



**FIRST MINING
GOLD**



APPENDIX K

GEOCHEMISTRY TECHNICAL SUPPORT DOCUMENTS

- K-1.1 Static Testing Baseline Report 2021
- K-1.2 Tailings ML/ARD Assessment – Static Testing Results
- K-1.3 Kinetic Geochemistry Report 2023
- K-1.4 Static Geochemical Characterization of Overburden and the Fish Habitat Development Area
- K-1.5 Static Geochemical Characterization of Springpole Lake Sediment Samples
- K-1.6 Preliminary Geochemical Assessment of CDF Quarry**
- K-2 Mine Site Water Quality Modelling Report



PRELIMINARY GEOCHEMICAL ASSESSMENT OF CO-DISPOAL FACILITY QUARRY

Springpole Gold Project
First Mining Gold Corp.

ONS2104

Prepared by:
WSP Canada Inc.

October 2024



Preliminary Geochemical Assessment of Co-Disposal Facility Quarry Springpole Gold Project

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Project #ONS2104

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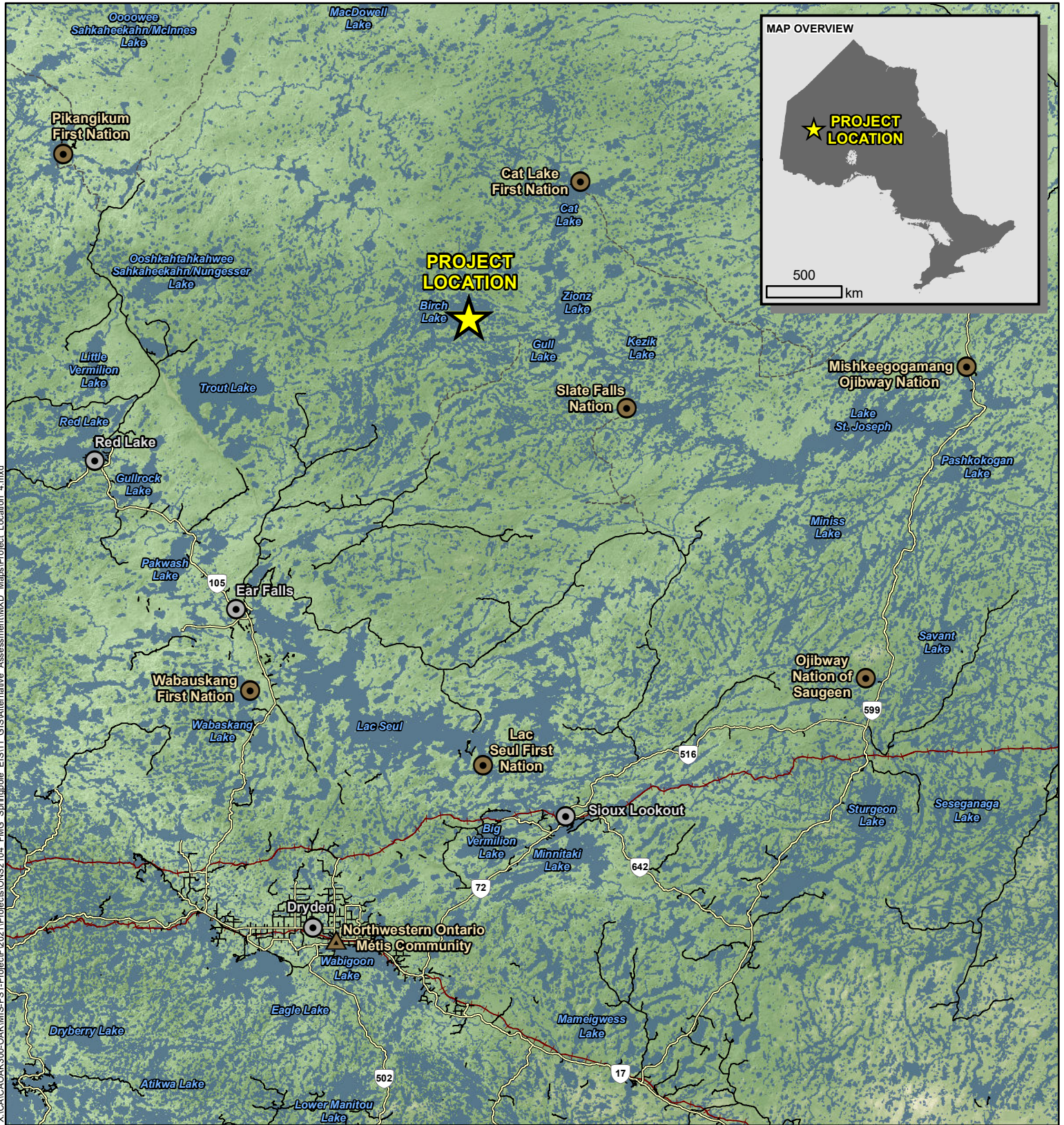
1.0 INTRODUCTION

First Mining Gold Corp. (FMG) proposes to develop, operate and eventually decommission / close an open pit gold and silver mine and ore process plant with supporting facilities known as the Springpole Gold Project (Project). The Project is located in a remote area of northwestern Ontario, approximately 110 kilometres (km) northeast of the Municipality of Red Lake and 145 km north of the Municipality of Sioux Lookout (Figure 1-1).

An environmental assessment (EA) pursuant to the Canadian Environmental Assessment Act, 2012 (SC 2012, c. 19, s. 52) and the Ontario Environmental Assessment Act (RSO 1990, c. E.18) is required to be completed for the Project. This report is one of a series of Technical Support Documents prepared by WSP Canada Inc. (WSP) on behalf of FMG. Geochemical studies are underway to characterize the metal leaching and acid rock drainage (ML/ARD) potential of geologic materials associated with the proposed mine development.

FMG has proposed to utilize non-potentially acid generating (NAG) and non-metal leaching (NML) mine rock for construction purposes. and therefore, sources of suitable rock for use in construction are being investigated, including the potential to develop a quarry within the footprint of the Co-Disposal Facility (CDF). To support ongoing Project planning, WSP conducted an assessment of the ML/ARD potential of rock (drill core samples) proximal to and within the footprint of the CDF. Static testing was conducted on the samples as part of this assessment, and the results are summarized in this memorandum.

The approach and testing methods utilized herein are based on the requirements described under the Ontario Mining Act; namely guidance found within the reference document 'Prediction for Drainage Chemistry for Sulphidic Geologic Materials' (MEND, 2009), which represents best practice and industry-standard approaches and methodologies for ML/ARD sampling and characterization in Canada.



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LEGEND

- Project Location
- Railway
- Town
- First Nation Reserve
- Northwestern Ontario Métis Community
- Highway
- Secondary Road
- Resource / Winter Road

NOTES:
- Topographic information extracted from LIO, MNRF.



SPRINGPOLE GOLD PROJECT

Project Location

Datum: NAD83
Projection: UTM Zone 15N

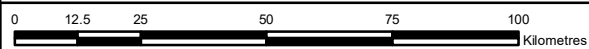


PROJECT N°: ONS2104

FIGURE: 1-1

SCALE: 1:1,500,000

DATE: September 2024



2.0 SAMPLE SUMMARY

A summary of the drill core samples tested as part of the static testing program is provided in Table 2-1.

- Sampling locations are shown in Figure 2-1. The samples were selected based on available archived drill core within the CDF footprint. The following is a summary of the sampling procedure: A total of 90 drill core samples were collected from 21 drill holes. The sampled drill holes were advanced as part of previous exploration, hydrogeological, or geotechnical programs for the Project.
- Sample intervals of nominally 1 m were selected approximately every 10 m from the drill holes. Samples were selected from near-surface to approximately 50 m deep. A detailed listing of the samples is provided in Appendix A.
- Samples were selected to be representative of the logged rock characteristics for drill holes around the CDF. This included consideration for available lithological and multi-element ICP data provided by FMG. The collected rock types were consistent with available geologic information for the Project, which indicates that rock in the vicinity of the CDF largely comprises andesitic volcanics and basalt.
- The drill core samples were collected by FMG, based on sample lists provided by WSP.

Table 2-1: Summary of Samples

Lithology	Number of Samples
Andesite Tuff Metasediments	82
Basalt	8
Total Number of Samples	90

546500 547000 547500 548000 548500 549000 549500

Birch Lake



5695000
5694500
5694000
5693500
5693000
5692500
5692000

P:\2021\Projects\IONS2104_FMIG_Springpole_EIS\11_GIS\GeoChem\CDF_Drillholes_Jan2023\MXD_Maps\Springpole_CDF_DH_Samples_4.mxd

LEGEND

- ⊗ Geochemistry Sample Locations (labelled with drill hole ID)
- ▭ Co-Disposal Facility Outline
- Open Pit Outline

NOTES:
 - Topographic information extracted from LIO, MNRF.
 - Aerial imagery provided by First Mining Gold, 2020.
 - Co-Disposal Facility current as of October 25, 2023

FIRST MINING GOLD 

SPRINGPOLE GOLD PROJECT
Locations of Drill Holes Sampled for Preliminary Geochemical Assessment of CDF Quarry



Datum: NAD83
 Projection: UTM Zone 15N



PROJECT N^o: ONS2104

FIGURE: 2-1

SCALE: 1:16,000

DATE: October 2024

3.0 STATIC TESTING METHODS AND SCREENING APPROACH

Static testing was conducted at Global ARD Testing Services, Burnaby, British Columbia. A summary of the static testing program is provided in Table 3-1. Static testing methods and the approach used to screen the results is described below.

- Acid Base Accounting (ABA) testing was conducted on all samples to assess the potential for a sample to generate acidity, determined by the balance of acid generating minerals and neutralizing minerals in a sample. ABA testing included determination of:
 - o Paste pH.
 - o Sulphur speciation analyses including total sulphur by Leco analyzer, sulphate sulphur by HCl leach, and sulphide sulphur by difference.
 - o Total carbon by Leco analyzer, total inorganic carbon (TIC) by HCl leach CO₂ coulometer, and standard Sobek neutralization potential (NP). Carbonate neutralization potential (CarbNP) was calculated from TIC.
 - o Acid potential was calculated based on the results of sulphur speciation testing, including the calculation of acid potential (AP) based on sulphide sulphur, and maximum potential acidity (MPA) based on total sulphur.
 - o Test results were used to calculate the sample's neutralization potential ratio (NPR, NP/AP) to classify the ARD potential of a sample (Table 3-2). For Project planning purposes, ABA results with an NPR value of <2 were assumed to be potentially acid generating (PAG). Samples with NPR values >2 were considered to be non-acid generating (NAG; MEND 2009). NPR values were calculated as both NP/AP and Carb NP/MPA for assessment purposes.
- Solid phase elemental content analysis was conducted on all samples by aqua regia digestion and inductively coupled plasma-mass spectrometry (ICP-MS) scan for environmental screening purposes. Near total dissolution of environmentally significant metal phases is generally achieved by aqua regia digest. Results were compared to ten times the crustal abundance values presented in Price (1997) for screening purposes. Sample concentrations greater than the screening value were considered enriched in those elements. This approach is used to screen the samples for elemental enrichment based on standard screening values and does not provide a direct assessment of metal leaching potential or resulting water quality.
- Shake Flask Extraction (SFE) testing was conducted on approximately half of the samples (Table 3-1). The purpose of this test is to assess the potential release of soluble metals during the initial (i.e., short-term) stages of weathering but it is not a direct indicator of drainage quality. Leachates were analyzed for pH, conductivity, sulphate, acidity, alkalinity, phosphorous by IC and dissolved metals by ICP-MS and dissolved mercury by CVAf. Leachate chemistry was compared to screening values to identify parameters of potential interest for metal leaching. The screening analysis included comparison of the SFE leachate chemistry to Ontario Provincial Water Quality Objectives (PWQO) for the protection of aquatic life, both in-place PWQO and interim PWQO values. The SFE test and screening approach is not a direct assessment of mine water quality and comparisons to screening criteria holds no regulatory significance.

Table 3–1: Analytical Program Summary

ANALYSIS	NUMBER OF SAMPLES
Acid Base Accounting	90
Elemental Content Analysis	90
Shake Flask Extraction Testing	52

Table 3–2: ARD Classification Criteria

ARD Classification	Screening Criteria	Implications
PAG	$NPR < 1$	Sample is likely to generate acidity
Uncertain	$1 < NPR < 2$	Sample has an uncertain acid generation potential
NAG	$NPR > 2$	Sample is unlikely to generate acidity

Notes:

Classification scheme as described in MEND (2009). For the purposes of this assessment, an NPR of 2 was used to distinguish between PAG and NAG samples (see text).

4.0 RESULTS

Results of static testing are presented in Figure 4–1 through Figure 4–4 and Appendix A. Certificates of analysis are presented in Appendix B. Key findings are summarized below.

4.1 Acid Base Accounting

ABA testing was conducted on 90 of the samples to evaluate the balance of potentially acid generating and acid neutralizing minerals in the samples. Key results include:

- Paste pH of the samples was slightly alkaline to alkaline, ranging from 8.3 to 9.8 with a median paste pH of 8.9 (Table A-2, Appendix A).
- Most samples had a detectable but low total sulphur content (median 0.11%). However, the total sulphur content of the samples was variable, ranging from the detection limit (<0.01%) to 1.3% (Table A-2, Appendix A).
- Comparison of total sulphur and sulphide sulphur concentrations (by difference) indicated that sulphur was present as predominantly sulphide sulphur in the samples (Figure 4–1). Sulphate sulphur concentrations were low, ranging from 0.01% (analytical detection limit) to 0.04% (median 0.02%).
- Bulk NP values were variable and ranged from 32 kg CaCO₃/t to approximately 400 kg CaCO₃/t (median 139 kg CaCO₃/t; Table A-2, Appendix A). A comparison of NP and Carb NP is presented in Figure 4–2, and indicated that CarbNP values were generally similar to or slightly lower than NP values, suggesting that most of the NP was present as carbonate minerals in these samples.
- All of the samples were classified as NAG (NPR>2, Carb NPR>2) as shown in Figure 4–3 and Figure 4–4.

4.2 Elemental Content Testing

Results of elemental content testing were compared to the qualitative screening values presented in Section 3. In general, elemental content testing indicated that few metals were greater than qualitative screening values. Key results include:

- Six of the 90 samples (7% of the samples; Table A-3, Appendix A) had arsenic concentrations marginally greater than the screening value for arsenic (18 mg/kg). Arsenic concentrations were low overall, ranging from 0.6 to 41 mg/kg (median 10 mg/kg). A relationship between sulphur content and arsenic content was generally not observed among the dataset.
- Nine of the 90 samples (10% of the samples; Table A-3, Appendix A) had selenium concentrations that were marginally higher than the screening value for selenium (0.5 mg/kg). Samples with a higher sulphur content generally had a higher selenium content.
- Isolated occurrences of silver and molybdenum greater than their respective screening values were observed in two samples. These represented <1% of the dataset (Table A-3, Appendix A).
- No other elements were above qualitative screening values in the samples.

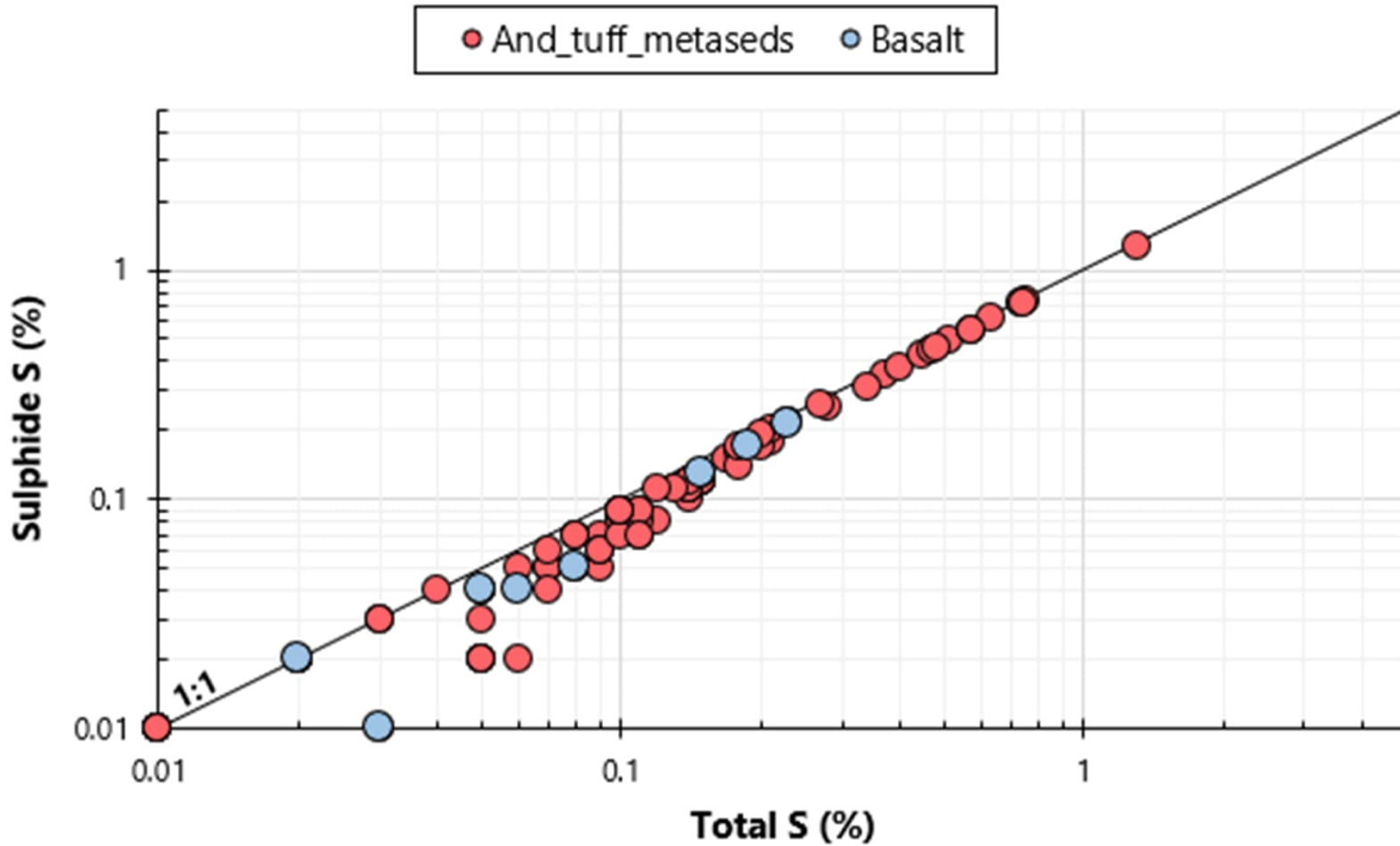
4.3 Leachable Metals

Shake Flask Extraction testing was conducted on 52 of the samples. Results were compared to qualitative screening values presented in Section 3. Key results include:

- SFE leachates had a circumneutral pH, ranging from pH 6.8 to 7.6 (median pH 7.3).
- Sulphate concentrations were generally low, ranging from 0.5 mg/L (the analytical detection limit) to approximately 4 mg/L for most samples. The SFE leachate for one sample had a sulphate concentration of approximately 50 mg/L (Table A-4, Appendix A), suggesting that the sample may contain stored oxidation products. This sample was among the highest total sulphur content samples tested (total sulphur content 0.7%, Table A-1, Appendix A), however a consistent relationship between sulphur content and SFE-leachable sulphate was not observed.

- Metal concentrations in the SFE leachates were generally low. Concentrations of Be, Cd, Pb, Hg, and Zn were consistently below the analytical detection limit in SFE leachates for most samples.
- Silver concentrations were slightly higher than screening value for silver for one sample (Table A-3, Appendix A).
- Aluminum concentrations in the SFE leachates were higher than the screening value in all of the tested samples; however, this is likely an artefact of the testing procedure due to the presence of colloidal aluminum and is unlikely to be observed under field conditions at neutral pH.
- Arsenic concentrations were below screening values in all SFE leachates. Selenium concentrations were also below screening values in all samples, and numerous leachates had selenium concentrations that were below the analytical detection limit.
- No other parameters had concentrations above the screening values.

Sulphide S vs. Total S



Notes:
Sulphide sulphur calculated as the difference between total sulphur and sulphate sulphur (HCl leach).
Total sulphur measured by Leco analyzer.

Preliminary Geochemical Assessment
of Co-Disposal Facility Quarry
Springpole Gold Project
Ear Falls, ON



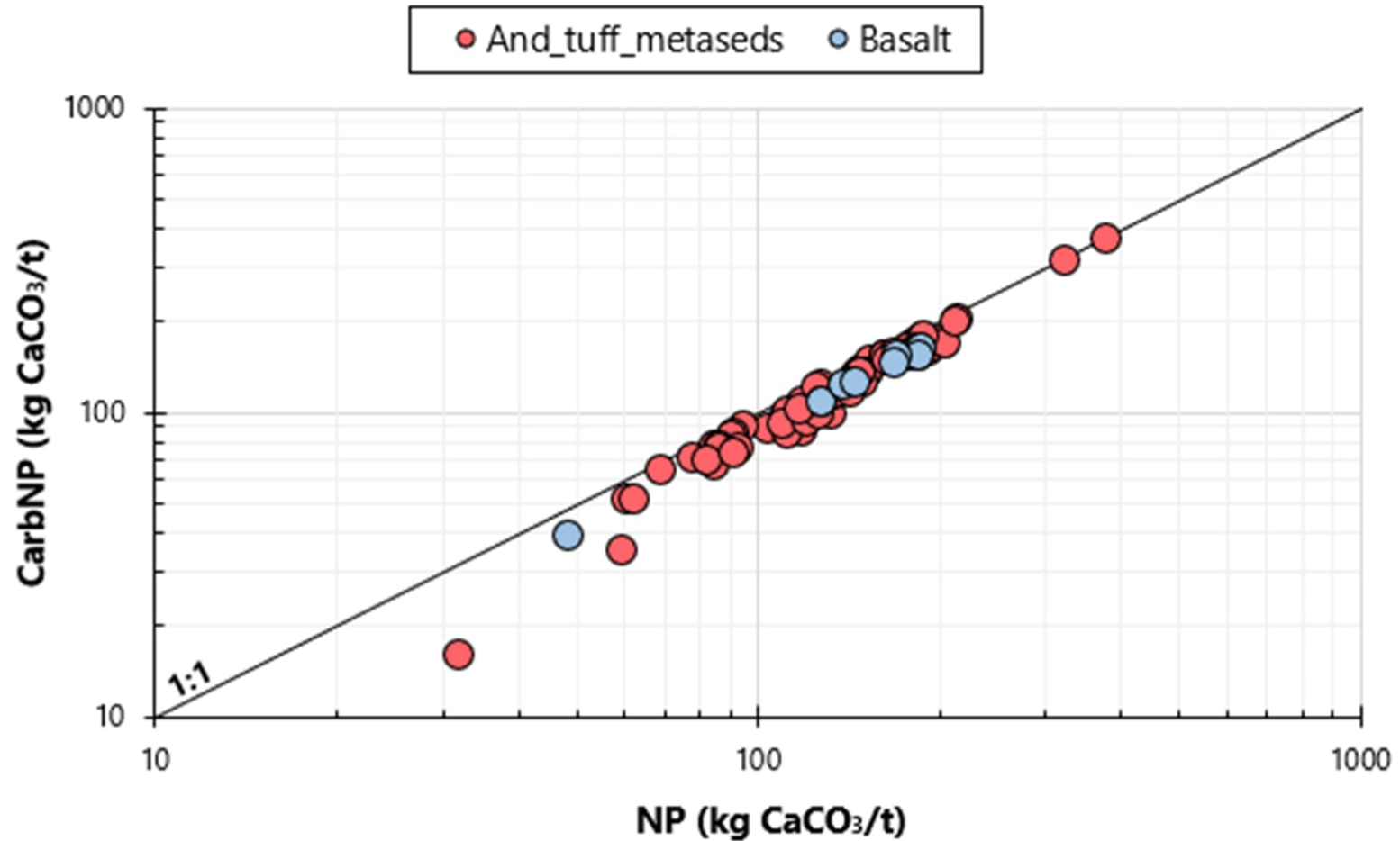
Date: Oct. 2024

Project: ONS2104

By: MT, KG

Figure 4-1

CarbNP vs Sobek NP



Notes:
Carbonate neutralization potential based on total inorganic carbon.
Neutralization potential by the standard Sobek method.

Preliminary Geochemical Assessment
of Co-Disposal Facility Quarry
Springpole Gold Project
Ear Falls, ON



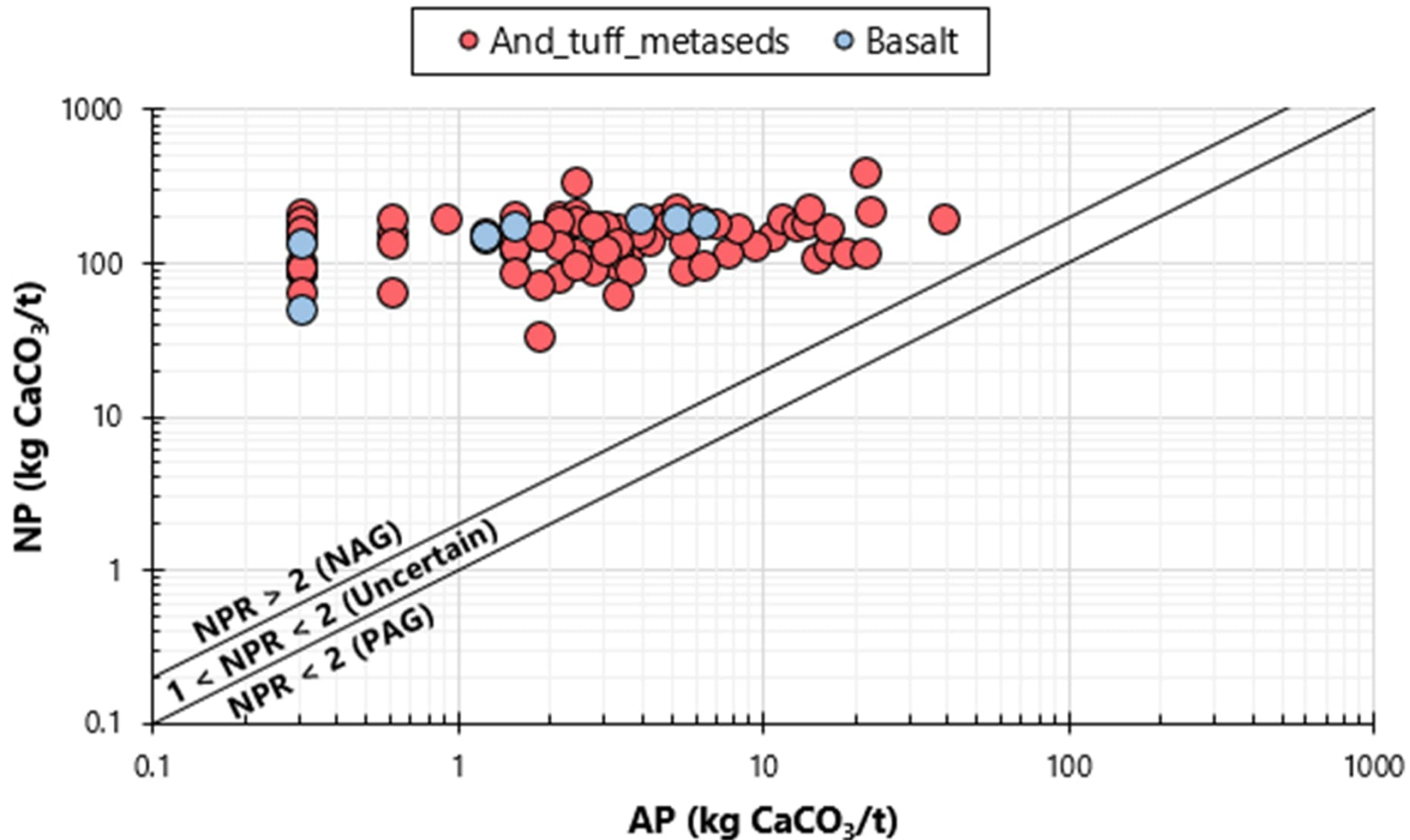
Date: Oct. 2024

Project: ONS2104

By: MT, KG

Figure 4-2

NP vs. AP



Notes:
 Neutralization potential by the standard Sobek method.
 Acid potential calculated as sulphide sulphur * 31.25.

Preliminary Geochemical Assessment
 of Co-Disposal Facility Quarry
 Springpole Gold Project
 Ear Falls, ON



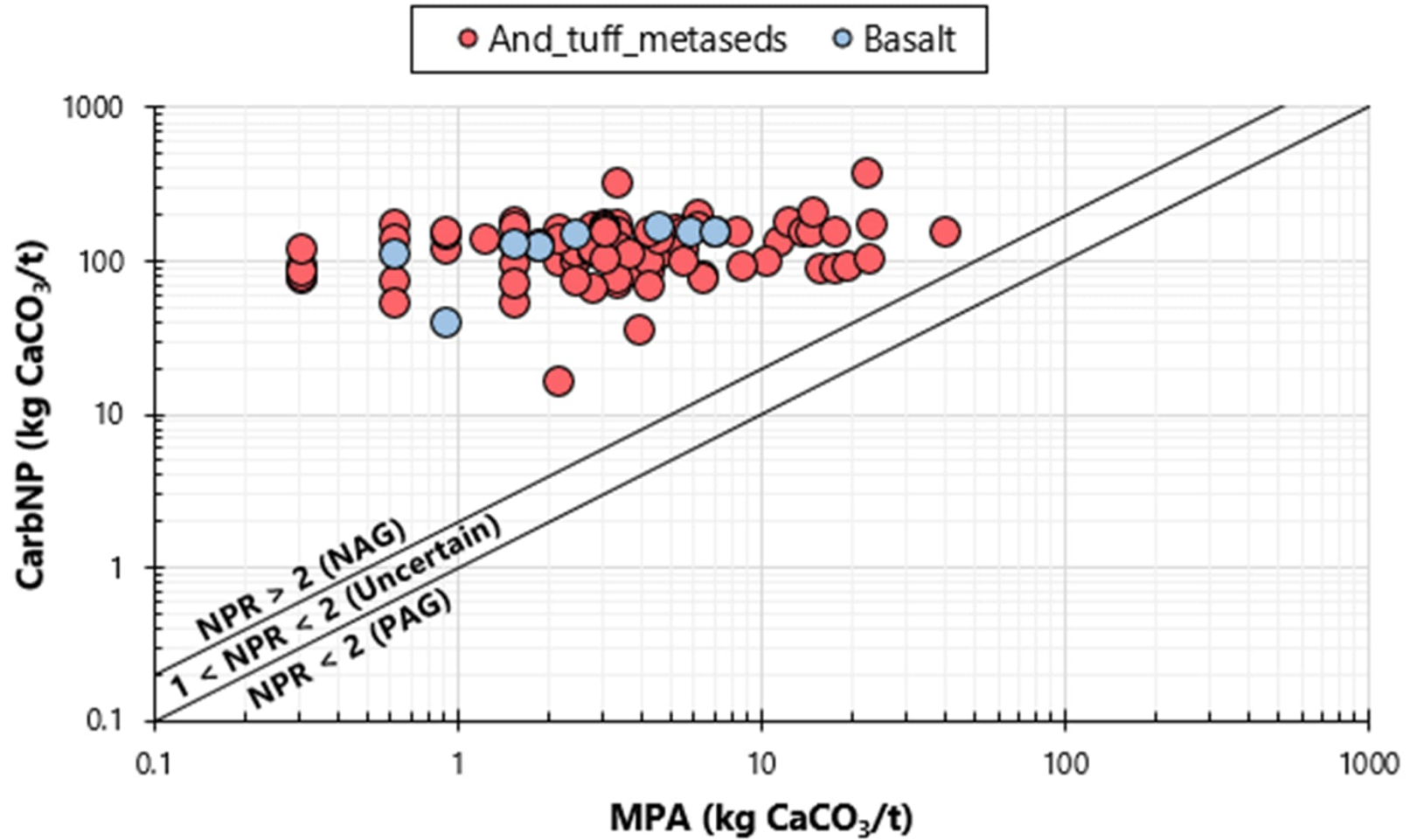
Date: Oct. 2024

Project: ONS2104

By: MT, KG

Figure 4-3

CarbNP vs. MPA



Notes:
Carbonate neutralization potential based on total inorganic carbon.
Maximum potential acidity calculated as total sulphur * 31.25.

Preliminary Geochemical Assessment
of Co-Disposal Facility Quarry
Springpole Gold Project
Ear Falls, ON



Date: Oct. 2024

Project: ONS2104

By: MT, KG

Figure 4-4

5.0 SUMMARY

Key findings of this preliminary assessment are provided below:

- Most samples had a detectable but low total sulphur content (median 0.11%), but samples with a sulphur content on the order of 0.5% and up to 1.3% were also present. Sulphur was predominantly present as sulphide sulphur.
- The NP content of the samples was variable, ranging from approximately 30 kg CaCO₃/t to 400 kg CaCO₃/t. ABA testing suggested that carbonate minerals comprised most of the NP in the samples. All the samples were classified as NAG based on their neutralization potential ratio (NPR>2, CarbNPR>2).
- Concentrations of solid phase elements of interest were generally low and below qualitative screening values. Some samples had arsenic and selenium concentrations that were slightly greater than their qualitative screening values (ten times crustal abundance). Arsenic concentrations were lower than the arsenic threshold identified to separate arsenic leaching and non-arsenic leaching Project mine rock (e.g., <50 mg/kg; WSP 2023) for all samples.
- Leachable metal concentrations in the SFE test were low and generally below qualitative screening values (PWQO, iPWQO) for all samples.

The results of this initial assessment are supportive of rock in the CDF area being a potential construction material source for the Project. Additional geochemical assessment of these materials will be undertaken as part of the next stages of Project engineering.

6.0 CLOSING

This preliminary geochemical assessment of co-disposal facility quarry was prepared for First Mining Gold Corp. by WSP. The quality of information, conclusions and scheduling estimates contained here is consistent with the level of effort involved in WSP's services and based on 1) information available at the time of preparation; 2) data supplied by outside sources; and 3) the assumptions, conditions and qualifications set forth in this report.

Yours sincerely,

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7.0 REFERENCES

- MEND 2009. Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials. Natural Resources Canada. MEND Report 1.20.1
- Price 1998. Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia. British Columbia. Ministry of Energy and Mines.
- Price 1997. Draft Guidelines and Recommended Methods of the Prediction of Metal Leaching and Acid Rock Drainage at Mine Site in British Columbia. British Columbia Ministry of Employment and Investment, Energy and Minerals Division. Smithers, British Columbia.
- WSP 2023. Springpole Gold Project – Preliminary ML/ARD Block Model Inputs, Draft. ONS2014. March 17, 2023.

Attachment A

Static Testing Results

Table A-1: Acid Base Accounting Results

Sample ID	Drillhole	From	To	Year	Lithology	Paste pH	Total Sulphur ^(A)	Sulphate Sulphur ^(B)	Sulphide Sulphur ^(C)	MPA ^(D)	AP ^(E)	Sobek NP ^(F)	Total Carbon ^(G)	Total Inorganic Carbon ^(H)	Fizz Rating	CarbNP ^(I)	NPR ^(J)	CarbNPR ^(K)
		m	m			pH Units	%	%	%	kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	%	%	N/A	kg CaCO ₃ /t	NP/AP	CarbNP/MPA
B1059901	SC21-048	3	4	2021	Basalt	8.7	0.030	0.020	0.010	0.94	0.31	49	0.52	0.47	Moderate	39	156	42
B1059902	SC21-048	13	14	2021	Basalt	8.3	0.15	0.020	0.13	4.7	4.1	188	2.0	1.9	Strong	160	46	34
B1059903	SC21-048	23	24	2021	Basalt	8.6	0.020	0.020	0.020	0.63	0.31	128	1.3	1.3	Strong	108	411	172
B1059904	SC21-048	33	34	2021	Basalt	8.3	0.060	0.020	0.040	1.9	1.3	140	1.5	1.5	Strong	123	112	65
B1059905	SC21-048	43	44	2021	Basalt	9.1	0.19	0.020	0.17	5.9	5.3	187	2.0	1.8	Strong	152	35	26
B1059906	SC21-048	53	54	2021	Basalt	8.7	0.050	0.010	0.040	1.6	1.3	147	1.5	1.5	Strong	124	117	79
B1059908	SG22-034	8	9	2022	And_tuf_metaseds	9.3	1.3	0.030	1.3	41	40	187	2.0	1.8	Strong	152	4.7	3.7
B1059909	SG22-025	4	5	2022	And_tuf_metaseds	8.9	0.030	0.020	0.010	0.94	0.31	134	2.2	1.4	Strong	116	428	124
B1059910	SG22-025	14	15	2022	And_tuf_metaseds	9.1	0.020	0.020	0.020	0.63	0.31	205	2.3	2.0	Strong	168	655	268
B1059911	BH-TMF-35	7.5	8.5	2021	And_tuf_metaseds	9.0	0.010	0.010	0.010	0.31	0.31	90	1.0	0.96	Strong	80	288	256
B1059912	BH-TMF-35	17.5	18.5	2021	And_tuf_metaseds	9.3	0.010	0.010	0.010	0.31	0.31	86	0.98	0.91	Strong	76	276	243
B1059913	BH-TMF-35	27.5	28.5	2021	And_tuf_metaseds	9.2	0.070	0.020	0.050	2.2	1.6	115	1.2	1.1	Strong	95	74	43
B1059914	BH-TMF-35	37.5	38.5	2021	And_tuf_metaseds	9.6	0.020	0.020	0.020	0.63	0.31	84	0.87	0.85	Strong	71	268	113
B1059915	BH-TMF-36	4	5	2021	And_tuf_metaseds	8.7	0.070	0.020	0.050	2.2	1.6	194	2.2	1.9	Strong	158	124	72
B1059916	BH-TMF-36	14	15	2021	And_tuf_metaseds	8.9	0.090	0.020	0.070	2.8	2.2	197	2.2	2.0	Strong	163	90	58
B1059917	BH-TMF-36	24	25	2021	And_tuf_metaseds	8.8	0.10	0.020	0.080	3.1	2.5	203	2.3	2.0	Strong	170	81	54
B1059918	BH-TMF-36	34	35	2021	And_tuf_metaseds	9.0	0.17	0.020	0.15	5.3	4.7	186	1.9	1.9	Strong	158	40	30
B1059919	SH22-MW-002A	7	8	2022	Basalt	8.7	0.23	0.020	0.21	7.2	6.6	171	1.8	1.8	Strong	153	26	21
B1059921	SH22-MW-002A	13.5	14.5	2022	Basalt	8.8	0.080	0.030	0.050	2.5	1.6	169	1.8	1.7	Strong	143	108	57
B1059922	SG22-035	3	4	2022	And_tuf_metaseds	9.2	0.75	0.020	0.73	23	23	206	2.2	2.0	Strong	168	9.0	7.1
B1059923	SG22-035	13	14	2022	And_tuf_metaseds	9.3	0.18	0.020	0.16	5.6	5.0	177	1.9	1.8	Strong	153	35	27
B1059926	SG22-035	19	20	2022	And_tuf_metaseds	9.2	0.51	0.020	0.49	16	15	105	1.1	1.0	Strong	87	6.9	5.4
B1059928	SC20-038	5	6	2020	And_tuf_metaseds	8.6	0.14	0.020	0.12	4.4	3.8	149	1.7	1.6	Strong	135	40	31
B1059929	SC20-038	13	14	2020	And_tuf_metaseds	8.5	0.11	0.030	0.080	3.4	2.5	183	2.0	2.0	Strong	166	73	48
B1059930	SC20-038	23	24	2020	And_tuf_metaseds	8.9	0.030	0.030	0.030	0.94	0.31	154	1.8	1.7	Strong	145	494	155
B1059931	SC20-038	34	35	2020	And_tuf_metaseds	8.6	0.73	0.020	0.71	23	22	382	4.8	4.4	Strong	364	17	16
B1059932	SC20-038	44	45	2020	And_tuf_metaseds	8.8	0.080	0.010	0.070	2.5	2.2	133	1.3	1.2	Strong	97	61	39
B1059933	SC20-039	8	9	2020	And_tuf_metaseds	8.6	0.37	0.020	0.35	12	11	147	1.6	1.6	Strong	131	13	11
B1059934	SC20-039	18	19	2020	And_tuf_metaseds	8.9	0.40	0.020	0.38	13	12	189	2.2	2.1	Strong	174	16	14
B1059935	SC20-039	28	29	2020	And_tuf_metaseds	8.6	0.15	0.030	0.12	4.7	3.8	151	1.5	1.5	Strong	128	40	27
B1059936	SC20-039	38	39	2020	And_tuf_metaseds	8.9	0.14	0.040	0.10	4.4	3.1	121	1.2	1.2	Strong	103	39	24
B1059937	SC20-039	48	49	2020	And_tuf_metaseds	8.7	0.45	0.030	0.42	14	13	166	1.8	1.8	Strong	149	13	11
B1059938	SC20-023	2	3	2020	And_tuf_metaseds	9.6	0.34	0.030	0.31	11	9.7	123	1.2	1.2	Strong	98	13	9.2
B1059939	SC20-023	11	12	2020	And_tuf_metaseds	9.2	0.57	0.030	0.54	18	17	120	1.1	1.0	Strong	86	7.1	4.8
B1059941	SC20-023	16	17	2020	And_tuf_metaseds	8.9	0.63	0.020	0.61	20	19	113	1.1	1.1	Strong	90	5.9	4.6
B1059942	SC20-023	22	23	2020	And_tuf_metaseds	8.6	0.11	0.020	0.090	3.4	2.8	166	1.8	1.8	Strong	149	59	43
B1059943	SC20-023	32	33	2020	And_tuf_metaseds	9.1	0.080	0.030	0.050	2.5	1.6	130	1.4	1.3	Strong	112	83	45
B1059944	SC20-023	42	43	2020	And_tuf_metaseds	8.4	0.15	0.030	0.12	4.7	3.8	130	1.4	1.3	Strong	109	35	23
B1059945	SC20-023	52	53	2020	And_tuf_metaseds	8.8	0.47	0.020	0.45	15	14	175	2.0	1.8	Strong	152	12	10
B1059947	SC20-024	1	2	2020	And_tuf_metaseds	9.1	<0.01	<0.01	0.010	0.31	0.31	86	1.9	0.92	Moderate	77	274	245
B1059948	SC20-024	11	12	2020	And_tuf_metaseds	9.6	0.15	0.030	0.12	4.7	3.8	119	1.3	1.3	Strong	108	32	23
B1059949	SC20-024	21	22	2020	And_tuf_metaseds	9.4	<0.01	<0.01	0.010	0.31	0.31	96	1.1	1.1	Strong	88	307	283
B1059950	SC20-024	31	32	2020	And_tuf_metaseds	9.5	0.14	0.030	0.11	4.4	3.4	92	1.1	1.0	Strong	84	27	19
B1059951	SC20-024	41	42	2020	And_tuf_metaseds	9.3	<0.01	<0.01	0.010	0.31	0.31	91	1.0	1.0	Strong	83	292	267
B1059952	SC20-024	51	52	2020	And_tuf_metaseds	9.2	0.050	0.030	0.020	1.6	0.63	61	0.62	0.62	Strong	52	98	33
B1059953	SC20-025	1	2	2020	And_tuf_metaseds	8.7	0.11	0.040	0.070	3.4	2.2	78	0.88	0.84	Strong	70	36	20
B1059954	SC20-025	10	11	2020	And_tuf_metaseds	8.8	0.090	0.040	0.050	2.8	1.6	134	1.4	1.4	Strong	113	86	40
B1059956	SC20-025	20	21	2020	And_tuf_metaseds	8.6	0.12	0.040	0.080	3.8	2.5	113	1.1	1.0	Strong	84	45	22
B1059958	SC20-025	31	32	2020	And_tuf_metaseds	8.9	0.14	0.030	0.11	4.4	3.4	112	1.1	1.1	Strong	95	32	22

(A) Total sulphur measured by Leco analyzer.
(B) Sulphate sulphur measured by HCl leach.
(C) Sulphide sulphur calculated as the difference between total sulphur and sulphate sulphur.
(D) MPA calculated as Total S * 31.25.
(E) AP calculated as Sulphide S * 31.25.
(F) Neutralization potential measured by the standard Sobek method.
(G) Total carbon measured by Leco analyzer.
(H) Total inorganic carbon measured by HCl leach CO₂ coulometer.
(I) Carbonate neutralization potential based on TIC.
(J) Neutralization potential ratio, NP/AP.
(K) Carbonate neutralization potential ratio, CarbNP/MPA.

Table A-1: Acid Base Accounting Results

Sample ID	Drillhole	From	To	Year	Lithology	Paste pH	Total Sulphur ^(A)	Sulphate Sulphur ^(B)	Sulphide Sulphur ^(C)	MPA ^(D)	AP ^(E)	Sobek NP ^(F)	Total Carbon ^(G)	Total Inorganic Carbon ^(H)	Fizz Rating	CarbNP ^(I)	NPR ^(J)	CarbNPR ^(K)
		m	m			pH Units	%	%	%	kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	%	%		kg CaCO ₃ /t	NP/AP	CarbNP/MPA
B1059959	SC20-025	41	42	2020	And_tuf_metaseds	8.8	0.18	0.040	0.14	5.6	4.4	135	1.4	1.4	Strong	117	31	21
B1059961	SC20-025	51	52	2020	And_tuf_metaseds	8.3	0.57	0.030	0.54	18	17	164	1.8	1.8	Strong	149	9.7	8.4
B1059962	SC20-019	6	7	2020	And_tuf_metaseds	8.3	0.74	0.030	0.71	23	22	113	1.3	1.2	Strong	100	5.1	4.3
B1059963	SC20-019	16	17	2020	And_tuf_metaseds	9.0	<0.01	<0.01	0.010	0.31	0.31	138	1.4	1.4	Strong	114	442	365
B1059964	SC20-019	26	27	2020	And_tuf_metaseds	9.1	0.020	0.020	0.020	0.63	0.31	154	1.7	1.6	Strong	133	492	213
B1059965	SC20-019	36	37	2020	And_tuf_metaseds	8.8	0.28	0.030	0.25	8.8	7.8	110	1.1	1.1	Strong	91	14	10
B1059966	SC20-019	46	47	2020	And_tuf_metaseds	9.1	0.11	0.030	0.080	3.4	2.5	326	4.0	3.7	Strong	310	130	90
B1059967	SC20-019	56	57	2020	And_tuf_metaseds	9.0	0.030	0.030	0.030	0.94	0.31	179	2.1	1.8	Strong	152	574	162
B1059968	SC20-013	5	6	2020	And_tuf_metaseds	9.3	0.040	0.040	0.040	1.3	0.31	154	1.6	1.6	Strong	133	492	107
B1059969	SC20-013	15	16	2020	And_tuf_metaseds	9.1	0.050	0.030	0.020	1.6	0.63	150	1.6	1.5	Strong	124	240	79
B1059970	SC20-013	25	26	2020	And_tuf_metaseds	9.8	0.21	0.030	0.18	6.6	5.6	87	0.94	0.92	Moderate	77	16	12
B1059971	SC20-013	35	36	2020	And_tuf_metaseds	9.4	0.11	0.020	0.090	3.4	2.8	87	0.95	0.90	Strong	75	31	22
B1059972	SC20-013	45	46	2020	And_tuf_metaseds	8.8	0.090	0.030	0.060	2.8	1.9	70	0.75	0.76	Moderate	63	37	23
B1059973	SC20-013	55	56	2020	And_tuf_metaseds	8.8	0.090	0.030	0.060	2.8	1.9	144	1.5	1.4	Strong	116	77	41
B1059975	SC20-014	2.5	3.5	2020	And_tuf_metaseds	8.8	0.020	0.020	0.020	0.63	0.31	63	0.60	0.61	Strong	51	201	81
B1059976	SC20-014	12.5	13.5	2020	And_tuf_metaseds	8.7	0.070	0.030	0.040	2.2	1.3	149	1.7	1.6	Strong	134	119	61
B1059977	SC20-014	22.5	23.5	2020	And_tuf_metaseds	8.5	0.10	0.030	0.070	3.1	2.2	178	2.0	1.9	Strong	160	81	51
B1059990	SC20-014	32.5	33.5	2020	And_tuf_metaseds	8.8	0.48	0.020	0.46	15	14	217	2.6	2.4	Strong	199	15	13
B1059991	SC20-014	42.5	43.5	2020	And_tuf_metaseds	8.6	0.15	0.020	0.13	4.7	4.1	150	1.7	1.6	Strong	133	37	28
B1059992	SC20-014	52.5	53.5	2020	And_tuf_metaseds	9.0	0.14	0.030	0.11	4.4	3.4	163	1.8	1.8	Strong	152	48	35
B1059994	BH-TMF-04	2	3	2020	And_tuf_metaseds	8.9	0.050	0.030	0.020	1.6	0.63	190	2.2	2.1	Strong	176	303	113
B1059995	BH-TMF-04	12	13	2020	And_tuf_metaseds	9.1	0.20	0.030	0.17	6.3	5.3	214	2.4	2.3	Strong	195	40	31
B1059996	BH-WSF2-13	8.5	9.5	2020	And_tuf_metaseds	8.5	0.060	0.040	0.020	1.9	0.63	129	1.5	1.5	Strong	122	206	65
B1059997	BH-WSF2-14	8	9	2020	And_tuf_metaseds	8.8	0.11	0.040	0.070	3.4	2.2	126	1.4	1.4	Strong	119	58	35
C253469	BH-TMF-05	2	3	2020	And_tuf_metaseds	9.0	0.27	<0.01	0.26	8.4	8.4	164	2.0	1.8	Strong	152	19	18
C253470	BH-TMF-05	8.5	9.5	2020	And_tuf_metaseds	8.7	0.21	<0.01	0.20	6.6	6.6	94	0.94	0.90	Strong	75	14	11
C253471	SC20-026	5	6	2020	And_tuf_metaseds	9.1	0.10	<0.01	0.090	3.1	3.1	170	1.9	1.9	Strong	155	54	50
C253472	SC20-026	12	13	2020	And_tuf_metaseds	8.8	0.14	0.020	0.12	4.4	3.8	85	0.81	0.79	Strong	66	23	15
C253473	SC20-026	19	20	2020	And_tuf_metaseds	8.8	0.13	0.020	0.11	4.1	3.4	60	0.48	0.42	Strong	35	17	8.6
C253474	SC20-026	26	27	2020	And_tuf_metaseds	8.8	0.050	<0.01	0.040	1.6	1.6	121	1.2	1.1	Strong	93	78	59
C253475	SC20-026	33	34	2020	And_tuf_metaseds	9.3	0.18	<0.01	0.17	5.6	5.6	128	1.3	1.2	Strong	97	23	17
C253476	SC20-026	40	41	2020	And_tuf_metaseds	8.7	0.070	0.010	0.060	2.2	1.9	32	0.24	0.19	Moderate	16	17	7.2
C253477	SC20-026	47	48	2020	And_tuf_metaseds	9.1	0.060	<0.01	0.050	1.9	1.9	144	1.6	1.5	Strong	125	77	67
C253478	SC20-026	54	55	2020	And_tuf_metaseds	8.8	0.12	0.010	0.11	3.8	3.4	128	1.4	1.3	Strong	108	37	29
C253462	SCH21-049	2	3	2021	And_tuf_metaseds	9.2	0.050	<0.01	0.040	1.6	1.6	83	0.85	0.83	Strong	69	53	44
C253463	SCH21-049	11	12	2021	And_tuf_metaseds	9.0	0.10	<0.01	0.090	3.1	3.1	118	1.3	1.2	Strong	102	38	33
C253464	SCH21-049	20	21	2021	And_tuf_metaseds	9.2	0.080	<0.01	0.070	2.5	2.5	92	0.94	0.87	Strong	73	37	29
C253465	SCH21-049	29	30	2021	And_tuf_metaseds	9.1	0.23	<0.01	0.22	7.2	7.2	173	2.1	1.8	Strong	153	24	21
C253466	SCH21-049	38	39	2021	And_tuf_metaseds	8.9	0.20	<0.01	0.19	6.3	6.3	186	2.2	1.9	Strong	162	30	26
C253467	SCH21-049	47	48	2021	And_tuf_metaseds	8.7	0.10	0.010	0.090	3.1	2.8	165	1.9	1.8	Strong	148	59	47
C253468	SCH21-049	56	57	2021	And_tuf_metaseds	8.9	0.050	0.020	0.030	1.6	0.94	186	2.2	1.9	Strong	160	198	102

(A) Total sulphur measured by Leco analyzer.
(B) Sulphate sulphur measured by HCl leach.
(C) Sulphide sulphur calculated as the difference between total sulphur and sulphate sulphur.
(D) MPA calculated as Total S * 31.25.
(E) AP calculated as Sulphide S * 31.25.
(F) Neutralization potential measured by the standard Sobek method.
(G) Total carbon measured by Leco analyzer.
(H) Total inorganic carbon measured by HCl leach CO₂ coulometer.
(I) Carbonate neutralization potential based on TIC.
(J) Neutralization potential ratio, NP/AP.
(K) Carbonate neutralization potential ratio, CarbNP/MPA.

Table A-2: Acid Base Accounting Statistical Summary

Group	Statistical Parameter	Paste pH	Total Sulphur ^(A)	Sulphate Sulphur ^(B)	Sulphide Sulphur ^(C)	MPA ^(D)	AP ^(E)	Sobek NP ^(F)
		pH Units	%	%	%	kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t
All Samples	Count	90	90	90	90	90	90	90
	Minimum	8.3	<0.010	<0.010	0.010	0.31	0.31	32
	10th Percentile	8.6	0.020	0.010	0.020	0.63	0.31	85
	Median	8.9	0.11	0.020	0.085	3.4	2.7	139
	Average	8.9	0.18	0.022	0.16	5.5	4.9	142
	Standard Deviation	0.31	0.21	0.009	0.21	6.6	6.5	52
	90th Percentile	9.3	0.47	0.030	0.45	15	14	190
	Maximum	9.8	1.3	0.040	1.3	41	40	382
Andesite Tuff Metasediments	Count	82	82	82	82	82	82	82
	Minimum	8.3	<0.010	<0.010	0.010	0.31	0.31	32
	10th Percentile	8.6	0.020	0.010	0.020	0.63	0.31	85
	Median	8.9	0.11	0.020	0.090	3.4	2.8	135
	Average	8.9	0.18	0.023	0.17	5.8	5.2	141
	Standard Deviation	0.30	0.22	0.010	0.21	6.8	6.7	53
	90th Percentile	9.3	0.48	0.030	0.46	15	14	194
	Maximum	9.8	1.3	0.040	1.3	41	40	382
Basalt	Count	8	8	8	8	8	8	8
	Minimum	8.3	0.020	<0.010	0.010	0.63	0.31	49
	10th Percentile	8.3	0.027	0.017	0.017	0.84	0.31	104
	Median	8.7	0.070	0.020	0.045	2.2	1.4	158
	Average	8.7	0.10	0.020	0.084	3.2	2.6	147
	Standard Deviation	0.23	0.074	0.005	0.071	2.3	2.2	42
	90th Percentile	8.9	0.20	0.023	0.18	6.3	5.7	187
	Maximum	9.1	0.23	0.030	0.21	7.2	6.6	188

(A) Total sulphur measured by Leco analyzer.

(B) Sulphate sulphur measured by HCl leach.

(C) Sulphide sulphur calculated as the difference between total sulphur and sulphate sulphur.

(D) MPA calculated as Total S * 31.25.

(E) AP calculated as Sulphide S * 31.25.

(F) Neutralization potential measured by the standard Sobek method.

(G) Total carbon measured by Leco analyzer.

(H) Total inorganic carbon measured by HCl leach CO₂ coulometer.

(I) Carbonate neutralization potential based on TIC.

(J) Neutralization potential ratio, NP/AP.

(K) Carbonate neutralization potential ratio, CarbNP/MPA.

Table A-2: Acid Base Accounting Statistical Summary

Group	Statistical Parameter	Total Carbon ^(G)	Total Inorganic Carbon ^(H)	CarbNP ^(I)	NPR ^(J)	CarbNPR ^(K)	Class (NPR)	Class (CarbNPR)
		%	%	kg CaCO ₃ /t	NP/AP	CarbNP/MPA		
All Samples	Count	90	90	90	90	90	PAG (NPR < 2)	
	Minimum	0.24	0.19	16	4.7	3.7	0%	0%
	10th Percentile	0.88	0.85	71	13	9.1		
	Median	1.5	1.4	120	52	45		
	Average	1.6	1.5	123	29	22	NAG (NPR > 2)	
	Standard Deviation	0.66	0.60	50	145	74	100%	100%
	90th Percentile	2.2	2.0	166	304	163		
	Maximum	4.8	4.4	364	655	365		
Andesite Tuff Metasediments	Count	82	82	82	82	82	PAG (NPR < 2)	
	Minimum	0.24	0.19	16	4.7	3.7	0%	0%
	10th Percentile	0.89	0.85	71	13	8.7		
	Median	1.5	1.4	116	48	41		
	Average	1.6	1.5	122	27	21	NAG (NPR > 2)	
	Standard Deviation	0.68	0.61	51	147	76	100%	100%
	90th Percentile	2.2	2.0	167	302	161		
	Maximum	4.8	4.4	364	655	365		
Basalt	Count	8	8	8	8	8	PAG (NPR < 2)	
	Minimum	0.52	0.47	39	26	21	0%	0%
	10th Percentile	1.1	1.0	87	32	24		
	Median	1.6	1.6	134	112	95		
	Average	1.6	1.5	125	57	40	NAG (NPR > 2)	
	Standard Deviation	0.46	0.44	37	116	46	100%	100%
	90th Percentile	2.0	1.9	155	232	107		
	Maximum	2.0	1.9	160	411	172		

- (A) Total sulphur measured by Leco analyzer.
- (B) Sulphate sulphur measured by HCl leach.
- (C) Sulphide sulphur calculated as the difference between total sulphur and su
- (D) MPA calculated as Total S * 31.25.
- (E) AP calculated as Sulphide S * 31.25.
- (F) Neutralization potential measured by the standard Sobek method.
- (G) Total carbon measured by Leco analyzer.
- (H) Total inorganic carbon measured by HCl leach CO₂ coulometer.
- (I) Carbonate neutralization potential based on TIC.
- (J) Neutralization potential ratio, NP/AP.
- (K) Carbonate neutralization potential ratio, CarbNP/MPA.

Table A-3: Elemental Content Results

Sample ID	Drillhole	From	To	Year	Lithology	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
						mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka
<i>10x Crustal Abundance Screening Value (mg/kg)⁽¹⁾</i>						0.75	--	18	100	4250	30	0.085	--	1.5	--	250	1020	--	600	--
B1059901	SC21-048	3	4	2021	Basalt	0.030	34400	2.2	<10	<10	0.070	0.020	12000	0.020	3.3	44	120	0.45	105	58100
B1059902	SC21-048	13	14	2021	Basalt	0.12	44300	4.9	14	<10	0.10	0.010	68400	0.050	4.2	51	187	0.75	237	98500
B1059903	SC21-048	23	24	2021	Basalt	0.040	40600	1.2	<10	<10	0.12	<0.010	45200	0.020	4.8	45	155	0.25	137	76700
B1059904	SC21-048	33	34	2021	Basalt	0.020	42800	3.5	<10	<10	0.12	<0.010	47300	0.040	3.1	44	168	0.39	126	87900
B1059905	SC21-048	43	44	2021	Basalt	0.030	24500	1.5	<10	11	<0.050	0.010	67400	0.070	2.0	33	70	0.15	77	49400
B1059906	SC21-048	53	54	2021	Basalt	0.050	32600	1.0	<10	<10	<0.050	<0.010	57800	0.080	1.8	28	113	0.16	68	43500
B1059908	SG22-034	8	9	2022	And_tuf_metaseds	0.14	21000	4.7	16	193	0.17	0.060	66500	0.12	11	48	87	20	134	116800
B1059909	SG22-025	4	5	2022	And_tuf_metaseds	0.070	23500	2.0	<10	17	0.11	0.010	74500	0.060	18	33	98	0.60	102	51000
B1059910	SG22-025	14	15	2022	And_tuf_metaseds	0.080	27200	1.1	<10	10	0.060	<0.010	76900	0.090	14	34	125	0.19	83	55000
B1059911	BH-TMF-35	7.5	8.5	2021	And_tuf_metaseds	0.050	26800	2.0	<10	31	0.15	0.010	31900	0.040	12	31	130	1.5	60	51400
B1059912	BH-TMF-35	17.5	18.5	2021	And_tuf_metaseds	0.040	27100	14	<10	56	0.13	0.010	28000	0.020	10	31	111	3.0	67	49400
B1059913	BH-TMF-35	27.5	28.5	2021	And_tuf_metaseds	0.050	36200	3.9	<10	186	0.11	0.010	36600	0.060	12	31	112	14	83	70100
B1059914	BH-TMF-35	37.5	38.5	2021	And_tuf_metaseds	0.040	29900	1.3	<10	230	0.080	0.010	29400	0.030	7.3	30	117	19	59	56600
B1059915	BH-TMF-36	4	5	2021	And_tuf_metaseds	0.16	36800	1.7	10	<10	<0.050	0.020	72500	0.090	8.7	50	112	0.23	128	79300
B1059916	BH-TMF-36	14	15	2021	And_tuf_metaseds	0.050	32700	1.4	<10	<10	0.060	0.020	74100	0.070	7.4	48	107	0.13	149	69000
B1059917	BH-TMF-36	24	25	2021	And_tuf_metaseds	0.13	31500	1.3	<10	11	0.13	0.020	74800	0.13	5.6	48	86	0.19	128	72000
B1059918	BH-TMF-36	34	35	2021	And_tuf_metaseds	0.050	31500	2.2	<10	<10	0.10	<0.010	65500	0.10	2.4	53	116	0.25	138	73500
B1059919	SH22-MW-002A	7	8	2022	Basalt	0.020	29700	1.1	<10	<10	0.16	0.050	62700	0.070	7.5	48	48	0.36	146	83800
B1059921	SH22-MW-002A	13.5	14.5	2022	Basalt	0.030	40600	3.3	<10	<10	0.19	0.020	52700	0.080	11	47	49	0.49	132	92200
B1059922	SG22-035	3	4	2022	And_tuf_metaseds	0.10	11800	2.6	<10	78	0.15	0.050	79500	0.030	5.3	49	142	7.4	153	66100
B1059923	SG22-035	13	14	2022	And_tuf_metaseds	0.060	18200	2.3	<10	27	0.090	0.020	67500	0.040	2.5	42	166	2.8	89	53000
B1059926	SG22-035	19	20	2022	And_tuf_metaseds	0.070	19800	2.3	<10	155	0.060	0.020	36500	0.020	3.2	49	182	4.9	136	62500
B1059928	SC20-038	5	6	2020	And_tuf_metaseds	0.13	47300	0.60	<10	105	0.27	<0.010	49600	0.10	4.2	48	168	6.2	119	86000
B1059929	SC20-038	13	14	2020	And_tuf_metaseds	0.080	39400	0.90	13	116	0.090	<0.010	66400	0.090	6.0	47	169	5.9	141	84600
B1059930	SC20-038	23	24	2020	And_tuf_metaseds	0.040	32400	1.1	11	<10	0.060	<0.010	53900	0.070	2.6	51	163	0.56	140	80800
B1059931	SC20-038	34	35	2020	And_tuf_metaseds	0.27	34300	1.7	<10	119	0.080	0.010	93000	0.12	4.4	48	144	9.4	120	77100
B1059932	SC20-038	44	45	2020	And_tuf_metaseds	0.050	38500	0.90	<10	<10	0.13	<0.010	46900	0.030	2.2	49	154	0.23	156	82100
B1059933	SC20-039	8	9	2020	And_tuf_metaseds	0.050	28700	2.0	<10	<10	0.11	0.010	51100	0.050	2.4	50	51	0.17	158	91800
B1059934	SC20-039	18	19	2020	And_tuf_metaseds	0.050	25400	2.3	<10	93	0.14	0.010	72900	0.070	4.2	55	49	2.0	141	73400
B1059935	SC20-039	28	29	2020	And_tuf_metaseds	0.060	28900	1.5	<10	39	0.14	0.010	51600	0.10	3.6	51	54	3.9	144	82900
B1059936	SC20-039	38	39	2020	And_tuf_metaseds	0.050	30500	0.90	<10	<10	0.12	<0.010	41900	0.040	3.1	50	53	0.25	152	80500
B1059937	SC20-039	48	49	2020	And_tuf_metaseds	0.12	24500	2.7	<10	40	0.14	0.030	61200	0.030	4.2	46	54	3.8	131	79300
B1059938	SC20-023	2	3	2020	And_tuf_metaseds	0.11	23400	2.5	<10	161	0.17	0.090	36200	0.030	48	25	69	6.4	108	56000
B1059939	SC20-023	11	12	2020	And_tuf_metaseds	0.15	24900	2.4	<10	172	0.10	0.18	37200	0.050	42	18	90	5.8	28	57200
B1059941	SC20-023	16	17	2020	And_tuf_metaseds	0.16	33700	7.6	12	102	0.22	0.070	37500	0.050	28	49	83	4.9	123	65600
B1059942	SC20-023	22	23	2020	And_tuf_metaseds	0.040	28700	1.9	<10	75	<0.050	0.010	39200	0.040	5.9	34	98	1.5	70	68200
B1059943	SC20-023	32	33	2020	And_tuf_metaseds	0.040	32200	1.1	<10	<10	<0.050	0.010	41800	0.040	5.0	47	140	0.13	110	72800
B1059944	SC20-023	42	43	2020	And_tuf_metaseds	0.12	39600	1.0	<10	<10	0.060	<0.010	43700	0.11	3.1	55	114	0.18	121	82500
B1059945	SC20-023	52	53	2020	And_tuf_metaseds	0.060	34300	0.90	<10	20	<0.050	0.010	62500	0.10	2.7	62	113	0.43	174	83600
B1059947	SC20-024	1	2	2020	And_tuf_metaseds	0.040	29300	1.0	<10	150	0.090	<0.010	21400	0.060	31	30	30	2.1	50	60300
B1059948	SC20-024	11	12	2020	And_tuf_metaseds	0.070	30400	2.0	<10	175	0.080	0.030	31600	0.19	42	30	38	3.4	50	63800
B1059949	SC20-024	21	22	2020	And_tuf_metaseds	0.040	31100	1.1	<10	281	<0.050	<0.010	25900	0.060	31	30	41	4.2	56	62900
B1059950	SC20-024	31	32	2020	And_tuf_metaseds	0.12	32300	1.1	<10	83	0.14	0.080	22900	0.050	27	30	35	3.0	17	64500
B1059951	SC20-024	41	42	2020	And_tuf_metaseds	0.030	32200	1.2	<10	165	0.14	<0.010	23600	0.060	38	30	29	5.1	44	61600
B1059952	SC20-024	51	52	2020	And_tuf_metaseds	0.050	30600	0.90	<10	<10	0.060	<0.010	16900	0.030	4.0	36	118	0.51	100	55100
B1059953	SC20-025	1	2	2020	And_tuf_metaseds	0.050	34200	1.3	10	<10	0.10	<0.010	24700	0.090	8.2	40	61	0.50	98	81700
B1059954	SC20-025	10	11	2020	And_tuf_metaseds	0.070	38800	1.0	15	<10	0.13	<0.010	42400	0.080	5.4	43	53	0.17	105	89400
B1059956	SC20-025	20	21	2020	And_tuf_metaseds	0.070	42600	1.2	15	<10	0.20	0.010	35900	0.14	9.3	46	59	0.26	112	101000
B1059958	SC20-025	31	32	2020	And_tuf_metaseds	0.090	37300	2.0	13	13	0.16	0.010	32700	0.070	11	46	55	1.6	159	97600
B1059959	SC20-025	41	42	2020	And_tuf_metaseds	0.080	42300	1.3	13	60	0.21	0.030	38700	0.12	17	42	57	8.1	92	103100
B1059961	SC20-025	51	52	2020	And_tuf_metaseds	0.090	21600	2.8	<10	176	0.56	0.13	54800	0.21	50	28	78	10	83	55700
B1059962	SC20-019	6	7	2020	And_tuf_metaseds	0.16	25000	6.6	<10	21	0.27	0.46	32700	0.84	64	28	35	0.43	153	52800
B1059963	SC20-019	16	17	2020	And_tuf_metaseds	0.10	28500	3.6	<10	38	0.12	0.040	42500	0.12	48	21	46	4.2	48	52100
B1059964	SC20-019	26	27	2020	And_tuf_metaseds	0.26	30400	1.3	<10	20	0.21	0.050	50300	0.21	41	24	33	0.27	5	

Table A-3: Elemental Content Results

Sample ID	Drillhole	From	To	Year	Lithology	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<i>10x Crustal Abundance Screening Value (mg/kg)⁽¹⁾</i>						0.75	--	18	100	4250	30	0.085	--	1.5	--	250	1020	--	600	--
B1059967	SC20-019	56	57	2020	And_tuf_metaseds	0.17	29800	1.1	<10	<10	0.27	0.15	62900	0.16	34	27	64	0.20	64	53100
B1059968	SC20-013	5	6	2020	And_tuf_metaseds	0.030	33500	3.9	<10	116	<0.050	0.020	48200	0.040	11	52	179	1.9	93	76700
B1059969	SC20-013	15	16	2020	And_tuf_metaseds	0.040	31500	7.9	<10	58	<0.050	0.020	49500	0.030	10	49	179	1.5	134	73300
B1059970	SC20-013	25	26	2020	And_tuf_metaseds	0.030	32800	6.4	<10	268	<0.050	0.050	21400	0.060	53	25	54	13	53	57000
B1059971	SC20-013	35	36	2020	And_tuf_metaseds	0.040	20500	41	21	<10	0.090	<0.010	33000	0.090	3.7	38	93	0.43	77	40900
B1059972	SC20-013	45	46	2020	And_tuf_metaseds	0.050	35400	26	<10	<10	<0.050	<0.010	23200	0.060	3.5	45	99	0.19	112	62800
B1059973	SC20-013	55	56	2020	And_tuf_metaseds	0.16	50500	5.1	<10	40	0.12	<0.010	46300	0.10	4.1	50	143	3.9	112	89700
B1059975	SC20-014	2.5	3.5	2020	And_tuf_metaseds	0.010	27200	11	<10	<10	<0.050	<0.010	24000	0.030	2.8	34	105	0.18	135	50300
B1059976	SC20-014	12.5	13.5	2020	And_tuf_metaseds	0.030	49400	2.8	<10	<10	0.060	<0.010	50600	0.050	4.5	47	159	0.090	136	93000
B1059977	SC20-014	22.5	23.5	2020	And_tuf_metaseds	0.080	43100	1.0	<10	<10	0.080	<0.010	63800	0.12	3.6	47	157	0.14	140	87600
B1059990	SC20-014	32.5	33.5	2020	And_tuf_metaseds	0.10	26400	9.9	<10	<10	0.070	<0.010	85100	0.13	1.3	55	116	0.070	207	63800
B1059991	SC20-014	42.5	43.5	2020	And_tuf_metaseds	0.050	28900	10	<10	<10	0.070	<0.010	53500	0.090	2.0	49	144	0.74	149	59100
B1059992	SC20-014	52.5	53.5	2020	And_tuf_metaseds	0.050	29800	9.3	<10	11	0.060	<0.010	57200	0.10	1.8	52	139	1.0	162	61200
B1059994	BH-TMF-04	2	3	2020	And_tuf_metaseds	0.81	38600	0.80	<10	54	<0.050	<0.010	68000	0.080	6.6	48	120	3.6	162	76200
B1059995	BH-TMF-04	12	13	2020	And_tuf_metaseds	0.14	33200	1.6	<10	21	0.060	<0.010	76000	0.20	3.7	54	152	2.0	143	69200
B1059996	BH-WSP2-13	8.5	9.5	2020	And_tuf_metaseds	0.020	47100	2.9	12	<10	0.15	0.010	42900	0.050	6.6	40	40	0.69	134	87200
B1059997	BH-WSP2-14	8	9	2020	And_tuf_metaseds	0.010	44600	1.0	14	<10	0.12	<0.010	37500	0.060	4.2	47	158	0.95	108	84200
C253469	BH-TMF-05	2	3	2020	And_tuf_metaseds	0.070	28900	2.2	<10	25	<0.050	0.020	57600	0.13	5.6	52	171	0.79	142	58000
C253470	BH-TMF-05	8.5	9.5	2020	And_tuf_metaseds	0.070	36100	19	<10	<10	<0.050	<0.010	32000	0.20	4.3	60	182	0.20	175	64200
C253471	SC20-026	5	6	2020	And_tuf_metaseds	0.050	38100	1.3	<10	27	0.060	<0.010	60200	0.060	3.2	47	137	4.3	128	70100
C253472	SC20-026	12	13	2020	And_tuf_metaseds	0.070	33600	1.4	<10	13	0.070	<0.010	29000	0.10	2.8	41	120	1.5	157	60200
C253473	SC20-026	19	20	2020	And_tuf_metaseds	0.050	35700	2.6	<10	10	<0.050	<0.010	20000	0.070	2.0	42	114	1.1	192	60900
C253474	SC20-026	26	27	2020	And_tuf_metaseds	0.070	46600	1.5	<10	<10	0.080	<0.010	39400	0.020	2.2	45	136	0.28	132	77500
C253475	SC20-026	33	34	2020	And_tuf_metaseds	0.18	25800	6.1	<10	96	0.070	<0.010	46500	0.090	1.4	51	138	8.6	130	47900
C253476	SC20-026	40	41	2020	And_tuf_metaseds	0.070	35600	1.8	<10	<10	<0.050	<0.010	12500	0.070	2.0	37	106	0.24	146	58800
C253477	SC20-026	47	48	2020	And_tuf_metaseds	0.070	25400	2.0	<10	<10	<0.050	<0.010	55400	0.13	1.9	34	93	0.73	140	44600
C253478	SC20-026	54	55	2020	And_tuf_metaseds	0.050	26100	1.0	<10	<10	<0.050	<0.010	46400	0.13	1.5	37	101	0.90	142	48400
C253482	SCH21-049	2	3	2021	And_tuf_metaseds	0.020	34200	3.2	<10	<10	<0.050	<0.010	27600	0.020	1.6	29	94	0.18	91	44000
C253483	SCH21-049	11	12	2021	And_tuf_metaseds	0.030	32200	5.0	<10	<10	<0.050	<0.010	40700	0.030	1.8	27	97	0.19	85	44700
C253484	SCH21-049	20	21	2021	And_tuf_metaseds	0.040	34500	3.7	<10	<10	<0.050	<0.010	32000	0.030	2.5	31	108	0.15	88	47700
C253485	SCH21-049	29	30	2021	And_tuf_metaseds	0.060	32900	3.3	<10	15	0.050	<0.010	63100	0.090	3.5	34	93	0.23	89	60100
C253486	SCH21-049	38	39	2021	And_tuf_metaseds	0.020	35400	9.3	<10	<10	0.090	<0.010	67200	0.050	1.9	45	132	0.37	122	63800
C253487	SCH21-049	47	48	2021	And_tuf_metaseds	0.050	44600	18	<10	<10	0.050	<0.010	60700	0.080	2.6	53	175	0.23	129	82600
C253488	SCH21-049	56	57	2021	And_tuf_metaseds	0.040	29600	31	<10	<10	0.070	<0.010	67100	0.080	2.5	43	136	0.28	114	56300

(1) Ten times average crustal abundance values presented in Price (1997).
 Screening values are for qualitative assessment only and hold no regulatory significance.
 Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997).
 Screening values not applied to major elements.

Table A-3: Elemental Content Results

Sample ID	Drillhole	From	To	Year	Lithology	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
						mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka
10x Crustal Abundance Screening Value (mg/kg) ⁽¹⁾																				
						190	15	--	0.85	--	390	200	--	9500	12	--	840	10500		
B1059901	SC21-048	3	4	2021	Basalt	8.4	0.15	0.080	0.012	0.0080	100	1.2	25	33100	803	0.35	200	0.050	144	245
B1059902	SC21-048	13	14	2021	Basalt	18	0.28	0.050	0.018	<0.024	300	1.6	19	36400	1355	0.93	100	<0.050	73	356
B1059903	SC21-048	23	24	2021	Basalt	11	0.23	0.080	<0.0050	0.0090	100	1.9	24	35300	1004	0.26	100	<0.050	83	301
B1059904	SC21-048	33	34	2021	Basalt	15	0.26	0.060	<0.0050	0.012	100	1.2	30	37100	1142	0.35	100	<0.050	74	319
B1059905	SC21-048	43	44	2021	Basalt	6.9	<0.050	<0.020	0.0070	0.0080	900	0.80	21	15300	734	0.32	300	<0.050	81	180
B1059906	SC21-048	53	54	2021	Basalt	6.8	<0.050	0.020	0.010	0.0060	300	0.70	24	14600	893	0.25	1300	0.060	58	164
B1059908	SG22-034	8	9	2022	And_tuf_metaseds	12	0.19	0.18	0.0080	0.027	13900	5.5	29	20000	2044	8.3	400	0.060	85	369
B1059909	SG22-025	4	5	2022	And_tuf_metaseds	7.4	0.050	0.050	0.0080	0.014	1100	7.9	22	11300	1035	0.25	200	<0.050	82	684
B1059910	SG22-025	14	15	2022	And_tuf_metaseds	8.6	<0.050	0.040	0.0070	0.014	700	6.3	24	17500	903	0.28	200	<0.050	102	638
B1059911	BH-TMF-35	7.5	8.5	2021	And_tuf_metaseds	9.9	0.060	0.10	<0.0050	<0.0080	1200	4.9	21	19500	908	0.65	300	0.12	69	779
B1059912	BH-TMF-35	17.5	18.5	2021	And_tuf_metaseds	9.3	0.090	0.090	0.0060	0.0090	2200	4.4	22	21000	855	0.58	300	0.13	72	757
B1059913	BH-TMF-35	27.5	28.5	2021	And_tuf_metaseds	13	0.16	0.070	<0.0050	0.012	7900	5.0	29	26200	1151	0.58	300	0.080	65	820
B1059914	BH-TMF-35	37.5	38.5	2021	And_tuf_metaseds	8.1	0.14	0.090	0.0050	0.0080	9700	3.1	18	17800	914	0.76	300	0.12	66	716
B1059915	BH-TMF-36	4	5	2021	And_tuf_metaseds	14	0.080	0.10	0.0090	0.045	400	3.5	38	24400	1331	0.17	200	<0.050	68	300
B1059916	BH-TMF-36	14	15	2021	And_tuf_metaseds	13	0.060	0.10	0.010	0.042	600	3.0	37	21700	1232	0.58	200	<0.050	61	299
B1059917	BH-TMF-36	24	25	2021	And_tuf_metaseds	10	<0.050	0.060	0.0070	0.025	1100	2.1	26	18700	1234	0.33	100	<0.050	63	267
B1059918	BH-TMF-36	34	35	2021	And_tuf_metaseds	12	0.15	0.020	<0.0050	0.011	300	0.90	25	23200	1193	0.54	200	<0.050	70	284
B1059919	SH22-MW-002A	7	8	2022	Basalt	14	0.27	0.070	0.015	0.038	100	2.9	17	22900	1501	0.34	300	0.060	38	348
B1059921	SH22-MW-002A	13.5	14.5	2022	Basalt	17	0.40	0.16	0.017	0.063	100	4.3	22	30400	1165	0.29	200	<0.050	34	338
B1059922	SG22-035	3	4	2022	And_tuf_metaseds	8.1	0.16	0.17	0.014	0.016	4800	2.3	14	11000	1085	2.4	400	0.080	62	305
B1059923	SG22-035	13	14	2022	And_tuf_metaseds	8.7	0.17	0.16	0.0060	0.011	2100	1.0	22	16900	1264	2.2	300	0.10	92	304
B1059926	SG22-035	19	20	2022	And_tuf_metaseds	9.1	0.17	0.10	0.0080	0.012	5200	1.3	20	16600	932	0.85	400	0.090	90	401
B1059928	SC20-038	5	6	2020	And_tuf_metaseds	17	0.13	0.070	0.0060	0.015	7400	1.9	45	42400	1323	0.42	200	<0.050	89	328
B1059929	SC20-038	13	14	2020	And_tuf_metaseds	15	0.18	0.030	<0.0050	0.012	6300	2.3	44	34400	1329	0.57	200	<0.050	87	322
B1059930	SC20-038	23	24	2020	And_tuf_metaseds	14	0.23	0.060	0.0060	0.012	400	1.0	26	31500	1176	0.13	200	0.050	93	337
B1059931	SC20-038	34	35	2020	And_tuf_metaseds	13	0.18	0.020	0.015	0.010	9800	1.9	35	28100	1528	1.1	200	<0.050	71	293
B1059932	SC20-038	44	45	2020	And_tuf_metaseds	13	0.16	0.030	0.0050	0.0080	200	0.80	34	36400	1014	0.36	200	<0.050	91	331
B1059933	SC20-039	8	9	2020	And_tuf_metaseds	12	0.20	0.050	0.0090	0.0080	100	1.0	16	25500	1477	0.29	200	<0.050	38	383
B1059934	SC20-039	18	19	2020	And_tuf_metaseds	10	0.19	0.040	0.0070	0.011	1400	2.0	19	20600	1528	1.2	200	0.050	44	312
B1059935	SC20-039	28	29	2020	And_tuf_metaseds	13	0.19	0.040	0.0060	0.016	1100	1.4	23	24700	1348	0.45	200	<0.050	40	363
B1059936	SC20-039	38	39	2020	And_tuf_metaseds	10	0.17	0.040	0.013	0.0090	100	1.3	20	25400	1011	0.29	200	<0.050	39	346
B1059937	SC20-039	48	49	2020	And_tuf_metaseds	12	0.24	0.070	0.013	0.014	1600	1.7	19	21400	1388	0.33	200	0.050	36	356
B1059938	SC20-023	2	3	2020	And_tuf_metaseds	12	0.23	0.13	<0.0050	0.041	7000	21	18	20300	618	1.2	400	0.080	23	1091
B1059939	SC20-023	11	12	2020	And_tuf_metaseds	13	0.21	0.37	<0.0050	0.023	12500	18	27	18100	1114	2.0	400	0.10	32	1000
B1059941	SC20-023	16	17	2020	And_tuf_metaseds	12	0.11	0.19	0.010	0.020	9600	12	30	19700	755	0.89	900	0.070	64	750
B1059942	SC20-023	22	23	2020	And_tuf_metaseds	9.0	0.16	0.020	<0.0050	0.029	4300	2.3	20	16400	1131	0.33	200	0.050	58	334
B1059943	SC20-023	32	33	2020	And_tuf_metaseds	12	0.16	0.040	<0.0050	0.022	200	1.5	16	23300	918	0.31	300	0.060	72	461
B1059944	SC20-023	42	43	2020	And_tuf_metaseds	10	0.12	<0.020	<0.0050	0.013	100	1.2	16	27200	1003	0.24	200	<0.050	86	463
B1059945	SC20-023	52	53	2020	And_tuf_metaseds	9.3	0.12	<0.020	<0.0050	0.011	600	1.0	14	20200	1339	0.37	200	0.050	81	443
B1059947	SC20-024	1	2	2020	And_tuf_metaseds	9.7	0.12	0.18	<0.0050	0.016	4900	13	23	21800	694	0.67	200	0.12	25	1025
B1059948	SC20-024	11	12	2020	And_tuf_metaseds	11	0.11	0.35	<0.0050	0.035	9800	18	29	22300	761	0.53	300	0.11	31	964
B1059949	SC20-024	21	22	2020	And_tuf_metaseds	10	0.15	0.21	<0.0050	0.020	13400	13	29	21700	788	0.78	300	0.12	30	1005
B1059950	SC20-024	31	32	2020	And_tuf_metaseds	12	0.16	0.27	<0.0050	0.027	4300	10	23	24900	658	1.5	300	0.11	27	1093
B1059951	SC20-024	41	42	2020	And_tuf_metaseds	12	0.18	0.24	<0.0050	0.023	6600	15	25	22700	623	0.68	300	0.12	25	1007
B1059952	SC20-024	51	52	2020	And_tuf_metaseds	7.2	0.12	0.070	<0.0050	0.0080	400	1.5	15	27500	681	0.34	500	<0.050	88	424
B1059953	SC20-025	1	2	2020	And_tuf_metaseds	9.4	0.18	0.080	<0.0050	0.017	300	3.1	16	25200	886	0.49	300	0.090	47	770
B1059954	SC20-025	10	11	2020	And_tuf_metaseds	9.9	0.14	0.050	<0.0050	0.010	100	2.0	20	27900	1108	0.51	100	0.070	49	732
B1059956	SC20-025	20	21	2020	And_tuf_metaseds	13	0.25	0.050	<0.0050	0.022	100	3.4	21	29100	1018	0.46	100	0.050	50	770
B1059958	SC20-025	31	32	2020	And_tuf_metaseds	13	0.25	0.080	<0.0050	0.029	500	4.1	21	29400	950	0.49	200	0.080	47	722
B1059959	SC20-025	41	42	2020	And_tuf_metaseds	15	0.27	0.13	<0.0050	0.056	2400	6.2	23	31200	1011	0.47	200	0.060	49	683
B1059961	SC20-025	51	52	2020	And_tuf_metaseds	7.7	0.070	0.45	<0.0050	0.038	10300	26	22	13700	1019	27	300	0.080	38	607
B1059962	SC20-019	6	7	2020	And_tuf_metaseds	7.0	0.070	0.16	0.0090	0.066	1600	29	16	14900	808	1.1	100	0.060	40	994
B1059963	SC20-019	16	17	2020	And_tuf_metaseds	7.9	0.060	0.30	<0.0050	0.021	4000	20	22	17700	892	0.24	200	0.10	39	936
B1059964	SC20-019	26	27	2020	And_tuf_metaseds	6.7	<0.050	0.32	<0.0050	0.016	1500	17								

Table A-3: Elemental Content Results

Sample ID	Drillhole	From	To	Year	Lithology	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
						mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka
<i>10x Crustal Abundance Screening Value (mg/kg)⁽¹⁾</i>						190	15	--	0.85	--	--	390	200	--	9500	12	--	--	840	10500
B1059967	SC20-019	56	57	2020	And_tuf_metaseds	6.3	<0.050	0.32	<0.0050	0.021	900	14	27	17600	795	0.38	100	<0.050	53	702
B1059968	SC20-013	5	6	2020	And_tuf_metaseds	13	0.23	0.080	<0.0050	0.050	2800	3.9	23	21100	967	0.38	200	0.060	94	469
B1059969	SC20-013	15	16	2020	And_tuf_metaseds	12	0.21	0.080	0.0070	0.041	1300	3.5	21	20600.00	1065	0.46	300.00	0.070	89	484
B1059970	SC20-013	25	26	2020	And_tuf_metaseds	11	0.13	0.61	<0.0050	0.041	16300	24	27	22100	635	1.1	300	0.18	34	965
B1059971	SC20-013	35	36	2020	And_tuf_metaseds	4.1	0.11	0.080	0.010	0.011	300	1.3	7.7	15000	693	0.30	700	0.12	71	347
B1059972	SC20-013	45	46	2020	And_tuf_metaseds	6.1	0.11	0.090	0.0090	0.010	100	1.3	15	28700	821	0.33	300	0.080	92	411
B1059973	SC20-013	55	56	2020	And_tuf_metaseds	11	0.20	0.050	<0.0050	0.014	1700	1.5	23	42000	1148	0.29	100	<0.050	104	402
B1059975	SC20-014	2.5	3.5	2020	And_tuf_metaseds	5.7	0.12	0.080	0.0070	0.0080	100	1.1	15	21600	728	0.32	300	0.070	64	287
B1059976	SC20-014	12.5	13.5	2020	And_tuf_metaseds	13	0.21	0.080	<0.0050	0.026	100	1.6	23	39600	1325	0.24	100	<0.050	94	315
B1059977	SC20-014	22.5	23.5	2020	And_tuf_metaseds	12	0.17	0.020	<0.0050	0.021	100	1.3	21	29500	1023	0.37	200	<0.050	93	315
B1059990	SC20-014	32.5	33.5	2020	And_tuf_metaseds	5.1	0.080	0.020	<0.0050	0.0050	100	0.50	12	14700	1230	0.75	200	0.080	104	274
B1059991	SC20-014	42.5	43.5	2020	And_tuf_metaseds	5.8	0.12	0.070	<0.0050	0.0080	400	0.80	14	17800	1102	0.22	200	0.10	100	285
B1059992	SC20-014	52.5	53.5	2020	And_tuf_metaseds	5.9	0.11	0.070	<0.0050	0.0090	600	0.70	15	18800	1198	0.21	200	0.10	101	283
B1059994	BH-TMF-04	2	3	2020	And_tuf_metaseds	7.9	<0.050	0.030	<0.0050	0.0090	6800	2.6	32	22000	1191	0.35	100	0.060	101	289
B1059995	BH-TMF-04	12	13	2020	And_tuf_metaseds	17	0.18	0.030	0.0080	0.016	3500	1.4	33	20300	1203	0.49	300	<0.050	105	311
B1059996	BH-WSF2-13	8.5	9.5	2020	And_tuf_metaseds	18	0.19	0.13	0.010	0.039	200	2.4	28	40700	1210	0.10	200	<0.050	34	376
B1059997	BH-WSF2-14	8	9	2020	And_tuf_metaseds	17	0.12	0.050	<0.0050	0.010	600	1.6	33	38300	968	0.33	200	<0.050	102	472
C253469	BH-TMF-05	2	3	2020	And_tuf_metaseds	11	0.070	0.080	0.0080	0.025	1000	2.1	22	19600	994	0.33	200	<0.050	102	331
C253470	BH-TMF-05	8.5	9.5	2020	And_tuf_metaseds	11	0.13	0.10	0.011	0.010	100	1.7	28	23800	934	0.41	200	0.080	115	405
C253471	SC20-026	5	6	2020	And_tuf_metaseds	14	0.090	0.040	<0.0050	0.010	1500	1.2	22	28200	1303	0.28	300	<0.050	90	323
C253472	SC20-026	12	13	2020	And_tuf_metaseds	11	0.10	0.050	<0.0050	0.010	700	1.0	18	25200	781	0.28	400	<0.050	77	342
C253473	SC20-026	19	20	2020	And_tuf_metaseds	10	0.10	0.070	<0.0050	0.0090	500	0.70	20	28000	758	0.19	400	0.050	77	332
C253474	SC20-026	26	27	2020	And_tuf_metaseds	14	0.10	0.070	<0.0050	0.0080	100	0.90	28	37300	1026	0.30	200	<0.050	82	333
C253475	SC20-026	33	34	2020	And_tuf_metaseds	7.2	0.090	0.090	<0.0050	0.0070	3600	0.50	17	15500	887	0.40	400	0.11	93	283
C253476	SC20-026	40	41	2020	And_tuf_metaseds	9.9	0.070	0.11	<0.0050	0.0070	100	0.70	20	27700	712	0.27	300	0.050	70	368
C253477	SC20-026	47	48	2020	And_tuf_metaseds	7.2	0.070	0.060	<0.0050	0.0070	300	0.70	13	17400	1001	0.30	500	0.070	65	315
C253478	SC20-026	54	55	2020	And_tuf_metaseds	7.2	0.070	0.030	<0.0050	0.0060	300	0.60	13	18400	898	0.18	400	<0.050	71	297
C253462	SCH21-049	2	3	2021	And_tuf_metaseds	7.5	<0.050	<0.020	<0.0050	<0.0050	300	0.60	34	24700	560	0.17	300	<0.050	64	178
C253463	SCH21-049	11	12	2021	And_tuf_metaseds	6.7	<0.050	0.020	<0.0050	<0.0050	200	0.70	29	22200	670	0.16	300	<0.050	50	195
C253464	SCH21-049	20	21	2021	And_tuf_metaseds	6.8	<0.050	0.020	<0.0050	<0.0050	300	0.90	31	23800	645	0.23	300	<0.050	55	232
C253465	SCH21-049	29	30	2021	And_tuf_metaseds	9.4	<0.050	0.020	0.010	0.011	900	1.3	23	18200	874	0.16	200	<0.050	62	244
C253466	SCH21-049	38	39	2021	And_tuf_metaseds	7.9	0.10	0.060	0.011	0.0060	200	0.70	20	26300	1095	0.22	100	<0.050	81	268
C253467	SCH21-049	47	48	2021	And_tuf_metaseds	15	0.11	0.090	0.0070	0.010	100	1.0	17	31900	1179	0.22	200	<0.050	98	302
C253468	SCH21-049	56	57	2021	And_tuf_metaseds	10.0	0.080	0.070	0.0060	0.0070	100	1.0	13	20900	1299	0.13	300	0.050	90	265

(1) Ten times average crustal abundance values presented in Price (1997).
 Screening values are for qualitative assessment only and hold no regulatory significance.
 Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997).
 Screening values not applied to major elements.

Table A-3: Elemental Content Results

Sample ID	Drillhole	From	To	Year	Lithology	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
						mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka
<i>10x Crustal Abundance Screening Value (mg/kg)⁽¹⁾</i>						140	--	--	3500	2	220	0.5	23	3700	--	--	96	56500
B1059901	SC21-048	3	4	2021	Basalt	0.80	1.0	<0.0010	400	0.73	2.8	<0.20	<0.20	17	<0.010	0.010	<0.20	2200
B1059902	SC21-048	13	14	2021	Basalt	3.2	1.8	0.0020	1800	0.58	14	0.50	0.20	31	<0.010	0.030	0.30	1970
B1059903	SC21-048	23	24	2021	Basalt	0.40	0.30	0.0020	400	0.56	5.8	<0.20	0.30	21	<0.010	0.020	<0.20	2750
B1059904	SC21-048	33	34	2021	Basalt	0.30	0.40	0.0010	1000	0.27	7.5	0.30	0.30	20	<0.010	0.020	<0.20	2580
B1059905	SC21-048	43	44	2021	Basalt	0.20	2.4	0.0010	2100	0.25	3.5	0.40	<0.20	16	<0.010	0.080	<0.20	670
B1059906	SC21-048	53	54	2021	Basalt	0.20	1.0	<0.0010	600	0.61	3.6	<0.20	<0.20	34	<0.010	0.40	<0.20	1000
B1059908	SG22-034	8	9	2022	And_tuf_metaseds	2.8	75	0.0030	13100	0.31	13	0.70	0.40	46	<0.010	0.17	0.50	3090
B1059909	SG22-025	4	5	2022	And_tuf_metaseds	1.3	4.0	<0.0010	500	0.090	5.6	<0.20	<0.20	27	<0.010	<0.010	1.2	480
B1059910	SG22-025	14	15	2022	And_tuf_metaseds	1.4	2.6	<0.0010	400	0.10	5.4	<0.20	<0.20	34	<0.010	0.010	1.0	600
B1059911	BH-TMF-35	7.5	8.5	2021	And_tuf_metaseds	0.80	5.8	<0.0010	200	0.25	5.4	<0.20	0.40	38	<0.010	<0.010	1.5	2940
B1059912	BH-TMF-35	17.5	18.5	2021	And_tuf_metaseds	0.90	11	<0.0010	200	0.18	4.9	<0.20	0.30	36	<0.010	<0.010	1.2	3440
B1059913	BH-TMF-35	27.5	28.5	2021	And_tuf_metaseds	1.3	42	<0.0010	800	0.19	6.4	<0.20	0.40	41	<0.010	<0.010	1.5	3100
B1059914	BH-TMF-35	37.5	38.5	2021	And_tuf_metaseds	0.80	50	<0.0010	300	0.19	3.7	<0.20	0.30	42	<0.010	<0.010	0.90	3770
B1059915	BH-TMF-36	4	5	2021	And_tuf_metaseds	1.1	1.7	<0.0010	900	0.21	25	0.20	<0.20	24	<0.010	0.020	0.60	730
B1059916	BH-TMF-36	14	15	2021	And_tuf_metaseds	0.70	2.4	<0.0010	1200	0.17	19	0.30	<0.20	22	<0.010	0.030	0.60	650
B1059917	BH-TMF-36	24	25	2021	And_tuf_metaseds	1.4	4.2	<0.0010	1200	0.25	13	0.30	<0.20	28	<0.010	0.030	0.50	570
B1059918	BH-TMF-36	34	35	2021	And_tuf_metaseds	0.70	1.7	0.0020	1600	0.40	9.0	0.30	<0.20	36	<0.010	0.020	0.30	910
B1059919	SH22-MW-002A	7	8	2022	Basalt	0.80	0.60	<0.0010	2500	0.46	28	0.50	0.50	84	<0.010	0.030	0.50	1630
B1059921	SH22-MW-002A	13.5	14.5	2022	Basalt	1.2	0.50	0.0020	1000	0.45	37	0.30	0.30	91	0.030	0.010	0.50	460
B1059922	SG22-035	3	4	2022	And_tuf_metaseds	0.60	40	0.0020	7700	0.41	8.1	0.60	0.30	51	0.010	0.21	0.40	2830
B1059923	SG22-035	13	14	2022	And_tuf_metaseds	0.30	16	0.0010	2000	0.47	6.4	<0.20	0.30	37	<0.010	0.080	0.30	3390
B1059926	SG22-035	19	20	2022	And_tuf_metaseds	0.40	32	0.0010	5000	0.23	6.7	0.50	0.30	19	<0.010	0.070	0.30	2910
B1059928	SC20-038	5	6	2020	And_tuf_metaseds	4.5	44	<0.0010	1600	0.060	11	0.20	0.30	23	<0.010	0.020	0.30	1530
B1059929	SC20-038	13	14	2020	And_tuf_metaseds	4.3	36	0.0010	1400	0.080	8.6	<0.20	<0.20	29	<0.010	0.060	0.40	1770
B1059930	SC20-038	23	24	2020	And_tuf_metaseds	1.0	2.3	<0.0010	500	0.30	7.8	<0.20	0.30	35	<0.010	0.020	<0.20	2730
B1059931	SC20-038	34	35	2020	And_tuf_metaseds	3.2	58	0.0010	7700	0.12	6.5	0.40	<0.20	38	<0.010	0.28	0.20	1980
B1059932	SC20-038	44	45	2020	And_tuf_metaseds	0.60	1.5	0.0010	1100	0.20	5.5	0.20	0.20	29	<0.010	0.040	<0.20	1900
B1059933	SC20-039	8	9	2020	And_tuf_metaseds	0.50	0.40	<0.0010	4000	0.18	6.3	0.40	<0.20	31	<0.010	0.030	0.20	1630
B1059934	SC20-039	18	19	2020	And_tuf_metaseds	0.90	12	0.0030	4300	0.25	6.7	0.70	0.20	62	<0.010	0.030	0.20	1630
B1059935	SC20-039	28	29	2020	And_tuf_metaseds	0.40	9.0	0.0010	1700	0.18	8.4	0.40	0.20	39	<0.010	0.020	0.30	1290
B1059936	SC20-039	38	39	2020	And_tuf_metaseds	0.40	0.50	<0.0010	1600	0.14	5.4	0.30	<0.20	32	<0.010	0.020	0.30	1040
B1059937	SC20-039	48	49	2020	And_tuf_metaseds	0.90	13	<0.0010	4800	0.22	11	0.30	0.30	46	<0.010	0.23	0.50	2230
B1059938	SC20-023	2	3	2020	And_tuf_metaseds	1.6	33	<0.0010	3400	0.14	17	0.30	0.90	49	<0.010	0.050	2.6	1510
B1059939	SC20-023	11	12	2020	And_tuf_metaseds	1.0	63	<0.0010	5700	0.19	12	<0.20	0.40	22	<0.010	0.33	2.6	2190
B1059941	SC20-023	16	17	2020	And_tuf_metaseds	1.1	53	0.0010	6300	0.21	5.2	0.90	0.20	45	<0.010	0.16	2.5	1960
B1059942	SC20-023	22	23	2020	And_tuf_metaseds	0.90	16	0.0020	1000	0.11	14	0.20	0.30	16	0.020	0.010	0.40	950
B1059943	SC20-023	32	33	2020	And_tuf_metaseds	0.60	0.80	0.0020	1100	0.19	12	0.20	0.30	15	<0.010	<0.010	0.40	940
B1059944	SC20-023	42	43	2020	And_tuf_metaseds	0.80	0.50	0.0020	1900	0.36	6.1	0.40	<0.20	21	<0.010	0.010	<0.20	710
B1059945	SC20-023	52	53	2020	And_tuf_metaseds	1.1	2.5	0.0020	5000	0.34	5.0	0.70	<0.20	22	<0.010	0.010	<0.20	720
B1059947	SC20-024	1	2	2020	And_tuf_metaseds	1.0	17	0.0010	100	0.15	4.2	<0.20	0.30	34	<0.010	<0.010	1.6	1510
B1059948	SC20-024	11	12	2020	And_tuf_metaseds	1.6	35	0.0010	1800	0.14	6.5	<0.20	0.40	34	<0.010	0.030	2.2	1910
B1059949	SC20-024	21	22	2020	And_tuf_metaseds	1.9	51	0.0010	100	0.12	5.7	<0.20	0.30	30	<0.010	0.010	2.0	2470
B1059950	SC20-024	31	32	2020	And_tuf_metaseds	1.1	17	0.0010	1800	0.11	8.6	<0.20	0.50	39	<0.010	0.060	1.6	1280
B1059951	SC20-024	41	42	2020	And_tuf_metaseds	1.1	27	0.0010	200	0.14	6.7	<0.20	0.60	38	<0.010	0.010	1.8	1450
B1059952	SC20-024	51	52	2020	And_tuf_metaseds	0.70	1.7	0.0020	700	0.14	3.8	0.30	<0.20	20	<0.010	<0.010	<0.20	1020
B1059953	SC20-025	1	2	2020	And_tuf_metaseds	1.3	1.2	0.0020	1300	0.40	7.1	0.30	0.30	30	<0.010	<0.010	0.30	1230
B1059954	SC20-025	10	11	2020	And_tuf_metaseds	1.4	0.30	0.0020	1400	0.52	3.9	0.40	<0.20	27	<0.010	<0.010	0.30	960
B1059956	SC20-025	20	21	2020	And_tuf_metaseds	1.5	0.30	0.0020	1500	0.35	9.7	0.40	0.30	29	<0.010	0.010	0.40	880
B1059958	SC20-025	31	32	2020	And_tuf_metaseds	1.3	3.3	0.0020	1800	0.32	11	0.40	0.50	35	<0.010	<0.010	0.40	1400
B1059959	SC20-025	41	42	2020	And_tuf_metaseds	2.0	18	0.0030	2200	0.35	20	0.50	0.60	40	<0.010	0.020	0.60	1160
B1059961	SC20-025	51	52	2020	And_tuf_metaseds	2.8	46	0.0040	6500	0.18	11	0.50	0.70	76	<0.010	0.18	2.3	1590
B1059962	SC20-019	6	7	2020	And_tuf_metaseds	9.5	5.9	0.0030	7900	0.28	3.0	1.0	<0.20	31	<0.010	0.39	5.3	340
B1059963	SC20-019	16	17	2020	And_tuf_metaseds	2.9	30	<0.0010	100	0.28	4.4	<0.20	<0.20	40	0.020	0.020	2.7	850
B1059964	SC20-019	26	27	2020	And_tuf_metaseds	2.9	4.4	<0.0010	200	0.30	3.0	<0.20	<0.20	67	<0.010	0.020	2.3	420
B1059965	SC20-019	36	37	2020	And_tuf_metaseds	3.5	3.6	0.0010	3000	0.78	3.6	0.40	<0.20	33	<0.010	0.050	3.4	420
B1059966	SC20-019	46	47	2020	And_tuf_metaseds	3.1	3.1	0.0010	1600	0.37	2.4	<0.20	<0.20	64	<0.010	<0.010	1.9	450

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Table A-3: Elemental Content Results

Sample ID	Drillhole	From	To	Year	Lithology	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
						mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka
<i>10x Crustal Abundance Screening Value (mg/kg)⁽¹⁾</i>						140	--	--	3500	2	220	0.5	23	3700	--	--	96	56500
B1059967	SC20-019	56	57	2020	And_tuf_metaseds	2.9	2.3	<0.0010	400	0.43	3.1	<0.20	<0.20	47	<0.010	0.060	2.2	340
B1059968	SC20-013	5	6	2020	And_tuf_metaseds	0.60	8.5	0.0020	500	0.19	22	0.20	0.60	56	<0.010	<0.010	0.50	1210
B1059969	SC20-013	15	16	2020	And_tuf_metaseds	0.60	4.3	0.0020	600	0.23	17	0.20	0.40	52	<0.010	<0.010	0.40	1160
B1059970	SC20-013	25	26	2020	And_tuf_metaseds	1.1	62	0.0010	2200	0.22	11	0.30	0.90	12	<0.010	0.040	3.4	2470
B1059971	SC20-013	35	36	2020	And_tuf_metaseds	0.50	0.90	0.0020	1100	1.1	5.3	0.30	<0.20	46	<0.010	0.020	2.0	1660
B1059972	SC20-013	45	46	2020	And_tuf_metaseds	0.60	0.20	0.0020	1100	1.2	4.4	0.30	<0.20	28	<0.010	0.010	<0.20	2130
B1059973	SC20-013	55	56	2020	And_tuf_metaseds	1.3	8.7	0.0020	1200	0.97	7.4	0.20	0.20	36	<0.010	0.010	<0.20	1320
B1059975	SC20-014	2.5	3.5	2020	And_tuf_metaseds	0.20	0.40	0.0020	300	0.62	3.2	<0.20	<0.20	33	<0.010	0.010	<0.20	2650
B1059976	SC20-014	12.5	13.5	2020	And_tuf_metaseds	0.80	0.10	0.0020	900	0.27	14	0.30	0.30	34	<0.010	0.020	<0.20	2410
B1059977	SC20-014	22.5	23.5	2020	And_tuf_metaseds	0.70	0.30	0.0010	1300	0.27	10	0.20	<0.20	35	<0.010	0.010	<0.20	820
B1059990	SC20-014	32.5	33.5	2020	And_tuf_metaseds	0.60	0.20	0.0020	5200	0.32	2.4	0.60	<0.20	30	<0.010	0.030	<0.20	910
B1059991	SC20-014	42.5	43.5	2020	And_tuf_metaseds	0.30	1.9	0.0010	1600	0.49	4.1	0.40	<0.20	20	<0.010	0.010	<0.20	1920
B1059992	SC20-014	52.5	53.5	2020	And_tuf_metaseds	0.30	2.5	0.0010	1600	0.49	4.2	0.40	<0.20	20	<0.010	0.010	<0.20	1970
B1059994	BH-TMF-04	2	3	2020	And_tuf_metaseds	1.9	29	0.0020	600	0.18	3.8	<0.20	<0.20	21	<0.010	0.010	0.30	1410
B1059995	BH-TMF-04	12	13	2020	And_tuf_metaseds	1.2	16	0.0020	2300	0.28	9.1	0.70	<0.20	32	<0.010	0.020	0.20	920
B1059996	BH-WSF2-13	8.5	9.5	2020	And_tuf_metaseds	1.0	1.1	<0.0010	800	0.46	31	0.20	0.30	55	<0.010	0.030	0.50	1810
B1059997	BH-WSF2-14	8	9	2020	And_tuf_metaseds	0.30	2.9	0.0010	1400	0.13	7.9	0.30	<0.20	17	<0.010	0.010	<0.20	860
C253469	BH-TMF-05	2	3	2020	And_tuf_metaseds	0.70	4.2	0.0010	2800	0.35	12	0.40	<0.20	38	0.010	0.050	0.30	730
C253470	BH-TMF-05	8.5	9.5	2020	And_tuf_metaseds	0.30	0.40	0.0010	2300	0.45	6.2	0.40	<0.20	23	<0.010	0.050	0.40	2060
C253471	SC20-026	5	6	2020	And_tuf_metaseds	0.40	7.9	0.0010	1400	0.20	6.4	0.30	<0.20	50	<0.010	0.010	0.20	1340
C253472	SC20-026	12	13	2020	And_tuf_metaseds	0.40	3.3	0.0010	1600	0.35	4.9	0.40	<0.20	33	<0.010	0.020	<0.20	1790
C253473	SC20-026	19	20	2020	And_tuf_metaseds	0.20	2.6	0.0010	1600	0.34	4.9	0.40	0.20	24	<0.010	0.010	<0.20	2210
C253474	SC20-026	26	27	2020	And_tuf_metaseds	0.60	0.40	0.0010	900	0.34	6.0	0.30	<0.20	26	<0.010	0.020	<0.20	2210
C253475	SC20-026	33	34	2020	And_tuf_metaseds	0.30	21	<0.0010	2100	0.36	4.9	0.50	<0.20	33	<0.010	0.020	<0.20	2250
C253476	SC20-026	40	41	2020	And_tuf_metaseds	<0.20	0.30	0.0010	900	0.34	3.6	0.30	<0.20	13	<0.010	0.010	<0.20	2200
C253477	SC20-026	47	48	2020	And_tuf_metaseds	<0.20	1.3	0.0010	700	0.32	4.4	<0.20	<0.20	33	<0.010	0.020	<0.20	1690
C253478	SC20-026	54	55	2020	And_tuf_metaseds	0.20	1.7	<0.0010	1400	0.28	3.9	0.40	<0.20	34	<0.010	0.010	<0.20	980
C253462	SCH21-049	2	3	2021	And_tuf_metaseds	<0.20	1.0	<0.0010	600	0.33	1.9	0.20	<0.20	17	<0.010	0.030	<0.20	80
C253463	SCH21-049	11	12	2021	And_tuf_metaseds	<0.20	0.80	<0.0010	1200	0.26	1.8	0.30	<0.20	19	<0.010	0.040	<0.20	100
C253464	SCH21-049	20	21	2021	And_tuf_metaseds	<0.20	1.2	<0.0010	1200	0.82	2.2	0.30	<0.20	22	<0.010	0.040	<0.20	640
C253465	SCH21-049	29	30	2021	And_tuf_metaseds	0.70	3.3	<0.0010	2500	0.32	5.2	0.60	<0.20	49	<0.010	0.24	<0.20	420
C253466	SCH21-049	38	39	2021	And_tuf_metaseds	<0.20	1.5	<0.0010	2400	0.59	4.3	0.50	<0.20	45	<0.010	0.060	<0.20	1920
C253467	SCH21-049	47	48	2021	And_tuf_metaseds	0.30	0.50	<0.0010	1300	0.55	6.9	0.40	0.20	38	<0.010	0.030	<0.20	2240
C253468	SCH21-049	56	57	2021	And_tuf_metaseds	<0.20	0.70	<0.0010	700	0.38	4.6	<0.20	<0.20	42	<0.010	0.020	<0.20	1930

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 Screening values not applied to major elements.

Table A-3: Elemental Content Results

Sample ID	Drillhole	From	To	Year	Lithology	Ti	U	V	W	Y	Zn	Zr
						mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka
<i>10x Crustal Abundance Screening Value (mg/kg)⁽¹⁾</i>						8.5	27	1200	12.5	330	700	1650
B1059901	SC21-048	3	4	2021	Basalt	<0.020	<0.050	79	0.47	4.3	57	2.0
B1059902	SC21-048	13	14	2021	Basalt	<0.020	<0.050	225	0.47	5.3	87	1.4
B1059903	SC21-048	23	24	2021	Basalt	<0.020	<0.050	142	0.43	5.9	70	2.5
B1059904	SC21-048	33	34	2021	Basalt	<0.020	<0.050	187	0.32	6.0	80	1.4
B1059905	SC21-048	43	44	2021	Basalt	<0.020	<0.050	46	3.1	2.7	55	<0.50
B1059906	SC21-048	53	54	2021	Basalt	<0.020	<0.050	63	0.18	2.5	47	0.70
B1059908	SG22-034	8	9	2022	And_tuf_metaseds	0.76	0.43	178	6.4	7.8	96	8.1
B1059909	SG22-025	4	5	2022	And_tuf_metaseds	0.030	0.12	54	0.090	7.8	73	2.4
B1059910	SG22-025	14	15	2022	And_tuf_metaseds	<0.020	0.090	66	0.070	6.9	73	1.9
B1059911	BH-TMF-35	7.5	8.5	2021	And_tuf_metaseds	0.030	0.18	89	0.23	4.6	79	2.6
B1059912	BH-TMF-35	17.5	18.5	2021	And_tuf_metaseds	0.060	0.15	84	0.25	4.4	75	3.0
B1059913	BH-TMF-35	27.5	28.5	2021	And_tuf_metaseds	0.24	0.17	118	0.16	4.9	86	2.3
B1059914	BH-TMF-35	37.5	38.5	2021	And_tuf_metaseds	0.29	0.12	80	0.12	3.2	83	2.8
B1059915	BH-TMF-36	4	5	2021	And_tuf_metaseds	<0.020	0.070	189	0.26	13	83	4.7
B1059916	BH-TMF-36	14	15	2021	And_tuf_metaseds	0.030	0.070	157	0.080	13	81	5.3
B1059917	BH-TMF-36	24	25	2021	And_tuf_metaseds	0.040	0.080	118	0.85	11	84	2.6
B1059918	BH-TMF-36	34	35	2021	And_tuf_metaseds	0.020	<0.050	187	0.21	3.9	87	0.70
B1059919	SH22-MW-002A	7	8	2022	Basalt	<0.020	0.080	237	<0.050	11	86	2.1
B1059921	SH22-MW-002A	13.5	14.5	2022	Basalt	<0.020	0.060	251	<0.050	8.1	87	5.6
B1059922	SG22-035	3	4	2022	And_tuf_metaseds	0.51	0.10	149	0.77	7.4	45	6.1
B1059923	SG22-035	13	14	2022	And_tuf_metaseds	0.19	<0.050	146	0.45	4.9	56	5.6
B1059926	SG22-035	19	20	2022	And_tuf_metaseds	0.41	<0.050	173	0.76	4.8	57	3.6
B1059928	SC20-038	5	6	2020	And_tuf_metaseds	0.48	<0.050	217	0.080	3.1	145	3.3
B1059929	SC20-038	13	14	2020	And_tuf_metaseds	0.47	<0.050	216	0.070	5.0	109	1.3
B1059930	SC20-038	23	24	2020	And_tuf_metaseds	0.030	<0.050	183	0.070	6.7	85	2.0
B1059931	SC20-038	34	35	2020	And_tuf_metaseds	0.93	<0.050	179	0.26	2.6	166	0.90
B1059932	SC20-038	44	45	2020	And_tuf_metaseds	<0.020	<0.050	156	0.060	4.2	85	0.80
B1059933	SC20-039	8	9	2020	And_tuf_metaseds	<0.020	<0.050	189	0.50	4.1	96	1.4
B1059934	SC20-039	18	19	2020	And_tuf_metaseds	0.14	0.060	146	1.4	4.3	85	1.1
B1059935	SC20-039	28	29	2020	And_tuf_metaseds	0.13	<0.050	196	0.090	5.5	90	1.4
B1059936	SC20-039	38	39	2020	And_tuf_metaseds	<0.020	<0.050	148	0.070	3.5	92	1.3
B1059937	SC20-039	48	49	2020	And_tuf_metaseds	0.20	0.060	185	0.30	6.3	94	2.4
B1059938	SC20-023	2	3	2020	And_tuf_metaseds	0.29	0.36	161	0.060	8.9	70	11
B1059939	SC20-023	11	12	2020	And_tuf_metaseds	0.52	0.31	151	0.60	9.4	55	20
B1059941	SC20-023	16	17	2020	And_tuf_metaseds	0.55	0.28	153	<0.050	11	104	9.7
B1059942	SC20-023	22	23	2020	And_tuf_metaseds	0.16	<0.050	204	0.060	8.1	73	0.60
B1059943	SC20-023	32	33	2020	And_tuf_metaseds	<0.020	0.050	275	<0.050	8.0	95	1.8
B1059944	SC20-023	42	43	2020	And_tuf_metaseds	<0.020	<0.050	170	0.070	4.1	106	0.50
B1059945	SC20-023	52	53	2020	And_tuf_metaseds	0.030	<0.050	189	0.080	3.5	115	<0.50
B1059947	SC20-024	1	2	2020	And_tuf_metaseds	0.12	0.21	104	0.34	7.9	95	8.0
B1059948	SC20-024	11	12	2020	And_tuf_metaseds	0.25	0.31	125	0.90	11	160	16
B1059949	SC20-024	21	22	2020	And_tuf_metaseds	0.29	0.25	132	0.63	6.7	110	9.7
B1059950	SC20-024	31	32	2020	And_tuf_metaseds	0.10	0.23	121	0.17	8.2	94	11
B1059951	SC20-024	41	42	2020	And_tuf_metaseds	0.15	0.26	125	0.15	9.4	93	11
B1059952	SC20-024	51	52	2020	And_tuf_metaseds	<0.020	<0.050	77	0.16	4.6	75	2.7
B1059953	SC20-025	1	2	2020	And_tuf_metaseds	<0.020	<0.050	149	0.25	9.7	106	2.9
B1059954	SC20-025	10	11	2020	And_tuf_metaseds	<0.020	<0.050	164	0.20	6.4	110	1.6
B1059956	SC20-025	20	21	2020	And_tuf_metaseds	<0.020	<0.050	230	0.20	10	126	1.8
B1059958	SC20-025	31	32	2020	And_tuf_metaseds	0.050	0.060	220	0.14	12	100	3.1
B1059959	SC20-025	41	42	2020	And_tuf_metaseds	0.22	0.070	276	0.14	18	122	5.1
B1059961	SC20-025	51	52	2020	And_tuf_metaseds	0.51	0.58	123	0.20	7.7	148	18
B1059962	SC20-019	6	7	2020	And_tuf_metaseds	0.080	0.65	23	0.060	10	253	9.2
B1059963	SC20-019	16	17	2020	And_tuf_metaseds	0.39	0.41	67	0.060	11	71	18
B1059964	SC20-019	26	27	2020	And_tuf_metaseds	0.040	0.22	45	0.12	9.2	99	14
B1059965	SC20-019	36	37	2020	And_tuf_metaseds	0.030	0.37	47	0.090	12	212	11
B1059966	SC20-019	46	47	2020	And_tuf_metaseds	0.030	0.44	32	0.090	10	74	17

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						mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka	mg/ka
<i>10x Crustal Abundance Screening Value (mg/kg)⁽¹⁾</i>						8.5	27	1200	12.5	330	700	1650
B1059967	SC20-019	56	57	2020	And_tuf_metaseds	<0.020	0.26	40	<0.050	9.3	122	13
B1059968	SC20-013	5	6	2020	And_tuf_metaseds	0.060	0.060	262	0.26	12	91	2.9
B1059969	SC20-013	15	16	2020	And_tuf_metaseds	0.040	0.070	257	0.31	10.0	91	2.6
B1059970	SC20-013	25	26	2020	And_tuf_metaseds	0.41	0.46	123	0.24	11	92	2.8
B1059971	SC20-013	35	36	2020	And_tuf_metaseds	<0.020	<0.050	62	0.23	4.5	65	1.9
B1059972	SC20-013	45	46	2020	And_tuf_metaseds	<0.020	<0.050	72	0.29	5.1	77	2.2
B1059973	SC20-013	55	56	2020	And_tuf_metaseds	0.10	<0.050	165	0.20	5.5	98	1.7
B1059975	SC20-014	2.5	3.5	2020	And_tuf_metaseds	<0.020	<0.050	76	0.30	4.4	57	2.1
B1059976	SC20-014	12.5	13.5	2020	And_tuf_metaseds	<0.020	<0.050	212	0.13	7.3	84	2.3
B1059977	SC20-014	22.5	23.5	2020	And_tuf_metaseds	<0.020	<0.050	214	0.25	4.3	92	0.80
B1059990	SC20-014	32.5	33.5	2020	And_tuf_metaseds	<0.020	<0.050	89	0.32	2.2	99	<0.50
B1059991	SC20-014	42.5	43.5	2020	And_tuf_metaseds	<0.020	<0.050	129	0.22	3.5	96	1.8
B1059992	SC20-014	52.5	53.5	2020	And_tuf_metaseds	<0.020	<0.050	131	0.23	3.4	104	1.8
B1059994	BH-TMF-04	2	3	2020	And_tuf_metaseds	0.28	<0.050	132	0.13	2.1	90	1.2
B1059995	BH-TMF-04	12	13	2020	And_tuf_metaseds	0.11	<0.050	223	0.15	3.2	89	1.4
B1059996	BH-WSF2-13	8.5	9.5	2020	And_tuf_metaseds	<0.020	0.060	220	0.12	8.6	72	4.0
B1059997	BH-WSF2-14	8	9	2020	And_tuf_metaseds	0.020	<0.050	167	0.090	4.1	87	1.6
C253469	BH-TMF-05	2	3	2020	And_tuf_metaseds	0.050	<0.050	169	3.7	5.5	92	1.7
C253470	BH-TMF-05	8.5	9.5	2020	And_tuf_metaseds	<0.020	<0.050	127	0.22	4.2	141	3.1
C253471	SC20-026	5	6	2020	And_tuf_metaseds	0.050	<0.050	107	0.18	4.7	74	1.2
C253472	SC20-026	12	13	2020	And_tuf_metaseds	0.030	<0.050	79	0.13	4.5	72	1.2
C253473	SC20-026	19	20	2020	And_tuf_metaseds	<0.020	<0.050	78	0.20	4.1	70	2.0
C253474	SC20-026	26	27	2020	And_tuf_metaseds	<0.020	<0.050	125	0.090	4.4	73	2.4
C253475	SC20-026	33	34	2020	And_tuf_metaseds	0.14	<0.050	92	0.10	2.9	83	2.3
C253476	SC20-026	40	41	2020	And_tuf_metaseds	<0.020	<0.050	71	0.090	4.1	64	3.9
C253477	SC20-026	47	48	2020	And_tuf_metaseds	<0.020	<0.050	61	0.070	3.6	56	1.6
C253478	SC20-026	54	55	2020	And_tuf_metaseds	<0.020	<0.050	63	0.060	2.6	63	0.90
C253462	SCH21-049	2	3	2021	And_tuf_metaseds	<0.020	<0.050	51	<0.050	1.7	47	<0.50
C253463	SCH21-049	11	12	2021	And_tuf_metaseds	<0.020	<0.050	54	0.050	1.9	49	<0.50
C253464	SCH21-049	20	21	2021	And_tuf_metaseds	<0.020	<0.050	59	0.12	2.9	59	0.70
C253465	SCH21-049	29	30	2021	And_tuf_metaseds	<0.020	<0.050	73	0.080	4.4	67	1.1
C253466	SCH21-049	38	39	2021	And_tuf_metaseds	<0.020	<0.050	105	0.15	3.2	74	1.7
C253467	SCH21-049	47	48	2021	And_tuf_metaseds	<0.020	<0.050	161	0.11	4.5	82	1.5
C253468	SCH21-049	56	57	2021	And_tuf_metaseds	<0.020	<0.050	115	0.14	4.2	68	1.5

(1) Ten times average crustal abundance values presented in Price (1997).
 Screening values are for qualitative assessment only and hold no regulatory significance.
 Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997).
 Screening values not applied to major elements.

Table A-4: Elemental Content Statistical Summary

Group	Statistical Parameter	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
10x Crustal Abundance Screening Value (mg/kg)⁽¹⁾		0.75	--	18	100	4250	30	0.085	--	1.5	--	250	1020	--	600
All Samples	Count	90	90	90	90	90	90	90	90	90	90	90	90	90	90
	Count Greater than 10x Crustal Abundance Screening Value	1	--	6	0	0	0	5	--	0	0	0	0	0	0
	Percent > 10x Crustal Abundance Screening Value	1%	--	7%	0%	0%	0%	6%	--	0%	0%	0%	0%	0%	0%
	Minimum	<0.010	11800	0.60	<10	<10	<0.050	<0.010	12000	0.020	1.3	18	28	0.070	17
	10th Percentile	0.030	24500	1.0	10	10	0.050	0.010	23960	0.030	2.0	27	46	0.17	58
	Median	0.055	32250	2.3	10	11	0.085	0.010	46700	0.070	4.4	45	110	0.65	123
	Average	0.082	32596	5.1	11	49	0.11	0.028	48214	0.090	12	41	105	2.5	115
	Standard Deviation	0.092	7265	6.9	1.7	65	0.078	0.055	18525	0.095	15	9.9	45	3.9	40
	90th Percentile	0.16	42830	12	12	161	0.19	0.061	73020	0.14	38	52	168	6.5	157
	Maximum	0.81	50500	41	21	281	0.56	0.46	94200	0.84	64	62	187	20	237
Andesite Tuff Metasediments	Count	82	82	82	82	82	82	82	82	82	82	82	82	82	82
	Count Greater than 10x Crustal Abundance Screening Value	1	--	5	0	0	0	5	--	0	0	0	0	0	0
	Percent > 10x Crustal Abundance Screening Value	1%	--	6%	0%	0%	0%	6%	--	0%	0%	0%	0%	0%	0%
	Minimum	<0.010	11800	0.60	<10	<10	<0.050	<0.010	12500	0.020	1.3	18	28	0.070	17
	10th Percentile	0.030	24500	1.0	10	10	0.050	0.010	24070	0.030	2.0	27	42	0.17	56
	Median	0.060	32200	2.0	10	14	0.080	0.010	46350	0.070	4.4	45	108	0.77	121
	Average	0.086	32245	4.7	11	53	0.11	0.029	47876	0.093	12	41	104	2.7	114
	Standard Deviation	0.095	7236	6.9	1.7	67	0.081	0.057	18630	0.099	15	10	44	4.0	39
	90th Percentile	0.16	42570	11	12	165	0.20	0.069	73980	0.14	41	52	166	7.3	156
Maximum	0.81	50500	41	21	281	0.56	0.46	94200	0.84	64	62	182	20	207	
Basalt	Count	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Count Greater than 10x Crustal Abundance Screening Value	0	--	1	0	0	0	0	--	0	0	0	0	0	0
	Percent > 10x Crustal Abundance Screening Value	0%	--	13%	0%	0%	0%	0%	--	0%	0%	0%	0%	0%	0%
	Minimum	0.020	24500	1.5	<10	<10	<0.050	<0.010	12000	0.020	1.8	28	48	0.15	68
	10th Percentile	0.020	28140	2.8	10	10	0.050	0.010	35240	0.020	1.9	31	49	0.16	74
	Median	0.030	37500	7.5	10	10	0.11	0.010	55250	0.060	3.7	44	117	0.38	129
	Average	0.043	36188	8.5	11	10	0.11	0.018	51688	0.054	4.6	42	114	0.38	129
	Standard Deviation	0.031	6550	6.3	1.3	0.33	0.047	0.013	17038	0.023	2.8	7.4	51	0.18	49
	90th Percentile	0.071	43250	15	11	10	0.17	0.029	67700	0.080	8.4	49	174	0.57	173
Maximum	0.12	44300	22	14	11	0.19	0.050	68400	0.080	11	51	187	0.75	237	

(1) Ten times average crustal abundance screening values presented in Price (1997).
 Screening values are for qualitative assessment only and hold no regulatory significance.
 Screening values not applied to major elements.

Table A-4: Elemental Content Statistical Summary

Group	Statistical Parameter	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
10x Crustal Abundance	Screening Value (mg/kg)⁽¹⁾	--	190	15	--	0.85	--	--	390	200	--	9500	12	--	--
All Samples	Count	90	90	90	90	90	90	90	90	90	90	90	90	90	90
	Count Greater than 10x Crustal Abundance Screening Value	NA	0	0	0	0	0	--	0	0	--	0	1	--	0
	Percent > 10x Crustal Abundance Screening Value	NA	0%	0%	0%	0%	0%	--	0%	0%	--	0%	1%	--	0%
	Minimum	40900	4.1	<0.050	<0.020	<0.0050	<0.0050	100	0.50	7.7	11000	560	0.10	100	<0.050
	10th Percentile	49300	6.7	0.050	0.020	0.0050	0.0070	100	0.70	15	15480	692	0.19	100	0.050
	Median	65050	10	0.12	0.070	0.0050	0.012	700	1.8	22	22150	1011	0.35	200	0.050
	Average	68556	11	0.14	0.11	0.0069	0.018	2498	4.8	23	23871	1024	1.0	263	0.068
	Standard Deviation	16007	3.2	0.070	0.11	0.0030	0.013	3683	6.6	7.0	7187	259	3.1	168	0.026
	90th Percentile	89430	15	0.23	0.24	0.011	0.039	8070	16	32	35410	1332	1.1	400	0.11
	Maximum	116800	18	0.40	0.61	0.018	0.066	16300	29	45	42400	2044	27	1300	0.18
Andesite Tuff Metasediments	Count	82	82	82	82	82	82	82	82	82	82	82	82	82	82
	Count Greater than 10x Crustal Abundance Screening Value	NA	0	0	0	0	0	--	0	0	--	0	1	--	0
	Percent > 10x Crustal Abundance Screening Value	NA	0%	0%	0%	0%	0%	--	0%	0%	--	0%	1%	--	0%
	Minimum	40900	4.1	<0.050	<0.020	<0.0050	<0.0050	100	0.50	7.7	11000	560	0.10	100	<0.050
	10th Percentile	49490	6.7	0.050	0.020	0.0050	0.0070	100	0.70	14	16420	682	0.18	100	0.050
	Median	64350	10	0.12	0.070	0.0050	0.013	950	1.9	22	21900	1011	0.37	200	0.050
	Average	68048	10	0.13	0.11	0.0065	0.018	2717	5.1	23	23455	1019	1.1	257	0.069
	Standard Deviation	15541	3.1	0.059	0.11	0.0024	0.013	3787	6.8	7.3	6882	260	3.3	129	0.027
	90th Percentile	87560	14	0.21	0.27	0.010	0.039	9430	17	32	31860	1329	1.1	400	0.11
	Maximum	116800	18	0.27	0.61	0.015	0.066	16300	29	45	42400	2044	27	900	0.18
Basalt	Count	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	Count Greater than 10x Crustal Abundance Screening Value	NA	0	0	0	0	0	--	0	0	--	0	0	--	0
	Percent > 10x Crustal Abundance Screening Value	NA	0%	0%	0%	0%	0%	--	0%	0%	--	0%	0%	--	0%
	Minimum	43500	6.8	<0.050	<0.020	<0.0050	0.0060	100	0.70	17	14600	734	0.25	100	<0.050
	10th Percentile	47630	6.9	0.050	0.020	0.0050	0.0074	100	0.77	19	15090	782	0.26	100	0.050
	Median	80250	13	0.25	0.065	0.011	0.011	100	1.4	23	31750	1073	0.33	200	0.050
	Average	73763	12	0.21	0.068	0.011	0.021	250	1.8	23	28138	1075	0.39	325	0.053
	Standard Deviation	19416	4.2	0.11	0.041	0.0049	0.019	260	1.1	3.7	8697	250	0.21	377	0.0043
	90th Percentile	94090	18	0.32	0.10	0.017	0.046	480	3.3	26	36610	1399	0.52	600	0.060
	Maximum	98500	18	0.40	0.16	0.018	0.063	900	4.3	30	37100	1501	0.93	1300	0.060

(1) Ten times average crustal abundance screening values presented in Price (1997).
 Screening values are for qualitative assessment only and hold no regulatory significance.
 Screening values not applied to major elements.

Table A-4: Elemental Content Statistical Summary

Group	Statistical Parameter	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<i>10x Crustal Abundance Screening Value (mg/kg)⁽¹⁾</i>		840	10500	140	--	--	3500	2	220	0.5	23	3700	--	--
All Samples	Count	90	90	90	90	90	90	90	90	90	90	90	90	90
	Count Greater than 10x Crustal Abundance Screening Value	0	0	0	0	0	13	0	0	9	0	0	0	0
	Percent > 10x Crustal Abundance Screening Value	0%	0%	0%	0%	0%	14%	0%	0%	10%	0%	0%	0%	0%
	Minimum	23	164	<0.20	<0.10	<0.0010	100	0.060	1.8	<0.20	<0.20	12	<0.010	<0.010
	10th Percentile	34	268	0.20	0.40	0.0010	390	0.14	3.2	0.20	0.20	19	0.010	0.010
	Median	70	352	0.80	2.8	0.0010	1400	0.28	6.3	0.30	0.20	33	0.010	0.020
	Average	68	483	1.2	12	0.0014	1988	0.33	8.2	0.34	0.28	35	0.010	0.050
	Standard Deviation	25	259	1.3	18	0.00063	2127	0.21	6.3	0.17	0.14	15	0.0025	0.081
	90th Percentile	101	964	2.9	42	0.0020	5000	0.58	14	0.51	0.41	51	0.010	0.16
Maximum	144	1093	9.5	75	0.0040	13100	1.2	37	1.0	0.90	91	0.030	0.40	
Andesite Tuff Metasediments	Count	82	82	82	82	82	82	82	82	82	82	82	82	82
	Count Greater than 10x Crustal Abundance Screening Value	0	0	0	0	0	13	0	0	9	0	0	0	0
	Percent > 10x Crustal Abundance Screening Value	0%	0%	0%	0%	0%	16%	0%	0%	11%	0%	0%	0%	0%
	Minimum	23	178	<0.20	<0.10	0.0010	100	0.060	1.8	<0.20	<0.20	12	<0.010	<0.010
	10th Percentile	34	283	0.20	0.40	0.0010	310	0.13	3.2	0.20	0.20	20	0.010	0.010
	Median	69	369	0.80	3.3	0.0010	1400	0.28	6.3	0.30	0.20	33	0.010	0.020
	Average	68	503	1.2	13	0.0014	2062	0.32	7.8	0.34	0.28	34	0.010	0.047
	Standard Deviation	24	262	1.3	18	0.00064	2201	0.21	5.3	0.17	0.15	13	0.0015	0.075
	90th Percentile	101	965	2.9	44	0.0020	5000	0.52	14	0.59	0.40	50	0.010	0.15
Maximum	115	1093	9.5	75	0.0040	13100	1.2	31	1.0	0.90	76	0.020	0.39	
Basalt	Count	8	8	8	8	8	8	8	8	8	8	8	8	8
	Count Greater than 10x Crustal Abundance Screening Value	0	0	0	0	0	0	0	0	0	0	0	0	0
	Percent > 10x Crustal Abundance Screening Value	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Minimum	34	164	<0.20	0.30	0.0010	400	0.25	2.8	<0.20	<0.20	16	<0.010	<0.010
	10th Percentile	37	175	0.20	0.37	0.0010	400	0.26	3.3	0.20	0.20	17	0.010	0.010
	Median	74	310	0.60	0.80	0.0010	1000	0.51	6.7	0.30	0.25	26	0.010	0.025
	Average	73	281	0.89	1.0	0.0014	1225	0.49	13	0.33	0.28	39	0.013	0.075
	Standard Deviation	32	71	0.93	0.69	0.00048	756	0.16	12	0.12	0.097	28	0.0066	0.12
	90th Percentile	101	350	1.8	2.0	0.0020	2220	0.65	31	0.50	0.36	86	0.016	0.18
Maximum	144	356	3.2	2.4	0.0020	2500	0.73	37	0.50	0.50	91	0.030	0.40	

(1) Ten times average crustal abundance screening values presented in Price (1997).
 Screening values are for qualitative assessment only and hold no regulatory significance.
 Screening values not applied to major elements.

Table A-4: Elemental Content Statistical Summary

Group	Statistical Parameter	Th	Ti	Tl	U	V	W	Y	Zn	Zr
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
10x Crustal Abundance Screening Value (mg/kg)⁽¹⁾		96	56500	8.5	27	1200	12.5	330	700	1650
All Samples	Count	90	90	90	90	90	90	90	90	90
	Count Greater than 10x Crustal Abundance Screening Value	0	0	0	0	0	0	0	0	0
	Percent > 10x Crustal Abundance Screening Value	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Minimum	<0.20	80	<0.020	<0.050	23	<0.050	1.7	45	<0.50
	10th Percentile	0.20	478	0.020	0.050	59	0.060	2.9	57	0.70
	Median	0.30	1510	0.030	0.050	132	0.16	5.1	86	2.2
	Average	0.75	1550	0.12	0.12	137	0.36	6.3	90	4.3
	Standard Deviation	0.94	838	0.18	0.13	63	0.82	3.2	32	5.2
	90th Percentile	2.2	2732	0.41	0.31	220	0.60	11	122	11
	Maximum	5.3	3770	0.93	0.65	276	6.4	18	253	28
Andesite Tuff Metasediments	Count	82	82	82	82	82	82	82	82	82
	Count Greater than 10x Crustal Abundance Screening Value	0	0	0	0	0	0	0	0	0
	Percent > 10x Crustal Abundance Screening Value	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Minimum	<0.20	80	<0.020	<0.050	23	<0.050	1.7	45	<0.50
	10th Percentile	0.20	489	0.020	0.050	59	0.060	3.1	59	0.80
	Median	0.30	1480	0.030	0.050	132	0.15	5.0	87	2.3
	Average	0.79	1539	0.13	0.12	136	0.34	6.4	92	4.5
	Standard Deviation	0.98	840	0.19	0.13	61	0.81	3.3	33	5.4
	90th Percentile	2.3	2722	0.41	0.31	217	0.59	11	122	11
	Maximum	5.3	3770	0.93	0.65	276	6.4	18	253	28
Basalt	Count	8	8	8	8	8	8	8	8	8
	Count Greater than 10x Crustal Abundance Screening Value	0	0	0	0	0	0	0	0	0
	Percent > 10x Crustal Abundance Screening Value	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Minimum	<0.20	460	<0.020	<0.050	46	<0.050	2.5	47	<0.50
	10th Percentile	0.20	607	0.020	0.050	58	0.050	2.6	53	0.64
	Median	0.20	1800	0.020	0.050	165	0.38	5.6	75	1.7
	Average	0.29	1658	0.020	0.055	154	0.63	5.7	71	2.0
	Standard Deviation	0.13	812	0	0.010	78	0.93	2.5	15	1.5
	90th Percentile	0.50	2631	0.020	0.066	241	1.2	8.8	87	3.4
	Maximum	0.50	2750	0.020	0.080	251	3.1	11	87	5.6

(1) Ten times average crustal abundance screening values presented in Price (1997).
 Screening values are for qualitative assessment only and hold no regulatory significance.
 Screening values not applied to major elements.

Table A-5: Shake Flask Extraction Results

Parameter	Drill Hole	From	To	Year	Lithology	Dry Sample Weight	DI Water Volume	pH	EC	Acidity	Alkalinity	Sulphate	P	Hardness	Al	Sb	
						g	mL	pH units	mV	mg CaCO ₃ /L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg/L	
<i>In-Place PWQO Screening Value (mg/L)</i>						-	-	6.5-8.5	-	-	-	-	-	-	-	-	-
<i>Interim PWQO Screening Value (mg/L)</i>						-	-	-	-	-	-	-	0.02	-	0.075	0.02	-
B1059901	SC21-048	3	4	2021	Basalt	250	750	6.8	54	15	34	2.8	0.0081	29	0.34	0.0020	
B1059903	SC21-048	23	24	2021	Basalt	250	750	7.0	60	14	39	3.4	0.0078	33	0.50	0.0020	
B1059904	SC21-048	33	34	2021	Basalt	250	750	7.0	55	12	38	0.50	0.0056	30	0.34	0.00052	
B1059906	SC21-048	53	54	2021	Basalt	250	750	7.1	53	9.7	36	<0.50	0.0065	27	0.56	0.0053	
B1059908	SG22-034	8	9	2022	And_tuf_metaseds	250	750	7.0	67	11	38	4.2	0.0069	25	0.29	0.00068	
B1059912	BH-TMF-35	17.5	18.5	2021	And_tuf_metaseds	250	750	7.2	54	9.4	37	2.8	0.0092	25	0.59	0.0013	
B1059914	BH-TMF-35	37.5	38.5	2021	And_tuf_metaseds	250	750	7.3	51	8.3	35	0.50	0.011	22	0.63	0.0026	
B1059916	BH-TMF-36	14	15	2021	And_tuf_metaseds	250	750	7.2	66	11	43	0.50	0.0061	35	0.48	0.00097	
B1059917	BH-TMF-36	24	25	2021	And_tuf_metaseds	250	750	7.2	59	9.0	39	2.8	0.0063	31	0.49	0.0026	
B1059918	BH-TMF-36	34	35	2021	And_tuf_metaseds	250	750	7.2	48	8.2	33	3.7	0.0071	24	0.48	0.0014	
B1059921	002A	13.5	14.5	2022	Basalt	250	750	7.2	51	7.7	33	<0.50	0.0064	27	0.38	0.00056	
B1059930	SC20-038	23	24	2020	And_tuf_metaseds	250	750	7.2	53	7.9	36	<0.50	0.0087	25	0.34	0.00060	
B1059932	SC20-038	44	45	2020	And_tuf_metaseds	250	750	7.2	51	8.2	35	<0.50	0.0076	25	0.36	0.00037	
B1059934	SC20-039	18	19	2020	And_tuf_metaseds	250	750	7.1	58	9.1	37	3.1	0.0077	29	0.27	0.00077	
B1059936	SC20-039	38	39	2020	And_tuf_metaseds	250	750	7.2	45	7.6	32	<0.50	0.0088	24	0.39	0.00050	
B1059937	SC20-039	48	49	2020	And_tuf_metaseds	250	750	7.2	50	7.7	33	2.9	0.0074	25	0.33	0.00050	
B1059939	SC20-023	11	12	2020	And_tuf_metaseds	250	750	7.3	56	7.6	36	0.50	0.013	23	0.51	0.0021	
B1059942	SC20-023	22	23	2020	And_tuf_metaseds	250	750	7.3	53	7.3	38	0.50	0.0070	27	0.45	0.00067	
B1059944	SC20-023	42	43	2020	And_tuf_metaseds	250	750	7.3	46	6.8	36	<0.50	0.0062	28	0.41	0.00050	
B1059945	SC20-023	52	53	2020	And_tuf_metaseds	250	750	7.3	53	6.6	37	<0.50	0.0052	29	0.44	0.00074	
B1059948	SC20-024	11	12	2020	And_tuf_metaseds	250	750	7.4	53	5.4	35	0.50	0.0057	22	0.55	0.00065	
B1059949	SC20-024	21	22	2020	And_tuf_metaseds	250	750	7.6	55	4.2	36	<0.50	0.0074	18	0.69	0.00043	
B1059950	SC20-024	31	32	2020	And_tuf_metaseds	250	750	7.5	55	4.5	34	2.8	0.0084	22	0.58	0.00050	
B1059952	SC20-024	51	52	2020	And_tuf_metaseds	250	750	7.4	48	5.3	34	<0.50	0.0056	22	0.42	0.00048	
B1059954	SC20-025	10	11	2020	And_tuf_metaseds	250	750	6.8	66	13	35	<0.50	0.0066	31	0.31	0.00060	
B1059958	SC20-025	31	32	2020	And_tuf_metaseds	250	750	7.5	74	12	38	<0.50	0.0080	30	0.30	0.00048	
B1059961	SC20-025	51	52	2020	And_tuf_metaseds	250	750	7.0	86	5.7	32	4.9	0.0050	32	0.10	0.00025	
B1059962	SC20-019	6	7	2020	And_tuf_metaseds	250	750	7.2	132	7.1	32	47	0.0070	62	0.32	0.00039	
B1059964	SC20-019	26	27	2020	And_tuf_metaseds	250	750	7.5	61	5.5	41	<0.50	0.0055	28	0.57	0.0032	
B1059965	SC20-019	36	37	2020	And_tuf_metaseds	250	750	7.4	68	6.0	42	3.9	0.0054	34	0.45	0.0061	
B1059966	SC20-019	46	47	2020	And_tuf_metaseds	250	750	7.4	74	6.1	42	6.9	0.0052	37	0.31	0.0012	
B1059969	SC20-013	15	16	2020	And_tuf_metaseds	250	750	7.5	66	5.6	45	0.50	<0.0050	32	0.51	0.00050	
B1059971	SC20-013	35	36	2020	And_tuf_metaseds	250	750	7.5	58	4.8	37	0.50	<0.0050	28	0.40	0.0048	
B1059973	SC20-013	55	56	2020	And_tuf_metaseds	250	750	7.5	59	5.3	43	<0.50	<0.0050	32	0.45	0.0033	
B1059975	SC20-014	2.5	3.5	2020	And_tuf_metaseds	250	750	7.4	52	5.2	38	<0.50	0.0051	28	0.33	0.0012	
B1059990	SC20-014	32.5	33.5	2020	And_tuf_metaseds	250	750	7.5	58	4.6	39	0.50	0.0057	31	0.46	0.0021	
B1059991	SC20-014	42.5	43.5	2020	And_tuf_metaseds	250	750	7.5	59	5.0	38	3.1	0.0050	30	0.50	0.0020	
B1059992	SC20-014	52.5	53.5	2020	And_tuf_metaseds	250	750	7.5	57	4.2	36	2.9	0.0062	27	0.53	0.0019	
B1059994	BH-TMF-04	2	3	2020	And_tuf_metaseds	250	750	7.6	67	4.5	44	<0.50	<0.0050	31	0.51	0.00099	
B1059995	BH-TMF-04	12	13	2020	And_tuf_metaseds	250	750	7.6	65	4.5	45	2.9	0.0066	32	0.51	0.0011	
B1059996	BH-WSF2-13	8.5	9.5	2020	And_tuf_metaseds	250	750	7.5	64	4.8	42	<0.50	0.0066	34	0.41	0.0012	
C253469	BH-TMF-05	2	3	2020	And_tuf_metaseds	250	750	7.0	83	12	34	8.8	0.0063	32	0.35	0.0022	
C253470	BH-TMF-05	8.5	9.5	2020	And_tuf_metaseds	250	750	7.1	73	11	38	3.8	0.0058	34	0.36	0.0024	
C253472	SC20-026	12	13	2020	And_tuf_metaseds	250	750	7.2	63	9.7	37	<1.0	0.0053	28	0.36	0.00099	
C253474	SC20-026	26	27	2020	And_tuf_metaseds	250	750	7.1	62	12	38	<1.0	0.0057	33	0.29	0.00051	
C253476	SC20-026	40	41	2020	And_tuf_metaseds	250	750	7.1	57	9.5	33	<1.0	0.0065	26	0.32	0.0010	
C253478	SC20-026	54	55	2020	And_tuf_metaseds	250	750	7.1	67	9.4	38	<1.0	0.0053	32	0.33	0.0010	
C253462	SCH21-049	2	3	2021	And_tuf_metaseds	250	750	7.3	62	9.2	38	<1.0	0.0052	30	0.51	0.00086	
C253463	SCH21-049	11	12	2021	And_tuf_metaseds	250	750	7.3	66	8.3	40	<1.0	0.013	31	0.50	0.00084	
C253465	SCH21-049	29	30	2021	And_tuf_metaseds	250	750	7.4	71	8.6	41	<1.0	0.0071	31	0.50	0.0039	
C253467	SCH21-049	47	48	2021	And_tuf_metaseds	250	750	7.4	67	8.5	39	<1.0	0.0067	32	0.44	0.0026	
C253468	SCH21-049	56	57	2021	And_tuf_metaseds	250	750	7.3	67	8.1	41	<1.0	0.0066	31	0.38	0.0014	

Red highlight indicates value is greater than the in-place PWQO screening value.
 Bold italic text indicates value is greater than the interim PWQO screening value.
 Screening values are for qualitative assessment only and hold no regulatory significance.

Table A-5: Shake Flask Extraction Results

Parameter	Drill Hole	From	To	Year	Lithology	As	Ba	Be	Bi	B	Cd	Ca	Cr	Co	Cu	Fe
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<i>In-Place PWQO Screening Value (mg/L)</i>						0.1	-	0.011	-	-	0.0002	-	0.001	-	0.005	0.3
<i>Interim PWQO Screening Value (mg/L)</i>						0.005	-	-	-	0.2	0.0001	-	-	0.0009	0.005	-
B1059901	SC21-048	3	4	2021	Basalt	0.0049	0.0028	<0.00010	<0.00010	0.0044	<0.000020	10	0.00022	0.000023	0.00040	<0.0020
B1059903	SC21-048	23	24	2021	Basalt	0.00072	0.0068	<0.00010	<0.00010	0.0054	<0.000020	12	0.00029	0.0000091	0.00026	<0.0020
B1059904	SC21-048	33	34	2021	Basalt	0.00031	0.0023	<0.00010	<0.00010	0.0043	<0.000020	11	0.00027	0.0000061	0.00041	<0.0020
B1059906	SC21-048	53	54	2021	Basalt	0.00059	0.00058	<0.00010	<0.00010	0.0043	0.0000023	9.9	0.00024	0.0000074	0.00022	<0.0020
B1059908	SG22-034	8	9	2022	And_tuf_metaseds	0.00071	0.0074	<0.00010	<0.00010	0.0038	<0.000020	8.9	0.00020	0.000014	0.00024	<0.0020
B1059912	BH-TMF-35	17.5	18.5	2021	And_tuf_metaseds	0.00089	0.0033	<0.00010	<0.00010	0.010	<0.000020	9.1	0.00029	0.0000076	0.00020	<0.0020
B1059914	BH-TMF-35	37.5	38.5	2021	And_tuf_metaseds	0.0016	0.0072	<0.00010	<0.00010	0.0079	<0.000020	7.9	0.00023	0.0000072	0.00021	0.0029
B1059916	BH-TMF-36	14	15	2021	And_tuf_metaseds	0.00011	0.013	<0.00010	<0.00010	0.0046	<0.000020	13	0.00021	0.0000071	0.00021	<0.0020
B1059917	BH-TMF-36	24	25	2021	And_tuf_metaseds	0.00023	0.0011	<0.00010	<0.00010	0.0051	<0.000020	11	0.00024	0.0000089	0.00020	<0.0020
B1059918	BH-TMF-36	34	35	2021	And_tuf_metaseds	0.00018	0.0013	<0.00010	<0.00010	0.0042	<0.000020	8.8	0.00025	0.000012	0.00025	<0.0020
B1059921	002A	13.5	14.5	2022	Basalt	0.00018	0.0023	<0.00010	<0.00010	0.0036	<0.000020	9.5	0.00026	<0.0000050	0.00026	<0.0020
B1059930	SC20-038	23	24	2020	And_tuf_metaseds	0.00024	0.0027	<0.00010	<0.00010	0.0075	<0.000020	8.5	0.00023	0.0000075	0.00039	<0.0020
B1059932	SC20-038	44	45	2020	And_tuf_metaseds	0.00021	0.0027	<0.00010	<0.00010	0.0086	<0.000020	8.8	0.00022	0.0000058	0.00032	<0.0020
B1059934	SC20-039	18	19	2020	And_tuf_metaseds	0.00022	0.018	<0.00010	<0.00010	0.0074	<0.000020	10.0	0.00039	0.000016	0.00037	<0.0020
B1059936	SC20-039	38	39	2020	And_tuf_metaseds	0.00018	0.0047	<0.00010	<0.00010	0.0068	<0.000020	8.2	0.00023	0.0000091	0.00034	<0.0020
B1059937	SC20-039	48	49	2020	And_tuf_metaseds	0.00027	0.0053	<0.00010	<0.00010	0.0084	<0.000020	8.6	0.00024	0.000019	0.00035	<0.0020
B1059939	SC20-023	11	12	2020	And_tuf_metaseds	0.00033	0.0026	<0.00010	<0.00010	0.0068	<0.000020	8.1	0.00020	0.0000089	0.00043	0.0024
B1059942	SC20-023	22	23	2020	And_tuf_metaseds	0.00064	0.0016	<0.00010	<0.00010	0.0083	<0.000020	9.4	0.00025	0.0000075	0.00038	<0.0020
B1059944	SC20-023	42	43	2020	And_tuf_metaseds	<0.000050	0.00070	<0.00010	<0.00010	0.0069	<0.000020	9.9	0.00020	0.000016	0.0017	<0.0020
B1059945	SC20-023	52	53	2020	And_tuf_metaseds	0.00057	0.0019	<0.00010	<0.00010	0.0047	<0.000020	10	0.00023	0.000020	0.00024	<0.0020
B1059948	SC20-024	11	12	2020	And_tuf_metaseds	0.0014	0.0019	<0.00010	<0.00010	0.0062	<0.000020	8.0	0.00019	0.000015	0.00036	0.0021
B1059949	SC20-024	21	22	2020	And_tuf_metaseds	0.00082	0.0027	<0.00010	<0.00010	0.0062	<0.000020	6.3	0.00022	0.0000067	0.00031	0.0027
B1059950	SC20-024	31	32	2020	And_tuf_metaseds	0.00030	0.0020	<0.00010	<0.00010	0.0087	<0.000020	7.7	0.00027	0.0000061	0.00026	<0.0020
B1059952	SC20-024	51	52	2020	And_tuf_metaseds	0.00025	0.0017	<0.00010	<0.00010	0.0047	<0.000020	7.5	0.00030	0.0000061	0.00030	0.0024
B1059954	SC20-025	10	11	2020	And_tuf_metaseds	0.00080	0.0016	<0.00010	<0.00010	0.0056	<0.000020	11	0.00020	0.000011	0.00020	<0.0020
B1059958	SC20-025	31	32	2020	And_tuf_metaseds	0.00070	0.0025	<0.00010	<0.00010	0.0048	<0.000020	10	0.00034	0.0000094	0.00014	<0.0020
B1059961	SC20-025	51	52	2020	And_tuf_metaseds	0.00058	0.012	<0.00010	<0.00010	0.018	<0.000070	11	0.00017	0.000018	0.00059	0.010
B1059962	SC20-019	6	7	2020	And_tuf_metaseds	0.00015	0.0022	<0.00010	<0.00010	0.0055	0.0000044	23	0.00019	0.000055	0.00069	<0.0020
B1059964	SC20-019	26	27	2020	And_tuf_metaseds	0.00049	0.00082	<0.00010	<0.00010	0.0053	<0.000020	10	0.00023	0.0000078	0.00033	<0.0020
B1059965	SC20-019	36	37	2020	And_tuf_metaseds	0.00028	0.00079	<0.00010	<0.00010	0.0039	0.0000024	13	0.00025	0.000010	0.0012	<0.0020
B1059966	SC20-019	46	47	2020	And_tuf_metaseds	0.00022	0.00085	<0.00010	<0.00010	0.0045	0.0000020	13	0.00025	0.000022	0.00086	<0.0020
B1059969	SC20-013	15	16	2020	And_tuf_metaseds	0.00020	0.0070	<0.00010	<0.00010	0.0056	<0.000020	12	0.00021	0.000016	0.00054	<0.0020
B1059971	SC20-013	35	36	2020	And_tuf_metaseds	0.00050	0.0016	<0.00010	<0.00010	0.0046	<0.000020	9.9	0.00023	0.000027	0.00013	0.0024
B1059973	SC20-013	55	56	2020	And_tuf_metaseds	0.00085	0.0069	<0.00010	<0.00010	0.0080	<0.000020	11	0.00023	0.000014	0.00028	<0.0020
B1059975	SC20-014	2.5	3.5	2020	And_tuf_metaseds	0.00081	0.0012	<0.00010	<0.00010	0.0080	<0.000020	9.7	0.00023	0.000010	0.00026	0.0022
B1059990	SC20-014	32.5	33.5	2020	And_tuf_metaseds	0.00031	0.0013	<0.00010	<0.00010	0.012	<0.000020	12	0.00028	0.000054	0.00022	<0.0020
B1059991	SC20-014	42.5	43.5	2020	And_tuf_metaseds	0.00080	0.0030	<0.00010	<0.00010	0.012	<0.000020	11	0.00021	0.000033	0.00026	<0.0020
B1059992	SC20-014	52.5	53.5	2020	And_tuf_metaseds	0.00042	0.0022	<0.00010	<0.00010	0.012	0.0000024	9.8	0.00023	0.000035	0.00026	<0.0020
B1059994	BH-TMF-04	2	3	2020	And_tuf_metaseds	0.00020	0.0025	<0.00010	<0.00010	0.0068	<0.000020	12	0.00020	0.000010	0.00041	<0.0020
B1059995	BH-TMF-04	12	13	2020	And_tuf_metaseds	0.00026	0.0019	<0.00010	<0.00010	0.0064	<0.000020	12	0.00023	0.000035	0.00026	<0.0020
B1059996	BH-WSF2-13	8.5	9.5	2020	And_tuf_metaseds	0.00017	0.0025	<0.00010	<0.00010	0.0059	<0.000020	12	0.00034	0.000014	0.00038	<0.0020
C253469	BH-TMF-05	2	3	2020	And_tuf_metaseds	0.00013	0.0068	<0.00010	<0.00010	0.0057	0.0000022	12	0.00020	0.000042	0.00035	<0.0020
C253470	BH-TMF-05	8.5	9.5	2020	And_tuf_metaseds	0.00075	0.0019	<0.00010	<0.00010	0.0082	<0.000020	13	0.00019	0.000068	0.00080	<0.0020
C253472	SC20-026	12	13	2020	And_tuf_metaseds	0.000073	0.0045	<0.00010	<0.00010	0.0084	<0.000020	9.5	0.00015	0.000013	0.00034	0.0024
C253474	SC20-026	26	27	2020	And_tuf_metaseds	<0.000050	0.0015	<0.00010	<0.00010	0.0064	<0.000020	12	<0.00010	0.000015	0.00037	<0.0020
C253476	SC20-026	40	41	2020	And_tuf_metaseds	0.000083	0.00077	<0.00010	<0.00010	0.019	<0.000020	8.9	0.00022	0.000011	0.00054	0.0027
C253478	SC20-026	54	55	2020	And_tuf_metaseds	0.00017	0.0021	<0.00010	<0.00010	0.026	<0.000020	12	0.00014	0.000031	0.00033	<0.0020
C253462	SCH21-049	2	3	2021	And_tuf_metaseds	0.00054	0.00024	<0.00010	<0.00010	0.0082	<0.000020	11	0.00016	0.0000061	0.00033	<0.0020
C253463	SCH21-049	11	12	2021	And_tuf_metaseds	0.00070	0.00027	<0.00010	<0.00010	0.0077	<0.000020	12	0.00014	0.0000051	0.00041	<0.0020
C253465	SCH21-049	29	30	2021	And_tuf_metaseds	0.00028	0.00061	<0.00010	<0.00010	0.0053	<0.000020	12	0.00013	0.0000065	0.00029	<0.0020
C253467	SCH21-049	47	48	2021	And_tuf_metaseds	0.00019	0.0020	<0.00010	<0.00010	0.015	<0.000020	12	0.00017	0.000021	0.00020	<0.0020
C253468	SCH21-049	56	57	2021	And_tuf_metaseds	0.00055	0.0022	<0.00010	<0.00010	0.027	<0.000020	11	0.00013	0.000013	0.00048	<0.0020

Red highlight indicates value is greater than the in-place PWQO screening value.
 Bold italic text indicates value is greater than the interim PWQO screening value.
 Screening values are for qualitative assessment only and hold no regulatory significance.

Table A-5: Shake Flask Extraction Results

Parameter	Drill Hole	From	To	Year	Lithology	Pb	Li	Mg	Mn	Hg	Mo	Ni	K	Se	Si	Ag
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<i>In-Place PWQO Screening Value (mg/L)</i>						0.005	-	-	-	0.0002	-	0.025	-	0.1	-	0.0001
<i>Interim PWQO Screening Value (mg/L)</i>						0.001	-	-	-	-	0.04	-	-	-	-	-
B1059901	SC21-048	3	4	2021	Basalt	<0.000050	0.00042	0.84	0.0050	<0.000050	0.00066	0.00028	0.67	0.00019	0.90	<0.000010
B1059903	SC21-048	23	24	2021	Basalt	<0.000050	0.00037	0.82	0.0070	<0.000050	0.00038	0.00024	0.79	0.00018	0.64	0.000014
B1059904	SC21-048	33	34	2021	Basalt	<0.000050	0.00021	0.56	0.0056	<0.000050	0.00010	0.000091	0.51	0.00038	0.52	<0.000010
B1059906	SC21-048	53	54	2021	Basalt	<0.000050	0.00020	0.53	0.0081	<0.000050	0.000084	0.00010	0.86	0.00011	0.71	<0.000010
B1059908	SG22-034	8	9	2022	And_tuf_metaseds	<0.000050	0.0019	0.76	0.017	<0.000050	0.0019	0.000074	6.1	<0.00010	1.0	0.000049
B1059912	BH-TMF-35	17.5	18.5	2021	And_tuf_metaseds	<0.000050	0.00044	0.65	0.0036	<0.000050	0.00025	0.000097	2.1	<0.00010	0.95	<0.000010
B1059914	BH-TMF-35	37.5	38.5	2021	And_tuf_metaseds	<0.000050	0.00044	0.44	0.0041	<0.000050	0.00035	0.00017	4.2	<0.00010	1.0	<0.000010
B1059916	BH-TMF-36	14	15	2021	And_tuf_metaseds	<0.000050	0.00063	0.87	0.013	<0.000050	0.00014	0.00019	1.5	<0.00010	0.62	<0.000010
B1059917	BH-TMF-36	24	25	2021	And_tuf_metaseds	<0.000050	0.00053	0.66	0.0098	<0.000050	0.00023	0.00017	2.1	0.00012	0.63	<0.000010
B1059918	BH-TMF-36	34	35	2021	And_tuf_metaseds	<0.000050	0.00033	0.56	0.010	<0.000050	0.00010	0.00036	0.74	0.00014	0.61	<0.000010
B1059921	002A	13.5	14.5	2022	Basalt	<0.000050	0.00015	0.68	0.011	<0.000050	0.00064	0.00052	0.44	<0.00010	0.49	0.00011
B1059930	SC20-038	23	24	2020	And_tuf_metaseds	<0.000050	0.00025	0.90	0.014	<0.000050	0.00046	0.00014	0.87	<0.00010	0.61	<0.000010
B1059932	SC20-038	44	45	2020	And_tuf_metaseds	<0.000050	0.00030	0.81	0.0099	<0.000050	0.00058	0.000089	0.69	<0.00010	0.59	<0.000010
B1059934	SC20-039	18	19	2020	And_tuf_metaseds	<0.000050	0.00066	0.99	0.023	<0.000050	0.00014	0.00035	1.9	0.0063	0.66	<0.000010
B1059936	SC20-039	38	39	2020	And_tuf_metaseds	<0.000050	0.00033	0.85	0.0075	<0.000050	0.00073	0.00014	0.59	<0.00010	0.66	<0.000010
B1059937	SC20-039	48	49	2020	And_tuf_metaseds	<0.000050	0.00043	0.74	0.015	<0.000050	0.00012	0.00023	1.3	<0.00010	0.68	0.000025
B1059939	SC20-023	11	12	2020	And_tuf_metaseds	<0.000050	0.0013	0.58	0.015	<0.000050	0.00061	0.00014	4.5	<0.00010	1.0	<0.000010
B1059942	SC20-023	22	23	2020	And_tuf_metaseds	0.00053	0.00057	0.77	0.020	<0.000050	0.00010	0.00013	2.6	<0.00010	0.56	<0.000010
B1059944	SC20-023	42	43	2020	And_tuf_metaseds	<0.000050	0.00023	0.80	0.013	<0.000050	0.00074	0.00053	0.64	<0.00010	0.47	<0.000010
B1059945	SC20-023	52	53	2020	And_tuf_metaseds	<0.000050	0.00022	0.69	0.018	<0.000050	0.00033	0.00046	0.92	0.00010	0.48	0.000035
B1059948	SC20-024	11	12	2020	And_tuf_metaseds	<0.000050	0.00080	0.53	0.0077	<0.000050	0.00031	0.00030	3.4	<0.00010	0.94	<0.000010
B1059949	SC20-024	21	22	2020	And_tuf_metaseds	<0.000050	0.0010	0.54	0.0040	<0.000050	0.00072	0.00013	6.0	<0.00010	1.2	<0.000010
B1059950	SC20-024	31	32	2020	And_tuf_metaseds	<0.000050	0.00040	0.67	0.0040	<0.000050	0.00022	0.000068	2.4	<0.00010	0.86	0.000011
B1059952	SC20-024	51	52	2020	And_tuf_metaseds	<0.000050	0.00016	0.89	0.0032	<0.000050	0.00013	0.00012	1.1	<0.00010	0.97	<0.000010
B1059954	SC20-025	10	11	2020	And_tuf_metaseds	<0.000050	0.00043	0.84	0.011	<0.000050	0.00039	0.00067	0.58	0.00034	0.53	<0.000010
B1059957	SC20-025	31	32	2020	And_tuf_metaseds	<0.000050	0.00044	1.1	0.011	<0.000050	0.00018	0.00022	1.3	<0.00010	0.57	<0.000010
B1059961	SC20-025	51	52	2020	And_tuf_metaseds	<0.000050	0.0012	1.3	0.010	<0.000050	0.011	0.00027	2.2	0.00021	1.3	<0.000010
B1059962	SC20-019	6	7	2020	And_tuf_metaseds	<0.000050	0.0010	0.98	0.019	<0.000050	0.00074	0.0010	4.5	0.0013	0.71	<0.000010
B1059964	SC20-019	26	27	2020	And_tuf_metaseds	<0.000050	0.00040	0.72	0.014	<0.000050	0.00011	0.00016	4.8	0.00010	0.62	<0.000010
B1059965	SC20-019	36	37	2020	And_tuf_metaseds	<0.000050	0.00031	0.63	0.011	<0.000050	0.0020	0.0013	3.1	0.00027	0.63	<0.000010
B1059966	SC20-019	46	47	2020	And_tuf_metaseds	<0.000050	0.00050	0.91	0.019	<0.000050	0.0011	0.0011	3.0	0.00044	0.62	0.000039
B1059969	SC20-013	15	16	2020	And_tuf_metaseds	<0.000050	0.00062	0.70	0.014	<0.000050	0.00073	0.00093	1.9	0.00015	0.66	<0.000010
B1059971	SC20-013	35	36	2020	And_tuf_metaseds	<0.000050	0.00041	0.87	0.0070	<0.000050	0.00017	0.00063	0.95	0.00023	1.2	0.000017
B1059973	SC20-013	55	56	2020	And_tuf_metaseds	<0.000050	0.00033	1.0	0.0087	<0.000050	0.00011	0.00069	2.6	<0.00010	0.50	<0.000010
B1059975	SC20-014	2.5	3.5	2020	And_tuf_metaseds	<0.000050	0.00028	0.99	0.0054	<0.000050	0.00072	0.00018	0.52	<0.00010	1.0	<0.000010
B1059990	SC20-014	32.5	33.5	2020	And_tuf_metaseds	<0.000050	0.00028	0.56	0.014	<0.000050	0.00081	0.00048	0.25	<0.00010	0.55	<0.000010
B1059991	SC20-014	42.5	43.5	2020	And_tuf_metaseds	<0.000050	0.00036	0.60	0.012	<0.000050	0.00091	0.00076	1.3	0.00016	0.68	0.000019
B1059992	SC20-014	52.5	53.5	2020	And_tuf_metaseds	<0.000050	0.00025	0.64	0.0077	<0.000050	0.00060	0.00067	1.5	0.00017	0.67	<0.000010
B1059994	BH-TMF-04	2	3	2020	And_tuf_metaseds	<0.000050	0.00092	0.52	0.017	<0.000050	0.00013	0.00034	4.8	0.00013	0.60	<0.000010
B1059995	BH-TMF-04	12	13	2020	And_tuf_metaseds	<0.000050	0.00079	0.66	0.017	<0.000050	0.00011	0.00035	3.2	0.00026	0.57	<0.000010
B1059996	BH-WSF2-13	8.5	9.5	2020	And_tuf_metaseds	<0.000050	0.00020	0.98	0.011	<0.000050	0.00074	0.00029	1.1	<0.00010	0.52	0.000016
C253469	BH-TMF-05	2	3	2020	And_tuf_metaseds	<0.000050	0.00040	0.56	0.013	<0.000050	0.00033	0.0014	1.9	0.00064	0.60	<0.000010
C253470	BH-TMF-05	8.5	9.5	2020	And_tuf_metaseds	<0.000050	0.00055	0.69	0.011	<0.000050	0.00087	0.0026	0.50	0.00067	0.69	0.000012
C253472	SC20-026	12	13	2020	And_tuf_metaseds	<0.000050	0.00032	0.98	0.0060	<0.000050	0.00095	0.00051	2.1	0.00027	0.88	0.000034
C253474	SC20-026	26	27	2020	And_tuf_metaseds	<0.000050	0.00036	0.95	0.011	<0.000050	0.00042	0.0014	0.53	0.00012	0.56	<0.000010
C253476	SC20-026	40	41	2020	And_tuf_metaseds	<0.000050	0.00022	0.93	0.0042	<0.000050	0.00075	0.00097	0.38	0.00011	0.97	<0.000010
C253478	SC20-026	54	55	2020	And_tuf_metaseds	<0.000050	0.00030	0.69	0.014	<0.000050	0.00068	0.00063	1.1	0.00012	0.78	<0.000010
C253462	SCH21-049	2	3	2021	And_tuf_metaseds	<0.000050	0.00033	0.61	0.0085	<0.000050	0.00049	0.00012	0.86	<0.00010	0.73	0.000011
C253463	SCH21-049	11	12	2021	And_tuf_metaseds	<0.000050	0.00025	0.58	0.0090	<0.000050	0.00054	0.00049	0.55	<0.00010	0.76	<0.000010
C253465	SCH21-049	29	30	2021	And_tuf_metaseds	<0.000050	0.00028	0.49	0.011	<0.000050	0.00021	0.00088	2.6	0.00029	0.67	<0.000010
C253467	SCH21-049	47	48	2021	And_tuf_metaseds	<0.000050	0.00019	0.86	0.011	<0.000050	0.00015	0.00065	0.66	0.00019	0.53	<0.000010
C253468	SCH21-049	56	57	2021	And_tuf_metaseds	<0.000050	0.00022	0.64	0.015	<0.000050	0.00036	0.00021	0.63	<0.00010	0.72	<0.000010

Red highlight indicates value is greater than the in-place PWQO screening value.
 Bold italic text indicates value is greater than the interim PWQO screening value.
 Screening values are for qualitative assessment only and hold no regulatory significance.

Table A-5: Shake Flask Extraction Results

Parameter	Drill Hole	From	To	Year	Lithology	Na	Sr	S	Te	Ti	Th	Sn	Ti	W	U	V	Zn	Zr	
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
In-Place PWQO Screening Value (mg/L)						-	-	-	-	-	-	-	-	-	-	-	0.03	-	
Interim PWQO Screening Value (mg/L)						-	-	-	-	0.0003	-	-	-	0.03	0.005	0.006	0.02	-	-
B1059901	SC21-048	3	4	2021	Basalt	1.0	0.0088	<1.0	<0.000050	0.000061	<0.000010	<0.000050	<0.00020	0.00042	0.000013	<0.0010	<0.0010	<0.00020	
B1059903	SC21-048	23	24	2021	Basalt	0.59	0.017	<1.0	<0.000050	0.000060	<0.000010	0.000053	<0.00020	0.00039	0.000020	<0.0010	<0.0010	<0.00020	
B1059904	SC21-048	33	34	2021	Basalt	0.44	0.0095	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020	<0.00020	0.000013	<0.0010	<0.0010	<0.00020	
B1059906	SC21-048	53	54	2021	Basalt	1.2	0.014	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020	0.00022	<0.000010	<0.0010	<0.0010	<0.00020	
B1059908	SG22-034	8	9	2022	And_tuf_metaseds	1.6	0.025	2.0	<0.000050	0.000013	<0.000010	<0.000050	<0.00020	0.0011	0.000022	0.0013	<0.0010	<0.00020	
B1059912	BH-TMF-35	17.5	18.5	2021	And_tuf_metaseds	1.5	0.026	<1.0	<0.000050	0.000050	<0.000010	<0.000050	<0.00020	0.00029	0.000017	<0.0010	<0.0010	<0.00020	
B1059914	BH-TMF-35	37.5	38.5	2021	And_tuf_metaseds	1.0	0.022	<1.0	<0.000050	0.000056	<0.000010	<0.000050	0.00029	0.00026	0.000036	0.0014	<0.0010	<0.00020	
B1059916	BH-TMF-36	14	15	2021	And_tuf_metaseds	0.95	0.017	<1.0	<0.000050	0.000052	<0.000010	<0.000064	<0.00020	0.00023	0.000015	<0.0010	<0.0010	<0.00020	
B1059917	BH-TMF-36	24	25	2021	And_tuf_metaseds	0.49	0.017	<1.0	<0.000050	0.000086	<0.000010	0.000074	<0.00020	0.00044	0.000022	<0.0010	<0.0010	0.00022	
B1059918	BH-TMF-36	34	35	2021	And_tuf_metaseds	1.2	0.015	<1.0	<0.000050	0.000050	<0.000010	<0.000050	<0.00020	0.00053	<0.000010	<0.0010	<0.0010	<0.00020	
B1059921	002A	13.5	14.5	2022	Basalt	0.91	0.033	<1.0	<0.000050	0.000046	<0.000010	<0.000050	<0.00020	<0.00020	<0.000010	<0.0010	<0.0010	<0.00020	
B1059930	SC20-038	23	24	2020	And_tuf_metaseds	2.3	0.041	<1.0	<0.000050	0.000054	<0.000010	<0.000050	<0.00020	<0.00020	<0.000010	<0.0010	<0.0010	<0.00020	
B1059932	SC20-038	44	45	2020	And_tuf_metaseds	1.9	0.044	<1.0	<0.000050	0.000043	<0.000010	<0.000050	<0.00020	<0.00020	<0.000010	<0.0010	<0.0010	<0.00020	
B1059934	SC20-039	18	19	2020	And_tuf_metaseds	1.1	0.049	<1.0	<0.000050	0.000012	<0.000010	<0.000050	<0.00020	0.0011	<0.000010	<0.0010	<0.0010	<0.00020	
B1059936	SC20-039	38	39	2020	And_tuf_metaseds	0.92	0.042	<1.0	<0.000050	0.000042	<0.000010	<0.000050	<0.00020	0.00024	<0.000010	<0.0010	<0.0010	<0.00020	
B1059937	SC20-039	48	49	2020	And_tuf_metaseds	1.3	0.043	<1.0	<0.000050	0.000014	<0.000010	<0.000050	<0.00020	0.00037	<0.000010	<0.0010	<0.0010	0.00040	
B1059939	SC20-023	11	12	2020	And_tuf_metaseds	1.6	0.031	<1.0	<0.000050	0.000065	<0.000010	<0.000050	<0.00020	0.00057	0.000012	0.0019	<0.0010	<0.00020	
B1059942	SC20-023	22	23	2020	And_tuf_metaseds	1.3	0.054	<1.0	<0.000050	0.000051	<0.000010	<0.000050	<0.00020	<0.00020	<0.000010	<0.0010	<0.0010	<0.00020	
B1059944	SC20-023	42	43	2020	And_tuf_metaseds	1.1	0.044	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020	<0.00020	<0.000010	<0.0010	<0.0010	<0.00020	
B1059945	SC20-023	52	53	2020	And_tuf_metaseds	1.2	0.031	<1.0	<0.000050	0.000056	<0.000010	0.000057	<0.00020	<0.00020	<0.000010	<0.0010	<0.0010	<0.00020	
B1059948	SC20-024	11	12	2020	And_tuf_metaseds	1.6	0.018	<1.0	<0.000050	0.000053	<0.000010	<0.000050	<0.00020	0.00079	0.000092	0.0012	<0.0010	<0.00020	
B1059949	SC20-024	21	22	2020	And_tuf_metaseds	2.6	0.015	<1.0	<0.000050	0.000048	<0.000010	<0.000050	0.00023	0.00092	0.000012	0.0022	<0.0010	<0.00020	
B1059950	SC20-024	31	32	2020	And_tuf_metaseds	3.0	0.025	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020	0.00040	0.000031	<0.0010	<0.0010	<0.00020	
B1059952	SC20-024	51	52	2020	And_tuf_metaseds	2.0	0.028	<1.0	<0.000050	0.000045	<0.000010	<0.000050	<0.00020	0.00097	<0.000010	0.0014	<0.0010	<0.00020	
B1059954	SC20-025	10	11	2020	And_tuf_metaseds	0.64	0.020	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020	0.00033	0.000013	<0.0010	<0.0010	0.00028	
B1059958	SC20-025	31	32	2020	And_tuf_metaseds	1.8	0.035	<1.0	<0.000050	0.000014	<0.000010	<0.000052	<0.00020	0.00030	<0.000010	<0.0010	<0.0010	<0.00020	
B1059961	SC20-025	51	52	2020	And_tuf_metaseds	4.1	0.14	1.2	<0.000050	0.000011	<0.000010	0.000050	0.00069	0.0012	0.000037	0.0014	0.0015	0.0013	
B1059962	SC20-019	6	7	2020	And_tuf_metaseds	0.90	0.025	17	<0.000050	0.000067	<0.000010	<0.000050	<0.00020	<0.00020	0.00081	<0.0010	<0.0010	0.00028	
B1059964	SC20-019	26	27	2020	And_tuf_metaseds	0.50	0.025	<1.0	<0.000050	0.000097	<0.000010	<0.000050	<0.00020	0.00040	0.000020	<0.0010	<0.0010	<0.00020	
B1059965	SC20-019	36	37	2020	And_tuf_metaseds	0.49	0.026	1.2	<0.000050	0.000056	<0.000010	0.000056	<0.00020	<0.00020	0.000010	<0.0010	<0.0010	<0.00020	
B1059966	SC20-019	46	47	2020	And_tuf_metaseds	0.60	0.043	2.3	<0.000050	0.000017	<0.000010	<0.000050	<0.00020	0.00022	0.000024	<0.0010	<0.0010	<0.00020	
B1059969	SC20-013	15	16	2020	And_tuf_metaseds	2.3	0.021	<1.0	<0.000050	0.000062	<0.000010	<0.000050	<0.00020	0.00043	0.000012	<0.0010	<0.0010	<0.00020	
B1059971	SC20-013	35	36	2020	And_tuf_metaseds	2.5	0.055	<1.0	<0.000050	0.000065	<0.000010	<0.000050	<0.00020	0.0014	0.000014	0.0016	<0.0010	<0.00020	
B1059973	SC20-013	55	56	2020	And_tuf_metaseds	1.1	0.039	<1.0	<0.000050	0.000023	<0.000010	<0.000050	<0.00020	0.00026	<0.000010	<0.0010	<0.0010	<0.00020	
B1059975	SC20-014	2.5	3.5	2020	And_tuf_metaseds	1.5	0.013	<1.0	<0.000050	<0.000040	<0.000010	0.000053	<0.00020	0.00062	<0.000010	0.0011	<0.0010	<0.00020	
B1059990	SC20-014	32.5	33.5	2020	And_tuf_metaseds	1.4	0.016	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020	0.00068	<0.000010	<0.0010	<0.0010	<0.00020	
B1059991	SC20-014	42.5	43.5	2020	And_tuf_metaseds	0.98	0.018	<1.0	<0.000050	0.000074	<0.000010	<0.000050	<0.00020	0.00071	0.000012	<0.0010	<0.0010	<0.00020	
B1059992	SC20-014	52.5	53.5	2020	And_tuf_metaseds	1.5	0.015	<1.0	<0.000050	0.000045	<0.000010	<0.000050	<0.00020	0.00081	<0.000010	<0.0010	<0.0010	<0.00020	
B1059994	BH-TMF-04	2	3	2020	And_tuf_metaseds	0.58	0.0075	<1.0	<0.000050	0.000013	<0.000010	<0.000050	<0.00020	0.00033	<0.000010	<0.0010	<0.0010	<0.00020	
B1059995	BH-TMF-04	12	13	2020	And_tuf_metaseds	2.3	0.019	<1.0	<0.000050	0.000082	<0.000010	<0.000050	<0.00020	0.00045	<0.000010	<0.0010	<0.0010	<0.00020	
B1059996	BH-WF2-13	8.5	9.5	2020	And_tuf_metaseds	0.96	0.019	<1.0	<0.000050	0.000088	<0.000010	0.000093	<0.00020	0.00051	<0.000010	<0.0010	<0.0010	<0.00020	
C253469	BH-TMF-05	2	3	2020	And_tuf_metaseds	1.9	0.016	2.8	<0.000050	0.000081	<0.000010	<0.000050	<0.00020	0.0032	0.000020	<0.0010	<0.0010	<0.00020	
C253470	BH-TMF-05	8.5	9.5	2020	And_tuf_metaseds	1.9	0.011	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020	0.00091	0.000031	<0.0010	<0.0010	<0.00020	
C253472	SC20-026	12	13	2020	And_tuf_metaseds	2.1	0.036	<1.0	<0.000050	0.000099	<0.000010	<0.000050	<0.00020	0.00053	<0.000010	<0.0010	<0.0010	<0.00020	
C253474	SC20-026	26	27	2020	And_tuf_metaseds	0.91	0.025	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020	0.00023	0.000023	<0.0010	<0.0010	<0.00020	
C253476	SC20-026	40	41	2020	And_tuf_metaseds	2.1	0.041	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020	0.00026	<0.000010	<0.0010	<0.0010	0.00086	
C253478	SC20-026	54	55	2020	And_tuf_metaseds	1.7	0.032	<1.0	<0.000050	0.000059	<0.000010	<0.000050	<0.00020	0.00033	0.000013	<0.0010	<0.0010	<0.0002	

Table A-6: Shake Flask Extraction Statistical Summary

Group	Statistical Parameter	pH	EC	Acidity	Alkalinity	Sulphate	P	Al	Sb	As	Ba	Be	Bi	B
		pH units	uS/cm	mg CaCO ₃ /L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
In-Place PWQO Screening Value (mg/L)		6.5-8.5	-	-	-	-	-	-	-	0.1	-	0.011	-	-
Interim PWQO Screening Value (mg/L)		-	-	-	-	-	0.02	0.075	0.02	0.005	-	-	-	0.2
All Samples	Count	52	52	52	52	52	52	52	52	52	52	52	52	52
	Count Greater than PWQO Screening Value	0	--	--	--	--	--	52	0	0	--	0	--	0
	Percent > PWQO Screening Value	0%	--	--	--	--	--	100%	0%	0%	--	0%	--	0%
	Minimum	6.8	45	4.2	32	<0.50	<0.0050	0.10	0.00025	<0.000050	0.00024	<0.000010	<0.000010	0.0036
	10th Percentile	7.0	51	4.6	33	1	0.0050	0.31	0.00049	0.000080	0.00077	0.000010	0.000010	0.0043
	Median	7.3	59	7.8	38	1.0	0.0065	0.43	0.0010	0.00027	0.0022	0.000010	0.000010	0.0068
	Average	7.3	61	7.9	38	2.6	0.0067	0.43	0.0015	0.00061	0.0033	0.000010	0.000010	0.0088
	Standard Deviation	0.19	13	2.7	3.3	6.4	0.0018	0.11	0.0013	0.0010	0.0034	0.00	0.00	0.0071
	90th Percentile	7.5	73	12	42	3.9	0.0087	0.56	0.0032	0.00088	0.0070	0.000010	0.000010	0.015
	Maximum	7.6	132	15	45	47	0.013	0.69	0.0061	0.0050	0.018	0.000010	0.000010	0.046
Andesite Tuff Metasediments	Count	47	47	47	47	47	47	47	47	47	47	47	47	47
	Count Greater than PWQO Screening Value	0	--	--	--	--	--	47	0	0	--	0	--	0
	Percent > PWQO Screening Value	0%	--	--	--	--	--	100%	0%	0%	--	0%	--	0%
	Minimum	6.8	45	4.2	32	<0.50	<0.0050	0.10	0.00025	<0.000050	0.00024	<0.000010	<0.000010	0.0038
	10th Percentile	7.1	50	4.6	33	0.50	0.0050	0.30	0.00048	0.000077	0.00078	0.000010	0.000010	0.0047
	Median	7.3	59	7.6	38	1.0	0.0063	0.44	0.00099	0.00025	0.0021	0.000010	0.000010	0.0069
	Average	7.3	62	7.5	38	2.7	0.0067	0.43	0.0014	0.00054	0.0033	0.000010	0.000010	0.0092
	Standard Deviation	0.18	14	2.4	3.4	6.7	0.0018	0.11	0.0012	0.00085	0.0035	0.00	0.00	0.0073
	90th Percentile	7.5	74	11	42	4.0	0.0087	0.56	0.0029	0.00085	0.0071	0.000010	0.000010	0.016
	Maximum	7.6	132	13	45	47	0.013	0.69	0.0061	0.0050	0.018	0.000010	0.000010	0.046
Basalt	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
	Count Greater than PWQO Screening value	0	--	--	--	--	--	5	0	0	--	0	--	0
	Percent > PWQO Screening Value	0%	--	--	--	--	--	100%	0%	0%	--	0%	--	0%
	Minimum	6.8	51	7.7	33	<0.50	0.0056	0.34	0.00052	0.00018	0.00058	<0.000010	<0.000010	0.0036
	10th Percentile	6.9	52	8.5	34	0.50	0.0059	0.34	0.00054	0.00023	0.0012	0.000010	0.000010	0.0039
	Median	7.0	54	12	36	0.50	0.0065	0.38	0.0020	0.00059	0.0023	0.000010	0.000010	0.0043
	Average	7.0	55	12	36	1.5	0.0069	0.42	0.0021	0.0013	0.0029	0.000010	0.000010	0.0044
	Standard Deviation	0.14	3.1	2.6	2.1	1.3	0.00093	0.089	0.0017	0.0018	0.0021	0.00	0.00	0.00058
	90th Percentile	7.2	58	14	38	3.2	0.0080	0.53	0.0040	0.0032	0.0052	0.000010	0.000010	0.0050
	Maximum	7.2	60	15	39	3.4	0.0081	0.56	0.0053	0.0049	0.0068	0.000010	0.000010	0.0054

Screening values are for qualitative assessment only and hold no regulatory significance.

Table A-6: Shake Flask Extraction Statistical Summary

Group	Statistical Parameter	Cd	Ca	Cr	Co	Cu	Fe	Pb	Li	Mg	Mn	Hg	Mo
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
In-Place PWQO Screening Value (mg/L)		0.0002	-	0.001	-	0.005	0.3	0.005	-	-	-	0.0002	-
Interim PWQO Screening Value (mg/L)		0.0001	-	-	0.0009	0.005	-	0.001	-	-	-	-	0.04
All Samples	Count	52	52	52	52	52	52	52	52	52	52	52	52
	Count Greater than PWQO Screening Value	0	--	0	0	0	0	0	--	--	--	0	0
	Percent > PWQO Screening Value	0%	--	0%	0%	0%	0%	0%	--	--	--	0%	0%
	Minimum	<0.0000020	6.3	<0.00010	<0.0000050	0.00013	<0.0020	<0.000050	0.00015	0.44	0.0032	<0.0000050	0.000046
	10th Percentile	0.0000020	8.1	0.00015	0.0000061	0.00020	0.0020	0.000050	0.00021	0.55	0.0043	0.0000050	0.000068
	Median	0.0000020	10	0.00023	0.000012	0.00033	0.0020	0.000050	0.00037	0.71	0.011	0.0000050	0.00014
	Average	0.0000022	11	0.00022	0.000017	0.00039	0.0022	0.000059	0.00047	0.75	0.011	0.0000050	0.00052
	Standard Deviation	0.00000076	2.4	0.000054	0.000014	0.00026	0.0011	0.000066	0.00033	0.18	0.0047	0.00	0.0015
	90th Percentile	0.0000022	12	0.00029	0.000034	0.00059	0.0024	0.000050	0.00091	0.98	0.017	0.0000050	0.00074
	Maximum	0.0000070	23	0.00039	0.000068	0.0017	0.010	0.00053	0.0019	1.3	0.023	0.0000050	0.011
Andesite Tuff Metasediments	Count	47	47	47	47	47	47	47	47	47	47	47	47
	Count Greater than PWQO Screening Value	0	--	0	0	0	0	0	--	--	--	0	0
	Percent > PWQO Screening Value	0%	--	0%	0%	0%	0%	0%	--	--	--	0%	0%
	Minimum	<0.0000020	6.3	<0.00010	0.0000051	0.00013	0.0020	<0.000050	0.00016	0.44	0.0032	<0.0000050	0.000046
	10th Percentile	0.0000020	8.1	0.00015	0.0000063	0.00020	0.0020	0.000050	0.00022	0.55	0.0042	0.0000050	0.000070
	Median	0.0000020	10	0.00022	0.000013	0.00033	0.0020	0.000050	0.00040	0.72	0.011	0.0000050	0.00014
	Average	0.0000022	11	0.00022	0.000017	0.00039	0.0023	0.000060	0.00049	0.76	0.011	0.0000050	0.00055
	Standard Deviation	0.00000079	2.5	0.000055	0.000014	0.00027	0.0012	0.000069	0.00033	0.18	0.0047	0.00	0.0016
	90th Percentile	0.0000021	12	0.00028	0.000035	0.00063	0.0024	0.000050	0.00095	0.99	0.018	0.0000050	0.00079
	Maximum	0.0000070	23	0.00039	0.000068	0.0017	0.010	0.00053	0.0019	1.3	0.023	0.0000050	0.011
Basalt	Count	5	5	5	5	5	5	5	5	5	5	5	5
	Count Greater than PWQO Screening value	0	--	0	0	0	0	0	--	--	--	0	0
	Percent > PWQO Screening Value	0%	--	0%	0%	0%	0%	0%	--	--	--	0%	0%
	Minimum	<0.0000020	9.5	0.00022	<0.0000050	0.00022	0.0020	<0.000050	0.00015	0.53	0.0050	<0.0000050	0.000064
	10th Percentile	0.0000020	9.7	0.00023	0.0000054	0.00024	0.0020	0.000050	0.00017	0.54	0.0053	0.0000050	0.000072
	Median	0.0000020	10	0.00026	0.0000074	0.00026	0.0020	0.000050	0.00021	0.68	0.0070	0.0000050	0.00010
	Average	0.0000021	11	0.00026	0.000010	0.00031	0.0020	0.000050	0.00027	0.69	0.0074	0.0000050	0.00026
	Standard Deviation	0.00000012	0.85	0.000024	0.0000064	0.000079	0.00	0.00	0.00010	0.13	0.0022	0.00	0.00023
	90th Percentile	0.0000022	12	0.00028	0.000017	0.00041	0.0020	0.000050	0.00040	0.83	0.0099	0.0000050	0.00055
	Maximum	0.0000023	12	0.00029	0.000023	0.00041	0.0020	0.000050	0.00042	0.84	0.011	0.0000050	0.00066

Screening values are for qualitative assessment only and hold no regulatory significance.

Table A-6: Shake Flask Extraction Statistical Summary

Group	Statistical Parameter	Ni	K	Se	Si	Ag	Na	Sr	S	Te	Tl	Th	Sn	Ti
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
In-Place PWQO Screening Value (mg/L)		0.025	-	0.1	-	0.0001	-	-	-	-	-	-	-	-
Interim PWQO Screening Value (mg/L)		-	-	-	-	-	-	-	-	-	0.0003	-	-	-
All Samples	Count	52	52	52	52	52	52	52	52	52	52	52	52	52
	Count Greater than PWQO Screening Value	0	NA	0	NA	1	NA	NA	NA	NA	NA	NA	NA	--
	Percent > PWQO Screening Value	0%	NA	0%	NA	2%	NA	NA	NA	NA	NA	NA	NA	--
	Minimum	0.000049	0.25	<0.00010	0.47	<0.000010	0.44	0.0075	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020
	10th Percentile	0.000089	0.52	0.00010	0.52	0.000010	0.59	0.012	1.0	0.000050	0.000040	0.000010	0.000050	0.00020
	Median	0.00027	1.3	0.00011	0.66	0.000010	1.4	0.024	1.0	0.000050	0.000054	0.000010	0.000050	0.00020
	Average	0.00045	1.8	0.00031	0.73	0.000015	1.5	0.028	1.4	0.000050	0.000068	0.000010	0.000052	0.00021
	Standard Deviation	0.00047	1.5	0.00086	0.20	0.000016	0.72	0.020	2.1	0.00	0.000039	0.00	0.000070	0.00068
	90th Percentile	0.0010	4.4	0.00038	1.0	0.000024	2.3	0.044	1.2	0.000050	0.000013	0.000010	0.000053	0.00020
	Maximum	0.0026	6.1	0.0063	1.3	0.00011	4.1	0.14	17	0.000050	0.000023	0.000010	0.000093	0.00069
Andesite Tuff Metasediments	Count	47	47	47	47	47	47	47	47	47	47	47	47	47
	Count Greater than PWQO Screening Value	0	NA	0	NA	0	NA	NA	NA	NA	NA	NA	NA	--
	Percent > PWQO Screening Value	0%	NA	0%	NA	0%	NA	NA	NA	NA	NA	NA	NA	--
	Minimum	0.000049	0.25	<0.00010	0.47	<0.000010	0.49	0.0075	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020
	10th Percentile	0.000094	0.54	0.00010	0.53	0.000010	0.63	0.014	1.0	0.000050	0.000040	0.000010	0.000050	0.00020
	Median	0.00030	1.5	0.00010	0.66	0.000010	1.5	0.025	1.0	0.000050	0.000054	0.000010	0.000050	0.00020
	Average	0.00048	2.0	0.00032	0.73	0.000013	1.5	0.029	1.4	0.000050	0.000070	0.000010	0.000052	0.00021
	Standard Deviation	0.00049	1.5	0.00091	0.21	0.000085	0.72	0.021	2.2	0.00	0.000040	0.00	0.000073	0.00072
	90th Percentile	0.0011	4.5	0.00038	1.0	0.000021	2.4	0.044	1.2	0.000050	0.000013	0.000010	0.000054	0.00020
	Maximum	0.0026	6.1	0.0063	1.3	0.000049	4.1	0.14	17	0.000050	0.000023	0.000010	0.000093	0.00069
Basalt	Count	5	5	5	5	5	5	5	5	5	5	5	5	5
	Count Greater than PWQO Screening value	0	NA	0	NA	1	0	NA	NA	NA	0	NA	NA	--
	Percent > PWQO Screening Value	0%	NA	0%	NA	20%	0%	NA	NA	NA	0%	NA	NA	--
	Minimum	0.000052	0.44	<0.00010	0.49	<0.000010	0.44	0.0088	<1.0	<0.000050	<0.000040	<0.000010	<0.000050	<0.00020
	10th Percentile	0.000068	0.47	0.00010	0.50	0.000010	0.50	0.0091	1.0	0.000050	0.000040	0.000010	0.000050	0.00020
	Median	0.00010	0.67	0.00018	0.64	0.000010	0.91	0.014	1.0	0.000050	0.000046	0.000010	0.000050	0.00020
	Average	0.00015	0.65	0.00019	0.65	0.000031	0.84	0.016	1.0	0.000050	0.000049	0.000010	0.000051	0.00020
	Standard Deviation	0.000089	0.16	0.00010	0.15	0.000041	0.28	0.0089	0.00	0.00	0.0000093	0.00	0.000012	0.00
	90th Percentile	0.00026	0.83	0.00030	0.82	0.000073	1.1	0.027	1.0	0.000050	0.000061	0.000010	0.000052	0.00020
	Maximum	0.00028	0.86	0.00038	0.90	0.00011	1.2	0.033	1.0	0.000050	0.000061	0.000010	0.000053	0.00020

Screening values are for qualitative assessment only and hold no regulatory significance.

Table A-6: Shake Flask Extraction Statistical Summary

Group	Statistical Parameter	W	U	V	Zn	Zr
		mg/L	mg/L	mg/L	mg/L	mg/L
In-Place PWQO Screening Value (mg/L)		-	-	-	0.03	-
Interim PWQO Screening Value (mg/L)		0.03	0.005	0.006	0.02	-
All Samples	Count	52	52	52	52	52
	Count Greater than PWQO Screening Value	0	0	0	0	--
	Percent > PWQO Screening Value	0%	0%	0%	0%	--
	Minimum	<0.00020	<0.0000010	<0.0010	<0.0010	<0.000020
	10th Percentile	0.00020	0.0000010	0.0010	0.0010	0.000020
	Median	0.00038	0.0000011	0.0010	0.0010	0.000020
	Average	0.00068	0.0000058	0.0011	0.0010	0.000029
	Standard Deviation	0.0014	0.000013	0.00023	0.000069	0.000040
	90th Percentile	0.0010	0.000019	0.0013	0.0010	0.000022
	Maximum	0.0097	0.000081	0.0022	0.0015	0.00028
Andesite Tuff Metasediments	Count	47	47	47	47	47
	Count Greater than PWQO Screening Value	0	0	0	0	--
	Percent > PWQO Screening Value	0%	0%	0%	0%	--
	Minimum	<0.00020	<0.0000010	<0.0010	<0.0010	<0.000020
	10th Percentile	0.00020	0.0000010	0.0010	0.0010	0.000020
	Median	0.00040	0.0000010	0.0010	0.0010	0.000020
	Average	0.00073	0.0000059	0.0011	0.0010	0.000030
	Standard Deviation	0.0014	0.000013	0.00024	0.000072	0.000041
	90th Percentile	0.0011	0.000015	0.0014	0.0010	0.000024
	Maximum	0.0097	0.000081	0.0022	0.0015	0.00028
Basalt	Count	5	5	5	5	5
	Count Greater than PWQO Screening value	0	0	0	0	--
	Percent > PWQO Screening Value	0%	0%	0%	0%	--
	Minimum	<0.00020	<0.0000010	<0.0010	<0.0010	<0.000020
	10th Percentile	0.00020	0.0000010	0.0010	0.0010	0.000020
	Median	0.00022	0.0000013	0.0010	0.0010	0.000020
	Average	0.00029	0.0000049	0.0010	0.0010	0.000020
	Standard Deviation	0.000098	0.0000075	0.00	0.00	0.00
	90th Percentile	0.00041	0.000012	0.0010	0.0010	0.000020
	Maximum	0.00042	0.000020	0.0010	0.0010	0.000020

Screening values are for qualitative assessment only and hold no regulatory significance.

Attachment B
Certificates of Analysis

CERTIFICATE OF ANALYSIS - COVER PAGE



CLIENT INFORMATION	
Client:	Wood PLC
Project Manager:	Anna Klein
Mailing Address	2020 Winston Park Drive Oakville, ON; L6H 6X7
Contact No:	(647) 620-5190

COMPANY INFORMATION	
Legal Name:	Global ARD Testing Services Inc.
Mailing Address:	6891 Antrim Avenue Burnaby, BC V5J 4M5
Contact No:	Main: (604) 428-2730 Alternate: (604) 603-1359

PROJECT INFORMATION	
Project Name:	Springpole
Project Number:	ONS2104

REPORTING	
Global Project No:	1956 (B18)
Report Version:	4
Pages (Including Cover):	6
Report Title:	COA (B18) 73 Springpole Samples (rec'd 10-Oct22)
Analysis Reviewed By:	Prab Bhatia (PBhatia@globalARDtesting.com)
Position:	Project Manager
Report Certified By:	Prab Bhatia
Signature:	

RESULTS	
Reported To:	1 Kristen Gault (kristen.gault@wsp.com)
	2 Anna Klein (anna.klein@wsp.com)
	3 Jullieta Lum (jullieta.lum@wsp.com)
	4
Date Reported:	Version-1: November 2, 2022 (SFE)
	Version-2: January 5, 2023 (ABA, Metals)
	Version-3: January 12, 2023 (TC)
	Version-4: January 17, 2023 (SFE #51)

INVOICE	
Submitted To:	1 Accounts Payable (accountspayale@firstmininggold.com)
	2 Meghan Bertenshaw (meghan@firstmininggold.com)
	3 Kristen Gault (kristen.gault@wsp.com)
	4
Global Invoice No:	ARD1956-0123B
Date Submitted:	January 5, 2023

GLOBAL NOTES	
All samples and pulps are stored at no charge for 90 days past reporting date.	
Please contact the lab if you would like to continue storage past 90 days.	
Storage charges will apply.	

CERTIFICATE OF ANALYSIS - SAMPLE DETAILS



PAGE: 2 of 6
 GLOBAL PROJECT NO: 1956 (B18)
 CLIENT: Wood PLC
 PROJECT NAME: Springpole
 PROJECT NO: ONS2104
 REPORT VERSION: 4

Sample Receipt Info:	
Date Samples Rec'd:	12-Oct-22
No. of Samples Rec'd:	73
Samples Rec'd By:	Garry & Mark

Analytical Instructions:	
From:	Julietta Lum
Date:	via email/COC confirmation
	18-Oct-22

S. No.	Sample ID	Sample Type	Condition	Wt. of Sample Rec'd (Kg)	Global Notes - if any
1	B1059901	Core	Dry	2.35	
2	B1059902	Core	Dry	2.15	
3	B1059903	Core	Dry	2.20	
4	B1059904	Core	Dry	2.05	
5	B1059905	Core	Dry	2.35	
6	B1059906	Core	Dry	2.50	
7	B1059908	Core	Dry	3.90	
8	B1059909	Core	Dry	4.35	
9	B1059910	Core	Dry	4.45	
10	B1059911	Core	Dry	4.80	
11	B1059912	Core	Dry	4.80	
12	B1059913	Core	Dry	4.45	
13	B1059914	Core	Dry	4.45	
14	B1059915	Core	Dry	4.00	
15	B1059916	Core	Dry	4.12	
16	B1059917	Core	Dry	4.35	
17	B1059918	Core	Dry	4.25	
18	B1059919	Core	Dry	2.10	
19	B1059921	Core	Dry	4.45	
20	B1059922	Core	Dry	1.90	
21	B1059923	Core	Dry	1.95	
22	B1059926	Core	Dry	2.25	
23	B1059928	Core	Dry	2.50	
24	B1059929	Core	Dry	2.25	
25	B1059930	Core	Dry	2.35	
26	B1059931	Core	Dry	1.10	
27	B1059932	Core	Dry	2.30	
28	B1059933	Core	Dry	2.20	
29	B1059934	Core	Dry	2.45	
30	B1059935	Core	Dry	2.35	
31	B1059936	Core	Dry	2.25	
32	B1059937	Core	Dry	1.20	
33	B1059938	Core	Dry	2.30	
34	B1059939	Core	Dry	1.15	
35	B1059941	Core	Dry	5.00	
36	B1059942	Core	Dry	2.45	
37	B1059943	Core	Dry	2.00	
38	B1059944	Core	Dry	2.65	
39	B1059945	Core	Dry	2.45	
40	B1059947	Core	Dry	2.20	
41	B1059948	Core	Dry	1.15	
42	B1059949	Core	Dry	2.25	
43	B1059950	Core	Dry	2.30	
44	B1059951	Core	Dry	2.20	
45	B1059952	Core	Dry	2.20	
46	B1059953	Core	Dry	2.55	
47	B1059954	Core	Dry	2.40	
48	B1059956	Core	Dry	2.40	
49	B1059958	Core	Dry	2.40	
50	B1059959	Core	Dry	2.35	
51	B1059961	Core	Dry	2.05	
52	B1059962	Core	Dry	2.35	
53	B1059963	Core	Dry	2.36	

CERTIFICATE OF ANALYSIS - SAMPLE DETAILS



PAGE: 2 of 6
 GLOBAL PROJECT NO: 1956 (B18)
 CLIENT: Wood PLC
 PROJECT NAME: Springpole
 PROJECT NO: ONS2104
 REPORT VERSION: 4

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Date Samples Rec'd:	12-Oct-22
No. of Samples Rec'd:	73
Samples Rec'd By:	Garry & Mark

Analytical Instructions:	
From:	Julietta Lum
Date:	via email/COC confirmation
	18-Oct-22

S. No.	Sample ID	Sample Type	Condition	Wt. of Sample Rec'd (Kg)	Global Notes - if any
54	B1059964	Core	Dry	2.20	
55	B1059965	Core	Dry	2.15	
56	B1059966	Core	Dry	2.00	
57	B1059967	Core	Dry	2.10	
58	B1059968	Core	Dry	2.40	
59	B1059969	Core	Dry	2.30	
60	B1059970	Core	Dry	2.20	
61	B1059971	Core	Dry	2.30	
62	B1059972	Core	Dry	2.60	
63	B1059973	Core	Dry	2.25	
64	B1059975	Core	Dry	2.45	
65	B1059976	Core	Dry	2.30	
66	B1059977	Core	Dry	2.30	
67	B1059990	Core	Dry	2.25	
68	B1059991	Core	Dry	2.30	
69	B1059992	Core	Dry	2.30	
70	B1059994	Core	Dry	2.50	
71	B1059995	Core	Dry	2.45	
72	B1059996	Core	Dry	2.10	
73	B1059997	Core	Dry	2.20	
74	B1059925	Core	Dry	2.30	HOLD
75	B1059955	Core	Dry	3.50	HOLD
76	B1059978	Core	Dry	2.25	HOLD
77	B1059979	Core	Dry	2.30	HOLD
78	B1059981	Core	Dry	2.25	HOLD
79	B1059982	Core	Dry	2.15	HOLD
80	B1059984	Core	Dry	2.40	HOLD
81	B1059985	Core	Dry	7.50	HOLD
82	B1059986	Core	Dry	2.40	HOLD
83	B1059987	Core	Dry	2.35	HOLD
84	B1059988	Core	Dry	2.40	HOLD
85	B1059989	Core	Dry	2.36	HOLD

Total wt of sample rec'd (kg): 224.09

S. No.	Sample ID	Paste pH	Fizz Rating	Total Carbon	Total Inorganic C	CaCO ₃ Equivalents ¹	Total Sulphur	Sulphate Sulphur	Sulphide Sulphur	AP ³	STD Sobek NP	NNP ⁴	NPR ⁵
		Units:		wt %	wt %	kg CaCO ₃ /tonne	wt %	wt %	wt %		kg CaCO ₃ /tonne		
		Reported Detection Limit:	0.01	0.01	0.02	1.7	0.01	0.01	0.01	0.3	0.5		
1	B1059901	8.7	Moderate	0.52	0.47	39.2	0.03	0.02	0.01	0.3	48.7	48.4	155.8
2	B1059902	8.3	Strong	2.03	1.92	160.0	0.15	0.02	0.13	4.1	188.4	184.3	46.4
3	B1059903	8.6	Strong	1.29	1.29	107.5	0.02	0.02	<0.01	<0.3	128.4	128.4	N/A
4	B1059904	8.3	Strong	1.48	1.47	122.5	0.06	0.02	0.04	1.3	139.8	138.6	111.8
5	B1059905	9.1	Strong	2.01	1.82	151.7	0.19	0.02	0.17	5.3	187.0	181.7	35.2
6	B1059906	8.7	Strong	1.50	1.49	124.2	0.05	0.01	0.04	1.3	146.6	145.4	117.3
7	B1059908	9.3	Strong	1.98	1.82	151.7	1.30	0.03	1.27	39.7	186.7	147.0	4.7
8	B1059909	8.9	Strong	2.15	1.39	115.8	0.03	0.02	0.01	0.3	133.8	133.5	428.2
9	B1059910	9.1	Strong	2.29	2.01	167.5	0.02	0.02	<0.01	<0.3	204.7	204.7	N/A
10	B1059911	9.0	Strong	1.00	0.96	80.0	0.01	0.01	<0.01	<0.3	90.0	90.0	N/A
11	B1059912	9.3	Strong	0.98	0.91	75.8	0.01	0.01	<0.01	<0.3	86.2	86.2	N/A
12	B1059913	9.2	Strong	1.19	1.14	95.0	0.07	0.02	0.05	1.6	114.9	113.3	73.5
13	B1059914	9.6	Strong	0.87	0.85	70.8	0.02	0.02	<0.01	<0.3	83.6	83.6	N/A
14	B1059915	8.7	Strong	2.19	1.89	157.5	0.07	0.02	0.05	1.6	194.3	192.7	124.4
15	B1059916	8.9	Strong	2.22	1.96	163.3	0.09	0.02	0.07	2.2	196.7	194.5	89.9
16	B1059917	8.8	Strong	2.29	2.04	170.0	0.10	0.02	0.08	2.5	202.7	200.2	81.1
17	B1059918	9.0	Strong	1.93	1.90	158.3	0.17	0.02	0.15	4.7	185.5	180.8	39.6
18	B1059919	8.7	Strong	1.83	1.83	152.5	0.23	0.02	0.21	6.6	171.2	164.6	26.1
19	B1059921	8.8	Strong	1.79	1.72	143.3	0.08	0.03	0.05	1.6	169.1	167.5	108.2
20	B1059922	9.2	Strong	2.24	2.01	167.5	0.75	0.02	0.73	22.8	205.9	183.1	9.0
21	B1059923	9.3	Strong	1.87	1.83	152.5	0.18	0.02	0.16	5.0	176.8	171.8	35.4
22	B1059926	9.2	Strong	1.09	1.04	86.7	0.51	0.02	0.49	15.3	105.2	89.9	6.9
23	B1059928	8.6	Strong	1.68	1.62	135.0	0.14	0.02	0.12	3.8	149.0	145.3	39.7
24	B1059929	8.5	Strong	1.99	1.99	165.8	0.11	0.03	0.08	2.5	183.0	180.5	73.2
25	B1059930	8.9	Strong	1.81	1.74	145.0	0.03	0.03	<0.01	<0.3	154.4	154.4	N/A
26	B1059931	8.6	Strong	4.80	4.37	364.2	0.73	0.02	0.71	22.2	382.4	360.2	17.2
27	B1059932	8.8	Strong	1.31	1.16	96.7	0.08	0.01	0.07	2.2	133.1	130.9	60.8
28	B1059933	8.6	Strong	1.61	1.57	130.8	0.37	0.02	0.35	10.9	146.7	135.8	13.4
29	B1059934	8.9	Strong	2.16	2.09	174.2	0.40	0.02	0.38	11.9	188.8	176.9	15.9
30	B1059935	8.6	Strong	1.53	1.54	128.3	0.15	0.03	0.12	3.8	150.5	146.8	40.1
31	B1059936	8.9	Strong	1.24	1.24	103.3	0.14	0.04	0.10	3.1	121.0	117.9	38.7
32	B1059937	8.7	Strong	1.76	1.79	149.2	0.45	0.03	0.42	13.1	165.8	152.7	12.6
33	B1059938	9.6	Strong	1.18	1.17	97.5	0.34	0.03	0.31	9.7	123.2	113.5	12.7
34	B1059939	9.2	Strong	1.10	1.03	85.8	0.57	0.03	0.54	16.9	119.8	102.9	7.1
35	B1059941	8.9	Strong	1.08	1.08	90.0	0.63	0.02	0.61	19.1	112.8	93.7	5.9
36	B1059942	8.6	Strong	1.79	1.79	149.2	0.11	0.02	0.09	2.8	166.3	163.5	59.1
37	B1059943	9.1	Strong	1.39	1.34	111.7	0.08	0.03	0.05	1.6	130.2	128.6	83.3
38	B1059944	8.4	Strong	1.40	1.31	109.2	0.15	0.03	0.12	3.8	129.8	126.1	34.6
39	B1059945	8.8	Strong	1.99	1.82	151.7	0.47	0.02	0.45	14.1	174.7	160.6	12.4
40	B1059947	9.1	Moderate	1.93	0.92	76.7	<0.01	<0.01	<0.01	<0.3	85.6	85.6	N/A
41	B1059948	9.6	Strong	1.32	1.29	107.5	0.15	0.03	0.12	3.8	118.9	115.2	31.7
42	B1059949	9.4	Strong	1.07	1.06	88.3	<0.01	<0.01	<0.01	<0.3	95.8	95.8	N/A
43	B1059950	9.5	Strong	1.06	1.01	84.2	0.14	0.03	0.11	3.4	91.9	88.5	26.7
44	B1059951	9.3	Strong	1.02	1.00	83.3	<0.01	<0.01	<0.01	<0.3	91.3	91.3	N/A
45	B1059952	9.2	Strong	0.62	0.62	51.7	0.05	0.03	0.02	0.6	61.2	60.6	97.9
46	B1059953	8.7	Strong	0.88	0.84	70.0	0.11	0.04	0.07	2.2	78.4	76.2	35.8
47	B1059954	8.8	Strong	1.36	1.36	113.3	0.09	0.04	0.05	1.6	134.4	132.8	86.0
48	B1059956	8.6	Strong	1.14	1.01	84.2	0.12	0.04	0.08	2.5	113.0	110.5	45.2
49	B1059958	8.9	Strong	1.14	1.14	95.0	0.14	0.03	0.11	3.4	111.7	108.3	32.5
50	B1059959	8.8	Strong	1.39	1.40	116.7	0.18	0.04	0.14	4.4	135.0	130.6	30.9
51	B1059961	8.3	Strong	1.81	1.79	149.2	0.57	0.03	0.54	16.9	163.6	146.7	9.7

S. No.	Sample ID	Paste pH	Fizz Rating	Total Carbon	Total Inorganic C	CaCO ₃ Equivalents ¹	Total Sulphur	Sulphate Sulphur	Sulphide Sulphur	AP ³	STD Sobek NP	NNP ⁴	NPR ⁵
		Units:		wt %	wt %	kg CaCO ₃ /tonne	wt %	wt %	wt %		kg CaCO ₃ /tonne		
		Reported Detection Limit:	0.01	0.01	0.02	1.7	0.01	0.01	0.01	0.3	0.5		
52	B1059962	8.3	Strong	1.25	1.20	100.0	0.74	0.03	0.71	22.2	112.9	90.7	5.1
53	B1059963	9.0	Strong	1.39	1.37	114.2	<0.01	<0.01	<0.01	<0.3	138.1	138.1	N/A
54	B1059964	9.1	Strong	1.67	1.60	133.3	0.02	0.02	<0.01	<0.3	153.8	153.8	N/A
55	B1059965	8.8	Strong	1.05	1.09	90.8	0.28	0.03	0.25	7.8	110.3	102.5	14.1
56	B1059966	9.1	Strong	4.01	3.72	310.0	0.11	0.03	0.08	2.5	325.5	323.0	130.2
57	B1059967	9.0	Strong	2.05	1.82	151.7	0.03	0.03	<0.01	<0.3	179.4	179.4	N/A
58	B1059968	9.3	Strong	1.64	1.60	133.3	0.04	0.04	<0.01	<0.3	153.8	153.8	N/A
59	B1059969	9.1	Strong	1.63	1.49	124.2	0.05	0.03	0.02	0.6	149.9	149.3	239.8
60	B1059970	9.8	Moderate	0.94	0.92	76.7	0.21	0.03	0.18	5.6	87.2	81.6	15.5
61	B1059971	9.4	Strong	0.95	0.90	75.0	0.11	0.02	0.09	2.8	86.7	83.9	30.8
62	B1059972	8.8	Moderate	0.75	0.76	63.3	0.09	0.03	0.06	1.9	69.6	67.7	37.1
63	B1059973	8.8	Strong	1.45	1.39	115.8	0.09	0.03	0.06	1.9	144.1	142.2	76.9
64	B1059975	8.8	Strong	0.60	0.61	50.8	0.02	0.02	<0.01	<0.3	62.9	62.9	N/A
65	B1059976	8.7	Strong	1.65	1.61	134.2	0.07	0.03	0.04	1.3	149.3	148.1	119.4
66	B1059977	8.5	Strong	2.04	1.92	160.0	0.10	0.03	0.07	2.2	177.9	175.7	81.3
67	B1059990	8.8	Strong	2.62	2.39	199.2	0.48	0.02	0.46	14.4	216.9	202.5	15.1
68	B1059991	8.6	Strong	1.65	1.59	132.5	0.15	0.02	0.13	4.1	149.5	145.4	36.8
69	B1059992	9.0	Strong	1.78	1.82	151.7	0.14	0.03	0.11	3.4	163.4	160.0	47.5
70	B1059994	8.9	Strong	2.19	2.11	175.8	0.05	0.03	0.02	0.6	189.5	188.9	303.2
71	B1059995	9.1	Strong	2.36	2.34	195.0	0.20	0.03	0.17	5.3	213.5	208.2	40.2
72	B1059996	8.5	Strong	1.47	1.46	121.7	0.06	0.04	0.02	0.6	128.9	128.3	206.2
73	B1059997	8.8	Strong	1.42	1.43	119.2	0.11	0.04	0.07	2.2	125.8	123.6	57.5
QUALITY ASSURANCE / QUALITY CONTROL													
Pulp Replicates:													
6	B1059906			1.50									
6R	B1059906 (Rep)			1.49									
10	B1059911	9.04	Strong		0.96						90.0		
10R	B1059911 (Rep)	9.09	Strong		0.92						91.3		
20	B1059922	9.23	Strong								205.9		
20R	B1059922 (Rep)	9.23	Strong								205.8		
28	B1059933						0.37						
28R	B1059933 (Rep)						0.36						
30	B1059935	8.59	Strong		1.54						150.5		
30R	B1059935 (Rep)	8.68	Strong		1.60						152.1		
40	B1059947	9.14	Strong								85.6		
40R	B1059947 (Rep)	9.16	Strong								86.0		
49	B1059958			1.14									
49R	B1059958 (Rep)			1.15									
50	B1059959	8.77	Strong		1.40						135.0		
50R	B1059959 (Rep)	8.74	Strong		1.43						129.7		
60	B1059970	9.78	Strong								87.2		
60R	B1059970 (Rep)	9.74	Strong								80.3		
70	B1059994	8.87	Strong		2.11						189.5		
70R	B1059994 (Rep)	8.78	Strong		2.04						192.8		

S. No.	Sample ID	Paste pH	Fizz Rating	Total Carbon	Total Inorganic C	CaCO ₃ Equivalents ^{*1}	Total Sulphur	Sulphate Sulphur	Sulphide Sulphur	AP ^{*3}	STD Sobek NP	NNP ^{*4}	NPR ^{*5}
		<i>Units:</i>											
		<i>pH Units</i>		<i>wt %</i>	<i>wt %</i>	<i>kg CaCO₃/tonne</i>	<i>wt %</i>	<i>wt %</i>	<i>wt %</i>		<i>kg CaCO₃/tonne</i>		
		<i>Reported Detection Limit:</i>	<i>0.01</i>	<i>0.01</i>	<i>0.02</i>	<i>1.7</i>	<i>0.01</i>	<i>0.01</i>	<i>0.01</i>	<i>0.3</i>	<i>0.5</i>		
Certified Reference Material (CRM) Analysis:													
Certified Reference Material	KZK-1			1) GS310-7 2) AR4024	KZK-1		1) CDN-CM-38 2) OREAS 20a	RTS-3a			1) KZK-1 (Slight) 2) KZK-1 (Moderate)		
CRM True Value	8.80			1) 4.16 2) 11.59	0.92		1) 5.30 2) 0.06	1.10			1) 59.0 2) 64.8		
Reference Material Results	8.88			1) 4.06 2) 11.62	0.86, 0.91, 0.88		1) 5.27 2) 0.06	1.18			1) 58.7 2) N/A		
Tolerance (+/-) or Acceptance Range	0.09 (+/-)			80% - 120%	80% - 120%		90% - 110%	90% - 110%			90% - 110%		
Method Blank Analysis:													
Method Blank Results				<0.01, <0.01	<0.02, <0.02, <0.02		<0.01, <0.01	<0.01, <0.01					
GLOBAL SOP No. / Method:	<i>ARD-004</i>	<i>ARD-005</i>		<i>LECO</i>	<i>HCl leach CO₂-Coulometer</i>	<i>Calc.</i>	<i>LECO</i>	<i>ARD-013 (HCl Leach)</i>	<i>Calc.</i>	<i>Calc.</i>	<i>ARD-007</i>	<i>Calc.</i>	<i>Calc.</i>

NOTES:

Job No: YVR2211186
 Acceptance criteria at Global ARD Testing for all CRMs is ±10 % of certified value.
Date of Analysis: October 28, 2022
 pH of DI water used: 5.72
 EC of DI water used: 1.12

METHODS:

Total Sulphur by Leco.
 Total Inorganic Carbon (TIC): HCl leach, evolved gas (CO₂) analysed by CO₂ Coulometer.

ABBREVIATIONS:

R = Rep = Replicate (a replicate is a sub-sample scooped from a single pulp sample bag produced per client sample)
 D = Dup = Duplicate (a duplicate is 2nd sub-pulp sample bag produced by processing a split of the original client sample received. A duplicate pulp sample is prepared only at client request)
 NP = Neutralization Potential
 Calc. = Calculation
 NR = Not Received

CALCULATIONS:

- *1 CaCO₃ Equivalents: based on TIC
- *2 Sulphide-Sulphur: Total-sulphur - sulphate-sulphur
- *3 AP (Acid Potential): Sulphide-Sulphur x 31.25
- *4 NNP (Net Neutralization Potential): NP - AP
- *5 NPR (Neutralization Potential Ratio): NP/AP

REFERENCES:

Sample Preparation: ASTM E877-08; MEND Report 1.20.1, Version 0 (2009)
ABA: Dried below 40°C (as requested by client), jaw-crushed if necessary, split by riffing and pulverized to 85% passing 200 mesh (75 µm).
Modified ABA (Sobek) NP: MEND Acid Rock Drainage Prediction Manual, MEND Project 1.16.1b (pages 6.2-11 to 17), March 1991.
Paste pH / Fizz Rating: Sobek, A.A., Schuller, W.A., Freeman, J.R. and Smith, R.M.; US EPA-600/2-78-054 (1978).
Sulphate Sulphur: Based on MEND method. The S extracted is determined by analysing the extract for SO₄ using UV-Vis Spectrophotometer (STD Method 4500-SO42- E).

S. No.	Sample ID	Method Analyte Unit MDL Sample Type	IMS-130																									
			Silver (Ag) ppm 0.01	Aluminum (Al) % 0.01	Arsenic (As) ppm 0.1	Gold (Au) ppm 0.0005	Boron (B) ppm 10	Barium (Ba) ppm 10	Beryllium (Be) ppm 0.05	Bismuth (Bi) ppm 0.01	Calcium (Ca) % 0.01	Cadmium (Cd) ppm 0.01	Cerium (Ce) ppm 0.02	Cobalt (Co) ppm 0.1	Chromium (Cr) ppm 1	Cesium (Cs) ppm 0.05	Copper (Cu) ppm 0.2	Iron (Fe) % 0.01	Gallium (Ga) ppm 0.05	Germanium (Ge) ppm 0.05	Hafnium (Hf) ppm 0.02	Mercury (Hg) ppm 0.005	Indium (In) ppm 0.005	Potassium (K) % 0.01	Lanthanum (La) ppm 0.2	Lithium (Li) ppm 0.1	Magnesium (Mg) % 0.01	Manganese (Mn) ppm 5
1	B1059901	Pulp	0.03	3.4	22.0	0.0071	<10	<10	0.07	0.02	1.20	0.02	3.26	43.7	120	0.45	104.8	5.81	8.38	0.15	0.08	0.01	0.008	0.01	1.2	24.7	3.31	803
2	B1059902	Pulp	0.12	4.4	4.9	0.0038	14	<10	0.10	0.01	6.84	0.05	4.19	50.7	187	0.75	237.4	9.85	17.79	0.28	0.05	0.02	0.024	0.03	1.6	19.3	3.64	1355
3	B1059903	Pulp	0.04	4.1	11.8	0.0036	<10	<10	0.12	<-0.01	4.52	0.02	4.76	45.0	155	0.25	137.1	7.67	11.24	0.23	0.08	<-0.005	<-0.001	0.01	1.9	23.9	3.53	1004
4	B1059904	Pulp	0.02	4.3	3.5	0.0042	<10	<10	0.12	<-0.01	4.73	0.04	3.1	43.8	168	0.39	126.2	8.79	14.85	0.26	0.06	<-0.005	0.012	<-0.01	1.2	30.2	3.71	1142
5	B1059905	Pulp	0.03	2.5	1.5	<-0.0005	<10	11	<-0.05	<-0.01	6.74	0.07	2.01	32.5	70	0.15	77.0	4.94	8.92	<-0.05	<-0.02	0.01	0.008	0.09	0.8	21.3	1.53	734
6	B1059906	Pulp	0.05	3.3	10.0	0.0023	<10	<10	<-0.05	<-0.01	5.78	0.08	1.79	28.1	113	0.16	68.4	4.35	8.79	<-0.05	0.02	0.01	0.006	0.03	0.7	24.2	1.46	893
7	B1059908	Pulp	0.14	2.1	4.7	0.0135	16	193	0.17	0.06	6.65	0.12	11.1	48.0	87	19.72	133.6	11.68	11.85	0.19	0.18	0.01	0.027	1.39	5.5	29.0	2	2044
8	B1059909	Pulp	0.07	2.4	2.0	0.0018	<10	17	0.11	0.01	7.45	0.06	18.3	32.9	96	0.60	102.0	5.10	7.36	0.05	0.05	0.01	0.014	0.11	7.9	22.3	1.13	1935
9	B1059910	Pulp	0.09	2.7	1.1	0.0022	<10	10	0.06	<-0.01	7.69	0.09	13.86	34.2	125	0.19	83.1	5.50	8.59	<-0.05	0.04	0.01	0.014	0.07	6.3	24.4	1.75	903
10	B1059911	Pulp	0.05	2.7	20.1	0.0011	<10	31	0.15	0.01	3.19	0.04	11.73	30.9	130	1.49	60.0	5.14	9.92	0.06	0.09	<-0.005	0.008	0.12	4.9	20.5	1.95	908
11	B1059912	Pulp	0.04	2.7	13.8	0.0008	<10	96	0.13	0.01	2.80	0.02	10.3	30.5	111	2.98	67.3	4.94	9.31	0.09	0.10	0.01	0.009	0.22	4.4	21.5	2.1	855
12	B1059913	Pulp	0.05	3.6	3.9	0.0006	<10	186	0.11	0.01	3.66	0.06	12.01	31.0	112	13.68	82.9	7.01	13.41	0.16	0.07	<-0.005	0.012	0.79	5.0	29.3	2.62	1151
13	B1059914	Pulp	0.04	3.0	12.8	0.0007	<10	230	0.08	0.01	2.94	0.03	7.29	29.9	117	19.44	99.3	5.66	8.08	0.14	0.09	0.01	0.008	0.97	3.1	17.6	1.78	814
14	B1059915	Pulp	0.16	3.7	1.7	0.0178	<10	<10	<-0.05	0.02	7.25	0.09	8.67	49.5	112	0.23	129.2	7.93	14.23	0.08	0.10	0.01	0.045	0.04	3.5	38.4	2.44	1331
15	B1059916	Pulp	0.06	3.3	1.4	0.0081	<10	<10	0.06	0.02	7.41	0.07	7.43	48.0	107	0.13	148.5	6.90	9.97	0.06	0.10	0.01	0.042	0.06	3.0	36.9	2.17	1232
16	B1059917	Pulp	0.13	3.2	1.3	0.0106	<10	11	0.13	0.02	7.48	0.13	5.62	48.1	96	0.19	129.2	7.20	10.41	<-0.05	0.09	0.01	0.025	0.11	2.1	25.6	1.87	1234
17	B1059918	Pulp	0.05	3.2	2.2	0.0053	<10	<10	0.10	<-0.01	6.55	0.1	2.41	52.8	116	0.25	137.9	7.25	12.06	0.15	0.02	<-0.005	0.011	0.03	0.9	25.0	2.32	1193
18	B1059919	Pulp	0.02	3.0	10.9	0.005	<10	<10	0.16	0.05	6.27	0.07	7.46	48.1	48	0.26	146.1	8.24	14.92	0.27	0.07	0.02	0.028	<-0.01	4.3	16.9	3.29	1561
19	B1059921	Pulp	0.03	4.1	2.5	0.0055	<10	<10	0.19	0.02	5.57	0.08	10.57	45.9	45	0.49	105.7	9.22	17.40	0.40	0.15	0.02	0.005	<-0.01	4.3	21.6	3.04	1185
20	B1059922	Pulp	0.10	1.2	2.6	0.0104	<10	7.8	0.15	0.05	7.95	0.03	5.31	45.9	142	7.35	152.7	6.61	8.05	0.16	0.17	0.01	0.016	0.48	2.3	13.7	1.1	1085
21	B1059923	Pulp	0.06	1.8	2.3	0.0047	<10	27	0.09	0.02	6.75	0.04	2.1	42.0	166	2.81	88.6	5.30	8.68	0.17	0.16	0.01	0.011	0.21	1.0	22.1	1.69	1264
22	B1059926	Pulp	0.07	2.0	2.3	0.0069	<10	155	0.06	0.02	3.65	0.02	3.23	49.4	182	13.23	49.2	16.25	9.12	0.17	0.10	0.01	0.012	0.52	1.3	19.7	1.66	832
23	B1059928	Pulp	0.13	4.7	0.6	0.0491	<10	105	0.27	<-0.01	4.96	0.1	4.21	48.3	168	6.17	119.4	8.80	16.98	0.13	0.07	0.01	0.015	0.74	1.9	45.0	4.24	1323
24	B1059929	Pulp	0.08	3.9	0.9	0.025	13	116	0.09	<-0.01	6.64	0.09	5.96	46.5	169	5.86	140.8	8.46	15.43	0.18	0.03	<-0.005	0.012	0.63	2.3	44.1	3.44	1329
25	B1059930	Pulp	0.04	3.2	1.1	0.0093	11	<10	0.06	<-0.01	5.39	0.07	2.62	50.8	163	0.56	140.1	8.08	13.59	0.23	0.06	0.01	0.012	0.04	1.0	25.5	3.15	1176
26	B1059931	Pulp	0.27	3.4	1.7	0.0191	<10	119	0.08	0.01	9.30	0.12	4.43	47.5	144	9.40	119.5	7.71	12.56	0.18	0.02	0.02	0.010	0.98	1.9	34.8	2.81	1528
27	B1059932	Pulp	0.05	3.9	0.9	0.0051	<10	<10	0.13	<-0.01	4.69	0.03	2.21	48.9	154	0.23	155.5	8.21	13.13	0.16	0.03	<-0.005	0.008	0.02	0.8	34.2	3.64	1014
28	B1059933	Pulp	0.05	2.9	2.0	0.0054	<10	<10	0.11	0.01	5.11	0.05	2.43	50.3	51	0.17	158.2	9.18	12.05	0.20	0.05	0.01	0.008	<-0.01	1.0	15.6	2.55	1477
29	B1059934	Pulp	0.05	2.5	2.3	0.0021	<10	93	0.14	0.01	7.29	0.07	4.23	54.8	49	2.02	141.0	7.34	10.19	0.19	0.04	0.01	0.011	0.14	2.0	18.7	2.06	1528
30	B1059935	Pulp	0.06	2.9	1.5	0.0043	<10	39	0.14	0.01	5.16	0.1	3.57	50.5	54	3.88	144.0	8.29	13.04	0.19	0.04	0.01	0.016	0.11	1.4	22.6	2.47	1348
31	B1059936	Pulp	0.05	3.1	0.9	0.004	<10	<10	0.12	<-0.01	4.19	0.04	3.1	50.1	53	0.25	152.4	8.05	10.45	0.17	0.04	0.01	0.009	<-0.01	1.3	19.8	2.54	1011
32	B1059937	Pulp	0.12	2.5	2.7	0.0129	<10	40	0.14	0.03	6.12	0.03	4.2	45.5	54	3.81	130.6	7.93	11.76	0.24	0.07	0.01	0.014	0.16	1.7	18.7	2.14	1388
33	B1059938	Pulp	0.11	2.3	2.5	0.0053	<10	161	0.17	0.09	3.62	0.03	47.9	24.9	69	6.36	108.2	5.60	12.27	0.23	0.13	<-0.005	0.041	0.70	20.9	18.3	2.03	618
34	B1059939	Pulp	0.15	2.5	2.4	0.0344	<10	172	0.10	0.18	3.72	0.05	41.8	17.7	90	5.76	27.9	5.72	12.52	0.21	0.37	<-0.005	0.023	1.25	18.3	26.6	1.81	1114
35	B1059941	Pulp	0.16	3.4	7.6	0.0089	12	102	0.22	0.07	3.75	0.05	28.05	49.0	83	4.89	123.2	6.56	11.66	0.11	0.19	0.01	0.020	0.96	11.8	30.1	1.97	755
36	B1059942	Pulp	0.04	2.9	1.9	0.0045	<10	75	<-0.05	0.01	3.92	0.04	5.86	33.9	96	1.53	69.9	6.82	9.00	0.16	0.02	<-0.005	0.029	0.43	2.3	20.0	1.64	1131
37	B1059943	Pulp	0.04	3.2	1.1	0.0037	<10	<10	<-0.05	0.01	4.18	0.04	5.02	47.3	140	0.13	109.7	7.28	12.13	0.16	0.04	<-0.005	0.022	0.02	1.5	15.6	2.33	818
38	B1059944	Pulp	0.12	4.0	1.0	0.0048	<10	<10	0.06	<-0.01	4.37	0.11	3.07	54.9	114	0.18	120.5	8.25	10.08	0.12	<-0.02	<-0.005	0.013	0.01	1.2	16.3	2.72	1003
39	B1059945	Pulp	0.06	3.4	0.9	0.0051	<10	20	<-0.05	0.01	6.25	0.1	2.69	62.2	113	0.43	173.8	9.96	9.31	0.12	<-0.02	<-0.005	0.011	0.06	1.0	14.0	2.02	1339
40	B1059947	Pulp	0.04	2.9	1.0	0.0055	<10	150	0.09	<-0.01	2.14	0.06	30.94	30.4	30	2.09	49.7	6.03	9.67	0.12	0.18	<-0.005	0.016	0.49	12.6	23.2	2.18	694
41	B1059948	Pulp	0.07	3.0	2.0	0.0064	<10	175	0.08	0.03	3.16	0.19	42.01	39.1	38	3.41	99.2	6.38	10.53	0.11	0.35	<-0.005	0.035	0.98	17.5	29.0	2.23	791
42	B1059949	Pulp	0.04	3.1	1.1	0.0086	<10	289	<-0.05	<-0.01	2.59	0.06	30.92	39.2	41	4.24	96.1	6.29	10.40	0.15	0.21	<-0.005	0.029	1.34	12.6	28.1	2.17	796
43	B1059950	Pulp	0.12	3.2	1.1	0.0013	<10	83	0.14	0.08	2.29	0.05	21.19	29.7	35	2.99	174	6.45	11.50	0.16	0.24	<-0.005	0.022	0.43	10.2	23.1	2.49	856
44	B1059951	Pulp	0.03	3.2	1.2	0.0041	<10	165	0.14	<-0.01	2.99	0.06	37.69	29.9	29	5.12	44.3	6.19	11.67	0.19	0.34	<-0.005	0.033	0.65				

S. No.	Sample ID	Method Analyte Unit MDL Sample Ty	Molybdenum (Mo) ppm 0.05	Sodium (Na) % 0.01	Niobium (Nb) ppm 0.05	Nickel (Ni) ppm 0.2	Phosphorus (P) ppm 10	Lead (Pb) ppm 0.2	Rubidium (Rb) ppm 0.1	Rhenium (Re) ppm 0.001	Sulphur (S) % 0.01	Antimony (Sb) ppm 0.05	Scandium (Sc) ppm 0.1	Selenium (Se) ppm 0.2	Tin (Sn) ppm 0.2	Strontium (Sr) ppm 0.2	Tantalum (Ta) ppm 0.01	Tellurium (Te) ppm 0.01	Thorium (Th) ppm 0.2	Titanium (Ti) % 0.005	Thallium (Tl) ppm 0.02	Uranium (U) ppm 0.05	Vandium (V) ppm 1	Tungsten (W) ppm 0.05	Yttrium (Y) ppm 0.05	Zinc (Zn) ppm 1	Zirconium (Zr) ppm 0.5
1	B1059901	Pulp	0.35	0.02	0.05	143.7	245	0.8	1.0	<0.001	0.04	0.73	2.8	<0.2	<0.2	17.3	<0.01	0.01	<0.2	0.22	<0.02	<0.05	79	0.47	4.30	57	2.0
2	B1059902	Pulp	0.93	0.01	<0.05	72.8	356	3.2	1.8	0.002	0.18	0.58	13.5	0.5	0.2	31.3	<0.01	0.03	0.3	0.197	<0.02	<0.05	225	0.47	5.34	87	1.4
3	B1059903	Pulp	0.26	0.01	<0.05	82.8	391	0.4	0.3	0.002	0.04	0.56	5.8	<0.2	0.3	21.2	<0.01	0.02	<0.2	0.275	<0.02	<0.05	142	0.43	5.89	70	2.5
4	B1059904	Pulp	0.35	0.01	<0.05	74.3	319	0.3	0.4	0.001	0.10	0.27	7.5	0.3	0.3	20	<0.01	0.02	<0.2	0.258	<0.02	<0.05	187	0.32	5.97	80	1.4
5	B1059905	Pulp	0.32	0.03	<0.05	81.2	180	0.2	2.4	0.001	0.21	0.25	3.5	0.4	<0.2	15.8	<0.01	0.08	<0.2	0.067	<0.02	<0.05	46	3.05	2.70	55	<0.5
6	B1059906	Pulp	0.25	0.13	0.06	57.9	164	0.2	1.0	<0.001	0.06	0.61	3.6	<0.2	<0.2	34.2	<0.01	0.4	<0.2	0.1	<0.02	<0.05	63	0.18	2.46	47	0.7
7	B1059908	Pulp	8.30	0.04	0.06	84.9	369	2.8	75.2	0.003	1.31	0.31	13.2	0.7	0.4	46.3	<0.01	0.17	0.5	0.309	0.76	0.43	178	6.44	7.75	96	8.1
8	B1059909	Pulp	0.25	0.02	<0.05	81.7	684	1.3	4.0	<0.001	0.05	0.99	5.6	<0.2	<0.2	27.3	<0.01	<0.01	1.2	0.048	0.03	0.12	54	0.09	7.76	73	2.4
9	B1059910	Pulp	0.28	0.02	<0.05	101.6	636	1.4	2.6	<0.001	0.04	1.10	5.4	<0.2	<0.2	34.1	<0.01	0.01	1	0.06	<0.02	0.09	66	0.07	6.94	73	1.9
10	B1059911	Pulp	0.65	0.03	0.12	69.4	779	0.8	5.8	<0.001	0.02	0.25	5.4	<0.2	0.4	38.3	<0.01	<0.01	1.5	0.294	0.03	0.18	89	0.23	4.62	79	2.6
11	B1059912	Pulp	0.58	0.03	0.13	71.7	757	0.9	10.7	<0.001	0.02	0.18	4.9	<0.2	0.3	36.4	<0.01	<0.01	1.2	0.344	0.06	0.15	84	0.25	4.37	75	3.0
12	B1059913	Pulp	0.58	0.03	0.08	64.7	820	1.3	42.1	<0.001	0.08	0.19	6.4	<0.2	0.4	40.6	<0.01	<0.01	1.5	0.31	0.24	0.17	118	0.16	4.88	86	2.3
13	B1059914	Pulp	0.76	0.03	0.12	65.5	716	0.8	50.1	<0.001	0.03	0.19	3.7	<0.2	0.3	42	<0.01	<0.01	0.9	0.377	0.29	0.12	80	0.12	3.15	83	2.8
14	B1059915	Pulp	0.17	0.02	<0.05	88.2	399	1.1	1.7	<0.001	0.09	0.21	29.2	0.2	<0.2	23.7	<0.01	0.02	0.6	0.073	<0.02	0.07	189	0.28	12.85	93	4.7
15	B1059916	Pulp	0.38	0.02	<0.05	61.1	290	0.7	2.4	<0.001	0.12	0.17	19.1	0.3	<0.2	21.9	<0.01	0.03	0.6	0.065	0.03	0.07	157	0.08	13.42	81	5.3
16	B1059917	Pulp	0.33	0.01	<0.05	63.4	287	1.4	4.2	<0.001	0.12	0.25	12.8	0.3	<0.2	29.4	<0.01	0.03	0.5	0.057	0.04	0.08	119	0.85	10.91	84	2.9
17	B1059918	Pulp	0.44	0.02	<0.05	89.5	284	0.7	1.7	0.002	0.16	0.40	8.9	0.3	<0.2	35.6	<0.01	0.02	0.3	0.091	0.02	<0.05	187	0.21	3.89	87	0.7
18	B1059919	Pulp	0.34	0.03	0.06	67.8	348	0.8	0.6	<0.001	0.25	0.46	29.4	0.5	0.5	83.5	<0.01	0.03	0.5	0.169	<0.02	0.09	237	<0.05	10.51	89	2.1
19	B1059921	Pulp	0.29	0.02	<0.05	54.1	339	1.2	0.5	0.002	0.10	0.45	36.9	0.7	0.3	81.5	0.03	0.01	0.5	0.146	<0.02	0.06	251	<0.05	5.13	87	6.6
20	B1059922	Pulp	2.43	0.04	0.08	62.1	305	0.6	40.2	0.002	0.77	0.41	8.1	0.6	0.6	50.5	0.01	0.21	0.4	0.283	0.51	0.1	149	0.77	7.43	85	6.1
21	B1059923	Pulp	2.15	0.03	0.10	82.1	304	0.3	15.8	0.001	0.20	0.47	6.4	<0.2	0.3	36.8	<0.01	0.08	0.3	0.339	0.19	<0.05	146	0.45	4.90	56	5.6
22	B1059926	Pulp	0.85	0.04	0.08	88.9	401	0.4	32.2	0.001	0.50	0.23	6.7	0.5	0.3	19.1	<0.01	0.07	0.3	0.291	0.41	<0.05	173	0.76	4.80	57	3.8
23	B1059928	Pulp	0.42	0.02	<0.05	89.0	328	4.5	44.0	<0.001	0.16	0.06	10.6	0.2	0.3	23.4	<0.01	0.02	0.3	0.153	0.48	<0.05	217	0.08	3.09	145	3.3
24	B1059929	Pulp	0.57	0.02	<0.05	87.1	322	4.3	35.6	0.001	0.14	0.08	8.6	<0.2	<0.2	28.8	<0.01	0.06	0.4	0.177	0.47	<0.05	216	0.07	5.01	109	1.3
25	B1059930	Pulp	0.13	0.02	0.05	92.6	337	1.0	2.3	<0.001	0.05	0.30	7.8	<0.2	0.3	35	<0.01	0.02	<0.2	0.273	0.03	<0.05	183	0.07	6.72	85	2.0
26	B1059931	Pulp	1.13	0.02	<0.05	71.4	293	3.2	57.8	0.001	0.77	0.12	6.5	0.4	<0.2	38	<0.01	0.28	0.2	0.198	0.93	<0.05	179	0.26	2.60	166	0.9
27	B1059932	Pulp	0.36	0.02	<0.05	91.3	331	0.6	1.5	0.001	0.11	0.20	5.5	0.2	0.2	28.6	<0.01	0.04	<0.2	0.19	<0.02	<0.05	156	0.06	4.18	85	0.8
28	B1059933	Pulp	0.29	0.02	<0.05	37.9	393	0.5	0.4	<0.001	0.40	0.18	3.3	0.4	<0.2	31.3	<0.01	0.03	0.2	0.163	<0.02	<0.05	189	0.50	4.05	96	1.4
29	B1059934	Pulp	1.16	0.02	0.05	44.1	312	0.9	12.2	0.003	0.43	0.25	6.7	0.7	0.2	82	<0.01	0.03	0.2	0.183	0.14	0.06	146	1.38	4.30	85	1.1
30	B1059935	Pulp	0.45	0.02	<0.05	39.7	363	0.4	9.0	0.001	0.17	0.18	8.4	0.4	0.2	39	<0.01	0.02	0.3	0.129	0.13	<0.05	196	0.09	5.46	90	1.4
31	B1059936	Pulp	0.29	0.02	<0.05	39.2	346	0.4	0.5	<0.001	0.16	0.14	5.4	0.3	<0.2	32.4	<0.01	0.02	0.3	0.104	<0.02	<0.05	148	0.07	3.50	92	1.3
32	B1059937	Pulp	0.33	0.02	0.05	36.4	356	0.9	13.3	<0.001	0.48	0.22	11.4	0.3	0.3	45.6	<0.01	0.23	0.5	0.223	0.2	0.06	185	0.30	6.29	94	2.4
33	B1059938	Pulp	1.15	0.04	0.08	23.3	1091	1.6	32.8	<0.001	0.34	0.14	17.2	0.3	0.9	48.6	<0.01	0.05	2.6	0.151	0.29	0.36	161	0.06	6.93	70	11.3
34	B1059939	Pulp	2.02	0.04	0.10	31.8	1000	1.0	63.2	<0.001	0.57	0.19	12	<0.2	0.4	21.8	<0.01	0.33	2.6	0.219	0.52	0.31	151	0.60	9.38	55	19.6
35	B1059941	Pulp	0.89	0.09	0.07	63.8	750	1.1	52.7	0.001	0.63	0.21	5.2	0.9	0.2	45.3	<0.01	0.16	2.5	0.196	0.55	0.28	153	<0.05	11.04	104	9.7
36	B1059942	Pulp	0.33	0.02	0.05	57.6	334	0.9	15.8	0.002	0.10	0.11	13.7	0.2	0.3	15.8	0.02	0.01	0.4	0.095	0.16	<0.05	204	0.06	8.12	73	0.6
37	B1059943	Pulp	0.31	0.03	0.06	71.5	461	0.6	0.8	0.002	0.11	0.19	11.9	0.2	0.3	14.5	<0.01	<0.01	0.4	0.094	<0.02	0.05	275	<0.05	8.04	95	1.8
38	B1059944	Pulp	0.24	0.02	<0.05	85.8	463	0.8	0.5	0.002	0.19	0.36	5.1	0.4	<0.2	21	<0.01	0.01	<0.2	0.071	<0.02	<0.05	170	0.07	4.11	106	0.5
39	B1059945	Pulp	0.37	0.02	0.05	81.1	443	1.1	2.5	0.002	0.50	0.34	5	0.7	<0.2	22.4	<0.01	0.01	<0.2	0.072	0.03	<0.05	189	0.08	3.50	115	<0.5
40	B1059947	Pulp	0.67	0.02	0.12	25.4	1025	1.0	17.2	0.001	0.01	0.15	4.2	<0.2	0.3	34.3	<0.01	<0.01	1.6	0.151	0.12	0.21	104	0.34	7.90	95	8.0
41	B1059948	Pulp	0.93	0.03	0.11	31.3	964	1.8	36.1	0.001	0.18	0.14	6.5	<0.2	0.4	84.2	<0.01	0.03	2.2	0.191	0.25	0.31	125	0.80	11.22	189	16.0
42	B1059949	Pulp	0.78	0.03	0.12	29.7	1005	1.9	51.1	0.001	<0.01	0.12	5.7	<0.2	0.3	39.4	<0.01	0.01	2	0.247	0.29	0.25	132	0.63	6.66	119	0.7
43	B1059950	Pulp	1.54	0.03	0.11	27.9	1004	1.1	17.9	0.001	0.18	0.11	8.6	<0.2	0.5	89.2	<0.01	0.06	1.6	0.129	0.11	0.51	121	0.17	6.22	84	11.5
44	B1059951	Pulp	0.68	0.03	0.15	24.7	1007	1.1	26.8	0.001	0.02	0.14	8.6	<0.2	0.8	37.5	<0.01	0.01	1.8	0.145	0.15	0.25	125	0.15	5.43	93	11.0
45	B1059952	Pulp	0.34	0.05	<0.05	87.8	424	0.7	1.7	0.002	0.07	0.14	3.8	0.3	<0.2	20.1	<0.01	<0.01	<0.2	0.082	<0.02	<0.05	177	0.16	4.63	75	2.7
46	B1059953	Pulp	0.49	0.03	0.09	46.8	770	1.3	1.2	0.002	0.13	0.40	7.1	0.3	0.3	29.8	<0.01	<0.01	0.3	0.123	<0.02	<0.05	149	0.25	9.65		

S. No.	Sample ID	Method	IMS-130																													
			Silver (Ag)	Aluminum (Al)	Arsenic (As)	Gold (Au)	Boron (B)	Barium (Ba)	Beryllium (Be)	Bismuth (Bi)	Calcium (Ca)	Cadmium (Cd)	Cerium (Ce)	Cobalt (Co)	Chromium (Cr)	Cesium (Cs)	Copper (Cu)	Iron (Fe)	Gallium (Ga)	Germanium (Ge)	Hafnium (Hf)	Mercury (Hg)	Indium (In)	Potassium (K)	Lanthanum (La)	Lithium (Li)	Magnesium (Mg)	Manganese (Mn)	Molybdenum (Mo)	Sodium (Na)	Niobium (Nb)	Nickel (Ni)
Unit	MDL	Sample Type	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	
			0.01	0.01	0.1	0.0005	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1	0.05	0.2	0.01	0.05	0.05	0.02	0.005	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01	0.05	0.2

Job No: YVR2211186

Analytical Methods (IMS-130):

A 0.5 g of pulp sample is leached in hot (95°C) 3:1 aqua regia digestion followed by ICP Mass Spec analysis.
Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5 g).
Refractory and graphitic samples can limit Au solubility.

Abbreviations:

R / Rep = Replicate (a replicate is a sub-sample scooped from a single sample bag produced per client sample)
D / Dup = Duplicate (a duplicate is 2nd sub-sample bag produced by processing a second split of the original client sample received)
MDL = Measurable Detection Limit
IND = Indeterminate

On Certified Reference Material and Tolerance:

Any one element in a run reporting outside tolerance limits does not constitute failure of the standard.
As per Certificate of Analysis (COA): All values indicated are Certified. Values indicated in green are indicative only.
NR = Not Reported (in the Certificate Of Analysis).

CERTIFICATE OF ANALYSIS - MEND-SHAKE FLASK EXTRACTION RESULTS



PAGE: 5 of 6
 GLOBAL PROJECT NO: 1956 (B18)
 CLIENT: Wood PLC
 PROJECT NAME: Springpole
 PROJECT NO: ONS2104
 REPORT VERSION: 4

Parameter	Method	Unit	RDL	1	1R	3	4	6	7	11	13	15
				B1059901	B1059901 (Rep)	B1059903	B1059904	B1059906	B1059908	B1059912	B1059914	B1059916
Weight of dry sample used	Weighing Scale	g	0.01	250		250	250	250	250	250	250	250
Volume of DI water used	Graduated Cylinder	mL	0.50	750		750	750	750	750	750	750	750
On filtered samples (using 0.45 um filter paper):												
pH	Meter	pH units	0.01	6.8		7.0	7.0	7.1	7.0	7.2	7.3	7.2
EC	Meter	uS/cm	1.0	54		60	55	53	67	54	51	66
Acidity (to pH 8.3)	Titration	mg CaCO ₃ /L	0.5	15.0		13.5	11.9	9.7	10.7	9.4	8.3	10.6
Total Alkalinity (to pH 4.5)	Titration	mg CaCO ₃ /L	0.5	34.2		38.9	37.7	35.9	38.1	37.4	35.2	42.7
Sulphate	Colourimetry	mg/L	0.5	2.8		3.4	0.5	<0.5	4.2	2.8	0.5	0.5
Phosphorous	IC	mg/L	0.0050	0.0081		0.0078	0.0056	0.0055	0.0069	0.0092	0.0105	0.0061
Dissolved Metals Analysis by ICP-MS:												
Dissolved Hardness (CaCO ₃)	ICP-MS	mg/L	0.125	29.1		32.8	30.2	27.0	25.4	25.4	21.6	34.7
Aluminum Dissolved	ICP-MS	mg/L	0.001	0.338	0.339	0.498	0.339	0.557	0.285	0.594	0.632	0.483
Antimony Dissolved	ICP-MS	mg/L	0.00005	0.00199	0.00203	0.00197	0.000522	0.00526	0.000678	0.00134	0.00259	0.00097
Arsenic Dissolved	ICP-MS	mg/L	0.00005	0.00487	0.00488	0.000718	0.00031	0.000594	0.000707	0.000888	0.00163	0.000107
Barium Dissolved	ICP-MS	mg/L	0.0001	0.0028	0.00279	0.00684	0.00226	0.00058	0.00742	0.00326	0.00722	0.0127
Beryllium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Boron Dissolved	ICP-MS	mg/L	0.002	0.0044	0.0044	0.0054	0.0043	0.0043	0.0038	0.0102	0.0079	0.0046
Cadmium Dissolved	ICP-MS	mg/L	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000023	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Calcium Dissolved	ICP-MS	mg/L	0.05	10.2	10.3	11.8	11.2	9.9	8.9	9.1	7.9	12.5
Chromium Dissolved	ICP-MS	mg/L	0.0001	0.0002	0.0003	0.0003	0.0003	0.0002	0.0002	0.0003	0.0002	0.0002
Cobalt Dissolved	ICP-MS	mg/L	0.000005	0.0000226	0.0000224	0.0000091	0.0000061	0.0000074	0.0000135	0.0000076	0.0000072	0.0000071
Copper Dissolved	ICP-MS	mg/L	0.0001	0.0004	0.00042	0.00026	0.00041	0.00022	0.00024	0.0002	0.0021	0.0021
Iron Dissolved	ICP-MS	mg/L	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lead Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium Dissolved	ICP-MS	mg/L	0.00005	0.0004	0.0004	0.0004	0.0002	0.0002	0.0019	0.0004	0.0004	0.0006
Magnesium Dissolved	ICP-MS	mg/L	0.005	0.8	0.8	0.8	0.6	0.5	0.8	0.6	0.4	0.9
Manganese Dissolved	ICP-MS	mg/L	0.00005	0.00503	0.00509	0.00695	0.00559	0.00808	0.0173	0.00356	0.00411	0.0132
Mercury Dissolved	CVAE	ug/L	0.005	<0.0050		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Molybdenum Dissolved	ICP-MS	mg/L	0.00001	0.000656	0.000661	0.000379	0.000102	0.000084	0.00192	0.000254	0.000352	0.00014
Nickel Dissolved	ICP-MS	mg/L	0.00004	0.000279	0.000251	0.000236	0.000091	0.000101	0.000074	0.000097	0.000169	0.000193
Phosphorus Dissolved	ICP-MS	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Potassium Dissolved	ICP-MS	mg/L	0.02	0.665	0.672	0.786	0.512	0.861	6.11	2.1	4.18	1.47
Selenium Dissolved	ICP-MS	mg/L	0.0001	0.00019	0.00019	0.00018	0.00038	0.00011	<0.00010	<0.00010	<0.00010	<0.00010
Silicon Dissolved	ICP-MS	mg/L	0.1	0.9	0.9	0.64	0.52	0.71	1.03	0.95	1.01	0.62
Silver Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	0.000014	<0.000010	<0.000010	0.000049	<0.000010	<0.000010	<0.000010
Sodium Dissolved	ICP-MS	mg/L	0.02	1.02	1.03	0.586	0.443	1.22	1.64	1.46	1.03	0.95
Strontium Dissolved	ICP-MS	mg/L	0.0001	0.00876	0.00898	0.017	0.0095	0.0139	0.025	0.0263	0.0223	0.0174
Sulphur Dissolved	ICP-MS	mg/L	1	<1.00	<1.00	<1.00	<1.00	<1.00	2.0	<1.00	<1.00	<1.00
Tellurium Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Thallium Dissolved	ICP-MS	mg/L	0.000004	0.0000061	0.0000079	0.000006	<0.000040	<0.000040	0.0000129	0.000005	0.0000056	0.0000052
Thorium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	0.000053	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000064
Titanium Dissolved	ICP-MS	mg/L	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00029	<0.00020
Tungsten Dissolved	ICP-MS	mg/L	0.0002	0.00042	0.00043	0.00039	<0.00020	0.00022	0.00105	0.00029	0.00026	0.00023
Uranium Dissolved	ICP-MS	mg/L	0.000001	0.0000013	<0.0000010	0.0000198	0.0000013	<0.0000010	0.000022	0.0000017	0.0000036	0.0000015
Vanadium Dissolved	ICP-MS	mg/L	0.001	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00125	0.00102	0.00135	<0.00100
Zinc Dissolved	ICP-MS	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zirconium Dissolved	ICP-MS	mg/L	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Ion Balance:												
Major Anions	Calc.	meq/L		0.74	0.74	0.85	0.76	0.72	0.85	0.81	0.71	0.86
Major Cations	Calc.	meq/L		0.68	0.69	0.76	0.68	0.68	0.77	0.69	0.66	0.83
Difference	Calc.	meq/L		-0.06	-0.06	-0.09	-0.09	-0.04	-0.08	-0.11	-0.06	-0.03
Balance (%)	Calc.	%		-4.4%	-3.9%	-5.6%	-6.1%	-2.9%	-4.9%	-7.4%	-4.2%	-2.0%
Shake Flask Extract ID:				22J2846-01	22J2846-01	22J2846-02	22J2846-03	22J2846-04	22J2846-05	22J2846-06	22J2846-07	22J2846-08

NOTES:

Job No: 22J2846, 23A0635
 Date of Analysis (24 h): October 19-20, 2022; January 11-12, 2022
 pH of DI water used (pH Units): 5.84
 EC of DI water used (uS/cm): 1.27

ABBREVIATIONS:

R / Rep = Replicate (which involves the analysis of the same Shake Flask Extract aliquot).
 D / Dup = Duplicate (produced by processing a second split of the original client sample received).
 Calc. = Calculation
 EC = Electrical Conductivity
 IC = Ion Chromatography
 N/A = Not Applicable.
 mg/L = Milligrams per Litre

REFERENCE:

Prediction Manual for Drainage Chemistry from Sulphidic Geologic Material, MEND Report 1.20.1; Sec 11.5; P 11 (8-9).
 Extraction Method used: Using gyratory shaker for 24 h (± 2 h; gentle agitation).
 Liquid: Solid ratio used: 3: 1; L: S; 750 mL DI H₂O: 250 g of homogenized as received material.

CERTIFICATE OF ANALYSIS • MEND-SHAKE FLASK EXTRACTION RESULTS



PAGE:
GLOBAL PROJECT NO:
CLIENT:
PROJECT NAME:
PROJECT NO:
REPORT VERSION:

Parameter	Method	Unit	RDL	16	17	17D	19	25	27	29	31	32
				B1059917	B1059918	B1059918 (Dup)	B1059921	B1059930	B1059932	B1059934	B1059936	B1059937
Weight of dry sample used	Weighing Scale	g	0.01	250	250	250	250	250	250	250	250	250
Volume of DI water used	Graduated Cylinder	mL	0.50	750	750	750	750	750	750	750	750	750
On filtered samples (using 0.45 um filter paper):												
pH	Meter	pH units	0.01	7.2	7.2	7.2	7.2	7.2	7.2	7.1	7.2	7.2
EC	Meter	uS/cm	1.0	59	48	45	51	53	51	58	45	50
Acidity (to pH 8.3)	Titration	mg CaCO ₃ /L	0.5	9.0	8.2	8.0	7.7	7.9	8.2	9.1	7.6	7.7
Total Alkalinity (to pH 4.5)	Titration	mg CaCO ₃ /L	0.5	39.4	33.3	33.7	33.3	36.5	35.2	37.5	31.8	33.4
Sulphate	Colourimetry	mg/L	0.5	2.8	3.7	3.2	<0.5	<0.5	<0.5	3.1	<0.5	2.9
Phosphorous	IC	mg/L	0.0050	0.0063	0.0071	0.0056	0.0064	0.0057	0.0076	0.0077	0.0088	0.0074
Dissolved Metals Analysis by ICP-MS:												
Dissolved Hardness (CaCO ₃)	ICP-MS	mg/L	0.125	30.9	24.4	25.9	26.5	25.0	25.3	29.0	23.9	24.5
Aluminum Dissolved	ICP-MS	mg/L	0.001	0.491	0.478	0.482	0.381	0.341	0.359	0.273	0.393	0.33
Antimony Dissolved	ICP-MS	mg/L	0.00005	0.00256	0.00136	0.00156	0.000561	0.000595	0.000367	0.000765	0.000495	0.000495
Arsenic Dissolved	ICP-MS	mg/L	0.00005	0.000234	0.00018	0.000182	0.000176	0.000244	0.000205	0.00022	0.000177	0.000273
Barium Dissolved	ICP-MS	mg/L	0.0001	0.00105	0.00134	0.00131	0.00225	0.00274	0.00272	0.0181	0.00471	0.00531
Beryllium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Boron Dissolved	ICP-MS	mg/L	0.002	0.0051	0.0042	0.0045	0.0036	0.0075	0.0086	0.0074	0.0068	0.0084
Cadmium Dissolved	ICP-MS	mg/L	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Calcium Dissolved	ICP-MS	mg/L	0.05	11.3	8.8	9.4	9.5	8.5	8.8	10.0	8.2	8.6
Chromium Dissolved	ICP-MS	mg/L	0.0001	0.0002	0.0003	0.0003	0.0003	0.0002	0.0002	0.0004	0.0002	0.0002
Cobalt Dissolved	ICP-MS	mg/L	0.000005	0.0000089	0.0000123	0.0000082	<0.0000050	0.0000075	0.0000058	0.0000161	0.0000091	0.0000193
Copper Dissolved	ICP-MS	mg/L	0.0001	0.0002	0.00025	0.00011	0.00028	0.00039	0.00032	0.00037	0.00034	0.00035
Iron Dissolved	ICP-MS	mg/L	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lead Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium Dissolved	ICP-MS	mg/L	0.00005	0.0005	0.0003	0.0004	0.0002	0.0003	0.0003	0.0007	0.0003	0.0004
Magnesium Dissolved	ICP-MS	mg/L	0.005	0.7	0.6	0.6	0.7	0.9	0.8	1.0	0.9	0.7
Manganese Dissolved	ICP-MS	mg/L	0.00005	0.0098	0.0103	0.00854	0.0111	0.0141	0.00986	0.0233	0.00746	0.0151
Mercury Dissolved	CVAE	ug/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Molybdenum Dissolved	ICP-MS	mg/L	0.00001	0.000225	0.000101	0.000116	0.000064	0.000046	0.000058	0.000139	0.000073	0.000118
Nickel Dissolved	ICP-MS	mg/L	0.00004	0.000171	0.000357	0.000329	0.000052	0.000139	0.000089	0.000351	0.000141	0.000229
Phosphorus Dissolved	ICP-MS	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Potassium Dissolved	ICP-MS	mg/L	0.02	2.09	0.741	0.779	0.436	0.869	0.686	1.91	0.589	1.32
Selenium Dissolved	ICP-MS	mg/L	0.0001	0.00012	0.00014	0.00016	<0.00010	<0.00010	<0.00010	0.00632	<0.00010	<0.00010
Silicon Dissolved	ICP-MS	mg/L	0.1	0.63	0.61	0.62	0.49	0.61	0.59	0.66	0.66	0.68
Silver Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	0.000113	<0.000010	<0.000010	<0.000010	<0.000010	0.000025
Sodium Dissolved	ICP-MS	mg/L	0.02	0.488	1.22	1.29	0.912	2.26	1.88	1.05	0.921	1.32
Strontium Dissolved	ICP-MS	mg/L	0.0001	0.0173	0.015	0.0165	0.0333	0.0412	0.0442	0.0485	0.0423	0.0425
Sulphur Dissolved	ICP-MS	mg/L	1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Tellurium Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Thallium Dissolved	ICP-MS	mg/L	0.000004	0.0000086	0.000005	0.0000067	0.0000046	0.0000054	0.0000043	0.0000119	0.0000042	0.0000143
Thorium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin Dissolved	ICP-MS	mg/L	0.00005	0.000074	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Titanium Dissolved	ICP-MS	mg/L	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tungsten Dissolved	ICP-MS	mg/L	0.0002	0.00044	0.00053	0.00063	<0.00020	<0.00020	<0.00020	0.00105	0.00024	0.00037
Uranium Dissolved	ICP-MS	mg/L	0.000001	0.0000022	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010
Vanadium Dissolved	ICP-MS	mg/L	0.001	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Zinc Dissolved	ICP-MS	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zirconium Dissolved	ICP-MS	mg/L	0.00002	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.00004
Ion Balance:												
Major Anions	Calc.	meq/L		0.85	0.74	0.74	0.87	0.73	0.70	0.81	0.64	0.73
Major Cations	Calc.	meq/L		0.75	0.61	0.65	0.62	0.66	0.65	0.71	0.58	0.62
Difference	Calc.	meq/L		-0.10	-0.13	-0.09	-0.04	-0.07	-0.06	-0.11	-0.06	-0.11
Balance (%)	Calc.	%		-6.1%	-9.5%	-6.7%	-3.2%	-4.9%	-4.2%	-7.0%	-4.8%	-8.0%
Shake Flask Extract ID:				22J2846-09	22J2846-10	22J2846-11	22J2846-12	22J2846-13	22J2846-14	22J2846-15	22J2846-16	22J2846-17

Parameter	Method	Unit	RDL	34	36	38	39	39R	39D	41	42	43
				B1059939	B1059942	B1059944	B1059945	B1059945 (Rep)	B1059945 (Dup)	B1059948	B1059949	B1059950
Weight of dry sample used	Weighing Scale	g	0.01	250	250	250	250		250	250	250	250
Volume of DI water used	Graduated Cylinder	mL	0.50	750	750	750	750		750	750	750	750
On filtered samples (using 0.45 um filter paper):												
pH	Meter	pH units	0.01	7.3	7.3	7.3	7.3		7.3	7.4	7.6	7.5
EC	Meter	uS/cm	1.0	56	53	46	53		55	53	55	55
Acidity (to pH 8.3)	Titration	mg CaCO ₃ /L	0.5	7.6	7.3	6.8	6.6		6.3	5.4	4.2	4.5
Total Alkalinity (to pH 4.5)	Titration	mg CaCO ₃ /L	0.5	35.6	37.9	35.7	37.3		37.7	34.5	36.1	34.4
Sulphate	Colourimetry	mg/L	0.5	0.5	0.5	<0.5	<0.5		0.5	0.5	<0.5	2.8
Phosphorous	IC	mg/L	0.0050	0.0128	0.0070	0.0062	0.0052		<0.005	0.0057	0.0074	0.0084
Dissolved Metals Analysis by ICP-MS:												
Dissolved Hardness (CaCO ₃)	ICP-MS	mg/L	0.125	22.7	26.5	28.0	28.6		30.9	22.2	18.0	21.9
Aluminum Dissolved	ICP-MS	mg/L	0.001	0.511	0.447	0.41	0.435	0.441	0.454	0.552	0.687	0.576
Antimony Dissolved	ICP-MS	mg/L	0.00005	0.0021	0.000674	0.0005	0.000735	0.000768	0.000833	0.000653	0.000433	0.000499
Arsenic Dissolved	ICP-MS	mg/L	0.00005	0.00333	0.000644	<0.000050	0.000057	<0.000054	0.000056	0.00139	0.000817	0.000304
Barium Dissolved	ICP-MS	mg/L	0.0001	0.00261	0.00163	0.0007	0.00193	0.00181	0.00203	0.00187	0.00272	0.00204
Beryllium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Boron Dissolved	ICP-MS	mg/L	0.002	0.068	0.083	0.069	0.047	0.046	0.0051	0.0062	0.0062	0.0087
Cadmium Dissolved	ICP-MS	mg/L	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Calcium Dissolved	ICP-MS	mg/L	0.05	8.1	9.4	9.9	10.3	10.3	11.1	8.0	6.3	7.7
Chromium Dissolved	ICP-MS	mg/L	0.0001	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003
Cobalt Dissolved	ICP-MS	mg/L	0.000005	0.0000089	0.0000075	0.0000155	0.0000197	0.0000199	0.0000137	0.0000149	0.0000067	0.0000061
Copper Dissolved	ICP-MS	mg/L	0.0001	0.00043	0.00038	0.00166	0.00024	0.00025	<0.00010	0.00036	0.00031	0.00026
Iron Dissolved	ICP-MS	mg/L	0.002	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	0.0027	<0.0020
Lead Dissolved	ICP-MS	mg/L	0.00005	<0.000050	0.0000527	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium Dissolved	ICP-MS	mg/L	0.00005	0.0013	0.0006	0.0002	0.0002	0.0002	0.0002	0.0008	0.0010	0.0004
Magnesium Dissolved	ICP-MS	mg/L	0.005	0.6	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.7
Manganese Dissolved	ICP-MS	mg/L	0.00005	0.0153	0.0195	0.0125	0.0182	0.0182	0.0169	0.00773	0.00399	0.00396
Mercury Dissolved	CVAE	ug/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Molybdenum Dissolved	ICP-MS	mg/L	0.00001	0.000614	0.0001	0.000074	0.00033	0.000332	0.000379	0.000311	0.000718	0.000216
Nickel Dissolved	ICP-MS	mg/L	0.00004	0.000139	0.000133	0.000528	0.000459	0.00043	0.000395	0.0003	0.000128	0.000068
Phosphorus Dissolved	ICP-MS	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Potassium Dissolved	ICP-MS	mg/L	0.02	4.48	2.63	0.641	0.924	0.923	0.971	3.41	5.96	2.39
Selenium Dissolved	ICP-MS	mg/L	0.0001	<0.00010	<0.00010	<0.00010	0.0001	0.00011	0.00012	<0.00010	<0.00010	<0.00010
Silicon Dissolved	ICP-MS	mg/L	0.1	1.04	0.56	0.47	0.48	0.47	0.5	0.94	1.21	0.86
Silver Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	0.000035	0.000041	<0.000010	<0.000010	<0.000010	0.000011
Sodium Dissolved	ICP-MS	mg/L	0.02	1.56	1.31	1.12	1.2	1.2	1.28	1.62	2.55	3.02
Strontium Dissolved	ICP-MS	mg/L	0.0001	0.0306	0.054	0.0438	0.0312	0.0314	0.0339	0.0183	0.0146	0.0254
Sulphur Dissolved	ICP-MS	mg/L	1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Tellurium Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Thallium Dissolved	ICP-MS	mg/L	0.000004	0.0000065	0.0000051	<0.0000040	0.0000056	0.0000071	0.0000052	0.0000053	0.0000048	<0.0000040
Thorium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	0.000057	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Titanium Dissolved	ICP-MS	mg/L	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00023	<0.00020
Tungsten Dissolved	ICP-MS	mg/L	0.0002	0.00057	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00079	0.00092	0.0004
Uranium Dissolved	ICP-MS	mg/L	0.000001	0.0000124	<0.0000010	<0.0000010	<0.0000010	<0.0000010	<0.0000010	0.0000092	0.0000117	0.0000031
Vanadium Dissolved	ICP-MS	mg/L	0.001	0.00187	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00116	0.00219	0.00103
Zinc Dissolved	ICP-MS	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zirconium Dissolved	ICP-MS	mg/L	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Ion Balance:												
Major Anions	Calc.	meq/L		0.72	0.77	0.71	0.75	0.75	0.76	0.70	0.72	0.75
Major Cations	Calc.	meq/L		0.69	0.71	0.67	0.70	0.70	0.75	0.66	0.70	0.70
Difference	Calc.	meq/L		-0.03	-0.06	-0.04	-0.05	-0.05	-0.01	-0.04	-0.02	-0.05
Balance (%)	Calc.	%		-2.0%	-4.1%	-2.9%	-3.4%	-3.3%	-0.9%	-2.6%	-1.5%	-3.4%
Shake Flask Extract ID:				22J2846-18	22J2846-19	22J2846-20	22J2846-21	22J2846-21	22J2846-22	22J2846-23	22J2846-24	22J2846-25

Parameter	Method	Unit	RDL	45	47	49	51	52	52D	54	55	56
				B1059952	B1059954	B1059958	B1059961	B1059962	B1059962 (Dup)	B1059964	B1059965	B1059966
Weight of dry sample used	Weighing Scale	g	0.01	250	250	250	250	250	250	250	250	250
Volume of DI water used	Graduated Cylinder	mL	0.50	750	750	750	750	750	750	750	750	750
On filtered samples (using 0.45 um filter paper):												
pH	Meter	pH units	0.01	7.4	6.8	7.5	7.0	7.2	7.3	7.5	7.4	7.4
EC	Meter	uS/cm	1.0	48	66	74	86	132	177	61	68	74
Acidity (to pH 8.3)	Titration	mg CaCO ₃ /L	0.5	5.3	13.1	12.1	5.7	7.1	14.0	5.5	6.0	6.1
Total Alkalinity (to pH 4.5)	Titration	mg CaCO ₃ /L	0.5	33.6	35.3	37.9	32.0	31.7	32.2	41.0	41.9	42.3
Sulphate	Colourimetry	mg/L	0.5	<0.5	<0.5	<0.5	4.9	46.5	52.0	<0.5	3.9	6.9
Phosphorous	IC	mg/L	0.0050	0.0056	0.0066	0.0080	0.0050	0.0070	0.0062	0.0055	0.0054	0.0052
Dissolved Metals Analysis by ICP-MS:												
Dissolved Hardness (CaCO ₃)	ICP-MS	mg/L	0.125	22.4	31.1	30.1	31.7	62.3	67.5	28.2	33.9	37.1
Aluminum Dissolved	ICP-MS	mg/L	0.001	0.418	0.309	0.297	0.1	0.319	0.186	0.571	0.448	0.314
Antimony Dissolved	ICP-MS	mg/L	0.00005	0.000484	0.000599	0.000478	0.000252	0.000392	0.000262	0.00324	0.00614	0.00117
Arsenic Dissolved	ICP-MS	mg/L	0.00005	0.000253	0.000288	0.00007	0.000584	0.000152	0.000174	0.000489	0.00028	0.000224
Barium Dissolved	ICP-MS	mg/L	0.0001	0.00165	0.00164	0.00248	0.012	0.00218	0.00264	0.00082	0.00079	0.00085
Beryllium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Boron Dissolved	ICP-MS	mg/L	0.002	0.0047	0.0056	0.0048	0.0176	0.0055	0.0053	0.0053	0.0039	0.0045
Cadmium Dissolved	ICP-MS	mg/L	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000070	0.0000044	0.0000077	<0.0000020	0.0000024	<0.0000020
Calcium Dissolved	ICP-MS	mg/L	0.05	7.5	11.1	10.3	10.5	23.3	25.4	10.1	12.5	13.3
Chromium Dissolved	ICP-MS	mg/L	0.0001	0.0003	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003
Cobalt Dissolved	ICP-MS	mg/L	0.000005	0.0000061	0.0000114	0.0000094	0.0000177	0.0000546	0.0000956	0.0000078	0.0000103	0.0000221
Copper Dissolved	ICP-MS	mg/L	0.0001	0.0003	0.0002	0.00014	0.00059	0.00069	0.0004	0.00033	0.00123	0.00086
Iron Dissolved	ICP-MS	mg/L	0.002	0.0024	<0.0020	<0.0020	0.0102	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Lead Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium Dissolved	ICP-MS	mg/L	0.00005	0.0002	0.0004	0.0004	0.0012	0.0010	0.0010	0.0004	0.0003	0.0005
Magnesium Dissolved	ICP-MS	mg/L	0.005	0.9	0.8	1.1	1.3	1.0	1.0	0.7	0.6	0.9
Manganese Dissolved	ICP-MS	mg/L	0.00005	0.00323	0.0105	0.0112	0.0104	0.019	0.0334	0.0142	0.0106	0.0189
Mercury Dissolved	CVAE	ug/L	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Molybdenum Dissolved	ICP-MS	mg/L	0.00001	0.00013	0.000393	0.00018	0.0111	0.000743	0.000803	0.000112	0.00201	0.00114
Nickel Dissolved	ICP-MS	mg/L	0.00004	0.00012	0.00067	0.000219	0.000267	0.00103	0.00164	0.000162	0.00126	0.00113
Phosphorus Dissolved	ICP-MS	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Potassium Dissolved	ICP-MS	mg/L	0.02	1.06	0.576	1.27	2.15	4.47	3.14	4.78	3.14	3.03
Selenium Dissolved	ICP-MS	mg/L	0.0001	<0.00010	0.00034	<0.00010	0.00021	0.00126	0.00144	<0.00010	0.00027	0.00044
Silicon Dissolved	ICP-MS	mg/L	0.1	0.97	0.53	0.57	1.34	0.71	0.68	0.62	0.63	0.62
Silver Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000039
Sodium Dissolved	ICP-MS	mg/L	0.02	1.99	0.643	1.77	4.09	0.9	0.685	0.495	0.487	0.598
Strontium Dissolved	ICP-MS	mg/L	0.0001	0.0284	0.0198	0.0353	0.141	0.0253	0.0311	0.0245	0.026	0.0434
Sulphur Dissolved	ICP-MS	mg/L	1	<1.00	<1.00	<1.00	1.2	16.5	18.0	<1.00	1.2	2.3
Tellurium Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Thallium Dissolved	ICP-MS	mg/L	0.000004	0.0000045	<0.0000040	0.0000137	0.0000105	0.0000067	<0.0000040	0.0000097	0.0000056	0.0000174
Thorium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	0.000052	<0.000050	<0.000050	<0.000050	<0.000050	0.000056	<0.000050
Titanium Dissolved	ICP-MS	mg/L	0.0002	<0.00020	<0.00020	<0.00020	0.00069	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tungsten Dissolved	ICP-MS	mg/L	0.0002	0.00973	0.00033	0.0003	0.00118	<0.00020	<0.00020	0.0004	<0.00020	0.00022
Uranium Dissolved	ICP-MS	mg/L	0.000001	<0.0000010	0.0000013	<0.0000010	0.0000369	0.0000807	0.000128	0.000002	0.0000103	0.0000239
Vanadium Dissolved	ICP-MS	mg/L	0.001	0.00135	<0.00100	<0.00100	0.00142	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Zinc Dissolved	ICP-MS	mg/L	0.001	<0.0010	<0.0010	<0.0010	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zirconium Dissolved	ICP-MS	mg/L	0.00002	<0.000020	0.00003	<0.000020	0.00013	0.00028	<0.000020	<0.000020	<0.000020	<0.000020
Ion Balance:												
Major Anions	Calc.	meq/L		0.67	0.71	0.76	0.74	1.60	1.73	0.82	0.92	0.99
Major Cations	Calc.	meq/L		0.61	0.70	0.75	0.89	1.43	1.48	0.77	0.83	0.88
Difference	Calc.	meq/L		-0.06	0.00	-0.01	0.15	-0.17	-0.24	-0.05	-0.09	-0.11
Balance (%)	Calc.	%		-4.8%	-3%	-0.7%	8.9%	-5.5%	-7.6%	-2.9%	-5.1%	-5.9%
Shake Flask Extract ID:				22J2846-26	22K1866-01	22K1866-02	23A0635-01	22J2846-27	22K1866-03	22J2846-28	22J2846-29	22J2846-30

EXTRACTION RESULTS

PAGE: 5 of 6
GLOBAL PROJECT NO: 1956 (B18)
CLIENT: Wood PLC
PROJECT NAME: Springpole
PROJECT NO: ONS2104
REPORT VERSION: 4

CERTIFICATE OF ANALYSIS

Parameter	Method	Unit	RDL	59	61	61R	61D	63	64	67	68	69
				B1059969	B1059971	B1059971 (Rep)	B1059971 (Dup)	B1059973	B1059975	B1059990	B1059991	B1059992
Weight of dry sample used	Weighing Scale	g	0.01	250	250		250	250	250	250	250	250
Volume of DI water used	Graduated Cylinder	mL	0.50	750	750		750	750	750	750	750	750
On filtered samples (using 0.45 um filter paper):												
pH	Meter	pH units	0.01	7.5	7.5		7.5	7.5	7.4	7.5	7.5	7.5
EC	Meter	uS/cm	1.0	66	58		57	59	52	58	59	57
Acidity (to pH 8.3)	Titration	mg CaCO ₃ /L	0.5	5.6	4.8		4.6	5.3	5.2	4.6	5.0	4.2
Total Alkalinity (to pH 4.5)	Titration	mg CaCO ₃ /L	0.5	44.6	37.1		37.3	42.9	37.5	39.2	38.5	36.5
Sulphate	Colourimetry	mg/L	0.5	0.5			0.5	<0.5	<0.5	0.5	3.1	2.9
Phosphorous	IC	mg/L	0.0050	<0.0050	<0.0050		0.0055	<0.0050	0.0051	0.0057	0.0050	0.0062
Dissolved Metals Analysis by ICP-MS:												
Dissolved Hardness (CaCO ₃)	ICP-MS	mg/L	0.125	31.9	28.3		29.2	32.0	28.2	31.1	30.3	27.2
Aluminum Dissolved	ICP-MS	mg/L	0.001	0.512	0.399	0.398	0.406	0.453	0.328	0.462	0.496	0.531
Antimony Dissolved	ICP-MS	mg/L	0.00005	0.0005	0.00482	0.00472	0.00591	0.00334	0.00124	0.00214	0.002	0.00187
Arsenic Dissolved	ICP-MS	mg/L	0.00005	0.000198	0.000497	0.00501	0.00564	0.000085	0.000805	0.00031	0.000797	0.00042
Barium Dissolved	ICP-MS	mg/L	0.0001	0.00698	0.00161	0.00164	0.0018	0.00694	0.00123	0.00125	0.00303	0.0022
Beryllium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Boron Dissolved	ICP-MS	mg/L	0.002	0.0056	0.0461	0.0454	0.0532	0.008	0.008	0.0118	0.0119	0.0122
Cadmium Dissolved	ICP-MS	mg/L	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000024
Calcium Dissolved	ICP-MS	mg/L	0.05	11.6	9.9	9.9	10.1	11.1	9.7	11.5	11.1	9.8
Chromium Dissolved	ICP-MS	mg/L	0.0001	0.0002	0.0002	0.0003	0.0003	0.0002	0.0002	0.0003	0.0002	0.0002
Cobalt Dissolved	ICP-MS	mg/L	0.000005	0.000016	0.0000273	0.0000291	0.0000287	0.0000143	0.0000101	0.0000538	0.0000327	0.0000345
Copper Dissolved	ICP-MS	mg/L	0.0001	0.00054	0.00013	0.00014	0.00116	0.00028	0.00026	0.00022	0.00026	0.00026
Iron Dissolved	ICP-MS	mg/L	0.002	<0.0020	0.0024	0.0025	0.0067	<0.0020	0.0022	<0.0020	<0.0020	<0.0020
Lead Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium Dissolved	ICP-MS	mg/L	0.00005	0.0006	0.0004	0.0004	0.0004	0.0003	0.0003	0.0003	0.0004	0.0002
Magnesium Dissolved	ICP-MS	mg/L	0.005	0.7	0.9	0.9	1.0	1.0	1.0	0.6	0.6	0.6
Manganese Dissolved	ICP-MS	mg/L	0.00005	0.0137	0.00704	0.00705	0.0061	0.00867	0.00543	0.0139	0.0124	0.00768
Mercury Dissolved	CVAE	ug/L	0.005	<0.0050	<0.0050	<0.000020	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Molybdenum Dissolved	ICP-MS	mg/L	0.00001	0.000073	0.000167	0.000168	0.0002	0.000105	0.000072	0.000081	0.000091	0.00006
Nickel Dissolved	ICP-MS	mg/L	0.00004	0.000932	0.00063	0.000685	0.000756	0.00069	0.000184	0.000479	0.000759	0.000665
Phosphorus Dissolved	ICP-MS	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Potassium Dissolved	ICP-MS	mg/L	0.02	1.87	0.948	0.951	1.03	2.63	0.516	0.246	1.33	1.52
Selenium Dissolved	ICP-MS	mg/L	0.0001	0.00015	0.00023	0.00022	0.00027	<0.00010	<0.00010	<0.00010	0.00016	0.00017
Silicon Dissolved	ICP-MS	mg/L	0.1	0.66	1.2	1.18	1.28	0.5	1	0.55	0.68	0.67
Silver Dissolved	ICP-MS	mg/L	0.00001	<0.000010	0.000017	0.000011	0.000014	<0.000010	<0.000010	<0.000010	0.000019	<0.000010
Sodium Dissolved	ICP-MS	mg/L	0.02	2.27	2.51	2.52	2.82	1.1	1.49	1.36	0.982	1.5
Strontium Dissolved	ICP-MS	mg/L	0.0001	0.0214	0.0549	0.0555	0.06	0.0385	0.0125	0.016	0.0176	0.0154
Sulphur Dissolved	ICP-MS	mg/L	1	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Tellurium Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Thallium Dissolved	ICP-MS	mg/L	0.000004	0.0000062	0.0000065	0.0000063	0.0000072	0.000023	<0.000040	<0.000040	0.000074	0.000045
Thorium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Tin Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	0.000052	<0.000050	<0.000050	0.000053	<0.000050	<0.000050	<0.000050
Titanium Dissolved	ICP-MS	mg/L	0.0002	<0.00020	<0.00020	<0.00020	0.00038	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Tungsten Dissolved	ICP-MS	mg/L	0.0002	0.00043	0.00138	0.00137	0.00166	0.00026	0.00062	0.00068	0.00071	0.00081
Uranium Dissolved	ICP-MS	mg/L	0.000001	0.0000012	0.0000014	0.0000017	0.0000024	<0.000010	<0.000010	<0.000010	0.000012	<0.000010
Vanadium Dissolved	ICP-MS	mg/L	0.001	<0.00100	0.0016	0.00165	0.00176	<0.00100	0.00114	<0.00100	<0.00100	<0.00100
Zinc Dissolved	ICP-MS	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zirconium Dissolved	ICP-MS	mg/L	0.00002	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Ion Balance:												
Major Anions	Calc.	meq/L		0.90	0.75	0.75	0.76	0.96	0.75	0.79	0.83	0.79
Major Cations	Calc.	meq/L		0.84	0.76	0.76	0.79	0.81	0.68	0.74	0.74	0.71
Difference	Calc.	meq/L		-0.06	0.01	0.00	0.04	-0.05	-0.07	-0.05	-0.09	-0.08
Balance (%)	Calc.	%		-3.4%	0.4%	0.3%	2.5%	-3.1%	-4.9%	-3.4%	-6.0%	-5.3%
Shake Flask Extract ID:				22J2846-31	22J2846-32	22J2846-32	22J2846-33	22J2846-34	22J2846-35	22J2846-36	22J2846-37	22J2846-38

ALYSIS - MEND-SHAKE FLASK EXTRACTION RESULTS

PAGE: 5 of 6
GLOBAL PROJECT NO: 1956 (B18)
CLIENT: Wood PLC
PROJECT NAME: Springpole
PROJECT NO: ONS2104
REPORT VERSION: 4

Parameter	Method	Unit	RDL	70	71	72	Method Blank
				B1059994	B1059995	B1059996	
Weight of dry sample used	Weighing Scale	g	0.01	250	250	250	
Volume of DI water used	Graduated Cylinder	mL	0.50	750	750	750	750
On filtered samples (using 0.45 um filter paper):							
pH	Meter	pH units	0.01	7.6	7.6	7.5	5.8
EC	Meter	uS/cm	1.0	67	65	64	1.2
Acidity (to pH 8.3)	Titration	mg CaCO ₃ /L	0.5	4.5	4.5	4.8	2.8
Total Alkalinity (to pH 4.5)	Titration	mg CaCO ₃ /L	0.5	44.3	45.1	41.6	1.3
Sulphate	Colourimetry	mg/L	0.5	<0.5	2.9	<0.5	<0.5
Phosphorous	IC	mg/L	0.0050	<0.0050	0.0066	0.0066	
Dissolved Metals Analysis by ICP-MS:							
Dissolved Hardness (CaCO ₃)	ICP-MS	mg/L	0.125	31.3	31.8	33.8	<0.125
Aluminum Dissolved	ICP-MS	mg/L	0.001	0.507	0.509	0.406	<0.0010
Antimony Dissolved	ICP-MS	mg/L	0.00005	0.00099	0.00112	0.00115	<0.000050
Arsenic Dissolved	ICP-MS	mg/L	0.00005	0.000195	0.000258	0.000166	<0.000050
Barium Dissolved	ICP-MS	mg/L	0.0001	0.00251	0.00189	0.00254	<0.00010
Beryllium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010
Boron Dissolved	ICP-MS	mg/L	0.002	0.0068	0.0064	0.0059	<0.0020
Cadmium Dissolved	ICP-MS	mg/L	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Calcium Dissolved	ICP-MS	mg/L	0.05	11.7	11.6	11.9	<0.050
Chromium Dissolved	ICP-MS	mg/L	0.0001	0.0002	0.0002	0.0003	0.0003
Cobalt Dissolved	ICP-MS	mg/L	0.000005	0.0000102	0.0000345	0.0000138	<0.0000050
Copper Dissolved	ICP-MS	mg/L	0.0001	0.00041	0.00026	0.00038	<0.00010
Iron Dissolved	ICP-MS	mg/L	0.002	<0.0020	<0.0020	<0.0020	<0.0020
Lead Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Lithium Dissolved	ICP-MS	mg/L	0.00005	0.0009	0.0008	0.0002	<0.000050
Magnesium Dissolved	ICP-MS	mg/L	0.005	0.5	0.7	1.0	<0.0050
Manganese Dissolved	ICP-MS	mg/L	0.00005	0.0171	0.017	0.0108	<0.000050
Mercury Dissolved	CVAF	ug/L	0.005	<0.0050	<0.0050	<0.0050	<0.000020
Molybdenum Dissolved	ICP-MS	mg/L	0.00001	0.000134	0.000114	0.000074	<0.000010
Nickel Dissolved	ICP-MS	mg/L	0.00004	0.000338	0.000349	0.000294	0.000088
Phosphorus Dissolved	ICP-MS	mg/L	0.01	<0.010	<0.010	<0.010	<0.010
Potassium Dissolved	ICP-MS	mg/L	0.02	4.8	3.19	1.09	<0.020
Selenium Dissolved	ICP-MS	mg/L	0.0001	0.00013	0.00026	<0.00010	<0.00010
Silicon Dissolved	ICP-MS	mg/L	0.1	0.6	0.57	0.52	<0.10
Silver Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	0.000016	0.000011
Sodium Dissolved	ICP-MS	mg/L	0.02	0.584	2.33	0.96	<0.020
Strontium Dissolved	ICP-MS	mg/L	0.0001	0.00745	0.0193	0.0191	<0.00010
Sulphur Dissolved	ICP-MS	mg/L	1	<1.00	<1.00	<1.00	<1.00
Tellurium Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	<0.000050	<0.000050
Thallium Dissolved	ICP-MS	mg/L	0.000004	0.0000128	0.0000082	0.0000088	<0.0000040
Thorium Dissolved	ICP-MS	mg/L	0.00001	<0.000010	<0.000010	<0.000010	<0.000010
Tin Dissolved	ICP-MS	mg/L	0.00005	<0.000050	<0.000050	0.000093	<0.000050
Titanium Dissolved	ICP-MS	mg/L	0.0002	<0.00020	<0.00020	<0.00020	<0.00020
Tungsten Dissolved	ICP-MS	mg/L	0.0002	0.00033	0.00045	0.00051	<0.00020
Uranium Dissolved	ICP-MS	mg/L	0.000001	<0.0000010	<0.0000010	<0.0000010	<0.0000010
Vanadium Dissolved	ICP-MS	mg/L	0.001	<0.00100	<0.00100	<0.00100	<0.00100
Zinc Dissolved	ICP-MS	mg/L	0.001	<0.0010	<0.0010	<0.0010	<0.0010
Zirconium Dissolved	ICP-MS	mg/L	0.00002	<0.000020	<0.000020	<0.000020	<0.000020
Ion Balance:							
Major Anions	Calc.	meq/L		0.89	0.96	0.83	
Major Cations	Calc.	meq/L		0.83	0.88	0.79	
Difference	Calc.	meq/L		-0.05	-0.09	-0.04	
Balance (%)	Calc.	%		-3.1%	-4.7%	-2.4%	
Shake Flask Extract ID:				22J2846-39	22J2846-40	22J2846-41	22J2846-42