 0.7	< 6	160	620	0.03	0.022	95	2.4	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-2-246	0.1	2400	0.8	< 0.8	< 0.7	< 6	8.0	120	< 0.02	0.012	11	0.25	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-22	2.7	120	0.26	1.4	0.1	< 6	110	560	< 0.02	0.013	81	2.7	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-23	4.4	130	0.21	< 0.8	0.2	< 6	98	590	< 0.02	0.012	84	2.7	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-28	2.6	120	0.21	< 0.8	0.1	< 6	120	760	0.03	0.019	100	3.3	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-28-Dup	2.2	120	0.56	< 0.8	0.2	< 6	120	690	< 0.02	0.02	87	3.1	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-13	0.1	190	0.68	< 0.8	0.2	< 6	65	600	< 0.02	0.01	80	2.7	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-14	0.2	100	0.37	< 0.8	0.2	< 6	100	560	0.02	0.007	87	2.4	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-15	0.2	110	0.23	< 0.8	0.3	< 6	68	990	< 0.02	0.016	140	4.2	39	-	-	-	-	-	51	11	6.0	14	15	1.1	0.12	0.17	< 0.01	0.15							
Gab-3-16	0.2	95	0.29	< 0.8	0.2	< 6	86	720	< 0.02	0.006	120	3.1	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-17	< 0.1	83	0.25	< 0.8	0.1	< 6	94	680	< 0.02	0.008	110	2.8	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-18	0.1	120	0.32	< 0.8	< 0.1	< 6	88	750	0.02	0.013	88	3.1	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-19	0.1	110	0.23	< 0.8	0.2	< 6	71	580	< 0.02	0.007	94	2.5	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-20	0.1	87	0.18	< 0.8	0.2	< 6	130	790	0.02	0.011	110	3.2	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-21	< 0.1	120	0.21	< 0.8	0.2	< 6	59	890	< 0.02	0.013	120	3.8	34	-	-	-	-	-	50	9.7	6.7	16	12	1.8	0.22	0.16	< 0.01	0.15							
Gab-3-24	2.0	120	0.17	< 0.8	0.2	< 6	110	700	< 0.02	0.016	100	3.1	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-25	1.4	110	0.13	< 0.8	0.3	< 6	61	770	< 0.02	0.014	110	3.4	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-26	0.3	450	0.28	< 0.8	0.1	< 6	93	980	< 0.02	0.017	100	4.0	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-27	2.7	110	0.18	< 0.8	0.2	< 6	77	670	< 0.02	0.011	100	3.0	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-29	2.3	130	0.28	< 0.8	0.2	< 6	120	650	< 0.02	0.015	74	2.9	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-30	3.3	110	0.21	< 0.8	0.2	< 6	78	730	< 0.02	0.015	82	3.3	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-31	4.2	110	0.16	< 0.8	0.2	< 6	84	710	< 0.02	0.011	89	3.1	23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-32	3.6	93	0.19	< 0.8	0.2	< 6	90	700	< 0.02	0.034	98	3.0	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-33	1.3	110	0.47	< 0.8	0.1	< 6	200	780	< 0.02	0.057	110	3.5	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-21-Dup	< 0.1	120	0.69	< 0.8	0.2	< 6	61	820	< 0.02	0.014	130	3.7	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-13-Dup	0.1	200	1.0	< 0.8	0.2	< 6	69	580	< 0.02	0.011	91	2.7	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Gab-3-32-Dup	3.9	100	0.54	< 0.8	0.3	< 6	89	640	< 0.02	0.013	100	2.8	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
IMV-1-21	1.8	15	3.3	< 0.8	< 0.1	< 6	115	2600	0.03	0.62	71	-	51	22	15000	9.7	4.0	0.33	-	-	-	-	-	-	-	-	-	-							
IMV-1-23	0.9	27	3.0	< 0.8	0.1	< 6	150	3000	0.04	0.53	91	-	130	33	34000	4070	2.8	1.4	-	-	-	-	-	-	-	-	-	-							
IMV-1-30	1.2	40	3.0	< 0.8	< 0.1	< 6	127	5000	0.14	0.3	87	-	98	24	22000	5.9	1.2	1.1	-	-	-	-	-	-	-	-	-	-							
MaMv-1-22	0.9	48	1.5	< 0.8	< 0.1	< 6	76	1800	0.05	0.53	79	-	21	39	16000	24000	0.78	0.08	-	-	-	-	-	-	-	-	-	-							
MaMv-1-24	2.1	43	2.2	&																															

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	WRA																			WRA								
	Molybdenum	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Yttrium	Zinc	Boron	Sodium	Silicon	Thorium	Tungsten	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	P ₂ O ₅	MnO
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%
IMV-2-181	0.9	13	3.0	< 0.8	< 0.7	< 6	160	980	0.06	0.77	27	10	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-182	0.9	13	3.0	< 0.8	< 0.7	< 6	160	470	0.08	0.84	28	9.4	132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-183	1.0	32	3.0	< 0.8	< 0.7	< 6	110	770	0.04	0.35	28	4.9	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-184	0.5	26	1.0	< 0.8	< 0.7	< 6	83	3500	0.07	0.31	70	13	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-185	0.4	16	2.0	< 0.8	< 0.7	< 6	86	3300	0.07	0.27	71	13	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-186	0.3	8.7	0.55	< 0.8	< 0.7	< 6	84	11000	0.02	0.15	1100	14	83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-110	0.8	29	2.0	< 0.8	< 0.7	< 6	180	3400	< 0.02	0.49	87	13	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-111	0.5	35	2.0	< 0.8	< 0.7	< 6	210	3800	0.06	0.52	92	15	68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-112	0.8	19	5.0	< 0.8	< 0.7	< 6	83	3800	0.07	0.36	98	14	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-113	1.1	22	4.0	< 0.8	< 0.7	< 6	310	4000	0.04	0.31	110	13	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-114	0.5	24	3.0	< 0.8	< 0.7	< 6	180	4200	0.09	0.39	110	15	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-115	2.6	12	2.0	< 0.8	< 0.7	< 6	150	1700	0.1	0.31	82	12	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-116	1.3	87	5.0	< 0.8	1.1	< 6	210	1400	0.39	0.23	190	8.9	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-117	0.6	91	2.0	< 0.8	< 0.7	< 6	230	1400	0.12	0.21	190	9.5	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-118	0.5	28	1.0	< 0.8	< 0.7	< 6	180	2600	0.07	0.17	170	13	99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-119	0.6	84	2.0	< 0.8	< 0.7	< 6	240	1700	0.11	0.19	190	9.2	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-120	1.2	28	2.0	< 0.8	< 0.7	< 6	120	2700	0.06	0.35	72	12	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-121	1.9	12	3.0	< 0.8	< 0.7	< 6	180	3500	0.1	0.42	79	14	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-122	0.5	41	2.0	< 0.8	< 0.7	44	120	2100	0.09	0.37	80	13	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-123	0.8	12	2.0	< 0.8	< 0.7	< 6	160	3300	0.09	0.38	80	13	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-124	0.5	31	4.0	< 0.8	< 0.7	< 6	200	1800	0.1	0.42	93	16	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-125	0.5	19	2.0	< 0.8	< 0.7	< 6	130	1900	0.07	0.39	85	13	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-126	1.6	11	4.0	< 0.8	< 0.7	< 6	210	1000	0.14	0.51	89	14	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-127	0.4	12	2.0	< 0.8	< 0.7	< 6	130	2100	0.11	0.44	87	11	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-128	0.8	13	1.0	< 0.8	< 0.7	< 6	200	8900	< 0.02	0.22	160	22	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-129	0.6	19	2.0	0.8	< 0.7	< 6	170	4300	0.07	0.25	210	15	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-130	0.6	45	2.0	< 0.8	< 0.7	< 6	280	3000	0.03	0.22	180	12	98	-	-	-	-	-	52	15	9.4	5.1	5.3	3.8	0.27	1.1	0.3	0.14
MaMv-2-131	1.1	77	137	< 0.8	< 0.7	< 6	190	4900	0.13	0.23	210	20	290	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-134	0.7	11	1.0	< 0.8	< 0.7	< 6	91	3500	0.04	0.43	94	17	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-135	0.6	21	0.94	< 0.8	< 0.7	< 6	140	4200	0.09	0.54	110	19	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-136	1.1	14	2.0	< 0.8	< 0.7	< 6	160	2900	0.11	0.61	72	12	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-137	5.9	3.9	2.0	< 0.8	< 0.7	< 6	170	1800	0.1	0.75	24	13	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-138	0.5	3.1	2.0	< 0.8	< 0.7	< 6	100	1800	0.12	0.74	26	12	31	-	-	-	-	-	73	14	1.8	0.45	1.7	3.5	2.7	0.31	0.11	0.02
MaMv-2-139	1.4	22	2.0	< 0.8	< 0.7	< 6	220	3600	0.08	0.5	97	16	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-140	0.5	22	3.0	< 0.8	< 0.7	< 6	220	3700	0.04	0.46	110	17	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-141	5.9	8.0	4.0	< 0.8	< 0.7	< 6	180	1800	0.05	0.41	100	17	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-142	0.5	47	2.0	< 0.8	< 0.7	< 6	190	2500	0																			

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	WRA																			WRA								
	Molybdenum	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Yttrium	Zinc	Boron	Sodium	Silicon	Thorium	Tungsten	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	P ₂ O ₅	MnO
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%
MaMv-3-46	0.3	47	1.0	< 0.8	< 0.1	< 6	99	2400	< 0.02	0.28	39	10	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-47	0.6	15	2.0	< 0.8	0.1	< 6	120	970	< 0.02	0.55	10	11	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-48	0.2	100	2.0	< 0.8	0.1	< 6	68	980	0.06	0.39	65	8.9	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-49	0.9	20	2.0	< 0.8	0.2	< 6	170	2900	0.05	0.54	73	14	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-50	0.4	48	8.0	< 0.8	0.1	< 6	120	2700	0.03	0.55	65	13	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-51	0.2	41	1.0	< 0.8	0.1	< 6	97	1300	< 0.02	0.24	32	9.6	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-52	0.5	14	1.0	< 0.8	< 0.1	< 6	140	1000	0.02	0.4	9.0	9.9	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-54	0.8	33	3.0	1.3	0.2	< 6	250	3400	0.09	0.56	63	13	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-55	0.3	23	1.0	< 0.8	0.1	< 6	83	3100	0.15	0.48	78	11	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-56	2.0	18	2.0	< 0.8	0.1	< 6	170	990	0.05	0.52	33	7.3	9.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-58	2.2	14	3.0	< 0.8	0.2	< 6	200	1100	0.35	0.42	63	11	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-59	2.4	53	2.0	< 0.8	0.4	< 6	180	580	0.18	0.23	110	6.4	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-60	2.6	100	7.0	2.1	1.1	< 6	150	930	0.49	0.4	120	8.7	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-35-Dup	0.6	970	4.0	< 0.8	0.2	< 6	230	5600	0.06	0.49	150	13	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-39-Dup	0.2	400	2.0	< 0.8	0.3	< 6	380	2400	0.04	0.34	160	11	56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-31	< 0.1	1600	0.41	< 0.8	< 0.1	< 6	30	380	< 0.02	0.018	29	-	12	40	34	22500	0.91	0.11	-	-	-	-	-	-	-	-	-	-
Per-1-33	< 0.1	2200	< 0.05	< 0.8	< 0.1	< 6	2.7	320	< 0.02	0.009	23	-	34	5.0	27	5.4	< 0.01	0.05	-	-	-	-	-	-	-	-	-	-
Per-1-38	< 0.1	800	0.52	< 0.8	< 0.1	< 6	1.1	390	< 0.02	0.01	24	-	37	6.1	73	< 3	0.05	0.11	-	-	-	-	-	-	-	-	-	-
Per-1-39	< 0.1	570	0.18	< 0.8	< 0.1	< 6	2.0	320	< 0.02	0.02	27	-	33	29	190	7080	0.4	0.13	-	-	-	-	-	-	-	-	-	-
Per-1-40	< 0.1	920	0.09	< 0.8	< 0.1	< 6	1.4	360	< 0.02	0.009	31	-	38	2.3	82	< 3	< 0.01	0.34	-	-	-	-	-	-	-	-	-	-
Per-1-46	0.1	790	0.37	< 0.8	< 0.1	< 6	0.96	350	< 0.02	0.026	31	-	31	65	42	10300	1.5	1.1	-	-	-	-	-	-	-	-	-	-
Per-1-48	< 0.1	820	0.49	< 0.8	0.1	< 6	39	1400	0.05	< 0.002	100	-	51	17	1900	221	0.15	< 0.04	-	-	-	-	-	-	-	-	-	-
Per-1-49	0.1	3300	0.73	< 0.8	0.8	< 6	15	1000	< 0.02	0.054	58	-	18	34	300	17600	0.91	0.08	-	-	-	-	-	-	-	-	-	-
Per-1-54	< 0.1	1100	0.34	< 0.8	< 0.1	< 6	183	280	< 0.02	0.006	17	-	29	1.4	23	5.5	< 0.01	0.1	-	-	-	-	-	-	-	-	-	-
TaU-1-34	< 0.1	1400	< 0.05	< 0.8	< 0.1	< 6	20	430	< 0.02	< 0.002	33	-	20	3.3	220	3160	0.54	0.06	-	-	-	-	-	-	-	-	-	-
TaU-1-35	< 0.1	1500	< 0.05	< 0.8	< 0.1	< 6	2.2	210	< 0.02	0.006	19	-	21	1.0	150	< 3	< 0.01	< 0.04	-	-	-	-	-	-	-	-	-	-
TaU-1-37	< 0.1	550	0.36	< 0.8	0.2	< 6	120	310	0.02	< 0.002	28	-	16	51	100	1690	< 0.01	0.16	-	-	-	-	-	-	-	-	-	-
TaU-1-52	0.1	1300	0.25	< 0.8	0.3	< 6	13	1500	0.02	0.04	110	-	76	15	620	240	0.54	0.19	-	-	-	-	-	-	-	-	-	-
Per-1-32	< 0.1	1100	0.06	< 0.8	< 0.1	< 6	2.4	590	< 0.02	0.011	55	-	60	20	190	< 3	0.62	0.17	-	-	-	-	-	-	-	-	-	-
Per-1-51	< 0.1	570	0.36	1.0	< 0.1	< 6	3.0	370	< 0.02	0.028	33	-	25	41	67	10700	1.8	2.0	-	-	-	-	-	-	-	-	-	-
Per-1-55	< 0.1	1000	0.26	< 0.8	0.2	< 6	11	410	< 0.02	0.021	47	-	27	29	130	15200	0.38	0.2	-	-	-	-	-	-	-	-	-	-
Per-2-189	< 0.1	1600	0.36	< 0.8	< 0.7	< 6	11	580	< 0.02	0.013	36	2.5	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-19	< 0.1	1300	0.41	< 0.8	< 0.7	< 6	12	860	0.03	0.023	29	3.4	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-190	0.2	590	0.12	< 0.8	< 0.7	< 6	1.1	520	< 0.02	0.008	36	2.4	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-200	< 0.1	1300	0.19	< 0.8	< 0.7	< 6	0.69	410	< 0.02	0.005	23	1.6	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-205	< 0.1	1400	0.17	< 0.8	< 0.7	&																						

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID																				WRA							WRA						
	Molybdenum	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Yttrium	Zinc	Boron	Sodium	Silicon	Thorium	Tungsten	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	P ₂ O ₅	MnO					
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%					
Per-2-223	< 0.1	1300	0.4	< 0.8	< 0.7	< 6	3.0	410	< 0.02	0.009	52	1.9	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-2-224	< 0.1	1200	0.46	< 0.8	< 0.7	< 6	13	1600	< 0.02	0.04	110	5.5	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-2-227	< 0.1	1600	0.24	< 0.8	< 0.7	6.2	2.0	400	< 0.02	0.013	49	1.9	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-2-248	< 0.1	1000	0.35	< 0.8	< 0.7	< 6	2.0	940	< 0.02	0.018	60	3.7	82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-75	0.1	1200	0.21	< 0.8	< 0.1	< 6	0.98	410	< 0.02	0.011	47	2.0	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-76	< 0.1	930	0.18	< 0.8	< 0.1	< 6	1.0	410	< 0.02	0.014	33	2.2	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-61	< 0.1	1400	0.21	< 0.8	0.2	< 6	8.0	410	< 0.02	0.01	45	1.3	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-62	0.2	1200	0.36	< 0.8	0.3	< 6	4.0	460	< 0.02	0.016	55	2.3	71	-	-	-	-	-	40	3.4	16	29	3.4	0.05	0.02	0.1	0.01	0.24					
Per-3-63	0.5	1200	0.49	4.9	0.3	< 6	2.0	380	< 0.02	0.018	52	1.7	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-64	< 0.1	720	0.33	< 0.8	0.2	< 6	83	760	0.1	0.032	81	2.8	69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-65	< 0.1	1200	0.72	< 0.8	0.3	< 6	19	750	< 0.02	0.015	59	2.9	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-66	0.3	1400	0.25	< 0.8	0.3	< 6	2.0	420	< 0.02	0.014	45	1.7	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-67	0.2	1400	0.54	< 0.8	0.3	< 6	5.0	310	< 0.02	0.016	37	1.4	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-68	< 0.1	240	0.65	< 0.8	0.1	< 6	7.0	710	< 0.02	0.012	73	2.2	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-69	< 0.1	580	0.3	< 0.8	0.1	< 6	64	430	< 0.02	0.014	30	1.9	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-70	0.5	930	2.0	< 0.8	0.2	< 6	96	5400	0.1	0.47	130	12	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-71	0.7	850	4.0	< 0.8	0.3	< 6	250	6800	0.19	0.59	170	15	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-72	0.3	460	0.24	< 0.8	0.2	< 6	9.0	950	< 0.02	0.016	84	3.9	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-73	0.1	1500	0.31	< 0.8	0.2	< 6	5.0	370	< 0.02	0.012	38	1.7	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-74	0.2	1400	0.23	< 0.8	0.3	< 6	2.0	360	< 0.02	0.011	43	1.7	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-62-Dup	0.2	1200	0.8	< 0.8	0.3	< 6	4.0	400	< 0.02	0.013	51	2.2	66	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-64-Dup	< 0.1	710	0.6	< 0.8	0.2	< 6	76	630	0.09	0.015	77	2.5	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Per-3-72-Dup	0.2	480	0.61	< 0.8	0.2	< 6	9.0	870	< 0.02	0.017	96	3.7	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Pyx-1-53	< 0.1	1700	< 0.05	< 0.8	< 0.1	< 6	130	220	< 0.02	< 0.002	18	-	14	28	110	6680	2.6	0.07	-	-	-	-	-	-	-	-	-	-	-				
Pyx-1-13	< 0.1	280	0.09	< 0.8	0.4	< 6	44	1100	< 0.02	0.018	110	-	25	< 1	1700	< 3	0.14	0.05	-	-	-	-	-	-	-	-	-	-	-				
Pyx-1-41	0.3	270	0.14	1.3	0.6	< 6	5.0	900	< 0.02	0.037	130	-	27	4.2	1400	13700	2.6	0.12	-	-	-	-	-	-	-	-	-	-	-				
Pyx-1-42	< 0.1	260	< 0.05	< 0.8	< 0.1	< 6	16	1200	< 0.02	0.019	130	-	37	2.5	2600	16	1.1	0.06	-	-	-	-	-	-	-	-	-	-	-				
Pyx-1-43	0.2	280	< 0.05	< 0.8	0.4	< 6	19	830	< 0.02	0.019	110	-	35	6.5	1100	< 3	0.21	0.08	-	-	-	-	-	-	-	-	-	-	-				
Pyx-1-44	< 0.1	230	< 0.05	< 0.8	0.2	< 6	38	960	< 0.02	0.012	130	-	35	< 1	7000	49	0.15	0.06	-	-	-	-	-	-	-	-	-	-	-				
Pyx-1-45	0.3	250	2.4	1.0	0.5	< 6	18	860	< 0.02	0.018	120	-	44	24	1100	22100	0.44	0.16	-	-	-	-	-	-	-	-	-	-	-				
Pyx-1-47	0.6	1000	3.3	< 0.8	0.2	< 6	130	5400	0.15	0.42	140	-	81	11	4000	23300	3.0	0.31	-	-	-	-	-	-	-	-	-	-	-				
Pyx-1-50	< 0.1	270	0.24	< 0.8	< 0.1	< 6	41	480	< 0.02	0.017	42	-	29	< 1	82	6.7	< 0.01	0.1	-	-	-	-	-	-	-	-	-	-	-				
Pyx-2-228	0.2	1400	3.0	< 0.8	< 0.7	< 6	37	3800	< 0.02	0.26	100	8.7	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Pyx-2-229	< 0.1	390	0.16	< 0.8	< 0.7	< 6	14	1300	< 0.02	0.013	150	4.3	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Pyx-2-230	< 0.1	1100	0.98	< 0.8	< 0.7	< 6	81	650	0.06	0.027	69	2.3	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Pyx-2-231	0.2	280	0.2	< 0.8	< 0.7	< 6	13	1300	< 0.02	0.018	180	5.2	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Pyx-2-232	< 0.1	428	0.29	< 0.8	< 0.7	< 6	48	980	0.04	0.004	130	3.6	50	-	-	-	-	-	-	-	-	-	-	-	-	-							

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	SFE																						
	Cr ₂ O ₃	V ₂ O ₅	LOI	Sample weight	Volume D.I. Water	Final pH	pH	Conductivity	Alkalinity	Acidity	Bromide	Chloride	Sulphate	Fluoride	Chromium VI	Mercury	Silver	Aluminum	Aluminum (0.2µm)	Arsenic	Barium	Boron	Beryllium
	%	%	%	g	mL	no unit	No unit	uS/cm	mg/L as CaCO ₃	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Dun-1-1	-	-	-	250	750	9.9	9.7	600	85	< 2	3.8	190	< 2	< 0.06	0.0005	< 0.00001	< 0.00005	0.006	0.001	0.0005	0.02	0.72	< 0.000007
Dun-1-10	-	-	-	250	750	9.7	9.5	772	177	< 2	2.2	57	54	< 0.06	<0.0002	< 0.00001	< 0.00005	-	0.004	< 0.0002	0.0084	0.95	< 0.000007
Dun-1-2	-	-	-	250	750	10.0	9.5	424	64	< 2	2.9	120	< 2	< 0.06	0.0009	< 0.00001	< 0.00005	0.002	0.003	< 0.0002	0.012	0.17	< 0.000007
Dun-1-3	-	-	-	250	750	10	8.4	246	24	< 2	2.1	65	< 2	< 0.06	< 0.0002	< 0.00001	< 0.00005	0.002	0.005	< 0.0002	0.0039	0.072	< 0.000007
Dun-1-36	-	-	-	250	750	9.7	9.7	857	272	< 2	4.9	230	14	< 0.06	< 0.0002	< 0.00001	< 0.00005	0.001	0.002	< 0.0002	0.007	0.21	< 0.000007
Dun-1-4	-	-	-	250	750	10.0	9.9	478	205	< 2	2.2	67	< 2	< 0.06	0.001	0.00009	< 0.00005	-	0.014	< 0.0002	0.0079	0.44	< 0.000007
Dun-1-5	-	-	-	250	750	9.8	9.7	1030	203	< 2	7.4	330	3.0	< 0.06	0.0004	< 0.00001	< 0.00005	0.001	0.005	< 0.0002	0.01	0.17	< 0.000007
Dun-1-6	-	-	-	250	750	10	7.1	282	15	< 2	1.7	72	< 2	< 0.06	< 0.0002	< 0.00001	< 0.00005	0.013	0.016	0.0005	0.015	0.018	< 0.000007
Dun-1-7	-	-	-	250	750	10.0	9.7	225	78	< 2	1.0	26	3.5	< 0.06	0.0003	< 0.00001	< 0.00005	-	0.003	< 0.0002	0.01	0.21	< 0.000007
Dun-1-8	-	-	-	250	750	9.8	9.5	491	58	< 2	3.4	120	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	-	0.004	< 0.0002	0.017	0.19	< 0.000007
Dun-1-9	-	-	-	250	750	9.9	9.8	541	100	< 2	3.2	140	4.2	< 0.06	<0.0002	< 0.00001	< 0.00005	-	0.008	< 0.0002	0.032	0.25	< 0.000007
Dun-2-1	-	-	-	250	750	9.5	9.1	402	110	< 2	4.9	189	8.8	< 0.06	0.0003	< 0.00001	< 0.00005	0.004	0.004	0.0006	0.028	0.24	< 0.000007
Dun-2-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-11	-	-	-	251	750	9.9	9.1	157	71	< 2	< 3	5.7	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.03	0.005	< 0.0002	0.023	0.019	< 0.000007
Dun-2-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-14	-	-	-	252	750	9.7	8.2	628	35	< 2	3.6	184	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.016	0.007	< 0.0002	0.01	0.15	< 0.000007
Dun-2-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-16	-	-	-	250	750	9.8	9.2	215	68	< 2	< 3	28	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	< 0.001	0.003	< 0.0002	0.025	0.006	< 0.000007
Dun-2-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-18	-	-	-	250	750	10.0	9.7	369	216	< 2	< 3	7.1	4.1	< 0.06	0.0017	< 0.00001	< 0.00005	0.003	0.003	< 0.0002	0.0028	0.16	< 0.000007
Dun-2-2	-	-	-	250	750	9.6	9.5	535	363	< 2	< 3	3.1	20	< 0.06	0.0003	< 0.00001	< 0.00005	0.003	0.005	0.0002	0.11	0.032	< 0.000007
Dun-2-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-21	-	-	-	251	750	9.6	9.1	162	84	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.001	0.003	< 0.0002	0.03	0.008	< 0.000007
Dun-2-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-25	-	-	-	250	750	9.6	9.5	697	330	< 2	< 3	72	2.4	< 0.06	0.0008	< 0.00001	< 0.00005	0.002	0.004	< 0.0002	0.0043	0.058	< 0.000007
Dun-2-26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-27	-	-	-	250	750	9.7	9.7	547	284	< 2	< 3	49	4.1	< 0.06	0.0055	< 0.00001	< 0.00005	0.001	0.004	< 0.0002	0.0052	0.79	< 0.000007
Dun-2-28	-	-	-	250	750	9.6	9.5	349	68	< 2	< 3	73	< 2	< 0.06	0.0008	< 0.00001	< 0.00005	0.002	0.004	< 0.0002	0.014	0.57	< 0.000007
Dun-2-29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-30	1.1	< 0.01	13	250	750	9.7	9.7	1040	403	< 2	3.8	198	< 2	< 0.06	0.0018	< 0.00001	< 0.00005	< 0.001	0.003	< 0.0002	0.0068	0.43	< 0.000007
Dun-2-36	-	-	-	250	750	9.7	9.7	328	196	< 2	< 3	3.0	< 2	< 0.06	0.0006	< 0.00001	< 0.00005	0.001	0.003	< 0.0002	0.0077	0.076	< 0.000007
Dun-2-37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-38	-	-	-	250	750	9.8	9.5	440	65	< 2	< 3	98	< 2	< 0.06	0.0002	< 0.00001	< 0.00005	0.002	0.006	< 0.0002	0.0084	1.7	< 0.000007
Dun-2-39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-4	-	-	-	249	750	9.8	7.3	321	14	< 2	< 3	113	< 2	< 0.06	<0.0002	< 0.0000							

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	SFE																					SFE			
	Cr ₂ O ₃	V ₂ O ₅	LOI	Sample weight	Volume D.I. Water	Final pH	pH	Conductivity	Alkalinity	Acidity	Bromide	Chloride	Sulphate	Fluoride	Chromium VI	Mercury	Silver	Aluminum	Aluminum (0.2µm)	Arsenic	Barium	Boron	Beryllium		
	%	%	%	g	mL	no unit	No unit	uS/cm	mg/L as CaCO ₃	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		
Dun-3-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dun-3-10	-	-	-	249	750	-	9.4	56	16	< 2	< 3	4.1	< 2	< 0.06	-	< 0.00001	< 0.00005	0.24	-	0.0014	0.0014	0.031	< 0.000007		
Dun-3-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dun-3-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dun-3-3	-	-	-	250	750	-	9.6	252	162	< 2	< 3	3.0	4.5	< 0.06	-	< 0.00001	< 0.00005	0.002	-	< 0.0002	0.0096	0.014	< 0.000007		
Dun-3-4	0.61	< 0.01	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dun-3-5	-	-	-	249	750	-	9.5	197	104	< 2	< 3	10	< 2	< 0.06	-	< 0.00001	< 0.00005	0.002	-	< 0.0002	0.0061	0.014	< 0.000007		
Dun-3-7	-	-	-	249	750	-	9.7	339	153	< 2	< 3	< 2	< 2	< 0.06	-	< 0.00001	< 0.00005	0.001	-	< 0.0002	0.0046	0.26	< 0.000007		
Dun-3-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dun-3-9	-	-	-	251	750	-	8.3	247	43	< 2	< 3	48	< 2	0.1	-	< 0.00001	< 0.00005	0.002	-	0.0008	0.018	0.82	< 0.000007		
Dun-3-3-Dup	-	-	-	250	750	9.8	9.6	349	192	< 2	< 3	3.8	4.9	< 0.06	0.3	< 0.00001	< 0.00005	0.004	< 0.001	< 0.0002	0.0067	0.011	< 0.000007		
Dun-3-9-Dup	-	-	-	250	750	8.9	7.9	294	33	< 2	< 3	73	< 2	0.11	< 0.2	< 0.00001	< 0.00005	0.002	< 0.001	< 0.0002	0.017	0.76	< 0.000007		
Gab-1-11	-	-	-	250	750	10	9.9	78	32	< 2	< 0.3	3.0	< 2	< 0.06	0.0007	< 0.00001	< 0.00005	0.16	0.17	0.0006	0.00081	0.069	< 0.000007		
Gab-1-12	-	-	-	250	750	10	10.0	78	37	< 2	< 0.3	< 1	< 2	< 0.06	0.002	< 0.00001	< 0.00005	0.2	0.2	0.0004	0.00084	0.023	< 0.000007		
Gab-1-14	-	-	-	250	750	10	9.5	71	33	< 2	< 0.3	< 2	< 2	< 0.06	0.0017	< 0.00001	< 0.00005	-	0.083	0.0013	0.0011	0.039	< 0.000007		
Gab-1-15	-	-	-	250	750	10	9.7	80	39	< 2	< 0.3	2.0	< 2	< 0.06	0.0019	< 0.00001	< 0.00005	0.14	0.16	0.0004	0.0014	0.023	< 0.000007		
Gab-1-16	-	-	-	250	750	9.6	8.9	78	31	< 2	< 0.3	4.7	< 2	< 0.06	0.0004	< 0.00001	< 0.00005	-	0.06	0.0021	0.0026	0.053	< 0.000007		
Gab-1-17	-	-	-	250	750	10	9.6	69	30	< 2	< 0.3	2.2	< 2	< 0.06	0.0013	< 0.00001	< 0.00005	-	0.16	0.0053	0.00071	0.048	< 0.000007		
Gab-1-18	-	-	-	250	750	10	9.8	159	58	< 2	< 0.3	3.0	4.0	0.22	0.0005	< 0.00001	< 0.00005	0.021	0.028	0.0027	0.0051	0.071	< 0.000007		
Gab-1-19	-	-	-	250	750	9.7	9.3	75	34	< 2	< 0.3	2.2	< 2	< 0.06	< 0.0002	< 0.00001	< 0.00005	-	0.053	0.0003	0.0045	0.067	< 0.000007		
Gab-1-20	-	-	-	250	750	10	9.6	78	38	< 2	< 0.3	< 2	< 2	< 0.06	0.0014	< 0.00001	< 0.00005	-	0.18	0.0013	0.0018	0.025	< 0.000007		
Gab-2-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gab-2-101	-	-	-	250	750	9.7	9.0	64	28	< 2	< 3	< 2	5.0	< 0.06	0.0003	< 0.00001	< 0.00005	0.052	0.043	< 0.0002	0.0026	0.027	< 0.000007		
Gab-2-102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gab-2-103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gab-2-104	-	-	-	250	750	9.7	8.9	46	22	< 2	< 3	< 2	< 2	< 0.06	0.0005	< 0.00001	< 0.00005	0.17	0.15	0.0004	0.00097	0.027	< 0.000007		
Gab-2-105	-	-	-	250	750	9.9	8.7	48	25	< 2	< 3	< 2	< 2	< 0.06	0.0003	< 0.00001	< 0.00005	0.16	0.15	0.0011	0.0015	0.016	< 0.000007		
Gab-2-106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gab-2-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gab-2-108	0.07	0.02	2.9	250	750	10	9.3	62	31	< 2	< 3	< 2	< 2	< 0.06	0.0006	< 0.00001	< 0.00005	0.26	0.24	0.0003	0.00047	0.051	< 0.000007		
Gab-2-236	-	-	-	250	750	9.9	8.2	58	27	< 2	< 3	2.8	< 2	< 0.06	0.003	< 0.00001	< 0.00005	0.28	0.3	0.0003	0.0023	0.051	< 0.000007		
Gab-2-55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gab-2-56	-	-	-	250	750	9.7	8.4	50	26	< 2	< 3	< 2	< 2	< 0.06	< 0.0002	< 0.00001	< 0.00005	0.13	0.12	0.0009	0.00081	0.01	< 0.000007		
Gab-2-57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gab-2-58	-	-	-	250	750	9.7	8.8	56	27	< 2	< 3	6.8	< 2	< 0.06	0.0002	< 0.00001	< 0.00005	0.12	0.11	0.0008	0.0023	0.015	< 0.000007		
Gab-2-59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gab-2-60	-	-	-	250	750	9.9	8.9	62	22	< 2	< 3	4.6	< 2	< 0.06	< 0.0002	< 0.00001	< 0.00005	0.35	0.34	0.0009	0.048	0.01	< 0.000007		
Gab-2-61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Gab-2-62	0.1	0.02	2.6	250	750	10.0	8.4	52	25	< 2	< 3	< 2	< 2	< 0.06	0.0005	< 0.00001	< 0.00005	0							

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	SFE																						
	Cr ₂ O ₃	V ₂ O ₅	LOI	Sample weight	Volume D.I. Water	Final pH	pH	Conductivity	Alkalinity	Acidity	Bromide	Chloride	Sulphate	Fluoride	Chromium VI	Mercury	Silver	Aluminum	Aluminum (0.2µm)	Arsenic	Barium	Boron	Beryllium
	%	%	%	g	mL	no unit	No unit	uS/cm	mg/L as CaCO ₃	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Gab-2-94	-	-	-	250	750	9.7	7.6	45	23	< 2	< 3	< 2	< 2	< 0.06	0.0003	< 0.00001	< 0.00005	0.2	0.18	0.001	0.0013	0.007	< 0.000007
Gab-2-95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-96	-	-	-	250	750	9.6	7.5	41	24	< 2	< 3	< 2	< 2	< 0.06	0.0005	< 0.00001	< 0.00005	0.14	0.13	0.0004	0.0011	0.009	< 0.000007
Gab-2-97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-98	-	-	-	250	750	9.7	9.2	47	24	< 2	< 3	< 2	< 2	< 0.06	0.0004	< 0.00001	< 0.00005	0.34	0.32	0.0011	0.0007	0.017	< 0.000007
Gab-2-99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-22	-	-	-	250	750	-	9.8	80	33	< 2	< 3	< 2	< 2	< 0.06	-	< 0.00001	< 0.00005	0.17	-	0.0006	0.0015	0.073	< 0.000007
Gab-3-23	-	-	-	251	750	-	9.5	64	25	< 2	< 3	< 2	< 2	< 0.06	-	< 0.00001	< 0.00005	0.27	-	0.0012	0.0017	0.035	< 0.000007
Gab-3-28	-	-	-	251	750	-	9.4	44	17	< 2	< 3	< 2	< 2	< 0.06	-	< 0.00001	< 0.00005	0.25	-	0.0003	0.00083	0.032	< 0.000007
Gab-3-28-Dup	-	-	-	250	750	10	9.7	80	35	< 2	< 3	< 2	< 2	< 0.06	0.8	< 0.00001	< 0.00005	0.17	0.15	0.001	0.0014	0.066	< 0.000007
Gab-3-13	-	-	-	249	750	-	9.4	46	22	< 2	< 3	< 2	< 2	< 0.06	-	< 0.00001	< 0.00005	0.14	-	0.0004	0.00062	0.029	< 0.000007
Gab-3-14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-15	0.08	0.03	2.5	251	750	-	9.5	68	31	< 2	< 3	< 2	3.6	< 0.06	-	< 0.00001	< 0.00005	0.087	-	0.0005	0.00085	0.03	< 0.000007
Gab-3-16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-17	-	-	-	249	750	-	9.6	65	32	< 2	< 3	< 2	< 2	0.06	-	< 0.00001	< 0.00005	0.11	-	0.0017	0.0008	0.036	< 0.000007
Gab-3-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-19	-	-	-	250	750	-	9.7	75	34	< 2	< 3	2.2	< 2	< 0.06	-	< 0.00001	< 0.00005	0.42	-	< 0.0002	0.00084	0.057	< 0.000007
Gab-3-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-21	0.09	0.02	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-33	-	-	-	251	750	-	7.9	365	32	< 2	< 3	89	< 2	< 0.06	-	< 0.00001	< 0.00005	0.003	-	0.0018	0.036	0.77	< 0.000007
Gab-3-21-Dup	-	-	-	250	750	9.9	9.5	103	43	< 2	< 3	< 2	< 2	0.12	0.9	< 0.00001	< 0.00005	0.084	0.03	0.0023	0.0014	0.12	< 0.000007
Gab-3-13-Dup	-	-	-	250	750	10	9.4	60	24	< 2	< 3	< 2	< 2	< 0.06	2.8	< 0.00001	< 0.00005	0.084	0.057	0.0006	0.00082	0.045	0.001
Gab-3-32-Dup	-	-	-	250	750	10	9.8	72	32	< 2	< 3	< 2	< 2	< 0.06	1.2	< 0.00001	< 0.00005	0.2	0.15	0.0007	0.00098	0.068	< 0.000007
IMV-1-21	-	-	-	250	750	9.4	9.0	134	46	< 2	< 0.3	18	< 2	0.12	< 0.0002	< 0.00001	< 0.00005	0.87	1.0	0.0002	0.00073	0.056	< 0.000007
IMV-1-23	-	-	-	250	750	9.5	8.7	72	35	< 2	< 0.3	< 2	< 2	0.08	< 0.0002	0.00001	< 0.00005	-	0.15	0.0012	0.0015	0.037	< 0.000007
IMV-1-30	-	-	-	250	750	9.0	8.5	141	67	< 2	< 0.3	2.0	< 2	< 0.06	< 0.0002	< 0.00001	< 0.00005	0.079	0.089	0.0032	0.0034	0.035	< 0.000007
MaMv-1-22	-	-	-	250	750	9.0	8.5	128	59	< 2	< 0.3	6.0	3.0	< 0.06	< 0.0002	< 0.00001	< 0.00005	0.23	0.27	< 0.0002	0.0014	0.014	< 0.000007
MaMv-1-24	-	-	-	250	750	9.6	8.8	99	39	< 2	< 0.3	< 2	3.4	< 0.06	< 0.0002	< 0.00001	< 0.00005	-	0.15	0.0019	0.0064	0.037	< 0.000007
MaMv-1-25	-	-	-	250	750	9.6	9.0	74	36	< 2	< 0.3	< 2	< 2	< 0.06	< 0.0002	< 0.00001	< 0.00005	-	1.1	0.082	0.0009	0.033	< 0.000007
MaMv-1-26	-	-	-	250	750	9.4	8.6	132	56	< 2	< 0.3	2.1	< 2	0.07	< 0.0002	< 0.00001	< 0.00005	-	0.48	0.04	0.0034	0.027	< 0.000007
MaMv-1-27	-	-	-	250	750	9.6	9.2	96	39	< 2	< 0.3	< 2	< 2	< 0.06	< 0.0002	0.00001	< 0.00005	-	1.6	0.0008	0.00086	0.033	< 0.000007
MaMv-1-28	-	-	-	250	750	9.4	8.1	95	46	< 2	< 0.3	< 2	< 2										

Waste Rock & Ore Sample ID	SFE																						
	Cr ₂ O ₃	V ₂ O ₅	LOI	Sample weight	Volume D.I. Water	Final pH	pH	Conductivity	Alkalinity	Acidity	Bromide	Chloride	Sulphate	Fluoride	Chromium VI	Mercury	Silver	Aluminum	Aluminum (0.2µm)	Arsenic	Barium	Boron	Beryllium
	%	%	%	g	mL	no unit	No unit	uS/cm	mg/L as CaCO ₃	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
IMV-2-181	-	-	-	250	750	9.8	8.7	45	24	< 2	< 3	< 2	< 2	< 0.06	0.0003	< 0.00001	< 0.00005	0.7	0.72	0.0077	0.0012	0.005	< 0.000007
IMV-2-182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-183	-	-	-	250	750	9.6	8.0	81	43	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.45	0.35	0.015	0.00065	0.021	< 0.000007
IMV-2-184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-185	-	-	-	250	750	9.6	8.1	54	27	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.56	0.57	0.0005	0.00084	0.01	< 0.000007
IMV-2-186	-	-	-	250	750	10	8.3	92	48	< 2	< 3	< 2	< 2	< 0.06	0.0003	< 0.00001	< 0.00005	1.6	1.6	0.0012	0.0014	0.031	< 0.000007
MaMv-2-110	-	-	-	250	750	9.4	7.7	59	26	< 2	< 3	< 2	< 2	< 0.06	0.0003	< 0.00001	< 0.00005	0.28	0.27	0.0057	0.0058	0.022	< 0.000007
MaMv-2-111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-112	-	-	-	250	750	9.4	8.3	59	33	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.84	0.8	0.0002	0.0013	0.015	< 0.000007
MaMv-2-113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-114	-	-	-	250	750	9.6	8.5	56	31	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	2.1	2.0	< 0.0002	0.00028	0.023	< 0.000007
MaMv-2-115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-116	-	-	-	250	750	8.4	8.0	242	60	< 2	< 3	< 2	60	0.06	<0.0002	< 0.00001	< 0.00005	0.23	0.21	< 0.0002	0.0035	0.027	0.000008
MaMv-2-117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-118	-	-	-	250	750	9.2	8.3	86	46	< 2	< 3	< 2	< 2	0.1	<0.0002	< 0.00001	< 0.00005	1.3	1.2	< 0.0002	0.0022	0.014	0.000008
MaMv-2-119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-120	-	-	-	251	750	9.6	8.3	56	30	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	1.3	1.2	0.0008	0.0016	0.019	0.000012
MaMv-2-121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-122	-	-	-	250	750	9.5	8.5	65	36	< 2	< 3	< 2	< 2	0.07	<0.0002	< 0.00001	< 0.00005	1.5	1.3	0.0019	0.00076	0.019	< 0.000007
MaMv-2-123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-124	-	-	-	250	750	9.2	8.2	58	34	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.87	0.87	0.0008	0.0011	0.012	< 0.000007
MaMv-2-125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-126	-	-	-	250	750	9.4	8.2	60	35	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.73	0.25	0.0007	0.0014	0.02	0.000012
MaMv-2-127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-128	-	-	-	250	750	8.9	8.2	105	65	< 2	< 3	< 2	< 2	0.11	<0.0002	< 0.00001	< 0.00005	0.61	0.61	< 0.0002	0.0031	0.004	< 0.000007
MaMv-2-129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-130	0.01	0.03	9.0	250	750	9.1	8.1	86	47	< 2	< 3	< 2	< 2	0.1	<0.0002	< 0.00001	< 0.00005	0.52	0.52	0.0003	0.0013	0.006	< 0.000007
MaMv-2-131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-134	-	-	-	250	750	9.5	8.3	53	29	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	1.3	1.3	0.0008	0.0013	0.01	< 0.000007
MaMv-2-135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-136	-	-	-	250	750	9.4	8.2	76	32	< 2	< 3	3.1	4.5	< 0.06	<0.0002	< 0.00001	< 0.00005	0.54	0.5	0.079	0.0041	0.013	< 0.000007
MaMv-2-137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-138	0.02	< 0.01	2.7	250	750	9.7	9.0	56	30	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.91	0.9	0.019	0.0014	0.012	< 0.000007
MaMv-2-139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-140	-	-	-	250	750	9.6	8.1	72	39	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.75	0.54	0.0003	0.00022	0.013	< 0.000007
MaMv-2-141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-142	-	-	-	250	750	9.2	8.3	100	51	< 2	< 3	2.6	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.74	0.75	< 0.0002	0.00048	0.015	< 0.000007
MaMv-2-143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-146	-	-	-	250	750	9.6	8.3	66	34	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	2.1	1.4	0.0005	0.002	0.018	< 0.000007
MaMv-2-147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-148	-	-	-	250	750	9.7	8.3	57	30	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	1.4	1.4	0.0006	0.0011	0.01	< 0.000007
MaMv-2-150	-	-	-	250	750	9.5	8.3	58	33	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	1.2	0.96	< 0.0002	0.0004	0.014	< 0.000007
MaMv-2-151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-152	-	-	-	250	750	9.6	8.8	58	31	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.74	0.79	0.016	0.00097	0.017	< 0.000007
MaMv-2-153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-154	-	-	-	250	750	9.8	8.5	43	24	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	1.0	0.88	0.0027	0.00059	0.007	< 0.000007
MaMv-2-159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-170	-	-	-	250	750	9.8	7.9	40	28	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.84	0.81	0.015	0.0014	0.005	< 0.000007
MaMv-2-171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-172	-	-	-	250	750	9.6	8.2	73	37	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.71	0.7	0.0078	0.00084	0.017	0.000009
MaMv-2-174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-187	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-92	-	-	-	250	750	9.8	8.1	48	25	< 2	< 3	< 2	< 2	< 0.06	<0.0002	< 0.00001	< 0.00005	0.8	0.77	0.0002	0.00085	0.029	< 0.000007
IMV-2-247	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-41	-	-	-	250	750	-	8.8	99	34	< 2	< 3	2.4	9.8	< 0.06	-	< 0.00001	< 0.00005	0.03	-	< 0.0002	0.054	0.018	< 0.000007
MaMv-3-53	-	-	-	250	750	-	8.5	163	25	< 2	< 3	< 2	49	< 0.06	-	< 0.00001	< 0.00005	0.01	-	0.032	0.013	0.022	< 0.000007
MaMv-3-57	-	-	-	249	750	-	8.6	151	59	< 2	< 3	4.7	6.0	< 0.06	-	< 0.00001	< 0.00005	0.032	-	0.6	0.023	0.015	< 0.000007
MaMv-3-35	0.19	0.03	3.0	249	750	-	9.6	93	41	< 2	< 3	< 2	< 2	0.12	-	< 0.00001	< 0.00005	0.071	-	0.0024	0.0026	0.051	< 0.000007
MaMv-3-36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-37	-	-	-	250	750	-	8.8	53	29	< 2	< 3	< 2	< 2	< 0.06	-	< 0.00001	< 0.00005	0.32	-	0.0054	0.00098	0.006	< 0.000007
MaMv-3-38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-39	-	-	-	250	750	-	8.6	102	49	< 2	< 3	< 2	3.5	< 0.06	-	< 0.00001	< 0.00005	0.082	-	0.0003	0.019	0.023	< 0.000007
MaMv-3-40	-	-	-	-	-	-	-	-	-	-	-	-	-	-									

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	SFE			SFE																			
	Cr ₂ O ₃	V ₂ O ₅	LOI	Sample weight	Volume D.I. Water	Final pH	pH	Conductivity	Alkalinity	Acidity	Bromide	Chloride	Sulphate	Fluoride	Chromium VI	Mercury	Silver	Aluminum	Aluminum (0.2µm)	Arsenic	Barium	Boron	Beryllium
	%	%	%	g	mL	no unit	No unit	uS/cm	mg/L as CaCO ₃	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MaMv-3-46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-48	-	-	-	250	750	-	8.8	78	41	< 2	< 3	< 2	< 2	0.14	-	< 0.00001	< 0.00005	0.32	-	0.0054	0.0016	0.014	< 0.000007
MaMv-3-49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-52	-	-	-	250	750	-	9.0	45	26	< 2	< 3	< 2	< 2	< 0.06	-	< 0.00001	< 0.00005	1.2	-	0.0008	0.0015	0.007	0.000015
MaMv-3-54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-56	-	-	-	249	750	-	8.6	94	36	< 2	< 3	3.4	< 2	< 0.06	-	< 0.00001	< 0.00005	0.59	-	0.042	0.0025	0.021	< 0.000007
MaMv-3-58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-35-Dup	-	-	-	250	750	10	9.6	163	59	< 2	< 3	2.4	3.8	0.3	0.8	< 0.00001	< 0.00005	0.11	0.03	0.0053	0.0016	0.16	< 0.000007
MaMv-3-39-Dup	-	-	-	250	750	9.3	8.3	138	55	< 2	< 3	2.8	3.2	< 0.06	< 0.2	< 0.00001	< 0.00005	0.098	0.068	< 0.0002	0.022	0.041	< 0.000007
Per-1-31	-	-	-	250	750	9.5	9.2	154	69	< 2	< 0.3	2.1	< 2	< 0.06	0.0007	0.00001	< 0.00005	-	0.016	0.0019	0.018	0.17	< 0.000007
Per-1-33	-	-	-	250	750	9.9	9.7	379	82	< 2	2.7	95	4.0	< 0.06	0.0002	< 0.00001	< 0.00005	0.001	0.002	< 0.0002	0.0059	0.43	< 0.000007
Per-1-38	-	-	-	250	750	9.8	8.6	187	17	< 2	1.4	48	< 2	< 0.06	< 0.0002	< 0.00001	< 0.00005	< 0.001	0.001	< 0.0002	0.0097	0.2	< 0.000007
Per-1-39	-	-	-	250	750	9.7	8.8	148	28	< 2	0.9	32	< 2	< 0.06	0.0002	< 0.00001	< 0.00005	-	0.004	< 0.0002	0.013	0.086	< 0.000007
Per-1-40	-	-	-	250	750	9.8	9.5	89	34	< 2	< 0.3	5.0	< 2	< 0.06	0.001	< 0.00001	< 0.00005	< 0.001	0.003	< 0.0002	0.0065	0.07	< 0.000007
Per-1-46	-	-	-	250	750	9.5	8.7	259	31	< 2	1.7	53	< 2	< 0.06	0.0005	< 0.00001	< 0.00005	-	0.008	0.0003	0.015	0.21	< 0.000007
Per-1-48	-	-	-	250	750	9.9	9.4	66	30	< 2	< 0.3	< 2	< 2	< 0.06	0.0004	0.00001	< 0.00005	-	0.015	0.0005	0.095	0.14	< 0.000007
Per-1-49	-	-	-	250	750	9.8	9.3	63	30	< 2	< 0.3	< 2	< 2	< 0.06	0.0006	< 0.00001	< 0.00005	-	0.006	0.0005	0.01	0.056	< 0.000007
Per-1-54	-	-	-	250	750	10	9.6	145	61	< 2	0.4	14	3.0	< 0.06	0.0003	< 0.00001	< 0.00005	< 0.001	0.004	0.0005	0.022	0.054	< 0.000007
TaU-1-34	-	-	-	0.002	750	9.4	9.1	173	82	< 2	< 0.3	< 2	5.4	< 0.06	0.0003	< 0.00001	< 0.00005	-	0.006	0.028	0.016	0.027	< 0.000007
TaU-1-35	-	-	-	250	750	9.6	9.2	148	73	< 2	< 0.3	< 1	3.0	< 0.06	0.0003	< 0.00001	< 0.00005	< 0.001	0.003	0.0007	0.021	0.008	< 0.000007
TaU-1-37	-	-	-	250	750	9.5	9.2	133	60	< 2	< 0.3	< 2	3.6	< 0.06	< 0.0002	0.00001	< 0.00005	-	0.005	0.0012	0.01	0.073	< 0.000007
TaU-1-52	-	-	-	250	750	9.2	8.8	240	65	< 2	< 0.3	31	39	< 0.06	0.0002	< 0.00001	< 0.00005	0.005	0.004	0.001	0.013	0.019	< 0.000007
Per-1-32	-	-	-	250	750	9.9	9.6	64	28	< 2	< 0.3	2.0	2.0	< 0.06	0.0004	< 0.00001	< 0.00005	0.005	0.006	< 0.0002	0.0043	0.041	< 0.000007
Per-1-51	-	-	-	250	750	9.7	9.2	103	33	< 2	< 0.3	4.1	5.9	< 0.06	0.0003	< 0.00001	< 0.00005	-	0.003	0.0012	0.0052	0.16	< 0.000007
Per-1-55	-	-	-	250	750	9.5	9.0	103	50	< 2	< 0.3	< 2	< 2	< 0.06	0.0003	< 0.00001	< 0.00005	-	0.009	0.0006	0.0054	0.035	< 0.000007
Per-2-189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-19	-	-	-	250	750	9.5	8.4	68	31	< 2	< 3	< 2	2.2	< 0.06	0.0004	< 0.00001	< 0.00005	0.003	0.004	0.016	0.0075	0.011	< 0.000007
Per-2-190	-	-	-	250	750	9.1	7.1	443	14	< 2	< 3	153	< 2	< 0.06	< 0.0002	< 0.00001	< 0.00005	0.003	0.003	0.0006	0.21	0.22	0.000023
Per-2-200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-205	-	-	-	250	750	9.3	8.5	113	54	< 2	< 3	< 2	< 2	< 0.06	0.0008	< 0.00001	< 0.00005	0.001	0.001	0.0012	0.012	0.1	< 0.000007
Per-2-207	-	-	-	250	750	9.0	8.1	535	72	< 2	3.2	174	< 2	< 0.06	0.0004	< 0.00001	< 0.00005	0.003	0.004	0.001	0.068	0.43	< 0.000007
Per-2-209	-	-	-	250	750	9.7	8.5	70	36	< 2	< 3	< 2	< 2	< 0.06	0.0017	< 0.000							

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	SFE																						
	Cr ₂ O ₃	V ₂ O ₅	LOI	Sample weight	Volume D.I. Water	Final pH	pH	Conductivity	Alkalinity	Acidity	Bromide	Chloride	Sulphate	Fluoride	Chromium VI	Mercury	Silver	Aluminum	Aluminum (0.2µm)	Arsenic	Barium	Boron	Beryllium
	%	%	%	g	mL	no unit	No unit	uS/cm	mg/L as CaCO ₃	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Per-2-223	-	-	-	250	750	9.7	9.2	62	27	< 2	< 3	< 2	< 2	< 0.06	0.0005	< 0.00001	< 0.00005	0.003	0.007	< 0.0002	0.0014	0.039	< 0.000007
Per-2-224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-227	-	-	-	250	750	10	9.1	70	28	< 2	< 3	< 2	< 2	< 0.06	0.0009	< 0.00001	< 0.00005	0.005	0.004	0.0009	0.069	0.052	< 0.000007
Per-2-248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-61	-	-	-	249	750	-	8.9	64	30	< 2	< 3	< 2	2.1	< 0.06	-	< 0.00001	< 0.00005	0.005	-	0.0004	0.0021	0.027	< 0.000007
Per-3-62	0.55	0.02	8.1	249	750	-	9.1	56	24	< 2	< 3	< 2	< 2	< 0.06	-	< 0.00001	< 0.00005	0.009	-	0.0009	0.005	0.045	< 0.000007
Per-3-63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-64	-	-	-	250	750	-	9.3	81	33	< 2	< 3	< 2	< 2	0.07	-	< 0.00001	< 0.00005	0.089	-	0.0004	0.0025	0.094	< 0.000007
Per-3-65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-66	-	-	-	249	750	-	9.5	50	22	< 2	< 3	< 2	< 2	< 0.06	-	< 0.00001	< 0.00005	0.01	-	0.0003	0.0013	0.032	< 0.000007
Per-3-67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-70	-	-	-	250	750	-	9.4	155	74	< 2	< 3	< 2	2.0	0.3	-	< 0.00001	< 0.00005	0.26	-	0.0036	0.002	0.83	< 0.000007
Per-3-71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-72	-	-	-	250	750	-	9.6	77	32	< 2	< 3	< 2	< 2	0.07	-	< 0.00001	< 0.00005	0.061	-	0.0005	0.0011	0.058	< 0.000007
Per-3-73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-62-Dup	-	-	-	251	750	9.8	8.9	73	27	< 2	< 3	< 2	2.6	< 0.06	0.5	< 0.00001	< 0.00005	0.011	0.004	0.0003	0.0046	0.049	< 0.000007
Per-3-64-Dup	-	-	-	250	750	9.8	9.5	106	42	< 2	< 3	< 2	< 2	0.11	0.7	< 0.00001	< 0.00005	0.051	0.023	0.0005	0.0022	0.092	0.012
Per-3-72-Dup	-	-	-	250	750	9.9	9.5	76	34	< 2	< 3	< 2	< 2	0.11	0.8	< 0.00001	< 0.00005	0.039	0.033	0.0004	0.00058	0.069	< 0.000007
Pyx-1-53	-	-	-	250	750	9.7	9.0	222	47	< 2	1.0	41	< 2	< 0.06	0.0005	< 0.00001	< 0.00005	-	0.002	0.0003	0.029	0.06	< 0.000007
Pyx-1-13	-	-	-	250	750	10	9.8	84	46	< 2	< 0.3	2.0	< 2	< 0.06	0.0071	< 0.00001	< 0.00005	0.018	0.012	0.0004	0.0014	0.012	< 0.000007
Pyx-1-41	-	-	-	250	750	10	9.7	86	42	< 2	< 0.3	1.9	0.8	< 0.06	0.0059	< 0.00001	< 0.00005	-	0.014	0.0008	0.0038	0.073	< 0.000007
Pyx-1-42	-	-	-	250	750	10	9.8	73	35	< 2	< 0.3	2.0	< 2	< 0.06	0.0032	< 0.00001	< 0.00005	0.025	0.018	0.0006	0.0023	0.022	< 0.000007
Pyx-1-43	-	-	-	250	750	10	9.9	82	35	< 2	< 0.3	4.0	< 2	< 0.06	0.0042	< 0.00001	< 0.00005	0.016	0.017	0.0004	0.0037	0.07	< 0.000007
Pyx-1-44	-	-	-	250	750	10	9.8	87	34	< 2	< 0.3	6.0	< 2	< 0.06	0.0018	< 0.00001	< 0.00005	0.031	0.032	0.0004	0.0026	0.07	< 0.000007
Pyx-1-45	-	-	-	250	750	9.8	9.3	72	26	< 2	< 0.3	< 2	3.1	< 0.06	0.0012	< 0.00001	< 0.00005	-	0.007	0.0005	0.0023	0.063	< 0.000007
Pyx-1-47	-	-	-	250	750	10	9.3	141	54	< 2	< 0.3	3.7	6.3	0.28	0.0007	< 0.00001	< 0.00005	-	0.069	0.0042	0.0017	0.26	< 0.000007
Pyx-1-50	-	-	-	250	750	9.5	8.9	102	56	< 2	< 0.3	2.0	< 2	< 0.06	< 0.0002	< 0.00001	< 0.00005	0.005	0.006	0.0004	0.0024	0.028	< 0.000007
Pyx-2-228	-	-	-	251	750	8.9	7.8	280	43	< 2	< 3	64	< 2	< 0.06	0.0003	< 0.00001	< 0.00005	0.003	0.008	0.0012	0.023	0.27	0.000075
Pyx-2-229	-	-	-	250	750	9.6	8.4	55	26	< 2	< 3	< 2	< 2	< 0.06	0.0008	< 0.00001	< 0.00005	0.021	0.02	0.0019	0.0053	0.025	0.000024
Pyx-2-230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-231	-	-	-	250	750	10	9.6	61	27	< 2	< 3	< 2	< 2	< 0.06	0.0041	< 0.00001	< 0.00005	0.03	0.041	0.0004	0.0025	0.023	< 0.000007
Pyx-2-232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-233	-	-	-	251	750	9.5	7.7	67	28	< 2	< 3	< 2	< 2	< 0.06	0.0007	< 0.00001	< 0.00005	0.007	0.007	0.0002	0.012	0.031	< 0.000007
Pyx-2-234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-235	-	-	-	250	750	10	9.8	88	37	< 2	< 3	2.6	2.3	< 0.06	0.01	< 0.00001	< 0.00005	0.031	0.026	0.0002	0.0028	0.044	< 0.000007
Pyx-2-237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-238	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-239	-	-	-	250	750	9.7	8.9	76	32	< 2	< 3	< 2	< 2	< 0.06	0.0003	< 0.00001	< 0.00005	0.02	0.018	0.0003	0.0045	0.24	< 0.000007
Pyx-2-240	-	-	-	250	750	9.8	9.3	68	33	< 2	< 3	< 2	< 2	< 0.06	0.0069	< 0.00001	< 0.00005	0.02	0.014	0.0008	0.0023	0.014	< 0.000007
Pyx-2-241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-251	-	-	-	250	750	9.7	8.9	50	25	< 2	< 3	< 2	< 2	< 0.06	0.0003	< 0.00001	< 0.00005	0.032	0.038	< 0.0002	0.0011	0.027	< 0.000007
Pyx-3-84	-	-	-	250	750	-	9.4	57	25	< 2	< 3	< 2	< 2	< 0.06	-	< 0.00001	< 0.00005	0.007	-	< 0.0002	0.0048	0.045	< 0.000007
Pyx-3-84-Dup	-	-	-	251	750	9.6	9.0	64	28	< 2	< 3	2.2	< 2	< 0.06	1.0	< 0.00001	< 0.00005	0.005	0.003	< 0.0002	0.0045	0.059	< 0.000007
Pyx-3-77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-78	0.52	0.03	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-80	0.55	0.03	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-87	-	-	-	250	750	-	9.7	80	32	< 2	< 3	< 2	< 2	0.07	-	< 0.00001	< 0.00005	0.046	-	0.0004	0.0017	0.069	< 0.000007
Pyx-3-88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-87-Dup	-	-	-	250	750	10.0	9.8	90	39	< 2	< 3	< 2	< 2	0.1	0.6	< 0.00001	< 0.00005	0.036	0.046	0.0005	0.0013	0.072	< 0.000007

Waste Rock & Ore Sample ID	SFE																											
	Bismuth mg/L	Calcium mg/L	Cadmium mg/L	Cobalt mg/L	Chromium mg/L	Copper mg/L	Iron mg/L	Potassium mg/L	Lithium mg/L	Magnesium mg/L	Manganese mg/L	Molybdenum mg/L	Sodium mg/L	Nickel mg/L	Lead mg/L	Silicon mg/L	Antimony mg/L	Selenium mg/L	Tin mg/L	Strontium mg/L	Titanium mg/L	Thorium mg/L	Thallium mg/L	Uranium mg/L	Vanadium mg/L	Tungsten mg/L		
Dun-1-1	< 0.00001	4.2	< 0.000003	0.000055	0.00072	0.0004	< 0.007	0.39	0.0001	75	0.00027	0.00099	0.36	0.0007	< 0.00009	0.09	< 0.0009	< 0.00004	< 0.00006	0.013	< 0.00005	< 0.0001	< 0.000005	0.000015	0.00021	0.00006	0.00006	
Dun-1-10	< 0.00001	1.6	< 0.000003	0.000066	0.00016	0.0004	< 0.007	0.54	0.0001	134	0.00069	0.0011	0.54	0.0006	< 0.00009	0.15	< 0.0009	0.00024	< 0.00006	0.0063	< 0.00005	< 0.0001	< 0.000005	0.000017	0.00006	0.00012		
Dun-1-2	< 0.00001	6.5	< 0.000003	0.000036	0.00094	0.0005	< 0.007	1.7	0.0001	46	0.00005	0.0001	0.44	0.0019	< 0.00009	0.11	< 0.0009	< 0.00004	< 0.00006	0.019	< 0.00005	< 0.0001	< 0.000005	0.000007	0.00008	0.00008		
Dun-1-3	< 0.00001	7.3	< 0.000003	0.000024	< 0.00008	< 0.0002	< 0.007	0.94	< 0.0001	21	0.00009	0.00006	0.43	0.0002	< 0.00009	0.09	< 0.0009	< 0.00004	< 0.00006	0.008	< 0.00005	< 0.0001	0.000006	0.000009	0.0001	0.00007		
Dun-1-36	< 0.00001	2.3	< 0.000003	0.000035	0.00011	0.0006	< 0.007	0.76	0.0008	139	0.00025	0.00014	0.25	0.0008	< 0.00009	0.16	< 0.0009	0.00011	< 0.00006	0.018	< 0.00005	< 0.0001	< 0.000005	0.00001	0.00004	0.0002		
Dun-1-4	< 0.00001	3.5	0.000003	0.000083	0.0015	0.0003	< 0.007	0.73	0.0001	84	0.00008	0.00014	0.48	0.0006	0.00015	0.15	< 0.0009	0.00004	< 0.00006	0.0034	< 0.00005	< 0.0001	< 0.000005	0.000007	0.00005	0.00008		
Dun-1-5	< 0.00001	3.3	< 0.000003	0.000034	0.00045	0.0008	< 0.007	2.2	< 0.0001	153	0.00007	0.00006	0.39	0.0039	0.00009	0.07	< 0.0009	0.0001	< 0.00006	0.019	< 0.00005	< 0.0001	0.00082	0.000002	0.00011	0.00005		
Dun-1-6	< 0.00001	20	0.000011	0.000037	< 0.00008	0.0008	< 0.007	0.72	0.0013	16	0.00016	0.0002	0.53	0.0002	0.00019	0.09	< 0.0009	< 0.00004	< 0.00006	0.021	0.00005	< 0.0001	< 0.000005	0.000008	0.00021	0.00017		
Dun-1-7	< 0.00001	2.0	0.000003	0.000026	0.0002	0.0008	< 0.007	0.5	0.0001	34	0.00003	0.00007	0.22	0.0023	< 0.00009	0.2	< 0.0009	0.00015	< 0.00006	0.005	0.00009	< 0.0001	< 0.000014	0.000025	0.00003	0.00008		
Dun-1-8	< 0.00001	5.6	< 0.000003	0.000048	0.00011	0.0003	< 0.007	3.7	0.0002	62	0.0001	0.00006	0.47	0.0008	< 0.00009	0.07	< 0.0009	0.00007	< 0.00006	0.0068	< 0.00005	< 0.0001	0.000012	0.000002	0.00002	0.00014		
Dun-1-9	< 0.00001	6.1	0.000004	0.00003	0.00031	0.0004	< 0.007	1.1	0.001	78	0.00003	0.00006	1.9	0.0004	< 0.00009	0.2	< 0.0009	0.00011	< 0.00006	0.12	0.00006	< 0.0001	< 0.000005	< 0.000002	0.00006	0.00006		
Dun-2-1	0.0001	4.0	< 0.000003	0.00002	0.0015	< 0.0002	0.03	1.6	< 0.0001	84	0.00037	0.00014	0.71	0.0013	< 0.00009	0.03	< 0.0009	0.00061	< 0.00006	0.016	< 0.00005	-	0.00007	0.00002	< 0.00001	-		
Dun-2-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-11	< 0.00001	4.6	< 0.000003	0.000024	0.0003	< 0.0002	0.01	3.5	0.0017	17	0.00029	0.00012	1.7	0.0006	< 0.00009	0.48	< 0.0009	0.00017	< 0.00006	0.035	< 0.00005	-	< 0.000005	0.000019	0.00005	-		
Dun-2-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-14	< 0.00001	14	< 0.000003	0.000026	0.00023	0.0002	< 0.007	0.72	0.0003	65	0.00023	0.00004	0.47	0.0005	< 0.00009	0.07	< 0.0009	< 0.00004	0.00019	0.012	< 0.00005	-	< 0.000005	0.000005	0.00005	-		
Dun-2-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-16	< 0.00001	4.6	< 0.000003	0.000025	< 0.00008	< 0.0002	< 0.007	4.4	0.02	20	0.00007	0.00012	9.7	0.0003	< 0.00009	0.18	< 0.0009	0.00005	< 0.00006	0.12	< 0.00005	-	< 0.000005	< 0.000002	0.00001	-		
Dun-2-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-18	< 0.00001	2.6	< 0.000003	0.00011	0.0019	< 0.0002	< 0.007	0.88	0.0002	62	0.00014	0.00044	0.92	0.0006	< 0.00009	0.08	< 0.0009	< 0.00004	< 0.00006	0.0043	< 0.00005	-	< 0.000005	0.000002	0.00007	-		
Dun-2-2	< 0.00001	1.2	< 0.000003	0.00005	0.0016	< 0.0002	0.24	0.96	< 0.0001	94	0.00084	0.00058	0.89	0.0052	< 0.00009	0.03	< 0.0009	0.00084	< 0.00006	0.06	< 0.00005	-	0.00001	0.00083	0.00001	-		
Dun-2-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-21	< 0.00001	2.9	< 0.000003	0.000023	< 0.00008	< 0.0002	< 0.007	1.8	0.0003	22	0.00039	0.00014	0.18	0.0003	< 0.00009	0.42	< 0.0009	0.00004	< 0.00006	0.013	< 0.00005	-	< 0.000005	< 0.000002	0.00005	-		
Dun-2-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-25	< 0.00001	2.0	< 0.000003	0.000066	0.0009	0.0003	< 0.007	0.94	0.0032	120	0.00031	0.00024	0.43	0.0031	< 0.00009	0.05	< 0.0009	0.00015	< 0.00006	0.032	< 0.00005	-	< 0.000005	< 0.000002	0.00004	-		
Dun-2-26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-27	< 0.00001	2.6	< 0.000003	0.00003	0.0057	< 0.0002	< 0.007	0.49	0.0003	94	0.00009	0.00025	0.44	0.0016	< 0.00009	0.06	< 0.0009	< 0.00004	< 0.00006	0.0093	< 0.00005	-	< 0.000005	0.000015	0.00004	-		
Dun-2-28	< 0.00001	5.3	< 0.000003	0.000009	0.00086	< 0.0002	< 0.007	0.71	0.0002	43	0.00006	0.00036	0.36	0.0008	< 0.00009	0.04	< 0.0009	< 0.00004	< 0.00006	0.016	< 0.00005	-	0.00024	< 0.000002	0.00002	-		
Dun-2-29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-30	< 0.00001	2.1	< 0.000003	0.000033	0.002	0.0003	< 0.007	0.75	0.0004	177	0.00008	0.00012	0.54	0.0026	< 0.00009	0.08	< 0.0009	0.00011	< 0.00006	0.0067	< 0.00005	-	0.000005	< 0.000002	0.00006	-		
Dun-2-36	< 0.00001	1.3	< 0.000003	0.00006	0.00048	0.0002	< 0.007	0.3	0.0003	57	0.00014	0.00026	0.38	0.0008	< 0.00009	0.05	< 0.0009	< 0.00004	< 0.00006	0.0067	< 0.00005	-	< 0.000005	< 0.000002	0.00003	-		
Dun-2-37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-38	< 0.00001	5.6	< 0.000003	0.00001	0.00023	< 0.0002	< 0.007	0.23	0.0005	52	0.00006	0.00015	0.23	0.0004	< 0.00009	0.06	< 0.0009	< 0.00004	< 0.00006	0.015	< 0.00005	-	< 0.000005	0.000003	0.00003	-		
Dun-2-39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-4	< 0.00001	16	< 0.000003	0.00001	0.00074	< 0.0002	0.02	0.55	0.001	21	0.00036	< 0.00004	0.54	< 0.0001	< 0.00009	0.13	< 0.0009	0.00032	< 0.00006	0.062	< 0.00005	-	0.00003	0.00005	< 0.00001	-		
Dun-2-40	< 0.00001	3.3	< 0.000003	0.000013	0.00038	0.0002	< 0.007	1.7	0.0003	94	0.00016	0.00007	0.46	0.0018	< 0.00009	0.1	< 0.0009	0.00005	< 0.00006	0.0064	< 0.00005	-	0.000056	0.000002	0.00006	-		
Dun-2-41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-44	0.00001	14	< 0.000003	0.000011	0.00089	0.0003	< 0.007	0.32	0.0003	58	0.00019	0.00054	0.42	0.0009	< 0.00009	0.05	< 0.0009	< 0.00004	< 0.00006	0.033	0.00005	-	< 0.000005	< 0.000002	0.00003	-		
Dun-2-45	< 0.00001	3.0	< 0.000003	0.000019	0.0026	0.0002	< 0.007	0.65	< 0.0001	39	0.00004	0.00028	0.23	0.0008	< 0.00009	0.06	< 0.0009	0.00011	< 0.00006	0.015	< 0.00005	-	0.00016	< 0.000002	0.00002	-		
Dun-2-46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dun-2-48	< 0.00001	2.2	<																									

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	SFE																									
	Bismuth mg/L	Calcium mg/L	Cadmium mg/L	Cobalt mg/L	Chromium mg/L	Copper mg/L	Iron mg/L	Potassium mg/L	Lithium mg/L	Magnesium mg/L	Manganese mg/L	Molybdenum mg/L	Sodium mg/L	Nickel mg/L	Lead mg/L	Silicon mg/L	Antimony mg/L	Selenium mg/L	Tin mg/L	Strontium mg/L	Titanium mg/L	Thorium mg/L	Thallium mg/L	Uranium mg/L	Vanadium mg/L	Tungsten mg/L
Dun-3-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-10	< 0.00001	9.1	< 0.000003	0.000012	0.00092	0.0003	0.009	0.56	< 0.0001	0.56	0.00026	0.00047	1.4	0.0001	< 0.00009	-	< 0.0009	< 0.00004	< 0.00006	0.034	0.00015	-	< 0.000005	0.000003	0.0066	0.00032
Dun-3-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-3	< 0.00001	2.0	< 0.000003	0.000057	< 0.00008	< 0.0002	< 0.007	0.64	0.0002	41	0.00017	0.00025	0.35	0.0005	< 0.00009	-	< 0.0009	0.00007	< 0.00006	0.0086	< 0.00007	-	0.000006	0.000002	0.00003	0.00007
Dun-3-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-5	< 0.00001	3.2	< 0.000003	0.000043	0.00018	0.0003	< 0.007	0.45	0.0003	27	0.00029	0.00006	0.3	0.0002	< 0.00009	-	< 0.0009	0.00007	< 0.00006	0.011	< 0.00007	-	< 0.000005	0.000002	0.00003	0.00006
Dun-3-7	< 0.00001	3.8	< 0.000003	0.000047	0.00054	0.0003	< 0.007	1.9	0.0003	51	0.00016	0.00069	0.45	0.0006	< 0.00009	-	< 0.0009	< 0.00004	< 0.00006	0.0041	< 0.00007	-	< 0.000005	0.000004	0.00003	0.00009
Dun-3-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-9	< 0.00001	18	< 0.000003	0.000021	0.00019	0.0003	< 0.007	3.8	0.0005	11	0.0092	0.00047	12	0.0022	< 0.00009	-	< 0.0009	< 0.00004	< 0.00006	0.36	< 0.00007	-	0.000005	0.00011	0.00017	0.00014
Dun-3-3-Dup	< 0.00001	1.9	< 0.000003	0.000065	0.00016	< 0.002	< 0.007	0.97	0.0003	51	0.00018	0.00047	0.43	0.0005	< 0.00009	-	< 0.0009	< 0.00004	< 0.00006	0.0067	< 0.0001	-	0.000008	< 0.000002	0.00007	< 0.0002
Dun-3-9-Dup	< 0.00001	19	0.000003	0.000043	0.00017	< 0.002	< 0.007	3.5	0.0009	17	0.0047	< 0.0004	6.3	0.0045	< 0.00009	-	< 0.0009	< 0.00004	< 0.00006	0.32	< 0.0001	-	0.000009	0.00012	0.00008	< 0.0002
Gab-1-11	< 0.00001	8.4	0.000006	0.000048	0.00083	0.0005	0.013	2.6	< 0.0001	0.64	0.00031	0.00025	4.5	0.0002	< 0.00009	10	< 0.0009	0.00018	< 0.00006	0.017	0.00026	< 0.0001	< 0.000005	0.000012	0.02	0.003
Gab-1-12	< 0.00001	9.3	< 0.000003	0.000064	0.003	0.0009	0.031	3.2	< 0.0001	0.62	0.00082	0.00021	4.5	0.0003	< 0.00009	10	< 0.0009	0.0001	< 0.00006	0.01	0.00033	< 0.0001	< 0.000005	0.000022	0.018	0.00088
Gab-1-14	< 0.00001	14	0.000003	0.000058	0.0037	0.0004	0.02	2.6	< 0.0001	0.88	0.00088	0.00025	1.9	0.0003	< 0.00009	15	< 0.0009	0.00004	< 0.00006	0.031	0.00047	< 0.0001	< 0.000005	0.000024	0.019	0.00047
Gab-1-15	< 0.00001	9.5	< 0.000003	0.000049	0.0022	< 0.0002	0.009	3.2	< 0.0001	0.33	0.00024	0.00017	4.3	0.0003	< 0.00009	11	< 0.0009	0.00004	< 0.00006	0.013	0.00017	< 0.0001	< 0.000005	0.000016	0.013	0.00036
Gab-1-16	0.00001	7.1	< 0.000003	0.000047	0.00048	0.0005	0.008	3.2	0.0009	2.5	0.00027	0.00018	7.3	0.0002	< 0.00009	11	0.002	0.00035	< 0.00006	0.026	0.0002	< 0.0001	< 0.000005	0.000009	0.014	0.0004
Gab-1-17	< 0.00001	11	< 0.000003	0.000049	0.002	0.0008	0.013	1.4	< 0.0001	0.37	0.0004	0.00021	6.5	0.0003	< 0.00009	12	< 0.0009	0.00011	< 0.00006	0.025	0.00031	< 0.0001	< 0.000005	0.000015	0.014	0.00043
Gab-1-18	< 0.00001	2.5	< 0.000003	0.00004	0.00051	0.0003	< 0.007	37	0.0011	0.8	0.00019	0.00076	6.5	0.0009	< 0.00009	13	< 0.0009	0.00023	< 0.00006	0.022	0.00021	< 0.0001	0.000016	0.000003	0.014	0.00091
Gab-1-19	< 0.00001	5.9	0.000028	0.000031	0.00015	0.0003	< 0.007	5.6	0.0004	3.3	0.00017	0.038	6.4	0.0001	< 0.00009	8.5	< 0.0009	< 0.00004	< 0.00006	0.023	0.0001	< 0.0001	0.000006	< 0.000002	0.0034	0.00066
Gab-1-20	< 0.00001	15	< 0.000003	0.000051	0.0018	0.0005	0.011	4.1	< 0.0001	1.0	0.00047	0.0004	3.4	0.0001	< 0.00009	16	0.0009	0.00007	< 0.00006	0.019	0.00035	< 0.0001	< 0.000005	0.000006	0.025	0.00059
Gab-2-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-101	< 0.00001	5.5	0.000004	0.000021	0.00027	0.0003	0.012	6.0	0.0002	2.4	0.00035	0.00029	2.0	0.0002	< 0.00009	8.1	< 0.0009	0.00056	< 0.00006	0.0098	0.00019	-	< 0.000005	< 0.000002	0.0088	-
Gab-2-102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-104	< 0.00001	4.2	< 0.000003	0.000037	0.00081	0.0004	0.024	2.8	0.0001	1.3	0.00065	0.00019	3.1	0.0004	< 0.00009	6.1	< 0.0009	0.00007	< 0.00006	0.013	0.00037	-	< 0.000005	< 0.000002	0.0049	-
Gab-2-105	< 0.00001	6.9	< 0.000003	0.00005	0.00067	0.0005	0.039	2.0	< 0.0001	1.4	0.0011	0.00022	0.93	0.0003	< 0.00009	7.5	< 0.0009	0.00073	< 0.00006	0.017	0.00059	-	< 0.000005	0.000002	0.011	-
Gab-2-106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-108	< 0.00001	8.4	< 0.000003	0.000044	0.0011	0.0005	0.032	1.6	< 0.0001	0.99	0.00077	0.00014	3.2	0.0004	< 0.00											

Waste Rock & Ore Sample ID	SFE																									
	Bismuth mg/L	Calcium mg/L	Cadmium mg/L	Cobalt mg/L	Chromium mg/L	Copper mg/L	Iron mg/L	Potassium mg/L	Lithium mg/L	Magnesium mg/L	Manganese mg/L	Molybdenum mg/L	Sodium mg/L	Nickel mg/L	Lead mg/L	Silicon mg/L	Antimony mg/L	Selenium mg/L	Tin mg/L	Strontium mg/L	Titanium mg/L	Thorium mg/L	Thallium mg/L	Uranium mg/L	Vanadium mg/L	Tungsten mg/L
Gab-2-94	< 0.00001	4.6	< 0.000003	0.000026	0.00033	0.0002	0.065	1.8	0.0001	1.8	0.00062	0.00061	1.4	0.0002	< 0.00009	5.1	0.0031	0.00021	< 0.00006	0.011	0.00029	-	< 0.000005	< 0.000002	0.0043	-
Gab-2-95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-96	< 0.00001	4.5	< 0.000003	0.000014	0.00063	< 0.0002	0.012	0.97	0.0001	1.7	0.00037	0.00015	1.9	0.0002	< 0.00009	4.6	0.001	0.00008	< 0.00006	0.008	0.00019	-	< 0.000005	0.000003	0.0042	-
Gab-2-97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-98	< 0.00001	6.1	< 0.000003	0.000048	0.0017	0.0003	0.05	1.5	< 0.0001	0.85	0.00097	0.00025	1.9	0.0004	< 0.00009	5.3	0.0026	0.00005	< 0.00006	0.018	0.00078	-	< 0.000005	< 0.000002	0.0062	-
Gab-2-99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-22	< 0.00001	5.7	< 0.000003	0.0001	0.0038	0.0005	0.077	2.9	0.0005	0.59	0.0017	0.00061	9.7	0.0007	< 0.00009	-	0.07	< 0.00004	< 0.00006	0.01	0.00087	-	< 0.000005	0.000004	0.0074	0.00081
Gab-3-23	< 0.00001	6.7	0.000007	0.000079	0.0013	0.0006	0.018	5.1	0.0001	0.47	0.00051	0.0049	3.3	0.001	< 0.00009	-	0.12	< 0.00004	< 0.00006	0.013	0.00025	-	< 0.000005	0.000014	0.0069	0.0032
Gab-3-28	< 0.00001	4.4	< 0.000003	0.000023	0.00084	0.0003	0.023	3.3	< 0.0001	1.1	0.00067	0.00081	1.4	0.0003	< 0.00009	-	0.001	< 0.00004	< 0.00006	0.0097	0.00036	-	< 0.000005	0.00051	0.0051	0.00088
Gab-3-28-Dup	< 0.00001	4.8	0.000006	0.0001	0.0025	< 0.002	0.071	3.0	0.0004	0.73	0.0019	0.00057	10	0.0006	< 0.00009	-	< 0.0009	0.00004	< 0.00006	0.0078	0.0016	-	< 0.000005	0.000012	0.0099	0.00062
Gab-3-13	< 0.00001	6.0	< 0.000003	< 0.000004	0.0012	< 0.0002	< 0.007	1.3	< 0.0001	0.74	0.00015	0.00015	1.6	< 0.0001	< 0.00009	-	< 0.0009	0.00005	< 0.00006	0.019	0.00014	-	< 0.000005	0.000094	0.0035	0.00011
Gab-3-14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-15	< 0.00001	4.6	< 0.000003	0.00011	0.0015	0.0015	0.07	0.67	0.0005	1.7	0.0019	0.00013	7.6	0.0006	< 0.00009	-	< 0.0009	0.0012	< 0.00006	0.011	0.0016	-	< 0.000005	0.000004	0.01	0.00021
Gab-3-16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-17	< 0.00001	3.7	< 0.000003	0.00018	0.00069	0.0011	0.08	1.1	0.0006	1.3	0.002	0.00008	8.6	0.0005	< 0.00009	-	< 0.0009	0.00009	< 0.00006	0.0075	0.0013	-	< 0.000005	0.000008	0.0076	0.00017
Gab-3-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-19	< 0.00001	6.1	< 0.000003	0.000028	0.0063	0.0006	0.26	0.52	0.0007	1.1	0.0059	0.00031	9.8	0.0013	< 0.00009	-	< 0.0009	0.00015	< 0.00006	0.014	0.0039	-	< 0.000005	0.000004	0.0063	0.00021
Gab-3-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-33	< 0.00001	32	< 0.000003	0.00021	0.00012	0.0003	< 0.007	4.1	0.0005	22	0.0035	0.00016	1.5	0.013	< 0.00009	-	< 0.0009	< 0.00004	< 0.00006	0.37	< 0.00007	-	0.00001	< 0.000002	0.00002	0.00009
Gab-3-21-Dup	< 0.00001	4.1	< 0.000003	0.00011	0.0017	< 0.002	0.076	6.4	0.0006	0.76	0.0019	0.00051	15	0.0005	< 0.00009	-	< 0.0009	0.0015	< 0.00006	0.016	0.001	-	< 0.000005	0.00005	0.018	0.00074
Gab-3-13-Dup	< 0.00001	7.8	< 0.000003	0.000021	0.0046	< 0.002	< 0.007	2.1	0.0003	0.78	0.00026	0.0039	2.7	0.0002	< 0.00009	-	< 0.0009	< 0.00004	< 0.00006	0.019	0.00014	-	< 0.000005	0.000002	0.009	< 0.0002
Gab-3-32-Dup	< 0.00001	6.7	0.000003	0.00011	0.0027	< 0.002	0.096	0.66	0.0003	0.67	0.0022	0.0058	7.8	0.0005	< 0.00009	-	< 0.0009	0.00028	< 0.00006	0.017	0.0015	-	< 0.000005	0.000002	0.014	0.0034
IMV-1-21	< 0.00001	4.5	< 0.000003	0.000031	< 0.00008	0.0002	0.013	1.2	0.0003	0.64	0.00036	0.00038	25	0.0002	< 0.00009	2.0	0.0016	0.00004	< 0.00006	0.009	0.00021	< 0.0001	< 0.000005	0.000035	0.0069	0.00024
IMV-1-23	< 0.00001	6.0	< 0.000003	0.000047	0.0001	0.0004	< 0.007	4.0	0.0001	0.75	0.00085	0.00058	11	0.0004	0.0001	3.0	0.0024	< 0.00004	< 0.00006	0.017	0.00015	< 0.0001	< 0.000005	0.000018	0.0068	0.0022
IMV-1-30	< 0.00001	6.2	0.000003	0.00004	< 0.00008	0.0003	< 0.007	6.8	0.0002	7.8	0.0014	0.004	9.4	0.0002	< 0.00009	3.8	< 0.0009	< 0.00004	< 0.00006	0.019	0.00006	< 0.0001	< 0.000005	0.000014	0.0024	0.002
MaMv-1-22	< 0.00001	9.0	0.000003	0.000036	< 0.00008	0.0004	< 0.007	8.4	< 0.0001	6.0	0.0007	0.00092	3.9	0.0004	< 0.00009	1.7	< 0.0009	0.00008	< 0.00006	0.057	< 0.00005	< 0.0001	< 0.000005	0.000002	0.00069	0.001
MaMv-1-24	< 0.00001	7.4	0.000005	0.000047	0.00013	0.0004	< 0.007	3.4	0.0002	3.8	0.00029	0.012	12	0.0003	< 0.00009	5.8	0.0029	0.00007	< 0.00006	0.028	0.00021	< 0.0001	< 0.000005	0.000004	0.0076	0.0011
MaMv-1-25	0.00003	5.3	0.000003	0.000042	0.0001	< 0.0002	< 0.007	4.2	0.0002	0.45	0.00033	0.0019	11	0.0002	< 0.00009	3.6	0.0046	< 0.00004	< 0.00006	0.013	0.00012	< 0.0001	< 0.000005	0.000088	0.016	0.0017
MaMv-1-26	< 0.00001	7.2	0.000016	0.000064	0.00013	0.0002	< 0.007	10	0.0033	2.9	0.0016	0.0011	14	0.0003	< 0.00009	5.0	0.0015	< 0.00004	< 0.00006	0.044	0.00013	< 0.0001	< 0.000005	0.000074	0.0083	0.0028
MaMv-1-27	< 0.00001	5.1	< 0.000003	0.000044	0.00009	< 0.0002	< 0.007	8.7	0.0002	0.33	0.00055	0.0011	9.3	< 0.0001	< 0.00009	3.1	0.0011	< 0.00004	< 0.00006	0.016	0.00008	< 0.0001	< 0.000005	0.000046	0.01	0.0007
MaMv-1-28	< 0.00001	5.4	< 0.000003	0.00013	0.00012	0.0009	0.022	4.9	0.0005	4.7	0.0038	0.00051	11	0.0004	0.00011	9.9	0.0009	< 0.00004	< 0.00006	0.014	0.00041	< 0.0001	< 0.000005	0.000057	0.0092	0.0013
MaMv-1-29	< 0.00001	4.8	0.000005	0.000075	0.00023	0.0018	0.065	3.2	0.0002	1.2	0.0022	0.00054	13	0.0001	< 0.00009	4.7	0.0009	0.00005	< 0.00006	0.0092	0.0029	< 0.0001	< 0.000005	0.00012	0.011	0.0013
IMV-2-109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-132	< 0.00001	5.8	< 0.000003	0.000005	< 0.00008	0.0003	< 0.007	2.9	0.0001	0.44	0.00047	0.00055	6.0	< 0.0001	< 0.00009	1.9	< 0.0009	< 0.00004	< 0.00006	0.027	0.00015	-	< 0.000005	0.000017	0.0039	-
IMV-2-133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-144	< 0.00001	4.9	< 0.000003	< 0.000004	< 0.00008	0.0004	< 0.007	0.65	0.0002	0.25	0.00035	0.00058	10	0.0002	< 0.00009	1.7	0.0012	0.00008	< 0.00006	0.014	0.00035	-	< 0.000005	0.000018	0.0032	-
IMV-2-145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-156	< 0.00001	11	< 0.000003	0.000027	0.0011	0.0004	< 0.007	2.3	0.0002	1.6	0.0029	0.0011	9.1	0.001	< 0.00009	2.0	< 0.0009	0.00095	< 0.00006	0.029	0.00005	-	< 0.000005	0.000005	0.0035	-
IMV-2-157	-	-	-	-	-	-	-	-	-	-	-	-														

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	SFE																									
	Bismuth mg/L	Calcium mg/L	Cadmium mg/L	Cobalt mg/L	Chromium mg/L	Copper mg/L	Iron mg/L	Potassium mg/L	Lithium mg/L	Magnesium mg/L	Manganese mg/L	Molybdenum mg/L	Sodium mg/L	Nickel mg/L	Lead mg/L	Silicon mg/L	Antimony mg/L	Selenium mg/L	Tin mg/L	Strontium mg/L	Titanium mg/L	Thorium mg/L	Thallium mg/L	Uranium mg/L	Vanadium mg/L	Tungsten mg/L
IMV-2-181	< 0.00001	5.8	< 0.000003	0.000006	0.00009	0.0003	< 0.007	1.7	0.0003	1.0	0.00034	0.00045	2.2	0.0001	< 0.00009	2.3	< 0.0009	< 0.00004	< 0.00006	0.012	0.00011	-	< 0.000005	< 0.000002	0.0015	-
IMV-2-182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-183	< 0.00001	5.6	< 0.000003	0.000016	< 0.00008	0.0004	< 0.007	0.86	0.0013	2.5	0.0011	0.00062	12	0.0003	< 0.00009	3.3	0.0012	< 0.00004	< 0.00006	0.011	< 0.00005	-	< 0.000005	< 0.000002	0.0016	-
IMV-2-184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-185	< 0.00001	5.8	< 0.000003	< 0.000004	< 0.00008	< 0.0002	< 0.007	2.8	< 0.0001	1.2	0.00011	0.00017	3.2	0.0001	< 0.00009	2.6	< 0.0009	< 0.00004	< 0.00006	0.0083	< 0.00005	-	< 0.000005	< 0.000002	0.0026	-
IMV-2-186	< 0.00001	1.4	< 0.000003	0.00015	0.00014	0.0002	0.2	0.38	< 0.0001	0.13	0.0026	0.00026	21	0.0001	< 0.00009	4.4	0.0023	0.00016	0.00007	0.006	0.0066	-	< 0.000005	0.000005	0.062	-
MaMv-2-110	< 0.00001	3.7	< 0.000003	0.00006	0.00097	0.0002	0.03	1.2	< 0.0001	2.0	0.0012	0.0044	4.8	0.0002	< 0.00009	3.4	< 0.0009	0.00021	< 0.00006	0.027	0.00086	-	0.00002	0.00018	0.0049	-
MaMv-2-111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-112	< 0.00001	6.0	< 0.000003	0.000011	< 0.00008	< 0.0002	< 0.007	5.2	0.0002	1.2	0.0018	0.00039	2.6	< 0.0001	< 0.00009	2.1	< 0.0009	< 0.00004	0.00009	0.0093	0.00024	-	< 0.000005	0.000003	0.0024	-
MaMv-2-113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-114	< 0.00001	4.9	< 0.000003	0.000005	< 0.00008	< 0.0002	< 0.007	3.6	0.0001	0.33	0.00053	0.00059	5.6	< 0.0001	< 0.00009	1.8	< 0.0009	< 0.00004	< 0.00006	0.018	0.00006	-	< 0.000005	0.000019	0.0042	-
MaMv-2-115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-116	< 0.00001	40	0.000003	0.000053	< 0.00008	0.0002	< 0.007	3.6	0.0007	4.2	0.024	0.00071	12	0.0005	< 0.00009	1.8	< 0.0009	0.00031	< 0.00006	0.11	< 0.00005	-	< 0.000005	0.00009	0.00033	-
MaMv-2-117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-118	< 0.00001	8.6	< 0.000003	0.000023	0.00009	0.0003	0.009	1.5	0.0011	1.6	0.0027	0.00027	9.6	0.0001	< 0.00009	1.2	< 0.0009	< 0.00004	0.00019	0.055	0.0002	-	< 0.000005	0.000004	0.0015	-
MaMv-2-119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-120	< 0.00001	5.9	0.000003	0.000024	< 0.00008	0.0006	0.009	2.4	0.0009	0.79	0.0012	0.0014	4.8	0.0001	< 0.00009	1.9	< 0.0009	0.00004	0.00022	0.011	0.00021	-	< 0.000005	0.000006	0.0026	-
MaMv-2-121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-122	< 0.00001	4.7	< 0.000003	0.000008	< 0.00008	0.0003	< 0.007	3.8	< 0.0001	0.65	0.00047	0.00045	9.3	< 0.0001	< 0.00009	2.3	< 0.0009	< 0.00004	< 0.00006	0.011	0.00013	-	< 0.000005	0.000018	0.0057	-
MaMv-2-123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-124	0.00009	5.9	< 0.000003	0.000004	< 0.00008	0.0002	< 0.007	2.3	0.0002	0.91	0.00087	0.00051	6.2	< 0.0001	< 0.00009	1.9	< 0.0009	< 0.00004	< 0.00006	0.012	0.00007	-	< 0.000005	0.000012	0.0025	-
MaMv-2-125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-126	0.00002	4.8	< 0.000003	0.000006	< 0.00008	0.0002	< 0.007	4.1	0.0002	0.32	0.00078	0.00034	8.5	0.0001	< 0.00009	2.0	0.0009	< 0.00004	< 0.00006	0.025	0.00007	-	< 0.000005	0.000022	0.0049	-
MaMv-2-127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-128	< 0.00001	18	< 0.000003	0.000008	< 0.00008	< 0.0002	< 0.007	1.4	0.0004	4.0	0.0062	0.00077	3.2	0.0002	< 0.00009	0.76	< 0.0009	0.00005	< 0.00006	0.093	< 0.00005	-	< 0.000005	0.000007	0.00023	-
MaMv-2-129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-130	< 0.00001	9.1	< 0.000003	0.000007	< 0.00008	0.0002	< 0.007	0.76	0.0004	3.6	0.0012	0.0011	7.9	0.0002	< 0.00009	1.5	0.0025	0.00007	< 0.00006	0.071	< 0.00005	-	< 0.000005	0.000002	0.0012	-
MaMv-2-131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-134	0.00001	5.4	0.000003	0.000006	< 0.00008	0.0004	< 0.007	3.3	0.0001	0.29	0.00049	0.0023	5.8	0.0002	< 0.00009	2.2	< 0.0009	0.00005	0.00006	0.036	0.00015	-	< 0.000005	0.000039	0.0067	-
MaMv-2-135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-136	< 0.00001	7.5	0.000004	0.000036	< 0.00008	0.0005	< 0.007	5.8	0.0008	1.8	0.0012	0.0016	6.3	0.0003	< 0.00009	3.2	0.0039	0.00014	< 0.00006	0.035	0.00026	-	< 0.000005	0.00003	0.0055	-
MaMv-2-137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	SFE																									
	Bismuth mg/L	Calcium mg/L	Cadmium mg/L	Cobalt mg/L	Chromium mg/L	Copper mg/L	Iron mg/L	Potassium mg/L	Lithium mg/L	Magnesium mg/L	Manganese mg/L	Molybdenum mg/L	Sodium mg/L	Nickel mg/L	Lead mg/L	Silicon mg/L	Antimony mg/L	Selenium mg/L	Tin mg/L	Strontium mg/L	Titanium mg/L	Thorium mg/L	Thallium mg/L	Uranium mg/L	Vanadium mg/L	Tungsten mg/L
MaMv-3-46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-48	< 0.00001	6.2	< 0.000003	0.000007	< 0.00008	0.0004	< 0.007	3.6	0.0006	2.6	0.00077	0.00023	5.0	0.0002	< 0.00009	-	0.0016	< 0.00004	< 0.00006	0.019	0.0002	-	< 0.000005	0.000023	0.0065	0.00031
MaMv-3-49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-52	< 0.00001	5.2	< 0.000003	0.000066	0.00026	0.0015	0.064	1.0	0.0006	0.96	0.0031	0.00013	2.9	0.0006	0.0001	-	< 0.0009	< 0.00004	< 0.00006	0.0093	0.0023	-	< 0.000005	0.000008	0.0021	0.0002
MaMv-3-54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-56	< 0.00001	8.3	< 0.000003	0.000028	0.00009	0.0008	< 0.007	4.1	0.0008	3.0	0.0011	0.002	5.2	0.0005	< 0.00009	-	0.0022	0.00005	< 0.00006	0.031	0.00014	-	< 0.000005	0.000077	0.0039	0.0023
MaMv-3-58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-35-Dup	< 0.00001	1.9	0.000011	0.0002	0.0017	< 0.002	0.22	27	0.0009	0.5	0.0028	0.024	16	0.0025	< 0.00009	-	< 0.0009	0.0012	< 0.00006	0.007	0.007	-	< 0.000005	0.000052	0.019	0.0012
MaMv-3-39-Dup	< 0.00001	5.8	< 0.000003	0.000018	0.0001	< 0.002	< 0.007	12	0.0013	4.1	0.00046	0.0014	11	0.0003	< 0.00009	-	< 0.0009	0.00009	< 0.00006	0.066	0.00012	-	0.00001	< 0.000002	0.0038	< 0.0002
Per-1-31	< 0.00001	5.8	0.000012	0.00007	0.00084	0.0004	< 0.007	2.5	0.0001	20	0.00023	0.019	1.7	0.0019	< 0.00009	4.0	0.0018	0.00005	< 0.00006	0.038	0.00007	< 0.0001	< 0.000005	0.000003	0.00025	0.00052
Per-1-33	< 0.00001	3.6	0.000003	0.000029	0.00025	0.0003	< 0.007	0.64	< 0.0001	51	0.00008	0.00012	0.26	0.001	< 0.00009	0.18	< 0.0009	< 0.00004	< 0.00006	0.0064	< 0.00005	< 0.0001	< 0.000005	0.000002	0.00006	0.00005
Per-1-38	< 0.00001	16	< 0.000003	0.000041	0.0001	< 0.0002	< 0.007	1.7	< 0.0001	9.5	0.00004	0.00004	0.34	0.0003	< 0.00009	0.67	< 0.0009	< 0.00004	< 0.00006	0.023	< 0.00005	< 0.0001	0.000005	0.000009	0.00005	0.00008
Per-1-39	0.00001	10	0.000009	0.000063	0.00042	0.0005	< 0.007	1.2	< 0.0001	14	0.00039	0.00008	0.35	0.0004	< 0.00009	2.6	< 0.0009	< 0.00004	< 0.00006	0.0059	0.00006	< 0.0001	< 0.000005	0.000002	0.00007	0.00029
Per-1-40	< 0.00001	4.8	< 0.000003	0.000048	0.001	0.0003	< 0.007	0.66	< 0.0001	7.4	0.00005	0.00012	0.6	0.0006	< 0.00009	1.8	< 0.0009	0.00004	< 0.00006	0.0046	< 0.00005	< 0.0001	< 0.000005	< 0.000002	0.00014	0.00067
Per-1-46	< 0.00001	23	< 0.000003	0.000073	0.00064	0.0003	< 0.007	10	< 0.0001	18	0.00023	< 0.00004	0.82	0.0015	< 0.00009	2.5	< 0.0009	< 0.00004	< 0.00006	0.021	< 0.00005	< 0.0001	< 0.000005	0.000006	0.00006	0.00097
Per-1-48	< 0.00001	8.0	< 0.000003	0.000034	0.0007	0.0002	< 0.007	4.0	< 0.0001	3.6	0.00011	0.00021	1.8	0.0006	< 0.00009	10	< 0.0009	< 0.00004	< 0.00006	0.05	0.00016	< 0.0001	0.000006	0.000003	0.0054	0.00055
Per-1-49	< 0.00001	6.4	< 0.000003	0.00021	0.00076	< 0.0002	< 0.007	2.4	< 0.0001	5.0	0.00033	0.00011	0.77	0.0007	< 0.00009	8.4	< 0.0009	0.00005	< 0.00006	0.027	0.00007	< 0.0001	< 0.000005	0.000013	0.002	0.00052
Per-1-54	< 0.00001	5.0	< 0.000003	0.000023	0.00027	< 0.0002	< 0.007	0.8	0.0002	16	0.00004	0.00012	1.1	0.0003	< 0.00009	0.55	0.0014	< 0.00004	< 0.00006	0.16	< 0.00005	< 0.0001	0.000008	0.000002	0.00005	0.00022
TaU-1-34	< 0.00001	9.4	< 0.000003	0.00012	0.00025	0.0007	< 0.007	3.6	0.0003	20	0.00012	0.00021	2.5	0.0029	< 0.00009	5.3	0.002	0.00006	< 0.00006	0.041	0.00007	< 0.0001	0.000017	0.000003	0.00088	0.00078
TaU-1-35	< 0.00001	2.3	< 0.000003	0.00011	0.00027	0.0002	< 0.007	8.4	0.0005	14	0.00016	0.00014	2.6	0.0026	< 0.00009	3.6	0.0009	< 0.00004	< 0.00006	0.0098	< 0.00005	< 0.0001	0.000034	0.00001	0.0009	0.00031
TaU-1-37	< 0.00001	6.5	< 0.000003	0.000066	0.00028	0.0002	< 0.007	2.7	0.0008	16	0.00037	0.00025	1.7	0.0011	< 0.00009	4.9	< 0.0009	0.00004	< 0.00006	0.049	0.00009	< 0.0001	< 0.000005	0.000003	0.00037	0.00035
TaU-1-52	0.00002	15	< 0.000003	0.00011	0.00015	0.0004	< 0.007	6.0	< 0.0001	19	0.00061	0.0011	2.2	0.0056	< 0.00009	3.5	< 0.0009	0.0011	< 0.00006	0.024	< 0.00005	< 0.0001	0.000023	0.000004	0.00059	0.00019
Per-1-32	< 0.00001	4.8	< 0.000003	0.000034	0.00037	0.0003	0.008	1.3	0.0001	4.4	0.00008	0.00013	0.61	0.0007	< 0.00009	6.0	< 0.0009	0.00006	< 0.00006	0.026	< 0.00005	< 0.0001	< 0.000005	0.000003	0.00094	0.0007
Per-1-51	< 0.00001	7.7	< 0.000003																							

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	SFE																									
	Bismuth mg/L	Calcium mg/L	Cadmium mg/L	Cobalt mg/L	Chromium mg/L	Copper mg/L	Iron mg/L	Potassium mg/L	Lithium mg/L	Magnesium mg/L	Manganese mg/L	Molybdenum mg/L	Sodium mg/L	Nickel mg/L	Lead mg/L	Silicon mg/L	Antimony mg/L	Selenium mg/L	Tin mg/L	Strontium mg/L	Titanium mg/L	Thorium mg/L	Thallium mg/L	Uranium mg/L	Vanadium mg/L	Tungsten mg/L
Per-2-223	< 0.00001	2.6	< 0.000003	0.000019	0.00081	< 0.0002	< 0.007	1.1	< 0.0001	5.7	0.00008	0.00015	0.16	0.0014	< 0.00009	6.5	< 0.0009	0.00029	< 0.00006	0.0068	< 0.00005	-	< 0.000005	< 0.000002	0.00073	-
Per-2-224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-227	< 0.00001	5.8	< 0.000003	0.000016	0.00099	< 0.0002	< 0.007	0.87	0.0003	3.2	0.00005	0.0002	0.99	0.0007	< 0.00009	5.1	0.0014	0.00006	< 0.00006	0.036	< 0.00005	-	< 0.000005	< 0.000002	0.00053	-
Per-2-248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-61	< 0.00001	3.8	< 0.000003	0.000014	0.00028	< 0.0002	< 0.007	0.83	< 0.0001	4.7	0.00021	0.00021	1.5	0.0004	< 0.00009	-	0.0011	< 0.00004	< 0.00006	0.074	0.0001	-	< 0.000005	0.0001	0.0011	0.0016
Per-3-62	< 0.00001	4.8	< 0.000003	0.000016	0.00072	0.0002	< 0.007	1.4	0.0001	4.1	0.00019	0.00097	0.27	0.0011	< 0.00009	-	0.0084	0.00014	< 0.00006	0.014	< 0.00007	-	0.000006	0.000003	0.0011	0.0011
Per-3-63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-64	< 0.00001	1.7	< 0.000003	0.0001	0.0039	0.0006	0.11	10	0.0004	1.2	0.0023	0.00019	8.6	0.0012	< 0.00009	-	< 0.0009	< 0.00004	< 0.00006	0.0057	0.0016	-	0.000007	0.000009	0.005	0.00091
Per-3-65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-66	< 0.00001	5.4	< 0.000003	0.00001	0.001	< 0.0002	< 0.007	0.54	< 0.0001	2.6	0.00013	0.00024	0.71	0.0006	< 0.00009	-	0.0029	0.00004	< 0.00006	0.0084	< 0.00007	-	< 0.000005	0.000002	0.0013	0.0038
Per-3-67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-70	< 0.00001	5.2	0.000006	0.00014	0.0026	0.0017	0.55	3.3	0.0009	1.7	0.012	0.012	31	0.0037	< 0.00009	-	< 0.0009	0.00012	< 0.00006	0.039	0.0017	-	< 0.000005	< 0.000002	0.071	< 0.00002
Per-3-71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-72	< 0.00001	5.0	< 0.000003	0.000071	0.002	0.0004	0.058	1.4	0.0005	0.71	0.0013	0.0002	11	0.0006	< 0.00009	-	0.001	0.00009	< 0.00006	0.041	0.0007	-	< 0.000005	0.000003	0.0049	0.00077
Per-3-73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-62-Dup	< 0.00001	4.3	< 0.000003	0.000023	0.00046	< 0.002	< 0.007	2.8	< 0.0001	4.8	0.00024	0.001	0.36	0.0009	< 0.00009	-	0.0082	0.00026	< 0.00006	0.013	0.0001	-	0.000011	< 0.000002	0.0013	0.001
Per-3-64-Dup	< 0.00001	2.1	< 0.000003	0.000088	0.0024	< 0.002	0.072	16	0.0006	0.87	0.0015	0.0079	9.9	0.0008	< 0.00009	-	< 0.0009	< 0.00004	< 0.00006	0.0075	0.00079	-	< 0.000005	0.000006	0.0059	0.00077
Per-3-72-Dup	< 0.00001	4.3	0.000008	0.00004	0.0013	< 0.002	0.028	1.4	0.0003	0.49	0.0011	0.0076	12	0.0004	< 0.00009	-	0.0009	0.00006	< 0.00006	0.029	0.00029	-	< 0.000005	0.000003	0.0062	0.0007
Pyx-1-53	< 0.00001	8.7	0.000003	0.000069	0.00085	< 0.0002	< 0.007	0.92	0.0003	25	0.00007	0.00008	0.6	0.0021	< 0.00009	2.6	0.002	0.00006	< 0.00006	0.12	0.00005	< 0.0001	0.000007	< 0.000002	0.00012	0.00005
Pyx-1-13	< 0.00001	13	< 0.000003	0.00005	0.0086	0.0007	0.02	0.93	< 0.0001	1.0	0.00049	0.00017	1.8	0.0004	< 0.00009	18	< 0.0009	0.0001	< 0.00006	0.014	0.00044	< 0.0001	< 0.000005	0.000009	0.021	0.00087
Pyx-1-41	< 0.00001	15	< 0.000003	0.000057	0.0085	0.001	0.019	2.5	< 0.0001	0.89	0.0006	0.00017	4.5	0.0002	< 0.00009	20	0.0013	0.0001	< 0.00006	0.088	0.00024	< 0.0001	< 0.000005	0.000008	0.02	0.00071
Pyx-1-42	< 0.00001	10	< 0.000003	0.000069	0.0053	0.0006	0.035	1.2	< 0.0001	1.2	0.00094	0.00013	2.6	0.0004	< 0.00009	14	< 0.0009	0.00007	< 0.00006	0.025	0.00054	< 0.0001	< 0.000005	0.000009	0.02	0.00026
Pyx-1-43	< 0.00001	11	0.000014	0.000037	0.0045	0.0016	0.007	3.4	< 0.0001	0.66	0.00024	0.00025	1.8	0.0001	< 0.00009	12	< 0.0009	0.0001	< 0.00006	0.032	0.00009	< 0.0001	< 0.000005	0.000023	0.014	0.00064
Pyx-1-44	< 0.00001	11	0.000017	0.000029	0.002	0.0014	< 0.007	1.8	< 0.0001	1.6	0.0001	0.0003	3.3	0.0002	< 0.00009	13	< 0.0009	0.00043	< 0.00006	0.019	0.00013	< 0.0001	0.000005	0.000002	0.0088	0.00032
Pyx-1-45	0.00002	11	< 0.000003	0.000045	0.0021	0.0004	< 0.007	1.1	< 0.0001	3.5	0.00011	0.00062	1.5	0.0005	< 0.00009	14	0.0015	0.00014	< 0.00006	0.024	0.00015	< 0.0001	< 0.000005	0.000003	0.0076	0.00046
Pyx-1-47	0.00001	1.7	0.000004	0.00033	0.0021	0.0011	0.27	13	0.0002	0.47	0.0034	0.0045	27	0.0046	< 0.00009	13	< 0.0009	0.00019	< 0.00006	0.013	0.0052	< 0.0001	0.000022	0.000016	0.042	0.00073
Pyx-1-50	< 0.00001	6.3	< 0.000003	0.000047	< 0.00008	< 0.0002	< 0.007	1.2	< 0.0001	8.5	0.00036	0.0002	1.3	0.0011	< 0.00009	4.6	< 0.0009	< 0.00004	< 0.00006	0.027	< 0.00005	< 0.0001	< 0.000005			

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	NAG								Mineralogy															
	Zinc	Vol H2O2	Final pH	NaOH	Vol NaOH to pH 4.5	Vol NaOH to pH 7.0	NAG (pH 4.5)	NAG (pH 7.0)	Quartz	Plagioclase	Potassium-feldspar	Forsterite	Diopside	Actinolite	Chlorite	Muscovite	Biotite	Magnetite	Talc	Serpentine	Ilmenite	Calcite	Hematite	Brucite
	mg/L	mL	no unit	Normality	mL	mL	kg H2SO ₄ /tonne	kg H2SO ₄ /tonne	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
Dun-1-1	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-10	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-2	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-3	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-36	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-4	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-5	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-6	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-7	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-8	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-9	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-1	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-11	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-14	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-16	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-18	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-2	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-21	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-25	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-27	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-28	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-30	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	61	-	-	-	12
Dun-2-36	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-38	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-4	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-40	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-44	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	63	-	-	-	17
Dun-2-45	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-48	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-49	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-5	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-51	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-8	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-243	< 0.002	150	7.9	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-244	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-245	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-32	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-34	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-52	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-7	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-1-Dyke	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	NAG								Mineralogy															
	Zinc	Vol H2O2	Final pH	NaOH	Vol NaOH to pH 4.5	Vol NaOH to pH 7.0	NAG (pH 4.5)	NAG (pH 7.0)	Quartz	Plagioclase	Potassium-feldspar	Forsterite	Diopside	Actinolite	Chlorite	Muscovite	Biotite	Magnetite	Talc	Serpentine	Ilmenite	Calcite	Hematite	Brucite
	mg/L	mL	no unit	Normality	mL	mL	kg H2SO ₄ /tonne	kg H2SO ₄ /tonne	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
Dun-3-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-10	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-3	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-4	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	10.0	-	-	9.9	-	65	-	-	-	3.8
Dun-3-5	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-7	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-9	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-3-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-9-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-11	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-12	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-14	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-15	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-16	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-17	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-18	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-19	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-20	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-101	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-104	< 0.002	150	8.5	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-105	< 0.002	150	9.0	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-108	< 0.002	150	8.7	0.1	0	0	0	0	-	16	2.2	-	6.8	34	9.1	0.98	-	0.49	-	-	-	-	-	-
Gab-2-236	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-56	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-58	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-60	< 0.002	150	7.6	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-62	< 0.002	150	7.7	0.1	0	0	0	0	-	9.3	1.8	-	16	27	10	1.5	-	0.41	-	0.44	-	-	-	-
Gab-2-63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-64	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-66	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-68	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-70	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-72	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-74	< 0.002	150	7.6	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-76	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-78	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-80	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-81	< 0.002	150	7.7	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-83	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-85	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-86	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-88	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-90	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	NAG								Mineralogy															
	Zinc	Vol H2O2	Final pH	NaOH	Vol NaOH to pH 4.5	Vol NaOH to pH 7.0	NAG (pH 4.5)	NAG (pH 7.0)	Quartz	Plagioclase	Potassium-feldspar	Forsterite	Diopside	Actinolite	Chlorite	Muscovite	Biotite	Magnetite	Talc	Serpentine	Ilmenite	Calcite	Hematite	Brucite
	mg/L	mL	no unit	Normality	mL	mL	kg H2SO ₄ /tonne	kg H2SO ₄ /tonne	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
Gab-2-94	< 0.002	150	7.8	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-96	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-98	< 0.002	150	7.7	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-22	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-23	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-28	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-28-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-13	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-15	< 0.002	-	-	-	-	-	-	-	0.33	10	1.6	0.14	24	37	8.7	1.9	0.45	0.22	-	0.6	-	-	-	-
Gab-3-16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-17	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-19	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-21	-	-	-	-	-	-	-	-	0.2	21	1.2	0.057	31	26	17	2.1	1.5	0.25	-	0.32	-	-	-	-
Gab-3-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-33	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-21-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-13-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-32-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-1-21	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-1-23	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-1-30	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-22	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-24	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-25	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-26	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-27	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-28	0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-29	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-132	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-144	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-145	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-149	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-156	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-157	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-158	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-160	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-162	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-163	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-164	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-165	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-166	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-168	< 0.002	150	9.8	0.1	0	0	0	0	19	64	0.7	-	-	-	7.9	5.3	0.22	0.27	-	-	-	1.7	-	-
IMV-2-169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-173	< 0.002	-	-	-	-	-	-	-	34	22	5.5	-	-	-	6.4	23	0.59	0.14	-	-	-	7.6	-	-
IMV-2-175	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-176	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-177	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-179	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	NAG								Mineralogy															
	Zinc	Vol H2O2	Final pH	NaOH	Vol NaOH to pH 4.5	Vol NaOH to pH 7.0	NAG (pH 4.5)	NAG (pH 7.0)	Quartz	Plagioclase	Potassium-feldspar	Forsterite	Diopside	Actinolite	Chlorite	Muscovite	Biotite	Magnetite	Talc	Serpentine	Ilmenite	Calcite	Hematite	Brucite
	mg/L	mL	no unit	Normality	mL	mL	kg H2SO ₄ /tonne	kg H2SO ₄ /tonne	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
IMV-2-181	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-183	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-185	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-186	< 0.002	150	6.7	0.1	0	0.03	0	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-110	< 0.002	150	7.7	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-112	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-114	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-116	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-118	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-120	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-122	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-124	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-126	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-128	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-130	< 0.002	-	-	-	-	-	-	-	24	33	0.33	-	-	-	17	4.7	-	0.18	-	-	-	2.3	-	-
MaMv-2-131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-134	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-136	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-137	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-138	< 0.002	-	-	-	-	-	-	-	44	32	0.48	-	1.2	-	1.3	20	0.37	-	-	-	-	-	-	-
MaMv-2-139	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-140	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-141	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-142	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-146	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-148	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-150	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-152	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-154	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-159	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-170	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-172	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-187	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-92	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-247	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-41	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-53	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-57	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-35	< 0.002	-	-	-	-	-	-	-	0.82	17	0.51	16	31	3.9	7.7	1.8	4.5	2.5	5.0	7.1	0.65	0.82	1.1	-
MaMv-3-36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-37	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-39	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-44	-	-	-	-	-	-	-	-	29	45	0.55	-	-	-	5.1	3.9	-	0.015	-	-	-	4.4	-	-
MaMv-3-45	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	NAG								Mineralogy															
	Zinc	Vol H2O2	Final pH	NaOH	Vol NaOH to pH 4.5	Vol NaOH to pH 7.0	NAG (pH 4.5)	NAG (pH 7.0)	Quartz	Plagioclase	Potassium-feldspar	Forsterite	Diopside	Actinolite	Chlorite	Muscovite	Biotite	Magnetite	Talc	Serpentine	Ilmenite	Calcite	Hematite	Brucite
	mg/L	mL	no unit	Normality	mL	mL	kg H2SO ₄ /tonne	kg H2SO ₄ /tonne	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
MaMv-3-46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-48	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-52	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-56	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-35-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-39-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-31	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-33	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-38	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-39	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-40	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-46	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-48	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-49	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-54	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TaU-1-34	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TaU-1-35	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TaU-1-37	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TaU-1-52	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-32	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-51	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-55	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-19	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-190	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-205	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-207	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-209	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-215	< 0.002	-	-	-	-	-	-	-	0.82	5.0	-	4.8	3.5	3.8	4.6	-	-	9.3	-	57	-	1.3	-	2.6
Per-2-216	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-217	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-218	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-219	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-221	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-225	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-191	< 0.002	150	8.4	0.1	0	0	0	0	1.7	3.6	-	1.7	15	-	13	-	-	7.4	-	55	-	-	-	-
Per-2-192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-193	0.002	150	8.7	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-194	< 0.002	150	8.4	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-195	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-198	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-199	< 0.002	150	8.4	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-201	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-202	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-203	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-204	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-208	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-211	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-212	< 0.002	150	8.4	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-213	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	NAG								Mineralogy															
	Zinc	Vol H2O2	Final pH	NaOH	Vol NaOH to pH 4.5	Vol NaOH to pH 7.0	NAG (pH 4.5)	NAG (pH 7.0)	Quartz	Plagioclase	Potassium-feldspar	Forsterite	Diopside	Actinolite	Chlorite	Muscovite	Biotite	Magnetite	Talc	Serpentine	Ilmenite	Calcite	Hematite	Brucite
	mg/L	mL	no unit	Normality	mL	mL	kg H2SO ₄ /tonne	kg H2SO ₄ /tonne	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %	wt %
Per-2-223	< 0.002	150	8.6	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-227	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-61	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-62	< 0.002	-	-	-	-	-	-	-	-	-	-	5.3	12	3.1	17	-	-	5.4	-	55	-	-	-	-
Per-3-63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-64	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-66	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-68	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-70	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-72	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-62-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-64-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-72-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-53	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-13	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-41	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-42	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-43	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-44	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-45	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-47	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-50	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-228	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-229	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-231	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-233	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-234	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-235	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-238	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-239	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-240	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-241	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-251	< 0.002	150	7.4	0.1	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-84	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-84-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-78	-	-	-	-	-	-	-	-	0.67	2.2	3.4	0.21	48	34	9.2	1.0	-	0.56	-	0.49	-	-	-	-
Pyx-3-79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-80	-	-	-	-	-	-	-	-	0.26	0.62	3.0	0.086	36	49	9.0	1.2	-	-	-	-	-	-	-	-
Pyx-3-81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-87	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-87-Dup	< 0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	Wuestite wt %	Pyrrhotite wt %	Zoisite wt %	Grossularia wt %	Dolomite wt %	Paragonite wt %	Rutile wt %	Ankerite wt %	Siderite wt %	Pyrite wt %	Pyroaurite wt %	Gibbsite wt %	Total wt %
Dun-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-10	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-2	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-3	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-36	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-4	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-5	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-6	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-7	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-8	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-1-9	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-10	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-11	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-12	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-13	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-14	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-15	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-16	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-17	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-18	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-20	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-21	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-22	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-23	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-24	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-25	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-26	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-28	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-29	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-3	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-30	11	0.25	-	-	-	-	-	-	-	-	-	-	100
Dun-2-36	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-37	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-38	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-39	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-4	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-40	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-41	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-42	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-43	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-44	9.5	0.15	-	-	-	-	-	-	-	-	-	-	100
Dun-2-45	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-46	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-47	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-48	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-49	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-5	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-50	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-51	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-54	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-6	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-8	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-9	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-243	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-244	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-245	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-31	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-32	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-33	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-34	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-35	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-52	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-53	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-2-7	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-1-Dyke	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	Wuestite wt %	Pyrrhotite wt %	Zoisite wt %	Grossularia wt %	Dolomite wt %	Paragonite wt %	Rutile wt %	Ankerite wt %	Siderite wt %	Pyrite wt %	Pyroaurite wt %	Gibbsite wt %	Total wt %
Dun-3-6	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-10	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-11	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-12	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-4	7.5	-	-	-	-	-	-	-	-	-	2.6	-	100
Dun-3-5	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-7	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-8	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-9	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-3-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
Dun-3-9-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-11	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-12	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-14	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-15	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-16	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-17	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-18	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-19	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-1-20	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-100	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-101	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-102	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-103	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-104	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-105	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-106	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-107	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-108	-	-	31	0.3	-	-	-	-	-	-	-	-	100
Gab-2-236	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-55	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-56	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-57	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-58	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-59	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-60	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-61	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-62	-	-	29	4.4	-	-	-	-	-	-	-	-	100
Gab-2-63	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-64	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-65	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-66	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-67	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-68	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-69	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-70	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-71	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-72	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-73	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-74	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-75	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-76	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-77	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-78	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-79	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-80	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-81	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-82	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-83	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-84	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-85	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-86	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-87	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-88	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-89	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-90	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-91	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-93	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	Wuestite wt %	Pyrrhotite wt %	Zoisite wt %	Grossularia wt %	Dolomite wt %	Paragonite wt %	Rutile wt %	Ankerite wt %	Siderite wt %	Pyrite wt %	Pyroaurite wt %	Gibbsite wt %	Total wt %
Gab-2-94	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-95	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-96	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-97	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-98	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-99	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-2-246	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-22	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-23	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-28	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-28-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-13	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-14	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-15	-	-	15	-	-	-	-	-	-	-	-	-	100
Gab-3-16	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-17	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-18	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-19	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-20	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-21	-	-	-	-	-	-	-	-	-	-	-	-	100
Gab-3-24	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-25	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-26	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-27	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-29	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-30	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-31	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-32	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-33	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-21-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-13-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
Gab-3-32-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-1-21	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-1-23	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-1-30	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-22	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-24	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-25	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-26	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-27	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-28	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-1-29	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-109	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-132	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-133	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-144	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-145	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-149	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-155	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-156	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-157	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-158	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-160	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-161	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-162	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-163	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-164	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-165	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-166	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-167	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-168	-	-	-	-	0.68	-	0.23	0.11	0.15	0.001	-	-	100
IMV-2-169	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-173	-	-	-	-	0.26	-	0.52	0.1	0.11	-	-	-	100
IMV-2-175	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-176	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-177	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-178	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-179	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-180	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	Wuestite wt %	Pyrrhotite wt %	Zoisite wt %	Grossularia wt %	Dolomite wt %	Paragonite wt %	Rutile wt %	Ankerite wt %	Siderite wt %	Pyrite wt %	Pyroaurite wt %	Gibbsite wt %	Total wt %
IMV-2-181	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-182	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-183	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-184	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-185	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-186	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-110	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-111	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-112	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-113	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-114	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-115	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-116	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-117	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-118	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-119	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-120	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-121	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-122	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-123	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-124	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-125	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-126	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-127	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-128	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-129	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-130	-	-	-	-	0.02	4.1	0.96	13	0.12	-	-	-	100
MaMv-2-131	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-134	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-135	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-136	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-137	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-138	-	-	-	-	-	-	0.099	-	-	-	-	-	100
MaMv-2-139	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-140	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-141	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-142	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-143	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-146	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-147	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-148	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-150	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-151	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-152	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-153	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-154	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-159	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-170	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-171	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-172	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-174	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-187	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-188	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-2-92	-	-	-	-	-	-	-	-	-	-	-	-	-
IMV-2-247	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-34	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-41	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-53	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-57	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-35	-	-	-	-	-	-	-	-	-	-	-	-	100
MaMv-3-36	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-37	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-38	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-39	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-40	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-42	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-43	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-44	-	-	-	-	2.2	8.6	0.53	-	-	-	-	-	100
MaMv-3-45	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	Wuestite wt %	Pyrrhotite wt %	Zoisite wt %	Grossularia wt %	Dolomite wt %	Paragonite wt %	Rutile wt %	Ankerite wt %	Siderite wt %	Pyrite wt %	Pyroaurite wt %	Gibbsite wt %	Total wt %
MaMv-3-46	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-47	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-48	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-49	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-50	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-51	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-52	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-54	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-55	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-56	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-58	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-59	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-60	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-35-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
MaMv-3-39-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-31	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-33	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-38	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-39	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-40	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-46	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-48	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-49	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-54	-	-	-	-	-	-	-	-	-	-	-	-	-
TaU-1-34	-	-	-	-	-	-	-	-	-	-	-	-	-
TaU-1-35	-	-	-	-	-	-	-	-	-	-	-	-	-
TaU-1-37	-	-	-	-	-	-	-	-	-	-	-	-	-
TaU-1-52	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-32	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-51	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-1-55	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-189	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-19	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-190	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-200	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-205	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-207	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-209	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-215	4.5	-	-	-	-	-	-	-	-	-	3.4	-	100
Per-2-216	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-217	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-218	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-219	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-220	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-221	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-225	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-226	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-249	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-191	3.1	-	-	-	-	-	-	-	-	-	-	-	100
Per-2-192	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-193	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-194	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-195	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-196	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-197	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-198	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-199	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-201	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-202	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-203	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-204	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-206	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-208	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-210	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-211	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-212	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-213	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-214	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-222	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table A: Waste Rock and Ore Static Results

Waste Rock & Ore Sample ID	Wuestite wt %	Pyrrhotite wt %	Zoisite wt %	Grossularia wt %	Dolomite wt %	Paragonite wt %	Rutile wt %	Ankerite wt %	Siderite wt %	Pyrite wt %	Pyroaurite wt %	Gibbsite wt %	Total wt %
Per-2-223	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-224	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-227	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-2-248	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-75	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-76	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-61	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-62	-	-	-	-	-	-	-	-	0.38	-	-	1.7	100
Per-3-63	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-64	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-65	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-66	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-67	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-68	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-69	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-70	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-71	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-72	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-73	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-74	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-62-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-64-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
Per-3-72-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-53	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-13	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-41	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-42	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-43	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-44	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-45	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-47	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-1-50	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-228	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-229	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-230	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-231	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-232	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-233	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-234	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-235	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-237	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-238	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-239	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-240	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-241	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-242	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-250	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-2-251	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-84	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-84-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-77	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-78	-	-	-	-	-	-	-	-	-	-	-	-	100
Pyx-3-79	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-80	-	-	1.3	-	-	-	-	-	-	-	-	-	100
Pyx-3-81	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-82	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-83	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-85	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-86	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-87	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-88	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-89	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyx-3-87-Dup	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix E:
Table B: Tailings Static Results

Tailings Sample ID			CANA-13	CBS-003	CDS-003	CBS-001
Lithology			Dunite	Dunite	Dunite	Peridotite
SFE	Arsenic	mg/L	-	-	-	0.0004
	Barium	mg/L	-	-	-	0.0096
	Boron	mg/L	-	-	-	0.31
	Beryllium	mg/L	-	-	-	< 0.000007
	Bismuth	mg/L	-	-	-	< 0.00001
	Calcium	mg/L	-	-	-	7.0
	Cadmium	mg/L	-	-	-	0.0002
	Cobalt	mg/L	-	-	-	0.0001
	Chromium	mg/L	-	-	-	0.004
	Chromium VI	mg/L	-	-	-	0.0039
	Copper	mg/L	-	-	-	0.0003
	Iron	mg/L	-	-	-	< 0.007
	Potassium	mg/L	-	-	-	0.93
	Lithium	mg/L	-	-	-	0.0003
	Magnesium	mg/L	-	-	-	31
	Manganese	mg/L	-	-	-	0.00084
	Molybdenum	mg/L	-	-	-	0.0052
	Sodium	mg/L	-	-	-	2.6
	Nickel	mg/L	-	-	-	0.0062
	Lead	mg/L	-	-	-	0.00032
	Antimony	mg/L	-	-	-	< 0.0009
	Selenium	mg/L	-	-	-	0.00014
	Tin	mg/L	-	-	-	< 0.00006
	Strontium	mg/L	-	-	-	0.038
	Titanium	mg/L	-	-	-	< 0.00005
	Thorium	mg/L	-	-	-	< 0.0001
	Thallium	mg/L	-	-	-	0.000022
	Uranium	mg/L	-	-	-	0.000026
	Vanadium	mg/L	-	-	-	0.00007
	Tungsten	mg/L	-	-	-	0.00008
	Yttrium	mg/L	-	-	-	< 0.00002
	Zinc	mg/L	-	-	-	< 0.002
Supernatant Liquid	pH	No Unit	9.6	8.3	8.3	8.2
	Conductivity	uS/cm	371	261	230	141
	Alkalinity	mg/L as CaCO ₃	65	68	39	42
	Acidity	mg/L as CaCO ₃	< 2	< 2	< 2	< 2
	Fluoride	mg/L	< 0.06	< 0.06	< 0.06	< 0.06
	Sulphate	mg/L	32	20	23	14
	Chloride	mg/L	92	56	66	21
	Nitrite (as N)	as N mg/L	< 0.03	< 0.03	< 0.03	< 0.03
	Nitrate (as N)	as N mg/L	< 0.06	0.41	0.42	0.21
	Nitrate + Nitrite (as N)	as N mg/L	< 0.06	0.41	0.42	0.21
	Bromide	mg/L	0.6	< 0.3	< 0.3	< 0.3
	Chromium VI	mg/L	< 0.0002	0.0004	0.001	0.0005
	Aluminum (0.2µm)	mg/L	0.002	0.002	0.001	< 0.001
	Metals-filt	Prep	1.0	1.0	1.0	-
	Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
	Hardness	mg/L as CaCO ₃	262	94	82	68
	Silver	mg/L	< 0.00005	< 0.00005	< 0.00005	< 0.00005
	Aluminum	mg/L	0.2	0.019	0.019	0.003
	Arsenic	mg/L	0.0002	0.0004	< 0.0002	< 0.0002
	Barium	mg/L	0.0011	0.0071	0.0062	0.0078
	Beryllium	mg/L	< 0.000007	< 0.000007	< 0.000007	< 0.000007
	Boron	mg/L	0.13	0.031	0.19	0.22
	Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
	Calcium	mg/L	2.8	13	15	9.8
	Cadmium	mg/L	0.000012	0.000005	< 0.000003	0.000005
	Cobalt	mg/L	0.012	0.00056	0.00048	0.000025
	Chromium	mg/L	0.16	0.015	0.019	0.0023
	Copper	mg/L	0.016	0.0025	0.0008	< 0.0002
	Iron	mg/L	3.1	0.19	0.11	0.01
	Potassium	mg/L	2.7	1.4	1.4	1.1
	Lithium	mg/L	0.0014	0.0007	0.0007	0.0004
	Magnesium	mg/L	62	15	11	11
	Manganese	mg/L	0.083	0.0094	0.0081	0.0011
	Molybdenum	mg/L	0.0033	0.00043	0.00033	0.001
	Sodium	mg/L	32	26	25	14
	Nickel	mg/L	0.29	0.013	0.0061	0.0022
	Phosphorus	mg/L	0.042	0.017	0.007	< 0.003
	Lead	mg/L	0.00011	0.00011	< 0.00009	< 0.00009
	Antimony	mg/L	< 0.0009	< 0.0009	< 0.0009	< 0.0009
	Selenium	mg/L	0.0002	< 0.00004	< 0.00004	0.0001
	Silicon	mg/L	11	3.1	2.6	1.2
	Tin	mg/L	0.00025	0.00037	0.00068	< 0.00006
	Strontium	mg/L	0.0022	0.053	0.054	0.047
	Titanium	mg/L	0.011	0.00085	0.00069	0.00012
	Thallium	mg/L	0.00001	0.000009	0.000035	< 0.000005
	Uranium	mg/L	0.000002	< 0.000002	< 0.000002	0.000002
	Vanadium	mg/L	0.0012	0.00019	0.00012	0.00007

Tailings Sample ID Lithology			CANA-13	CBS-003	CDS-003	CBS-001
			Dunite	Dunite	Dunite	Peridotite
	Tungsten	mg/L	0.00007	0.00005	0.00003	0.00005
Supernatant	Yttrium	mg/L	0.00005	0.00004	< 0.00002	< 0.00002
Liquid	Zinc	mg/L	0.006	0.003	< 0.002	< 0.002
QEMSCAN	Mineral Mass (%)	Serpentine	87	86	89	90
		Serpentine(Fe)	3.1	3.6	2.6	3.9
		Talc	0.0044	0.0097	0.0087	0.029
		Amphibole	0.0065	0.0041	0.014	0.0064
		Orthopyroxene	0.014	0.031	0.015	0.021
		Clinopyroxene	0.23	0.0063	0.0068	0.07
		Olivine	0.0076	0.007	0.0051	0.0014
		Andradite	0.005	0	0	0
		Quartz	0.0022	0.021	0.0081	0.019
		Feldspars	0.068	0.012	0.0096	0.037
		Chlorite	0.38	0.17	0.3	2.1
		Mica/Clays	0.015	0.0054	0.0073	0.051
		Magnetite	1.9	3.4	2.7	1.7
		Brucite	3.0	2.4	3.5	0.01
		Magnesite	1.5	1.3	1.1	0.017
		Coalingite/Pyroaurite	0.039	1.0	0.07	0.029
		Cr-Minerals	1.8	1.7	0.94	0.36
		Ilmenite/Rutile	0.0029	0.00085	0.00048	0.015
		Pentlandite	0.46	0.068	0.024	0.00035
		Awaruite	0.0012	0.00045	0.024	0.00029
		Heazlewoodite	0.00018	0.021	0.0052	0.019
		Millerite	0	0.0012	0.00019	0.0006
		Ni-Arsenide	0	0	0	0
		Chalcopyrite	0.0014	0.042	0.014	0.0032
		Chalcocite	0.00021	0	0	0.001
		Pyrrhotite	0.0074	0	0.00048	0.0005
		Pyrite	0.00037	0.00037	0.00017	0.0022
		Tochilinite	0.12	0.0077	0.0014	0.00054
		Native Copper	0.00033	0	0	0
		Sphalerite	0.0045	0.0018	0	0.0022
		Apatite	0.0062	0.00012	0.027	0.012
		Calcite/Dolomite	0.036	0.045	0.034	1.2
		Gibbsite	0.0032	0	0.0016	0.005
		Other	0.0084	0.044	0.0076	0.007
		Total	100	100	100	100
QEMSCAN	Mean Grain Size by Frequency (µm)	Serpentine	22	20	20	20
		Serpentine(Fe)	7.3	7.8	7.1	7.1
		Talc	6.2	6.2	6.1	6.0
		Amphibole	6.5	21	16	6.2
		Orthopyroxene	6.0	6.0	6.0	5.9
		Clinopyroxene	24	9.0	9.4	13
		Olivine	6.5	7.2	7.2	7.8
		Andradite	11	0	0	0
		Quartz	7.3	14	9.4	8.5
		Feldspars	19	7.8	7.7	7.9
		Chlorite	12	10	10	12
		Mica/Clays	8.5	7.1	8.8	8.9
		Magnetite	11	10	10	10
		Brucite	10	10	12	6.9
		Magnesite	11	9.7	12	7.8
		Coalingite/Pyroaurite	9.2	14	8.2	15
		Cr-Minerals	13	12	10	11
		Ilmenite/Rutile	6.3	7.4	8.9	8.0
		Pentlandite	8.2	9.0	7.7	7.8
		Awaruite	6.0	6.0	6.5	5.8
		Heazlewoodite	6.0	7.6	7.8	6.7
		Millerite	0	6.0	6.0	5.8
		Ni-Arsenide	0	0	0	0
		Chalcopyrite	11	9.6	12	6.4
		Chalcocite	6.0	0	0	5.8
		Pyrrhotite	6.0	0	6.0	5.8
		Pyrite	6.0	6.0	6.0	7.0
		Tochilinite	8.0	7.0	6.7	5.8
		Native Copper	6.0	0	0	0
QEMSCAN	Mean Grain Size by Frequency (µm)	Sphalerite	8.1	7.9	0	7.3
		Apatite	9.6	6.0	12	12
		Calcite/Dolomite	8.2	8.5	7.5	8.7
		Gibbsite	20	0	13	9.7
		Other	10	11	10	8.1

Appendix E:
Table C: Overburden Static Results

Overburden Sample ID	Soil Unit	Material Type	Batch	ABA														ABA	
				Paste pH	Fizz Rate	Sample weight	HCl Added	HCl	NaOH	NaOH to pH=8.3	Final pH	NP	AP	Net NP	NP/AP	Sulphur (total)	Acid Leachable SO4-S		
				no unit	no unit	g	mL	Normality	Normality	mL	no unit	kg CaCO3/ t	kg CaCO3/ t	kg CaCO3/ t	ratio	%	%		
58201	Clay	Mineral	1	8.5	4.0	2.0	186	0.1	0.1	54	1.6	329	0.2	328	2106	< 0.005	<0.04		
58203	Clay	Mineral	1	8.3	4.0	2.0	183	0.1	0.1	65	1.6	297	1.0	296	288	0.033	<0.04		
58204	Clay	Mineral	1	8.2	4.0	2.0	177	0.1	0.1	61	1.6	290	0.8	289	357	0.026	<0.04		
58211	Organic	Organics	1	6.6	1.0	2.0	70	0.1	0.1	62	1.6	19	1.9	17	10	0.062	< 0.04		
58212	Clay	Mineral	1	8.4	4.0	2.0	207	0.1	0.1	37	1.9	424	0.2	423	2714	< 0.005	<0.04		
58214	Clay	Mineral	1	8.1	4.0	2.0	210	0.1	0.1	55	1.7	392	1.3	391	314	0.067	< 0.04		
58215	Clay	Mineral	1	8.2	4.0	2.0	173	0.1	0.1	58	1.6	289	0.9	287	308	0.03	<0.04		
58217	Clay	Mineral	1	8.2	4.0	2.0	214	0.1	0.1	59	1.7	383	0.2	382	2451	0.005	<0.04		
58218	Organic	Organics	1	6.6	1.0	2.0	55	0.1	0.1	44	1.6	29	2.3	28	12	0.075	0.07		
58219	Clay	Mineral	1	8.4	4.0	2.0	144	0.1	0.1	51	1.7	232	0.3	230	928	0.008	<0.04		
58220	Silt	Mineral (Acidic)	1	6.0	1.0	2.0	33	0.1	0.1	30	1.6	5.7	1.6	4.1	3.6	0.13	0.08		
58221	Clay	Mineral	1	8.5	4.0	2.0	180	0.1	0.1	31	1.9	372	0.4	371	992	0.012	<0.04		
58223	Clay	Mineral	1	8.1	4.0	2.0	181	0.1	0.1	37	1.8	360	1.3	359	288	0.061	< 0.04		
58224	Clay	Mineral	1	8.3	4.0	2.0	185	0.1	0.1	70	1.5	284	1.3	283	222	0.041	0.04		
58230	Organic	Organics	1	6.4	1.0	2.0	20	0.1	0.1	17	1.7	7.8	0.9	6.6	8.9	0.028	<0.04		
58231	Clay	Mineral	1	8.4	4.0	2.0	225	0.1	0.1	47	1.8	448	0.3	446	1792	0.008	<0.04		
58233	Clay	Mineral	1	8.3	4.0	2.0	120	0.1	0.1	42	1.6	193	0.7	192	269	0.023	<0.04		
58241	Organic	Organics	1	6.3	1.0	2.0	39	0.1	0.1	40	1.5	-3.5	4.9	-4.8	-0.7	0.16	0.16		
58243	Clay	Mineral	1	8.2	4.0	2.0	150	0.1	0.1	38	1.7	281	1.4	280	195	0.046	0.05		
58360	Silt	Mineral	1	8.1	4.0	2.0	125	0.1	0.1	37	1.5	218	1.3	217	170	0.041	0.05		
167367	Clay	Mineral	1	8.2	4.0	2.0	200	0.1	0.1	76	1.6	305	0.3	304	1084	0.009	<0.04		
167370	Clay	Mineral	1	8.3	4.0	2.0	151	0.1	0.1	49	1.6	256	0.8	254	341	0.024	<0.04		
167378	Silt	Mineral	1	8.5	4.0	2.0	108	0.1	0.1	37	1.6	180	0.7	178	250	0.023	<0.04		
167380	Silt	Mineral (Acidic)	1	3.1	4.0	2.0	108	0.1	0.1	37	1.7	180	0.8	179	240	0.024	<0.04		
167729	Organic	Organics	1	6.7	1.0	2.0	59	0.1	0.1	43	1.6	41	2.9	39	14	0.092	0.09		
167730	Clay	Mineral	1	8.2	4.0	2.0	210	0.1	0.1	66	1.6	361	0.5	360	680	0.017	<0.04		
167731	Clay	Mineral	1	8.2	4.0	2.0	209	0.1	0.1	53	1.7	395	0.5	394	744	0.017	<0.04		
167733	Clay	Mineral	1	8.2	4.0	2.0	160	0.1	0.1	53	1.5	267	1.2	266	231	0.037	<0.04		
167738	Organic	Organics	1	6.1	1.0	2.0	36	0.1	0.1	33	1.5	13	4.3	12	3	0.14	0.14		
167739	Clay	Mineral	1	8.3	4.0	2.0	211	0.1	0.1	52	1.7	400	1.0	399	400	0.032	<0.04		
CSA001	Organic	Organics	3	6.7	2.0	2.0	39	0.1	0.1	19	1.6	49	2.4	48	21	0.076	< 0.04		
CSA002	Organic	Organics	3	6.2	2.0	2.0	35	0.1	0.1	31	1.7	9.0	2.8	6.2	3.2	0.16	0.07		
CSA003	Organic	Organics	3	5.6	2.0	2.0	34	0.1	0.1	19	1.5	38	3.8	36	10	0.12	< 0.04		
CSA004	Organic	Organics	3	5.0	2.0	2.0	20	0.1	0.1	16	1.8	8.9	5.4	7.7	1.7	0.17	< 0.04		
CSA005	Organic	Organics	3	5.2	2.0	2.0	30	0.1	0.1	16	1.5	33	1.9	31	17	0.22	0.16		
CSA006	Organic	Organics	3	3.3	2.0	2.0	20	0.1	0.1	12	1.1	20	4.3	19	5	0.14	< 0.04		
CSA007	Organic	Organics	3	5.4	2.0	2.0	39	0.1	0.1	14	1.5	62	1.3	61	50	0.17	0.13		
CSA009	Organic	Organics	3	4.8	2.0	2.1	20	0.1	0.1	20	1.6	3.4	4.9	2.2	0.7	0.16	< 0.04		
CSA010	Organic	Organics	3	6.0	2.0	2.1	20	0.1	0.1	13	1.2	17	1.9	15	9.2	0.15	0.09		
CSA011	Organic	Organics	3	4.5	2.0	2.0	40	0.1	0.1	18	1.5	55	9.8	54	6	0.31	< 0.04		
CSA012	Organic	Organics	3	4.3	2.0	2.0	20	0.1	0.1	13	1.2	18	2.8	15	6.3	0.083	< 0.04		
CSA013	Organic	Organics	3	5.4	2.0	2.0	20	0.1	0.1	17	1.6	6.5	3.0	5.3	2.2	0.095	< 0.04		
CSA014	Organic	Organics	3	5.4	2.0	2.1	33	0.1	0.1	20	1.7	30	1.9	28	16	0.21	0.15		
CSA015	Organic	Organics	3	4.4	2.0	2.0	32	0.1	0.1	18	1.5	35	4.3	34	8	0.14	< 0.04		
CSA016	Organic	Organics	3	6.2	2.0	2.0	20	0.1	0.1	12	1.2	19	4.8	18	4	0.16	< 0.04		
CSA017	Organic	Organics	3	4.6	2.0	2.0	36	0.1	0.1	19	1.6	42	1.3	41	33	0.24	0.2		
CSA018	Organic	Organics	3	4.3	2.0	1.9	20	0.1	0.1	14	1.2	17	3.3	15	5	0.1	< 0.04		
CSA019	Organic	Organics	3	5.6	2.0	1.9	41	0.1	0.1	17	1.5	63	1.6	61	40	0.15	< 0.04		
CSA020	Organic	Organics	3	4.8	2.0	2.0	20	0.1	0.1	17	1.1	7.6	2.0	6.4	3.7	0.065	< 0.04		
CSA008	Organic	Organics	3	5.7	2.0	2.0	20	0.1	0.1	16	1.2	10	5.4	9.0	1.9	0.17	< 0.04		

Appendix E:
Table C: Overburden Static Results

Overburden Sample ID	Elemental			Elemental																	
	Sulphide %	Carbon (total) %	Carbonate (HCl) %	Silver ppm	Aluminum ppm	Arsenic ppm	Barium ppm	Beryllium ppm	Bismuth ppm	Calcium ppm	Cadmium ppm	Cobalt ppm	Chromium ppm	Copper ppm	Iron ppm	Potassium ppm	Lithium ppm	Magnesium ppm	Manganese ppm	Molybdenum ppm	Nickel ppm
58201	< 0.04	4.0	19	< 0.5	48000	2.4	420	0.91	0.23	84000	0.07	8.0	45	17	20000	19000	18	42000	480	0.6	19
58203	< 0.04	3.7	17	< 0.5	56000	3.2	430	1.0	0.22	100000	0.08	11	63	56	27000	20000	28	27000	470	1.7	29
58204	< 0.04	3.6	17	< 0.5	54000	2.6	430	1.0	0.19	98000	0.07	11	62	20	26000	19000	26	27000	460	0.5	28
58211	0.06	33	39	< 0.5	12000	1.4	110	0.33	0.12	47000	0.39	2.0	14	33	10000	3100	5.0	6400	170	1.1	8.3
58212	< 0.04	5.1	25	< 0.5	45000	2.5	370	0.87	0.14	140000	0.08	8.0	46	22	19000	17000	20	34000	400	0.3	21
58214	0.04	5.1	24	< 0.5	44000	2.4	370	0.79	0.13	130000	0.07	6.0	39	34	16000	16000	16	34000	380	1.2	17
58215	< 0.04	3.7	17	< 0.5	54000	2.4	440	1.0	0.18	100000	0.09	10	59	20	25000	19000	27	26000	450	0.4	27
58217	< 0.04	4.8	23	< 0.5	48000	2.1	380	0.96	0.17	130000	0.1	9.0	53	24	23000	18000	25	32000	490	0.5	24
58218	< 0.04	37	7.5	< 0.5	10000	1.5	89	0.29	< 0.09	34000	0.19	2.0	13	10	6400	3100	5.0	5100	180	0.7	8.0
58219	< 0.04	4.2	20	< 0.5	48000	2.5	430	0.96	0.21	94000	0.1	8.0	44	26	20000	19000	19	43000	470	0.7	20
58220	0.05	30	27	< 0.5	25000	1.5	200	0.49	0.14	23000	0.41	3.0	28	8.7	9300	7900	11	3800	170	0.4	7.9
58221	< 0.04	4.4	22	< 0.5	48000	2.5	390	0.88	0.16	110000	0.07	7.0	44	23	19000	18000	20	38000	430	0.6	19
58223	0.04	4.8	22	< 0.5	43000	2.2	370	0.78	0.12	120000	0.06	6.0	37	11	16000	16000	15	33000	340	0.4	16
58224	< 0.04	3.6	17	< 0.5	53000	2.5	420	1.0	0.16	100000	0.08	9.0	52	25	22000	18000	23	24000	410	0.6	23
58230	< 0.04	5.7	11	< 0.5	65000	3.4	500	1.0	0.22	17000	0.14	10	66	11	29000	23000	28	9500	400	0.3	27
58231	< 0.04	5.4	27	< 0.5	42000	2.4	350	0.77	0.13	150000	0.05	7.0	40	15	18000	16000	18	38000	360	0.3	18
58233	< 0.04	2.5	11	< 0.5	64000	1.8	440	1.0	0.15	73000	0.05	7.0	38	13	20000	20000	33	19000	380	0.5	18
58241	< 0.04	42	19	< 0.5	4900	1.5	57	0.11	< 0.09	28000	0.3	1.0	5.6	9.0	4500	1100	< 2	2200	130	0.7	2.7
58243	< 0.04	3.7	17	< 0.5	54000	2.4	430	1.0	0.18	100000	0.05	10	57	18	24000	18000	25	26000	440	0.4	26
58360	< 0.04	2.3	10	< 0.5	55000	1.6	420	0.73	< 0.09	76000	0.02	8.0	46	25	18000	14000	10	12000	330	0.7	20
167367	< 0.04	3.7	18	< 0.5	54000	3.7	470	1.0	0.32	84000	0.1	11	68	21	29000	17000	39	24000	540	0.9	30
167370	< 0.04	3.3	15	< 0.5	62000	2.8	440	1.0	0.22	84000	0.11	11	63	22	27000	18000	35	23000	470	0.7	29
167378	< 0.04	2.2	11	< 0.5	57000	1.7	410	0.96	0.12	64000	0.06	5.0	38	9.0	14000	16000	12	17000	300	0.6	14
167380	< 0.04	2.2	9.1	< 0.5	81000	2.8	520	2.0	0.34	58000	0.11	19	130	37	48000	20000	54	24000	630	0.7	65
167729	< 0.04	34	28	< 0.5	15000	1.0	130	0.4	0.1	39000	0.33	3.0	16	9.5	11000	3200	4.9	6000	280	0.6	8.6
167730	< 0.04	3.8	18	< 0.5	63000	4.2	460	1.0	0.28	99000	0.11	14	76	26	33000	19000	46	30000	900	0.5	37
167731	< 0.04	5.1	24	< 0.5	47000	2.4	350	0.95	0.14	120000	0.1	7.0	43	13	18000	16000	25	33000	350	0.4	19
167733	< 0.04	3.4	16	< 0.5	61000	2.6	450	1.0	0.21	86000	0.11	10	60	19	26000	18000	34	24000	460	0.5	28
167738	< 0.04	45	12	< 0.5	5200	2.0	43	0.14	< 0.09	21000	0.13	0.85	5.6	6.6	4200	1100	2.1	2500	39	0.2	2.9
167739	< 0.04	5.0	24	< 0.5	47000	1.5	390	1.0	0.16	120000	0.1	7.0	46	15	19000	15000	28	33000	420	0.3	20
CSA001	< 0.04	43	12	< 0.5	5800	2.4	58	0.22	0.2	25000	0.66	1.1	13	8.7	3300	1400	3.7	3800	51	0.5	4.4
CSA002	0.09	29	11	< 0.5	28000	2.4	240	0.66	0.12	22000	0.38	5.9	43	13	14000	9300	14	4700	520	0.6	14
CSA003	< 0.04	44	6.4	< 0.5	3500	2.1	43	0.1	0.18	22000	0.71	0.46	11	15	1800	1100	< 2	3900	27	0.6	2.9
CSA004	< 0.04	47	7.8	< 0.5	3600	0.9	47	0.11	< 0.09	18000	0.2	0.57	34	4.4	1700	770	< 2	2200	86	0.5	2.5
CSA005	0.06	46	11	< 0.5	4700	1.2	61	0.12	< 0.09	21000	0.26	0.9	16	6.1	3400	1100	< 2	2200	120	0.7	3.1
CSA006	< 0.04	47	11	< 0.5	1900	2.1	35	0.05	< 0.09	8700	0.61	0.48	14	4.9	2100	940	< 2	810	15	1.3	1.8
CSA007	0.04	45	6.3	< 0.5	3700	3.2	45	0.15	0.28	27000	0.48	0.9	12	9.2	1800	790	< 2	2600	150	2.6	4.2
CSA009	< 0.04	45	7.4	< 0.5	4700	1.4	49	0.14	0.14	14000	1.2	1.2	34	9.1	2900	1300	< 2	1800	31	0.5	5.8
CSA010	0.06	46	14	< 0.5	1700	1.1	35	0.05	0.15	4500	0.43	0.3	13	12	990	580	< 2	470	110	0.4	2.5
CSA011	< 0.04	46	9.9	< 0.5	4200	< 0.5	64	0.18	< 0.09	28000	0.37	0.82	13	12	4200	800	< 2	1800	160	0.7	4.3
CSA012	0.09	48	8.8	< 0.5	4400	1.8	51	0.13	0.15	8300	0.41	0.89	14	7.9	2700	1400	2.0	1600	54	0.4	3.5
CSA013	< 0.04	46	5.9	< 0.5	3600	2.8	47	0.09	0.33	11000	0.82	0.63	13	7.9	1900	1100	< 2	1500	34	0.5	2.6
CSA014	0.06	35	10	< 0.5	23000	1.1	200	0.48	0.11	21000	0.45	2.8	32	9.7	7200	6800	11	3100	210	0.4	7.7
CSA015	< 0.04	43	9.5	< 0.5	5200	1.8	52	0.11	0.16	20000	0.38	0.83	17	10	2400	1500	< 2	2200	58	0.6	3.5
CSA016	< 0.04	50	9.9	< 0.5	2600	0.6	30	0.07	< 0.09	5600	0.15	0.23	26	3.7	920	820	< 2	360	13	3.9	6.1
CSA017	0.04	39	7.4	< 0.5	13000	1.6	120	0.3	0.11	25000	0.58	2.3	30	8.6	4600	3900	5.1	2900	250	7.0	12
CSA018	< 0.04	38	10	< 0.5	16000	2.4	180	0.28	0.45	7800	0.79	1.3	28	15	4600	6000	5.0	1400	160	1.7	7.7
CSA019	0.05	44	8.1	< 0.5	3600	1.1	59	0.12	< 0.09	30000	0.44	0.72	16	5.1	3800	680	< 2	3100	130	3.0	4.1
CSA020	< 0.04	46	11	< 0.5	2300	0.9	32	0.06	< 0.09	5700	0.38	0.27	19	5.8	900	800	< 2	940	18	1.3	2.7
CSA008	< 0.04	49	8.9	< 0.5	3000	1.1	39	0.08	< 0.09	7600	0.3	0.34	15	7.0	1200	700	< 2	570	13	1.9	2.4

Appendix E:
Table C: Overburden Static Results

Overburden Sample ID												SFE									
	Lead ppm	Antimony ppm	Selenium ppm	Tin ppm	Strontium ppm	Titanium ppm	Thallium ppm	Uranium ppm	Vanadium ppm	Yttrium ppm	Zinc ppm	Sample weight g	Volume D.I. Water mL	Final pH s.u.	pH No unit	Conductivity uS/cm	Alkalinity mg/L	Acidity mg/L	Sulphate mg/L	Chloride mg/L	Bromide mg/L
58201	12	< 0.8	< 0.7	6.0	200	2500	< 0.5	1.3	51	< 20	35	250	750	8.3	8.4	137	61	< 2	< 2	< 1	< 3
58203	13	< 0.8	< 0.7	6.2	240	2200	< 0.5	1.4	64	< 20	53	250	750	8.2	8.6	252	65	< 2	67	< 1	< 3
58204	12	< 0.8	< 0.7	< 6	240	2100	< 0.5	1.5	61	< 20	50	250	750	8.3	8.5	307	62	< 2	78	< 1	< 3
58211	4.0	< 0.8	1.8	< 6	100	570	< 0.5	3.1	16	< 20	17	190	570	6.0	7.7	260	82	< 2	< 20	6.0	< 3
58212	10	< 0.8	< 0.7	< 6	230	1900	< 0.5	1.2	47	< 20	38	250	750	8.6	8.7	118	59	< 2	2.0	< 1	< 3
58214	9.0	< 0.8	< 0.7	6.1	250	1800	< 0.5	1.7	40	< 20	31	250	750	8.2	8.5	323	54	< 2	95	< 1	< 3
58215	12	< 0.8	< 0.7	6.0	250	2000	< 0.5	1.3	59	< 20	49	250	750	8.3	8.6	298	79	< 2	63	< 1	< 3
58217	10	< 0.8	< 0.7	< 6	220	2100	< 0.5	1.3	54	< 20	42	250	750	8.4	8.8	197	71	< 2	9.0	< 1	< 3
58218	2.0	< 0.8	0.8	< 6	86	460	< 0.5	0.52	15	< 20	22	150	450	5.9	7.8	191	66	< 2	20	5.0	< 3
58219	12	< 0.8	< 0.7	6.3	210	2500	< 0.5	1.4	51	< 20	35	250	750	8.2	8.7	175	65	< 2	10	< 1	< 3
58220	10	< 0.8	1.0	< 6	90	1200	< 0.5	4.1	23	< 20	36	200	600	6.0	7.9	286	109	< 2	< 20	8.0	< 3
58221	10	< 0.8	< 0.7	< 6	220	2100	< 0.5	1.2	47	< 20	35	250	750	8.7	9.0	121	61	< 2	< 2	< 1	< 3
58223	9.0	< 0.8	< 0.7	< 6	240	1600	< 0.5	1.1	38	< 20	29	250	750	8.4	7.7	277	57	< 2	78	< 1	< 3
58224	12	< 0.8	< 0.7	6.0	270	1900	< 0.5	1.3	52	< 20	43	250	750	8.3	8.5	282	82	< 2	58	< 1	< 3
58230	15	< 0.8	< 0.7	< 6	210	2700	< 0.5	1.7	68	< 20	64	250	750	6.0	7.5	343	63	< 2	< 20	5.0	< 3
58231	9.0	< 0.8	< 0.7	< 6	220	1800	< 0.5	1.1	43	< 20	29	250	750	8.7	8.6	122	59	< 2	< 2	< 1	< 3
58233	12	< 0.8	< 0.7	< 6	290	1700	< 0.5	1.2	42	< 20	46	250	750	8.3	8.8	289	74	< 2	68	< 1	< 3
58241	2.0	< 0.8	0.9	< 6	82	240	< 0.5	0.33	7.1	< 20	8.9	150	450	5.8	7.6	204	59	46	< 20	7.0	< 3
58243	12	< 0.8	< 0.7	6.1	260	2000	< 0.5	1.3	57	< 20	46	250	750	8.3	8.6	305	94	< 2	68	< 1	< 3
58360	8.0	< 0.8	< 0.7	< 6	320	1300	< 0.5	0.7	46	< 20	24	250	750	9.2	8.2	144	32	89	38	1.0	< 3
167367	14	< 0.8	< 0.7	6.6	180	2700	0.5	1.5	70	< 20	51	250	750	8.5	8.3	160	81	< 2	< 2	< 1	< 3
167370	12	< 0.8	< 0.7	8.2	270	2200	< 0.5	1.4	62	< 20	51	250	750	8.4	8.8	281	99	< 2	49	< 1	< 3
167378	10	< 0.8	< 0.7	7.7	290	1400	< 0.5	0.78	32	< 20	20	250	750	8.8	8.6	254	58	< 2	60	6.0	< 3
167380	14	< 0.8	< 0.7	7.8	220	3300	0.54	1.6	110	< 20	85	250	750	8.4	8.8	394	90	< 2	110	1.0	< 3
167729	4.0	< 0.8	0.8	< 6	100	560	< 0.5	1.4	14	< 20	20	140	420	5.6	7.5	295	94	< 2	33	8.0	< 3
167730	14	< 0.8	< 0.7	7.8	210	2800	< 0.5	1.4	77	< 20	64	250	750	8.4	9.1	165	97	< 2	< 2	< 1	< 3
167731	9.0	< 0.8	< 0.7	7.2	240	1800	< 0.5	1.1	42	< 20	31	250	750	8.3	8.5	126	58	< 2	< 2	< 1	< 3
167733	12	< 0.8	< 0.7	6.9	270	2200	< 0.5	1.4	60	< 20	49	250	750	8.2	9.1	276	91	< 2	49	< 1	< 3
167738	2.0	< 0.8	0.7	< 6	42	270	< 0.5	0.43	6.7	< 20	4.3	120	360	5.6	7.7	250	103	< 2	10	17	< 3
167739	10	< 0.8	< 0.7	7.0	210	2000	< 0.5	1.3	47	< 20	34	250	750	8.3	8.9	170	78	< 2	< 20	1.0	< 3
CSA001	20	< 0.8	0.7	< 6	37	240	0.08	0.4	6.5	3.1	31	249	750	-	8.7	136	68	< 2	< 2	5.8	< 3
CSA002	12	< 0.8	0.7	< 6	100	1100	0.24	1.3	26	7.6	55	249	750	-	8.4	165	88	< 2	< 2	2.5	< 3
CSA003	24	< 0.8	0.7	< 6	51	220	0.06	0.4	4.0	1.2	41	249	750	-	8.1	200	60	< 2	3.4	32	< 3
CSA004	5.0	< 0.8	0.6	< 6	46	180	0.07	0.3	3.4	1.4	14	251	750	-	7.8	97	45	< 2	< 2	3.0	< 3
CSA005	4.0	< 0.8	0.9	< 6	61	270	0.09	0.8	4.2	1.9	12	250	750	-	8.1	77	38	< 2	< 2	< 2	< 3
CSA006	14	< 0.8	0.5	< 6	30	80	0.05	0.1	1.8	0.7	24	250	750	-	7.3	82	38	< 2	2.7	< 2	< 3
CSA007	20	< 0.8	1.0	< 6	68	140	0.1	0.4	6.3	2.0	20	249	750	-	7.7	136	53	< 2	2.2	< 2	< 3
CSA009	20	< 0.8	0.6	< 6	34	190	0.07	0.2	4.7	1.5	27	250	750	-	7.6	82	37	< 2	< 2	< 2	< 3
CSA010	23	< 0.8	0.5	< 6	13	46	0.04	0.1	1.4	0.5	48	250	750	-	7.8	68	34	< 2	< 2	< 2	< 3
CSA011	3.0	< 0.8	1.1	< 6	81	180	0.07	3.1	8.6	2.5	19	249	750	-	7.9	102	48	< 2	2.7	< 2	< 3
CSA012	17	< 0.8	0.5	< 6	24	200	0.06	0.4	4.0	1.9	28	248	750	-	7.4	103	39	12	< 2	2.6	< 3
CSA013	39	< 0.8	0.8	< 6	28	180	0.07	0.3	3.8	1.2	26	250	750	-	8.0	115	59	< 2	< 2	< 2	< 3
CSA014	9.0	< 0.8	0.9	< 6	90	1100	0.24	1.6	21	5.7	32	249	750	-	7.8	110	52	< 2	< 2	2.2	< 3
CSA015	21	< 0.8	0.5	< 6	62	190	0.06	0.2	5.5	1.2	16	249	750	-	7.9	233	67	< 2	< 2	44	< 3
CSA016	3.0	< 0.8	0.5	< 6	19	100	0.03	0.2	9.0	0.8	7.7	252	750	-	8.0	81	39	< 2	< 2	< 2	< 3
CSA017	18	< 0.8	0.9	< 6	76	570	0.15	0.9	23	3.4	22	250	750	-	8.0	185	94	< 2	< 2	< 2	< 3
CSA018	55	< 0.8	0.8	< 6	59	770	0.2	0.6	14	2.5	42	249	750	-	7.2	147	50	27	3.0	6.1	< 3
CSA019	7.0	< 0.8	0.7	< 6	71	170	0.06	0.4	6.5	1.7	16	252	750	-	7.5	89	38	< 2	< 2	< 2	< 3
CSA020	7.0	< 0.8	0.4	< 6	22	85	0.03	0.2	3.8	0.6	17	251	750	-	7.4	79	27	< 2	< 2	5.1	< 3
CSA008	6.0	< 0.8	0.5	< 6	23	190	0.07	0.3	4.7	1.0	18	250	750	-	8.0	77	38	< 2	< 2	< 2	< 3

Appendix E:
Table C: Overburden Static Results

Overburden Sample ID	SFE																			
	Fluoride mg/L	Chromium VI µg/L	Aluminum (0.2µm) mg/L	Mercury mg/L	Silver mg/L	Aluminum mg/L	Arsenic mg/L	Barium mg/L	Boron mg/L	Beryllium mg/L	Bismuth mg/L	Calcium mg/L	Cadmium mg/L	Cobalt mg/L	Chromium mg/L	Copper mg/L	Iron mg/L	Potassium mg/L	Lithium mg/L	Magnesium mg/L
58201	0.99	2.5	0.015	0.00001	< 0.00005	0.26	0.0029	0.0071	0.22	0.000022	< 0.00001	19	0.000004	0.00013	0.0036	0.0054	0.25	1.1	0.0034	2.0
58203	1.3	2.0	0.01	< 0.00001	< 0.00005	0.03	0.0016	0.027	0.45	0.000013	< 0.00001	35	0.000006	0.000052	0.0019	0.0052	0.027	3.7	0.0088	5.4
58204	1.2	1.3	0.01	< 0.00001	< 0.00005	0.051	0.0061	0.018	0.45	< 0.000007	0.00005	35	0.000015	0.000076	0.0013	0.0064	0.046	3.8	0.0065	5.2
58211	0.27	1.5	0.51	0.00002	< 0.00005	0.64	0.0042	0.019	0.99	0.00011	0.00001	41	0.00006	0.00042	0.0025	0.027	0.6	0.56	0.0017	10
58212	1.5	3.6	0.033	< 0.00001	< 0.00005	0.19	0.0034	0.0048	0.21	0.000016	< 0.00001	14	0.000008	0.00011	0.0043	0.002	0.16	0.79	0.003	1.9
58214	1.3	1.5	0.007	< 0.00001	< 0.00005	0.044	0.0033	0.021	0.21	< 0.000007	< 0.00001	45	0.000008	0.000054	0.0017	0.0036	0.035	2.7	0.0084	6.2
58215	1.3	1.4	0.012	< 0.00001	< 0.00005	0.18	0.013	0.023	0.54	0.000012	< 0.00001	32	0.000031	0.00014	0.0018	0.0062	0.12	3.8	0.0081	4.6
58217	1.2	1.8	0.02	< 0.00001	< 0.00005	0.21	0.0039	0.013	0.48	0.000012	< 0.00001	28	0.00001	0.00013	0.0023	0.0071	0.18	1.5	0.0024	1.7
58218	0.27	2.6	0.17	< 0.00001	< 0.00005	0.12	0.013	0.014	1.4	0.00007	< 0.00001	25	0.00007	0.00081	0.0018	0.021	0.12	0.77	0.0016	4.6
58219	1.1	1.7	0.041	< 0.00001	< 0.00005	0.18	0.0021	0.013	0.18	0.00001	< 0.00001	30	0.000012	0.00012	0.0021	0.0071	0.15	1.7	0.0044	1.9
58220	0.2	2.6	0.72	0.00002	< 0.00005	0.36	0.0053	0.032	1.1	0.00003	0.00002	47	0.0001	0.0013	0.0028	0.13	0.34	1.2	0.0017	11
58221	1.0	3.3	0.018	< 0.00001	< 0.00005	0.27	0.0033	0.0046	0.26	0.000017	< 0.00001	13	0.00001	0.00011	0.0037	0.0024	0.22	0.75	0.0019	1.6
58223	1.1	1.1	0.008	< 0.00001	< 0.00005	0.043	0.0027	0.018	0.25	0.000009	< 0.00001	38	0.000003	0.00007	0.0012	0.0047	0.035	3.1	0.0069	4.7
58224	0.98	1.4	0.007	< 0.00001	< 0.00005	0.079	0.0033	0.03	0.45	0.000009	< 0.00001	37	0.000003	0.000097	0.0016	0.006	0.067	4.4	0.0078	5.7
58230	0.17	2.3	0.68	0.00005	< 0.00005	0.71	0.0034	0.03	0.84	0.00018	0.00001	50	0.00009	0.00083	0.0042	0.0073	0.69	1.2	0.002	12
58231	0.47	0.3	0.026	0.00001	< 0.00005	0.2	0.0024	0.0055	0.21	0.000007	< 0.00001	17	0.000005	0.000081	0.0021	0.0036	0.17	0.46	0.0011	1.9
58233	1.1	1.5	0.025	< 0.00001	< 0.00005	0.078	0.0033	0.027	0.45	0.000012	< 0.00001	43	0.000004	0.00011	0.0016	0.0069	0.061	4.2	0.0083	5.4
58241	0.22	2.7	0.18	0.00002	< 0.00005	0.13	0.0096	0.024	1.5	0.00011	0.00001	29	0.00008	0.00057	0.0018	0.0041	0.25	0.68	0.0017	4.5
58243	1.1	1.1	0.011	0.00002	< 0.00005	0.071	0.0047	0.021	0.45	< 0.000007	< 0.00001	42	0.000005	0.00013	0.0015	0.0087	0.052	5.4	0.0079	5.8
58360	0.19	0.3	0.28	< 0.00001	< 0.00005	0.17	0.0016	0.0085	0.081	0.000011	< 0.00001	17	0.000003	0.000013	0.00043	0.0011	0.007	2.7	0.0028	2.2
167367	0.97	4.7	0.26	< 0.00001	< 0.00005	0.19	0.003	0.0067	0.38	0.000011	< 0.00001	17	0.000007	0.000088	0.0056	0.0026	0.15	1.1	0.0025	3.0
167370	0.89	2.0	0.017	< 0.00001	< 0.00005	0.095	0.007	0.014	0.62	< 0.000007	< 0.00001	19	0.000004	0.00011	0.0022	0.0084	0.076	3.2	0.0077	3.3
167378	0.49	1.7	0.021	< 0.00001	< 0.00005	0.048	0.0017	0.013	0.18	< 0.000007	< 0.00001	22	0.000016	0.000086	0.002	0.0034	0.049	5.7	0.0076	5.6
167380	0.41	1.3	0.005	0.00001	< 0.00005	0.01	0.0034	0.043	0.25	< 0.000007	< 0.00001	25	0.000006	0.000043	0.00095	0.0033	< 0.007	6.1	0.0069	18
167729	0.17	1.6	0.55	0.00004	< 0.00005	1.1	0.0034	0.046	0.91	0.00007	0.00001	42	0.00012	0.0018	0.0018	0.025	0.78	1.2	0.0019	9.9
167730	0.97	4.5	0.044	0.00002	< 0.00005	0.22	0.0026	0.007	0.43	0.000009	< 0.00001	13	0.000005	0.0002	0.0053	0.011	0.18	0.91	0.0025	2.2
167731	1.0	2.8	0.014	< 0.00001	< 0.00005	0.25	0.002	0.0064	0.27	< 0.000007	< 0.00001	14	0.000015	0.00013	0.0035	0.0035	0.2	0.9	0.0029	1.5
167733	0.91	1.6	0.52	< 0.00001	< 0.00005	0.1	0.0037	0.012	0.45	< 0.000007	< 0.00001	22	0.000008	0.0001	0.0015	0.0073	0.081	2.6	0.0066	3.7
167738	0.3	3.6	0.56	< 0.00001	< 0.00005	0.46	0.018	0.039	1.8	0.00012	0.00001	34	0.0001	0.0015	0.0026	0.011	0.61	1.2	0.0024	6.8
167739	0.68	2.1	0.015	< 0.00001	< 0.00005	0.28	0.0019	0.0097	0.26	0.000028	< 0.00001	23	0.00001	0.0002	0.0039	0.024	0.24	0.7	0.0014	1.9
CSA001	0.2	-	-	0.00001	< 0.00005	0.21	0.0017	0.0065	0.3	0.000007	< 0.00001	8.3	0.000022	0.000083	0.00076	0.0052	0.11	0.95	0.0007	2.5
CSA002	0.23	-	-	< 0.00001	< 0.00005	0.61	0.0013	0.012	0.54	0.000014	< 0.00001	14	0.000026	0.00049	0.0015	0.0036	0.9	7.3	0.0021	3.8
CSA003	0.2	-	-	0.00001	< 0.00005	0.2	0.0027	0.011	0.46	0.000011	< 0.00001	10	0.00003	0.00017	0.0011	0.0054	0.12	1.8	0.0009	3.5
CSA004	0.18	-	-	0.00002	< 0.00005	0.094	0.0042	0.0071	0.45	0.000008	0.00001	7.2	0.000047	0.00021	0.00093	0.003	0.067	1.4	0.001	2.3
CSA005	0.17	-	-	0.00001	< 0.00005	0.11	0.0013	0.0044	0.49	< 0.000007	< 0.00001	5.6	0.000007	0.000086	0.001	0.0016	0.21	0.83	0.0011	1.5
CSA006	0.2	-	-	0.00002	< 0.00005	0.38	0.0024	0.015	0.79	0.000019	0.00004	5.2	0.0001	0.00026	0.0017	0.023	0.3	3.3	0.0016	1.8
CSA007	0.2	-	-	0.00002	< 0.00005	0.13	0.0037	0.014	0.6	0.000012	0.00001	16	0.00006	0.00041	0.001	0.0073	0.093	2.1	0.0008	4.7
CSA009	0.19	-	-	< 0.00001	< 0.00005	0.29	0.0018	0.0072	0.57	0.000013	0.00001	6.5	0.000055	0.00028	0.0038	0.011	0.31	2.2	0.0013	1.7
CSA01																				

Appendix E:
Table C: Overburden Static Results

Overburden Sample ID	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Silicon	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
58201	0.0062	0.0047	11	0.0007	0.00029	< 0.0009	0.00034	4.8	0.00007	0.039	0.026	< 0.000005	0.0013	0.0037	0.00025	< 0.002
58203	0.00088	0.0094	19	0.0012	< 0.00009	< 0.0009	0.0031	11	< 0.00006	0.25	0.0013	< 0.000005	0.0012	0.0047	< 0.00002	< 0.002
58204	0.0013	0.0067	22	0.0012	0.00049	0.0009	0.0027	8.9	0.00008	0.26	0.0022	< 0.000005	0.0018	0.012	< 0.00002	< 0.002
58211	0.029	0.003	25	0.0027	0.00046	0.0009	0.0019	3.5	0.00048	0.068	0.034	0.00002	0.0011	0.0078	0.00058	0.012
58212	0.0019	0.0095	12	0.0006	0.0001	< 0.0009	0.00066	5.0	< 0.00006	0.033	0.008	< 0.000005	0.00054	0.0021	0.00008	< 0.002
58214	0.0015	0.0089	15	0.0009	< 0.00009	0.001	0.0034	3.2	< 0.00006	0.34	0.0015	< 0.000005	0.0029	0.0026	< 0.00002	< 0.002
58215	0.0028	0.0051	27	0.0012	0.00022	0.0011	0.0036	9.0	0.00013	0.31	0.0066	< 0.000005	0.0025	0.012	0.00007	< 0.002
58217	0.0024	0.0068	16	0.001	0.00023	< 0.0009	0.0019	9.1	< 0.00006	0.07	0.011	< 0.000005	0.0011	0.0063	0.00013	< 0.002
58218	0.039	0.0037	19	0.0063	0.00014	< 0.0009	0.00031	6.8	0.00049	0.055	0.0035	< 0.000005	0.00017	0.0012	0.00046	0.007
58219	0.0069	0.014	11	0.0006	0.00015	0.0011	0.0013	2.2	< 0.00006	0.11	0.022	0.000006	0.0018	0.0026	0.00021	< 0.002
58220	0.11	0.0069	18	0.0058	0.0019	< 0.0009	0.0012	5.1	0.00057	0.067	0.033	< 0.000005	0.0012	0.0019	0.00092	0.054
58221	0.002	0.013	14	0.0005	0.00012	< 0.0009	0.00016	5.5	< 0.00006	0.024	0.012	< 0.000005	0.00022	0.0035	0.0001	< 0.002
58223	0.001	0.0074	15	0.0009	< 0.00009	0.001	0.0016	3.0	< 0.00006	0.19	0.0016	< 0.000005	0.00092	0.0029	< 0.00002	< 0.002
58224	0.0017	0.0058	17	0.0013	0.00009	0.0011	0.0018	10	< 0.00006	0.34	0.0027	< 0.000005	0.0025	0.0099	0.00002	< 0.002
58230	0.094	0.0013	14	0.0033	0.00036	0.0011	0.00097	93	0.00031	0.073	0.02	0.00001	0.00036	0.0016	0.0016	0.012
58231	0.0016	0.0018	11	0.0005	0.00011	< 0.0009	0.00019	0.5	< 0.00006	0.018	0.013	< 0.000005	0.00026	0.0031	0.00016	< 0.002
58233	0.002	0.0063	14	0.0015	< 0.00009	0.0012	0.0019	4.9	< 0.00006	0.2	0.0031	< 0.000005	0.0054	0.0086	0.00003	< 0.002
58241	0.072	0.0023	19	0.0028	< 0.00009	< 0.0009	0.00092	87	0.00025	0.067	0.0055	0.00001	0.00035	0.0011	0.00035	0.011
58243	0.0015	0.013	18	0.0016	< 0.00009	0.001	0.0019	0.51	< 0.00006	0.36	0.0021	< 0.000005	0.0022	0.005	0.00002	0.003
58360	0.00059	0.0024	7.2	0.0002	< 0.00009	< 0.0009	0.0004	7.8	< 0.00006	0.033	0.00019	< 0.000005	0.0013	0.0079	< 0.00002	< 0.002
167367	0.0013	0.017	15	0.0008	< 0.00009	< 0.0009	0.00022	1.6	< 0.00006	0.031	0.0082	< 0.000005	0.00054	0.0028	0.00017	< 0.002
167370	0.0018	0.0064	39	0.0013	< 0.00009	0.0011	0.0019	11	< 0.00006	0.17	0.0037	< 0.000005	0.0039	0.012	0.00002	< 0.002
167378	0.0016	0.061	18	0.0023	< 0.00009	< 0.0009	0.00067	7.2	< 0.00006	0.068	0.0022	0.000008	0.0024	0.0045	< 0.00002	< 0.002
167380	0.0012	0.019	25	0.0011	< 0.00009	0.0017	0.0038	2.9	< 0.00006	0.28	0.00071	0.000011	0.0032	0.01	< 0.00002	< 0.002
167729	0.23	0.007	15	0.006	0.00031	< 0.0009	0.0011	28	0.00026	0.11	0.03	0.00002	0.00066	0.0029	0.00084	0.021
167730	0.0022	0.011	24	0.002	< 0.00009	< 0.0009	0.00015	0.18	< 0.00006	0.029	0.011	< 0.000005	0.00045	0.0024	0.00016	< 0.002
167731	0.0024	0.0077	12	0.001	0.00011	< 0.0009	0.00038	4.9	< 0.00006	0.038	0.01	< 0.000005	0.00042	0.0024	0.00013	< 0.002
167733	0.0017	0.0079	32	0.0012	< 0.00009	0.001	0.0023	5.9	< 0.00006	0.19	0.004	< 0.000005	0.0022	0.0092	0.00003	< 0.002
167738	0.011	0.0022	26	0.0071	0.00035	< 0.0009	0.00058	49	0.00023	0.06	0.018	0.00001	0.00032	0.0027	0.00086	0.012
167739	0.0094	0.0042	16	0.0013	0.00019	0.0012	0.001	0.51	< 0.00006	0.03	0.022	< 0.000005	0.0017	0.0099	0.00082	0.003
CSA001	0.0018	0.0038	28	0.0014	0.00022	< 0.0009	0.00014	3.8	< 0.00006	0.0087	0.0054	0.000007	0.000012	0.00067	-	< 0.002
CSA002	0.033	0.00047	19	0.002	0.0014	< 0.0009	0.00011	6.3	< 0.00006	0.019	0.019	0.000011	0.000086	0.0027	-	0.005
CSA003	0.0015	0.00031	40	0.0015	0.00038	< 0.0009	0.00026	4.2	< 0.00006	0.014	0.0064	< 0.000005	0.000037	0.00047	-	0.003
CSA004	0.012	0.00055	15	0.0017	0.00054	< 0.0009	0.00019	4.4	< 0.00006	0.011	0.0015	0.000006	0.000014	0.00044	-	0.005
CSA005	0.0032	0.00031	14	0.001	0.00009	< 0.0009	0.00012	3.2	< 0.00006	0.0083	0.0035	< 0.000005	0.000028	0.00048	-	< 0.002
CSA006	0.011	0.0057	16	0.0029	0.0016	< 0.0009	0.00034	3.0	0.00014	0.0085	0.012	0.000025	0.000046	0.0012	-	0.024
CSA007	0.054	0.00065	14	0.0024	0.00048	< 0.0009	0.0003	3.2	< 0.00006	0.033	0.002	0.000009	0.000039	0.0011	-	0.007
CSA009	0.0051	0.00027	14	0.0029	0.00068	< 0.0009	0.00015	6.1	< 0.00006	0.012	0.0082	0.000008	0.000055	0.0011	-	0.004
CSA010	0.0062	0.0001	14	0.0013	0.00031	< 0.0009	0.00013	2.0	< 0.00006	0.0026	0.0016	< 0.000005	0.000019	0.00051	-	0.003
CSA011	0.012	0.006	15	0.0014	0.00026	< 0.0009	0.00014	4.1	< 0.00006	0.017	0.0027	0.000005	0.000031	0.00093	-	0.003
CSA012	0.022	0.00038	21	0.0042	0.0027	< 0.0009	0.00042	6.8	0.00013	0.012	0.025	0.000017	0.00019	0.0028	-	0.034
CSA013	0.032	0.00021	24	0.0027	0.0012	< 0.0009	0.00023	5.7	0.00014	0.0094	0.022	0.000014	0.000065	0.0016	-	0.007
CSA014	0.03	0.00042	17	0.0048	0.00052	< 0.0009	0.00009	6.2	< 0.00006	0.011	0.0044	0.000017	0.000031	0.00096	-	0.003
CSA015	0.0029	0.0011	46	0.0013	0.00046	< 0.0009	0.0002	4.7	0.00007	0.019	0.0064	0.000007	0.000023	0.00069	-	0.002
CSA016	0.0014	0.00021	15	0.0018	0.00026	< 0.0009	0.00015	2.9	< 0.00006	0.0026	0.0019	0.000012	0.000021	0.0009	-	0.003
CSA017	0.14	0.00099	14	0.0037	0.0009	< 0.0009	0.0002	6.9	< 0.00006	0.031	0.0089	0.00002	0.000071	0.0014	-	0.004
CSA018	0.11	0.00038	18	0.008	0.011	< 0.0009	0.00066	9.2	0.00047	0.018	0.12	0.000043	0.00015	0.0062	-	0.052
CSA019	0.0087	0.00059	12	0.0015	0.0002	< 0.0009	0.00017	4.5	< 0.00006	0.014	0.0022	0.000008	0.00001	0.00043	-	0.002
CSA020	0.0048	0.0047	12	0.0022	0.0014	< 0.0009	0.00021	3.0	0.00008	0.0044	0.0048	0.000011	0.000059	0.00096	-	0.012
CSA008	0.0026	0.00028	14	0.0012	0.00025	< 0.0009	0.0001	2.6	< 0.00006	0.0052	0.0023	0.000005	0.000012	0.00068	-	0.004

Appendix E:
Table D: Clay Static Results

Clay Sample ID	Parent	Lime Treatment	ABA					
			Paste pH	Sulphur (total)	Sulphide	Acid Leachable SO ₄ -S	Carbon (total)	Carbonate (HCl)
			No Unit	%	%	%	%	%
35279	35279	0	8.5	0.017	< 0.04	<0.04	2.0	8.8
035279 2% Lime	35279	2	13	0.015	< 0.04	<0.04	1.9	8.5
035279 3% Lime	35279	3	13	0.018	< 0.04	<0.04	2.0	9.1
035279 4% Lime	35279	4	13	0.017	< 0.04	<0.04	2.0	9.3
167356	167356	0	8.3	0.028	< 0.04	<0.04	3.3	15
167356 2% Lime	167356	2	12	0.023	< 0.04	<0.04	3.4	16
167356 3% Lime	167356	3	11	0.024	< 0.04	<0.04	3.3	15
167356 4% Lime	167356	4	11	0.029	< 0.04	<0.04	3.3	15
35223	35223	0	8.3	0.018	< 0.04	<0.04	4.0	18
035223 2% Lime	35223	2	11	0.018	< 0.04	<0.04	4.5	19
035223 3% Lime	35223	3	9.5	0.019	< 0.04	<0.04	4.2	19
035223 4% Lime	35223	4	11	0.018	< 0.04	<0.04	4.4	20
167688	167688	0	8.1	0.018	< 0.04	<0.04	4.4	20
167688 2% Lime	167688	2	10	0.016	< 0.04	<0.04	4.7	22
167688 3% Lime	167688	3	9.8	0.016	< 0.04	<0.04	4.4	21
167688 4% Lime	167688	4	12	0.023	< 0.04	<0.04	4.8	23
58403	58403	0	8.3	0.011	< 0.04	<0.04	3.5	16
058403 2% Lime	58403	2	11	0.012	< 0.04	<0.04	3.7	17
058403 3% Lime	58403	3	9.6	0.015	< 0.04	<0.04	3.8	17
058403 4% Lime	58403	4	12	0.014	< 0.04	<0.04	3.7	17

Appendix E:
Table D: Clay Static Results

Clay Sample ID	Parent	Lime Treatment	ABA				SFE			
			NP	AP	Net NP	Mod. NPR	pH	Aluminum	Antimony	Arsenic
			kg CaCO ₃ / t	kg CaCO ₃ / t	kg CaCO ₃ / t	-	No Unit	mg/L	mg/L	mg/L
35279	35279	0	136	0.53	135	256	9.0	0.28	< 0.0009	0.0005
035279 2% Lime	35279	2	129	0.47	128	275	12	1.5	< 0.0009	0.0008
035279 3% Lime	35279	3	149	0.56	148	265	12	0.96	< 0.0009	0.0007
035279 4% Lime	35279	4	230	0.53	229	433	12	0.58	< 0.0009	0.0007
167356	167356	0	243	0.88	242	278	8.4	0.37	< 0.0009	0.0031
167356 2% Lime	167356	2	279	0.72	278	388	12	2.6	< 0.0009	0.0009
167356 3% Lime	167356	3	253	0.75	252	337	12	1.4	< 0.0009	0.0008
167356 4% Lime	167356	4	278	0.91	277	307	12	1.2	< 0.0009	0.0005
35223	35223	0	267	0.56	266	475	8.2	0.15	< 0.0009	0.0008
035223 2% Lime	35223	2	325	0.56	324	578	12	4.0	< 0.0009	0.0008
035223 3% Lime	35223	3	326	0.59	325	549	12	3.9	< 0.0009	0.0006
035223 4% Lime	35223	4	328	0.56	327	583	12	1.2	< 0.0009	0.0006
167688	167688	0	360	0.56	359	640	8.3	0.21	< 0.0009	0.0014
167688 2% Lime	167688	2	361	0.5	360	722	12	3.7	< 0.0009	0.0013
167688 3% Lime	167688	3	320	0.5	319	640	12	2.2	< 0.0009	0.0007
167688 4% Lime	167688	4	350	0.72	349	487	12	1.6	< 0.0009	0.0005
58403	58403	0	257	0.34	256	748	8.9	1.1	< 0.0009	0.0032
058403 2% Lime	58403	2	284	0.38	283	757	12	3.2	< 0.0009	0.001
058403 3% Lime	58403	3	305	0.47	304	651	12	2.4	< 0.0009	0.0005
058403 4% Lime	58403	4	290	0.44	289	663	12	1.7	< 0.0009	0.0007

Appendix E:
Table D: Clay Static Results

Clay Sample ID	Parent	Lime Treatment	SFE								
			Barium mg/L	Beryllium mg/L	Bismuth mg/L	Boron mg/L	Cadmium mg/L	Calcium mg/L	Chromium mg/L	Cobalt mg/L	Copper mg/L
35279	35279	0	0.015	0.000019	< 0.00001	0.13	< 0.000003	27	0.0011	0.00016	0.0023
035279 2% Lime	35279	2	0.065	< 0.000007	< 0.00001	0.008	< 0.000003	660	0.0079	0.00043	0.022
035279 3% Lime	35279	3	0.084	< 0.000007	< 0.00001	0.014	0.000003	724	0.0077	0.00053	0.022
035279 4% Lime	35279	4	0.099	< 0.000007	< 0.00001	0.013	< 0.000003	813	0.0096	0.00059	0.019
167356	167356	0	0.015	0.00004	< 0.00001	0.53	0.000004	22	0.0014	0.00024	0.0062
167356 2% Lime	167356	2	0.039	< 0.000007	< 0.00001	0.024	< 0.000003	437	0.0068	0.00015	0.026
167356 3% Lime	167356	3	0.049	< 0.000007	< 0.00001	0.01	< 0.000003	538	0.0053	0.00021	0.024
167356 4% Lime	167356	4	0.066	< 0.000007	< 0.00001	0.011	0.000004	573	0.0076	0.00026	0.024
35223	35223	0	0.0089	< 0.000007	< 0.00001	0.66	< 0.000003	16	0.0013	0.000077	0.0021
035223 2% Lime	35223	2	0.02	< 0.000007	< 0.00001	0.035	0.000005	194	0.0075	0.00019	0.03
035223 3% Lime	35223	3	0.025	< 0.000007	< 0.00001	0.031	0.000003	271	0.0073	0.00014	0.027
035223 4% Lime	35223	4	0.059	< 0.000007	< 0.00001	0.02	< 0.000003	615	0.0068	0.00026	0.033
167688	167688	0	0.013	< 0.000007	< 0.00001	0.59	< 0.000003	17	0.0013	0.0001	0.0019
167688 2% Lime	167688	2	0.022	< 0.000007	< 0.00001	0.04	0.000006	219	0.0078	0.00022	0.028
167688 3% Lime	167688	3	0.072	< 0.000007	< 0.00001	0.004	0.000004	545	0.0068	0.00017	0.023
167688 4% Lime	167688	4	0.062	< 0.000007	< 0.00001	0.006	< 0.000003	562	0.0089	0.0002	0.02
58403	58403	0	0.017	0.0001	< 0.00001	0.5	0.000013	10	0.0039	0.00099	0.006
058403 2% Lime	58403	2	0.018	< 0.000007	< 0.00001	0.056	< 0.000003	149	0.017	0.00021	0.021
058403 3% Lime	58403	3	0.044	< 0.000007	< 0.00001	0.051	0.000008	510	0.016	0.00036	0.026
058403 4% Lime	58403	4	0.042	< 0.000007	< 0.00001	0.043	0.000003	594	0.014	0.00037	0.025

Appendix E:
Table D: Clay Static Results

Clay Sample ID	Parent	Lime Treatment	SFE							
			Iron	Lead	Lithium	Magnesium	Manganese	Mercury	Molybdenum	Nickel
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
35279	35279	0	0.41	0.00017	0.0033	3.8	0.0066	< 0.00001	0.0047	0.0011
035279 2% Lime	35279	2	< 0.007	0.00025	0.0001	0.024	0.00024	< 0.00001	0.0058	0.0055
035279 3% Lime	35279	3	< 0.007	0.00043	0.0002	0.023	0.00021	< 0.00001	0.0053	0.0072
035279 4% Lime	35279	4	< 0.007	< 0.00009	0.0002	0.029	0.00021	< 0.00001	0.0043	0.0083
167356	167356	0	0.48	0.00032	0.0049	2.7	0.0096	< 0.00001	0.0051	0.0013
167356 2% Lime	167356	2	< 0.007	0.00099	0.0005	0.042	0.00011	< 0.00001	0.010	0.0018
167356 3% Lime	167356	3	< 0.007	0.00015	0.0002	0.019	0.00021	< 0.00001	0.0079	0.0021
167356 4% Lime	167356	4	< 0.007	0.00021	0.0002	0.017	0.00021	< 0.00001	0.0066	0.0023
35223	35223	0	0.15	< 0.00009	0.0042	3.2	0.0024	< 0.00001	0.0062	0.0007
035223 2% Lime	35223	2	< 0.007	< 0.00009	0.0001	0.014	0.00025	< 0.00001	0.01	0.0024
035223 3% Lime	35223	3	0.007	< 0.00009	0.0001	0.023	0.00031	< 0.00001	0.012	0.0022
035223 4% Lime	35223	4	< 0.007	0.00037	0.0002	0.021	0.0006	< 0.00001	0.0072	0.0036
167688	167688	0	0.18	0.00009	0.0081	5.5	0.0031	< 0.00001	0.0062	0.0008
167688 2% Lime	167688	2	< 0.007	< 0.00009	0.0001	0.013	0.00037	< 0.00001	0.013	0.0025
167688 3% Lime	167688	3	< 0.007	0.00038	0.0001	0.018	0.00044	< 0.00001	0.009	0.0026
167688 4% Lime	167688	4	< 0.007	0.00044	0.0005	0.02	0.00064	< 0.00001	0.0069	0.0019
58403	58403	0	1.6	0.0013	0.0075	2.4	0.029	< 0.00001	0.0014	0.0028
058403 2% Lime	58403	2	0.007	< 0.00009	0.0003	0.008	0.00018	< 0.00001	0.0051	0.0011
058403 3% Lime	58403	3	< 0.007	0.00017	0.0002	0.02	0.00019	< 0.00001	0.018	0.0018
058403 4% Lime	58403	4	< 0.007	0.00033	0.0002	0.019	0.00025	< 0.00001	0.0033	0.002

Appendix E:
Table D: Clay Static Results

Clay Sample ID	Parent	Lime Treatment	SFE							
			Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Tin	Titanium
			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
35279	35279	0	3.9	0.00053	< 0.00005	15	0.072	< 0.000005	< 0.00006	0.013
035279 2% Lime	35279	2	11	0.00081	< 0.00005	3.8	0.76	0.000012	< 0.00006	< 0.00007
035279 3% Lime	35279	3	12	0.00063	< 0.00005	4.6	0.88	0.000016	< 0.00006	< 0.00007
035279 4% Lime	35279	4	13	0.00065	< 0.00005	5.0	1.1	0.00002	< 0.00006	< 0.00007
167356	167356	0	3.3	0.00069	< 0.00005	39	0.12	0.000011	< 0.00006	0.015
167356 2% Lime	167356	2	7.2	0.0016	< 0.00005	27	0.98	< 0.000005	< 0.00006	< 0.00007
167356 3% Lime	167356	3	11	0.0011	< 0.00005	19	0.95	0.000005	< 0.00006	< 0.00007
167356 4% Lime	167356	4	15	0.00095	< 0.00005	26	1.3	0.000012	< 0.00006	< 0.00007
35223	35223	0	3.4	0.00066	< 0.00005	40	0.14	< 0.000005	< 0.00006	0.0057
035223 2% Lime	35223	2	8.3	0.0022	< 0.00005	17	0.53	0.000006	< 0.00006	< 0.00007
035223 3% Lime	35223	3	8.6	0.002	< 0.00005	18	0.61	0.000009	< 0.00006	< 0.00007
035223 4% Lime	35223	4	13	0.0012	< 0.00005	21	1.0	0.00001	< 0.00006	< 0.00007
167688	167688	0	3.4	0.001	< 0.00005	35	0.12	0.000005	< 0.00006	0.0074
167688 2% Lime	167688	2	6.5	0.0022	< 0.00005	14	0.51	0.000009	< 0.00006	< 0.00007
167688 3% Lime	167688	3	9.3	0.0011	< 0.00005	17	1.0	0.000016	< 0.00006	< 0.00007
167688 4% Lime	167688	4	7.6	0.001	< 0.00005	14	1.0	0.000009	< 0.00006	< 0.00007
58403	58403	0	1.4	0.0012	< 0.00005	60	0.03	0.000014	< 0.00006	0.03
058403 2% Lime	58403	2	5.8	0.0027	< 0.00005	27	0.27	0.000007	< 0.00006	< 0.00007
058403 3% Lime	58403	3	8.2	0.002	< 0.00005	23	0.55	0.00001	< 0.00006	< 0.00007
058403 4% Lime	58403	4	9.3	0.0016	< 0.00005	26	0.57	0.000006	< 0.00006	< 0.00007

Appendix E:
Table D: Clay Static Results

Clay Sample ID	Parent	Lime Treatment	Uranium	Vanadium	Tungsten	Yttrium	Zinc
			mg/L	mg/L	mg/L	mg/L	mg/L
35279	35279	0	0.00098	0.0013	0.00018	0.00012	< 0.002
035279 2% Lime	35279	2	0.000002	0.00025	0.00006	< 0.00002	< 0.002
035279 3% Lime	35279	3	< 0.000002	0.00014	0.00002	< 0.00002	< 0.002
035279 4% Lime	35279	4	< 0.000002	0.00008	< 0.00002	< 0.00002	< 0.002
167356	167356	0	0.0018	0.0018	0.0004	0.00016	< 0.002
167356 2% Lime	167356	2	0.00001	0.0007	0.00019	< 0.00002	< 0.002
167356 3% Lime	167356	3	0.000005	0.00026	0.00005	< 0.00002	< 0.002
167356 4% Lime	167356	4	0.00055	0.00022	0.00002	< 0.00002	< 0.002
35223	35223	0	0.0013	0.00095	0.0005	0.00003	< 0.002
035223 2% Lime	35223	2	0.000007	0.0047	0.00021	< 0.00002	< 0.002
035223 3% Lime	35223	3	0.000004	0.0025	0.00017	< 0.00002	< 0.002
035223 4% Lime	35223	4	0.000006	0.00034	0.00003	< 0.00002	< 0.002
167688	167688	0	0.0014	0.0024	0.00043	0.00005	< 0.002
167688 2% Lime	167688	2	0.000006	0.0089	0.00042	< 0.00002	< 0.002
167688 3% Lime	167688	3	0.000012	0.0013	0.00028	< 0.00002	< 0.002
167688 4% Lime	167688	4	0.000005	0.00091	0.00018	< 0.00002	< 0.002
58403	58403	0	0.0015	0.0059	0.00026	0.00092	0.007
058403 2% Lime	58403	2	0.000026	0.014	0.00036	< 0.00002	< 0.002
058403 3% Lime	58403	3	0.000005	0.00079	0.00011	< 0.00002	< 0.002
058403 4% Lime	58403	4	0.000045	0.00069	0.00006	< 0.00002	< 0.002

APPENDIX F

Crawford Kinetic Geochemical Data

Dunite P1-Dun-MZ-7

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
0	CA10021-NOV21	2-Nov-21	1000	829	9.6	< 2	64	278	3.0	61	1.2	< 0.03	< 0.06	< 0.06	< 0.2
1	CA10072-NOV21	9-Nov-21	1000	879	9.4	< 2	95	337	4.0	64	1.4	< 0.03	< 0.06	< 0.06	< 0.2
2	CA10118-NOV21	16-Nov-21	1000	906	9.7	< 2	109	318	5.0	54	1.2	< 0.03	< 0.06	< 0.06	< 0.2
3	CA10190-NOV21	23-Nov-21	1000	889	9.8	< 2	117	277	7.0	30	0.8	< 0.03	< 0.06	< 0.06	< 0.2
4	CA10241-NOV21	30-Nov-21	1000	905	9.5	< 2	103	217	7.0	14	0.4	< 0.03	< 0.06	< 0.06	< 0.2
5	CA10030-DEC21	7-Dec-21	1000	904	9.5	< 2	104	205	11	9.0	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
6	CA10096-DEC21	14-Dec-21	1000	880	9.6	< 2	107	204	10	4.0	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
7	CA10148-DEC21	21-Dec-21	1000	883	9.7	< 2	110	211	12	3.0	< 0.3	< 0.03	< 0.06	< 0.06	0.3
8	CA10206-DEC21	28-Dec-21	1000	871	9.7	< 2	194	302	13	2.0	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
9	CA10018-JAN22	4-Jan-22	1000	922	9.5	< 2	115	204	9.0						
10	CA10056-JAN22	11-Jan-22	1000	894	9.6	< 2	115	206	10						
11	CA10118-JAN22	18-Jan-22	1000	892	9.7	< 2	123	219	9.0						
12	CA10153-JAN-22	25-Jan-22	1000	893	9.5	< 2	116	210	9.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
12	CA14102-MAR22	9-Mar-22	1000	893											
13	CA10016-FEB22	1-Feb-22	1000	896	9.7	< 2	118	213	9.0						
14	CA10052-FEB22	8-Feb-22	1000	897	9.6	< 2	119	210	8.0						
15	CA10086-FEB22	15-Feb-22	1000	900	9.6	< 2	123	224	10						
16	CA10119-FEB22	22-Feb-22	1000	909	9.8	< 2	113	207	9.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	
17	CA10012-MAR22	1-Mar-22	1000	900	9.7	< 2	120	209	8.0						
18	CA10044-MAR22	8-Mar-22	1000	926	9.6	< 2	113	211	9.0						
19	CA10084-MAR22	15-Mar-22	1000	873	9.5	< 2	116	204	8.0						
20	CA10114-MAR22	22-Mar-22	1000	961	9.6	< 2	113	196	7.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	
21	CA10162-MAR22	29-Mar-22	1000	937	9.5	< 2	118	194	8.0						
22	CA10011-APR22	5-Apr-22	1000	926	9.6	< 2	117	200	7.0						
23	CA10046-APR22	12-Apr-22	1000	956	9.5	< 2	113	207	9.0						
24	CA10084-APR22	19-Apr-22	1000	966	9.6	< 2	105	189	6.0	<1	< 0.3	< 0.03	< 0.06	< 0.06	---
25	CA10125-APR22	26-Apr-22	1000	982	9.7	< 2	110	183	5.0						
26	CA10009-MAY22	03-May-22	1000	993	9.4	< 2	105	192	6.0						
27	CA10051-MAY22	10-May-22	1000	936	9.6	< 2	111	197	6.0						
28	CA10093-MAY22	17-May-22	1000	957	9.7	< 2	145	238	5.0	<1	< 0.3	< 0.03	< 0.06	< 0.06	---
29	CA10138-MAY22	24-May-22	1000	882	9.7	< 2	133	219	6.0						
30	CA10186-MAY22	31-May-22	1000	951	9.6	< 2	103	186	7.0						
31	CA10030-JUN22	07-Jun-22	1000	950	9.7	< 2	92	179	5.0						
32	CA10076-JUN22	14-Jun-22	1000	922	9.4	< 2	107	192	6.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
33	CA10118-JUN22	21-Jun-22	1000	920	9.7	< 2	105	183	4.0						
34	CA10165-JUN22	28-Jun-22	1000	970	9.6	< 2	102	181	5.0						
35	CA10007-JUL22	05-Jul-22	1000	950	9.8	< 2	93	152	4.0						
36	CA10051-JUL22	12-Jul-22	1000	933	9.7	< 2	103	170	5.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
37	CA10095-JUL22	19-Jul-22	1000	931	9.5	< 2	99	164	5.0						
38	CA10139-JUL22	26-Jul-22	1000	980	9.6	< 2	107	184	5.0						
39	CA10007-AUG22	02-Aug-22	1000	966	9.5	< 2	103	171	4.0						
40	CA10051-AUG22	09-Aug-22	1000	992	9.5	< 2	99	180	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
41	CA10095-AUG22	16-Aug-22	1000	981	9.7	< 2	104	180	4.0						
42	CA10178-AUG22	23-Aug-22	1000	963	9.6	< 2	113	162	5.0						
43	CA10187-AUG22	30-Aug-22	1000	981	9.4	< 2	107	163	4.0						
44	CA10010-SEP22	06-Sep-22	1000	945	9.3	< 2	96	171	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
45	CA10055-SEP22	13-Sep-22	1000	971	9.3	< 2	97	183	4.0						
46	CA10098-SEP22	20-Sep-22	1000	963	9.5	< 2	102	162	5.0						
47	CA10145-SEP22	27-Sep-22	1000	944	9.4	< 2	99	159	4.0						

Dunite P1-Dun-MZ-7

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
48	CA10006-OCT22	04-Oct-22	1000	964	9.4	< 2	109	132	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
49	CA10052-OCT22	11-Oct-22	1000	951	9.6	< 2	98	178	5.0						
50	CA10097-OCT22	18-Oct-22	1000	948	9.7	< 2	114	198	5.0						
51	CA10141-OCT22	25-Oct-22	1000	879	9.6	< 2	112	195	5.0						
52	CA10006-NOV22	01-Nov-22	1000	912	9.4	< 2	116	162	5.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
53	CA10049-NOV22	08-Nov-22	1000	894	9.3	< 2	99	183	5.0						
54	CA10091-NOV22	15-Nov-22	1000	907	9.5	< 2	97	168	4.0						
55	CA10135-NOV22	22-Nov-22	1000	891	9.6	< 2	112	191	4.0						
56	CA10177-NOV22	29-Nov-22	1000	908	9.6	< 2	95	158	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
57	CA10010-DEC22	06-Nov-22	1000	925	9.4	< 2	93	154	5.0						
58	CA10053-DEC22	13-Dec-22	1000	931	9.3	< 2	103	191	6.0						
59	CA10099-DEC22	20-Dec-22	1000	916	9.6	< 2	113	170	5.0						
60	CA10216-DEC22	27-Dec-22	1000	912	9.7	< 2	100	158	6.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
61	CA10005-JAN23	03-Jan-23	1000	940	9.6	< 2	117	180	5.0						
62	CA10049-JAN23	10-Jan-23	1000	896	9.5	< 2	105	184	5.0						
63	CA10098-JAN23	17-Jan-23	1000	960	9.6	< 2	108	164	6.0						
64	CA10145-JAN23	24-Jan-23	1000	911	9.6	< 2	99	179	5.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
65	CA10192-JAN23	31-Jan-23	1000	904	9.7	< 2	108	188	4.0						
66	CA10033-FEB23	07-Feb-23	1000	974	9.5	< 2	100	176	5.0						
67	CA10079-FEB23	14-Feb-23	1000	956	9.4	< 2	102	175	4.0						
68	CA10126-FEB23	21-Feb-23	1000	933	9.6	< 2	99	176	8.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
69	CA10175-FEB23	28-Feb-23	1000	930	9.5	< 2	100	157	7.0						
70	CA10032-MAR23	07-Mar-23	1000	971	9.6	< 2	110	215	4.0						
71	CA10079-MAR23	14-Mar-23	1000	938	9.7	< 2	119	193	4.0						
72	CA10127-MAR23	21-Mar-23	1000	975	9.6	< 2	93	164	5.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
73	CA10174-MAR23	28-Mar-23	1000	912	9.6	< 2	117	204	4.0						
74	CA10006-MAR23	04-Apr-23	1000	961	9.7	< 2	129	217	4.0						
75	CA10055-APR23	11-Apr-23	1000	998	9.5	< 2	116	176	4.0						
76	CA10104-APR23	18-Apr-23	1000	984	9.5	< 2	105	157	3.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
77	CA10153-APR23	25-Apr-23	1000	994	9.4	< 2	115	197	4.0						
78	CA10006-MAY23	02-May-23	1000	960	9.2	< 2	115	173	6.0						
79	CA10058-MAY23	09-May-23	1000	998	9.5	< 2	121	199	3.0						
80	CA10109-MAY23	16-May-23	1000	988	9.5	< 2	118	186	3.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
81	CA10161-MAY23	23-May-23	1000	1006	9.5	< 2	126	208	3.0						
82	CA10216-MAY23	30-May-23	1000	979	9.3	< 2	109	171	3.0						
83	CA10018-JUN23	06-Jun-23	1000	941	9.4	< 2	93	158	3.0						
84	CA10071-JUN23	13-Jun-23	1000	967	9.4	< 2	106	172	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
85	CA10123-JUN23	20-Jun-23	1000	966	9.5	< 2	89	158	2.0						
86	CA10173-JUN23	27-Jun-23	1000	980	9.3	< 2	114	201	3.0						
87	CA10006-JUL23	04-Jul-23	1000	979	9.5	< 2	115	200	3.0						
88	CA10058-JUL23	11-Jul-23	1000	987	9.5	< 2	124	198	2.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
89	CA10111-JUL23	18-Jul-23	1000	957	9.4	< 2	113	178	3.0						
90	CA10162-JUL23	25-Jul-23	1000	990	9.5	< 2	106	179	2.0						
91	CA10006-AUG23	01-Aug-23	1000	906	9.4	< 2	92	173	3.0						

Appendix F:
HCT Results-Dunite P1-Dun-MZ-7

Dunite P1-Dun-MZ-7

Week/Event	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	< 0.00001	0.002	< 0.00005	0.0004	0.0098	< 0.000007	0.074	< 0.00001	2.8	0.000005	0.000034	0.00021	0.001	< 0.007	0.68	0.0007	32	0.0001
1	< 0.00001	0.002	< 0.00005	< 0.0002	0.0022	< 0.000007	0.059	< 0.00001	0.43	< 0.000003	0.000017	< 0.00008	0.0003	< 0.007	0.53	0.0001	45	0.00008
2	< 0.00001	< 0.001	< 0.00005	< 0.0002	0.0021	< 0.000007	0.06	< 0.00001	0.43	0.000006	0.000026	0.0001	< 0.0002	0.011	0.55	< 0.0001	41	0.00015
3	< 0.00001	0.004	< 0.00005	< 0.0002	0.0016	< 0.000007	0.08	0.00002	0.34	< 0.000003	0.000024	0.00011	0.0003	< 0.007	0.28	0.0001	39	0.00019
4	< 0.00001	< 0.001	< 0.00005	< 0.0002	0.0011	< 0.000007	0.07	< 0.00001	0.26	< 0.000003	0.00002	0.00008	< 0.0002	< 0.007	0.12	< 0.0001	31	0.00014
5	< 0.00001	0.004	0.00016	0.0006	0.0011	< 0.000007	0.058	< 0.00001	0.38	< 0.000003	0.000067	< 0.00008	0.001	0.077	0.06	< 0.0001	28	0.00036
6	< 0.00001	0.014	< 0.00005	0.0003	0.00096	0.000009	0.048	< 0.00001	0.33	0.000015	0.000031	0.0001	< 0.0002	0.016	0.062	< 0.0001	28	0.001
7	< 0.00001	0.004	< 0.00005	< 0.0002	0.001	< 0.000007	0.059	< 0.00001	0.2	< 0.000003	0.000032	< 0.00008	0.0002	< 0.007	0.054	0.0003	29	0.00029
8	< 0.00001	0.003	< 0.00005	< 0.0002	0.0012	< 0.000007	0.078	< 0.00001	0.25	< 0.000003	0.000033	0.00015	0.0006	< 0.007	0.071	0.0001	47	0.00046
9																		
10																		
11																		
12	< 0.00001	0.001	< 0.00005	0.0038	0.00034	< 0.000007	0.012	< 0.00001	3.5	< 0.000003	< 0.000004	0.0012	< 0.0002	0.009	0.1	< 0.0001	1.7	0.0015
12			< 0.00005	< 0.0002	0.00088	< 0.000007	0.055	0.00001	0.19	< 0.000003	0.00002	0.00082	< 0.0002	< 0.007	0.023	< 0.0001	30	0.00019
13																		
14																		
15																		
16		0.003	< 0.00005	< 0.0002	0.0008	< 0.000007	0.03	< 0.00001	0.2	< 0.000003	0.000012	< 0.00008	< 0.0002	< 0.007	0.021	< 0.0001	29	0.00009
17																		
18																		
19																		
20		0.002	< 0.00005	0.0003	0.00064	< 0.000007	0.028	< 0.00001	0.2	< 0.000003	0.000019	< 0.00008	0.0011	0.011	< 0.009	< 0.0001	31	0.00059
21																		
22																		
23																		
24		0.001	< 0.00005	< 0.0002	0.00063	< 0.000007	0.022	< 0.00001	0.18	< 0.000003	0.00001	< 0.00008	< 0.0002	< 0.007	0.011	< 0.0001	24	0.00013
25																		
26																		
27																		
28		< 0.001	< 0.00005	0.0003	0.00059	0.000012	0.019	< 0.00001	0.14	< 0.000003	0.000035	< 0.00008	< 0.0002	< 0.007	0.018	< 0.0001	38	0.00056
29																		
30																		
31																		
32		0.013	< 0.00005	0.0003	0.00074	< 0.000007	0.023	< 0.00001	0.16	0.000006	0.000031	< 0.00008	< 0.0002	< 0.007	< 0.009	< 0.0001	29	0.00033
33																		
34																		
35																		
36		0.001	< 0.00005	< 0.0002	0.00077	< 0.000007	0.024	< 0.00001	0.14	< 0.000003	0.000025	0.00012	< 0.0002	< 0.007	< 0.009	< 0.0001	26	0.00034
37																		
38																		
39																		
40		0.002	< 0.00005	0.0002	0.00048	< 0.000007	0.023	< 0.00001	0.1	0.000014	0.000048	0.00012	< 0.0002	< 0.007	< 0.009	< 0.0001	23	0.00022
41																		
42																		
43																		
44		0.002	< 0.00005	0.0024	0.00054	< 0.000007	0.015	< 0.00001	0.14	0.000024	0.000032	< 0.00008	< 0.0002	< 0.007	0.034	< 0.0001	21	0.00015
45																		
46																		
47																		

Dunite P1-Dun-MZ-7

Week/Event	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
48		0.002	< 0.00005	0.0004	0.00062	< 0.000007	0.018	< 0.00001	0.15	< 0.000003	0.000031	< 0.00008	< 0.0002	< 0.007	< 0.009	< 0.0001	25	0.00026
49																		
50																		
51																		
52		0.001	< 0.00005	< 0.0002	0.00066	< 0.000007	0.016	< 0.00001	0.19	< 0.000003	0.000026	0.00009	< 0.0002	< 0.007	< 0.009	0.011	23	0.00024
53																		
54																		
55																		
56		0.002	< 0.00005	0.0008	0.00063	< 0.000007	0.015	< 0.00001	0.17	0.000007	0.000031	0.00084	< 0.0002	0.014	0.012	< 0.0001	22	0.00031
57																		
58																		
59																		
60		< 0.001	< 0.00005	< 0.0002	0.00068	< 0.000007	0.017	< 0.00001	0.16	< 0.000003	0.000015	0.00015	< 0.0002	< 0.007	< 0.009	< 0.0001	25	0.00009
61																		
62																		
63																		
64		<0.001	< 0.00005	0.0002	0.00066	< 0.000007	0.014	< 0.00001	0.18	< 0.000003	0.000022	< 0.00008	< 0.0002	0.012	0.017	0.0006	27	0.00042
65																		
66																		
67																		
68		< 0.001	< 0.00005	0.001	0.00069	< 0.000007	0.012	< 0.00001	0.19	< 0.000003	0.000031	< 0.00008	0.0002	< 0.007	0.011	< 0.0001	27	0.00033
69																		
70																		
71																		
72		0.002	< 0.00005	< 0.0002	0.00067	< 0.000007	0.01	< 0.00001	0.16	< 0.000003	0.000022	0.00013	< 0.0002	< 0.007	< 0.009	< 0.0001	23	0.0001
			< 0.00005	< 0.0002	0.0017	0.000007	0.009	< 0.00001	0.16	< 0.000003	0.00002	0.00017	< 0.0002	< 0.007	0.014	< 0.0001	22	0.00003
73																		
74																		
75																		
76		0.001	< 0.00005	0.0003	0.00057	< 0.000007	0.01	< 0.00001	0.15	0.000005	0.000021	< 0.00008	< 0.0002	< 0.007	< 0.009	0.0002	25	0.00019
77																		
78																		
79																		
80		0.001	< 0.00005	0.0002	0.00065	< 0.000007	0.011	< 0.00001	0.19	< 0.000003	0.000033	0.00009	< 0.0002	< 0.007	0.02	< 0.0001	32	0.00035
81																		
82																		
83																		
84		< 0.001	< 0.00005	0.0003	0.00056	< 0.000007	0.009	< 0.00001	0.24	0.000003	0.000029	< 0.00008	0.0003	< 0.007	0.022	0.0002	26	0.00036
85																		
86																		
87																		
88		0.002	< 0.00005	0.0004	0.00066	< 0.000007	0.008	< 0.00001	0.21	< 0.000003	0.000053	0.00009	0.0003	< 0.007	0.014	< 0.0001	31	0.0021
89																		
90																		
91																		

Appendix F:
HCT Results-Dunite P1-Dun-MZ-7

Dunite P1-Dun-MZ-7

Week/Event	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.001	1.9	0.0017	< 0.00009	< 0.0009	< 0.00004	0.00038	0.042	< 0.00005	< 0.000005	0.000004	< 0.00001	< 0.00002	< 0.00002	< 0.002
1	0.00008	1.6	0.0006	< 0.00009	< 0.0009	0.00008	0.00017	0.0088	< 0.00005	< 0.000005	< 0.000002	0.00001	0.00004	< 0.00002	< 0.002
2	0.00015	1.4	0.0005	0.00024	< 0.0009	0.00005	0.00012	0.0085	0.00007	< 0.000005	0.000012	0.00002	0.00011	< 0.00002	< 0.002
3	0.00025	0.93	0.0005	< 0.00009	< 0.0009	< 0.00004	0.00007	0.0084	0.00016	< 0.000005	0.000004	0.00003	0.00007	< 0.00002	< 0.002
4	< 0.00004	0.61	0.0004	< 0.00009	< 0.0009	0.00006	< 0.00006	0.0063	< 0.00005	< 0.000005	< 0.000002	0.00001	0.00007	< 0.00002	< 0.002
5	0.00075	0.12	0.0005	0.00012	< 0.0009	0.00008	< 0.00006	0.0063	0.0001	< 0.000005	< 0.000002	0.00002	0.00045	< 0.00002	< 0.002
6	0.00015	0.21	0.0006	< 0.00009	< 0.0009	0.00011	0.00008	0.0066	0.0002	< 0.000005	0.00015	0.0002	0.00007	< 0.00002	< 0.002
7	0.00007	0.37	0.0004	< 0.00009	< 0.0009	0.0001	< 0.00006	0.0053	< 0.00005	< 0.000005	0.00001	0.00004	0.0001	< 0.00002	< 0.002
8	0.00021	0.15	0.0008	< 0.00009	< 0.0009	0.00011	< 0.00006	0.0061	< 0.00005	< 0.000005	0.000004	0.00004	0.00016	< 0.00002	< 0.002
9															
10															
11															
12	0.00027	0.18	< 0.0001	< 0.00009	< 0.0009	0.00007	< 0.00006	0.0048	0.00007	< 0.000005	0.000003	0.00076	0.00003	< 0.00002	< 0.002
12	0.00012	0.08	0.0004	< 0.00009	< 0.0009	0.00009	< 0.00006	0.0053	0.00014	< 0.000005	0.000012	0.00004	0.00008	< 0.00002	< 0.002
13															
14															
15															
16	0.00008	0.03	0.0003	< 0.00009	< 0.0009	0.00009	< 0.00006	0.0048	< 0.00005	< 0.000005	0.000002	0.00001	0.00007	< 0.00002	< 0.002
17															
18															
19															
20	0.00041	0.05	0.0005	< 0.00009	< 0.0009	0.0001	0.00006	0.0046	< 0.00005	< 0.000005	0.000006	0.00002	0.00005	< 0.00002	< 0.002
21															
22															
23															
24	0.00025	0.01	0.0005	< 0.00009	< 0.0009	0.00008	< 0.00006	0.0045	< 0.00005	< 0.000005	0.000002	0.00001	0.00005	< 0.00002	< 0.002
25															
26															
27															
28	0.00005	0.07	0.0005	< 0.00009	< 0.0009	0.00008	< 0.00006	0.0046	< 0.00005	< 0.000005	0.0043	< 0.00001	0.00005	< 0.00002	< 0.002
29															
30															
31															
32	0.00039	0.02	0.0006	< 0.00009	< 0.0009	0.00013	< 0.00006	0.0046	0.00005	< 0.000005	0.0013	0.00001	0.00006	< 0.00002	< 0.002
33															
34															
35															
36	0.00063	0.03	0.0005	< 0.00009	< 0.0009	0.00009	< 0.00006	0.0045	< 0.00005	< 0.000005	0.00022	0.00002	0.00005	< 0.00002	< 0.002
37															
38															
39															
40	0.00018	0.04	0.0005	< 0.00009	< 0.0009	0.00023	< 0.00006	0.0039	0.00037	< 0.000005	< 0.000002	0.00001	0.00008	< 0.00002	< 0.002
41															
42															
43															
44	0.021	0.13	0.0008	< 0.00009	< 0.0009	0.00017	< 0.00006	0.0038	< 0.00005	< 0.000005	0.0011	0.00003	0.00019	< 0.00002	< 0.002
45															
46															
47															

Dunite P1-Dun-MZ-7

Week/Event	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
48	0.00014	0.01	0.0007	< 0.00009	< 0.0009	0.00011	< 0.00006	0.0043	0.00005	< 0.000005	0.0016	0.00001	0.00008	< 0.00002	< 0.002
49															
50															
51															
52	0.00012	0.02	0.0006	< 0.00009	< 0.0009	0.00009	< 0.00006	0.0042	0.00005	< 0.000005	0.0006	0.00002	0.00011	< 0.00002	< 0.002
53															
54															
55															
56	0.00023	0.02	0.001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0042	< 0.00005	< 0.000005	0.0023	0.00002	0.00003	< 0.00002	< 0.002
57															
58															
59															
60	< 0.00004	0.04	0.0005	< 0.00009	< 0.0009	0.00009	< 0.00006	0.0043	< 0.00005	< 0.000005	0.00011	0.00001	0.00004	< 0.00002	< 0.002
61															
62															
63															
64	0.00008	0.22	0.0005	< 0.00009	< 0.0009	0.0003	< 0.00006	0.0043	< 0.00005	< 0.000005	0.000045	< 0.00001	0.00003	< 0.00002	< 0.002
65															
66															
67															
68	0.00011	0.02	0.0005	< 0.00009	< 0.0009	0.00015	< 0.00006	0.0045	< 0.00005	< 0.000005	0.00011	0.00003	0.00003	< 0.00002	< 0.002
69															
70															
71															
72	0.00013	0.02	0.0007	< 0.00009	< 0.0009	0.00006	0.0044	0.0037	< 0.00005	< 0.000005	0.00024	0.00002	0.00004	< 0.00002	< 0.002
	0.0001	0.05	0.0005	< 0.00009	< 0.0009	0.00013	0.0046	0.0036	< 0.00005	< 0.000005	0.00025	0.00003	0.00002	< 0.00002	< 0.002
73															
74															
75															
76	0.00014	0.02	0.0005	< 0.00009	< 0.0009	< 0.00004	0.00009	0.0041	< 0.00005	< 0.000005	0.00056	< 0.00001	0.00023	< 0.00002	< 0.002
77															
78															
79															
80	0.00008	0.04	0.0006	< 0.00009	< 0.0009	0.00007	< 0.00006	0.0047	< 0.00005	< 0.000005	0.0041	0.00002	0.00003	< 0.00002	< 0.002
81															
82															
83															
84	0.00025	0.06	0.0005	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.004	< 0.00005	< 0.000005	0.00024	0.00001	0.00006	< 0.00002	< 0.002
85															
86															
87															
88	0.00022	< 0.01	0.0005	< 0.00009	< 0.0009	0.00006	< 0.00006	0.0046	< 0.00007	< 0.000005	0.0039	0.00002	0.00004	< 0.00002	< 0.002
89															
90															
91															

Appendix F:
HCT Results-Dunite CR21-146 510-520

Dunite CR21-146 510-520

Week/Event	LIMS	Sample Date	Leachate Volume Recovered (mL)	pH	Alkalinity	Conductivity	Acidity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	No unit	mg/L as CaCO ₃	uS/cm	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10057-SEP23	1-Sep-23	810	9.6	271	1440	< 2	2.0	390	7.4	< 0.03	0.22	< 0.06
1	CA10114-SEP23	8-Sep-23	962	9.6	100	664	< 2	< 2	190	3.3	< 0.03	< 0.06	< 0.06
2	CA10115-SEP23	15-Sep-23	969	9.5	92	424	< 2	< 2	84	2.1	< 0.03	< 0.06	< 0.06
3	CA10171-SEP23	22-Sep-23	984	9.5	90	297	< 2	< 2	46	1.2	< 0.03	< 0.06	< 0.06
4	CA10228-SEP23	29-Sep-23	980	9.7	96	217	< 2	< 2	29	0.9	< 0.03	< 0.06	< 0.06
5	CA10054-OCT23	6-Oct-23	992	9.6	88	98	< 2	< 2	17	0.5	< 0.03	< 0.06	< 0.06
6	CA10111-OCT23	13-Oct-23	1002	9.7	98	204	< 2	< 2	10	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10169-OCT23	20-Oct-23	971	9.9	85	171	< 2	< 2	6.0	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10226-OCT23	27-Oct-23	1000	9.8	87	160	< 2	< 2	3.0	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10029-NOV23	3-Nov-23	1011	9.6	100	169	< 2	2.0					
10	CA10084-NOV23	10-Nov-23	917	9.7	120	208	< 2	2.0					
11	CA10139-NOV23	17-Nov-23	1002	9.6	89	144	< 2	< 2					
12	CA10201-NOV23	24-Nov-23	1010	9.5	96	151	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
13	CA10001-DEC23	1-Dec-23	979	9.7	94	154	< 2	2.0					
14	CA10061-DEC23	8-Dec-23	978	9.8	87	163	< 2	2.0					
15	CA10121-DEC23	15-Dec-23	997	9.6	78	122	< 2	< 2					
16	CA10182-DEC23	22-Dec-23	998	9.7	83	153	< 2	6.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10240-DEC23	29-Dec-23	997	9.6	92	147	< 2	3.0					
18	CA10056-JAN24	5-Jan-24	982	9.8	74	136	< 2	2.0					
19	CA10115-JAN24	12-Jan-24	956	9.4	84	146	< 2	2.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
20	CA10177-JAN24	19-Jan-24	981	9.5	71	139	< 2	< 2	1.0	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10241-JAN24	26-Jan-24	993	9.4	83	137	< 2	< 2					
22	CA10014-FEB24	2-Feb-24	995	9.5	87	145	< 2	< 2					
23	CA10072-FEB24	9-Feb-24	986	9.7	86	132	< 2	< 2					
24	CA10129-FEB24	15-Feb-24	986	9.7	74	121	< 2	5.0	3.0	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10184-FEB24	23-Feb-24	992	9.6	72	128	< 2	4.0					

Appendix F:
HCT Results-Dunite CR21-146 510-520

Dunite CR21-146 510-520

Week/Event	Chromium VI	Mercury	Aluminum	Aluminum (0.2µm)	Silver	Arsenic	Boron	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	1.6	< 0.00001	0.002	0.002	< 0.00005	0.0003	0.25	0.0049	< 0.000007	< 0.00001	1.7	< 0.000003	0.000081	0.0024	0.0005
1	0.7	0.00001	0.004	0.003	< 0.00005	0.0004	0.19	0.0037	< 0.000007	< 0.00001	1.1	< 0.000003	0.000073	0.00069	0.0004
2	0.5	< 0.00001	0.002	0.003	< 0.00005	< 0.0002	0.22	0.0029	< 0.000007	< 0.00001	0.89	< 0.000003	0.000025	0.00058	< 0.0002
3	0.5	< 0.00001	0.003	0.012	< 0.00005	< 0.0002	0.2	0.0023	< 0.000007	< 0.00001	0.72	< 0.000003	0.000016	0.00057	< 0.0002
4	0.7	< 0.00001	0.001	< 0.001	< 0.00005	0.0003	0.19	0.0016	< 0.000007	< 0.00001	0.57	< 0.000003	0.000021	0.00061	0.0003
5	1.0	< 0.00001	0.001	0.001	< 0.00005	< 0.0002	0.19	0.0013	< 0.000007	< 0.00001	0.49	0.000005	0.000015	0.00054	0.0028
6	0.7	< 0.00001	0.001	< 0.001	< 0.00005	< 0.0002	0.17	0.0012	< 0.000007	< 0.00001	0.41	< 0.000003	0.000022	0.00047	0.0003
7	0.5	< 0.00001	0.002	< 0.001	< 0.00005	< 0.0002	0.16	0.0012	< 0.000007	< 0.00001	0.4	0.000039	0.00011	0.00057	0.0012
8	0.5	< 0.00001	0.003	< 0.001	< 0.00005	< 0.0002	0.16	0.0012	< 0.000007	< 0.00001	0.42	< 0.000003	0.000015	0.00064	< 0.0002
9															
10															
11															
12	0.2	< 0.00001	0.001	0.003	< 0.00005	0.0003	0.087	0.00045	< 0.000007	< 0.00001	0.14	< 0.000003	0.000046	0.00032	< 0.0002
13															
14															
15															
16	< 0.2	< 0.00001	0.002	< 0.001	< 0.00005	< 0.0002	0.077	0.00074	< 0.000007	< 0.00001	0.17	< 0.000003	0.000029	0.00021	< 0.0002
17															
18															
19	< 0.2	< 0.00001	0.001	< 0.001	< 0.00005	< 0.0002	0.079	0.00036	< 0.000007	< 0.00001	0.15	< 0.000003	0.000035	0.00024	< 0.0002
20	< 0.2	< 0.00001	0.006	< 0.001	< 0.00005	< 0.0002	0.099	0.00034	< 0.000007	< 0.00001	0.17	< 0.000003	0.00002	0.0002	< 0.0002
21															
22															
23															
24	< 0.2	< 0.00001	0.003	0.001	< 0.00005	0.0002	0.072	0.00034	< 0.000007	< 0.00001	0.14	0.000005	0.000019	0.00022	< 0.001
25															

Appendix F:
HCT Results-Dunite CR21-146 510-520

Dunite CR21-146 510-520

Week/Event	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	< 0.007	1.3	0.012	196	0.00008	0.00034	1.4	0.0021	< 0.00009	< 0.0009	0.00006	0.00081	0.0067	< 0.00007	0.000005	0.0015	0.00025
1	< 0.007	0.44	0.045	72	0.00023	0.00025	0.6	0.0024	< 0.00009	< 0.0009	0.00004	0.00015	0.0031	< 0.00007	< 0.000005	0.0019	0.00003
2	< 0.007	0.17	0.057	52	0.00017	0.00014	0.11	0.0021	< 0.00009	< 0.0009	0.00006	0.00007	0.0023	< 0.00007	< 0.000005	0.00041	0.00004
3	< 0.007	0.1	0.029	38	0.00016	0.00033	0.05	0.0018	< 0.00009	< 0.0009	0.00006	< 0.00006	0.0016	< 0.00007	< 0.000005	0.0035	0.00005
4	< 0.007	0.071	0.013	34	0.00012	0.00024	0.02	0.0019	< 0.00009	< 0.0009	0.00008	< 0.00006	0.0012	< 0.00007	< 0.000005	0.0014	0.00003
5	< 0.007	0.065	0.0098	27	0.00014	0.00011	0.03	0.0014	0.00016	< 0.0009	0.00006	< 0.00006	0.00095	< 0.00007	< 0.000005	0.000072	0.00002
6	0.021	0.02	0.0054	27	0.00039	0.00018	0.03	0.0016	< 0.00009	< 0.0009	0.00005	< 0.00006	0.00084	< 0.00007	< 0.000005	0.0012	0.00003
7	< 0.007	0.013	0.0039	22	0.00086	0.00013	0.02	0.002	< 0.00009	< 0.0009	0.00004	< 0.00006	0.00088	< 0.00007	< 0.000005	0.00025	0.00001
8	< 0.007	0.044	0.004	22	0.00015	0.00013	0.06	0.0012	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00088	< 0.00007	< 0.000005	0.0012	0.00003
9																	
10																	
11																	
12	< 0.007	0.025	0.0019	25	0.0011	0.0002	0.01	0.0015	< 0.00009	< 0.0009	0.00006	< 0.00006	0.00043	< 0.00007	< 0.000005	0.0075	0.00004
13																	
14																	
15																	
16	< 0.007	0.013	0.0013	20	0.00036	0.0038	0.02	0.0011	< 0.00009	< 0.0009	0.00011	< 0.00006	0.00076	< 0.00007	< 0.000005	0.000072	0.00002
17																	
18																	
19	< 0.007	0.011	0.0013	22	0.00044	0.00036	0.03	0.0013	< 0.00009	< 0.0009	0.00015	< 0.00006	0.00039	< 0.00007	< 0.000005	0.00021	0.00002
20	< 0.007	0.024	0.0014	21	< 0.00001	0.00021	< 0.01	0.0007	< 0.00009	< 0.0009	0.00014	< 0.00006	0.00043	< 0.00007	< 0.000005	0.0052	0.00002
21																	
22																	
23																	
24	< 0.007	0.02	0.0012	18	0.00016	< 0.0004	0.04	0.0009	< 0.00009	< 0.0009	0.00013	< 0.00006	0.00047	< 0.0001	< 0.000005	0.0075	0.00004
25																	

Appendix F:
HCT Results-Dunite CR21-146 510-520

Dunite CR21-146 510-520

Week/Event	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L
0	0.00008	< 0.00002	< 0.002
1	0.00008	< 0.00002	< 0.002
2	0.00039	< 0.00002	< 0.002
3	0.00012	< 0.00002	< 0.002
4	0.00005	< 0.00002	< 0.002
5	0.00009	< 0.00002	< 0.002
6	0.00062	< 0.00002	< 0.002
7	0.0011	< 0.00002	< 0.002
8	0.00005	< 0.00002	< 0.002
9			
10			
11			
12	0.00006	< 0.00002	< 0.002
13			
14			
15			
16	0.00004	< 0.00002	< 0.002
17			
18			
19	0.00005	< 0.00002	< 0.002
20	0.00005	< 0.00002	< 0.002
21			
22			
23			
24	< 0.0002	< 0.00002	< 0.002
25			

Appendix F:
HCT Results-Dunite CR22-193A 200-210

Dunite CR22-193A 200-210

Week/Event	LIMS	Sample Date	Leachate Volume Recovered (mL)	pH	Alkalinity	Conductivity	Acidity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI
			mL	No unit	mg/L as CaCO ₃	uS/cm	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
0	CA10057-SEP23	1-Sep-23	787	8.8	25	1180	< 2	< 2	380	6.9	< 0.03	0.09	< 0.06	0.9
1	CA10114-SEP23	8-Sep-23	1014	9.3	43	637	< 2	< 2	200	3.7	< 0.03	< 0.06	< 0.06	0.9
2	CA10115-SEP23	15-Sep-23	974	8.7	35	297	< 2	< 2	72	1.8	< 0.03	< 0.06	< 0.06	0.6
3	CA10171-SEP23	22-Sep-23	929	8.9	34	193	< 2	< 2	49	1.3	< 0.03	< 0.06	< 0.06	0.8
4	CA10228-SEP23	29-Sep-23	967	7.9	40	168	< 2	< 2	37	1.0	< 0.03	< 0.06	< 0.06	0.3
5	CA10054-OCT23	6-Oct-23	988	7.9	39	169	< 2	< 2	32	1.0	< 0.03	< 0.06	< 0.06	1.3
6	CA10111-OCT23	13-Oct-23	1008	9.3	62	172	< 2	< 2	29	1.0	< 0.03	< 0.06	< 0.06	1.4
7	CA10169-OCT23	20-Oct-23	977	9.3	43	133	< 2	< 2	21	0.6	< 0.03	< 0.06	< 0.06	1.2
8	CA10226-OCT23	27-Oct-23	999	9.1	44	113	< 2	< 2	16	0.6	< 0.03	< 0.06	< 0.06	1.2
9	CA10029-NOV23	3-Nov-23	992	9.4	55	117	< 2	< 2						
10	CA10084-NOV23	10-Nov-23	982	9.3	51	112	< 2	< 2						
11	CA10139-NOV23	17-Nov-23	963	9.2	52	97	< 2	< 2						
12	CA10201-NOV23	24-Nov-23	1018	9.3	51	97	< 2	< 2	2.0	< 0.3	< 0.03	< 0.06	< 0.06	2.0
13	CA10001-DEC23	1-Dec-23	990	9.5	54	104	< 2	< 2						
14	CA10061-DEC23	8-Dec-23	980	9.3	62	101	< 2	3.0						
15	CA10121-DEC23	15-Dec-23	1003	9.6	58	113	< 2	2.0						
16	CA10182-DEC23	22-Dec-23	1001	9.4	59	102	< 2	3.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.1
17	CA10240-DEC23	29-Dec-23	988	9.3	62	115	< 2	2.0						
18	CA10056-JAN24	5-Jan-24	966	9.0	59	105	< 2	< 2						
19	CA10115-JAN24	12-Jan-24	950	8.5	69	110	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.5
20	CA10177-JAN24	19-Jan-24	956	9.0	65	126	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.0
21	CA10241-JAN24	26-Jan-24	986	9.2	75	122	< 2	< 2						
22	CA10014-FEB24	2-Feb-24	988	9.1	66	122	< 2	3.0						
23	CA10072-FEB24	9-Feb-24	988	9.6	63	109	< 2	< 2						
24	CA10129-FEB24	15-Feb-24	958	9.4	68	119	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.8
25	CA10184-FEB24	23-Feb-24	974	8.1	74	138	< 2	3.0						

Appendix F:
HCT Results-Dunite CR22-193A 200-210

Dunite CR22-193A 200-210

Week/Event	Mercury	Aluminum	Aluminum (0.2µm)	Silver	Arsenic	Boron	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.00006	0.002	0.002	< 0.00005	< 0.0002	0.27	0.017	< 0.000007	< 0.00001	30	0.000004	0.000054	0.0012	0.0004	< 0.007	0.85	0.0009
1	< 0.00001	0.002	0.001	< 0.00005	< 0.0002	0.31	0.0068	< 0.000007	< 0.00001	9.1	< 0.000003	0.000049	0.0011	0.0006	< 0.007	0.22	0.0004
2	< 0.00001	0.001	< 0.001	< 0.00005	< 0.0002	0.33	0.0032	< 0.000007	< 0.00001	6.0	0.000005	0.000034	0.00075	< 0.0002	< 0.007	0.082	< 0.0001
3	0.00002	0.001	0.001	< 0.00005	< 0.0002	0.3	0.0023	< 0.000007	< 0.00001	4.8	< 0.000003	0.000033	0.00085	< 0.0002	< 0.007	0.045	< 0.0001
4	0.00004	< 0.001	0.001	< 0.00005	< 0.0002	0.27	0.0022	< 0.000007	< 0.00001	4.2	< 0.000003	0.00019	0.00026	0.0005	< 0.007	0.044	< 0.0001
5	< 0.00001	< 0.001	< 0.001	< 0.00005	< 0.0002	0.24	0.0013	< 0.000007	< 0.00001	3.5	0.000004	0.00014	0.00069	0.0005	< 0.007	0.051	< 0.0001
6	< 0.00001	< 0.001	0.001	< 0.00005	< 0.0002	0.32	0.00082	< 0.000007	< 0.00001	2.5	< 0.000003	0.000019	0.0014	0.0006	< 0.007	0.013	< 0.0001
7	< 0.00001	0.002	0.001	< 0.00005	< 0.0002	0.3	0.00082	< 0.000007	< 0.00001	2.4	< 0.000003	0.000046	0.0013	0.0009	< 0.007	< 0.009	< 0.0001
8	< 0.00001	0.002	0.001	< 0.00005	< 0.0002	0.33	0.00069	< 0.000007	< 0.00001	2.2	< 0.000003	0.000009	0.0016	< 0.0002	< 0.007	0.034	< 0.0001
9																	
10																	
11																	
12	< 0.00001	0.003	0.002	< 0.00005	0.0022	0.26	0.0006	< 0.000007	< 0.00001	1.4	< 0.000003	0.000005	0.0019	< 0.0002	< 0.007	0.017	0.0004
13																	
14																	
15																	
16	< 0.00001	0.004	< 0.001	< 0.00005	< 0.0002	0.23	0.00032	< 0.000007	< 0.00001	1.3	< 0.000003	0.000009	0.0024	< 0.0002	< 0.007	0.011	< 0.0001
17																	
18																	
19	< 0.00001	0.002	0.002	< 0.00005	0.0003	0.22	0.00033	< 0.000007	< 0.00001	1.2	< 0.000003	0.00002	0.0027	0.0002	< 0.007	0.019	0.0001
20	< 0.00001	0.002	0.002	< 0.00005	< 0.0002	0.18	0.00041	< 0.000007	< 0.00001	1.2	< 0.000003	0.000014	0.0027	0.0002	< 0.007	0.02	< 0.0001
21																	
22																	
23																	
24	< 0.00001	0.001	0.001	< 0.00005	< 0.0002	0.13	0.00024	< 0.000007	< 0.00001	1.0	< 0.000003	0.000013	0.0028	< 0.001	< 0.007	0.034	< 0.0001
25																	

Dunite CR22-193A 200-210

Week/Event	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	108	0.00018	0.00009	1.1	0.0009	< 0.00009	< 0.0009	0.00005	0.0006	0.073	< 0.00007	< 0.000005	0.000011	0.00008	< 0.00002	< 0.00002
1	55	0.00044	0.00013	0.19	0.001	< 0.00009	< 0.0009	< 0.00004	0.00035	0.018	0.00008	< 0.000005	0.00031	0.00001	< 0.00002	< 0.00002
2	29	0.00028	0.013	0.1	0.0005	< 0.00009	< 0.0009	< 0.00004	0.00009	0.012	< 0.00007	< 0.000005	0.00054	0.00002	< 0.00002	< 0.00002
3	20	0.00036	0.0004	0.03	0.0008	< 0.00009	< 0.0009	0.00004	< 0.00006	0.009	< 0.00007	< 0.000005	0.00038	0.00003	< 0.00002	< 0.00002
4	18	0.0068	0.00009	0.03	0.0068	< 0.00009	< 0.0009	0.00006	0.00009	0.008	< 0.00007	0.000006	0.00063	< 0.00001	< 0.00002	< 0.00002
5	17	0.0028	0.0004	< 0.01	0.0043	< 0.00009	< 0.0009	< 0.00004	0.00012	0.0061	< 0.00007	< 0.000005	0.000027	< 0.00001	0.00009	< 0.00002
6	22	0.00011	0.00012	0.02	0.0004	< 0.00009	< 0.0009	0.00004	0.00007	0.0034	< 0.00007	< 0.000005	0.00023	0.00003	0.00003	< 0.00002
7	14	0.0004	< 0.00004	0.02	0.0007	< 0.00009	< 0.0009	< 0.00004	0.00007	0.0035	< 0.00007	< 0.000005	0.0033	0.00001	< 0.00002	< 0.00002
8	14	0.00007	0.0011	0.03	0.0003	< 0.00009	< 0.0009	0.00005	< 0.00006	0.0031	< 0.00007	< 0.000005	0.00019	0.0002	0.00035	< 0.00002
9																
10																
11																
12	13	0.00037	0.0015	0.03	0.0002	< 0.00009	< 0.0009	0.00006	< 0.00006	0.0018	< 0.00007	< 0.000005	0.00039	0.00002	< 0.00002	< 0.00002
13																
14																
15																
16	14	0.00007	0.00011	< 0.01	0.0003	< 0.00009	< 0.0009	0.00005	< 0.00006	0.0012	< 0.00007	< 0.000005	0.00036	0.00003	< 0.00002	< 0.00002
17																
18																
19	17	0.00039	0.00059	0.02	0.0006	< 0.00009	< 0.0009	0.00009	< 0.00006	0.001	< 0.00007	< 0.000005	0.0010	0.00003	0.00003	< 0.00002
20	16	0.00021	0.0011	0.01	0.0003	< 0.00009	< 0.0009	0.00007	< 0.00006	0.001	< 0.00007	< 0.000005	0.00034	0.00003	0.00002	< 0.00002
21																
22																
23																
24	17	0.00016	< 0.0004	0.01	0.0003	< 0.00009	< 0.0009	0.00004	< 0.00006	0.00079	< 0.0001	< 0.000005	0.00038	0.00002	< 0.0002	< 0.00002
25																

Appendix F:
HCT Results-Dunite CR22-193A 200-210

Dunite CR22-193A 200-210

Week/Event	Zinc
	mg/L
0	< 0.002
1	0.005
2	< 0.002
3	< 0.002
4	< 0.002
5	< 0.002
6	< 0.002
7	< 0.002
8	< 0.002
9	
10	
11	
12	< 0.002
13	
14	
15	
16	< 0.002
17	
18	
19	< 0.002
20	< 0.002
21	
22	
23	
24	< 0.002
25	

Gabbro P1-Gab-EZ-1

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10021-NOV21	2-Nov-21	1000	841	8.8	< 2	17	40	< 2	2.0	< 0.3	< 0.03	< 0.06	< 0.06
1	CA10072-NOV21	9-Nov-21	1000	885	8.1	< 2	15	38	< 2	1.0	< 0.3	< 0.03	< 0.06	< 0.06
2	CA10118-NOV21	16-Nov-21	1000	924	8.6	< 2	12	30	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
3	CA10190-NOV21	23-Nov-21	1000	921	7.6	< 2	7.0	23	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
4	CA10241-NOV21	30-Nov-21	1000	933	7.8	< 2	11	20	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
5	CA10030-DEC21	7-Dec-21	1000	947	7.5	< 2	10	20	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
6	CA10096-DEC21	14-Dec-21	1000	939	7.3	< 2	9.0	20	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10148-DEC21	21-Dec-21	1000	925	7.6	< 2	7.0	18	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10206-DEC21	28-Dec-21	1000	923	7.3	< 2	9.0	18	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10018-JAN22	4-Jan-22	1000	930	7.4	< 2	8.0	18	< 2					
10	CA10056-JAN22	11-Jan-22	1000	921	7.5	< 2	10	19	< 2					
11	CA10118-JAN22	18-Jan-22	1000	940	7.7	< 2	7.0	14	< 2					
12	CA10153-JAN-22	25-Jan-22	1000	934	7.2	< 2	7.0	15	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
13	CA10016-FEB22	1-Feb-22	1000	931	7.2	< 2	6.0	14	< 2					
14	CA10052-FEB22	8-Feb-22	1000	941	7.2	< 2	6.0	14	< 2					
15	CA10086-FEB22	15-Feb-22	1000	944	7.2	< 2	6.0	15	< 2					
16	CA10119-FEB22	22-Feb-22	1000	951	7.7	< 2	6.0	19	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10012-MAR22	1-Mar-22	1000	934	7.3	< 2	8.0	17	< 2					
18	CA10044-MAR22	8-Mar-22	1000	961	7.2	< 2	5.0	20	< 2					
19	CA10084-MAR22	15-Mar-22	1000	956	7.5	< 2	7.0	15	< 2					
20	CA10114-MAR22	22-Mar-22	1000	929	7.3	< 2	7.0	14	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10162-MAR22	29-Mar-22	1000	962	7.3	< 2	7.0	16	< 2					
22	CA10011-APR22	5-Apr-22	1000	978	7.3	< 2	6.0	13	< 2					
23	CA10046-APR22	12-Apr-22	1000	1008	7.2	< 2	7.0	18	< 2					
24	CA10084-APR22	19-Apr-22	1000	808	7.1	< 2	5.0	11	<2	<1	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10125-APR22	26-Apr-22	1000	975	7.2	< 2	5.0	11	< 2					
26	CA10009-MAY22	03-May-22	1000	986	7.2	< 2	6.0	11	< 2					
27	CA10051-MAY22	10-May-22	1000	950	7.4	< 2	7.0	14	< 2					
28	CA10093-MAY22	17-May-22	1000	1011	7.2	< 2	6.0	11	<2	<1	< 0.3	< 0.03	< 0.06	< 0.06
29	CA10138-MAY22	24-May-22	1000	938	7.5	< 2	6.0	13	< 2					
30	CA10186-MAY22	31-May-22	1000	958	7.3	< 2	5.0	13	< 2					
31	CA10030-JUN22	07-Jun-22	1000	981	7.1	< 2	5.0	10	< 2					
32	CA10076-JUN22	14-Jun-22	1000	880	7.1	< 2	5.0	11	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
33	CA10118-JUN22	21-Jun-22	1000	1020	7.3	< 2	5.0	11	< 2					
34	CA10165-JUN22	28-Jun-22	1000	978	7.2	< 2	4.0	13	< 2					
35	CA10007-JUL22	05-Jul-22	1000	984	7.1	< 2	5.0	11	< 2					
36	CA10051-JUL22	12-Jul-22	1000	952	7.1	< 2	6.0	14	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
37	CA10095-JUL22	19-Jul-22	1000	988	7.2	< 2	5.0	10	< 2					
38	CA10139-JUL22	26-Jul-22	1000	991	7.1	< 2	4.0	11	< 2					
39	CA10007-AUG22	02-Aug-22	1000	987	7.3	< 2	5.0	10	< 2					
40	CA10051-AUG22	09-Aug-22	1000	1002	6.9	< 2	3.0	10	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
41	CA10095-AUG22	16-Aug-22	1000	1008	7.2	< 2	6.0	6.0	< 2					
42	CA10178-AUG22	23-Aug-22	1000	985	7.4	< 2	5.0	10	< 2					
43	CA10187-AUG22	30-Aug-22	1000	992	7.3	< 2	6.0	14	< 2					

Appendix F:
HCT Results-Gabbro P1-Gab-EZ-1

Gabbro P1-Gab-EZ-1

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
44	CA10010-SEP22	06-Sep-22	1000	981	7.1	< 2	4.0	12	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
45	CA10055-SEP22	13-Sep-22	1000	981	7.2	< 2	5.0	13	< 2					
46	CA10098-SEP22	20-Sep-22	1000	981	6.9	< 2	4.0	13	< 2					
47	CA10145-SEP22	27-Sep-22	1000	908	7.1	< 2	4.0	14	< 2					
48	CA10006-OCT22	04-Oct-22	1000	925	7.2	< 2	4.0	11	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
49	CA10052-OCT22	11-Oct-22	1000	978	7.3	< 2	5.0	9.0	< 2					
50	CA10097-OCT22	18-Oct-22	1000	976	7.2	< 2	5.0	10	< 2					
51	CA10141-OCT22	25-Oct-22	1000	961	6.9	< 2	5.0	10	< 2					
52	CA10006-NOV22	01-Nov-22	1000	970	7.8	< 2	6.0	9.0	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
53	CA10049-NOV22	08-Nov-22	1000	954	7.2	< 2	5.0	9.0	< 2					
54	CA10091-NOV22	15-Nov-22	1000	969	7.1	< 2	5.0	10	< 2					
55	CA10135-NOV22	22-Nov-22	1000	948	7.1	< 2	4.0	7.0	< 2					
56	CA10177-NOV22	29-Nov-22	1000	945	7.3	< 2	4.0	10	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
57	CA10010-DEC22	06-Nov-22	1000	964	7.1	< 2	4.0	9.0	< 2					
58	CA10053-DEC22	13-Dec-22	1000	941	7.2	< 2	5.0	12	< 2					
59	CA10099-DEC22	20-Dec-22	1000	931	7.3	< 2	5.0	10	< 2					
60	CA10216-DEC22	27-Dec-22	1000	952	7.0	< 2	4.0	10	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
61	CA10005-JAN23	03-Jan-23	1000	961	7.4	< 2	4.0	9.0	< 2					
62	CA10049-JAN23	10-Jan-23	1000	950	7.1	< 2	4.0	6.0	< 2					
63	CA10098-JAN23	17-Jan-23	1000	977	7.2	< 2	5.0	10	< 2					
64	CA10145-JAN23	24-Jan-23	1000	963	7.1	< 2	4.0	9.0	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
65	CA10192-JAN23	31-Jan-23	1000	961	7.4	< 2	5.0	10	< 2					
66	CA10033-FEB23	07-Feb-23	1000	982	7.3	< 2	5.0	9.0	< 2					
67	CA10079-FEB23	14-Feb-23	1000	981	7.0	< 2	5.0	11	< 2					
68	CA10126-FEB23	21-Feb-23	1000	973	6.9	< 2	3.0	10	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
69	CA10175-FEB23	28-Feb-23	1000	902	7.1	< 2	4.0	9.0	< 2					
70	CA10032-MAR23	07-Mar-23	1000	997	7.1	< 2	5.0	12	< 2					
71	CA10079-MAR23	14-Mar-23	1000	999	7.0	< 2	5.0	9.0	< 2					
72	CA10127-MAR23	21-Mar-23	1000	1032	7.3	< 2	6.0	12	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
73	CA10174-MAR23	28-Mar-23	1000	978	7.4	< 2	3.0	9.0	< 2					
74	CA10006-MAR23	04-Apr-23	1000	996	6.8	< 2	3.0	10	< 2					
75	CA10055-APR23	11-Apr-23	1000	984	7.1	< 2	3.0	10	< 2					
76	CA10104-APR23	18-Apr-23	1000	964	7.3	< 2	2.0	9.0	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
77	CA10153-APR23	25-Apr-23	1000	973	6.9	< 2	3.0	8.0	< 2					
78	CA10006-MAY23	02-May-23	1000	945	7.1	< 2	4.0	10	< 2					
79	CA10058-MAY23	09-May-23	1000	974	6.9	< 2	2.0	6.0	< 2					
80	CA10109-MAY23	16-May-23	1000	963	7.0	< 2	3.0	9.0	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
81	CA10161-MAY23	23-May-23	1000	963	7.0	< 2	2.0	8.0	< 2					
82	CA10216-MAY23	30-May-23	1000	921	6.9	< 2	3.0	6.0	< 2					
83	CA10018-JUN23	06-Jun-23	1000	941	6.5	< 2	2.0	7.0	< 2					
84	CA10071-JUN23	13-Jun-23	1000	951	6.8	2.0	3.0	8.0	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
85	CA10123-JUN23	20-Jun-23	1000	934	7.1	< 2	3.0	7.0	< 2					
86	CA10173-JUN23	27-Jun-23	1000	930	6.9	< 2	3.0	8.0	< 2					
87	CA10006-JUL23	04-Jul-23	1000	961	7.1	< 2	4.0	8.0	< 2					

Gabbro P1-Gab-EZ-1

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
88	CA10058-JUL23	11-Jul-23	1000	950	7.0	< 2	3.0	6.0	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
89	CA10111-JUL23	18-Jul-23	1000	930	7.0	<2	3.0	9.0	< 2					
90	CA10162-JUL23	25-Jul-23	1000	975	6.9	< 2	4.0	9.0	< 2					
91	CA10006-AUG23	01-Aug-23	1000	941	7.0	< 2	4.0	6.0	< 2					

Appendix F:
HCT Results-Gabbro P1-Gab-EZ-1

Gabbro P1-Gab-EZ-1

Week/Event	Chromium VI	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.3	< 0.00001	0.005	< 0.00005	0.0002	0.00042	< 0.000007	0.01	< 0.00001	5.4	< 0.000003	0.000032	< 0.00008	0.0006	0.008	0.62
1	< 0.2	< 0.00001	0.048	< 0.00005	< 0.0002	0.00027	< 0.000007	0.01	< 0.00001	3.1	0.000006	0.000025	0.00011	0.0004	0.01	0.62
2	< 0.2	< 0.00001	0.009	< 0.00005	0.0002	0.0006	< 0.000007	0.011	< 0.00001	3.3	< 0.000003	0.000029	0.00014	0.0002	0.008	0.98
3	< 0.2	< 0.00001	0.033	< 0.00005	< 0.0002	0.00028	< 0.000007	0.01	< 0.00001	2.8	< 0.000003	0.000032	0.00013	< 0.0002	0.014	0.66
4	< 0.2	< 0.00001	0.014	< 0.00005	< 0.0002	0.00021	< 0.000007	0.012	< 0.00001	1.8	0.000006	0.000031	0.0001	< 0.0002	0.007	0.57
5	0.4	< 0.00001	0.029	< 0.00005	0.0006	0.00031	< 0.000007	0.012	0.00001	3.0	< 0.000003	0.00028	0.00028	0.0042	0.32	0.55
6	< 0.2	< 0.00001	0.025	< 0.00005	< 0.0002	0.00031	< 0.000007	0.007	< 0.00001	2.4	0.00001	0.000017	0.0001	< 0.0002	0.009	0.53
7	< 0.2	< 0.00001	0.003	< 0.00005	0.0004	0.00036	< 0.000007	0.009	< 0.00001	2.1	< 0.000003	0.00001	< 0.00008	< 0.0002	0.007	0.5
8	< 0.2	< 0.00001	0.023	< 0.00005	< 0.0002	0.00025	< 0.000007	0.014	< 0.00001	2.2	< 0.000003	0.000035	0.00011	0.0003	< 0.007	0.64
9																
10																
11																
12	< 0.2	< 0.00001	0.026	< 0.00005	0.0006	0.00034	< 0.000007	0.004	< 0.00001	2.2	< 0.000003	< 0.000004	< 0.00008	< 0.0002	0.01	0.49
13																
14																
15																
16			0.03	< 0.00005	< 0.0002	0.00021	< 0.000007	< 0.002	< 0.00001	2.1	< 0.000003	0.000021	0.00011	< 0.0002	< 0.007	0.43
17																
18																
19																
20			0.03	< 0.00005	0.0004	0.00023	< 0.000007	0.003	< 0.00001	4.0	0.000003	0.000014	< 0.00008	0.002	< 0.007	0.31
21																
22																
23																
24			0.03	< 0.00005	< 0.0002	0.00017	< 0.000007	< 0.002	< 0.00001	1.8	< 0.000003	< 0.000004	< 0.00008	< 0.0002	< 0.007	0.27
25																
26																
27																
28	---		0.02	< 0.00005	< 0.0002	0.0003	0.000011	0.002	< 0.00001	1.6	< 0.000003	0.000014	0.00011	0.0002	< 0.007	0.2
29																
30																
31																
32	---		0.028	< 0.00005	< 0.0002	0.00019	< 0.000007	< 0.002	< 0.00001	1.7	< 0.000003	0.000011	0.00009	< 0.0002	0.007	0.24
33																
34																
35																
36	---		0.031	< 0.00005	< 0.0002	0.00018	< 0.000007	< 0.002	< 0.00001	1.6	< 0.000003	0.000013	< 0.00008	< 0.0002	< 0.007	0.23
37																
38																
39																
40	---		0.018	< 0.00005	< 0.0002	0.0002	< 0.000007	0.003	< 0.00001	1.3	0.000021	0.000025	0.00019	0.0004	< 0.007	0.17
41																
42																
43																

Appendix F:
HCT Results-Gabbro P1-Gab-EZ-1

Gabbro P1-Gab-EZ-1

Week/Event	Chromium VI	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
44	---		0.025	< 0.00005	0.0005	0.0001	< 0.000007	< 0.002	< 0.00001	1.4	0.000009	0.00002	0.00011	< 0.0002	< 0.007	0.22
45																
46																
47																
48	---		0.057	< 0.00005	0.0003	0.00017	< 0.000007	0.003	< 0.00001	1.7	< 0.000003	0.000009	< 0.00008	< 0.0002	< 0.007	0.21
49																
50																
51																
52	---		0.02	< 0.00005	< 0.0002	0.00015	< 0.000007	< 0.002	< 0.00001	1.7	< 0.000003	0.000011	< 0.00008	< 0.0002	< 0.007	0.18
53																
54																
55																
56	---		0.035	< 0.00005	< 0.0002	0.00017	< 0.000007	< 0.002	< 0.00001	1.7	0.000004	0.000018	0.00051	0.0002	0.012	0.2
57																
58																
59																
60	---		0.039	< 0.00005	< 0.0002	0.00019	< 0.000007	0.003	< 0.00001	1.5	< 0.000003	0.000016	< 0.00008	0.0002	< 0.007	0.18
61																
62																
63																
64	---		0.002	< 0.00005	< 0.0002	0.00012	< 0.000007	< 0.002	< 0.00001	1.7	< 0.000003	0.000011	< 0.00008	0.0002	0.016	0.18
65																
66																
67																
68	---		0.034	< 0.00005	< 0.0002	0.0001	< 0.000007	< 0.002	< 0.00001	1.3	< 0.000003	0.00002	< 0.00008	< 0.0002	< 0.007	0.13
69																
70																
71																
72	---		0.023	< 0.00005	< 0.0002	0.00024	< 0.000007	< 0.002	< 0.00001	2.0	< 0.000003	0.000013	0.00009	0.0002	< 0.007	0.13
				< 0.00005	< 0.0002	0.00023	< 0.000007	< 0.002	< 0.00001	2.1	0.000008	0.00001	0.00012	< 0.0002	< 0.007	0.14
73																
74																
75																
76	---		0.034	< 0.00005	< 0.0002	0.00011	< 0.000007	< 0.002	< 0.00001	1.4	< 0.000003	< 0.000004	< 0.00008	0.0003	< 0.007	0.13
77																
78																
79																
80	---		0.035	< 0.00005	0.0009	0.00011	< 0.000007	< 0.002	< 0.00001	1.6	< 0.000003	0.000009	< 0.00008	0.0003	< 0.007	0.15
81																
82																
83																
84	---		0.038	< 0.00005	< 0.0002	0.00013	< 0.000007	< 0.002	< 0.00001	1.8	0.000005	0.000013	< 0.00008	0.0005	< 0.007	0.16
85																
86																
87																

Gabbro P1-Gab-EZ-1

Week/Event	Chromium VI	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
88	---		0.025	< 0.00005	< 0.0002	0.00019	< 0.000007	< 0.002	< 0.00001	1.4	0.000006	0.000024	< 0.00008	0.0003	< 0.007	0.13
89																
90																
91																

Gabbro P1-Gab-EZ-1																	
Week/Event	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.0002	1.2	0.0006	0.00026	1.2	0.0004	< 0.00009	< 0.0009	0.00013	0.00024	0.008	0.00022	< 0.000005	0.000002	0.0011	0.0007	< 0.00002
1	0.0002	0.97	0.00099	0.00027	1.1	0.0003	< 0.00009	< 0.0009	0.00011	0.00015	0.0048	< 0.00005	< 0.000005	< 0.000002	0.00084	0.0009	< 0.00002
2	0.0001	1.1	0.00093	0.00051	1.2	< 0.0001	< 0.00009	< 0.0009	0.00011	0.00019	0.0045	0.00011	< 0.000005	0.000003	0.0015	0.00093	< 0.00002
3	0.0002	0.82	0.0017	0.00012	0.79	< 0.0001	< 0.00009	< 0.0009	< 0.00004	0.0001	0.004	0.00064	< 0.000005	< 0.000002	0.0011	0.00048	< 0.00002
4	0.0002	0.72	0.0009	0.00006	0.7	< 0.0001	< 0.00009	< 0.0009	0.00008	0.00006	0.0029	< 0.00005	< 0.000005	< 0.000002	0.00085	0.00034	< 0.00002
5	0.0002	0.7	0.0013	0.0017	0.39	0.0004	0.00084	< 0.0009	0.00037	0.00007	0.0037	0.00011	< 0.000005	0.000005	0.00094	0.0023	< 0.00002
6	< 0.0001	0.69	0.00075	0.0012	0.33	0.0001	< 0.00009	< 0.0009	0.00011	0.00007	0.0025	0.00029	< 0.000005	0.000003	0.00069	0.00021	< 0.00002
7	0.0003	0.61	0.00082	0.00012	0.46	< 0.0001	< 0.00009	< 0.0009	0.00005	< 0.00006	0.0026	0.00006	< 0.000005	0.000006	0.00058	0.00016	< 0.00002
8	0.0003	0.76	0.00059	0.00007	0.35	0.0003	< 0.00009	< 0.0009	0.00005	< 0.00006	0.0024	< 0.00005	< 0.000005	< 0.000002	0.00054	0.00017	< 0.00002
9																	
10																	
11																	
12	< 0.0001	0.57	0.00051	0.00063	0.17	< 0.0001	< 0.00009	< 0.0009	0.00007	< 0.00006	0.006	0.00008	< 0.000005	0.000002	0.00056	0.00015	< 0.00002
13																	
14																	
15																	
16	0.0001	0.45	0.00044	0.00026	0.12	< 0.0001	< 0.00009	< 0.0009	0.00005	< 0.00006	0.002	0.00006	< 0.000005	0.000002	0.00047	0.00007	< 0.00002
17																	
18																	
19																	
20	0.0001	0.38	0.00048	0.00006	0.09	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0017	0.00006	< 0.000005	0.000003	0.00032	0.00007	< 0.00002
21																	
22																	
23																	
24	0.0001	0.29	0.00021	0.00008	0.04	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0016	< 0.00005	< 0.000005	< 0.000002	0.00025	0.00003	< 0.00002
25																	
26																	
27																	
28	0.0002	0.32	0.0012	0.00006	0.11	< 0.0001	0.00014	< 0.0009	< 0.00004	< 0.00006	0.0016	0.00008	< 0.000005	0.0001	0.00017	0.00003	< 0.00002
29																	
30																	
31																	
32	< 0.0001	0.27	0.0006	0.00005	0.03	0.0001	< 0.00009	< 0.0009	0.00006	< 0.00006	0.0016	< 0.00005	< 0.000005	0.00028	0.00024	0.00004	< 0.00002
33																	
34																	
35																	
36	< 0.0001	0.24	0.00044	0.0001	0.05	0.0001	< 0.00009	< 0.0009	0.00004	< 0.00006	0.0015	0.00019	< 0.000005	0.006	0.0002	0.00003	< 0.00002
37																	
38																	
39																	
40	< 0.0001	0.18	0.00038	0.00009	0.06	0.0003	< 0.00009	< 0.0009	0.00013	< 0.00006	0.0015	0.00072	< 0.000005	0.000022	0.00021	0.00003	< 0.00002
41																	
42																	
43																	

Gabbro P1-Gab-EZ-1

Week/Event	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
44	< 0.0001	0.17	0.00035	0.0099	0.14	0.0003	< 0.00009	< 0.0009	0.00008	< 0.00006	0.0013	0.00008	< 0.000005	0.000087	0.0002	0.00008	< 0.00002
45																	
46																	
47																	
48	< 0.0001	0.2	0.00033	< 0.00004	0.02	< 0.0001	< 0.00009	< 0.0009	0.00008	< 0.00006	0.002	0.00007	< 0.000005	0.00062	0.00022	0.00006	< 0.00002
49																	
50																	
51																	
52	0.0069	0.18	0.00047	< 0.00004	0.04	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0014	< 0.00005	< 0.000005	0.000012	0.0002	0.00002	< 0.00002
53																	
54																	
55																	
56	< 0.0001	0.17	0.001	0.00049	0.04	0.0004	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0016	0.00007	< 0.000005	0.000076	0.00018	0.00002	< 0.00002
57																	
58																	
59																	
60	0.0001	0.17	0.00029	< 0.00004	0.05	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0013	0.00009	< 0.000005	0.000021	0.00023	< 0.00002	< 0.00002
61																	
62																	
63																	
64	0.0007	0.15	0.00053	0.00007	0.27	0.0001	0.00009	< 0.0009	0.00016	< 0.00006	0.0013	< 0.00005	< 0.000005	0.000013	0.00018	< 0.00002	< 0.00002
65																	
66																	
67																	
68	< 0.0001	0.12	0.00045	0.00005	0.02	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0011	< 0.00005	< 0.000005	0.000056	0.00015	< 0.00002	< 0.00002
69																	
70																	
71																	
72	< 0.0001	0.16	0.0004	0.0031	0.03	< 0.0001	< 0.00009	< 0.0009	< 0.00004	0.0061	0.0016	< 0.00005	< 0.000005	0.0011	0.00014	0.00002	< 0.00002
	0.0001	0.14	0.00028	0.0029	0.06	< 0.0001	< 0.00009	< 0.0009	0.00007	0.0063	0.0016	0.00011	< 0.000005	0.0011	0.00014	< 0.00002	< 0.00002
73																	
74																	
75																	
76	< 0.0001	0.12	0.00029	0.00018	0.03	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00098	< 0.00005	< 0.000005	0.000052	0.00012	0.00002	< 0.00002
77																	
78																	
79																	
80	< 0.0001	0.14	0.00041	0.00014	0.06	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0011	< 0.00005	< 0.000005	0.0003	0.00018	0.00003	< 0.00002
81																	
82																	
83																	
84	0.0004	0.19	0.0005	0.00007	0.11	< 0.0001	< 0.00009	< 0.0009	0.00004	< 0.00006	0.0014	< 0.00005	< 0.000005	0.00016	0.00021	0.00006	< 0.00002
85																	
86																	
87																	

Gabbro P1-Gab-EZ-1

Week/Event	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
88	< 0.0001	0.11	0.0004	0.00008	< 0.01	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00098	< 0.00007	< 0.000005	0.00016	0.00011	< 0.00002	< 0.00002
89																	
90																	
91																	

Appendix F:
HCT Results-Gabbro P1-Gab-EZ-1

Gabbro P1-Gab-EZ-1	
Week/Event	Zinc
	mg/L
0	< 0.002
1	< 0.002
2	< 0.002
3	< 0.002
4	< 0.002
5	< 0.002
6	< 0.002
7	< 0.002
8	< 0.002
9	
10	
11	
12	< 0.002
13	
14	
15	
16	< 0.002
17	
18	
19	
20	< 0.002
21	
22	
23	
24	< 0.002
25	
26	
27	
28	< 0.002
29	
30	
31	
32	< 0.002
33	
34	
35	
36	< 0.002
37	
38	
39	
40	< 0.002
41	
42	
43	

Appendix F:
HCT Results-Gabbro P1-Gab-EZ-1

Gabbro P1-Gab-EZ-1	
Week/Event	Zinc
	mg/L
44	< 0.002
45	
46	
47	
48	< 0.002
49	
50	
51	
52	< 0.002
53	
54	
55	
56	< 0.002
57	
58	
59	
60	< 0.002
61	
62	
63	
64	< 0.002
65	
66	
67	
68	< 0.002
69	
70	
71	
72	0.002
	< 0.002
73	
74	
75	
76	< 0.002
77	
78	
79	
80	< 0.002
81	
82	
83	
84	< 0.002
85	
86	
87	

Appendix F:
HCT Results-Gabbro P1-Gab-EZ-1

Gabbro P1-Gab-EZ-1	
Week/Event	Zinc
	mg/L
88	< 0.002
89	
90	
91	

Appendix F:
HCT Results-Gabbro CR21-GT-04B 350-360

Gabbro CR21-GT-04B 350-360

Week/Event	LIMS	Sample Date	Leachate Volume Recovered (mL)	pH	Alkalinity	Conductivity	Acidity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	No unit	mg/L as CaCO ₃	uS/cm	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10057-SEP23	1-Sep-23	838	8.8	11	33	< 2	< 2	1.0	< 0.3	< 0.03	< 0.06	< 0.06
1	CA10114-SEP23	8-Sep-23	998	7.6	11	35	< 2	< 2	2.0	< 0.3	< 0.03	< 0.06	< 0.06
2	CA10115-SEP23	15-Sep-23	979	6.8	9.0	26	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
3	CA10171-SEP23	22-Sep-23	900	7.0	7.0	16	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
4	CA10228-SEP23	29-Sep-23	919	7.3	6.0	13	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
5	CA10054-OCT23	6-Oct-23	937	6.9	4.0	5.0	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
6	CA10111-OCT23	13-Oct-23	950	7.1	6.0	14	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10169-OCT23	20-Oct-23	912	7.3	8.0	12	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10226-OCT23	27-Oct-23	936	7.0	4.0	10	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10029-NOV23	3-Nov-23	891	6.9	5.0	12	< 2	< 2					
10	CA10084-NOV23	10-Nov-23	880	6.9	5.0	10	< 2	< 2					
11	CA10139-NOV23	17-Nov-23	978	7.0	4.0	11	< 2	< 2					
12	CA10201-NOV23	24-Nov-23	967	6.8	3.0	7.0	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
13	CA10001-DEC23	1-Dec-23	919	7.0	3.0	9.0	< 2	< 2					
14	CA10061-DEC23	8-Dec-23	923	7.1	4.0	9.0	< 2	< 2					
15	CA10121-DEC23	15-Dec-23	941	7.0	3.0	10	< 2	< 2					
16	CA10182-DEC23	22-Dec-23	1004	7.1	7.0	15	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10240-DEC23	29-Dec-23	954	7.0	4.0	10	< 2	< 2					
18	CA10056-JAN24	5-Jan-24	918	6.9	3.0	8.0	< 2	< 2					
19	CA10115-JAN24	12-Jan-24	900	7.1	4.0	10	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
20	CA10177-JAN24	19-Jan-24	900	7.0	3.0	10	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10241-JAN24	26-Jan-24	956	6.8	2.0	5.0	< 2	< 2					
22	CA10014-FEB24	2-Feb-24	934	6.8	2.0	5.0	< 2	< 2					
23	CA10072-FEB24	9-Feb-24	926	6.9	4.0	7.0	< 2	< 2					
24	CA10129-FEB24	15-Feb-24	944	7.1	3.0	10	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10184-FEB24	23-Feb-24	934	6.9	2.0	7.0	< 2	< 2					

Appendix F:
HCT Results-Gabbro CR21-GT-04B 350-360

Gabbro CR21-GT-04B 350-360

Week/Event	Chromium VI	Mercury	Aluminum	Aluminum (0.2µm)	Silver	Arsenic	Boron	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.5	< 0.00001	0.047	0.048	< 0.00005	0.0005	0.014	0.00033	< 0.000007	< 0.00001	2.8	< 0.000003	0.000022	0.00053	0.0002	< 0.007
1	0.4	< 0.00001	0.018	0.016	< 0.00005	0.001	0.019	0.00059	< 0.000007	< 0.00001	2.2	< 0.000003	0.000034	0.00057	0.0003	< 0.007
2	< 0.2	< 0.00001	0.016	0.016	< 0.00005	0.0007	0.015	0.00038	< 0.000007	< 0.00001	1.8	< 0.000003	0.000019	0.00031	< 0.0002	0.079
3	< 0.2	< 0.00001	0.023	0.021	< 0.00005	0.0004	0.009	0.00023	< 0.000007	< 0.00001	0.96	< 0.000003	0.000013	0.00016	< 0.0002	< 0.007
4	< 0.2	< 0.00001	0.032	0.025	< 0.00005	0.0004	0.011	0.00021	< 0.000007	< 0.00001	0.96	< 0.000003	0.000018	0.00018	0.0004	0.01
5	0.4	< 0.00001	0.027	0.018	< 0.00005	0.0002	0.008	0.00018	< 0.000007	< 0.00001	0.77	0.000003	0.000013	0.00013	0.0002	0.011
6	0.2	< 0.00001	0.019	0.017	< 0.00005	0.0003	0.009	0.00019	< 0.000007	< 0.00001	0.72	< 0.000003	0.00001	0.00012	0.0005	< 0.007
7	0.2	< 0.00001	0.027	0.021	< 0.00005	0.0002	0.006	0.00018	< 0.000007	< 0.00001	0.64	< 0.000003	0.00006	0.00019	0.0021	0.008
8	< 0.2	< 0.00001	0.029	0.023	< 0.00005	< 0.0002	0.005	0.00016	< 0.000007	< 0.00001	0.61	0.000005	0.000015	0.0002	< 0.0002	< 0.007
9																
10																
11																
12	< 0.2	< 0.00001	0.027	0.024	< 0.00005	0.0004	0.005	0.00025	< 0.000007	< 0.00001	0.54	< 0.000003	0.000007	0.0001	< 0.0002	< 0.007
13																
14																
15																
16	< 0.2	< 0.00001	0.016	0.014	< 0.00005	< 0.0002	0.005	0.00046	< 0.000007	< 0.00001	1.1	< 0.000003	0.000013	< 0.00008	< 0.0002	< 0.007
17																
18																
19	< 0.2	< 0.00001	0.031	0.009	< 0.00005	< 0.0002	0.003	0.00021	< 0.000007	< 0.00001	0.54	< 0.000003	0.000015	0.00011	< 0.0002	< 0.007
20	< 0.2	< 0.00001	0.035	0.034	< 0.00005	< 0.0002	0.004	0.00037	< 0.000007	< 0.00001	0.65	< 0.000003	0.000012	0.00018	0.0013	0.008
21																
22																
23																
24	< 0.2	< 0.00001	0.024	0.016	< 0.00005	< 0.0002	0.004	0.00029	< 0.000007	< 0.00001	0.69	< 0.000003	0.000013	< 0.00008	< 0.001	< 0.007
25																

Appendix F:
HCT Results-Gabbro CR21-GT-04B 350-360

Gabbro CR21-GT-04B 350-360

Week/Event	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	1.2	0.0001	0.74	0.00025	0.00068	2.0	0.0003	< 0.00009	< 0.0009	< 0.00004	0.00056	0.0099	< 0.00007	< 0.000005	0.00095
1	1.3	0.0002	0.9	0.00063	0.0003	2.1	0.0005	< 0.00009	< 0.0009	< 0.00004	0.00023	0.0099	0.00008	< 0.000005	0.000005
2	1.2	0.0002	0.8	0.0013	0.00033	1.3	0.0003	< 0.00009	< 0.0009	0.00007	0.00014	0.0086	0.00009	< 0.000005	0.0023
3	1.0	0.0001	0.54	0.00062	0.00026	0.94	0.0002	< 0.00009	< 0.0009	< 0.00004	0.00006	0.0046	0.00012	< 0.000005	0.000073
4	1.1	0.0001	0.56	0.00043	0.00015	0.72	0.0001	< 0.00009	< 0.0009	< 0.00004	0.00008	0.0043	0.00014	< 0.000005	0.0012
5	1.0	< 0.0001	0.48	0.00039	0.00028	0.55	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0033	0.0001	< 0.000005	0.000027
6	0.83	0.0001	0.46	0.00052	0.00008	0.32	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0032	0.00009	< 0.000005	0.000088
7	0.8	0.0001	0.44	0.00072	< 0.00004	0.27	0.0007	< 0.00009	< 0.0009	< 0.00004	0.00007	0.0028	0.00016	< 0.000005	0.00034
8	0.93	0.0001	0.44	0.00054	0.00004	0.26	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0025	0.00015	< 0.000005	0.000043
9															
10															
11															
12	0.7	0.0002	0.35	0.00051	0.00028	0.11	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0024	0.00009	< 0.000005	0.000012
13															
14															
15															
16	0.8	0.0002	0.52	0.00063	0.00005	0.09	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.005	< 0.00007	< 0.000005	0.000002
17															
18															
19	0.77	0.0001	0.31	0.0005	0.00027	0.09	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0022	< 0.00007	< 0.000005	0.000011
20	1.1	0.0002	0.48	0.00016	0.0045	0.08	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0027	0.00016	0.000008	0.000055
21															
22															
23															
24	0.79	0.0001	0.34	0.00033	< 0.0004	0.08	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0028	< 0.0001	< 0.000005	0.00019
25															

Appendix F:
HCT Results-Gabbro CR21-GT-04B 350-360

Gabbro CR21-GT-04B 350-360

Week/Event	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L
0	0.00049	0.00002	< 0.00002	< 0.002
1	0.00056	0.00011	< 0.00002	< 0.002
2	0.00048	0.00013	< 0.00002	< 0.002
3	0.00052	0.00013	< 0.00002	< 0.002
4	0.00051	0.00002	< 0.00002	< 0.002
5	0.00043	0.00004	< 0.00002	< 0.002
6	0.00033	0.00003	< 0.00002	< 0.002
7	0.00034	0.00002	< 0.00002	< 0.002
8	0.0003	0.00002	< 0.00002	< 0.002
9				
10				
11				
12	0.00029	< 0.00002	< 0.00002	< 0.002
13				
14				
15				
16	0.00021	0.00002	< 0.00002	< 0.002
17				
18				
19	0.00026	< 0.00002	< 0.00002	< 0.002
20	0.00024	< 0.00002	< 0.00002	< 0.002
21				
22				
23				
24	0.00022	< 0.0002	< 0.00002	< 0.002
25				

Appendix F:
HCT Results-Gabbro CR20-41 365-375

Gabbro CR20-41 365-375

Week/Event	LIMS	Sample Date	Leachate Volume Recovered (mL)	pH	Alkalinity	Conductivity	Acidity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	No unit	mg/L as CaCO ₃	uS/cm	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10057-SEP23	1-Sep-23	818	8.3	9.0	30	< 2	< 2	1.0	< 0.3	< 0.03	< 0.06	< 0.06
1	CA10114-SEP23	8-Sep-23	993	7.5	11	35	< 2	< 2	1.0	< 0.3	< 0.03	< 0.06	< 0.06
2	CA10115-SEP23	15-Sep-23	968	6.9	8.0	22	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
3	CA10171-SEP23	22-Sep-23	955	7.1	6.0	17	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
4	CA10228-SEP23	29-Sep-23	912	7.5	7.0	14	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
5	CA10054-OCT23	6-Oct-23	921	7.0	5.0	7.0	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
6	CA10111-OCT23	13-Oct-23	968	7.1	6.0	14	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10169-OCT23	20-Oct-23	898	7.5	7.0	14	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10226-OCT23	27-Oct-23	928	7.1	5.0	10	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10029-NOV23	3-Nov-23	903	7.3	5.0	13	< 2	< 2					
10	CA10084-NOV23	10-Nov-23	909	6.9	5.0	11	< 2	< 2					
11	CA10139-NOV23	17-Nov-23	971	7.1	4.0	11	< 2	< 2					
12	CA10201-NOV23	24-Nov-23	982	6.8	4.0	7.0	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
13	CA10001-DEC23	1-Dec-23	922	7.4	7.0	13	< 2	< 2					
14	CA10061-DEC23	8-Dec-23	945	7.3	4.0	11	< 2	< 2					
15	CA10121-DEC23	15-Dec-23	930	7.1	4.0	11	< 2	< 2					
16	CA10182-DEC23	22-Dec-23	999	7.1	7.0	15	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10240-DEC23	29-Dec-23	988	7.1	4.0	11	< 2	< 2					
18	CA10056-JAN24	5-Jan-24	943	7.5	3.0	9.0	< 2	< 2					
19	CA10115-JAN24	12-Jan-24	904	7.2	3.0	9.0	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
20	CA10177-JAN24	19-Jan-24	918	6.9	3.0	9.0	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10241-JAN24	26-Jan-24	934	6.9	3.0	6.0	< 2	< 2					
22	CA10014-FEB24	2-Feb-24	952	6.8	2.0	8.0	< 2	< 2					
23	CA10072-FEB24	9-Feb-24	947	7.2	3.0	5.0	< 2	< 2					
24	CA10129-FEB24	15-Feb-24	947	7.1	3.0	7.0	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10184-FEB24	23-Feb-24	938	6.8	3.0	6.0	< 2	< 2					

Appendix F:
HCT Results-Gabbro CR20-41 365-375

Gabbro CR20-41 365-375

Week/Event	Chromium VI	Mercury	Aluminum	Aluminum (0.2µm)	Silver	Arsenic	Boron	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.3	< 0.00001	0.037	0.038	< 0.00005	0.0005	0.009	0.0002	< 0.000007	< 0.00001	2.5	< 0.000003	0.000043	0.00047	0.0003	< 0.007
1	0.5	< 0.00001	0.024	0.021	< 0.00005	0.0008	0.024	0.00046	< 0.000007	< 0.00001	2.0	< 0.000003	0.000073	0.00043	0.0008	< 0.007
2	< 0.2	< 0.00001	0.023	0.027	< 0.00005	0.0004	0.014	0.00022	< 0.000007	< 0.00001	1.5	< 0.000003	0.000016	0.00023	< 0.0002	0.007
3	< 0.2	< 0.00001	0.034	0.051	< 0.00005	0.0004	0.01	0.00021	< 0.000007	< 0.00001	1.1	< 0.000003	0.000014	0.00017	< 0.0002	0.011
4	< 0.2	< 0.00001	0.037	0.038	< 0.00005	0.0003	0.008	0.00019	< 0.000007	< 0.00001	0.9	< 0.000003	0.00002	0.00023	0.0002	0.012
5	< 0.2	< 0.00001	0.034	0.034	< 0.00005	0.0002	0.008	0.0001	< 0.000007	< 0.00001	0.82	0.000003	0.000015	0.00013	0.0005	0.01
6	0.2	< 0.00001	0.023	0.02	< 0.00005	< 0.0002	0.008	0.00008	< 0.000007	< 0.00001	0.72	< 0.000003	0.000007	0.0001	0.0003	< 0.007
7	< 0.2	< 0.00001	0.033	0.03	< 0.00005	< 0.0002	0.006	< 0.00008	< 0.000007	< 0.00001	0.66	< 0.000003	0.000067	0.00014	0.0014	0.01
8	< 0.2	< 0.00001	0.033	0.031	< 0.00005	0.0003	0.004	0.00013	< 0.000007	< 0.00001	0.7	0.000005	0.000013	0.0002	< 0.0002	0.008
9																
10																
11																
12	< 0.2	< 0.00001	0.029	0.019	< 0.00005	0.0003	0.004	0.00012	< 0.000007	< 0.00001	0.59	< 0.000003	0.000009	0.0001	< 0.0002	< 0.007
13																
14																
15																
16	< 0.2	< 0.00001	0.016	0.014	< 0.00005	0.0002	0.005	0.00023	< 0.000007	< 0.00001	1.2	< 0.000003	0.000012	< 0.00008	< 0.0002	< 0.007
17																
18																
19	< 0.2	< 0.00001	0.043	0.023	< 0.00005	< 0.0002	0.002	0.00009	< 0.000007	< 0.00001	0.6	< 0.000003	0.000018	0.0002	< 0.0002	0.013
20	< 0.2	< 0.00001	0.033	0.027	< 0.00005	0.0006	0.004	0.0001	< 0.000007	< 0.00001	0.75	< 0.000003	0.000015	0.00022	< 0.0002	0.007
21																
22																
23																
24	< 0.2	< 0.00001	0.026	0.02	< 0.00005	< 0.0002	0.002	0.00011	< 0.000007	< 0.00001	0.57	0.000003	0.000011	< 0.00008	< 0.001	0.01
25																

Appendix F:
HCT Results-Gabbro CR20-41 365-375

Gabbro CR20-41 365-375

Week/Event	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.55	0.0007	0.69	0.00029	0.00021	1.9	0.0002	< 0.00009	< 0.0009	< 0.00004	0.00073	0.0072	< 0.00007	< 0.000005	0.00081
1	0.62	0.0004	1.3	0.00081	0.00038	2.5	0.0005	< 0.00009	< 0.0009	0.00006	0.00029	0.0076	0.00012	< 0.000005	0.00041
2	0.44	0.0003	1.1	0.00083	0.00048	1.2	0.0002	< 0.00009	< 0.0009	< 0.00004	0.00012	0.0053	0.00013	< 0.000005	0.00034
3	0.46	0.0002	0.88	0.00071	0.00078	1.0	0.0001	< 0.00009	< 0.0009	< 0.00004	0.00009	0.0036	0.00011	< 0.000005	0.000054
4	0.44	0.0002	0.8	0.00049	0.00034	0.75	0.0001	< 0.00009	< 0.0009	< 0.00004	0.0001	0.0029	0.00015	< 0.000005	0.0011
5	0.43	0.0002	0.82	0.00049	0.0016	0.62	0.0001	< 0.00009	< 0.0009	< 0.00004	0.00007	0.0025	0.00013	< 0.000005	0.0026
6	0.32	0.0002	0.7	0.00041	0.0034	0.39	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0022	0.00012	< 0.000005	0.000032
7	0.31	0.0002	0.7	0.00059	0.00036	0.35	0.001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.002	0.00009	< 0.000005	0.00046
8	0.37	0.0002	0.71	0.00055	0.00016	0.37	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.002	0.00015	< 0.000005	0.00082
9															
10															
11															
12	0.25	0.0003	0.53	0.00076	0.00014	0.14	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0017	0.00011	< 0.000005	0.000055
13															
14															
15															
16	0.26	0.0002	0.67	0.00097	0.00016	0.13	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0034	< 0.00007	< 0.000005	0.000069
17															
18															
19	0.25	0.0001	0.41	0.00074	0.00024	0.14	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0016	0.00023	< 0.000005	0.000023
20	0.32	0.0003	0.64	0.00012	0.0015	0.14	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.002	0.00012	< 0.000005	0.000049
21															
22															
23															
24	0.22	0.0002	0.4	0.00075	0.0022	0.11	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0016	< 0.0001	< 0.000005	0.000063
25															

Appendix F:
HCT Results-Gabbro CR20-41 365-375

Gabbro CR20-41 365-375

Week/Event	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L
0	0.0005	0.00007	< 0.00002	< 0.002
1	0.0012	0.00023	< 0.00002	< 0.002
2	0.00087	0.00014	< 0.00002	< 0.002
3	0.00097	0.00014	< 0.00002	< 0.002
4	0.00092	0.00005	< 0.00002	< 0.002
5	0.00076	0.00005	< 0.00002	< 0.002
6	0.00052	0.00004	< 0.00002	< 0.002
7	0.0006	0.00003	< 0.00002	< 0.002
8	0.00053	0.00005	< 0.00002	< 0.002
9				
10				
11				
12	0.00044	0.00003	< 0.00002	< 0.002
13				
14				
15				
16	0.00034	< 0.00002	< 0.00002	< 0.002
17				
18				
19	0.00041	< 0.00002	< 0.00002	< 0.002
20	0.00033	0.00005	< 0.00002	< 0.002
21				
22				
23				
24	0.00031	< 0.0002	< 0.00002	< 0.002
25				

Appendix F:
HCT Results-Pyroxenite P1-Pyr-MZ-1

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10021-NOV21	2-Nov-21	1000	842	9.1	< 2	29	49	< 2	1.0	< 0.3	< 0.03	< 0.06	< 0.06
1	CA10072-NOV21	9-Nov-21	1000	854	8.8	< 2	24	47	< 2	1.0	< 0.3	< 0.03	< 0.06	< 0.06
2	CA10118-NOV21	16-Nov-21	1000	909	8.9	< 2	22	41	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
3	CA10190-NOV21	23-Nov-21	1000	906	8.2	< 2	17	37	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
4	CA10241-NOV21	30-Nov-21	1000	893	8.8	< 2	16	34	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
5	CA10030-DEC21	7-Dec-21	1000	936	8.2	< 2	17	33	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
6	CA10096-DEC21	14-Dec-21	1000	924	7.8	< 2	21	30	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10148-DEC21	21-Dec-21	1000	898	8.4	< 2	16	31	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10206-DEC21	28-Dec-21	1000	883	8.3	< 2	17	34	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10018-JAN22	4-Jan-22	1000	925	8.1	< 2	15	40	< 2					
10	CA10056-JAN22	11-Jan-22	1000	914	8.6	< 2	14	30	< 2					
11	CA10118-JAN22	18-Jan-22	1000	898	8.7	< 2	15	28	< 2					
12	CA10153-JAN-22	25-Jan-22	1000	902	8.6	< 2	13	28	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
12	CA14102-MAR22	9-Mar-22	1000											
13	CA10016-FEB22	1-Feb-22	1000	919	7.7	< 2	14	30	< 2					
14	CA10052-FEB22	8-Feb-22	1000	922	8.4	< 2	15	27	< 2					
15	CA10086-FEB22	15-Feb-22	1000	927	8.7	< 2	14	25	< 2					
16	CA10119-FEB22	22-Feb-22	1000	918	9.5	< 2	12	27	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10012-MAR22	1-Mar-22	1000	922	8.3	< 2	13	25	< 2					
18	CA10044-MAR22	8-Mar-22	1000	940	7.9	< 2	13	27	< 2					
19	CA10084-MAR22	15-Mar-22	1000	939	7.5	< 2	11	21	< 2					
20	CA10114-MAR22	22-Mar-22	1000	938	8.4	< 2	13	27	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10162-MAR22	29-Mar-22	1000	905	7.8	< 2	11	22	< 2					
22	CA10011-APR22	5-Apr-22	1000	944	7.8	< 2	11	22	< 2					
23	CA10046-APR22	12-Apr-22	1000	997	8.4	< 2	7.0	20	< 2					
24	CA10084-APR22	19-Apr-22	1000	955	8.8	< 2	11	23	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10125-APR22	26-Apr-22	1000	971	8.6	< 2	10	19	< 2					
26	CA10009-MAY22	03-May-22	1000	942	7.6	< 2	11	20	< 2					
27	CA10051-MAY22	10-May-22	1000	928	8.0	< 2	10	23	< 2					
28	CA10093-MAY22	17-May-22	1000	996	8.6	< 2	11	20	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
29	CA10138-MAY22	24-May-22	1000	922	8.9	< 2	11	22	< 2					
30	CA10186-MAY22	31-May-22	1000	959	9.0	< 2	10	21	< 2					
31	CA10030-JUN22	07-Jun-22	1000	980	8.7	< 2	10	19	< 2					
32	CA10076-JUN22	14-Jun-22	1000	942	9.1	< 2	10	20	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
33	CA10118-JUN22	21-Jun-22	1000	968	9.1	< 2	10	21	< 2					
34	CA10165-JUN22	28-Jun-22	1000	996	7.0	< 2	10	21	< 2					
35	CA10007-JUL22	05-Jul-22	1000	957	6.9	< 2	9.0	18	< 2					
36	CA10051-JUL22	12-Jul-22	1000	985	6.8	< 2	9.0	19	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
37	CA10095-JUL22	19-Jul-22	1000	964	7.6	< 2	9.0	20	< 2					
38	CA10139-JUL22	26-Jul-22	1000	987	7.3	< 2	8.0	16	< 2					
39	CA10007-AUG22	02-Aug-22	1000	964	7.5	< 2	8.0	16	< 2					
40	CA10051-AUG22	09-Aug-22	1000	999	7.4	< 2	8.0	12	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
41	CA10095-AUG22	16-Aug-22	1000	987	7.6	< 2	7.0	15	< 2					
42	CA10178-AUG22	23-Aug-22	1000	979	7.4	< 2	12	19	< 2					
43	CA10187-AUG22	30-Aug-22	1000	986	7.9	< 2	7.0	18	< 2					
44	CA10010-SEP22	06-Sep-22	1000	957	7.2	< 2	9.0	17	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
45	CA10055-SEP22	13-Sep-22	1000	974	7.3	< 2	8.0	17	< 2					
46	CA10098-SEP22	20-Sep-22	1000	958	7.2	< 2	8.0	19	< 2					
47	CA10145-SEP22	27-Sep-22	1000	915	7.2	< 2	8.0	19	< 2					
48	CA10006-OCT22	04-Oct-22	1000	957	7.2	< 2	7.0	22	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06

Appendix F:
HCT Results-Pyroxenite P1-Pyr-MZ-1

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
49	CA10052-OCT22	11-Oct-22	1000	964	7.4	< 2	8.0	15	< 2					
50	CA10097-OCT22	18-Oct-22	1000	961	7.5	< 2	8.0	16	< 2					
51	CA10141-OCT22	25-Oct-22	1000	948	7.9	< 2	10	20	< 2					
52	CA10006-NOV22	01-Nov-22	1000	932	7.2	< 2	17	16	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
53	CA10049-NOV22	08-Nov-22	1000	944	7.0	< 2	7.0	15	< 2					
54	CA10091-NOV22	15-Nov-22	1000	942	7.3	< 2	6.0	15	< 2					
55	CA10135-NOV22	22-Nov-22	1000	931	7.8	< 2	8.0	17	< 2					
56	CA10177-NOV22	29-Nov-22	1000	915	7.7	< 2	9.0	16	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
57	CA10010-DEC22	06-Nov-22	1000	960	7.2	< 2	8.0	14	< 2					
58	CA10053-DEC22	13-Dec-22	1000	920	6.7	< 2	7.0	18	< 2					
59	CA10099-DEC22	20-Dec-22	1000	942	7.4	< 2	8.0	14	< 2					
60	CA10216-DEC22	27-Dec-22	1000	929	7.3	< 2	7.0	15	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
61	CA10005-JAN23	03-Jan-23	1000	961	7.8	< 2	7.0	13	< 2					
62	CA10049-JAN23	10-Jan-23	1000	915	7.3	< 2	7.0	16	< 2					
63	CA10098-JAN23	17-Jan-23	1000	962	7.4	< 2	8.0	15	< 2					
64	CA10145-JAN23	24-Jan-23	1000	928	7.5	< 2	8.0	18	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
65	CA10192-JAN23	31-Jan-23	1000	948	7.8	< 2	9.0	16	< 2					
66	CA10033-FEB23	07-Feb-23	1000	958	7.5	< 2	8.0	15	< 2					
67	CA10079-FEB23	14-Feb-23	1000	924	7.3	< 2	10	17	< 2					
68	CA10126-FEB23	21-Feb-23	1000	944	7.5	< 2	7.0	14	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
69	CA10175-FEB23	28-Feb-23	1000	931	7.2	< 2	7.0	13	< 2					
70	CA10032-MAR23	07-Mar-23	1000	971	7.3	< 2	8.0	17	< 2					
71	CA10079-MAR23	14-Mar-23	1000	954	7.1	< 2	9.0	18	< 2					
72	CA10127-MAR23	21-Mar-23	1000	1005	7.6	< 2	10	20	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
73	CA10174-MAR23	28-Mar-23	1000	944	7.2	< 2	13	16	< 2					
74	CA10006-MAR23	04-Apr-23	1000	1001	7.4	< 2	8.0	16	< 2					
75	CA10055-APR23	11-Apr-23	1000	976	7.6	< 2	8.0	15	< 2					
76	CA10104-APR23	18-Apr-23	1000	955	7.3	< 2	7.0	14	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
77	CA10153-APR23	25-Apr-23	1000	973	7.1	< 2	7.0	15	< 2					
78	CA10006-MAY23	02-May-23	1000	980	7.2	< 2	6.0	14	< 2					
79	CA10058-MAY23	09-May-23	1000	957	7.1	< 2	6.0	15	< 2					
80	CA10109-MAY23	16-May-23	1000	954	7.7	< 2	8.0	15	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
81	CA10161-MAY23	23-May-23	1000	952	7.2	< 2	6.0	15	< 2					
82	CA10216-MAY23	30-May-23	1000	1009	7.5	< 2	5.0	11	< 2					
83	CA10018-JUN23	06-Jun-23	1000	936	8.1	< 2	6.0	14	< 2					
84	CA10071-JUN23	13-Jun-23	1000	938	7.3	< 2	6.0	14	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
85	CA10123-JUN23	20-Jun-23	1000	942	7.3	< 2	6.0	10	< 2					
86	CA10173-JUN23	27-Jun-23	1000	932	7.2	< 2	7.0	16	< 2					
87	CA10006-JUL23	04-Jul-23	1000	942	7.2	< 2	7.0	16	< 2					
88	CA10058-JUL23	11-Jul-23	1000	941	8.0	< 2	6.0	16	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
89	CA10111-JUL23	18-Jul-23	1000	924	7.3	< 2	6.0	15	< 2					
90	CA10162-JUL23	25-Jul-23	1000	1003	7.5	< 2	8.0	18	< 2					
91	CA10006-AUG23	01-Aug-23	1000	903	7.1	< 2	6.0	15	< 2					

Appendix F:
HCT Results-Pyroxenite P1-Pyr-MZ-1

Week/Event	Chromium VI	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.7	< 0.00001	0.012	< 0.00005	0.0035	0.00065	< 0.000007	0.011	< 0.00001	5.6	< 0.000003	0.000021	0.00057	0.0003	< 0.007	0.42	< 0.0001
1	< 0.2	< 0.00001	0.012	< 0.00005	0.0034	0.00064	< 0.000007	0.014	< 0.00001	4.0	0.000003	0.000006	0.00041	0.0004	< 0.007	0.38	< 0.0001
2	< 0.2	< 0.00001	< 0.001	< 0.00005	0.0048	0.00062	< 0.000007	0.011	< 0.00001	4.3	< 0.000003	0.000017	0.00063	0.0003	0.007	0.45	< 0.0001
3	0.3	< 0.00001	0.006	< 0.00005	0.0039	0.00056	< 0.000007	0.015	< 0.00001	4.0	< 0.000003	0.000014	0.00099	0.0003	0.008	0.3	0.0001
4	0.3	< 0.00001	0.003	< 0.00005	0.0028	0.00099	< 0.000007	0.021	< 0.00001	3.5	< 0.000003	0.000016	0.00081	< 0.0002	0.008	0.24	< 0.0001
5	0.4	< 0.00001	0.007	< 0.00005	0.0031	0.00054	< 0.000007	0.01	< 0.00001	3.8	< 0.000003	< 0.000004	0.00062	0.0003	0.007	0.17	< 0.0001
6	0.4	< 0.00001	0.011	< 0.00005	0.0034	0.00045	< 0.000007	0.01	< 0.00001	3.6	0.000006	0.000022	0.00068	0.0003	0.011	0.16	< 0.0001
7	0.4	< 0.00001	0.006	< 0.00005	0.0032	0.0013	< 0.000007	0.022	< 0.00001	3.4	< 0.000003	0.000026	0.00067	0.0004	0.009	0.18	0.0004
8	0.7	< 0.00001	0.007	< 0.00005	0.0048	0.00039	< 0.000007	0.013	< 0.00001	3.4	< 0.000003	0.000017	0.001	0.0003	< 0.007	0.19	0.0002
9																	
10																	
11																	
12	0.8	< 0.00001	0.008	< 0.00005	< 0.0002	0.00087	< 0.000007	0.05	< 0.00001	0.22	< 0.000003	< 0.000004	0.0001	< 0.0002	< 0.007	0.014	< 0.0001
12				< 0.00005	0.0043	0.00039	< 0.000007	0.013	< 0.00001	3.2	0.000013	0.000017	0.0011	< 0.0002	0.007	0.1	< 0.0001
13																	
14																	
15																	
16	0.5		0.004	< 0.00005	0.0034	0.00052	< 0.000007	0.005	< 0.00001	3.9	< 0.000003	0.000015	0.001	0.0002	0.013	0.077	< 0.0001
17																	
18																	
19																	
20	< 0.2		0.004	< 0.00005	0.0038	0.00031	< 0.000007	0.005	< 0.00001	3.9	< 0.000003	0.000029	0.00068	0.0005	0.011	0.039	< 0.0001
21																	
22																	
23																	
24	< 0.2		0.004	< 0.00005	0.0025	0.00028	< 0.000007	0.004	< 0.00001	3.3	< 0.000003	< 0.000004	0.00035	0.0003	< 0.007	0.035	< 0.0001
25																	
26																	
27																	
28	0.2		0.005	< 0.00005	0.0024	0.00021	0.000013	0.003	< 0.00001	2.9	0.00002	0.000018	0.00081	0.0004	0.009	0.04	0.0001
29																	
30																	
31																	
32	0.3		0.009	< 0.00005	0.0024	0.00027	< 0.000007	0.003	< 0.00001	3.1	< 0.000003	0.000009	0.00071	0.0004	0.007	0.024	< 0.0001
33																	
34																	
35																	
36	< 0.2		0.005	< 0.00005	0.0019	0.00026	< 0.000007	0.005	< 0.00001	2.6	0.000003	0.000021	0.0012	0.0005	0.022	0.02	< 0.0001
37																	
38																	
39																	
40	0.3		0.009	< 0.00005	0.0026	0.00026	< 0.000007	0.005	< 0.00001	3.4	0.00001	0.000093	0.0049	0.001	0.066	0.017	< 0.0001
41																	
42																	
43																	
44	< 0.2		0.005	< 0.00005	0.003	0.00014	< 0.000007	0.002	< 0.00001	2.1	0.000004	0.00079	0.00063	0.0053	0.02	0.043	< 0.0001
45																	
46																	
47																	
48	< 0.2		0.005	< 0.00005	0.0023	0.00022	< 0.000007	0.004	< 0.00001	2.3	0.000004	0.000025	0.0011	0.0003	0.013	0.018	< 0.0001

Appendix F:
HCT Results-Pyroxenite P1-Pyr-MZ-1

Week/Event	Chromium VI	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
49																	
50																	
51																	
52	0.2		0.003	< 0.00005	0.0022	0.00025	< 0.000007	0.004	< 0.00001	2.1	< 0.000003	0.000017	0.00055	0.0003	< 0.007	0.009	0.0091
53																	
54																	
55																	
56	< 0.2		0.004	< 0.00005	0.0026	0.0002	< 0.000007	0.003	< 0.00001	2.3	0.000008	0.00005	0.0019	0.0006	0.026	0.022	< 0.0001
57																	
58																	
59																	
60	0.5		0.004	< 0.00005	0.0024	0.00016	< 0.000007	0.003	< 0.00001	2.2	< 0.000003	0.000014	0.0012	0.0003	0.008	0.016	< 0.0001
61																	
62																	
63																	
64	0.3		0.002	< 0.00005	0.0019	0.00019	< 0.000007	0.002	0.00001	2.5	< 0.000003	0.000015	0.00081	0.0004	0.022	0.026	0.0006
65																	
66																	
67																	
68	0.3		0.006	< 0.00005	0.0022	0.00015	< 0.000007	< 0.002	< 0.00001	2.1	0.000003	0.000018	0.00066	0.0004	0.008	0.03	< 0.0001
69																	
70																	
71																	
72	0.3		0.003	< 0.00005	0.0028	0.00022	< 0.000007	0.003	< 0.00001	2.8	< 0.000003	0.000019	0.00077	0.0004	0.007	0.012	< 0.0001
73																	
74																	
75																	
76	0.7		0.004	< 0.00005	0.0023	0.00014	< 0.000007	< 0.002	< 0.00001	2.1	0.000006	0.000018	0.00088	0.001	0.018	0.009	< 0.0001
77																	
78																	
79																	
80	0.9		0.003	< 0.00005	0.0026	0.00018	< 0.000007	< 0.002	< 0.00001	2.4	< 0.000003	0.000032	0.0012	0.0007	0.017	0.027	< 0.0001
81																	
82																	
83																	
84	< 0.2		0.003	< 0.00005	0.0025	0.00014	< 0.000007	< 0.002	< 0.00001	2.0	< 0.000003	0.000023	0.00084	0.0007	0.011	0.027	0.0002
85																	
86																	
87																	
88	0.3		0.008	< 0.00005	0.0025	0.00017	< 0.000007	< 0.002	< 0.00001	2.4	0.000004	0.00004	0.001	0.0006	0.014	0.02	< 0.0001
89																	
90																	
91																	

Appendix F:
HCT Results-Pyroxenite P1-Pyr-MZ-1

Week/Event	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	2.2	0.00058	0.00098	0.6	0.0002	< 0.00009	< 0.0009	0.00005	0.00019	0.0091	0.00005	< 0.000005	0.000002	0.0012	< 0.00002	< 0.00002	< 0.002
1	2.3	0.0011	0.0001	0.52	0.0004	< 0.00009	< 0.0009	0.00006	0.00013	0.008	0.00024	< 0.000005	< 0.000002	0.00094	0.00007	< 0.00002	< 0.002
2	2.3	0.0012	0.0024	0.62	< 0.0001	< 0.00009	< 0.0009	0.00009	0.00009	0.0067	0.0001	< 0.000005	0.000003	0.001	0.00007	< 0.00002	< 0.002
3	2.0	0.0016	0.00012	0.56	0.0002	< 0.00009	< 0.0009	0.00007	0.00009	0.0065	0.00018	< 0.000005	0.000009	0.00088	0.00006	< 0.00002	< 0.002
4	1.9	0.0015	0.00005	0.76	0.0001	0.00013	< 0.0009	0.00009	< 0.00006	0.0053	0.00013	< 0.000005	< 0.000002	0.00081	0.00005	< 0.00002	< 0.002
5	1.6	0.0014	0.0018	0.27	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0044	0.00022	< 0.000005	0.000004	0.0007	0.00005	< 0.00002	< 0.002
6	1.5	0.0018	0.0002	0.28	< 0.0001	< 0.00009	< 0.0009	0.00007	0.00007	0.0049	0.00023	< 0.000005	0.000003	0.00077	0.00003	< 0.00002	0.002
7	1.6	0.0016	0.00012	0.87	0.0001	< 0.00009	< 0.0009	0.00007	< 0.00006	0.0052	0.00005	< 0.000005	0.000004	0.00071	0.00003	< 0.00002	< 0.002
8	2.3	0.0013	0.00027	0.36	0.0002	< 0.00009	< 0.0009	0.00007	< 0.00006	0.0052	0.00009	< 0.000005	0.000002	0.00067	0.00005	< 0.00002	< 0.002
9																	
10																	
11																	
12	30	0.00015	0.00006	0.04	0.0003	< 0.00009	< 0.0009	0.00007	< 0.00006	0.0052	< 0.00005	< 0.000005	0.000012	0.00001	0.00008	< 0.00002	< 0.002
12	1.5	0.0016	0.00012	0.2	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0046	0.00012	< 0.000005	0.000005	0.00083	0.00003	< 0.00002	< 0.002
13																	
14																	
15																	
16	1.2	0.0018	0.00008	0.09	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0048	0.00014	< 0.000005	0.000002	0.0007	0.00002	< 0.00002	< 0.002
17																	
18																	
19																	
20	1.0	0.0017	0.00027	0.09	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0037	0.00016	< 0.000005	0.000002	0.00053	0.00002	< 0.00002	< 0.002
21																	
22																	
23																	
24	0.72	0.0013	0.00018	0.03	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0035	< 0.00005	< 0.000005	< 0.000002	0.00046	< 0.00002	< 0.00002	< 0.002
25																	
26																	
27																	
28	0.73	0.0023	0.027	0.1	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0032	0.00016	< 0.000005	0.00071	0.00041	< 0.00002	< 0.00002	< 0.002
29																	
30																	
31																	
32	0.77	0.0016	0.00029	0.02	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0035	0.0001	< 0.000005	0.0012	0.00045	< 0.00002	< 0.00002	< 0.002
33																	
34																	
35																	
36	0.6	0.0018	0.0012	0.03	0.0002	< 0.00009	< 0.0009	< 0.00004	0.0001	0.0028	0.00028	< 0.000005	0.0055	0.00039	< 0.00002	< 0.00002	< 0.002
37																	
38																	
39																	
40	0.66	0.0023	0.00015	0.04	0.0008	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.003	0.0013	< 0.000005	< 0.000002	0.00049	0.00004	< 0.00002	< 0.002
41																	
42																	
43																	
44	0.5	0.0014	0.0017	0.12	0.014	< 0.00009	< 0.0009	0.00008	< 0.00006	0.0022	0.0001	< 0.000005	0.00033	0.00037	0.00011	< 0.00002	< 0.002
45																	
46																	
47																	
48	0.6	0.0016	0.00005	0.01	0.0002	< 0.00009	< 0.0009	0.0001	< 0.00006	0.0025	0.00013	< 0.000005	0.000089	0.0004	0.00005	< 0.00002	< 0.002

Appendix F:
HCT Results-Pyroxenite P1-Pyr-MZ-1

Week/Event	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
49																	
50																	
51																	
52	0.5	0.0012	0.00005	0.02	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0023	0.00007	< 0.000005	0.000009	0.00038	0.00003	< 0.00002	< 0.002
53																	
54																	
55																	
56	0.58	0.0014	0.00056	0.01	0.0007	< 0.00009	< 0.0009	0.00009	< 0.00006	0.0026	0.00018	< 0.000005	0.0025	0.00046	< 0.00002	< 0.00002	< 0.002
57																	
58																	
59																	
60	0.68	0.0012	< 0.00004	0.03	0.0001	< 0.00009	< 0.0009	0.00006	< 0.00006	0.0022	0.00006	< 0.000005	0.000081	0.00043	< 0.00002	< 0.00002	< 0.002
61																	
62																	
63																	
64	0.62	0.0014	< 0.00004	0.22	0.0002	< 0.00009	< 0.0009	0.0001	< 0.00006	0.0025	0.00013	< 0.000005	0.000005	0.00039	< 0.00002	< 0.00002	< 0.002
65																	
66																	
67																	
68	0.49	0.0012	< 0.00004	0.33	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0023	0.00005	< 0.000005	0.0026	0.0004	< 0.00002	< 0.00002	< 0.002
69																	
70																	
71																	
72	0.79	0.0017	0.00011	0.02	< 0.0001	< 0.00009	< 0.0009	0.00007	0.0063	0.0029	0.00012	< 0.000005	0.000085	0.00036	< 0.00002	< 0.00002	< 0.002
73																	
74																	
75																	
76	0.56	0.0017	0.00012	0.02	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.002	0.00017	< 0.000005	0.00075	0.00038	0.00002	< 0.00002	< 0.002
77																	
78																	
79																	
80	0.61	0.0017	0.0001	0.05	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0023	0.00016	< 0.000005	0.000069	0.00044	< 0.00002	< 0.00002	< 0.002
81																	
82																	
83																	
84	0.54	0.0013	0.0003	0.05	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.002	0.00011	< 0.000005	0.00074	0.00038	0.00002	< 0.00002	< 0.002
85																	
86																	
87																	
88	0.58	0.0023	0.00009	0.01	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0022	0.00013	< 0.000005	0.000049	0.0004	< 0.00002	< 0.00002	< 0.002
89																	
90																	
91																	

Metavolcanic P1-MetV-MZ-4

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
0	CA10021-NOV21	2-Nov-21	1000	867	7.3	< 2	7.0	26	3.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.3
1	CA10072-NOV21	9-Nov-21	1000	935	7.5	< 2	14	40	3.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
2	CA10118-NOV21	16-Nov-21	1000	962	7.5	< 2	10	23	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
3	CA10190-NOV21	23-Nov-21	1000	948	7.4	< 2	8.0	24	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
4	CA10241-NOV21	30-Nov-21	1000	956	7.5	< 2	8.0	20	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
5	CA10030-DEC21	7-Dec-21	1000	969	7.3	< 2	8.0	17	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.4
6	CA10096-DEC21	14-Dec-21	1000	925	7.5	< 2	18	20	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
7	CA10148-DEC21	21-Dec-21	1000	924	7.5	< 2	10	20	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.2
8	CA10206-DEC21	28-Dec-21	1000	889	7.6	< 2	11	22	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
9	CA10018-JAN22	4-Jan-22	1000	963	7.4	< 2	4.0	15	< 2						
10	CA10056-JAN22	11-Jan-22	1000	927	7.3	< 2	15	20	< 2						
11	CA10118-JAN22	18-Jan-22	1000	930	7.4	< 2	8.0	19	< 2						
12	CA10153-JAN-22	25-Jan-22	1000	922	7.5	< 2	10	20	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.2
13	CA10016-FEB22	1-Feb-22	1000	929	7.8	< 2	7.0	21	< 2						
14	CA10052-FEB22	8-Feb-22	1000	935	7.5	< 2	9.0	18	< 2						
15	CA10086-FEB22	15-Feb-22	1000	936	7.5	< 2	10	20	< 2						
16	CA10119-FEB22	22-Feb-22	1000	974	7.7	< 2	8.0	18	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	
17	CA10012-MAR22	1-Mar-22	1000	938	7.7	< 2	6.0	18	< 2						
18	CA10044-MAR22	8-Mar-22	1000	960	7.5	< 2	5.0	19	< 2						
19	CA10084-MAR22	15-Mar-22	1000	946	7.3	< 2	8.0	16	< 2						
20	CA10114-MAR22	22-Mar-22	1000	1010	7.3	< 2	5.0	16	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	
21	CA10162-MAR22	29-Mar-22	1000	929	7.2	< 2	7.0	13	< 2						
22	CA10011-APR22	5-Apr-22	1000	993	7.2	< 2	7.0	12	< 2						
23	CA10046-APR22	12-Apr-22	1000	982	7.2	< 2	7.0	18	< 2						
24	CA10084-APR22	19-Apr-22	1000	978	7.2	< 2	6.0	12	<2	<1	< 0.3	< 0.03	< 0.06	< 0.06	---
25	CA10125-APR22	26-Apr-22	1000	996	7.0	< 2	5.0	9.0	< 2						
26	CA10009-MAY22	03-May-22	1000	917	7.5	< 2	9.0	18	< 2						
27	CA10051-MAY22	10-May-22	1000	957	7.6	< 2	8.0	18	< 2						
28	CA10093-MAY22	17-May-22	1000	1010	7.4	< 2	6.0	12	<2	<1	< 0.3	< 0.03	< 0.06	< 0.06	---
29	CA10138-MAY22	24-May-22	1000	939	8.5	< 2	9.0	18	< 2						
30	CA10186-MAY22	31-May-22	1000	974	7.5	< 2	7.0	18	< 2						
31	CA10030-JUN22	07-Jun-22	1000	986	7.3	< 2	6.0	11	< 2						
32	CA10076-JUN22	14-Jun-22	1000	973	7.2	< 2	6.0	13	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
33	CA10118-JUN22	21-Jun-22	1000	979	7.3	< 2	7.0	18	< 2						
34	CA10165-JUN22	28-Jun-22	1000	971	7.6	< 2	8.0	16	< 2						
35	CA10007-JUL22	05-Jul-22	1000	950	7.4	< 2	6.0	13	< 2						
36	CA10051-JUL22	12-Jul-22	1000	972	7.4	< 2	7.0	14	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
37	CA10095-JUL22	19-Jul-22	1000	963	7.3	< 2	6.0	14	< 2						
38	CA10139-JUL22	26-Jul-22	1000	968	7.3	< 2	7.0	12	< 2						
39	CA10007-AUG22	02-Aug-22	1000	962	7.3	<2	6.0	12	< 2						
40	CA10051-AUG22	09-Aug-22	1000	981	7.5	< 2	7.0	15	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
41	CA10095-AUG22	16-Aug-22	1000	964	7.2	< 2	6.0	11	< 2						
42	CA10178-AUG22	23-Aug-22	1000	959	7.2	< 2	6.0	11	< 2						
43	CA10187-AUG22	30-Aug-22	1000	964	7.9	< 2	10	19	< 2						
44	CA10010-SEP22	06-Sep-22	1000	952	7.1	< 2	7.0	17	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
45	CA10055-SEP22	13-Sep-22	1000	961	7.3	< 2	8.0	17	< 2						
46	CA10098-SEP22	20-Sep-22	1000	963	7.1	< 2	5.0	15	< 2						
47	CA10145-SEP22	27-Sep-22	1000	943	7.0	< 2	5.0	15	< 2						
48	CA10006-OCT22	04-Oct-22	1000	965	7.4	< 2	6.0	11	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
49	CA10052-OCT22	11-Oct-22	1000	969	7.5	< 2	6.0	13	< 2						

Metavolcanic P1-MetV-MZ-4

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
50	CA10097-OCT22	18-Oct-22	1000	968	8.5	< 2	7.0	14	< 2						
51	CA10141-OCT22	25-Oct-22	1000	968	8.2	< 2	9.0	18	< 2						
52	CA10006-NOV22	01-Nov-22	1000	965	8.7	< 2	6.0	13	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
53	CA10049-NOV22	08-Nov-22	1000	930	8.2	< 2	7.0	12	< 2						
54	CA10091-NOV22	15-Nov-22	1000	956	8.1	< 2	7.0	13	< 2						
55	CA10135-NOV22	22-Nov-22	1000	950	8.8	< 2	6.0	12	< 2						
56	CA10177-NOV22	29-Nov-22	1000	950	8.3	< 2	7.0	14	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
57	CA10010-DEC22	06-Nov-22	1000	968	8.9	< 2	8.0	13	< 2						
58	CA10053-DEC22	13-Dec-22	1000	942	7.3	< 2	7.0	16	< 2						
58	CA14525-DEC22				7.0										
59	CA10099-DEC22	20-Dec-22	1000	939	7.1	< 2	6.0	11	< 2						
60	CA10216-DEC22	27-Dec-22	1000	957	7.0	< 2	5.0	14	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
61	CA10005-JAN23	03-Jan-23	1000	972	7.0	< 2	4.0	13	< 2						
62	CA10049-JAN23	10-Jan-23	1000	950	7.3	< 2	6.0	12	< 2						
63	CA10098-JAN23	17-Jan-23	1000	982	7.5	< 2	6.0	12	< 2						
64	CA10145-JAN23	24-Jan-23	1000	949	7.5	< 2	7.0	12	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
65	CA10192-JAN23	31-Jan-23	1000	964	7.5	< 2	6.0	12	< 2						
66	CA10033-FEB23	07-Feb-23	1000	964	7.5	< 2	7.0	12	< 2						
67	CA10079-FEB23	14-Feb-23	1000	977	7.1	< 2	7.0	12	< 2						
68	CA10126-FEB23	21-Feb-23	1000	965	7.3	< 2	6.0	11	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
69	CA10175-FEB23	28-Feb-23	1000	959	7.3	< 2	8.0	13	< 2						
70	CA10032-MAR23	07-Mar-23	1000	994	7.3	< 2	7.0	14	< 2						
71	CA10079-MAR23	14-Mar-23	1000	999	7.4	< 2	6.0	12	< 2						
72	CA10127-MAR23	21-Mar-23	1000	1030	7.1	< 2	7.0	12	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
73	CA10174-MAR23	28-Mar-23	1000	952	7.1	< 2	6.0	13	< 2						
74	CA10006-MAR23	04-Apr-23	1000	1008	6.9	< 2	6.0	14	< 2						
75	CA10055-APR23	11-Apr-23	1000	967	7.6	< 2	5.0	10	< 2						
76	CA10104-APR23	18-Apr-23	1000	984	7.0	< 2	4.0	9.0	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
77	CA10153-APR23	25-Apr-23	1000	968	7.2	< 2	7.0	14	< 2						
78	CA10006-MAY23	02-May-23	1000	984	7.1	< 2	5.0	9.0	< 2						
79	CA10058-MAY23	09-May-23	1000	994	6.9	< 2	4.0	10	< 2						
80	CA10109-MAY23	16-May-23	1000	988	7.0	< 2	4.0	10	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
81	CA10161-MAY23	23-May-23	1000	976	6.9	< 2	5.0	10	< 2						
82	CA10216-MAY23	30-May-23	1000	964	7.1	< 2	5.0	11	< 2						
83	CA10018-JUN23	06-Jun-23	1000	955	6.8	< 2	5.0	12	< 2						
84	CA10071-JUN23	13-Jun-23	1000	958	7.2	< 2	5.0	11	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
85	CA10123-JUN23	20-Jun-23	1000	968	7.1	< 2	4.0	11	< 2						
86	CA10173-JUN23	27-Jun-23	1000	952	7.0	< 2	4.0	11	< 2						
87	CA10006-JUL23	04-Jul-23	1000	998	7.1	< 2	5.0	11	< 2						
88	CA10058-JUL23	11-Jul-23	1000	947	6.9	< 2	4.0	9.0	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	---
89	CA10111-JUL23	18-Jul-23	1000	962	7.0	< 2	4.0	11	< 2						
90	CA10162-JUL23	25-Jul-23	1000	957	7.4	< 2	10	20	< 2						
91	CA10006-AUG23	01-Aug-23	1000	954	7.0	< 2	5.0	11	< 2						

Metavolcanic P1-MetV-MZ-4

Week/Event	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	< 0.00001	0.073	< 0.00005	0.0004	0.0032	< 0.000007	< 0.002	< 0.00001	0.52	0.000003	0.000067	0.00017	0.0004	< 0.007	2.5	< 0.0001	1.1	0.00088
1	< 0.00001	0.01	< 0.00005	0.0004	0.0081	< 0.000007	0.004	< 0.00001	0.4	0.000003	0.000079	< 0.00008	0.0005	< 0.007	3.8	0.0001	2.3	0.0006
2	< 0.00001	< 0.001	< 0.00005	0.0004	0.0068	< 0.000007	0.004	< 0.00001	0.41	< 0.000003	0.000049	0.00019	0.0002	< 0.007	2.9	< 0.0001	1.7	0.00056
3	< 0.00001	0.002	< 0.00005	0.0004	0.0071	< 0.000007	0.005	< 0.00001	0.45	< 0.000003	0.000051	0.00011	< 0.0002	< 0.007	2.5	0.0001	1.8	0.00042
4	< 0.00001	0.007	< 0.00005	0.0005	0.0064	< 0.000007	0.01	< 0.00001	0.34	< 0.000003	0.000033	< 0.00008	< 0.0002	< 0.007	1.9	< 0.0001	1.6	0.00031
5	< 0.00001	0.006	< 0.00005	0.0004	0.0054	< 0.000007	< 0.002	< 0.00001	0.36	< 0.000003	0.000005	0.00013	< 0.0002	< 0.007	1.7	< 0.0001	1.6	0.00023
6	< 0.00001	0.006	< 0.00005	0.0006	0.0056	0.000013	0.004	< 0.00001	0.48	0.000022	0.000087	0.00009	< 0.0002	0.033	2.0	< 0.0001	1.6	0.0013
7	< 0.00001	0.022	< 0.00005	0.0004	0.0059	< 0.000007	0.015	< 0.00001	0.42	< 0.000003	0.000034	0.00013	0.0003	0.007	2.3	0.0002	1.5	0.00053
8	< 0.00001	0.003	< 0.00005	0.0005	0.0064	< 0.000007	0.01	< 0.00001	0.42	0.000004	0.000033	0.00037	< 0.0002	< 0.007	2.9	0.0001	2.1	0.00009
9																		
10																		
11																		
12	< 0.00001	0.003	< 0.00005	0.0004	0.0059	< 0.000007	0.002	< 0.00001	0.42	< 0.000003	< 0.000004	0.00018	< 0.0002	< 0.007	2.6	< 0.0001	1.7	0.00025
13																		
14																		
15																		
16		0.001	< 0.00005	< 0.0002	0.0037	< 0.000007	< 0.002	< 0.00001	0.32	< 0.000003	0.000017	0.00012	< 0.0002	< 0.007	1.3	< 0.0001	1.4	0.00018
17																		
18																		
19																		
20		0.002	< 0.00005	0.0006	0.0026	< 0.000007	< 0.002	< 0.00001	0.32	0.000009	0.000018	0.00014	0.0034	< 0.007	0.91	< 0.0001	1.1	0.00026
21																		
22																		
23																		
24		< 0.001	< 0.00005	< 0.0002	0.0021	< 0.000007	< 0.002	< 0.00001	0.31	< 0.000003	0.000018	< 0.00008	< 0.0002	< 0.007	0.93	< 0.0001	1.1	0.00021
25																		
26																		
27																		
28		< 0.001	< 0.00005	< 0.0002	0.0024	0.000016	< 0.002	< 0.00001	0.35	0.000006	0.000029	0.0002	< 0.0002	< 0.007	0.62	< 0.0001	1.3	0.0007
29																		
30																		
31																		
32		0.004	< 0.00005	< 0.0002	0.0026	< 0.000007	< 0.002	< 0.00001	0.35	0.000006	0.000038	0.00009	0.0002	< 0.007	1.0	< 0.0001	1.3	0.0004
33																		
34																		
35																		
36		<0.001	< 0.00005	0.0005	0.0021	< 0.000007	0.017	< 0.00001	0.33	0.000003	0.00003	< 0.00008	< 0.0002	< 0.007	0.91	< 0.0001	1.3	0.00025
37																		
38																		
39																		
40		0.003	< 0.00005	0.0003	0.0018	< 0.000007	< 0.002	< 0.00001	0.3	0.000029	0.000091	0.00024	0.0003	< 0.007	0.71	< 0.0001	1.5	0.00007
41																		
42																		
43																		
44		0.001	< 0.00005	0.0006	0.0011	< 0.000007	< 0.002	< 0.00001	0.26	0.000024	0.000037	0.0001	< 0.0002	< 0.007	0.69	< 0.0001	1.0	0.00015
45																		
46																		
47																		
48		0.005	< 0.00005	< 0.0002	0.0013	< 0.000007	< 0.002	< 0.00001	0.3	< 0.000003	0.000023	< 0.00008	< 0.0002	< 0.007	0.79	< 0.0001	1.2	0.00018
49																		

Metavolcanic P1-MetV-MZ-4

Week/Event	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
50																		
51																		
52		<0.001	< 0.00005	< 0.0002	0.0012	< 0.000007	< 0.002	< 0.00001	0.31	< 0.000003	0.00003	< 0.00008	< 0.0002	< 0.007	0.67	0.0075	1.1	0.00035
53																		
54																		
55																		
56		0.001	< 0.00005	< 0.0002	0.0012	< 0.000007	< 0.002	< 0.00001	0.39	0.000005	0.000039	0.00067	< 0.0002	0.012	0.71	< 0.0001	1.5	0.00025
57																		
58																		
58																		
59																		
60		0.001	< 0.00005	< 0.0002	0.00083	< 0.000007	0.003	< 0.00001	0.28	0.000004	0.000022	< 0.00008	< 0.0002	< 0.007	0.67	< 0.0001	1.1	0.0001
61																		
62																		
63																		
64		0.005	< 0.00005	0.0003	0.00093	< 0.000007	< 0.002	< 0.00001	0.33	0.000004	0.000031	< 0.00008	< 0.0002	0.014	0.63	0.0006	1.4	0.00047
65																		
66																		
67																		
68		0.002	< 0.00005	0.0002	0.00087	< 0.000007	< 0.002	< 0.00001	0.29	< 0.000003	0.00004	< 0.00008	< 0.0002	< 0.007	0.51	< 0.0001	1.2	0.00027
69																		
70																		
71																		
72		0.001	< 0.00005	< 0.0002	0.001	< 0.000007	< 0.002	< 0.00001	0.38	0.000021	0.000041	0.0002	< 0.0002	< 0.007	0.44	< 0.0001	1.3	0.00014
			< 0.00005	< 0.0002	0.001	< 0.000007	< 0.002	< 0.00001	0.38	< 0.000003	0.000027	0.00011	< 0.0002	< 0.007	0.46	< 0.0001	1.2	< 0.00001
73																		
74																		
75																		
76		< 0.001	< 0.00005	< 0.0002	0.00052	< 0.000007	< 0.002	< 0.00001	0.25	0.000003	0.000023	< 0.00008	< 0.0002	< 0.007	0.42	< 0.0001	1.0	0.00017
77																		
78																		
79																		
80		< 0.001	< 0.00005	< 0.0002	0.00054	< 0.000007	< 0.002	< 0.00001	0.28	< 0.000003	0.000032	< 0.00008	< 0.0002	< 0.007	0.39	< 0.0001	1.0	0.00023
81																		
82																		
83																		
84		< 0.001	< 0.00005	< 0.0002	0.00054	< 0.000007	< 0.002	0.00001	0.3	< 0.000003	0.000032	< 0.00008	0.0004	< 0.007	0.38	0.0006	1.3	0.0003
85																		
86																		
87																		
88		0.004	< 0.00005	< 0.0002	0.00049	< 0.000007	< 0.002	< 0.00001	0.3	0.000028	0.000086	< 0.00008	0.0004	0.01	0.28	< 0.0001	0.9	0.0007
89																		
90																		
91																		

Appendix F:
HCT Results-Metavolcanic P1-MetV-MZ-4

Metavolcanic P1-MetV-MZ-4

Week/Event	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.00012	1.5	0.0008	< 0.00009	< 0.0009	0.00005	0.00026	0.0049	< 0.00005	< 0.000005	0.000002	0.00029	< 0.00002	< 0.00002	< 0.002
1	0.0048	1.7	0.0011	< 0.00009	< 0.0009	< 0.00004	0.00015	0.0031	0.00012	0.000012	< 0.000002	0.00046	0.00014	< 0.00002	< 0.002
2	0.00083	0.9	0.0004	0.00011	< 0.0009	< 0.00004	< 0.00006	0.0021	0.00008	0.000011	< 0.000002	0.00034	0.00008	< 0.00002	< 0.002
3	0.00043	0.69	0.0003	0.00009	< 0.0009	< 0.00004	0.00009	0.0026	< 0.00005	< 0.000005	0.000003	0.00037	0.00008	< 0.00002	< 0.002
4	0.00004	0.63	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0038	< 0.00005	< 0.000005	< 0.000002	0.00024	0.00004	< 0.00002	< 0.002
5	0.00038	0.15	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0016	0.00026	< 0.000005	< 0.000002	0.0002	0.00004	< 0.00002	< 0.002
6	0.00013	0.35	0.0004	< 0.00009	< 0.0009	0.00007	0.00014	0.0055	0.00017	0.000008	0.00019	0.00039	0.00003	0.00002	0.003
7	0.00051	0.38	0.0002	< 0.00009	< 0.0009	< 0.00004	0.00007	0.002	< 0.00005	< 0.000005	0.000003	0.00022	0.00003	< 0.00002	0.003
8	0.00014	0.14	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0019	< 0.00005	0.000006	0.000003	0.00029	0.00003	< 0.00002	< 0.002
9															
10															
11															
12	0.00009	0.04	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0023	< 0.00005	0.000009	< 0.000002	0.00025	0.00003	< 0.00002	< 0.002
13															
14															
15															
16	0.00006	< 0.01	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.001	< 0.00005	< 0.000005	< 0.000002	0.00012	< 0.00002	< 0.00002	< 0.002
17															
18															
19															
20	0.0092	0.04	< 0.0001	0.00028	< 0.0009	< 0.00004	0.00011	0.001	< 0.00005	0.000008	< 0.000002	0.00013	< 0.00002	< 0.00002	0.008
21															
22															
23															
24	0.00005	< 0.01	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00079	< 0.00005	< 0.000005	< 0.000002	0.00006	< 0.00002	< 0.00002	< 0.002
25															
26															
27															
28	0.0011	0.06	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00098	< 0.00005	0.00001	0.00016	0.00004	< 0.00002	< 0.00002	< 0.002
29															
30															
31															
32	0.00086	< 0.01	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00095	< 0.00005	0.000007	0.000081	0.00007	< 0.00002	< 0.00002	0.002
33															
34															
35															
36	0.00005	0.02	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00076	0.0001	0.000005	0.00082	0.00005	< 0.00002	< 0.00002	< 0.002
37															
38															
39															
40	0.0001	0.04	0.0006	< 0.00009	< 0.0009	0.00005	< 0.00006	0.00054	0.0004	< 0.000005	0.00064	0.00008	< 0.00002	< 0.00002	< 0.002
41															
42															
43															
44	0.02	0.12	0.0005	< 0.00009	< 0.0009	0.00006	< 0.00006	0.00057	< 0.00005	0.000005	0.00013	0.00005	0.00007	< 0.00002	< 0.002
45															
46															
47															
48	0.00049	< 0.01	0.0002	< 0.00009	< 0.0009	0.00006	0.00014	0.00078	0.00005	0.000005	0.00022	0.00005	0.00006	< 0.00002	< 0.002
49															

Appendix F:
HCT Results-Metavolcanic P1-MetV-MZ-4

Metavolcanic P1-MetV-MZ-4

Week/Event	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
50															
51															
52	0.00026	0.02	0.0004	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00063	0.00011	0.000005	0.000026	0.00005	< 0.00002	< 0.00002	< 0.002
53															
54															
55															
56	0.00019	0.05	0.0007	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00093	0.00019	0.000006	0.00063	0.00005	< 0.00002	< 0.00002	< 0.002
57															
58															
58															
59															
60	0.00008	0.02	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00053	0.00018	0.000007	0.0014	0.00004	< 0.00002	< 0.00002	< 0.002
61															
62															
63															
64	< 0.00004	0.25	0.0002	< 0.00009	< 0.0009	0.0001	< 0.00006	0.00053	< 0.00005	< 0.000005	0.000023	0.00003	< 0.00002	< 0.00002	< 0.002
65															
66															
67															
68	0.00012	< 0.01	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00054	< 0.00005	0.000006	0.000012	0.00003	< 0.00002	< 0.00002	< 0.002
69															
70															
71															
72	0.0005	< 0.01	0.0002	< 0.00009	< 0.0009	0.00041	0.0039	0.00059	0.0003	0.000005	0.00031	0.00003	< 0.00002	< 0.00002	< 0.002
	0.00057	0.04	< 0.0001	< 0.00009	< 0.0009	< 0.00004	0.0037	0.00057	< 0.00005	0.000005	0.00028	0.00003	< 0.00002	< 0.00002	< 0.002
73															
74															
75															
76	0.0003	< 0.01	0.0001	< 0.00009	< 0.0009	< 0.00004	0.00006	0.00034	< 0.00005	< 0.000005	0.00022	0.00002	0.00007	< 0.00002	< 0.002
77															
78															
79															
80	0.00016	0.05	< 0.0001	< 0.00009	< 0.0009	< 0.00004	0.0003	0.00042	< 0.00005	0.000008	0.00045	0.00001	< 0.00002	< 0.00002	< 0.002
81															
82															
83															
84	0.0017	0.06	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00042	< 0.00005	< 0.000005	0.000099	0.00006	0.00014	< 0.00002	< 0.002
85															
86															
87															
88	0.0012	< 0.01	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00044	< 0.00007	< 0.000005	0.000049	0.00002	< 0.00002	< 0.00002	0.007
89															
90															
91															

Appendix F:
HCT Results-Basalt CR21-GT-07 510-520

Basalt CR21-GT-07 510-520

Week/Event	LIMS	Sample Date	Leachate Volume Recovered (mL)	pH	Alkalinity	Conductivity	Acidity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	No unit	mg/L as CaCO ₃	uS/cm	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10057-SEP23	1-Sep-23	831	9.3	35	66	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
1	CA10114-SEP23	8-Sep-23	1009	9.0	31	59	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
2	CA10115-SEP23	15-Sep-23	990	8.0	27	52	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
3	CA10171-SEP23	22-Sep-23	980	8.4	24	48	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
4	CA10228-SEP23	29-Sep-23	992	8.7	21	39	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
5	CA10054-OCT23	6-Oct-23	997	7.9	21	9.0	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
6	CA10111-OCT23	13-Oct-23	999	8.0	18	40	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10169-OCT23	20-Oct-23	979	8.9	17	38	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10226-OCT23	27-Oct-23	999	8.5	16	35	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10029-NOV23	3-Nov-23	992	8.2	16	31	< 2	< 2					
10	CA10084-NOV23	10-Nov-23	911	8.7	13	30	< 2	< 2					
11	CA10139-NOV23	17-Nov-23	1010	8.0	14	28	< 2	< 2					
12	CA10201-NOV23	24-Nov-23	1016	8.0	13	28	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
13	CA10001-DEC23	1-Dec-23	989	7.9	11	26	< 2	< 2					
14	CA10061-DEC23	8-Dec-23	999	7.7	13	30	< 2	< 2					
15	CA10121-DEC23	15-Dec-23	982	7.7	14	27	< 2	< 2					
16	CA10182-DEC23	22-Dec-23	1001	8.3	14	30	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10240-DEC23	29-Dec-23	991	8.1	16	26	< 2	< 2					
18	CA10056-JAN24	5-Jan-24	969	8.6	12	28	< 2	< 2					
19	CA10115-JAN24	12-Jan-24	959	7.8	14	33	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
20	CA10177-JAN24	19-Jan-24	980	7.5	12	26	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10241-JAN24	26-Jan-24	1019	7.5	12	24	< 2	< 2					
22	CA10014-FEB24	2-Feb-24	990	7.7	11	22	< 2	< 2					
23	CA10072-FEB24	9-Feb-24	971	8.6	12	13	< 2	< 2					
24	CA10129-FEB24	15-Feb-24	976	7.7	12	24	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10184-FEB24	23-Feb-24	999	7.6	10	23	< 2	< 2					

Appendix F:
HCT Results-Basalt CR21-GT-07 510-520

Basalt CR21-GT-07 510-520

Week/Event	Chromium VI	Mercury	Aluminum	Aluminum (0.2µm)	Silver	Arsenic	Boron	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	< 0.2	< 0.00001	0.092	0.096	< 0.00005	0.0011	0.006	0.001	< 0.000007	< 0.00001	3.9	< 0.000003	0.000019	0.00017	0.0002
1	< 0.2	< 0.00001	0.081	0.076	< 0.00005	0.0034	0.013	0.0012	< 0.000007	< 0.00001	4.5	< 0.000003	0.000064	< 0.00008	0.0006
2	< 0.2	< 0.00001	0.076	0.098	< 0.00005	0.0044	0.01	0.001	< 0.000007	< 0.00001	5.1	< 0.000003	0.000007	< 0.00008	< 0.0002
3	< 0.2	< 0.00001	0.075	0.19	< 0.00005	0.0048	0.009	0.00096	< 0.000007	< 0.00001	5.1	< 0.000003	0.000008	< 0.00008	< 0.0002
4	< 0.2	< 0.00001	0.071	0.095	< 0.00005	0.0058	0.006	0.00093	< 0.000007	< 0.00001	5.2	< 0.000003	0.000021	< 0.00008	< 0.0002
5	< 0.2	< 0.00001	0.069	0.1	< 0.00005	0.006	0.005	0.00095	< 0.000007	< 0.00001	5.3	0.000006	0.000011	< 0.00008	0.0015
6	0.6	< 0.00001	0.067	0.16	< 0.00005	0.0063	0.005	0.00078	< 0.000007	< 0.00001	4.9	< 0.000003	0.000011	< 0.00008	0.0002
7	< 0.2	< 0.00001	0.068	0.12	< 0.00005	0.0072	0.005	0.00079	< 0.000007	< 0.00001	4.9	0.000037	0.000094	0.0001	0.0012
8	< 0.2	< 0.00001	0.069	0.09	< 0.00005	0.007	0.003	0.00082	< 0.000007	< 0.00001	5.0	< 0.000003	0.000012	< 0.00008	< 0.0002
9															
10															
11															
12	< 0.2	< 0.00001	0.079	0.075	< 0.00005	0.0065	0.003	0.00074	< 0.000007	< 0.00001	4.5	< 0.000003	0.000009	< 0.00008	< 0.0002
13															
14															
15															
16	< 0.2	< 0.00001	0.057	0.053	< 0.00005	0.007	< 0.002	0.00077	< 0.000007	< 0.00001	4.4	0.000005	0.000015	< 0.00008	< 0.0002
17															
18															
19	< 0.2	< 0.00001	0.067	0.081	< 0.00005	0.0079	< 0.002	0.00074	< 0.000007	< 0.00001	4.3	< 0.000003	0.000019	< 0.00008	< 0.0002
20	0.2	< 0.00001	0.079	0.091	< 0.00005	0.0076	< 0.002	0.00072	< 0.000007	< 0.00001	4.3	0.000003	0.000023	< 0.00008	< 0.0002
21															
22															
23															
24	< 0.2	< 0.00001	0.061	0.058	< 0.00005	0.0077	< 0.002	0.00071	< 0.000007	< 0.00001	4.0	< 0.000003	0.000016	< 0.00008	< 0.001
25															

Appendix F:
HCT Results-Basalt CR21-GT-07 510-520

Basalt CR21-GT-07 510-520

Week/Event	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	< 0.007	9.1	0.0004	0.21	0.00051	0.00063	3.3	0.0001	< 0.00009	< 0.0009	0.00004	0.00072	0.013	0.00014	< 0.000005	0.00017
1	< 0.007	5.9	0.0004	0.23	0.0024	0.00096	2.6	0.0002	< 0.00009	0.001	0.00005	0.00026	0.017	0.00018	< 0.000005	0.00009
2	< 0.007	4.7	0.0005	0.28	0.0037	0.00062	1.5	< 0.0001	< 0.00009	0.0009	0.00006	0.0001	0.02	0.00013	< 0.000005	0.003
3	< 0.007	4.2	0.0004	0.31	0.0039	0.00032	1.1	< 0.0001	< 0.00009	< 0.0009	0.00007	0.00006	0.018	0.00007	< 0.000005	0.00047
4	< 0.007	3.3	0.0003	0.27	0.005	0.00069	0.73	< 0.0001	< 0.00009	< 0.0009	0.00005	< 0.00006	0.017	0.00017	< 0.000005	0.0052
5	< 0.007	2.8	0.0004	0.27	0.0056	0.00072	0.59	< 0.0001	0.0001	< 0.0009	0.00004	< 0.00006	0.016	0.00014	< 0.000005	0.00044
6	< 0.007	2.6	0.0003	0.23	0.0051	0.00023	0.36	0.0001	< 0.00009	< 0.0009	0.00006	< 0.00006	0.015	0.00017	< 0.000005	0.00019
7	< 0.007	2.2	0.0003	0.25	0.0056	0.00011	0.34	0.001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.014	0.00012	< 0.000005	0.00012
8	< 0.007	2.0	0.0003	0.24	0.0053	0.00026	0.34	< 0.0001	< 0.00009	< 0.0009	0.00006	< 0.00006	0.013	0.00009	< 0.000005	0.0012
9																
10																
11																
12	< 0.007	1.3	0.0004	0.18	0.0056	0.00019	0.13	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0095	< 0.00007	< 0.000005	0.00031
13																
14																
15																
16	< 0.007	1.1	0.0002	0.16	0.0062	0.012	0.12	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.010	< 0.00007	< 0.000005	0.0004
17																
18																
19	< 0.007	1.2	0.0003	0.15	0.005	0.0013	0.14	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.01	0.00007	< 0.000005	0.000075
20	< 0.007	1.2	0.0004	0.17	0.0047	0.0008	0.09	< 0.0001	< 0.00009	< 0.0009	0.00005	< 0.00006	0.0089	0.00008	< 0.000005	0.000077
21																
22																
23																
24	< 0.007	0.9	0.0002	0.14	0.0054	< 0.0004	0.1	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0085	< 0.0001	< 0.000005	0.000031
25																

Appendix F:
HCT Results-Basalt CR21-GT-07 510-520

Basalt CR21-GT-07 510-520

Week/Event	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L
0	0.0015	0.00018	< 0.00002	< 0.002
1	0.0016	0.00051	< 0.00002	< 0.002
2	0.0015	0.0029	< 0.00002	< 0.002
3	0.0015	0.00021	< 0.00002	< 0.002
4	0.0015	0.00013	< 0.00002	< 0.002
5	0.0014	0.00009	< 0.00002	< 0.002
6	0.0012	0.00009	< 0.00002	< 0.002
7	0.0013	0.00005	< 0.00002	< 0.002
8	0.0012	0.0001	< 0.00002	< 0.002
9				
10				
11				
12	0.00082	0.00003	< 0.00002	< 0.002
13				
14				
15				
16	0.00078	0.00002	< 0.00002	0.002
17				
18				
19	0.00082	< 0.00002	< 0.00002	< 0.002
20	0.00088	0.00003	< 0.00002	< 0.002
21				
22				
23				
24	0.00069	< 0.0002	< 0.00002	< 0.002
25				

Appendix F:
HCT Results-Basalt CR22-GT-11 300-310

Basalt CR22-GT-11 300-310

Week/Event	LIMS	Sample Date	Leachate Volume Recovered (mL)	pH	Alkalinity	Conductivity	Acidity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	No unit	mg/L as CaCO ₃	uS/cm	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10057-SEP23	1-Sep-23	684	9.4	33	56	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
1	CA10114-SEP23	8-Sep-23	938	9.0	25	50	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
2	CA10115-SEP23	15-Sep-23	904	7.6	18	37	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
3	CA10171-SEP23	22-Sep-23	900	8.1	13	30	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
4	CA10228-SEP23	29-Sep-23	922	7.8	10	30	< 2	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
5	CA10054-OCT23	6-Oct-23	923	7.6	11	2.0	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
6	CA10111-OCT23	13-Oct-23	972	7.5	11	24	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10169-OCT23	20-Oct-23	909	8.1	12	22	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10226-OCT23	27-Oct-23	940	8.4	10	21	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10029-NOV23	3-Nov-23	899	7.5	8.0	18	< 2	< 2					
10	CA10084-NOV23	10-Nov-23	934	7.9	9.0	19	< 2	< 2					
11	CA10139-NOV23	17-Nov-23	980	7.3	8.0	19	< 2	< 2					
12	CA10201-NOV23	24-Nov-23	971	7.4	9.0	18	< 2	8.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
13	CA10001-DEC23	1-Dec-23	955	7.6	8.0	19	< 2	< 2					
14	CA10061-DEC23	8-Dec-23	952	7.8	9.0	19	< 2	< 2					
15	CA10121-DEC23	15-Dec-23	957	7.3	8.0	24	< 2	3.0					
16	CA10182-DEC23	22-Dec-23	996	7.3	11	23	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10240-DEC23	29-Dec-23	994	7.4	8.0	18	< 2	< 2					
18	CA10056-JAN24	5-Jan-24	932	8.4	8.0	20	< 2	< 2					
19	CA10115-JAN24	12-Jan-24	939	7.5	10	19	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
20	CA10177-JAN24	19-Jan-24	918	7.2	6.0	24	< 2	3.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10241-JAN24	26-Jan-24	944	7.4	7.0	15	< 2	< 2					
22	CA10014-FEB24	2-Feb-24	928	7.2	7.0	15	< 2	< 2					
23	CA10072-FEB24	9-Feb-24	949	7.3	7.0	17	< 2	< 2					
24	CA10129-FEB24	15-Feb-24	1004	8.9	12	23	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10184-FEB24	23-Feb-24	942	7.9	9.0	19	< 2	< 2					

Appendix F:
HCT Results-Basalt CR22-GT-11 300-310

Basalt CR22-GT-11 300-310

Week/Event	Chromium VI	Mercury	Aluminum	Aluminum (0.2µm)	Silver	Arsenic	Boron	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	< 0.2	< 0.00001	0.18	0.18	< 0.00005	0.0048	0.004	0.0011	< 0.000007	< 0.00001	4.0	< 0.000003	0.00097	0.0002	0.0006	0.011
1	< 0.2	0.00001	0.078	0.069	< 0.00005	0.024	0.007	0.0013	< 0.000007	< 0.00001	3.7	< 0.000003	0.000067	< 0.00008	0.0003	< 0.007
2	< 0.2	< 0.00001	0.076	0.067	< 0.00005	0.025	0.004	0.00083	< 0.000007	< 0.00001	3.9	< 0.000003	0.000037	0.0001	< 0.0002	< 0.007
3	< 0.2	< 0.00001	0.07	0.11	< 0.00005	0.022	0.003	0.00068	< 0.000007	< 0.00001	3.4	0.000004	0.000034	< 0.00008	< 0.0002	< 0.007
4	< 0.2	< 0.00001	0.066	0.11	< 0.00005	0.011	< 0.002	0.0018	< 0.000007	< 0.00001	3.9	< 0.000003	0.0002	< 0.00008	0.0003	< 0.007
5	< 0.2	< 0.00001	0.078	0.19	< 0.00005	0.023	0.002	0.00064	< 0.000007	< 0.00001	3.0	0.000006	0.000045	< 0.00008	0.0009	0.02
6	< 0.2	< 0.00001	0.06	0.067	< 0.00005	0.023	0.003	0.00055	< 0.000007	< 0.00001	2.7	< 0.000003	0.000038	0.0001	0.0003	< 0.007
7	< 0.2	< 0.00001	0.073	0.15	< 0.00005	0.022	0.002	0.00052	< 0.000007	< 0.00001	2.6	< 0.000003	0.000089	< 0.00008	0.0023	< 0.007
8	< 0.2	< 0.00001	0.078	0.072	< 0.00005	0.019	< 0.002	0.00055	< 0.000007	< 0.00001	2.7	< 0.000003	0.00005	< 0.00008	0.0003	< 0.007
9																
10																
11																
12	< 0.2	< 0.00001	0.067	0.062	< 0.00005	0.021	0.002	0.0005	< 0.000007	< 0.00001	3.0	< 0.000003	0.000046	< 0.00008	< 0.0002	< 0.007
13																
14																
15																
16	< 0.2	< 0.00001	0.042	0.037	< 0.00005	0.026	< 0.002	0.00061	< 0.000007	< 0.00001	3.3	0.000008	0.000092	< 0.00008	< 0.0002	< 0.007
17																
18																
19	< 0.2	< 0.00001	0.063	0.076	< 0.00005	0.02	< 0.002	0.0004	< 0.000007	< 0.00001	2.5	0.000006	0.000048	< 0.00008	< 0.0002	0.007
20	< 0.2	< 0.00001	0.064	0.08	< 0.00005	0.02	< 0.002	0.0019	< 0.000007	< 0.00001	3.6	0.000005	0.00029	< 0.00008	0.0003	< 0.007
21																
22																
23																
24	< 0.2	< 0.00001	0.071	0.13	< 0.00005	0.012	< 0.002	0.00051	< 0.000007	< 0.00001	3.8	< 0.000003	0.00004	< 0.00008	< 0.001	< 0.007
25																

Basalt CR22-GT-11 300-310

Week/Event	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	4.1	0.0002	0.41	0.0027	0.00066	3.4	0.018	< 0.00009	< 0.0009	< 0.00004	0.00087	0.015	0.00063	< 0.000005	0.00091
1	3.1	0.0002	0.5	0.012	0.0021	3.1	0.0002	< 0.00009	0.0021	< 0.00004	0.00035	0.016	0.00023	< 0.000005	0.0047
2	2.1	0.0002	0.46	0.016	0.00086	1.6	< 0.0001	< 0.00009	0.0015	< 0.00004	0.00009	0.016	0.00015	< 0.000005	0.00015
3	1.4	0.0001	0.35	0.014	0.0024	1.1	< 0.0001	< 0.00009	< 0.0009	< 0.00004	0.00006	0.013	0.00012	< 0.000005	0.002
4	0.59	0.0002	0.54	0.0035	0.0008	1.2	0.0001	< 0.00009	< 0.0009	0.0001	0.00007	0.014	0.00014	< 0.000005	0.00057
5	1.3	0.0001	0.38	0.011	0.0013	0.78	< 0.0001	< 0.00009	< 0.0009	< 0.00004	0.00008	0.012	0.00018	< 0.000005	0.000099
6	0.97	0.0001	0.33	0.011	0.00038	0.49	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.011	0.00009	< 0.000005	0.000076
7	0.96	0.0001	0.34	0.01	0.00022	0.42	0.0008	< 0.00009	< 0.0009	< 0.00004	0.00007	0.01	0.00016	< 0.000005	0.0013
8	0.89	< 0.0001	0.32	0.011	0.0011	0.43	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0095	0.00025	< 0.000005	0.00014
9															
10															
11															
12	0.54	0.0002	0.28	0.015	0.00026	0.2	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.011	0.00008	< 0.000005	0.00015
13															
14															
15															
16	0.47	0.0001	0.29	0.012	0.012	0.21	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.013	< 0.00007	< 0.000005	0.000071
17															
18															
19	0.36	< 0.0001	0.18	0.011	0.00071	0.14	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.01	0.00011	< 0.000005	0.00009
20	0.48	0.0003	0.26	0.0014	0.0018	0.22	0.0002	< 0.00009	< 0.0009	0.00009	< 0.00006	0.0099	0.00011	< 0.000005	0.00042
21															
22															
23															
24	0.23	< 0.0001	0.15	0.015	0.0008	0.09	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.014	0.0001	< 0.000005	0.00017
25															

Appendix F:
HCT Results-Basalt CR22-GT-11 300-310

Basalt CR22-GT-11 300-310

Week/Event	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L
0	0.0005	0.0011	< 0.00002	< 0.002
1	0.00056	0.0049	< 0.00002	< 0.002
2	0.00038	0.0015	< 0.00002	< 0.002
3	0.00033	0.0018	< 0.00002	< 0.002
4	0.0011	0.00002	< 0.00002	< 0.002
5	0.00035	0.00031	< 0.00002	< 0.002
6	0.00028	0.0003	< 0.00002	< 0.002
7	0.00026	0.00016	< 0.00002	< 0.002
8	0.00027	0.00017	< 0.00002	< 0.002
9				
10				
11				
12	0.00022	0.0001	< 0.00002	< 0.002
13				
14				
15				
16	0.00021	0.0001	< 0.00002	< 0.002
17				
18				
19	0.00017	0.00006	< 0.00002	< 0.002
20	0.00055	< 0.00002	< 0.00002	< 0.002
21				
22				
23				
24	0.00011	< 0.0002	< 0.00002	< 0.002
25				

Basalt CR21-GT-03 300-310

Week/Event	LIMS	Sample Date	Leachate Volume Recovered (mL)	pH	Alkalinity	Conductivity	Acidity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	No unit	mg/L as CaCO ₃	uS/cm	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10057-SEP23	1-Sep-23	771	9.0	23	62	< 2	6.0	2.0	< 0.3	< 0.03	< 0.06	< 0.06
1	CA10114-SEP23	8-Sep-23	993	8.7	23	72	< 2	11	< 1	< 0.3	< 0.03	< 0.06	< 0.06
2	CA10115-SEP23	15-Sep-23	962	7.5	17	53	< 2	7.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
3	CA10171-SEP23	22-Sep-23	918	7.4	10	32	< 2	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
4	CA10228-SEP23	29-Sep-23	927	8.3	11	24	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
5	CA10054-OCT23	6-Oct-23	910	7.1	8.0	7.0	< 2	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
6	CA10111-OCT23	13-Oct-23	963	7.3	10	31	< 2	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10169-OCT23	20-Oct-23	901	7.8	9.0	32	< 2	3.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10226-OCT23	27-Oct-23	936	7.6	8.0	27	< 2	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10029-NOV23	3-Nov-23	902	7.5	9.0	25	< 2	4.0					
10	CA10084-NOV23	10-Nov-23	894	7.2	8.0	24	< 2	4.0					
11	CA10139-NOV23	17-Nov-23	969	7.3	8.0	26	< 2	3.0					
12	CA10201-NOV23	24-Nov-23	961	7.2	7.0	22	< 2	2.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
13	CA10001-DEC23	1-Dec-23	907	7.5	10	27	< 2	3.0					
14	CA10061-DEC23	8-Dec-23	931	7.5	7.0	25	< 2	3.0					
15	CA10121-DEC23	15-Dec-23	941	7.5	9.0	17	< 2	< 2					
16	CA10182-DEC23	22-Dec-23	991	7.2	11	31	< 2	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10240-DEC23	29-Dec-23	995	7.4	9.0	28	< 2	4.0					
18	CA10056-JAN24	5-Jan-24	929	7.3	8.0	27	< 2	4.0					
19	CA10115-JAN24	12-Jan-24	949	7.6	9.0	26	< 2	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
20	CA10177-JAN24	19-Jan-24	894	7.3	6.0	14	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10241-JAN24	26-Jan-24	919	7.1	5.0	21	< 2	3.0					
22	CA10014-FEB24	2-Feb-24	939	7.2	5.0	21	< 2	4.0					
23	CA10072-FEB24	9-Feb-24	949	7.4	17	14	< 2	5.0					
24	CA10129-FEB24	15-Feb-24	946	7.4	7.0	26	< 2	5.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10184-FEB24	23-Feb-24	934	7.4	7.0	24	< 2	5.0					

Basalt CR21-GT-03 300-310

Week/Event	Chromium VI	Mercury	Aluminum	Aluminum (0.2µm)	Silver	Arsenic	Boron	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	< 0.2	< 0.00001	0.13	0.13	< 0.00005	0.0042	0.004	0.0027	< 0.000007	< 0.00001	4.6	< 0.000003	0.000073	0.0002	0.0004	< 0.007
1	< 0.2	< 0.00001	0.067	0.058	< 0.00005	0.0082	0.01	0.0034	< 0.000007	< 0.00001	5.6	< 0.000003	0.00027	< 0.00008	0.0008	< 0.007
2	< 0.2	< 0.00001	0.29	0.1	< 0.00005	0.0006	0.006	0.001	< 0.000007	< 0.00001	6.2	< 0.000003	0.000016	< 0.00008	< 0.0002	< 0.007
3	< 0.2	< 0.00001	0.064	0.092	< 0.00005	0.0099	0.006	0.0017	< 0.000007	< 0.00001	4.1	< 0.000003	0.00014	< 0.00008	< 0.0002	0.009
4	< 0.2	< 0.00001	0.094	0.11	< 0.00005	0.025	0.003	0.00075	< 0.000007	< 0.00001	3.3	< 0.000003	0.000053	< 0.00008	0.0006	< 0.007
5	< 0.2	< 0.00001	0.061	0.13	< 0.00005	0.011	< 0.002	0.0017	< 0.000007	< 0.00001	3.7	0.000006	0.00019	< 0.00008	0.001	0.013
6	0.3	< 0.00001	0.048	0.067	< 0.00005	0.013	0.002	0.0017	< 0.000007	< 0.00001	3.7	< 0.000003	0.00024	< 0.00008	0.0004	< 0.007
7	< 0.2	< 0.00001	0.063	0.15	< 0.00005	0.015	< 0.002	0.0016	< 0.000007	< 0.00001	3.6	< 0.000003	0.00029	< 0.00008	0.002	0.007
8	< 0.2	< 0.00001	0.051	0.051	< 0.00005	0.012	< 0.002	0.0014	< 0.000007	< 0.00001	3.6	< 0.000003	0.00025	< 0.00008	< 0.0002	< 0.007
9																
10																
11																
12	< 0.2	< 0.00001	0.05	0.076	< 0.00005	0.012	< 0.002	0.0014	< 0.000007	< 0.00001	3.3	< 0.000003	0.00025	< 0.00008	< 0.0002	< 0.007
13																
14																
15																
16	< 0.2	< 0.00001	0.038	0.041	< 0.00005	0.018	< 0.002	0.0018	< 0.000007	< 0.00001	4.6	< 0.000003	0.00045	< 0.00008	< 0.0002	< 0.007
17																
18																
19	< 0.2	< 0.00001	0.046	0.054	< 0.00005	0.017	< 0.002	0.0014	< 0.000007	< 0.00001	3.7	< 0.000003	0.00038	< 0.00008	0.0003	< 0.007
20	< 0.2	< 0.00001	0.076	0.092	< 0.00005	0.018	< 0.002	0.00032	< 0.000007	< 0.00001	2.2	0.000003	0.00004	< 0.00008	0.0009	< 0.007
21																
22																
23																
24	< 0.2	< 0.00001	0.04	0.044	< 0.00005	0.016	< 0.002	0.0015	< 0.000007	< 0.00001	4.0	< 0.000003	0.00047	< 0.00008	< 0.001	0.18
25																

Basalt CR21-GT-03 300-310

Week/Event	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	1.1	0.0002	0.42	0.00061	0.0022	5.7	0.0003	< 0.00009	< 0.0009	0.00029	0.00084	0.017	0.0002	< 0.000005	0.000022	0.0012	0.00012
1	1.0	0.0003	0.82	0.0041	0.0042	5.7	0.0005	< 0.00009	0.0022	0.00032	0.00034	0.027	0.00018	< 0.000005	0.0011	0.0011	0.00022
2	0.31	0.0003	3.6	0.0068	0.0013	3.1	< 0.0001	< 0.00009	0.0021	0.00026	0.00012	0.055	< 0.00007	< 0.000005	0.0086	0.0011	0.00011
3	0.59	0.0002	0.51	0.0036	0.0025	1.5	0.0001	< 0.00009	< 0.0009	0.00012	0.00006	0.014	0.00015	< 0.000005	0.0012	0.0011	0.00035
4	1.5	0.0001	0.38	0.013	0.00051	0.95	< 0.0001	< 0.00009	< 0.0009	< 0.00004	0.00011	0.012	0.00037	< 0.000005	0.00025	0.00038	0.00053
5	0.57	0.0002	0.54	0.0029	0.00069	0.9	0.0001	< 0.00009	0.0009	0.00007	0.00006	0.013	0.00014	< 0.000005	0.0028	0.001	0.00002
6	0.47	0.0002	0.5	0.0029	0.00062	0.61	0.0002	< 0.00009	0.001	0.00007	< 0.00006	0.014	< 0.00007	< 0.000005	0.00011	0.00087	0.00003
7	0.47	0.0003	0.49	0.0028	0.00039	0.64	0.0007	< 0.00009	< 0.0009	0.00008	0.00007	0.013	0.00015	< 0.000005	0.00012	0.0011	< 0.00002
8	0.45	0.0002	0.45	0.0028	0.0004	0.51	< 0.0001	< 0.00009	< 0.0009	0.00007	< 0.00006	0.011	0.00012	< 0.000005	0.0001	0.00075	< 0.00002
9																	
10																	
11																	
12	0.36	0.0003	0.28	0.0034	0.00035	0.28	0.0001	< 0.00009	< 0.0009	0.00007	< 0.00006	0.0087	0.00014	< 0.000005	0.0013	0.00066	0.00002
13																	
14																	
15																	
16	0.42	0.0003	0.32	0.004	0.0018	0.28	0.0002	< 0.00009	< 0.0009	0.00011	< 0.00006	0.015	< 0.00007	< 0.000005	0.00013	0.00065	0.00002
17																	
18																	
19	0.35	0.0002	0.21	0.0024	0.00055	0.21	0.0003	< 0.00009	< 0.0009	0.00011	< 0.00006	0.011	0.00008	< 0.000005	0.00009	0.00053	0.00002
20	0.39	< 0.0001	0.2	0.0056	0.0033	0.14	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.008	0.00013	< 0.000005	0.00009	0.00019	0.00005
21																	
22																	
23																	
24	0.32	0.0002	0.2	0.0025	0.0006	0.18	0.0003	< 0.00009	< 0.0009	0.00008	< 0.00006	0.01	< 0.0001	< 0.000005	0.00028	0.00051	< 0.0002
25																	

Basalt CR21-GT-03 300-310

Week/Event	Yttrium	Zinc
	mg/L	mg/L
0	< 0.00002	< 0.002
1	< 0.00002	< 0.002
2	< 0.00002	< 0.002
3	< 0.00002	< 0.002
4	0.00002	< 0.002
5	< 0.00002	< 0.002
6	< 0.00002	< 0.002
7	< 0.00002	< 0.002
8	< 0.00002	< 0.002
9		
10		
11		
12	< 0.00002	< 0.002
13		
14		
15		
16	< 0.00002	< 0.002
17		
18		
19	< 0.00002	< 0.002
20	< 0.00002	< 0.002
21		
22		
23		
24	< 0.00002	< 0.002
25		

Appendix F:
HCT Results-Basalt CR21-GT-09B 490-500

Basalt CR21-GT-09B 490-500

Week/Event	LIMS	Sample Date	Leachate Volume Recovered (mL)	pH	Alkalinity	Conductivity	Acidity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	No unit	mg/L as CaCO ₃	uS/cm	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10057-SEP23	1-Sep-23	832	8.61	37	101	< 2	4	7	< 0.3	< 0.03	< 0.06	0.13
1	CA10114-SEP23	8-Sep-23	996	8.5	39	86	< 2	3.0	< 1	< 0.3	< 0.03	< 0.06	0.07
2	CA10115-SEP23	15-Sep-23	984	8.0	35	73	< 2	3.0	< 1	< 0.3	< 0.03	< 0.06	0.08
3	CA10171-SEP23	22-Sep-23	997	8.2	33	68	< 2	3.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
4	CA10228-SEP23	29-Sep-23	953	8.5	30	58	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
5	CA10054-OCT23	6-Oct-23	996	8.1	29	10	< 2	2.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
6	CA10111-OCT23	13-Oct-23	998	8.1	24	54	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10169-OCT23	20-Oct-23	974	8.6	28	53	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10226-OCT23	27-Oct-23	998	8.7	24	44	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10029-NOV23	3-Nov-23	964	8.4	24	43	< 2	< 2					
10	CA10084-NOV23	10-Nov-23	1021	8.1	25	48	< 2	< 2					
11	CA10139-NOV23	17-Nov-23	1023	7.8	22	39	< 2	< 2					
12	CA10201-NOV23	24-Nov-23	985	7.7	22	40	< 2	16	< 1	< 0.3	< 0.03	< 0.06	< 0.06
13	CA10001-DEC23	1-Dec-23	982	8.2	22	38	< 2	< 2					
14	CA10061-DEC23	8-Dec-23	972	7.8	18	38	< 2	< 2					
15	CA10121-DEC23	15-Dec-23	1005	7.8	15	34	< 2	< 2					
16	CA10182-DEC23	22-Dec-23	985	8.4	21	42	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10240-DEC23	29-Dec-23	1000	7.9	17	34	< 2	< 2					
18	CA10056-JAN24	5-Jan-24	973	7.8	21	39	< 2	< 2					
19	CA10115-JAN24	12-Jan-24	971	8.1	24	41	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
20	CA10177-JAN24	19-Jan-24	993	7.9	22	42	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10241-JAN24	26-Jan-24	1002	7.8	24	38	< 2	< 2					
22	CA10014-FEB24	2-Feb-24	980	8.1	21	36	< 2	< 2					
23	CA10072-FEB24	9-Feb-24	991	7.9	23	42	< 2	< 2					
24	CA10129-FEB24	15-Feb-24	973	8.2	18	38	< 2	2.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10184-FEB24	23-Feb-24	987	8.2	20	36	< 2	< 2					

Appendix F:
HCT Results-Basalt CR21-GT-09B 490-500

Basalt CR21-GT-09B 490-500

Week/Event	Chromium VI	Mercury	Aluminum	Aluminum (0.2µm)	Silver	Arsenic	Boron	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	< 0.2	< 0.00001	0.112	0.114	< 0.00005	0.0003	0.005	0.00112	< 0.000007	< 0.00001	4.94	< 0.000003	0.00007	0.00044	0.0008	< 0.007
1	< 0.2	< 0.00001	0.23	0.23	< 0.00005	0.0005	0.009	0.0012	< 0.000007	< 0.00001	5.0	< 0.000003	0.000079	0.0001	0.0012	0.008
2	< 0.2	< 0.00001	0.26	0.27	< 0.00005	0.0004	0.02	0.001	< 0.000007	< 0.00001	0.85	0.000009	0.00003	0.0011	0.0003	< 0.007
3	< 0.2	< 0.00001	0.32	0.31	< 0.00005	0.0007	0.005	0.00098	< 0.000007	< 0.00001	6.6	< 0.000003	0.00001	< 0.00008	< 0.0002	< 0.007
4	< 0.2	< 0.00001	0.31	0.3	< 0.00005	0.0007	0.004	0.0009	< 0.000007	< 0.00001	6.6	< 0.000003	0.00001	0.0002	0.0017	< 0.007
5	< 0.2	< 0.00001	0.3	0.28	< 0.00005	0.0007	0.003	0.00081	< 0.000007	< 0.00001	6.3	0.000008	0.000009	< 0.00008	0.0007	0.008
6	< 0.2	< 0.00001	0.27	0.26	< 0.00005	0.0006	0.003	0.00064	< 0.000007	< 0.00001	5.6	< 0.000003	0.000006	< 0.00008	0.0003	< 0.007
7	< 0.2	< 0.00001	0.27	0.27	< 0.00005	0.0008	0.003	0.00075	< 0.000007	< 0.00001	5.7	< 0.000003	0.000057	0.0001	0.0008	< 0.007
8	< 0.2	< 0.00001	0.23	0.22	< 0.00005	0.0008	< 0.002	0.00064	< 0.000007	< 0.00001	5.5	< 0.000003	0.000007	< 0.00008	< 0.0002	< 0.007
9																
10																
11																
12	< 0.2	< 0.00001	0.25	0.23	< 0.00005	0.0008	0.002	0.00063	< 0.000007	< 0.00001	5.0	< 0.000003	0.000033	< 0.00008	< 0.0002	< 0.007
13																
14																
15																
16	< 0.2	< 0.00001	0.18	0.16	< 0.00005	0.0006	< 0.002	0.00038	< 0.000007	< 0.00001	4.6	0.000003	0.000006	< 0.00008	< 0.0002	< 0.007
17																
18																
19	< 0.2	< 0.00001	0.22	0.21	< 0.00005	0.0007	< 0.002	0.00039	< 0.000007	< 0.00001	4.8	< 0.000003	0.000012	< 0.00008	< 0.0002	< 0.007
20	< 0.2	< 0.00001	0.28	0.25	< 0.00005	0.0009	< 0.002	0.00039	< 0.000007	< 0.00001	5.2	< 0.000003	0.000041	< 0.00008	0.0003	< 0.007
21																
22																
23																
24	< 0.2	< 0.00001	0.22	0.21	< 0.00005	0.0009	< 0.002	0.00035	< 0.000007	< 0.00001	4.7	< 0.000003	0.000005	< 0.00008	< 0.001	< 0.007
25																

Appendix F:
HCT Results-Basalt CR21-GT-09B 490-500

Basalt CR21-GT-09B 490-500

Week/Event	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.754	0.0001	1.50	0.00361	0.00148	13.0	0.0002	< 0.00009	0.0016	0.00024	0.00108	0.0349	< 0.00007	< 0.000005	0.000100
1	0.43	0.0003	3.4	0.0073	0.0023	5.9	0.0002	< 0.00009	0.0024	0.00022	0.00034	0.049	0.00017	< 0.000005	0.00036
2	0.37	< 0.0001	4.7	0.00065	0.019	0.41	0.0007	< 0.00009	< 0.0009	0.00006	0.00016	0.0028	< 0.00007	< 0.000005	0.000052
3	0.31	0.0003	3.6	0.0066	0.00056	2.2	< 0.0001	< 0.00009	0.0013	0.00014	0.00008	0.05	< 0.00007	< 0.000005	0.00019
4	0.25	0.0003	3.3	0.0074	0.0022	1.6	0.0001	< 0.00009	0.0014	0.00016	0.00007	0.048	< 0.00007	< 0.000005	0.000028
5	0.2	0.0002	2.9	0.0074	0.001	1.1	< 0.0001	0.00012	0.0012	0.00013	0.00008	0.042	< 0.00007	< 0.000005	0.001
6	0.14	0.0002	2.5	0.0077	0.00031	0.68	0.0001	< 0.00009	< 0.0009	0.00007	< 0.00006	0.036	< 0.00007	< 0.000005	0.001
7	0.12	0.0002	2.4	0.0087	0.0002	0.76	0.0008	< 0.00009	0.0009	0.00006	< 0.00006	0.037	0.00012	< 0.000005	0.00031
8	0.14	0.0002	2.2	0.01	0.00024	0.66	< 0.0001	< 0.00009	< 0.0009	0.0001	< 0.00006	0.03	< 0.00007	< 0.000005	0.00017
9															
10															
11															
12	0.098	0.0003	1.7	0.013	0.00021	0.38	< 0.0001	< 0.00009	< 0.0009	0.00005	< 0.00006	0.028	< 0.00007	< 0.000005	0.000096
13															
14															
15															
16	0.079	0.0001	1.5	0.014	0.011	0.29	< 0.0001	< 0.00009	< 0.0009	0.00006	< 0.00006	0.023	< 0.00007	< 0.000005	0.000014
17															
18															
19	0.084	0.0001	1.4	0.012	0.00025	0.27	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.025	< 0.00007	< 0.000005	0.0018
20	0.099	0.0002	1.8	0.0094	0.00036	0.28	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.024	< 0.00007	< 0.000005	0.007
21															
22															
23															
24	0.07	0.0002	1.4	0.011	< 0.0004	0.23	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.023	< 0.0001	< 0.000005	0.000075
25															

Appendix F:
HCT Results-Basalt CR21-GT-09B 490-500

Basalt CR21-GT-09B 490-500

Week/Event	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L
0	0.00071	0.00021	< 0.00002	< 0.002
1	0.0009	0.00013	< 0.00002	< 0.002
2	0.00011	0.00025	< 0.00002	< 0.002
3	0.0013	0.00007	< 0.00002	< 0.002
4	0.0015	0.00005	< 0.00002	< 0.002
5	0.0016	0.00004	< 0.00002	< 0.002
6	0.0014	0.00003	< 0.00002	< 0.002
7	0.0015	0.00003	< 0.00002	< 0.002
8	0.0012	0.00003	< 0.00002	< 0.002
9				
10				
11				
12	0.0012	< 0.00002	0.00007	< 0.002
13				
14				
15				
16	0.00096	< 0.00002	< 0.00002	< 0.002
17				
18				
19	0.0011	< 0.00002	< 0.00002	< 0.002
20	0.0015	< 0.00002	< 0.00002	< 0.002
21				
22				
23				
24	0.0011	< 0.0002	< 0.00002	< 0.002
25				

Appendix F:
HCT Results-Peridotite CR20-34 555-565

Peridotite CR20-34 555-565

Week/Event	LIMS	Sample Date	Leachate Volume Recovered (mL)	pH	Alkalinity	Conductivity	Acidity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	No unit	mg/L as CaCO ₃	uS/cm	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10057-SEP23	1-Sep-23	854	8.4	16	40	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
1	CA10114-SEP23	8-Sep-23	986	8.6	28	61	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
2	CA10115-SEP23	15-Sep-23	984	7.3	23	46	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
3	CA10171-SEP23	22-Sep-23	939	7.4	12	27	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
4	CA10228-SEP23	29-Sep-23	972	7.6	8.0	20	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
5	CA10054-OCT23	6-Oct-23	988	7.4	14	16	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
6	CA10111-OCT23	13-Oct-23	1000	7.4	11	25	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10169-OCT23	20-Oct-23	980	7.6	14	29	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10226-OCT23	27-Oct-23	962	7.7	8.0	18	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10029-NOV23	3-Nov-23	902	7.9	8.0	18	< 2	< 2					
10	CA10084-NOV23	10-Nov-23	924	7.1	7.0	15	< 2	< 2					
11	CA10139-NOV23	17-Nov-23	1017	7.3	11	20	< 2	< 2					
12	CA10201-NOV23	24-Nov-23	957	7.2	5.0	11	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
13	CA10001-DEC23	1-Dec-23	966	7.0	6.0	15	< 2	< 2					
14	CA10061-DEC23	8-Dec-23	1004	7.1	7.0	16	< 2	< 2					
15	CA10121-DEC23	15-Dec-23	984	7.3	9.0	19	< 2	< 2					
16	CA10182-DEC23	22-Dec-23	1005	7.1	9.0	19	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10240-DEC23	29-Dec-23	988	7.2	7.0	16	< 2	< 2					
18	CA10056-JAN24	5-Jan-24	961	7.2	7.0	14	< 2	< 2					
19	CA10115-JAN24	12-Jan-24	952	7.2	9.0	17	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
20	CA10177-JAN24	19-Jan-24	902	7.1	7.0	16	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10241-JAN24	26-Jan-24	978	6.9	4.0	8.0	< 2	< 2					
22	CA10014-FEB24	2-Feb-24	1000	7.0	5.0	10	< 2	< 2					
23	CA10072-FEB24	9-Feb-24	960	7.3	5.0	11	< 2	< 2					
24	CA10129-FEB24	15-Feb-24	996	7.2	6.0	14	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10184-FEB24	23-Feb-24	941	7.4	7.0	14	< 2	< 2					

Appendix F:
HCT Results-Peridotite CR20-34 555-565

Peridotite CR20-34 555-565

Week/Event	Chromium VI	Mercury	Aluminum	Aluminum (0.2µm)	Silver	Arsenic	Boron	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	1.7	< 0.00001	0.011	0.012	< 0.00005	0.0003	0.025	0.0014	< 0.000007	< 0.00001	2.2	< 0.000003	0.00007	0.002	0.0003	< 0.007
1	2.1	< 0.00001	0.005	0.005	< 0.00005	0.0003	0.02	0.0016	< 0.000007	< 0.00001	0.92	< 0.000003	0.000057	0.0023	0.0003	< 0.007
2	0.9	< 0.00001	0.002	0.005	< 0.00005	< 0.0002	0.009	0.00099	< 0.000007	< 0.00001	0.64	< 0.000003	0.00012	0.00013	< 0.0002	< 0.007
3	0.7	< 0.00001	0.006	0.005	< 0.00005	0.0006	0.016	0.00062	< 0.000007	< 0.00001	0.75	< 0.000003	0.000017	0.00074	< 0.0002	< 0.007
4	0.5	< 0.00001	0.003	0.004	< 0.00005	< 0.0002	0.012	0.00045	< 0.000007	< 0.00001	0.52	0.000003	0.000019	0.00048	0.0002	< 0.007
5	0.3	< 0.00001	0.003	0.003	< 0.00005	< 0.0002	0.015	0.00073	< 0.000007	< 0.00001	0.76	0.000006	0.000027	0.00035	0.0012	< 0.007
6	0.4	< 0.00001	0.002	0.004	< 0.00005	< 0.0002	0.012	0.00058	< 0.000007	< 0.00001	0.6	< 0.000003	0.000014	0.00031	0.0005	< 0.007
7	0.3	< 0.00001	0.003	0.004	< 0.00005	< 0.0002	0.014	0.00061	< 0.000007	< 0.00001	0.7	0.000032	0.000098	0.00027	0.0007	< 0.007
8	< 0.2	< 0.00001	0.006	0.005	< 0.00005	< 0.0002	0.01	0.00042	< 0.000007	< 0.00001	0.56	< 0.000003	0.000013	0.00024	< 0.0002	< 0.007
9																
10																
11																
12	< 0.2	< 0.00001	0.004	0.004	< 0.00005	0.0004	0.009	0.00043	< 0.000007	< 0.00001	0.44	< 0.000003	0.000014	0.00018	< 0.0002	< 0.007
13																
14																
15																
16	< 0.2	< 0.00001	0.002	0.002	< 0.00005	< 0.0002	0.01	0.00055	< 0.000007	< 0.00001	0.8	< 0.000003	0.000058	0.00015	< 0.0002	< 0.007
17																
18																
19	< 0.2	< 0.00001	0.003	0.003	< 0.00005	< 0.0002	0.01	0.00055	< 0.000007	< 0.00001	0.86	< 0.000003	0.000032	0.00013	< 0.0002	< 0.007
20	0.9	< 0.00001	0.006	0.005	< 0.00005	< 0.0002	0.011	0.00048	< 0.000007	< 0.00001	0.76	< 0.000003	0.00002	0.00015	< 0.0002	< 0.007
21																
22																
23																
24	< 0.2	< 0.00001	0.003	0.003	< 0.00005	< 0.0002	0.008	0.00046	< 0.000007	< 0.00001	0.67	< 0.000003	0.000062	0.00012	< 0.001	0.012
25																

Peridotite CR20-34 555-565

Week/Event	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.53	0.0002	3.3	0.00031	0.00018	0.75	0.0013	< 0.00009	< 0.0009	< 0.00004	0.00086	0.0084	< 0.00007	< 0.000005	0.000044
1	0.54	< 0.0001	6.1	0.00061	0.00024	0.82	0.0014	0.0001	< 0.0009	0.00006	0.00026	0.0032	< 0.00007	< 0.000005	0.00007
2	0.24	< 0.0001	32	0.00008	0.0013	0.2	0.0013	< 0.00009	< 0.0009	0.0001	0.00013	0.00036	< 0.00007	< 0.000005	0.00043
3	0.29	< 0.0001	3.0	0.00032	0.00022	0.28	0.0004	< 0.00009	< 0.0009	< 0.00004	0.00008	0.0022	< 0.00007	< 0.000005	0.00064
4	0.22	< 0.0001	2.3	0.00063	0.0076	0.17	0.0004	< 0.00009	< 0.0009	< 0.00004	0.00009	0.0016	< 0.00007	< 0.000005	0.00019
5	0.24	< 0.0001	3.5	0.00053	0.00048	0.14	0.0006	< 0.00009	< 0.0009	< 0.00004	0.00008	0.0024	< 0.00007	< 0.000005	0.0006
6	0.15	< 0.0001	2.5	0.00048	0.00011	0.09	0.0004	< 0.00009	< 0.0009	< 0.00004	0.00006	0.002	< 0.00007	< 0.000005	0.0011
7	0.14	< 0.0001	2.5	0.00084	0.00005	0.09	0.0011	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0024	< 0.00007	< 0.000005	0.000067
8	0.14	< 0.0001	2.2	0.00027	0.00006	0.1	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0017	< 0.00007	< 0.000005	0.0017
9															
10															
11															
12	0.082	0.0001	1.3	0.00054	0.00048	0.04	0.0005	0.00011	< 0.0009	< 0.00004	< 0.00006	0.0016	< 0.00007	< 0.000005	0.0019
13															
14															
15															
16	0.078	< 0.0001	1.7	0.00047	0.00037	0.03	0.0016	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0028	< 0.00007	< 0.000005	0.0024
17															
18															
19	0.082	< 0.0001	1.7	0.0004	0.00014	0.03	0.0008	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.003	< 0.00007	< 0.000005	0.00013
20	0.11	< 0.0001	1.9	0.00038	0.00045	< 0.01	0.0004	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0024	< 0.00007	< 0.000005	0.0025
21															
22															
23															
24	0.057	< 0.0001	1.4	0.00065	< 0.0004	0.04	0.0018	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0023	< 0.0001	< 0.000005	0.00016
25															

Appendix F:
HCT Results-Peridotite CR20-34 555-565

Peridotite CR20-34 555-565

Week/Event	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L
0	0.00025	0.00016	< 0.00002	< 0.002
1	0.00015	0.00035	< 0.00002	< 0.002
2	0.00003	0.0001	< 0.00002	< 0.002
3	0.00009	0.00014	< 0.00002	< 0.002
4	0.00007	0.00006	< 0.00002	< 0.002
5	0.00004	0.00007	< 0.00002	< 0.002
6	0.00003	0.00004	< 0.00002	< 0.002
7	0.00003	0.00004	< 0.00002	< 0.002
8	0.00006	0.00003	< 0.00002	< 0.002
9				
10				
11				
12	0.00005	0.00004	< 0.00002	< 0.002
13				
14				
15				
16	0.00003	< 0.00002	< 0.00002	< 0.002
17				
18				
19	0.00002	< 0.00002	< 0.00002	< 0.002
20	0.00005	< 0.00002	< 0.00002	< 0.002
21				
22				
23				
24	0.00003	< 0.0002	< 0.00002	< 0.002
25				

Peridotite P1-Per-EZ-2

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
0	CA10021-NOV21	2-Nov-21	1000	840	8.72	< 2	16	39	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1
1	CA10072-NOV21	9-Nov-21	1000	891	8.53	< 2	23	44	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.4
2	CA10118-NOV21	16-Nov-21	1000	899	8.75	< 2	20	37	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.5
3	CA10190-NOV21	23-Nov-21	1000	905	8.01	< 2	15	32	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.3
4	CA10241-NOV21	30-Nov-21	1000	910	7.82	< 2	13	28	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.3
5	CA10030-DEC21	7-Dec-21	1000	943	7.66	< 2	13	24	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.2
6	CA10096-DEC21	14-Dec-21	1000	920	7.79	< 2	12	24	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.3
7	CA10148-DEC21	21-Dec-21	1000	924	7.95	< 2	7	24	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.4
8	CA10206-DEC21	28-Dec-21	1000	895	7.86	< 2	15	31	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.4
9	CA10018-JAN22	4-Jan-22	1000	963	7.38	< 2	11	25	< 2						
10	CA10056-JAN22	11-Jan-22	1000	912	7.25	< 2	9	22	< 2						
11	CA10118-JAN22	18-Jan-22	1000	920	7.44	< 2	11	21	< 2						
12	CA10153-JAN-22	25-Jan-22	1000	911	7.32	< 2	10	19	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.4
13	CA10016-FEB22	1-Feb-22	1000	917	7.63	< 2	10	19	< 2						
14	CA10052-FEB22	8-Feb-22	1000	923	7.35	< 2	9	18	< 2						
15	CA10086-FEB22	15-Feb-22	1000	1008	7.70	< 2	13	21	< 2						
16	CA10119-FEB22	22-Feb-22	1000	1013	7.52	< 2	10	24	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.3
17	CA10012-MAR22	1-Mar-22	1000	1007	7.54	< 2	6	20	< 2						
18	CA10044-MAR22	8-Mar-22	1000	1010	7.52	< 2	7	21	< 2						
19	CA10084-MAR22	15-Mar-22	1000	939	7.36	< 2	9	18	< 2						
20	CA10114-MAR22	22-Mar-22	1000	1014	7.35	< 2	10	19	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
21	CA10162-MAR22	29-Mar-22	1000	1005	7.48	< 2	9	18	< 2						
22	CA10011-APR22	5-Apr-22	1000	976	7.26	< 2	7	14	< 2						
23	CA10046-APR22	12-Apr-22	1000	986	7.54	< 2	11	27	< 2						
24	CA10084-APR22	19-Apr-22	1000	1002	7.14	< 2	7	14	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
25	CA10125-APR22	26-Apr-22	1000	1010	6.90	< 2	5	14	< 2						
26	CA10009-MAY22	03-May-22	1000	956	7.27	< 2	6	12	< 2						
27	CA10051-MAY22	10-May-22	1000	942	7.40	< 2	8	16	< 2						
28	CA10093-MAY22	17-May-22	1000	1004	7.34	< 2	7	13	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
29	CA10138-MAY22	24-May-22	1000	932	7.53	< 2	7	15	< 2						
30	CA10186-MAY22	31-May-22	1000	948	7.34	< 2	6	14	< 2						
31	CA10030-JUN22	07-Jun-22	1000	1000	7.25	< 2	5	11	< 2						
32	CA10076-JUN22	14-Jun-22	1000	983	7.68	< 2	6	10	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
33	CA10118-JUN22	21-Jun-22	1000	986	7.16	< 2	6	13	< 2						
34	CA10165-JUN22	28-Jun-22	1000	1001	7.17	< 2	5	13	< 2						
35	CA10007-JUL22	05-Jul-22	1000	997	7.04	< 2	6	11	< 2						
36	CA10051-JUL22	12-Jul-22	1000	999	7.21	< 2	6	12	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
37	CA10095-JUL22	19-Jul-22	1000	974	7.19	< 2	5	12	< 2						
38	CA10139-JUL22	26-Jul-22	1000	1001	7.08	< 2	4	10	< 2						
39	CA10007-AUG22	02-Aug-22	1000	975	7.27	< 2	5	11	< 2						
40	CA10051-AUG22	09-Aug-22	1000	996	7.07	< 2	5	10	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
41	CA10095-AUG22	16-Aug-22	1000	988	7.25	< 2	7	9	< 2						
42	CA10178-AUG22	23-Aug-22	1000	989	7.14	< 2	5	10	< 2						
43	CA10187-AUG22	30-Aug-22	1000	999	7.69	< 2	7	17	< 2						
44	CA10010-SEP22	06-Sep-22	1000	993	6.92	< 2	5	10	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
45	CA10055-SEP22	13-Sep-22	1000	969	7.02	< 2	5	11	< 2						
46	CA10098-SEP22	20-Sep-22	1000	975	7.04	< 2	4	13	< 2						
47	CA10145-SEP22	27-Sep-22	1000	951	6.92	< 2	5	13	< 2						

Peridotite P1-Per-EZ-2

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
48	CA10006-OCT22	04-Oct-22	1000	976	7.18	< 2	5	13	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
49	CA10052-OCT22	11-Oct-22	1000	984	7.24	< 2	5	9	< 2						
50	CA10097-OCT22	18-Oct-22	1000	975	7.50	< 2	5	9	< 2						
51	CA10141-OCT22	25-Oct-22	1000	974	7.04	< 2	6	11	< 2						
52	CA10006-NOV22	01-Nov-22	1000	965	6.90	< 2	5	9	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
53	CA10049-NOV22	08-Nov-22	1000	963	6.80	< 2	5	9	< 2						
54	CA10091-NOV22	15-Nov-22	1000	962	7.10	< 2	5	8	< 2						
55	CA10135-NOV22	22-Nov-22	1000	946	7.20	< 2	5	15	< 2						
56	CA10177-NOV22	29-Nov-22	1000	961	7.15	< 2	4	9	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
57	CA10010-DEC22	06-Nov-22	1000	970	7.11	< 2	4	9	< 2						
58	CA10053-DEC22	13-Dec-22	1000	934	7.07	< 2	5	11	< 2						
59	CA10099-DEC22	20-Dec-22	1000	934	7.06	< 2	6	10	< 2						
60	CA10216-DEC22	27-Dec-22	1000	951	6.91	< 2	5	12	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.2
61	CA10005-JAN23	03-Jan-23	1000	970	6.81	< 2	5	8	< 2						
62	CA10049-JAN23	10-Jan-23	1000	938	7.14	< 2	5	11	< 2						
63	CA10098-JAN23	17-Jan-23	1000	988	7.13	< 2	5	9	< 2						
64	CA10145-JAN23	24-Jan-23	1000	935	6.99	< 2	5	10	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
65	CA10192-JAN23	31-Jan-23	1000	965	7.23	< 2	5	10	< 2						
66	CA10033-FEB23	07-Feb-23	1000	978	7.09	< 2	5	8	< 2						
67	CA10079-FEB23	14-Feb-23	1000	964	6.79	< 2	5	6	< 2						
68	CA10126-FEB23	21-Feb-23	1000	959	7.19	< 2	4	5	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
69	CA10175-FEB23	28-Feb-23	1000	941	6.97	< 2	4	9	< 2						
70	CA10032-MAR23	07-Mar-23	1000	991	7.04	< 2	5	8	< 2						
71	CA10079-MAR23	14-Mar-23	1000	1003	6.95	< 2	5	10	< 2						
72	CA10127-MAR23	21-Mar-23	1000	1052	7.18	< 2	6	13	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
73	CA10174-MAR23	28-Mar-23	1000	965	7.25	< 2	4	9	< 2						
74	CA10006-MAR23	04-Apr-23	1000	995	7.12	< 2	5	9	< 2						
75	CA10055-APR23	11-Apr-23	1000	963	7.15	< 2	4	8	< 2						
76	CA10104-APR23	18-Apr-23	1000	957	6.97	< 2	4	9	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.3
77	CA10153-APR23	25-Apr-23	1000	985	6.95	< 2	5	9	< 2						
78	CA10006-MAY23	02-May-23	1000	957	7.09	< 2	5	9	< 2						
79	CA10058-MAY23	09-May-23	1000	957	6.93	< 2	4	9	< 2						
80	CA10109-MAY23	16-May-23	1000	974	6.90	< 2	4	11	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.5
81	CA10161-MAY23	23-May-23	1000	989	7.05	< 2	6	13	< 2						
82	CA10216-MAY23	30-May-23	1000	966	6.91	< 2	3	8	< 2						
83	CA10018-JUN23	06-Jun-23	1000	966	6.73	< 2	4	10	< 2						
84	CA10071-JUN23	13-Jun-23	1000	959	6.85	< 2	4	9	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
85	CA10123-JUN23	20-Jun-23	1000	958	7.11	< 2	3	8	< 2						
86	CA10173-JUN23	27-Jun-23	1000	938	6.96	< 2	4	9	< 2						
87	CA10006-JUL23	04-Jul-23	1000	964	7.05	< 2	5	10	< 2						
88	CA10058-JUL23	11-Jul-23	1000	943	7.14	< 2	4	10	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2
89	CA10111-JUL23	18-Jul-23	1000	1002	7.14	< 2	7	15	< 2						
90	CA10162-JUL23	25-Jul-23	1000	1005	6.89	< 2	4	10	< 2						
91	CA10006-AUG23	01-Aug-23	1000	931	6.95	< 2	4	8	< 2						

Appendix F:
HCT Results-Peridotite P1-Per-EZ-2

Peridotite P1-Per-EZ-2

Week/Event	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	< 0.00001	0.006	< 0.00005	< 0.0002	0.00114	< 0.000007	0.01	< 0.00001	3.24	< 0.000003	0.000043	0.00056	0.0004	< 0.007	0.484	0.0015	2.98	0.00064
1	< 0.00001	0.007	< 0.00005	< 0.0002	0.00087	< 0.000007	0.007	< 0.00001	1.64	< 0.000003	0.000013	0.00059	0.0003	< 0.007	0.504	0.0007	3.92	0.00028
2	< 0.00001	< 0.001	< 0.00005	0.0003	0.00084	< 0.000007	0.006	< 0.00001	1.52	< 0.000003	0.000035	0.00046	< 0.0002	< 0.007	0.608	0.0003	3.61	0.00036
3	< 0.00001	0.006	< 0.00005	0.0002	0.00065	< 0.000007	0.016	< 0.00001	1.43	< 0.000003	0.000034	0.00042	< 0.0002	< 0.007	0.442	0.0004	3.18	0.00063
4	< 0.00001	0.002	< 0.00005	< 0.0002	0.00066	< 0.000007	0.022	< 0.00001	1.17	< 0.000003	0.000019	0.00042	< 0.0002	< 0.007	0.387	0.0003	2.86	0.00038
5	< 0.00001	0.007	< 0.00005	< 0.0002	0.00054	< 0.000007	0.016	< 0.00001	1.3	< 0.000003	0.000033	0.00038	0.0006	0.026	0.326	0.0002	2.47	0.00026
6	< 0.00001	0.015	< 0.00005	0.0005	0.00052	< 0.000007	0.005	< 0.00001	1.09	0.000005	0.000012	0.00024	< 0.0002	< 0.007	0.267	< 0.0001	2.37	0.00031
7	< 0.00001	0.004	< 0.00005	< 0.0002	0.00144	< 0.000007	0.02	< 0.00001	0.94	< 0.000003	0.000023	0.00035	< 0.0002	0.01	0.325	0.0005	2.32	0.00036
8	< 0.00001	0.003	< 0.00005	< 0.0002	0.00047	< 0.000007	0.011	< 0.00001	1.1	< 0.000003	0.000021	0.00034	< 0.0002	< 0.007	0.41	0.0003	3.22	0.00019
9																		
10																		
11																		
12	< 0.00001	0.004	< 0.00005	0.0002	0.00047	< 0.000007	0.006	< 0.00001	1.01	< 0.000003	0.000082	0.00041	< 0.0002	< 0.007	0.253	< 0.0001	2.17	0.00022
13																		
14																		
15																		
16		0.009	< 0.00005	< 0.0002	0.0006	< 0.000007	0.004	< 0.00001	1.21	< 0.000003	0.000015	0.00025	< 0.0002	< 0.007	0.206	0.0001	1.93	0.00032
17																		
18																		
19																		
20		0.002	< 0.00005	< 0.0002	0.00146	< 0.000007	0.004	< 0.00001	1.3	0.000008	0.000022	0.00017	0.0011	< 0.007	0.137	< 0.0001	1.67	0.00078
21																		
22																		
23																		
24		0.001	< 0.00005	< 0.0002	0.00041	< 0.000007	0.003	< 0.00001	0.92	< 0.000003	0.000009	0.00012	< 0.0002	< 0.007	0.103	0.0001	1.27	0.00033
25																		
26																		
27																		
28		0.002	< 0.00005	< 0.0002	0.00046	0.000014	0.003	< 0.00001	0.75	0.000003	0.000014	0.00042	< 0.0002	< 0.007	0.078	0.0001	1.47	0.00079
29																		
30																		
31																		
32		0.005	< 0.00005	0.0002	0.0004	< 0.000007	0.003	< 0.00001	0.76	< 0.000003	0.000008	0.00023	< 0.0002	< 0.007	0.072	< 0.0001	1.05	0.00033
33																		
34																		
35																		
36		0.003	< 0.00005	< 0.0002	0.0003	< 0.000007	0.005	< 0.00001	0.7	0.000005	0.000015	0.00011	< 0.0002	< 0.007	0.064	< 0.0001	0.926	0.00046
37																		
38																		
39																		
40		0.004	< 0.00005	< 0.0002	0.00023	0.000007	0.005	< 0.00001	0.58	0.000015	0.000017	0.00036	0.0002	< 0.007	0.046	< 0.0001	0.742	0.00043
41																		
42																		
43																		
44		0.004	< 0.00005	0.0008	0.00018	< 0.000007	< 0.002	< 0.00001	0.56	0.000005	0.000034	0.00018	< 0.0002	< 0.007	0.084	< 0.0001	0.74	0.00035
45																		
46																		
47																		

Peridotite P1-Per-EZ-2

Week/Event	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
48		0.004	< 0.00005	0.0002	0.00023	< 0.000007	0.004	< 0.00001	0.64	< 0.000003	0.000018	0.00025	< 0.0002	< 0.007	0.06	< 0.0001	0.836	0.00033
49																		
50																		
51																		
52		0.011	< 0.00005	< 0.0002	0.00023	< 0.000007	0.004	< 0.00001	0.69	< 0.000003	0.000019	0.00026	< 0.0002	< 0.007	0.054	0.0084	0.782	0.00049
53																		
54																		
55																		
56		0.004	< 0.00005	0.0004	0.00039	< 0.000007	0.014	< 0.00001	0.72	0.000004	0.000037	0.00141	< 0.0002	0.026	0.062	< 0.0001	0.74	0.00047
57																		
58																		
59																		
60		0.003	< 0.00005	< 0.0002	0.00022	< 0.000007	0.004	< 0.00001	0.76	0.000008	0.000012	0.00027	< 0.0002	< 0.007	0.068	< 0.0001	0.918	0.00023
61																		
62																		
63																		
64		0.005	< 0.00005	< 0.0002	0.00019	< 0.000007	0.002	< 0.00001	0.74	< 0.000003	0.000014	0.00013	0.0003	0.012	0.059	0.0006	0.769	0.0004
65																		
66																		
67																		
68		0.003	< 0.00005	< 0.0002	0.00018	< 0.000007	< 0.002	< 0.00001	0.64	0.000003	0.000015	0.00018	< 0.0002	< 0.007	0.049	< 0.0001	0.655	0.00045
69																		
70																		
71																		
72		0.014	< 0.00005	< 0.0002	0.0003	< 0.000007	0.003	< 0.00001	0.96	< 0.000003	0.000032	0.00024	< 0.0002	< 0.007	0.042	< 0.0001	1.06	0.00038
73																		
74																		
75																		
76		0.003	< 0.00005	< 0.0002	0.00053	< 0.000007	0.002	< 0.00001	0.66	0.000005	0.000017	0.00015	< 0.0002	< 0.007	0.039	< 0.0001	0.759	0.00047
77																		
78																		
79																		
80		0.003	< 0.00005	0.0008	0.0002	< 0.000007	< 0.002	< 0.00001	0.78	< 0.000003	0.000021	0.00013	< 0.0002	0.011	0.060	< 0.0001	0.867	0.00058
81																		
82																		
83																		
84		0.002	< 0.00005	< 0.0002	0.00017	< 0.000007	< 0.002	< 0.00001	0.77	< 0.000003	0.000017	0.00009	0.0012	< 0.007	0.052	0.0004	0.734	0.00037
85																		
86																		
87																		
88		0.003	< 0.00005	< 0.0002	0.00016	< 0.000007	< 0.002	< 0.00001	0.65	0.000011	0.000039	0.00010	0.0002	< 0.007	0.037	< 0.0001	0.657	0.00057
89																		
90																		
91																		

Appendix F:
HCT Results-Peridotite P1-Per-EZ-2

Peridotite P1-Per-EZ-2

Week/Event	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.00037	0.38	0.0005	< 0.00009	< 0.0009	0.00005	0.00026	0.0139	0.00006	< 0.000005	0.000004	0.00021	0.00017	< 0.00002	< 0.002
1	0.00008	0.38	0.0005	0.00362	< 0.0009	0.00006	0.00016	0.00803	< 0.00005	< 0.000005	< 0.000002	0.00012	0.00027	< 0.00002	< 0.002
2	0.00083	0.44	0.0002	< 0.00009	< 0.0009	0.00004	0.00011	0.00633	< 0.00005	< 0.000005	< 0.000002	0.00011	0.00024	< 0.00002	< 0.002
3	0.00036	0.36	0.0003	< 0.00009	< 0.0009	< 0.00004	0.00009	0.00592	< 0.00005	< 0.000005	0.000003	0.00012	0.00018	< 0.00002	< 0.002
4	< 0.00004	0.52	0.0002	< 0.00009	< 0.0009	< 0.00004	0.00006	0.00495	< 0.00005	< 0.000005	< 0.000002	0.00007	0.00015	< 0.00002	< 0.002
5	0.00039	0.15	0.0002	< 0.00009	< 0.0009	< 0.00004	0.00008	0.0049	< 0.00005	< 0.000005	< 0.000002	0.00008	0.00028	< 0.00002	< 0.002
6	0.00023	0.13	0.0002	< 0.00009	< 0.0009	< 0.00004	0.00006	0.00406	0.00028	< 0.000005	0.000012	0.00013	0.00009	< 0.00002	0.002
7	0.00027	0.76	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00462	0.00007	< 0.000005	0.000007	0.0001	0.00009	< 0.00002	0.002
8	0.00007	0.2	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00443	< 0.00005	< 0.000005	< 0.000002	0.00012	0.00009	< 0.00002	< 0.002
9															
10															
11															
12	0.00018	0.06	< 0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00389	< 0.00005	< 0.000005	< 0.000002	0.00006	0.00007	< 0.00002	< 0.002
13															
14															
15															
16	0.00019	0.03	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00487	< 0.00005	< 0.000005	< 0.000002	0.00003	0.00004	< 0.00002	< 0.002
17															
18															
19															
20	0.00028	0.04	0.0277	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00499	< 0.00005	0.000012	0.000004	0.00005	0.00003	< 0.00002	< 0.002
21															
22															
23															
24	0.00007	0.01	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00342	< 0.00005	< 0.000005	< 0.000002	0.00002	0.00002	< 0.00002	< 0.002
25															
26															
27															
28	0.00015	0.07	0.0001	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0025	< 0.00005	< 0.000005	0.000908	0.00004	< 0.00002	< 0.00002	< 0.002
29															
30															
31															
32	0.00087	< 0.01	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00235	< 0.00005	< 0.000005	0.000161	0.00004	0.00003	< 0.00002	0.002
33															
34															
35															
36	0.0001	0.02	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00218	0.00022	< 0.000005	0.000009	0.00005	0.00002	< 0.00002	< 0.002
37															
38															
39															
40	0.0001	0.04	0.0005	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00167	0.00057	< 0.000005	0.000056	0.00007	0.00002	< 0.00002	< 0.002
41															
42															
43															
44	0.00075	0.12	0.0006	< 0.00009	< 0.0009	0.00006	< 0.00006	0.00147	< 0.00005	< 0.000005	0.000207	0.00006	0.00011	< 0.00002	< 0.002
45															
46															
47															

Peridotite P1-Per-EZ-2

Week/Event	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
48	0.00011	< 0.01	0.0003	< 0.00009	< 0.0009	0.00007	< 0.00006	0.00166	0.00007	< 0.000005	0.000872	0.00004	0.00007	< 0.00002	< 0.002
49															
50															
51															
52	0.00004	0.02	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00169	0.0001	< 0.000005	0.000011	0.00005	0.00003	< 0.00002	< 0.002
53															
54															
55															
56	0.00026	0.02	0.0008	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00174	0.00017	< 0.000005	0.000663	0.00006	< 0.00002	< 0.00002	< 0.002
57															
58															
59															
60	< 0.00004	0.02	0.0003	< 0.00009	< 0.0009	0.00016	< 0.00006	0.00147	0.00014	< 0.000005	0.000059	0.00008	< 0.00002	< 0.00002	< 0.002
61															
62															
63															
64	< 0.00004	0.20	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00147	< 0.00005	< 0.000005	0.000005	0.00004	< 0.00002	< 0.00002	< 0.002
65															
66															
67															
68	0.00016	0.19	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00138	< 0.00005	< 0.000005	0.000282	0.00004	< 0.00002	< 0.00002	< 0.002
69															
70															
71															
72	0.00016	0.01	0.0006	< 0.00009	< 0.0009	0.00004	0.00639	0.00191	0.00008	< 0.000005	0.000066	0.00005	< 0.00002	< 0.00002	< 0.002
73															
74															
75															
76	0.00034	0.04	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00134	0.00007	< 0.000005	0.000823	0.00009	0.00003	< 0.00002	< 0.002
77															
78															
79															
80	0.00007	0.05	0.0007	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00132	< 0.00005	< 0.000005	0.000213	0.00005	< 0.00002	< 0.00002	< 0.002
81															
82															
83															
84	0.00009	0.05	0.0003	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00124	< 0.00005	< 0.000005	0.000192	0.00007	0.00004	< 0.00002	< 0.002
85															
86															
87															
88	0.00014	< 0.01	0.0002	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00114	< 0.00007	< 0.000005	0.000007	0.00005	< 0.00002	< 0.00002	0.003
89															
90															
91															

Appendix F:
HCT Results-Peridotite-01 CR20-78 100-110

Peridotite-01 CR20-78 100-110

Week/Event	LIMS	Sample Date	Leachate Volume Recovered (mL)	pH	Alkalinity	Conductivity	Acidity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride
			mL	No unit	mg/L as CaCO ₃	uS/cm	mg/L as CaCO ₃	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	CA10057-SEP23	1-Sep-23	815	9.3	119	218	< 2	< 2	3.0	< 0.3	< 0.03	0.13	< 0.06
1	CA10114-SEP23	8-Sep-23	982	9.7	161	294	< 2	3.0	2.0	< 0.3	< 0.03	< 0.06	< 0.06
2	CA10115-SEP23	15-Sep-23	978	9.6	132	226	< 2	2.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
3	CA10171-SEP23	22-Sep-23	910	9.4	100	176	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
4	CA10228-SEP23	29-Sep-23	924	9.5	93	157	< 2	2.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
5	CA10054-OCT23	6-Oct-23	930	9.5	108	99	< 2	3.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
6	CA10111-OCT23	13-Oct-23	972	9.6	110	197	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
7	CA10169-OCT23	20-Oct-23	915	9.6	97	182	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
8	CA10226-OCT23	27-Oct-23	927	9.7	99	172	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
9	CA10029-NOV23	3-Nov-23	896	9.6	142	191	< 2	4.0					
10	CA10084-NOV23	10-Nov-23	898	9.6	115	200	< 2	3.0					
11	CA10139-NOV23	17-Nov-23	964	9.3	105	166	< 2	< 2					
12	CA10201-NOV23	24-Nov-23	974	9.3	101	156	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
13	CA10001-DEC23	1-Dec-23	920	9.4	108	194	< 2	4.0					
14	CA10061-DEC23	8-Dec-23	908	9.5	101	183	< 2	< 2					
15	CA10121-DEC23	15-Dec-23	926	9.5	109	170	< 2	2.0					
16	CA10182-DEC23	22-Dec-23	996	9.5	113	203	< 2	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
17	CA10240-DEC23	29-Dec-23	962	9.5	105	162	< 2	2.0					
18	CA10056-JAN24	5-Jan-24	915	9.4	112	171	< 2	4.0					
19	CA10115-JAN24	12-Jan-24	921	9.3	92	151	< 2	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06
20	CA10177-JAN24	19-Jan-24	932	9.3	166	256	< 2	4.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
21	CA10241-JAN24	26-Jan-24	915	9.3	100	162	< 2	2.0					
22	CA10014-FEB24	2-Feb-24	915	9.6	95	150	< 2	< 2					
23	CA10072-FEB24	9-Feb-24	946	9.6	92	146	< 2	3.0					
24	CA10129-FEB24	15-Feb-24	919	9.5	100	157	< 2	3.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06
25	CA10184-FEB24	23-Feb-24	914	9.5	97	155	< 2	2.0					

Appendix F:
HCT Results-Peridotite-01 CR20-78 100-110

Peridotite-01 CR20-78 100-110

Week/Event	Chromium VI	Mercury	Aluminum	Aluminum (0.2µm)	Silver	Arsenic	Boron	Barium	Beryllium	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium
	ug/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.3	< 0.00001	0.002	0.002	< 0.00005	< 0.0002	0.009	0.002	< 0.000007	< 0.00001	1.5	< 0.000003	0.00022	0.00043	0.0003	< 0.007	0.85
1	0.2	0.00001	0.002	0.002	< 0.00005	0.0002	0.008	0.0021	< 0.000007	< 0.00001	0.83	< 0.000003	0.00022	0.00026	< 0.0002	< 0.007	0.6
2	< 0.2	< 0.00001	0.063	0.013	< 0.00005	0.014	0.004	0.0026	< 0.000007	< 0.00001	5.5	< 0.000003	0.00018	0.00019	0.0003	< 0.007	0.86
3	< 0.2	< 0.00001	0.002	0.001	< 0.00005	< 0.0002	0.006	0.00064	< 0.000007	< 0.00001	0.5	< 0.000003	0.00013	< 0.00008	< 0.0002	< 0.007	0.14
4	< 0.2	< 0.00001	0.003	< 0.001	< 0.00005	< 0.0002	0.006	0.00049	< 0.000007	< 0.00001	0.72	< 0.000003	0.00018	< 0.00008	0.0002	< 0.007	0.13
5	0.2	< 0.00001	0.003	0.002	< 0.00005	< 0.0002	0.006	0.00051	< 0.000007	< 0.00001	0.6	0.000005	0.00019	< 0.00008	0.001	< 0.007	0.14
6	0.2	< 0.00001	0.002	< 0.001	< 0.00005	< 0.0002	0.006	0.0005	< 0.000007	< 0.00001	0.57	< 0.000003	0.00017	< 0.00008	0.0009	< 0.007	0.076
7	< 0.2	< 0.00001	0.002	< 0.001	< 0.00005	< 0.0002	0.005	0.00042	< 0.000007	< 0.00001	0.45	< 0.000003	0.00023	0.00011	0.0012	< 0.007	0.06
8	< 0.2	< 0.00001	0.004	0.001	< 0.00005	< 0.0002	0.004	0.00037	< 0.000007	< 0.00001	0.41	< 0.000003	0.00016	0.00008	< 0.0002	< 0.007	0.091
9																	
10																	
11																	
12	< 0.2	< 0.00001	0.002	< 0.001	< 0.00005	0.0019	0.011	0.00058	< 0.000007	< 0.00001	0.32	< 0.000003	0.0002	< 0.00008	< 0.0002	< 0.007	0.057
13																	
14																	
15																	
16	< 0.2	< 0.00001	0.001	0.003	< 0.00005	< 0.0002	0.005	0.00032	< 0.000007	< 0.00001	0.32	< 0.000003	0.00023	0.00089	< 0.0002	0.055	0.056
17																	
18																	
19	< 0.2	< 0.00001	0.002	< 0.001	< 0.00005	< 0.0002	0.005	0.00029	< 0.000007	< 0.00001	0.32	< 0.000003	0.00019	< 0.00008	< 0.0002	< 0.007	0.045
20	1.0	< 0.00001	0.005	< 0.001	< 0.00005	< 0.0002	0.012	0.00074	< 0.000007	< 0.00001	0.64	< 0.000003	0.00048	< 0.00008	< 0.0002	< 0.007	0.067
21																	
22																	
23																	
24	0.2	0.00006	0.002	0.001	< 0.00005	< 0.0002	0.006	0.00036	< 0.000007	< 0.00001	0.36	< 0.000003	0.00022	< 0.00008	< 0.001	< 0.007	0.043
25																	

Appendix F:
HCT Results-Peridotite-01 CR20-78 100-110

Peridotite-01 CR20-78 100-110

Week/Event	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.0002	30	0.00033	0.00012	0.55	0.0012	< 0.00009	< 0.0009	0.00006	0.00071	0.0013	< 0.00007	< 0.000005	0.00069	0.00005	0.00003	< 0.00002
1	0.0002	42	0.00012	0.00018	0.62	0.0014	< 0.00009	< 0.0009	0.0001	0.00022	0.00056	< 0.00007	< 0.000005	0.0014	0.00003	0.00009	< 0.00002
2	0.0003	0.76	0.0046	0.0022	3.1	0.0003	< 0.00009	0.0025	0.00019	0.00015	0.025	0.00014	< 0.000005	0.0019	0.0013	0.00011	< 0.00002
3	< 0.0001	25	0.00033	0.00019	0.1	0.0011	< 0.00009	< 0.0009	0.00008	0.0001	0.00026	< 0.00007	< 0.000005	0.000022	0.00003	0.00006	< 0.00002
4	< 0.0001	24	0.00023	0.00008	0.06	0.0015	< 0.00009	< 0.0009	0.00009	0.00007	0.00024	< 0.00007	< 0.000005	0.00043	0.00002	0.00003	< 0.00002
5	< 0.0001	27	0.00027	0.00013	0.06	0.0014	< 0.00009	< 0.0009	0.00009	0.00006	0.0002	< 0.00007	< 0.000005	0.00066	0.00002	0.00005	< 0.00002
6	< 0.0001	28	0.00033	0.00017	0.05	0.0014	< 0.00009	< 0.0009	0.00009	< 0.00006	0.00017	< 0.00007	< 0.000005	0.00014	0.00004	0.00024	< 0.00002
7	< 0.0001	25	0.00048	0.00007	0.03	0.0021	< 0.00009	< 0.0009	0.00007	< 0.00006	0.00016	< 0.00007	< 0.000005	0.0055	0.00004	0.00003	< 0.00002
8	< 0.0001	25	0.00032	0.00008	0.06	0.0011	< 0.00009	< 0.0009	0.00007	< 0.00006	0.00022	< 0.00007	< 0.000005	0.00058	0.00002	0.00004	< 0.00002
9																	
10																	
11																	
12	0.0004	25	0.00074	0.00039	0.04	0.0014	< 0.00009	< 0.0009	0.00008	< 0.00006	0.00043	< 0.00007	< 0.000005	0.00034	0.00002	0.00003	< 0.00002
13																	
14																	
15																	
16	< 0.0001	28	0.0011	0.0018	0.02	0.0013	< 0.00009	< 0.0009	0.0001	< 0.00006	0.00016	< 0.00007	< 0.000005	0.00087	0.00003	0.00002	< 0.00002
17																	
18																	
19	< 0.0001	22	0.00019	0.0019	0.03	0.0013	< 0.00009	< 0.0009	0.00009	< 0.00006	0.00012	< 0.00007	< 0.000005	0.0011	0.00001	0.00002	< 0.00002
20	< 0.0001	48	0.00014	0.00027	< 0.01	0.0041	< 0.00009	< 0.0009	0.00013	< 0.00006	0.00037	< 0.00007	< 0.000005	0.00079	0.00002	0.00004	< 0.00002
21																	
22																	
23																	
24	< 0.0001	24	0.00015	< 0.0004	0.02	0.0013	< 0.00009	< 0.0009	0.00008	< 0.00006	0.00016	< 0.0001	< 0.000005	0.0077	0.00002	< 0.0002	< 0.00002
25																	

Appendix F:
HCT Results-Peridotite-01 CR20-78 100-110

Peridotite-01 CR20-78 100-110

Week/Event	Zinc
	mg/L
0	< 0.002
1	< 0.002
2	< 0.002
3	< 0.002
4	< 0.002
5	< 0.002
6	< 0.002
7	< 0.002
8	< 0.002
9	
10	
11	
12	< 0.002
13	
14	
15	
16	< 0.002
17	
18	
19	< 0.002
20	< 0.002
21	
22	
23	
24	< 0.002
25	

Appendix F:
HCT Results-CANA-13

CANA-13

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI	Mercury
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L
0	CA10034-APR22	5-Apr-22	1000	497	9.7	< 2	108	364	67	36	0.3	0.25	0.09	< 0.06	11	0.00002
1	CA10056-APR22	12-Apr-22	1000	968	9.7	< 2	47	140	18	8.0	< 0.3	0.05	< 0.06	< 0.06	2.5	< 0.00001
2	CA10094-APR22	19-Apr-22	1000	923	9.3	< 2	31	98	13	3.0	< 0.3	< 0.03	< 0.06	< 0.06	1.0	< 0.00001
2	CA14375-APR22	19-Apr-22							12							
3	CA10135-APR22	26-Apr-22	1000	994	9.3	< 2	44	120	16	4.0	< 0.3	< 0.03	< 0.06	< 0.06	1.6	< 0.00001
4	CA10019-MAY22	3-May-22	1000	972	9.3	< 2	48	131	18	4.0	< 0.3	< 0.03	< 0.06	< 0.06	1.5	< 0.00001
5	CA10061-MAY22	10-May-22	1000	984	9.8	< 2	52	143	20	4.0	< 0.3	< 0.03	< 0.06	< 0.06	1.4	< 0.00001
6	CA10103-MAY22	17-May-22	1000	992	9.7	< 2	65	174	27	4.0	< 0.3	< 0.03	< 0.06	< 0.06		< 0.00001
7	CA10148-MAY22	24-May-22	1000	924	9.7	< 2	69	173	29	4.0	< 0.3	< 0.03	< 0.06	< 0.06		< 0.00001
8	CA10196-MAY22	31-May-22	1000	975	9.7	< 2	99	236	30	5.0	< 0.3	< 0.03	< 0.06	< 0.06		< 0.00001
9	CA10040-JUN22	7-Jun-22	1000	997	9.7	< 2	117	287	40							
10	CA10086-JUN22	14-Jun-22	1000	935	9.4	< 2	138	315	45							
11	CA10128-JUN22	21-Jun-22	1000	1012	9.7	< 2	126	297	44							
12	CA10175-JUN22	28-Jun-22	1000	955	9.9	< 2	136	258	34	3.0	< 0.3	< 0.03	< 0.06	< 0.06	0.3	< 0.00001
13	CA10017-JUL22	5-Jul-22	1000	950	9.7	< 2	116	267	38							
14	CA10061-JUL22	12-Jul-22	1000	1005	9.7	< 2	120	292	51							
15	CA10105-JUL22	19-Jul-22	1000	917	9.8	< 2	117	269	50							
16	CA10149-JUL22	26-Jul-22	1000	983	9.6	< 2	114	278	48	3.0	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2	< 0.00001
17	CA10016-AUG22	2-Aug-22	1000	912	9.8	< 2	113	263	42							
18	CA10060-AUG22	9-Aug-22	1000	960	9.5	< 2	111	270	40							
19	CA10104-AUG22	16-Aug-22	1000	950	9.6	< 2	110	255	41							
20	CA10148-AUG22	23-Aug-22	1000	938	9.6	< 2	110	242	34	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2	< 0.00001
21	CA10196-AUG22	30-Aug-22	1000	963	9.6	< 2	100	226	31							
22	CA10019-SEP22	6-Sep-22	1000	910	9.7	< 2	96	223	29							
23	CA10064-SEP22	13-Sep-22	1000	955	9.3	< 2	152	409	57							
24	CA10107-SEP22	20-Sep-22	1000	847	9.5	< 2	128	278	38	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.3	< 0.00001
25	CA10153-SEP22	27-Sep-22	1000	958	9.6	< 2	103	217	36							
26	CA10015-OCT22	04-Oct-22	1000	941	9.6	< 2	103	246	35							
27	CA10059-OCT22	11-Oct-22	1000	949	9.6	< 2	100	227	32							
28	CA10103-OCT22	18-Oct-22	1000	940	9.6	< 2	99	219	29	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.4	< 0.00001
29	CA10145-OCT22	25-Oct-22	1000	902	9.6	< 2	103	232	31							
30	CA10010-NOV22	01-Nov-22	1000	934	9.3	< 2	109	191	29							
31	CA10053-NOV22	08-Nov-22	1000	910	9.5	< 2	93	210	29							
32	CA10096-NOV22	15-Nov-22	1000	908	9.4	< 2	97	212	27	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.6	< 0.00001
33	CA10137-NOV22	22-Nov-22	1000	896	9.6	< 2	93	196	25							
34	CA10179-NOV22	29-Nov-22	1000	927	9.6	< 2	95	193	31							
35	CA10012-DEC22	06-Dec-22	1000	941	9.5	< 2	90	184	26							
36	CA10056-DEC22	13-Dec-22	1000	962	9.6	< 2	91	177	30	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.7	< 0.00001
37	CA10101-DEC22	20-Dec-22	1000	926	9.6	< 2	94	178	24							
38	CA10219-DEC22	27-Dec-22	1000	838	9.5	< 2	91	217	25							
39	CA10007-JAN23	03-Jan-23	1000	945	9.4	< 2	101	194	28							
40	CA10052-JAN23	10-Jan-23	1000	887	9.5	< 2	103	228	31	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.8	< 0.00001
41	CA10100-JAN23	17-Jan-23	1000	984	9.6	< 2	108	208	27							
42	CA10148-JAN23	24-Jan-23	1000	921	9.5	< 2	107	225	27							
43	CA10195-JAN23	31-Jan-23	1000	829	9.7	< 2	120	252	31							
44	CA10035-FEB23	07-Feb-23	1000	990	9.6	< 2	113	243	28	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.1	< 0.00001

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Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI	Mercury
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L
45	CA10081-FEB23	14-Feb-23	1000	966	9.5	< 2	125	253	32							
46	CA10128-FEB23	21-Feb-23	1000	970	9.4	< 2	114	218	23							
47	CA10177-FEB23	28-Feb-23	1000	952	9.5	< 2	124	210	29							
48	CA10034-MAR23	07-Mar-23	1000	1023	9.5	< 2	120	224	27	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.7	< 0.00001
49	CA10081-MAR23	14-Mar-23	1000	1004	9.4	< 2	119	230	26							
50	CA10129-MAR23	21-Mar-23	1000	1042	9.4	< 2	109	222	20							
51	CA10176-MAR23	28-Mar-23	1000	994	9.4	< 2	109	225	25							
52	CA10008-APR23	04-Apr-23	1000	984	9.4	< 2	104	219	22	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.2	< 0.00001
53	CA10057-APR23	11-Apr-23	1000	986	9.4	< 2	123	201	26							
54	CA10106-APR23	18-Apr-23	1000	932	9.5	< 2	97	197	21							
55	CA10155-APR23	25-Apr-23	1000	958	9.4	< 2	111	225	23							
56	CA10008-MAY23	02-May-23	1000	945	9.3	< 2	117	228	22	2.0	< 0.3	< 0.03	< 0.06	< 0.06	1.7	< 0.00001
57	CA10060-MAY23	09-May-23	1000	951	9.4	< 2	114	208	21							
58	CA10111-MAY23	16-May-23	1000	937	9.3	< 2	129	247	21							
59	CA10163-MAY23	23-May-23	1000	983	9.3	< 2	125	244	20							
60	CA10218-MAY23	30-May-23	1000	958	9.2	< 2	120	216	20	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.0	0.00001
61	CA10020-JUN23	06-Jun-23	1000	969	9.4	< 2	109	225	20							
62	CA10073-JUN23	13-Jun-23	1000	959	9.3	< 2	130	229	22							
63	CA10125-JUN23	20-Jun-23	1000	974	9.4	< 2	101	210	17							
64	CA10175-JUN23	27-Jun-23	1000	969	9.3	< 2	124	253	24	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.2	< 0.00001
65	CA10008-JUL23	04-Jul-23	1000	960	9.5	< 2	118	233	20							
66	CA10060-JUL23	11-Jul-23	1000	964	9.4	< 2	117	237	20							
67	CA10113-JUL23	18-Jul-23	1000	914	9.4	< 2	116	201	21							
68	CA10164-JUL23	25-Jul-23	1000	917	9.2	< 2	104	190	17	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.1	< 0.00001
69	CA10008-AUG23	01-Aug-23	1000	899	9.3	< 2	106	213	17							
70	CA10062-AUG23	08-Aug-23	1000	920	9.4	< 2	111	234	20							
71	CA10117-AUG23	15-Aug-23	1000	911	9.5	< 2	141	278	25							
72	CA10172-AUG23	22-Aug-23	1000	937	9.3	< 2	113	234	18	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.4	< 0.00001
73	CA10226-AUG23	29-Aug-23	1000	940	9.4	< 2	135	258	23							
74	CA10008-SEP23	05-Sep-23	1000	924	9.4	< 2	108	222	18							
75	CA10064-SEP23	12-Sep-23	1000	934	9.3	< 2	119	210	20							
76	CA10122-SEP23	19-Sep-23	1000	914	9.4	< 2	109	197	20	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.7	< 0.00001
77	CA10180-SEP23	26-Sep-23	1000	943	9.2	< 2	115	228	15							
78	CA10006-OCT23	03-Oct-23	1000	941	9.4	< 2	110	224	18							
79	CA10062-OCT23	10-Oct-23	1000	971	9.5	< 2	114	235	21							
80	CA10121-OCT23	17-Oct-23	1000	936	9.3	< 2	115	211	20	< 1	< 0.3	< 0.03	< 0.06	< 0.06	3.2	< 0.00001
81	CA10177-OCT23	24-Oct-23	1000	945	9.2	< 2	111	199	20							
82	CA10234-OCT23	31-Oct-23	1000	954	9.4	< 2	132	250	19							
83	CA10036-NOV23	07-Nov-23	1000	942	9.3	< 2	112	186	14							
84	CA10092-NOV23	14-Nov-23	1000	901	9.4	< 2	112	216	17	< 1	< 0.3	< 0.03	< 0.06	< 0.06	3.3	< 0.00001
85	CA10151-NOV23	21-Nov-23	1000	956	9.3	< 2	114	228	15							
86	CA10210-NOV23	28-Nov-23	1000	925	9.3	< 2	97	205	18							
87	CA10008-DEC23	05-Dec-23	1000	913	9.1	< 2	100	186	15							
88	CA10070-DEC23	12-Dec-23	1000	935	9.2	< 2	104	215	16	< 1	< 0.3	< 0.03	< 0.06	< 0.06	3.5	< 0.00001
89	CA10130-DEC23	19-Dec-23	1000	924	9.2	< 2	118	236	21							
90	CA10190-DEC23	26-Dec-23	1000	909	9.3	< 2	99	181	15							

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Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI	Mercury
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L
91	CA10004-JAN24	02-Jan-24	1000	945	9.1	< 2	98	200	15							
92	CA10066-JAN24	09-Jan-24	1000	918	9.2	< 2	100	210	16	< 1	< 0.3	< 0.03	< 0.06	< 0.06	3.6	< 0.00001
93	CA10124-JAN24	16-Jan-24	1000	897	9.2	< 2	110	200	18							
94	CA10186-JAN24	23-Jan-24	1000	923	9.1	< 2	90	199	13							
95	CA10248-JAN24	30-Jan-24	1000	908	9.3	< 2	92	191	14							
96	CA10022-FEB24	06-Feb-24	1000	930	9.1	< 2	115	234	18	< 1	< 0.3	< 0.03	< 0.06	< 0.06	4.9	< 0.00001
97	CA10080-FEB24	13-Feb-24	1000	926	9.1	< 2	108	229	18							
98	CA10134-FEB24	20-Feb-24	1000	916	9.3	< 2	111	215	19							
99	CA10188-FEB24	27-Feb-24	1000	946	9.4	< 2	115	225	19							

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Week/Event	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.002	< 0.00005	0.0002	0.002	0.000019	0.033	< 0.00001	1.1	< 0.000003	0.000066	0.011	0.0004	< 0.007	0.89	0.0004	39	0.00016	0.0014	5.2
1	0.004	< 0.00005	< 0.0002	0.00059	< 0.000007	0.007	< 0.00001	0.26	0.000004	0.000046	0.0024	0.0002	< 0.007	0.21	< 0.0001	12	0.0003	0.0006	0.87
2	0.001	< 0.00005	0.0003	0.00047	< 0.000007	0.009	< 0.00001	0.3	0.000004	0.000007	0.0018	< 0.0002	0.01	0.13	0.0001	9.1	0.0001	0.00029	0.45
2																			
3	< 0.001	< 0.00005	< 0.0002	0.00051	< 0.000007	0.012	< 0.00001	0.31	< 0.000003	0.000005	0.0016	< 0.0002	< 0.007	0.14	0.0001	14	0.00011	0.001	0.48
4	0.002	< 0.00005	< 0.0002	0.00041	< 0.000007	0.008	< 0.00001	0.32	< 0.000003	0.000008	0.0016	< 0.0002	< 0.007	0.14	< 0.0001	16	0.0001	0.00043	0.6
5	0.002	< 0.00005	< 0.0002	0.00045	< 0.000007	0.009	< 0.00001	0.26	< 0.000003	0.000016	0.0017	< 0.0002	< 0.007	0.15	< 0.0001	18	0.00005	0.00029	0.57
6	0.002	< 0.00005	< 0.0002	0.00034	0.000012	0.01	< 0.00001	0.2	0.000005	0.000036	0.0017	< 0.0002	< 0.007	0.15	0.0002	24	0.00025	0.0088	0.63
7	< 0.001	< 0.00005	0.0006	0.00049	< 0.000007	0.014	< 0.00001	0.24	< 0.000003	0.000019	0.0015	< 0.0002	< 0.007	0.15	0.0001	21	0.00032	0.00044	0.58
8	0.001	< 0.00005	< 0.0002	0.0014	< 0.000007	0.013	< 0.00001	0.36	< 0.000003	0.000026	0.0013	0.0005	0.076	0.19	0.0002	33	0.00062	0.00057	1.0
9																			
10																			
11																			
12	0.03	< 0.00005	< 0.0002	0.00053	< 0.000007	0.015	< 0.00001	0.21	< 0.000003	0.000018	0.00026	< 0.0002	< 0.007	0.16	< 0.0001	37	0.00026	0.00081	0.55
13																			
14																			
15																			
16	0.015	< 0.00005	< 0.0002	0.00048	< 0.000007	0.019	< 0.00001	0.25	< 0.000003	0.000053	0.00026	0.0007	0.026	0.16	< 0.0001	43	0.00078	0.00067	0.51
17																			
18																			
19																			
20	< 0.001	< 0.00005	< 0.0002	0.00056	< 0.000007	0.018	< 0.00001	0.23	0.000005	0.000027	0.00023	< 0.0002	< 0.007	0.15	0.0001	35	0.00055	0.00036	0.28
21																			
22																			
23																			
24	0.002	< 0.00005	< 0.0002	0.0011	< 0.000007	0.018	< 0.00001	1.1	< 0.000003	0.00002	0.00027	0.0009	< 0.007	0.11	< 0.0001	35	0.00053	0.0068	0.93
25																			
26																			
27																			
28	0.001	< 0.00005	< 0.0002	0.00033	< 0.000007	0.017	< 0.00001	0.28	< 0.000003	0.000022	0.00036	< 0.0002	< 0.007	0.066	< 0.0001	28	0.00022	0.00025	0.26
29																			
30																			
31																			
32	0.001	< 0.00005	< 0.0002	0.00027	< 0.000007	0.016	< 0.00001	0.24	< 0.000003	0.000017	0.0006	< 0.0002	< 0.007	0.064	< 0.0001	28	0.00024	0.00075	0.16
33																			
34																			
35																			
36	0.003	< 0.00005	0.0012	0.0003	< 0.000007	0.021	< 0.00001	0.28	< 0.000003	0.000038	0.00098	0.0002	< 0.007	0.094	< 0.0001	35	0.00015	0.00053	0.17
37																			
38																			
39																			
40	0.001	< 0.00005	0.0004	0.00027	< 0.000007	0.019	< 0.00001	0.27	< 0.000003	0.000028	0.0011	< 0.0002	< 0.007	0.064	< 0.0001	34	0.00026	0.00092	0.13
41																			
42																			
43																			
44	0.006	< 0.00005	< 0.0002	0.0083	< 0.000007	0.021	< 0.00001	0.3	< 0.000003	0.000067	0.0014	< 0.0002	< 0.007	0.068	< 0.0001	31	0.0029	0.00044	0.12

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Week/Event	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
45																			
46																			
47																			
48	0.001	< 0.00005	< 0.0002	0.00021	< 0.000007	0.019	< 0.00001	0.26	< 0.000003	0.000024	0.0014	< 0.0002	< 0.007	0.05	< 0.0001	35	0.00053	0.00075	0.12
49																			
50																			
51																			
52	0.013	< 0.00005	< 0.0002	0.00008	< 0.000007	0.015	< 0.00001	0.23	0.000005	0.000034	0.0015	< 0.0002	< 0.007	0.017	< 0.0001	31	0.0002	0.0021	0.04
53																			
54																			
55																			
56	0.002	< 0.00005	0.0004	0.00012	< 0.000007	0.016	< 0.00001	0.21	< 0.000003	0.000046	0.0016	< 0.0002	< 0.007	0.028	< 0.0001	31	0.00041	0.001	0.05
57																			
58																			
59																			
60	< 0.001	< 0.00005	< 0.0002	0.00011	< 0.000007	0.016	< 0.00001	0.23	< 0.000003	0.000054	0.0022	< 0.0002	< 0.007	0.041	< 0.0001	36	0.00053	0.00033	0.07
61																			
62																			
63																			
64	< 0.001	< 0.00005	< 0.0002	0.00072	< 0.000007	0.028	< 0.00001	0.81	0.000003	0.00007	0.0027	< 0.0002	0.034	0.073	0.0002	39	0.0049	0.0012	0.74
65																			
66																			
67																			
68	0.003	< 0.00005	< 0.0002	0.00015	< 0.000007	0.014	< 0.00001	0.2	< 0.000003	0.000035	0.0023	< 0.0002	< 0.007	0.03	< 0.0001	33	0.00037	0.00031	0.09
69																			
70																			
71																			
72	0.001	< 0.00005	< 0.0002	0.00014	< 0.000007	0.016	< 0.00001	0.23	< 0.000003	0.000046	0.0026	< 0.0002	< 0.007	0.039	< 0.0001	33	0.00028	0.00045	0.03
73																			
74																			
75																			
76	< 0.001	< 0.00005	< 0.0002	0.0001	< 0.000007	0.018	< 0.00001	0.22	< 0.000003	0.000031	0.0029	< 0.0002	< 0.007	0.023	< 0.0001	31	0.00009	0.00053	0.02
77																			
78																			
79																			
80	0.002	< 0.00005	< 0.0002	0.00019	< 0.000007	0.017	< 0.00001	0.24	< 0.000003	0.00004	0.0032	< 0.0002	0.011	0.036	< 0.0001	35	0.00026	0.00072	0.07
81																			
82																			
83																			
84	< 0.001	< 0.00005	< 0.0002	0.00014	< 0.000007	0.017	< 0.00001	0.25	< 0.000003	0.000034	0.0032	< 0.0002	< 0.007	0.014	< 0.0001	28	0.00036	0.00022	0.02
85																			
86																			
87																			
88	< 0.001	< 0.00005	< 0.0002	0.00018	< 0.000007	0.016	< 0.00001	0.24	< 0.000003	0.000044	0.0036	< 0.0002	< 0.007	0.017	< 0.0001	30	0.00057	0.0013	0.03
89																			
90																			

CANA-13

Week/Event	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
91																			
92	< 0.001	< 0.00005	< 0.0002	0.00022	< 0.000007	0.019	< 0.00001	0.24	< 0.000003	0.000038	0.0039	0.0003	< 0.007	0.027	< 0.0001	30	0.00038	0.00014	0.04
93																			
94																			
95																			
96	< 0.001	< 0.00005	< 0.0002	0.00019	< 0.000007	0.018	< 0.00001	0.27	< 0.000003	0.000054	0.0052	< 0.002	< 0.007	0.022	< 0.0001	34	0.00034	0.0005	0.02
97																			
98																			
99																			

Appendix F:
HCT Results-CANA-13

CANA-13

Week/Event	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.001	< 0.00009	< 0.0009	0.00034	0.0051	0.0039	0.00006	0.000013	0.000013	0.00004	0.00007	< 0.00002	< 0.002
1	0.0012	< 0.00009	< 0.0009	0.00008	0.00058	0.00061	< 0.00005	< 0.000005	< 0.000002	< 0.00001	0.00002	< 0.00002	< 0.002
2	0.0002	< 0.00009	< 0.0009	0.00004	0.00015	0.00058	< 0.00005	< 0.000005	0.00014	< 0.00001	< 0.00002	< 0.00002	< 0.002
2													
3	0.0001	< 0.00009	< 0.0009	0.00006	0.00026	0.0005	< 0.00005	< 0.000005	0.00016	0.00001	< 0.00002	< 0.00002	< 0.002
4	0.0002	< 0.00009	< 0.0009	0.00008	0.00012	0.00061	< 0.00005	< 0.000005	0.000029	0.00001	< 0.00002	< 0.00002	< 0.002
5	0.0003	< 0.00009	< 0.0009	0.00011	0.00015	0.00048	< 0.00005	< 0.000005	0.000062	0.00002	< 0.00002	< 0.00002	< 0.002
6	0.0011	< 0.00009	< 0.0009	0.00008	0.0001	0.00047	< 0.00005	< 0.000005	0.00022	< 0.00001	0.00006	< 0.00002	< 0.002
7	0.0005	< 0.00009	< 0.0009	0.0001	0.00016	0.00054	< 0.00005	< 0.000005	0.00085	0.00001	0.00011	< 0.00002	< 0.002
8	0.0005	< 0.00009	< 0.0009	0.00011	0.0015	0.0012	< 0.00005	< 0.000005	0.00031	0.00002	0.00004	< 0.00002	< 0.002
9													
10													
11													
12	0.0003	< 0.00009	< 0.0009	0.00013	0.00012	0.00043	< 0.00005	< 0.000005	0.003	0.00002	0.00003	< 0.00002	< 0.002
13													
14													
15													
16	0.0019	< 0.00009	< 0.0009	0.00025	0.00013	0.00056	0.00009	< 0.000005	0.0001	0.00004	0.00006	< 0.00002	< 0.002
17													
18													
19													
20	0.0014	< 0.00009	< 0.0009	0.00028	0.00006	0.00059	< 0.00005	< 0.000005	0.0012	0.00013	0.00004	< 0.00002	< 0.002
21													
22													
23													
24	0.0005	< 0.00009	< 0.0009	0.0003	< 0.00006	0.0032	< 0.00005	< 0.000005	0.00087	< 0.00001	0.00006	< 0.00002	< 0.002
25													
26													
27													
28	0.0005	< 0.00009	< 0.0009	0.00035	< 0.00006	0.00066	< 0.00005	0.000005	0.00049	0.00001	0.00002	< 0.00002	< 0.002
29													
30													
31													
32	0.0005	< 0.00009	< 0.0009	0.00027	< 0.00006	0.0006	0.0001	< 0.000005	0.000053	< 0.00001	0.00004	< 0.00002	< 0.002
33													
34													
35													
36	0.0006	< 0.00009	< 0.0009	0.00036	< 0.00006	0.00062	< 0.00005	0.000006	0.00017	< 0.00001	0.00007	< 0.00002	< 0.002
37													
38													
39													
40	0.0007	< 0.00009	< 0.0009	0.00029	< 0.00006	0.0006	< 0.00005	< 0.000005	0.0011	0.00003	0.00004	< 0.00002	< 0.002
41													
42													
43													
44	0.0007	< 0.00009	< 0.0009	0.00044	< 0.00006	0.00074	0.00023	0.000005	0.000002	0.00007	0.00009	< 0.00002	< 0.002

Appendix F:
HCT Results-CANA-13

CANA-13

Week/Event	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
45													
46													
47													
48	0.0007	< 0.00009	< 0.0009	0.00041	< 0.00006	0.0005	< 0.00005	< 0.000005	0.00016	0.00001	0.00003	< 0.00002	< 0.002
49													
50													
51													
52	0.0006	< 0.00009	< 0.0009	0.00056	< 0.00006	0.0004	< 0.00005	< 0.000005	0.000012	< 0.00001	< 0.00002	< 0.00002	< 0.002
53													
54													
55													
56	0.0007	< 0.00009	< 0.0009	0.00033	< 0.00006	0.00029	< 0.00005	< 0.000005	0.00026	0.00002	0.00003	< 0.00002	< 0.002
57													
58													
59													
60	0.0046	< 0.00009	< 0.0009	0.0003	< 0.00006	0.00045	< 0.00005	< 0.000005	0.000044	< 0.00001	0.00003	< 0.00002	< 0.002
61													
62													
63													
64	0.0009	< 0.00009	< 0.0009	0.00036	< 0.00006	0.0044	0.0011	0.000007	0.00052	0.00006	0.00006	0.00002	< 0.002
65													
66													
67													
68	0.0006	0.00021	< 0.0009	0.00024	< 0.00006	0.00045	< 0.00007	< 0.000005	0.00065	0.00002	< 0.00002	< 0.00002	< 0.002
69													
70													
71													
72	0.0006	< 0.00009	< 0.0009	0.00032	< 0.00006	0.00042	< 0.00007	0.000005	0.00083	0.00002	0.00003	< 0.00002	< 0.002
73													
74													
75													
76	0.0005	< 0.00009	< 0.0009	0.00028	< 0.00006	0.0004	< 0.00007	0.000008	0.00011	0.00002	< 0.00002	< 0.00002	< 0.002
77													
78													
79													
80	0.0007	< 0.00009	< 0.0009	0.00037	< 0.00006	0.00056	< 0.00007	< 0.000005	0.00067	0.00002	0.00002	< 0.00002	< 0.002
81													
82													
83													
84	0.0006	< 0.00009	< 0.0009	0.00024	< 0.00006	0.00044	< 0.00007	< 0.000005	0.0013	0.00002	0.00003	< 0.00002	< 0.002
85													
86													
87													
88	0.0007	< 0.00009	< 0.0009	0.00032	< 0.00006	0.00047	< 0.00007	0.000006	0.00022	0.00002	0.00003	< 0.00002	< 0.002
89													
90													

CANA-13

Week/Event	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
91													
92	0.0008	< 0.00009	< 0.0009	0.00029	< 0.00006	0.00061	< 0.00007	< 0.000005	0.0029	0.00002	< 0.00002	< 0.00002	< 0.002
93													
94													
95													
96	0.0008	< 0.00009	< 0.0009	0.00035	< 0.00006	0.00062	< 0.0001	< 0.000005	0.0024	0.00002	< 0.0002	< 0.00002	< 0.002
97													
98													
99													

CDS-003

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
0	CA10034-APR22	5-Apr-22	1000	481	9.5	< 2	73	221	35	19	< 0.3	< 0.03	< 0.06	< 0.06	0.7
1	CA10056-APR22	12-Apr-22	1000	975	9.4	< 2	28	107	19	7.0	< 0.3	< 0.03	< 0.06	< 0.06	1.5
2	CA10094-APR22	19-Apr-22	1000	952	9.1	< 2	37	120	22	4.0	< 0.3	< 0.03	< 0.06	< 0.06	0.7
3	CA10135-APR22	26-Apr-22	1000	1023	9.2	< 2	43	121	21	4.0	< 0.3	< 0.03	< 0.06	< 0.06	1.3
4	CA10019-MAY22	3-May-22	1000	1034	8.9	< 2	36	116	21	3.0	< 0.3	< 0.03	< 0.06	< 0.06	1.6
5	CA10061-MAY22	10-May-22	1000	973	9.5	< 2	39	118	20	3.0	< 0.3	< 0.03	< 0.06	< 0.06	1.4
6	CA10103-MAY22	17-May-22	1000	1004	9.4	< 2	53	150	27	3.0	< 0.3	< 0.03	< 0.06	< 0.06	
7	CA10148-MAY22	24-May-22	1000	970	9.6	< 2	62	151	26	3.0	< 0.3	< 0.03	< 0.06	< 0.06	
8	CA10196-MAY22	31-May-22	1000	957	9.6	< 2	85	203	23	1.0	< 0.3	< 0.03	< 0.06	< 0.06	
9	CA10040-JUN22	7-Jun-22	1000	970	9.6	< 2	98	256	38						
10	CA10086-JUN22	14-Jun-22	1000	891	9.5	< 2	143	333	54						
11	CA10128-JUN22	21-Jun-22	1000	978	9.7	< 2	119	284	45						
12	CA10175-JUN22	28-Jun-22	1000	956	9.8	< 2	123	296	43	2.0	< 0.3	< 0.03	< 0.06	< 0.06	1.4
13	CA10017-JUL22	5-Jul-22	1000	959	9.7	< 2	103	248	39						
14	CA10061-JUL22	12-Jul-22	1000	972	9.7	< 2	118	270	44						
15	CA10105-JUL22	19-Jul-22	1000	957	9.8	< 2	112	253	41						
16	CA10149-JUL22	26-Jul-22	1000	1008	9.7	< 2	107	225	40	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.8
17	CA10016-AUG22	2-Aug-22	1000	927	9.8	< 2	106	257	39						
18	CA10060-AUG22	9-Aug-22	1000	971	9.7	< 2	97	245	33						
19	CA10104-AUG22	16-Aug-22	1000	943	9.7	< 2	92	221	29						
20	CA10148-AUG22	23-Aug-22	1000	962	9.9	< 2	85	217	28	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.5
21	CA10196-AUG22	30-Aug-22	1000	964	9.6	< 2	95	215	27						
22	CA10019-SEP22	6-Sep-22	1000	927	9.5	< 2	94	215	27						
23	CA10064-SEP22	13-Sep-22	1000	876	9.5	< 2	209	499	68						
24	CA10107-SEP22	20-Sep-22	1000	844	9.5	< 2	122	267	33	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.4
25	CA10153-SEP22	27-Sep-22	1000	931	9.6	< 2	110	213	27						
26	CA10015-OCT22	04-Oct-22	1000	931	9.6	< 2	116	250	29						
27	CA10059-OCT22	11-Oct-22	1000	929	9.7	< 2	117	242	28						
28	CA10103-OCT22	18-Oct-22	1000	929	9.7	< 2	125	254	28	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.5
29	CA10145-OCT22	25-Oct-22	1000	915	9.5	< 2	122	254	27						
30	CA10010-NOV22	01-Nov-22	1000	923	9.6	< 2	130	210	25						
31	CA10053-NOV22	08-Nov-22	1000	932	9.6	< 2	112	223	22						
32	CA10096-NOV22	15-Nov-22	1000	923	9.5	< 2	111	230	22	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.5
33	CA10137-NOV22	22-Nov-22	1000	888	9.6	< 2	114	230	21						
34	CA10179-NOV22	29-Nov-22	1000	901	9.6	< 2	112	210	24						
35	CA10012-DEC22	06-Dec-22	1000	932	9.5	< 2	99	183	21						
36	CA10056-DEC22	13-Dec-22	1000	955	9.6	< 2	96	172	20	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.5
37	CA10101-DEC22	20-Dec-22	1000	936	9.7	< 2	113	192	17						
38	CA10219-DEC22	27-Dec-22	1000	899	9.6	< 2	123	258	19						

CDS-003

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
39	CA10007-JAN23	03-Jan-23	1000	961	9.5	< 2	114	198	18						
40	CA10052-JAN23	10-Jan-23	1000	874	9.6	< 2	143	269	24	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.7
41	CA10100-JAN23	17-Jan-23	1000	991	9.7	< 2	117	204	18						
42	CA10148-JAN23	24-Jan-23	1000	996	9.6	< 2	114	214	18						
43	CA10195-JAN23	31-Jan-23	1000	1001	9.8	< 2	115	211	13						
44	CA10035-FEB23	07-Feb-23	1000	1002	9.6	< 2	107	208	14	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.7
45	CA10081-FEB23	14-Feb-23	1000	989	9.6	< 2	119	219	20						
46	CA10128-FEB23	21-Feb-23	1000	990	9.5	< 2	105	174	12						
47	CA10177-FEB23	28-Feb-23	1000	997	9.6	< 2	102	168	17						
48	CA10034-MAR23	07-Mar-23	1000	1003	9.5	< 2	97	184	13	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.8
49	CA10081-MAR23	14-Mar-23	1000	998	9.5	< 2	109	196	14						
50	CA10129-MAR23	21-Mar-23	1000	1004	9.4	< 2	96	170	12						
51	CA10176-MAR23	28-Mar-23	1000	980	9.5	< 2	104	207	12						
52	CA10008-APR23	04-Apr-23	1000	979	9.4	< 2	101	165	12	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.6
53	CA10057-APR23	11-Apr-23	1000	986	9.4	< 2	110	208	11						
54	CA10106-APR23	18-Apr-23	1000	930	9.6	< 2	117	182	14						
55	CA10155-APR23	25-Apr-23	1000	949	9.5	< 2	122	221	12						
56	CA10008-MAY23	02-May-23	1000	964	9.4	< 2	110	216	11	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.8
57	CA10060-MAY23	09-May-23	1000	956	9.6	< 2	116	203	9.0						
58	CA10111-MAY23	16-May-23	1000	922	9.4	< 2	128	231	14						
59	CA10163-MAY23	23-May-23	1000	980	9.5	< 2	117	189	10						
60	CA10218-MAY23	30-May-23	1000	964	9.4	< 2	120	197	10	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 2.0
61	CA10020-JUN23	06-Jun-23	1000	960	9.5	< 2	106	201	9.0						
62	CA10073-JUN23	13-Jun-23	1000	947	9.4	< 2	123	204	10						
63	CA10125-JUN23	20-Jun-23	1000	968	9.6	< 2	96	163	7.0						
64	CA10175-JUN23	27-Jun-23	1000	987	9.4	< 2	107	202	8.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.7
65	CA10008-JUL23	04-Jul-23	1000	976	9.6	< 2	104	200	7.0						
66	CA10060-JUL23	11-Jul-23	1000	923	9.5	< 2	101	183	7.0						
67	CA10113-JUL23	18-Jul-23	1000	917	9.5	< 2	111	180	9.0						
68	CA10164-JUL23	25-Jul-23	1000	910	9.3	< 2	95	159	9.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.3
69	CA10008-AUG23	01-Aug-23	1000	904	9.4	< 2	107	193	7.0						
70	CA10062-AUG23	08-Aug-23	1000	909	9.4	< 2	107	201	7.0						
71	CA10117-AUG23	15-Aug-23	1000	940	9.6	< 2	114	201	8.0						
72	CA10172-AUG23	22-Aug-23	1000	928	9.4	< 2	106	201	8.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.0
73	CA10226-AUG23	29-Aug-23	1000	924	9.5	< 2	113	214	7.0						
74	CA10008-SEP23	05-Sep-23	1000	952	9.5	< 2	125	185	8.0						
75	CA10064-SEP23	12-Sep-23	1000	952	9.3	< 2	112	183	8.0						
76	CA10122-SEP23	19-Sep-23	1000	923	9.4	< 2	101	174	6.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.8
77	CA10180-SEP23	26-Sep-23	1000	939	9.3	< 2	102	189	5.0						

CDS-003

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L
78	CA10006-OCT23	03-Oct-23	1000	929	9.4	< 2	94	177	6.0						
79	CA10062-OCT23	10-Oct-23	1000	957	9.5	< 2	90	173	6.0						
80	CA10121-OCT23	17-Oct-23	1000	939	9.3	< 2	99	158	6.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.8
81	CA10177-OCT23	24-Oct-23	1000	941	9.2	< 2	106	164	7.0						
82	CA10234-OCT23	31-Oct-23	1000	944	9.5	< 2	103	195	5.0						
83	CA10036-NOV23	07-Nov-23	1000	935	9.4	< 2	156	265	8.0						
84	CA10092-NOV23	14-Nov-23	1000	889	9.5	< 2	129	220	8.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.1
85	CA10151-NOV23	21-Nov-23	1000	956	9.2	< 2	110	185	15						
86	CA10210-NOV23	28-Nov-23	1000	903	9.4	< 2	105	177	7.0						
87	CA10008-DEC23	05-Dec-23	1000	922	9.3	< 2	105	181	7.0						
88	CA10070-DEC23	12-Dec-23	1000	926	9.3	< 2	105	201	6.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.0
89	CA10130-DEC23	19-Dec-23	1000	900	9.3	< 2	129	231	7.0						
90	CA10190-DEC23	26-Dec-23	1000	902	9.4	< 2	117	191	8.0						
91	CA10004-JAN24	02-Jan-24	1000	945	9.3	< 2	105	194	8.0						
92	CA10066-JAN24	09-Jan-24	1000	896	9.3	< 2	131	227	6.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.0
93	CA10124-JAN24	16-Jan-24	1000	897	9.3	< 2	112	186	9.0						
94	CA10186-JAN24	23-Jan-24	1000	907	9.5	< 2	123	224	9.0						
95	CA10248-JAN24	30-Jan-24	1000	897	9.4	< 2	116	222	7.0						
96	CA10022-FEB24	06-Feb-24	1000	942	9.4	< 2	126	229	8.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.2
97	CA10080-FEB24	13-Feb-24	1000	920	9.2	< 2	115	221	6.0						
98	CA10134-FEB24	20-Feb-24	1000	933	9.3	< 2	111	203	6.0						
99	CA10188-FEB24	27-Feb-24	1000	948	9.4	< 2	120	208	5.0						

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Week/Event	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.00001	0.004	< 0.00005	< 0.0002	0.0033	0.000021	0.015	< 0.00001	1.5	0.000007	0.00011	0.00077	0.0011	0.011	0.6	0.0004	20	0.00042	0.0012	6.0
1	< 0.00001	0.003	< 0.00005	< 0.0002	0.0014	< 0.000007	0.02	< 0.00001	0.42	< 0.000003	0.00022	0.00098	0.0004	0.012	0.11	< 0.0001	9.7	0.00073	0.00044	1.2
2	< 0.00001	0.002	< 0.00005	< 0.0002	0.0013	< 0.000007	0.027	< 0.00001	0.37	< 0.000003	0.000032	0.0013	< 0.0002	< 0.007	0.098	< 0.0001	12	0.00032	0.00027	1.0
3	< 0.00001	0.001	< 0.00005	< 0.0002	0.0011	0.000015	0.026	< 0.00001	0.33	< 0.000003	0.000037	0.0014	< 0.0002	< 0.007	0.073	0.0001	13	0.00024	0.00047	0.73
4	< 0.00001	0.002	< 0.00005	< 0.0002	0.00098	< 0.000007	0.022	< 0.00001	0.28	< 0.000003	0.000055	0.0017	< 0.0002	< 0.007	0.075	< 0.0001	13	0.00094	0.00084	0.84
5	< 0.00001	0.003	< 0.00005	< 0.0002	0.0017	< 0.000007	0.021	< 0.00001	0.25	< 0.000003	0.000048	0.0013	< 0.0002	< 0.007	0.067	< 0.0001	15	0.00029	0.00025	0.59
6	< 0.00001	0.002	< 0.00005	0.0005	0.00093	0.000013	0.022	< 0.00001	0.23	< 0.000003	0.000084	0.0014	< 0.0002	< 0.007	0.068	0.0001	20	0.00051	0.00028	0.59
7	< 0.00001	0.001	< 0.00005	< 0.0002	0.0013	< 0.000007	0.023	< 0.00001	0.2	< 0.000003	0.000064	0.0016	< 0.0002	< 0.007	0.052	< 0.0001	18	0.00036	0.00046	0.45
8	< 0.00001	0.002	< 0.00005	< 0.0002	0.0012	< 0.000007	0.006	< 0.00001	0.28	< 0.000003	0.000019	0.0002	< 0.0002	0.04	0.064	0.0001	26	0.00047	0.00028	0.46
9																				
10																				
11																				
12	< 0.00001	0.003	< 0.00005	< 0.0002	0.00077	< 0.000007	0.033	< 0.00001	0.24	< 0.000003	0.000072	0.0015	< 0.0002	< 0.007	0.059	< 0.0001	40	0.00036	0.00035	0.4
13																				
14																				
15																				
16	< 0.00001	0.001	< 0.00005	< 0.0002	0.00071	< 0.000007	0.04	< 0.00001	0.2	< 0.000003	0.000097	0.0027	0.0003	0.2	0.054	< 0.0001	36	0.0012	0.0014	0.23
17																				
18																				
19																				
20	0.00001	0.001	< 0.00005	< 0.0002	0.00061	< 0.000007	0.033	< 0.00001	0.18	0.000024	0.000055	0.00015	< 0.0002	< 0.007	0.088	< 0.0001	30	0.00031	0.013	0.13
21																				
22																				
23																				
24	< 0.00001	0.003	< 0.00005	0.0002	0.0017	< 0.000007	0.039	< 0.00001	1.4	< 0.000003	0.00008	0.00041	0.0012	< 0.007	0.072	< 0.0001	33	0.00057	0.0042	0.96
25																				
26																				
27																				
28	< 0.00001	0.002	< 0.00005	0.0002	0.00064	< 0.000007	0.048	< 0.00001	0.35	< 0.000003	0.000075	0.00044	< 0.0002	< 0.007	0.032	< 0.0001	33	0.00025	0.00056	0.23
29																				
30																				
31																				
32	< 0.00001	0.002	< 0.00005	< 0.0002	0.00047	< 0.000007	0.044	< 0.00001	0.26	< 0.000003	0.000084	0.00059	< 0.0002	< 0.007	0.028	< 0.0001	31	0.00027	0.00038	0.1
33																				
34																				
35																				
36	< 0.00001	< 0.001	< 0.00005	0.0002	0.00069	< 0.000007	0.054	< 0.00001	0.26	< 0.000003	0.00011	0.00066	< 0.0002	< 0.007	0.042	< 0.0001	33	0.0002	0.0004	0.06
37																				
38																				

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Week/Event	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
39																				
40	< 0.00001	0.003	< 0.00005	0.0003	0.0004	< 0.000007	0.059	< 0.00001	0.36	< 0.000003	0.00011	0.0007	< 0.0002	< 0.007	0.033	< 0.0001	43	0.00037	0.00097	0.05
41																				
42																				
43																				
44	< 0.00001	0.007	< 0.00005	< 0.0002	0.0036	< 0.000007	0.053	< 0.00001	0.34	0.000008	0.000097	0.0009	< 0.0002	< 0.007	0.026	< 0.0001	27	0.00037	0.00022	0.08
45																				
46																				
47																				
48	< 0.00001	< 0.001	< 0.00005	< 0.0002	0.00026	< 0.000007	0.039	< 0.00001	0.21	< 0.000003	0.000071	0.00061	< 0.0002	< 0.007	0.017	< 0.0001	26	0.00017	0.00049	0.06
49																				
50																				
51																				
52	< 0.00001	0.001	< 0.00005	0.0004	0.00023	0.000095	0.042	< 0.00001	0.21	0.0001	0.000081	0.0013	< 0.0002	< 0.007	< 0.009	< 0.0001	27	0.00021	0.00024	< 0.01
53																				
54																				
55																				
56	< 0.00001	0.012	< 0.00005	< 0.0002	0.00023	< 0.000007	0.042	< 0.00001	0.2	< 0.000003	0.0001	0.00076	< 0.0002	< 0.007	0.011	< 0.0001	31	0.00056	0.00097	0.04
57																				
58																				
59																				
60	0.00002	< 0.001	< 0.00005	0.0011	0.00032	< 0.000007	0.036	< 0.00001	0.3	< 0.000003	0.00012	0.00082	< 0.0002	< 0.007	0.026	< 0.0001	33	0.0012	0.00047	0.07
61																				
62																				
63																				
64	< 0.00001	0.002	< 0.00005	0.0003	0.00026	< 0.000007	0.044	< 0.00001	0.23	0.000003	0.00011	0.00087	< 0.0002	< 0.007	0.025	< 0.0001	30	0.00048	0.00025	0.06
65																				
66																				
67																				
68	< 0.00001	0.002	< 0.00005	< 0.0002	0.00022	< 0.000007	0.006	< 0.00001	0.2	0.000003	0.000085	0.0023	0.0003	0.074	0.011	< 0.0001	25	0.00054	0.00026	0.05
69																				
70																				
71																				
72	< 0.00001	0.001	< 0.00005	< 0.0002	0.00028	< 0.000007	0.034	< 0.00001	0.26	< 0.000003	0.00013	0.0013	0.0011	0.34	0.023	< 0.0001	29	0.0025	0.00085	< 0.01
73																				
74																				
75																				
76	< 0.00001	0.001	< 0.00005	< 0.0002	0.00022	0.000011	0.037	< 0.00001	0.23	< 0.000003	0.000094	0.00092	< 0.0002	< 0.007	0.01	< 0.0001	27	0.00026	0.00023	< 0.01
77																				

CDS-003

Week/Event	Mercury	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
78																				
79																				
80	< 0.00001	0.001	< 0.00005	< 0.0002	0.00021	< 0.000007	0.029	< 0.00001	0.19	< 0.000003	0.000094	0.0008	< 0.0002	< 0.007	0.023	< 0.0001	25	0.00027	0.0004	0.04
81																				
82																				
83																				
84	< 0.00001	0.001	< 0.00005	< 0.0002	0.00045	< 0.000007	0.036	< 0.00001	0.27	< 0.000003	0.00011	0.0011	< 0.0002	< 0.007	< 0.009	< 0.0001	28	0.00046	0.00018	< 0.01
85																				
86																				
87																				
88	< 0.00001	< 0.001	< 0.00005	< 0.0002	0.00026	< 0.000007	0.034	< 0.00001	0.26	< 0.000003	0.00013	0.001	< 0.0002	< 0.007	0.012	< 0.0001	29	0.00072	0.00027	< 0.01
89																				
90																				
91																				
92	< 0.00001	< 0.001	< 0.00005	< 0.0002	0.00034	< 0.000007	0.044	< 0.00001	0.3	< 0.000003	0.0001	0.0012	0.0004	< 0.007	0.015	< 0.0001	34	0.00032	0.00008	0.02
93																				
94																				
95																				
96	< 0.00001	< 0.001	< 0.00005	< 0.0002	0.00031	< 0.000007	0.04	< 0.00001	0.3	< 0.000003	0.00012	0.0013	< 0.002	< 0.007	0.012	< 0.0001	34	0.00034	< 0.0004	< 0.01
97																				
98																				
99																				

Appendix F:
HCT Results-CDS-003

CDS-003

Week/Event	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.0047	0.0001	0.001	0.0005	0.0042	0.006	< 0.00005	0.000031	0.000008	0.00002	0.00009	< 0.00002	0.003
1	0.0072	< 0.00009	< 0.0009	0.00016	0.00072	0.00094	< 0.00005	0.000006	0.000011	< 0.00001	0.00003	< 0.00002	< 0.002
2	0.0014	< 0.00009	< 0.0009	0.0002	0.00032	0.00073	< 0.00005	< 0.000005	0.00021	< 0.00001	0.00003	< 0.00002	< 0.002
3	0.0015	< 0.00009	< 0.0009	0.00017	0.00019	0.00074	< 0.00005	< 0.000005	0.000021	< 0.00001	0.00002	< 0.00002	< 0.002
4	0.0018	< 0.00009	< 0.0009	0.0002	0.00014	0.00068	< 0.00005	< 0.000005	0.000018	0.00001	0.00002	< 0.00002	< 0.002
5	0.0008	< 0.00009	< 0.0009	0.00029	0.00066	0.00051	0.00017	< 0.000005	0.000006	0.00002	0.00003	< 0.00002	< 0.002
6	0.0035	< 0.00009	< 0.0009	0.00019	0.00012	0.00061	0.00005	< 0.000005	0.00022	< 0.00001	0.00002	< 0.00002	< 0.002
7	0.0018	< 0.00009	< 0.0009	0.00026	0.00013	0.00042	< 0.00005	< 0.000005	0.0019	0.00002	0.00003	< 0.00002	< 0.002
8	0.0024	< 0.00009	< 0.0009	0.0004	0.00006	0.00094	< 0.00005	< 0.000005	0.0001	0.00001	0.00003	< 0.00002	< 0.002
9													
10													
11													
12	0.0014	< 0.00009	< 0.0009	0.00045	< 0.00006	0.00039	< 0.00005	< 0.000005	0.00037	0.00001	0.00005	< 0.00002	< 0.002
13													
14													
15													
16	0.0009	< 0.00009	< 0.0009	0.00038	< 0.00006	0.00042	0.00009	< 0.000005	0.00068	0.00006	0.00007	< 0.00002	< 0.002
17													
18													
19													
20	0.0013	< 0.00009	< 0.0009	0.00033	< 0.00006	0.00039	0.00006	< 0.000005	0.000012	0.0001	0.00005	< 0.00002	< 0.002
21													
22													
23													
24	0.0007	< 0.00009	< 0.0009	0.00041	< 0.00006	0.0044	< 0.00005	< 0.000005	0.00087	0.00001	0.00009	< 0.00002	< 0.002
25													
26													
27													
28	0.0006	< 0.00009	< 0.0009	0.00039	< 0.00006	0.00088	< 0.00005	< 0.000005	0.0006	0.00003	0.00005	< 0.00002	< 0.002
29													
30													
31													
32	0.0006	< 0.00009	< 0.0009	0.00028	< 0.00006	0.00069	< 0.00005	< 0.000005	0.0003	0.00002	0.00006	< 0.00002	< 0.002
33													
34													
35													
36	0.0006	< 0.00009	< 0.0009	0.00027	< 0.00006	0.00061	< 0.00005	0.000007	0.00011	0.00002	0.00011	< 0.00002	< 0.002
37													
38													

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Week/Event	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
39													
40	0.0009	< 0.00009	< 0.0009	0.00033	< 0.00006	0.00083	< 0.00005	< 0.000005	0.0043	0.00003	0.00007	< 0.00002	< 0.002
41													
42													
43													
44	0.0006	< 0.00009	< 0.0009	0.00006	< 0.00006	0.00069	0.00014	0.000003	< 0.000002	0.00004	0.00007	< 0.00002	< 0.002
45													
46													
47													
48	0.0007	< 0.00009	< 0.0009	0.0002	< 0.00006	0.00041	< 0.00005	< 0.000005	0.0001	0.00002	0.00004	< 0.00002	< 0.002
49													
50													
51													
52	0.0005	< 0.00009	< 0.0009	0.0046	< 0.00006	0.00042	0.002	0.000005	0.000052	0.00002	0.00005	0.00003	< 0.002
53													
54													
55													
56	0.0006	< 0.00009	< 0.0009	0.00017	< 0.00006	0.00023	0.00006	< 0.000005	0.0027	0.00002	0.00008	< 0.00002	< 0.002
57													
58													
59													
60	0.0009	< 0.00009	< 0.0009	0.00019	< 0.00006	0.00067	< 0.00005	< 0.000005	0.0025	0.00002	0.00014	< 0.00002	< 0.002
61													
62													
63													
64	0.0009	< 0.00009	< 0.0009	0.00016	< 0.00006	0.00057	< 0.00007	0.000005	0.000034	0.00013	0.00005	< 0.00002	< 0.002
65													
66													
67													
68	0.0028	0.0002	< 0.0009	0.00042	< 0.00006	0.00071	< 0.00007	0.000006	0.0058	0.00002	< 0.00002	< 0.00002	< 0.002
69													
70													
71													
72	0.0049	< 0.00009	< 0.0009	0.00013	0.00007	0.00058	< 0.00007	< 0.000005	0.000013	0.00003	0.00004	< 0.00002	< 0.002
73													
74													
75													
76	0.0007	< 0.00009	< 0.0009	0.0001	< 0.00006	0.00065	< 0.00007	0.000005	0.0082	0.00002	0.00003	< 0.00002	< 0.002
77													

CDS-003

Week/Event	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
78													
79													
80	0.0008	< 0.00009	< 0.0009	0.00015	< 0.00006	0.00042	< 0.00007	< 0.000005	0.0003	0.00002	0.00004	< 0.00002	< 0.002
81													
82													
83													
84	0.0009	0.00009	< 0.0009	0.00016	< 0.00006	0.00078	< 0.00007	< 0.000005	0.00021	0.00002	0.00005	< 0.00002	< 0.002
85													
86													
87													
88	0.001	< 0.00009	< 0.0009	0.00014	< 0.00006	0.00067	< 0.00007	< 0.000005	0.0018	0.00003	0.00004	< 0.00002	< 0.002
89													
90													
91													
92	0.0007	< 0.00009	< 0.0009	0.00012	< 0.00006	0.00069	< 0.00007	< 0.000005	0.00057	0.00003	0.00003	< 0.00002	< 0.002
93													
94													
95													
96	0.001	< 0.00009	< 0.0009	0.00013	< 0.00006	0.00081	< 0.0001	0.000005	0.0044	0.00002	< 0.0002	< 0.00002	< 0.002
97													
98													
99													

CBS-003

Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI	Mercury	Aluminum (0.2µm)
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L
0	CA10034-APR22	5-Apr-22	1000	295	8.9	< 2	21	109	20	13	< 0.3	< 0.03	< 0.06	< 0.06	1.4	0.00001	0.017
1	CA10056-APR22	12-Apr-22	1000	965	9.6	< 2	49	136	18	5.0	< 0.3	< 0.03	< 0.06	< 0.06	0.6	< 0.00001	0.005
2	CA10094-APR22	19-Apr-22	1000	968	9.4	< 2	53	138	19	2.0	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2	< 0.00001	0.002
3	CA10135-APR22	26-Apr-22	1000	964	9.5	< 2	52	134	17	2.0	< 0.3	< 0.03	< 0.06	< 0.06	0.3	< 0.00001	< 0.001
4	CA10019-MAY22	3-May-22	1000	971	9.2	< 2	44	120	16	2.0	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2	< 0.00001	0.005
5	CA10061-MAY22	10-May-22	1000	923	9.7	< 2	60	154	23	2.0	< 0.3	< 0.03	< 0.06	< 0.06	0.2	0.00001	0.003
6	CA10103-MAY22	17-May-22	1000	981	9.6	< 2	91	214	34	3.0	< 0.3	< 0.03	< 0.06	< 0.06		< 0.00001	0.005
7	CA10148-MAY22	24-May-22	1000	942	9.7	< 2	75	190	27	2.0	< 0.3	< 0.03	< 0.06	< 0.06		< 0.00001	< 0.001
8	CA10196-MAY22	31-May-22	1000	985	9.6	< 2	91	229	44	4.0	< 0.3	< 0.03	< 0.06	< 0.06		< 0.00001	0.002
9	CA10040-JUN22	7-Jun-22	1000	984	9.4	< 2	69	178	17								
10	CA10086-JUN22	14-Jun-22	1000	932	9.4	< 2	121	269	37								
11	CA10128-JUN22	21-Jun-22	1000	961	9.6	< 2	117	276	42								
12	CA10175-JUN22	28-Jun-22	1000	955	9.7	< 2	99	244	37	1.0	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2	< 0.00001	0.002
13	CA10017-JUL22	5-Jul-22	1000	945	9.7	< 2	84	198	36								
14	CA10061-JUL22	12-Jul-22	1000	967	9.5	< 2	90	229	39								
15	CA10105-JUL22	19-Jul-22	1000	960	9.6	< 2	88	205	35								
16	CA10149-JUL22	26-Jul-22	1000	955	9.6	< 2	102	209	40	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2	0.00001	< 0.001
17	CA10016-AUG22	2-Aug-22	1000	924	9.7	< 2	96	220	38								
18	CA10060-AUG22	9-Aug-22	1000	942	9.6	< 2	85	216	32								
19	CA10104-AUG22	16-Aug-22	1000	955	9.5	< 2	82	206	30								
20	CA10148-AUG22	23-Aug-22	1000	957	9.6	< 2	75	185	27	< 1	< 0.3	< 0.03	< 0.06	< 0.06	< 0.2	< 0.00001	< 0.001
21	CA10196-AUG22	30-Aug-22	1000	944	9.5	< 2	75	179	24								
22	CA10019-SEP22	6-Sep-22	1000	939	9.5	< 2	75	167	23								
23	CA10064-SEP22	13-Sep-22	1000	963	9.2	< 2	128	371	54								
24	CA10107-SEP22	20-Sep-22	1000	868	9.4	< 2	83	214	32	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.3	< 0.00001	0.002
25	CA10153-SEP22	27-Sep-22	1000	941	9.5	< 2	81	194	34								
26	CA10015-OCT22	04-Oct-22	1000	938	9.5	< 2	88	220	32								
27	CA10059-OCT22	11-Oct-22	1000	941	9.3	< 2	76	192	27								
28	CA10103-OCT22	18-Oct-22	1000	935	9.5	< 2	83	199	28	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.3	< 0.00001	0.002
29	CA10145-OCT22	25-Oct-22	1000	931	9.5	< 2	86	194	24								
30	CA10010-NOV22	01-Nov-22	1000	932	9.3	< 2	94	174	24								
31	CA10053-NOV22	08-Nov-22	1000	940	9.3	< 2	69	164	18								
32	CA10096-NOV22	15-Nov-22	1000	902	9.4	< 2	74	200	25	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.5	< 0.00001	< 0.001
33	CA10137-NOV22	22-Nov-22	1000	866	9.5	< 2	85	182	22								
34	CA10179-NOV22	29-Nov-22	1000	924	9.5	< 2	88	184	29								
35	CA10012-DEC22	06-Dec-22	1000	935	9.3	< 2	79	162	20								
36	CA10056-DEC22	13-Dec-22	1000	943	9.5	< 2	85	162	24	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.6	< 0.00001	0.002
37	CA10101-DEC22	20-Dec-22	1000	902	9.6	< 2	91	168	20								
38	CA10219-DEC22	27-Dec-22	1000	880	9.4	< 2	82	194	20								
39	CA10007-JAN23	03-Jan-23	1000	968	9.4	< 2	93	176	25								
40	CA10052-JAN23	10-Jan-23	1000	859	9.5	< 2	109	242	34	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.1	< 0.00001	0.01
41	CA10100-JAN23	17-Jan-23	1000	930	9.5	< 2	104	193	24								
42	CA10148-JAN23	24-Jan-23	1000	900	9.5	< 2	110	231	27								
43	CA10195-JAN23	31-Jan-23	1000	1002	9.6	< 2	124	252	26								
44	CA10035-FEB23	07-Feb-23	1000	1001	9.5	< 2	111	228	22	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.4	< 0.00001	0.009
45	CA10081-FEB23	14-Feb-23	1000	1001	9.4	< 2	113	215	23								
46	CA10128-FEB23	21-Feb-23	1000	968	9.4	< 2	95	192	19								
47	CA10177-FEB23	28-Feb-23	1000	960	9.4	< 2	87	160	21								
48	CA10034-MAR23	07-Mar-23	1000	1004	9.2	< 2	83	175	14	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.6	< 0.00001	< 0.001
49	CA10081-MAR23	14-Mar-23	1000	986	9.3	< 2	100	194	16								
50	CA10129-MAR23	21-Mar-23	1000	1048	9.1	< 2	85	154	13								
51	CA10176-MAR23	28-Mar-23	1000	1012	9.2	< 2	86	182	16								

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Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI	Mercury	Aluminum (0.2µm)
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L	mg/L
52	CA10008-APR23	04-Apr-23	1000	977	9.2	< 2	87	158	13	1.0	< 0.3	< 0.03	< 0.06	< 0.06	1.5	< 0.00001	0.002
53	CA10057-APR23	11-Apr-23	1000	997	9.2	< 2	96	193	17								
54	CA10106-APR23	18-Apr-23	1000	906	9.4	< 2	67	136	10								
55	CA10155-APR23	25-Apr-23	1000	948	9.3	< 2	89	178	15								
56	CA10008-MAY23	02-May-23	1000	970	9.1	< 2	83	150	13	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.8	< 0.00001	0.003
57	CA10060-MAY23	09-May-23	1000	950	9.4	< 2	89	174	14								
58	CA10111-MAY23	16-May-23	1000	919	9.5	< 2	90	170	11								
59	CA10163-MAY23	23-May-23	1000	988	9.3	< 2	90	166	12								
60	CA10218-MAY23	30-May-23	1000	970	9.3	< 2	92	164	11	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.1	< 0.00001	< 0.001
61	CA10020-JUN23	06-Jun-23	1000	983	9.3	< 2	81	167	11								
62	CA10073-JUN23	13-Jun-23	1000	950	9.3	< 2	100	181	13								
63	CA10125-JUN23	20-Jun-23	1000	973	9.4	< 2	82	165	10								
64	CA10175-JUN23	27-Jun-23	1000	982	9.2	< 2	97	191	13	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.4	< 0.00001	0.04
65	CA10008-JUL23	04-Jul-23	1000	981	9.5	< 2	90	177	12								
66	CA10060-JUL23	11-Jul-23	1000	952	9.4	< 2	88	177	11								
67	CA10113-JUL23	18-Jul-23	1000	928	9.3	< 2	78	143	9.0								
68	CA10164-JUL23	25-Jul-23	1000	926	9.1	< 2	83	151	6.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.6	< 0.00001	0.002
69	CA10008-AUG23	01-Aug-23	1000	902	9.3	< 2	86	173	10								
70	CA10062-AUG23	08-Aug-23	1000	923	9.3	< 2	93	188	11								
71	CA10117-AUG23	15-Aug-23	1000	940	9.5	< 2	85	169	10								
72	CA10172-AUG23	22-Aug-23	1000	924	9.3	< 2	75	154	8.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.3	< 0.00001	0.002
73	CA10226-AUG23	29-Aug-23	1000	942	9.3	< 2	90	174	9.0								
74	CA10008-SEP23	05-Sep-23	1000	916	9.3	< 2	94	152	10								
75	CA10064-SEP23	12-Sep-23	1000	934	9.3	< 2	93	166	12								
76	CA10122-SEP23	19-Sep-23	1000	899	9.4	< 2	85	154	10	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.8	< 0.00001	< 0.001
77	CA10180-SEP23	26-Sep-23	1000	926	9.2	< 2	78	160	7.0								
78	CA10006-OCT23	03-Oct-23	1000	946	9.3	< 2	82	166	9.0								
79	CA10062-OCT23	10-Oct-23	1000	950	9.5	< 2	83	169	11								
80	CA10121-OCT23	17-Oct-23	1000	929	9.2	< 2	82	154	9.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	3.1	< 0.00001	0.002
81	CA10177-OCT23	24-Oct-23	1000	925	9.1	< 2	86	152	10								
82	CA10234-OCT23	31-Oct-23	1000	938	9.4	< 2	91	174	9.0								
83	CA10036-NOV23	07-Nov-23	1000	909	9.2	< 2	82	142	8.0								
84	CA10092-NOV23	14-Nov-23	1000	893	9.4	< 2	80	158	9.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	3.0	< 0.00001	0.001
85	CA10151-NOV23	21-Nov-23	1000	954	9.1	< 2	72	130	7.0								
86	CA10210-NOV23	28-Nov-23	1000	919	9.2	< 2	61	142	6.0								
87	CA10008-DEC23	05-Dec-23	1000	938	9.2	< 2	67	129	7.0								
88	CA10070-DEC23	12-Dec-23	1000	929	9.5	< 2	63	129	7.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.6	< 0.00001	< 0.001
89	CA10130-DEC23	19-Dec-23	1000	906	9.2	< 2	81	161	8.0								
90	CA10190-DEC23	26-Dec-23	1000	907	9.5	< 2	81	157	10								
91	CA10004-JAN24	02-Jan-24	1000	927	9.1	< 2	68	133	8.0								
92	CA10066-JAN24	09-Jan-24	1000	894	9.4	< 2	77	148	9.0	< 1	< 0.3	< 0.03	< 0.06	< 0.06	3.2	< 0.00001	< 0.001
93	CA10124-JAN24	16-Jan-24	1000	899	9.1	< 2	70	130	10								
94	CA10186-JAN24	23-Jan-24	1000	889	9.3	< 2	58	122	7.0								
95	CA10248-JAN24	30-Jan-24	1000	900	9.4	< 2	62	127	10								
96	CA10022-FEB24	06-Feb-24	1000	930	9.4	< 2	92	166	9.0	2.0	< 0.3	< 0.03	< 0.06	< 0.06	3.7	< 0.00001	< 0.001
97	CA10080-FEB24	13-Feb-24	1000	932	9.0	< 2	73	154	9.0								
98	CA10134-FEB24	20-Feb-24	1000	919	9.0	< 2	66	130	6.0								
99	CA10188-FEB24	27-Feb-24	1000	938	9.4	< 2	86	154	9.0								

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Week/Event	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	< 0.00005	< 0.0002	0.0037	0.000022	0.051	< 0.00001	1.3	0.000004	0.00013	0.0014	0.0014	< 0.007	0.32	0.0002	9.0	0.00084	0.0016	2.9	0.0022	< 0.00009	< 0.0009	0.00022
1	< 0.00005	< 0.0002	0.0014	< 0.000007	0.003	< 0.00001	0.54	< 0.000003	0.000018	0.00033	0.0004	< 0.007	0.13	< 0.0001	14	0.00014	0.00073	1.5	0.0028	< 0.00009	< 0.0009	0.00028
2	< 0.00005	< 0.0002	0.002	< 0.000007	0.004	< 0.00001	0.41	< 0.000003	0.000014	0.0003	0.0003	< 0.007	0.12	0.0001	14	0.00009	0.00049	1.0	0.0017	< 0.00009	< 0.0009	0.0003
3	< 0.00005	< 0.0002	0.0016	0.000016	0.007	< 0.00001	0.28	< 0.000003	0.000024	0.00026	< 0.0002	< 0.007	0.073	0.0001	15	0.00008	0.00039	0.77	0.0022	0.00022	< 0.0009	0.00035
4	< 0.00005	< 0.0002	0.0025	< 0.000007	0.005	< 0.00001	0.22	< 0.000003	0.000012	0.00048	< 0.0002	< 0.007	0.066	< 0.0001	13	0.00022	0.00047	0.79	0.0019	< 0.00009	< 0.0009	0.00028
5	< 0.00005	< 0.0002	0.0013	< 0.000007	0.004	< 0.00001	0.27	0.000007	0.00004	0.00032	< 0.0002	< 0.007	0.07	< 0.0001	20	0.00022	0.00029	0.81	0.0025	< 0.00009	< 0.0009	0.00042
6	< 0.00005	0.0002	0.0012	< 0.000007	0.004	< 0.00001	0.24	0.000003	0.000028	0.00039	< 0.0002	< 0.007	0.09	0.0002	30	0.00018	0.00062	0.91	0.0027	< 0.00009	< 0.0009	0.00057
7	< 0.00005	0.0004	0.0011	< 0.000007	0.005	< 0.00001	0.2	< 0.000003	0.000022	0.00043	< 0.0002	< 0.007	0.063	< 0.0001	24	0.00016	0.00035	0.73	0.0018	< 0.00009	< 0.0009	0.00047
8	< 0.00005	< 0.0002	0.0021	< 0.000007	0.031	< 0.00001	0.27	< 0.000003	0.000054	0.0026	< 0.0002	< 0.007	0.085	< 0.0001	30	0.0003	0.00051	0.67	0.0011	< 0.00009	< 0.0009	0.00041
9																						
10																						
11																						
12	< 0.00005	< 0.0002	0.00066	< 0.000007	0.009	< 0.00001	0.22	< 0.000003	0.00003	0.00009	< 0.0002	< 0.007	0.064	< 0.0001	33	0.00011	0.00049	0.65	0.0015	< 0.00009	< 0.0009	0.00069
13																						
14																						
15																						
16	< 0.00005	< 0.0002	0.00073	< 0.000007	0.007	< 0.00001	0.24	< 0.000003	0.00005	0.00018	< 0.0002	< 0.007	0.058	< 0.0001	33	0.00026	0.00064	0.45	0.0018	< 0.00009	< 0.0009	0.00076
17																						
18																						
19																						
20	< 0.00005	< 0.0002	0.00051	< 0.000007	0.006	< 0.00001	0.18	< 0.000003	0.000034	0.00029	< 0.0002	< 0.007	0.077	< 0.0001	24	0.00021	0.00049	0.19	0.0024	< 0.00009	< 0.0009	0.0006
21																						
22																						
23																						
24	< 0.00005	0.0003	0.0011	< 0.000007	0.009	< 0.00001	0.88	< 0.000003	0.000049	0.00025	0.0093	< 0.007	0.055	< 0.0001	25	0.00055	0.0054	0.78	0.0017	< 0.00009	< 0.0009	0.00074
25																						
26																						
27																						
28	< 0.00005	0.0002	0.00052	< 0.000007	0.01	< 0.00001	0.25	< 0.000003	0.000044	0.0003	0.0007	< 0.007	0.026	< 0.0001	25	0.00017	0.00029	0.23	0.0014	< 0.00009	< 0.0009	0.00076
29																						
30																						
31																						
32	< 0.00005	< 0.0002	0.00039	< 0.000007	0.009	< 0.00001	0.24	< 0.000003	0.000097	0.0005	0.0004	< 0.007	0.029	< 0.0001	26	0.00057	0.00037	0.14	0.0015	< 0.00009	< 0.0009	0.00062
33																						
34																						
35																						
36	< 0.00005	< 0.0002	0.00049	< 0.000007	0.01	< 0.00001	0.26	< 0.000003	0.000089	0.00084	0.0005	< 0.007	0.039	< 0.0001	29	0.00025	0.0015	0.1	0.0017	0.0016	< 0.0009	0.00062
37																						
38																						
39																						
40	< 0.00005	< 0.0002	0.00036	< 0.000007	0.01	< 0.00001	0.33	< 0.000003	0.000077	0.0011	< 0.0002	< 0.007	0.032	< 0.0001	37	0.00016	0.00037	0.1	0.0015	< 0.00009	< 0.0009	0.00086
41																						
42																						
43																						
44	< 0.00005	< 0.0002	0.00064	< 0.000007	0.013	< 0.00001	0.64	< 0.000003	0.00012	0.0017	0.0004	< 0.007	0.03	< 0.0001	30	0.0024	0.00038	0.13	0.002	< 0.00009	< 0.0009	0.00052
45																						
46																						
47																						
48	< 0.00005	< 0.0002	0.00033	< 0.000007	0.008	< 0.00001	0.26	< 0.000003	0.000064	0.0014	< 0.0002	< 0.007	0.017	< 0.0001	24	0.0003	0.0004	0.07	0.0017	< 0.00009	< 0.0009	0.00053
49																						
50																						
51																						

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Week/Event	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum	Sodium	Nickel	Lead	Antimony	Selenium
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
52	< 0.00005	< 0.0002	0.00019	0.000009	0.008	< 0.00001	0.19	0.000005	0.00009	0.0015	< 0.0002	< 0.007	< 0.009	< 0.0001	24	0.00033	0.00029	< 0.01	0.0019	< 0.00009	< 0.0009	0.0003
53																						
54																						
55																						
56	< 0.00005	< 0.0002	0.0003	< 0.000007	0.007	< 0.00001	0.18	< 0.000003	0.000087	0.002	< 0.0002	0.026	< 0.009	< 0.0001	23	0.00043	0.00027	0.02	0.0016	< 0.00009	< 0.0009	0.00044
57																						
58																						
59																						
60	< 0.00005	< 0.0002	0.00023	< 0.000007	0.007	< 0.00001	0.22	< 0.000003	0.00012	0.0023	0.0003	< 0.007	0.026	< 0.0001	26	0.0012	0.00031	0.04	0.0021	< 0.00009	< 0.0009	0.00038
61																						
62																						
63																						
64	< 0.00005	< 0.0002	0.00036	< 0.000007	0.014	< 0.00001	0.3	< 0.000003	0.00013	0.0028	< 0.0002	< 0.007	0.028	< 0.0001	29	0.0009	0.0003	0.14	0.002	< 0.00009	< 0.0009	0.00045
65																						
66																						
67																						
68	< 0.00005	< 0.0002	0.00021	< 0.000007	0.028	< 0.00001	0.19	< 0.000003	0.000098	0.00075	< 0.0002	< 0.007	0.012	< 0.0001	27	0.00034	0.00028	0.05	0.0007	0.0002	< 0.0009	0.00013
69																						
70																						
71																						
72	< 0.00005	< 0.0002	0.00031	< 0.000007	0.006	< 0.00001	0.24	< 0.000003	0.000094	0.0025	< 0.0002	0.11	0.019	< 0.0001	21	0.001	0.00023	< 0.01	0.0016	< 0.00009	< 0.0009	0.00031
73																						
74																						
75																						
76	< 0.00005	< 0.0002	0.00024	< 0.000007	0.008	< 0.00001	0.24	0.000004	0.000072	0.0031	< 0.0002	< 0.007	0.011	< 0.0001	22	0.00027	0.0064	0.02	0.0014	< 0.00009	< 0.0009	0.00033
77																						
78																						
79																						
80	< 0.00005	< 0.0002	0.00023	< 0.000007	0.007	< 0.00001	0.2	< 0.000003	0.000083	0.0029	< 0.0002	< 0.007	0.021	< 0.0001	23	0.00024	0.00021	0.05	0.0014	< 0.00009	< 0.0009	0.00041
81																						
82																						
83																						
84	< 0.00005	< 0.0002	0.00025	< 0.000007	0.006	< 0.00001	0.3	< 0.000003	0.0022	0.003	< 0.0002	< 0.007	< 0.009	0.0004	17	0.00056	0.00031	0.04	0.0029	< 0.00009	< 0.0009	0.00031
85																						
86																						
87																						
88	< 0.00005	< 0.0002	0.00033	< 0.000007	0.005	< 0.00001	0.24	< 0.000003	0.00013	0.0026	< 0.0002	0.02	0.01	0.0001	16	0.0014	0.0011	< 0.01	0.0019	< 0.00009	< 0.0009	0.00026
89																						
90																						
91																						
92	< 0.00005	< 0.0002	0.0003	< 0.000007	0.008	< 0.00001	0.23	< 0.000003	0.000079	0.0033	0.0002	< 0.007	0.011	< 0.0001	22	0.00037	0.00017	0.02	0.0012	< 0.00009	< 0.0009	0.00028
93																						
94																						
95																						
96	< 0.00005	< 0.0002	0.00023	< 0.000007	0.009	< 0.00001	0.26	< 0.000003	0.000087	0.004	< 0.002	< 0.007	0.01	< 0.0001	24	0.00017	0.0005	0.01	0.0013	< 0.00009	< 0.0009	0.00036
97																						
98																						
99																						

Appendix F:
HCT Results-CBS-003

CBS-003

Week/Event	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.0046	0.0037	< 0.00005	0.000024	0.000004	0.00002	0.00006	< 0.00002	< 0.002
1	0.00066	0.0023	< 0.00005	0.000008	0.000018	< 0.00001	0.00003	< 0.00002	< 0.002
2	0.0016	0.0016	< 0.00005	0.000006	0.000008	< 0.00001	0.00008	< 0.00002	< 0.002
3	0.00031	0.001	< 0.00005	0.000008	0.000004	0.00002	0.00004	< 0.00002	< 0.002
4	0.00013	0.00069	< 0.00005	< 0.000005	0.00018	0.00002	0.00003	< 0.00002	< 0.002
5	0.0001	0.001	0.00013	0.000005	0.0012	0.00002	0.00004	< 0.00002	< 0.002
6	0.00007	0.0016	< 0.00005	< 0.000005	0.0016	< 0.00001	0.00008	< 0.00002	< 0.002
7	0.00007	0.00071	< 0.00005	< 0.000005	0.000076	< 0.00001	0.00005	< 0.00002	< 0.002
8	0.00011	0.00046	< 0.00005	< 0.000005	0.0038	0.00002	0.00006	< 0.00002	< 0.002
9									
10									
11									
12	< 0.00006	0.00082	< 0.00005	< 0.000005	0.0011	0.00001	0.00005	< 0.00002	< 0.002
13									
14									
15									
16	< 0.00006	0.00092	< 0.00005	< 0.000005	0.0017	< 0.00001	0.00008	< 0.00002	< 0.002
17									
18									
19									
20	< 0.00006	0.00082	0.00005	< 0.000005	0.000078	0.00008	0.00004	< 0.00002	< 0.002
21									
22									
23									
24	< 0.00006	0.0029	< 0.00005	< 0.000005	0.004	0.00002	0.00009	< 0.00002	0.002
25									
26									
27									
28	< 0.00006	0.00077	< 0.00005	0.000005	0.001	0.00003	0.00006	< 0.00002	< 0.002
29									
30									
31									
32	< 0.00006	0.00085	< 0.00005	< 0.000005	0.000018	< 0.00001	0.00007	< 0.00002	< 0.002
33									
34									
35									
36	< 0.00006	0.00094	< 0.00005	0.000009	0.000024	< 0.00001	0.00015	< 0.00002	< 0.002
37									
38									
39									
40	< 0.00006	0.0013	< 0.00005	< 0.000005	0.0016	0.00001	0.00007	< 0.00002	< 0.002
41									
42									
43									
44	< 0.00006	0.0012	0.0002	0.000007	0.000003	0.00006	0.00011	0.00004	< 0.002
45									
46									
47									
48	< 0.00006	0.00084	< 0.00005	< 0.000005	0.00016	< 0.00001	0.00004	< 0.00002	< 0.002
49									
50									
51									

Appendix F:
HCT Results-CBS-003

CBS-003

Week/Event	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
52	< 0.00006	0.00068	0.00013	< 0.000005	0.00014	< 0.00001	0.00004	< 0.00002	< 0.002
53									
54									
55									
56	< 0.00006	0.0037	< 0.00005	0.000005	0.00026	< 0.00001	0.00005	< 0.00002	< 0.002
57									
58									
59									
60	< 0.00006	0.00071	< 0.00005	0.000009	0.0002	0.00001	0.00004	< 0.00002	< 0.002
61									
62									
63									
64	< 0.00006	0.0018	0.00019	0.000008	0.000025	0.00002	0.00005	< 0.00002	< 0.002
65									
66									
67									
68	< 0.00006	0.00043	< 0.00007	< 0.000005	0.00043	0.00002	0.00002	< 0.00002	< 0.002
69									
70									
71									
72	< 0.00006	0.00082	< 0.00007	0.000008	0.000003	0.00002	0.00004	< 0.00002	< 0.002
73									
74									
75									
76	0.00013	0.00084	< 0.00007	0.000019	0.000083	0.00001	0.00004	< 0.00002	< 0.002
77									
78									
79									
80	< 0.00006	0.00071	< 0.00007	0.000005	0.00056	0.00002	0.00004	< 0.00002	< 0.002
81									
82									
83									
84	< 0.00006	0.0011	< 0.00007	0.000005	0.00045	0.00001	0.00004	< 0.00002	< 0.002
85									
86									
87									
88	< 0.00006	0.00079	< 0.00007	0.000007	0.00019	0.00001	0.00003	0.00003	< 0.002
89									
90									
91									
92	< 0.00006	0.00086	< 0.00007	< 0.000005	0.0016	< 0.00001	0.00003	< 0.00002	< 0.002
93									
94									
95									
96	< 0.00006	0.00099	< 0.0001	< 0.000005	0.018	0.00005	< 0.0002	< 0.00002	< 0.002
97									
98									
99									

CBS-001																
Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI	Mercury
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L
0	CA10157-JUN22	22-Jun-22	1000	447	8.98	< 2	155	479	51	41	< 0.3	0.13	0.18	< 0.06	8	< 0.00001
1	CA10197-JUN22	29-Jun-22	1000	1041	8.41	< 2	35	82	6	2	< 0.3	< 0.03	< 0.06	< 0.06	1.5	0.00001
2	CA10039-JUL22	6-Jul-22	1000	1016	8.06	< 2	33	79	6	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.6	< 0.00001
3	CA10083-JUL22	13-Jul-22	1000	868	8.14	< 2	29	66	7	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.8	< 0.00001
4	CA10127-JUL22	20-Jul-22	1000	816	8.54	< 2	33	73	6	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.7	< 0.00001
5	CA10171-JUL22	27-Jul-22	1000	997	8.24	< 2	40	91	7	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.9	< 0.00001
6	CA10038-AUG22	3-Aug-22	1000	914	7.96	< 2	33	78	6	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.7	< 0.00001
7	CA10082-AUG22	10-Aug-22	1000	934	8.27	< 2	38	92	6	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.9	0.00005
8	CA10126-AUG22	17-Aug-22	1000	966	8.80	< 2	48	93	6	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.8	0.00004
9	Ca10169-AUG22	24-Aug-22	1000	1023	8.35	< 2	52	92	9							
10	CA10218-AUG22	31-Aug-22	1000	942	8.10	< 2	39	82	5							
11	CA10041-SEP22	7-Sep-22	1000	902	8.84	< 2	47	108	8							
12	CA10085-SEP22	14-Sep-22	1000	841	8.91	< 2	52	125	11	<1	< 0.3	< 0.03	< 0.06	< 0.06	2.4	< 0.00001
13	CA10128-SEP22	21-Sep-22	1000	932	8.33	< 2	51	100	9							
14	CA10176-SEP22	28-Sep-22	1000	943	8.82	< 2	49	90	8							
15	CA10038-OCT22	5-Oct-22	1000	888	8.75	< 2	47	93	8							
16	CA10082-OCT22	12-Oct-22	1000	830	8.39	< 2	47	95	9	< 1	< 0.3	< 0.03	< 0.06	< 0.06	2.5	< 0.00001
17	CA10126-OCT22	19-Oct-22	1000	903	8.47	< 2	45	93	8							
18	CA10168-OCT22	26-Oct-22	1000	809	8.71	< 2	42	87	7							
19	CA10032-NOV22	2-Nov-22	1000	909	7.91	< 2	43	84	6							
20	CA10075-NOV22	9-Nov-22	1000	902	8.09	< 2	41	78	6	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.6	0.00003
21	CA10118-NOV22	16-Nov-22	1000	830	8.56	< 2	39	84	7							
22	CA10158-NOV22	23-Nov-22	1000	875	8.53	< 2	45	87	6							
23	CA10200-NOV22	30-Nov-22	1000	870	8.53	< 2	38	77	6							
24	CA10034-DEC22	7-Dec-22	1000	888	8.44	< 2	48	78	5	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.0	< 0.00001
25	CA10079-DEC22	14-Dec-22	1000	875	8.90	< 2	39	71	5							
26	CA10123-DEC22	21-Dec-22	1000	913	8.19	< 2	42	75	7							
27	CA10241-DEC22	28-Dec-22	1000	905	8.25	< 2	34	72	4							
28	CA10029-JAN23	04-Jan-22	1000	893	8.44	< 2	35	69	5	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.3	< 0.00001
29	CA10074-JAN23	11-Jan-23	1000	882	8.30	< 2	33	65	6							
30	CA10122-JAN23	18-Jan-23	1000	889	8.30	< 2	33	67	6							
31	CA10170-JAN23	25-Jan-23	1000	856	8.46	< 2	46	67	5							
32	CA10010-FEB23	01-Feb-23	1000	927	8.33	< 2	36	64	4	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.2	< 0.00001
33	CA10056-FEB23	08-Feb-23	1000	954	8.18	< 2	37	67	5							
34	CA10101-FEB23	15-Feb-23	1000	896	7.94	< 2	37	71	5							
35	CA10151-FEB23	22-Feb-23	1000	899	7.82	< 2	32	60	6							
36	CA10010-MAR23	01-Mar-23	1000	808	8.31	< 2	42	80	5	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.3	< 0.00001
37	CA10058-MAR23	08-Mar-23	1000	897	7.96	< 2	32	58	5							
38	CA10105-MAR23	15-Mar-23	1000	907	7.98	< 2	37	68	6							
39	CA10153-MAR23	22-Mar-23	1000	988	7.84	< 2	40	81	6							
40	CA10201-MAR23	29-Mar-23	1000	862	7.94	< 2	35	71	4	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.2	< 0.00001
41	CA10032-APR23	05-Apr-23	1000	910	8.06	< 2	33	60	5							
42	CA10081-APR23	12-Apr-23	1000	930	7.97	< 2	39	75	5							
43	CA10130-APR23	19-Apr-23	1000	918	8.09	< 2	36	64	4							
44	CA10183-APR23	26-Apr-23	1000	896	8.03	< 2	34	60	4	2	< 0.3	< 0.03	< 0.06	< 0.06	1.0	< 0.00001

CBS-001																
Week/Event	LIMS	Sample Date	Leachate Volume Added (mL)	Leachate Volume Recovered (mL)	pH	Acidity	Alkalinity	Conductivity	Sulphate	Chloride	Bromide	Nitrite (as N)	Nitrate (as N)	Fluoride	Chromium VI	Mercury
			mL	mL	No unit	mg/L as CaCO ₃	mg/L as CaCO ₃	uS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	mg/L
45	CA10031-MAY23	03-May-23	1000	953	7.92	< 2	38	74	4							
46	CA10086-MAY23	10-May-23	1000	914	8.17	< 2	38	65	4							
47	CA10137-MAY23	17-May-23	1000	966	7.95	< 2	36	69	4							
48	CA10191-MAY23	24-May-23	1000	916	8.00	< 2	36	66	3	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.2	< 0.00001
49	CA10246-MAY23	31-May-23	1000	925	7.97	< 2	37	78	3							
50	CA10047-JUN23	07-Jun-23	1000	932	8.00	< 2	35	63	3							
51	CA10099-JUN23	14-Jun-23	1000	920	7.89	< 2	30	62	3							
52	CA10151-JUN23	27-Jun-23	1000	924	8.10	< 2	35	66	3	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.3	< 0.00001
53	CA10201-JUN23	28-Jun-23	1000	897	8.06	< 2	35	66	3							
54	CA10034-JUL23	05-Jul-23	1000	899	8.05	< 2	38	70	3							
55	CA10087-JUL23	12-Jul-23	1000	912	7.81	< 2	31	77	3							
56	CA10139-JUL23	19-Jul-23	1000	941	7.88	< 2	32	67	3	< 0.2	< 0.3	< 0.03	< 0.06	< 0.06	1.1	< 0.00001
57	CA10190-JUL23	26-Jul-23	1000	905	7.80	< 2	31	56	2							
58	CA10034-AUG23	02-Aug-23	1000	843	7.96	< 2	35	65	3							
59	CA10088-AUG23	09-Aug-23	1000	910	7.98	< 2	33	64	2							
60	CA10143-AUG23	16-Aug-23	1000	913	7.90	< 2	27	61	3	< 1	< 0.3	< 0.03	< 0.06	< 0.06	1.0	< 0.00001
61	CA10198-AUG23	23-Aug-23	1000	911	7.97	< 2	29	60	2							
62	CA10253-AUG23	30-Aug-23	1000	928	7.93	< 2	31	63	3							
63	CA10036-SEP23	06-Sep-23	1000	965	8.22	< 2	34	62	3							
64	CA10092-SEP23	13-Sep-23	1000	896	7.98	< 2	27	56	2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.9	< 0.00001
65	CA10150-SEP23	20-Sep-23	1000	903	7.76	< 2	28	52	2							
66	CA10207-SEP23	27-Sep-23	1000	908	7.70	< 2	32	63	3							
67	CA10034-OCT23	04-Oct-23	1000	927	7.55	< 2	31	57	4							
68	CA10090-OCT23	11-Oct-23	1000	905	7.75	< 2	27	53	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.9	< 0.00001
69	CA10149-OCT23	18-Oct-23	1000	892	7.82	< 2	28	49	2							
70	CA10205-OCT23	25-Oct-23	1000	896	7.59	< 2	27	50	2							
71	CA10009-NOV23	01-Nov-23	1000	905	7.55	< 2	31	52	2							
72	CA10063-NOV23	08-Nov-23	1000	909	7.54	< 2	28	55	2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.9	< 0.00001
73	CA10119-NOV23	15-Nov-23	1000	969	7.92	< 2	33	60	2							
74	CA10180-NOV23	22-Nov-23	1000	899	7.47	< 2	25	51	2							
75	CA10240-NOV23	29-Nov-23	1000	886	7.68	< 2	27	51	2							
76	CA10037-DEC23	06-Dec-23	1000	921	7.73	< 2	26	48	3	< 1	<0.3	<0.03	<0.06	< 0.06	0.9	< 0.00001
77	CA10098-DEC23	13-Dec-23	1000	897	7.79	< 2	27	46	< 2							
78	CA10158-DEC23	20-Dec-23	1000	936	7.77	< 2	28	52	3							
79	CA10218-DEC23	27-Dec-23	1000	921	7.55	< 2	25	51	3							
80	CA10033-JAN24	03-Jan-24	1000	899	7.92	< 2	28	57	< 2	< 1	< 0.3	< 0.03	< 0.06	< 0.06	0.5	< 0.00001
81	CA10093-JAN24	10-Jan-24	1000	905	7.73	< 2	23	48	2							
82	CA10153-JAN24	17-Jan-24	1000	909	7.77	< 2	24	46	2							
83	CA10216-JAN24	24-Jan-24	1000	891	7.62	< 2	25	52	3							
84	CA10274-JAN24	31-Jan-24	1000	912	7.67	< 2	22	44	< 2	< 1	< 0.3	< 0.03	< 0.06	0.17	0.5	< 0.00001
85	CA10049-FEB24	01-Feb-24	1000	905	7.71	< 2	27	54	3							
86	CA10105-FEB24	14-Feb-24	1000	933	7.77	< 2	25	50	2							
87	CA10161-FEB24	21-Feb-24	1000	893	7.71	< 2	24	47	3							

CBS-001

Week/Event	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	0.006	< 0.00005	0.0007	0.00864	< 0.000007	0.147	< 0.00001	4.38	0.000004	0.000097	0.00824	0.0009	0.012	4.64	0.0005	46.9	0.00186	0.00363
1	0.003	< 0.00005	< 0.0002	0.00275	< 0.000007	0.031	< 0.00001	2.14	0.000004	0.000042	0.00176	0.0003	< 0.007	0.789	< 0.0001	8.83	0.00127	0.00062
2	0.005	< 0.00005	< 0.0002	0.00266	< 0.000007	0.036	< 0.00001	1.73	< 0.000003	0.000024	0.00148	< 0.0002	< 0.007	0.716	< 0.0001	8.14	0.00071	0.00075
3	0.016	< 0.00005	0.0002	0.00218	< 0.000007	0.028	< 0.00001	1.55	< 0.000003	0.000023	0.0016	< 0.0002	< 0.007	0.728	< 0.0001	7.95	0.00046	0.00044
4	0.003	< 0.00005	< 0.0002	0.00212	< 0.000007	0.027	< 0.00001	1.55	0.000003	0.000036	0.00193	< 0.0002	< 0.007	0.713	< 0.0001	8.35	0.00065	0.00062
5	0.005	< 0.00005	< 0.0002	0.00317	< 0.000007	0.037	< 0.00001	1.62	< 0.000003	0.000029	0.00191	< 0.0002	< 0.007	0.735	< 0.0001	10.9	0.00072	0.00063
6	0.002	< 0.00005	< 0.0002	< 0.00008	< 0.000007	< 0.002	0.00001	1.23	0.000007	0.000031	0.00317	0.0004	< 0.007	0.515	0.0009	8.16	0.00048	0.00055
7	0.045	< 0.00005	< 0.0002	0.00167	< 0.000007	0.034	< 0.00001	1.35	0.000007	0.000025	0.00164	< 0.0002	< 0.007	0.679	< 0.0001	9.14	0.00048	0.0013
8	0.002	< 0.00005	< 0.0002	0.00154	< 0.000007	0.03	< 0.00001	1.1	< 0.000003	0.000023	0.00141	< 0.0002	0.018	0.641	< 0.0001	8.7	0.00065	0.001
9																		
10																		
11																		
12	0.002	< 0.00005	< 0.0002	0.00166	< 0.000007	0.043	< 0.00001	1.72	< 0.000003	0.000032	0.00362	< 0.0002	< 0.007	0.95	< 0.0001	14.1	0.00064	0.00088
13																		
14																		
15																		
16	0.002	< 0.00005	< 0.0002	0.00188	< 0.000007	0.039	< 0.00001	1.45	0.000016	0.000063	0.00241	< 0.0002	< 0.007	0.616	0.0002	11.8	0.00045	0.00097
17																		
18																		
19																		
20	< 0.001	< 0.00005	< 0.0002	0.0016	< 0.000007	0.047	< 0.00001	1.26	< 0.000003	0.000021	0.00148	0.0002	< 0.007	0.383	< 0.0001	7.73	0.0004	0.00063
21																		
22																		
23																		
24	0.001	< 0.00005	0.0008	0.00158	< 0.000007	0.043	< 0.00001	1.38	0.000007	0.000168	0.00178	0.0045	< 0.007	0.42	< 0.0001	9.27	0.00111	0.0007
25																		
26																		
27																		
28	0.001	< 0.00005	< 0.0002	0.00158	< 0.000007	0.039	< 0.00001	1.20	0.000005	0.000018	0.00133	< 0.0002	< 0.007	0.33	< 0.0001	8.70	0.00036	0.00062
29																		
30																		
31																		
32	0.001	< 0.00005	< 0.0002	0.00143	< 0.000007	0.043	< 0.00001	1.17	< 0.000003	0.000017	0.00119	< 0.0002	< 0.007	0.29	< 0.0001	8.32	0.00089	0.00048
33																		
34																		
35																		
36	0.008	< 0.00005	< 0.0002	0.00163	< 0.000007	0.045	< 0.00001	1.44	< 0.000003	0.000007	0.00163	< 0.0002	< 0.007	0.303	< 0.0001	10.4	0.00061	0.00049
37																		
38																		
39																		
40	0.002	< 0.00005	0.0004	0.00453	< 0.000007	0.032	< 0.00001	1.53	0.000004	0.000011	0.00133	< 0.0002	< 0.007	0.25	< 0.0001	8.31	0.0008	0.00075
41																		
42																		
43																		
44	0.002	< 0.00005	< 0.0002	0.00144	< 0.000007	0.035	< 0.00001	1.20	0.000003	0.000109	0.0014	< 0.0002	< 0.007	0.23	< 0.0001	7.76	0.00095	0.00062

CBS-001

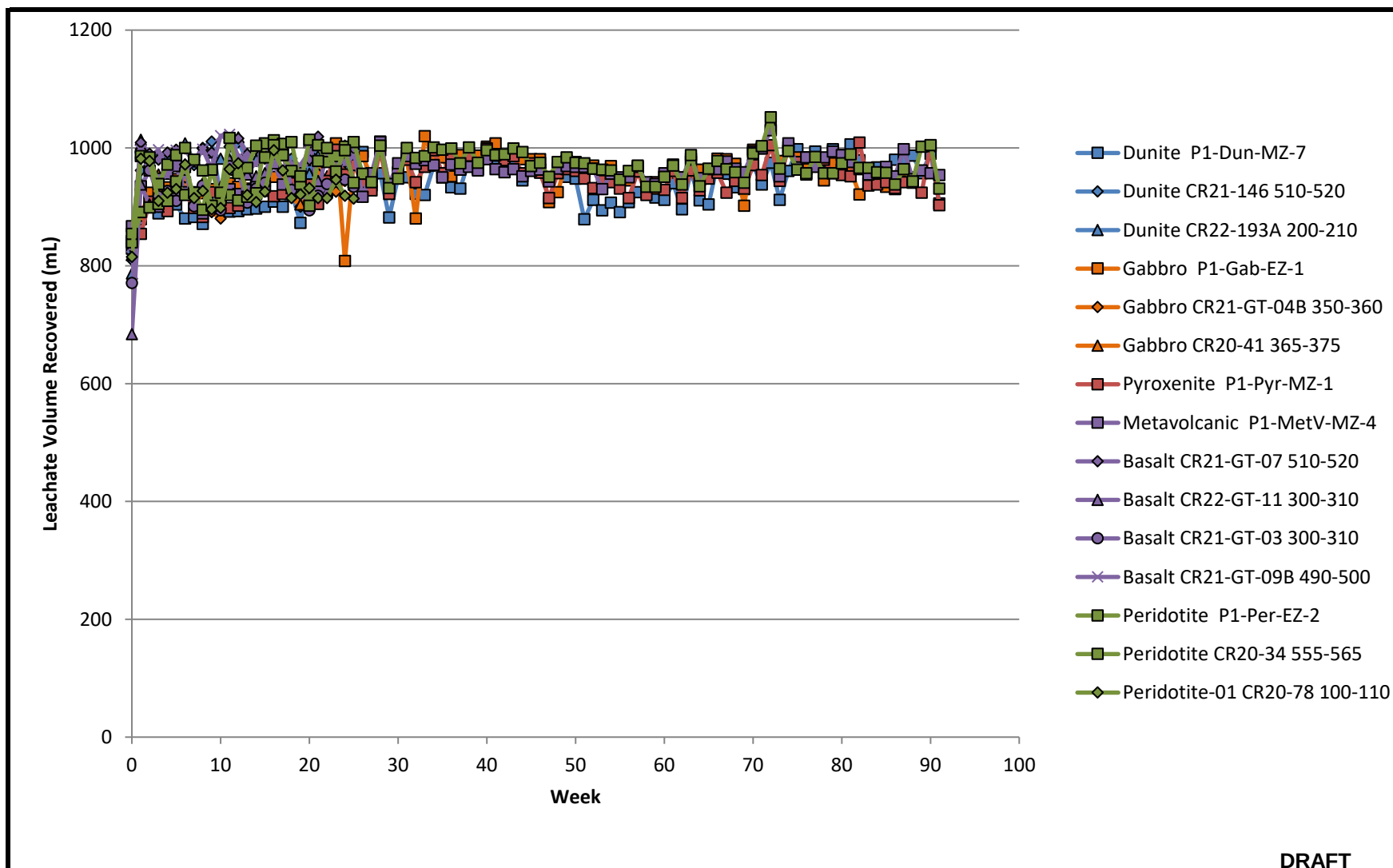
Week/Event	Aluminum (0.2µm)	Silver	Arsenic	Barium	Beryllium	Boron	Bismuth	Calcium	Cadmium	Cobalt	Chromium	Copper	Iron	Potassium	Lithium	Magnesium	Manganese	Molybdenum
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
45																		
46																		
47																		
48	0.001	< 0.00005	< 0.0002	0.00172	< 0.000007	0.041	< 0.00001	1.64	< 0.000003	0.000025	0.0011	< 0.0002	< 0.007	0.321	< 0.0001	10.8	0.00063	0.00072
49																		
50																		
51																		
52	0.001	< 0.00005	< 0.0002	0.00151	< 0.000007	0.042	< 0.00001	1.28	< 0.000003	0.000016	0.00106	0.0004	< 0.007	0.24	< 0.0001	8.03	0.0006	0.00057
53																		
54																		
55																		
56	0.003	< 0.00005	< 0.0002	0.00170	< 0.000007	0.038	< 0.00001	1.33	< 0.000003	0.000028	0.00173	0.0005	0.082	0.266	< 0.0001	8.05	0.00111	0.00056
57																		
58																		
59																		
60	0.001	< 0.00005	< 0.0002	0.00162	< 0.000007	0.042	< 0.00001	1.21	< 0.000003	0.000046	0.00101	< 0.0002	< 0.007	0.200	< 0.0001	6.72	0.00054	0.00027
61																		
62																		
63																		
64	0.001	< 0.00005	< 0.0002	0.00147	< 0.000007	0.031	< 0.00001	1.14	< 0.000003	0.00002	0.00093	< 0.0002	< 0.007	0.139	< 0.0001	5.71	0.0005	0.00037
65																		
66																		
67																		
68	< 0.001	< 0.00005	< 0.0002	0.00132	< 0.000007	0.034	< 0.00001	1.02	< 0.000003	0.000027	0.00087	0.0021	< 0.007	0.144	< 0.0001	6.14	0.0004	0.00045
69																		
70																		
71																		
72	0.001	< 0.00005	< 0.0002	0.00143	< 0.000007	0.032	< 0.00001	1.15	< 0.000003	0.000007	0.00085	0.0006	< 0.007	0.152	< 0.0001	6.12	0.0005	0.0003
73																		
74																		
75																		
76	< 0.001	< 0.00005	< 0.0002	0.00136	< 0.000007	0.033	< 0.00001	1.06	< 0.000003	0.000006	0.00079	< 0.0002	< 0.007	0.165	< 0.0001	6.01	0.00036	0.00033
77																		
78																		
79																		
80	0.001	< 0.00005	< 0.0002	0.00148	< 0.000007	0.037	< 0.00001	1.21	< 0.000003	0.000015	0.00066	< 0.0002	< 0.007	0.148	< 0.0001	7.28	0.00047	0.00031
81																		
82																		
83																		
84	< 0.001	< 0.00005	< 0.0002	0.00117	< 0.000007	0.032	< 0.00001	0.93	< 0.000003	0.000041	0.00087	< 0.002	< 0.007	0.13	0.0002	5.08	0.0004	0.00048
85																		
86																		
87																		

CBS-001														
Week/Event	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
0	13.1	0.003	< 0.00009	0.0012	0.00023	0.0017	0.0276	0.00009	< 0.000005	0.0069	0.0001	0.00016	< 0.00002	< 0.002
1	0.66	0.0015	< 0.00009	< 0.0009	0.00005	0.0018	0.00489	< 0.00005	< 0.000005	0.000097	< 0.00001	0.00004	< 0.00002	< 0.002
2	0.31	0.001	< 0.00009	< 0.0009	0.00004	0.00051	0.00392	< 0.00005	< 0.000005	0.000035	0.00004	0.00004	< 0.00002	< 0.002
3	0.25	0.0008	< 0.00009	< 0.0009	0.00008	0.0003	0.00345	< 0.00005	< 0.000005	0.00255	0.00001	0.00003	< 0.00002	< 0.002
4	0.29	0.0009	0.00013	< 0.0009	0.00008	0.00011	0.00348	0.00005	< 0.000005	0.00008	0.00001	0.00002	< 0.00002	< 0.002
5	0.3	0.0009	< 0.00009	< 0.0009	< 0.00004	0.00017	0.00355	< 0.00005	< 0.000005	0.00113	0.00003	0.00002	< 0.00002	< 0.002
6	0.27	0.0005	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00268	0.00006	< 0.000005	< 0.000002	0.00067	< 0.00002	< 0.00002	< 0.002
7	0.25	0.0006	< 0.00009	< 0.0009	0.00009	0.00012	0.0028	0.00009	< 0.000005	0.000363	0.00002	0.00006	< 0.00002	< 0.002
8	0.21	0.0018	< 0.00009	< 0.0009	0.00008	0.00012	0.00266	0.0001	< 0.000005	0.000099	0.00002	0.00005	< 0.00002	< 0.002
9														
10														
11														
12	0.34	0.0009	< 0.00009	< 0.0009	0.00007	0.00016	0.00341	< 0.00005	< 0.000005	0.000214	0.00003	0.00003	< 0.00002	< 0.002
13														
14														
15														
16	0.16	0.0009	< 0.00009	< 0.0009	0.00027	0.00007	0.00313	0.00024	< 0.000005	0.000488	0.00002	0.00003	< 0.00002	< 0.002
17														
18														
19														
20	0.06	0.0005	< 0.00009	< 0.0009	0.00019	< 0.00006	0.00292	0.00029	< 0.000005	0.000021	0.00002	< 0.00002	< 0.00002	< 0.002
21														
22														
23														
24	0.04	0.0007	< 0.00009	< 0.0009	0.00014	0.00007	0.00255	< 0.00005	< 0.000005	0.00016	0.00002	0.00007	< 0.00002	< 0.002
25														
26														
27														
28	0.14	0.0005	< 0.00009	< 0.0009	0.00007	0.00006	0.00213	< 0.00005	< 0.000005	0.00003	< 0.00001	0.00006	< 0.00002	< 0.002
29														
30														
31														
32	0.34	0.0006	< 0.00009	< 0.0009	0.00005	< 0.00006	0.00193	< 0.00005	< 0.000005	0.000338	< 0.00001	< 0.00002	< 0.00002	< 0.002
33														
34														
35														
36	0.04	0.0004	< 0.00009	< 0.0009	0.0001	< 0.00006	0.00193	< 0.00005	0.000011	0.000065	< 0.00001	0.00002	< 0.00002	< 0.002
37														
38														
39														
40	< 0.01	0.0007	< 0.00009	< 0.0009	0.00005	< 0.00006	0.00183	< 0.00005	< 0.000005	0.00215	0.00004	0.00009	< 0.00002	0.002
41														
42														
43														
44	0.27	0.0019	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00193	< 0.00005	< 0.000005	0.000692	0.00007	0.00002	< 0.00002	< 0.002

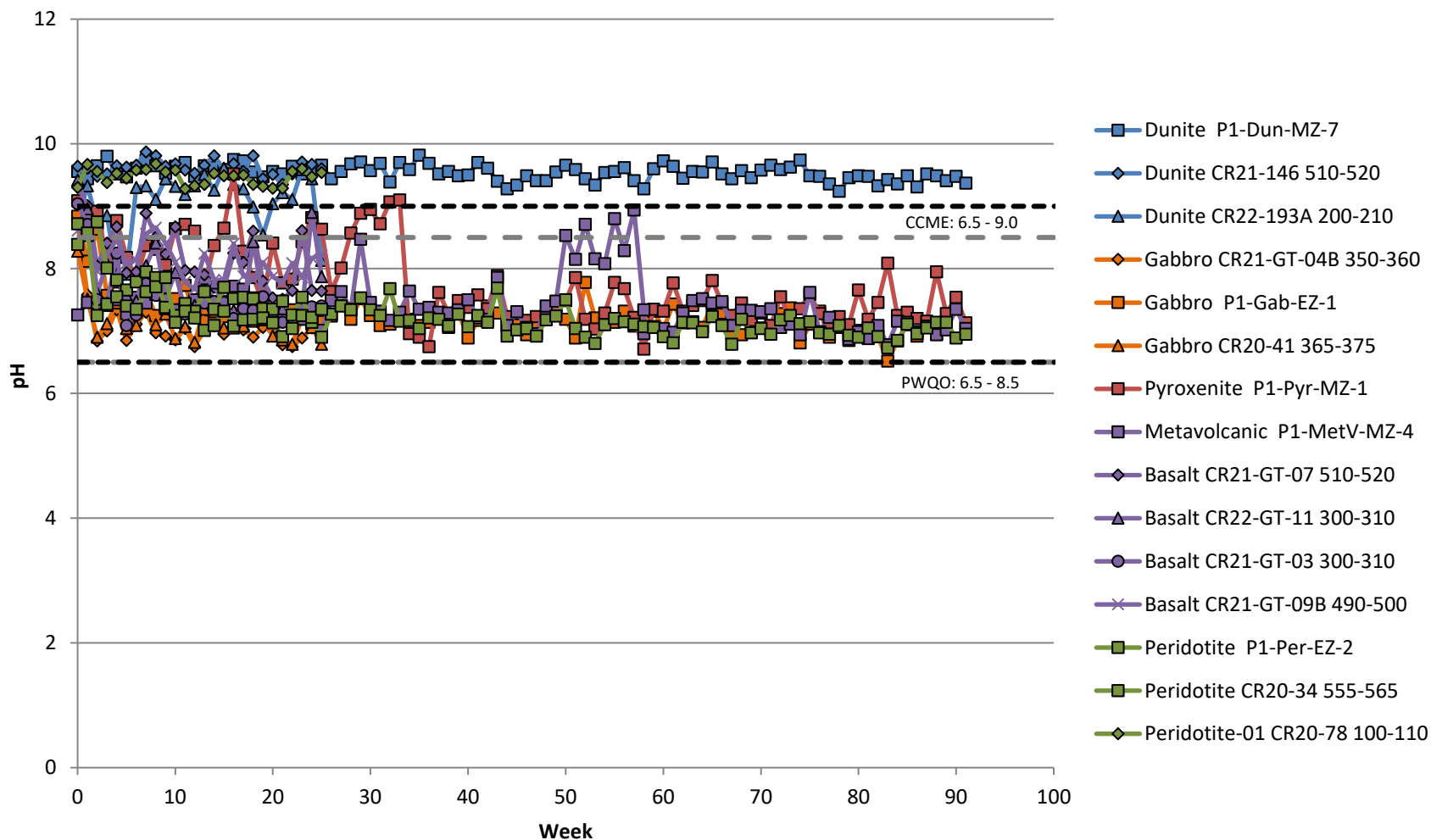
CBS-001															
Week/Event	Sodium	Nickel	Lead	Antimony	Selenium	Tin	Strontium	Titanium	Thallium	Uranium	Vanadium	Tungsten	Yttrium	Zinc	
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
45															
46															
47															
48	0.19	0.0006	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00205	0.00011	< 0.000005	0.000018	0.00005	0.00002	< 0.00002	< 0.002	
49															
50															
51															
52	0.03	0.0005	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00165	< 0.00007	< 0.000005	0.000033	0.00001	< 0.00002	< 0.00002	< 0.002	
53															
54															
55															
56	0.03	0.0046	< 0.00009	< 0.0009	0.00004	< 0.00006	0.00155	< 0.00007	< 0.000005	0.000789	0.00002	< 0.00002	< 0.00002	< 0.002	
57															
58															
59															
60	0.02	0.0006	< 0.00009	< 0.0009	0.00005	< 0.00006	0.00153	< 0.00007	< 0.000005	0.000058	0.00003	< 0.00002	< 0.00002	< 0.002	
61															
62															
63															
64	0.03	0.0004	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.0013	< 0.00007	< 0.000005	0.000111	0.00002	< 0.00002	< 0.00002	< 0.002	
65															
66															
67															
68	0.04	0.0004	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00121	< 0.00007	< 0.000005	0.000025	0.00004	< 0.00002	< 0.00002	< 0.002	
69															
70															
71															
72	0.04	0.0004	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00129	< 0.00007	< 0.000005	0.000018	0.00002	< 0.00002	< 0.00002	< 0.002	
73															
74															
75															
76	0.02	0.0004	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00137	< 0.00007	< 0.000005	0.000057	< 0.00001	< 0.00002	< 0.00002	< 0.002	
77															
78															
79															
80	0.03	0.0004	< 0.00009	< 0.0009	< 0.00004	< 0.00006	0.00127	< 0.00007	< 0.000005	0.000008	< 0.00001	< 0.00002	< 0.00002	< 0.002	
81															
82															
83															
84	0.03	0.0004	0.00015	< 0.0009	< 0.00004	< 0.00006	0.00098	< 0.0001	< 0.000005	0.00324	0.00002	< 0.0002	< 0.00002	< 0.002	
85															
86															
87															

APPENDIX G

**Waste Rock and Ore HCT
Time Series Plots**



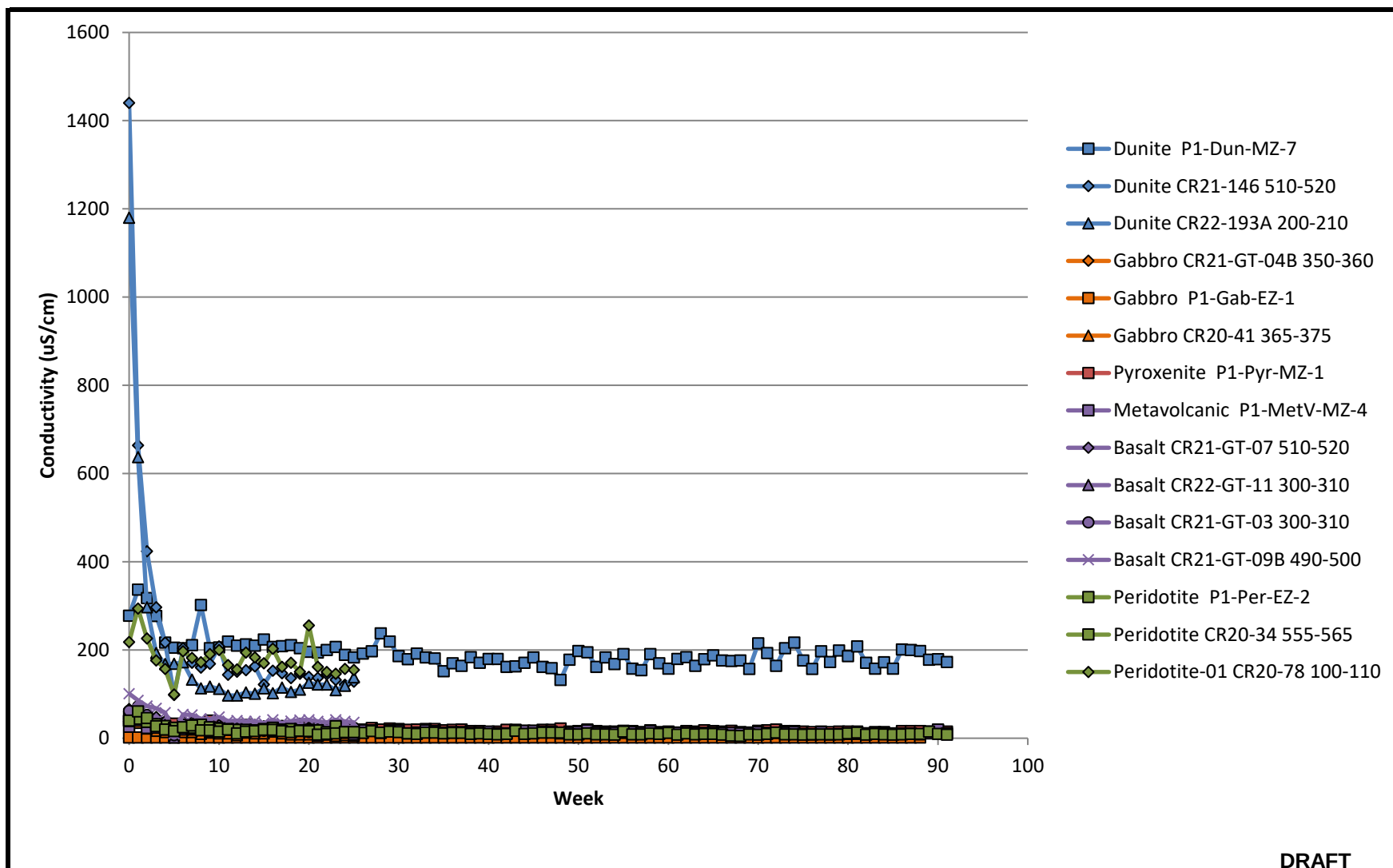
	Title Humidity Cell Results - Leachate Volume Recovered (mL)		
	Project Name Crawford	Project No. 23590674	FIGURE 1
	Client Name Canadian Nickel Company	Date 2024-03-25	



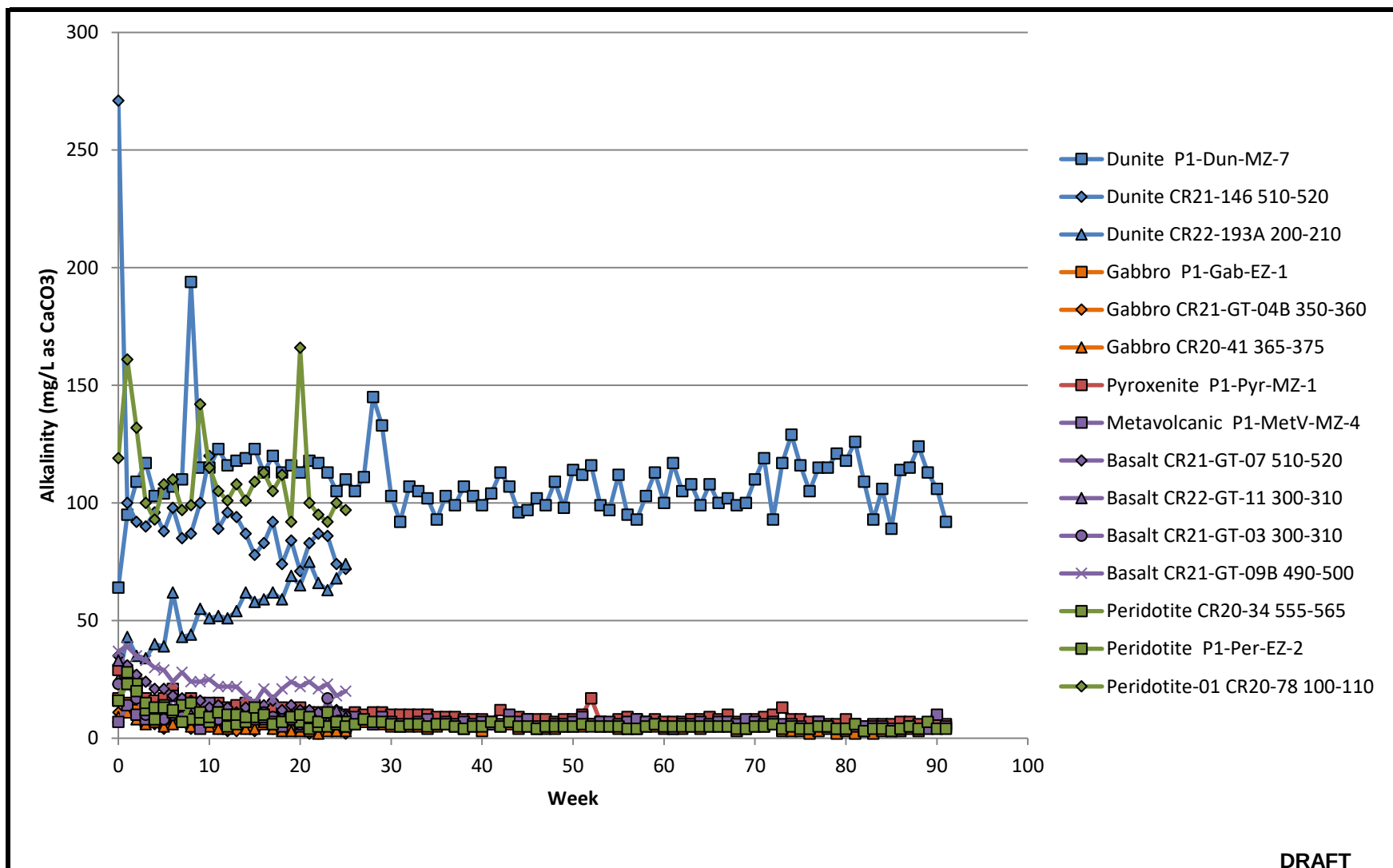
DRAFT



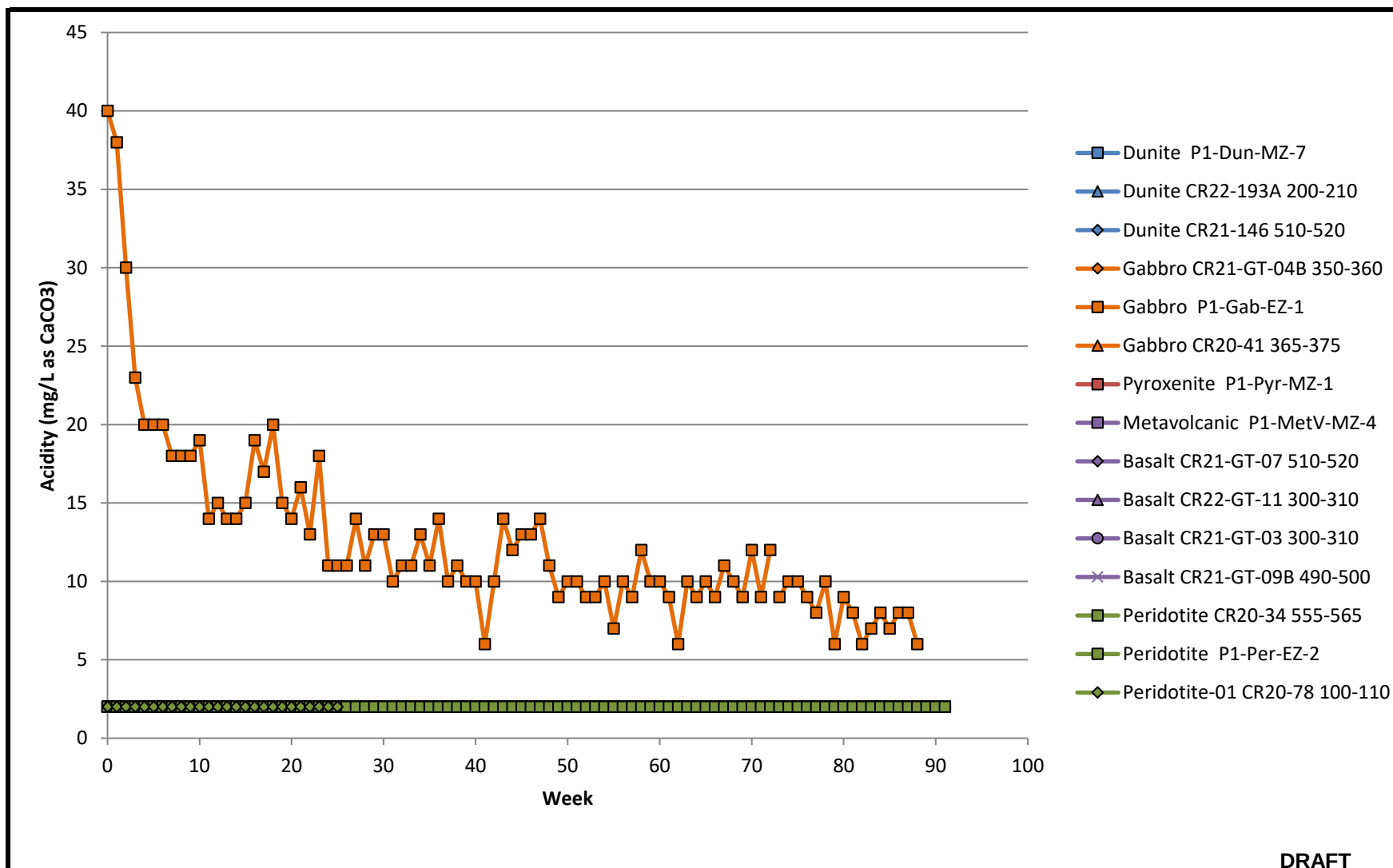
Title Humidity Cell Results - pH			
Project Name	Crawford	Project No.	23590674
Client Name	Canadian Nickel Company	Date	2024-03-25
FIGURE			2



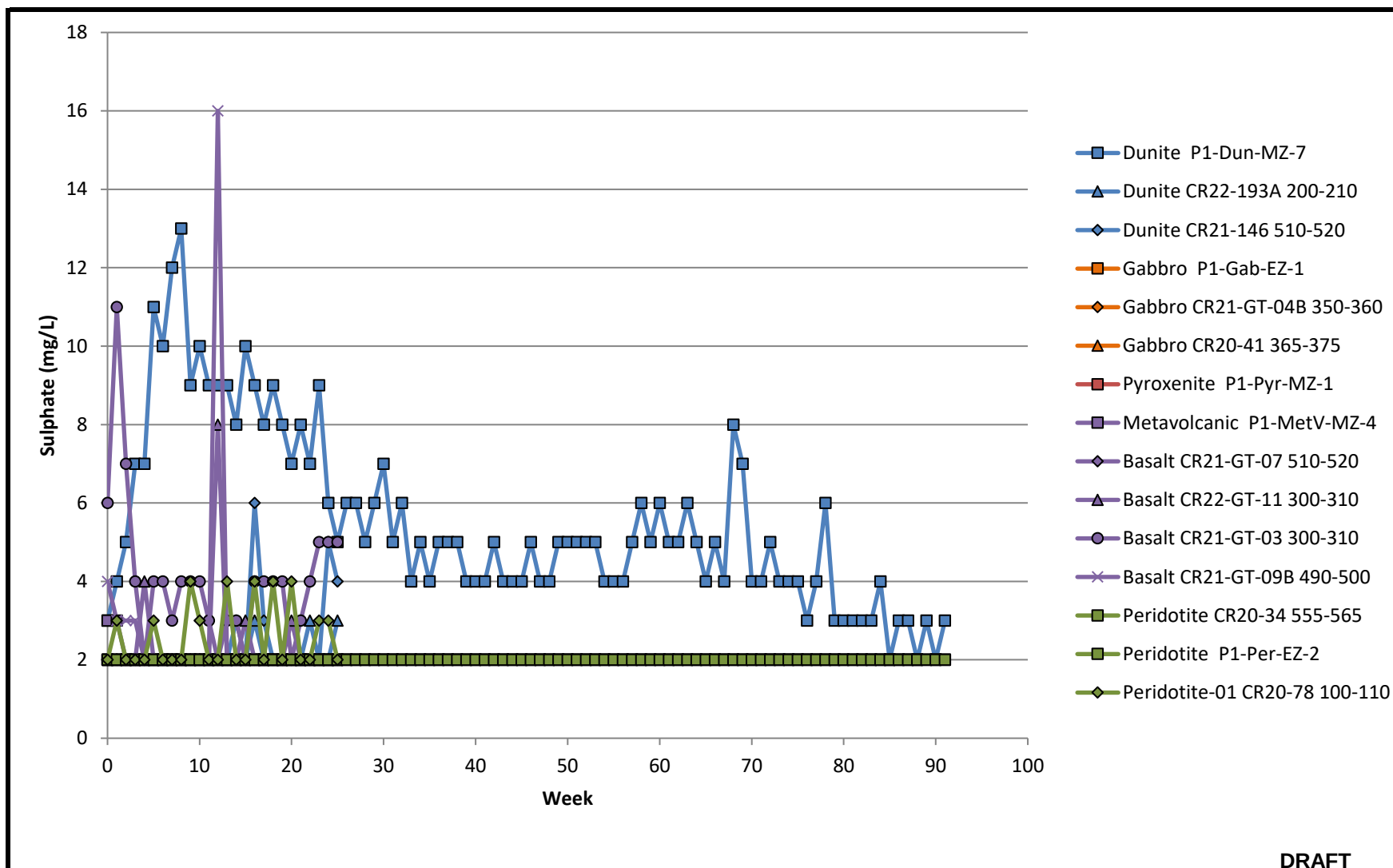
DRAFT			
	Title		
	Humidity Cell Results - Conductivity		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 4



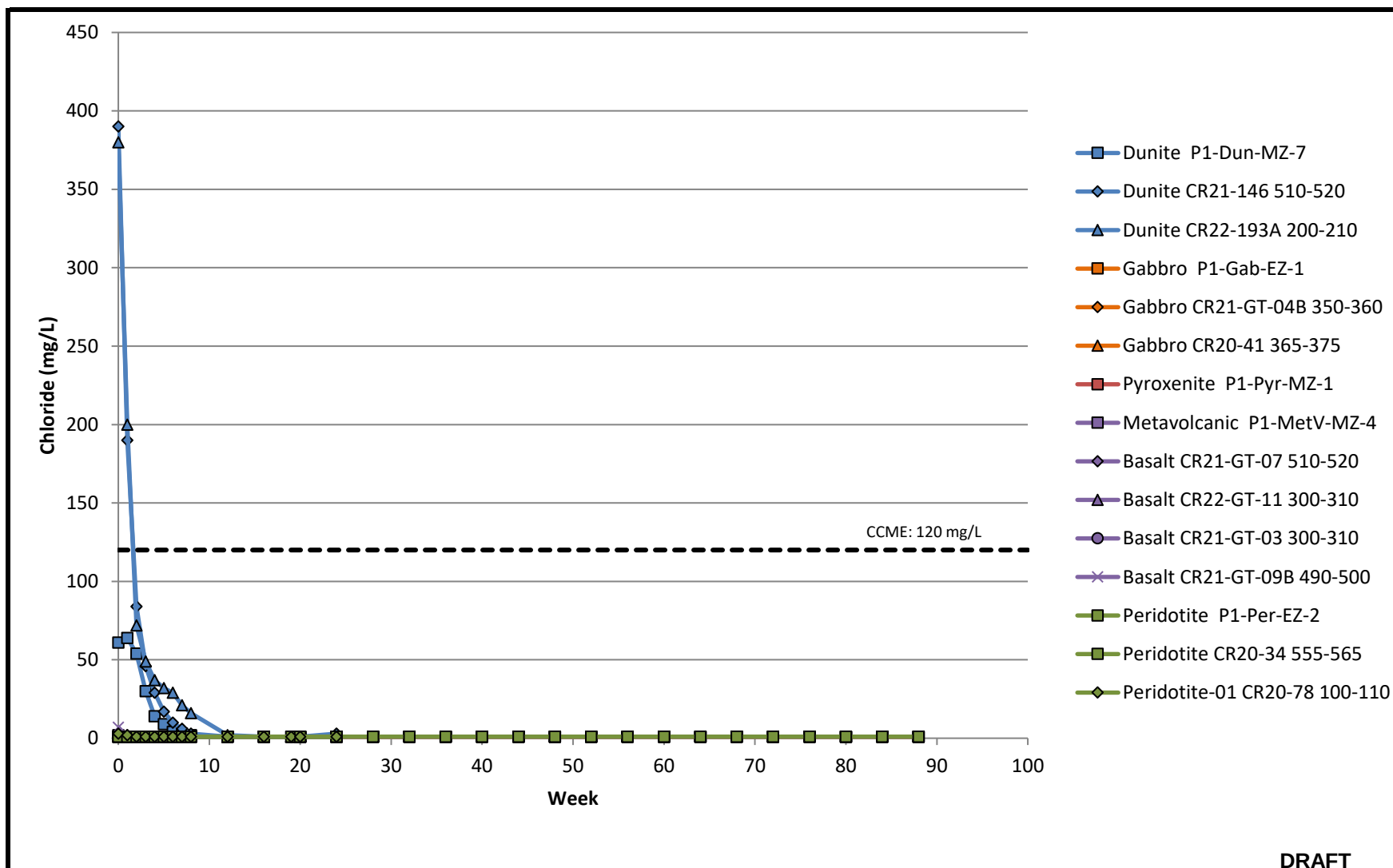
	Title			Humidity Cell Results - Alkalinity	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE 3



	Title		
	Humidity Cell Results - Acidity		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 5

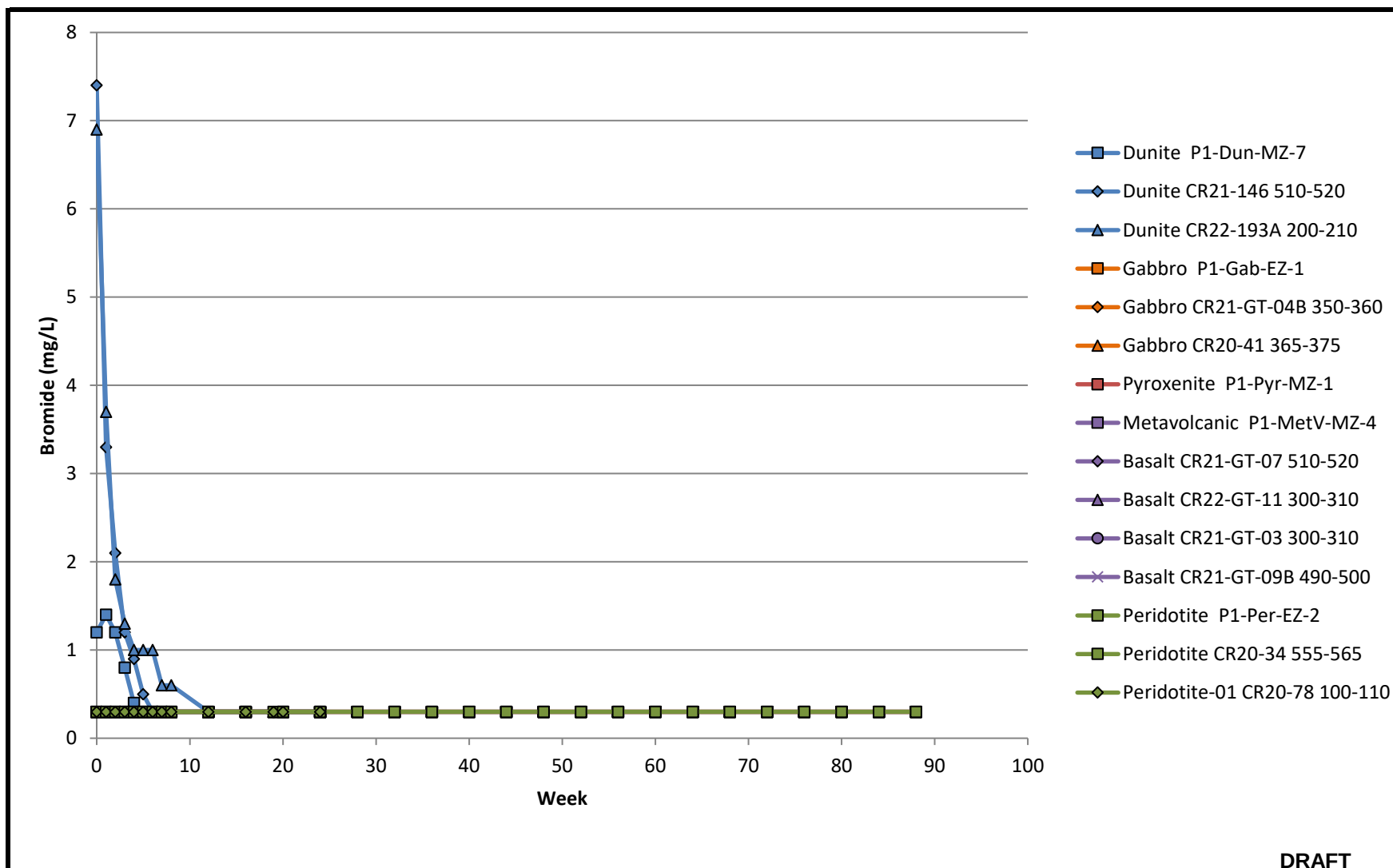


	Title			
	Humidity Cell Results - Sulphate			
	Project Name		Project No.	FIGURE
Crawford		23590674		
	Client Name		Date	6
	Canadian Nickel Company		2024-03-25	

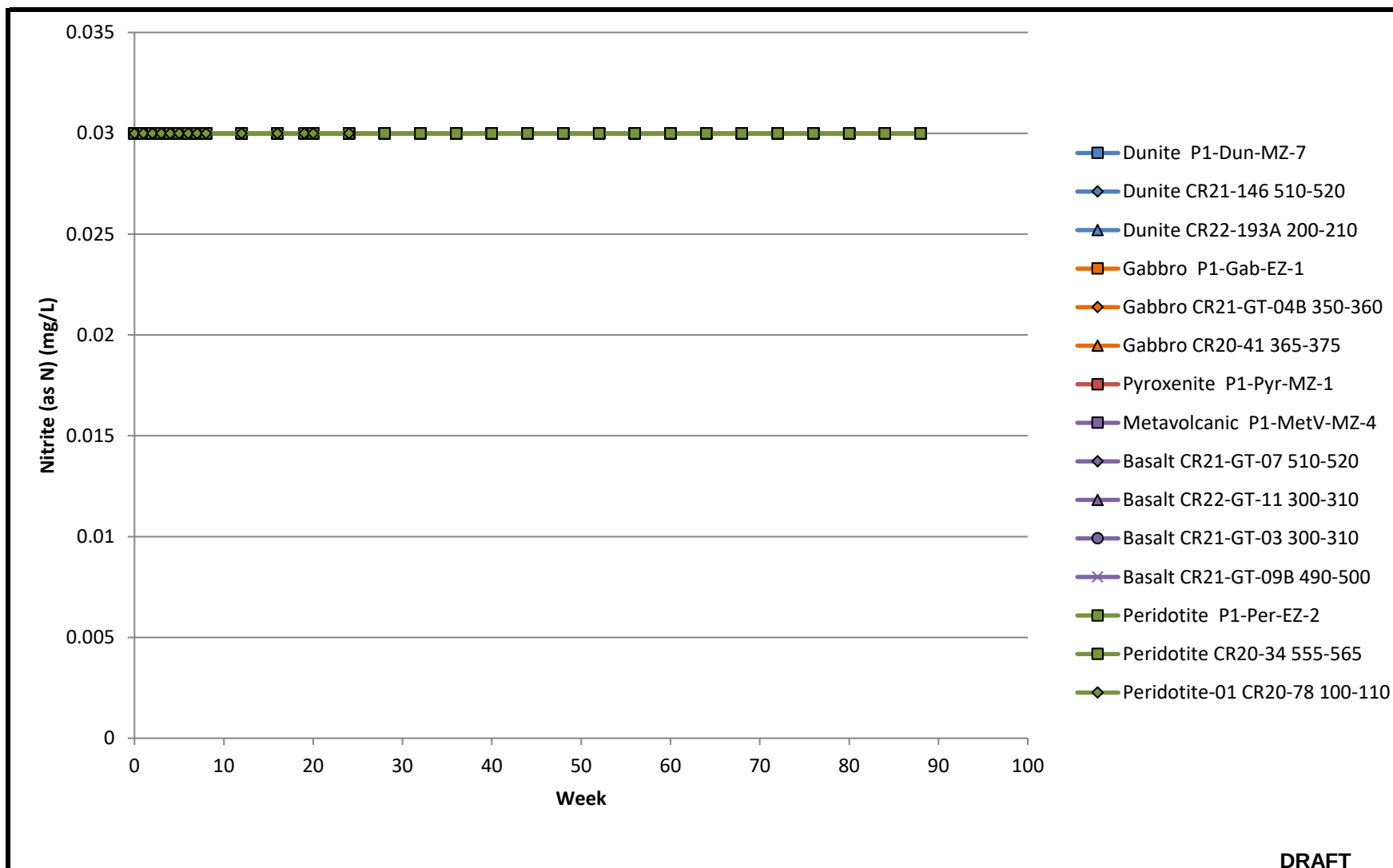


DRAFT

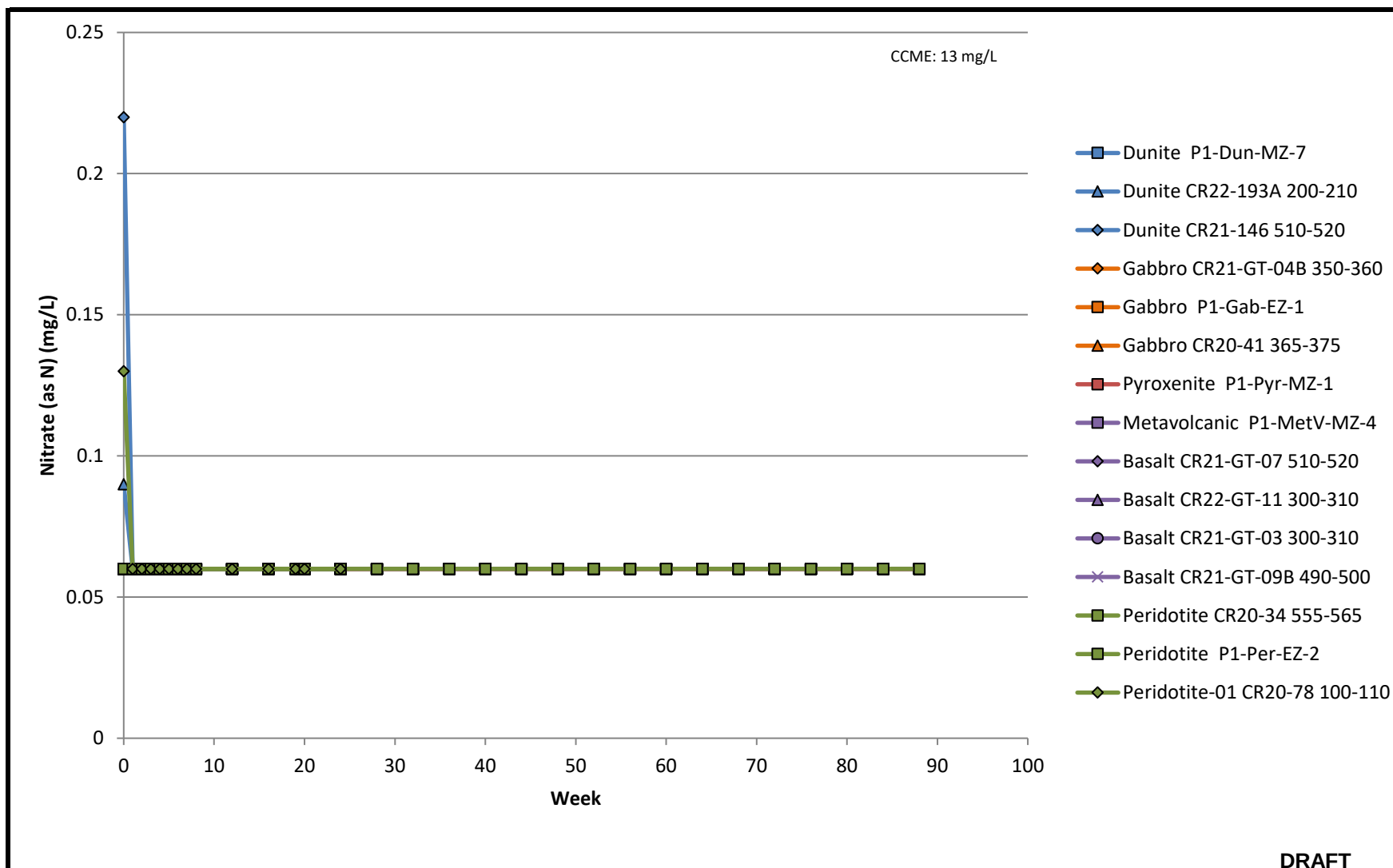
	Title			
	Humidity Cell Results - Chloride			
	Project Name	Crawford	Project No.	23590674
	Client Name	Canadian Nickel Company	Date	2024-03-25
				FIGURE
				7



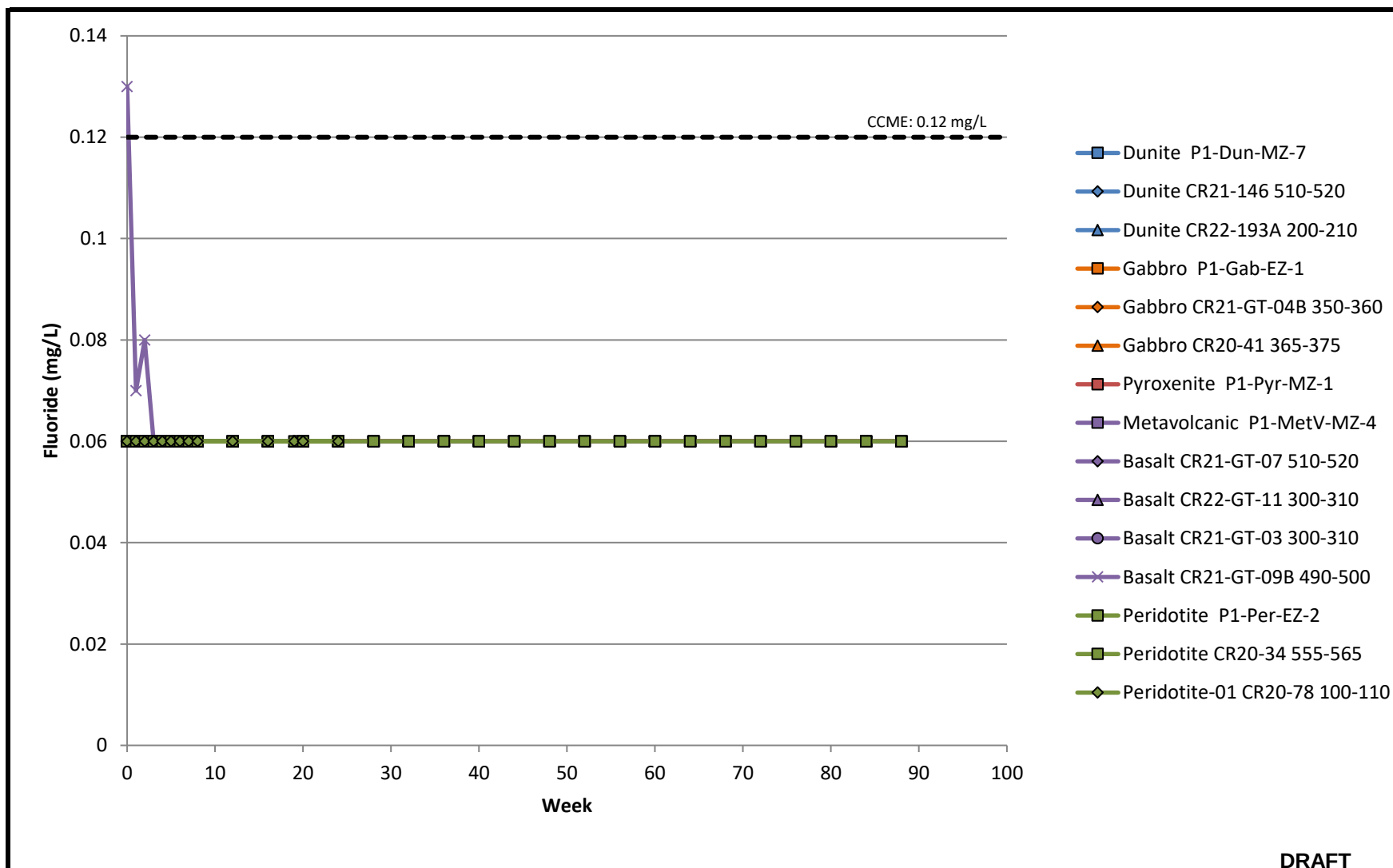
DRAFT			
	Title		
	Humidity Cell Results - Bromide		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 8



	Title		
	Humidity Cell Results - Nitrite (as N)		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 9

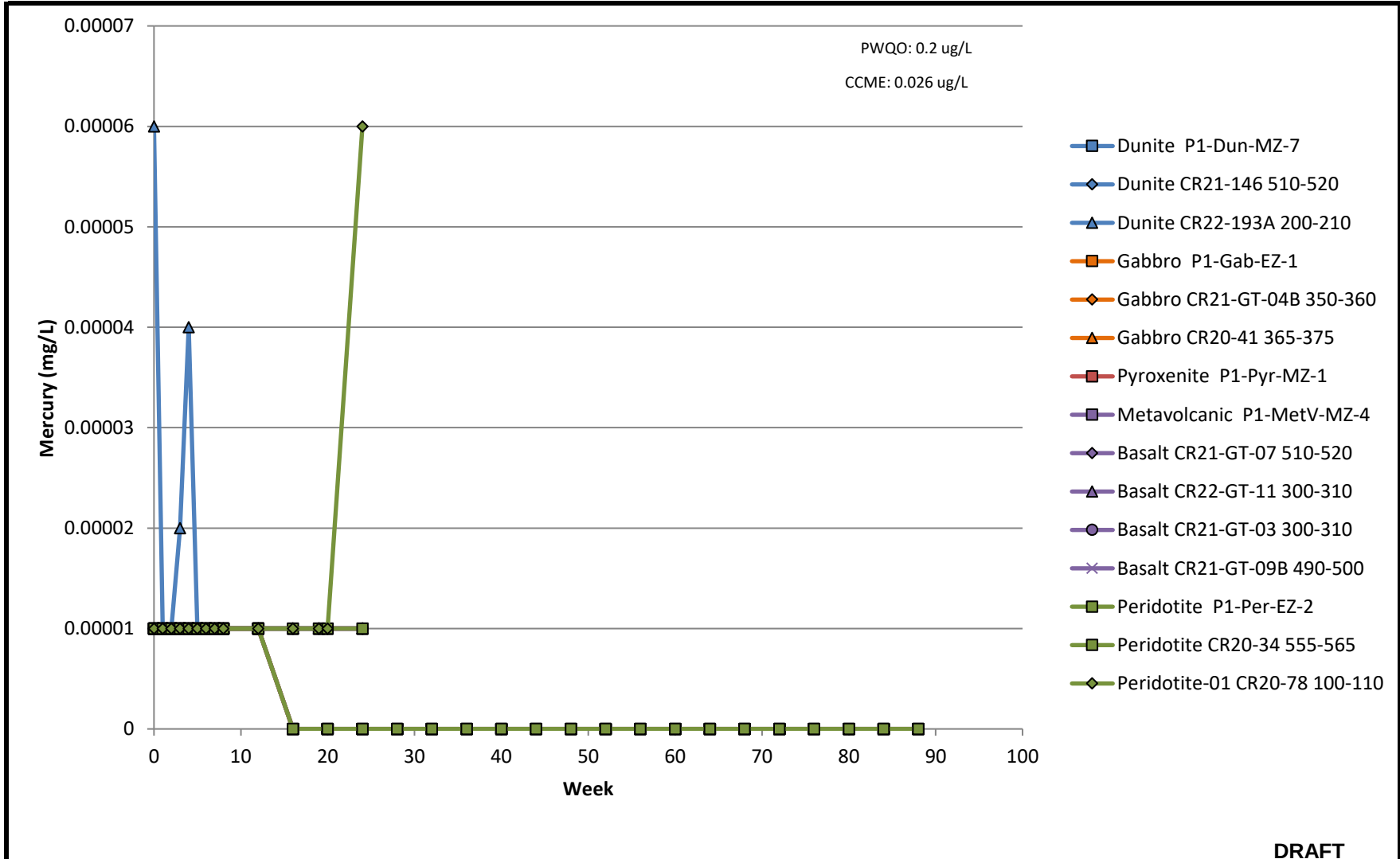


	Title		
	Humidity Cell Results - Nitrate (as N)		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 10

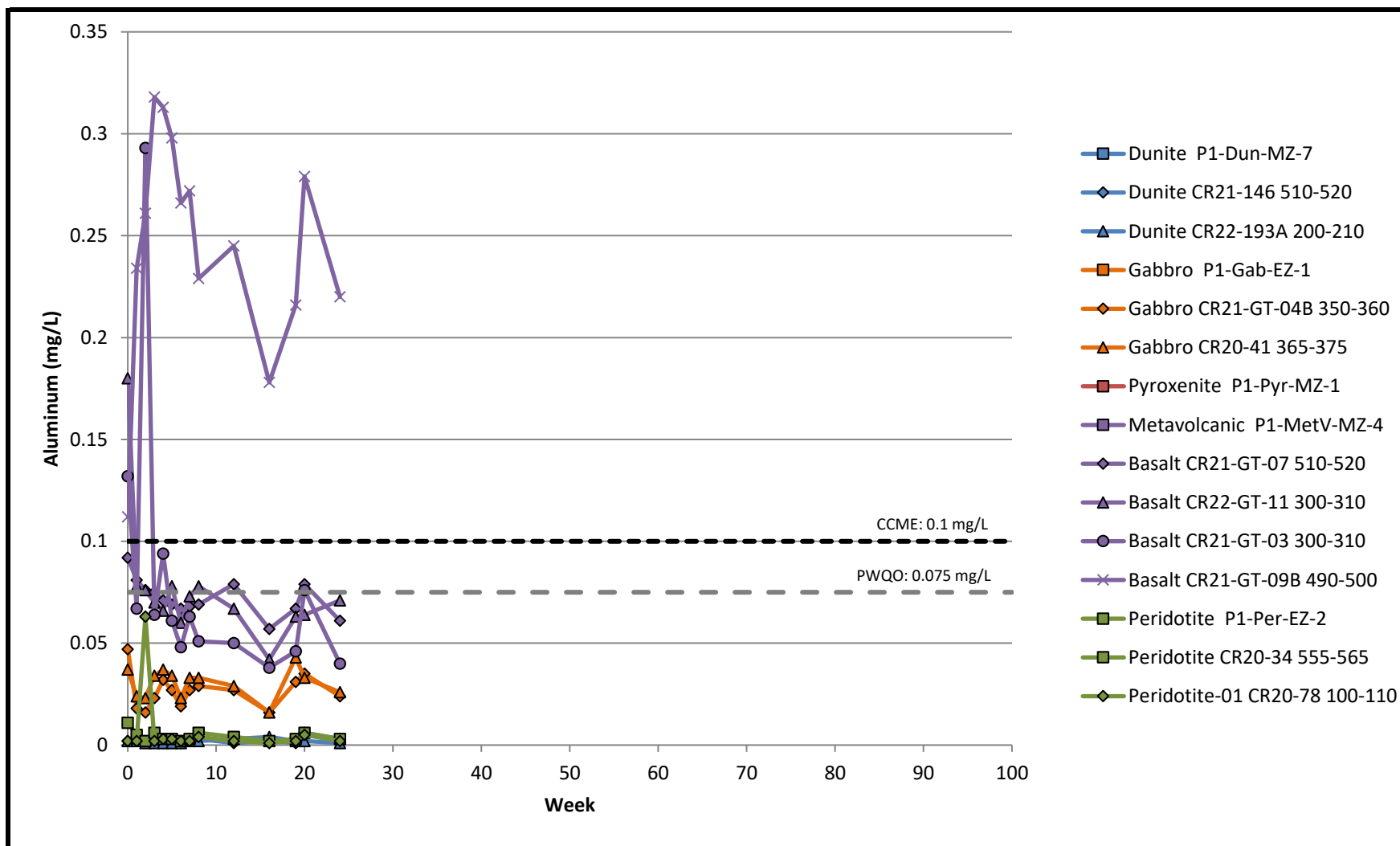


DRAFT

	Title		
	Humidity Cell Results - Fluoride		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 11

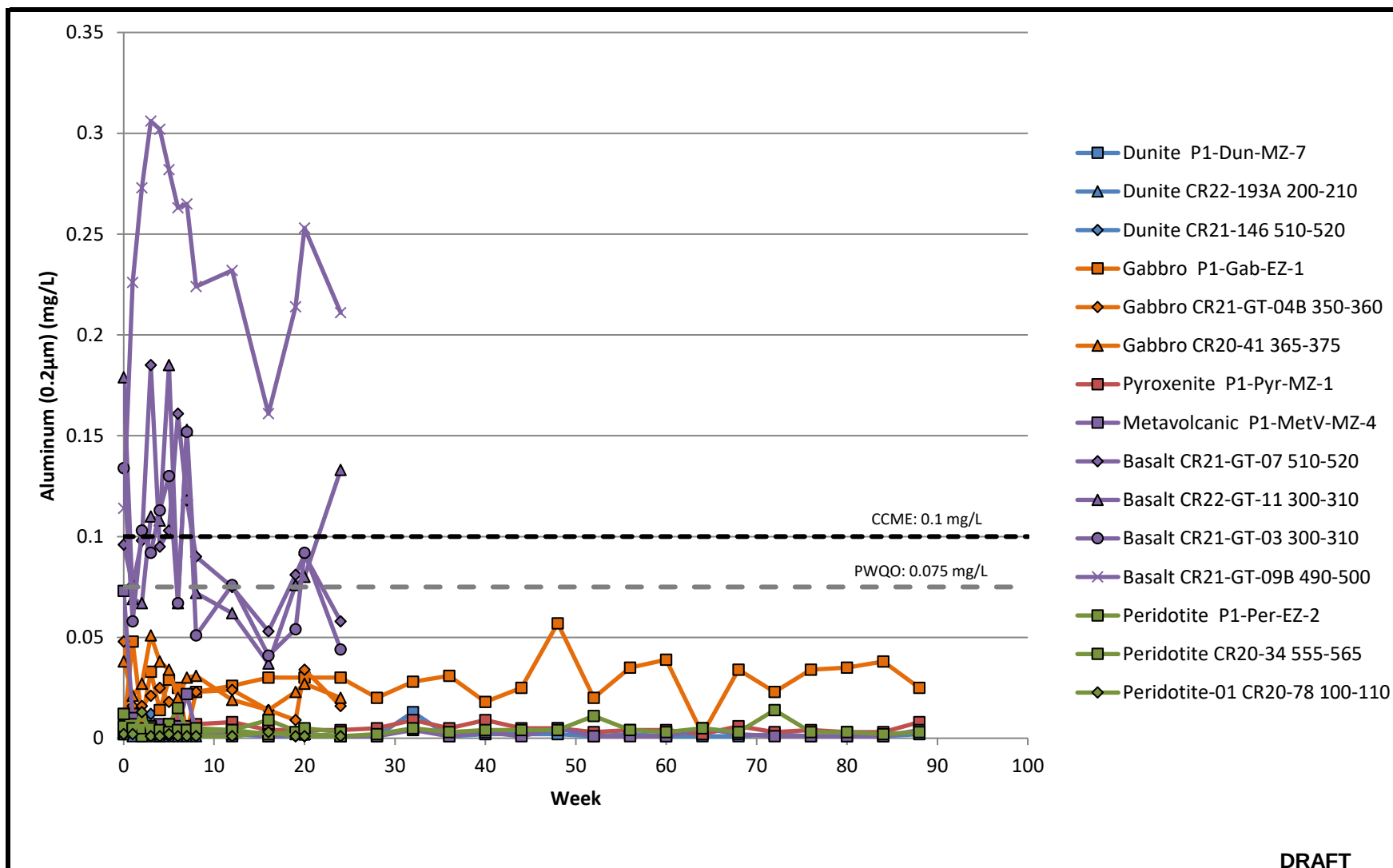


	Title			Humidity Cell Results - Mercury			
	Project Name		Crawford		Project No.	23590674	FIGURE
	Client Name		Canadian Nickel Company		Date	2024-03-25	
							13



DRAFT

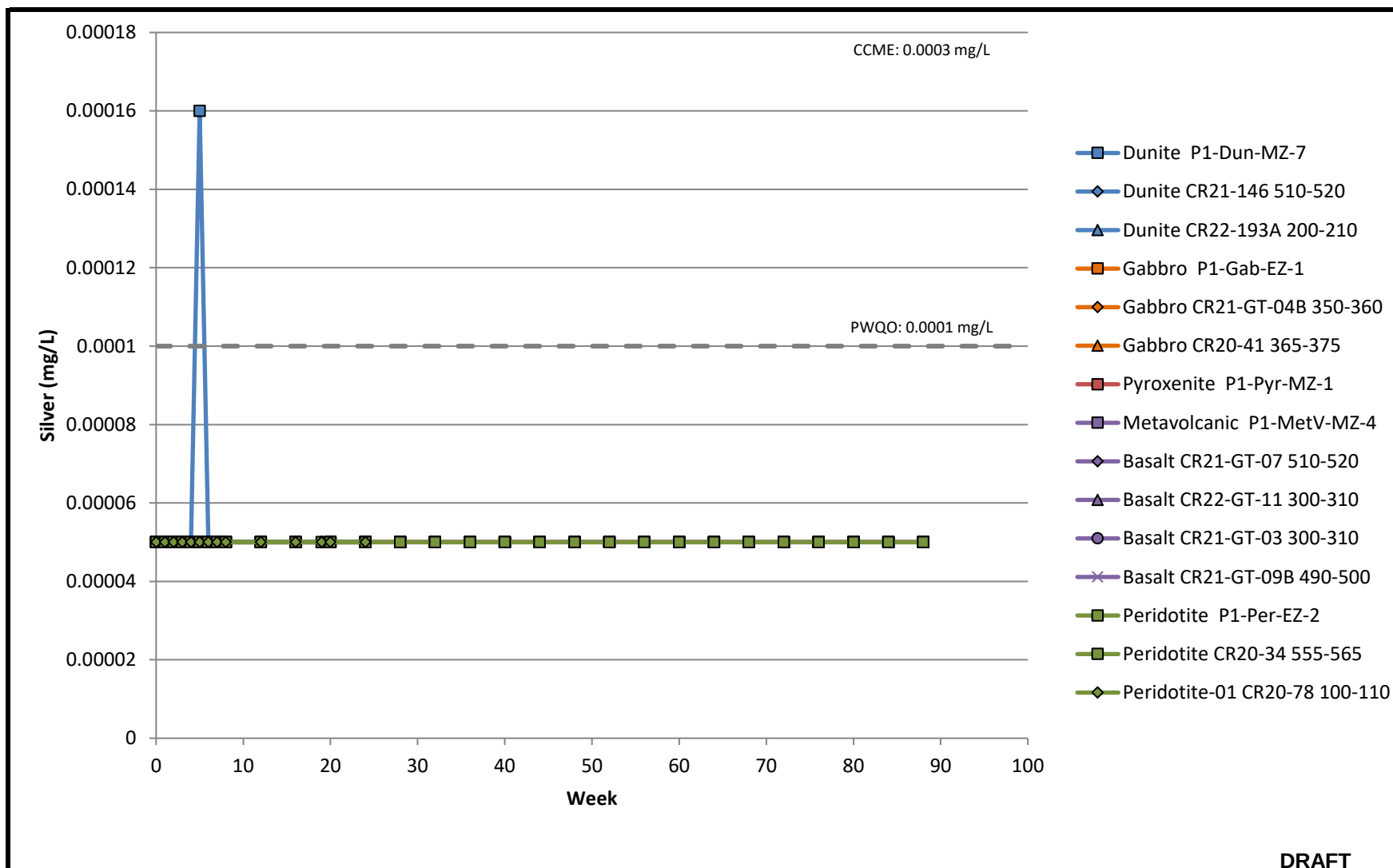
	Title				Humidity Cell Results - Aluminum	
	Project Name		Crawford	Project No.		23590674
	Client Name		Canadian Nickel Company	Date		2024-03-25
						FIGURE 14



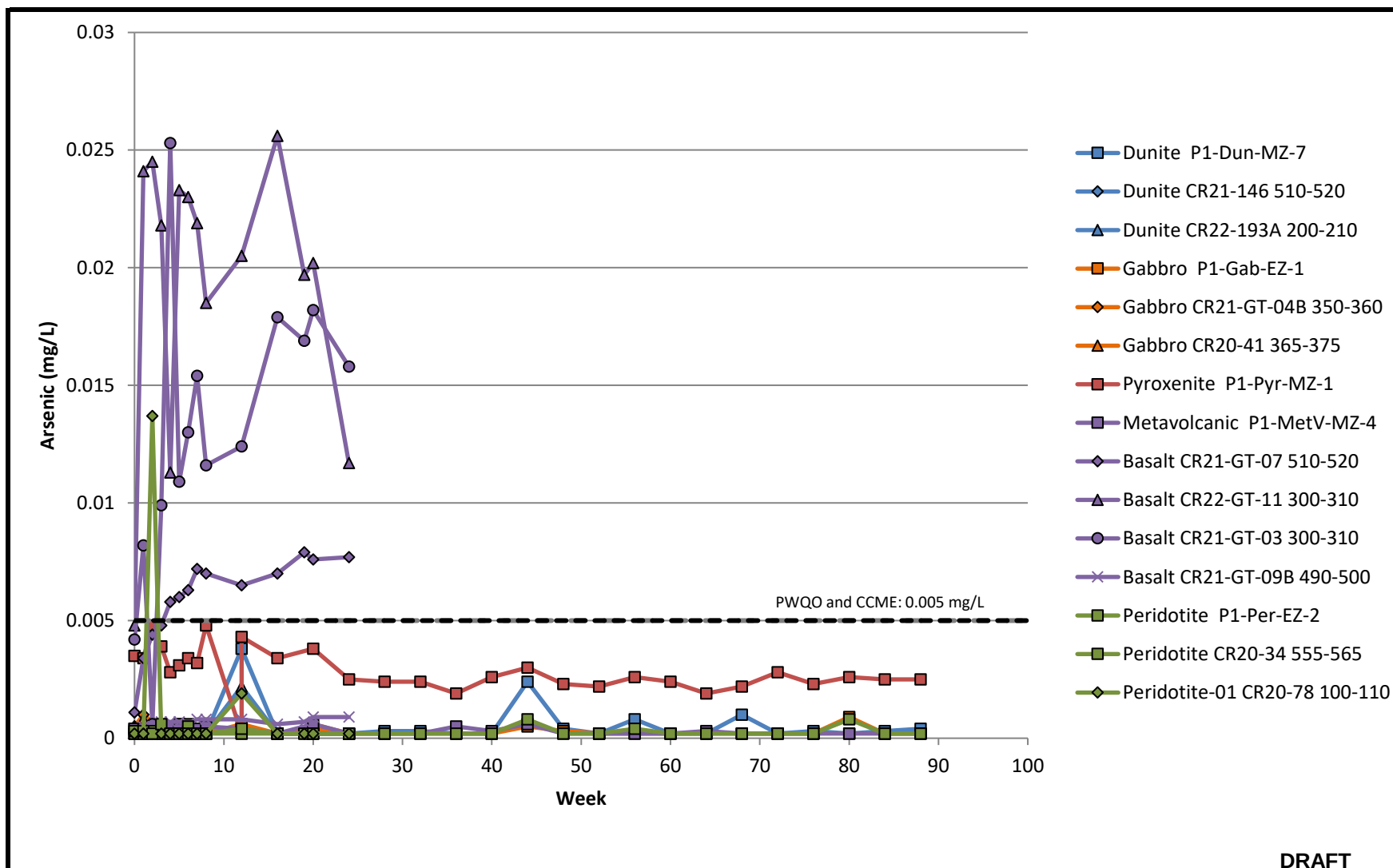
DRAFT



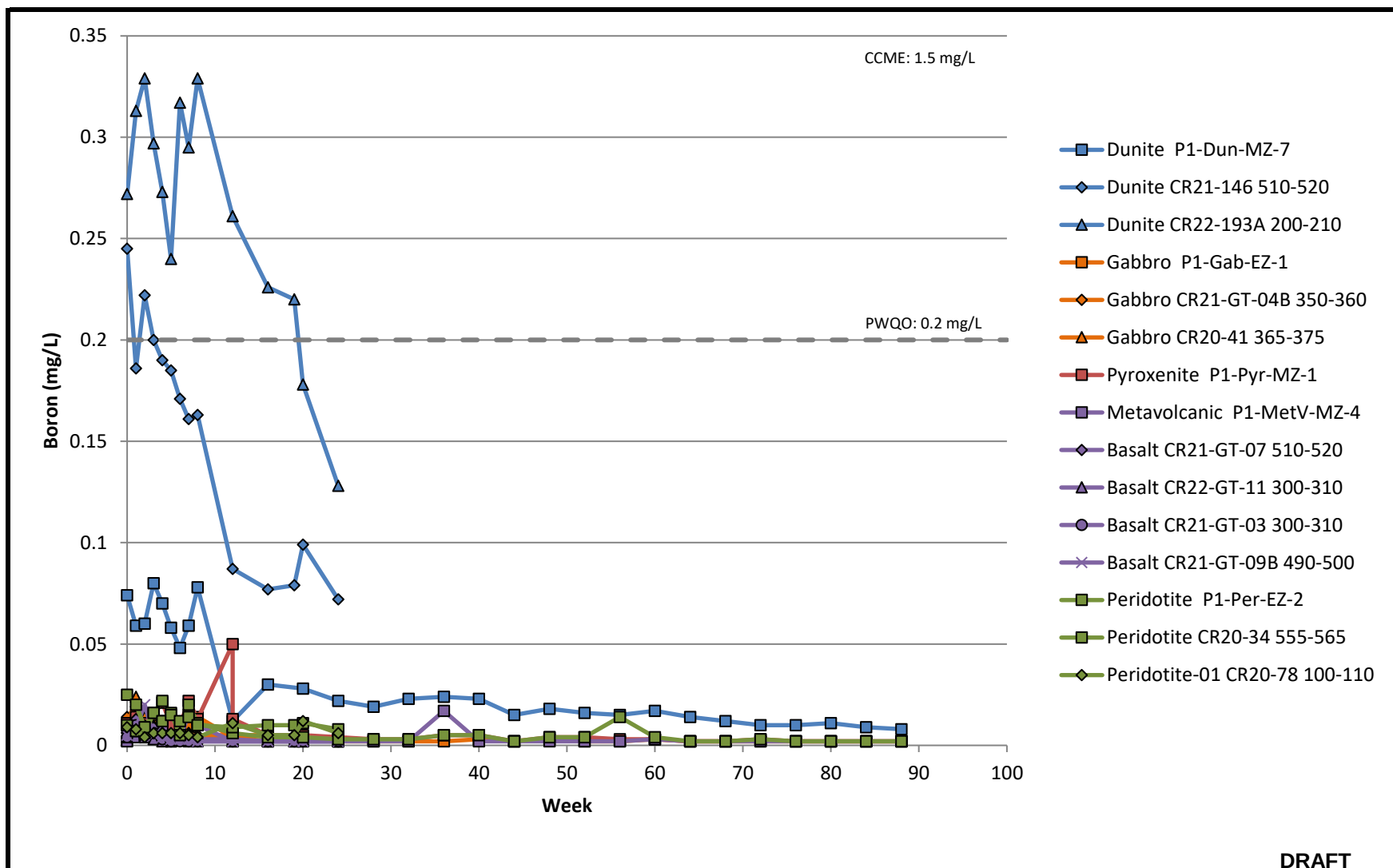
Title Humidity Cell Results - Aluminum (0.2µm)			
Project Name Crawford		Project No. 23590674	FIGURE 15
Client Name Canadian Nickel Company		Date 2024-03-25	



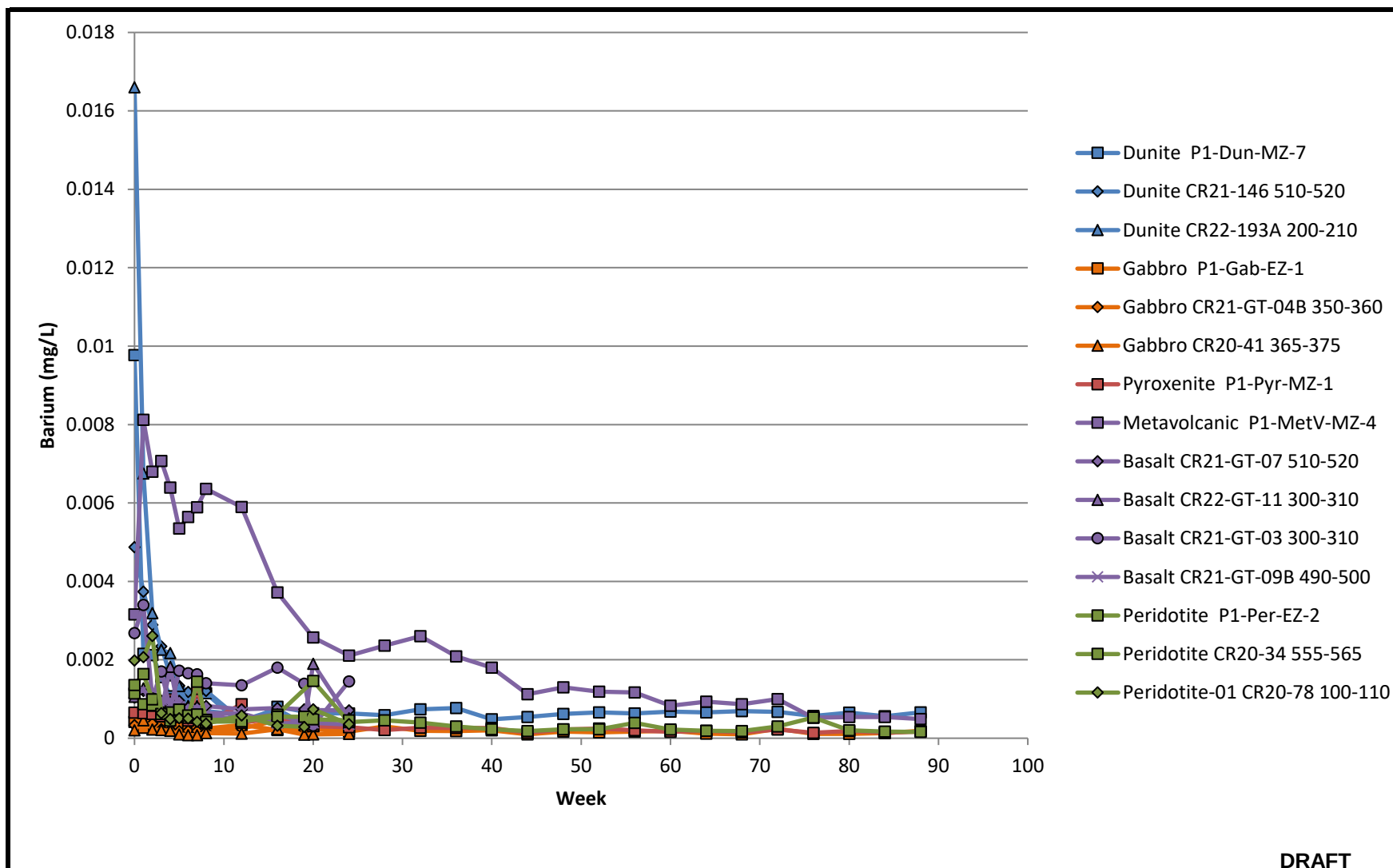
	Title			Humidity Cell Results - Silver		
	Project Name		Crawford	Project No.		23590674
	Client Name		Canadian Nickel Company	Date		2024-03-25
						FIGURE 16



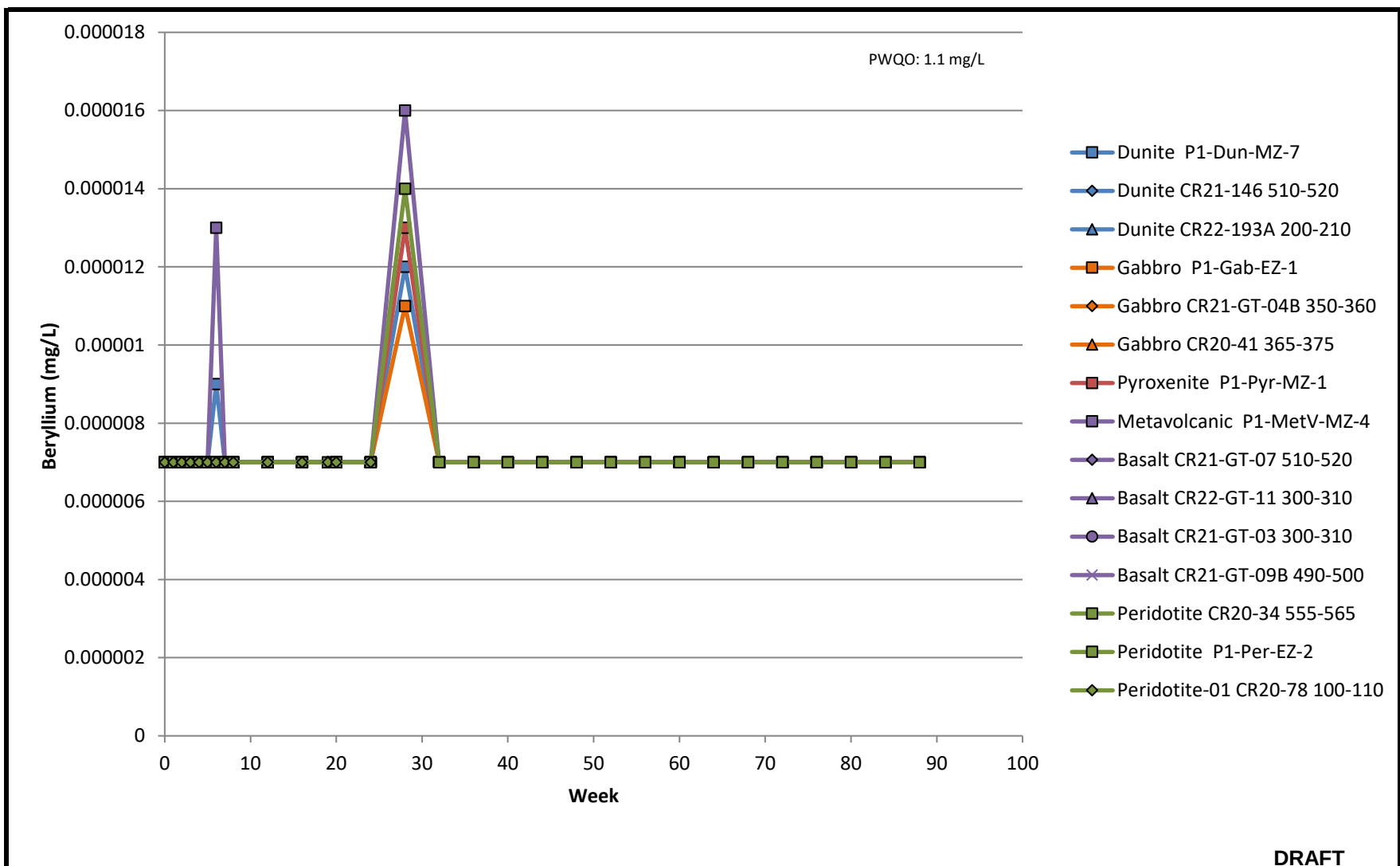
	Title		
	Humidity Cell Results - Arsenic		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 17



Title Humidity Cell Results - Boron			
Project Name Crawford		Project No. 23590674	FIGURE 18
Client Name Canadian Nickel Company		Date 2024-03-25	

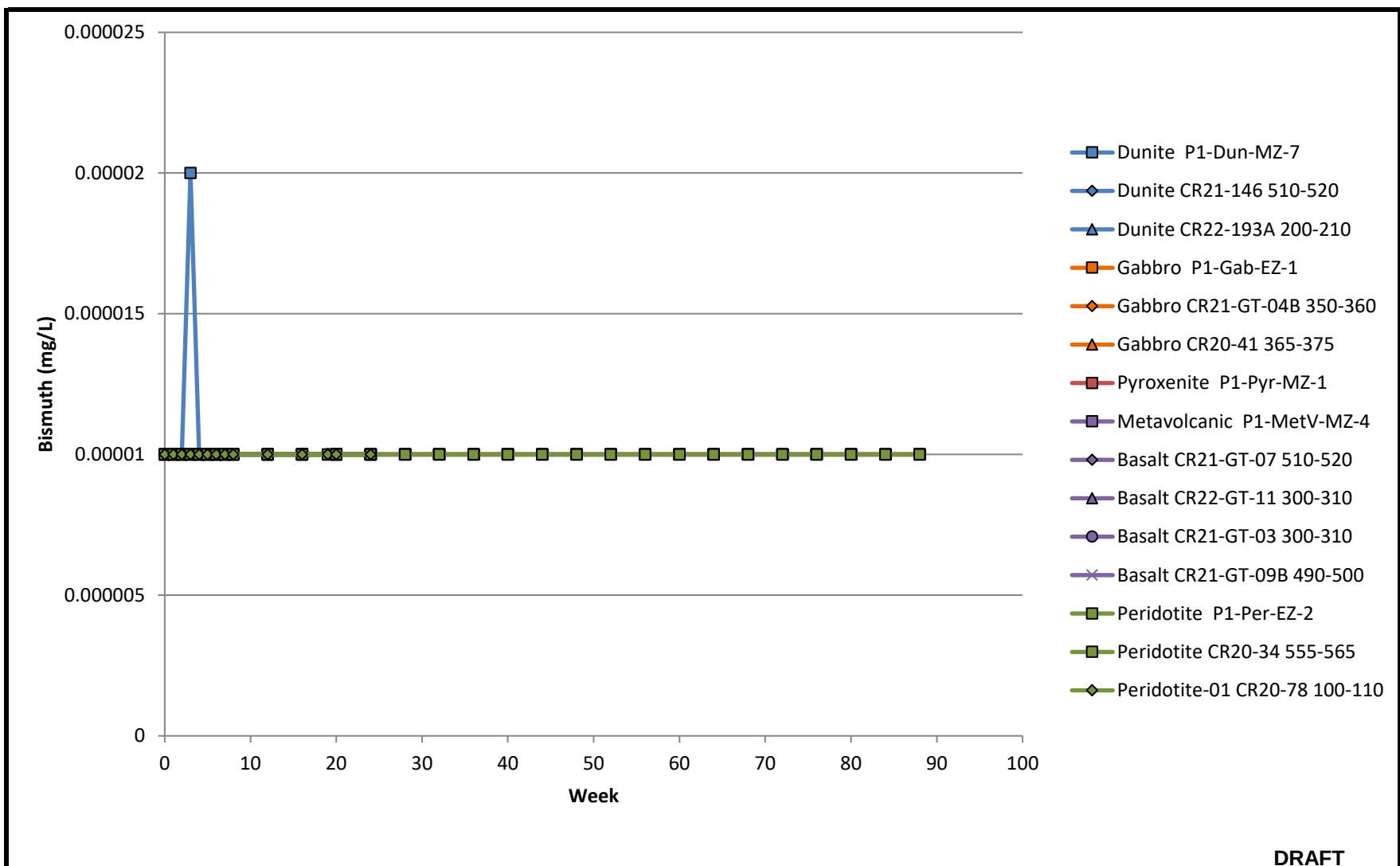


DRAFT			
	Title		
	Humidity Cell Results - Barium		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 19

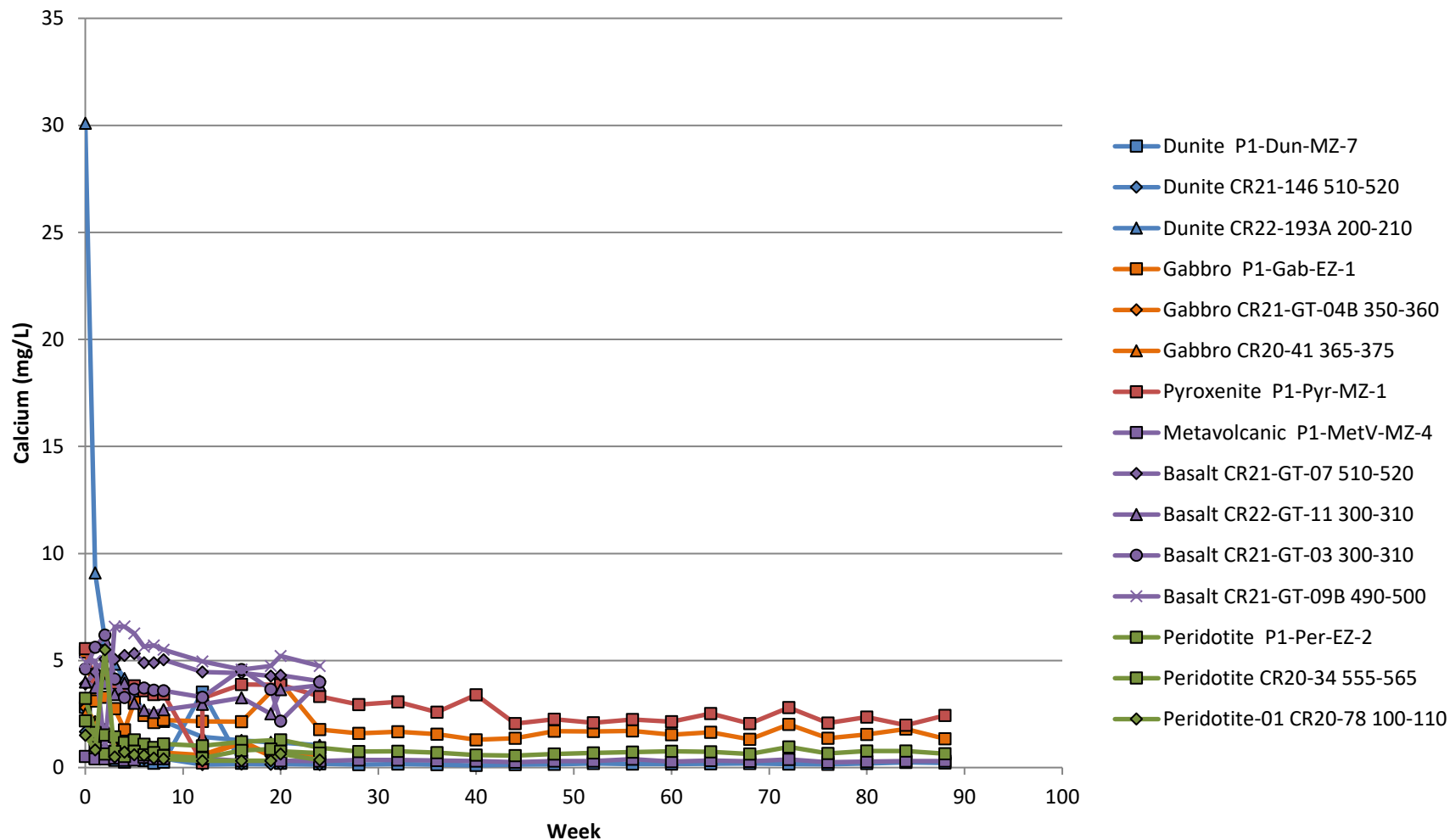


DRAFT

	Title				
	Humidity Cell Results - Beryllium				
	Project Name		Project No.		FIGURE
Crawford		23590674			
Client Name		Date		20	
Canadian Nickel Company		2024-03-25			



	Title		
	Humidity Cell Results - Bismuth		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 21



DRAFT



Title

Humidity Cell Results - Calcium

Project Name

Crawford

Project No.

23590674

FIGURE

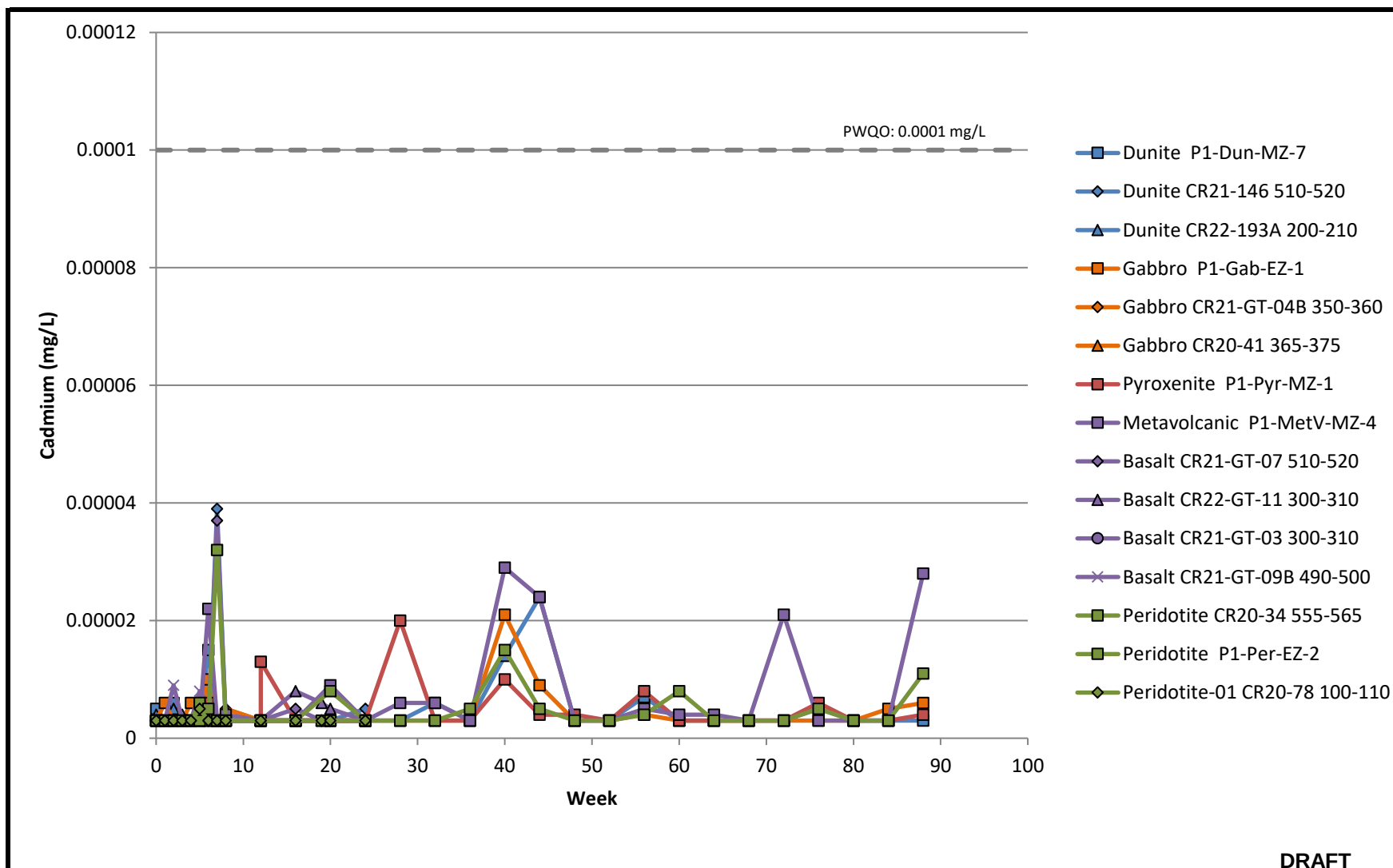
Client Name

Canadian Nickel Company

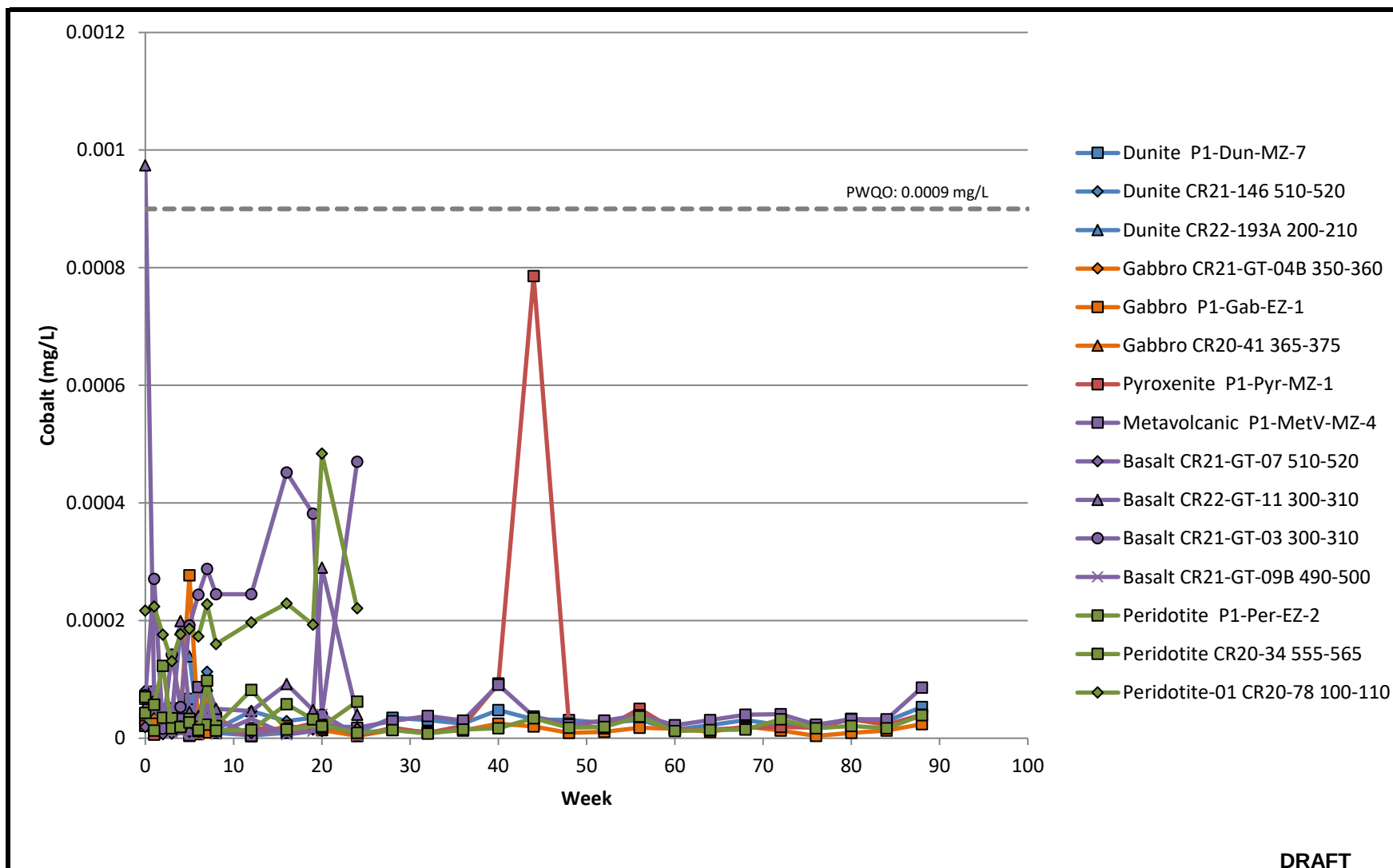
Date

2024-03-25

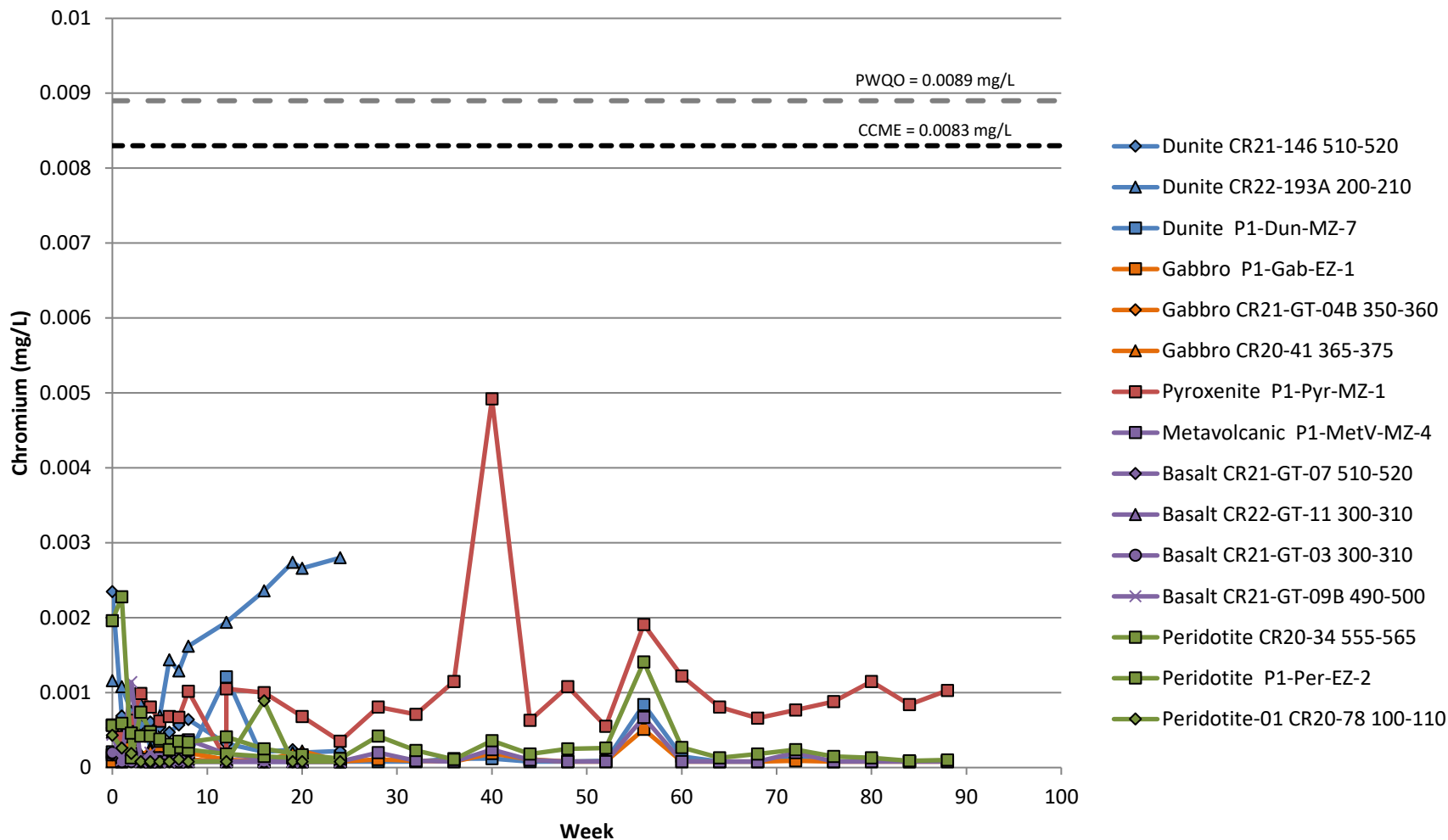
22



	Title		
	Humidity Cell Results - Cadmium		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 23



	Title		
	Humidity Cell Results - Cobalt		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 24



DRAFT



Title

Humidity Cell Results - Chromium

Project Name

Crawford

Project No.

23590674

FIGURE

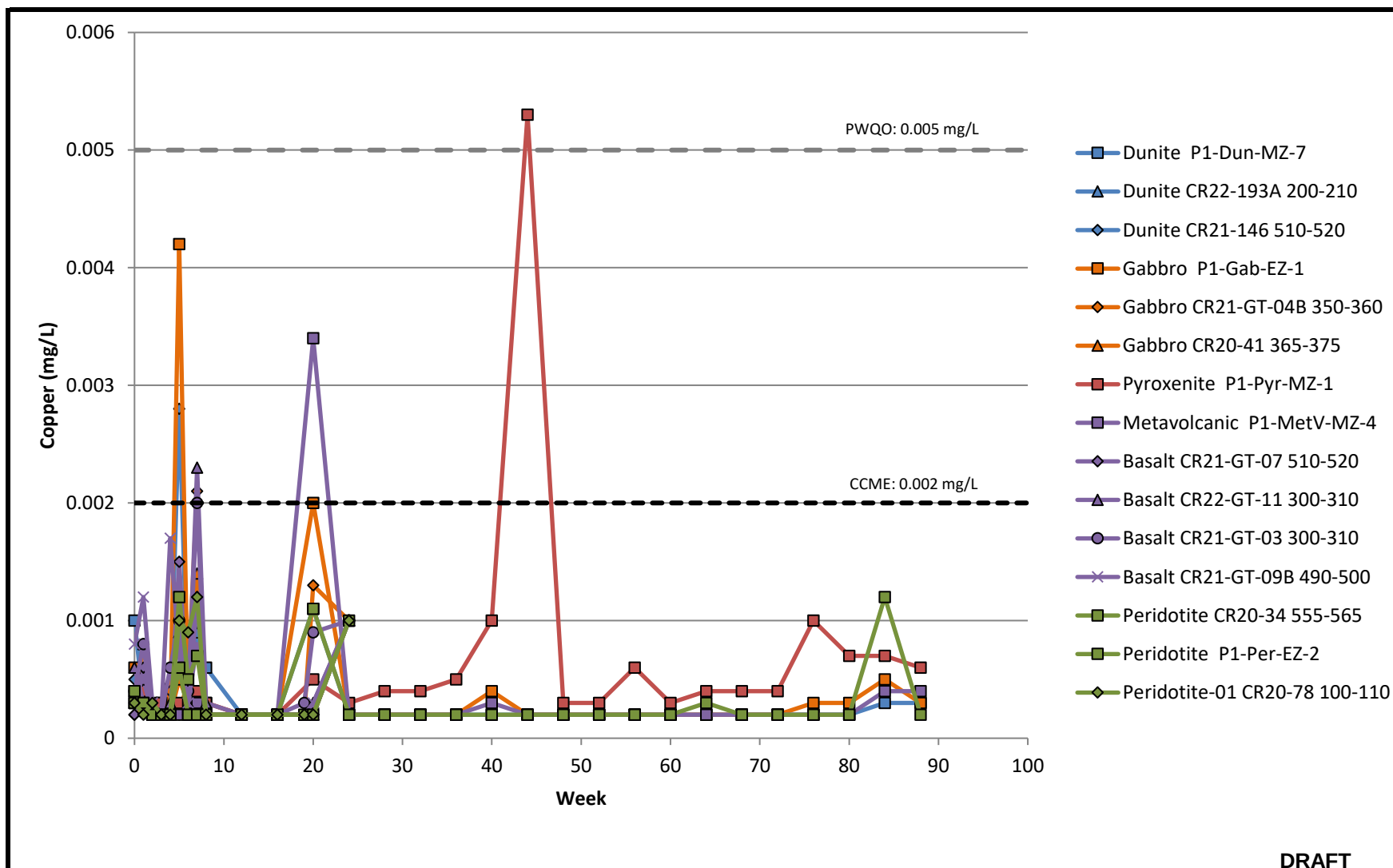
Client Name

Canadian Nickel Company

Date

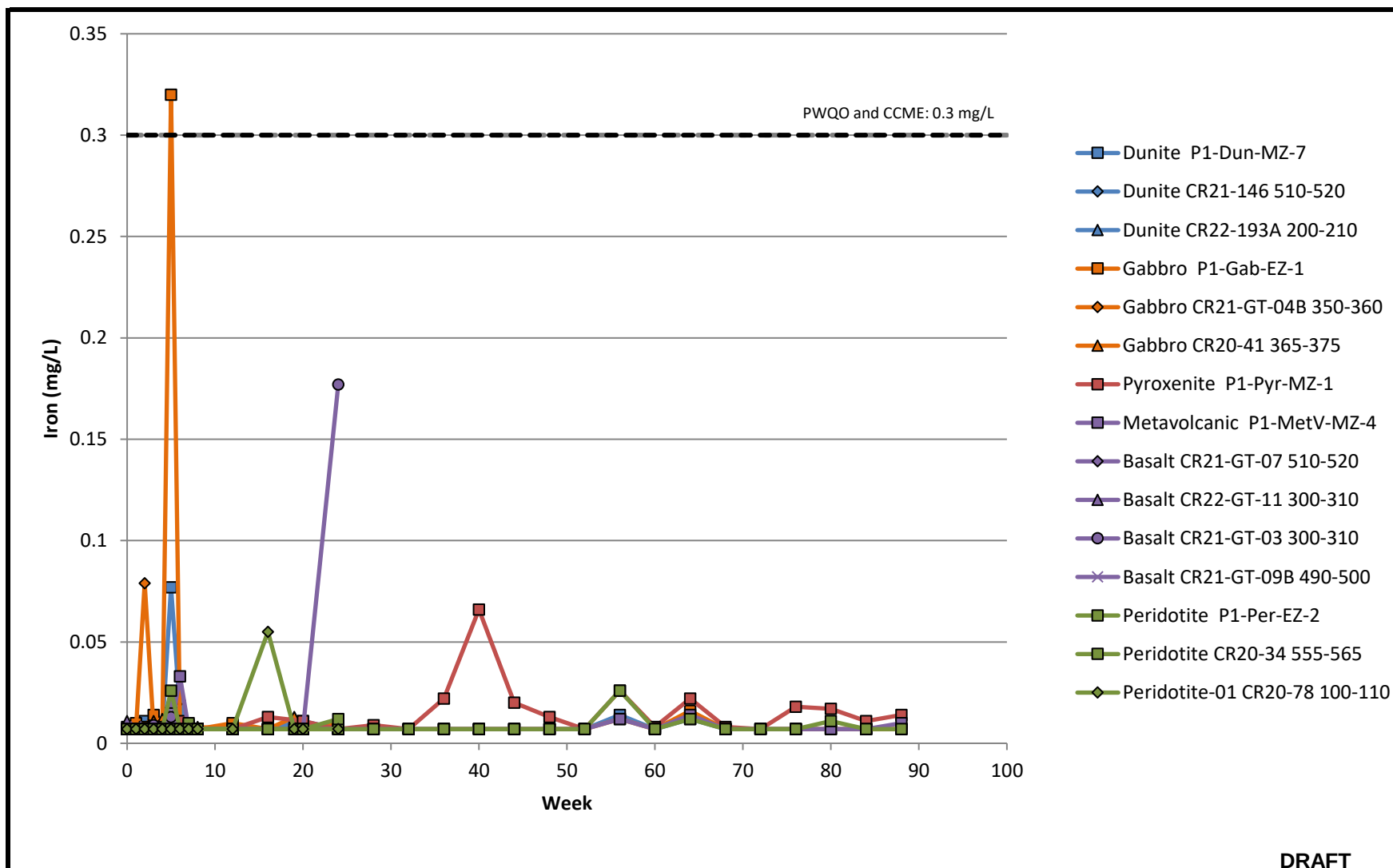
2024-03-25

25



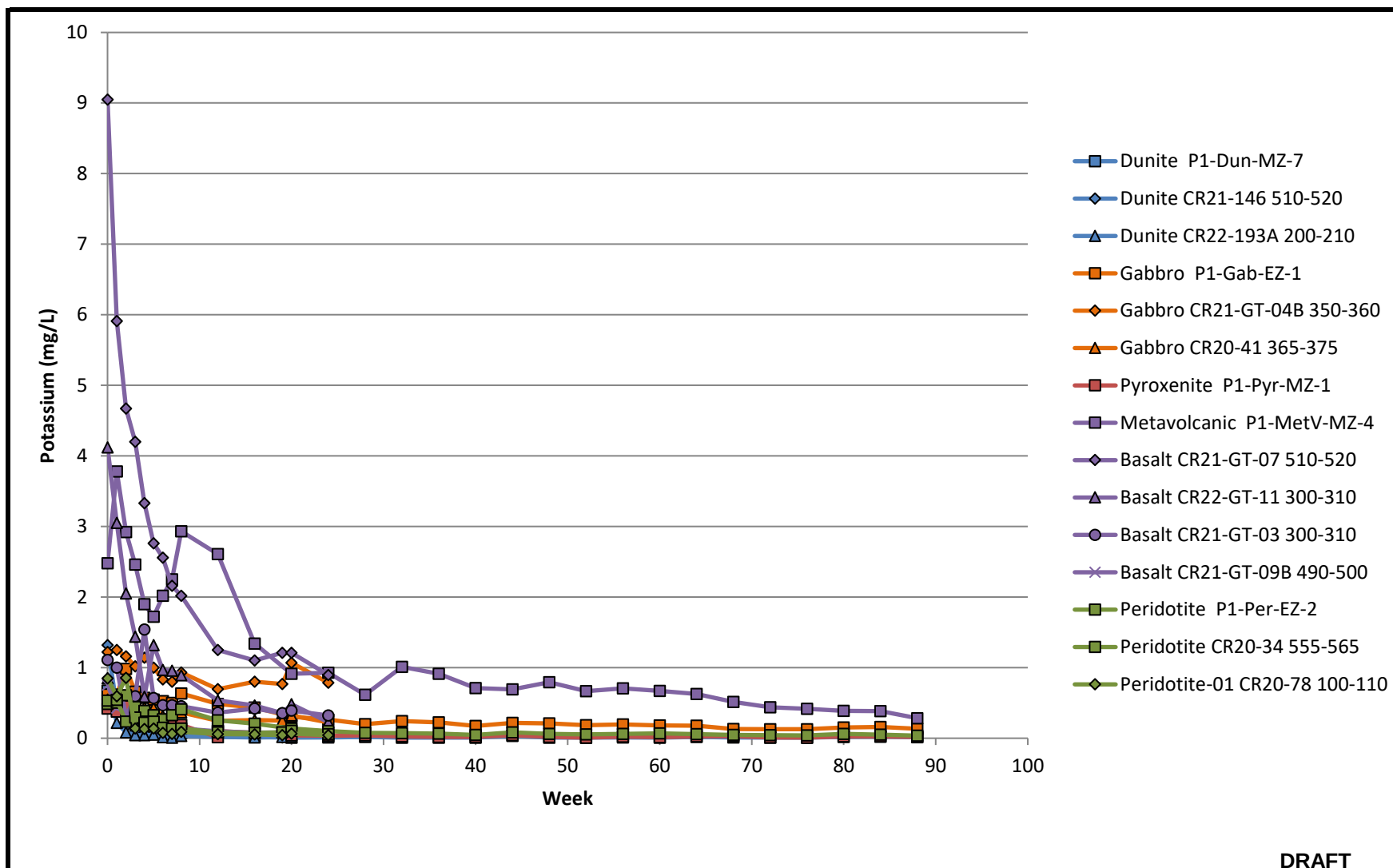
DRAFT

	Title			Humidity Cell Results - Copper	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE 26

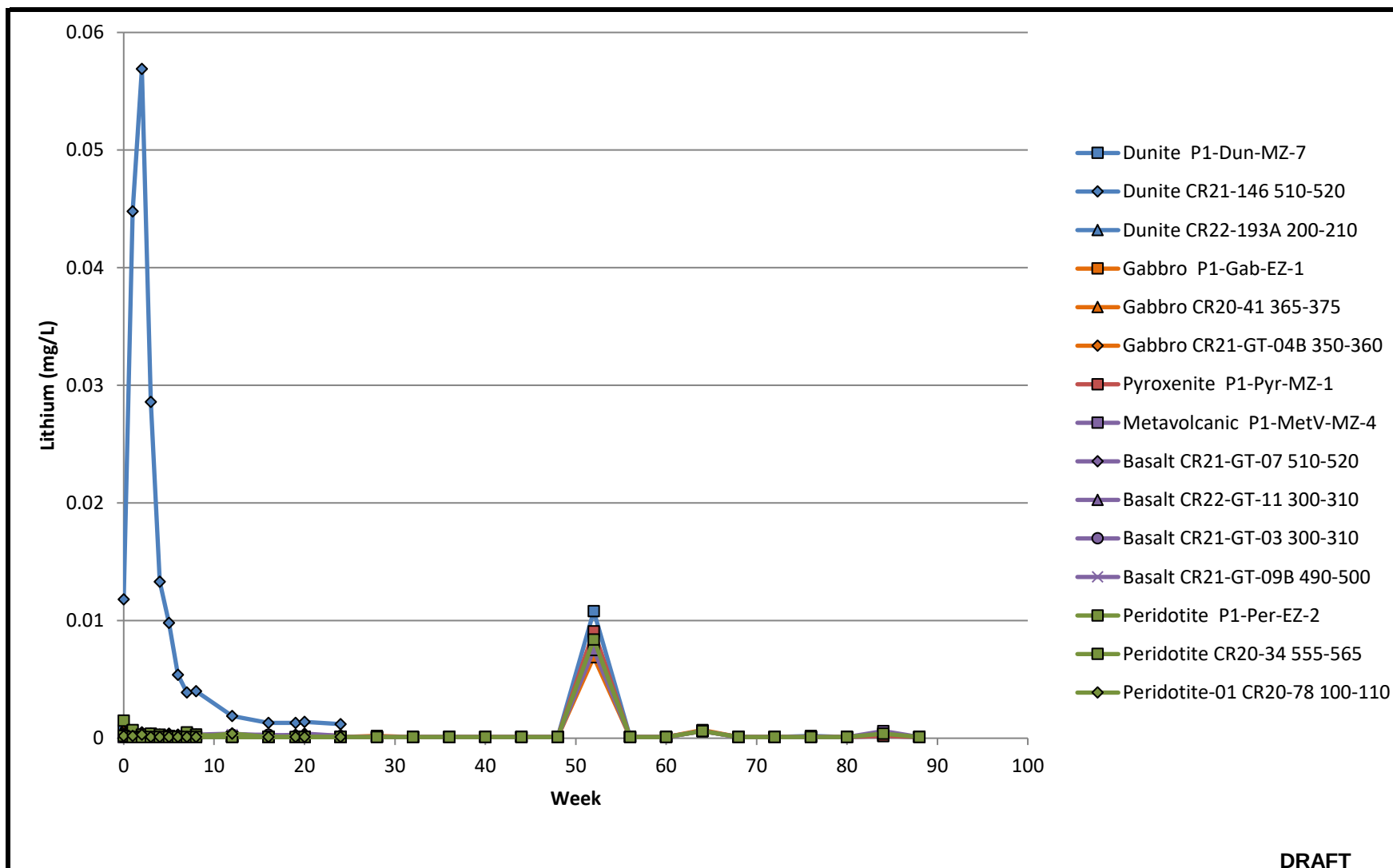


DRAFT

	Title			Humidity Cell Results - Iron		
	Project Name		Crawford	Project No.		23590674
	Client Name		Canadian Nickel Company	Date		2024-03-25
						FIGURE
						27



	Title			
	Humidity Cell Results - Potassium			
	Project Name		Project No.	FIGURE
Crawford		23590674		
Client Name		Date	28	
Canadian Nickel Company		2024-03-25		



DRAFT



Title

Humidity Cell Results - Lithium

Project Name

Crawford

Project No.

23590674

FIGURE

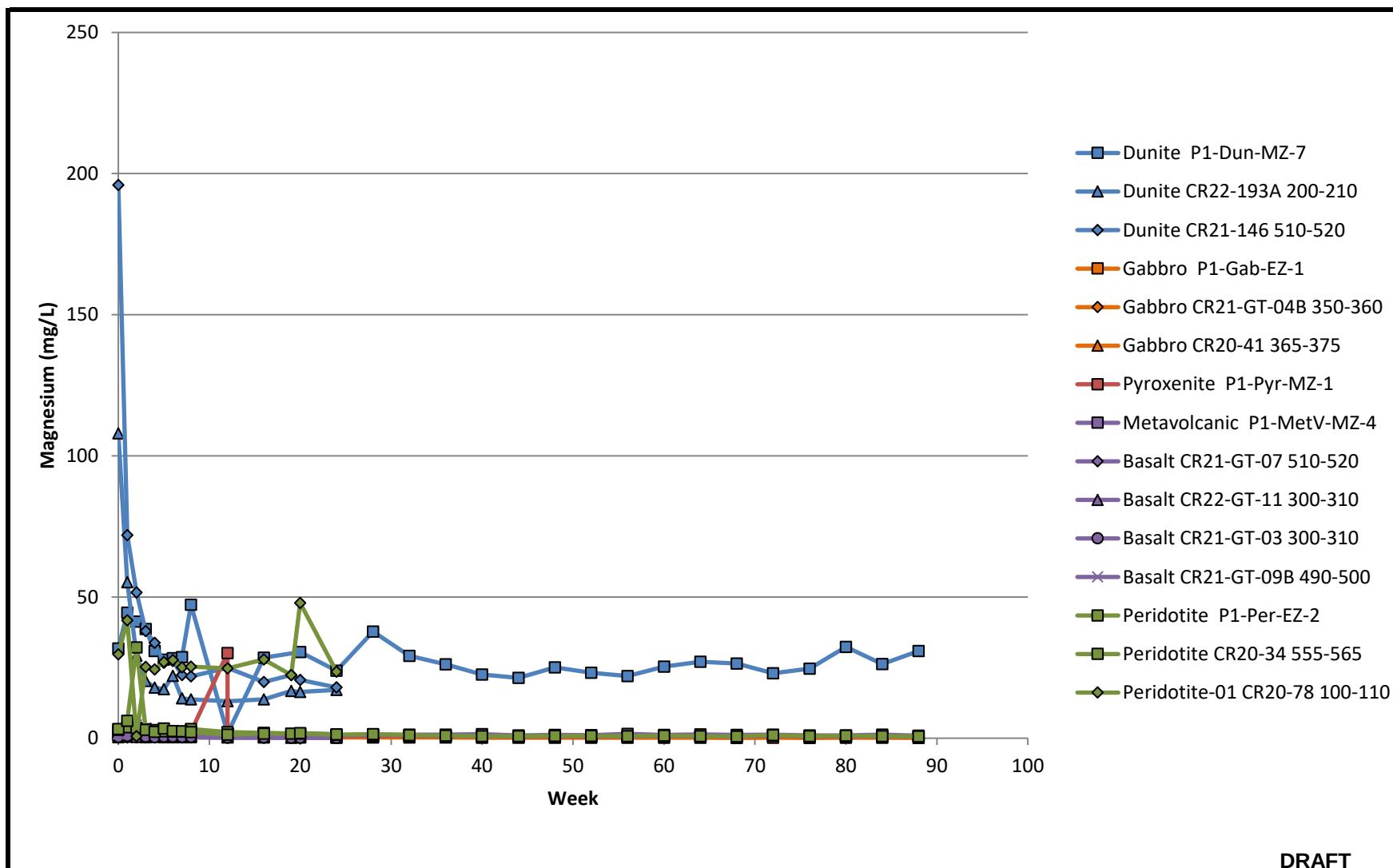
Client Name

Canadian Nickel Company

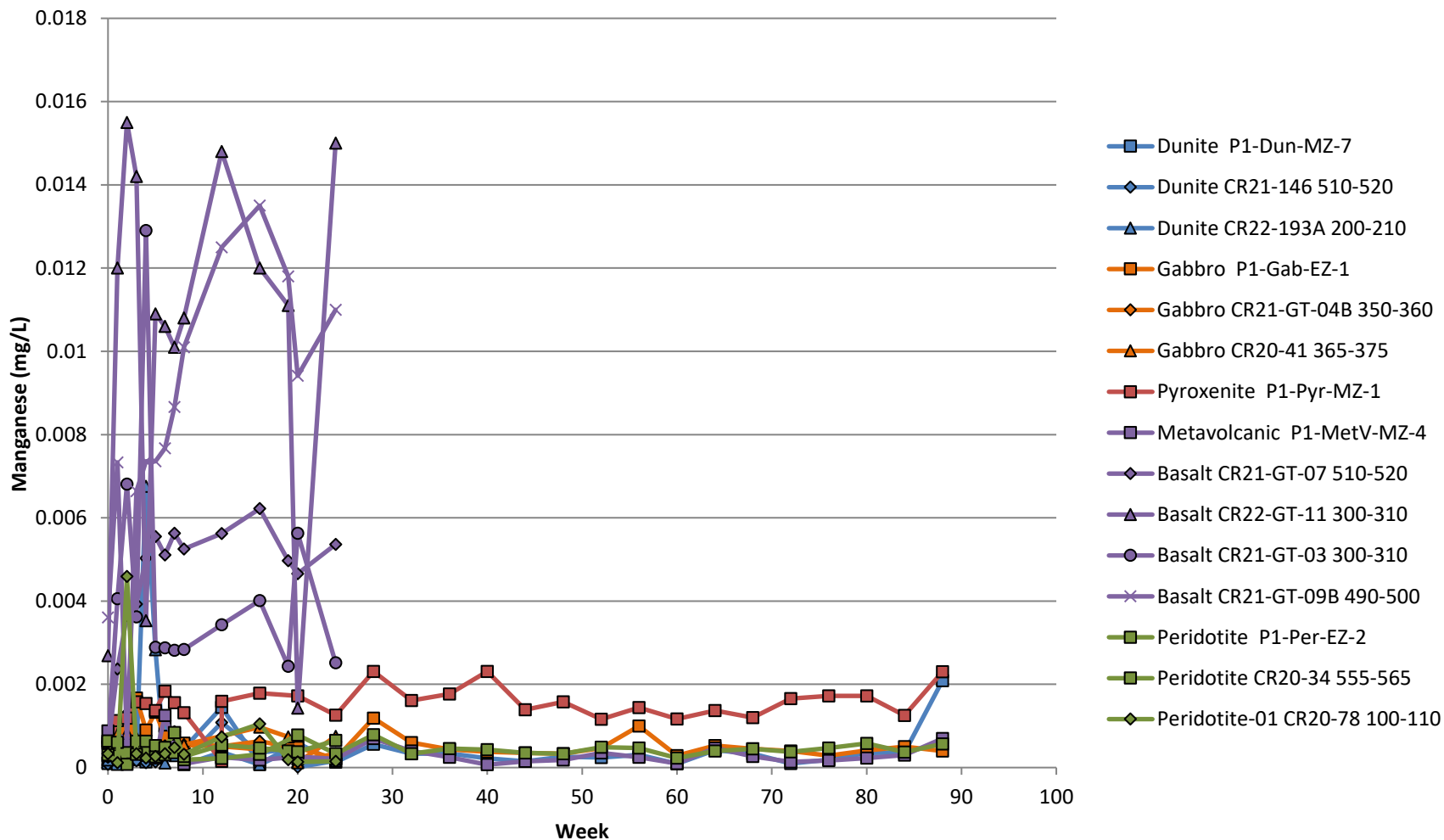
Date

2024-03-25

29



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	Title		
	Humidity Cell Results - Magnesium		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 30



DRAFT



Title

Humidity Cell Results - Manganese

Project Name

Crawford

Project No.

23590674

FIGURE

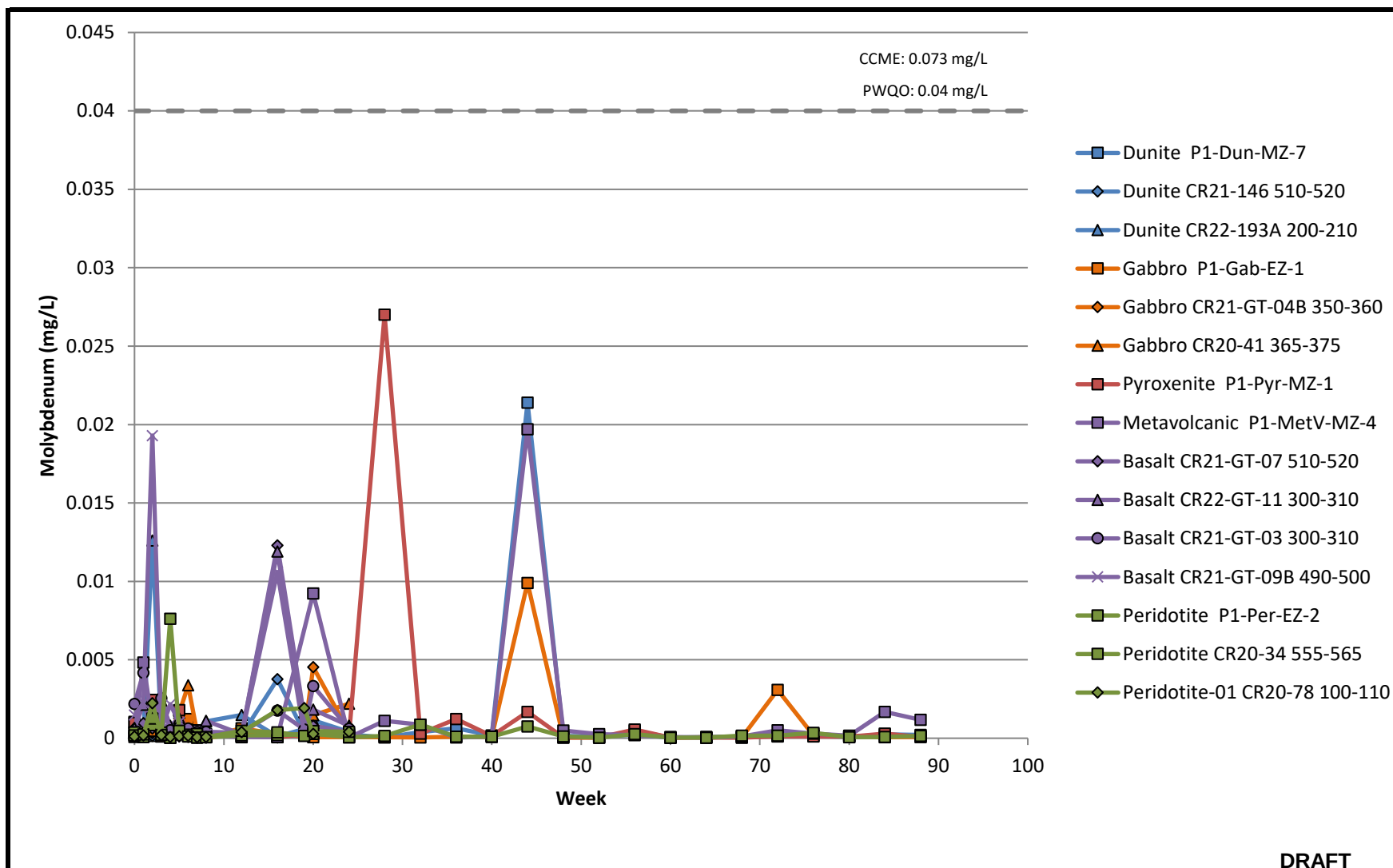
Client Name

Canadian Nickel Company

Date

2024-03-25

31



DRAFT



Title

Humidity Cell Results - Molybdenum

Project Name

Crawford

Project No.

23590674

FIGURE

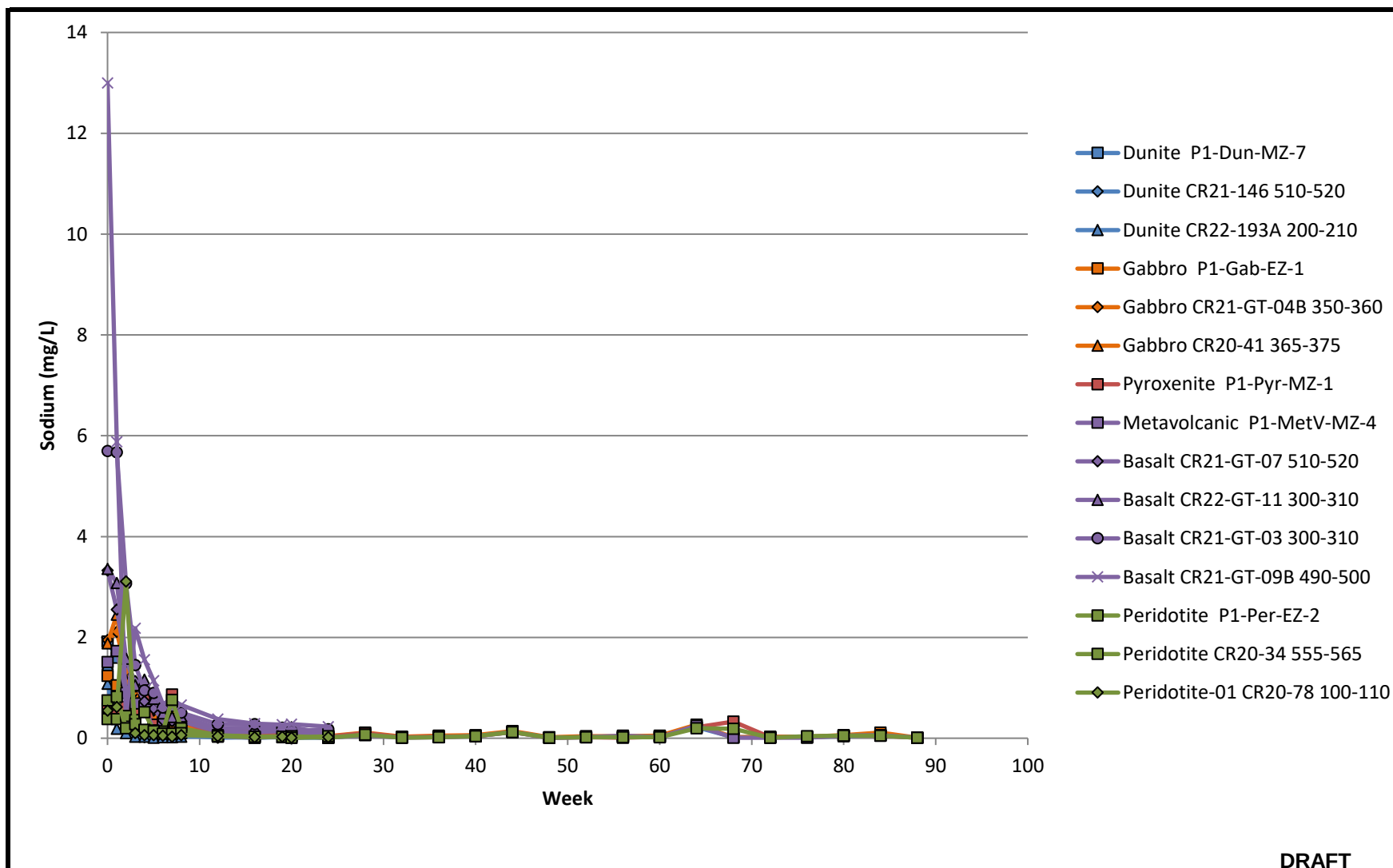
Client Name

Canadian Nickel Company

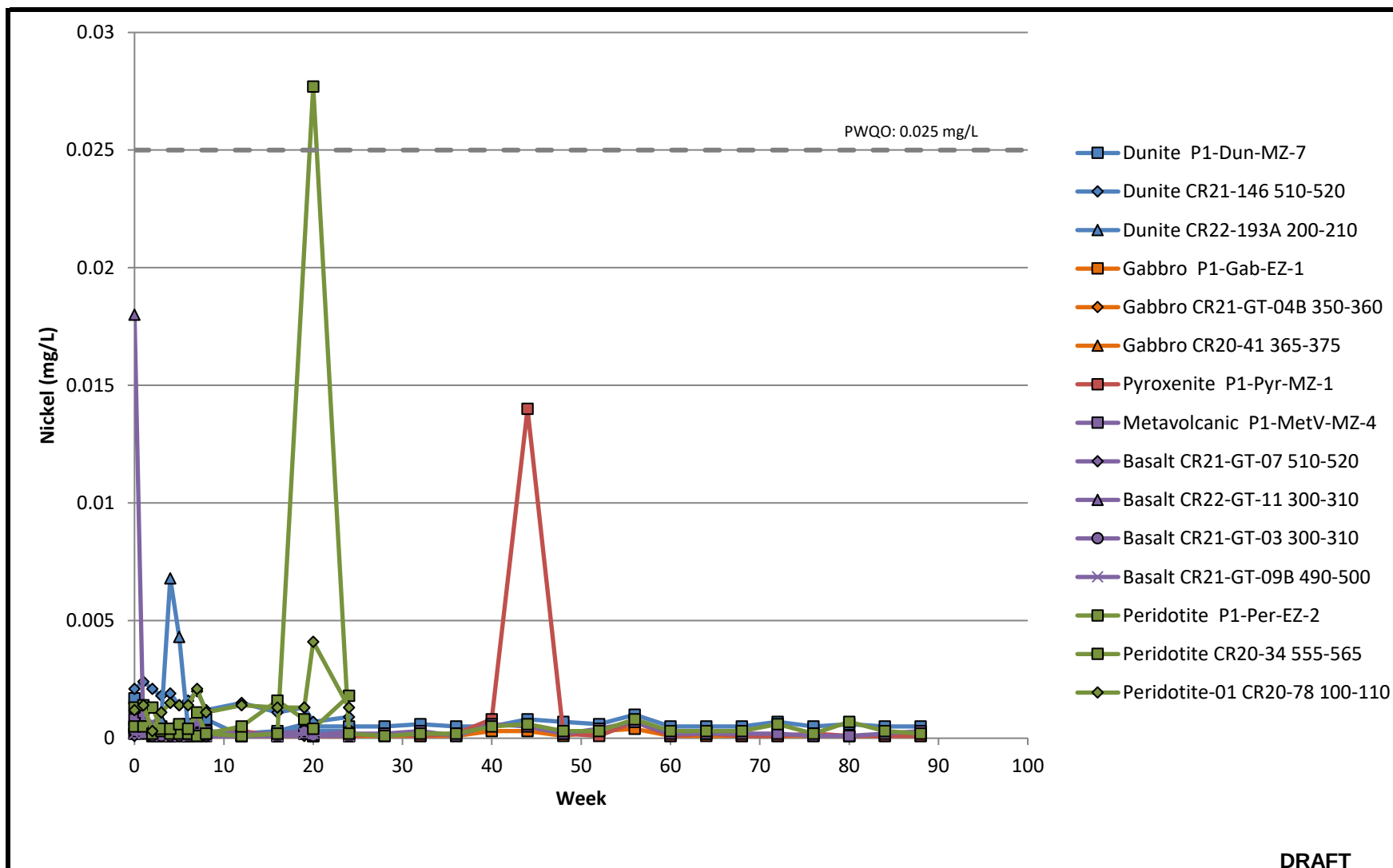
Date

2024-03-25

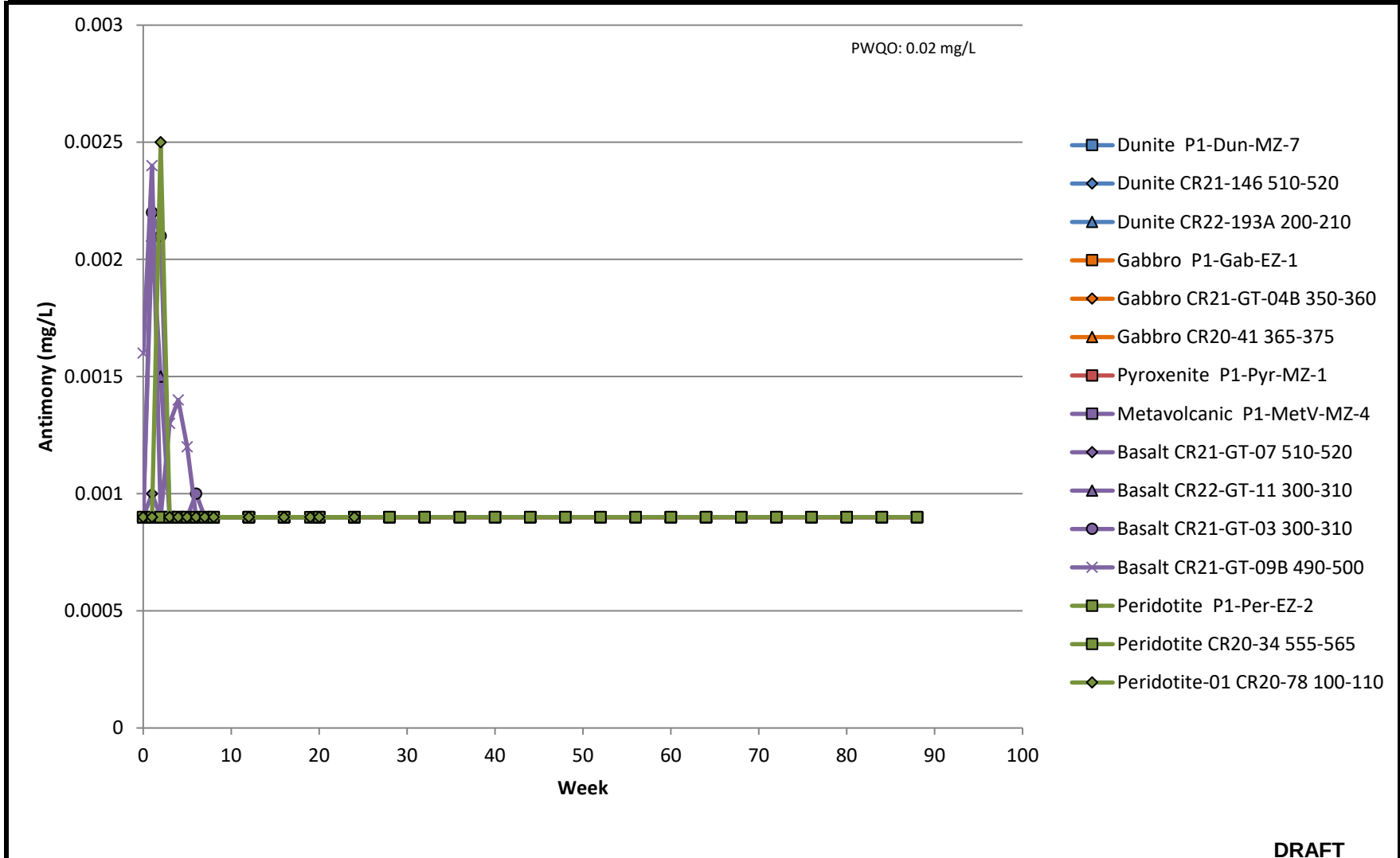
32



	Title		
	Humidity Cell Results - Sodium		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 33

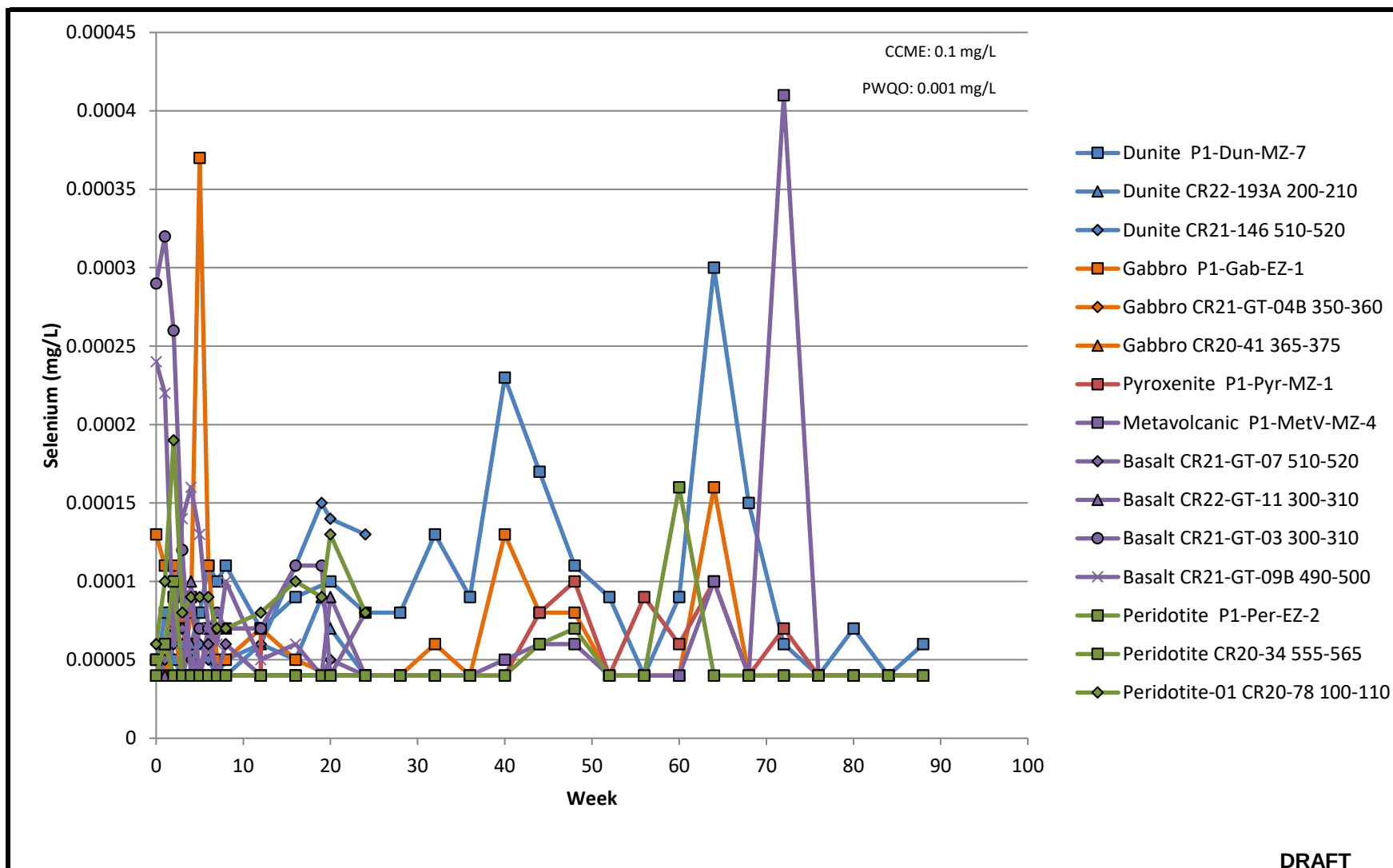


DRAFT			
	Title		
	Humidity Cell Results - Nickel		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 34

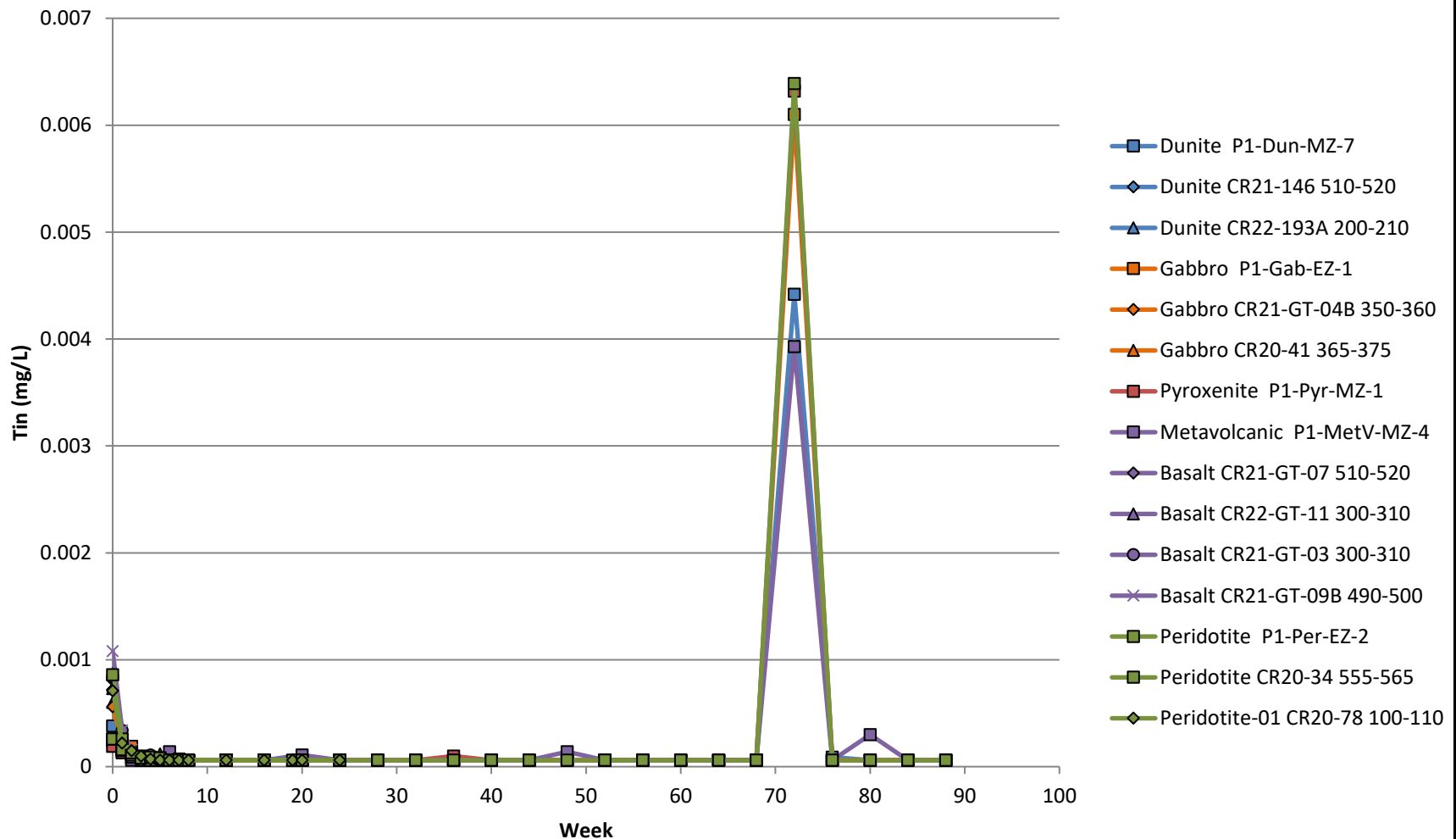


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	Title Humidity Cell Results - Antimony		
	Project Name Crawford	Project No. 23590674	FIGURE 36
	Client Name Canadian Nickel Company	Date 2024-03-25	



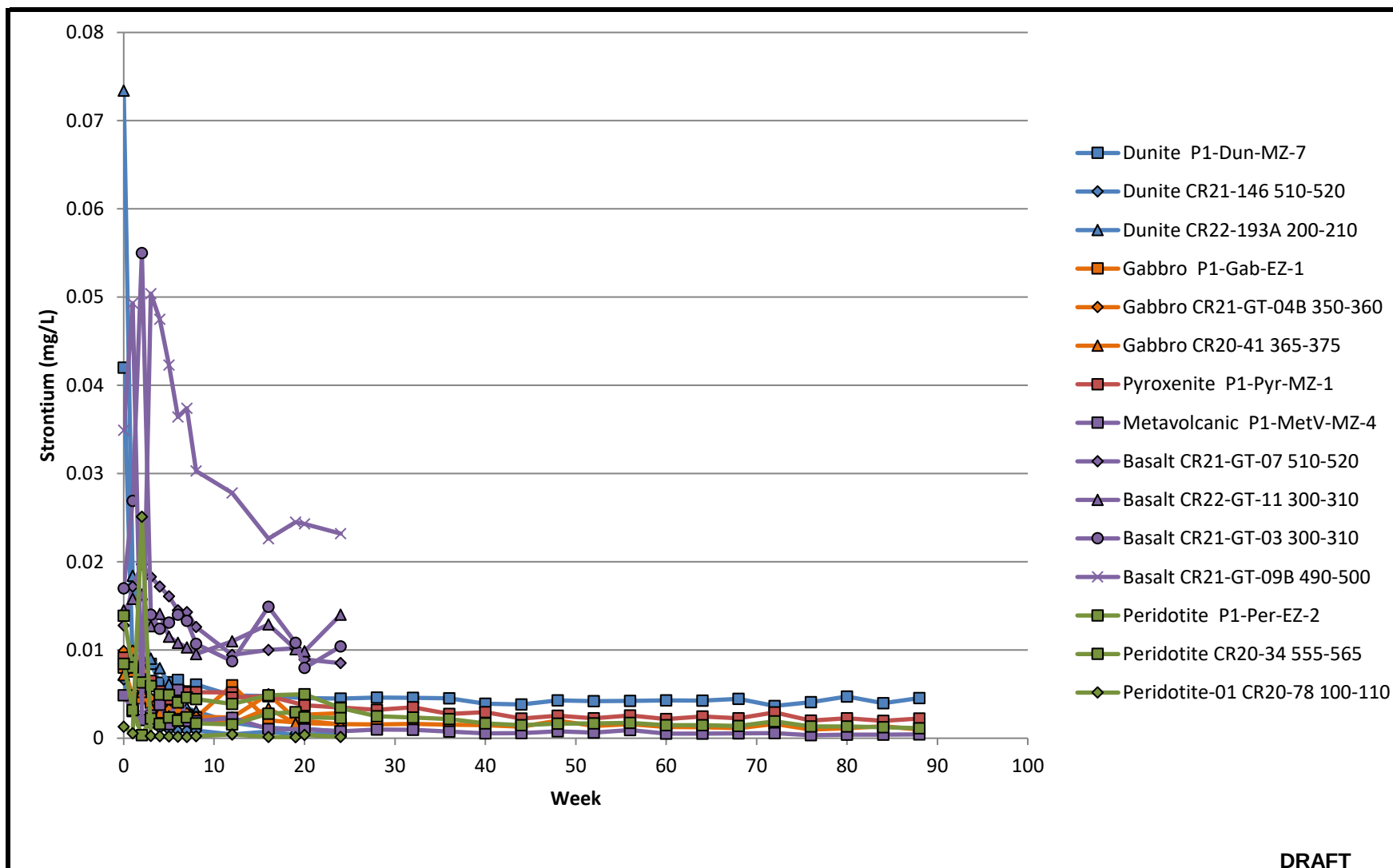
	Title			
	Humidity Cell Results - Selenium			
	Project Name	Crawford	Project No.	23590674
	Client Name	Canadian Nickel Company	Date	2024-03-25
				FIGURE 37



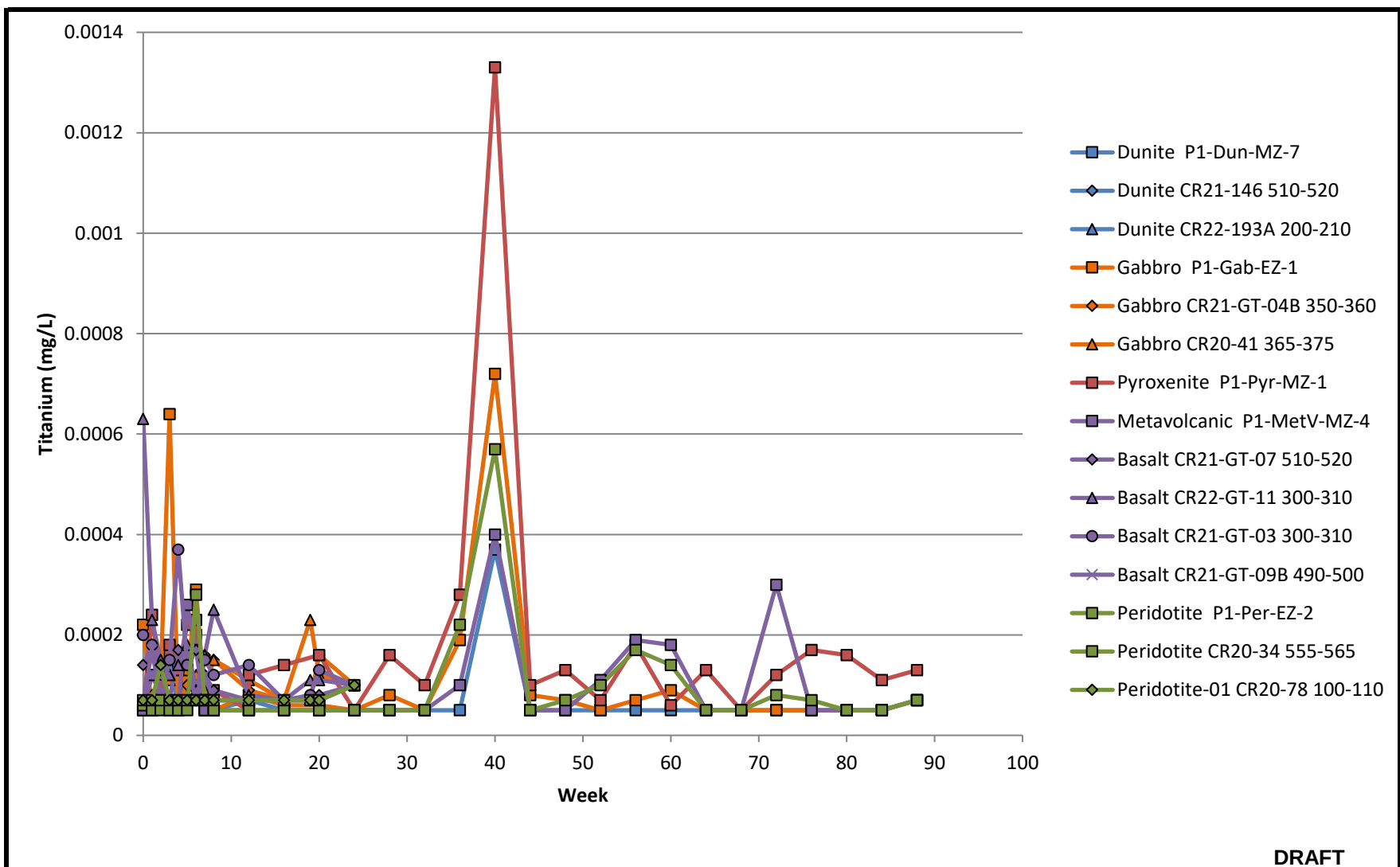
DRAFT



Title Humidity Cell Results - Tin			
Project Name	Crawford	Project No.	23590674
Client Name	Canadian Nickel Company	Date	2024-03-25
FIGURE			38

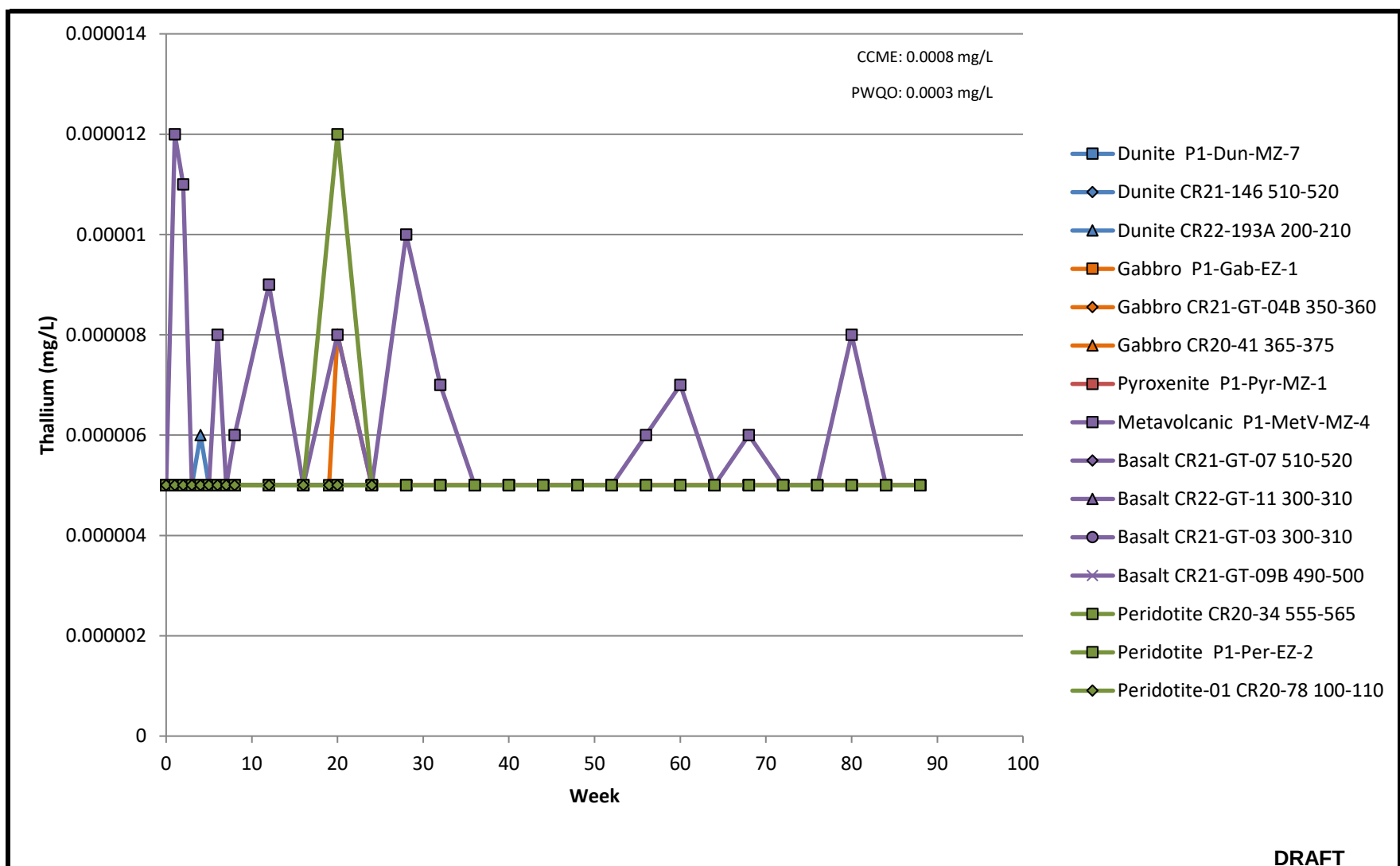


Title Humidity Cell Results - Strontium			
Project Name	Crawford	Project No.	23590674
Client Name	Canadian Nickel Company	Date	2024-03-25
			FIGURE 39

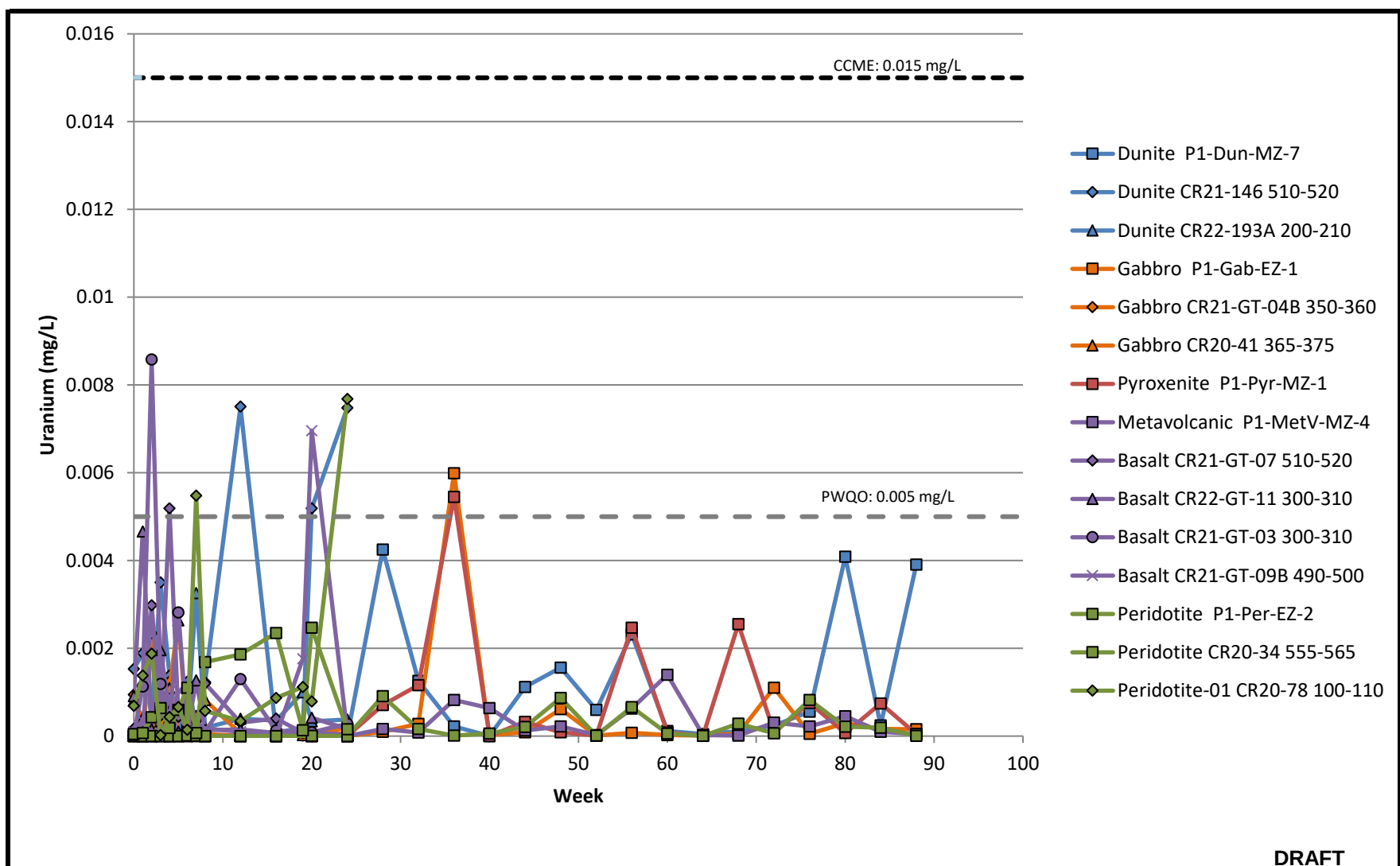


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	Title		
	Humidity Cell Results - Titanium		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 40



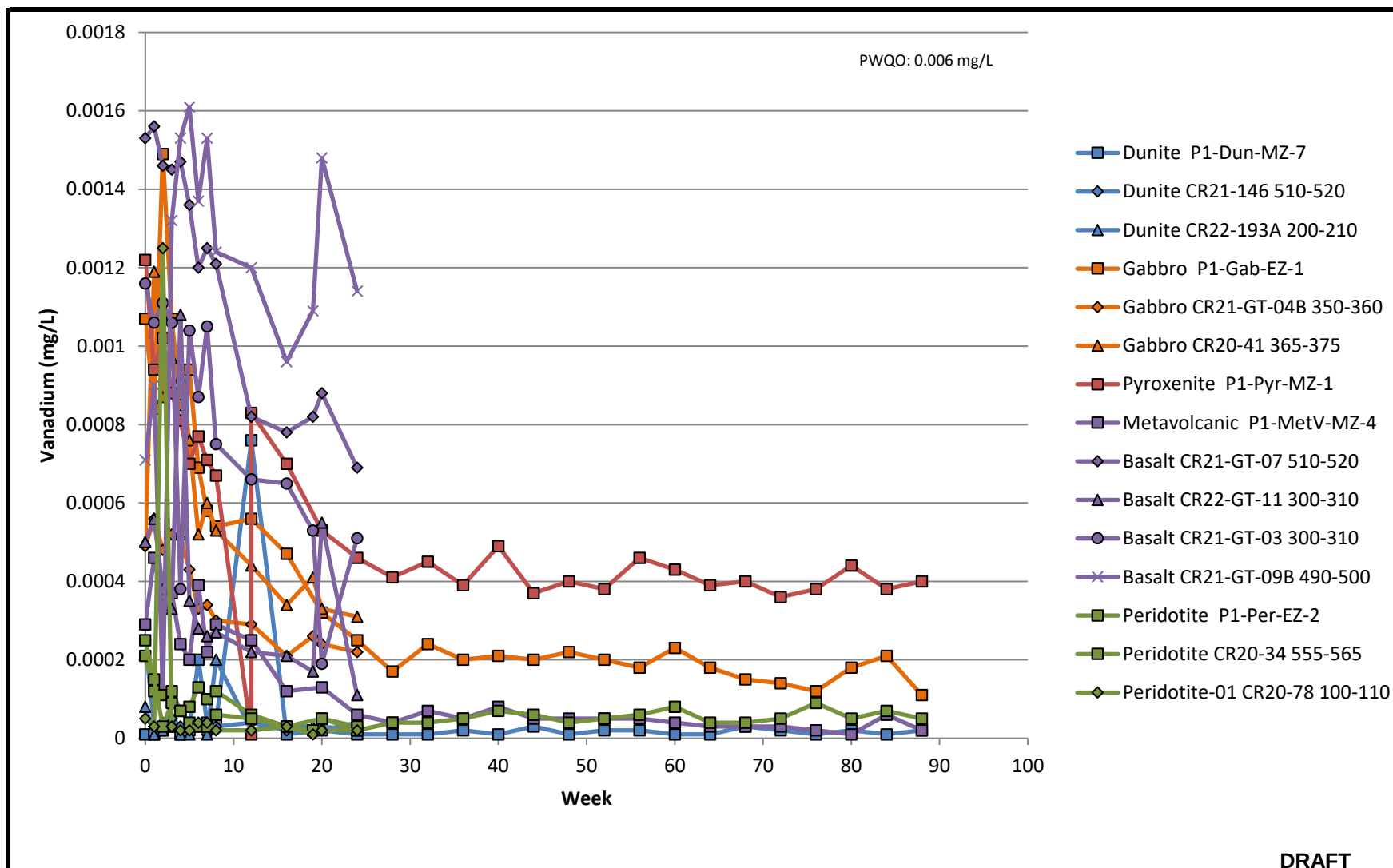
	Title			Humidity Cell Results - Thallium			
	Project Name		Crawford		Project No.	23590674	FIGURE
	Client Name		Canadian Nickel Company		Date	2024-03-25	
							41



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Title Humidity Cell Results - Uranium			
Project Name Crawford		Project No. 23590674	FIGURE 42
Client Name Canadian Nickel Company		Date 2024-03-25	



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Title

Humidity Cell Results - Vanadium

Project Name

Crawford

Project No.

23590674

FIGURE

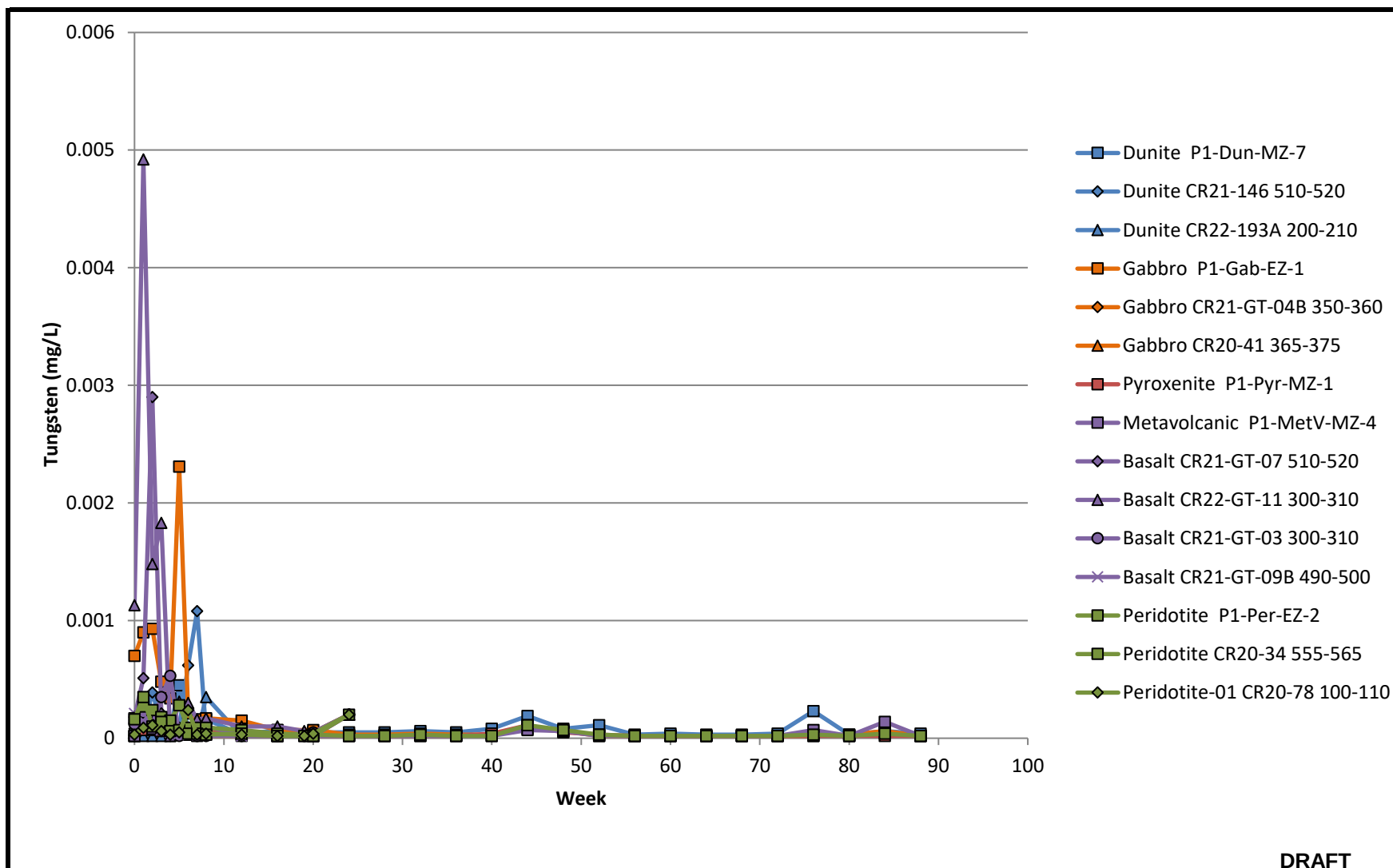
Client Name

Canadian Nickel Company

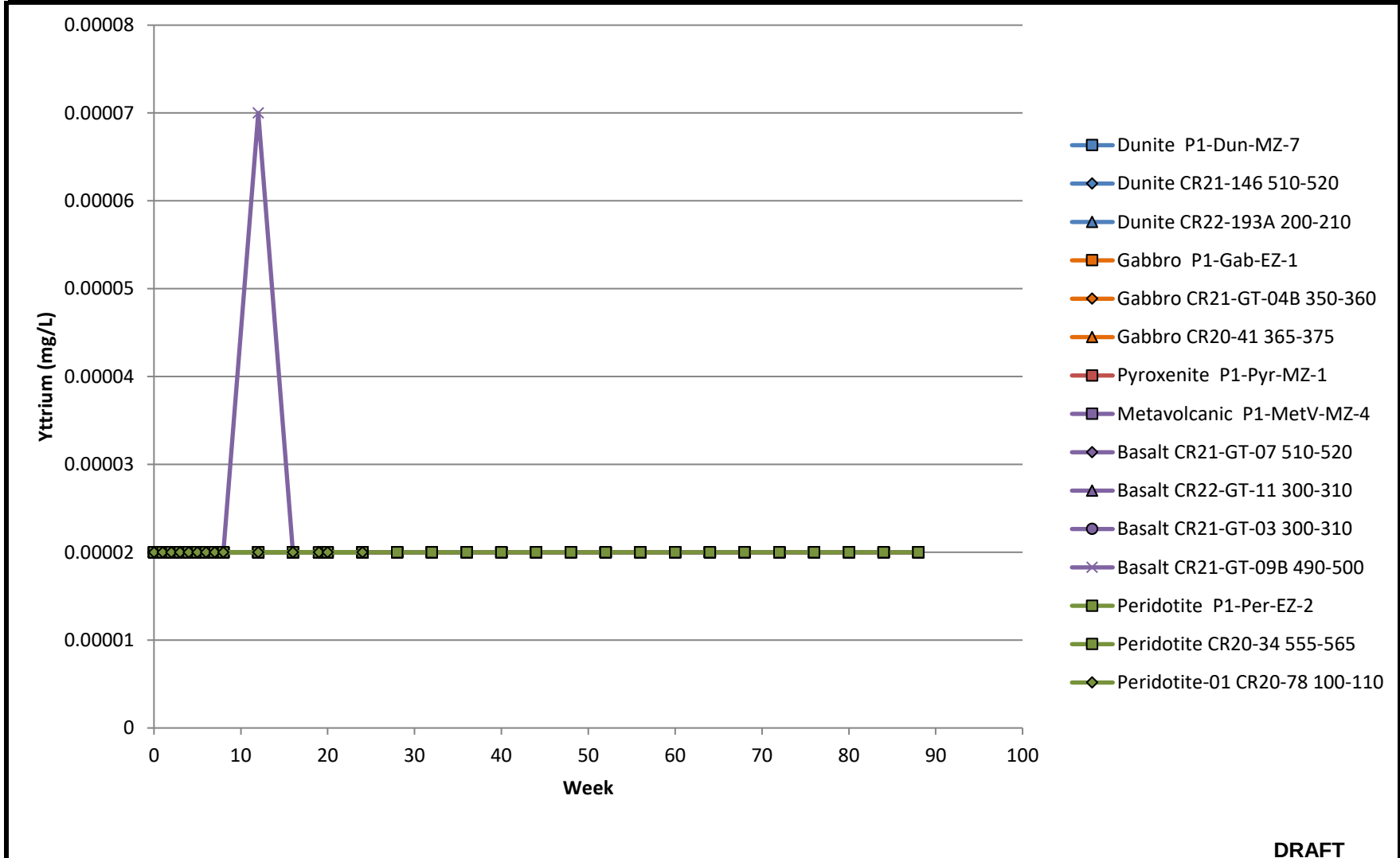
Date

2024-03-25

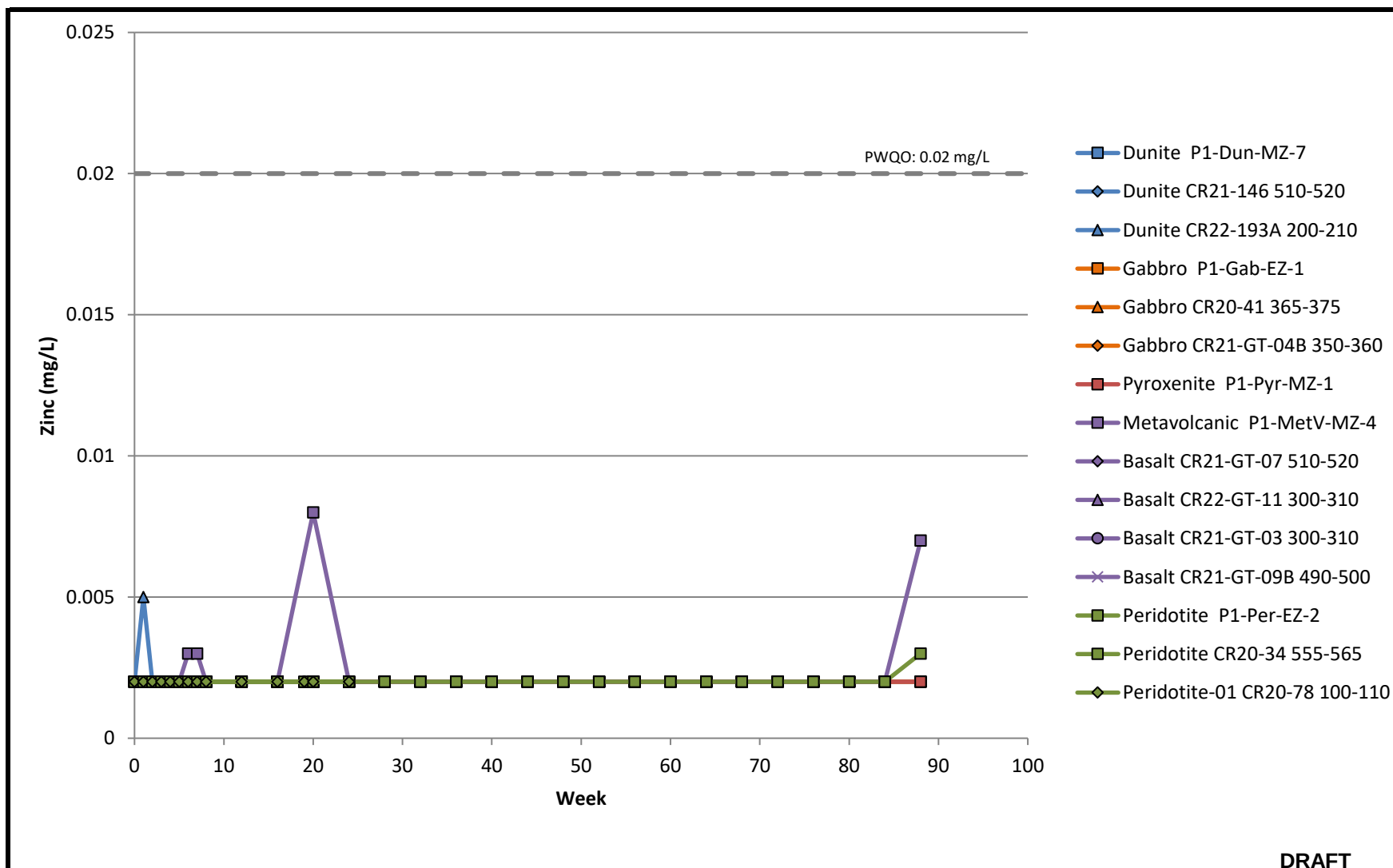
43



	Title		
	Humidity Cell Results - Tungsten		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 44



	Title		
	Humidity Cell Results - Yttrium		
	Project Name	Crawford	Project No. 23590674
	Client Name	Canadian Nickel Company	Date 2024-03-25
			FIGURE 45



DRAFT



Title

Humidity Cell Results - Zinc

Project Name

Crawford

Project No.

23590674

FIGURE

Client Name

Canadian Nickel Company

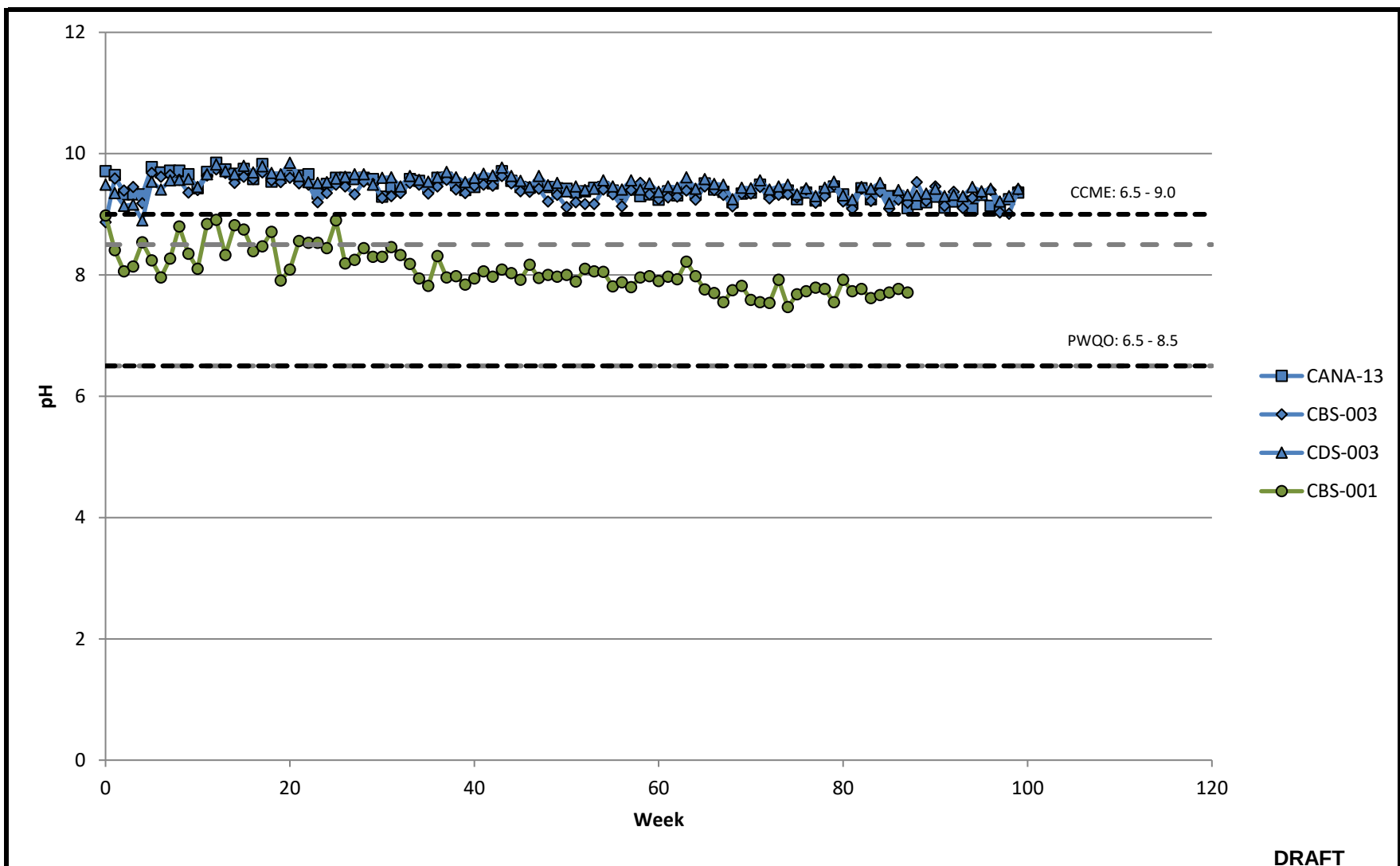
Date

2024-03-25

46

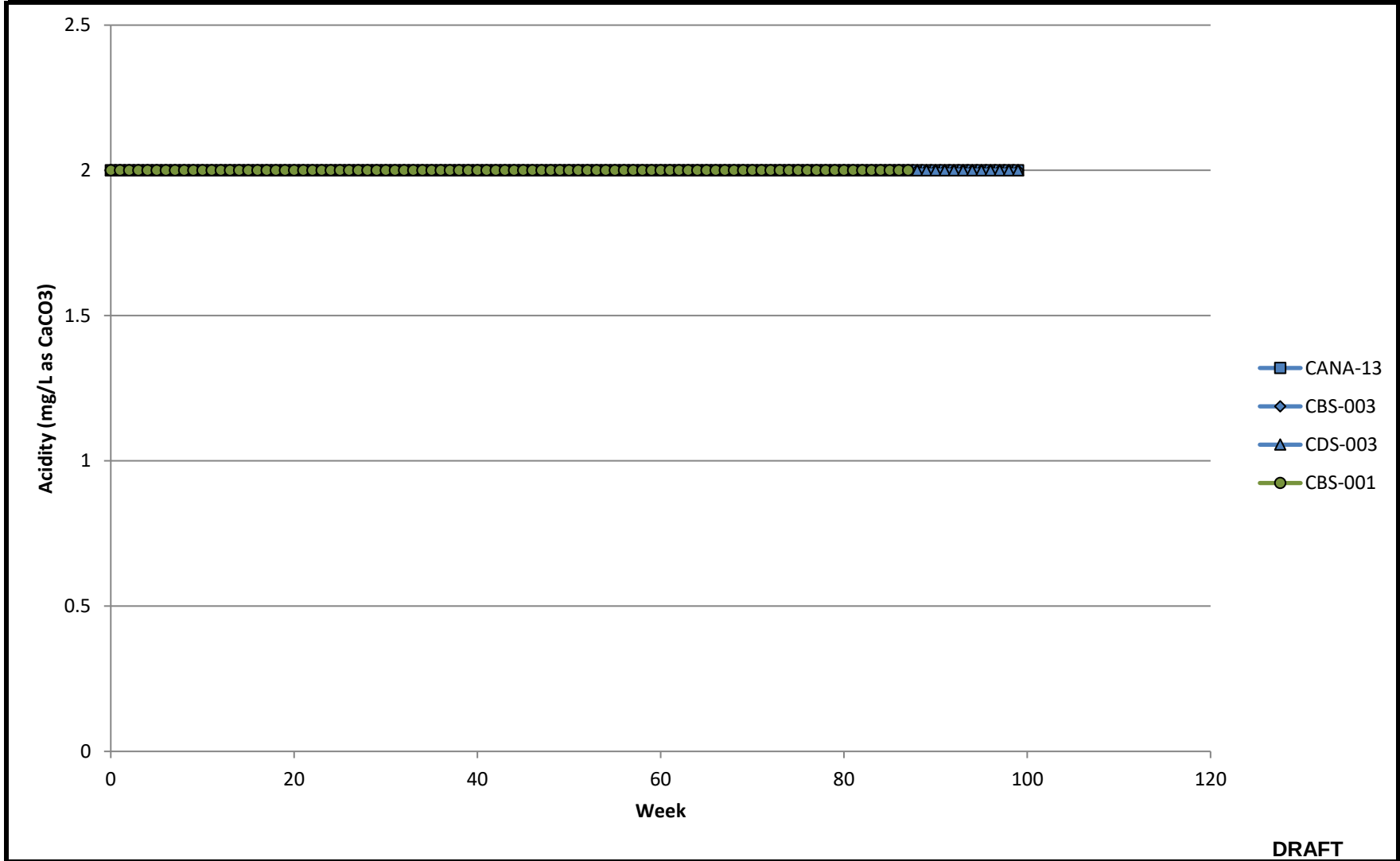
APPENDIX H

Tailings HCT Time Series Plots



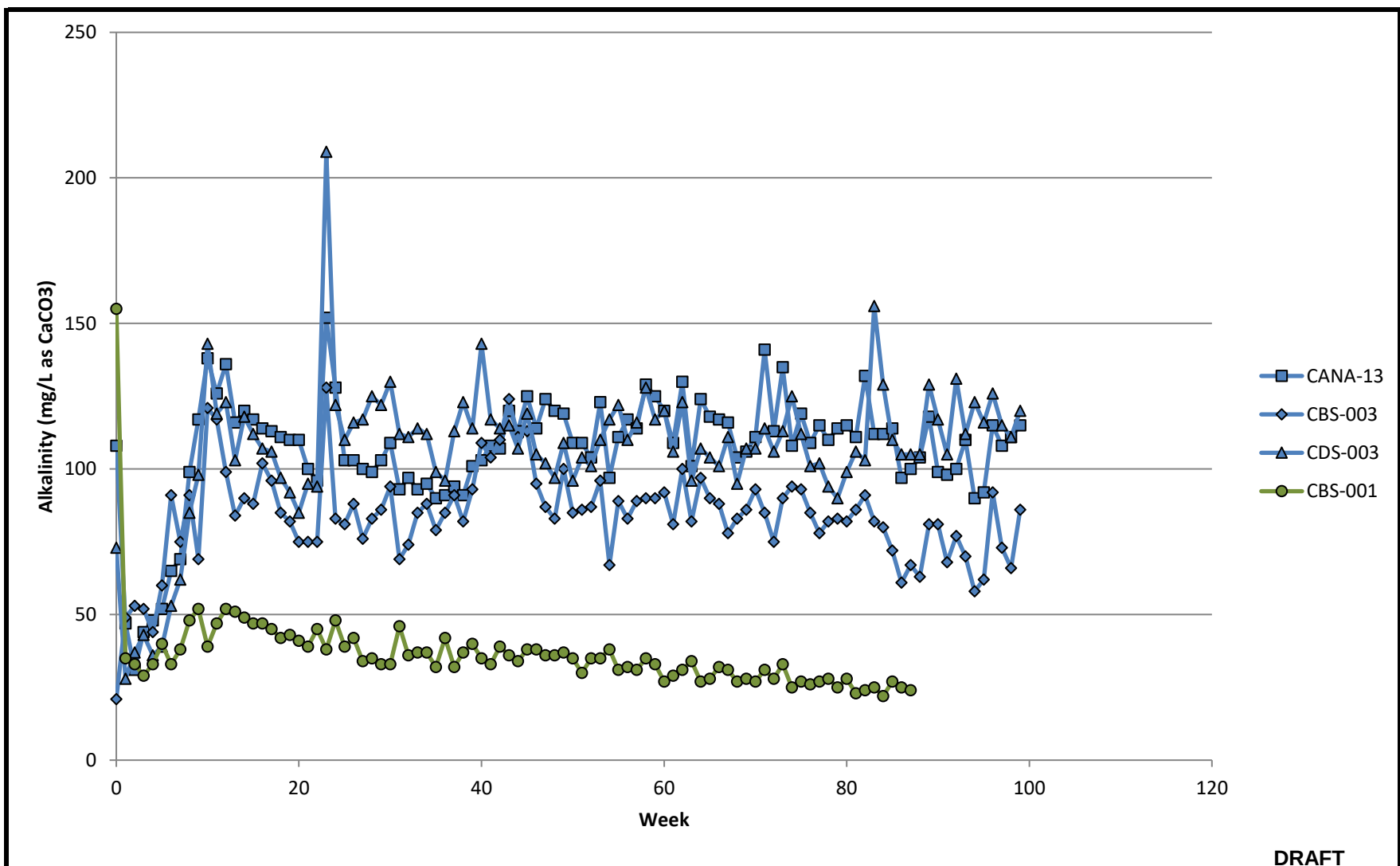
DRAFT

	Title				Humidity Cell Results - pH	
	Project Name		Crawford		Project No.	23590674
	Client Name		Canadian Nickel Company		Date	2024-03-25
						FIGURE
						1



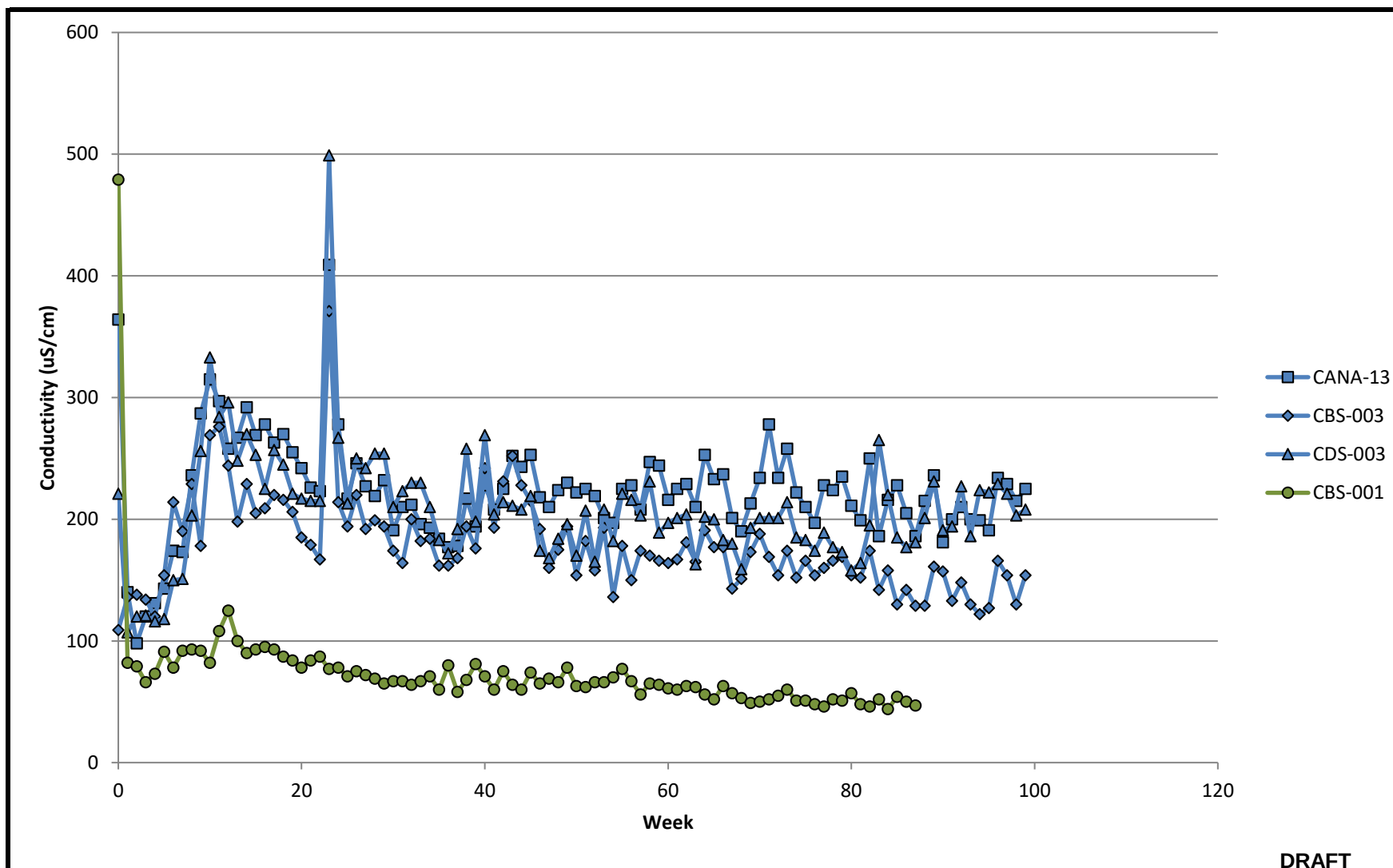
DRAFT

	Title					Humidity Cell Results - Acidity					
	Project Name			Crawford		Project No.		23590674		FIGURE	
	Client Name			Canadian Nickel Company		Date		2024-03-25		2	



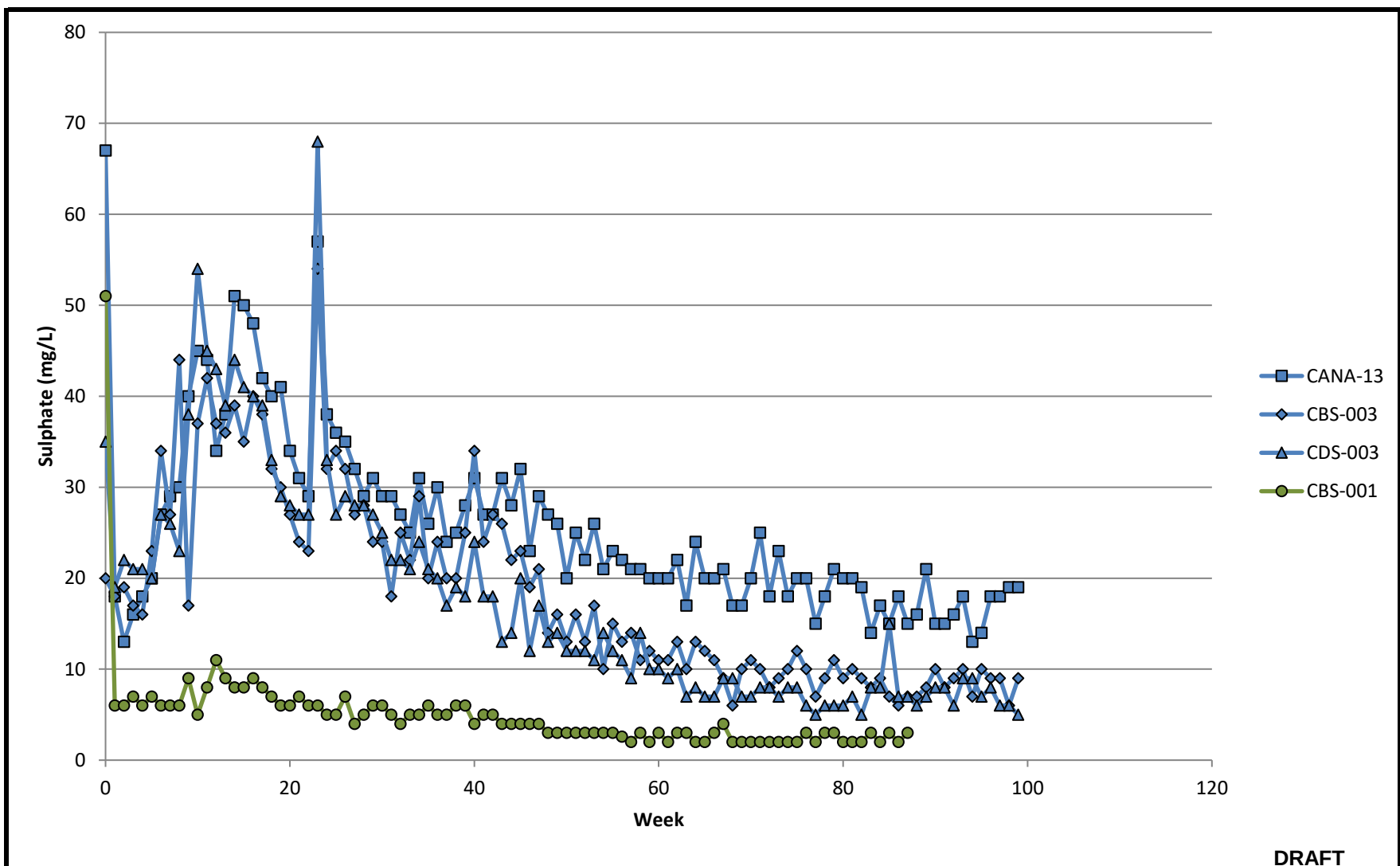
DRAFT

	Title			Humidity Cell Results - Alkalinity		
	Project Name		Crawford	Project No.	23590674	FIGURE 3
	Client Name		Canadian Nickel Company	Date	2024-03-25	



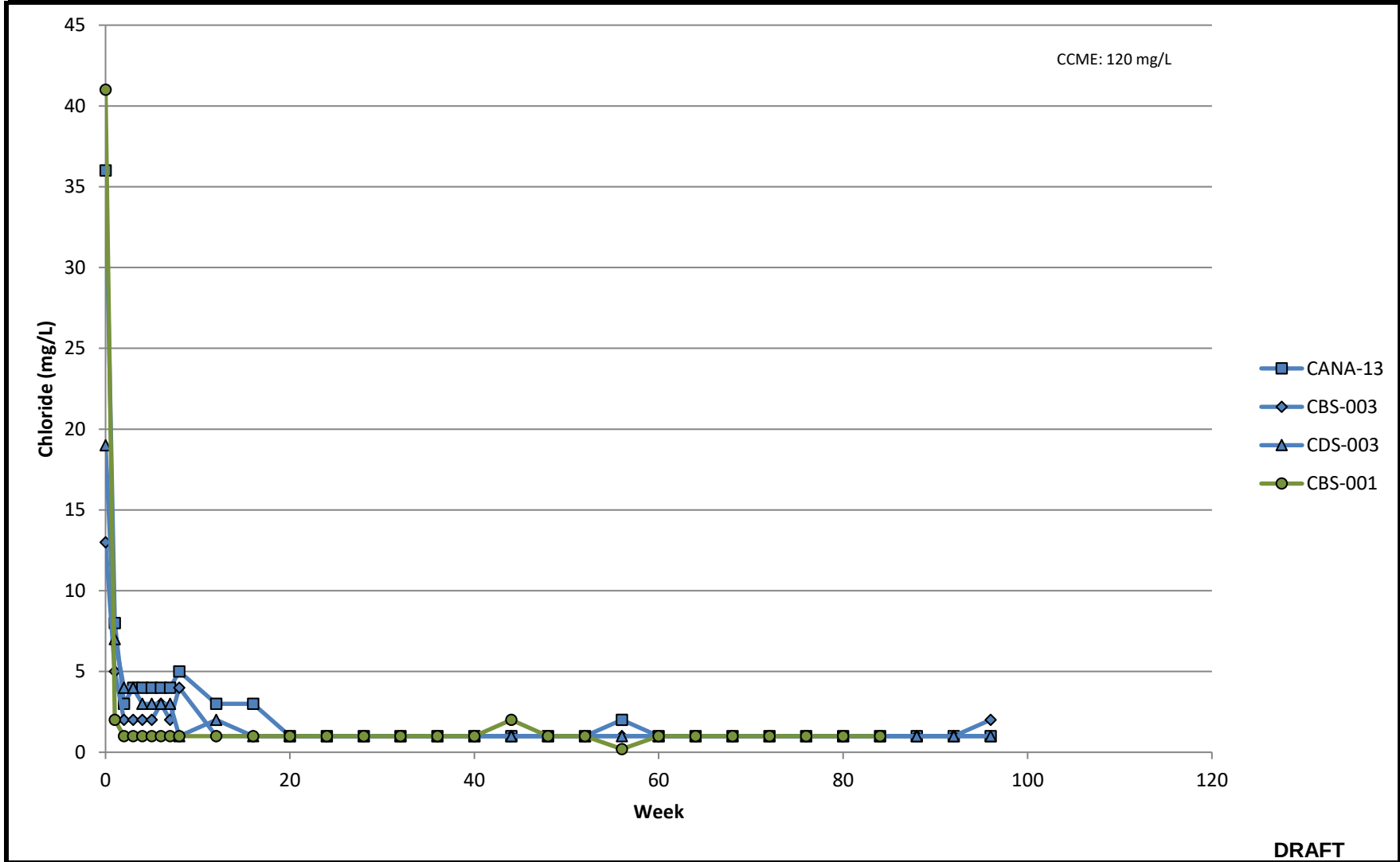
DRAFT

	Title			Humidity Cell Results - Conductivity	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					4



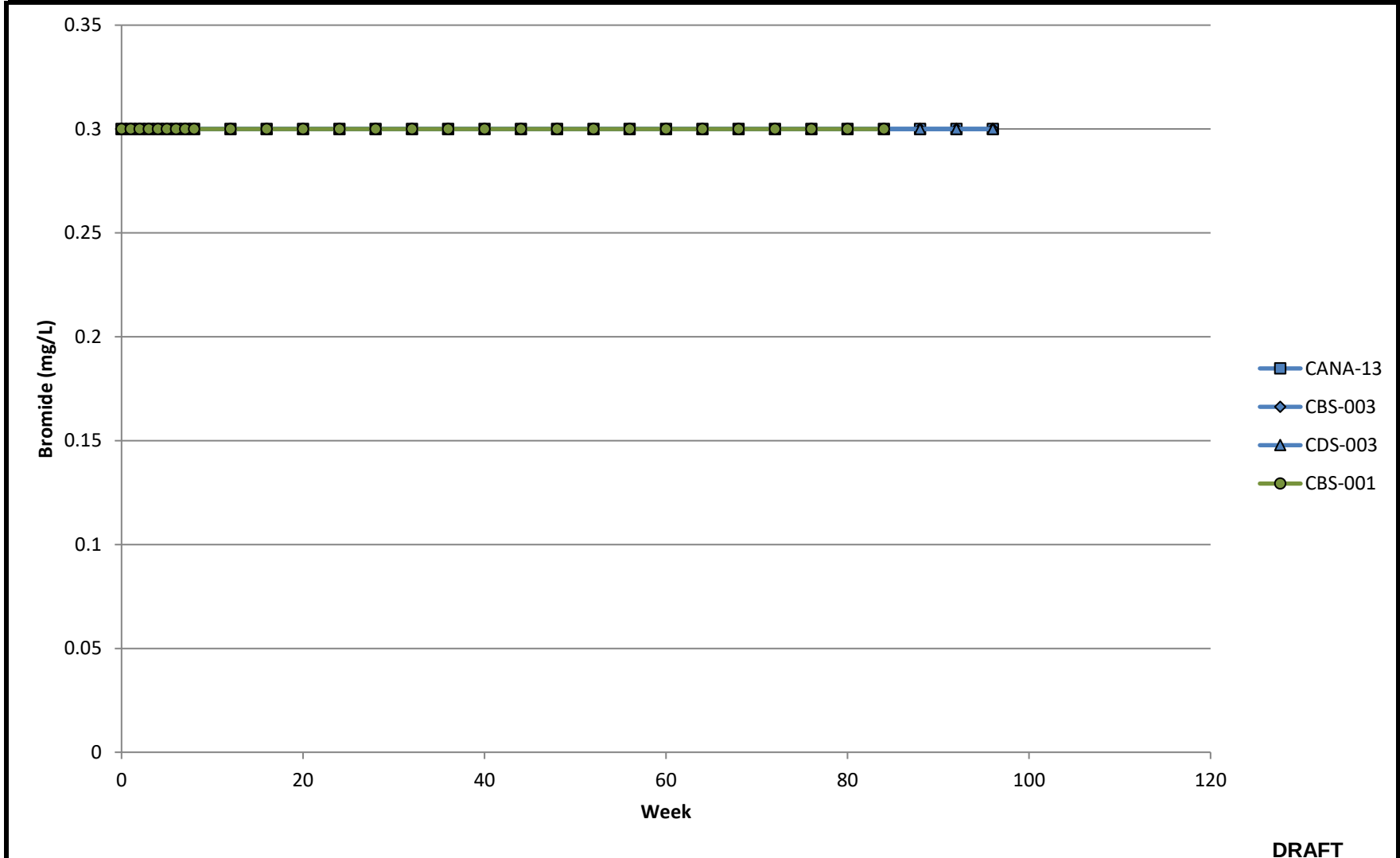
DRAFT

	Title			Humidity Cell Results - Sulphate	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					5



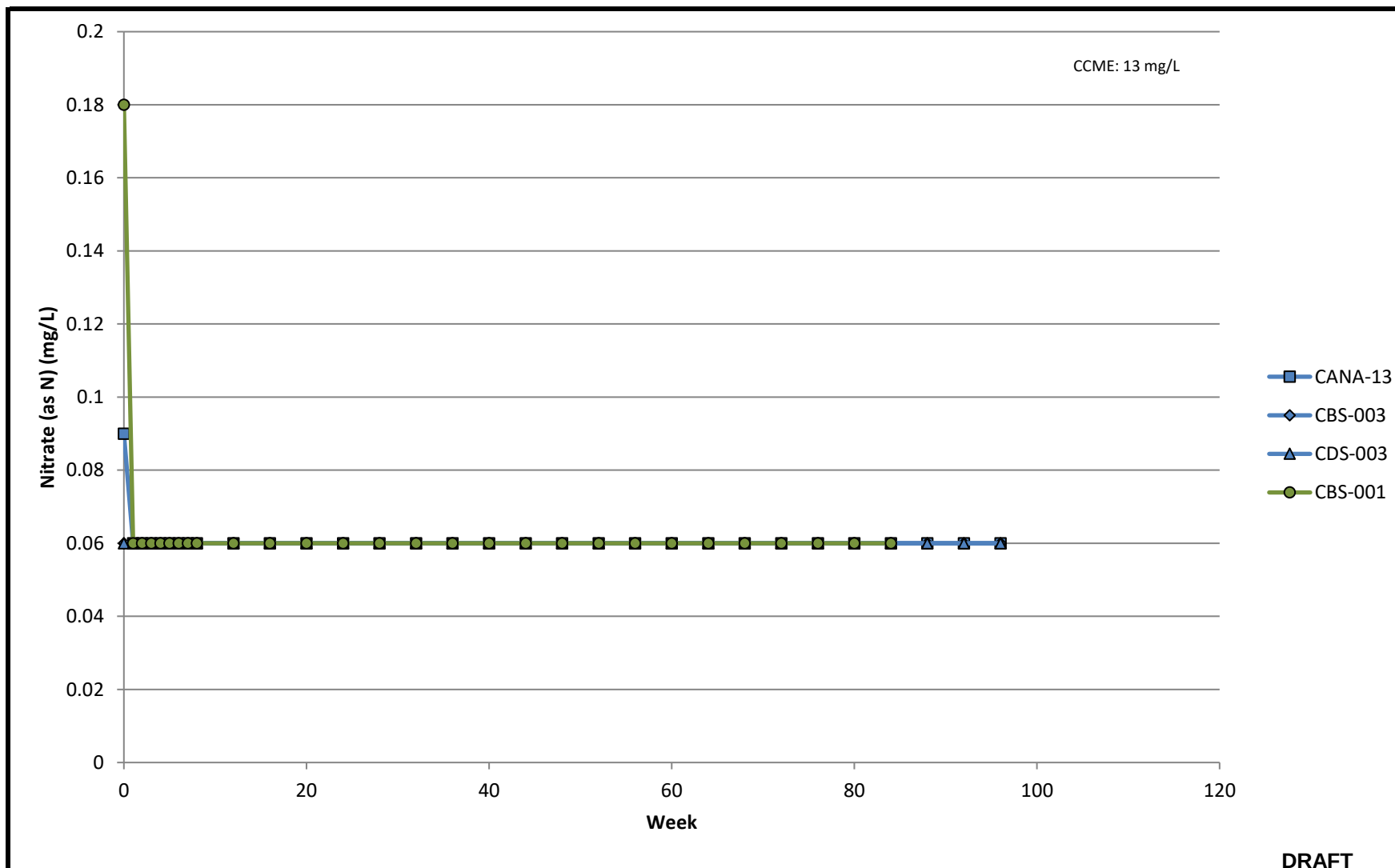
DRAFT

	Title			Humidity Cell Results - Chloride	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					6



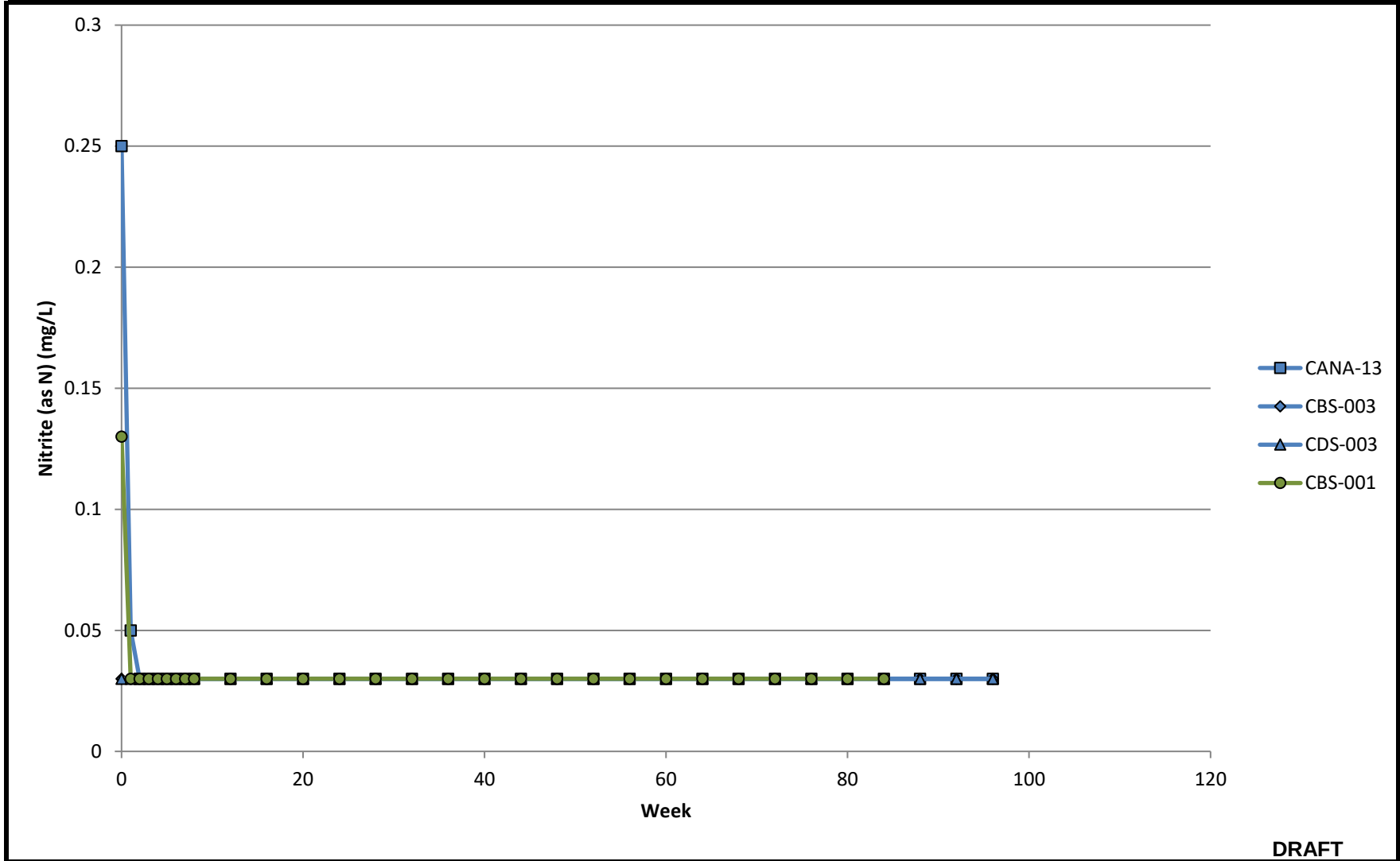
DRAFT

	Title Humidity Cell Results - Bromide		
	Project Name Crawford	Project No. 23590674	FIGURE 7
	Client Name Canadian Nickel Company	Date 2024-03-25	



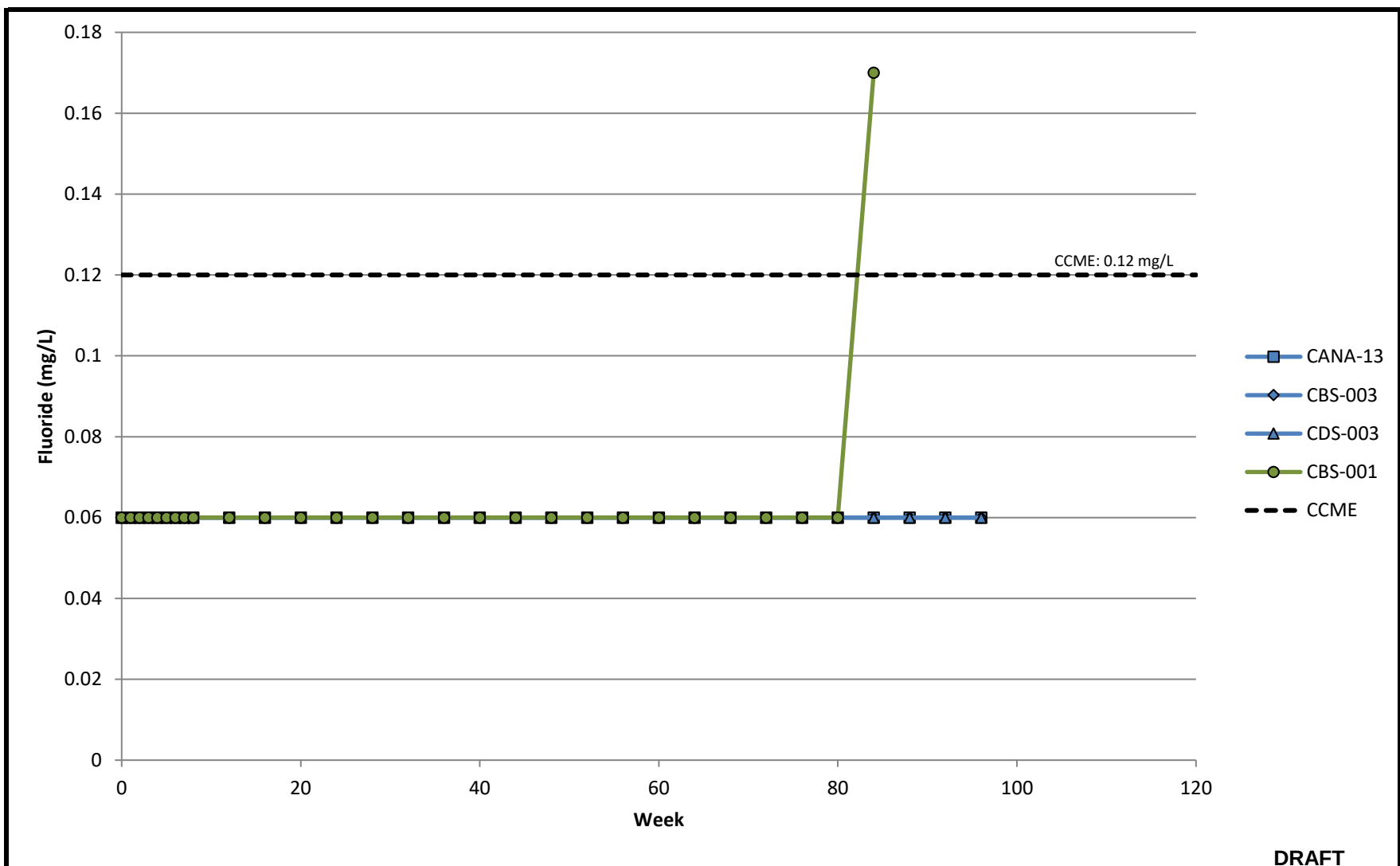
DRAFT

	Title			Humidity Cell Results - Nitrate (as N)	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					9

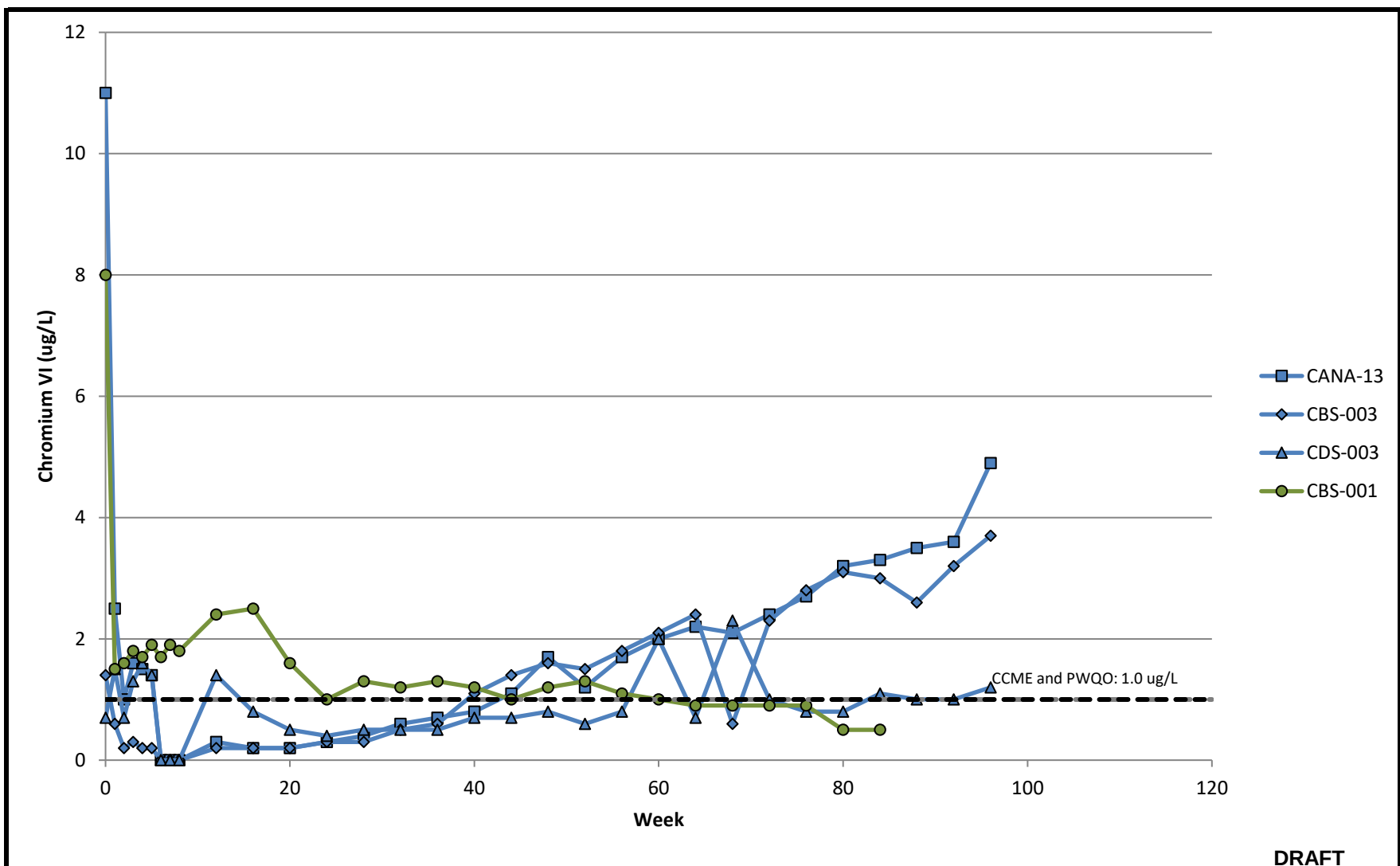


DRAFT

	Title			Humidity Cell Results - Nitrite (as N)			
	Project Name		Crawford	Project No.		23590674	FIGURE 8
	Client Name		Canadian Nickel Company	Date		2024-03-25	

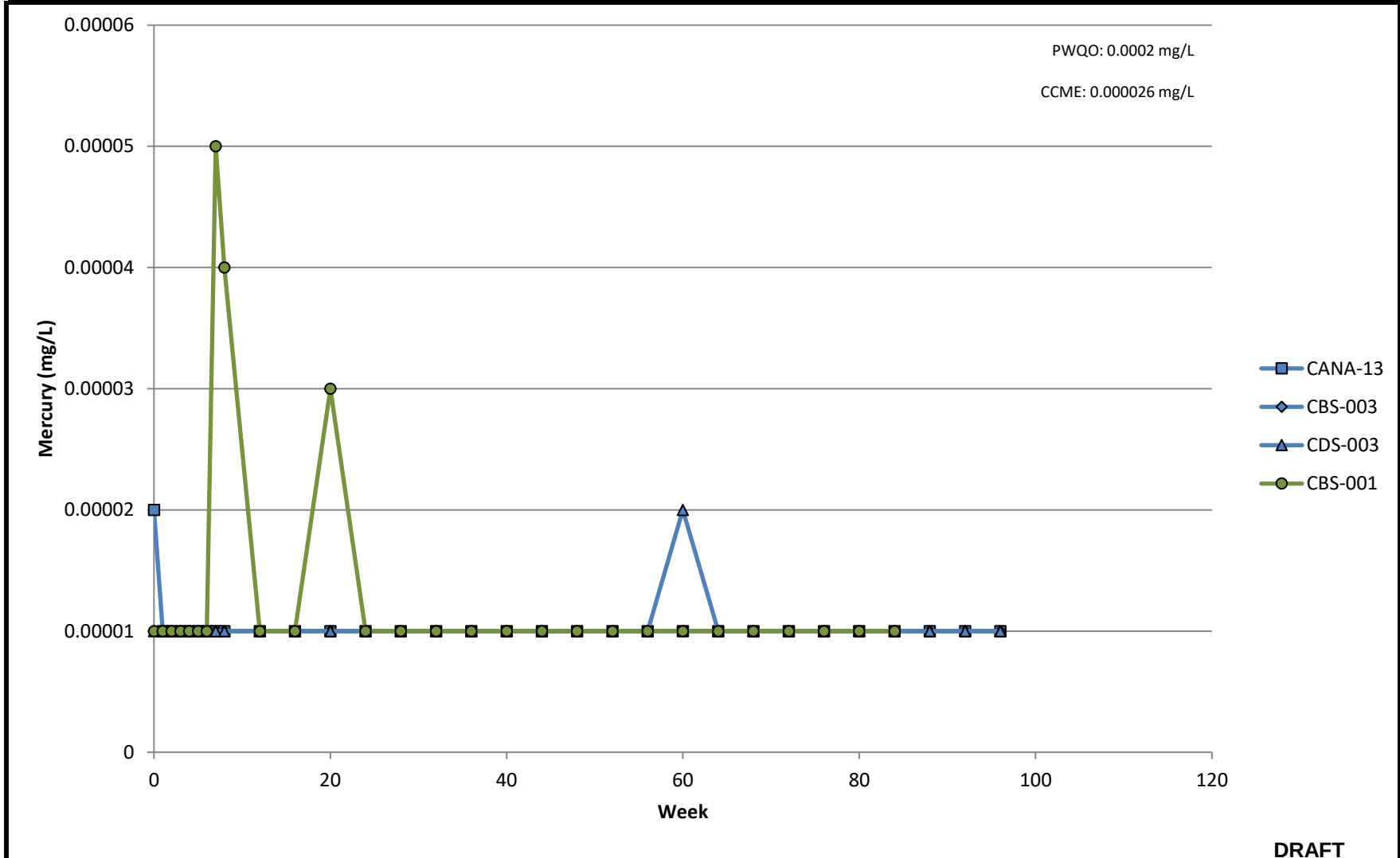


	Title Humidity Cell Results - Fluoride			
	Project Name Crawford		Project No. 23590674	FIGURE 10
	Client Name Canadian Nickel Company		Date 2024-03-25	



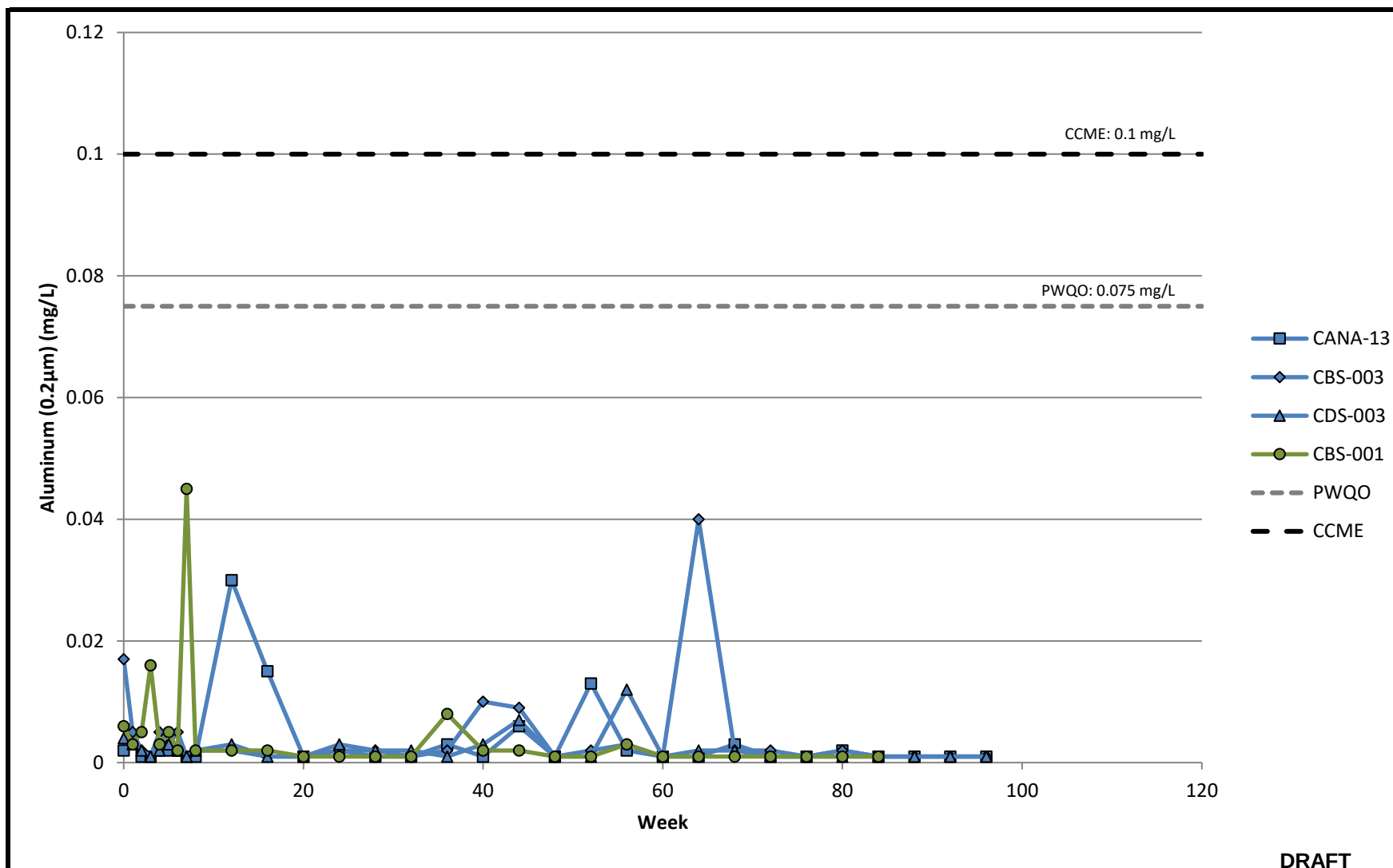
DRAFT

	Title				Humidity Cell Results - Chromium VI	
	Project Name		Crawford		Project No.	23590674
	Client Name		Canadian Nickel Company		Date	2024-03-25
						FIGURE
						11



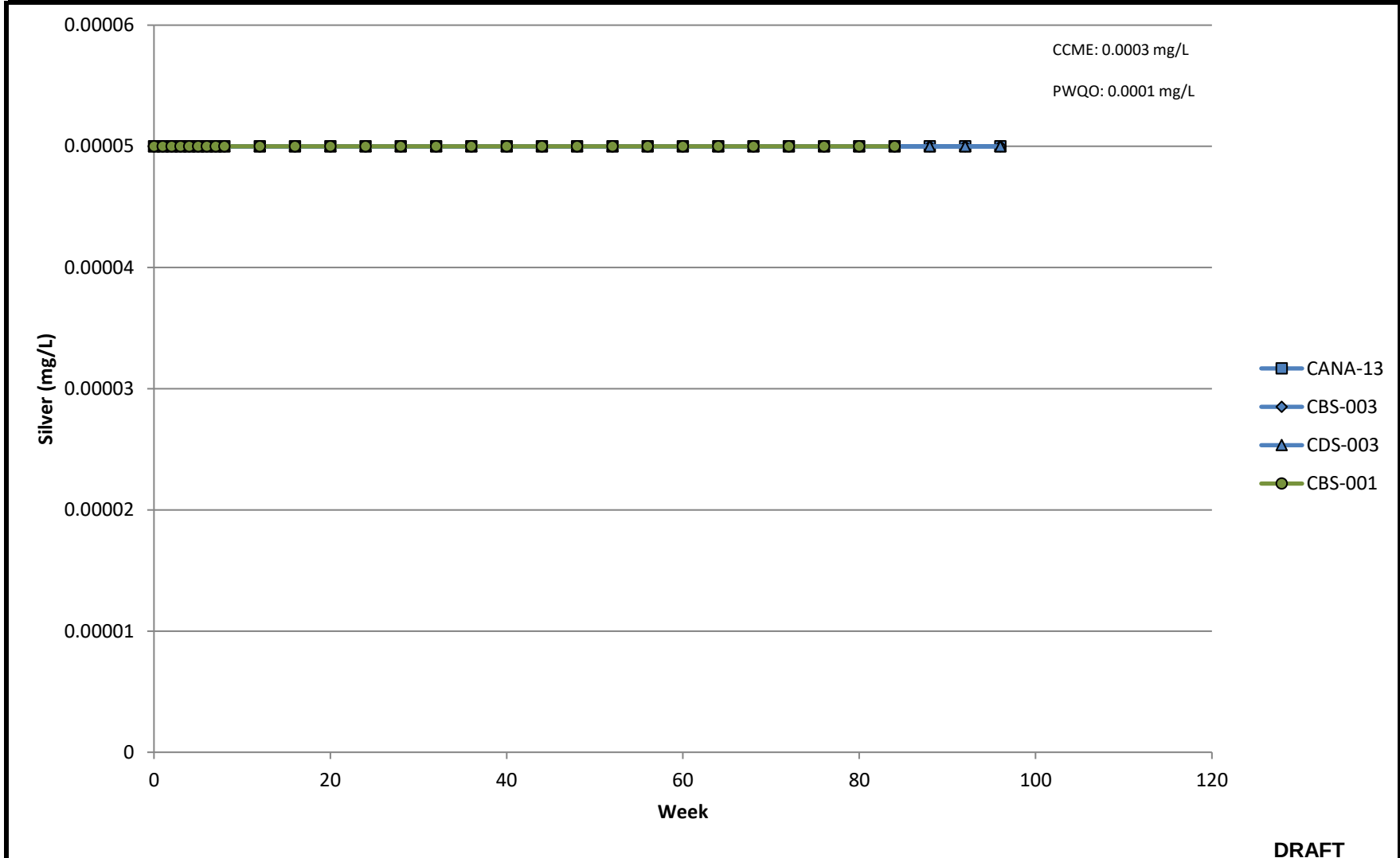
DRAFT

	Title Humidity Cell Results - Mercury		
	Project Name Crawford	Project No. 23590674	FIGURE 12
	Client Name Canadian Nickel Company	Date 2024-03-25	



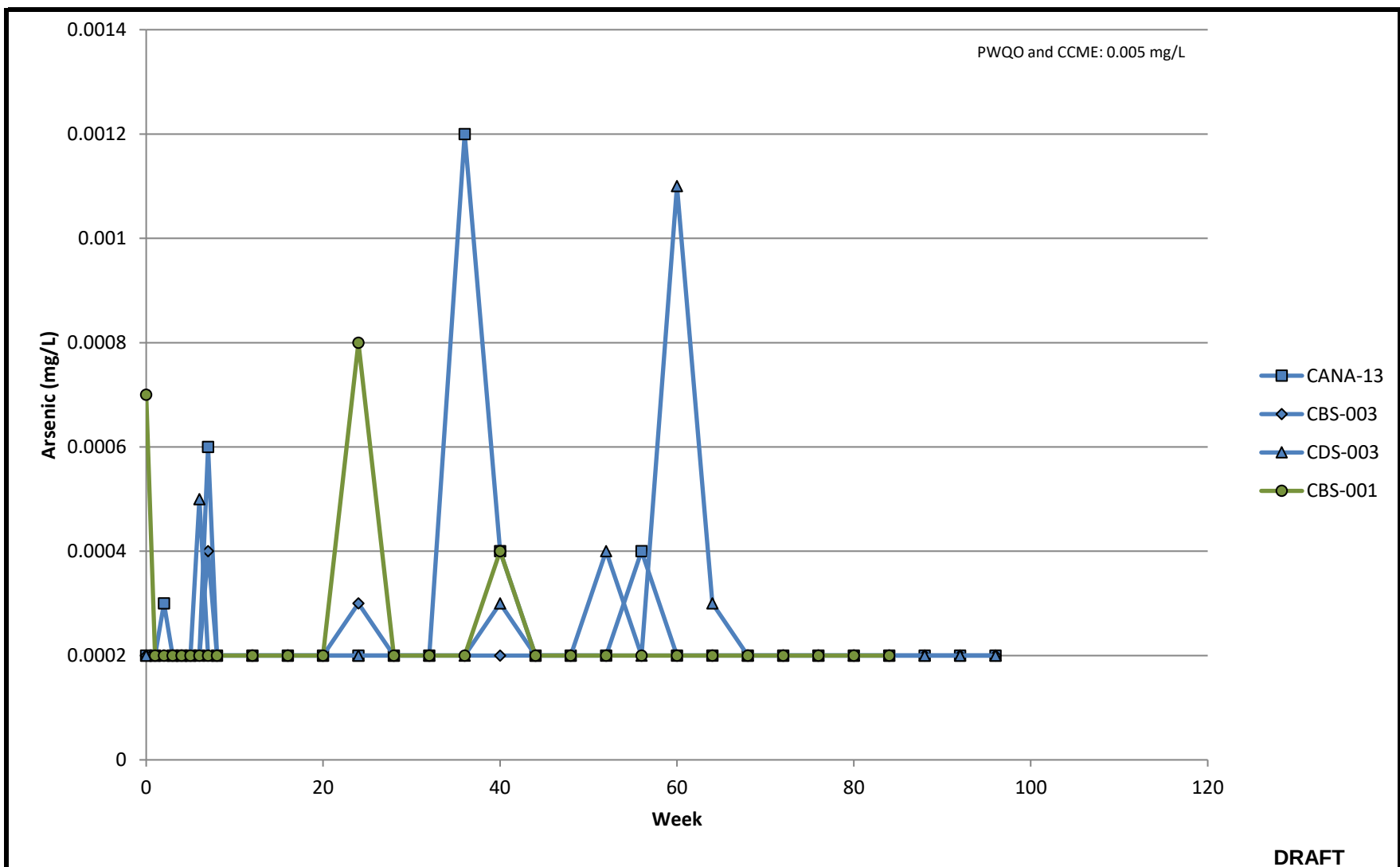
DRAFT

	Title			Humidity Cell Results - Aluminum (0.2µm)	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					13



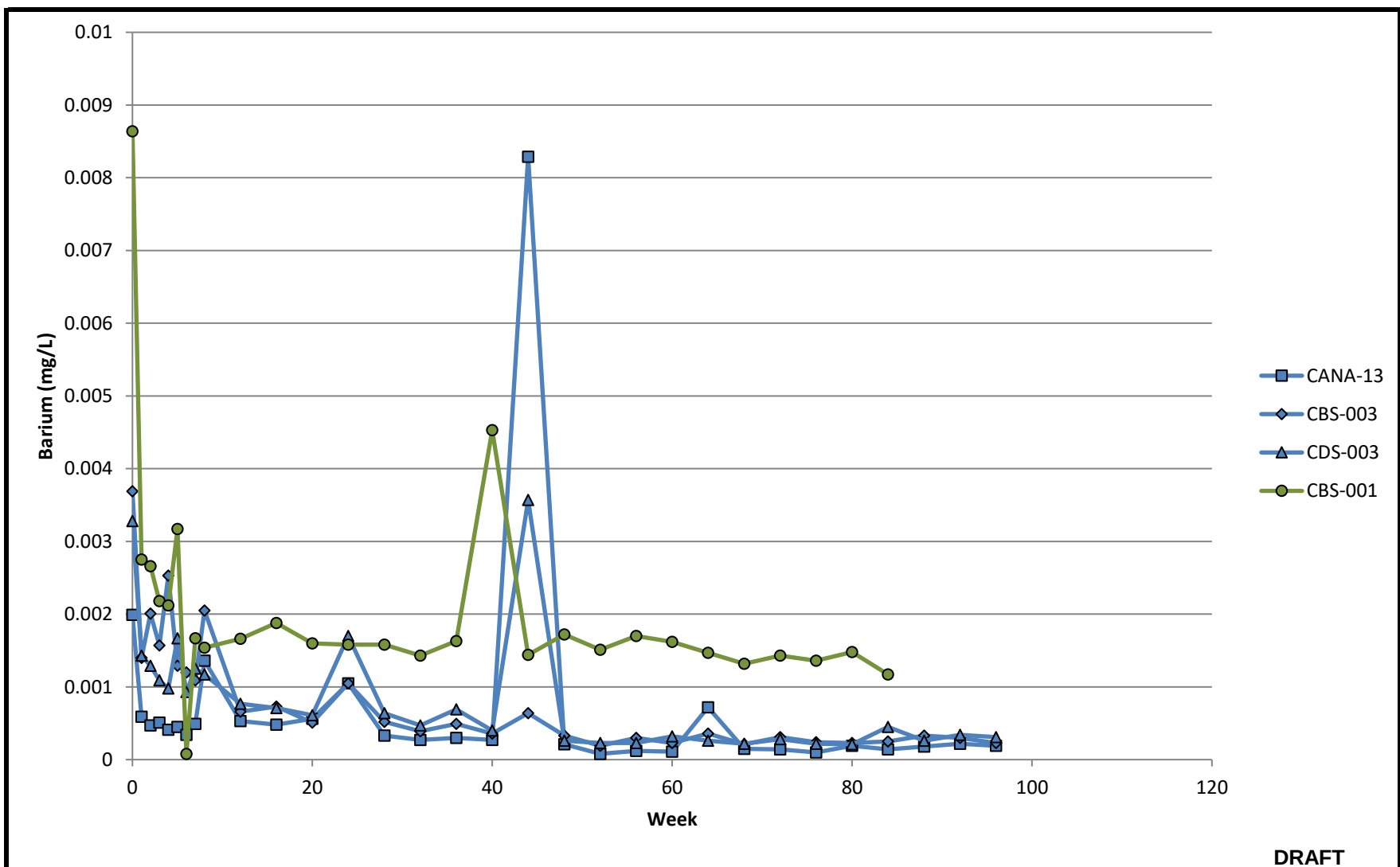
DRAFT

	Title Humidity Cell Results - Silver		
	Project Name Crawford	Project No. 23590674	FIGURE 14
	Client Name Canadian Nickel Company	Date 2024-03-25	



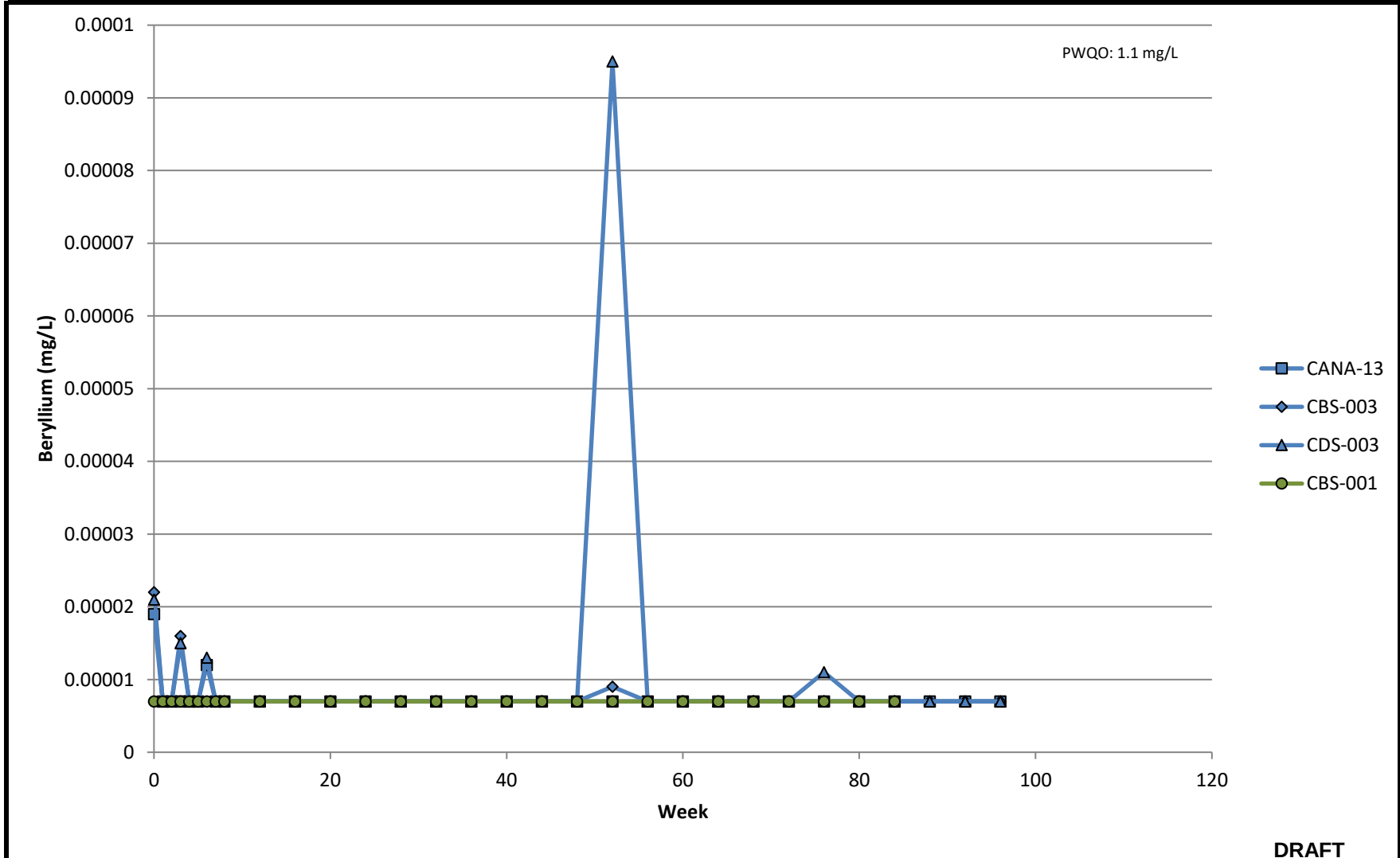
DRAFT

	Title			Humidity Cell Results - Arsenic	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					15



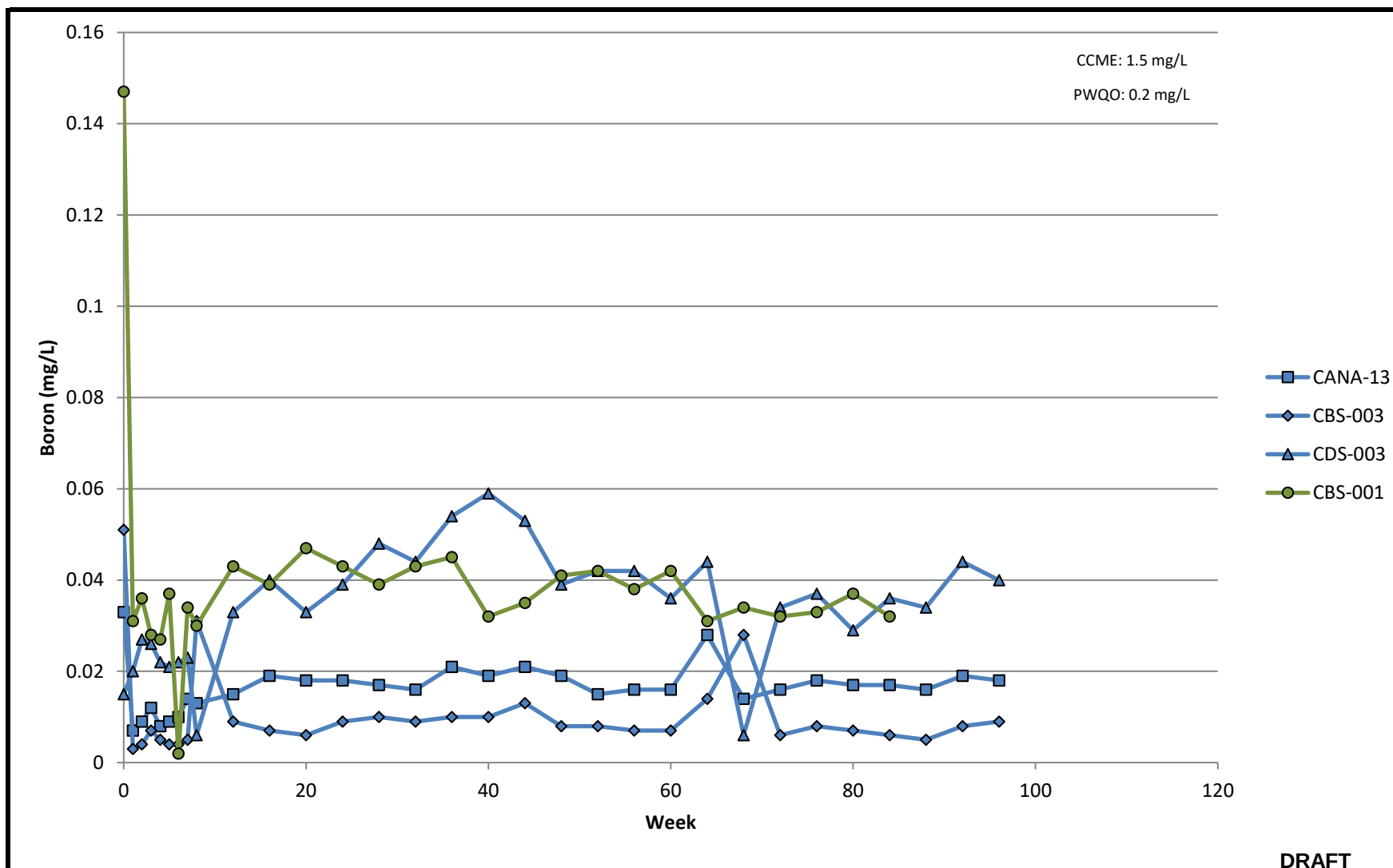
DRAFT

	Title			Humidity Cell Results - Barium	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					16



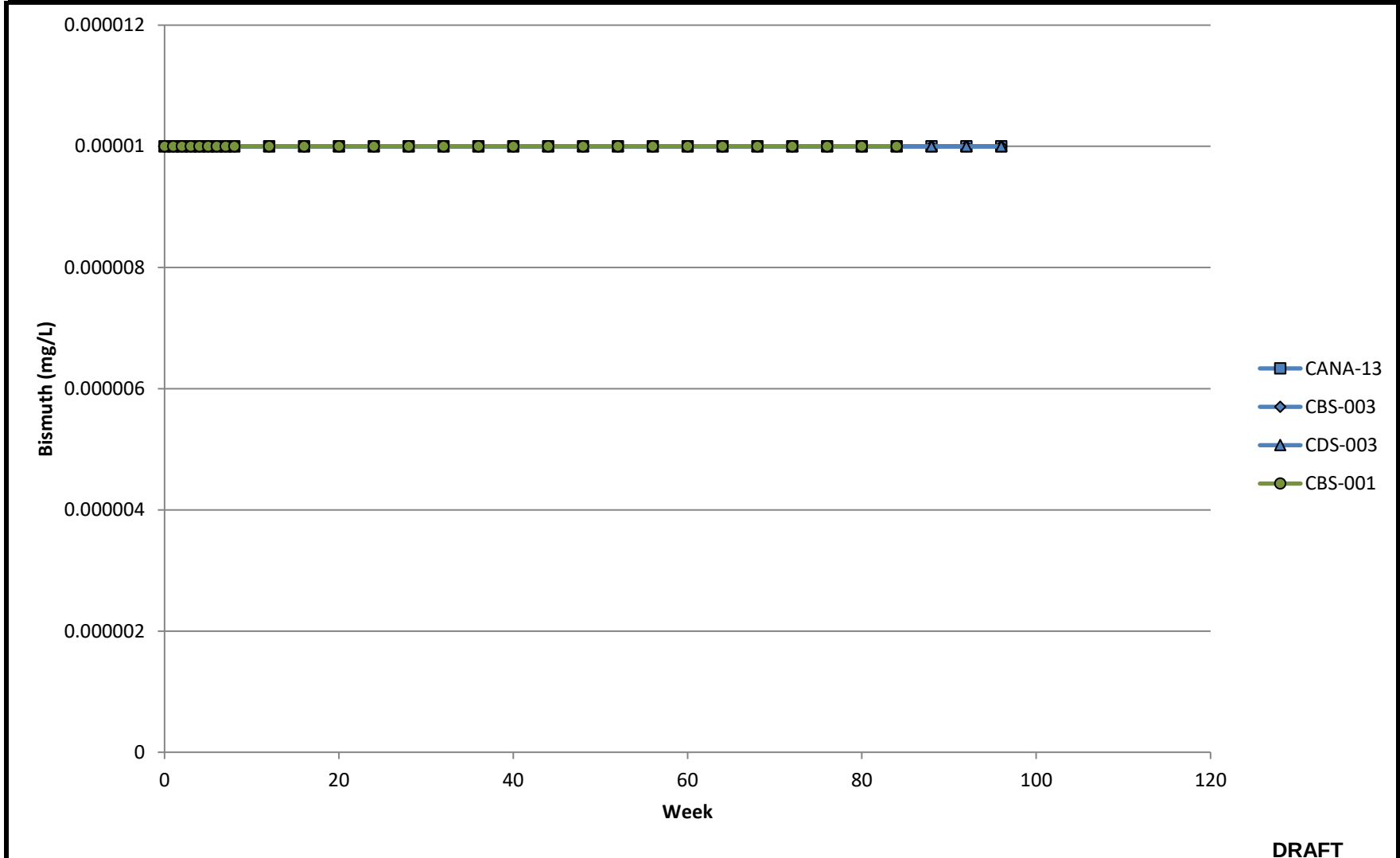
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	Title			
	Humidity Cell Results - Beryllium			
	Project Name	Crawford	Project No.	23590674
	Client Name	Canadian Nickel Company	Date	2024-03-25
				FIGURE 17



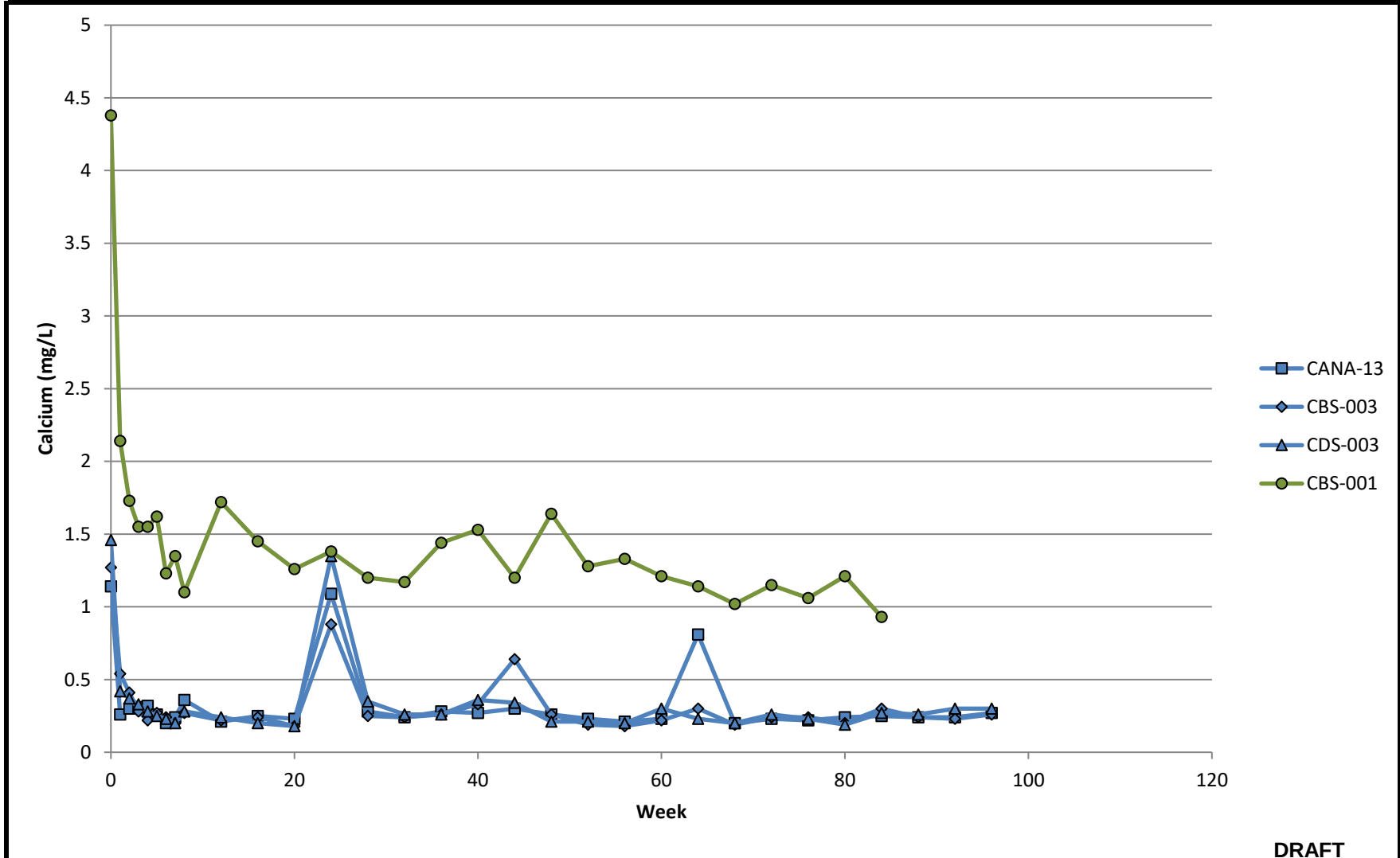
DRAFT

	Title			Humidity Cell Results - Boron		
	Project Name		Crawford	Project No.	23590674	FIGURE 18
	Client Name		Canadian Nickel Company	Date	2024-03-25	



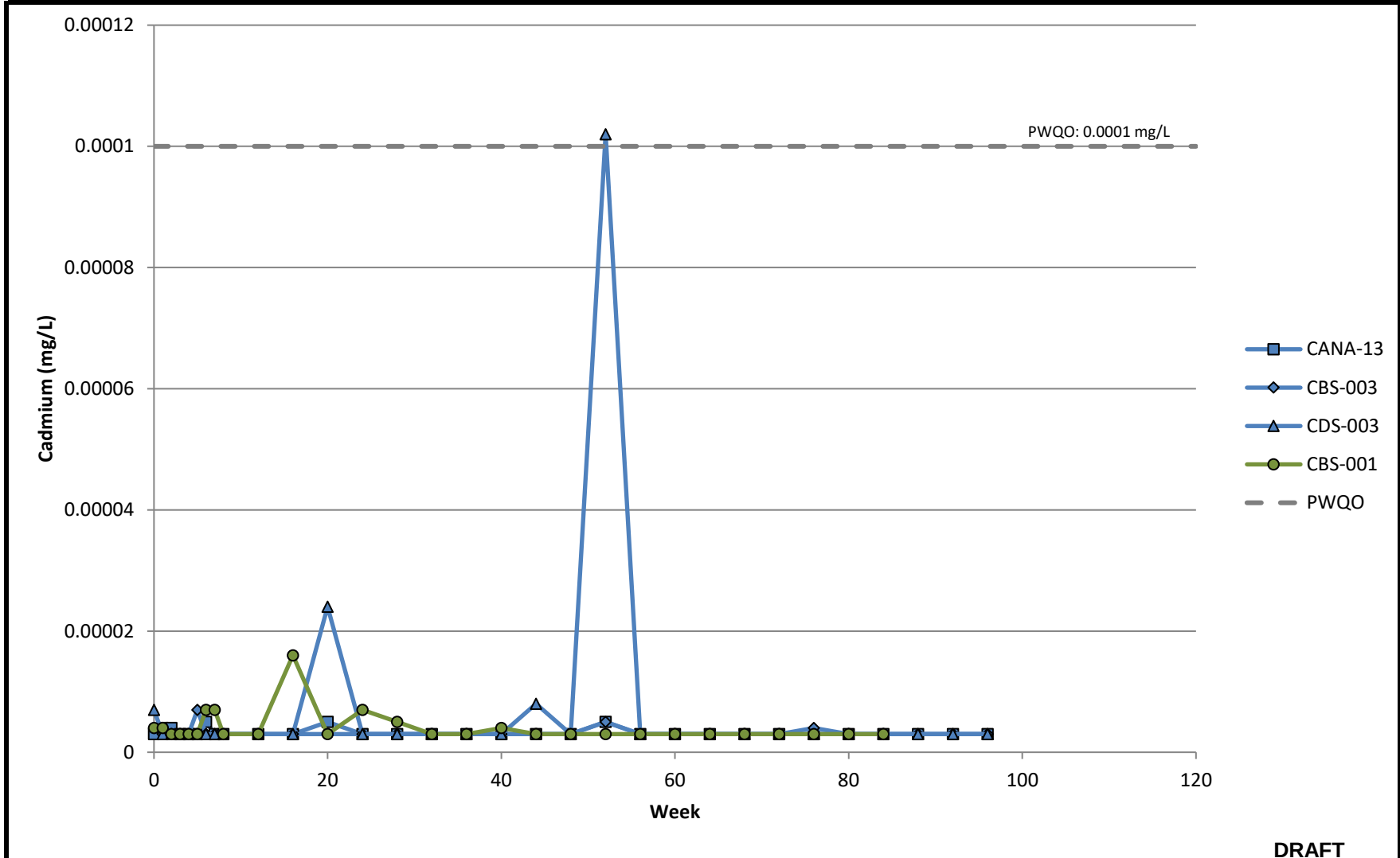
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	Title Humidity Cell Results - Bismuth		
	Project Name Crawford	Project No. 23590674	FIGURE 19
	Client Name Canadian Nickel Company	Date 2024-03-25	



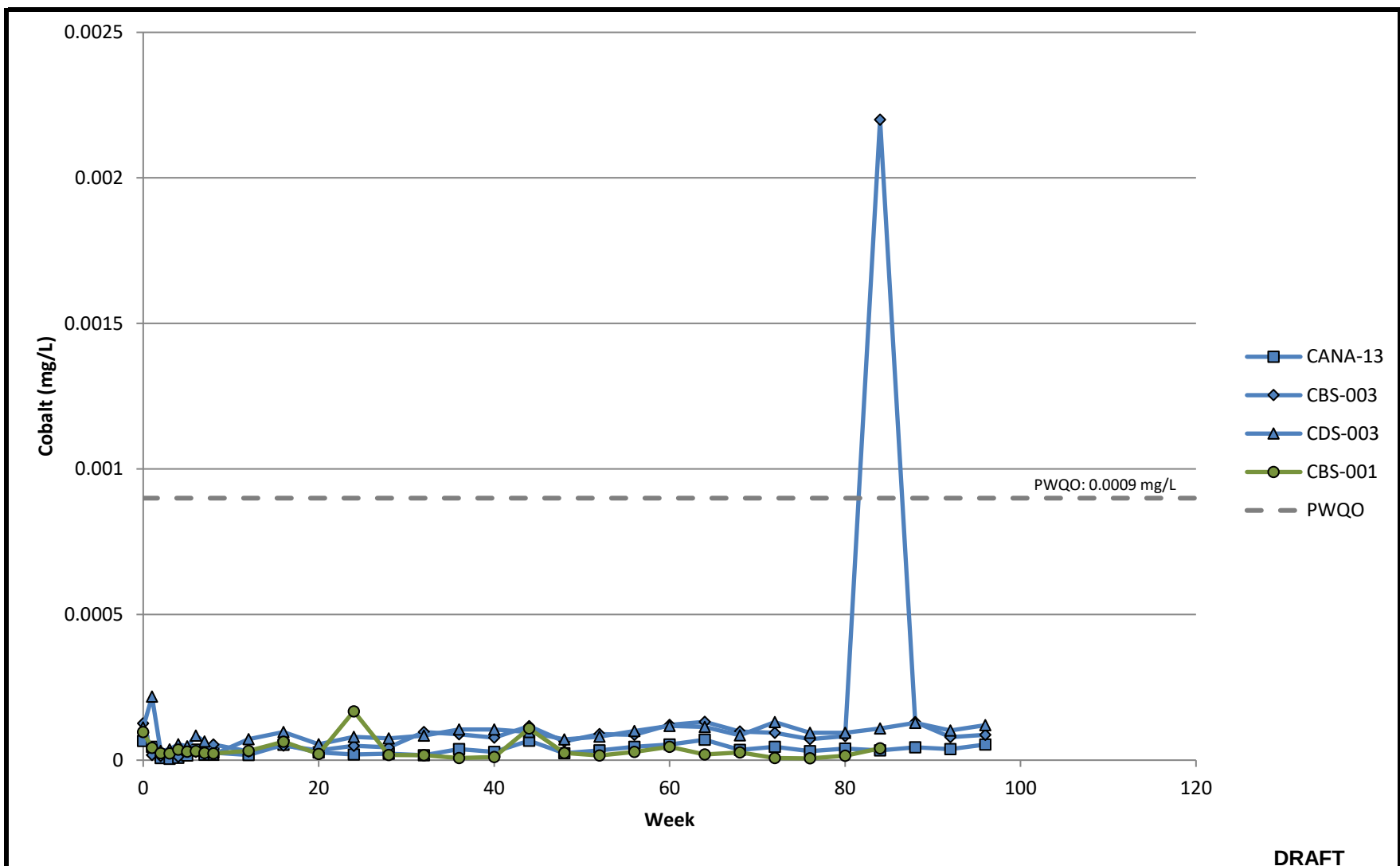
DRAFT

	Title Humidity Cell Results - Calcium		
	Project Name Crawford	Project No. 23590674	FIGURE 20
	Client Name Canadian Nickel Company	Date 2024-03-25	



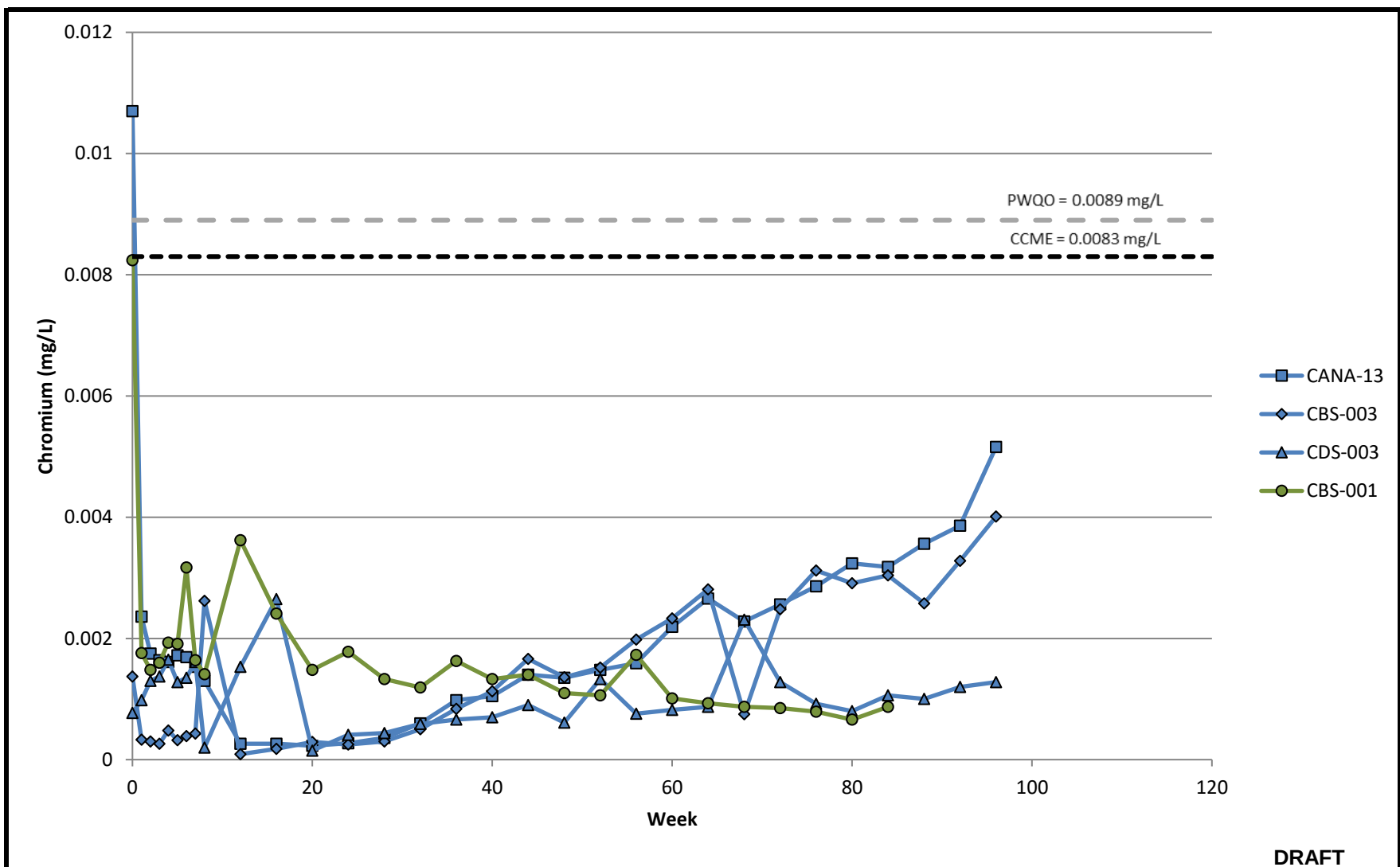
DRAFT

	Title Humidity Cell Results - Cadmium		
	Project Name Crawford	Project No. 23590674	FIGURE 21
	Client Name Canadian Nickel Company	Date 2024-03-25	



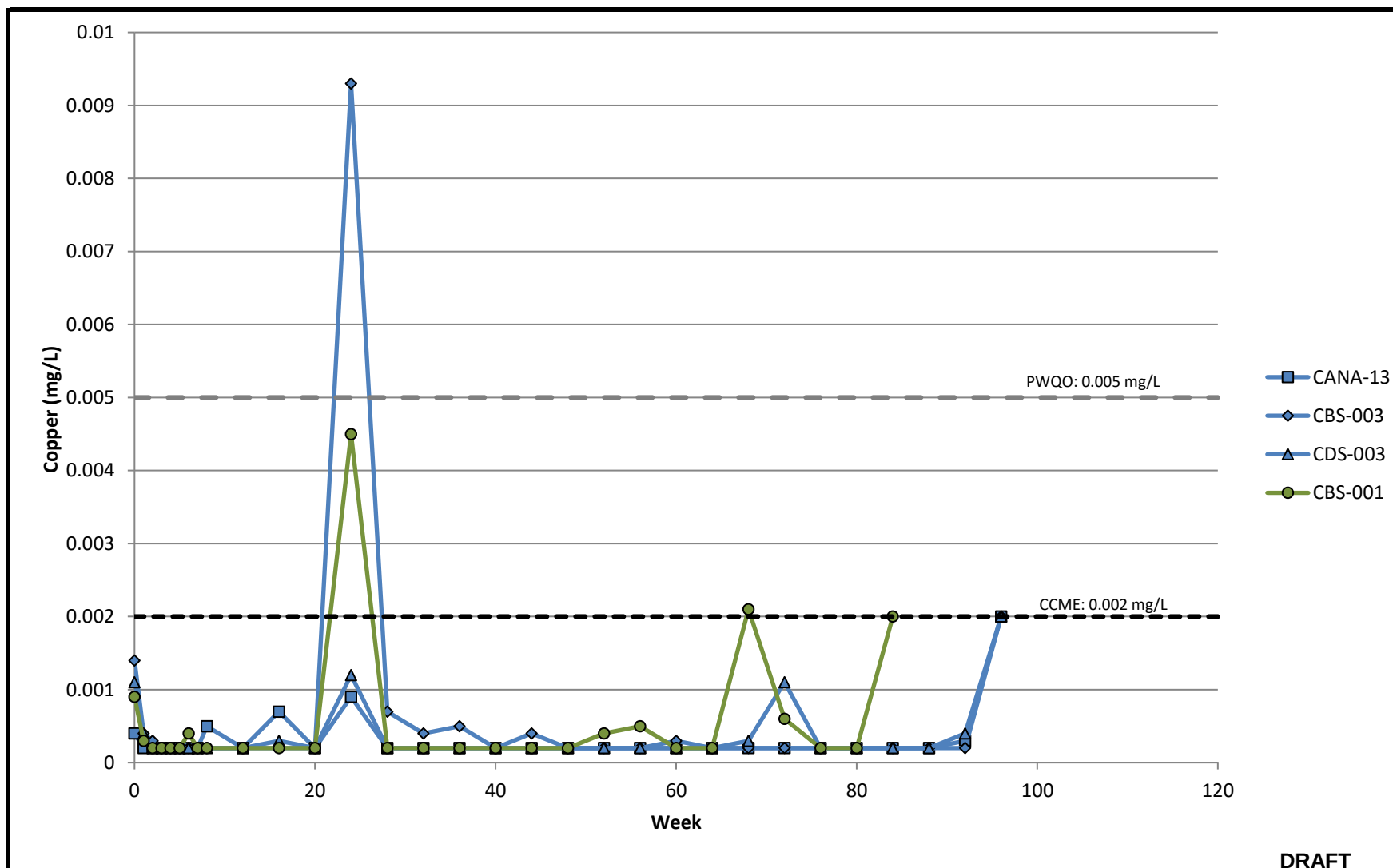
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	Title			Humidity Cell Results - Cobalt	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					22



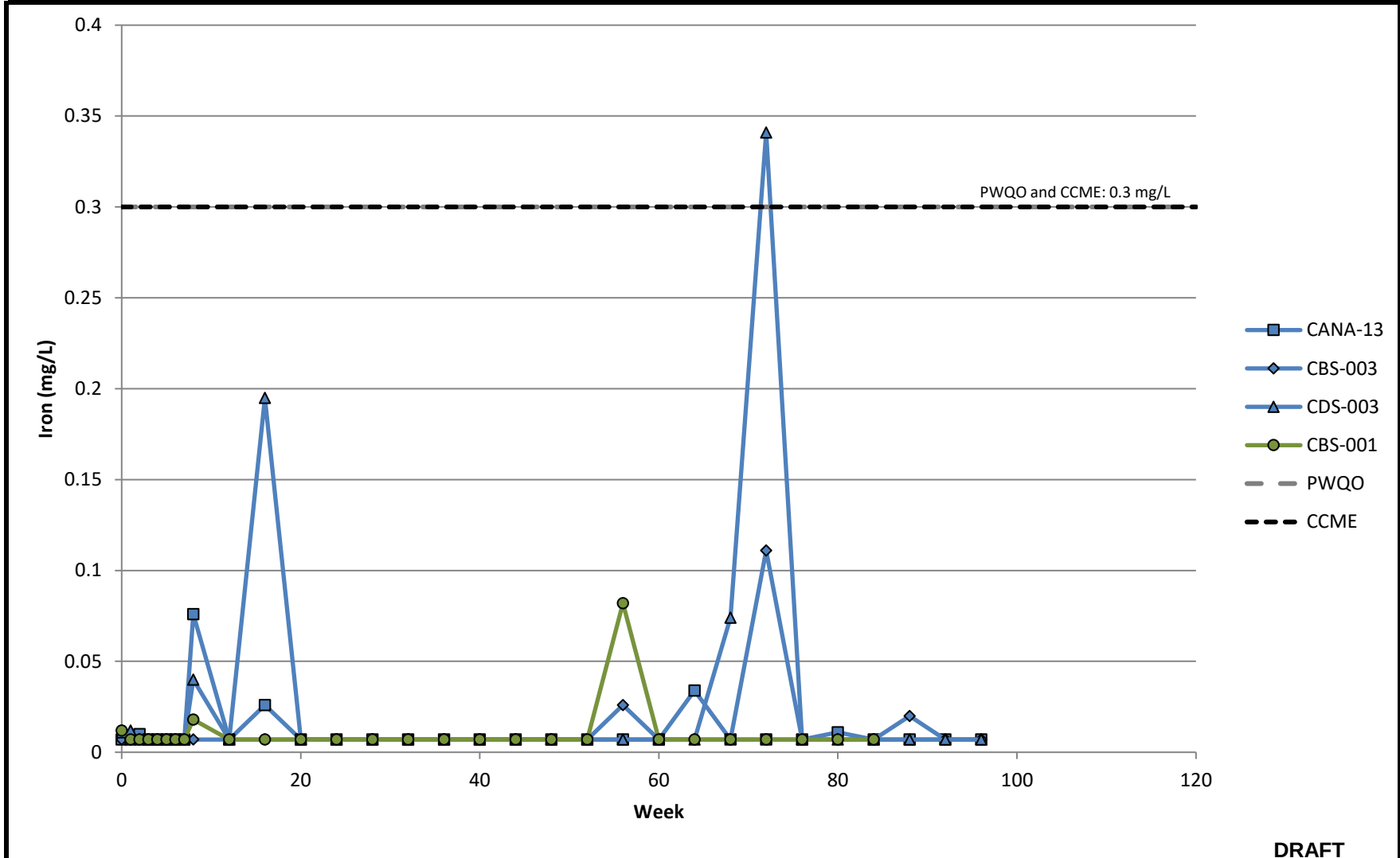
DRAFT

	Title			Humidity Cell Results - Chromium	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					23



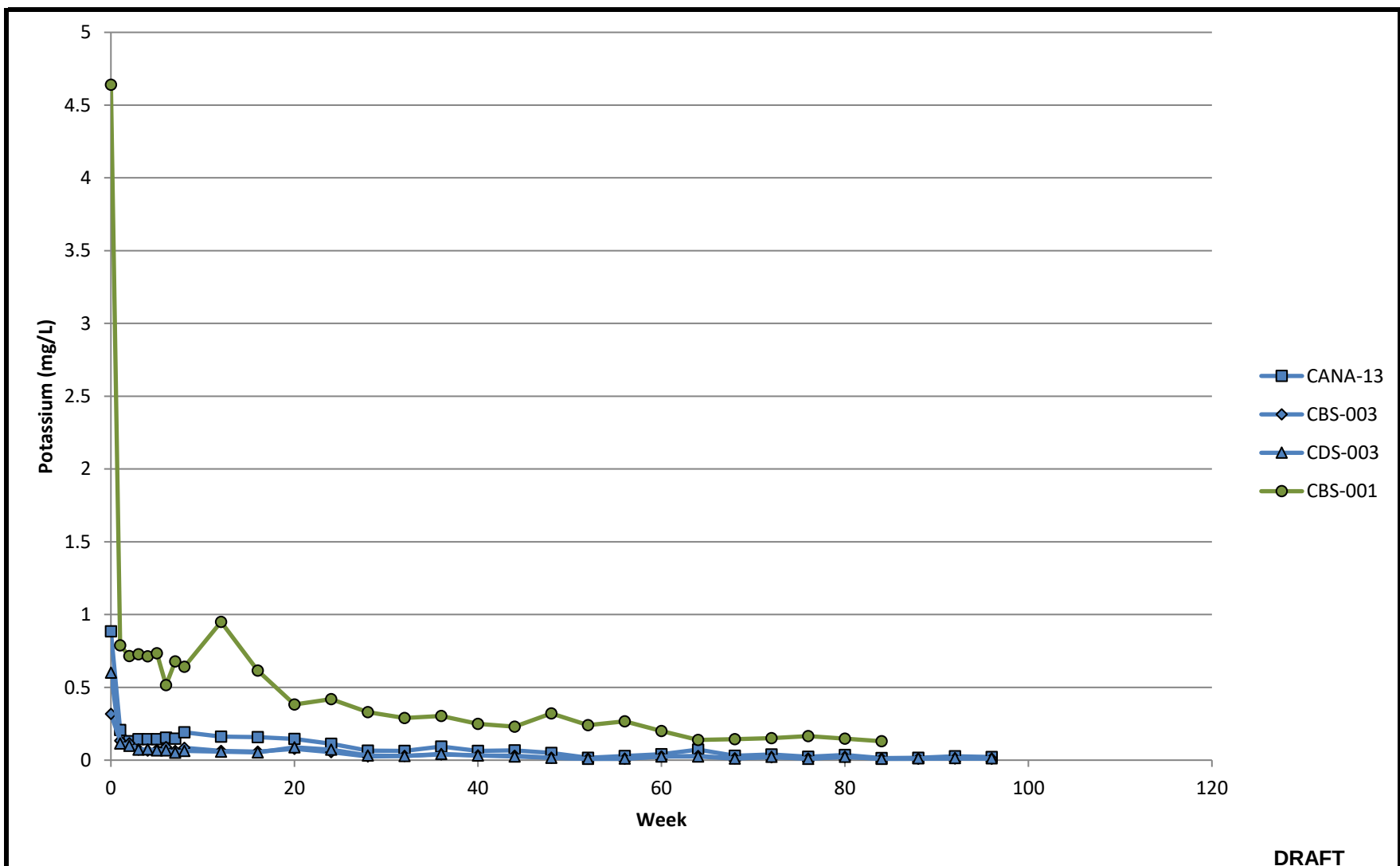
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	Title			Humidity Cell Results - Copper	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
			FIGURE		24



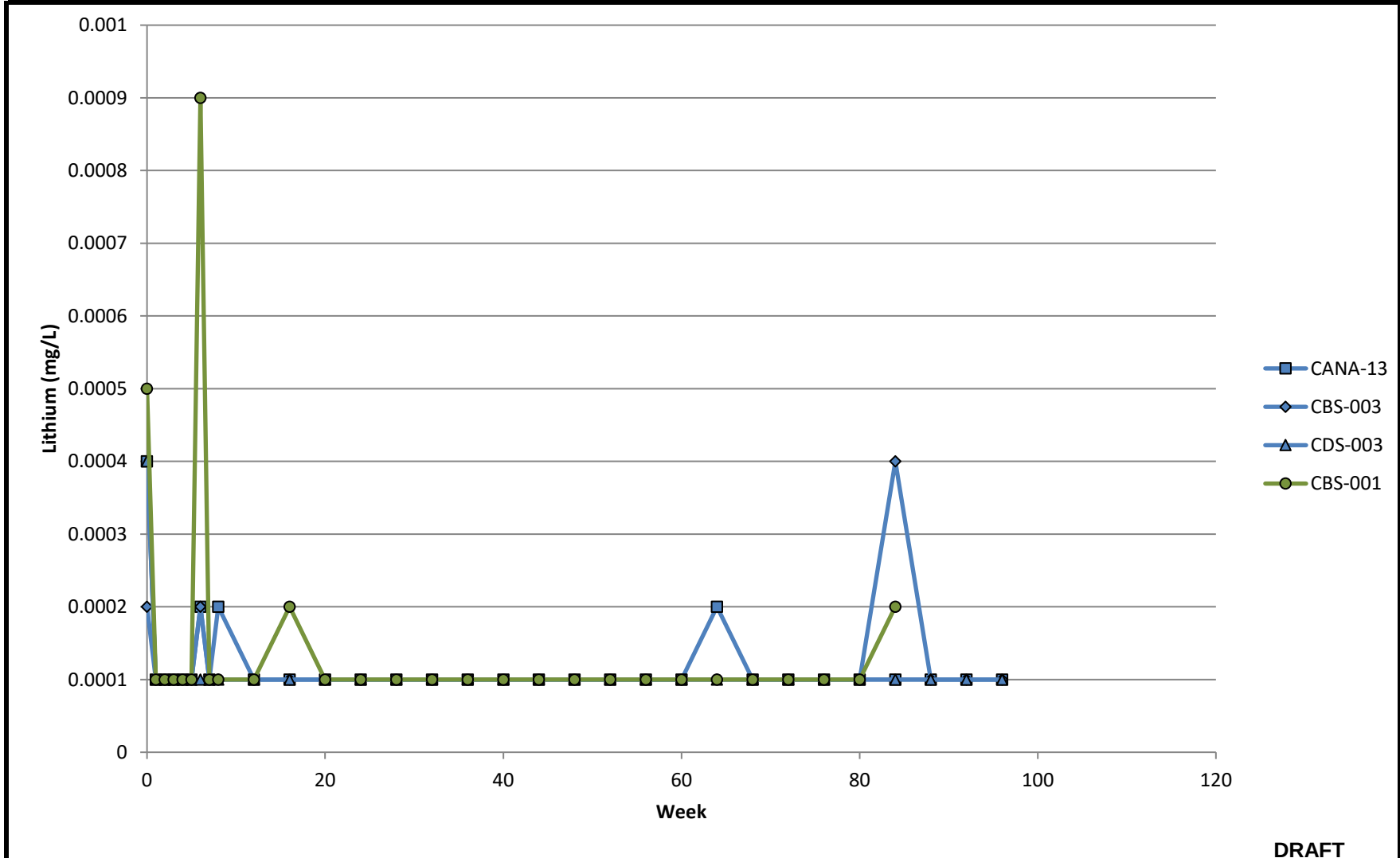
DRAFT

	Title Humidity Cell Results - Iron		
	Project Name Crawford	Project No. 23590674	FIGURE 25
	Client Name Canadian Nickel Company	Date 2024-03-25	



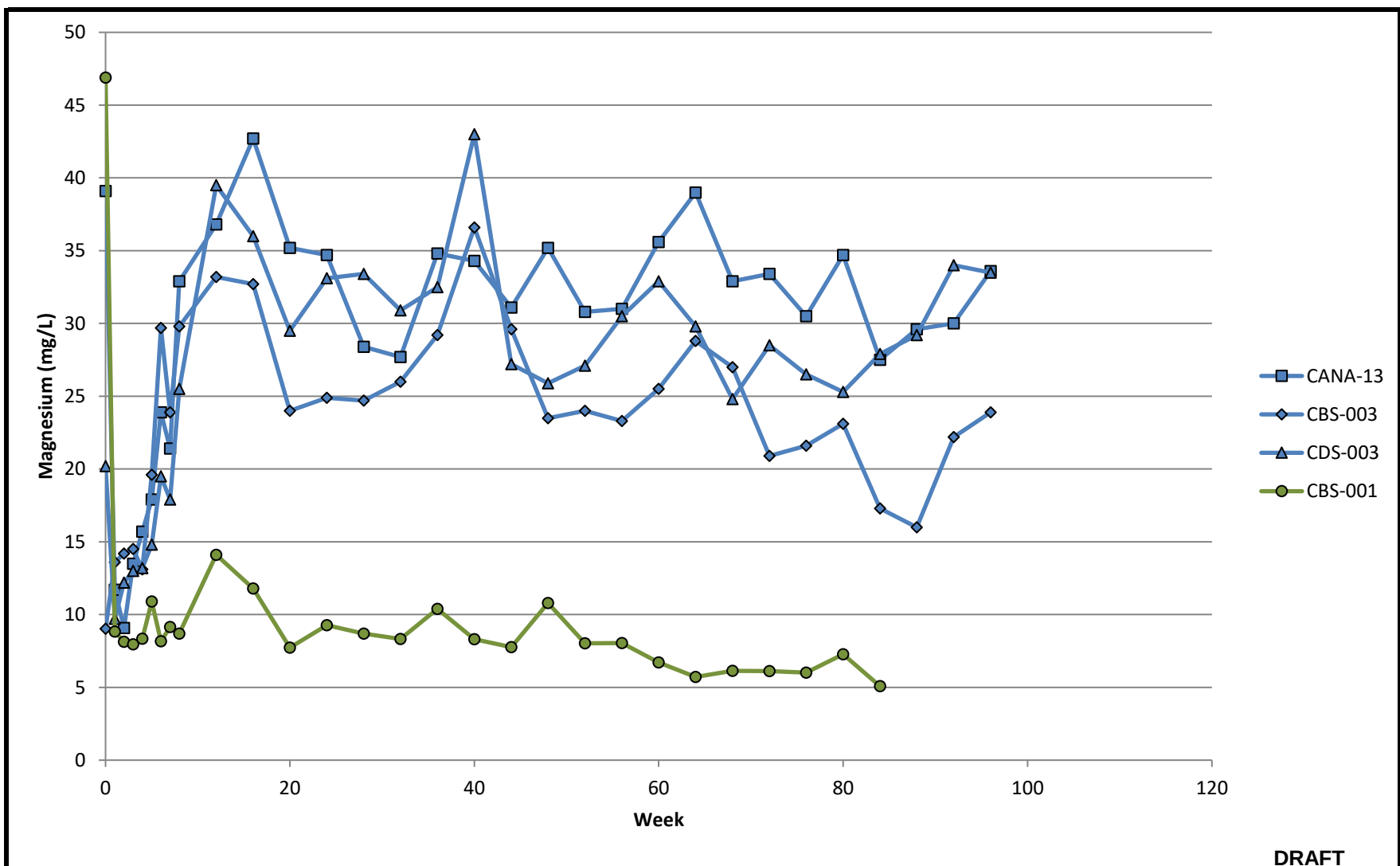
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	Title			Humidity Cell Results - Potassium	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					26

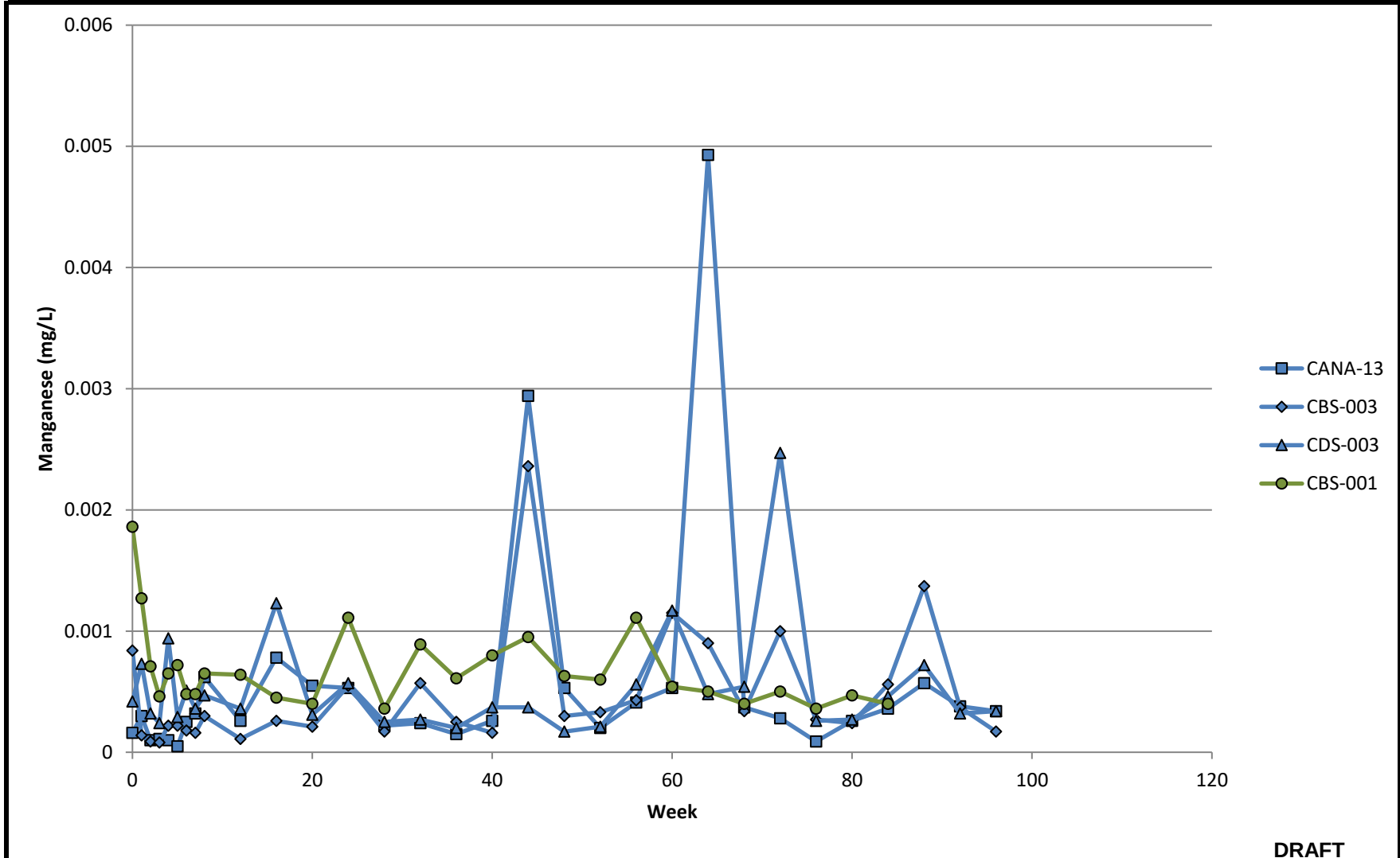


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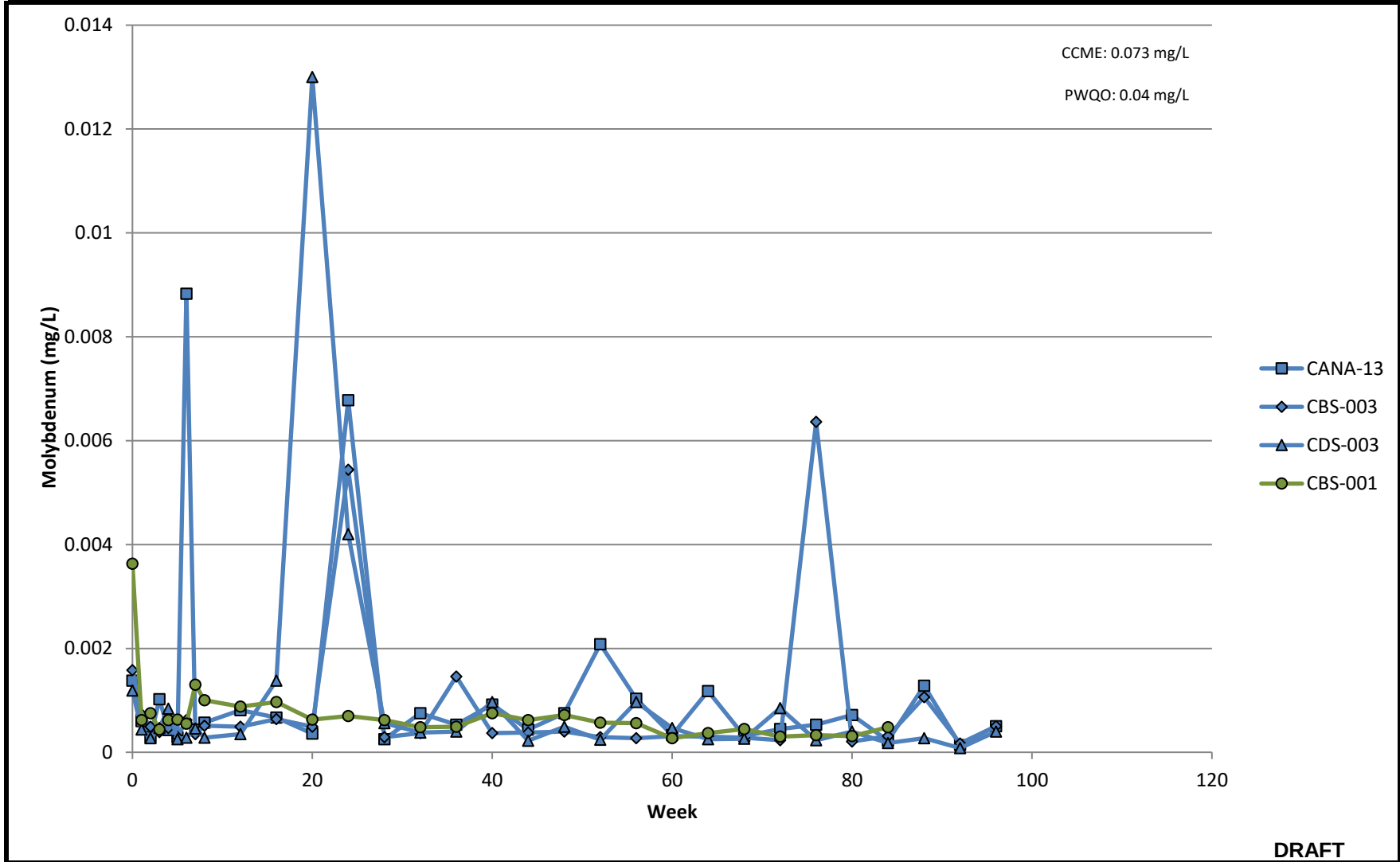
	Title Humidity Cell Results - Lithium		
	Project Name Crawford	Project No. 23590674	FIGURE 27
	Client Name Canadian Nickel Company	Date 2024-03-25	



	Title				Humidity Cell Results - Magnesium	
	Project Name		Crawford	Project No.	23590674	FIGURE 28
	Client Name		Canadian Nickel Company	Date	2024-03-25	

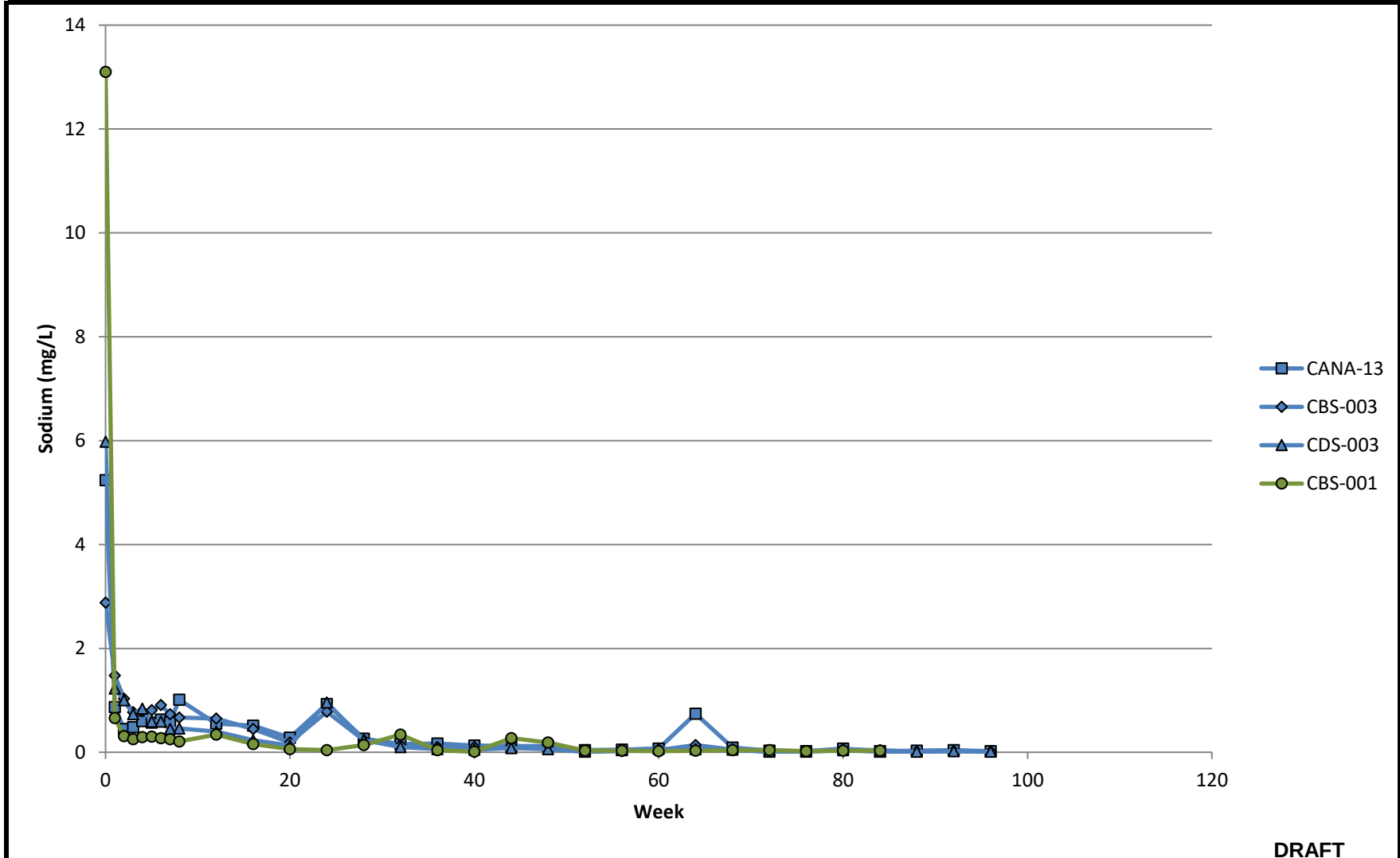


	Title Humidity Cell Results - Manganese		
	Project Name Crawford	Project No. 23590674	FIGURE 29
	Client Name Canadian Nickel Company	Date 2024-03-25	



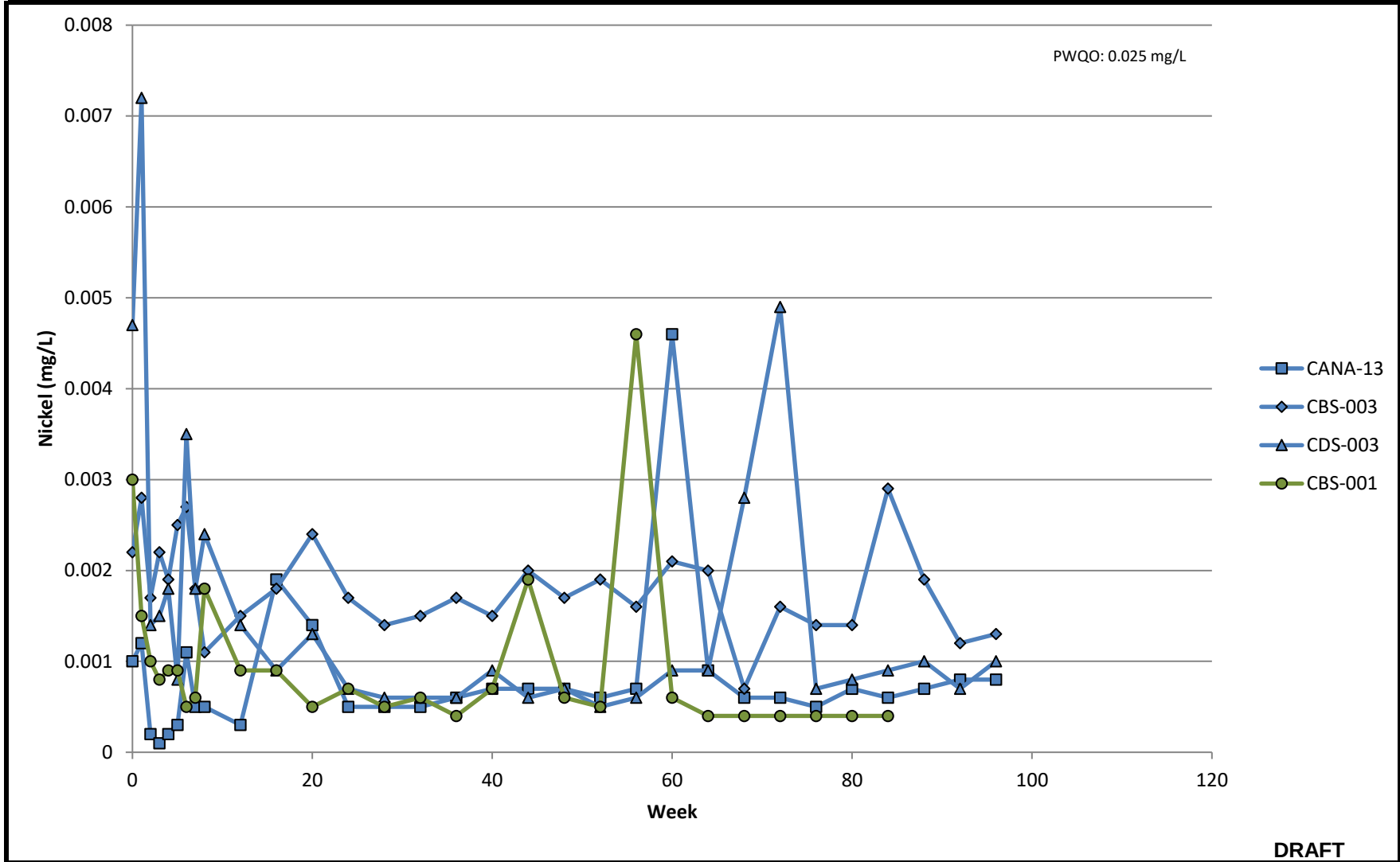
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	Title			Humidity Cell Results - Molybdenum		
	Project Name		Crawford	Project No.	23590674	FIGURE
	Client Name		Canadian Nickel Company	Date	2024-03-25	
						30



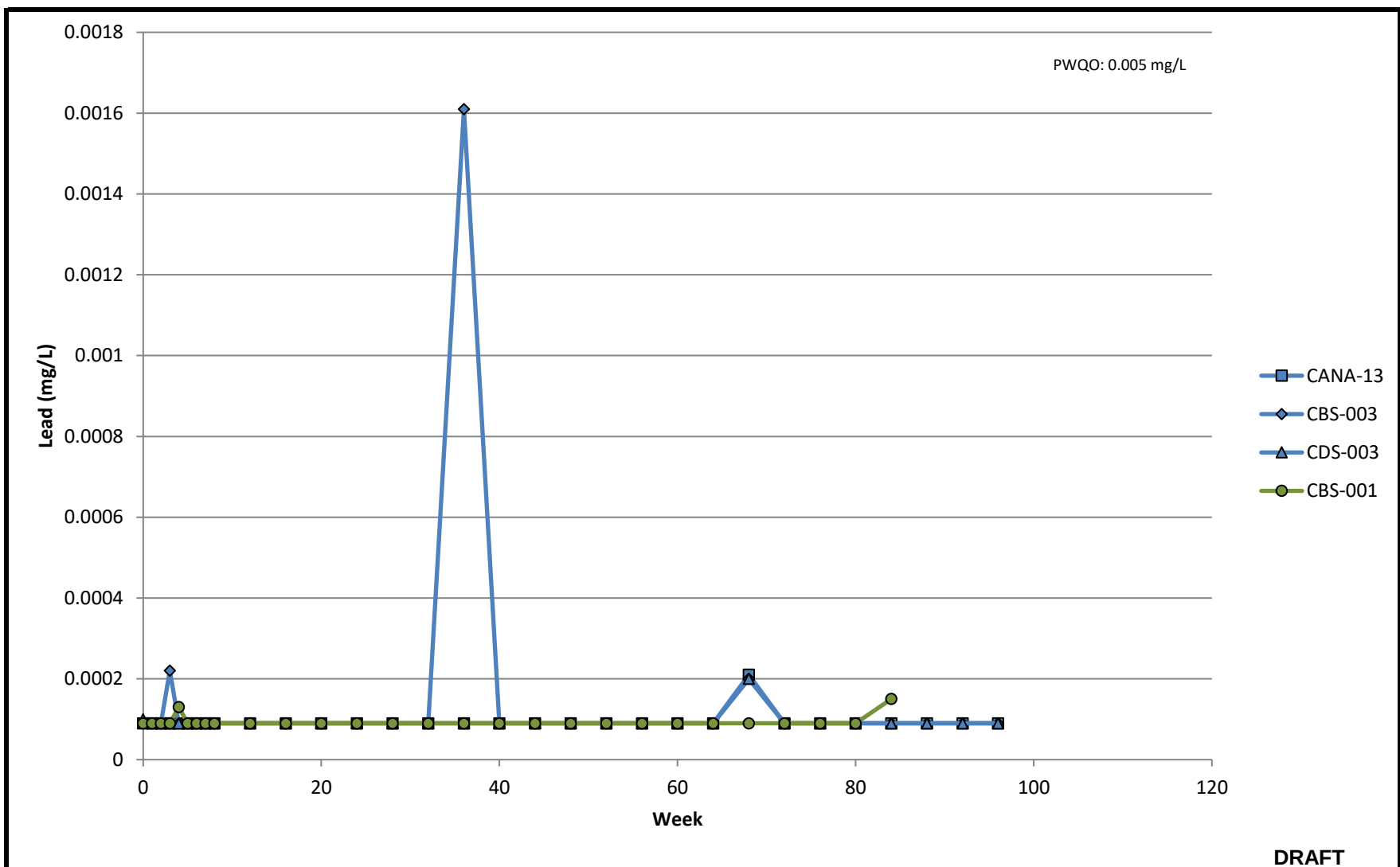
DRAFT

	Title				Humidity Cell Results - Sodium		
	Project Name		Crawford		Project No.	23590674	FIGURE 31
	Client Name		Canadian Nickel Company		Date	2024-03-25	



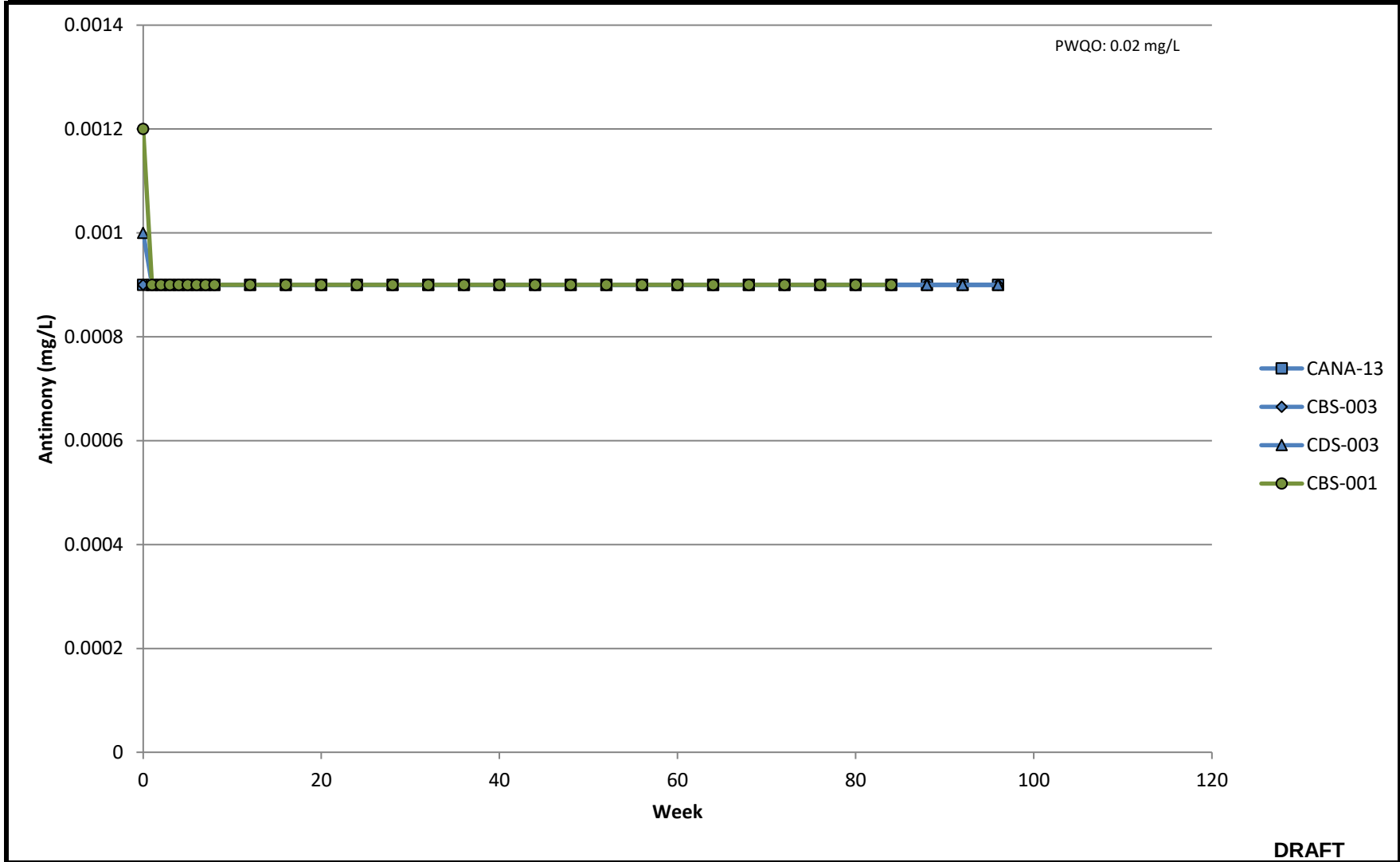
DRAFT

	Title Humidity Cell Results - Nickel		
	Project Name Crawford	Project No. 23590674	FIGURE 32
	Client Name Canadian Nickel Company	Date 2024-03-25	



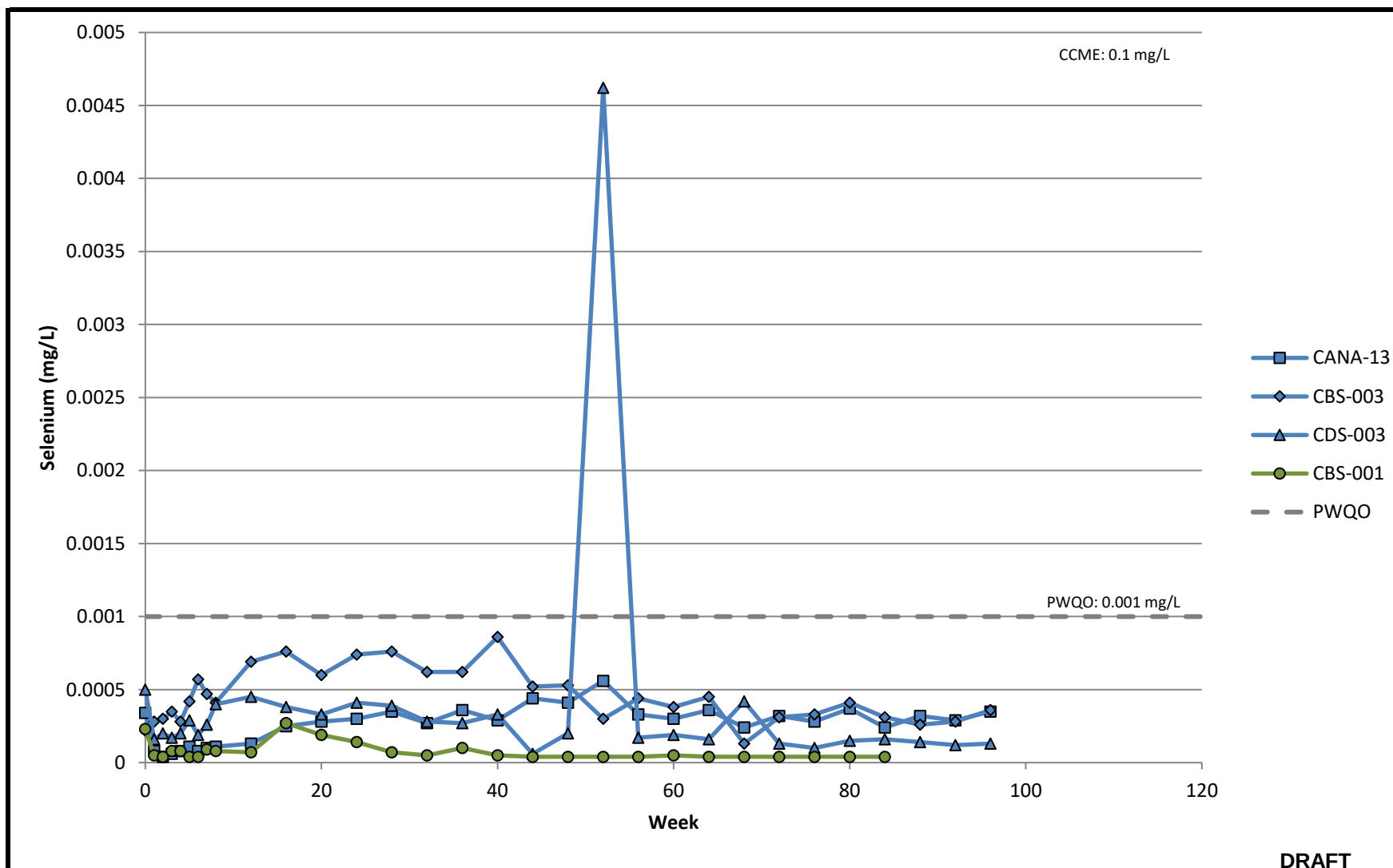
DRAFT

	Title			Humidity Cell Results - Lead	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					33

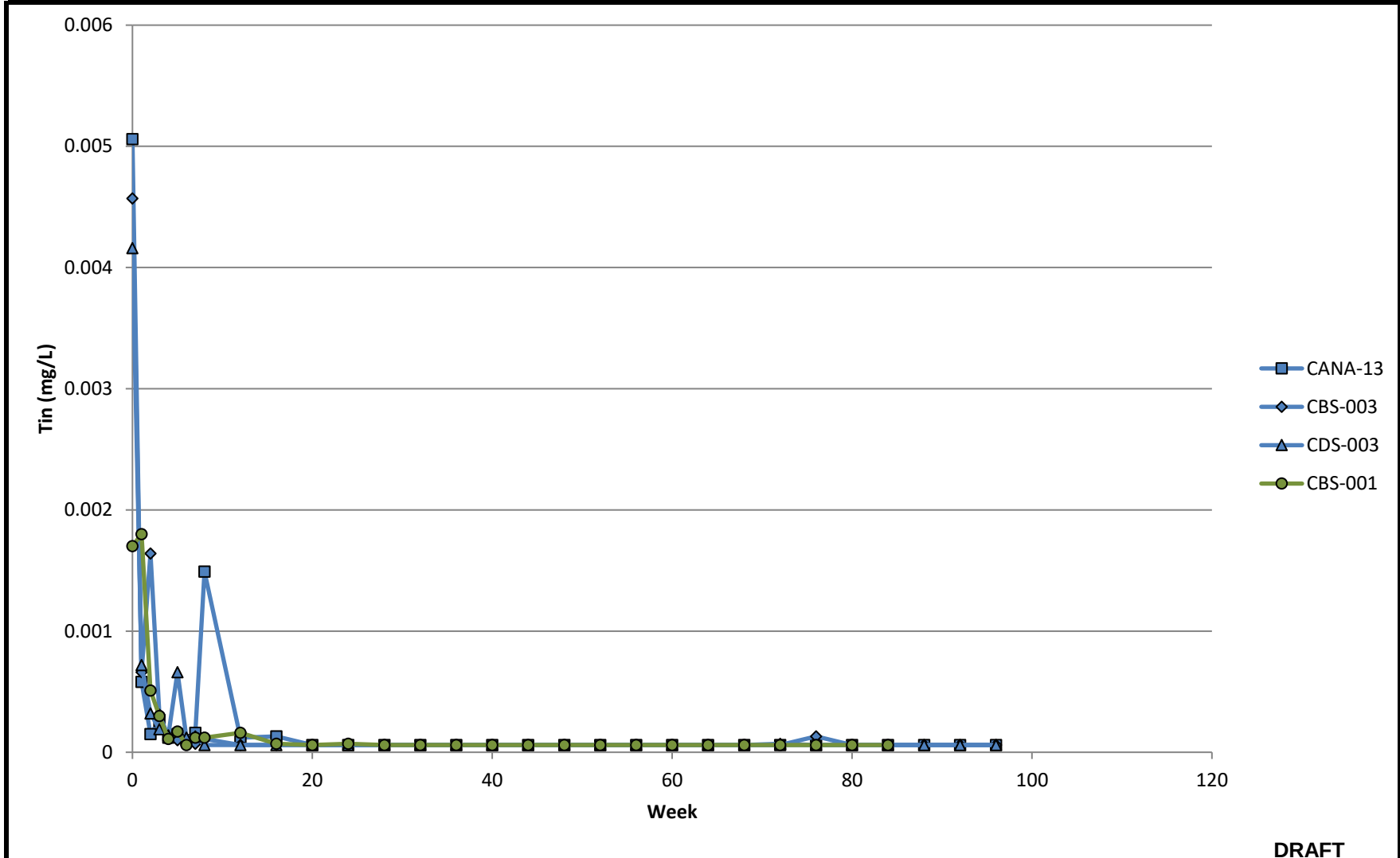


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	Title				Humidity Cell Results - Antimony						
	Project Name			Crawford		Project No.		23590674		FIGURE	
	Client Name			Canadian Nickel Company		Date		2024-03-25			
34											

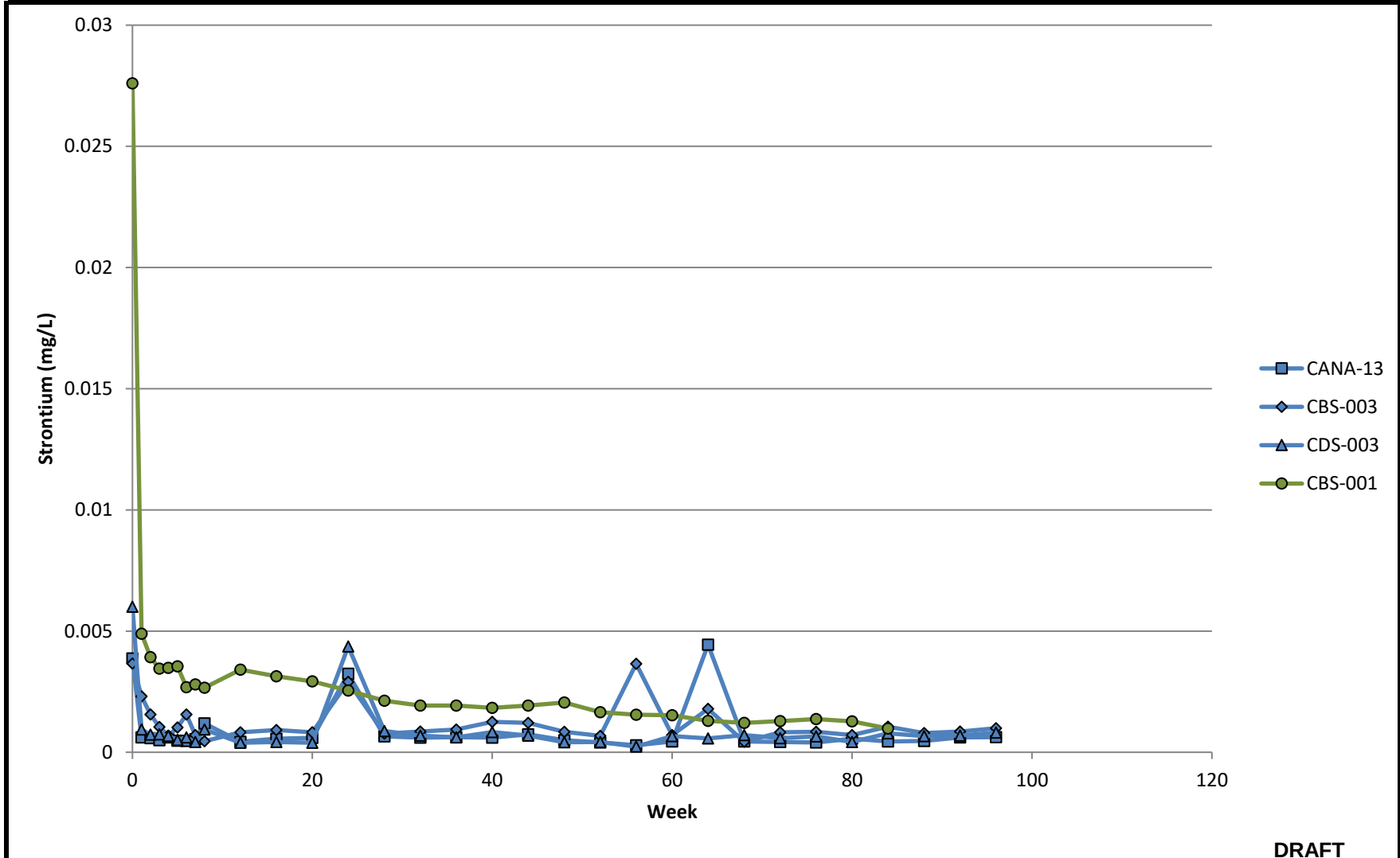


	Title			Humidity Cell Results - Selenium	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					35



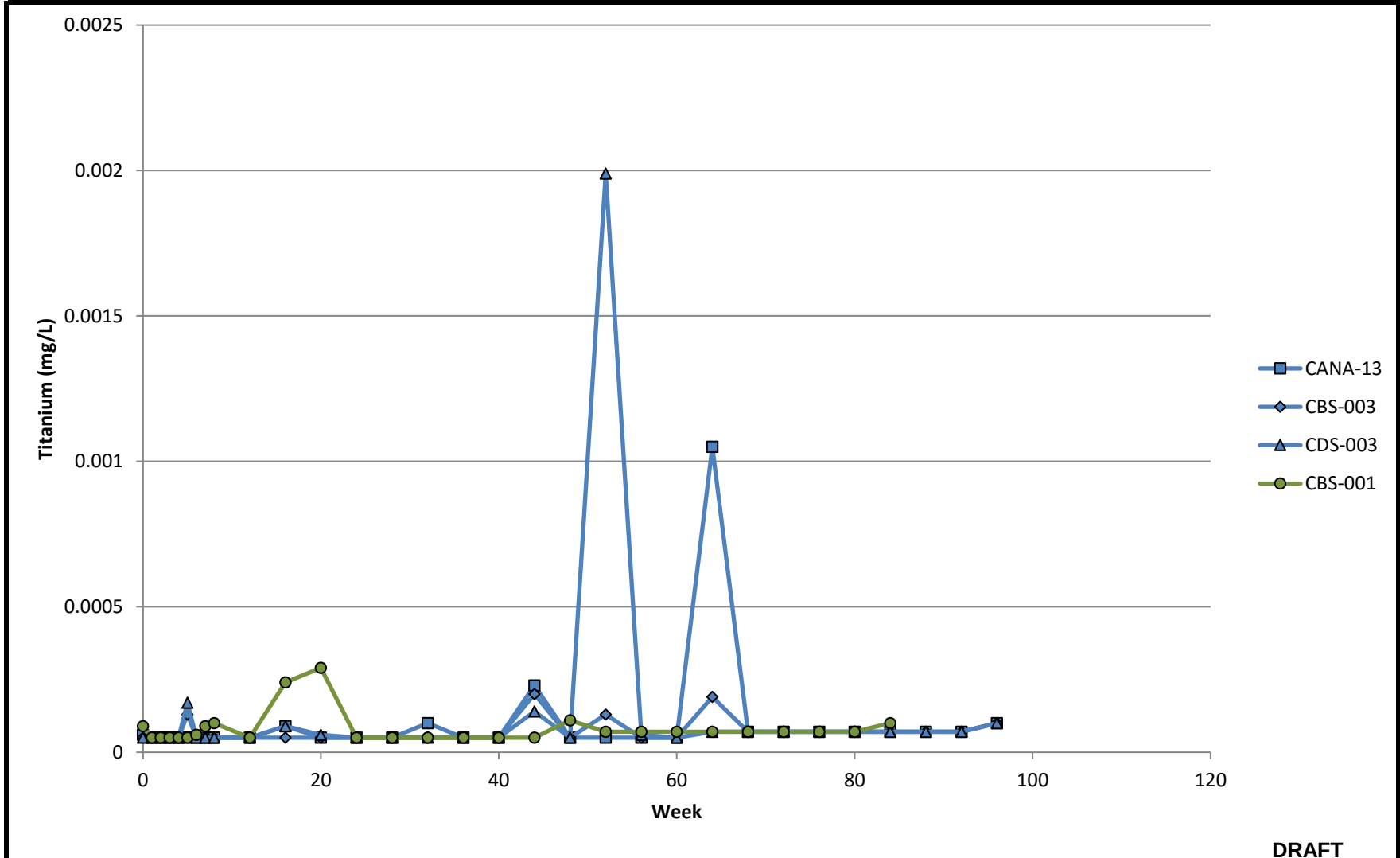
DRAFT

	Title Humidity Cell Results - Tin		
	Project Name Crawford	Project No. 23590674	FIGURE 36
	Client Name Canadian Nickel Company	Date 2024-03-25	



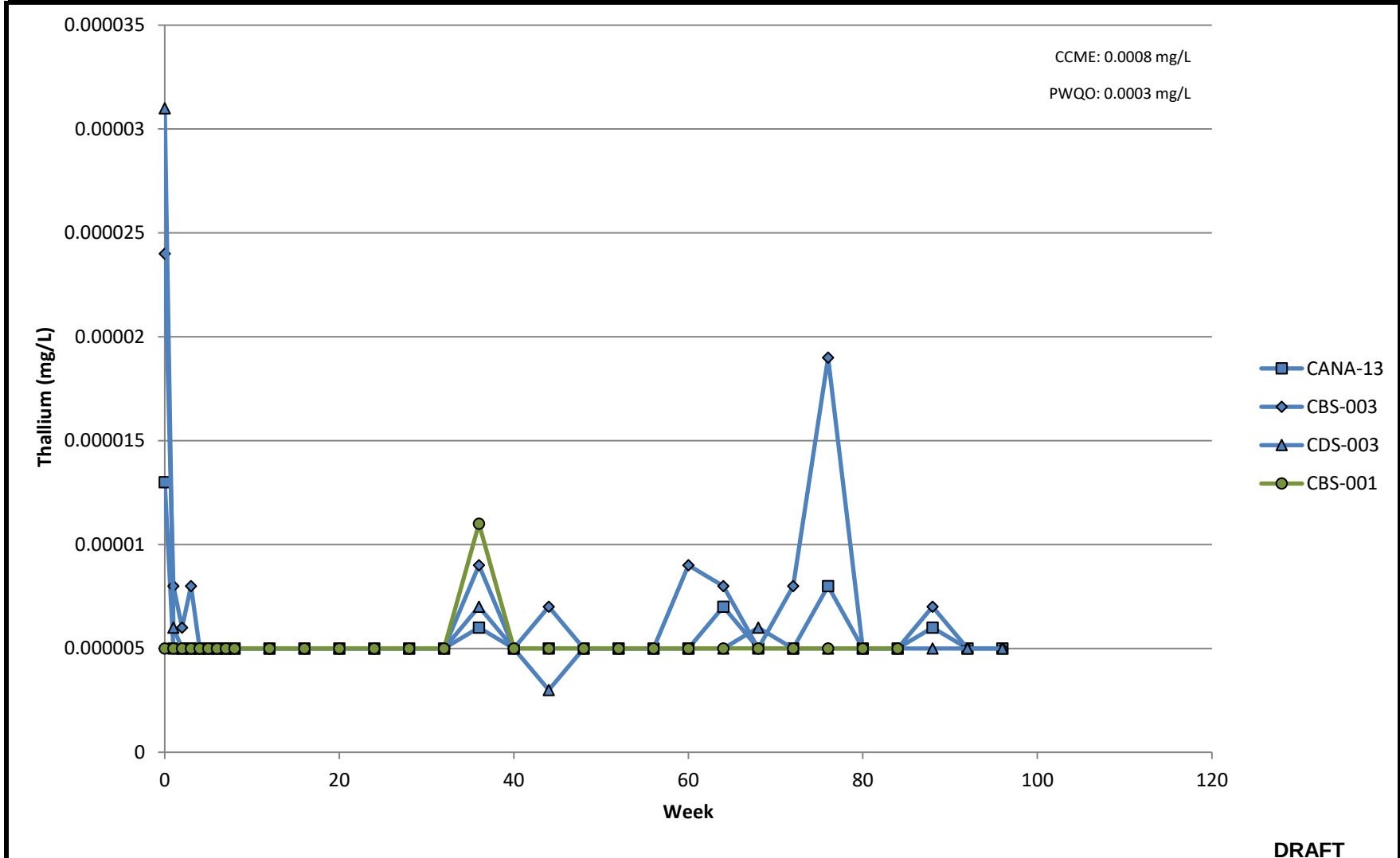
DRAFT

	Title Humidity Cell Results - Strontium		
	Project Name Crawford	Project No. 23590674	FIGURE 37
	Client Name Canadian Nickel Company	Date 2024-03-25	



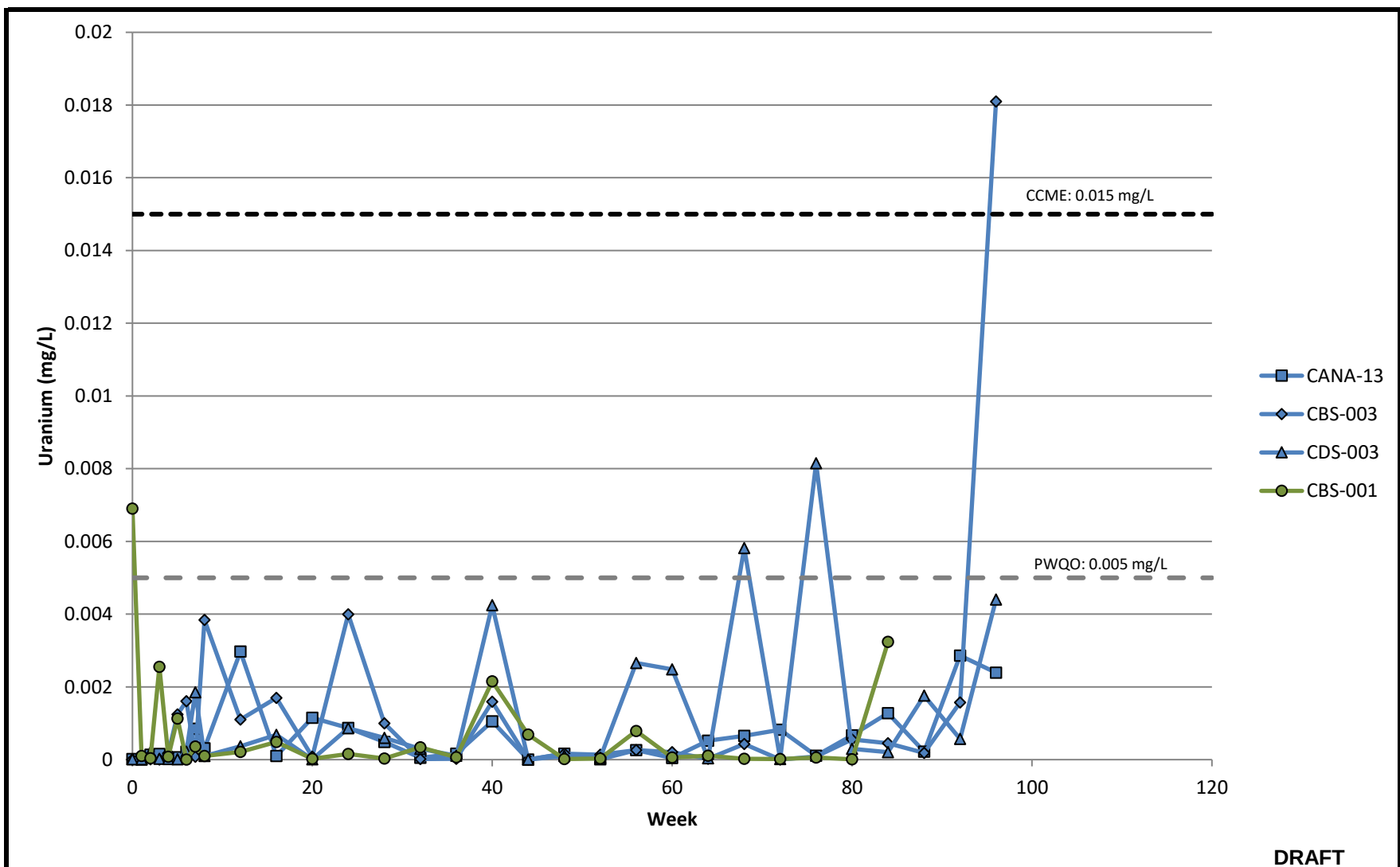
DRAFT

	Title Humidity Cell Results - Titanium		
	Project Name Crawford	Project No. 23590674	FIGURE 38
	Client Name Canadian Nickel Company	Date 2024-03-25	



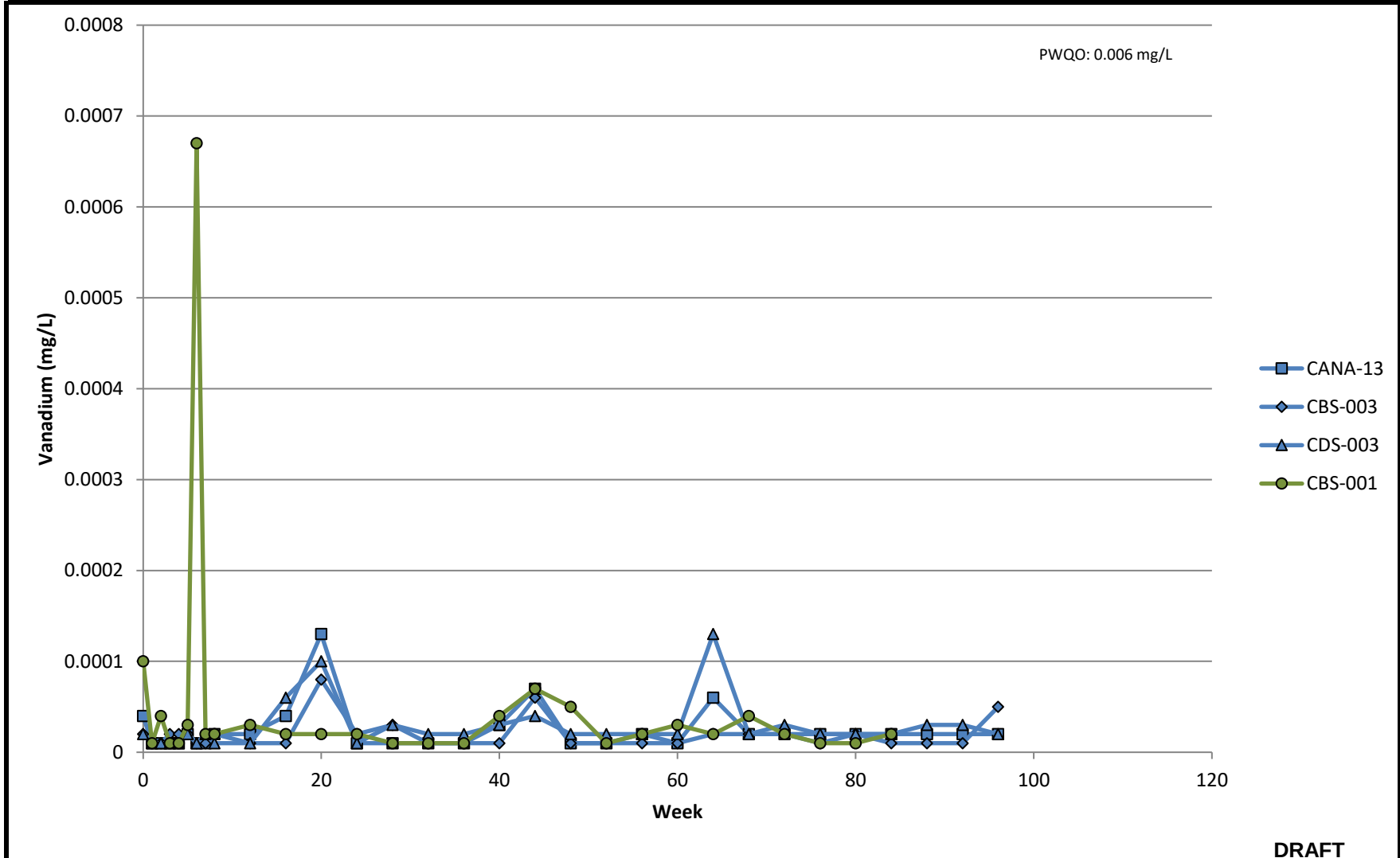
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	Title Humidity Cell Results - Thallium		
	Project Name Crawford	Project No. 23590674	FIGURE 39
	Client Name Canadian Nickel Company	Date 2024-03-25	



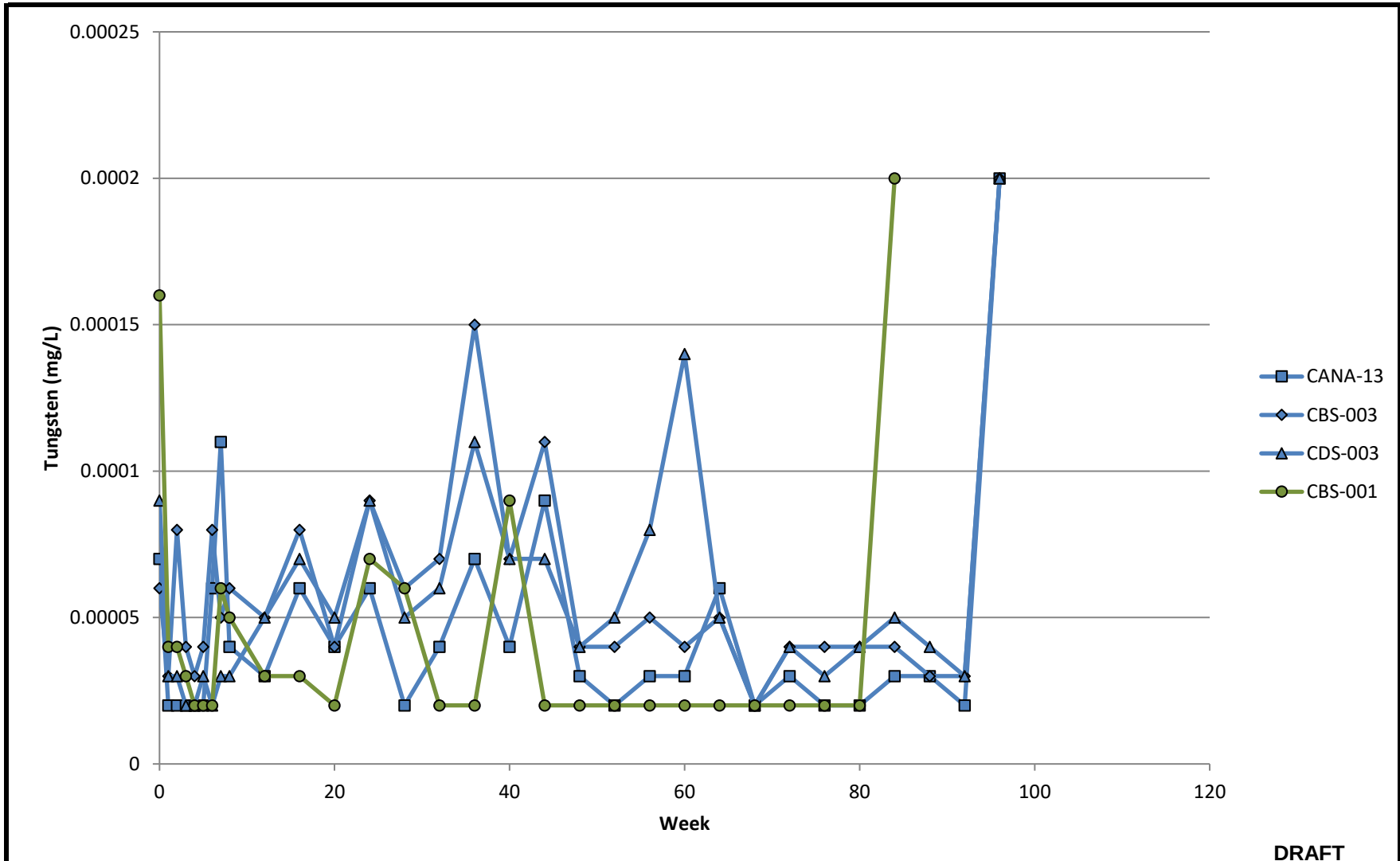
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	Title			Humidity Cell Results - Uranium	
	Project Name		Crawford	Project No.	23590674
	Client Name		Canadian Nickel Company	Date	2024-03-25
					FIGURE
					40



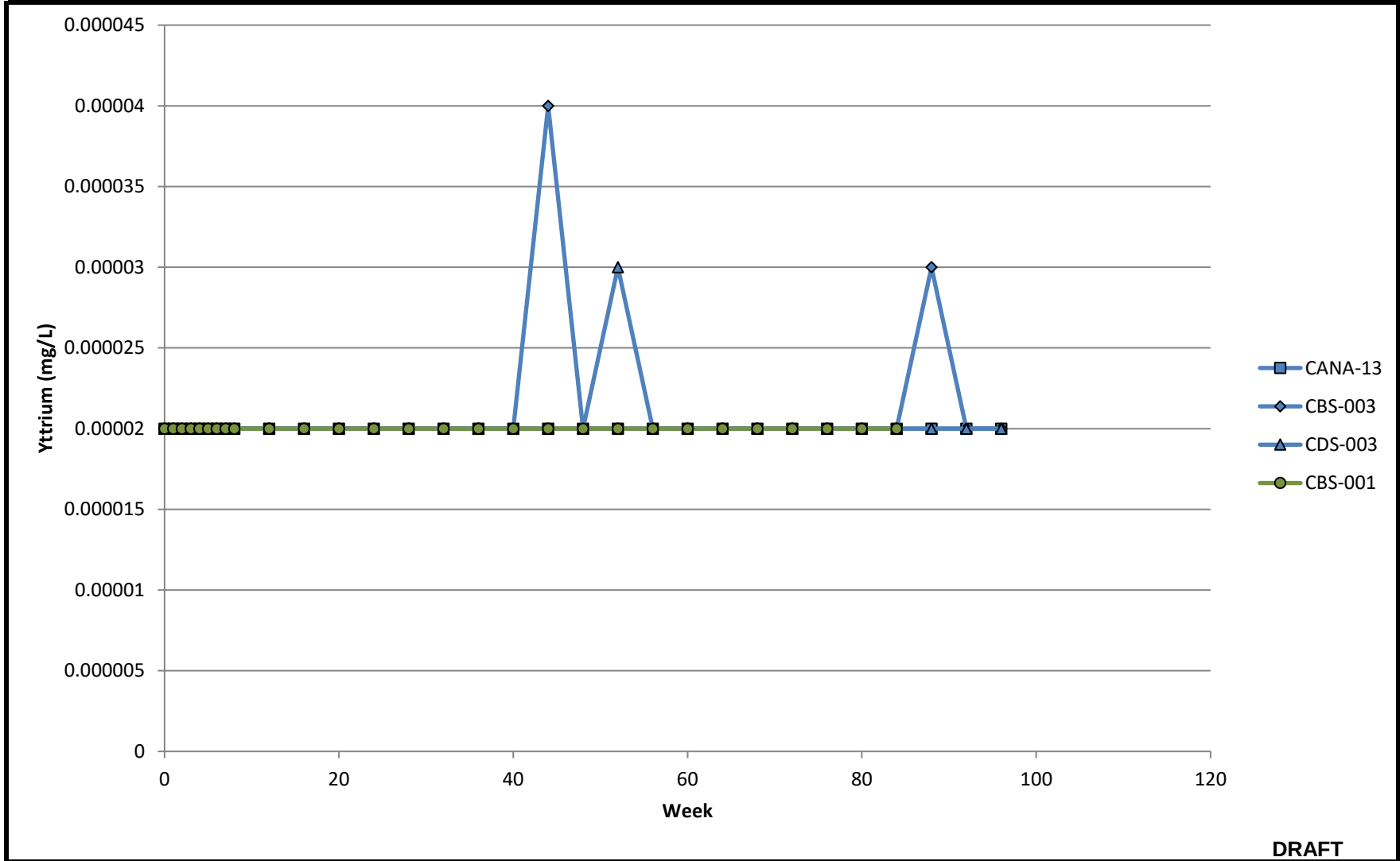
DRAFT

	Title				Humidity Cell Results - Vanadium	
	Project Name		Crawford		Project No.	23590674
	Client Name		Canadian Nickel Company		Date	2024-03-25
						FIGURE
						41



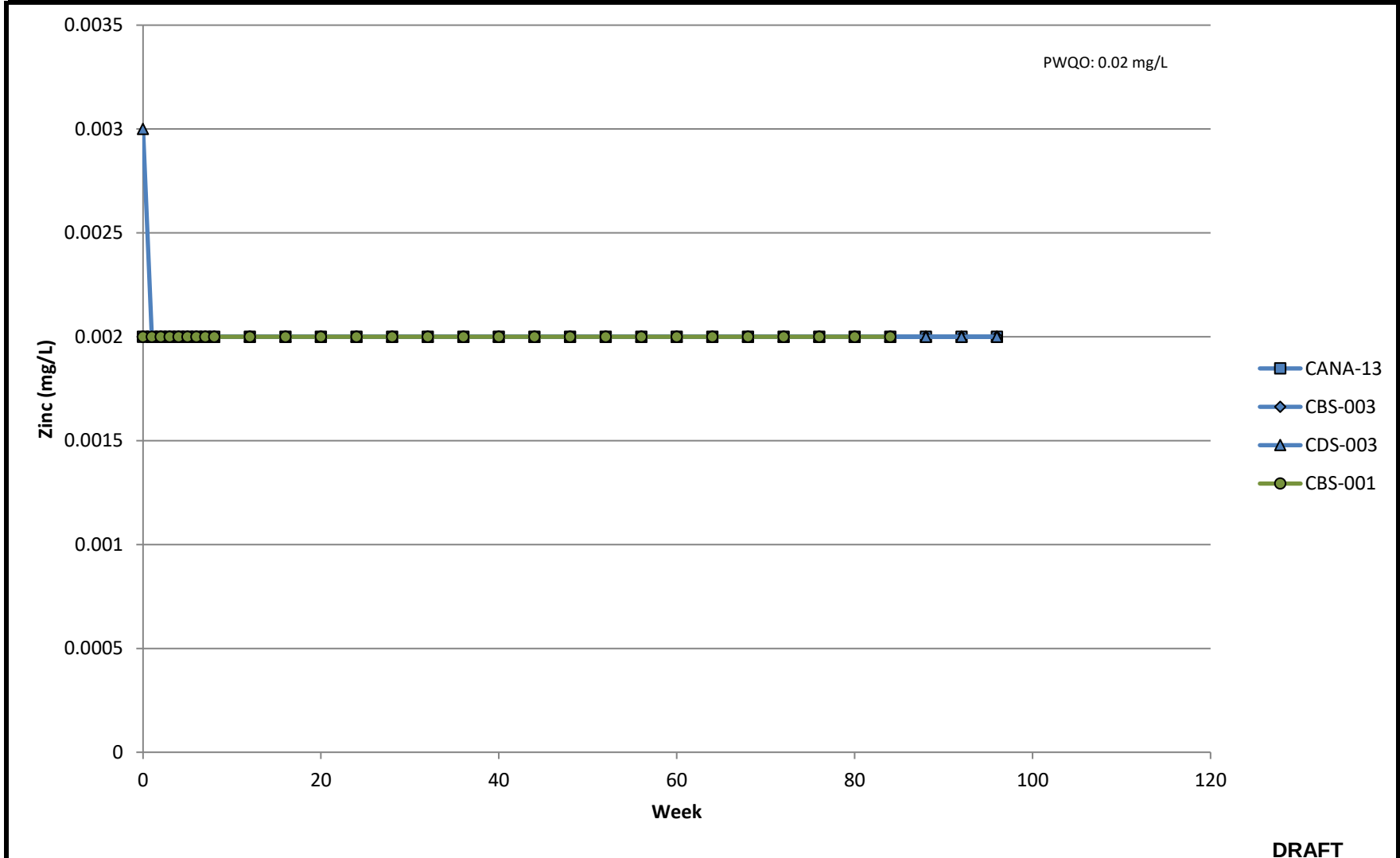
DRAFT

	Title Humidity Cell Results - Tungsten		
	Project Name Crawford	Project No. 23590674	FIGURE 42
	Client Name Canadian Nickel Company	Date 2024-03-25	



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	Title Humidity Cell Results - Yttrium		
	Project Name Crawford	Project No. 23590674	FIGURE 43
	Client Name Canadian Nickel Company	Date 2024-03-25	



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	Title				Humidity Cell Results - Zinc						
	Project Name			Crawford		Project No.		23590674		FIGURE	
	Client Name			Canadian Nickel Company			Date		2024-03-25		44

