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APPENDIX E
GEOCHEMICAL CHARACTERIZATION REPORT

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TECHNICAL MEMORANDUM

Project No. TC121522

Date **December 2014**

Subject **Côté Gold Project**
Amended Environmental Impact Statement / Final Environmental Assessment Report
Addendum to Appendix E – Geochemical Characterization Report

1.0 INTRODUCTION

This addendum to Appendix E – Geochemical Characterization Report has been prepared to address comments received from Aboriginal groups, government reviews and interested stakeholders on the Environmental Impact Statement (EIS) / Draft Environmental Assessment (EA) Report.

Comments submitted to IAMGOLD have been provided and responded to in Appendix Z of the Amended EIS / Final EA Report. Minor editorial comments related to the TSD have been directly addressed through updates in the TSD, and these changes are tracked in Appendix Z. Comments that request additional information to support the TSD have been addressed through this addendum to the Geochemical Characterization Report. Comments which require more information or greater clarification are generally focused on the following technical areas:

- Potentially Acid Generating Rock Sample Distribution;
- Additional Tailings Geochemical Results; and,
- Mine Rock Field Cell pH Results.

2.0 POTENTIALLY ACID GENERATING ROCK SAMPLE DISTRIBUTION

In response to Comment #462 (see Appendix Z) provided by the Canadian Environmental Assessment Agency, additional information related to the distribution of potentially acid generating (PAG) rock has been developed.

Previous investigations in 2013 identified low quantities of potentially acid generating (PAG) rock (7% of samples with carbonate neutralization potential ratio (NPR) <2) with no clear links between PAG rock and specific lithologies. On this basis, combined with a visual inspection of the PAG rock sample distribution for mine planning, it was postulated that segregation of PAG rock may be a challenge and was unlikely to be warranted. A systematic presentation of PAG rock distribution has been requested by regulators to support this view.

The distribution of PAG rock samples (NPR <2) among non-potentially acid generating (NPAG) samples (NPR >2) is provided in plan and cross sections (see Figure 1a) along the length of the pit. The distribution of PAG samples is spread widely throughout the open pit in a generally

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random pattern. Some apparent visual clustering of points can be observed (for example between cross sections A and B). Considering the broad sample coverage within the open pit such clustering is relatively infrequent and arguably may simply be random occurrences. However, in the interest of better explaining such clustering, the most visually evident apparent clustering of data was further evaluated in detail. The evaluation involved defining a block around this apparent concentration of PAG samples (see Figure 2a) that was defined by the extent of the apparently clustered PAG samples. Samples within this volume were identified and information in terms of lithology and acid base accounting (ABA) characteristics are presented in Table 1a.

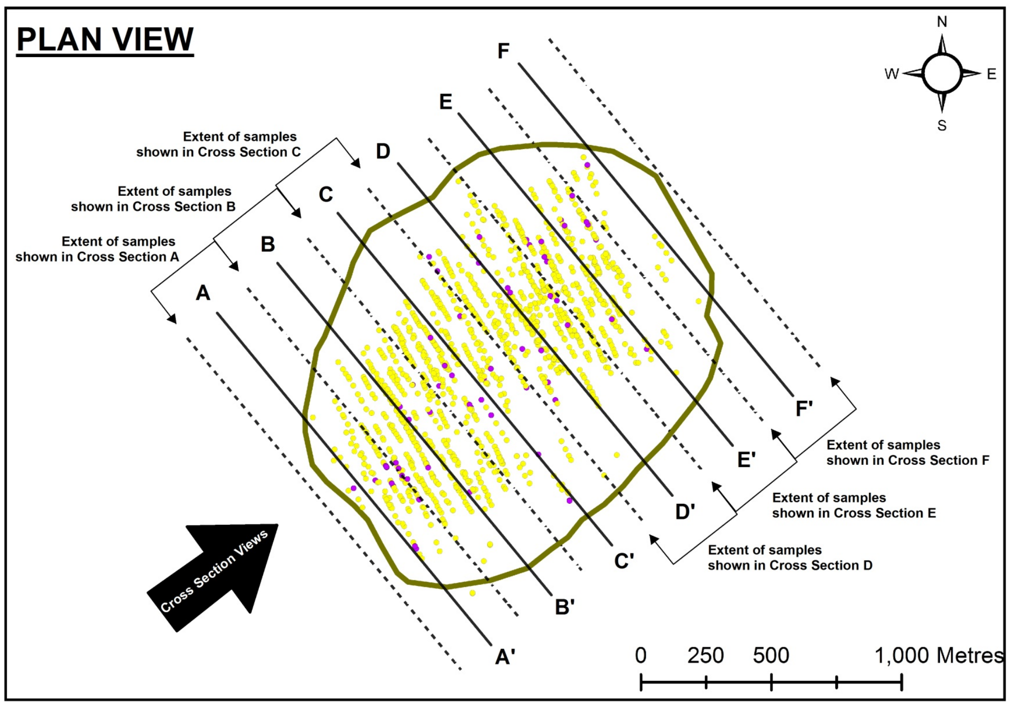
Table 1a: PAG and NPAG Samples within Apparent PAG Cluster

Sample ID	Lithology	Carbonate NP*	MPA**	NPR***
PAG Samples				
E11-110-2	Diorite Breccia	4.8	3.6	1.4
ARD-1262116	Magma Mixing Breccia	5.3	2.7	2.0
959461	Diabase Dykes	18	50	0.36
1070872	Diabase Dykes	28	28	1.0
1105066	Diorite Mega Breccia	27	20	1.3
1260426	Intrusive Feldspar Porphyry	3.3	9.4	0.36
1172872	Diabase Dykes	6.7	4.4	1.5
1047653	Mafic Dykes	3.3	3.4	1.0
1047603	Mafic Dykes	3.3	3.1	1.1
1260403	Mafic Dykes	0.83	1.9	0.44
1262062	Magma Mixing Breccia	0.83	1.3	0.67
1008640	Tonalite	0.83	0.63	1.3
NPAG Samples				
ARD-90295	Diorite Mega Breccia	13	1.2	11
ARD-11	Diorite Breccia	13	1.0	13
ARD-1105010	Mafic Dykes	119	1.7	71
ARD-1260435	Tonalite	122	4.6	26
ARD-1262116	Magma Mixing Breccia	5.3	2.7	2.0
E11-062-3	Mafic Dykes	102	8.3	12
1047626	Tonalite	17	0.31	53
1047699	Tonalite	5.0	0.31	16
1047705	Intrusive Feldspar Porphyry	20	1.3	16
1105010	Diorite Mega Breccia	99	3.1	32
1105040	Diorite Mega Breccia	3.3	0.94	3.6
1117211	Tonalite	17	1.0	18
1117290	Diabase Dykes	146	0.31	468
1172947	Tonalite	73	1.3	59

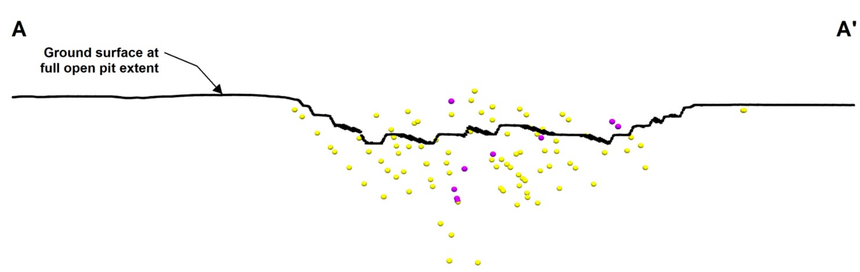
Sample ID	Lithology	Carbonate NP*	MPA**	NPR***
1173243	Tonalite	58	3.8	15
1260333	Tonalite	27	1.9	14
1260360	Intrusive Feldspar Porphyry	0.8	0.31	2.7
1260834	Magma Mixing Breccia	67	6.3	11
1260900	Magma Mixing Breccia	23	1.9	12
1262151	Intrusive Feldspar Porphyry	3.3	0.94	3.6
1264312	Tonalite	24	2.2	11
1264346	Tonalite	108	4.7	23
1264388	Diabase Dykes	13	3.1	4.3
1349110	Tonalite	14	2.5	5.7
1349176	Tonalite	28	4.4	6.3
1349224	Magma Mixing Breccia	33	1.6	21
1349261	Magma Mixing Breccia	34	1.6	22
90295	Diorite Mega Breccia	20	1.6	13

Notes:
* Carbonate NP calculated from carbonate carbon content
** MPA calculated from total sulphur content
*** NPR = Carbonate NP / MPA

No lithological relationship was identified among the PAG samples. The block represents roughly some 11,000 kilotonnes (kt) of rock within the defined volume. The block defines a relatively high proportion of PAG samples compared to the overall pit (12/40 or 30%). However, not only is the distribution of PAG and NPAG samples within the block mixed, but on balance (as with the overall open pit), the neutralization potential (NP) is in substantial excess to acid potential (AP) for the overall block (see Figure 3a). The NP is approximately 6.7 times the AP for even this more apparently concentrated PAG block.



Cross Section A



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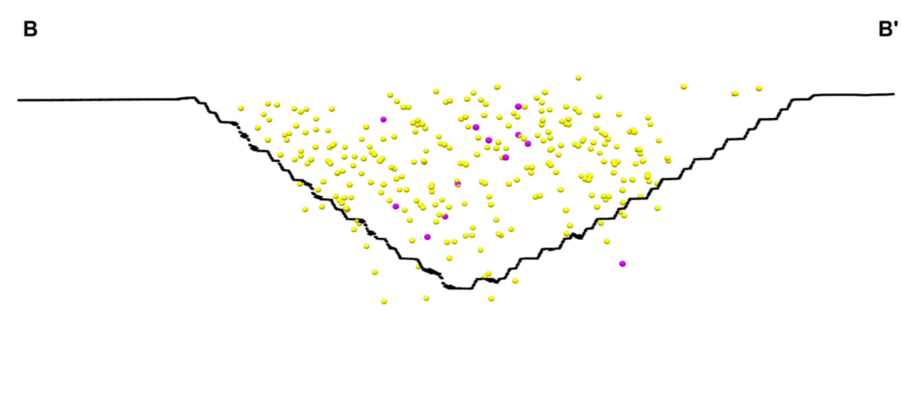

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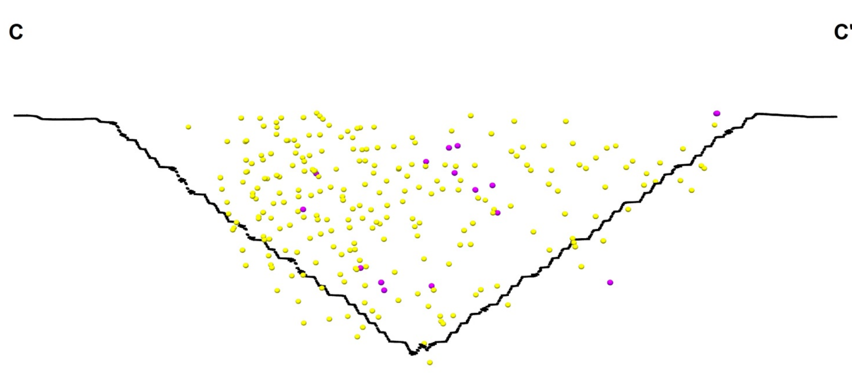
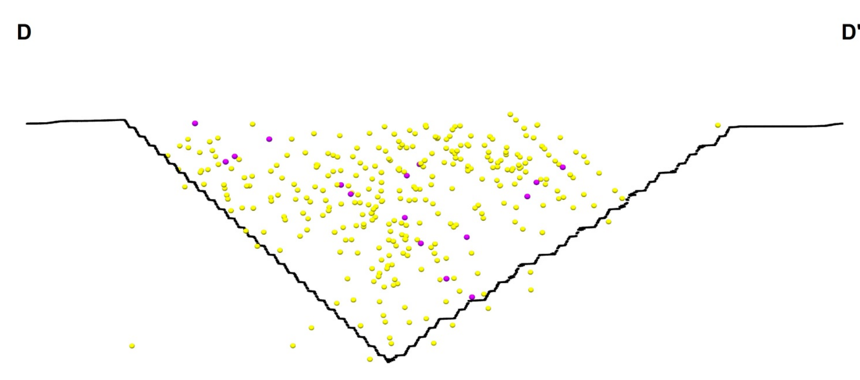
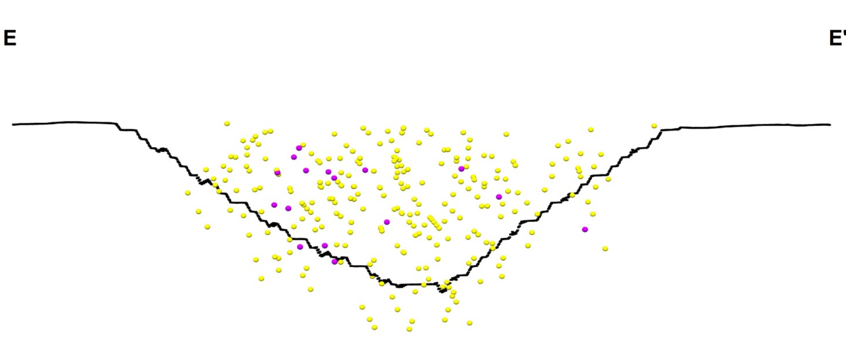


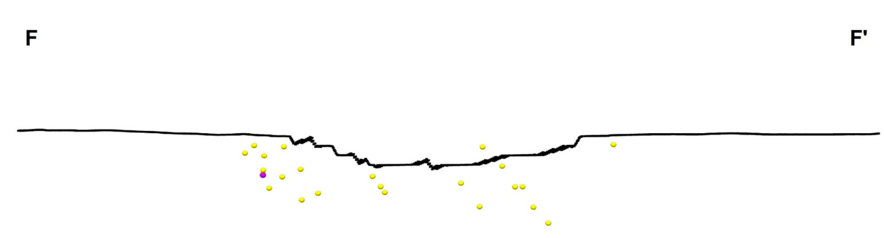
Cross Section D



Cross Section E



Cross Section F



LEGEND

Drill Hole Sample Locations

- PAG
- NPAG

Extent around Cross Section lines where Samples are shown in Cross Section Views

Cross Section Line

Open Pit Extent

NOTES:
- Each cross section is 1,650 m long in plan view.
- Only samples within 150 m on either side of a cross section plan view line were included in the cross section view

Datum: NAD83
Projection: UTM Zone 17N

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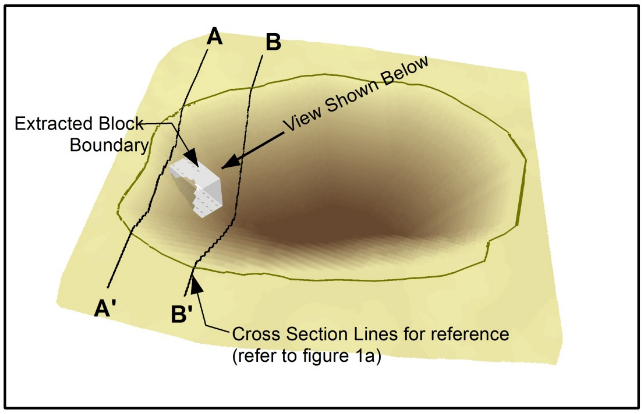
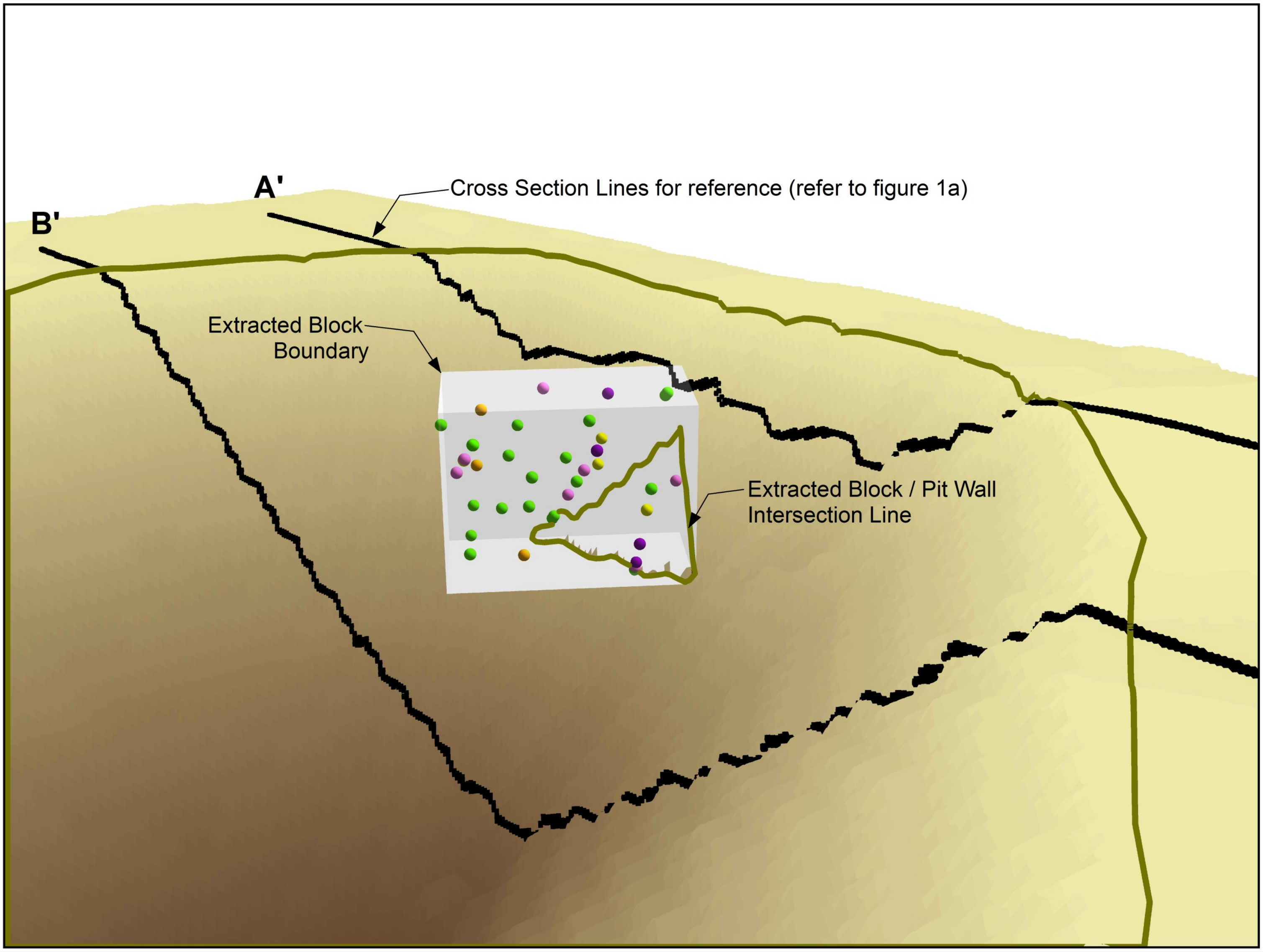
Spatial Distribution of PAG Samples in Future Pit

PROJECT N°: TC121522	**FIGURE: 1a**
SCALE:	DATE: November 2014

Key Map - Three-Dimensional Oblique View Looking Northwest
(Linear scale varies in this perspective)



Three-Dimensional Oblique View Looking South-Southwest
(Linear scale varies in this perspective)



P:\EM\Projects\2012\TC121522 IAMGOLD Cote Project\GIS\GeoChem\PAG_NPAG_XSec_Nov2014\MXD_Maps\Oblique3D_View_DetailedInvestigationBlock_4.mxd

LEGEND

Sample Locations within Extracted Block

NPR

- **> 8**
- **>= 4 to 8**
- **>= 2 to 4**
- **>= 1 to 2**
- **< 1**

Open Pit Extent

NOTES:
- Linear measurement scale varies in three-dimensional perspective renderings

Datum: NAD83
Projection: UTM Zone 17N

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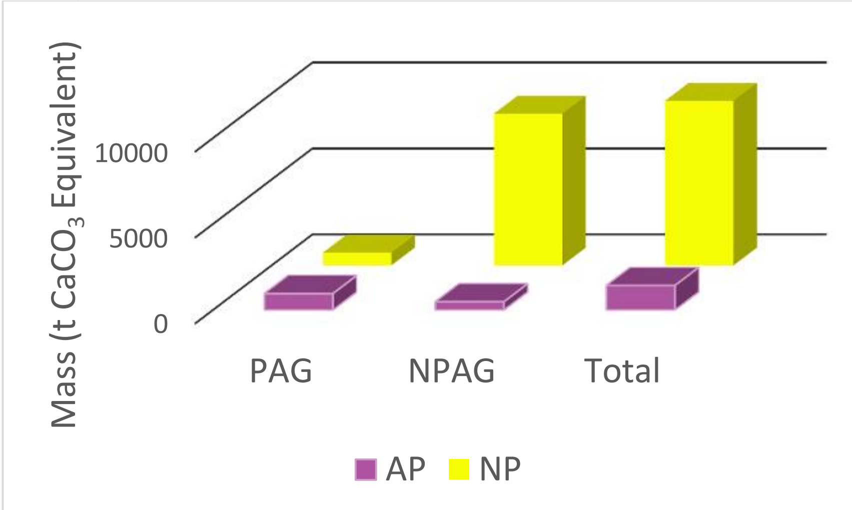
Detailed Inspection of Extracted Block with Apparent Cluster of PAG Samples

PROJECT N^{o}: TC121522	**FIGURE: 2a**
SCALE:	DATE: November 2014

Figure 3a: Balance of NP and AP in Apparent Cluster



In summary, at the present sampling density within this "worst case" apparent PAG cluster, there is no geological explanation for the somewhat elevated PAG content, PAG samples are generally dispersed among NPAG samples and the volume has a high proportion of excess NP.

3.0 ADDITIONAL TAILINGS GEOCHEMICAL RESULTS

In response to Comments #464, #648 and #652, updated results from the ongoing tailings geochemical characterization program have been provided.

3.1 Geochemical Characterization of 2014 Simulated Tailings

Additional tailings geochemical testing was conducted in 2014.Testing included the following:

- Static testing analysis of selected tailings samples produced in 2014 metallurgical test work including 27 individual test samples and three (3) composite tailings samples;
- Static tailings test work in 2014 consistent with mine waste rock characterization work in 2013, including acid base accounting (ABA), non-acid generating (NAG) pH test, ICP metals (aqua-regia and four acid leach), and short term leach tests (SFE) on each sample;
- Additional leach tests including US EPA 1312 (SPLP) and ageing test analysis of three (3) tailings composite samples; and
- Standard MEND humidity cell testing of three composite tailings samples.

Results have been tabulated in Attachment A (Tables A1 through A9) and evaluated in accordance with the approach and methods described in Appendix E (Geochemical Characterization Report) and MEND, 2009.

3.2 Static Tailings Results

3.2.1 Acid Base Accounting

Acid base accounting results for 2014 tailings samples are provided in Attachment A (Table A1). The ranges in sulphur, sulphate and sulphide contents are generally similar to those reported for samples in 2013. The sulphide content of the three composite tailings samples are close to, or above median sulphide contents of the 2013 and 2014 sample sets. All three composite tailings samples contain a higher ratio of sulphate to sulphide sulphur (close to 1:1) that is not generally observed in discrete tailings samples from either the 2013 or 2014 programs. The 2014 composite tailings samples were derived from the 2013 tailings material and the elevated sulphate observed in the 2014 tests is a result of additional oxidation that occurred during storage and handling prior to preparation for testing.

The ranges in NP and Carbonate NP are also generally similar in 2014 tailings samples as those observed in the 2013 set. The NP and Carbonate NP for the three composite tailings samples are similar to or slightly higher than the median values for the 2013 or 2014 discrete samples sets.

The resulting NPR and Carbonate NPR for the 2014 tailings samples are also similar to the 2013 samples set, and specifically are all greater than 2 and interpreted to be NPAG. The NPR of the three composite tailings samples (9 to 19) are similar to slightly lower than median NPR values reported for discrete 2013 and 2014 sample sets.

NAG pH for all 2014 tailings samples, Attachment A (Table A2) are all greater than pH 8 (none are less than pH 4.5) and consistent with ABA characterization of all samples as NPAG.

3.2.2 Elemental Content

Elemental content of the tailings samples determined by aqua-regia and four acid leach are provided in Attachment A (Tables A3 and A4, respectively). As expected, in the four acid leach data certain elements (e.g., Ba, Ca, Fe, K, Li and Mg) were elevated when compared to aqua-regia results, likely due a more complete digestion by the four acid method. The stronger leach by the four acid method is more effective at solubilizing silicate minerals; however, the aqua-regia leach is generally regarded as being more environmentally relevant.

Aqua-regia results for selected elements were compared and assessed against a screening criteria based on crustal abundance values (Price, 1997). Results of the aqua-regia leach for tailings samples are generally consistent with 2013 tailings analyses and identified a number of samples with Bi, Se, Cu and Mo above the 10 times crustal abundance screening criteria. Silver, which was not included in 2013 analyses, was also identified above the 10 times crustal screening criteria in a single sample in the 2014 sample set.

3.2.3 Short Term Leach Tests

Static leach testing results (SFE and SPLP) have been tabulated in comparison to relevant screening criteria (O.Reg 560/94 and PWQO) and are presented in Attachment A (Tables A5 and A6). We note that completed leachate tests do not directly replicate metal release under field conditions and are compared as a guide only.

Results of the tailings short term leach data are as follows:

- All SFE and SPLP results are below O.Reg 560/94 criteria with the exception of a single composite tailings sample (CND3) that exhibited a pH marginally above 9;
- With the exception of aluminum, most SFE and SPLP results are below PWQO with exceedances for SFE summarized in Table 2a;
- Aluminum often exceeds PWQO criteria; however, this may be an artifact of colloidal behaviour during the laboratory leach test that would not be observed under site conditions; and
- Measured pH in the three SPLP tests for the tailings composite samples were greater than the PWQO specified pH of 8.5.

Table 2a: Exceedances of PWQO (SFE)

Description	Count	pH	Al	Co	Cr
		Unit	mg/L	mg/L	mg/L
PWQO	—	6.5-8.5	0.075	0.0009	0.001
CND – Composite Samples	3	0	1	1	0
C25 Samples	15	1	13	0	5
All	**18**	**1**	**14**	**1**	**5**

PWQO – Ontario Provincial Water Quality Objective

3.2.4 Ageing Tests

Ageing test results for three tailings composite samples are provided in Attachment A (Table A7). This test measured dissolved elemental concentrations in overlying water of settled tailings for the three composite samples (CND-1, CND-2 and CND-3) at Day 0, Day 7, Day 29 and Day 60 as guidance on metal leaching from submerged tailings.

Results are summarized as follows:

- Only copper and total suspended solids exceed O.Reg 560/94 criteria and only for the CND-1 sample at Day 0;
- All other results for the three samples over the 60 day ageing tests meet O.Reg 560/94 criteria;

- Concentrations of Al, Co, Cu and Mo exceed the PWQO screening values for all three samples for all stages of ageing tests; however, with the exception of Mo, the concentrations for these metals decline with increased ageing; and
- Cr (all three samples) and U (only CND-1) exceed the PWQO value during initial testing (mostly day 0 only).

3.2.5 Rietveld XRD

The mineralogy of tailings samples was assessed by Rietveld X-ray Diffraction (R-XRD). Results are provided in Attachment A (Table A8). Silicates including quartz and albite are the predominant mineral phases in almost all tailings samples (each typically constituting 30 to 40% w/w) with chlorite and muscovite observed in moderate abundance for most samples (typically 4 to 20% w/w). Calcium carbonates are also present in moderate abundance in most samples (typically 3 to 6% w/w). Calcite is the predominant calcium carbonate present; however, aragonite is consistently identified in many of the C25 series tailings samples, but not the composite samples (CND-1, CND-2 and CND-3). Other carbonate minerals were identified in a few samples and were generally in low abundance, including dolomite, ankerite, siderite and rhodocrosite. No sulphide minerals were detected in any of the tailings samples analysed.

3.3 Kinetic Testing Results

3.3.1 Humidity Cell

Standard MEND humidity cells were initiated at SGS Lakefield for the three tailings composite samples (CND-1, CND-2 and CND-3) in March, 2014. These cells represent composites of various tailings samples prepared under direction by IAMGOLD as part of the metallurgical testing program. Materials in these humidity cells are assumed by AMEC to be representative of the proposed Project tailings. The principal objective of these tests was to provide updated source terms to support geochemical modeling and water quality prediction for the Project (Appendix J).

Samples were collected and analyzed for pH, acidity, alkalinity, conductivity and concentrations of sulphate on a weekly basis. All other parameters were collected on a weekly basis for the first six weeks, and reduced to every five weeks thereafter.

Tailings humidity cell results were evaluated in July 2014 when approximately 18 weeks of data were available. Preliminary source terms based on the relatively short operational life of the tests were provided to the water quality modeling team in July 2014 to support a tailings model water quality prediction update required at that time. The preliminary source terms were expected to provide a significant refinement in model predictions since they were based on simulated site specific tailings materials.

Source terms were generated based on the average loading rates obtained over the 18-week testing period. These source terms are presented in Attachment A (Table A9). Concentrations for most elements were at or near their method detection limits for most samples.

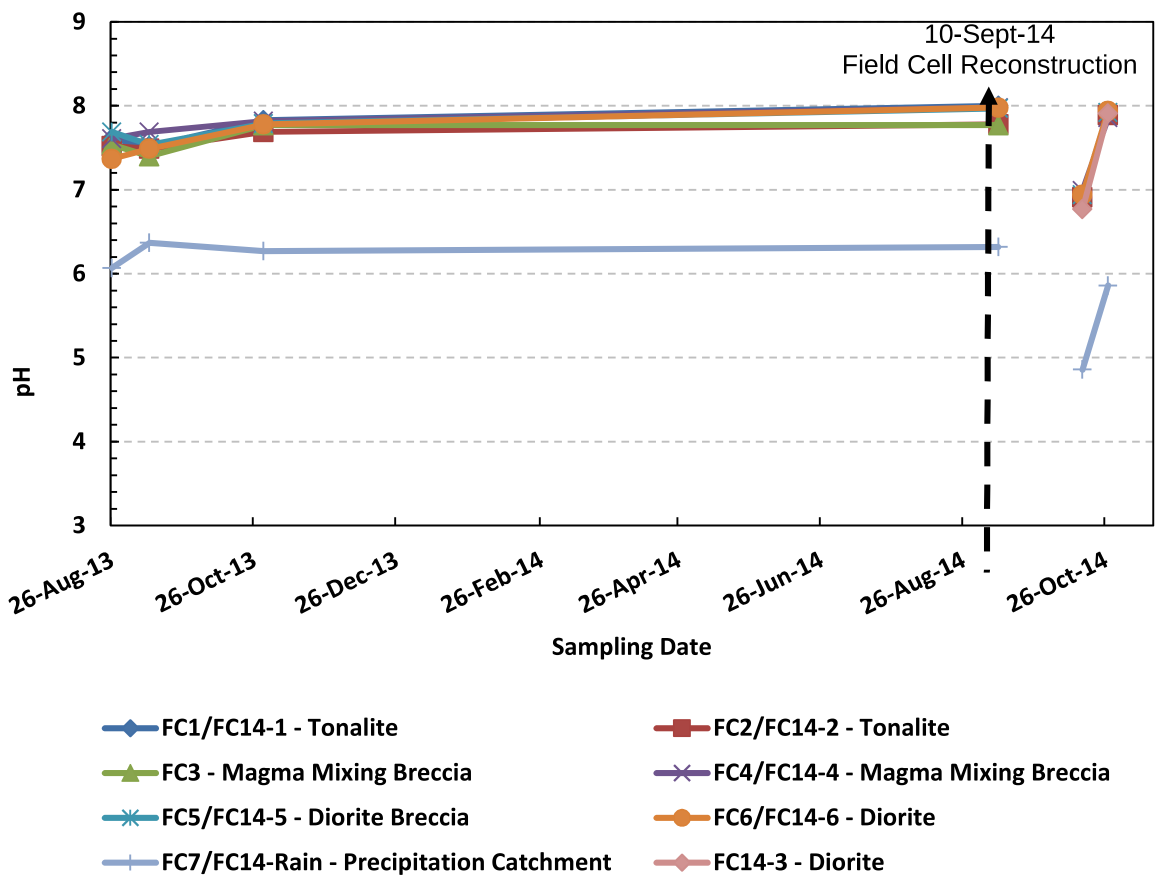
4.0 MINE ROCK FIELD CELL pH RESULTS

Field cell data collection is ongoing and an upgrade to the existing field cell program was completed in September 2014. Evaluation of all field cell and humidity cell data is planned for early 2015.

The field cell upgrade included shut-down of one of two magma-mixing breccia cells (FC-3). This cell was evaluated as providing low benefit due to duplication of a relatively low abundance rock type. This cell was replaced by an additional diorite cell (FC14-3). As part of the upgrade, the remaining original humidity cells previously constructed by Knight Piesold (FC-1, FC-2, FC-4, FC-5 and FC-6) were unpacked, reconstructed and repacked to ensure a consistent field cell design. The drill core material from the original cells was reused in the new cells, now identified as FC14-1, FC14-2, FC14-4, FC14-5 and FC14-6. Thus the material in all cells except new cell FC14-3 (diorite) has been exposed in the environment since November 2012. Original cell FC-7 containing no core and sampling site precipitation was also replaced with a new blank cell collecting only precipitation (FC14-Rain).

Pending a broader evaluation of all kinetic data, updated field cell pH results (see Figure 4a) are provided in the interim to confirm the continuing neutral pH status of all waste rock field cells.

Figure 4a: Field Cell pH



5.0 CONCLUDING REMARKS

5.1 Mine Rock

Work in 2013 identified open pit mine rock with the following characteristics with respect to potential future acid generation:

- most mine rock had a low sulphide content with a low potential for metal leaching / acid rock drainage and an excess of NP overall (average NPR of 19); and
- more than 93% of samples were classified as NPAG based on NPR >2.

It was also observed that not only was the quantity of PAG rock low, but it appeared that PAG samples were generally widely spaced throughout the future pit and no strong lithological control on acid rock drainage character was identified. The additional information presented here on PAG distribution confirms the following:

- PAG distribution based on NPR <2 appears to be largely random and not localized within the future pit;
- PAG sample distributions are sparse, but some apparent visual clustering of data is observed in certain regions;
- the apparent visual clustering of PAG samples has no geological basis and the cluster volumes appear to contain dispersed rather than continuous PAG rock with a clear overall excess of NP; and
- planning for segregation of PAG material based on such distributions is likely not feasible and/or beneficial from a mine waste management and mine water quality perspective.

5.2 Tailings

The updated 2014 tailings data is largely consistent with 2013 tailings testing and confirms that Project tailings are expected to have the following characteristics consistent with previous findings.

- NPAG based on NPR >2 with generally substantial excess NP expected; and
- low metal content with generally low concern for metal leaching.

In addition, operation of three humidity cells has provided more robust source terms for predictive water quality modeling.

5.3 Field Cells

IAMGOLD is committed to continued operation of field cells to supplement on-going laboratory waste rock kinetic data. Additional evaluation of existing field cell data is planned in early 2015 along with laboratory kinetic data review. Sampling and analysis of the reconstructed field cells is expected to continue in 2015.

6.0 REFERENCES

Mine Environment Neutral Drinage (MEND). 2009. Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials. Natural Resources Canada.

Price, W.A. 1997. DRAFT Guidelines and Recommended Method for Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia. British Columbia Ministry of Employment and Investment, Energy and Minerals Division. Smithers, B.C., Canada.

ATTACHMENT A

ADDITIONAL TAILINGS GEOCHEMICAL TESTING RESULTS

Table A1 - Tailings Acid Base Accounting Results

Comp	Program	Paste pH	Fizz Rate	Total Sulphur	Sulphate	Sulphide*	Total Carbon	Carbonate Carbon	Carbonate NP**	NP	AP***	NPR	Carbonate NPR
				%					kg $CaCO_3$/tonne				
CND 1 (CN-16 MC-13-01) Solids	2014	8.5	3.0	0.33	0.17	0.16	0.60	2.7	50	48	5.0	9.7	10
CND 2 (CN-17 MC-13-02) Solids	2014	8.7	3.0	0.17	0.11	0.058	0.50	2.2	41	40	1.8	22	23
CND 3 (CN-18 MC-13-03) Solids	2014	8.7	3.0	0.30	0.11	0.19	0.70	3.0	58	53	5.8	9.1	10.0
C25-201	2014	9.0	2.0	0.15	0.020	0.13	0.31	1.4	26	28	4.1	6.8	6.4
C25-202	2014	8.7	3.0	0.36	0.10	0.26	0.50	1.9	42	38	8.0	4.8	5.2
C25-206	2014	9.0	3.0	0.11	0.030	0.076	0.25	1.0	21	20	2.4	8.4	8.6
C25-212	2014	9.3	3.0	0.066	0.020	0.046	0.59	2.6	49	45	1.4	31	34
C25-213	2014	9.3	3.0	0.030	0.030	< 0.001	0.32	1.4	26	25	0.031	800	840
C25-214	2014	8.8	3.0	0.074	0.050	0.024	0.26	0.90	21	19	0.75	25	28
C25-217	2014	9.2	3.0	0.14	0.060	0.076	0.65	2.7	54	51	2.4	21	23
C25-218	2014	9.2	3.0	0.072	0.030	0.042	0.37	1.6	31	30	1.3	23	23
C25-223	2014	9.2	3.0	0.34	0.080	0.26	0.44	1.8	37	34	8.0	4.2	4.6
C25-226	2014	8.6	3.0	0.56	0.10	0.46	0.48	1.9	40	40	15	2.8	2.7
C25-227	2014	8.7	3.0	0.16	0.050	0.11	0.55	2.4	46	45	3.5	13	13
C25-231	2014	8.6	3.0	0.10	0.030	0.071	0.93	4.3	78	78	2.2	35	35
C25-233	2014	8.4	3.0	0.14	0.040	0.10	1.3	5.4	104	87	3.2	27	32
C25-236	2014	8.9	3.0	0.20	0.060	0.14	0.54	2.1	45	43	4.4	9.7	10
C25-238	2014	8.7	3.0	0.31	0.10	0.21	0.71	3.1	59	58	6.6	8.8	9.1
C25-208	2014	9.2	2.0	0.027	0.030	< 0.001	0.45	2.1	37	35	0.031	1107	1189
C25-209	2014	9.2	3.0	0.021	0.020	0.0010	0.59	2.7	49	47	0.031	1514	1565
C25-215	2014	8.6	3.0	0.068	0.030	0.038	0.34	1.4	28	26	1.2	21	24
C25-220	2014	9.1	3.0	0.055	0.020	0.035	0.42	2.0	35	35	1.1	32	32
C25-222	2014	9.1	3.0	0.074	0.030	0.044	0.39	1.8	33	32	1.4	23	24
C25-228	2014	8.6	3.0	0.094	0.030	0.064	0.49	2.1	40	39	2.0	19	20
C25-232	2014	9.0	1.0	0.085	0.040	0.045	0.058	0.20	4.8	7	1.4	4.8	3.4
C25-235	2014	8.7	3.0	0.020	0.020	< 0.001	0.48	2.2	40	38	0.031	1210	1291
C25-203	2014	8.9	3.0	0.35	0.070	0.28	0.63	2.9	52	52	8.7	6.0	6.0
C25-210	2014	8.9	3.0	0.45	0.11	0.34	0.36	1.4	30	28	11	2.6	2.8
C25-234	2014	9.0	3.0	0.028	0.020	0.0080	0.45	2.0	37	35	0.25	138	149
C25-237	2014	9.0	3.0	0.027	0.020	0.0070	0.39	1.8	33	31	0.22	141	149

* Calculated as the difference between measured total sulphur and sulphate

** Carbonate NP calculated from carbonate carbon

*** AP calculated from sulphide sulphur

Table A2 - Tailings Net Acid Generation Results

Comp	Program	Final pH units	Vol. of NaOH, mL		NAG, kg/tonne H_2SO_4	
			to pH 4.5	to pH 7.0	to pH 4.5	to pH 7.0
CND 1 (CN-16 MC-13-01) Solids	2014	11.0	0	0	0	0
CND 2 (CN-17 MC-13-02) Solids	2014	11.0	0	0	0	0
CND 3 (CN-18 MC-13-03) Solids	2014	11.1	0	0	0	0
C25-201	2014	10.9	0	0	0	0
C25-202	2014	10.9	0	0	0	0
C25-206	2014	10.9	0	0	0	0
C25-212	2014	11.2	0	0	0	0
C25-213	2014	11.1	0	0	0	0
C25-214	2014	10.9	0	0	0	0
C25-217	2014	11.2	0	0	0	0
C25-218	2014	11.1	0	0	0	0
C25-223	2014	11.1	0	0	0	0
C25-226	2014	10.3	0	0	0	0
C25-227	2014	10.9	0	0	0	0
C25-231	2014	11.2	0	0	0	0
C25-233	2014	10.8	0	0	0	0
C25-236	2014	11.1	0	0	0	0
C25-238	2014	11.1	0	0	0	0
C25-208	2014	11.2	0	0	0	0
C25-209	2014	11.2	0	0	0	0
C25-215	2014	10.9	0	0	0	0
C25-220	2014	11.1	0	0	0	0
C25-222	2014	11.1	0	0	0	0
C25-228	2014	11.1	0	0	0	0
C25-232	2014	8.3	0	0	0	0
C25-235	2014	11.1	0	0	0	0
C25-203	2014	11.0	0	0	0	0
C25-210	2014	10.5	0	0	0	0
C25-234	2014	11.1	0	0	0	0
C25-237	2014	11.0	0	0	0	0

Table A3 - Tailings Elemental Analyses Results by Aqua Regia Digest Method

Sample ID	Program*	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Th	Ti	Tl	U	V	W	Y	Zn	Hg
		µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
	Average Crustal	**0.075**	**82300**	**1.8**	**10**	**425**	**3**	**0.025**	**41500**	**0.15**	**25**	**102**	**60**	**56300**	**20850**	**20**	**23300**	**950**	**1.2**	**23550**	**84**	**1050**	**14**	**0.2**	**0.05**	**281500**	**2.3**	**370**	**9.6**	**5650**	**0.85**	**2.7**	**120**	**1.25**	**33**	**70**	**0.085**
	10x Average Crustal	**0.75**	**823000**	**18**	**100**	**4250**	**30**	**0.25**	**415000**	**1.5**	**250**	**1020**	**600**	**563000**	**208500**	**200**	**233000**	**9500**	**12**	**235500**	**840**	**10500**	**140**	**2**	**0.5**	**3E+06**	**23**	**3700**	**96**	**56500**	**8.5**	**27**	**1200**	**12.5**	**330**	**700**	**0.85**
CND 1 (CN-16 MC-13-01) Solids	2014	0.11	5500	2.3	< 1.0	29	0.26	< 0.09	21000	0.10	6.5	71	430	16000	980	7.0	5100	210	2.0	340	31	400	7.9	< 0.80	**0.59**	1000	0.7	20	11	250	0.03	1.3	17	0.55	15	31	< 0.05
CND 2 (CN-17 MC-13-02) Solids	2014	0.070	7700	3.7	< 1.0	10	0.20	< 0.09	17000	0.040	8.3	67	190	19000	550	10	7400	230	9.1	250	48	240	3.3	< 0.80	0.25	850	0.8	9.8	11	280	< 0.02	1.2	19	0.53	13	24	< 0.05
CND 3 (CN-18 MC-13-03) Solids	2014	0.15	6900	2.8	< 1.0	11	0.29	**0.56**	20000	0.040	6.0	57	**850**	21000	1200	6.0	6300	230	7.4	220	31	290	4.8	< 0.80	**1.1**	990	2.0	14	13	150	0.040	1.5	18	1.1	19	20	< 0.05
C25-201	2014	0.46	4100	4.1	2.0	9.5	0.16	**0.34**	12000	0.15	9.3	510	**1200**	15000	280	3.0	2800	160	3.4	160	230	310	6.8	< 0.80	**1.5**	950	1.4	11	9.1	120	< 0.02	1.3	< 1.00	0.26	14	26	< 0.05
C25-202	2014	0.45	8100	2.6	< 1.0	8.2	0.24	**0.79**	14000	0.060	10	440	**1300**	23000	930	7.0	7200	200	6.5	160	210	76	3.3	< 0.80	**2.1**	1100	1.6	15	10	62	0.03	1.2	6.00	0.83	7.2	22	< 0.05
C25-206	2014	0.090	2600	5.3	< 1.0	4.8	0.11	0.22	8100	0.070	5.3	500	120	8600	420	3.0	1500	160	2.7	110	230	150	3.2	< 0.80	0.17	980	0.6	5.3	4.7	87	< 0.02	0.78	< 1.00	0.35	9.4	18	< 0.05
C25-212	2014	0.050	3000	3.2	< 1.0	4.5	0.13	< 0.09	19000	0.040	5.3	490	99	8300	410	5.0	1700	220	2.7	210	230	66	2.8	< 0.80	0.24	1100	< 0.50	8.4	5.0	72	< 0.02	1.2	< 1.00	0.52	41	11	< 0.05
C25-213	2014	0.040	1200	1.8	< 1.0	4.5	0.22	< 0.09	9900	0.040	3.8	480	48	6200	310	< 2.0	450	120	5.3	190	220	15	2.5	< 0.80	0.11	630	1.1	4.9	8.5	53	< 0.02	1.1	< 1.00	0.66	13	7.5	< 0.05
C25-214	2014	0.080	1900	4.3	< 1.0	4.3	0.22	< 0.09	8100	0.070	4.8	470	170	8700	180	3.0	870	120	**53**	160	210	120	2.7	< 0.80	0.28	670	1.2	4.5	9.1	47	< 0.02	0.87	< 1.00	0.83	9.9	9.7	< 0.05
C25-217	2014	0.050	9800	1.4	< 1.0	17	0.18	< 0.09	20000	< 0.02	9.8	440	160	22000	1400	15	9100	230	4.8	160	190	99	1.1	< 0.80	0.30	820	1.7	9.8	8.7	200	0.030	1.0	20	1.1	13	18	< 0.05
C25-218	2014	0.030	4000	1.4	< 1.0	11	0.15	< 0.09	12000	0.030	7.2	430	110	12000	390	4.0	3200	160	4.5	130	200	360	1.1	< 0.80	0.22	700	0.5	10	8.3	140	< 0.02	0.50	7.00	0.57	12	9.3	< 0.05
C25-223	2014	0.040	2100	5.1	< 1.0	4.8	0.22	0.14	13000	0.040	5.7	420	100	10000	360	3.0	1100	140	4.6	150	200	42	2.2	< 0.80	0.34	610	< 0.50	6.1	8.7	30	< 0.02	1.2	< 1.00	0.70	14	8.4	< 0.05
C25-226	2014	**0.81**	13000	3.1	< 1.0	14	0.43	**1.9**	16000	0.050	12	420	**1700**	41000	1300	9.0	8900	270	**14**	100	180	820	2.7	< 0.80	**2.2**	900	3.9	12	15	200	0.03	1.3	34	0.57	16	23	< 0.05
C25-227	2014	0.030	10000	1.1	< 1.0	7.7	0.23	< 0.09	19000	< 0.02	11	510	56	23000	390	13	11000	280	2.9	140	230	290	0.96	< 0.80	0.25	1100	1.6	12	7.7	350	< 0.02	0.78	12	1.7	7.7	18	< 0.05
C25-231	2014	0.040	27000	4.9	< 1.0	4.3	0.16	< 0.09	32000	< 0.02	29	350	100	50000	430	32	**32000**	600	1.7	100	280	250	0.56	< 0.80	0.18	920	1.0	9.8	0.62	860	< 0.02	0.09	64	0.23	5.6	45	< 0.05
C25-233	2014	0.12	9100	1.0	< 1.0	21	0.30	**0.40**	25000	0.090	9.2	390	150	33000	2600	6.0	13000	430	7.2	90	180	650	9.0	< 0.80	0.22	950	2.4	23	17	240	0.12	1.9	34	0.17	9.8	31	< 0.05
C25-236	2014	0.22	6700	0.70	< 1.0	140	0.32	< 0.09	17000	0.230	9.4	440	390	18000	4500	8.0	5600	240	2.4	160	190	400	24	< 0.80	**0.54**	790	0.6	25	7.2	590	0.15	0.88	16	0.65	12	62	< 0.05
C25-238	2014	0.070	8000	2.2	< 1.0	24	0.27	< 0.09	24000	0.030	12	430	160	25000	610	7.0	8200	300	4.1	130	200	610	1.5	< 0.80	**0.60**	880	< 0.50	31	6.7	390	< 0.02	0.81	21	0.75	13	21	< 0.05
C25-208	2014	0.020	2600	1.1	1.0	3.2	0.10	< 0.09	14000	0.030	4.7	430	50	8100	180	5.0	1500	150	2.6	110	190	42	2.2	< 0.80	0.13	940	< 0.50	6.3	10	28	< 0.02	1.3	< 1.00	0.35	17	12	< 0.05
C25-209	2014	< 0.01	2900	1.1	< 1.0	3.9	0.15	< 0.09	18000	< 0.02	6.5	430	32	8200	140	3.0	3200	200	2.6	78	190	310	0.76	< 0.80	0.08	880	< 0.50	15	3.4	77	< 0.02	0.45	< 1.00	0.44	8.7	6.7	< 0.05
C25-215	2014	0.020	2100	2.4	< 1.0	2.1	0.59	< 0.09	10000	< 0.02	7.1	450	89	8700	95	2.0	1700	130	2.4	98	200	80	2.3	< 0.80	0.18	770	3.4	4.3	6.7	140	< 0.02	0.80	< 1.00	0.17	12	5.6	< 0.05
C25-220	2014	0.030	6600	4.6	1.0	11	0.15	< 0.09	15000	0.050	8.4	450	76	17000	370	8.0	6100	260	2.4	100	210	310	2.7	< 0.80	0.14	830	0.9	11	6.2	310	< 0.02	0.51	9.00	0.26	9.4	28	< 0.05
C25-222	2014	0.010	3900	2.3	3.0	8.2	0.19	< 0.09	13000	0.030	6.5	470	43	12000	400	4.0	2700	160	4.6	91	210	150	2.8	< 0.80	0.16	710	0.8	7.0	12	210	< 0.02	1.4	< 1.00	0.84	17	14	< 0.05
C25-228	2014	0.020	4600	1.7	< 1.0	8.8	0.28	< 0.09	17000	0.030	8.0	410	29	16000	360	7.0	5100	200	5.0	83	190	520	1.8	< 0.80	0.18	810	< 0.50	20	9.4	110	< 0.02	0.78	13	0.65	8.9	14	< 0.05
C25-232	2014	0.050	11000	0.90	< 1.0	5.9	0.26	**0.47**	2900	< 0.02	11	470	170	27000	240	12	9300	200	4.6	110	210	240	0.94	< 0.80	0.33	1000	0.6	2.4	7.2	240	< 0.02	0.59	16	0.59	7.9	20	< 0.05
C25-235	2014	0.020	1300	0.70	< 1.0	6.2	0.16	< 0.09	15000	0.060	4.0	420	20	6500	260	2.0	460	160	2.4	98	190	40	2.8	< 0.80	0.14	700	< 0.50	6.3	9.2	71	< 0.02	1.4	< 1.00	0.30	23	12	< 0.05
C25-203	2014	0.080	11000	1.3	< 1.0	27	0.25	**1.0**	20000	0.020	8.6	330	240	27000	4500	8.0	11000	230	**14**	90	160	87	4.1	< 0.80	**0.70**	960	5.2	17	18	390	0.17	2.2	25	0.62	28	23	< 0.05
C25-210	2014	0.30	5200	2.2	< 1.0	4.0	0.12	**0.95**	11000	0.020	10	420	**1600**	18000	250	4.0	3900	160	3.6	72	200	220	2.3	< 0.80	**2.1**	1100	0.7	7.0	8.1	45	< 0.02	0.97	< 1.00	0.15	12	13	< 0.05
C25-234	2014	0.030	1500	1.4	< 1.0	5.1	0.14	< 0.09	14000	0.080	4.2	440	50	7200	200	2.0	820	130	4.2	100	210	70	6.7	< 0.80	0.11	770	< 0.50	6.9	9.1	68	< 0.02	1.4	< 1.00	0.66	17	20	< 0.05
C25-237	2014	0.020	2100	1.1	< 1.0	22	0.09	< 0.09	12000	< 0.02	4.8	370	74	9600	1200	< 2.0	930	170	4.1	68	170	99	4.3	< 0.80	0.13	620	3.3	17	17	190	0.030	2.8	< 1.00	0.49	16	11	< 0.05

Notes:

bold values greater than 10x Average Crustal value

Table A4 - Tailings Elemental Analyses Results by Strong Acid Digest Method

Sample ID	**Program***	**Ag**	**Al**	**As**	**B**	**Ba**	**Be**	**Bi**	**Ca**	**Cd**	**Co**	**Cr**	**Cu**	**Fe**	**K**	**Li**	**Mg**	**Mn**	**Mo**	**Na**	**Ni**	**Pb**	**Sb**	**Se**	**Si**	**Sn**	**Sr**	**Ti**	**Tl**	**U**	**V**	**W**	**Y**	**Zn**	**Hg**
		µg/g	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**%**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
	Average Crustal	**0.075**	**82300**	**1.8**	**10**	**425**	**3**	**0.025**	**41500**	**0.15**	**25**	**102**	**60**	**56300**	**20850**	**20**	**23300**	**950**	**1.2**	**23550**	**84**	**14**	**0.2**	**0.05**	**28.15**	**2.3**	**370**	**5650**	**0.85**	**2.7**	**120**	**1.25**	**33**	**70**	**0.085**
	10x Average Crustal	**0.75**	**823000**	**18**	**100**	**4250**	**30**	**0.25**	**415000**	**1.5**	**250**	**1020**	**600**	**563000**	**208500**	**200**	**233000**	**9500**	**12**	**235500**	**840**	**140**	**2**	**0.5**	**281.5**	**23**	**3700**	**56500**	**8.5**	**27**	**1200**	**12.5**	**330**	**700**	**0.85**
CND 1 (CN-16 MC-13-01) Solids	2014	0.47	69000	2.6	11	290	1.5	0.19	24000	0.31	6.4	92	390	22000	15000	11	7500	270	2.7	30000	30	8.6	< 0.80	**< 0.70**	30	3.0	110	2000	0.15	1.8	33	2.2	24	32	< 0.05
CND 2 (CN-17 MC-13-02) Solids	2014	0.42	66000	3.5	8.0	200	1.1	0.18	22000	0.27	9.4	81	170	27000	12000	15	12000	320	9.3	28000	54	3.4	< 0.80	**< 0.70**	31	2.6	82	2300	0.10	1.6	38	1.7	22	31	< 0.05
CND 3 (CN-18 MC-13-03) Solids	2014	0.56	62000	2.6	8.0	120	1.4	**0.65**	22000	0.30	6.1	73	**810**	25000	10000	10	8500	260	**14**	29000	31	4.8	< 0.80	**1.3**	32	5.1	66	1300	0.13	2.1	35	1.2	28	24	< 0.05
C25-201	2014	**0.93**	58000	2.8	< 1.00	170	1.2	**0.44**	15000	0.43	8.3	220	**1100**	20000	7500	6.0	4300	220	5.3	30000	200	7.2	< 0.80	**1.0**	32	6.1	80	1200	0.090	1.6	18	0.59	21	33	< 0.05
C25-202	2014	**1.1**	58000	2.6	< 1.00	89	1.2	**0.92**	14000	0.49	9.4	230	**1300**	27000	8600	11	8900	210	9.9	28000	190	4.2	< 0.80	**2.3**	31	5.8	50	610	0.13	1.7	21	1.3	11	30	< 0.05
C25-206	2014	0.51	57000	6.3	< 1.00	160	0.78	**0.34**	12000	0.35	4.4	180	95	12000	18000	7.0	3300	170	2.9	12000	190	4.1	< 0.80	**< 0.70**	33	3.0	70	870	0.18	1.1	20	1.7	18	27	< 0.05
C25-212	2014	0.36	80000	2.6	< 1.00	140	1.0	< 0.09	26000	0.22	4.3	190	79	12000	15000	11	3600	230	2.9	30000	180	3.3	< 0.80	**0.8**	30	2.4	110	740	0.16	1.2	23	1.1	49	17	< 0.05
C25-213	2014	0.40	61000	1.2	< 1.00	110	1.1	< 0.09	12000	0.25	3.0	170	40	7300	10000	3.0	720	120	5.5	30000	190	3.3	< 0.80	**1.3**	33	2.9	62	580	0.070	1.3	5.0	1.4	21	10	< 0.05
C25-214	2014	0.54	59000	4.8	< 1.00	120	0.98	0.22	9800	0.41	3.8	160	140	11000	6700	5.0	1500	120	**79**	34000	170	3.0	< 0.80	**0.80**	35	3.3	54	740	0.060	1.4	6.0	1.9	17	14	< 0.05
C25-217	2014	0.44	66000	1.6	< 1.00	130	0.83	0.14	23000	0.25	8.8	200	140	29000	11000	19	12000	270	4.3	27000	170	1.8	< 0.80	**< 0.70**	30	5.6	92	1700	0.11	1.3	38	3.8	18	24	< 0.05
C25-218	2014	0.45	61000	1.7	< 1.00	260	1.1	0.10	15000	0.27	6.8	160	93	17000	9500	6.0	4900	190	4.3	30000	170	1.6	< 0.80	**< 0.70**	33	2.9	120	1100	0.070	0.92	25	1.1	21	15	< 0.05
C25-223	2014	0.39	61000	4.1	< 1.00	140	1.0	**0.33**	14000	0.25	4.2	150	89	12000	13000	6.0	1900	140	5.0	26000	150	2.1	< 0.80	**< 0.70**	33	3.7	57	860	0.090	1.5	10	1.6	20	14	< 0.05
C25-226	2014	**1.4**	51000	2.8	< 1.00	87	1.2	**2.3**	17000	0.38	11	260	**1800**	45000	6600	10	9500	290	**19**	22000	170	3.5	< 0.80	**1.8**	32	8.7	43	690	0.080	1.9	47	1.0	19	28	< 0.05
C25-227	2014	0.44	62000	0.8	< 1.00	180	0.89	0.19	23000	0.27	11	280	45	29000	11000	16	15000	330	2.8	26000	220	1.6	< 0.80	**1.1**	30	3.8	81	2000	0.12	1.2	37	2.9	24	26	< 0.05
C25-231	2014	0.13	68000	4.0	< 1.00	24	0.32	0.24	41000	0.06	36	260	100	74000	2600	39	**52000**	880	1.7	20000	350	0.77	< 0.80	**1.6**	21	3.1	40	4000	0.04	0.18	100	0.81	12	71	< 0.05
C25-233	2014	0.70	50000	0.7	< 1.00	95	1.1	**0.48**	24000	0.43	8.2	210	140	38000	11000	12	14000	430	10	20000	160	8.6	< 0.80	**< 0.70**	31	7.6	51	780	0.19	2.2	60	0.74	10	35	< 0.05
C25-236	2014	0.64	58000	0.5	< 1.00	390	1.1	0.11	19000	0.49	8.3	220	360	22000	15000	11	6600	300	2.6	25000	170	25	< 0.80	**< 0.70**	32	2.3	150	1700	0.21	1.2	29	1.9	15	65	< 0.05
C25-238	2014	0.57	61000	2.4	< 1.00	390	1.2	< 0.09	25000	0.34	13	240	150	33000	12000	11	11000	360	4.1	24000	180	2.0	< 0.80	**0.90**	30	2.1	120	1800	0.11	1.4	41	2.4	18	30	< 0.05

Notes:

bold values greater than 10x Average Crustal value

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Table A5 - Tailings Shake Flask Extraction Results

Sample ID	Description	Sample Weight	Volume D.I. Water	LIMS	pH	Alkalinity	Conductivity	F	Cl	SO_4	NO_2	NO_3	Hg	Ag	Al	As	Ba	B	Be	Bi	Ca	Cd	Co	Cr	Cu
					unit	g/L as CaC	µS/cm	mg/L	mg/L	mg/L	as N mg/L	as N mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				O.Reg	6.5-9											0.5									0.3
		g	mL	PWQO	6.5-8.5								0.0002	0.0001	0.075*	0.1		0.2	0.011-1.1**			0.0002	0.0009	0.001	0.005
CND 1	(CN-16 MC-13-01)	250	750	14572-FEB14	8.4	28	1300	0.31	<2.0	700	<0.30	0.93	<0.00001	0.00003	0.060	0.0010	0.0097	0.0072	<0.00002	<0.00001	252	<0.000003	0.00062	<0.0005	0.0012
CND 2	(CN-17 MC-13-02)	250	750	14572-FEB14	7.9	29	813	0.31	2.9	360	<0.30	<0.60	<0.00001	<0.00001	**0.080**	0.0006	0.0053	0.0069	<0.00002	<0.00001	115	<0.000003	0.00033	<0.0005	0.0031
CND 3	(CN-18 MC-13-03)	250	750	14572-FEB14	7.6	28	2100	0.30	<2.0	1200	<0.30	0.75	<0.00001	<0.00001	0.020	0.0013	0.025	0.0061	<0.00002	<0.00001	466	<0.000003	**0.00091**	<0.0005	0.0028
C25-201	Solids	250	750	14496-MAR14	7.8	29	95	0.56	<2.0	8.1	<0.30	<0.60	<0.00001	0.00004	**0.25**	0.0017	0.00079	0.13	<0.00002	<0.00001	12	<0.000003	0.00045	<0.0005	0.0015
C25-202	Solids	250	750	14496-MAR14	7.8	36	158	0.69	12	11	<0.30	<0.60	<0.00001	0.00003	**0.090**	0.0006	0.00066	0.0064	<0.00002	<0.00001	22	<0.000003	0.00042	<0.0005	0.0013
C25-206	Solids	250	750	14496-MAR14	7.8	27	84	0.52	<2.0	4.0	<0.30	<0.60	0.00005	<0.00001	**0.24**	0.0024	0.00031	0.0070	<0.00002	<0.00001	11	<0.000003	0.00058	<0.0005	0.0010
C25-212	Solids	250	750	14496-MAR14	7.8	28	81	1.2	<2.0	3.5	<0.30	<0.60	0.00002	<0.00001	**0.48**	0.0046	0.00025	0.0072	<0.00002	<0.00001	8.8	<0.000003	0.00022	<0.0005	0.00090
C25-213	Solids	250	750	14496-MAR14	7.8	26	68	0.17	<2.0	<2.0	<0.30	<0.60	<0.00001	<0.00001	**0.33**	0.0029	0.00035	0.0065	<0.00002	<0.00001	8.2	<0.000003	0.00031	**0.0013**	0.0010
C25-214	Solids	250	750	14496-MAR14	8.5	34	129	0.39	12	3.6	<0.30	<0.60	<0.00001	<0.00001	<0.01	0.0017	0.037	0.066	<0.00002	<0.00001	14	0.000003	0.00032	<0.0005	0.0012
C25-217	Solids	250	750	14496-MAR14	7.9	32	107	1.2	<2.0	10	<0.30	<0.60	<0.00001	<0.00001	**0.13**	0.0013	0.017	0.048	<0.00002	<0.00001	9.2	<0.000003	0.00050	0.00090	0.0011
C25-218	Solids	250	750	14496-MAR14	8.0	27	84	0.40	<2.0	3.2	<0.30	<0.60	<0.00001	<0.00001	**0.14**	0.0024	0.0025	0.053	<0.00002	<0.00001	8.2	<0.000003	0.00047	**0.0012**	0.0010
C25-223	Solids	250	750	14496-MAR14	7.9	29	94	0.12	<2.0	7.4	<0.30	<0.60	<0.00001	<0.00001	**0.23**	0.0045	0.00086	0.063	<0.00002	<0.00001	9.8	<0.000003	0.00043	0.00070	0.00070
C25-226	Solids	250	750	14496-MAR14	7.8	33	169	0.94	13	17	<0.30	<0.60	<0.00001	0.00002	**0.13**	0.0005	0.0011	0.0053	<0.00002	<0.00001	24	0.000006	0.00049	<0.0005	0.0016
C25-227	Solids	250	750	14496-MAR14	8.0	35	144	1.0	12	5.9	<0.30	<0.60	<0.00001	<0.00001	0.050	0.0007	0.025	0.041	<0.00002	<0.00001	17	<0.000003	0.00048	0.00090	0.0012
C25-231	Solids	250	750	14496-MAR14	7.9	35	141	0.13	11	7.4	<0.30	<0.60	<0.00001	<0.00001	**0.12**	0.0014	0.00081	0.0078	<0.00002	<0.00001	18	<0.000003	0.00049	**0.0090**	0.00060
C25-233	Solids	250	750	14496-MAR14	8.0	44	145	0.30	9.7	3.7	<0.30	<0.60	<0.00001	<0.00001	**0.090**	0.0005	0.0033	0.0052	<0.00002	<0.00001	17	<0.000003	0.00078	<0.0005	0.0011
C25-236	Solids	250	750	14496-MAR14	8.0	33	85	0.19	<2.0	2.6	<0.30	<0.60	<0.00001	<0.00001	**0.10**	0.0015	0.0098	0.055	<0.00002	<0.00001	8.5	<0.000003	0.00035	**0.0030**	0.0014
C25-238	Solids	250	750	14496-MAR14	7.9	35	137	0.30	12	5.1	<0.30	<0.60	<0.00001	<0.00001	0.040	0.0006	0.026	0.048	<0.00002	<0.00001	17	<0.000003	0.00023	**0.0065**	0.00090

Sample ID	Description	Sample Weight	Volume D.I. Water	LIMS	Fe	K	Li	Mg	Mn	Mo	Na	Ni	Pb	Si	Sb	Se	Sn	Sr	Ti	Tl	U	V	W	Y	Zn
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
				O.Reg								0.5	0.2												0.5
		g	mL	PWQO	0.3					0.04		0.025	0.003**		0.02	0.1					0.005	0.006			0.03
CND 1	(CN-16 MC-13-01)	250	750	14572-FEB14	0.034	8.9	0.003	3.7	0.025	0.010	74	0.0027	<0.00002	2.0	0.0008	0.001	0.00003	0.25	0.0002	<0.00002	0.0014	0.00005	0.00014	0.000018	<0.001
CND 2	(CN-17 MC-13-02)	250	750	14572-FEB14	0.046	8.4	0.003	3.4	0.018	0.0057	60	0.0014	<0.00002	1.6	0.0011	0.004	0.00003	0.13	0.0002	<0.00002	0.0011	0.00007	0.00011	0.000009	<0.001
CND 3	(CN-18 MC-13-03)	250	750	14572-FEB14	0.036	11	0.004	4.1	0.068	0.0052	100	0.0054	<0.00002	2.0	0.0005	0.003	0.00008	0.39	0.0002	<0.00002	0.0038	0.00003	0.00015	0.000013	<0.001
C25-201	Solids	250	750	14496-MAR14	0.027	1.1	<0.0010	0.38	0.00082	0.0024	5.2	0.0003	0.00024	1.9	0.0008	0.003	0.00006	0.021	0.0003	<0.00002	0.00078	0.00031	0.00034	0.000037	<0.001
C25-202	Solids	250	750	14496-MAR14	0.023	1.7	<0.0010	1.8	0.0024	0.0029	5.0	0.0004	<0.00002	1.4	0.0010	0.002	0.00011	0.034	<0.0001	<0.00002	0.00066	0.00010	0.00010	0.000006	<0.001
C25-206	Solids	250	750	14496-MAR14	0.033	2.1	<0.0010	0.26	0.00079	0.0010	3.3	0.0003	0.00004	1.9	0.0012	<0.001	0.00007	0.017	0.0003	<0.00002	0.00071	0.00031	0.00033	0.000032	<0.001
C25-212	Solids	250	750	14496-MAR14	0.032	2.1	<0.0010	0.20	0.00069	0.0009	6.0	0.0003	0.00003	3.0	0.0008	<0.001	0.00005	0.016	0.0009	<0.00002	0.0013	0.00118	0.00030	0.000114	<0.001
C25-213	Solids	250	750	14496-MAR14	0.071	1.2	<0.0010	0.19	0.00088	0.0012	5.0	0.0003	0.00008	3.1	0.0020	<0.001	0.00009	0.011	0.0014	<0.00002	0.0012	0.00059	0.00017	0.000084	0.0010
C25-214	Solids	250	750	14496-MAR14	0.0070	0.76	<0.0010	0.50	0.00030	0.021	10	0.0004	0.00004	2.4	0.0019	<0.001	0.00015	0.019	0.0001	<0.00002	0.00061	0.00013	0.00052	0.000010	<0.001
C25-217	Solids	250	750	14496-MAR14	0.069	1.6	<0.0010	0.33	0.0014	0.0024	11	0.0003	0.00003	2.6	0.0021	<0.001	0.00007	0.016	0.0030	<0.00002	0.00035	0.00110	0.00037	0.000044	<0.001
C25-218	Solids	250	750	14496-MAR14	0.040	1.0	<0.0010	0.33	0.00046	0.0014	8.3	0.0002	0.00004	2.9	0.0011	<0.001	0.00012	0.016	0.0006	<0.00002	0.00043	0.00103	0.00027	0.000033	<0.001
C25-223	Solids	250	750	14496-MAR14	0.070	1.2	<0.0010	0.39	0.0011	0.0020	7.9	0.0003	0.00005	2.8	0.0010	<0.001	0.00012	0.012	0.0018	<0.00002	0.00096	0.00039	0.00044	0.000112	<0.001
C25-226	Solids	250	750	14496-MAR14	0.097	1.6	<0.0010	1.4	0.0051	0.0046	5.2	0.0004	0.00005	1.2	0.0004	0.001	0.00012	0.040	0.0004	<0.00002	0.00047	0.00017	<0.00003	0.000045	<0.001
C25-227	Solids	250	750	14496-MAR14	0.037	1.5	<0.0010	0.74	0.00038	0.0013	10	0.0007	0.00004	2.4	0.0020	<0.001	0.00007	0.023	0.0004	<0.00002	0.00037	0.00045	0.00046	0.000007	<0.001
C25-231	Solids	250	750	14496-MAR14	0.047	2.2	<0.0010	1.0	0.00057	0.0009	6.8	0.0005	0.00002	2.4	0.0010	<0.001	0.00018	0.034	0.0002	<0.00002	0.000027	0.00161	0.00021	0.000004	<0.001
C25-233	Solids	250	750	14496-MAR14	0.039	1.6	<0.0010	3.6	0.0024	0.0026	3.7	0.0003	<0.00002	1.3	0.0009	<0.001	0.00006	0.032	<0.0001	<0.00002	0.00067	0.00021	0.00010	0.000006	<0.001
C25-236	Solids	250	750	14496-MAR14	0.064	1.6	<0.0010	0.35	0.00068	0.0014	7.9	0.0005	0.00020	2.9	0.0009	<0.001	0.00005	0.017	0.0014	<0.00002	0.00050	0.00046	0.00046	0.000078	<0.001
C25-238	Solids	250	750	14496-MAR14	0.013	1.2	<0.0010	0.86	0.00039	0.0020	8.3	0.0003	<0.00002	2.4	0.0021	<0.001	0.00008	0.036	0.0003	<0.00002	0.00035	0.00030	0.00045	0.000007	<0.001

Notes
Results were compared to Ontario Provincial Water Quality Objectives (PWQO) and Ontario Regulation 560/94 for metal mining effluent (monthly average values). Comparison for reference purposes only, and implies neither compliance nor non-compliance with the specified valu
Bold values indicate concentrations that exceed PWQO guidelines
Itallic values indicate concentrations that exceed O.Reg 560/94 standards
* PWQO values for Al for pH range between 6.5-9.
** Ranges provided for PWQO values for Be and Pb (revised) are hardness dependent

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Table A6 - Tailings Synthetic Precipitation Leaching Procedure (SPLP) Results

Parameter	**Unit**	**O.Reg 560/94**	**PWQO**	**CND 1 (CN-16 MC-13-01)**	**CND 2 (CN-17 MC-13-02)**	**CND 3 (CN-18 MC-13-03)**
LIMS				13298-JUL14	13298-JUL14	13298-JUL14
Sample weight	g			100	100	100
Ext Fluid	#1 or #2			1.0	1.0	1.0
Ext Volume	mL			2000	2000	2000
Initial pH				9.3	9.4	9.5
Final pH				9.1	9.2	9.3
pH	no unit	6.5-9	6.5-8.5	**8.8**	**9.0**	***9.3***
Hg	mg/L		0.0002	< 0.00001	< 0.00001	< 0.00001
Al	mg/L		0.075*	**0.088**	**0.10**	**0.11**
As	mg/L	0.5	0.1	0.00030	0.00040	0.0010
Ag	mg/L		0.0001	< 0.000002	< 0.000002	< 0.000002
Ba	mg/L			0.0088	0.0087	0.0063
Be	mg/L		0.011-1.1**	< 0.000007	< 0.000007	< 0.000007
B	mg/L		0.2	0.033	0.044	0.067
Bi	mg/L			0.000149	0.000010	0.000012
Ca	mg/L			35	20	11
Cd	mg/L		0.0002	< 0.000003	< 0.000003	< 0.000003
Co	mg/L		0.0009	0.000067	0.000033	0.000049
Cr	mg/L		0.001	0.00023	0.00059	0.00041
Cu	mg/L		0.005	0.00078	0.0010	0.0024
Fe	mg/L		0.3	0.048	0.20	0.11
K	mg/L			1.0	0.72	0.70
Li	mg/L			0.00068	0.00070	0.00055
Mg	mg/L			0.33	0.25	0.42
Mn	mg/L			0.00083	0.0011	0.00079
Mo	mg/L		0.04	0.0018	0.0022	0.0022
Na	mg/L			10	10	10
Ni	mg/L	0.5	0.025	0.00060	0.00040	0.00030
Pb	mg/L	0.2	0.003**	< 0.00001	0.00003	0.00005
P	mg/L			< 0.009	< 0.009	< 0.009
Sb	mg/L		0.02	< 0.0002	< 0.0002	0.0003
Se	mg/L		0.1	< 0.001	< 0.001	< 0.001
Si	mg/L			0.95	1.2	1.5
Sn	mg/L			0.00019	0.000050	0.000020
Sr	mg/L			0.023	0.014	0.014
Th	mg/L			< 0.00001	< 0.00001	0.00001
Ti	mg/L			0.00083	0.00095	0.0010
Tl	mg/L			< 0.000005	< 0.000005	< 0.000005
U	mg/L		0.005	0.00027	0.00014	0.00016
V	mg/L		0.006	0.00010	0.00016	0.00038
W	mg/L			0.000050	0.000040	0.000050
Y	mg/L			0.000013	0.000021	0.000093
Zn	mg/L	0.5	0.03	< 0.001	< 0.001	< 0.001

Notes

Results were compared to Ontario Provincial Water Quality Objectives (PWQO) and Ontario Regulation 560/94
Bold values indicate concentrations that exceed PWQO guidelines.
Itallic values indicate concentrations that exceed O.Reg 560/94 standards
* PWQO values for Al for pH range between 6.5-9.
** Ranges provided for PWQO values for Be and Pb (revised) are hardness dependent.

Table A7 - Tailings Ageing Test Decant Solution Analyses - Total Metals

Sample				CND 1 (CN-16 MC-13-01)				CND 2 (CN-17 MC-13-02)				CND 3 (CN-18 MC-13-03)			
Parameter	**Unit**	**O.Reg 560/94**	**PWQO**	**Decant Day 0**	**Decant Day 7**	**Decant Day 29**	**Decant Day 60**	**Decant Day 0**	**Decant Day 7**	**Decant Day 29**	**Decant Day 60**	**Decant Day 0**	**Decant Day 7**	**Decant Day 29**	**Decant Day 60**
Temp on Receipt	°C			18.0	18.0	19.0	18.0	18.0	18.0	19.0	18.0	18.0	18.0	19.0	18.0
TSS	mg/L	15		*138*	5	5	7	*33*	12	5	5	*24*	11	3	3
pH	no unit	6.5-9	6.5-8.5	7.96	8.18	7.85	8.12	7.63	8.00	8.10	8.09	7.67	8.08	7.93	8.18
Conductivity	µS/cm			5220	5230	4960	5670	4550	4630	7700	4780	3470	3500	3650	3840
Alkalinity	mg/L as $CaCO_3$			97	93	81	75	62	65	816	73	65	78	82	85
Acidity	mg/L as $CaCO_3$			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TDS	mg/L			3900	4010	4160	4560	3370	3610	3720	3840	2540	2680	2800	2930
EMF	mV			156	223	247	178	172	238	185	177	153	186	207	197
F	mg/L			0.86	0.70	0.69	0.77	1.04	0.88	0.87	0.84	1.21	0.96	1.03	1.05
S_2O_3	mg/L			< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.4	4.4
NH_3+NH_4	as N mg/L			4.9	4.4	7.0	9.4	4.6	4.9	7.4	11	3.1	3.6	5.9	10
CN(T)	mg/L	1		*1.5*	0.060	0.020	< 0.01000	*1.3*	0.080	0.040	0.02	*1.8*	0.57	0.020	< 0.01
CN_{WAD}	mg/L			0.020	0.050	< 0.01	< 0.01	< 0.01	0.060	< 0.01	< 0.01	< 0.01	0.090	0.020	< 0.01
CNO	mg/L			160	120	110	95	160	190	170	92	170	170	170	130
CNS	mg/L			19	18	18	9.8	9.8	9.6	9.3	9.9	44	42	44	46
NO_2	as N mg/L			< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
NO_3	as N mg/L			< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60
Cl	mg/L			26	22	22	23	23	21	23	23	23	21	21	23
SO_4	mg/L			2600	2800	2500	3100	2200	2200	2500	3100	1600	1600	1700	1800
Hg	mg/L		0.0002	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.000020	0.000030
Ag	mg/L		0.0001	0.000020	0.000020	< 0.00001	0.00081	0.000020	< 0.00001	< 0.00001	0.00071	< 0.00001	0.000010	**0.00014**	**0.00068**
Al	mg/L		0.015-0.075*	**2.4**	**0.18**	**0.070**	**0.13**	**1.2**	**0.45**	**0.050**	**0.070**	**0.93**	**0.24**	**0.10**	**0.060**
As	mg/L	0.5	0.1	0.0016	0.0014	0.0020	< 0.00200	0.0018	0.0016	0.0020	< 0.00200	0.0014	0.0013	0.0016	< 0.00200
Ba	mg/L			0.038	0.041	0.047	0.057	0.024	0.024	0.033	0.034	0.017	0.020	0.024	0.024
Be	mg/L		0.011-1.1**	0.00007	< 0.00002	< 0.00002	< 0.00007	0.00002	< 0.00002	< 0.00002	< 0.00007	0.00002	< 0.00002	< 0.00002	< 0.00007
B	mg/L		0.2	0.014	0.015	0.013	0.020	0.014	0.016	0.015	0.023	0.015	0.017	0.014	0.021
Bi	mg/L			0.000030	< 0.00001	0.000090	0.000080	< 0.00001	< 0.00001	0.000090	< 0.00007	0.000030	< 0.00001	0.000050	< 0.00007
Ca	mg/L			66	136	169	247	135	161	220	279	110	142	180	179
Cd	mg/L		0.0002	< 0.000003	0.000026	0.000067	< 0.00004	< 0.000003	0.000039	0.00011	< 0.00004	< 0.000003	0.000031	0.000084	< 0.00004
Co	mg/L		0.0009	**0.010**	**0.0068**	**0.0092**	**0.0026**	**0.0070**	**0.0058**	**0.0035**	**0.0026**	**0.0091**	**0.0088**	**0.0069**	**0.0036**
Cr	mg/L		0.001	**0.0062**	0.00070	< 0.00050	< 0.00030	**0.0027**	**0.0011**	< 0.00050	< 0.00030	**0.0011**	0.00060	< 0.00050	< 0.00030
Cu	mg/L	0.3	0.005	***0.31***	**0.11**	**0.075**	**0.016**	**0.23**	**0.15**	**0.097**	**0.013**	**0.17**	**0.10**	**0.039**	**0.028**
Fe	mg/L		0.3	3.1	0.24	0.034	0.16	**1.8**	0.59	0.030	0.033	**1.5**	**0.51**	0.093	0.022
K	mg/L			41	49	62	67	47	45	54	57	44	45	48	56
Li	mg/L			0.0030	0.0020	0.0030	0.0057	0.0020	< 0.00100	0.0030	0.00407	0.0020	0.0010	0.0040	0.0043
Mg	mg/L			5.9	5.7	7.9	7.9	5.1	4.8	7.5	7.8	5.1	5.9	8.8	12
Mn	mg/L			0.065	0.027	0.026	0.021	0.036	0.017	0.022	0.044	0.032	0.024	0.043	0.065
Mo	mg/L		0.04	**0.053**	**0.051**	**0.064**	**0.061**	**0.10**	**0.094**	**0.098**	**0.11**	**0.071**	**0.075**	**0.075**	**0.084**
Na	mg/L			1250	1420	1450	1240	994	*1080	1070	970	713	*907	747	788
Ni	mg/L	0.5	0.025	0.0043	0.010	0.016	0.0050	0.0044	0.0099	0.0099	0.0050	0.0022	0.0040	0.0083	0.0030
Pb	mg/L	0.2	0.005-0.025**	0.0013	0.000080	0.00038	0.00020	0.00037	0.000070	0.00021	< 0.00010	0.00030	0.000040	< 0.00002	< 0.00010
Sb	mg/L		0.02	0.0028	0.0018	0.0010	< 0.002	0.0028	0.0023	0.0022	< 0.002	0.0046	0.0041	0.0030	< 0.00200
Se	mg/L		0.1	0.0030	0.0020	0.011	< 0.010	< 0.001	0.0010	0.010	< 0.01	0.0070	0.0040	0.010	< 0.01000
Si	mg/L			7.0	2.0	2.5	2.6	3.8	2.4	2.4	2.4	3.6	2.2	2.4	2.1
Sn	mg/L			0.00046	0.000090	< 0.00001	0.00030	0.00024	0.00011	< 0.00001	< 0.00010	0.00027	0.00012	< 0.00001	0.00020
Sr	mg/L			0.12	0.20	0.26	0.40	0.23	0.26	0.35	0.45	0.22	0.27	0.36	0.43
Ti	mg/L			0.087	0.0041	0.00090	0.0045	0.045	0.015	0.00080	0.0012	0.013	0.0030	0.0012	< 0.00050
Tl	mg/L			< 0.00020	< 0.00020	< 0.00020	< 0.00005	< 0.00020	< 0.00020	< 0.00020	< 0.00005	< 0.00020	< 0.00020	< 0.00020	< 0.00005
U	mg/L		0.005	**0.0070**	0.0041	0.0034	0.0027	0.0043	0.0027	0.0048	0.0029	0.0049	0.0041	0.0040	0.0029
V	mg/L		0.006	0.0033	0.00029	0.00020	< 0.0001	0.0018	0.00067	0.00015	< 0.0001	0.00095	0.00034	0.00018	< 0.0001
W	mg/L			0.0027	0.0014	0.0012	0.001	0.0018	0.0015	0.00051	0.000	0.0014	0.0011	0.00049	0.000
Y	mg/L			0.0034	0.00015	0.000040	0.00015	0.00110	0.00035	0.000017	0.000030	0.00108	0.00025	0.00010	0.000020
Zn	mg/L	0.5	0.03	0.012	0.0050	< 0.002	< 0.002	0.0070	0.0050	< 0.002	< 0.002	0.0090	0.0050	< 0.002	< 0.002

Notes

Results were compared to Ontario Provincial Water Quality Objectives (PWQO) and Ontario Regulation 560/94 for metal mining effluent (monthly average values). Comparison for reference purposes only, and implies neither compliance nor non-compliance with the specified values.
Bold values indicate concentrations that exceed PWQO guidelines.
Itallic values indicate concentrations that exceed O.Reg 560/94 standards
* PWQO values for Al for pH range between 6.5-9.
** Ranges provided for PWQO values for Be and Pb (revised) are hardness dependent.

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Table A8 - Tailings Mineralogy (Rietveld X-Ray Diffraction)

Mineral/Compound	Formula	CND 1	CND 2	CND 3	C25-201	C25-202	C25-206	C25-212	C25-213	C25-214	C25-217	C25-218	C25-223	C25-226	C25-227	C25-231	C25-233	C25-236	C25-238
		(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)	(wt %)
Quartz	SiO_2	34.2	30.6	32.3	43.0	40.1	59.4	30.5	40.2	43.4	33.6	35.3	37.1	48.0	34.8	8.1	45.7	40.4	33.1
Albite	$NaAlSi_3O_8$	38.7	41.3	45.3	37.2	36.8	12.2	38.4	40.8	43.3	37.3	44.5	37.9	31.7	36.6	27.1	21.4	35.3	32.9
Chlorite	$(Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$	7.9	13.4	7.5	6.8	9.7	4.6	4.6	4.1	3.0	10.9	5.2	3.6	10.0	13.6	40.4	6.3	5.3	13.8
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$	13.9	10.8	9.5	6.8	8.3	21.0	18.9	11.2	6.1	9.1	7.2	13.6	3.4	8.5	6.8	7.5	9.4	12.2
Calcite	$CaCO_3$	5.1	3.5	3.2	4.6	3.3	2.4	5.5	2.8	2.8	6.9	3.7	4.3	4.3	5.1	8.0	2.3	3.9	6.2
Microcline	$KAlSi_3O_8$	-	-	-	0.5	0.9	-	1.6	0.5	0.6	0.7	1.1	-	-	-	0.3	0.9	0.6	1.5
Aragonite	$CaCO_3$	-	-	-	1.2	0.9	0.3	0.4	0.4	0.8	1.6	2.6	3.6	2.6	1.5	0.4	0.5	0.8	0.3
Hematite	Fe_2O_3	0.1	0.1	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Siderite	$FeCO_3$	0.1	0.3	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dolomite	$CaMg(CO_3)_2$	-	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cummingtonite	$(Mg,Fe)_7Si_8O_{22}(OH)_2$	-	-	-	-	-	-	-	-	-	-	0.4	-	-	-	-	-	-	-
Tremolite	$Ca_2Mg_5Si_8O_{22}(OH)_2$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.9	0.6	1.4	-
Rhodochrosite	$MnCO_3$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	-	-	-
Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	2.9	-
Ankerite	$CaFe(CO_3)_2$	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12.7	-	-
TOTAL		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Table A9: Average Tailings Humidity Cell Loading Rates (wk 0-18)

Chemical Parameter	Units	CND-1	CND-2	CND-3
Acidity	mg/kg $CaCO_3$/wk	1.86	1.90	1.86
Alkalinity	mg/kg $CaCO_3$/wk	34.6	36.2	9.06
SO4	mg/kg/wk	171	111	45.6
Hg	mg/kg/wk	0.00000922	0.00000914	0.00000908
Ag	mg/kg/wk	0.0000460	0.0000123	0.00000801
Al	mg/kg/wk	0.0810	0.0974	0.0240
As	mg/kg/wk	0.000721	0.00101	0.000238
Ba	mg/kg/wk	0.00872	0.00443	0.00105
Be	mg/kg/wk	0.0000398	0.0000187	0.0000151
B	mg/kg/wk	0.00431	0.00459	0.00182
Bi	mg/kg/wk	0.0000138	0.0000103	0.00000917
Ca	mg/kg/wk	136	84.0	22.1
Cd	mg/kg/wk	0.00000537	0.00000349	0.00000370
Co	mg/kg/wk	0.000472	0.000388	0.0000949
Cr	mg/kg/wk	0.000350	0.000356	0.000353
Cu	mg/kg/wk	0.00191	0.00130	0.00115
Fe	mg/kg/wk	0.0157	0.0366	0.00739
K	mg/kg/wk	4.77	3.54	1.26
Li	mg/kg/wk	0.00266	0.00199	0.000681
Mg	mg/kg/wk	2.25	1.99	1.23
Mn	mg/kg/wk	0.0341	0.0162	0.0141
Mo	mg/kg/wk	0.00499	0.0108	0.00182
Na	mg/kg/wk	34.4	25.8	9.61
Ni	mg/kg/wk	0.00160	0.00110	0.000335
Pb	mg/kg/wk	0.0000415	0.0000584	0.0000335
Sb	mg/kg/wk	0.000903	0.00121	0.000360
Se	mg/kg/wk	0.00169	0.00118	0.000908
Si	mg/kg/wk	1.74	1.89	0.224
Sn	mg/kg/wk	0.000165	0.000186	0.000131
Sr	mg/kg/wk	0.129	0.0877	0.0277
Ti	mg/kg/wk	0.000230	0.000166	0.0000988
Tl	mg/kg/wk	0.0000149	0.0000146	0.0000147
U	mg/kg/wk	0.00214	0.00128	0.000280
V	mg/kg/wk	0.0000951	0.000130	0.0000379
W	mg/kg/wk	0.000150	0.000220	0.0000260
Y	mg/kg/wk	0.0000134	0.00000835	0.0000106
Zn	mg/kg/wk	0.00485	0.00241	0.00182

CÔTÉ GOLD PROJECT
GEOCHEMICAL CHARACTERIZATION REPORT

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TC121522

EXECUTIVE SUMMARY

AMEC Environment and Infrastructure (AMEC) was retained by IAMGOLD Corporation (IAMGOLD) to conduct geochemical characterization of mine rock, construction and borrow material and tailings for the Côté Gold Project (the Project) located approximately 20 kilometres southwest of Gogama. This report documents a geochemical investigation to assess the metal leaching and acid rock drainage (ML/ARD) potential of materials to be generated during operations.

AMEC has evaluated previous geochemical studies and completed additional sampling to assess the ML/ARD potential of mine rock, and materials related to construction activities anticipated for the Project. Geochemical characterization of mine rock, construction and borrow rock and overburden from this and previous studies was completed using standardized ML/ARD techniques. This report provides interpretation on static and kinetic testing completed on Project samples.

Selected samples of overburden and rock available from previous investigations were analysed for ABA and metals to screen for the potential for ML/ARD in the following Project areas: Mine Rock Area (MRA), Tailings Management Facility (TMF) and the Bagsverd Creek Realignment. Test results indicate a low potential for ML/ARD for these materials. Overburden materials in the vicinity of the future pit and sediments from Côte Lake, Three Duck Lakes, Clam Lake and Unnamed Pond were also assessed in a similar manner and likewise indicate little potential for ML/ARD.

A subset of 236 acid base accounting (ABA) mine rock sample results have been screened from a larger set of site mine rock ABA results collected since 2011. The focused subset of results have been identified as representing all major lithology types and broad spatial coverage of non-ore mine rock in the vicinity of the proposed pit development. Results of this testing determined that approximately 94% of mine rock samples had neutralization potential ratios (NPR) of less than 2 and were unlikely to generate acid drainage. A larger sample set of representative archived drill core pulps (912) were analyzed by Leco induction furnace for total carbon and sulphur and used as a proxy for Carbonate NP and Maximum Potential Acidity (MPA). Using this proxy produced a similar result and determined that approximately 94% of mine rock samples had an NPR greater than 2 and were unlikely to generate acid drainage in the future.

Some mine rock samples were enriched in arsenic, bismuth, copper and selenium and infrequently (a few samples) in cadmium and molybdenum. Based on short-term leaching tests there is little evidence of concern for metal leaching under neutral drainage conditions. Potential metal leaching from mine rock is being further investigated vis-a-vis ongoing kinetic testing.

ABA and total metals analysis of 93 simulated tailings materials indicates the tailings are NPAG with generally low metals concentrations. Some samples showed somewhat enriched values of arsenic, bismuth, copper, selenium and molybdenum. Although neutral metal leaching is not

considered to be a concern, Kinetic (humidity cell) testing is planned on representative tailings materials.

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GLOSSARY

ABA	acid base accounting
ARD	acid rock drainage
AP	acid potential
Carbonate NP	carbonate neutralization potential
Carbonate NPR	carbonate neutralization potential ratio
Carbonate NPR_{MPA}	carbonate neutralization potential ratio from MPA
CGC	Chester Granitoid Complex
EA	Environmental Assessment
kg $CaCO_3$/tonne	kilograms calcium carbonate per tonne
Km	Kilometres
IAMGOLD	IAMGOLD Corporation
ICP-OES	Inductively Coupled Plasma Optical Emission Spectrometry
ICP-MS	Inductively Coupled Plasma-Mass Spectrometry
mL	Milliliters
MDL	minimum detection limits
µg	Micrograms
ML/ARD	metal leaching and acid rock drainage
MRA	mine rock area
MPA	Maximum potential acidity
NAG	net acid generation
NP	neutralization potential
NPR	neutralization potential ratio
NPR_{MPA}	neutralization potential ratio from MPA
NPAG	non-potentially acid generating
Mt	million tonnes
PAG	potentially acid generating
Ppm	parts per million
Project	Côté Gold Project
PWQO	Provincial Water Quality Objectives
RDZ	Ridout Deformation Zone
SFE	shake flask extraction
Rietveld-XRD	Rietveld X-Ray Diffraction
SPLP	synthetic preparation leaching procedure
TMF	Tailings Management Facility
XRD	x-ray defraction
XRF	x-ray fluorescence

1.0 INTRODUCTION

IAMGOLD Corporation (IAMGOLD) is planning to develop the Côté Gold Project (the Project) located approximately 20 kilometres (km) southwest of Gogama, 130 km southwest of Timmins, and 200 km northwest of Sudbury (see Figure 1).

This document is one in a series of physical, biological and human environment baseline reports to describe the current environmental conditions at the Project site. These baseline reports are written with the intent to support the Environmental Assessment (EA) process.

1.1 Overview of the Côté Gold Project

IAMGOLD is planning to construct, operate and eventually reclaim a new open pit gold mine at the Côté Gold Project site.

The proposed site layout places the required mine-related facilities in close proximity to the open pit, to the extent practicable. The proposed site layout is presented in Figure 2 showing the approximate scale of the Côté Gold Project. The site plan will be refined further as a result of ongoing consultation activities, land purchase agreements and engineering studies.

As part of the proposed development of the Project, several water features will be fully or partially overprinted. These include Côté Lake, portions of Three Duck Lakes, Clam Lake, Mollie River/Chester Lake system and Bagsverd Creek. As a consequence, these water features will need to be realigned for safe development and operation of the open pit.

The major proposed Project components are expected to include:

- open pit;
- ore processing plant;
- maintenance garage, fuel and lube facility, warehouse and administration complex;
- construction and operations accommodations complex;
- explosives manufacturing and storage facility (emulsion plant);
- various stockpiles (low-grade ore, overburden and mine rock area (MRA)) in close proximity to the open pit;
- aggregate extraction with crushing and screening plants;
- tailings management facility (TMF);
- on-site access roads and pipelines, power infrastructure and fuel storage facilities;
- potable and process water treatment facilities;
- domestic and industrial solid waste handling facilities (landfill);

- water management facilities and drainage works, including watercourse realignments; and
- transmission line and related infrastructure.

2.0 SCOPE OF WORK

This report provides geochemical input on the following aspects of the Project:

- overburden from the MRA;
- overburden and rock from the proposed bagsverd creek realignment channel;
- overburden and possible rock borrow from the area of the TMF;
- overburden and lake sediments within the open pit boundary;
- the proposed open pit mine rock; and
- ore and tailings character, based on available metallurgical samples.

3.0 STUDY AREA

The following sections are summarized from the Côté Gold Project NI 43-101 report (RPA, 2012). Deposit geology and mineralization described in Section 3.4 has been updated by the IAMGOLD exploration group.

3.1 Physiography

The Project site is located within an area with moderately hilly boreal mixed wood (Birch, Pine, Poplar and Spruce) forest, bogs, fens and lakes; generally less than 10 m deep. Elevations range from 375 to 425 m above sea level (masl), averaging approximately 400 masl near the Project site. The glaciated country has a gently rolling topography that seldom exceeds 50 m from the lowest point in the Project site area. The higher ground usually has a veneer of glacial soil over bedrock, with thicker overburden present in the low-lying areas between the hills.

3.2 Regional Geology

The Project area is located in the Swayze greenstone belt, an extension of the Abitibi greenstone belt located within the Superior province. The Swayze belt contains both extrusive and intrusive rocks with compositions ranging from ultramafic to felsic. It also contains chemical and clastic sedimentary rocks which mainly occur near the top of successions. The Swazye area underwent complex structural development which includes polyphase folding, multiple foliations, ductile high-strain zones and late brittle faulting. An important element in the Abitibi belt is the Ridout Deformation Zone (RDZ), a major east-west high-strain zone interpreted to be the western extension of the Larder Lake-Cadillac deformation zone. While the Côté Gold deposit does not appear to be associated with the RDZ, many other deposits in the area are. There are also at least four separate dike swarms present in the Swazye belt.

3.3 Property Geology

The Côté Gold deposit is hosted within the Chester Granitoid Complex (CGC), which is the northern edge of the Ramsey-Algoma granitoid complex. The CGC is synvolcanic and was emplaced along the now southern margin on the Ridout syncline. It is a stratified trondhjemite-diorite laccolith containing numerous screens and inclusions of mafic volcanic rocks.

The Chester Property host rocks include: calc-alkalic pyroclastic metavolcanic rocks of felsic to intermediate composition, felsic to intermediate intrusive rocks, namely tonalite, trondhjemites, granodiorite, and diorite of the CGC and related migmatites.

3.4 Deposit Geology and Mineralization

Descriptions of the main lithological units within the Côté Gold deposit are as follows:

- **Tonalite:** This unit is a medium to coarse grained intermediate intrusive, inequigranular texture and is light grey or light pink in color. The unit is composed of 40-50% quartz and 50-60% plagioclase. Accessory minerals include hornblende, ilmenite, magnetite, titanite, leucoxene, and rutile. Alteration can range from weak to intense silica-albite, sericite, hematite with generally weak to very weak epidote, carbonate, chlorite and occasionally fuchsite. Unit is commonly fractured with 1-2% quartz-carbonate veining, and jointed throughout. Mineralization is characterized by trace disseminated to 1% pyrite-chalcopyrite-pyrrhotite-molybdenum-gold and is concentrated in veins, fractures and interstitial to quartz-feldspar grains. Two generations of tonalite have been observed with the older tonalite hosting the deposit and the younger intrusion injecting tonalite, diorite and breccia bodies, and is not related to any mineralizing events. The tonalite has also been referred to as granodiorite in previous reports.

- **Diorite:** This intermediate intrusive unit ranges from fine to medium grained to coarse grained to pegmatitic to quartz-porphyritic in texture and intrudes the tonalite hosting the deposit. Diorite constitutes the matrix of the main breccia body with a hydrothermal overprint. The Diorite also forms a series of E-W trending lenses within the deposit. The diorite contains 40-50% plagioclase, 15-30% amphiboles and 0-10% quartz. Accessory minerals include ilmenite, magnetite, leucoxene, tourmaline, zircon and apatite. This unit has been observed to grade into a hornblende tonalite. The unit is generally massive with minor zones of weak foliation and shearing, minor fracturing, veining and jointing throughout. Mineralization is characterized by trace disseminated pyrite-chalcopyrite. Alteration is characterized by weak hematite, carbonate and epidote alteration with strong to intense silica-albite marginal to the main E-W fault and the main breccia body. This unit has also been referred to as both Diorite and Gabbro in previous reports.
- **Breccias:** Four main types of breccia are recognized throughout the deposit including diorite magmatic breccia, hydrothermal breccia, magmatic mixing breccia and heterolithic quartz carbonate breccia with the hydrothermal breccia as the core of the deposit and host the majority of disseminated gold (Au) mineralization, semi-massive chalcopyrite-pyrite-pyrrhotite (up to >5%) and the vein hosted Au.
  - **Hydrothermal Breccia:** Unit is composed of small scale (cm up to > 30 cm) tonalite fragments (mega breccia) set in a fine grained hydrothermal matrix composed of biotite, chlorite, epidote, silica, carbonate and leucoxene. Fragments have sharp to diffuse boundaries and commonly display intense silica albite alteration. Disseminated to semi-massive to massive clots of pyrite, chalcopyrite, pyrrhotite and minor molybdenum are commonly concentrated in the matrix. Disseminated Au and vein hosted Au is common throughout the unit. The breccia has been observed to show near complete replacement by intense silica-albite alteration. Unit shows minor fabric, quartz/carb veining and or flooding. This unit has been referred to as both diorite breccia and gabbro breccia in previous reports.
  - **Diorite Magmatic Breccia:** Unit is composed of small scale (cm up to >30 cm) tonalite fragments (mega breccia) set in a coarse grained dioritic matrix with primary magmatic textures preserved. Fragments are angular to sub rounded with sharp boundaries and show weak to moderate hematite-epidote alteration. Trace disseminated pyrite and chalcopyrite mineralization is common with minor vein Au. Unit shows weak hematite, epidote, carbonate, silica-albite alteration with fracture

hosted carbonate stringers, 1-2% quartz/quartz-carb veining, minor fracturing and jointing. Magmatic breccia constitutes and minor portion of the main breccia body. This unit has been referred to as both diorite breccia and gabbro breccia in previous reports.

- **Magmatic Mixing Breccia:** This unit is spatially associated with the contacts on tonalite and diorite and is composed of a mixture of diorite, tonalite, diorite fragments and mafic fragments as a contact breccia from the differentiating main diorite bodies. Unit shows trace disseminated pyrite and chalcopyrite mineralization with weak silica-albite, epidote, hematite, sericite, carbonate, and chlorite alteration. 1-2% carbonate, quartz carbonate and quartz veining is common with minor fracturing, shearing, and jointing present.
- **Heterolithic Quartz Carbonate Breccia:** This unit is a late hydrothermal fault breccia associated with the main E-W fault structure and secondary structures throughout the deposit. Unit is composed of angular quartz, mafic, and tonalite fragments set in a matrix of quartz and carbonate material. Minor disseminated to semi-massive chalcopyrite mineralization, quartz and quartz carbonate veining and or flooding is common.

- **Diabase Dykes:** Diabase dikes are found throughout the deposit striking northwest (NW) and dipping steeply to the northeast (NE) as part of the 2452 Ma Matachewan Dike Swarm event. They can range in thickness from cm scale up to 30 m wide and are found cross cutting all units throughout the deposit. The dikes range in texture from fine grained and siliceous to med grained to feldspar glomeroporphyritic. The diabase is strongly magnetic with trace disseminated pyrite +/- chalcopyrite mineralization near the contacts with other units. Fracture hosted carbonate veining, very weak to weak hematite alteration and weak epidote alteration of feldspar phenocrysts is common. Diabase dikes are not associated with the Au mineralization within the deposit.
- **Mafic Dykes:** The mafic dikes are a fine grained mafic intrusive with sharp contacts with the host rock. They are numerous throughout the deposit in a “sheeted” fashion and range from cm scale to several meters in width. They are commonly strongly foliated, folded and crenulated with mod to strong chlorite-carbonate alteration. Barren quartz, carbonate and quartz carbonate veining throughout and concentrated along contacts with the host rock is common. Trace disseminated to >5% semi-massive to massive pyrite +/- chalcopyrite is common. Mafic dikes are not associated with the Au mineralization within the deposit.
- **Intermediate and Felsic Dykes:** Minor dikes of intermediate composition are present throughout the deposit and are commonly fine grained and foliated with weak hematite, chlorite, sericite, carbonate and silica alteration. Dikes have sharp contacts with the host rocks and show trace disseminated pyrite and chalcopyrite mineralization. Intermediate dikes are not associated with the Au mineralization. Felsic dikes are composed of quartz and feldspar phenocrysts, set in a fine grained felsic matrix. Felsic dikes are a minor feature in the deposit and show trace disseminated pyrite +/- chalcopyrite mineralization with weak silicification, hematite, carbonate, sericite, chlorite and epidote alteration.

Felsic dikes are commonly massive with some instances of strong foliation. Felsic dikes are not associated with the Au mineralization within the deposit.

4.0 PROGRAM DESIGN

Approximately 810 Mt of mine rock will be generated during development of the open pit and will be stockpiled in the MRA. Rock generated from realignment of watercourses, and stripped overburden from the Site will also be stockpiled in the MRA. Stockpiled mine rock (approximately 40 Mt) and overburden will be sourced for construction of dams and roads where possible.

Assessment of the potential for metal leaching and acid rock drainage (ML/ARD) covered a range of overburden, sediment and rock materials expected to be generated during development including:

- potential aggregate and construction rock excavations and borrow areas (TMF, Bagsverd Creek realignment area);
- lake sediments from the vicinity of pit development;
- in-pit overburden and mine rock, and
- simulated tailings.

The sampling and analysis program was developed to meet anticipated regulatory requirements. Static testing of all sampled materials included acid base accounting (ABA) and metals/elemental analysis. Characterization of in-pit mine rock additionally included analyses of selected sample for the following: Net Acid Generation (NAG) testing, whole rock digestion, mineralogical analysis by X-ray Diffraction with Rietveld refinement (Rietveld-XRD), and leach testing by Shake Flask Extraction (SFE) and Synthetic Precipitation Leaching Procedure (SPLP). Kinetic testing of selected mine rock samples in the form of standard humidity cells and field cells has also been initiated.

The ML/ARD program and results described herein was completed using a staged approach with initial studies carried out by Knight Piésold (2011 to 2012) and subsequent work (2012 to 2013) directed by AMEC.

In the absence of specific testing or ore, ABA and bulk geochemical results of tailings can also be utilized to support a broad understanding of ore character in terms of ML/ARD. However, it is recognized that the relationship is limited to bulk characterization and cannot be extended to metal leaching in terms of grain-size and effects induced by metallurgical processing.

4.1 Regulatory Context

The approach and methodology for the data interpretation used in this report was based on the requirements described under the Ontario *Mining Act*; namely guidance found within the documents *DRAFT Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia* (Price 1997), and *Policy for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia* (MEM 1998).

Additional guidance was provided by the reference document *Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials* (MEND 2009) which represents best practice and industry standard approaches and methodologies for ML/ARD sampling and characterization in Canada.

4.2 Acid Base Accounting

The ML/ARD characterization conducted in this study follows the testing methods outlined in the standards described above. The analyses included:

- the determination of paste pH;
- several potential measures of neutralization potential (NP), namely total carbon, total inorganic carbon, and modified Sobek NP; and
- assessment of acid potential (AP) based on sulphur species (total sulphur, sulphate-sulphur, and sulphide-sulphur by difference).

Assessment of the potential for a sample to generate acidity is defined by the ratio of the neutralization potential (NP) to the acid potential (AP) and is referred to as the neutralization potential ratio (NPR). For initial screening and practical purposes, the threshold separating potentially acid generating (PAG) rock from non-potentially acid generating (NPAG) rock is an NPR value of 2. This value is generally accepted as industry best practice (MEND 2009). Rock with NPR values between 1 and 2 is considered to have an uncertain acid generating potential, whereas rock with NPR <1 is considered to be likely acid generating.

4.3 Metals/Elemental Content

Chemical extraction and analysis is used to quantify the concentration of elements in samples, but does not provide a direct assessment of metal leaching potential. There are no regulatory standards that apply directly to the elemental content of overburden or mine rock.

For screening purposes, elemental content of the soil and sediment samples were compared to the site specific soil standards derived from Ontario Typical Range values for soils not contaminated by point sources. This comparison is strictly for reference purposes and implies neither compliance nor non-compliance with specified guideline. The standards are for use under Part XV.1 of the Environmental Assessment Act for contaminated sites (MOE 2011). Several standards are specified to guide contaminated site cleanup to background conditions including.

- a soil quality standard for most land uses (e.g. residential, parkland, commercial and industrial), hereafter the R/P/C/I standard;
- a soil quality standard for agricultural and related land uses; and
- a sediment quality standard.

The elemental content of mine rock was evaluated against average elemental crustal compositions (Price 1997). For screening purposes, samples with more than 10 times the average crustal abundance for a given element were considered to be enriched in that element.

4.4 Leachable Metals

The results SFE and SPLP testing are used as screening tools to assess whether short term metal leaching could potentially occur from a sample.

Results were screened by conducting a comparison of leachate results to standards specified in Ontario Regulation 560/94 and Ontario Provincial Water Quality Objectives (PWQO) for the protection of aquatic life. The PWQO standards are not directly comparable to leachates from source materials. This comparison is strictly for reference purposes and implies neither compliance nor non-compliance with the specified guideline.

4.5 Kinetic Tests

There are no criteria that are directly applicable to assess metal leaching data from kinetic tests such as humidity cells or field test cells. Kinetic test results must be interpreted and are informative in terms of:

- rates of sulphide oxidation, neutralization potential depletion and metal leaching rates;
- site-specific PAG and NPAG thresholds; and
- interpreted timing of the onset of acidic conditions in PAG materials.

5.0 METHODOLOGY

5.1 Sampling Program

Based on a review of information provided by IAMGOLD to AMEC in May 2013 that included previous geochemical and geotechnical studies, and mine plan information; AMEC developed a geochemical testing program to augment the geochemical database existing at that time. The following sections outline the overall sampling plan and collection of samples as completed and coordinated by AMEC. The subject work also integrates ML/ARD data previously collected by Knight Piésold and accepted by AMEC on the basis of the documentation provided. A list of samples analyzed by location and sample type is provided in Table 5-1. The reader is also referred to the methods documented in the supporting report (Knight Piésold, 2012a).

5.1.1 Overburden and Construction Rock Sample Selection

Overburden, sediment and construction rock samples were selected from archived materials for previous hydrogeological studies completed by Golder (2013) and geotechnical studies by Knight Piésold (2012b, 2012c, 2013a). Samples were selected for the following areas:

- MRA (11 overburden samples);
- Bagsverd Creek realignment (five overburden samples, two rock samples);
- open pit (35 overburden samples);
- Côté Lake, Clam Lake, Three Duck Lakes and Unnamed Pond (five sediment samples); and
- TMF (four overburden samples, 12 rock samples).

Overburden and sediment samples were selected using test pit, and borehole logs according to location and soil/sediment characteristics to ensure good spatial and material variation coverage. Sample locations selected from the MRA are identified on Figure 3, and locations for samples selected from the TMF and Bagsverd Creek diversion area are identified on Figure 4. Overburden and lake sediment samples selected from the open pit area are identified on Figure 5. Selected sediment samples that were stored by Golder were collected and shipped to SGS Lakefield (ON). The remaining samples stored on-site were collected by IAMGOLD personnel and shipped to SGS Lakefield (ON) for analyses.

Rock samples were selected from drill core completed for geotechnical testing programs (Knight Piésold 2012b, 2012c, 2013) and locations are indicated on Figure 4. Samples were selected based on location, core availability and lithology. As directed by AMEC, the core sections selected for sampling were re-logged by IAMGOLD personnel (to ensure consistency with site geology) and then sampled, and shipped to SGS Lakefield (ON).

5.1.2 Mine Rock Sample Selection

Target mine rock sample numbers were established based on the material balance sent from IAMGOLD to AMEC in May 2013 (2012 conceptual pit). In the absence of defined in-pit lithological quantities the proportions of each lithology were estimated using linear lengths extracted from in-pit borehole intersections provided by IAMGOLD (Table 5-2).

All sample selection was guided by the following considerations:

- anticipated lithological proportions (Table 5-2);
- available samples from previous characterization programs by Knight Piésold (2012a, 2013b);
- mine waste rock (hereafter referred to as mine rock) defined on the basis of a gold cut-off grade of 0.3 g/t; and
- broad in-pit spatial coverage assured by cross sections provided by IAMGOLD at 50 to 100 m spacing along the pit.

Screening of the existing Knight Piésold data set indicated a strong correlation between Leco total sulphur and AP and Leco total carbon and NP to the extent that total sulphur and total carbon as determined by Leco induction furnace could be used as proxies for AP and NP respectively. Based on this analysis, the sampling program was designed to include the following components:

- a reference sample set (n=236) from archived drill core stored at site and analysed for a full suite of ML/ARD characterization parameters;
- a high spatial density sample set (n=1114) from exploration assay pulp materials (ground and pulverised core) in archive with Accurassay, Thunder Bay (ON) to be analysed for Leco carbon/sulphur; and
- a control sample set for quality assurance/quality control (QA/QC).

It should be noted, that of the original 128 samples available from the Knight Piésold work, a total of 75 mine rock samples were identified as in-pit mine rock. The remainder were not included in the current analyses because they were either located significantly outside the pit or had a gold grade in excess of 0.3 g/t and were considered ore instead of mine rock.

The reference sample set comprised samples derived from existing Knight Piésold work and additional samples collected by AMEC. To complement the 75 Knight Piésold samples, an additional 161 widely distributed samples representative of in-pit mine rock were selected by AMEC. Drill core for the mine rock in-pit samples were retrieved by IAMGOLD personnel, and were logged and sampled by AMEC personnel in July 2013. Samples were also selected from geotechnical drill core (Knight Piésold 2012b, 2012c) to fill spatial gaps in the sample distribution. The geotechnical samples were logged and sampled by IAMGOLD personnel as directed by AMEC. The spatial distribution of the selected rock core samples is presented in Figures 6 and 7.

The high spatial density sample set was retrieved by Accurassay from archive based on sample lists provided by AMEC. Upon request, the selected samples were homogenized, split, and sent to Western University, London (ON) for total carbon/sulphur analysis by Leco induction furnace. The pulp samples selected for total carbon and sulphur analysis are presented in Figures 6 and 7.

A subset of 35 of the pulp samples corresponded with testing of drill core samples for QA/QC (Appendix C). Drill core and pulp samples analyzed for ABA were homogenized, split and sent to SGS Lakefield (ON) for analysis.

Humidity cell testing was conducted on fourteen composite samples selected by Knight Piésold. The humidity cells consisted of composite samples of 3 to 4 segments of half-core ranging from 2 to 6 m in length. The cells contain material from four lithological rock units, including tonalite, diorite, diorite breccia and magma mixing breccia.

Field cell testing was conducted on six composite samples selected by Knight Piésold. Each field cell consisted of 29 to 30 boxes of split NQ core (> 100 m) representing a single rock type. Lithologies selected for the cells included: tonalite (two cells), diorite, diorite breccia and magma mixing breccia (two cells). A seventh empty field cell was also set up to collect and analyze the precipitation at site.

5.1.3 Tailings Sample Selection

A total of 93 simulated tailings materials produced in metallurgical testing were selected for characterization to support this study. The materials are believed to be largely representative of the range of tailings produced from a variety of ore types subjected to simulated gold extraction processes similar to those to be utilized in milling of future Côté Gold Project ores. All samples were selected and submitted by IAMGOLD to SGS Lakefield for analysis.

5.2 Analytical Methodology

The analytical methods used were consistent with those described in the previous geochemical investigations (Knight Piésold, 2012a). These analytical methods also represent industry best practice (MEND 2009). It is noted that the previous Knight Piésold elemental analyses utilized a different extraction technique than the current AMEC work and this is detailed below. AMEC analytical work in expansion from that of Knight Piésold has focused on ABA and elemental content of materials to be generated by the Project. Work is planned to expand on the short-term leach testing, mineralogy and kinetic testing initiated by Knight Piésold as required.

Kinetic testing documented in this report was based on 34 weeks of humidity test cells that were initiated by Knight Piésold in December 2012 under the operation of SGS Lakefield. Humidity cells simulate the weathering of mine rock and assess metals and acid leaching due to potential oxidation of sulphide minerals on the crushed drill core.

5.2.1 Static Testing

5.2.1.1 Acid Base Accounting

ABA testing methods were applied to assess the acid generation and neutralization potential of the geologic material. The testing techniques and calculations are outlined below:

Paste pH

Paste pH is a method used to assess the immediate balance of acidity / alkalinity of a sample. Paste pH is one of the principal drivers indicating solubility for many trace elements and metals in water. The paste pH is measured from the supernatant following mixing of one part sample and one part de-ionized water.

Forms of Sulphur and Acid Potential (AP)

Sulphur in a geologic sample can be in the form of sulphide sulphur, acid-leachable sulphate, acid-insoluble sulphate, organic sulphur, elemental sulphur, and occasionally other forms of sulphur. Part of ABA testing quantifies the total sulphur, leachable sulphate sulphur and sulphide sulphur content. Total sulphur in the samples was determined by the Leco carbon/sulphur induction furnace method. Sulphate sulphur was determined by dilute hydrochloric acid digestion and colorimetry. Sulphide sulphur was calculated as the difference between total sulphur and sulphate sulphur. The acid potential (AP) is a measure of a samples potential to generate acidity primarily due to oxidation of sulphide-bearing minerals. Sulphide sulphur (as determined here by difference) was used to estimate AP, and the total sulphur content was used to determine the maximum potential acidity (MPA) assuming all sulphur is in the form of suphide-sulphur. For this work, AP was used to characterize the overburden, construction rock, mine rock and tailings samples from ABA, and MPA was used to characterize the mine rock samples by Leco carbon/sulphur.

Forms of Neutralization Potential (NP)

The neutralization potential (NP) is the measure of the ability of a sample to neutralize a known volume of acid during a short exposure period. The amount of NP was determined using the Modified Sobek method which represents the NP as determined empirically in the prescribed acidification/titration test (hereafter NP). Measurement of inorganic carbon provides an estimate of the NP attributable to carbonate minerals (hereafter Carbonate NP). For this work total carbon was determined by Leco analysis and inorganic carbon was determined following the pyrolysis Leco method.

For this study, overburden and sediments were found to contain a component of organic carbon and therefore Carbonate NP was calculated from carbonate carbon content. For rock materials total carbon has been found to be a reasonable predictor of carbonate carbon. For rock materials, total carbon was used to calculate Carbonate NP in order to support the proxy approach for estimating NP by total C as determined by Leco furnace.

Neutralization Potential Ratio (NPR)

The NPR is a widely accepted criterion to characterize the potential of geologic materials to produce net acidity. Values less than one indicate that the AP exceeds NP, and values greater than one indicate that a sample has excess NP. As previously described, an initial practical screening value separating PAG rock from NPAG is an NPR value of 2 (MEND 2009). Values of NPR between 1 and 2 are considered to have an uncertain acid generating potential, whereas rock with NPR<1 are considered to be likely acid generating.

For this study, a sample had no measurable sulphur content (i.e., less that the method detection limit of 0.01%) and thus the AP value was less than detection, a minimum value of 0.3 kg $CaCO_3$/tonne was assumed and substituted for the AP.

5.2.1.2 Net Acid Generation Testing

The single addition NAG test was conducted on selected mine rock samples, and is a complimentary test to ABA which provides additional assessment of the potential to generate acidity. Hydrogen peroxide was applied to rapidly oxidize sulphide minerals in a sample to determine if it has enough neutralization capacity to buffer the acidity generated during sulphide oxidation. Approximately 2.5 g of pulverized sample was reacted with 250 mL of 15% hydrogen peroxide at room temperature until effervescence ceased. The sample was then heated for a minimum of two hours and boiled rapidly for several minutes to decompose remaining peroxide. De-ionized water was added to the sample to bring the final volume to 250 mL. The resulting pH of this solution is measured and referred to as the NAGpH. Values for NAGpH greater than 4.5 indicate that a sample has little potential to produce net acidity in the future, whereas values less than 4.5 suggest that the sample has the potential to produce net acidity.

5.2.1.3 Elemental Analyses

Elemental analysis was used to quantify the metals content in the rock samples by aqua regia digestion. Quantification of major elements was conducted by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) and minor elements determined by Inductively Coupled Plasma Mass Spectrometry (ICP-MS). Digestion by *aqua regia* is considered a near total digestion as the majority of minerals in the rocks are dissolved (including sulphides and carbonates) with the exception of some resistant minerals such as silicates that may only be partially digested. Dissolution of most environmentally significant metal phases is achieved by this technique.

Previous Knight Piésold mine rock characterization work utilized a different near total three acid digestion method rather than the aqua-regia (two acid) method described above. This more aggressive digestion in some instances has the potential to extract higher concentrations of some metals; however, these will in general be related to a more complete digestion of weathering resistant phases (silicates). This difference only applies to the mine rock sample set and was considered in evaluating these results.

5.2.1.4 Leachable Metals

Analysis of leachable metals by SFE and SPLP testing on selected mine rock samples was completed to provide an indication of the potential release of soluble metals during initial stages of weathering. The SFE testing was conducted using a 3:1 de-ionized water to solid ratio agitated for 24 hours. The SPLP procedure was conducted using acidified (pH 4.2) de-ionized water at a 20:1 water to solid ratio agitated for 24 hours. The resulting leachates for both tests were analyzed for pH, conductivity, hardness, sulphate and dissolved metals. Analysis of the leachate from the NAG test (NAG leachate) was similarly completed on selected mine rock samples to assess metal release as a result of the induced peroxide oxidation of the sample. For all leachate tests major elements (calcium, magnesium, sodium, potassium, iron) were quantified by ICP-OES and minor elements by ICP-MS.

5.2.1.5 Whole Rock Analysis

Whole rock analysis provides a quantitative chemical analysis of rock samples to support bulk mineralogy and chemistry and complementary to mineralogical analyses such as Rietveld XRD. Whole rock analysis was completed using borate fusion with X-ray Fluorescence (XRF).

5.2.1.6 Mineralogy (Rietveld-XRD)

Mineralogical analysis was conducted by Rietveld-XRD. This technique provides a semi-quantitative to quantitative assessment of the mineral composition of a sample. A laboratory split sub-sample was crushed to less than 10 µm then analyzed as a random powder mount using an X-ray diffractometer equipped with a step-scanning goniometer. The amounts reported represent the relative amounts of crystalline mineral phases in the mounted specimens normalized to 100%. This method is effective at identifying crystalline phases present in abundance greater than a few weight percent. With favourable peak profiles and minimal overlapping peaks, phases may be detected at less than one weight percent.

5.2.2 Kinetic Testing

5.2.2.1 Humidity Cells

Humidity cell tests are a standardized procedure designed to determine primary reaction rates of mine materials under accelerated subaerial weathering conditions. Samples are crushed, placed in specifically designed cells, leached with deionized water under controlled conditions (temperature and humidity). Leachate is routinely collected from the cells and analyzed for dissolved metals, anions and general parameters. Humidity cell testing generally continues until leaching rates become stable. The standardized nature of humidity cell testing allows the comparison of results with those from other sites.

The results from humidity cell testing in combination with precipitation data, the configuration disposal facilities are used to estimate the flux of metals from mine materials, the rates of NP depletion, and the lag time until net acidic conditions occur for the sample. In order to remove the effect of weekly variances in the results, average loading calculations are preferentially determined from steady state release rates.

Estimates of the time until sulphide and NP exhaustion in kinetic tests can be used to infer if a material has the potential to generate acid in the future. Estimated depletion rates for mine rock humidity cells were calculated by determining the average loss of sulphide and carbonate NP (represented as molar calcium plus magnesium) for each cell. Estimated sulphur and NP depletion rates were applied to the measured sulphide and NP contents to determine the time until sulphide and NP exhaustion, and to estimate the time to acid onset for PAG material. Prediction of depletion rates from standard humidity cells can guide interpretation of the timing of future acid onset for materials being tested.

Samples for humidity cell testing were selected and initiated by Knight Piésold in December 2012. AMEC reviewed the available information for all cells including borehole logs and drill core photographs. AMEC updated the lithological names to be consistent with updated lithological descriptions used during exploration. AMEC also confirmed archived homogenized material was available for each cell with the analysing laboratory (SGS) and directed that ABA and metals analysis be completed on this material consistent with the drill core mine rock characterization program.

5.2.2.2 Field Cells

Field cells are used to determine site specific weathering rates in comparison to laboratory testing including humidity cells. They usually contain a larger volume of mine rock than is possible to test in a laboratory setting, often on the order of several hundred kilograms to tens of tonnes of rock. In the absence of blasted mine rock, earlier testing can be accomplished by using available drill core in smaller field vessels such as drums. The rock is placed in a container or on a lined surface that is exposed to the environment, including direct precipitation. A drainage collection system beneath the sample allows the collection of seepage from the rock for analysis. Field cells are considered to be a more realistic method of estimating the seepage quality of mine rock where seepage monitoring data is unavailable.

Samples for field cell testing were selected and set up by Knight Piésold in November 2012. Sampling of the cells commenced in August 2013. AMEC has updated the lithological names to be consistent with updated lithological descriptions currently in use.

Table 5-1: Summary of Analysis

Location	Sample Type	Analysis Type								
		ABA	Leco C and S	NAG	Metals	Whole Rock	SFE/SPLP/ NAG Leachate	XRD	Humidity Cells	Field Cells
Mine Rock Area	Overburden	11	-	-	11	-	-	-	-	-
Tailings Management Facility	Overburden	4	-	-	4	-	-	-	-	-
Tailings Management Facility	Construction Rock	12	-	-	12	-	-	-	-	-
Bagsverd Creek Realignment	Overburden	5	-	-	5	-	-	-	-	-
Bagsverd Creek Realignment	Construction Rock	2	-	-	2	-	-	-	-	-
Open Pit	Overburden	35	-	-	35	-	-	-	-	-
Open Pit	Lake Sediment	5	-	-	5	-	-	-	-	-
Open Pit	Mine Rock	236	1114	75	224	75	75	63	14	7
--	Tailings	93	-	93	93	-	-	-	-	-

Table 5-2: Proportion of In-Pit Mine Rock

	Length* (m)	Percent
Tonalite	61837	64%
Diorite	19272	20%
Diorite Breccia	7572	7.9%
Diorite Mega Breccia	1472	1.5%
Mafic Dykes	1406	1.5%
Quartz Diorite	1329	1.4%
Magma Mixing Breccia	1068	1.1%
Diabase	699	0.73%
Intrusive Feldspar Porphyry	526	0.55%
Intrusive Mafic Lamprophyre	286	0.30%
Fault	203	0.21%
Intermediate and Felsic Dykes	196	0.20%
Fault Breccia	130	0.14%
Quartz Carbonate Heterolithic Breccia	116	0.12%
Quatz Sericite Schist	43	0.04%
Mafic Breccia	27	0.03%
Hyrdothermal Breccia	7	0.007%
Total	96217	100%

* Length of logged waste rock core within pit

6.0 RESULTS FROM POTENTIAL AGGREGATE, ROCK BORROW AND CONSTRUCTION AREAS

Detailed results from the various potential aggregate, rock borrow and construction areas are provided in Appendix A. Overall results include:

- overburden:
  - generally neutral to alkaline paste pH, with one of 20 samples having a pH value of 5.2;
  - generally low concentrations of total sulphur (<0.03%) mostly occuring as sulphate;
  - the highest sulphide content (0.12%) was observed in overburden from the Bagsverd Creek area;
  - the NP and Carbonate NP (from carbonate content) at each site (ranged from 1 to more than 100 kg $CaCO_3$/tonne;
  - based on analyses of four samples, a narrower range in NP (1 to 20 kg $CaCO_3$/tonne) was observed in the vicinity of the proposed TMF;
  - all samples had NPR < 2; indicating the overburden was NPAG; and
  - three of 20 samples exceeded the Ontario Typical Range standard (molybdenum in one TMF sample, uranium in one MRA sample and one Bagsverd Creek area sample).
- construction rock:
  - paste pH values were generally alkaline (pH>8.5);
  - generally low concentrations of total sulphur (<0.08%) occurring mostly as sulphate;
  - the highest sulphide content (0.10%) was observed in the TMF area;
  - a wide range in NP and Carbonate NP values in the TMF area (range of 5 to almost 200 kg $CaCO_3$/tonne);
  - based on two samples, the Bagsverd Creek area had low NP (< 10 kg $CaCO_3$/tonne;
  - all samples had NPR < 2 indicating the materials were NPAG; and
  - a single elemental exceedance of the 10 times crustal abundance screening criteria (as in the TMF area).

A description of results for each of the areas is presented in the following sections.

6.1 Mine Rock Area (MRA)

Eleven overburden samples were collected from the proposed mine rock area (MRA), primarily comprised of sand and silt. The location of overburden samples selected from within the mine rock area is shown in Figure 4. Statistical summaries of the results are presented in Tables 6-1 and Table 6-2, and Graphics 6-1 through 6-4.

6.1.1 Acid Base Accounting

The paste pH of samples selected from the mine rock area ranged from 5.2 to 8.9, with a median value of 8.4. The samples contained total sulphur values ranging from 0.01% to 0.03%. Sulphur was largely in the form of sulphate sulphur for the majority of the samples analyzed (see Graphic 6-1). The AP was calculated from sulphide sulphur. Values for AP for the MRA overburden samples were low and ranged from 0.3 to 0.7 kg $CaCO_3$/tonne.

The NP ranged from 1.3 to 113 kg $CaCO_3$/tonne and Carbonate NP values ranged from 0.33 to 107 kg $CaCO_3$/tonne, with all but one of the Carbonate NP values being lower than their corresponding NP values (see Graphic 6-2). The NPR values for all samples were greater than 2. Carbonate NPR values were between 1 and 2 for four of the 11 overburden samples from the mine rock area; however, AP for these samples was derived from an assumed upper limit sulphide content based on analytical detection limit (see Graphic 6-3). Actual AP values may be lower than indicated.

6.1.2 Elemental Content

For screening purposes, elemental content of the overburden samples collected from the MRA were compared to the site specific soil standards for Ontario Typical Range values (MOE 2011). A summary of the results is presented in Table 6-2. Most parameters measured for the MRA overburden were less than the Ontario Typical Range values for all land uses. One sample had a uranium concentration of 2.2 µg/g, and was slightly elevated relative to agricultural land use soil standard for uranium (1.9 µg/g).

6.2 Tailings Management Facility (TMF)

The locations of overburden and construction rock samples selected within the TMF are shown in Figure 5.

Four overburden samples were taken from the proposed TMF area, and were primarily composed of sand and silt. Statistical summaries of the results for overburden samples from the TMF are presented in Tables 6-1 and 6-2, and Graphics 6-1 through 6-4.

Twelve construction rock samples were taken from the proposed TMF area. Samples were primarily granodiorite and mafic dykes in composition with one sample of diorite. Statistical summaries of the results for the construction rock samples are shown in Tables 6-3 and 6-4, and Graphics 6-5 through 6-8.

6.2.1 Acid Base Accounting

6.2.1.1 Overburden

The paste pH values for the TMF overburden samples ranged from 7.0 to 9.0. The samples contained total sulphur values (predominantly as sulphate) slightly greater than the method detection limit of approximately 0.02% (see Graphic 6-1). Values for AP from sulphide sulphur were all assumed to be 0.3 kg $CaCO_3$/tonne based on the MDL.

Values of NP were low ranging from 1.2 to 20 kg $CaCO_3$/tonne, and Carbonate NP values ranged from 0.4 to 16 kg $CaCO_3$/tonne. Carbonate NP values were lower than their corresponding NP values (see Graphic 6-2). Values for NPR were greater than 2 for all samples (see Graphic 6-3). Carbonate NPR values were also greater than 2 for most samples with the exception of two samples with Carbonate NPR values less than 2 (see Graphic 6-4).

6.2.1.2 Construction Rock

The paste pH values for TMF construction rock samples ranged from 8.7 to 10. Total sulphur content ranged from 0.01% to 0.13%, with a median value of 0.04%. The sulphur is primarily in the form of sulphate sulphur for the TMF construction rock samples (see Graphic 6-5). Values for AP ranged from an assumed minimum 0.3 to 3.0 kg $CaCO_3$/tonne.

Values for NP ranged from 5.5 to 194 kg $CaCO_3$/tonne, with a median value of 11.4 kg $CaCO_3$/tonne. The Carbonate NP values ranged from 0.5 to 189 kg $CaCO_3$/tonne similar to or less than their corresponding NP values (see Graphic 6-6). The data was treated in aggregate here; however, it is noted that the mafic dyke samples have generally higher NP than other rock sampled in the TMF area. The NPR values for all of the samples were greater than 2 (see Graphic 6-7), and Carbonate NPR values were greater than two for all samples (see Graphic 6-8) with the exceptions of one granodiorite sample (Carbonate NPR = 1.7) and one diorite sample (Carbonate NPR = 0.7).

6.2.2 Elemental Content

6.2.2.1 Overburden

For screening purposes, elemental content of the TMF overburden samples were compared to the Ontario Typical Range values for soils (MOE 2011). A summary of the results is presented in Table 6-2. The concentration of molybdenum in one sample was 14 µg/g, which is 7 times greater than the Ontario Typical Range value of 2 µg/g for all land uses (MOE 2011). The remaining three samples did not exceed soil standards for the parameters tested.

6.2.2.2 Construction Rock

For screening purposes, elemental content of the TMF construction rock samples were compared to 10 times average continental crust values (Price, 1997). A summary of the results is presented in Table 6-4. All parameters measured were less than 10 times the average crustal concentrations, with the exception of one sample which exceeded the average crustal composition for arsenic by greater than 10 times and two samples that exceeded the 10 times crustal average for bismuth.

6.3 Bagsverd Creek Realignment

The locations of overburden and construction rock samples selected within the Bagsverd Creek Realignment area are shown in Figure 5.

Five overburden (sand) samples were selected from the proposed Bagsverd Creek realignment area. Statistical summaries of the results are presented in Tables 6-1 and 6-2, and Graphics 6-1 through 6-4.

Two construction rock samples were taken from the proposed Bagsverd Creek realignment area, and were both classified as granodiorite. Results for these samples are shown in Table 6-3 and 6-4 and Graphics 6-5 through 6-8.

6.3.1 Acid Base Accounting

6.3.1.1 Overburden

The paste pH values ranged from 8.1 to 8.8. The total sulphur content of the overburden samples ranged from 0.01% to 0.16%, with a median of 0.02%. Sulphur is largely in the form of sulphate sulphur for all but one sample (see Graphic 6-1). AP values calculated from sulphide sulphur ranged from 0.31 to 3.6 kg $CaCO_3$/tonne.

The NP values for the Bagsverd Creek overburden samples ranged from 3.7 to 181 kg $CaCO_3$/tonne, with a median value of 36 kg $CaCO_3$/tonne. The Carbonate NP values range from 0.6 to 182 kg $CaCO_3$/tonne, with a median value of 32 kg $CaCO_3$/tonne. The Carbonate NP values were generally less than the corresponding NP values (see Graphic 6-2). The NPR was greater than two for all samples. Carbonate NPR values were greater than two for all samples except one with a Carbonate NPR of 1.9.

6.3.1.2 Construction Rock

Both samples had a paste pH of 9.7, and low total sulphur content of approximately 0.01% (see Graphic 6-5). The samples had NP values of 5.5 and 8.0 kg $CaCO_3$/tonne and Carbonate NP values of 1.3 and 4.0 kg $CaCO_3$/tonne (see Graphic 6-6). The NPR and Carbonate NPR values for both samples were greater than 2 (see Graphics 6-7 and 6-8).

6.3.2 Elemental Content

6.3.2.1 Overburden

For screening purposes, elemental content of the Bagsverd Creek realignment overburden samples were compared to the Ontario Typical Range values for soils (MOE, 2011). A summary of the results is presented in Table 6-2. All parameters measured for the Bagsverd Creek overburden samples were less than the provincial standards, with the exception of one sample with slightly elevated concentrations of uranium (5.5 µg/g) relative to the Ontario soil standards (1.9 µg/g and 2.5 µg/g, for agriculture related and R/P/I/C uses respectively).

6.3.2.2 Construction Rock

For screening purposes, elemental content of the Bagsverd Creek realignment rock samples were compared to 10 times average continental crust values (Price, 1997). A summary of results is presented in Table 6-4. All parameters tested had concentrations less than 10 times the average crustal value.

Table 6-1: Summary of Acid Base Accounting Results for Construction or Borrow Pit Overburden Samples

Sample Location	Parameter	Paste pH	Total Sulphur	Sulphate	Sulphide	NP	Carbonate NP*	AP**	NPR	Carbonate NPR
			%			kg $CaCO_3$/tonne				
Mine Rock Area Overburden	Number of Samples	11	11	11	11	11	11	11	11	11
	Min	5.2	0.0090	0.010	0.010	1.3	0.33	0.31	4.2	1.1
	Max	8.9	0.036	0.030	0.022	113	107	0.69	301	300
	Median	8.4	0.022	0.020	0.010	5.5	1.7	0.31	18	5.3
	Average		0.022	0.017	0.011	34	32	0.35	97	90
	Standard Deviation	1.1	0.009	0.008	0.004	46	46	0.11	114	115
	10th Percentile	6.4	0.012	0.010	0.010	2.5	0.50	0.31	8.0	1.6
	90th Percentile	8.8	0.033	0.030	0.012	109	104	0.38	291	286
Tailings Management Facility Overburden	Number of Samples	4	4	4	4	4	4	4	4	4
	Min	7.0	0.015	0.010	0.010	1.2	0.42	0.31	3.8	1.3
	Max	9.0	0.018	0.020	0.010	20	16	0.31	64	52
	Median	7.5	0.017	0.015	0.010	2.4	0.71	0.31	7.5	2.3
	Average		0.017	0.015	0.010	6.5	4.5	0.31	21	14
	Standard Deviation	0.9	0.0017	0.006	0	9.0	7.8	0	29	25
	10th Percentile	7.0	0.015	0.010	0.010	1.4	0.44	0.31	4.3	1.4
	90th Percentile	8.6	0.018	0.020	0.010	15	12	0.31	48	37
Bagsverd Creek Realignment Overburden	Number of Samples	5	5	5	5	5	5	5	5	5
	Min	8.1	0.013	0.010	0.010	3.7	0.58	0.31	12	1.9
	Max	8.8	0.16	0.040	0.12	181	182	3.6	288	283
	Median	8.5	0.016	0.020	0.010	36	32	0.31	102	93
	Average		0.043	0.022	0.031	69	66	1.0	71	69
	Standard Deviation	0.3	0.062	0.011	0.047	70	72	1.5	106	107
	10th Percentile	8.2	0.014	0.014	0.010	15	12	0.31	27	21
	90th Percentile	8.8	0.10	0.032	0.073	145	145	2.3	219	211

* Calculated from CO_3^{2-} content

** Calculated from sulphide sulphur

Table 6-2: Summary of Elemental Content Results for Construction or Borrow Pit Overburden Samples

	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Soil Standards (Agricultural or Other Property Use)*		**11**	**210**				**1**	**19**		**62**						**2**
Soil Standards* (Residential/Parkland/Institutional/Industrial/ Commercial/Community Property Use)		**18**	**220**				**1.2**	**21**		**92**						**2**
Mine Rock Area Overburden (n=11)																
Min	2500	0.50	9.5	0.090	0.090	1600	0.020	2.4	14	9	4900	210	3.0	1400	44	0.20
Max	6400	1.8	28	0.18	0.090	29000	0.040	6.3	56	26	14000	1500	8.0	12000	180	0.60
Median	4600	0.70	17	0.11	0.090	2500	0.030	4.0	46	14	9700	760	5.0	4400	110	0.40
Average	4664	0.81	19	0.12	0.090	10218	0.029	4.0	41	16	9227	719	5.4	5673	111	0.40
Standard Deviation	1363	0.39	5.5	0.029	0.000	11543	0.0070	1.2	15	5	2488	320	1.4	3996	34	0.11
10th Percentile	3300	0.50	13	0.090	0.090	1700	0.020	3.0	17	12	6700	480	4.0	2400	83	0.30
90th Percentile	6300	1.1	25	0.15	0.090	29000	0.040	6.1	54	22	12000	820	7.0	12000	140	0.50
Tailings Management Facility Overburden (n=4)																
Min	4100	0.50	14	0.13	0.090	1700	0.030	3.2	33	15	8200	360	6.0	2200	85	0.20
Max	5300	0.50	20	0.19	0.090	6700	0.17	5.0	48	20	12000	1000	11	5500	150	14
Median	5050	0.50	19	0.15	0.090	2150	0.045	4.0	42	17	9750	615	7.0	2900	125	0.60
Average	4875	0.50	18	0.16	0.090	3175	0.073	4.1	41	17	9925	648	7.8	3375	121	3.9
Standard Deviation	544	0.00	2.9	0.030	0.000	2368	0.067	0.74	6	2	1569	271	2.4	1563	27	6.8
10th Percentile	4340	0.50	15	0.13	0.090	1760	0.030	3.4	35	15	8620	414	6.0	2200	96	0.32
90th Percentile	5270	0.50	20	0.18	0.090	5410	0.14	4.7	47	19	11370	907	10	4930	144	10
Bagsverd Creek Realignment Overburden (n=5)																
Min	2700	0.50	14	0.080	0.090	2500	0.030	2.8	29	10	5900	510	4.0	2600	93	0.30
Max	4400	1.4	20	0.13	0.090	58000	0.080	4.0	44	27	9100	780	6.0	10000	130	0.50
Median	3900	0.50	17	0.13	0.090	11000	0.030	3.4	35	12	7800	570	6.0	5600	120	0.30
Average	3780	0.76	17	0.12	0.090	21100	0.044	3.4	35	14	7800	636	5.4	6480	113	0.38
Standard Deviation	646	0.40	2.4	0.022	0.000	22199	0.022	0.49	6	7	1300	125	0.89	3109	15	0.11
10th Percentile	3140	0.50	14	0.10	0.090	5100	0.030	2.9	30	10	6460	530	4.4	3520	96	0.30
90th Percentile	4280	1.2	19	0.13	0.090	44800	0.068	3.9	41	21	9020	772	6.0	9720	126	0.50

	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Soil Standards (Agricultural or Other Property Use)		**37**		**45**	**1**	**1.2**				**1**	**1.9**	**86**			**0.16**
Soil Standards (Residential/Parkland/Institutional/Industrial/ Commercial/Community Property Use)		**82**		**120**	**1.3**	**1.5**				**1**	**2.5**	**86**			**0.27**
Mine Rock Area Overburden (n=11)															
Min	84	7.6	270	0.96	0.80	0.040	0.50	6.9	340	0.020	0.36	13	2.9	12	0.050
Max	320	21	600	3.9	0.80	0.11	0.60	22	600	0.050	2.2	27	4.8	21	0.050
Median	250	10	340	3.1	0.80	0.040	0.50	9.5	460	0.030	0.46	17	4.0	14	0.050
Average	234	12	402	2.7	0.80	0.059	0.51	12	448	0.034	0.63	17	3.9	15	0.050
Standard Deviation	70	3.8	124	1.1	1.2E-16	0.027	0.030	5.7	84	0.0081	0.53	3.9	0.66	3.3	7.3E-18
10th Percentile	130	7.7	290	1.1	0.80	0.040	0.50	7.3	350	0.030	0.38	14	3.1	12	0.050
90th Percentile	300	15	550	3.7	0.80	0.11	0.50	21	540	0.040	0.60	21	4.6	19	0.050
Tailings Management Facility Overburden (n=4)															
Min	240	10	340	2.6	0.80	0.050	0.50	7.0	450	0.040	0.37	16	3.2	13	0.050
Max	280	18	550	3.1	0.80	0.10	0.50	13	640	0.060	0.67	29	4.4	60	0.050
Median	265	13	445	2.9	0.80	0.065	0.50	9.7	500	0.040	0.43	22	3.6	17	0.050
Average	263	14	445	2.9	0.80	0.070	0.50	9.9	523	0.045	0.47	22	3.7	27	0.050
Standard Deviation	17	3.7	97	0.22	0.00	0.022	0.00	2.5	82	0.010	0.13	5.4	0.59	22	0
10th Percentile	246	10	355	2.7	0.80	0.053	0.50	7.7	462	0.040	0.38	18	3.2	13	0.050
90th Percentile	277	17	535	3.1	0.80	0.091	0.50	12	601	0.054	0.60	27	4.3	48	0.050
Bagsverd Creek Realignment Overburden (n=5)															
Min	220	8.6	380	1.9	0.80	0.040	0.50	9.4	290	0.030	0.33	11	2.9	15	0.050
Max	370	13	480	2.8	0.80	0.15	0.80	35	460	0.050	5.5	18	3.8	17	0.050
Median	270	9.2	440	2.1	0.80	0.060	0.50	15	410	0.040	0.97	16	3.6	15	0.050
Average	286	9.9	438	2.3	0.80	0.080	0.56	18	398	0.038	1.8	15	3.4	16	0.050
Standard Deviation	57	1.8	38	0.40	0.00	0.045	0.13	10	64	0.0084	2.1	2.8	0.38	0.89	0
10th Percentile	236	8.6	400	1.9	0.80	0.044	0.50	10	338	0.030	0.47	12	3.0	15	0.050
90th Percentile	346	12	472	2.7	0.80	0.13	0.68	29	444	0.046	3.9	17	3.8	17	0.050

*MOE 2011

Table 6-3: Summary of Acid Base Accounting Results for Construction Rock Samples

Sample Type	Parameter	Paste pH	Total Sulphur	Sulphate	Sulphide	NP	Carbonate NP*	AP**	NPR	Carbonate NPR
			%			kg $CaCO_3$/tonne				
Tailings Management Facility Rock	Number of Samples	12	12	12	12	12	12	12	12	12
	Min	8.7	0.0060	0.010	0.010	5.50	0.50	0.31	8.2	0.74
	Max	10	0.13	0.060	0.10	194	188	3.0	327	317
	Median	9.1	0.035	0.025	0.013	11	2.4	0.41	27	6.9
	Average		0.043	0.028	0.022	46	38	0.70	65	54
	Standard Deviation	0.47	0.039	0.017	0.025	61	61	0.78	101	102
	10th Percentile	8.8	0.007	0.010	0.010	5.7	1.1	0.31	18	1.8
	90th Percentile	10	0.079	0.049	0.037	115	107	1.1	219	203
Bagsverd Creek Realignment Rock	Granodiorite 1	9.7	0.0080	0.010	0.010	5.5	1.3	0.31	18	4.3
	Granodiorite 2	9.7	0.010	0.010	0.010	8.0	4.0	0.31	26	13

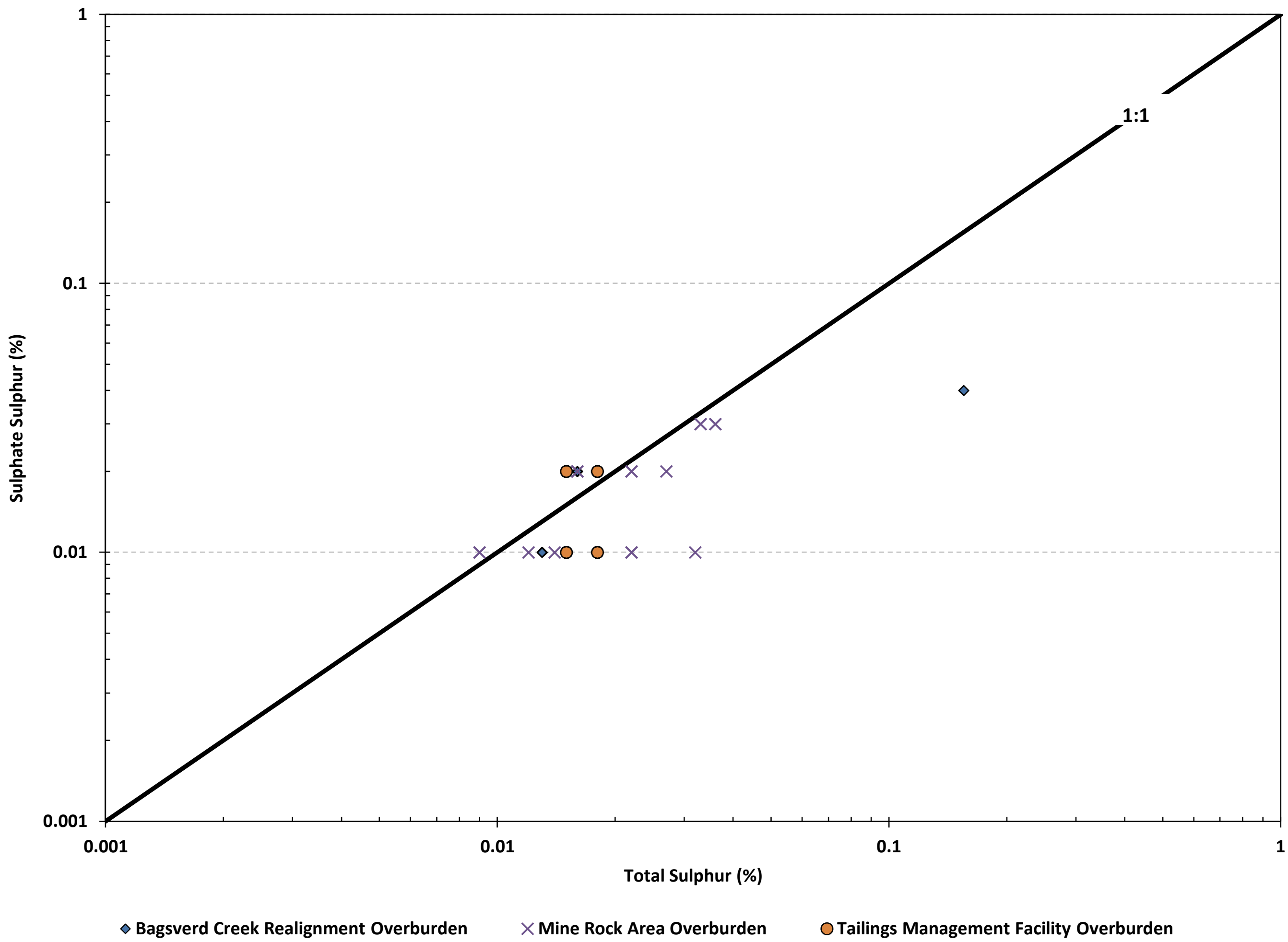
* Calculated from CO_3^{2-} content

** Calculated from sulphide sulphur

Table 6-4: Summary of Elemental Content of Construction Rock Samples

	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Average Crustal Abundance*	**82300**	**1.8**	**425**	**3**	**0.025**	**41500**	**0.15**	**25**	**102**	**60**	**56300**	**20850**	**20**	**23300**	**950**	**1.2**
Ten Times Average Crustal Abundance*	**823000**	**18**	**4250**	**30**	**0.25**	**415000**	**1.5**	**250**	**1020**	**600**	**563000**	**208500**	**200**	**233000**	**9500**	**12**
Tailings Management Facility Rock (n=12)																
Min	3400	0.50	3.1	0.020	0.090	1900	0.020	2.7	50	1.8	7500	65	5.0	3000	82	0.10
Max	33000	70	89	0.44	1.1	71000	0.070	34	190	110	66000	4100	56	41000	800	0.60
Median	9100	0.55	21	0.16	0.090	4700	0.020	13	65	9.5	26500	735	18	16000	335	0.50
Average	15633	6.7	26	0.20	0.20	16975	0.032	15	90	27	30983	1453	21	16592	399	0.43
Standard Deviation	12720	20	24	0.13	0.30	21814	0.019	13	45	34	23202	1342	15	13328	299	0.17
10th Percentile	4110	0.50	5.6	0.094	0.090	2920	0.020	3.3	51	2.1	7810	210	7.3	4100	85	0.20
90th Percentile	32800	3.3	48	0.41	0.38	41300	0.067	33	138	63	54900	3470	41	34000	710	0.60
Bagsverd Creek Realignment Rock (n=2)																
Granodiorite 1	3900	0.50	18	0.21	0.090	3200	0.020	3.2	58	11	8200	720	8	4000	110	0.50
Granodiorite 2	4600	0.50	21	0.21	0.090	4100	0.020	3.7	60	10	10000	1000	13	5300	130	0.60

	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Average Crustal Abundance*	**23550**	**84**	**1050**	**14**	**0.2**	**0.05**	**2.3**	**370**	**5650**	**0.85**	**2.7**	**120**	**33**	**70**	**0.085**
Ten Times Average Crustal Abundance*	**235500**	**840**	**10500**	**140**	**2**	**0.5**	**23**	**3700**	**56500**	**8.5**	**27**	**1200**	**330**	**700**	**0.85**
Tailings Management Facility Rock (n=12)															
Min	91	5.7	180	1.1	0.80	0.040	0.50	3.1	53	0.020	0.0040	11	1.0	14	0.050
Max	1900	100	2000	3.2	0.80	0.17	0.70	39	3100	0.27	0.92	120	16	85	0.050
Median	530	35	530	2.2	0.80	0.050	0.50	19	565	0.020	0.18	39	3.5	35	0.050
Average	516	41	623	2.2	0.80	0.076	0.53	20	808	0.067	0.31	54	4.7	42	0.050
Standard Deviation	491	35	479	0.62	1.2E-16	0.046	0.062	10	786	0.075	0.31	42	3.9	23	7.2E-18
10th Percentile	99	7.7	212	1.7	0.80	0.040	0.50	9.4	363	0.020	0.016	12	2.0	18	0.050
90th Percentile	687	82	794	3.1	0.80	0.14	0.59	35	1190	0.12	0.81	109	6.7	73	0.050
Bagsverd Creek Realignment Rock (n=2)															
Granodiorite 1	580	6.5	540	2.7	0.80	0.040	0.50	21	510	0.020	0.61	14	3.2	22	0.050
Granodiorite 2	560	7.0	550	2.7	0.80	0.040	0.50	21	590	0.040	0.87	17	3.6	27	0.050

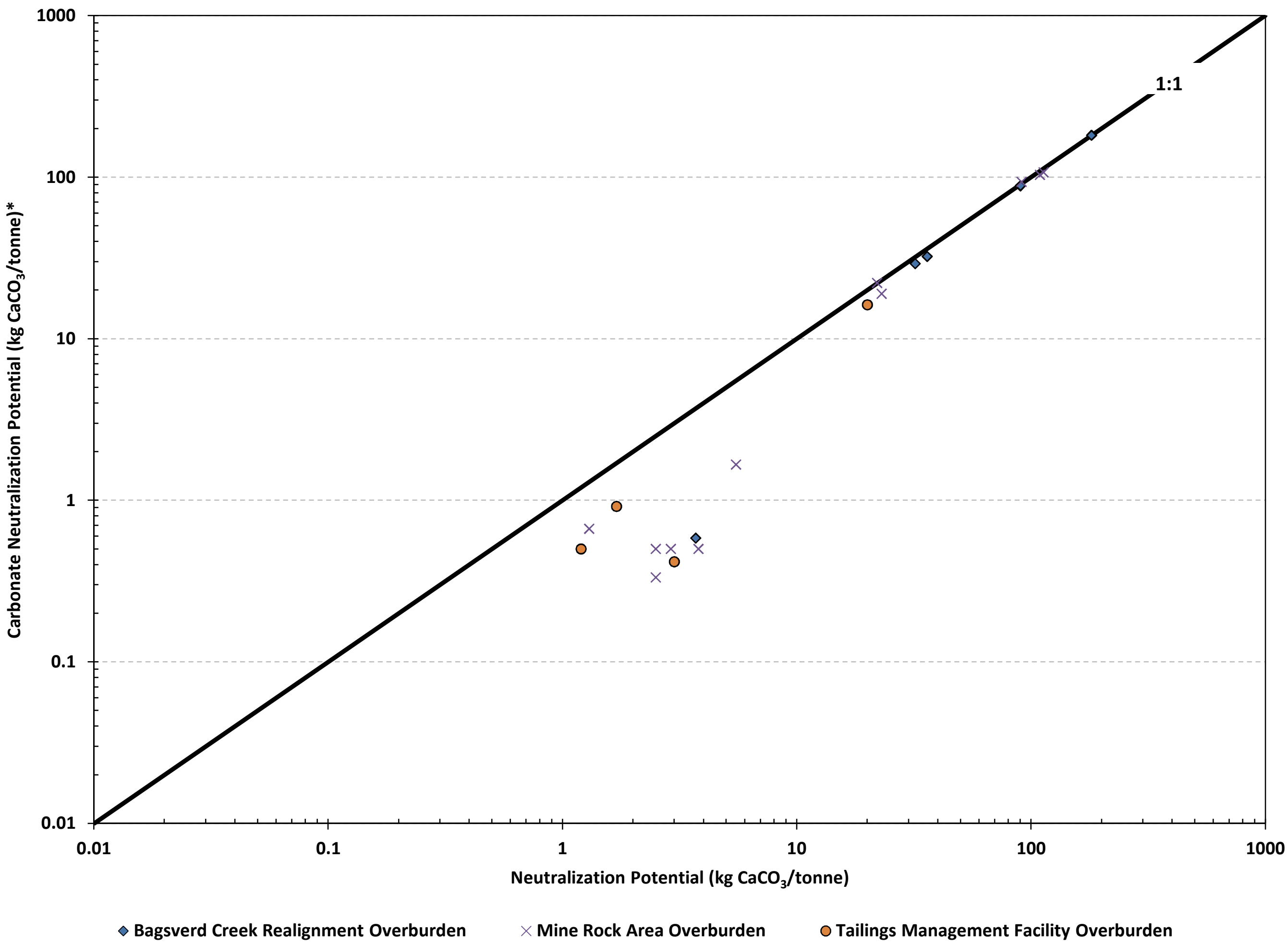


IAMGOLD amec

Côté Gold Project

Overburden Sediments Total Sulphur vs Sulphate Sulphur

Drawn by: LC	Checked by: SW
Date: December 2013	
Project: TC121522	GRAPHIC 6-1



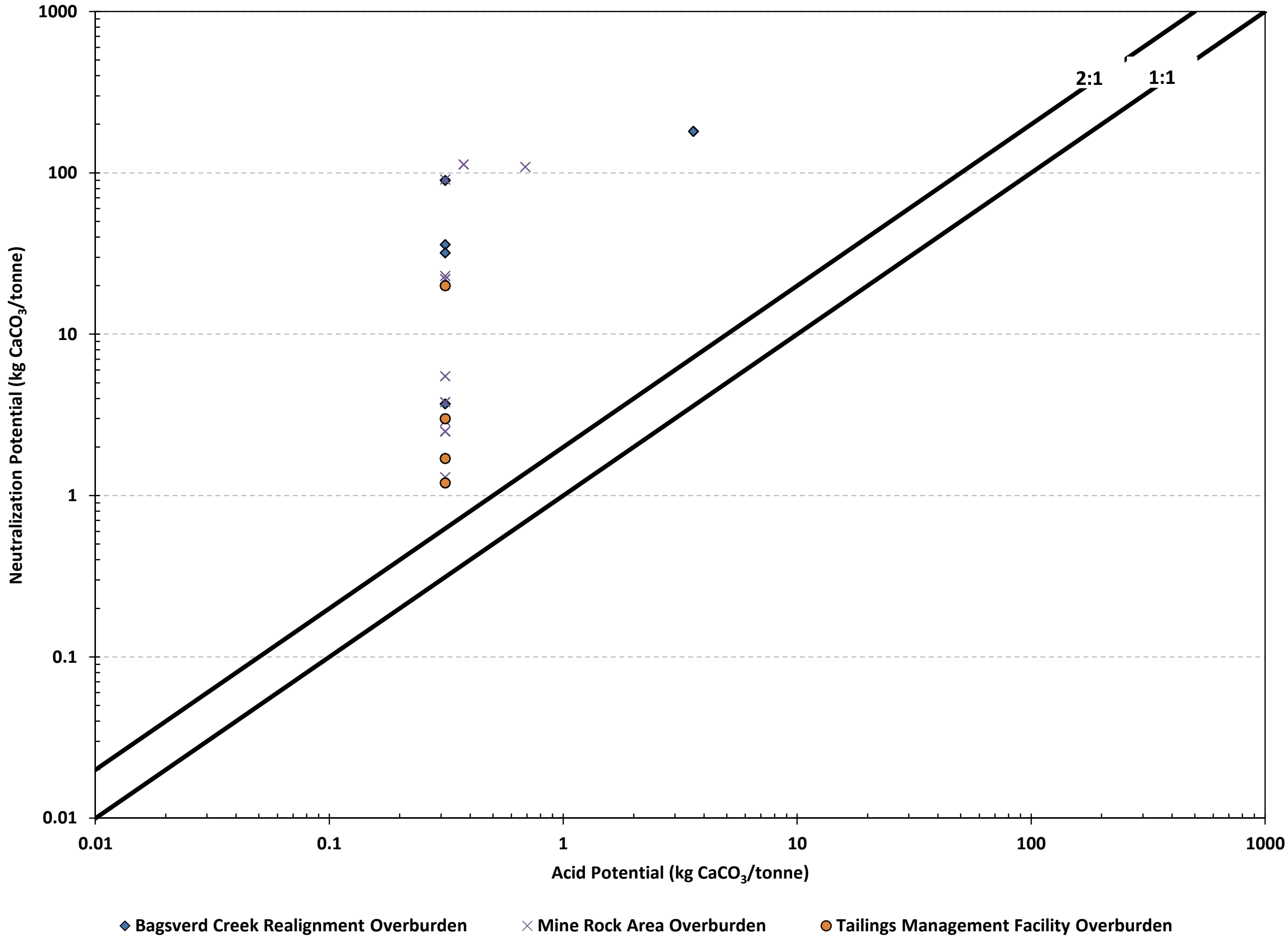
* Carbonate NP determined from measured CO_3^{2-} content

IAMGOLD amec

Côté Gold Project

Overburden Sediments
Neutralization Potential vs Carbonate Neutralization Potential

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 6-2

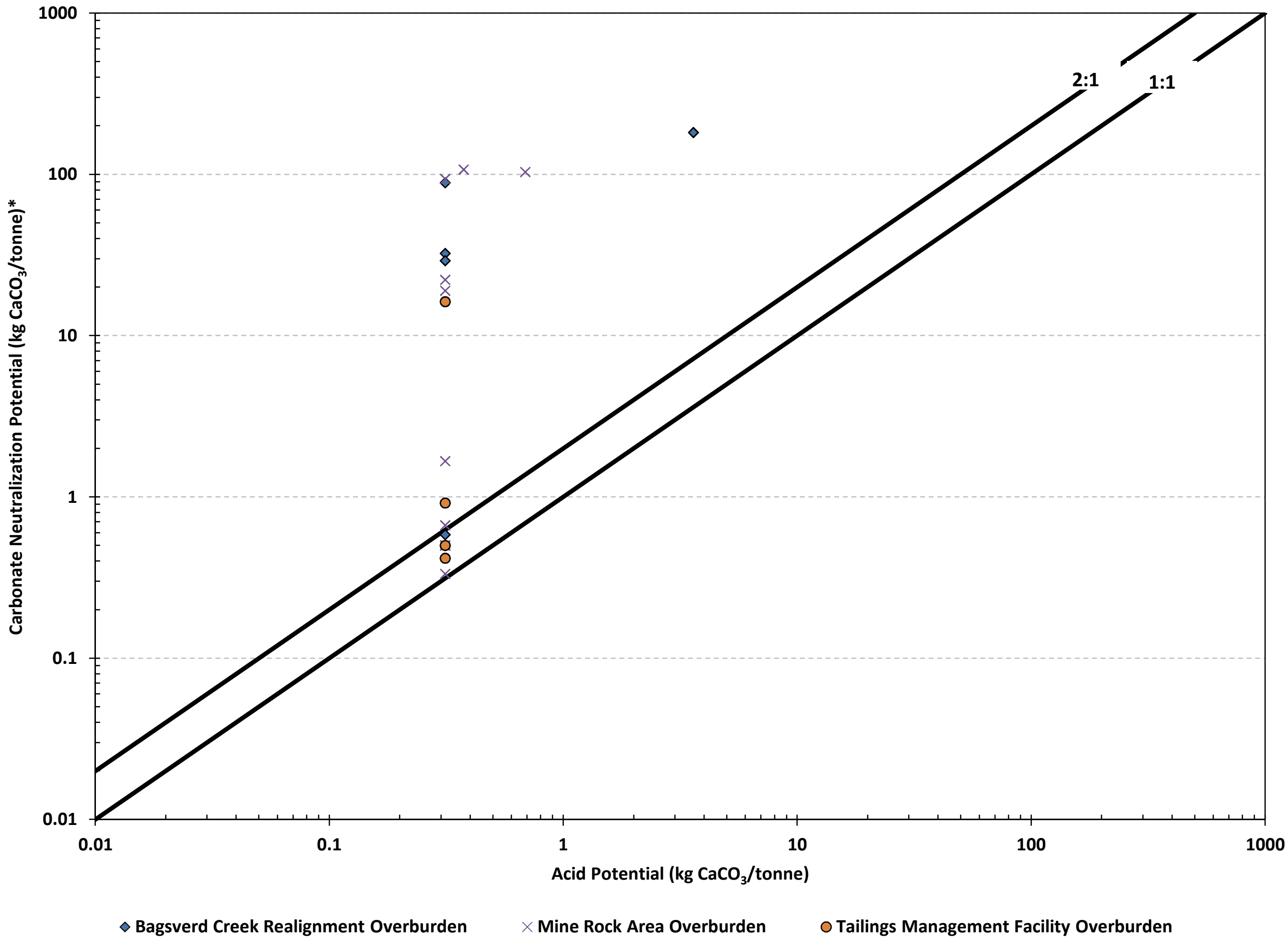


IAMGOLD amec

Côté Gold Project

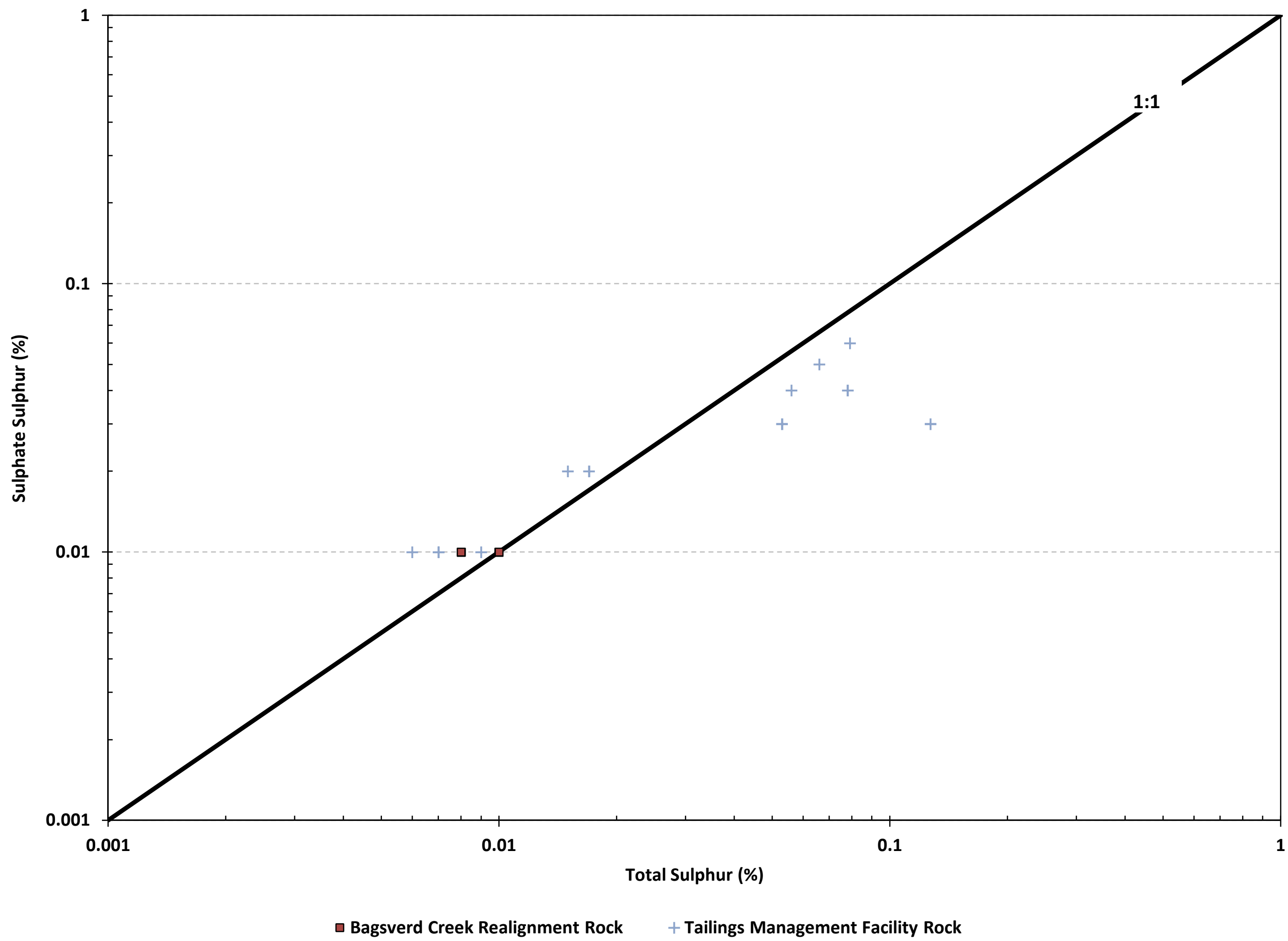
Overburden Sediments
Acid Potential vs Neutralization Potential

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 6-3



* Carbonate NP determined from measured CO_3^{2-} content

IAMGOLD	amec
Côté Gold Project	
Overburden Sediments Acid Potential vs Carbonate Neutralization Potential	
Drawn by: LC Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 6-4

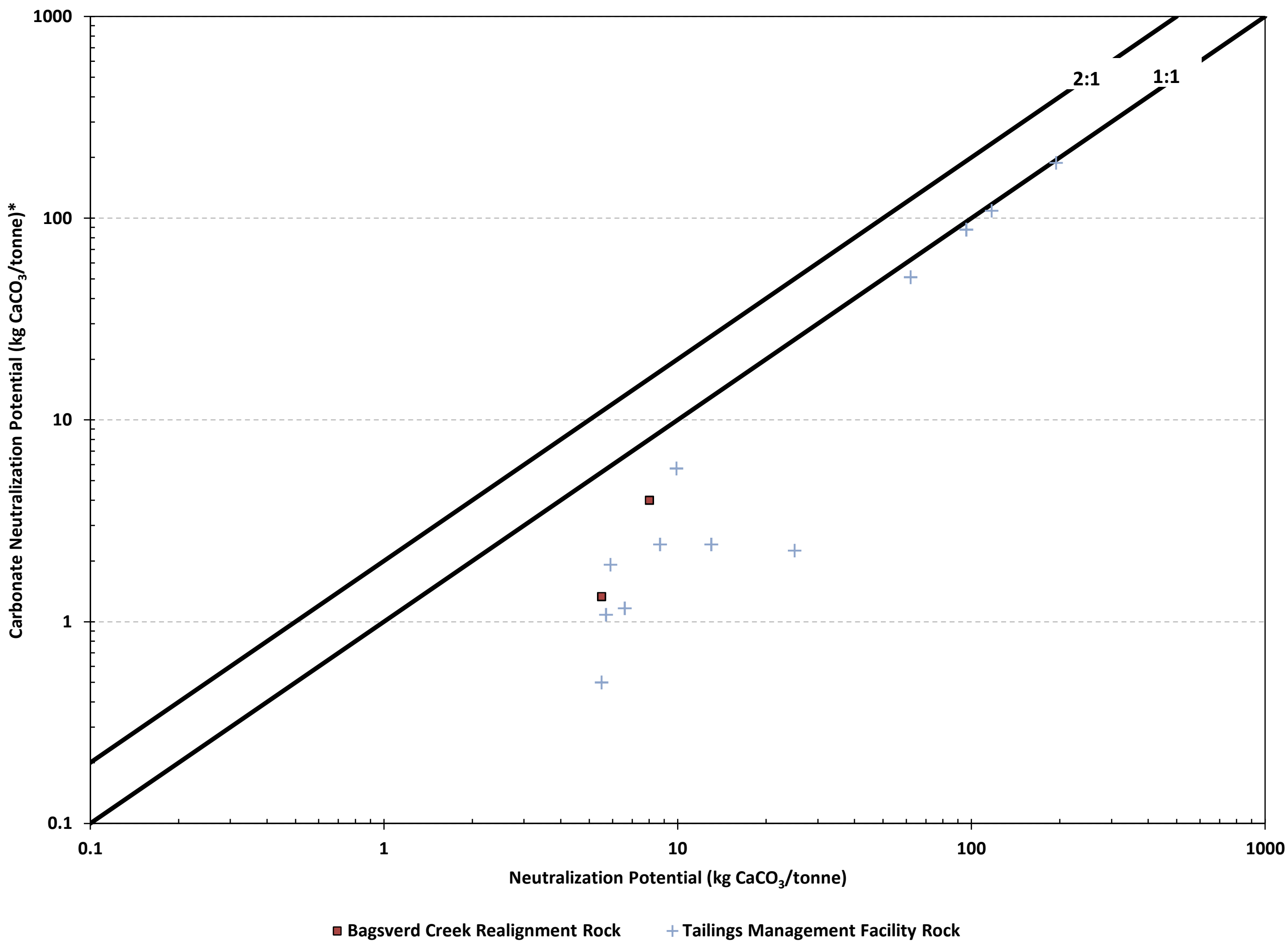


IAMGOLD amec

Côté Gold Project

Construction Rock
Total Sulphur vs Sulphate Sulphur

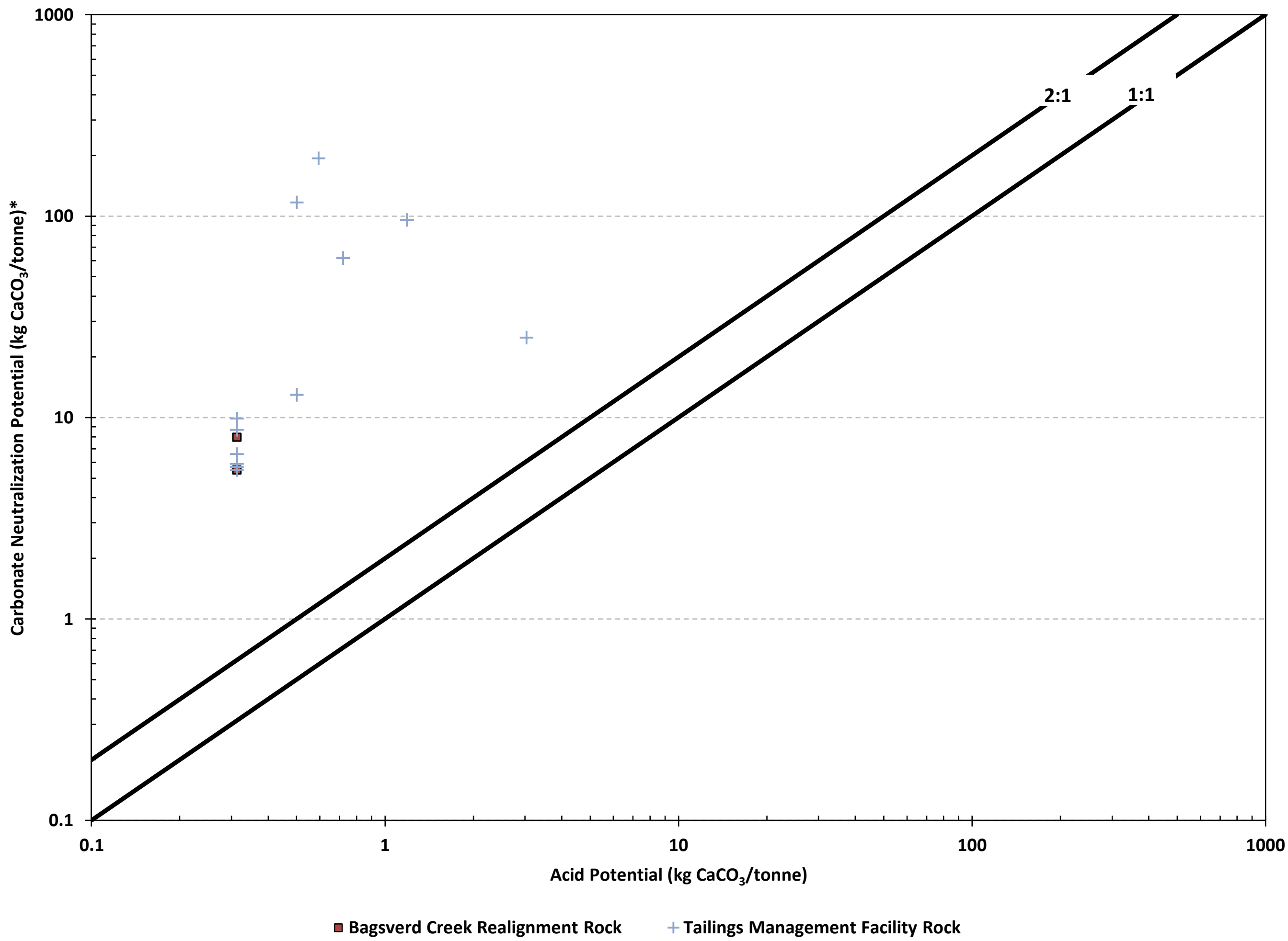
Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 6-5



* Carbonate NP determined from measured CO_3^{2-} content

IAMGOLD amec

Côté Gold Project		
Construction Rock Neutralization Potential vs Carbonate Neutralization Potential		
Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 6-6



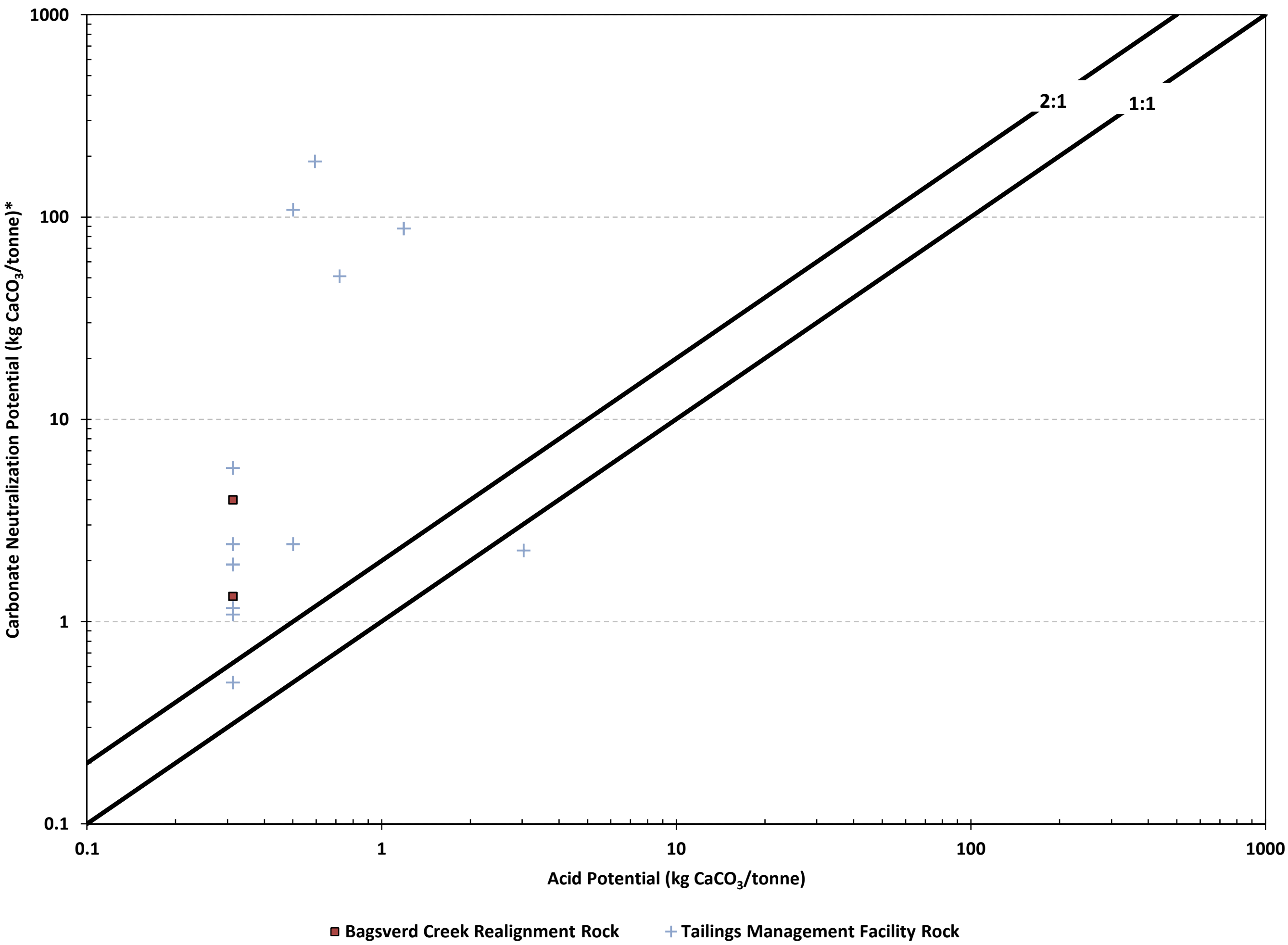
* Carbonate NP determined from measured CO_3^{2-} content

IAMGOLD amec

Côté Gold Project

Construction Rock Acid Potential vs Neutralization Potential

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 6-7



* Carbonate NP determined from measured CO_3^{2-} content

IAMGOLD	amec
Côté Gold Project	
Construction Rock Acid Potential vs Carbonate Neutralization Potential	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 6-8

7.0 RESULTS FOR OPEN PIT AREA

This section provides a summary and discussion of results for overburden, lake sediments and mine rock related to the future open pit development. Detailed results are provided in Appendix A. Locations of samples can be found in Figure 3.

An overview of results are provided in Section 7.1 with a detailed description of results in subsequent sections.

7.1 Open Pit Area Results Overview

7.1.1 Pit Overburden

A summary of ABA results for overburden samples are provided in Table 7-1 and elemental content in Table 7-2.

- Paste pH values are generally neutral to alkaline with one sample having a pH of 5.0.
- The concentration of total sulphur (<0.03%) is generally low with roughly equal proportions of sulphate and sulphide.
- The maximum sulphide content was 0.05%.
- Some shallow (<0.9 m depth) soil samples are NP depleted (negative NP and depressed paste pH) and may contain low concentrations (<0.04%) acid sulphates.
- A wide range in NP and Carbonate NP (on the order of <1 to greater than 200 kg $CaCO_3$/tonne) has been identified..
- All samples were NPAG on the basis of NPR <2.
- Ontario Typical Range agricultural standard for copper was exceeded in four of 35 samples (three samples also exceeded the R/P/C/I standard).

7.1.2 Lake Sediments

A summary of ABA results for Lake Sediment samples are provided in Table 7-3 and elemental content in Table 7-4.

- Paste pH values were neutral to alkaline.
- Concentrations of total sulphur (<0.07%) were generally low with mixed proportions of sulphate and sulphide.
- A maximum sulphide content of 0.05% was observed in an organic rich, high NP Côté Lake sediment.
- A wide range in NP and Carbonate NP from site to site (on the order of 1 to slighly less than 150 kg $CaCO_3$/tonne has been identified.

- All samples were NPAG on the basis of NPR <2 and Carbonate NPR <2.
- Exceedance of the Ontario Typical Range Sediment copper standard for three of five samples with two of these marginally exceeding the Sediment standard for nickel.

7.1.3 Mine Rock

A summary of ABA results for Mine Rock samples are provided in Table 7-5 and elemental content in Table 7-6.

- Paste pH values were neutral to alkaline.
- Concentrations of total sulphur were generally low (<0.24% at 90th percentile) predominantly as sulphide.
- The maximum reported sulphide content was 1.4%.
- Samples had a wide range in NP and Carbonate NP on the order of 1 to 450 kg $CaCO_3$/tonne.
- Most samples are NPAG based on NPR <2 with approximately 5% of ABA samples being PAG based on NPR <2 and 7% of ABA samples classified as PAG based on NPR_{MPA} <2.
- Approximately 6% of samples were PAG based on pulp NPR_{MPA} < 2 calculated from total carbon/sulphur values determined by Leco induction furnace.
- A small proportion of samples (see Section 7.4.5) exceeded the 10 times crustal abundance screening criteria for arsenic, bismuth, copper and selenium.
- Of the 224 samples tested, one sample exceeded the 10 times crustal abundance screening criteria for cadmium and three samples exceeded the 10 times crustal abundance screening criteria for molybdenum.
- Short term leach tests on selected samples identified no elements above O.Reg 560/94 criteria.
- Several elements including chromium, copper, silver and vanadium were sometimes elevated above the PWQO screening criteria in short term leach tests (see Section 7.4.8).
- Humidity cells indicate generally low trace element leaching rates (see Section 7.5.3.6) with many elements near or below detection limits.

7.2 Overburden

Thirty five overburden samples were collected from the open pit footprint area. The locations of the samples are shown in Figure 3. Samples were comprised of primarily sand, silt and till. Statistical summaries of the results for these samples are shown in Tables 7-1 and 7-2 and Graphics 7-1 through 7-4. Detailed results can be found in Appendix A.

7.2.1 Acid Base Accounting

The paste pH values for pit area overburden samples ranged from 5.0 to 9.2. The total sulphur content of the overburden samples was low and ranged from 0.01% to 0.12%, with a median of 0.02%. The sulphur content consists of approximately equal proportions of sulphate sulphur and sulphide sulphur (see Graphic 7-1).

The Modified Sobek NP values were generally low and ranged from -1.2 to 235 kg $CaCO_3$/tonne, with a median value of 4.3 kg $CaCO_3$/tonne. The Carbonate NP values ranged from 0.25 to 217 kg $CaCO_3$/tonne, with a median value of 0.8 kg $CaCO_3$/tonne. In general, the Carbonate NP values were lower than the Modified Sobek NP values for the majority of samples (see Graphic 7-2). A total of four samples (all shallow at <0.9 m) exhibit negative to zero NP (Modified Sobek) with slightly depressed paste pH (pH 5 to 6.2). These samples have very low sulphur content <0.04%, but suggest the possible localized presence of low concentrations of acid sulphates in some surface soils.

The NPR values were greater than two for all samples with positive NP values (see Graphic 7-3). Carbonate NPR values were less than 2 for 10 of the thirty-five overburden samples analyzed from the open pit area (see Graphic 7-4). One of these samples had a Carbonate NPR<1. All of the samples with low NPR values are based on detection limit sulphide content.

7.2.2 Elemental Content

For screening purposes, elemental content of the open pit area overburden samples were compared to the Ontario Typical Range values for soils (MOE 2011). A summary of results is presented in Table 7-2. Concentrations of copper ranged from 5 to 100 µg/g. Four of the overburden samples had elevated copper concentrations above the agricultural standard (62 µg/g) and three were also above the R/P/C/I standard (92 µg/g).

7.3 Lake Sediments

Five sediment samples were collected from the lakes surrounding the open pit (Côté Lake, Clam Lake, Three Duck Lakes and Unnamed Pond) (see Figure 3). Each sample was composed of a range of materials and textures, but were generally mixed in varying degrees with organic material, silt, sand and gravel. Descriptions of the sediment samples are provided in Appendix A. Results for ABA testing are presented in Graphics 7-1 through 7-4, and statistical summaries for the ABA and elemental content of the lake sediment samples are shown in Tables 7-3 and 7-4.

7.3.1 Acid Base Accounting

The paste pH values for the lake sediments ranged from 7.8 to 9.2. Total sulphur ranged from 0.01% to 0.1%, with a median of 0.03%. Sulphur in the sediments occurs as mixed sulphide and sulphate. (see Table 7-3 and Graphic 7-1). An organic-rich sediment sample from Côté Lake had the greatest sulphur content relative to other lake sediments samples (0.096%), and was largely in the form of sulphate sulphur.

Total carbon content for lake sediment samples ranged from 0.2 to 2.7%, whereas carbonate carbon content ranged from 0.01 to 1.7%. Total carbon results are greater than carbonate carbon results for the sediment samples with generally more than 15% of the carbon as organic carbon by difference. The NP values ranged from 3.8 to 145 kg $CaCO_3$/tonne, and Carbonate NP values from (carbonate content) ranged from 0.83 to 139 kg $CaCO_3$/tonne. For all samples, Carbonate NP values were slightly lower than the corresponding NP values (see Graphic 7-2). The NPR and Carbonate NPR values for all samples were greater than 2 (see Graphics 7-3 and 7-4).

7.3.2 Elemental Content

For screening purposes, elemental content of the lake sediment samples were compared to sediment standards for properties within 30 m of a body of water (MOE 2011). A summary of the results is presented in Table 7-4. Concentrations of copper in the lake sediments ranged from 8 to 46 µg/g. Three of the five samples analyzed had copper concentrations equal to or greater than typical values for sediments in Ontario (16 µg/g). Two of the same samples had concentrations of nickel that were marginally elevated (19 and 21 µg/g) relative to concentrations typical for sediments in Ontario (16 µg/g). All other parameters tested were below sediment standard values for the analyzed samples.

7.4 Mine Rock Static Testing

Static testing of drill core samples selected by AMEC and Knight Piésold were used to characterize the open pit mine rock. Testing for ABA was completed for 236 archived drill core samples (reference sample set), In addition, Net Acid Generating (NAG) testing was completed for 75 samples, and elemental content was analyzed for 224 samples. Detailed ABA, NAG testing, and elemental content results for the open pit mine rock are provided in Appendix A.

An additional 1114 archived pulverised (pulp) samples providing broad lithological and spatial coverage within the pit were additionally analysed for carbon/sulphur by Leco induction furnace for use as proxies for NP and AP. As discussed previously this proxy approach was based on a preliminary analysis of early data reported by Knight Piesold (2012a, 2013b) by AMEC. The proxy approach is supported and described by analyses presented and discussed herein. Sample locations are presented on Figures 6 and 7.

7.4.1 Acid Base Accounting

A statistical summary of ABA results for the drill core sample set is presented in Table 7-5, and detailed results are presented in Appendix A.

The paste pH ranged between 7.8 and 10.2. In general, the sulphur content of the drill core samples was low and ranged from 0.01% to 1.4%, with a median value of 0.06%. Only three samples had total sulphur contents greater than 1%. The total sulphur content was compared to the sulphide sulphur content and is presented in Graphic 7-5. The positive correlation trend in the data shows that sulphur was largely in the form of sulphide sulphur in the mine rock samples, particularly for samples with total sulphur content greater than 0.1%. Values for AP ranged from 0.3 to 45 kg $CaCO_3$/tonne, with a median AP value of 1.1 kg $CaCO_3$/tonne. By using MPA (calculated from total sulphur and consistent with proxy sulphur analysis by Leco induction furnace) AP values were in the same range, but had a higher median value of 1.8 kg $CaCO_3$/tonne.

The total carbon content was compared to the carbonate carbon content (see Graphic 7-6) and provided a strong positive correlation. The relationship indicates that the majority of carbon is inorganic, and that total carbon content is a reasonable measure of carbonate content. The NP of the mine rock samples ranged from 0.6 to 450 kg $CaCO_3$/tonne, with a median value of 31 kg $CaCO_3$/tonne. The Carbonate NP was calculated from the total carbon, and ranged from 1.3 to 413 kg $CaCO_3$/tonne, with a median value of 31 kg $CaCO_3$/tonne. The relationship between NP and Carbonate NP suggests that values are generally similar especially above an NP of 20 kg $CaCO_3$/tonne (see Graphic 7-7).

The NPR and Carbonate NPR for all samples ranged from 0.1 to 1062 and 0.3 to 1107 respectively (see Graphics 7-8 and 7-9). The NPR_{MPA} and Carbonate NPR_{MPA} for all samples were lower and ranged from 0.1 to 664 and 0.3 to 692 respectively (see Graphics 7-10 and 7-11). The comparison suggests that NPR values calculated from MPA (total sulphur content) relative to NPR values calculated from AP (sulphide sulphur content) provide a conservative (more frequent) calculation of low NPR samples.

Five samples had NPR values less than 1, three of which were from the tonalite rock group (see Table 7-6). Eight additional samples had NPR values between 1 and 2. Eight samples had Carbonate NPR values less than 1, the majority of which were from the tonalite and diabase lithologies. The majority of mine rock samples analyzed (~92-94%) had NPR and Carbonate NPR values that were greater than 2, and are likely NPAG. Values for NPR_{MPA} and Carbonate NPR_{MPA} are more conservative and suggest that 91-92% of samples are likely NPAG.

A small group of samples are noted to have very low NP and generally low AP (see Graphics 7-8 and 7-10) that have elevated Carbonate NP and do not stand out when plotted against Carbonate NP (see Graphics 7-9 and 7-11). In most cases these samples contain Carbonate NP higher than NP suggesting the possible presence of iron carbonates.

7.4.2 QA/QC for Proxy AP and NP Determination

Drill core pulp samples remaining from the exploration program were used to further characterize the ML/ARD potential of the mine rock. Quality control measures were built into the sampling program to validate the use of the archived pulps for proxy determination of AP and NP of the mine rock. A total of 35 pulp samples covering the range of sample ages (2009 to 2013) were compared to their corresponding drill core sample intervals. The total carbon and total sulphur content of the pulps and core samples are compared in Graphics 7-12 and 7-13. Total carbon content reveals a strong positive correlation between the pulp and core samples with no apparent evidence that duration of storage had an effect on the results. The relationship between total sulphur content in the pulps and total sulphur content in drill core samples show scatter about the 1:1 line. The scatter is random and shows no relation to age of sample, suggesting that sulphur content in the mine rock may be heterogeneously distributed.

By design, the testing program also included analysis of the corresponding archived rock core pulp for most drill core samples. In total 129 overlapping samples were included in the program. In comparing the two sample sets, total carbon results between rock core pulps and drill core correlated well, but the data for total sulphur again exhibited scatter and poor correlation. While sample to sample correlation of sulphur content was poor, the overall distribution of results for each set was very similar (see Graphic 7-14).

It was determined through an expanded QA/QC program (detailed in Appendix C) that:

- intra-lab variability is low;
- variability in repeat analysis of subsample cuts (archived pulp and core) is moderate; and
- variability between the paired archived pulp and core samples is moderate.

This relationship is best explained by a “nugget” effect in the distribution of sulphide within the rock at site, where accumulations of sulphide are distributed heterogeneously at the scale of sampling. Such an effect explains both the variability within individual samples and between the archived pulp and drill core samples. These effects were compounded by differences in sample mass analyzed by each of the laboratories (see Appendix C). For the systematic sampling completed here, this means comparison on a sample to sample basis may be inappropriate (e.g. where sulphide heterogeneity is present), but with sufficient sample population sizes the overall sample distributions are meaningful. This result supports the use of the archived pulp sample set as a proxy for NP and AP.

As discussed in Appendix C, a particularly high variability was noted between the pulp analytical results reported at and below the 0.01% detection limit in comparison to the core results. This set of samples was removed from further analysis as a conservative measure on the basis that they could artificially inflate the NPAG sample numbers, although the bulk of them are indeed expected to be NPAG samples. Removal of this set of samples decreased the number of samples in the high spatial density set to 912.

7.4.3 Total Carbon and Sulphur as Proxy for AP and NP

Carbon and sulphur content (by Leco induction method) were measured for the high spatial density data set. Results were used to determine Carbonate NP and MPA based on the previously described proxy approach for this larger sample set of in-pit mine rock. A statistical summary of MPA and Carbonate NP by rock type are provided in Table 7-7, and results are found in Appendix A.

The total sulphur content of the pulp samples ranged from 0.01% to 1.9%. The median total sulphur content of the pulp samples was 0.06%, and was similar to the total sulphur content from ABA testing. Only five pulp samples had total sulphur content greater than 1%. Values for MPA ranged from 0.31 to 60 kg $CaCO_3$/tonne for all samples, with a median value of 1.9 kg $CaCO_3$/tonne. The total carbon content for all samples ranged from 0.01% to 8.2%, with a median of 0.34%. Carbonate NP ranged from 0.8 to 680 kg $CaCO_3$/tonne, with a median value of 28 kg $CaCO_3$/tonne.

The Carbonate NPR_{MPA} for all samples ranged from 0.09 to 644, with a median value of 17. The Carbonate NPR_{MPA} distributions are summarized in Table 7-8 for each lithological unit, and are presented in Graphics 7-15 to 7-18. A total of 57 samples (6.3%) had NPR values less than or equal to 2. Half of the samples with Carbonate NPR_{MPA} values less than 2 were from the tonalite rock group. A total of 25 samples (2.5%) had Carbonate NPR_{MPA} values less than 1 for samples classified as tonalities (9), dykes (8), intrusive feldspar porphyry (1) and intrusive mafic lamprophyre (2), diorite (2) and breccia (3). Approximately 94% of the drill core pulp mine rock samples had Carbonate NPR_{MPA} values greater than 2, and were similar to findings from the ABA testing (~ 93%) suggesting that the mine rock is predominantly NPAG.

7.4.4 NAG pH

A subset of 75 samples collected by Knight Piésold underwent NAG testing. Detailed results of these samples are found in Appendix A. The NAGpH for all samples was greater than 4.5 (see Graphic 7-19) indicating that those samples had little potential to produce net acidity in the future. This is largely consistent with the NPR for the sample set which was predominantly NPR>2.

7.4.5 Elemental Content

A statistical summary of the elemental content by rock type is provided in Table 7-9. For screening purposes, elemental content of the mine rock overburden samples were compared to 10 times average continental crust values (Price, 1997) (see Table 7-10). Complete elemental content results are provided in Appendix A.

The previous Knight Piésold work utilized a three (nitric-hydrochloric-hydrofluoric) acid technique rather than aqua-regia (nitric-hydrochloric acids) leach. Therefore, a check on the effect of this difference was made by comparing metal content frequency distributions between the two sample sets (Appendix C). In comparing the data there is evidence for more complete extraction of some major elements (especially aluminum) consistent with a greater attack on the silicate and alumino-silicate minerals by the more aggressive leach. However, there is generally little difference in extraction of trace elements between the two data sets (Appendix C). A possible exception may be noted for cadmium and chromium which appear to be extracted at higher concentrations overall by the three acid technique. Concentrations reported for cadmium and chromium in the Knight Piésold sample set should be considered conservative (high) relative to the aqua-regia analyses and may over-estimate content that has reasonable potential for environmental availability.

Concentrations of selenium have been detected above the 10 times crustal abundance screening value. It is noted that the MDL for selenium in previous work was > 10 times the average crustal abundance, and therefore for the current work, specific methods were utilized to analyze a detection limit below the screening value. Due to the elevated detection limit for the earlier samples it is uncertain whether these samples exceed the screening criteria or not and so they have been disregarded in the compilation of exceedances. A total of 27 samples were greater than the MDL for selenium (>0.04 µg/g for AMEC samples and >0.7 µg/g for the Knight Piésold samples) and also exceeded the average crustal abundance by greater than 10 times.

In addition to selenium, several parameters had a few samples with concentrations greater than the average crustal abundance, including bismuth (18), copper (9), arsenic (6), molybdenum (3), and cadmium (1). The distribution of all exceedances by lithology is presented in Table 7-10.

7.4.6 Whole Rock Analysis

The whole rock test results are presented in Appendix A. Whole rock results are generally consistent with mineralogy determined by Rietveld-XRD.

7.4.7 Mineralogy

A subset of samples (n=63) representing the various lithologies were selected for Rietveld-XRD analysis. The detailed results are shown in Appendix A.

All samples contained at least 45% combined quartz and plagioclase (albite) which are the two dominant minerals throughout all of the lithologies. Almost all of the samples contained calcite with concentrations ranging from 0.2 to 20.5%. Some samples (14) contained minor dolomite (0.1 to 1.6%) ankerite (12 samples, 0.1 to 1.9%). Pyrite was identified in seven samples at trace concentrations (0.1 or 0.2%).

7.4.8 Leachable Metals

All samples collected by Knight Piésold were analyzed by the SFE, and SPLP Leachate tests to assess the presence of potentially leachable metals. These test methods are not intended to simulate site-specific leaching conditions, but to provide a screening assessment of the short term leaching potential of mine rock. The SFE testing results are presented in Appendix A along with comparison to regulated effluent discharge values (O.Reg. 560/94). The more stringent PWQO values are also provided for reference purposes only. These values are useful in identifying parameters of interest when evaluating final discharge to receiving waters.

The leachate from the NAG test was also analysed to assess potential leaching response under induced oxidizing conditions (hydrogen peroxide).

7.4.8.1 Shake Flask Extraction

All Shake Flask Extraction (SFE) sample results exhibited neutral to slightly alkaline pH and ranged from pH 7.6 to a maximum of pH 9.5. Dissolved metal concentrations in the SFE tests are all below O.Reg 560/94 threshold values. SFE results have also been compared to the PWQO screening criteria in Appendix A with exceedances summarized in Table 7-11. Aluminum concentrations consistently exceeded the PWQO threshold value; however, elevated aluminum may be an artifact of short term leach tests due to the presence of colloids that are unlikely to be mobilized in natural systems. Vanadium also exceeded the PWQO threshold in approximately 40% of samples. A small number of samples (<10%) exceeded PWQO thresholds for silver, chromium, copper, and iron. One sample exceeded PWQO for uranium.

7.4.8.2 Synthetic Precipitation Leaching Procedure (SPLP)

All Synthetic Precipitation Leaching Procedure (SPLP) sample results exhibited neutral to slightly alkaline pH and ranged from pH 7.7 to a maximum of pH 9.4. Dissolved metal concentrations in the SPLP tests are all below O.Reg 560/94 threshold values. SPLP results have also been compared to the PWQO screening criteria in Appendix A with exceedances summarized in Table 7-12. As with the SFE tests, aluminum concentrations consistently exceeded the PWQO threshold value. Iron and chromium concentrations exceeded PWQO thresholds in approximately 27% and 21% of samples respectively. Vanadium and copper exceeded the PWQO thresholds in less than 11% of samples. Fewer than three samples exceeded PWQO thresholds for silver, cobalt and zinc.

7.4.8.3 NAG Leachate

Detailed results of the samples are presented in Appendix A. Response of most leached elements were similar to the SFE and SPLP testing previously described. As expected, sulphate released (by the induced sulphide oxidation) was generally elevated in comparison to the SFE and SPLP tests. It is also noted that chromium and molybdenum exhibit greater release in this test than the SFE and SPLP tests, suggesting that these metals may potentially be released during sulphide weathering.

7.5 Mine Rock Humidity Cell Kinetic Testing

Fourteen humidity cells were initiated by Knight Piésold in December 2012 and 34 weeks of data has been collected and analyzed to date. There were two humidity cells set up for each of the predominant rock units; one from the northern drill hole samples and one from the southern drill hole samples. Each cell represents a composite of three to four selected core samples as selected by Knight Piésold (2013b). Sample lithologies were reclassified by AMEC due to the reclassification of drill core lithologies by IAMGOLD.

7.5.1 Acid Base Accounting

ABA results for blended composite material representative of each cell are provided in Table 7 -13 and complete results are provided in Appendix A.

Paste pH values for all cells were weakly alkaline with values ranging from 8.8 to 9.5. Total sulphur content ranged from 0.03 to 0.82%. Sulphur was mostly in the form of sulphide sulphur and ranged from <0.01 to 0.71%. NP values ranged from 24 to 60 kg $CaCO_3$/tonne with Carbonate NP (24 to 61 kg $CaCO_3$/tonne) being the main component of neutralization.

All humidity cells had NPR and Carbonate NPR values greater than 2, with the exception of HC5. Humidity cell HC5 had an NPR value of 1.3 and a Carbonate NPR value of 1.2. The distribution of humidity cells in relation to the overall distribution of NPR and Carbonate NPR are shown in Graphics 7-20 and 7-21 respectively.

7.5.2 Elemental Content

The elemental content of humidity cells is presented in Appendix A. Selected element concentrations (arsenic, bismuth, cadmium, cobalt, molybdenum, selenium and zinc) are also provided in Graphics 7-22 to 7-28. The existing humidity cells contain trace element concentrations that generally cover the range of metals observed in the ABA data set.

7.5.3 Release Rates

Detailed results of humidity cell testing are found in Appendix B.

7.5.3.1 pH

The pH values for the 14 humidity cells were relatively constant and generally neutral over the duration of testing (see Graphic 7-29). The median pH value for these neutral cells was 7.5 with none exhibiting a persistent pH below 7.

7.5.3.2 Alkalinity and Acidity

Consistent with cell pH described above, low and steady acidity (to pH 8.3) loading rates were observed in all cells (average 2.1 mg $CaCO_3$ mg/kg/wk). Alkalinity loadings from all cells exhibited generally stable to slightly declining trends and were typically in the range of 10 to 25 mg $CaCO_3$/kg/wk over the duration of testing (see Graphic 7-30).

7.5.3.3 Sulphate

Sulphate loading rates for all humidity cells were generally consistent throughout the duration of testing, with the exception of an observed decline within the initial 10 weeks (see Graphic 7-31). Average steady state (last 15 weeks of data collected) ranged from 0.2 to 2.3 mg/kg/wk. The highest sulphate loading rate was for HC5 (NPR =1.5) tonalite cell with 0.82% total sulphur.

7.5.3.4 Calcium and Magnesium

Loading rates for calcium were consistent throughout the testing period, and range between approximately 3 and 6 mg/kg/wk (see Graphic 7-32). Initial loading rates for magnesium were approximately 0.1 to 0.4 mg/kg/wk for all humidity cells, and gradually decreased over the duration of testing (see Graphic 7-33).

7.5.3.5 Carbonate Molar Ratios

At steady state conditions, the CMR ($(Ca+Mg)/SO_4$) generally ranged between 10 and 15 for most cells (see Graphic 7-34). Humidity cell HC5 (Magma Mixing Breccia, NPR=1.5) had steady $(Ca+Mg)/SO_4$ ratios of approximately five. These high CMR values are reflective of the very low sulphide oxidation rates (sulphate loading rates were generally <1 mg/kg/wk), and suggest that the release of calcium and magnesium is not controlled by the neutralization of acidity from sulphide oxidation, but by the deionized water solution used to flush the samples.

7.5.3.6 Trace Elements

For all humidity cells, 18 elements (silver, beryllium, bismuth, cadmium, chromium, copper, iron, mercury, lithium, nickel, phosphorus, lead, selenium, titanium, thallium, thorium, tungsten and zinc) had leachate concentrations at, or near detection limits. All cells except HC5 were at or near detection limits for copper. In general, loading rates for parameters greater than instrument detection (arsenic, boron, potassium, magnesium, sodium, antimony, silicon, strontium, uranium, vanadium, and yttrium) consistently decreased throughout the duration of testing. Loading rates for aluminum, barium, calcium, cobalt, manganese, molybdenum and tin remained relatively steady throughout the testing period. Complete metals results for the humidity cells are provided in Appendix B.

7.5.4 Depletion Rates

For HC5 (single PAG cell on the basis of NPR < 2), the estimated NP and AP depletion rates were calculated from the average steady state dissolution of NP (represented as molar calcium plus magnesium) and release of sulphate for each cell. These estimated depletion rates were applied to measured sulphur and NP contents to determine the time to NP exhaustion and complete oxidation of sulphide (see Table 7-13). For HC5, the time to NP depletion was calculated to be approximately 50 years. The NP of this cell is typical of overall NP for rock tested (median of ABA data is 31 in comparison to HC5 at 34 kg CaCO3/tonne). However, it is acknowledged that this NP is toward the upper end of NP for PAG samples (notably very few) on the basis of NPR <2.

7.6 Mine Rock Field Cell Kinetic Testing

Seven field cells were set up in November 2012 and sampling was initiated by Knight Piésold in August 2013 and 3 sampling events have occurred as of October 2013. Table 7-14 identifies the lithology of each cell. Field Cell 7 was empty and collected natural precipitation (blank cell).

7.6.1 Concentrations

7.6.1.1 pH

All cells had pH values that ranged from 5.8 to 7.8 in the field (see Graphic 7-35) and were largely similar to laboratory measured circum-neutral pH (see Graphic 7-36). The two cells that exhibited slightly lower field pH on the second sampling event may be due to possible unconfirmed meter calibration drift on that event or atmospheric equilibration effects.

7.6.1.2 Sulphate

Sulphate concentrations increased slightly between sampling events, and ranged from 0.3 to 15 mg/L (see Graphic 7-37).

7.6.1.3 Carbonate Molar Ratios

The (Ca+Mg)/SO_4 ratios were generally steady at values of approximately 5 for all of the field cells throughout the duration of testing (see Graphic 7-38) and reflect the very low sulphate release (sulphide oxidation) rates. Calcium and magnesium release is likely controlled more by the influx of precipitation than by the oxidation of sulphides.

7.6.1.4 Trace Elements

Five elements were below detectable concentrations for all three sampling events for all cells (bismuth, beryllium, mercury, selenium and thallium). Due to the limited data currently available (early time in testing) it is too early to determine trends in the detectable trace elements.

Table 7-1: Summary of Acid Base Accounting Results for Overburden Samples

Sample Location	Parameter	Paste pH	Total Sulphur	Sulphate	Sulphide	NP	Carbonate NP*	AP**	NPR	Carbonate NPR*
			%			kg $CaCO_3$/tonne				
Pit Overburden	Number of Samples	35	35	35	35	35	35	35	35	35
	Min	5.0	0.0050	0.010	0.010	-1.2	0.25	0.31	-3.8	0.80
	Max	9.2	0.12	0.070	0.047	235	217	1.5	684	631
	Median	8.0	0.018	0.010	0.010	4.3	0.83	0.31	12	2.4
	Average		0.024	0.018	0.013	30	27	0.40	75	69
	Standard Deviation	1.0	0.022	0.013	0.008	55	54	0.26	142	137
	10th Percentile	6.3	0.010	0.010	0.010	0.68	0.42	0.31	2.2	1.3
	90th Percentile	9.0	0.032	0.030	0.016	66	67	0.50	211	214

* Calculated from CO_3^{2-} content
** Calculated from sulphide sulphur

Table 7-2: Summary of Elemental Content of Overburden Samples

	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Soil Standards (Agricultural or Other Property Use)		**11**	**210**				**1.0**	**19**		**62**						**2**
Soil Standards (Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use)		**18**	**220**				**1.2**	**21**		**92**						**2**
Pit Overburden (n=35)																
Min	2600	0.50	11	0.080	0.090	760	0.020	1.6	14	5.4	4900	140	3.0	1200	27	0.20
Max	8900	6.2	46	0.20	0.10	75000	0.21	8.8	62	100	25000	1500	10	23000	280	1.5
Median	5300	0.90	18	0.12	0.090	3000	0.030	4.3	43	17	10000	540	5.0	3700	120	0.40
Average	5483	1.5	20	0.13	0.090	9767	0.045	4.4	43	30	10569	598	5.7	5154	128	0.52
Standard Deviation	1967	1.3	7.7	0.040	0.0017	16520	0.041	1.6	10	27	4325	270	1.7	4709	60	0.27
10th Percentile	2880	0.50	12	0.090	0.090	1320	0.020	2.5	34	8.7	5980	364	4.0	1920	69	0.30
90th Percentile	8360	3.0	26	0.20	0.090	20000	0.060	5.9	53	69	16000	834	8.0	7720	216	0.80

	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Soil Standards (Agricultural or Other Property Use)		**37**		**45**	**1.0**	**1.2**				**1**	**1.9**	**86**			**0.16**
Soil Standards (Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use)		**82**		**120**	**1.3**	**1.5**				**1**	**2.5**	**86**			**0.27**
Pit Overburden (n=35)															
Min	44	5.8	210	0.94	0.80	0.040	0.50	3.3	210	0.020	0.21	8.0	1.9	7.4	0.050
Max	380	20	840	6.4	0.80	0.51	0.50	56	690	0.080	1.0	44	10	50	0.050
Median	230	11	400	3.2	0.80	0.060	0.50	9.5	430	0.030	0.41	19	4.2	15	0.050
Average	240	12	409	3.1	0.80	0.094	0.50	13	464	0.037	0.46	19	4.5	18	0.050
Standard Deviation	80	3.6	128	1.1	3.4E-16	0.090	0	11	116	0.015	0.17	6.9	1.8	8.3	2.1E-17
10th Percentile	144	8.4	250	1.6	0.80	0.040	0.50	6.5	344	0.020	0.30	12	2.8	9.5	0.050
90th Percentile	340	18	544	4.2	0.80	0.16	0.50	20	630	0.060	0.66	25	6.3	27	0.050

Table 7-3: Summary of Acid Base Accounting Results for Lake Sediment Samples

Sample Type	Parameter	Paste pH	Total Sulphur	Sulphate	Sulphide	NP	Carbonate NP*	AP**	NPR	Carbonate NPR*
			%			kg $CaCO_3$/tonne				
Lake Sediments	Number of Samples	5	5	5	5	5	5	5	5	5
	Min	7.8	0.0080	0.010	0.010	3.8	0.83	0.31	12	2.7
	Max	9.2	0.10	0.050	0.046	145	139	1.4	274	259
	Median	8.3	0.026	0.020	0.010	19	16	0.31	61	51
	Average		0.035	0.022	0.018	64	60	0.58	112	104
	Standard Deviation	0.63	0.036	0.016	0.016	70	68	0.49	102	100
	10th Percentile	7.8	0.0092	0.010	0.010	9.1	6.1	0.31	29	20
	90th Percentile	9.1	0.072	0.038	0.034	142	135	1.1	205	194

* Calculated from CO_3^{2-} content
** Calculated from sulphide sulphur

Table 7-4: Summary of Elemental Content of Lake Sediment Samples

	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Sediment Standards (All Property Use)		**6**					**0.6**	**50**		**16**						
All Samples (n=5)																
Min	2000	0.50	12	0.070	0.090	2500	0.020	1.8	20	7.8	5200	470	4.0	2200	57	0.40
Max	9200	2.5	42	0.25	0.12	42000	0.11	8.5	63	43	23000	1700	11	15000	230	1.6
Median	4000	1.2	16	0.11	0.090	6900	0.050	3.4	49	16	8300	670	7.0	6200	150	0.50
Average	5260	1.2	22	0.15	0.10	19480	0.054	4.7	45	20	11660	902	7.0	8040	143	0.72
Standard Deviation	3159	0.80	13	0.076	0.013	19726	0.035	2.7	16	14	7355	537	3.1	5668	65	0.51
10th Percentile	2440	0.54	13	0.082	0.090	3900	0.024	2.4	29	8.7	5840	470	4.0	2840	78	0.40
90th Percentile	8720	2.1	36	0.23	0.11	41200	0.090	7.6	57	35	19800	1500	10	14200	206	1.2

	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Sediment Standards (All Property Use)		**16**		**31**											**0.2**
All Samples (n=5)															
Min	160	6.4	260	2.7	0.80	0.040	0.50	8.0	260	0.020	0.44	10	2.0	8.5	0.050
Max	380	21	530	6.2	0.80	0.18	0.50	31	680	0.070	0.74	29	6.7	28	0.050
Median	270	11	410	3.5	0.80	0.060	0.50	10	310	0.040	0.59	13	3.8	25	0.050
Average	262	13	404	4.0	0.80	0.078	0.50	17	442	0.042	0.58	18	4.0	22	0.050
Standard Deviation	81	6.4	108	1.4	0	0.058	0	11	209	0.019	0.12	8.4	2.1	8.2	0
10th Percentile	184	7.4	292	2.9	0.80	0.040	0.50	8.8	276	0.024	0.46	11	2.1	13	0.050
90th Percentile	340	20	510	5.5	0.80	0.14	0.50	29	672	0.062	0.70	27	6.2	28	0.050

Table 7-5: Summary of Acid Base Accounting Results for Mine Rock

Lithological Classification	Parameter	Paste pH	Total Sulphur	Sulphate	Sulphide***	NP	Carbonate NP*	AP***	MPA**	NPR	Carbonate NPR*	NPR_{MPA}	Carbonate NPR_{MPA}*
			%			kg$CaCO_3$/tonne							
All	Number of Samples	236	236	236	236	236	236	236	236	236	236	236	236
	Min	7.8	0.0050	0.010	0.010	0.60	1.3	0.31	0.16	0.13	0.33	0.13	0.31
	Max	10	1.4	0.20	1.4	450	413	45	45	1062	1107	664	692
	Median	9.3	0.059	0.020	0.036	31	31	1.1	1.8	33	30	20	18
	Average		0.12	0.030	0.088	51	47	2.7	3.6	19	17	14	13
	Standard Deviation	0.38	0.18	0.027	0.17	56	54	5.3	5.7	85	86	52	54
	10th Percentile	8.7	0.019	0.010	0.010	12	6.7	0.31	0.59	4.9	3.5	3.3	2.2
	90th Percentile	9.7	0.24	0.060	0.17	122	114	5.4	7.4	81	117	57	61
Diorite Breccia	Number of Samples	13	13	13	13	13	13	13	13	13	13	13	13
	Min	8.9	0.011	0.010	0.010	11	4.8	0.31	0.34	1.8	1.5	1.7	1.4
	Max	10	1.2	0.05	1.2	64	64	36	38	146	147	60	102
	Median	9.2	0.040	0.020	0.029	27	24	0.91	1.3	34	34	17	16
	Average		0.14	0.022	0.12	30	29	3.7	4.4	8.0	7.7	6.8	6.6
	Standard Deviation	0.32	0.32	0.012	0.31	16	16	9.7	10	40	45	19	28
	10th Percentile	9.0	0.021	0.010	0.010	17	14	0.33	0.66	5.6	3.7	4.1	2.6
	90th Percentile	9.6	0.11	0.038	0.08	57	51	2.5	3	81	107	52	57
Diorite Mega Breccia	Number of Samples	7	7	7	7	7	7	7	7	7	7	7	7
	Min	9.0	0.037	0.010	0.019	12	6.8	0.59	1.2	1.8	1.6	1.6	1.4
	Max	9.7	0.94	0.11	0.83	126	113	26	29	78	67	63	49
	Median	9.5	0.058	0.020	0.043	46	42	1.3	1.8	34	22	16	11
	Average		0.18	0.029	0.15	54	46	4.7	5.6	11	9.7	9.5	8.2
	Standard Deviation	0.25	0.34	0.036	0.30	46	40	9.4	10	31	27	24	21
	10th Percentile	9.1	0.038	0.010	0.024	13	9.1	0.74	1.2	5.2	4.7	4.4	3.9
	90th Percentile	9.7	0.42	0.056	0.36	113	94	11	13	76	63	58	49
Fault Breccia	Number of Samples	1	1	1	1	1	1	1	1	1	1	1	1
	Value	8.5	0.069	0.050	0.019	9.0	3.8	0.59	2.2	15	6	4.2	1.8
Hydrothermal Breccia	Number of Samples	3	3	3	3	3	3	3	3	3	3	3	3
	Min	8.6	0.21	0.040	0.17	6.0	4.8	5.4	6.7	1.1	0.87	0.90	0.71
	Max	9.1	0.45	0.20	0.30	165	158	9.3	14	18	17	12	11
	Median	9.0	0.44	0.15	0.24	139	115	7.5	14	18	15	10	8.3
	Average		0.37	0.13	0.24	103	92	7.4	11	14	12	9.0	8.1
	Standard Deviation	0.26	0.13	0.082	0.062	85	79	1.9	4.2	9.8	8.8	5.9	5.5
	10th Percentile	8.7	0.26	0.062	0.19	33	27	5.9	8.1	4.4	3.8	2.7	2.2
	90th Percentile	9.0	0.45	0.19	0.29	160	149	8.9	14	18	17	11	11
Mafic Breccia	Number of Samples	1	1	1	1	1	1	1	1	1	1	1	1
	Value	8.9	0.034	0.020	0.014	66	63	0.44	1.1	151	145	62	60
Magma Mixing Breccia	Number of Samples	11	11	11	11	11	11	11	11	11	11	11	11
	Min	8.4	0.0130	0.010	0.010	12	5.3	0.31	0.41	12	4.7	4.8	2.0
	Max	10	0.16	0.050	0.11	136	120	3.3	4.9	122	116	122	126
	Median	9.2	0.047	0.020	0.032	38	36	1.0	1.5	47	39	41	39
	Average		0.065	0.025	0.042	56	49	1.3	2.0	42	37	28	24
	Standard Deviation	0.32	0.049	0.016	0.037	45	42	1.2	1.5	31	31	31	33
	10th Percentile	9.0	0.019	0.010	0.010	13	6.5	0.31	0.59	26	21	14	7.7
	90th Percentile	9.5	0.15	0.050	0.105	119	108	3.3	4.5	93	82	64	55
Quartz Carbonate Heterolithic Breccia	Number of Samples	2	2	2	2	2	2	2	2	2	2	2	2
	Min	8.4	0.016	0.020	0.010	268	266	0.31	0.50	451	448	175	174
	Max	8.4	0.049	0.030	0.019	332	346	0.59	1.5	1062	1107	664	692
	Median	8.4	0.033	0.025	0.015	300	306	0.45	1.0	757	777	420	433
	Average		0.033	0.025	0.015	300	306	0.45	1.0	662	675	295	301
Fault	Number of Samples	5	5	5	5	5	5	5	5	5	5	5	5
	Min	7.8	0.020	0.020	0.010	0.60	2.0	0.31	0.63	1.9	5.9	1.0	1.5
	Max	9.3	0.067	0.040	0.037	227	224	1.2	2.1	196	194	108	107
	Median	8.2	0.045	0.020	0.013	7.3	4.0	0.41	1.4	23	13	10	5.6
	Average		0.042	0.026	0.019	53	51	0.59	1.3	89	86	41	39
	Standard Deviation	0.58	0.020	0.009	0.012	98	97	0.37	0.62	81	81	45	45
	10th Percentile	7.9	0.021	0.020	0.010	2.6	2.2	0.31	0.66	6.7	6.1	1.9	2.2
	90th Percentile	9.1	0.061	0.036	0.032	146	143	1.0	1.9	130	127	72	70
Intrusive Feldspar Porphyry	Number of Samples	6	6	6	6	6	6	6	6	6	6	6	6
	Min	9.4	0.020	0.010	0.010	12	9.6	0.31	0.63	32	26	13	10
	Max	10	0.084	0.030	0.074	75	69	2.3	2.6	67	58	34	29
	Median	9.6	0.038	0.010	0.017	22	19	0.52	1.17	37	33	28	27
	Average		0.042	0.015	0.028	33	30	0.88	1.3	37	34	25	23
	Standard Deviation	0.15	0.025	0.0084	0.025	24	23	0.80	0.8	14	13	9	9
	10th Percentile	9.5	0.022	0.010	0.010	17	13	0.31	0.67	33	28	14	11
	90th Percentile	9.7	0.068	0.025	0.058	61	58	1.8	2.1	62	53	33	29
Intermediate and Felsic Dykes	Number of Samples	6	6	6	6	6	6	6	6	6	6	6	6
	Min	8.8	0.025	0.010	0.010	1.2	2.1	0.31	0.78	0.65	0.43	0.63	0.42
	Max	9.8	0.45	0.040	0.44	108	85	14	14	144	110	49	46
	Median	9.3	0.057	0.015	0.036	43	37	1.1	1.8	45	29	31	23
	Average		0.12	0.018	0.11	51	38	3.4	3.9	15	11	13	9.8
	Standard Deviation	0.44	0.16	0.012	0.17	45	32	5.2	5.1	54	43	21	17
	10th Percentile	8.8	0.026	0.010	0.010	5.0	4.0	0.31	0.81	2.2	3.6	1.1	1.5
	90th Percentile	9.8	0.29	0.030	0.28	105	73	8.7	9.0	111	92	47	38
Diorite	Number of Samples	46	46	46	46	46	46	46	46	46	46	46	46
	Min	8.6	0.018	0.010	0.010	8.4	3.2	0.31	0.56	1.4	1.5	1.4	1.2
	Max	9.8	0.81	0.090	0.79	190	188	25	25	272	223	90	86
	Median	9.2	0.062	0.020	0.035	37	36	1.1	1.9	31	25	18	15
	Average		0.11	0.033	0.083	50	45	2.6	3.6	19	17	14	12
	Standard Deviation	0.33	0.15	0.022	0.14	40	40	4.2	4.5	57	52	22	22
	10th Percentile	8.7	0.023	0.015	0.010	15	7.0	0.31	0.70	6.6	3.4	4.1	2.2
	90th Percentile	9.6	0.22	0.070	0.16	96	90	4.9	7.0	129	124	66	59
Quartz Diorite	Number of Samples	11	11	11	11	11	11	11	11	11	11	11	11
	Min	8.7	0.023	0.010	0.010	10	7.2	0.31	0.72	9.2	3.7	7.2	3.2
	Max	9.6	0.17	0.070	0.10	74	73	3.1	5.3	157	146	62	61
	Median	9.0	0.072	0.020	0.036	49	46	1.1	2.3	26	23	17	13
	Average		0.071	0.027	0.044	45	40	1.4	2.2	33	29	20	18
	Standard Deviation	0.29	0.043	0.019	0.029	24	25	0.90	1.4	50	49	20	20
	10th Percentile	8.8	0.028	0.010	0.013	17	9.0	0.41	0.88	9.3	7.0	8.0	5.5
	90th Percentile	9.5	0.10	0.050	0.073	72	67	2.3	3.1	132	129	56	52
Tonalite	Number of Samples	89	89	89	89	89	89	89	89	89	89	89	89
	Min	8.5	0.0050	0.010	0.010	1.6	2.3	0.31	0.16	0.51	0.33	0.48	0.31
	Max	10	1.4	0.13	1.4	140	144	45	45	163	169	267	281
	Median	9.3	0.041	0.020	0.022	28	27	0.69	1.3	32	31	20	19
	Average		0.10	0.024	0.080	32	31	2.5	3.2	13	12	10.1	9.7
	Standard Deviation	0.34	0.18	0.022	0.17	23	23	5.3	5.7	37	35	36	37
	10th Percentile	8.8	0.013	0.010	0.010	13	11	0.31	0.40	5.0	4.8	3.1	3.3
	90th Percentile	9.7	0.20	0.040	0.16	50	52	5.0	6.3	89	79	61	58

Table 7-5: Summary of Acid Base Accounting Results for Mine Rock

Lithological Classification	Parameter	Paste pH	Total Sulphur	Sulphate	Sulphide***	NP	Carbonate NP*	AP***	MPA**	NPR	Carbonate NPR*	NPR_{MPA}	Carbonate NPR_{MPA}*
			%			kgCaCO$_3$/tonne							
Mafic Dykes	Number of Samples	20	20	20	20	20	20	20	20	20	20	20	20
	Min	8.5	0.032	0.010	0.018	1.9	1.3	0.56	1.0	0.13	0.40	0.13	0.31
	Max	10	0.48	0.14	0.45	450	413	14	15	141	126	86	79
	Median	9.1	0.13	0.040	0.089	117	100	2.8	4.0	42	38	27	23
	Average		0.15	0.047	0.10	111	104	3.2	4.7	34	32	24	22
	Standard Deviation	0.45	0.11	0.034	0.10	97	90	3.0	3.4	44	40	25	24
	10th Percentile	8.6	0.052	0.010	0.027	15	28	0.86	1.6	4.9	2.6	4.1	2.4
	90th Percentile	9.7	0.27	0.080	0.19	159	153	5.9	8.4	133	114	67	68
Diabase Dykes	Number of Samples	9	9	9	9	9	9	9	9	9	9	9	9
	Min	9.0	0.058	0.010	0.038	9.1	1.4	1.2	1.8	2.1	0.34	1.9	0.31
	Max	10	0.42	0.080	0.35	204	198	11	13	172	166	113	109
	Median	9.4	0.13	0.030	0.10	38	30	3.1	3.9	7.6	4.9	5.2	4.1
	Average		0.17	0.040	0.13	51	42	4.0	5.3	13	10	9.6	7.9
	Standard Deviation	0.38	0.11	0.026	0.095	61	62	3.0	3.4	55	54	36	35
	10th Percentile	9.0	0.066	0.018	0.038	10	1.8	1.2	2.1	3.0	0.46	2.3	0.36
	90th Percentile	10	0.28	0.072	0.21	95	82	6.6	8.6	48	44	33	30
Intrusive Mafic Lamprophyre	Number of Samples	4	4	4	4	4	4	4	4	4	4	4	4
	Min	8.5	0.046	0.030	0.010	51	31	0.31	1.4	50	45	26	21
	Max	9.8	0.12	0.060	0.064	203	188	2.0	3.9	203	188	105	97
	Median	9.3	0.054	0.035	0.024	97	87	0.75	1.7	177	134	51	41
	Average		0.07	0.040	0.031	112	98	0.95	2.2	118	103	52	45
	Standard Deviation	0.53	0.037	0.014	0.024	64	66	0.76	1.2	70	66	36	36
	10th Percentile	8.7	0.046	0.030	0.012	64	47	0.37	1.4	84	61	29	22
	90th Percentile	9.6	0.11	0.054	0.054	172	159	1.7	3.3	199	183	93	86
Quartz Sericite Schist	Number of Samples	2	2	2	2	2	2	2	2	2	2	2	2
	Min	9.0	0.028	0.010	0.018	70	80	0.56	0.88	4.7	4.6	4.6	4.5
	Max	9.6	1.2	0.030	1.1	164	160	35	36	124	143	80	92
	Median	9.3	0.59	0.020	0.57	117	120	18	18	65	74	42	48
	Average		0.59	0.020	0.57	117	120	18	18	6.6	6.8	6.4	6.5

* Calculated from total carbon content

** Calculated from total sulphur content

*** Calculated as the difference between measured total sulphur and sulphate sulphur

Table 7-6: Summary of Neutralization Potential Ratio Distribution of Mine Rock by Acid Base Accounting

Lithological Classification	Number of Samples	NPR Distribution				
		NPR < 1	1 < NPR < 2	2 < NPR < 3	3 < NPR < 4	NPR > 4
All	236	5	8	3	6	214
Diorite Breccia	13	0	1	0	0	12
Diorite Mega Breccia	7	0	1	0	0	6
Fault Breccia	1	0	0	0	0	1
Hydrothermal Breccia	3	0	1	0	0	2
Mafic Breccia	1	0	0	0	0	1
Magma Mixing Breccia	11	0	0	0	0	11
Quartz Carbonate Heterolithic Breccia	2	0	0	0	0	2
Fault	5	0	1	0	0	4
Intrusive Feldspar Porphyry	6	0	0	0	0	6
Intermediate and Felsic Dykes	6	1	0	0	1	4
Diorite	46	0	2	0	1	43
Quartz Diorite	11	0	0	0	0	11
Tonalite	89	3	2	2	2	80
Mafic Dykes	20	1	0	0	1	18
Diabase Dykes	9	0	0	1	1	7
Intrusive Mafic Lamprophyre	4	0	0	0	0	4
Quartz Sericite Schist	2	0	0	0	0	2
Lithological Classification	**Number of Samples**	**Carbonate NPR Distribution**				
		NPR < 1	**1 < NPR < 2**	**2 < NPR < 3**	**3 < NPR < 4**	**NPR > 4**
All	236	8	9	5	5	209
Diorite Breccia	13	0	2	0	0	11
Diorite Mega Breccia	7	0	1	0	0	6
Fault Breccia	1	0	0	0	0	1
Hydrothermal Breccia	3	1	0	0	0	2
Mafic Breccia	1	0	0	0	0	1
Magma Mixing Breccia	11	0	0	0	0	11
Quartz Carbonate Heterolithic Breccia	2	0	0	0	0	2
Fault	5	0	0	0	0	5
Intrusive Feldspar Porphyry	6	0	0	0	0	6
Intermediate and Felsic Dykes	6	1	0	0	0	5
Diorite	46	0	3	1	2	40
Quartz Diorite	11	0	0	0	1	10
Tonalite	89	3	2	2	1	81
Mafic Dykes	20	1	0	2	0	17
Diabase Dykes	9	2	1	0	1	5
Intrusive Mafic Lamprophyre	4	0	0	0	0	4
Quartz Sericite Schist	2	0	0	0	0	2

Table 7-7: Summary of Acid Base Accounting Results for Mine Rock by Leco Carbon and Sulphur

Lithological Classification	Parameter	Total Sulphur %	Total Carbon %	MPA kgCaCO$_3$/tonne	Carbonate NP kgCaCO$_3$/tonne	Carbonate NPR$_{MPA}$
All	Number of Samples	912	912	912	912	912
	Min	0.010	0.010	0.32	0.83	0.091
	Max	1.9	8.2	60	680	644
	Median	0.060	0.34	1.9	28	16
	Average	0.10	0.56	3.1	47	15
	Standard Deviation	0.16	0.68	4.9	57	48
	10th Percentile	0.020	0.100	0.63	8.3	3.3
	90th Percentile	0.21	1.3	6.6	110	66
Diorite Breccia	Number of Samples	117	117	117	117	117
	Min	0.011	0.040	0.36	3.33	0.21
	Max	0.69	2.8	22	229	127
	Median	0.070	0.42	2.2	35	16
	Average	0.11	0.52	3.6	43	12
	Standard Deviation	0.13	0.36	4.1	30	26
	10th Percentile	0.022	0.20	0.68	16	3.6
	90th Percentile	0.25	0.96	7.8	80	69
Diorite Mega Breccia	Number of Samples	19	19	19	19	19
	Min	0.020	0.040	0.63	3.3	1.3
	Max	0.88	2.1	28	178	114
	Median	0.070	0.52	2.2	43	17
	Average	0.17	0.70	5.5	58	11
	Standard Deviation	0.25	0.57	7.7	47	27
	10th Percentile	0.028	0.22	0.88	19	2.4
	90th Percentile	0.60	1.4	18.8	115	44
Fault Breccia	Number of Samples	5	5	5	5	5
	Min	0.010	0.160	0.32	13.3	6.1
	Max	0.080	1.5	2.5	127	121
	Median	0.056	0.51	1.76	43	24
	Average	0.053	0.66	1.7	55	33
	Standard Deviation	0.027	0.5	0.84	43	49
	10th Percentile	0.026	0.28	0.80	23	12.3
	90th Percentile	0.076	1.2	2.4	98	106
Hydrothermal Breccia	Number of Samples	2	2	2	2	2
	Min	0.080	0.16	2.5	13	3.6
	Max	0.12	8.2	3.8	680	272
	Median	0.10	4.2	3.1	347	138
	Average	0.10	4.2	3.1	347	111
	Standard Deviation	0.028	5.7	0.88	471	190
	10th Percentile	0.084	0.96	2.6	80	30
	90th Percentile	0.12	7.4	3.6	613	245
Mafic Breccia	Number of Samples	3	3	3	3	3
	Min	0.060	0.28	1.88	24	2.0
	Max	0.38	6.7	12	556	296
	Median	0.15	0.41	4.5	34	8
	Average	0.19	2.5	6.1	205	34
	Standard Deviation	0.16	3.7	5.1	304	168
	10th Percentile	0.077	0.31	2.41	26	3.1
	90th Percentile	0.33	5.4	10.4	452	239
Magma Mixing Breccia	Number of Samples	27	27	27	27	27
	Min	0.018	0.010	0.55	0.83	0.67
	Max	0.20	4.8	6.3	403	644
	Median	0.048	0.33	1.5	28	15
	Average	0.068	0.61	2.1	51	24
	Standard Deviation	0.055	0.93	1.7	78	123
	10th Percentile	0.020	0.080	0.63	6.6	4.6
	90th Percentile	0.16	1.2	5.1	102	60
Quartz Carbonate Heterolithic Breccia	Number of Samples	6	6	6	6	6
	Min	0.050	0.60	1.6	50	18
	Max	0.13	5.0	4.2	418	268
	Median	0.084	1.5	2.6	123	44
	Average	0.089	2.2	2.8	186	67
	Standard Deviation	0.030	1.9	0.93	155	95
	10th Percentile	0.060	0.67	1.9	56	23
	90th Percentile	0.12	4.5	3.8	379	174
Fault	Number of Samples	6	6	6	6	6
	Min	0.020	0.330	0.63	27.5	8.2
	Max	0.14	3.6	4.5	302	483
	Median	0.040	1.13	1.25	94	81
	Average	0.059	1.5	1.8	128	70
	Standard Deviation	0.050	1.4	1.6	116	185
	10th Percentile	0.020	0.355	0.63	29.6	9.7
	90th Percentile	0.12	3.1	3.7	261	363
Intrusive Feldspar Porphyry	Number of Samples	26	26	26	26	26
	Min	0.014	0.040	0.45	3.30	0.36
	Max	0.30	3.1	9.4	262	143
	Median	0.040	0.24	1.3	20	17
	Average	0.060	0.47	1.9	39	21
	Standard Deviation	0.060	0.66	1.9	55	32
	10th Percentile	0.019	0.050	0.58	4.2	4.0
	90th Percentile	0.11	0.89	3.5	74	70
Intermediate and Felsic Dykes	Number of Samples	19	19	19	19	19
	Min	0.016	0.040	0.49	3.3	0.34
	Max	0.42	1.9	13	161	163
	Median	0.070	0.61	2.2	51	19
	Average	0.11	0.78	3.5	65	19
	Standard Deviation	0.11	0.62	3.4	52	42
	10th Percentile	0.028	0.072	0.88	6.0	2.9
	90th Percentile	0.24	1.6	7.6	135	83

Table 7-7: Summary of Acid Base Accounting Results for Mine Rock by Leco Carbon and Sulphur

Lithological Classification	Parameter	Total Sulphur	Total Carbon	MPA	Carbonate NP	Carbonate
		%	%	kg$CaCO_3$/tonne	kg$CaCO_3$/tonne	NPR_{MPA}
Diorite	Number of Samples	182	182	182	182	182
	Min	0.011	0.010	0.33	0.83	0.46
	Max	1.9	3.8	60	316	325
	Median	0.05	0.31	1.6	26	15
	Average	0.09	0.48	2.8	40	14
	Standard Deviation	0.18	0.53	5.5	44	40
	10th Percentile	0.02	0.11	0.63	9.3	3.9
	90th Percentile	0.18	1.1	5.6	92	57
Quartz Diorite	Number of Samples	34	34	34	34	34
	Min	0.012	0.040	0.36	3.3	2.0
	Max	0.24	1.4	7.5	118	126
	Median	0.050	0.32	1.6	27	18
	Average	0.058	0.40	1.8	33	18
	Standard Deviation	0.044	0.34	1.4	28	27
	10th Percentile	0.020	0.082	0.63	6.8	3.8
	90th Percentile	0.10	0.80	3.1	66	53
Tonalite	Number of Samples	356	356	356	356	356
	Min	0.012	0.010	0.37	0.83	0.091
	Max	1.2	3.6	37	301	381
	Median	0.050	0.31	1.6	26	15
	Average	0.089	0.43	2.8	36	13
	Standard Deviation	0.12	0.47	3.9	39	35
	10th Percentile	0.020	0.081	0.63	6.7	3.2
	90th Percentile	0.19	0.87	6.0	73	51
Mafic Dykes	Number of Samples	58	58	58	58	58
	Min	0.020	0.010	0.63	0.83	0.44
	Max	1.8	3.1	56	254	325
	Median	0.077	1.0	2.4	87	24
	Average	0.14	1.1	4.5	91	20
	Standard Deviation	0.24	0.74	7.5	61	64
	10th Percentile	0.030	0.25	0.94	21	3.7
	90th Percentile	0.25	2.0	7.7	167	116
Diabase Dykes	Number of Samples	37	37	37	37	37
	Min	0.020	0.010	0.63	0.83	0.19
	Max	1.6	3.3	50	272	109
	Median	0.13	0.33	4.1	28	4.5
	Average	0.22	0.62	6.9	52	7.5
	Standard Deviation	0.29	0.75	9.1	63	21
	10th Percentile	0.066	0.080	2.06	6.7	1.3
	90th Percentile	0.45	1.5	14	124	34
Intrusive Mafic Lamprophyre	Number of Samples	12	12	12	12	12
	Min	0.020	0.010	0.63	0.83	0.24
	Max	0.11	1.3	3.4	112	108
	Median	0.065	0.46	2.0	39	28
	Average	0.063	0.61	2.0	50	25
	Standard Deviation	0.034	0.51	1.1	43	33
	10th Percentile	0.025	0.028	0.79	2.3	0.8
	90th Percentile	0.10	1.2	3.1	101	82
Quartz Sericite Schist	Number of Samples	3	3	3	3	3
	Min	0.030	0.20	0.94	17	5.9
	Max	0.11	1.9	3.4	158	88
	Median	0.090	0.99	2.8	83	46
	Average	0.077	1.0	2.4	86	36
	Standard Deviation	0.042	0.85	1.3	70	41
	10th Percentile	0.042	0.36	1.3	30	14
	90th Percentile	0.11	1.7	3.3	143	80

Table 7-8: Summary of Neutralization Potential Ratio Distribution of Mine Rock Samples by Leco Carbon and Sulphur

Lithological Classification	Number of Samples	Carbonate NPR_{MPA} Distribution				
		NPR < 1	1 < NPR < 2	2 < NPR < 3	3 < NPR < 4	NPR > 4
All	912	25	32	27	39	789
Diorite Breccia	117	2	2	4	6	103
Diorite Mega Breccia	19	0	1	2	2	14
Fault Breccia	5	0	0	0	0	5
Hydrothermal Breccia	2	0	0	0	1	1
Mafic Breccia	3	0	1	0	0	2
Magma Mixing Breccia	27	1	0	0	1	25
Quartz Carbonate Heterolithic Breccia	6	0	0	0	0	6
Fault	6	0	0	0	0	6
Intrusive Feldspar Porphyry	26	1	0	1	1	23
Intermediate and Felsic Dykes	19	2	0	0	1	16
Diorite	182	2	6	4	8	162
Quartz Diorite	34	0	1	1	2	30
Tonalite	356	9	16	10	11	310
Mafic Dykes	58	2	2	1	1	52
Diabase Dykes	37	4	3	4	4	22
Intrusive Mafic Lamprophyre	12	2	0	0	1	9
Quartz Sericite Schist	3	0	0	0	0	3

Table 7-9: Summary of Elemental Content of Mine Rock Samples

	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Average Crustal Abundance*	**82300**	**1.8**	**425**	**3**	**0.025**	**41500**	**0.15**	**25**	**102**	**60**	**56300**	**20850**	**20**	**23300**	**950**	**1.2**	**23550**	**84**	**1050**	**14**	**0.2**	**0.05**	**2.3**	**370**	**5650**	**0.85**	**2.7**	**120**	**33**	**70**	**0.085**
Ten Times Average Crustal Abundance*	**823000**	**18**	**4250**	**30**	**0.25**	**415000**	**1.5**	**250**	**1020**	**600**	**563000**	**208500**	**200**	**233000**	**9500**	**12**	**235500**	**840**	**10500**	**140**	**2**	**0.5**	**23**	**3700**	**56500**	**8.5**	**27**	**1200**	**330**	**700**	**0.85**
All Samples (n=236)																															
Min	1000	0.50	1.0	0.040	0.090	600	0.020	0.50	8.6	1.5	1300	31	2.0	52	23	0.10	56	1.6	10	0.050	0.80	0.040	0.50	1.7	10	0.020	0.014	1.0	1.3	2.4	0.050
Max	87000	110	2100	2.3	2.7	160000	2.3	53	530	1900	100000	36000	63	50000	1400	2800	970	430	2500	50	1.5	3.9	13	450	9000	0.69	4.2	250	71.0	590	0.10
Median	16000	1.5	21	0.26	0.090	14500	0.030	5.7	58	42	20000	1050	9.0	6950	220	0.70	370	9.3	300	1.7	0.80	0.20	0.70	16	800	0.020	0.78	20	13.0	22	0.050
Average	26454	3.2	96	0.48	0.15	22171	0.09	10	97	113	27648	4738	13	12103	324	14	363	26	492	2.9	0.80	0.36	1.5	49	1327	0.070	0.85	45	15.3	33	0.057
Standard Deviation	24940	8.7	187	0.44	0.26	21164	0.21	10	88	242	22235	6997	11	12422	282	187	153	43	522	5.2	0.047	0.39	1.6	70	1649	0.11	0.62	53	11.0	48	0.017
10th Percentile	3200	0.60	4.5	0.11	0.090	5330	0.020	1.6	30	7.4	5200	322	2.0	1130	74	0.20	170	2.6	22	0.42	0.80	0.053	0.50	6.1	53	0.020	0.17	2.0	4.0	5.8	0.050
90th Percentile	65000	4.5	270	1.2	0.24	52000	0.21	25	210	200	62000	15000	27	30700	710	1.6	490	68	1300	4.7	0.80	0.70	3.4	144	3400	0.16	1.6	120	29.7	63	0.10
Diorite Breccia (n=13)																															
Min	2400	0.70	5.1	0.22	0.090	8700	0.020	2.0	43	3.9	4900	390	2.0	1900	70	0.20	300	2.4	12	0.44	0.80	0.090	0.50	5.7	29	0.020	0.18	7.0	5.4	5.3	0.050
Max	68000	7.0	390	1.2	2.0	31000	1.4	15	210	1700	48000	12000	24	23000	580	2800	460	56	1100	21	0.80	3.9	5.8	120	3400	0.22	1.8	84	29.0	120	0.10
Median	23000	1.5	46	0.9	0.090	12000	0.12	4.5	92	46	18000	4400	9.0	5300	200	0.70	340	7.2	41	1.8	0.80	0.70	1.6	46	1200	0.040	1.2	15	20.0	18	0.050
Average	33818	2.3	107	0.70	0.27	15000	0.24	5.8	91	194	21536	5072	9.8	8555	228	255	352	13	334	4.0	0.80	0.78	2.0	51	1273	0.057	1.2	28	18.0	30	0.055
Standard Deviation	27529	2.0	128	0.44	0.57	7157	0.41	4.5	51	500	13857	4741	6.2	6872	148	844	60	15	481	6.0	0	1.09	1.6	43	1107	0.059	0.44	26	9.6	32	0.015
10th Percentile	5900	0.90	6.5	0.22	0.090	9300	0.020	2.7	44	15	11000	420	4.0	4200	98	0.60	300	6.5	20	0.9	0.80	0.11	0.50	8.4	72	0.020	0.71	8.0	6.0	10	0.050
90th Percentile	66000	5.0	230	1.2	0.2	24000	0.47	14	140	100	46000	11000	17	20000	340	1.0	415	21	940	7.6	0.80	1.00	3.0	95	2300	0.08	1.6	65	29.0	51	0.05
Diorite Mega Breccia (n=7)																															
Min	3400	0.90	3.1	0.060	0.090	4900	0.020	1.7	21	4.6	5700	180	3.0	1700	58	0.20	160	3.6	11	0.92	0.80	0.040	0.50	7.8	140	0.020	0.42	4.0	5.1	7.2	0.050
Max	18000	2.2	120	0.26	0.80	43000	0.05	15	260	400	32000	5400	30	19000	560	0.80	540	31	1200	4.0	0.80	0.74	0.90	35	1200	0.090	1.8	57	27.0	41	0.050
Median	7200	1.4	16	0.22	0.090	16000	0.020	7.3	72	26	17000	1000	7.0	7900	170	0.60	300	23	320	2.2	0.80	0.09	0.50	14	320	0.020	0.59	16	8.8	15	0.050
Average	9886	1.5	42	0.20	0.19	17686	0.027	7.3	91	74	17814	1896	12	9629	228	0.60	337	18	367	2.2	0.80	0.20	0.56	17	620	0.040	0.94	25	11.6	22	0.050
Standard Deviation	6214	0.49	51	0.066	0.27	14117	0.011	4.9	80	144	11076	2100	10	6972	167	0.19	134	11	398	1.0	1.2E-16	0.26	0.15	9.4	485	0.034	0.56	21	7.8	15	7.5E-18
10th Percentile	3760	1.0	5.8	0.14	0.090	5020	0.020	2.5	34	6.0	5880	342	3.6	2300	95	0.44	214	4.7	39	1.1	0.80	0.040	0.50	9.1	170	0.020	0.48	5.2	5.5	8.3	0.050
90th Percentile	16800	2.0	114	0.25	0.37	34000	0.038	13	170	182	30800	4800	26	17200	410	0.74	504	30	732	3.1	0.80	0.49	0.66	27	1140	0.090	1.7	50	21.0	39	0.050
Fault Breccia (n=1)																															
Value	30000	1.6	13	0.88	0.090	7800	0.020	18	50	990	55000	1200	39	28000	500	0.20	130	51	430	0.69	0.80	0.080	1.3	19	860	0.020	0.18	91	8.7	60	0.050
Hydrothermal Breccia (n=3)																															
Min	8900	4.2	1.8	0.19	0.34	1600	0.020	4.6	20	8.3	20000	59	7.0	8100	140	0.50	160	8.2	54	0.72	0.80	0.22	0.50	2.7	60	0.020	0.38	16	4.1	13	0.050
Max	39000	9.3	19	0.48	1.4	59000	0.040	19	45	1300	85000	950	22	28000	460	47	270	26	1800	12	0.80	0.55	2.8	36	240	0.040	1.4	190	25	55	0.050
Median	18000	4.7	6.3	0.19	0.46	41000	0.030	8.3	28	48	36000	500	18	15000	380	0.70	180	14	1000	2.7	0.80	0.44	0.50	34	79	0.020	1.0	99	20	52	0.050
Average	21967	6.1	9.0	0.29	0.73	33867	0.030	11	31	452	47000	503	16	17033	327	16	203	16	951	5.1	0.80	0.40	1.3	24	126	0.027	0.93	102	16	40	0.050
Standard Deviation	15437	2.8	8.9	0.17	0.58	29357	0.010	7.5	13	735	33867	446	7.8	10105	167	27	59	9.1	874	6.0	1.4E-16	0.17	1.3	19	99	0.012	0.51	87	11	23	8.5E-18
10th Percentile	10720	4.3	2.7	0.19	0.36	9480	0.022	5.3	22	16	23200	147	9.2	9480	188	0.54	164	9.4	243	1.1	0.80	0.26	0.50	9.0	64	0.020	0.50	33	7.3	21	0.05
90th Percentile	34800	8.4	16	0.42	1.2	55400	0.038	17	42	1050	75200	860	21	25400	444	38	252	24	1640	10	0.80	0.53	2.3	36	208	0.036	1.3	172	24	54	0.05
Mafic Breccia (n=1)																															
Value	13000	0.90	2.0	0.15	0.090	24000	0.020	7.6	43	7.8	34000	290	16	15000	320	0.30	430	22	750	0.35	0.80	0.080	2.3	9.9	670	0.020	0.29	77	14	27	0.050
Magma Mixing Breccia (n=11)																															
Min	5400	0.50	3.6	0.14	0.090	3700	0.020	1.1	35	4.3	4500	290	3.0	1500	65	0.20	420	2.4	270	0.65	0.80	0.11	0.50	6.2	430	0.020	0.68	2.0	10.0	3.1	0.050
Max	77000	7.4	250	1.5	0.47	50000	0.27	25	190	640	59000	22000	36	29000	470	3.9	490	49	1200	5.5	0.80	0.90	8.0	200	5400	0.16	2.0	130	38	65	0.10
Median	37000	1.4	74	0.7	0.090	15000	0.10	5.9	94	54	22500	3850	11	6150	235	0.75	475	8.1	410	1.9	0.80	0.70	1.9	38	1750	0.060	1.3	20	26	22	0.050
Average	37340	2.13	94	0.70	0.13	21500	0.12	7.9	102	105	23810	5739	13	9380	237	1.2	465	16	573	2.0	0.80	0.50	2.4	65	1935	0.063	1.3	36	25	26	0.065
Standard Deviation	27533	2.1	85	0.51	0.12	16240	0.10	7.4	60	190	16731	6445	10.8	9027	125	1.1	31	16	433	1.5	0	0.31	2.3	70	1491	0.045	0.40	39	8.6	19	0.024
10th Percentile	9540	0.77	6.5	0.19	0.090	8740	0.020	2.6	39	24.7	8460	569	3.0	2940	115	0.38	435	4.9	279	0.67	0.80	0.13	0.68	7.6	574	0.020	0.86	7.4	15	9	0.050
90th Percentile	63500	4.2	223	1.3	0.17	47300	0.25	18	181	138	41900	10930	30	22700	416	2.6	487	40	996	3.1	0.80	0.72	4.5	173	3510	0.11	1.6	83	33	46	0.10
Quartz Carbonate Heterolithic Breccia (n=2)																															
Min	1000	0.80	1.0	0.15	0.090	96000	0.020	2.1	33	6.6	2700	31	2.0	910	370	0.50	110	4.8	27	0.050	0.80	0.060	0.50	32	86	0.020	0.027	3.0	41	2.9	0.050
Max	1000	0.90	1.3	0.15	0.16	120000	0.020	3.7	39	53	2800	32	2.0	1100	560	0.60	170	8.9	120	0.080	0.80	0.13	0.50	43	140	0.020	0.051	5.0	42	3.5	0.050
Median	1000	0.85	1.2	0.15	0.13	108000	0.020	2.9	36	30	2750	32	2.0	1005	465	0.55	140	6.9	74	0.065	0.80	0.10	0.50	38	113	0.020	0.039	4.0	42	3.2	0.050
Average	1000	0.85	1.2	0.15	0.13	108000	0.020	2.9	36	30	2750	32	2.0	1005	465	0.55	140	6.9	74	0.065	0.80	0.10	0.50	38	113	0.020	0.039	4.0	42	3.2	0.050
Fault (n=5)																															
Min	4500	2.1	4.9	0.32	0.090	1300	0.020	3.1	31	81	10000	68	3.0	3200	110	0.10	160	4.9	110	0.35	0.80	0.080	0.50	3.6	210	0.020	0.16	7.0	13	11	0.050
Max	59000	4.3	62	1.8	0.26	81000	0.10	12	110	1900	46000	4200	21	18000	690	0.70	470	32	480	2.8	0.80	0.70	5.1	53	3700	0.050	0.71	62	37	47	0.10
Median	22000	2.8	13	1.1	0.24	8700	0.020	10	63	200	29000	580	13	10000	310	0.50	270	16	380	0.89	0.80	0.20	1.6	24	2000	0.020	0.51	40	25	30	0.050
Average	29020	2.9	29	1.0	0.19	23440	0.044	9.0	69	568	28800	1784	11	9560	342	0.44	300	17	323	1.2	0.80	0.36	2.5	28	1690	0.030	0.49	39	25	27	0.060
Standard Deviation	26555	0.88	26	0.62	0.088	32720	0.036	3.5	34	764	12988	1953	7.4	5967	212	0.24	157	9.7	191	0.95	0	0.31	1.9	19	1450	0.014	0.21	21	8.8	14	0.022
10th Percentile	4540	2.1	7.7	0.38	0.090	4060	0.020	5.4	36	105	16400	229	3.4	3760	182	0.18	182	8.9	164	0.55	0.80	0.10	0.90	9.0	262	0.020	0.28	18	16	13	0.050
90th Percentile	57400	3.7	58	1.6	0.26	55800	0.084	12	105	1348	40800	3960	18	15600	538	0.66	430	26	460	2.0	0.80	0.70	4.5	48	3100	0.046	0.66	58	33	41	0.080
Intrusive Feldspar Porphyry (n=6)																															
Min	6900	0.50	5.4	0.090	0.090	5700	0.020	3.7	25	10.0	13000	280	7.0	4100	110	0.30	310	6.7	370	0.23	0.80	0.040	0.50	9.6	410	0.020	0.22	7.0	2.1	15	0.050
Max	23000	2.8	97	0.15	0.25	27000	0.020	11	65	510	36000	9300	20	22000	510	1.0	460	55	570	0.9	0.80	0.84	1.9	17	1400	0.15	0.9	87	10	42	0.050
Median	10000	1.00	14	0.14	0.090	8300	0.020	7.5	42	17	18000	600	10	8600	240	0.70	420	12.0	510	0.44	0.80	0.05	0.80	13	620	0.020	0.34	26	4.1	26	0.050
Average	11920	1.2	44	0.13	0.12	11520	0.020	6.8	43	123	21000	2778	12	10100	268	0.66	392	20	496	0.5	0.80	0.21	0.90	13	746	0.050	0.42	35	5.6	26	0.050
Standard Deviation	6509	0.93	47	0.03	0.07	8727	0.000	3.1	15	217	9192	3854	5.2	6920	148	0.30	72	20	75	0.2	0.0E+00	0.35	0.58	3	402	0.057	0.26	31	3.5	11	0.0E+00
10th Percentile	7220	0.54	7.0	0.09	0.090	6700	0.020	3.8	29	12.4	13800	332	7.4	5220	150	0.34	314	7.8	426	0.28	0.80	0.040	0.50	9.8	430	0.020	0.26	13	2.6	16	0.050
90th Percentile	18600	2.1	96	0.15	0.19	19560	0.020	9.8	59	331	30800	6900	17	16760	414	0.96	456	39	550	0.7	0.80	0.54	1.5	17	1176	0.11	0.7	66	9.4	36	0.050
Intermediate and Felsic Dykes (n=6)																															
Min	2500	0.50	7.1	0.11	0.090	600	0.020	1.3	8.6	2.1	6800	500	2.0	1100	45	0.20	140	2.0	15	0.25	0.80	0.040	0.50	1.7	29	0.020	0.10	1.0	1.9	4.6	0.050
Max	21000	7.8	250	0.47	0.24	37000	0.020	17	320	52	48000	10000	26	24000	670	1.3	450	66	1700	1.7	0.80	0.17	0.50	22	2100	0.22	1.2	110	9.6	60	0.050
Median	7650	1.2	15	0.20	0.090	16000	0.020	5.6	36	8.5	15500	1000	8.0	6600	170	0.35	265	5.3	420	0.62	0.80	0.055	0.50	15	179	0.020	0.31	10	4.7	14	0.050
Average	10983	2.2	57	0.23	0.12	15667	0.020	8.1	78	19	22133	2508	10	9967	273	0.50	267	15	664	0.86	0.80	0.082	0.50	14	547	0.053	0.43	32	5.0	24	0.050
Standard Deviation	7633	2.8	96	0.13	0.061	13420	0	6.0	120	22	15626	3687	8.3	8694	233	0.42	107	25	679	0.63	1.2E-16	0.055	0.00	7.7	812	0.082	0.40	44	2.7	22	7.6E-18
10th Percentile	4800	0.50	7.7	0.13	0.090	1500	0.020	3.2	13	2.6	9900	725	4.0	2800	98	0.20	165	3.0	73	0.32	0.80	0.040	0.50	4.7	33	0.020	0.14	2.5	2.5	7.1	0.050
90th Percentile	20500	4.9	148	0.37	0.17	29500	0.020	16	186	47	41000	5800	18	20500	550	1.0	370	37	1500	1.7	0.80	0.15	0.50	21	1430	0.12	0.85	84	7.8	52	0.050

Table 7-9: Summary of Elemental Content of Mine Rock Samples

	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
Unit	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
Average Crustal Abundance*	**82300**	**1.8**	**425**	**3**	**0.025**	**41500**	**0.15**	**25**	**102**	**60**	**56300**	**20850**	**20**	**23300**	**950**	**1.2**	**23550**	**84**	**1050**	**14**	**0.2**	**0.05**	**2.3**	**370**	**5650**	**0.85**	**2.7**	**120**	**33**	**70**	**0.085**
Ten Times Average Crustal Abundance*	**823000**	**18**	**4250**	**30**	**0.25**	**415000**	**1.5**	**250**	**1020**	**600**	**563000**	**208500**	**200**	**233000**	**9500**	**12**	**235500**	**840**	**10500**	**140**	**2**	**0.5**	**23**	**3700**	**56500**	**8.5**	**27**	**1200**	**330**	**700**	**0.85**
Diorite (n=46)																															
Min	2300	0.50	1.4	0.040	0.090	3200	0.020	0.92	17	2.2	3100	45	3.0	800	68	0.10	56	1.6	11	0.050	0.80	0.040	0.50	2.6	20	0.020	0.014	1.0	1.3	4.1	0.050
Max	87000	23	540	2.3	0.31	67000	0.50	53	530	1300	83000	32000	61	49000	1200	5.9	870	430	2500	15	1.5	1.50	13	450	9000	0.69	1.8	210	71	87	0.10
Median	34500	1.9	48	0.32	0.090	24500	0.030	17	105	41	42500	2850	14	18000	445	0.50	340	34	495	1.4	0.80	0.22	1.5	35	1200	0.025	0.33	69	14	42	0.050
Average	40534	3.7	109	0.54	0.11	29545	0.082	17	134	113	42168	6053	18	20352	495	0.81	327	56	728	2.1	0.82	0.42	2.1	92	2195	0.087	0.58	70	15	43	0.061
Standard Deviation	25033	5.2	140	0.49	0.054	20033	0.10	12	106	238	22501	7881	13	13854	303	0.96	177	76	644	2.5	0.11	0.34	2.3	109	2140	0.12	0.54	52	13	22	0.021
10th Percentile	10600	0.83	2.6	0.09	0.090	5590	0.020	3.3	35	7.3	12000	149	6.0	2730	123	0.20	129	4.5	134	0.33	0.80	0.070	0.50	7.4	537	0.020	0.050	12.3	2.5	16	0.050
90th Percentile	73400	6.4	298	1.2	0.20	57400	0.23	31	264	209	69000	15700	33	39400	961	1.4	477	127	1680	3.9	0.80	0.70	4.1	257	5300	0.19	1.6	127	30	78	0.10
Quartz Diorite (n=11)																															
Min	4400	0.80	2.2	0.12	0.090	4200	0.020	0.61	26	6.0	5000	200	5.0	3800	79	0.20	200	1.7	86	0.20	0.80	0.050	0.70	5.1	530	0.020	0.20	7.0	4.4	7.4	0.050
Max	26000	4.5	70	0.47	2.70	31000	0.030	17	180	470	49000	7700	44	26000	660	2.1	560	84	2100	3.6	0.80	0.61	4.1	25	1900	0.14	1.5	80	48	54	0.050
Median	12000	1.5	6.3	0.21	0.090	19000	0.020	8.0	36	36	29000	570	8.0	8500	300	0.90	370	13	950	1.2	0.80	0.14	1.7	15	890	0.020	0.40	37	12	26	0.050
Average	14364	2.0	21	0.23	0.33	17736	0.021	9.2	53	94	29727	1545	14	11700	303	0.92	384	21	958	1.4	0.80	0.19	1.9	15	1081	0.040	0.62	42	18	27	0.050
Standard Deviation	6951	1.2	27	0.11	0.79	9091	0.003	4.9	44	132	13252	2238	12	7883	144	0.55	101	23	527	1.0	1.2E-16	0.16	1.0	5.9	463	0.039	0.47	26	14	12	7.3E-18
10th Percentile	6900	0.90	3.9	0.13	0.090	5600	0.020	4.9	28	14	17000	280	7.0	4500	170	0.40	290	5.4	530	0.60	0.80	0.060	0.80	9.9	550	0.020	0.27	9.0	7.3	17	0.050
90th Percentile	22000	3.6	59	0.38	0.13	27000	0.020	16	65	120	45000	3000	24	25000	360	1.7	520	32	1300	2.0	0.80	0.27	2.6	23	1600	0.080	1.4	79	34	38	0.050
Tonalite (n=89)																															
Min	1100	0.50	4.3	0.08	0.090	850	0.020	0.50	16	3.4	1300	310	2.0	52	23	0.40	74	1.7	10	0.090	0.80	0.040	0.50	2.2	10	0.020	0.084	1.0	2.0	2.4	0.050
Max	85000	19	520	1.6	1.30	45000	2.30	14	190	680	51000	25000	23	25000	650	47	630	33	820	50	0.80	1.1	5.9	180	5000	0.27	4.2	62	46	590	0.10
Median	5000	1.2	20	0.25	0.090	10000	0.030	2.6	50	31	11000	1000	4.0	2500	110	0.80	435	4.4	120	2.2	0.80	0.20	0.50	12	250	0.020	1.1	5.0	13	11	0.050
Average	20746	2.0	77	0.48	0.14	12609	0.11	3.5	70	83	12033	3899	5.5	3501	134	1.8	415	6.1	141	3.4	0.80	0.34	1.3	32	600	0.043	1.2	8.9	15	20	0.058
Standard Deviation	27053	2.8	125	0.45	0.17	8274	0.26	2.6	44	129	8061	6203	4.0	3883	92	5.3	99	6	138	6.1	1.3E-15	0.30	1.3	43	838	0.049	0.62	12	9.4	63	0.019
10th Percentile	2280	0.50	7.1	0.11	0.090	5120	0.020	1.3	38	7.9	3180	500	2.0	678	56	0.50	311	2.2	16	0.75	0.80	0.05	0.50	4.6	24	0.020	0.57	1.0	4.3	4.2	0.050
90th Percentile	65200	4.0	226	1.2	0.20	21800	0.25	6.8	146	196	23000	13600	11	7840	216	1.7	499	10	290	5.9	0.80	0.70	3.0	110	1760	0.11	1.9	20	27	23	0.10
Mafic Dykes (n=20)																															
.	11000	0.90	1.7	0.09	0.090	5400	0.020	3.8	15	10	18000	110	10	8500	240	0.10	73	9.6	50	0.050	0.80	0.040	0.50	7.1	290	0.020	0.032	37	2.7	29	0.050
Max	62000	110	540	1.1	0.31	160000	0.10	38	430	260	100000	28000	63	50000	990	5.8	900	130	1800	4.3	0.80	0.80	5.7	124	4600	0.64	0.86	190	58	96	0.050
Median	27000	1.8	25	0.26	0.090	39500	0.030	22	175	59	48500	1600	26	31000	630	0.25	210	63	925	1.1	0.80	0.21	0.50	34	1550	0.030	0.35	89	11	51	0.050
Average	29444	7.9	135	0.41	0.12	39783	0.035	22	190	79	49167	8348	29	28806	632	0.62	265	63	898	1.6	0.80	0.25	1.3	44	1703	0.18	0.35	98	13	56	0.050
Standard Deviation	14197	25	187	0.33	0.065	35362	0.021	8.6	131	63	18360	10527	14	11450	220	1.3	189	40	503	1.3	2.3E-16	0.20	1.5	36	1121	0.23	0.24	45	13	20	1.4E-17
10th Percentile	14700	1.1	4.3	0.14	0.090	12110	0.020	13	23	22	30800	290	14	14500	379	0.10	140	18	325	0.47	0.80	0.10	0.50	11	509	0.020	0.066	54	2.9	32	0.050
90th Percentile	44900	4.1	458	0.85	0.19	59600	0.060	34	354	153	67500	24200	45	39900	911	0.76	395	120	1500	3.4	0.80	0.44	3.2	90	2800	0.50	0.63	156	19	88	0.050
Diabase Dykes(n=9)																															
Min	12000	0.70	7.1	0.08	0.090	6200	0.020	18	16	65	41000	780	9.0	7300	210	0.30	330	18	410	1.0	0.80	0.25	0.50	9.6	2400	0.040	0.061	130	9.1	41	0.050
Max	65000	6.5	490	1.1	0.29	68000	1.3	44	330	160	100000	18000	27	38000	1400	3.1	970	97	1200	39	0.80	1.4	1.6	260	8900	0.28	1.1	250	27	300	0.10
Median	49000	1.4	210	0.56	0.090	36000	0.08	35	28	96	67000	9000	17	28000	730	0.60	740	25	830	4.8	0.80	0.70	0.70	78	4000	0.11	0.46	170	13	76	0.050
Average	39667	2.5	187	0.54	0.13	36156	0.28	31	79	101	70556	8631	17	22322	834	1.0	695	42	818	11	0.80	0.65	0.82	103	5000	0.13	0.56	184	15	105	0.056
Standard Deviation	23958	2.0	171	0.35	0.08	23236	0.41	8.6	107	28	19863	6823	6.7	11246	455	0.91	276	27	391	13	1.2E-16	0.36	0.39	97	2532	0.09	0.32	42	6.8	80	0.017
10th Percentile	12000	0.78	19	0.16	0.090	7000	0.052	20	16	73	45000	1596	10.6	8340	258	0.38	426	22	455	1.6	0.80	0.29	0.50	12	2560	0.040	0.32	146	9.7	42	0.050
90th Percentile	65000	4.8	370	1.0	0.25	66400	0.57	39	202	128	94400	16400	27	31600	1320	2.1	928	77	1170	27	0.80	1.0	1.3	220	8340	0.26	1.0	242	25	156	0.06
Intrusive Mafic Lamprophyre (n=4)																															
Min	18000	1.3	4.0	0.49	0.090	16000	0.020	16	170	3.5	33000	290	18	24000	550	0.10	170	35	1200	0.56	0.80	0.070	0.50	12	780	0.020	0.21	67	4.0	51	0.050
Max	38000	8.0	2100	1.0	0.090	71000	0.11	28	400	49	57000	36000	40	48000	780	0.20	320	140	1600	2.5	0.80	0.13	0.80	340	2500	0.57	0.60	110	9.8	57	0.050
Median	25000	1.5	305	0.72	0.090	35000	0.060	17	250	24	43000	6400	27	32500	635	0.20	235	47	1350	1.4	0.80	0.12	0.50	52	1750	0.14	0.46	82	7.5	56	0.050
Average	26500	3.1	679	0.73	0.090	39250	0.063	20	268	25	44000	12273	28	34250	650	0.18	240	67	1375	1.5	0.80	0.11	0.58	114	1695	0.22	0.43	85	7.2	55	0.050
Standard Deviation	9292	3.3	968	0.21	0	22998	0.038	5.7	96	24	12302	16095	9.2	11325	96	0.050	62	49	206	0.81	0	0.027	0.15	152	716	0.24	0.18	19	2.9	2.7	0
10th Percentile	18600	1.3	45	0.55	0.090	21400	0.029	16	191	4.0	33300	1853	20	24600	574	0.13	188	37	1200	0.75	0.80	0.085	0.50	23	1026	0.050	0.26	69	4.4	53	0.050
90th Percentile	35600	6.1	1611	0.92	0.090	60500	0.098	25	358	47	55500	27390	36	45300	738	0.20	296	114	1570	2.2	0.80	0.13	0.71	255	2320	0.45	0.58	104	9.7	57	0.050
Quartz Sericite Schist (n=2)																															
Min	3600	0.50	11	0.21	0.090	18000	0.020	3.9	24	1.5	13000	1000	5.0	4300	220	0.20	120	5.9	370	0.050	0.80	0.040	0.50	18	16	0.020	0.091	2.0	1.5	9.5	0.050
Max	28000	58	15	0.27	0.18	61000	0.020	25	53	78	62000	1100	27	19000	510	0.30	360	33	430	6.8	0.80	1.1	1.5	39	54	0.020	0.14	50	18	38	0.050
Median	15800	29	13	0.24	0.14	39500	0.020	14	39	40	37500	1050	16	11650	365	0.25	240	19	400	3.4	0.80	0.59	1.0	29	35	0.020	0.12	26	9.8	24	0.050
Average	15800	29	13	0.24	0.14	39500	0.020	14	39	40	37500	1050	16	11650	365	0.25	240	19	400	3.4	0.80	0.59	1.0	29	35	0.020	0.12	26	9.8	24	0.050

*Price 1997

Table 7-10: Mine Rock Samples Greater than 10X Average Crustal Abundance

Lithological Classification	Total Number of Samples	As	Bi	Cd	Cu	Mo	Se*
		µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
	MDL	0.5	0.09	0.02	-	-	0.04, 0.7
	Ten Times Average Crustal Abundance	18	0.25	1.5	600	12	0.5
All Samples	224	6	18	1	9	3	27
Diorite Breccia	11	0	1	0	1	1	4
Diorite Mega Breccia	7	0	1	0	0	0	1
Fault Breccia	1	0	0	0	1	0	0
Hydrothermal Breccia	3	0	3	0	1	1	1
Mafic Breccia	1	0	0	0	0	0	0
Magma Mixing Breccia	10	0	1	0	1	0	6
Quartz Carbonate Heterolithic Breccia	2	0	0	0	0	0	0
Fault	5	0	1	0	1	0	0
Intrusive Feldspar Porphyry	5	0	0	0	0	0	1
Intermediate and Felsic Dykes	6	0	0	0	0	0	0
Diorite	44	3	2	0	2	0	3
Quartz Diorite	11	0	1	0	0	0	1
Tonalite	85	1	5	1	2	1	6
Mafic Dykes	18	1	2	0	0	0	1
Diabase Dykes	9	0	1	0	0	0	2
Intrusive Mafic Lamprophyre	4	0	0	0	0	0	0
Quartz Sericite Schist	2	1	0	0	0	0	1

* MDL is greater than 10 times the crustal average; only values above the MDL are included in the analysis

Table 7-11: Shake Flask Extraction Results Greater Than 10x Average Crustal Abundance

Lithological Classification	Total Number	pH	Ag mg/L	Al mg/L	B mg/L	Cr mg/L	Cu mg/L	Fe mg/L	U mg/L	V mg/L
PWQO		6.5-8.5	0.0001	0.015-0.075	0.2	0.001	0.005	0.3	0.005	0.006
All	75	29	2	75	3	3	3	8	1	33
Diorite	22	6	1	22	0	1	0	1	0	14
Tonalite	27	11	0	27	1	1	2	2	1	6
Diabase Dykes	5	3	0	5	0	0	0	2	0	4
Diorite Breccia	7	3	0	7	0	0	0	2	0	4
Fault	2	2	0	2	2	1	1	0	0	0
Intrusive Feldspar Porphyry	1	0	0	1	0	0	0	1	0	2
Mafic Dykes	4	1	1	4	0	0	0	0	0	1
Magma Mixing Breccia	7	3	0	7	0	0	0	0	0	2

Table 7-12: Synthetic Precipitation Leaching Procedure Results Greater Than 10x Average Crustal Abundance

Lithological Classification	Total Number	pH	Ag mg/L	Al mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L	V mg/L	Zn mg/L
PWQO		**6.5-8.5**	**0.0001**	**0.015-0.075**	**0.0009**	**0.001**	**0.005**	**0.3**	**0.006**	**0.03**
All	75	47	1	75	1	13	5	20	8	1
Diorite	22	11	0	22	0	6	0	6	2	0
Tonalite	27	16	0	27	0	1	2	4	0	1
Diabase Dykes	5	4	0	5	0	2	1	4	4	0
Diorite Breccia	7	5	0	7	0	1	0	3	1	0
Fault	2	1	1	2	1	1	2	2	1	0
Intrusive Feldspar Porphyry	1	1	0	1	0	0	0	0	0	0
Mafic Dykes	4	3	0	4	0	2	0	1	0	0
Magma Mixing Breccia	7	6	0	7	0	0	0	0	0	0

Table 7-13: Humidity Cell Results and Depletion Rates

	Knight Piésold Sample ID	Lithology	Paste pH	Total Carbon	Total Sulphur	Sulphate	Sulphide*	NP	Carbonate NP**	AP	MPA	NPR	Carbonate NPR	NPR_{MPA}	Carbonate NPR_{MPA}	Carbonate NP Depletion***	Sulphide Depletion****
				%				kg $CaCO_3$/tonne									
HC1	Altered Tonalite South	Tonalite	9.2	0.28	0.030	<0.010	0.020	25	24	0.63	0.94	40	38	27	25		
HC2	Altered Tonalite North	Tonalite	8.9	0.60	0.092	<0.010	0.082	50	50	2.6	2.9	20	20	17	17		
HC3	Tonalite South	Tonalite	9.0	0.41	0.028	<0.010	0.018	31	34	0.56	0.88	55	61	35	39		
HC4	Tonalite North	Tonalite	9.6	0.29	0.041	0.010	0.031	24	24	0.97	1.3	25	25	19	19		
HC5	Tonalite Breccia South	Magma Mixing Breccia	9.5	0.38	0.82	0.11	0.71	34	32	22	26	1.5	1.4	1.3	1.2	51	175
HC6	Tonalite Breccia North	Tonalite	9.1	0.47	0.070	0.020	0.050	38	39	1.6	2.2	24	25	17	18		
HC7	Altered Tonalite Breccia South	Magma Mixing Breccia	9.1	0.39	0.17	0.040	0.13	32	33	3.9	5.2	8.2	8.4	6.2	6.3		
HC8	Altered Tonalite Breccia North	Tonalite	8.8	0.73	0.024	<0.010	0.014	60	61	0.44	0.75	137	138	80	81		
HC9	Diorite South	Diorite	9.3	0.48	0.015	<0.010	<0.010	47	40	0.31	0.47	150	129	100	86		
HC10	Diorite North	Diorite	9.4	0.51	0.026	<0.010	0.016	47	42	0.50	0.81	94	85	58	52		
HC11	Diorite Breccia South	Diorite Breccia	9.4	0.54	0.14	0.030	0.11	50	45	3.6	4.5	14	13	11	10		
HC12	Diorite Breccia North	Diorite Breccia	9.4	0.61	0.058	0.020	0.038	52	51	1.2	1.8	44	43	29	28		
HC13	Altered Diorite South	Diorite	9.3	0.39	0.082	<0.010	0.072	38	33	2.3	2.6	17	15	15	13		
HC14	Altered Diorite North	Diorite	9.2	0.49	0.11	0.030	0.076	39	41	2.4	3.3	16	17	12	12		

* Calculated as the difference between measured total sulphur and sulphate

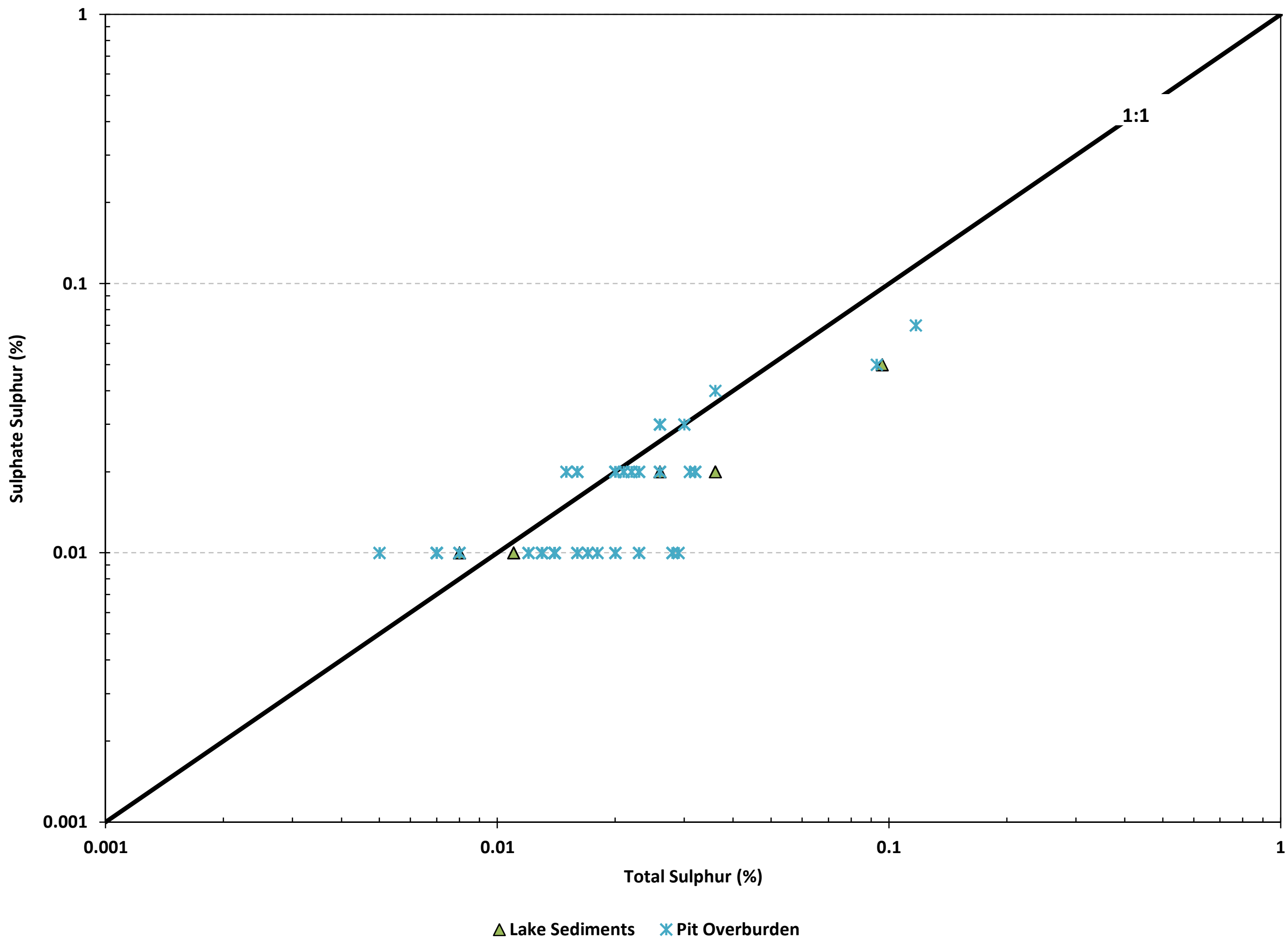
** Calculated from total carbon content

*** Calculated using steady molar Ca plus Mg release rates for ABA determined potential PAG materials (most recent 15 weeks of data)

**** Calculated using steady sulphate release rates for aBA determined potential PAG material(most recent 15 weeks of data)

Table 7-14: Field Cell Lithologies

Cell	Knight Piésold Sample ID	Lithology
FC1	Altered Tonalite	Tonalite
FC2	Tonalite	Tonalite
FC3	Altered Tonalite Breccia	Magma Mixing Breccia
FC4	Tonalite Breccia	Magma Mixing Breccia
FC5	Diorite Breccia	Diorite Breccia
FC6	Diorite	Diorite
FC7	Precipitation Catchment (empty)	Precipitation Blank

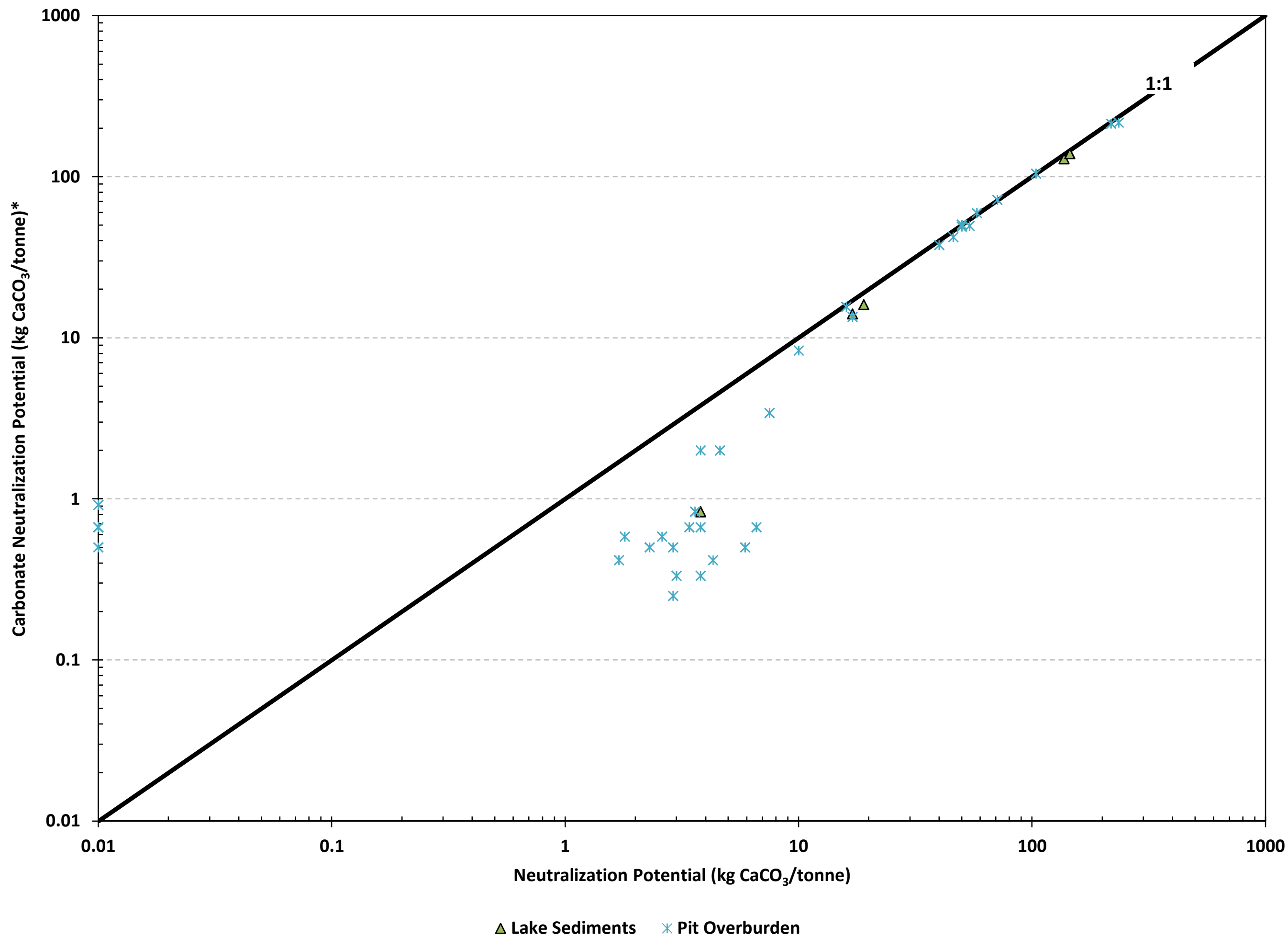


IAMGOLD amec

Côté Gold Project

Open Pit Overburden and Lake Sediments
Total Sulphur vs Sulphate Sulphur

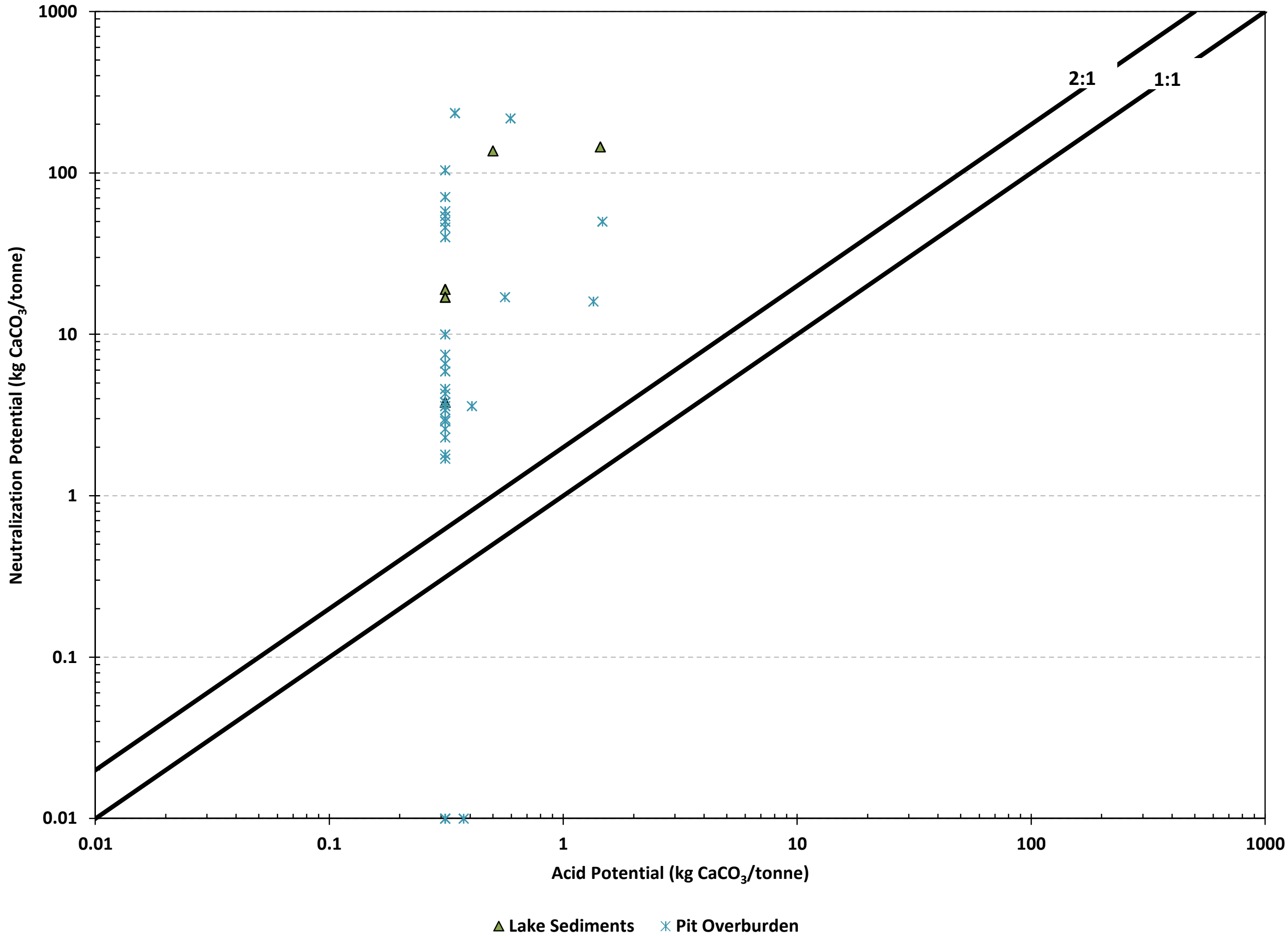
Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-1



* Carbonate NP determined from measured CO_3^{2-} content

IAMGOLD amec

Côté Gold Project	
Open Pit Overburden and Lake Sediments Neutralization Potential vs Carbonate Neutralization Potential	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-2



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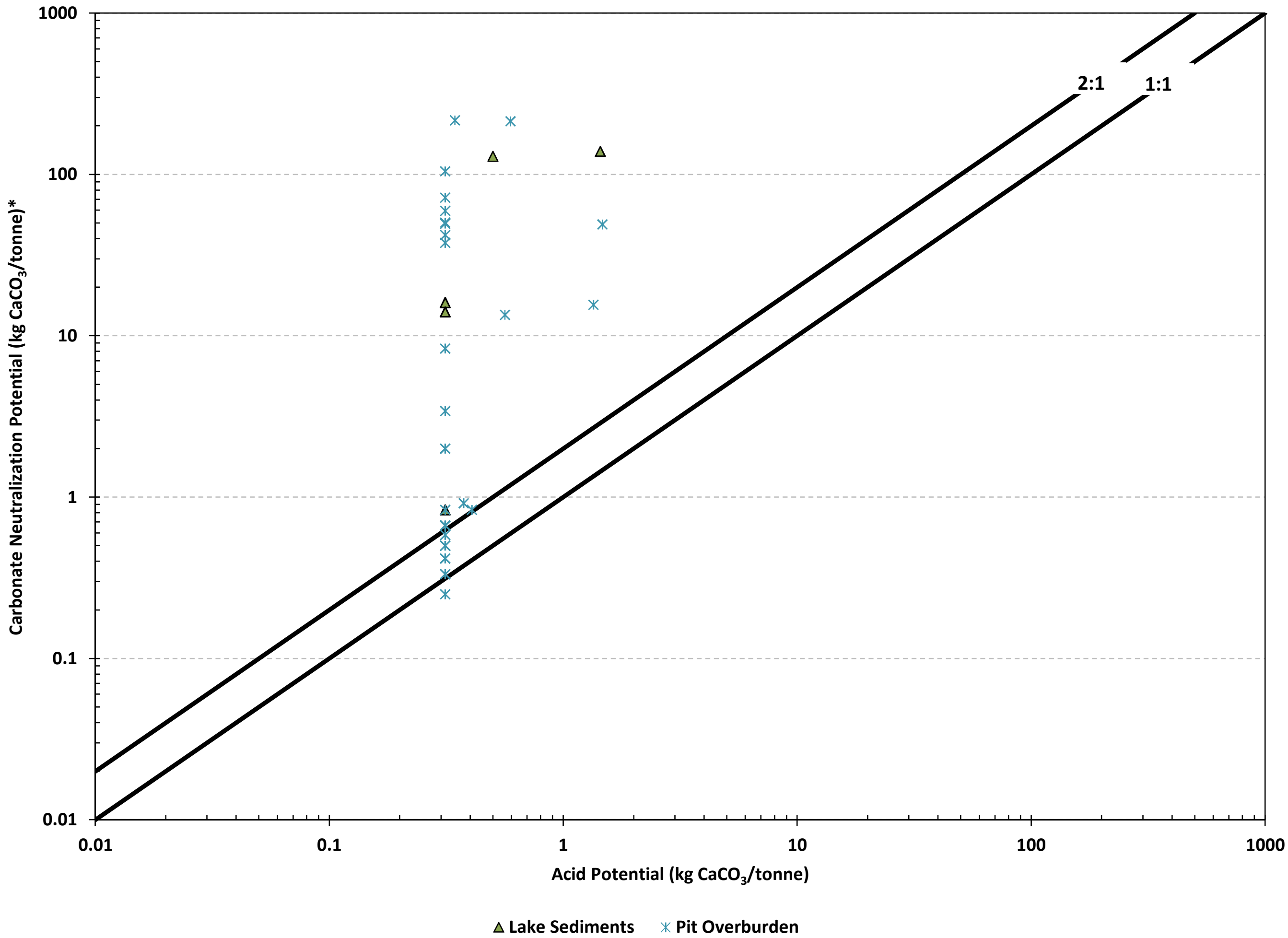
Côté Gold Project

Open Pit Overburden and Lake Sediments
Acid Potential vs Neutralization Potential

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-3



* Carbonate NP determined from measured CO_3^{2-} content

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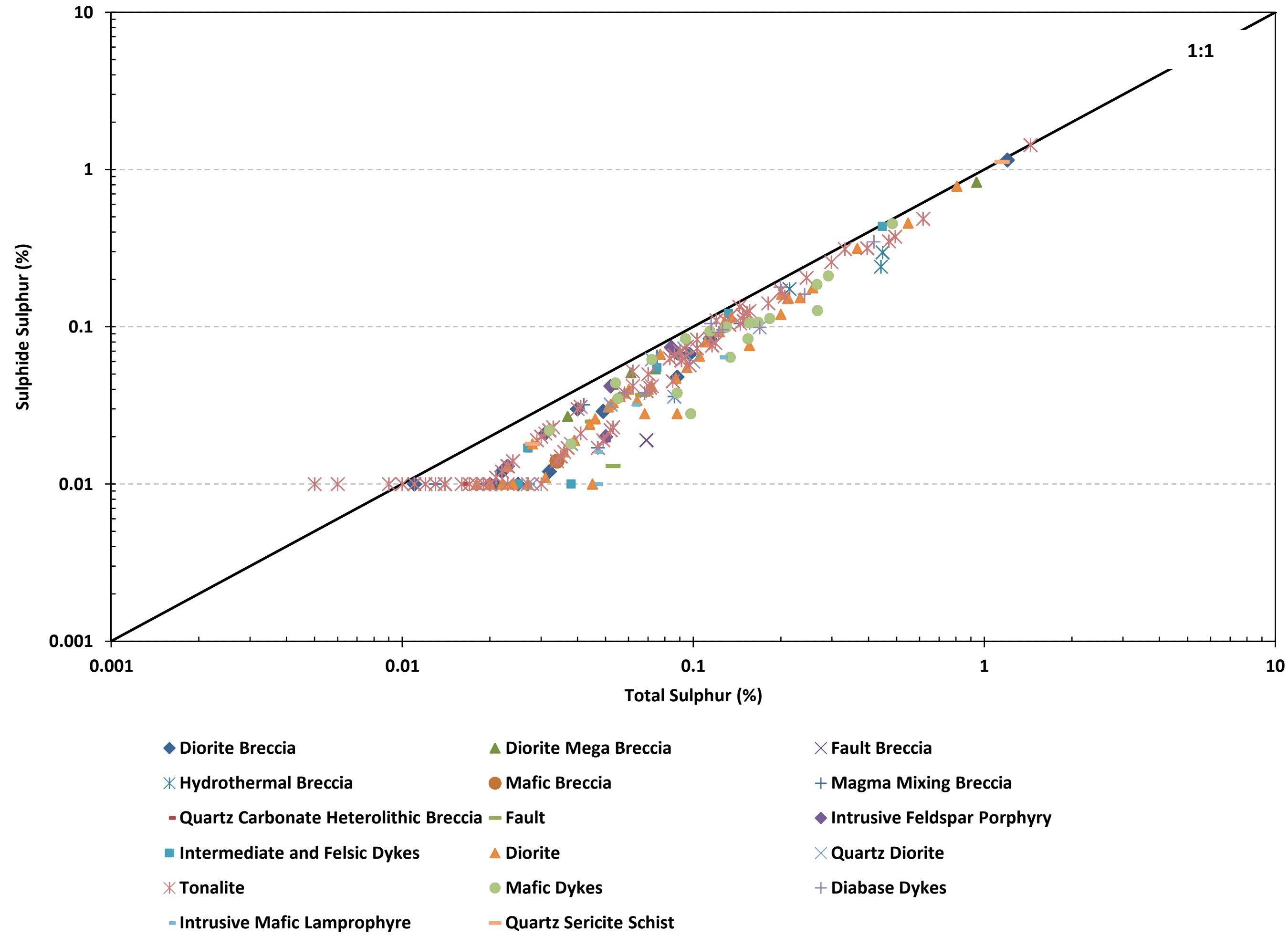
Côté Gold Project

Open Pit Overburden and Lake Sediments Acid Potential vs Carbonate Neutralization Potential

Drawn by: LC	Checked by: SW
Date: December 2013	
Project: TC121522	GRAPHIC 7-4



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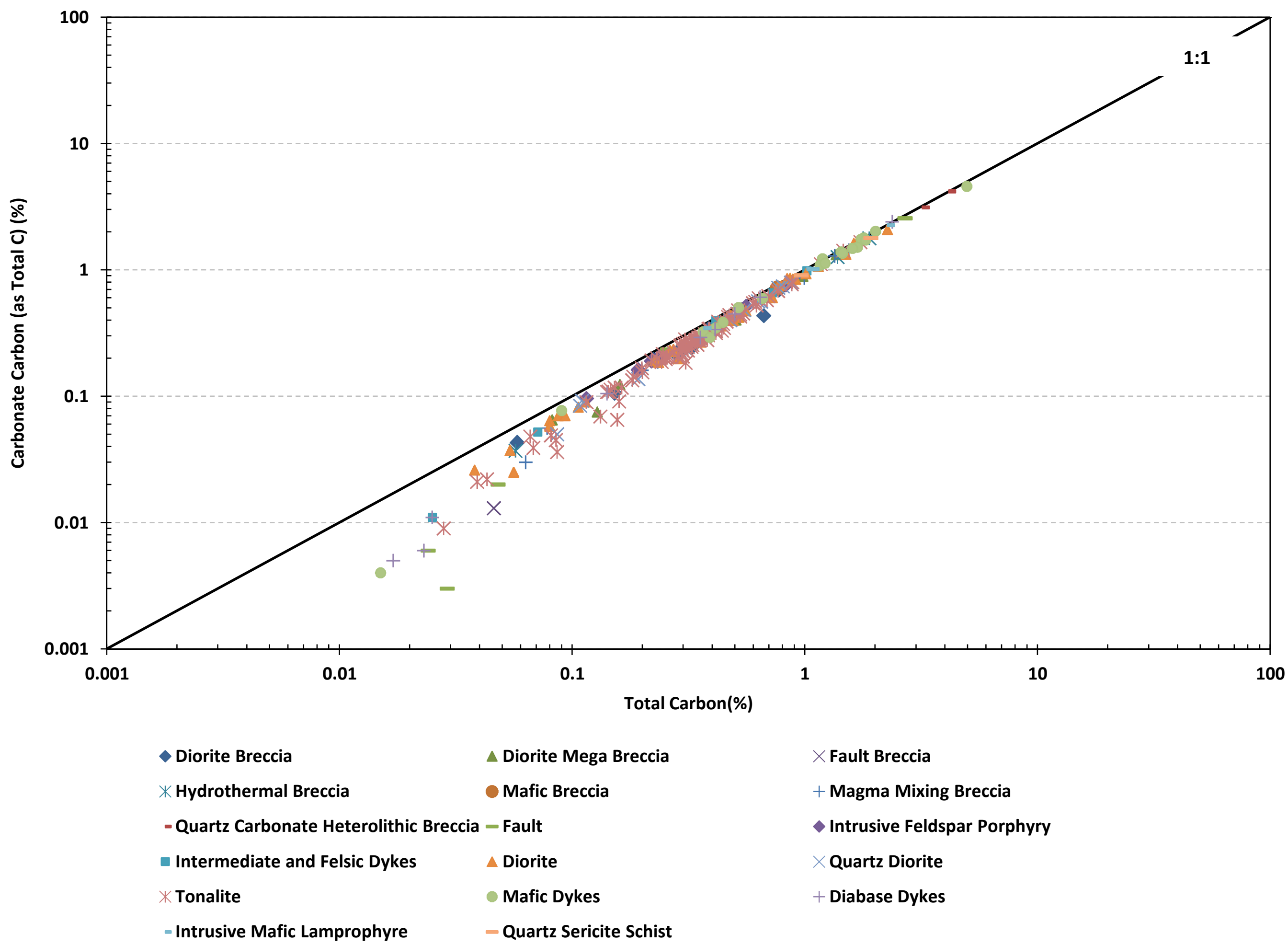
Côté Gold Project

Mine Rock
Sulphide Sulphur vs Total Sulphur

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-5



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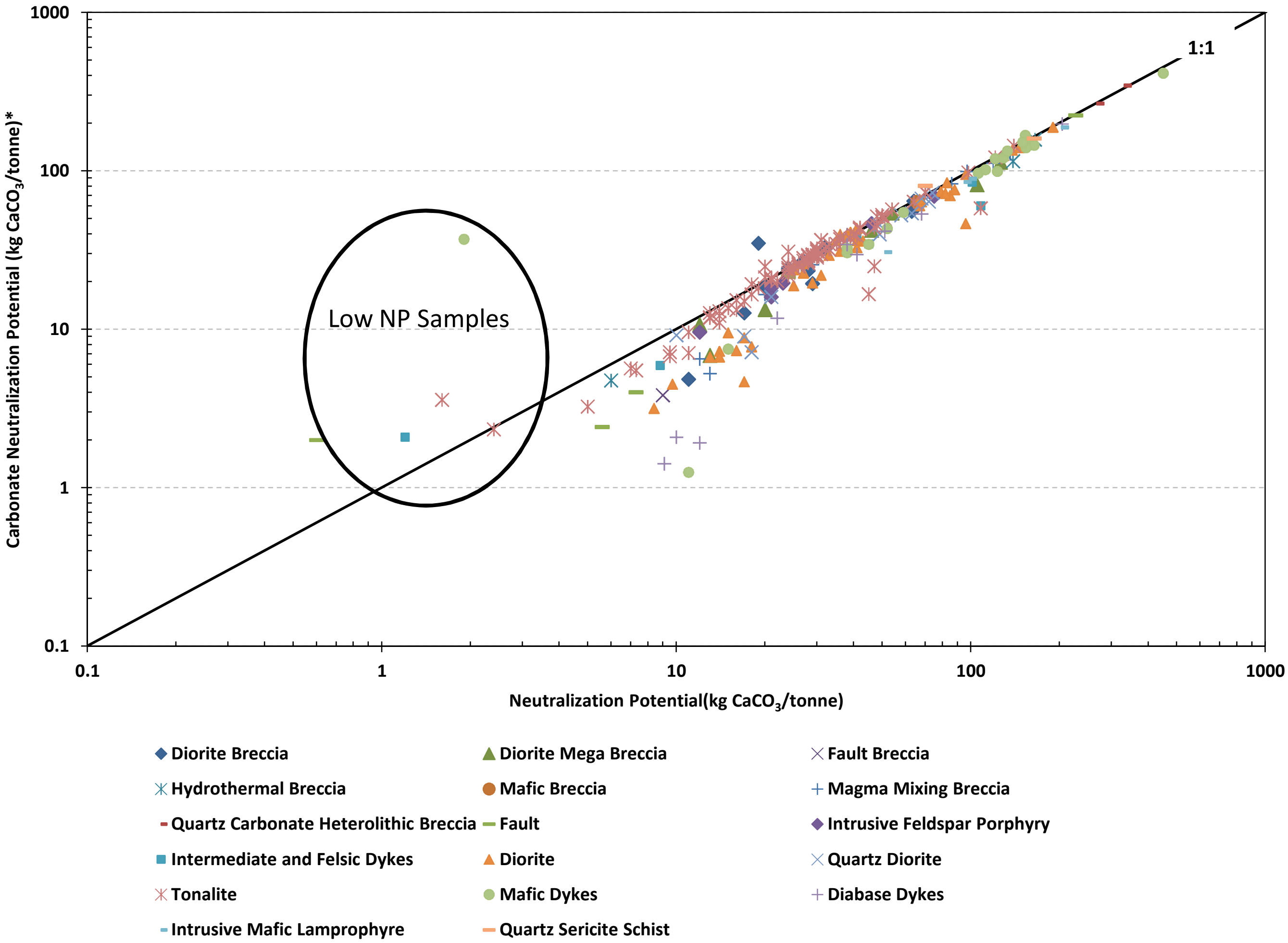
Côté Gold Project

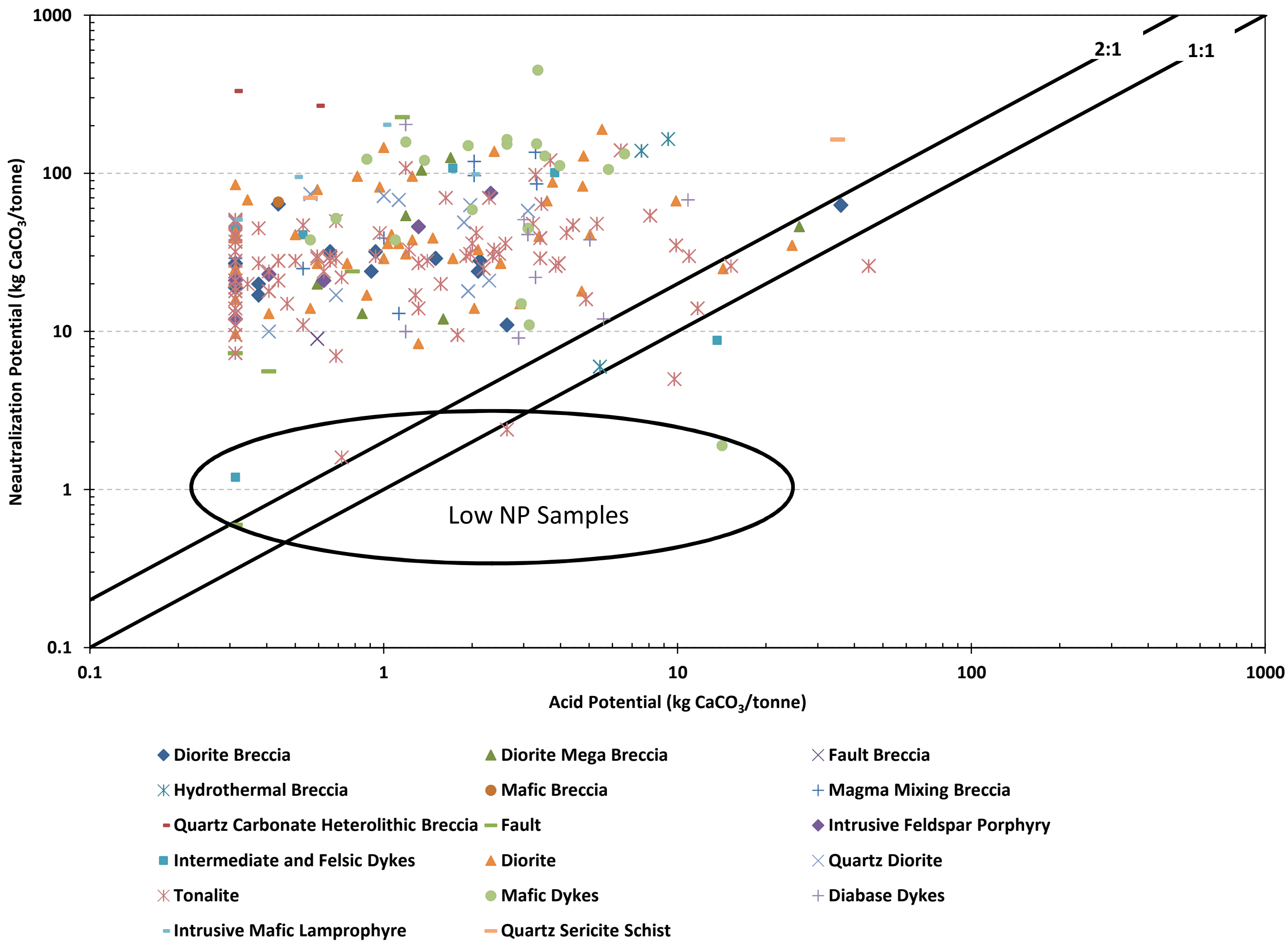
Mine Rock Total Carbon vs Total Carbon from Carbonate

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-6



* Carbonate NP determined from measured total carbon content

IAMGOLD	amec
Côté Gold Project	
Mine Rock Neutralization Potential vs Carbonate Neutralization Potential	
Drawn by: KS / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-7

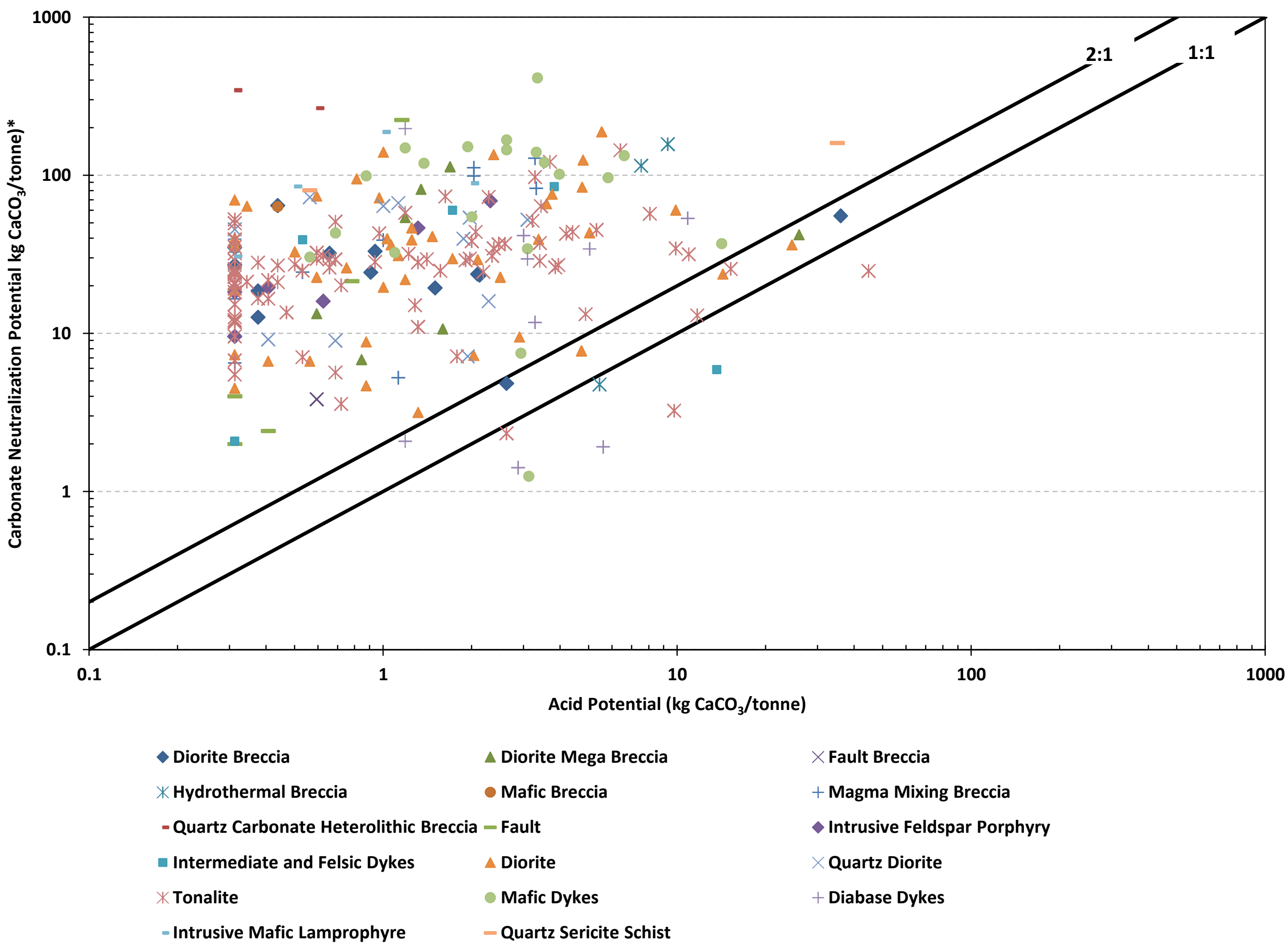


IAMGOLD amec

Côté Gold Project

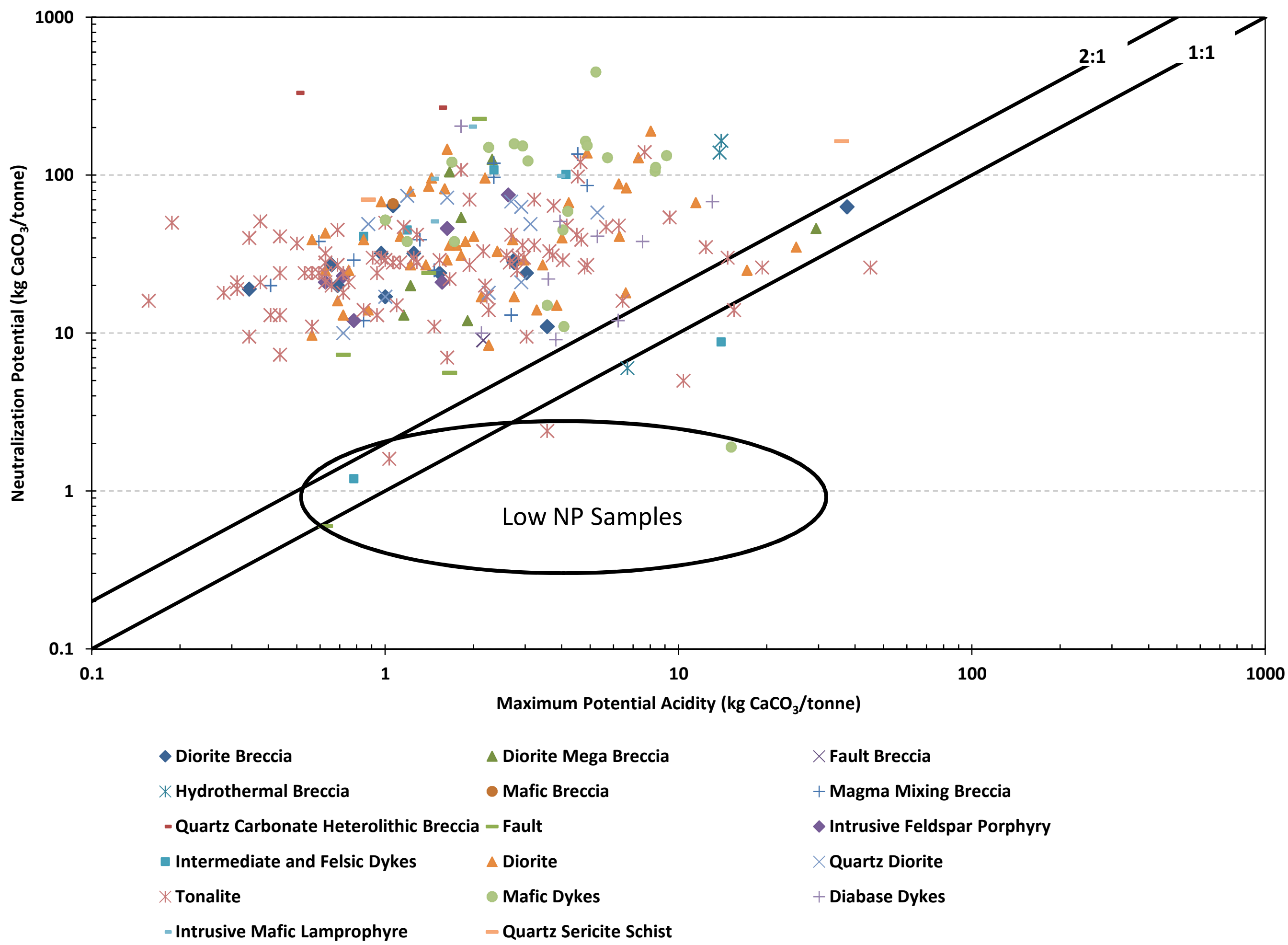
Mine Rock
Acid Potential vs Neutralization Potential

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-8



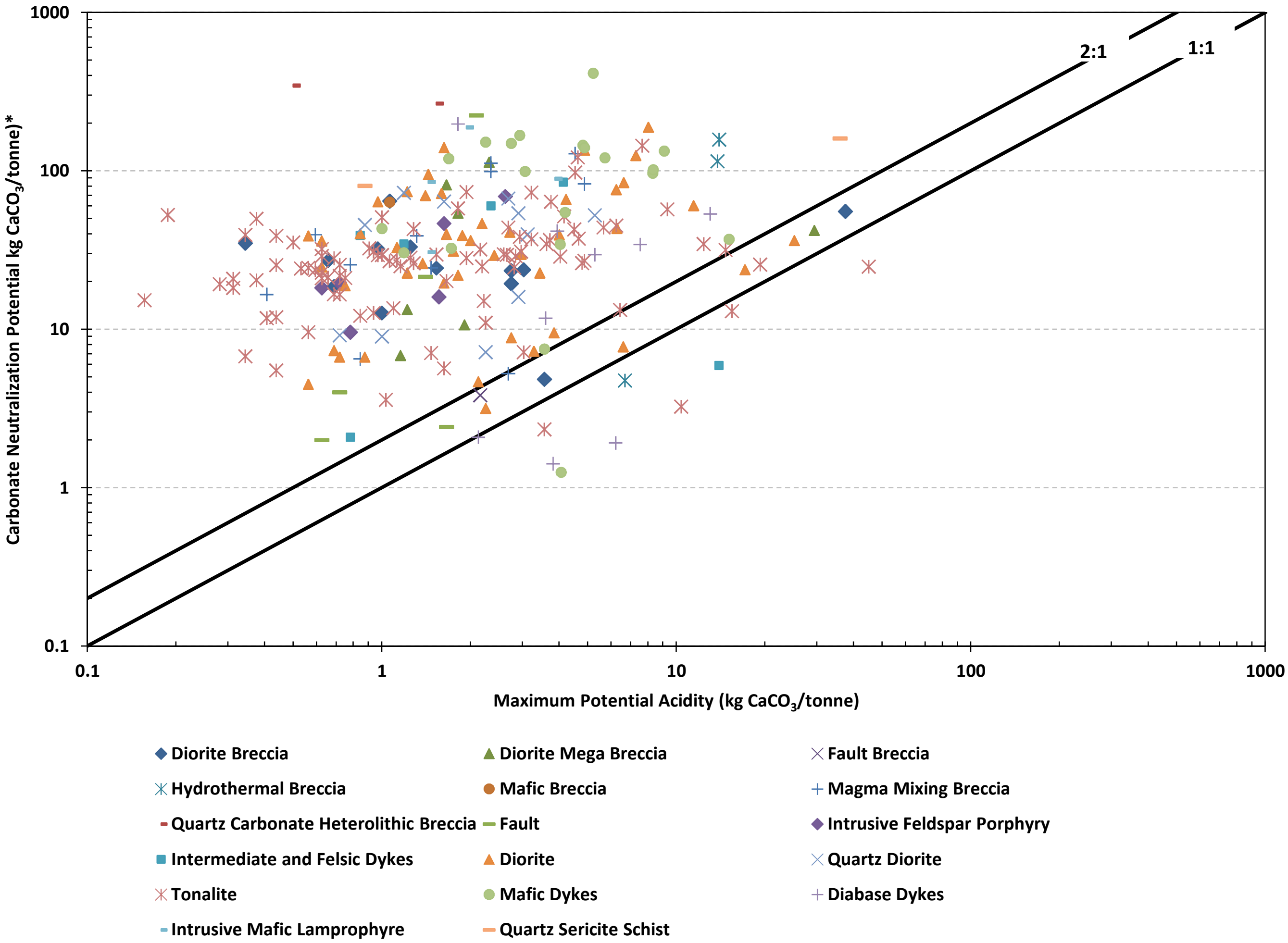
* Carbonate NP determined from measured total carbon content

IAMGOLD	amec
Côté Gold Project	
Mine Rock Acid Potential vs Carbonate Neutralization Potential	
Drawn by: KS Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-9



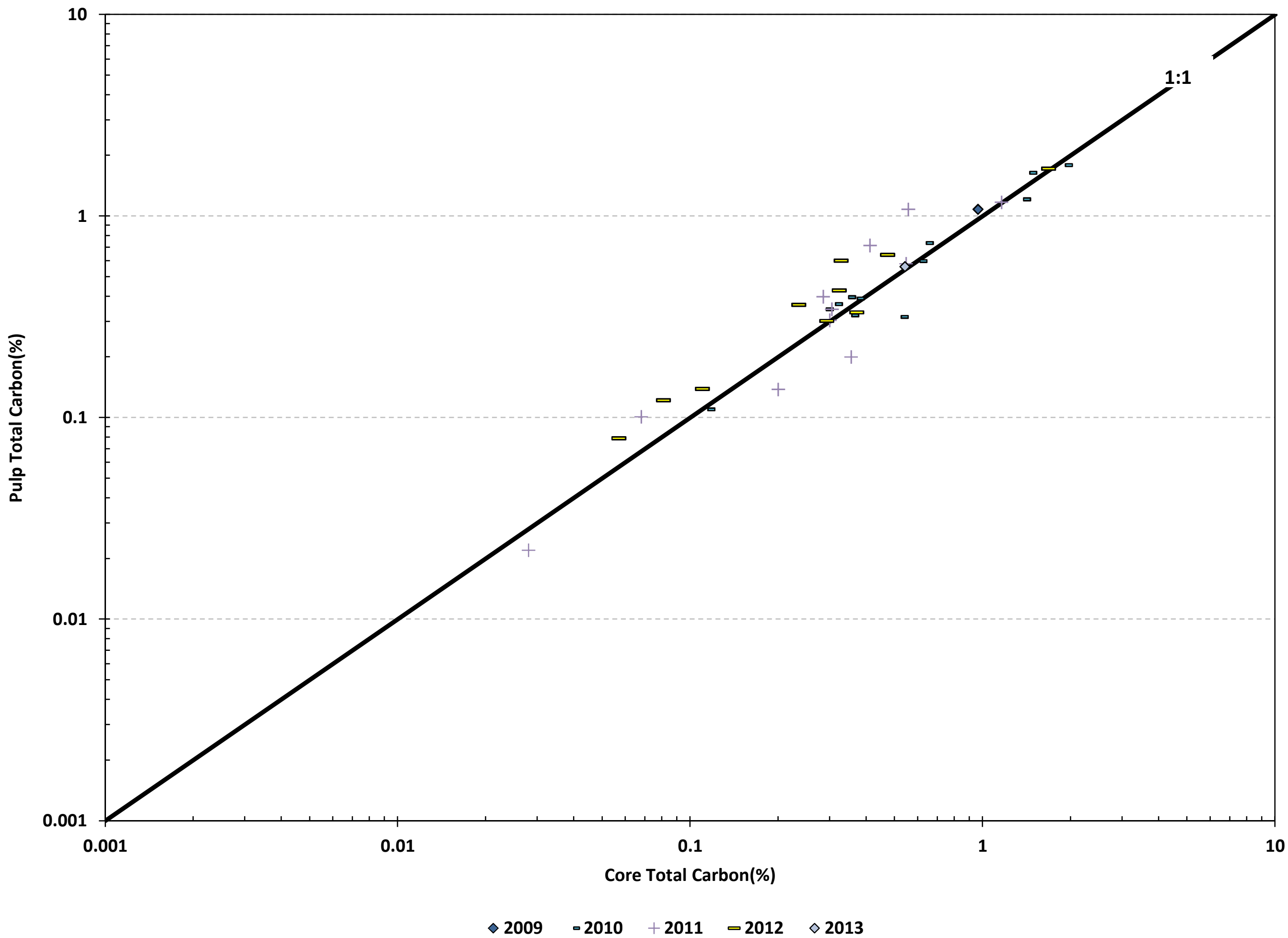
IAMGOLD amec

Côté Gold Project	
Mine Rock Maximum Potential Acidity vs Neutralization Potential	
Drawn by: KS · Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-10



* Carbonate NP determined from measured total carbon content

IAMGOLD	amec
Côté Gold Project	
Mine Rock Maximum Potential Acidity vs Carbonate Neutralization Potential	
Drawn by: KS / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-11



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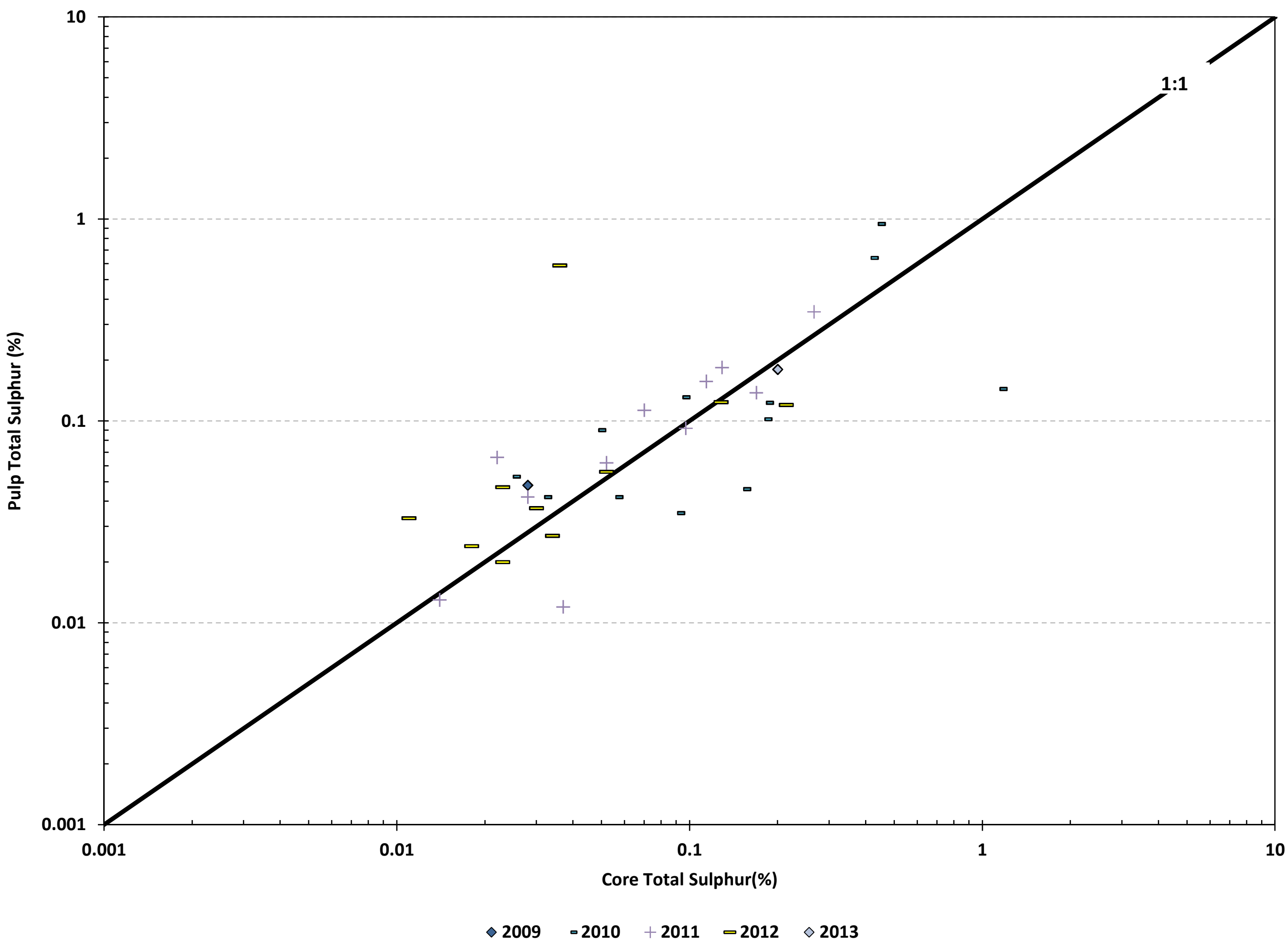
Côté Gold Project

Mine Rock
Core vs Pulp (Total Carbon)

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-12



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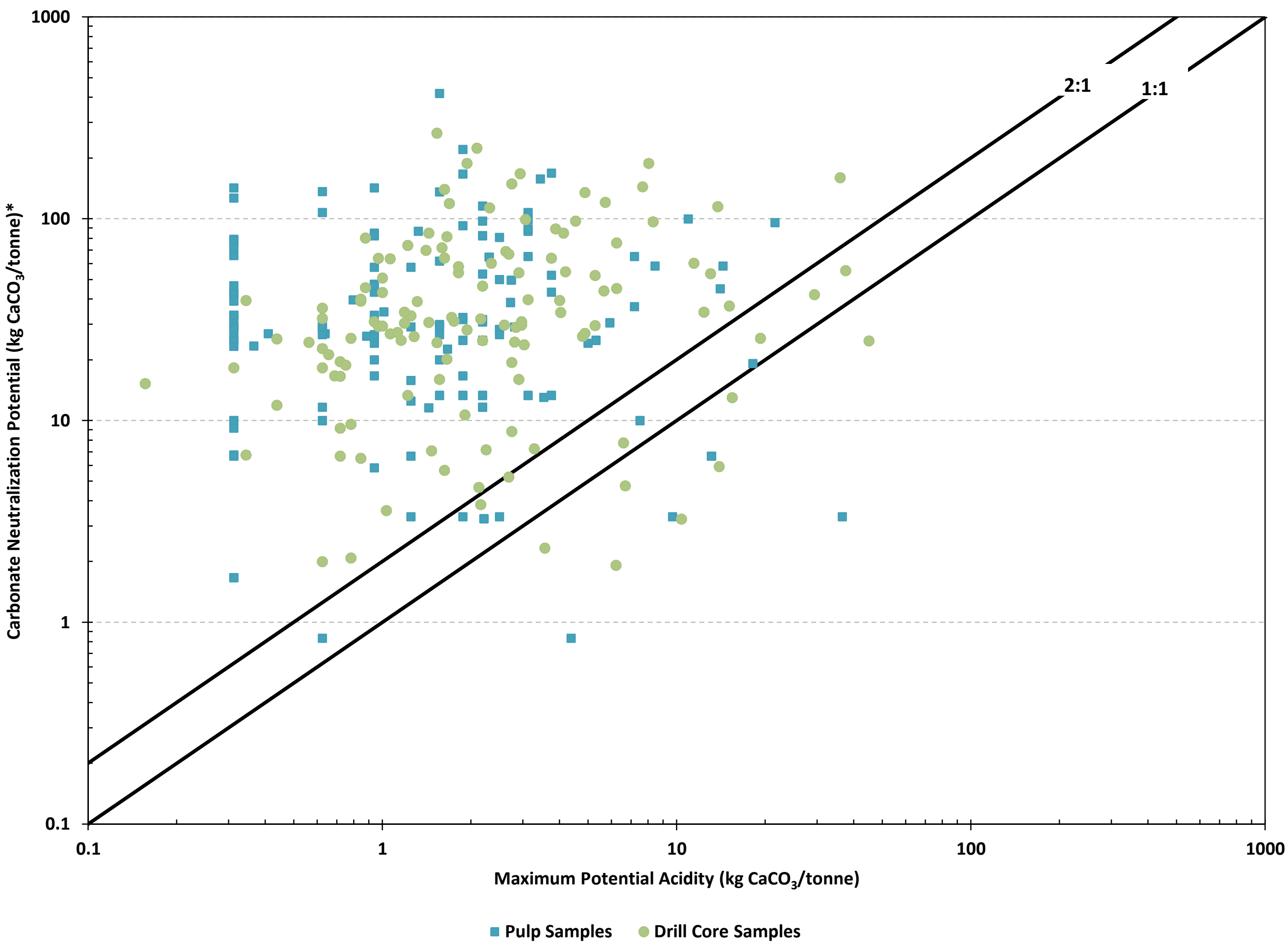
Côté Gold Project

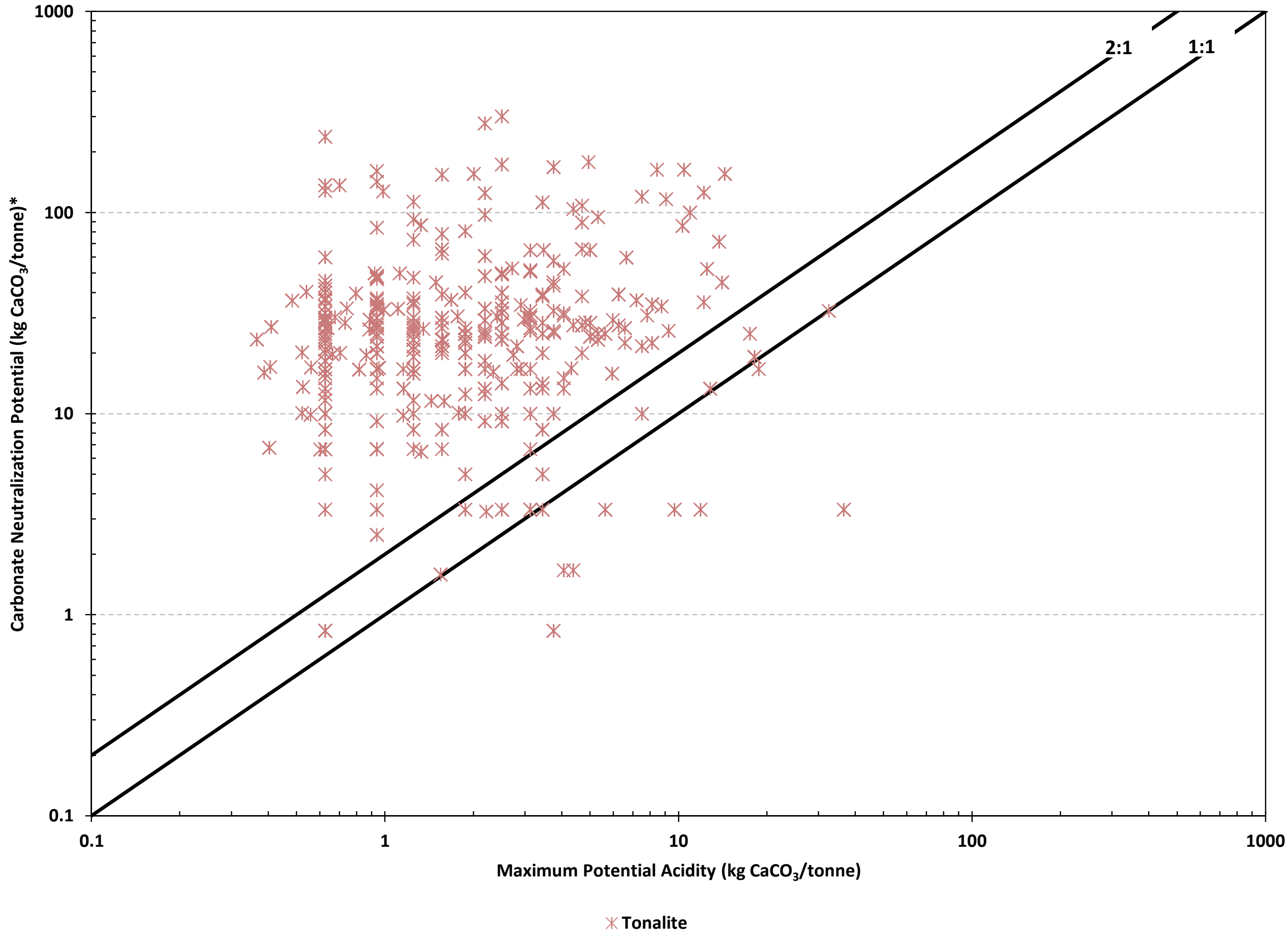
Mine Rock
Core vs Pulp (Total Sulphur)

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-13



* Carbonate NP determined from measured total carbon content

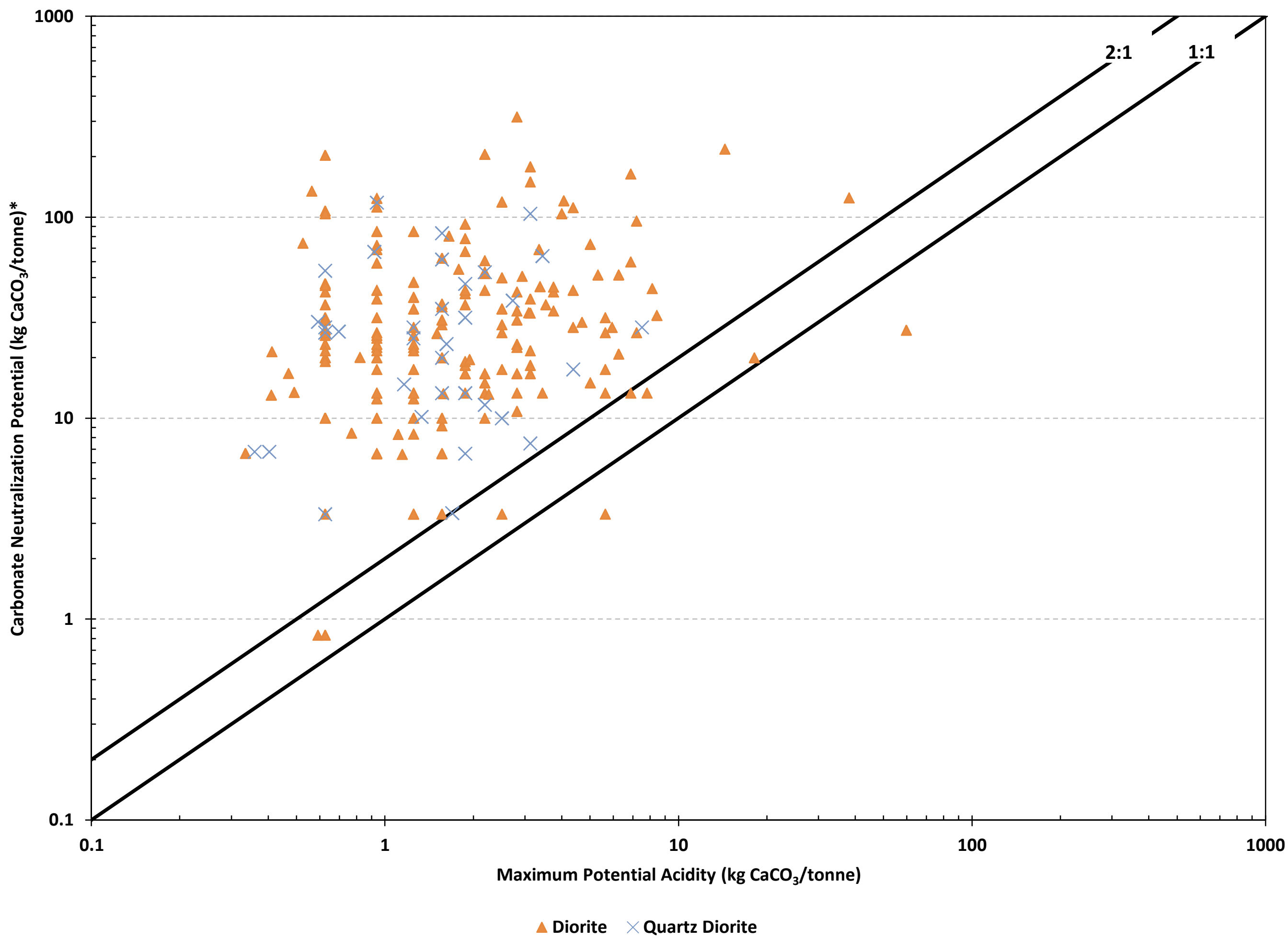
IAMGOLD	amec
Côté Gold Project	
Mine Rock Maximum Potential Acidity vs Carbonate Neutralization Potential for Drill Core and Pulps	
Drawn by: KS / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-14



* Carbonate NP determined from measured total carbon content

IAMGOLD amec

Côté Gold Project	
Mine Rock Maximum Potential Acidity vs Carbonate Neutralization Potential from Leco (Tonalite)	
Drawn by: KS / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-15



* Carbonate NP determined from measured total carbon content

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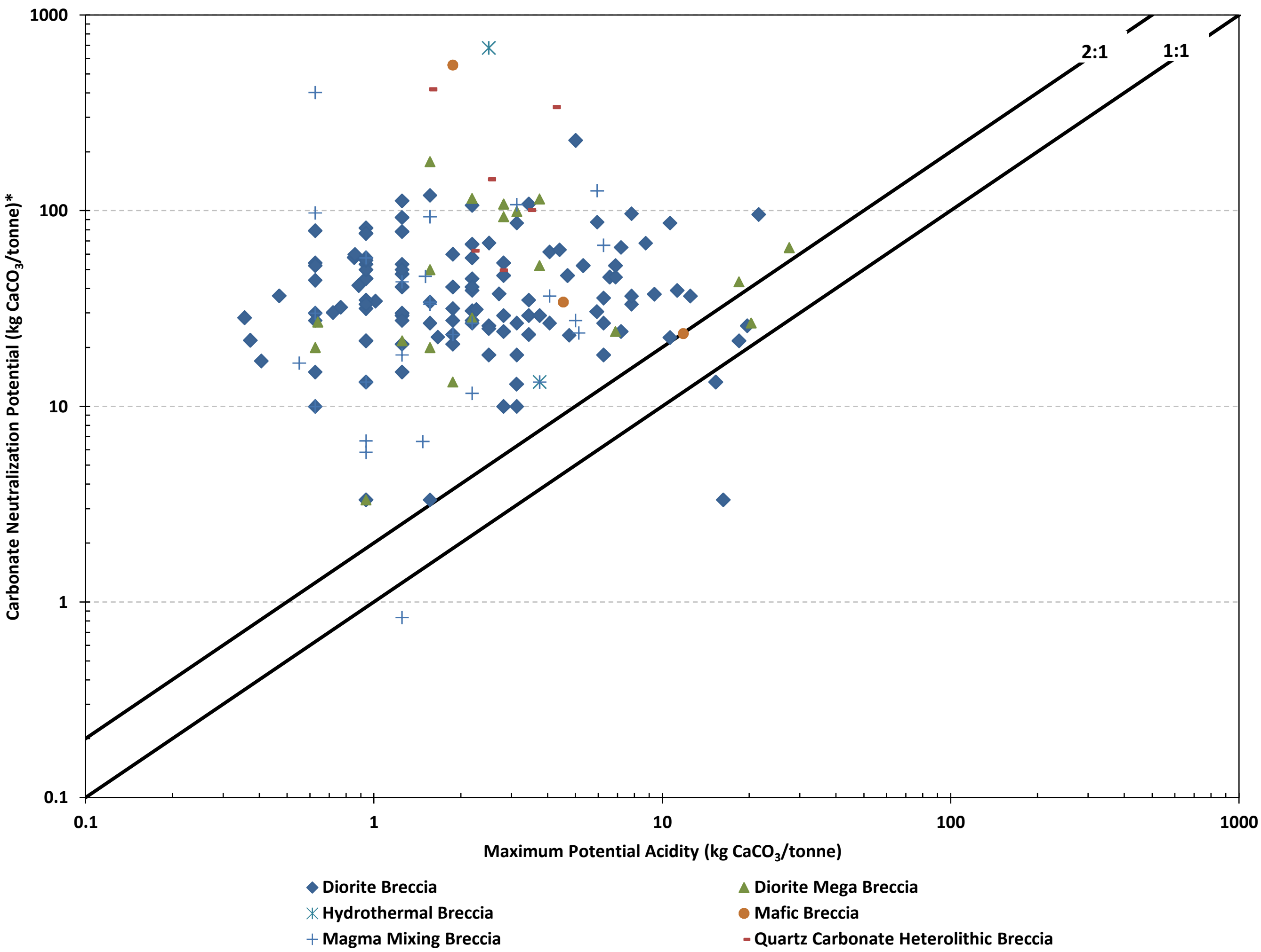
Côté Gold Project

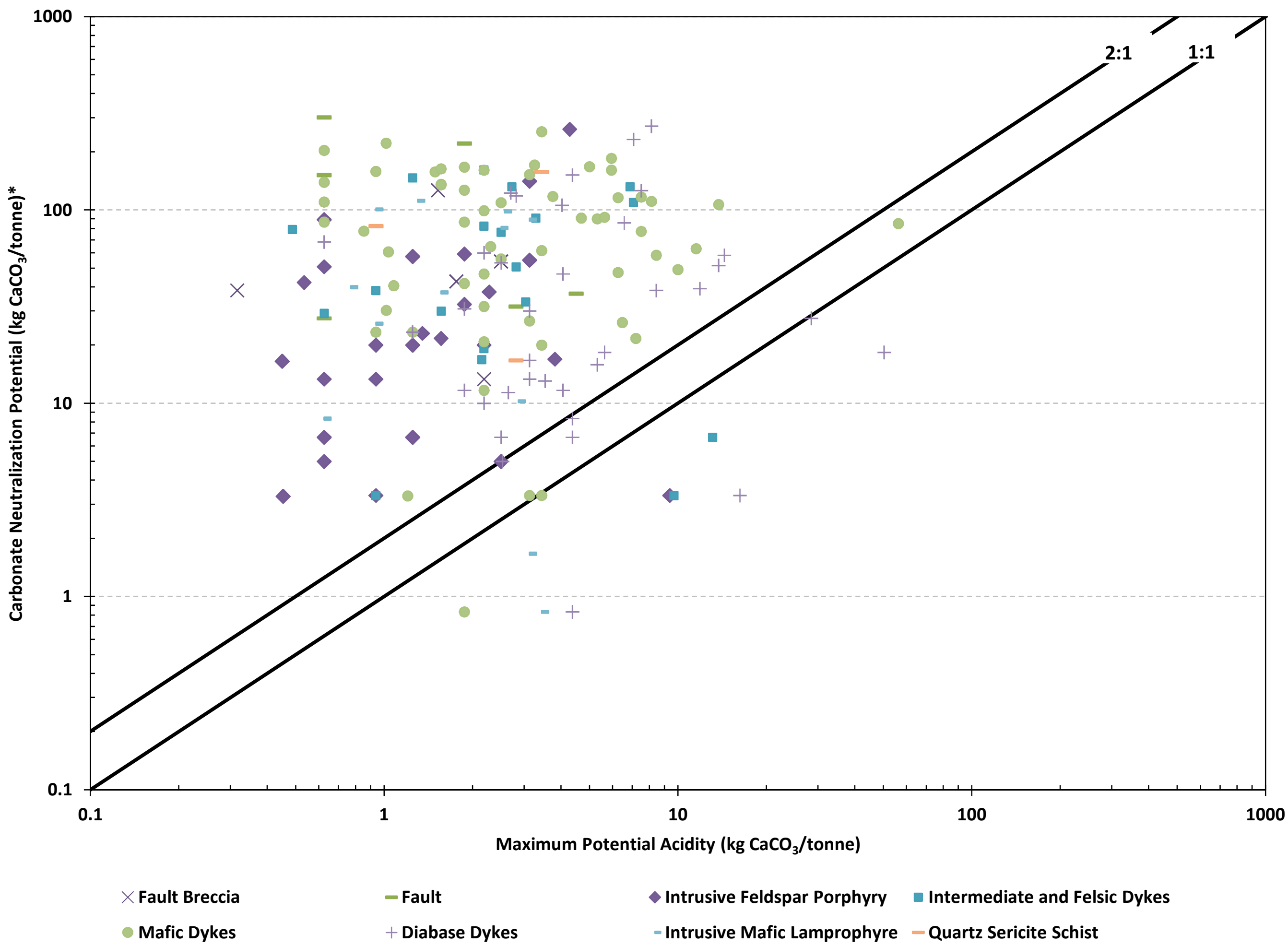
Mine Rock Maximum Potential Acidity vs Carbonate Neutralization Potential from Leco (Diorite)

Drawn by: KS / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-16



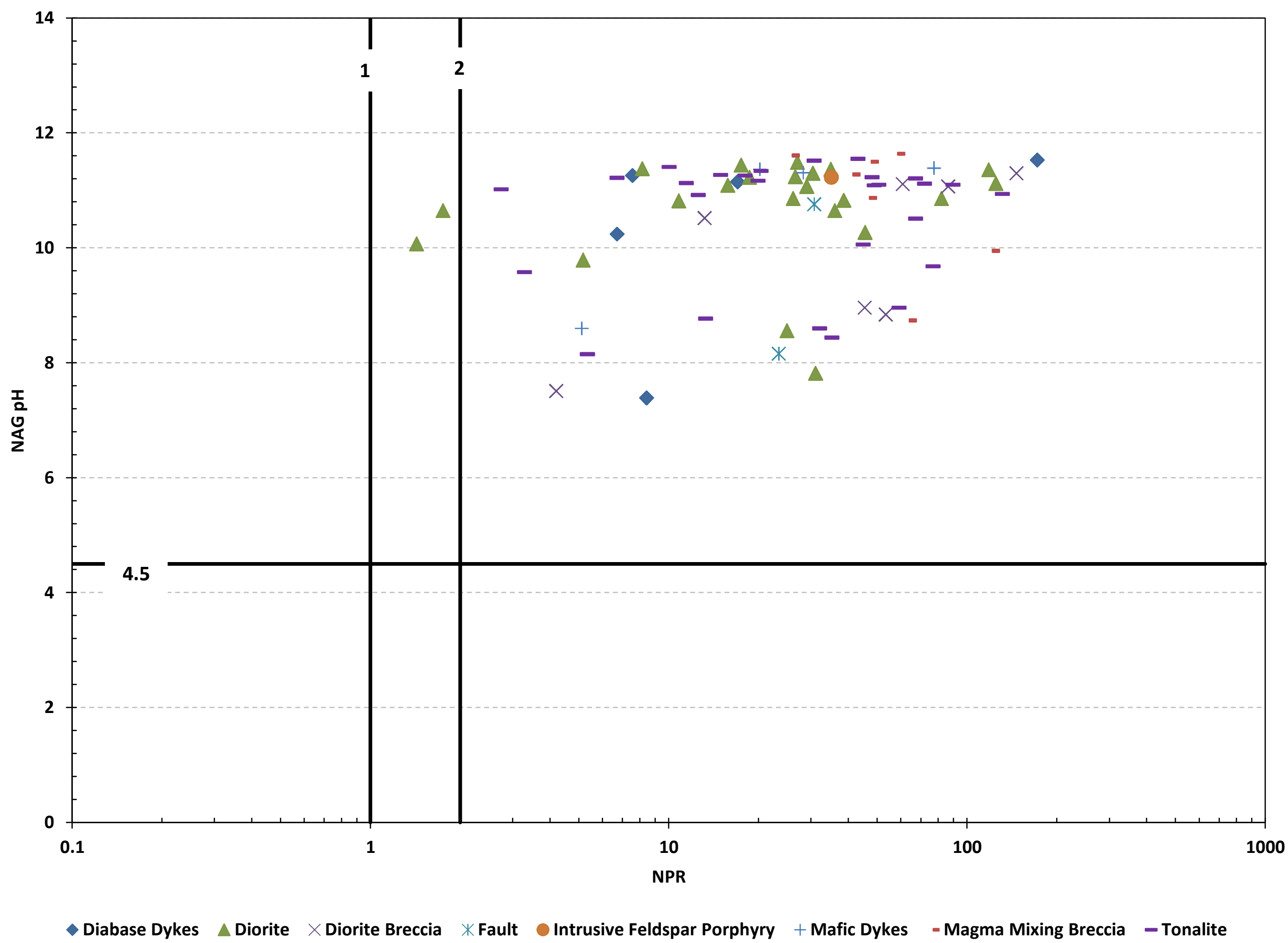
* Carbonate NP determined from measured total carbon content

IAMGOLD	amec
Côté Gold Project	
Mine Rock Maximum Potential Acidity vs Carbonate Neutralization Potential from Leco (Breccia)	
Drawn by: KS / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-17



* Carbonate NP determined from measured total carbon content

IAMGOLD	amec
Côté Gold Project	
Mine Rock Maximum Potential Acidity vs Carbonate Neutralization Potential from Leco (Other)	
Drawn by: KS Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-18

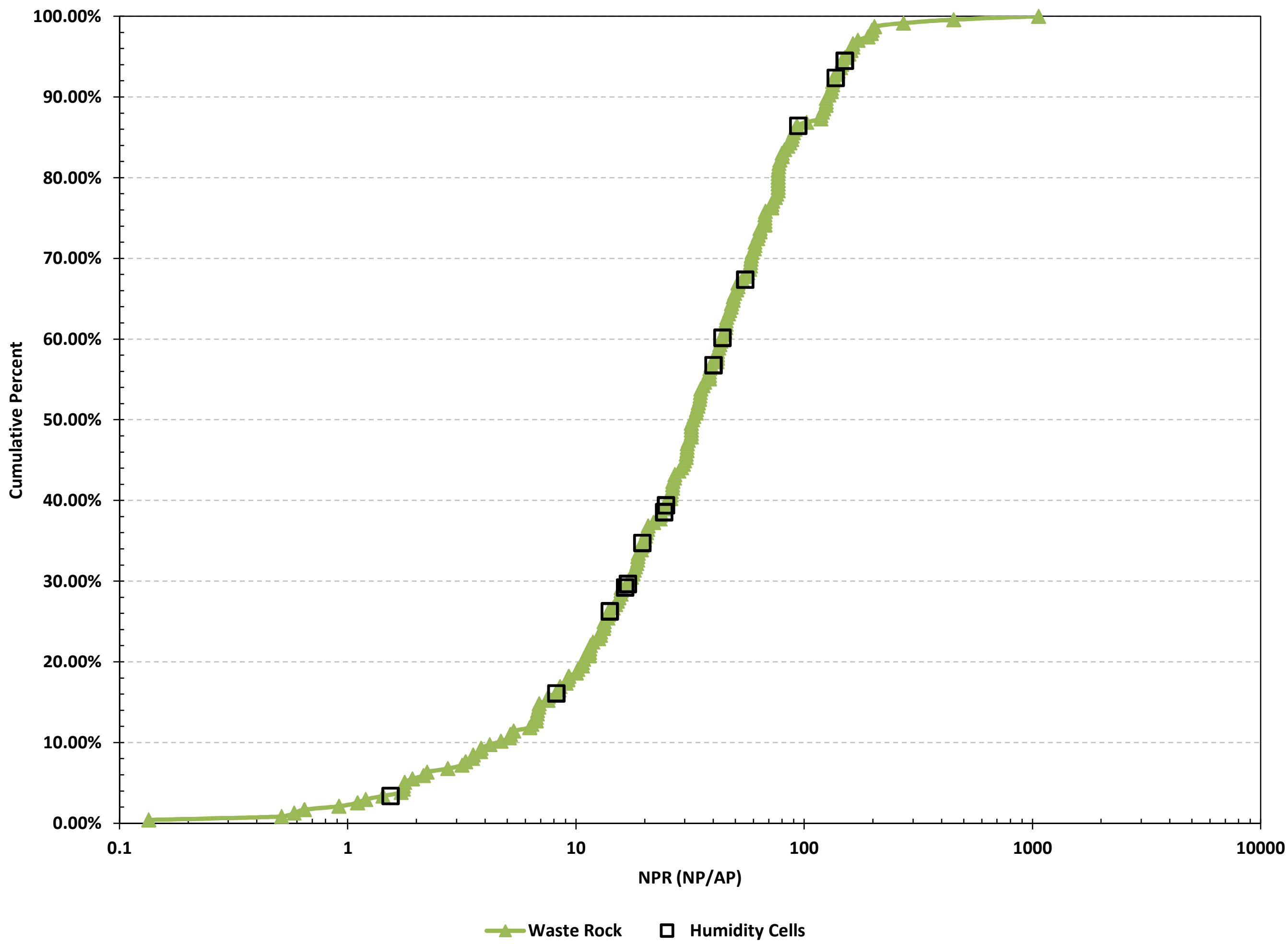


IAMGOLD amec

Côté Gold Project

Mine Rock
NPR vs NAGpH

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-19

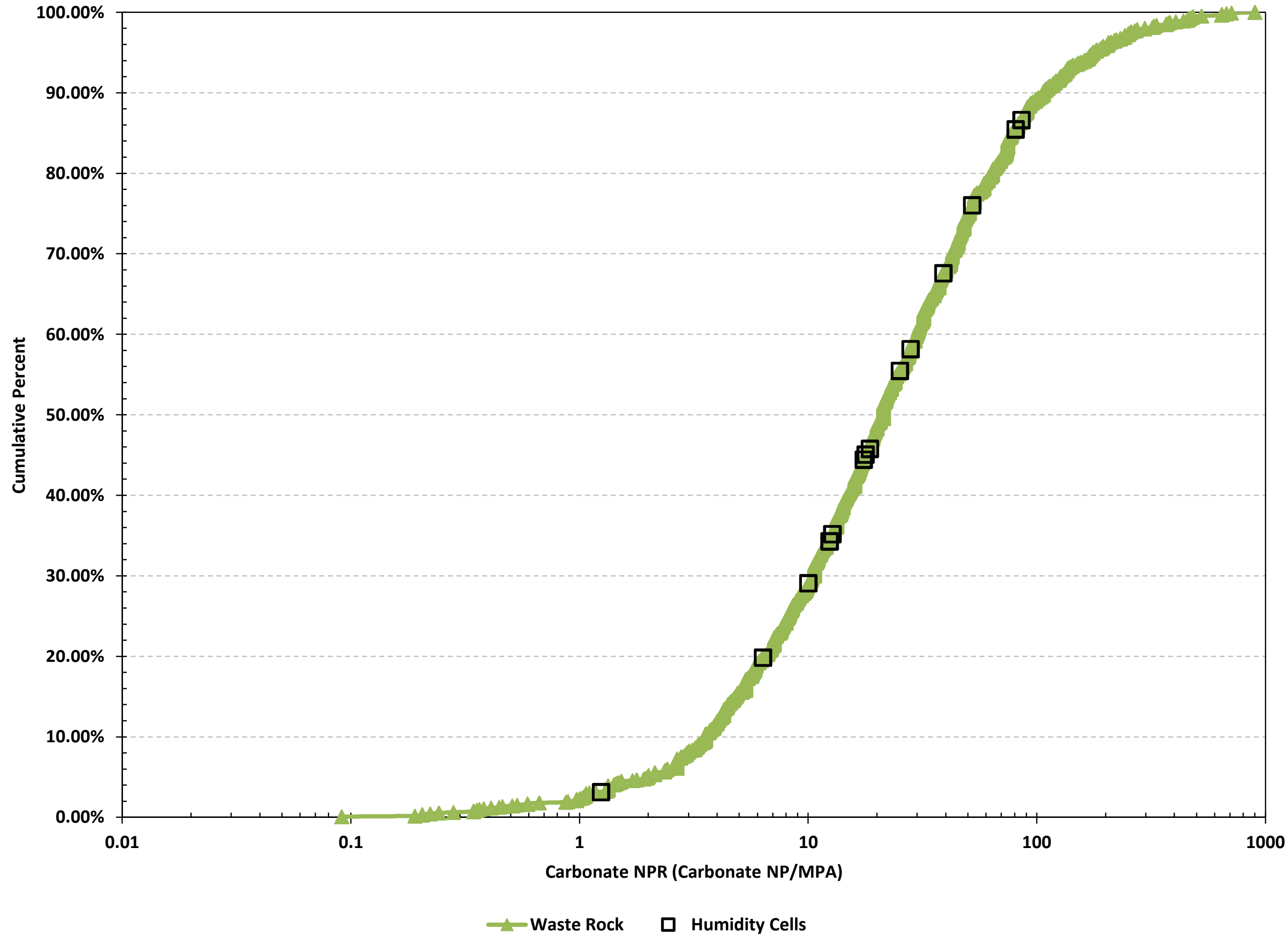


IAMGOLD amec

Côté Gold Project

Cumulative NPR

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-20

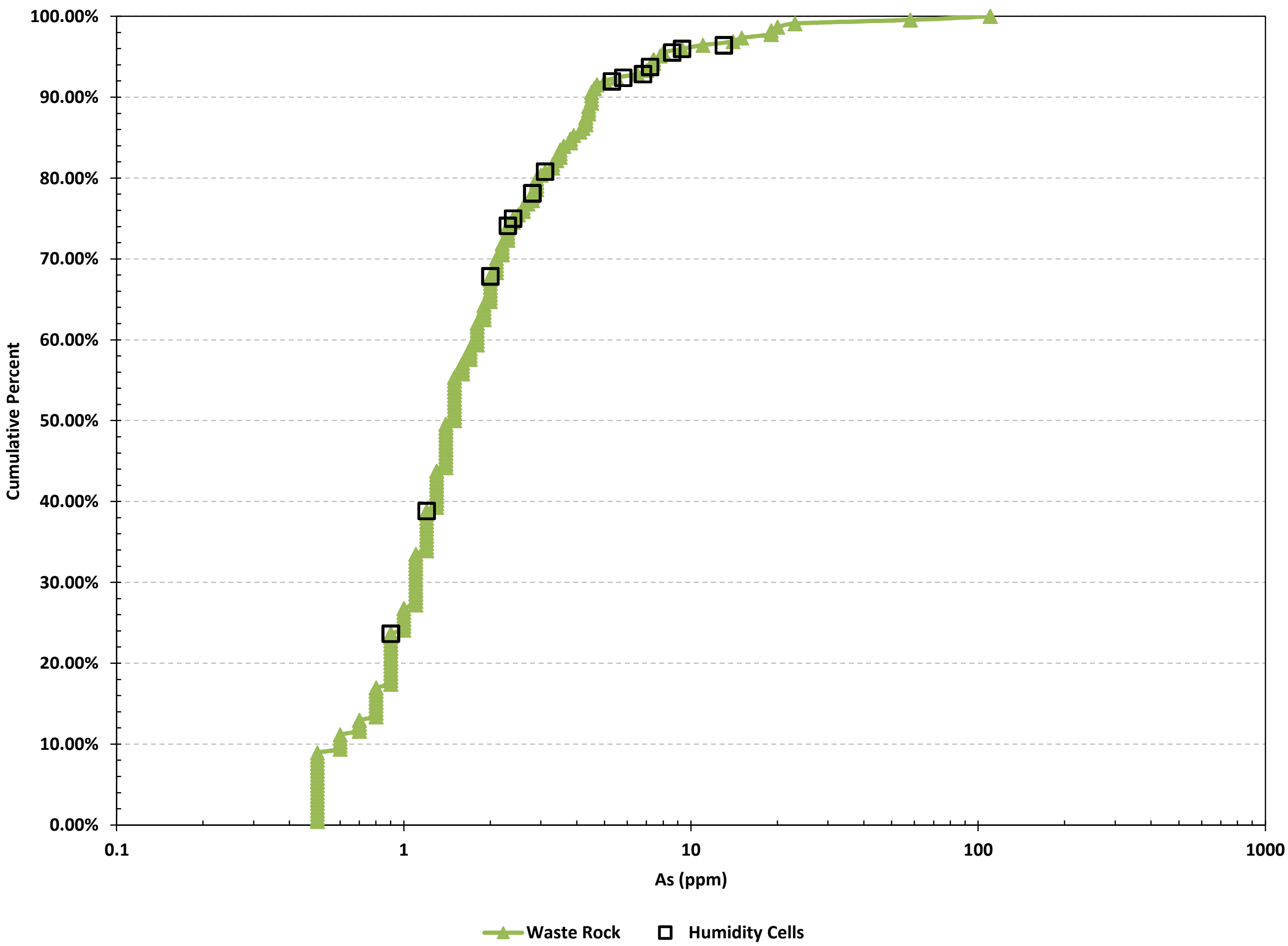


IAMGOLD amec

Côté Gold Project

Cumulative Carbonate NPRMPA

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-21



IAMGOLD amec

Côté Gold Project

Cumulative Arsenic Concentration

Drawn by: LC	Checked by: SW	Date: December 2013
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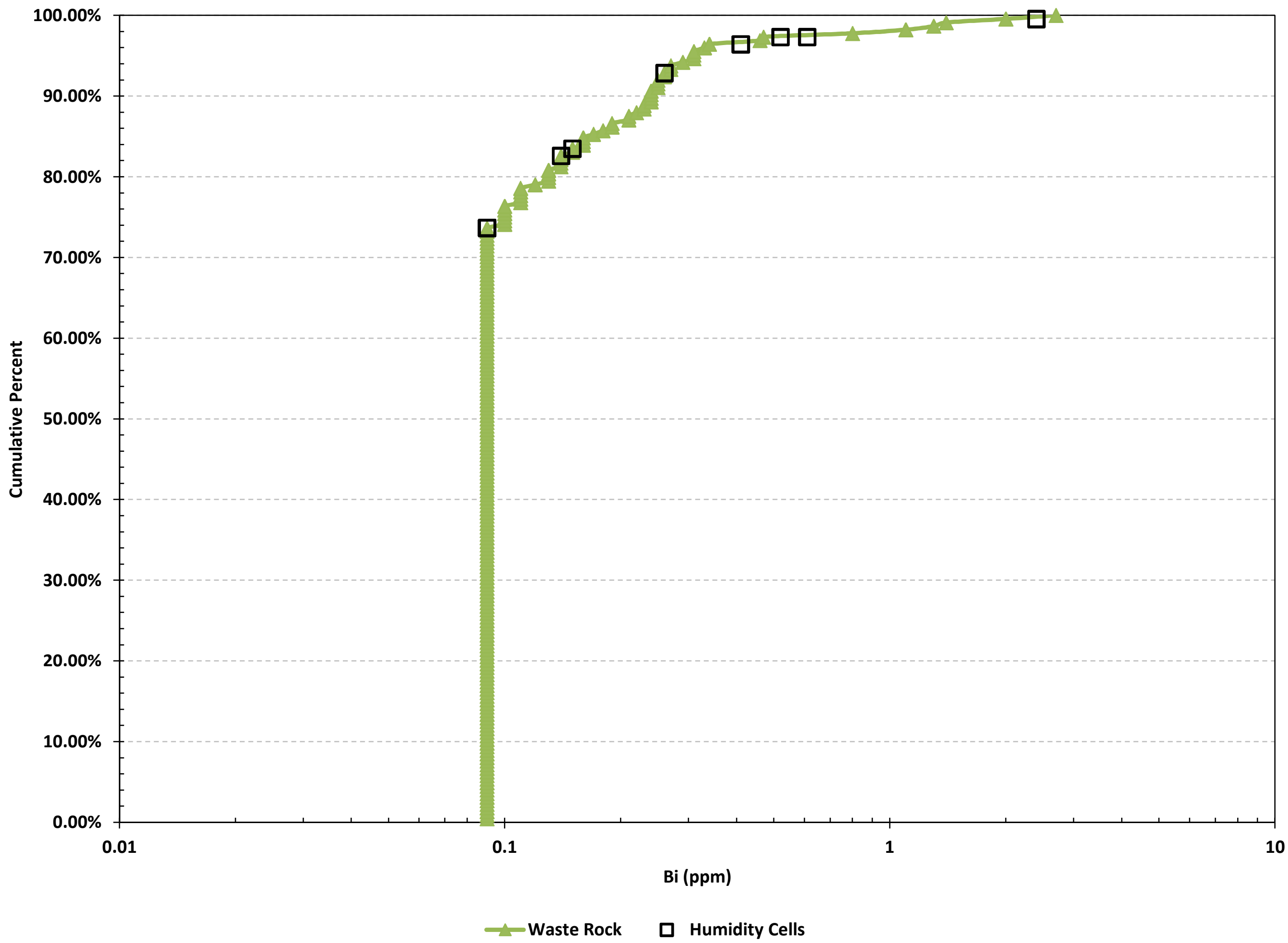
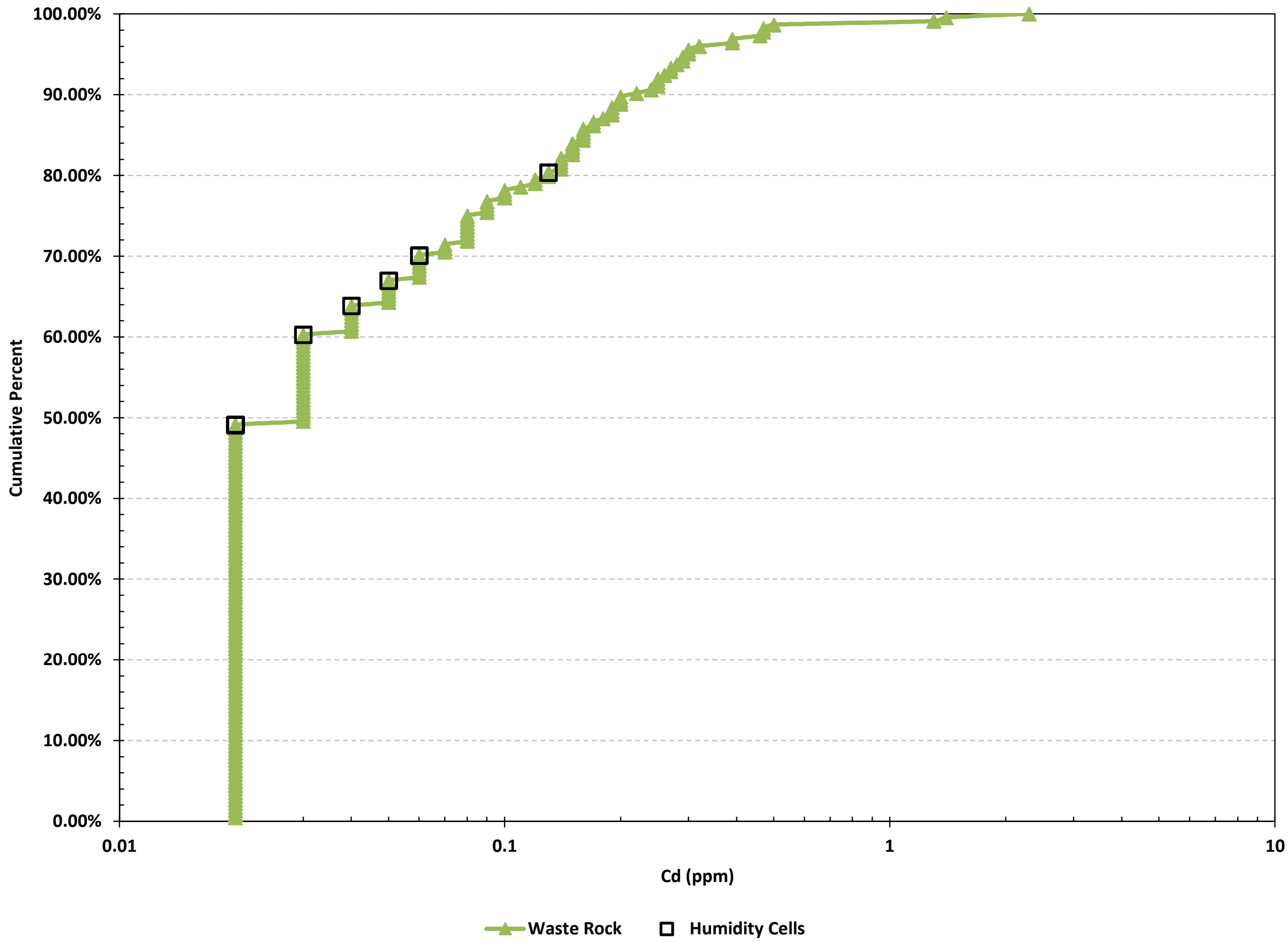


IAMGOLD amec

Côté Gold Project

Cumulative Bismuth Concentration

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-23

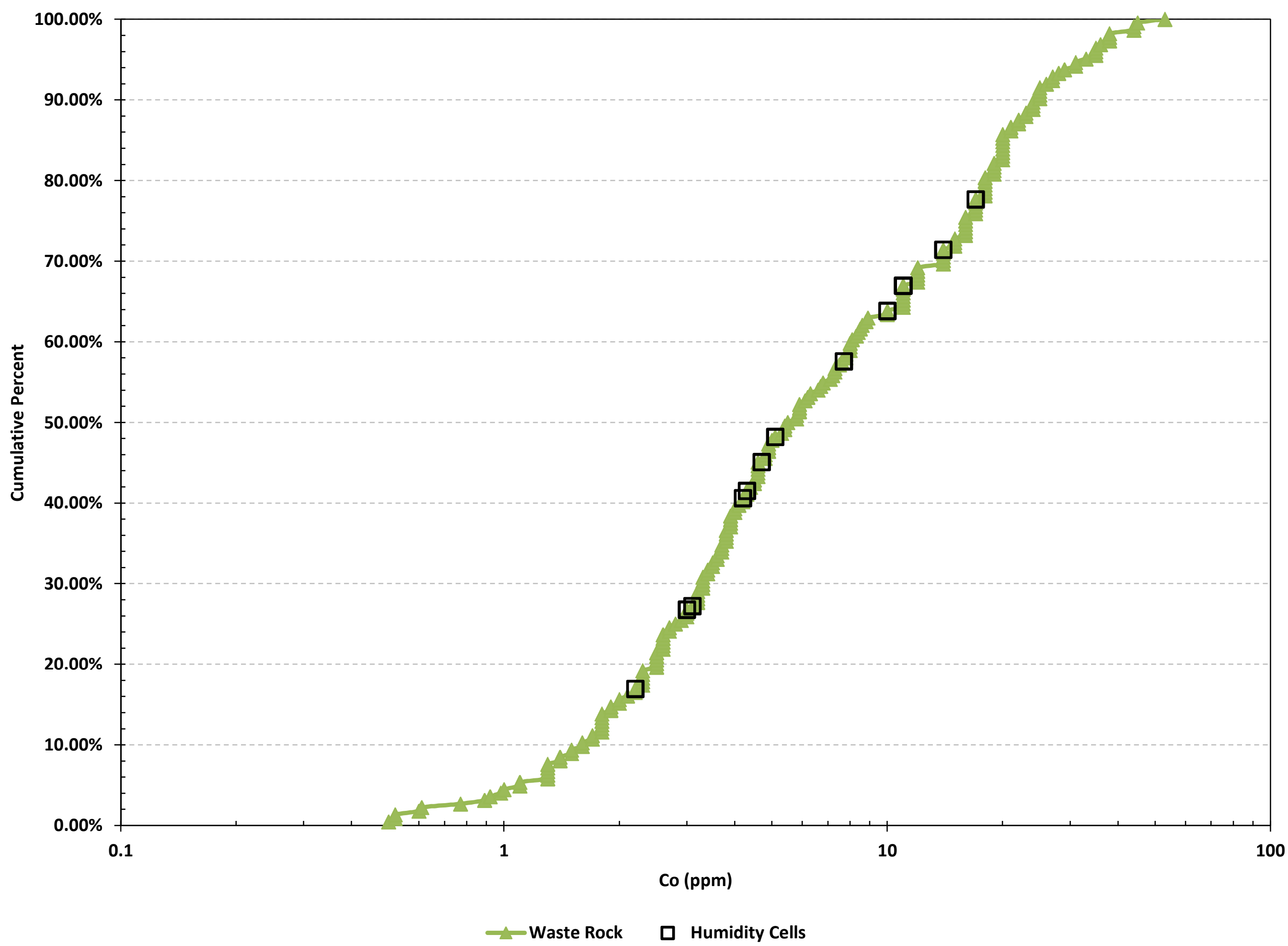


IAMGOLD amec

Côté Gold Project

Cumulative Cadmium Concentration

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-24

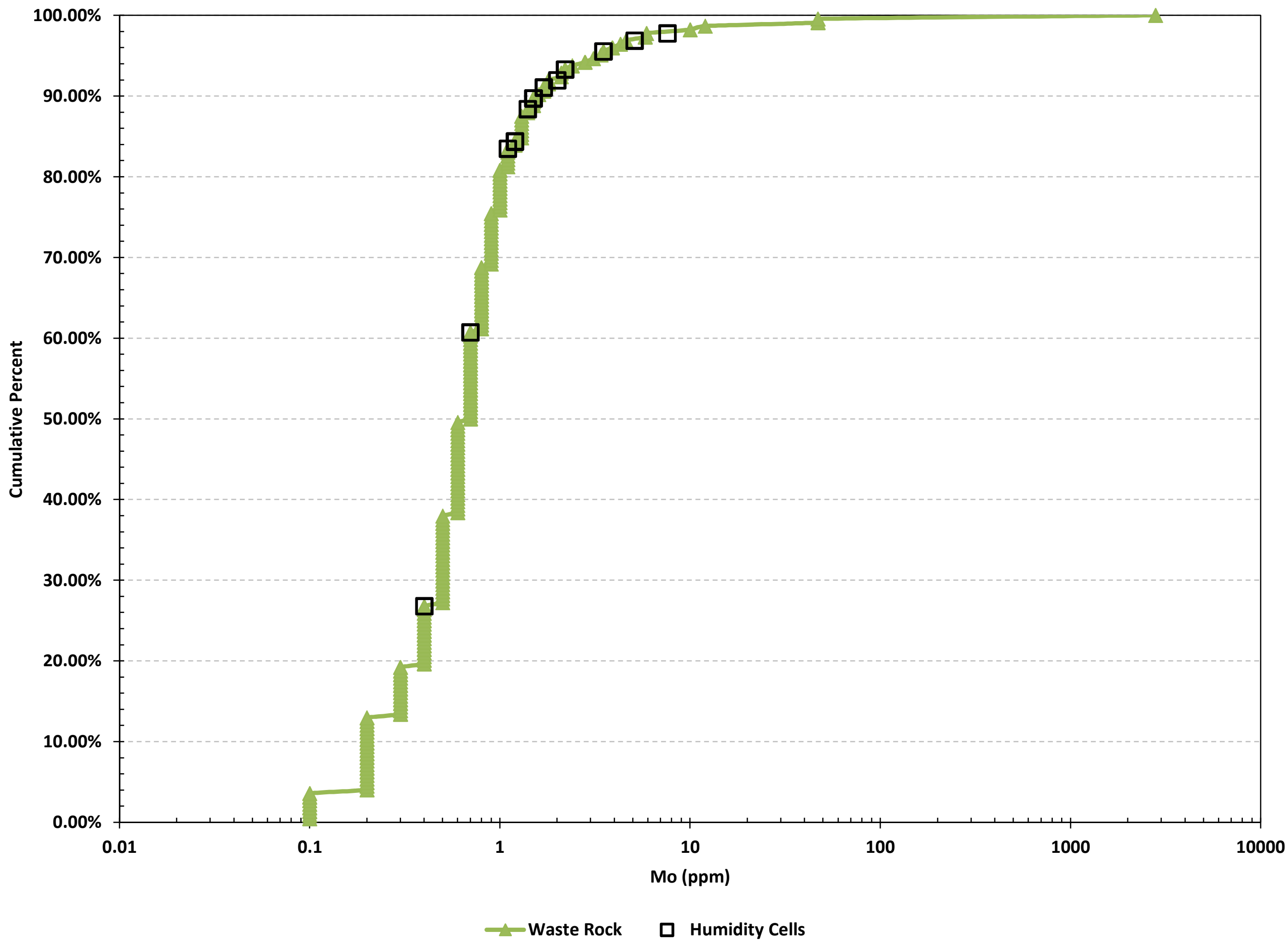


IAMGOLD amec

Côté Gold Project

Cumulative Cobalt Concentration

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-25

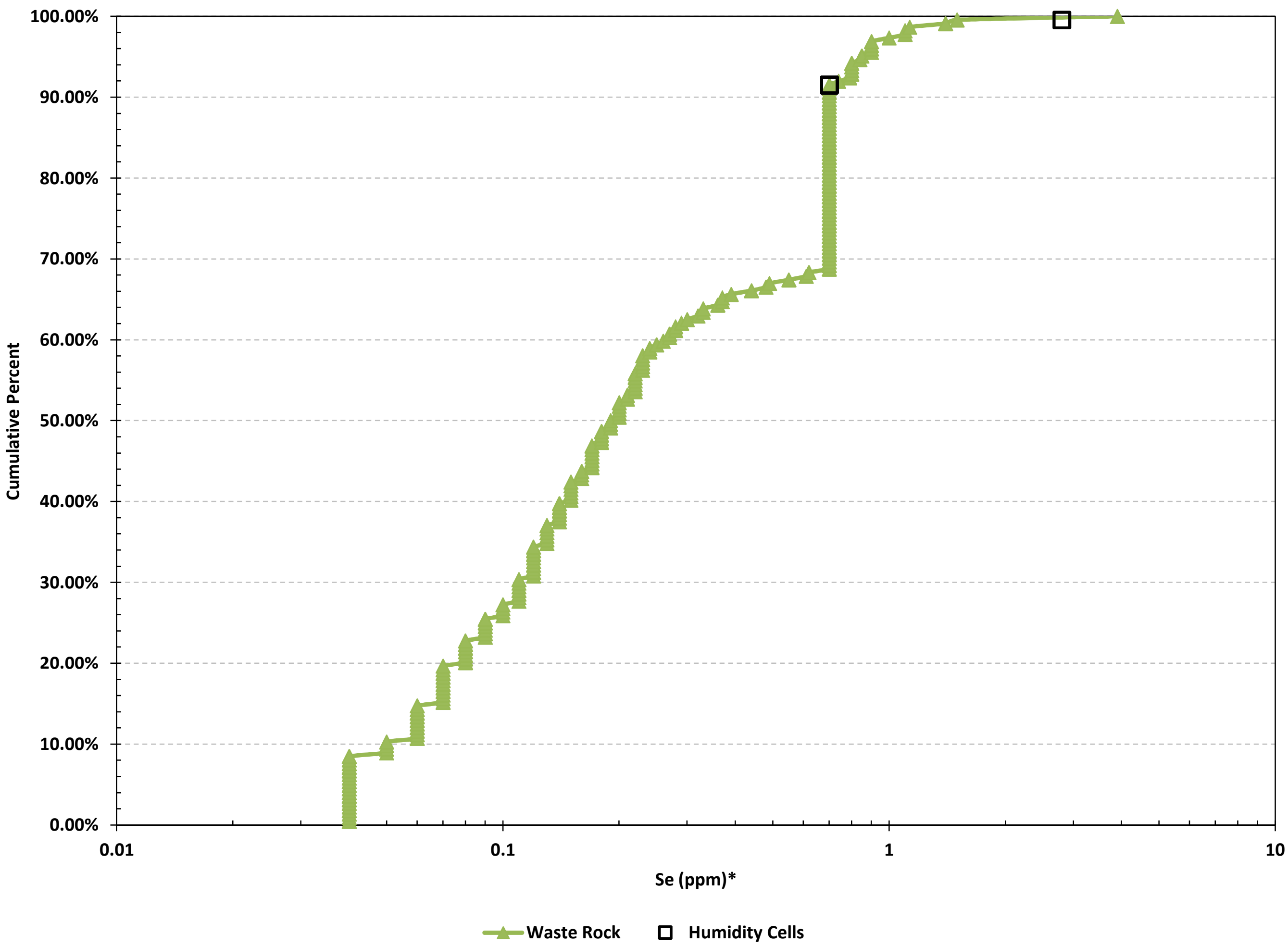


IAMGOLD amec

Côté Gold Project

Cumulative Molybdenum Concentration

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-26



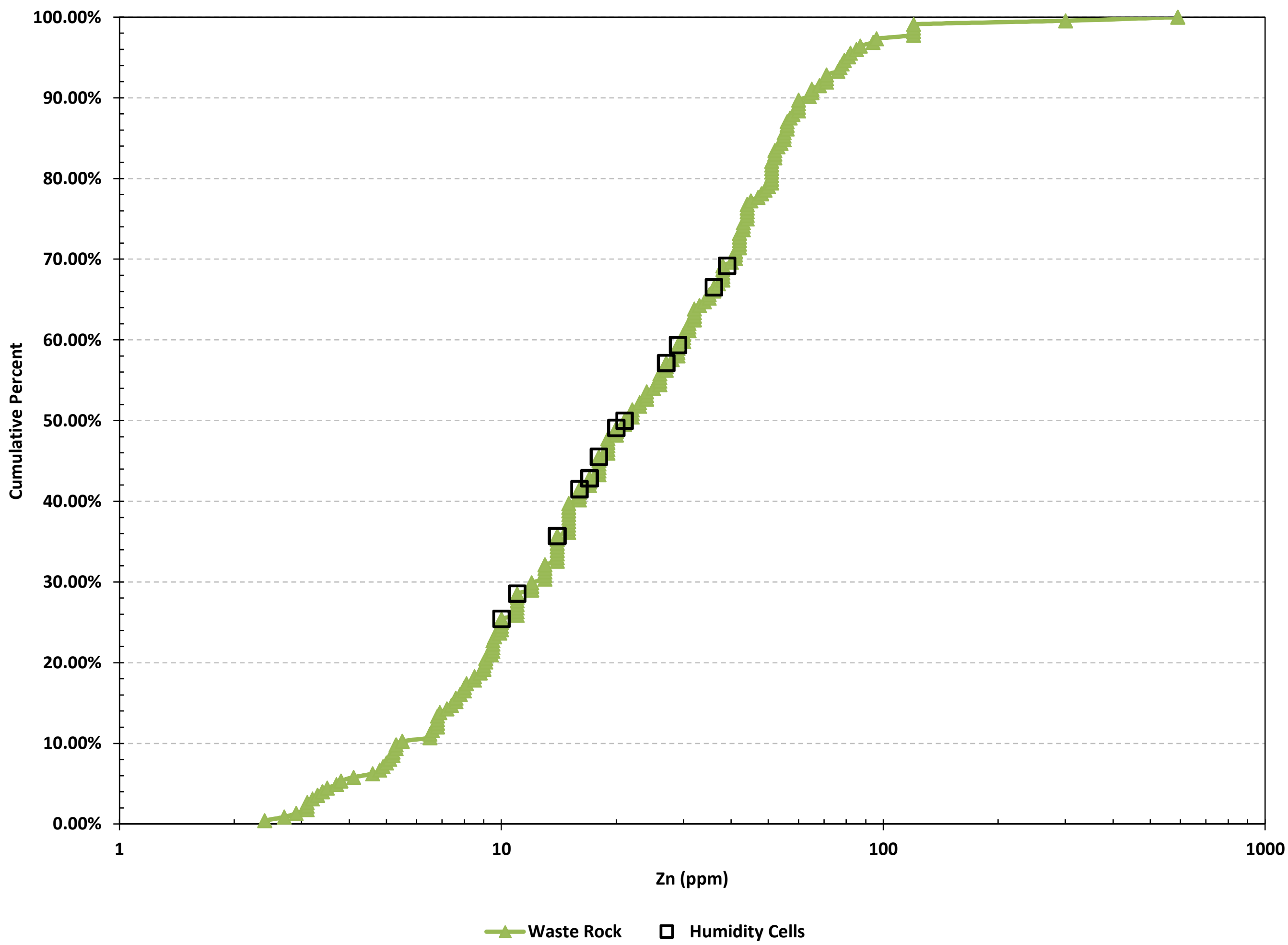
* There are two selenium MDLs (0.04 ppm and 0.7 ppm) present due to the use of two different analytical digestions

IAMGOLD amec

Côté Gold Project

Cumulative Selenium Concentration

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-27

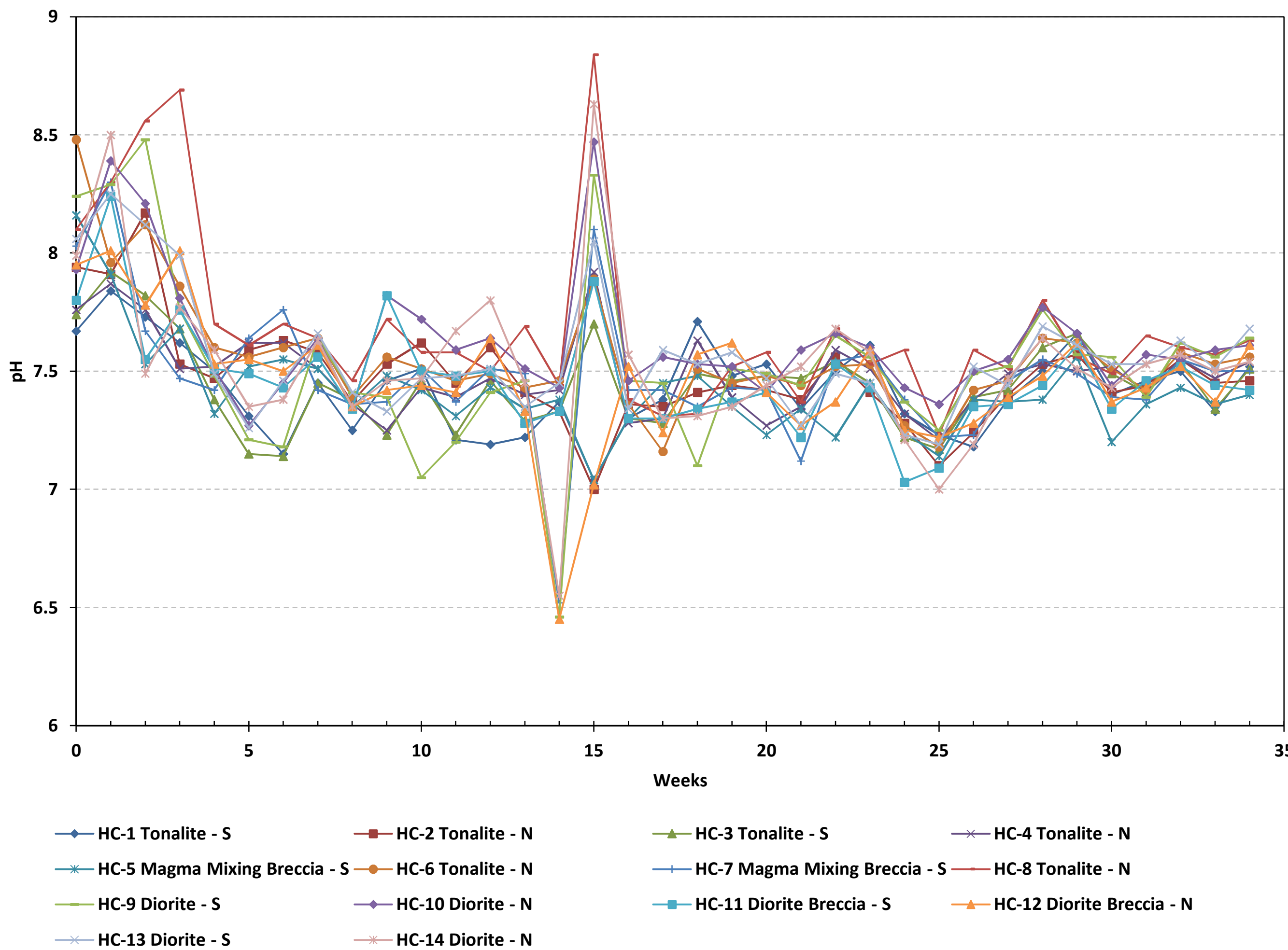


IAMGOLD amec

Côté Gold Project

Cumulative Zinc Concentration

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-28

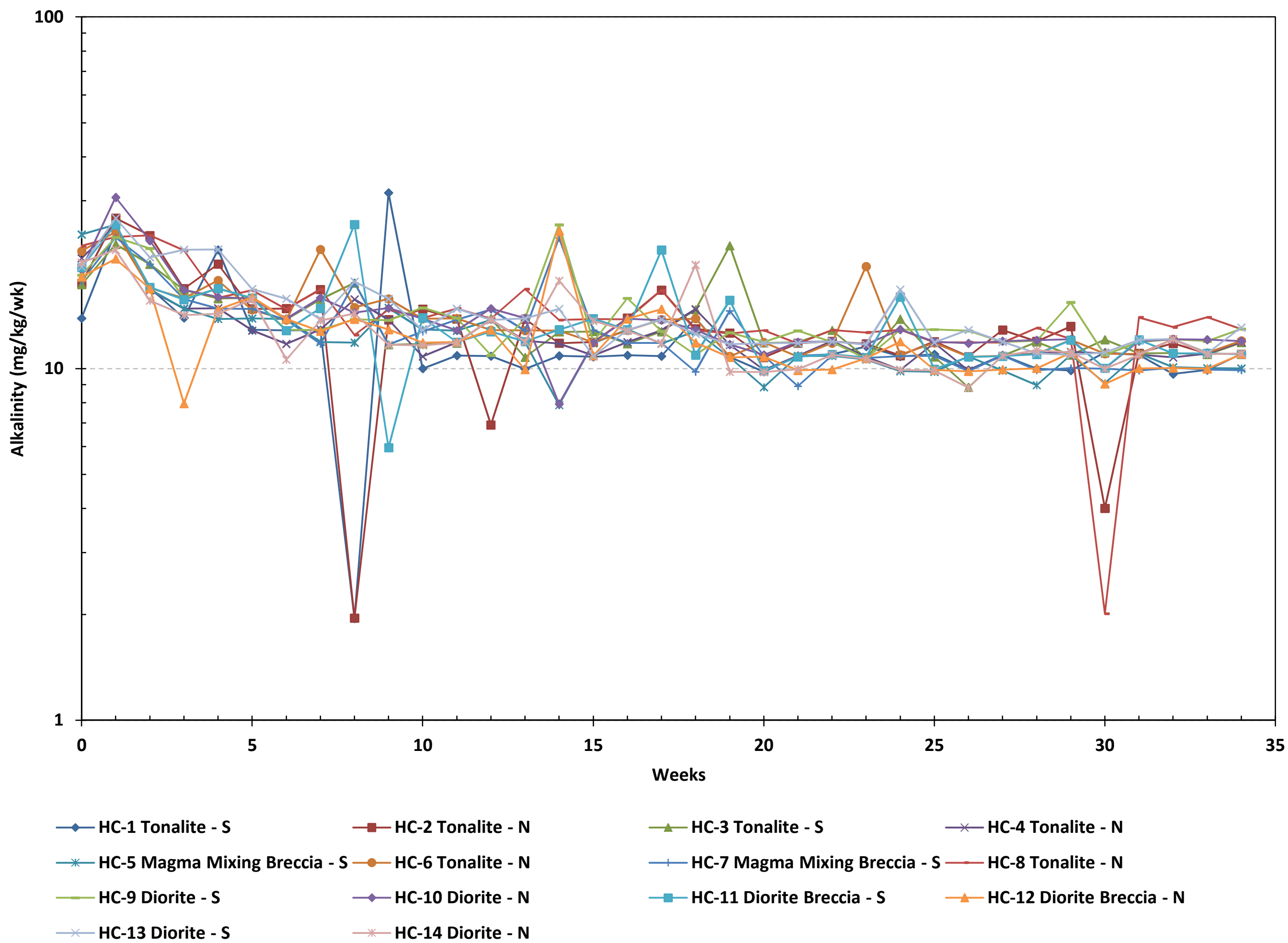


IAMGOLD amec

Côté Gold Project

Humidity Cell pH

Drawn by: LC Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-29

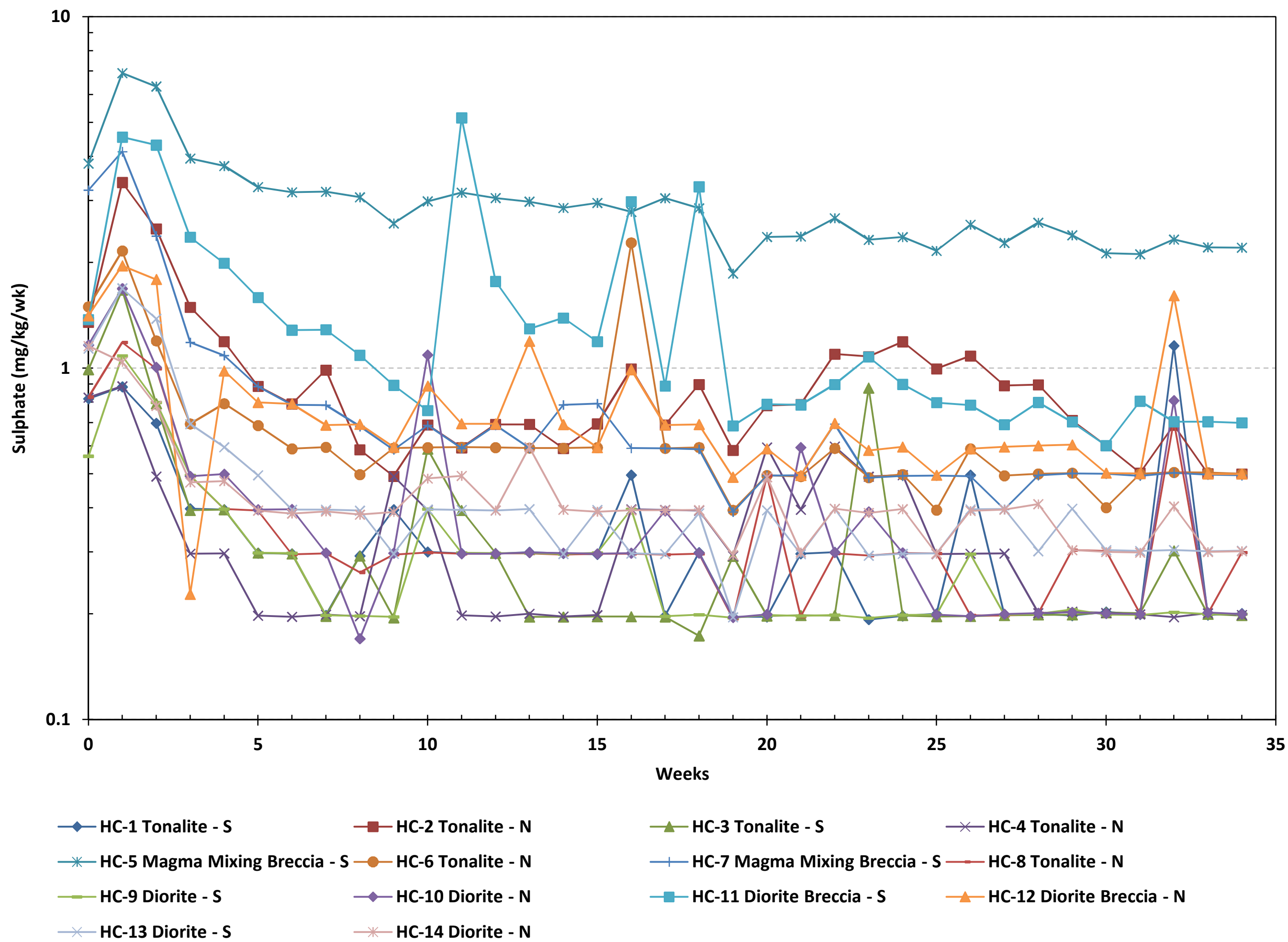


IAMGOLD amec

Côté Gold Project

Humidity Cell Alkalinity Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-30

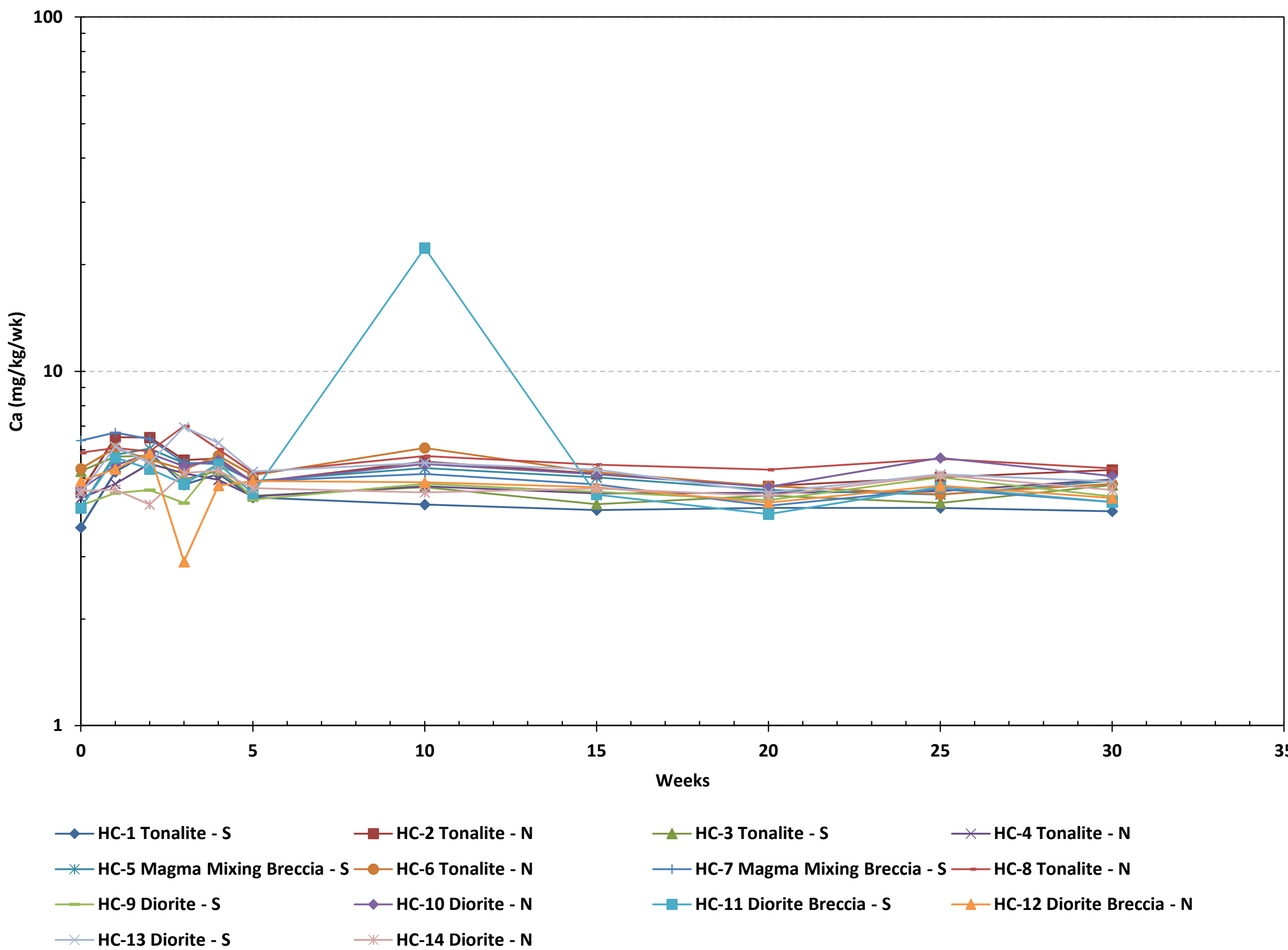


IAMGOLD amec

Côté Gold Project

Humidity Cell Sulphate Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-31

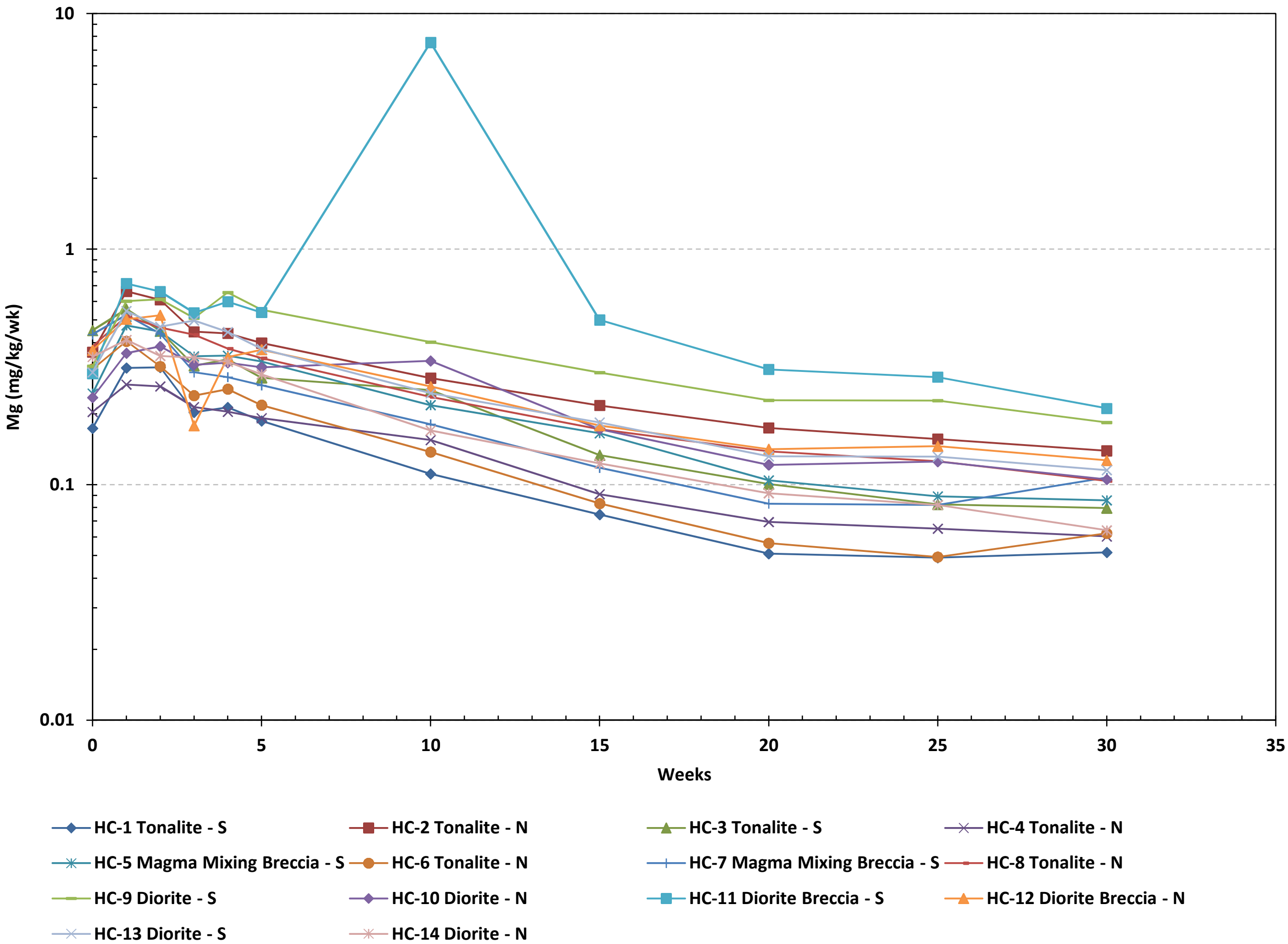


IAMGOLD amec

Côté Gold Project

Humidity Cell Calcium Loading Rates

Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-32

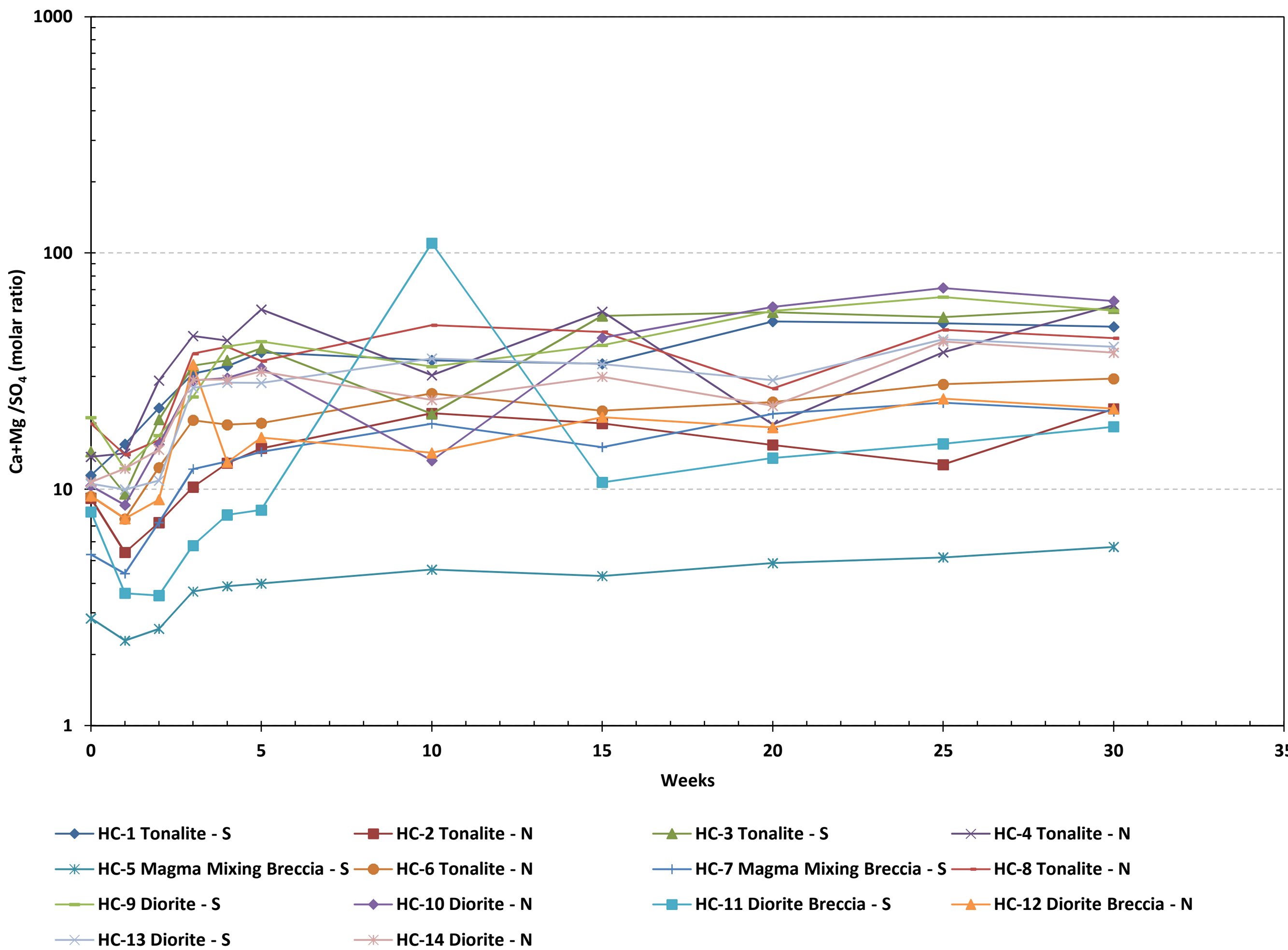


IAMGOLD amec

Côté Gold Project

Humidity Cell Magnesium Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-33

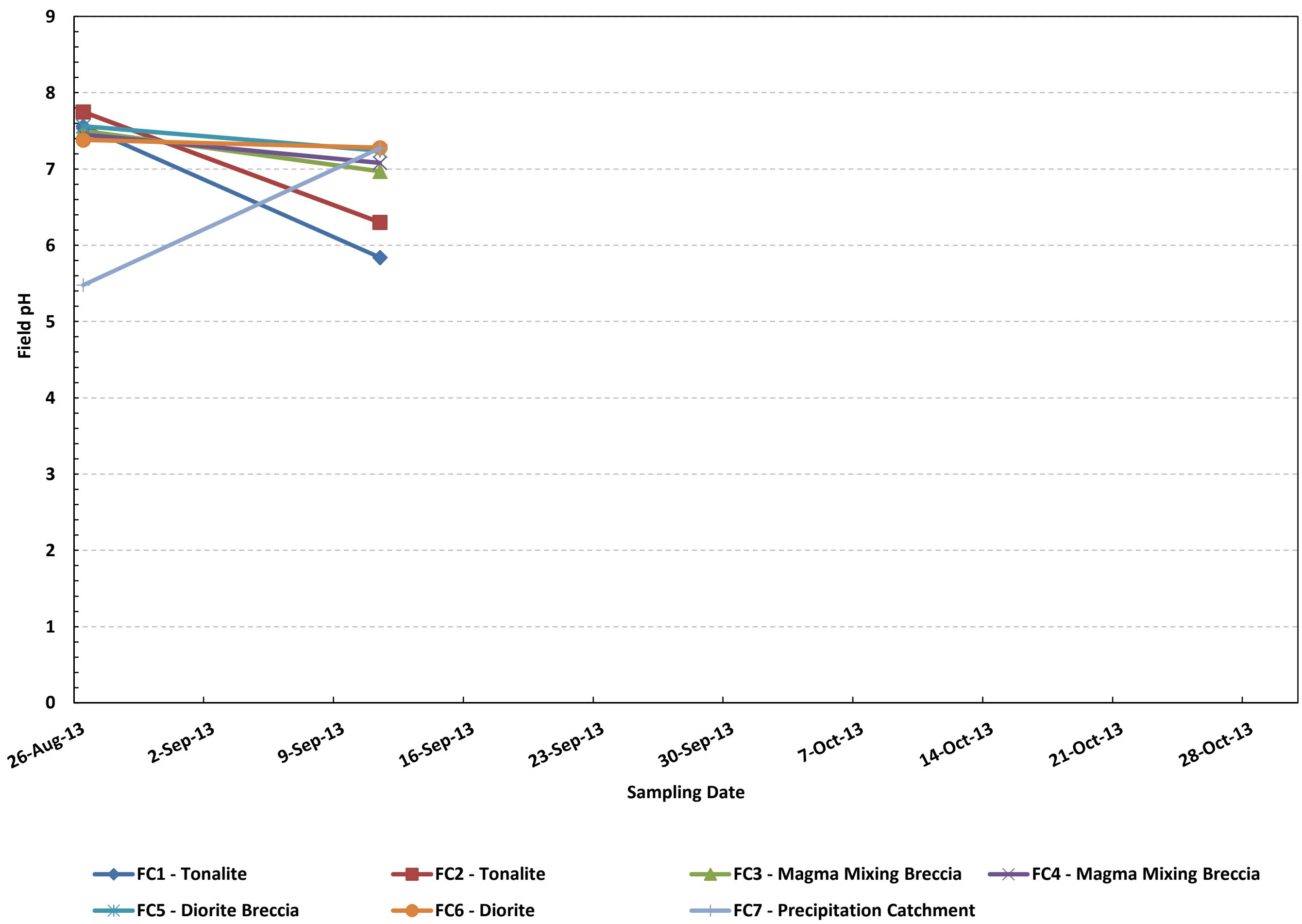


IAMGOLD amec

Côté Gold Project

Humidity Cell (Ca+Mg)/S04

Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC 7-34

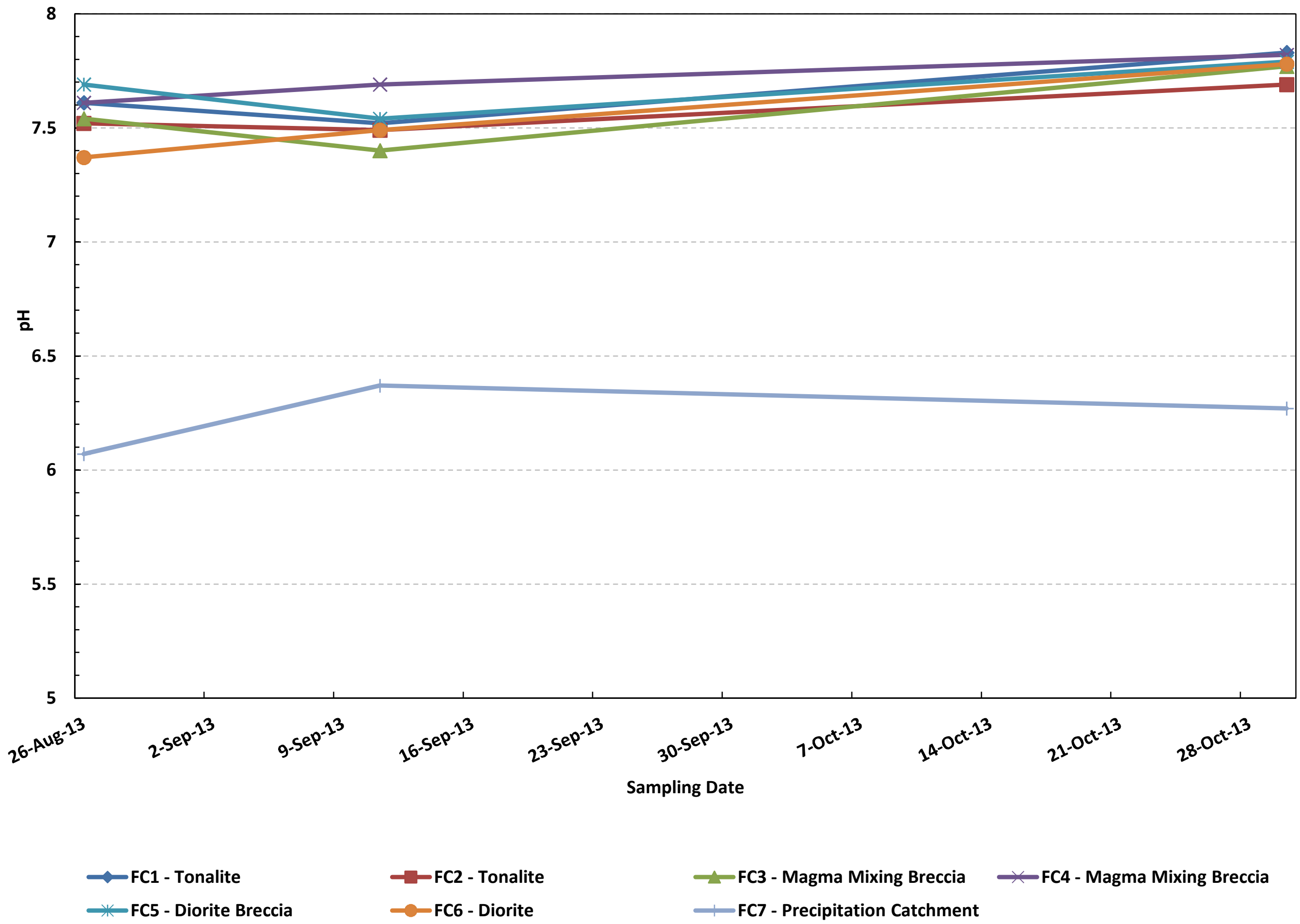


IAMGOLD amec

Côté Gold Project

Field Cell Field pH

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-35

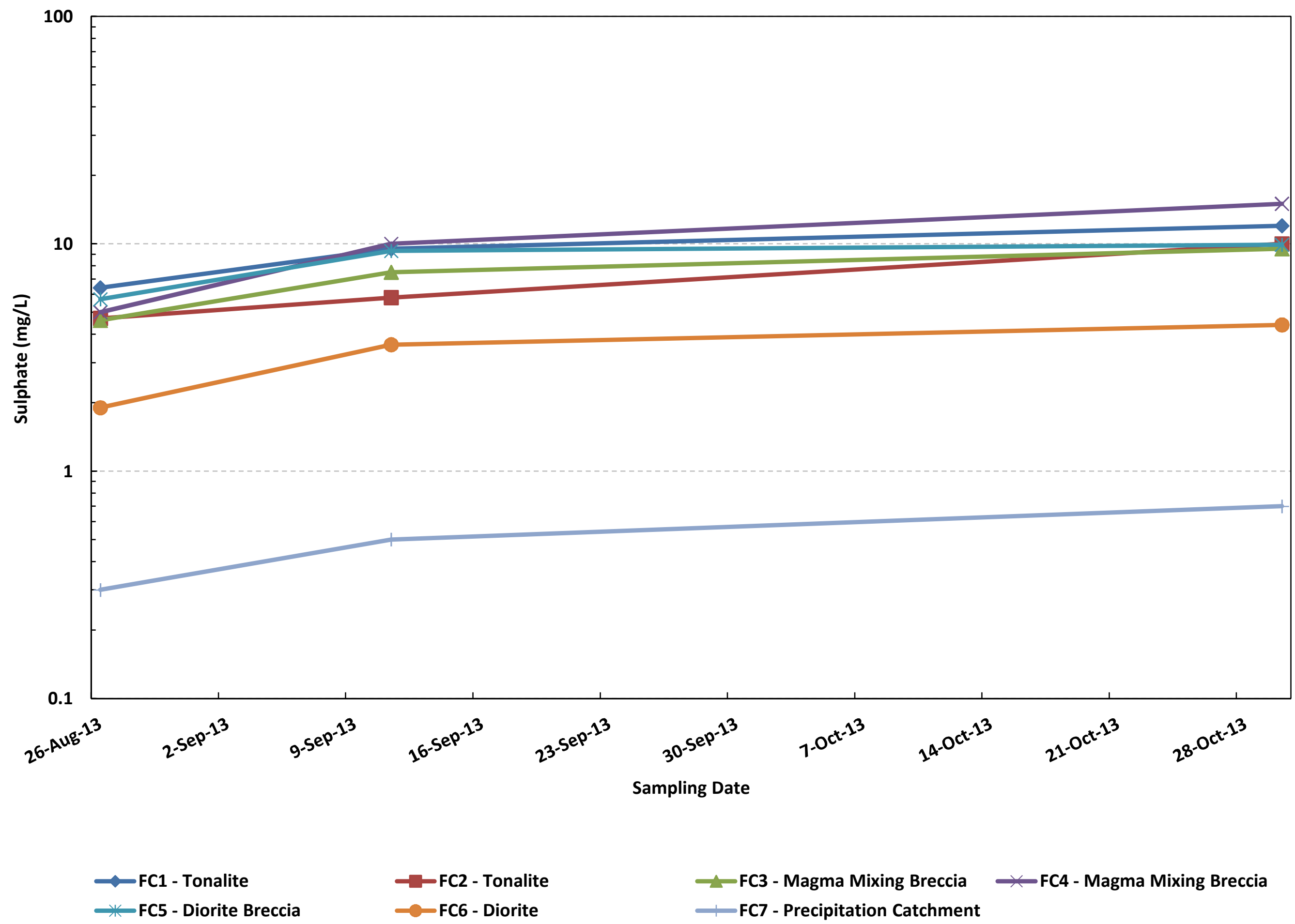


IAMGOLD amec

Côté Gold Project

Field Cell Laboratory pH

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-36

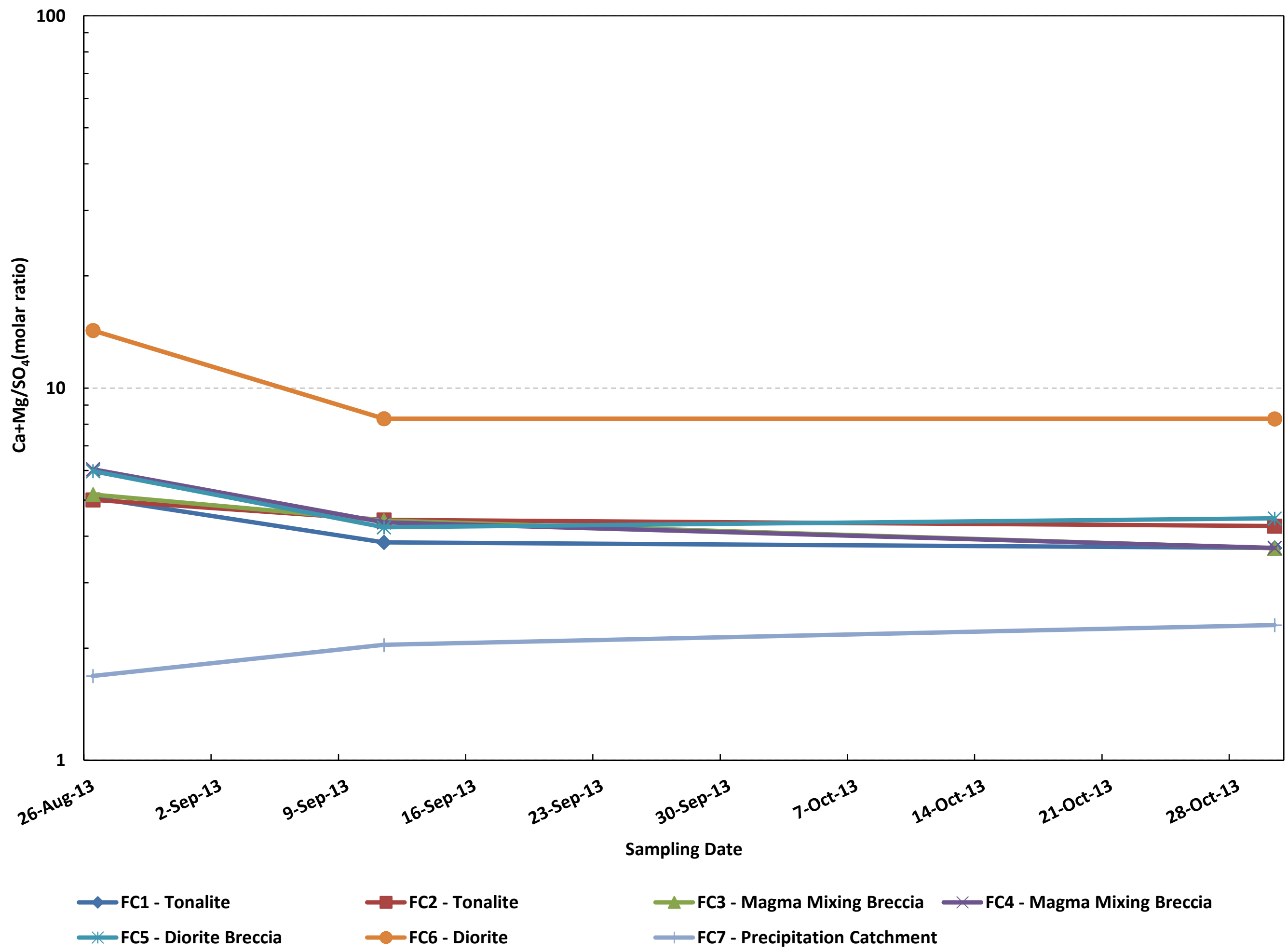


IAMGOLD amec

Côté Gold Project

Field Cell Sulphate Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-37



IAMGOLD amec

Côté Gold Project

Field Cell (Ca+Mg)/S04

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 7-38

8.0 TAILINGS RESULTS

This section describes and discusses the currently available results for the tailings characterization testing. Detailed results for available tailings sample material can be found in Appendix A.

Overall results include:

- concentrations of total sulphur were generally low (<0.3%) predominantly occuring as sulphide;
- the maximum measured sulphide content was 1.9%;
- modified Sobek NP and Carbonate NP values were on the order of <1 to 100 kg $CaCO_3$/tonne);
- NPAG catergorization (based on NPR >2) for most samples (97% based on NPR and 94% based on Carbonate NPR); and
- generally low metal contents for most samples in comparison to average crustal abundances.

A detailed description of results is presented in the following sections.

8.1 Acid Base Accounting

A statistical summary of ABA results for the tailings is provided in Table 8-1. The sulphur content of the tailings residues were generally low and ranged from 0.007% to 1.9%, with a median value of 0.07%. The sulphur content of the tailings residues were generally in the form of sulphide sulphur (see Graphic 8-1). The AP values based on sulphide sulphur content ranged from 0.03 to 53 kg $CaCO_3$/tonne for all tailings residue samples analyzed.

The carbonate content of the tailings residues ranged from 0.045% to 5.3% with a median value of 1.7%. Modified Sobek NP ranged from 3.2 to 100 kg $CaCO_3$/tonne, with a median value of 33 kg $CaCO_3$/tonne. The Carbonate NP ranged from 0.75 to 88 kg $CaCO_3$/tonne, with a median of 29 kg $CaCO_3$/tonne. A strong positive correlation was observed between NP and Carbonate NP, suggesting that NP is dominated by carbonates (see Graphic 8-2). Carbonate NP was higher than NP for two of the 93 samples suggesting the possible presence of iron carbonates in some samples.

For the majority of samples (90 of 93 or 97%) the NPR was greater than two. Similarly 87 of 93 samples (94%) had a Carbonate NPR >2. Of the samples with NPR and Carbonate NPR <2, two and one samples respectively have NPR <1 (see Graphics 8-3 and 8-4).

The NAG test results for 93 tailings composite samples are presented in Graphic 8-5, and detailed results are provided in Appendix A. The NAG pH results for all but two samples were greater than 4.5 indicating the non acid generating nature of the tailings. NAG pH results are generally predictive of acid generating character as determined by NPR (see Graphic 8-5). It is notable that a number of the samples with low Carbonate NPR do not exhibit low NAG pH. This supports the use of NPR rather than the more conservative Carbonate NPR in predicting acid generating character.

8.2 Elemental Content

A statistical summary of the elemental content by rock type is provided in Table 8-2. For screening purposes, elemental content of the mine rock overburden samples were compared to 10 times average continental crust values (Price, 1997). Complete elemental content results are provided in Appendix A.

Generally the samples reported low metals concentrations below the screening values. Several parameters had a few samples with concentrations greater than their respective screening values, including bismuth (26), selenium (14), copper (6), arsenic (2) and molybdenum (1).

Table 8-1: Summary of Acid Base Accounting Results for Tailings Samples

All Samples (n=93)	Paste pH	Total Sulphur	Sulphate	Sulphide***	NP	Carbonate NP*	AP**	NPR	Carbonate NPR
		%			kg $CaCO_3$/tonne				
Min	8.3	0.0070	0.010	0.010	3.2	0.75	0.31	0.094	0.014
Max	9.5	1.9	0.23	1.7	100	88	53	189	195
Median	9.0	0.070	0.020	0.045	33	29	1.4	22	19
Average		0.14	0.032	0.11	36	32	3.4	11	9.4
Standard Deviation	0.2	0.24	0.033	0.21	18	18	6.6	41	39
10th Percentile	8.8	0.019	0.010	0.010	17	12	0.31	4.2	3.8
90th Percentile	9.2	0.31	0.060	0.25	61	51	7.9	109	98

* Carbonate NP calculated from total CO_3^{2-}

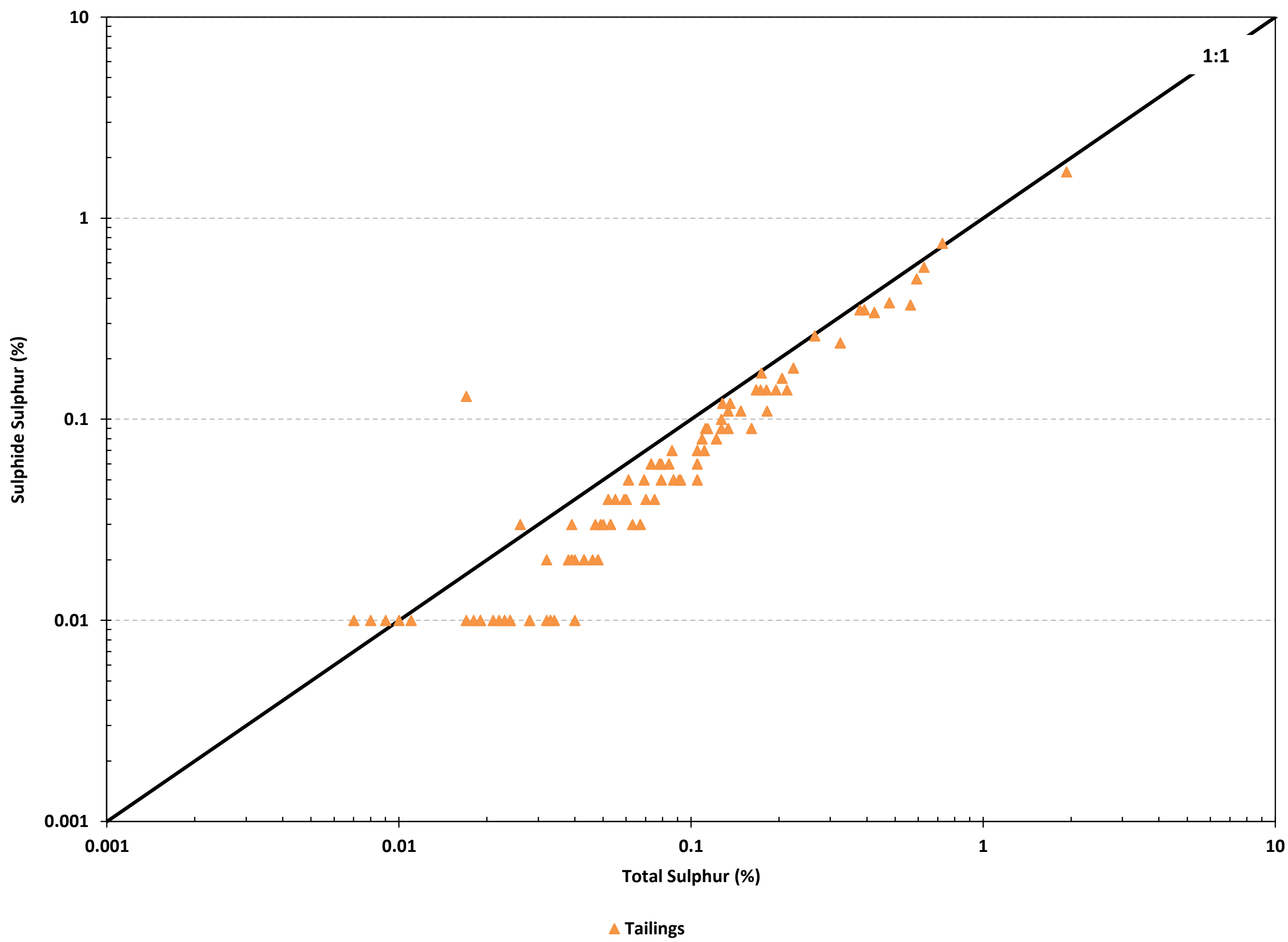
** AP calculated from sulphide sulphur

Table 8-2: Summary of Elemental Content Results for Tailings Samples

	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Average Crustal Abundance*	**82300**	**1.8**	**425**	**3**	**0.025**	**41500**	**0.15**	**25**	**102**	**60**	**56300**	**20850**	**20**	**23300**	**950**	**1.2**
Ten Times Average Crustal Abundance*	**823000**	**18**	**4250**	**30**	**0.25**	**415000**	**1.5**	**250**	**1020**	**600**	**563000**	**208500**	**200**	**233000**	**9500**	**12**
All Samples (n=93)																
Min	1000	0.50	2.3	0.10	0.090	1000	0.020	3.0	240	24	5100	110	2.0	400	110	1.5
Max	24000	45	130	1.2	7.9	38000	0.39	23	720	1500	51000	6600	29	28000	770	14
Median	5000	2.1	6.4	0.22	0.13	13000	0.030	7.9	450	120	16000	360	6.0	5100	200	2.5
Average	6169	3.5	17	0.28	0.39	13374	0.053	8.7	450	213	17237	976	7.2	6003	226	3.1
Standard Deviation	4281	5.3	23	0.16	0.91	6405	0.066	4.1	95	276	8328	1353	5.1	4899	111	2.0
10th Percentile	2220	1.0	3.7	0.15	0.090	6720	0.020	4.6	330	48	8700	192	2.0	1520	130	1.9
90th Percentile	10800	6.0	47	0.46	0.93	20000	0.10	14	570	456	26800	2860	12	9940	338	3.9

	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
Unit	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**	**µg/g**
Average Crustal Abundance*	**23550**	**84**	**1050**	**14**	**0.2**	**0.05**	**2.3**	**370**	**5650**	**0.85**	**2.7**	**120**	**33**	**70**	**0.085**
Ten Times Average Crustal Abundance*	**235500**	**840**	**10500**	**140**	**2**	**0.5**	**23**	**3700**	**56500**	**8.5**	**27**	**1200**	**330**	**700**	**0.85**
All Samples (n=93)															
Min	39	98	5	0.61	0.80	0.040	0.50	1.9	5	0.020	0.27	1.0	3.7	4.1	0.050
Max	300	300	880	17	0.80	2.7	2.9	40	1100	0.15	1.9	75	37	76	0.050
Median	130	180	180	2.1	0.80	0.21	0.50	8.8	120	0.020	0.91	12	10	15	0.050
Average	137	185	229	2.8	0.80	0.34	0.78	12	227	0.032	0.92	16	12	19	0.050
Standard Deviation	43	38	201	2.3		0.43	0.44	8.3	260	0.029	0.33	14	7.0	13	
10th Percentile	89	140	36	1.2	0.80	0.092	0.50	4.5	19	0.020	0.47	2.2	5.6	7.5	0.050
90th Percentile	190	230	538	5.0	0.80	0.74	1.3	24	686	0.068	1.4	32	21	36	0.050

*Price 1997



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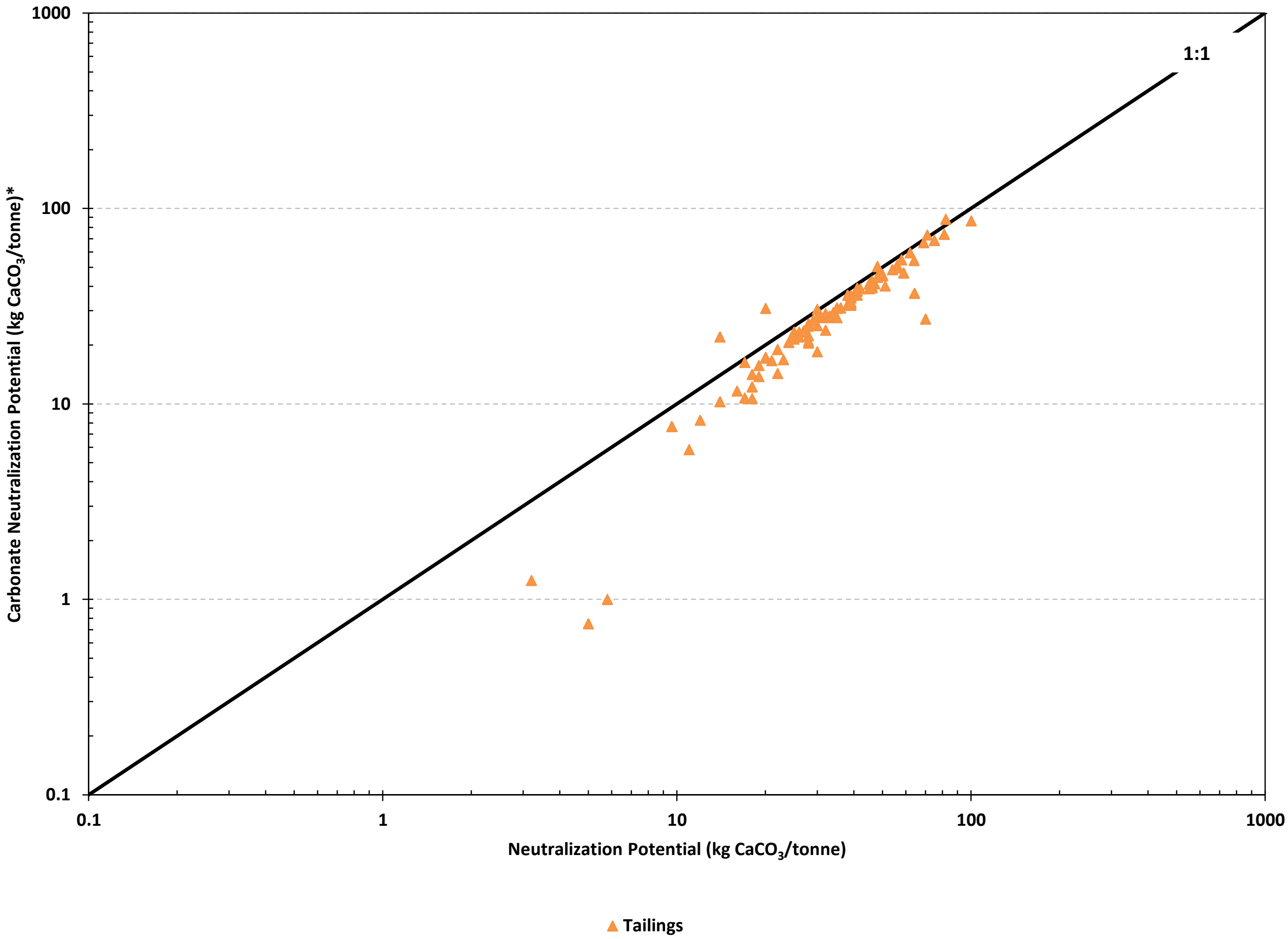
Tailings
Sulphide Sulphur vs Total Sulphur

Drawn by: MLT	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 8-1



* Carbonate NP determined from measured CO_3^{2-} content

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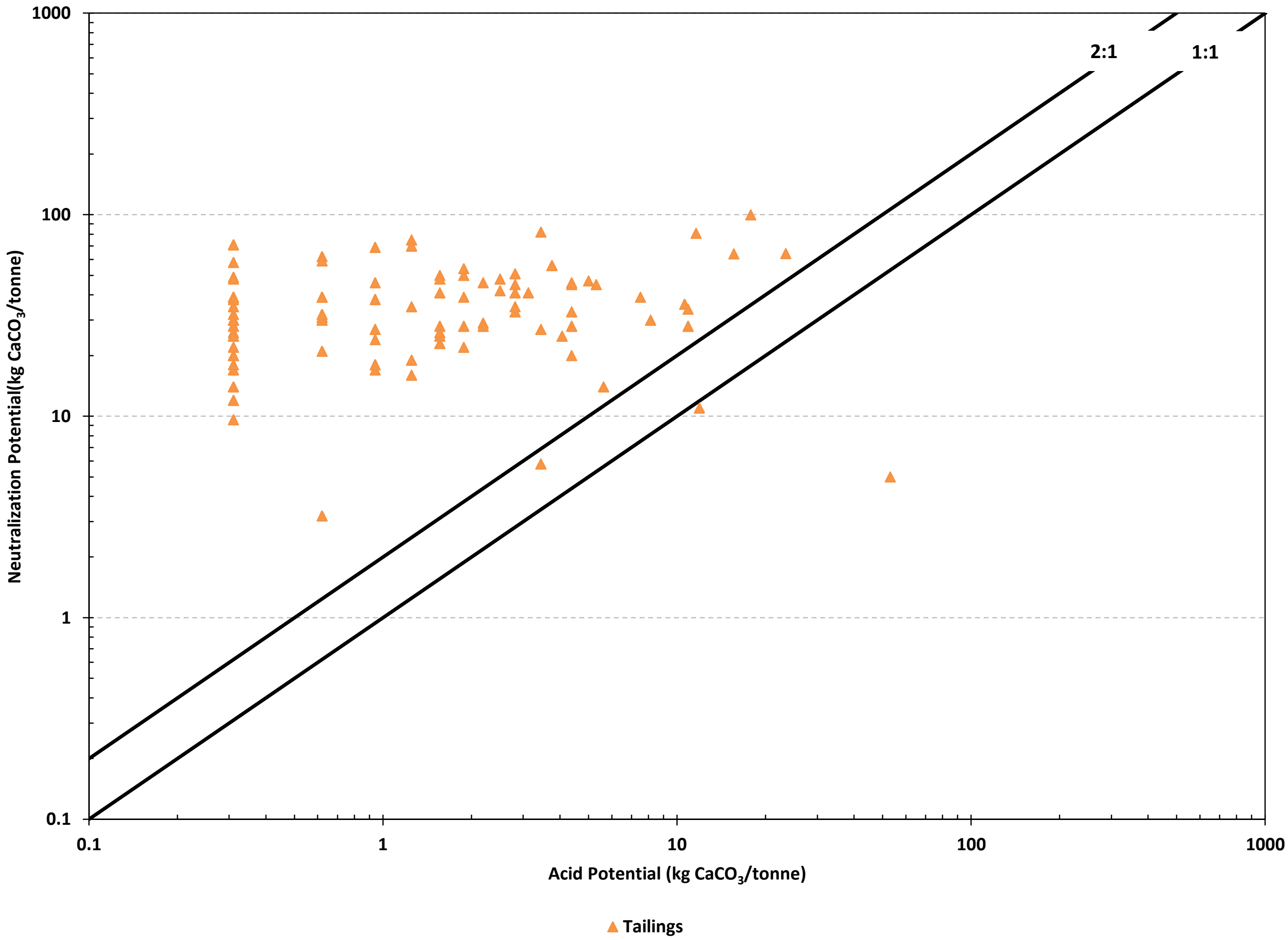
Côté Gold Project			
Tailings Neutralization Potential vs Carbonate Neutralization Potential			
Drawn by: MLT	Checked by: SW	Date: December 2013	
Project: TC121522		GRAPHIC 8-2	



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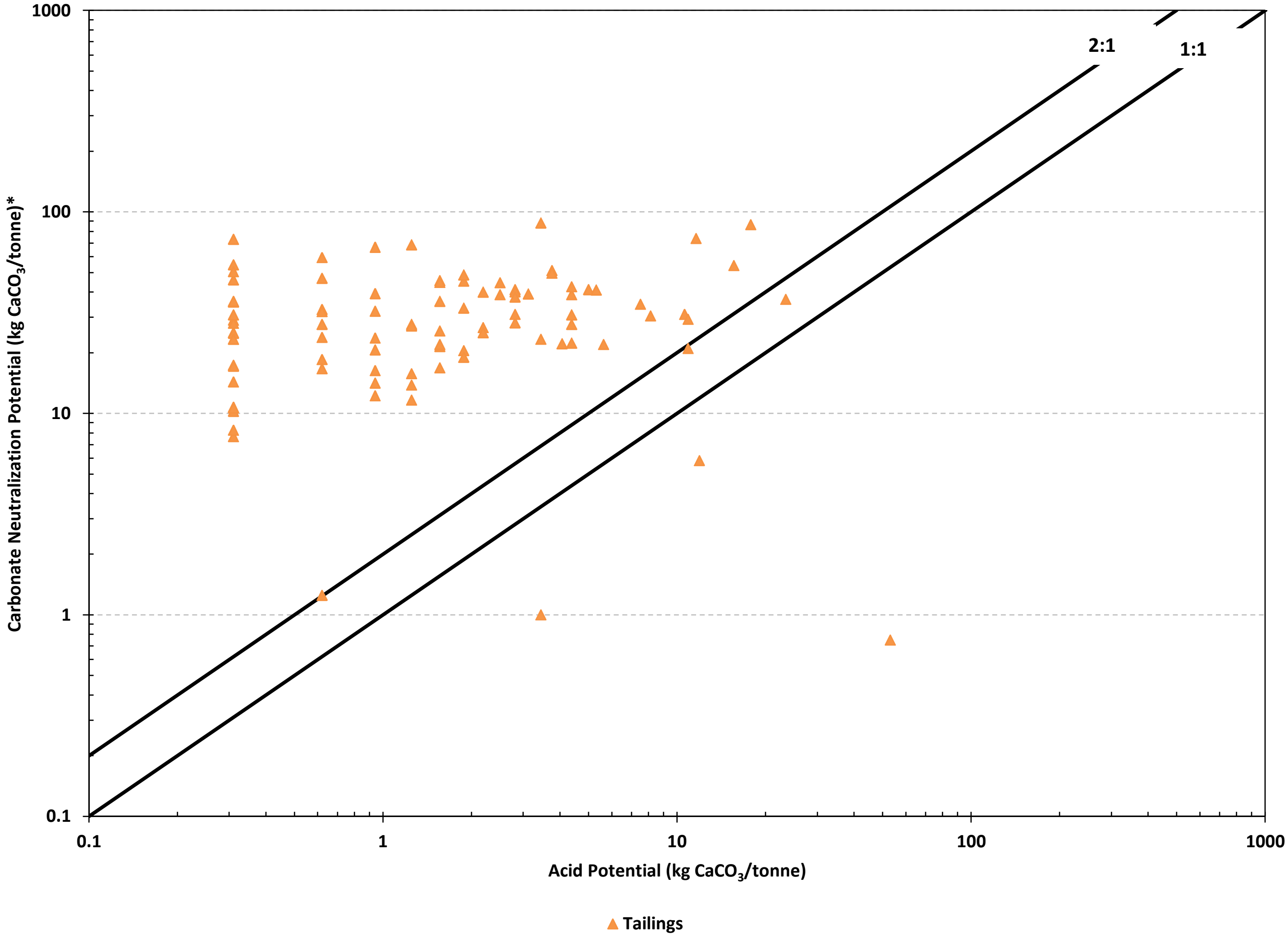
Côté Gold Project

Tailings
Acid Potential vs Neutralization Potential

Drawn by: MLT	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 8-3



* Carbonate NP determined from measured CO_3^{2-} content

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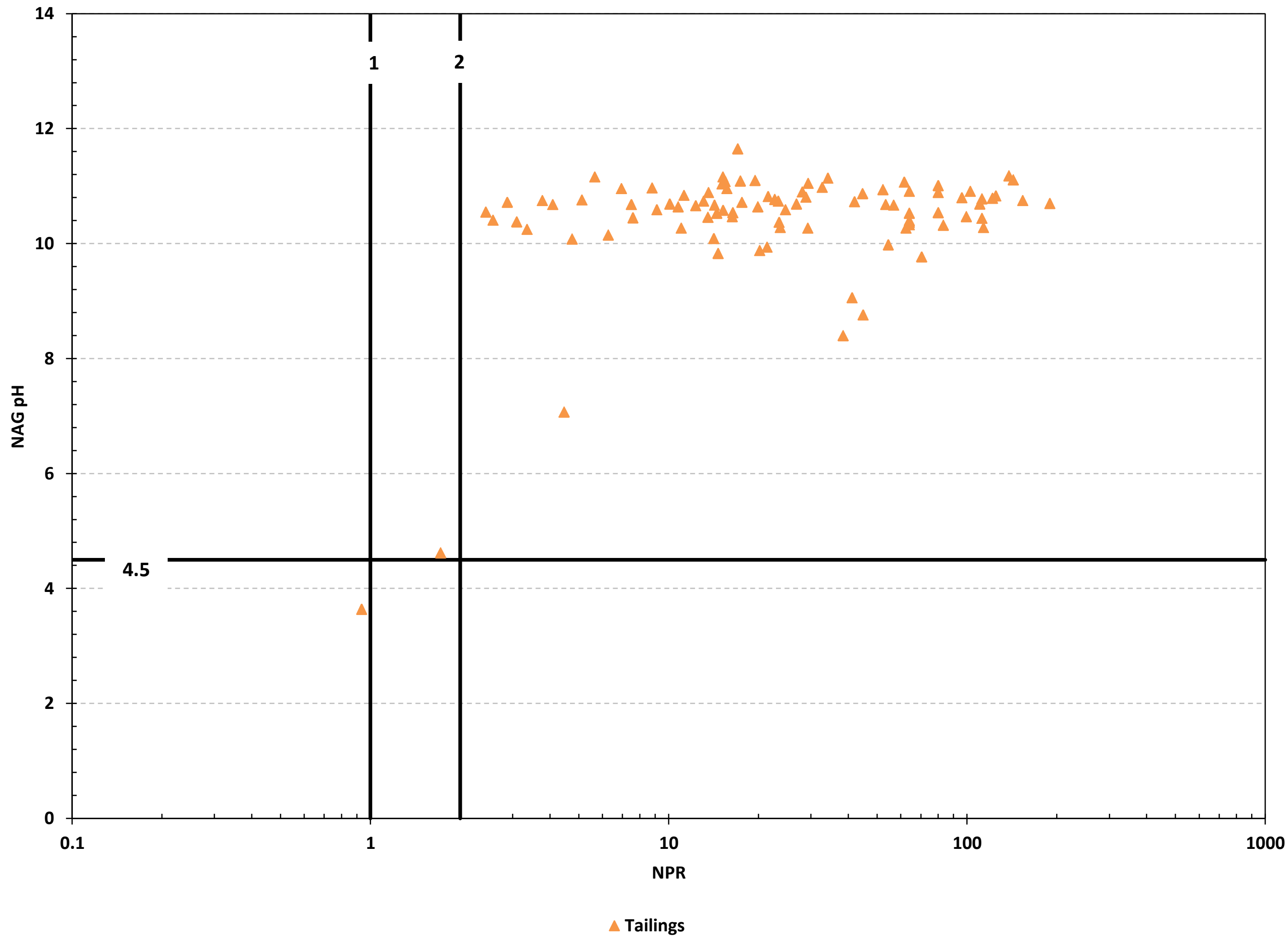
Côté Gold Project

Tailings
Acid Potential vs Carbonate Neutralization Potential

Drawn by: MLT	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 8-4



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Côté Gold Project

Tailings
NPR vs NAGpH

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC 8-5

9.0 SUMMARY OF FINDINGS

This section summarizes the key findings regarding the Côté Gold Project geochemical characterization study.

9.1 Potential Aggregate, Rock Borrow and Construction Areas

Selected overburden materials have been characterized for the following Project areas: MRA, TMF and Bagsverd Creek realignment area. The following are key findings of the characterization work completed:

- the overburden materials from the areas sampled generally exhibit a low potential for ARD;
- generally low concentrations of total sulphur (<0.03%) predominantly as sulphate were reported;
- the highest sulphide content (0.12%) was in overburden from the Bagsverd Creek area;
- a wide range in NP predominantly as carbonate was identified in these materials (in the order of 1 to more than 100 kg $CaCO_3$/t);
- no PAG samples on the basis of NPR < 2 were identified; and
- three of 20 samples exceeded the Ontario Typical Range soil standards; one TMF sample exceeded criteria for molybdenum, and one MRA sample and one Bagsverd Creek Diversion sample exceeded criteria for uranium).

Selected construction rock materials have been characterized for the TMF and Bagsverd Creek realignment areas. The following are the key findings of the characterization work completed:

- the rock materials from the areas sampled generally exhibit a low potential for ARD;
- generally low concentrations of total sulphur (<0.08%) with a predominance of sulphate are present in rock sampled from these areas;
- the highest sulphide content (0.10%) was identified in the TMF area;
- the NP for the rock materials sampled exhibits a wide range in NP mostly as carbonate (in the order of 5 to almost 200 kg $CaCO_3$/t);
- no PAG samples were identified from these areas on the basis of NPR < 2;
- as for the overburden materials, the generally low sulphur content, occuring mostly as sulphate, and the observed range in NP is consistent with a generally low potential for ARD in rock from these areas; and
- a single exceedance of the 10 times crustal abundance screening criteria for arsenic was observed in a sample from the TMF area.

9.2 Open Pit Area

A total of 35 selected overburden materials have been characterized from the proposed Open pit area. The following are key findings of the characterization work completed:

- open pit overburden materials generally exhibit a low potential for ARD;
- generally low concentrations of total sulphur (<0.03%) were observed with mostly subequal proportions of sulphate and sulphide;
- a maximum sulphide content of 0.05% was observed;
- some shallow (<0.9 m depth) soil samples are NP depleted (negative NP and depressed paste pH) presumably due to weathering exposure at surface;
- a wide range in NP predominantly as carbonate is present in pit overburden materials (in the order of <1 to more than 200 kg $CaCO_3$/tonne);
- no PAG samples were identified on the basis of NPR <2; and
- four of 35 samples exceeded the Ontario Typical Range agricultural standards for copper.

Five selected sediment materials have been characterized from the following four lakes in the region of the future proposed open pit: Clam Lake, Côté Lake, Three Duck Lakes and Unnamed Pond. The following are key findings of the characterization work completed:

- the sediment materials exhibit a low potential for ARD;
- generally low concentrations of total sulphur (<0.07%) variably mixed in proportion as sulphate and sulphide were identified in the sediments;
- a maximum sulphide content of 0.05% was present in an organic rich, high NP Côté Lake sediment sample;
- a wide range in NP predominantly as carbonate was observed from site to site (in the order of 1 to just under 150 kg $CaCO_3$/t);
- there is a generally low potential for ARD from these materials and no PAG samples were identified on the basis of NPR <2 or Carbonate NPR <2; and
- exceedance of the Ontario Typical Range Sediment copper standard has been reported for three of the five samples with two of these also exceeding the sediment standard for nickel.

9.3 Open Pit Mine Rock

An extensive characterization program of mine rock from the proposed open pit has been completed. The following are the key findings of the characterization work completed:

- ARD Potential:
  - most mine rock sampled exhibited little potential for ML/ARD;
  - generally low concentrations of total sulphur (<0.24% at 90th percentile) predominantly as sulphide are observed;
  - the maximum reported sulphide content was 1.4% and the most commonly observed sulphide is pyrite;
  - the materials exhibit a wide range in NP predominantly as carbonate (in the order of 1 to 450 kg $CaCO_3$/t);
  - calcite is the most commonly observed carbonate mineral with lesser amounts of dolomite and sometimes ankerite identified;
  - most samples are NPAG (NPR >2), mean NPR of the mine rock was 19;
  - a proxy approach using Leco Carbon and Sulphur analysis to estimate NP and MPA was proved to be reasonable as a stream-lined approach to guide future ARD characterization work for Project Mine rock;
  - approximately 5% of ABA (reference) samples were PAG based on NPR <2 and 7% of ABA samples were PAG based on NPR_{MPA} <2;
  - approximately 5% of Leco carbon/sulphur samples (1100 sample expanded data set) were PAG based on NPR_{MPA} < 2; and
  - a small sub-set of the ABA (reference) samples have been identified with low NP (<10 kg CaCO3/t) that may contain Fe carbonates that are not well characterized by the proxy approach using Leco Carbon and Sulphur, All but one of these samples contained very low sulphide content.
- Metal Leaching Potential:
  - a number of samples exceeded the 10 times crustal abundance screening criteria for arsenic, bismuth, copper and selenium;
  - a few samples exceeded the 10 times crustal abundance screening criteria for cadmium and molybdenum respectively;
  - data available suggest a generally low potential for neutral metal leaching;
  - all short term metal leach results were below O.Reg 560/94 threshold values;
  - a few elements (most frequently vanadium, silver, chromium and copper) in some samples were detected in short term leach test results above the PWQO screening criteria;
  - most trace elements (including silver, beryllium, bismuth, cadmium, chromium, iron, mercury, lithium, nickel, phosphorus, lead, selenium, titanium, thallium, thorium, tungsten and zinc) were at or below detection limits in all humidity cell leachates; and

– arsenic, antimony and molybdenum (that can tend to be mobile at neutral pH) were detected at low levels in some humidity cell leachates and copper was detected in leachate only from the HC5 (PAG cell based on NPR <2).

9.4 Tailings

Characterization of 93 simulated tailings materials produced in metallurgical testing has been completed for ABA testing and elemental analysis. The following are the key findings of the characterization work completed:

- most tailings materials (97%) indicate a low potential for ARD;
- generally low concentrations of total sulphur (<0.3%) predominantly as sulphide are observed;
- the maximum reported sulphide content was 1.9%;
- the materials exhibit a wide range in NP predominantly as carbonate (in the order of <1 to 450 kg $CaCO_3$/t);
- generally low concentrations of total metals;
- 15% and 28% of samples exceeded the 10 times crustal abundance screening criteria for selenium and bismuth respectively; and
- a few samples exceeded the 10 times crustal abundance screening criteria for arsenic, copper and molybdenum.

10.0 REFERENCES

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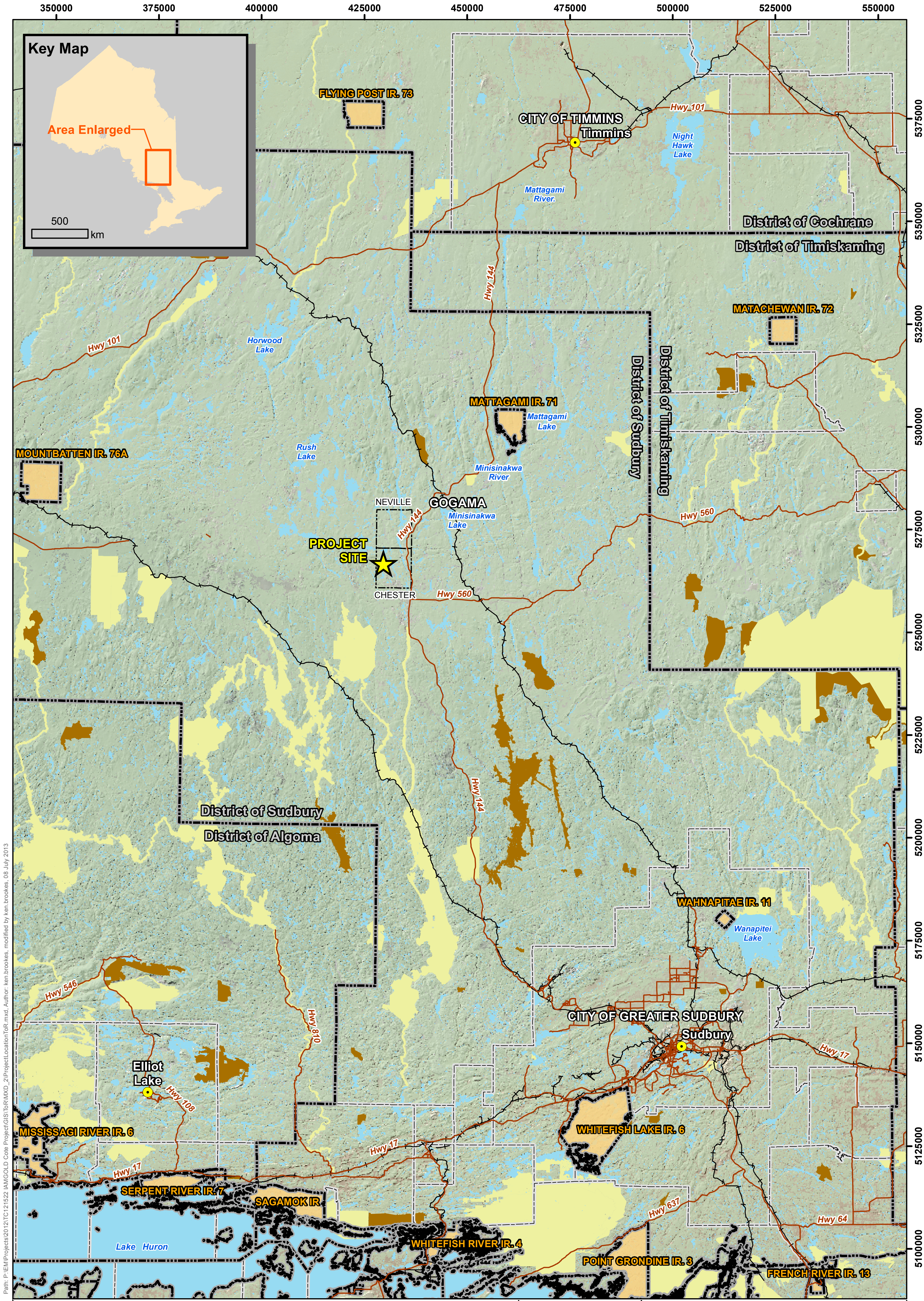
FIGURES



LEGEND

- Project Site Location
- Regional Communities
- Major Roads
- Railway
- Lower Tier Municipality Boundary
- Upper Tier Municipality Boundary
- First Nation Reserve
- Conservation Reserve (Regulated)
- Provincial Park
- Wooded Area
- Waterbody / Large Watercourse

NOTES:
- Base data on this map was extracted from Land Information Ontario, MNDM, OBM Ontario Digital Geospatial Database and Ontario Road Network Database.

Datum: NAD83
Projection: UTM Zone 17N

0 12.5 25 50 75 100 Kilometres

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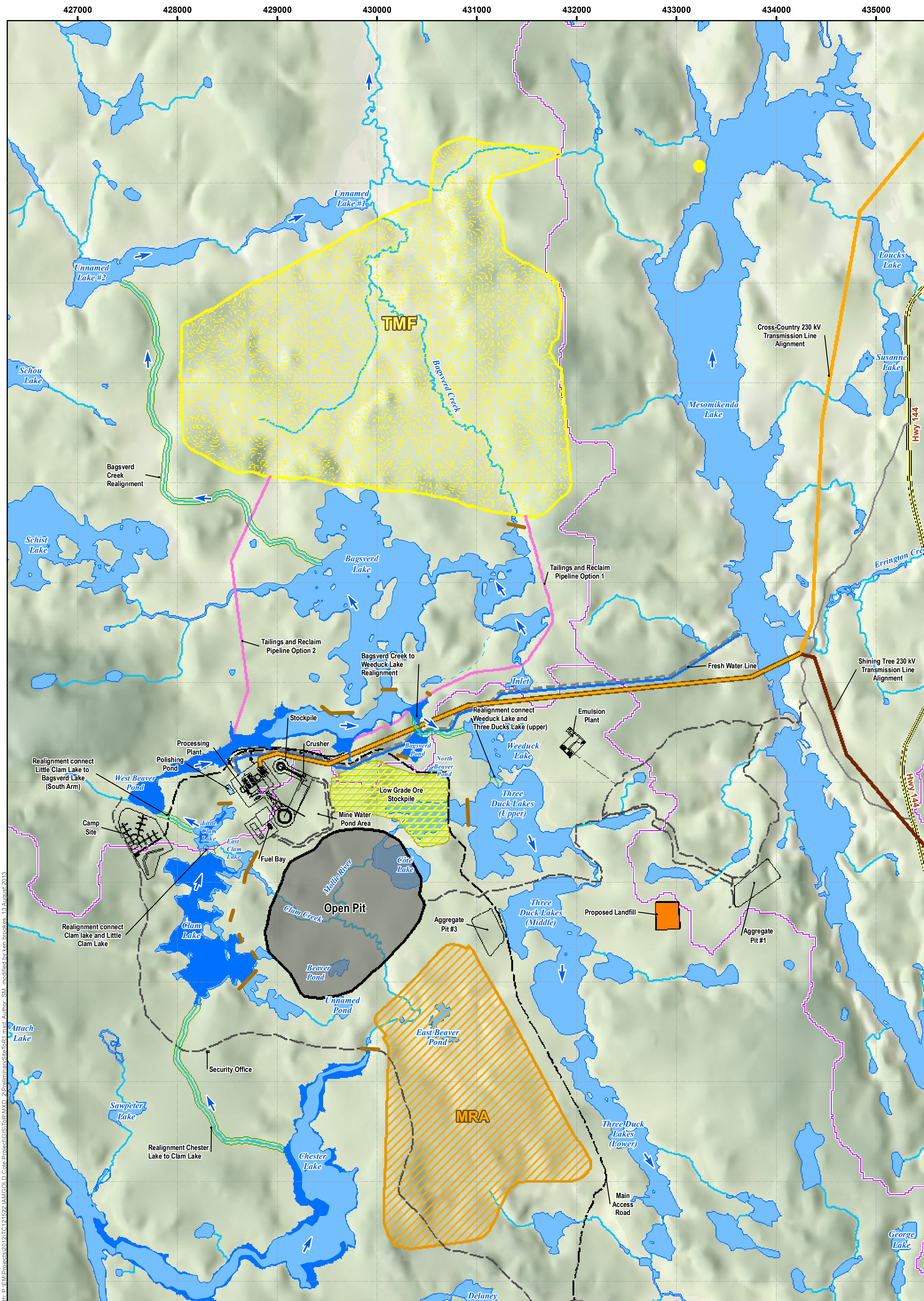
CÔTÉ GOLD PROJECT

Project Location

PROJECT N°: TC121522	FIGURE: 1
SCALE: 1:850,000	DATE: July 2013



LEGEND

- Existing Intermittent Watercourse
- Existing Permanent Watercourse
- Existing Waterbodies
- Highway
- Local Road
- Subwatershed Boundary
- Wooded Area

Proposed Site Features

- Open Pit
- Potential Discharge Location
- Facilities
- Dam
- Main Access Road
- Access Road
- Cross-Country 230 kV Transmission Line Alignment
- Shining Tree 230 kV Transmission Line Alignment
- Tailings and Reclaim Pipeline
- Fresh Water
- Water Realignment
- Proposed Water Flow Direction
- Proposed Lake Area
- Polishing Pond
- Low Grade Ore Stockpile
- Proposed Mine Rock Area (MRA)
- Proposed Tailings Management Facility (TMF)
- Proposed Landfill

NOTES:
- Ontario base data extracted from Land Information Ontario (MNR)
- TMF and subwatershed provided by Golder Associates.
- Watercourse realignment and proposed lake area provided by Calder Engineering.
- Surface infrastructure, open pit, landfill, MRA and transmission lines provided by IAMGOLD.
- Mesomikenda Lake is preferred discharge option, but others are being investigated.

Datum: NAD83
Projection: UTM Zone 17N

0 0.5 1 2 3 4 Kilometres

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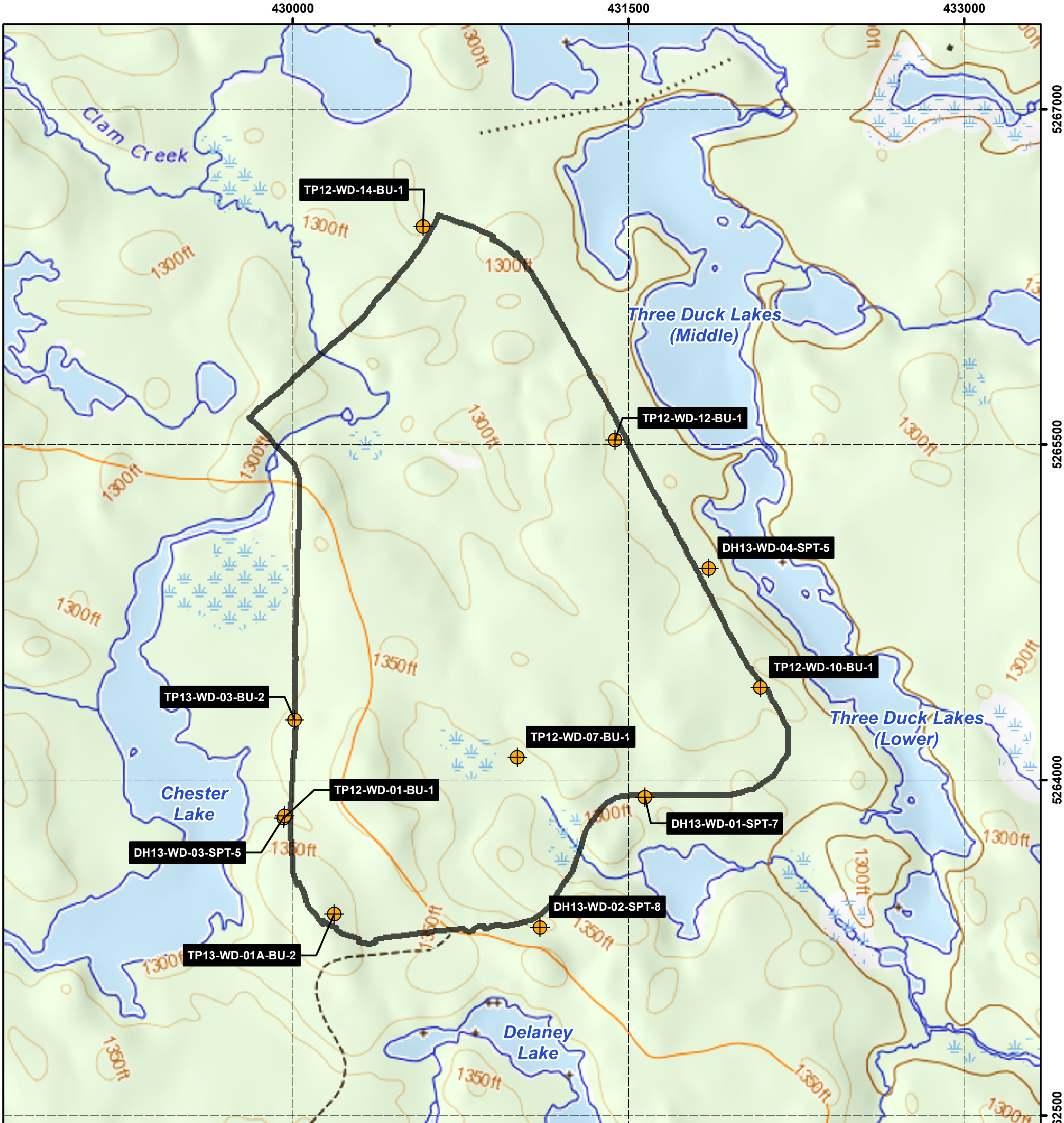
CÔTÉ GOLD PROJECT

Preliminary Site Plan

PROJECT Nº: TC121522	FIGURE: 2
SCALE: 1:35,000	DATE: August 2013



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LEGEND

Mine Rock Area Outline

Overburden Samples

NOTES:
-

Datum: NAD83
Projection: UTM Zone 17N

0 0.25 0.5 1 1.5 2 Kilometres

N S W E

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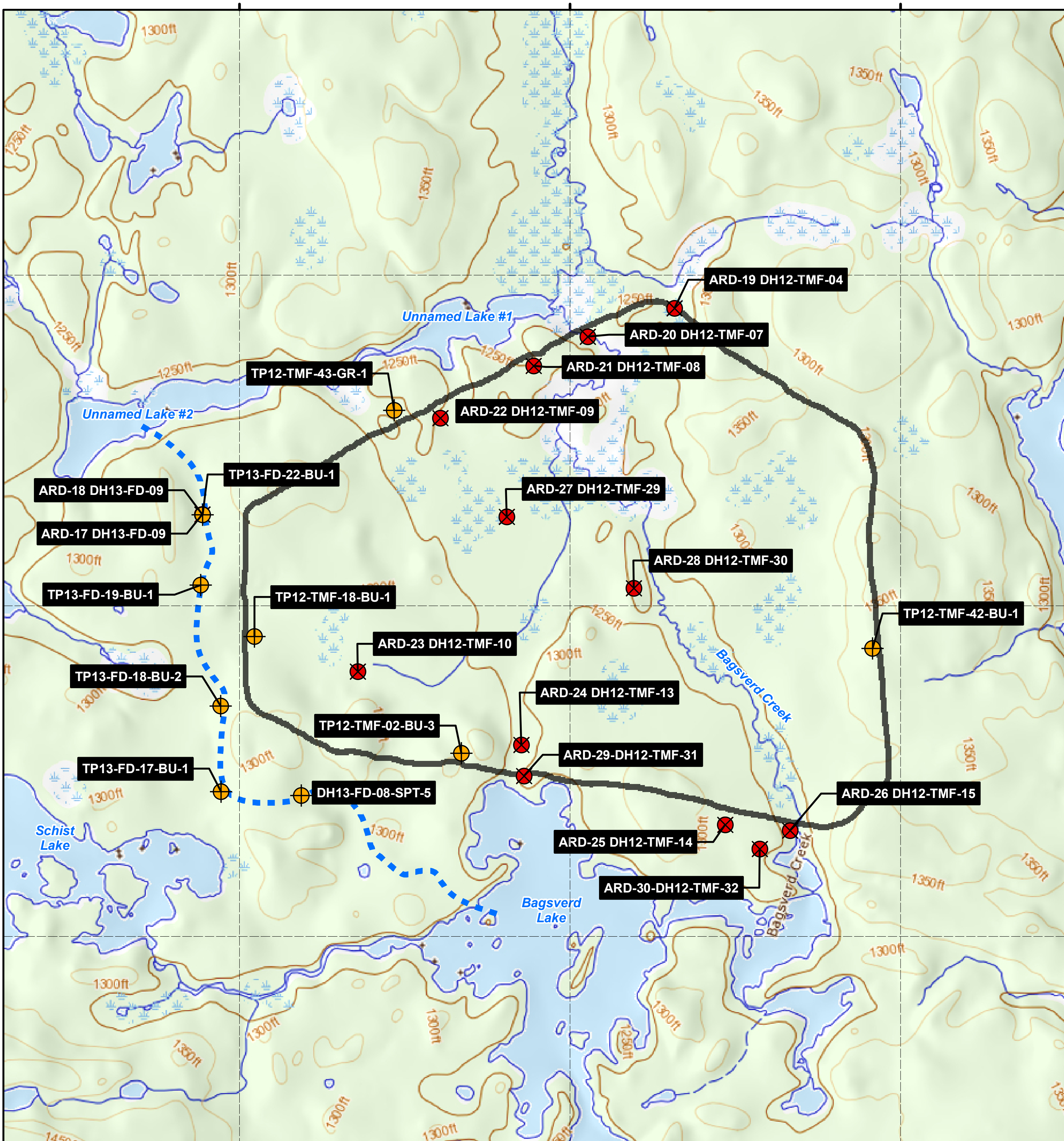
CÔTÉ GOLD PROJECT

Overburden Samples from Mine Rock Area

PROJECT N^{o}: TC121522	**FIGURE: 3**
SCALE: 1:23,000	DATE: November 2013



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LEGEND

- Tailings Management Facility Outline
- Bagsverd Diversion Route
- Overburden Samples
- Rock Samples

NOTES:
-

0 0.25 0.5 1 1.5 2 Kilometres

Datum: NAD83
Projection: UTM Zone 17N

N S E W

IAMGOLD CORPORATION

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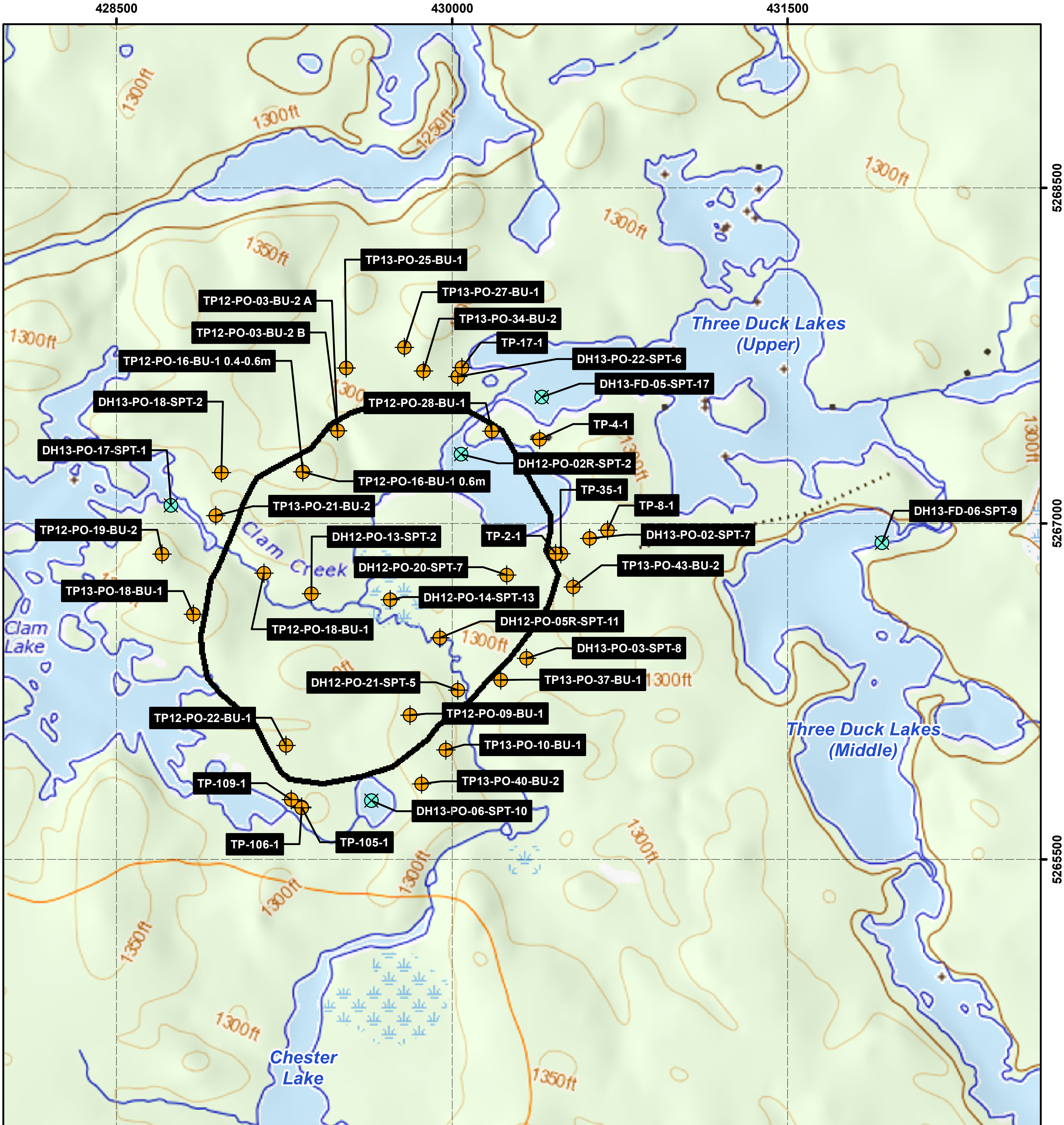
CÔTÉ GOLD PROJECT

Overburden and Construction Rock Samples from the Tailings Management Facility and Bagsverd Creek Diversion Areas

PROJECT N°: TC121522	FIGURE: 4
SCALE: 1:32,000	DATE: November 2013



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LEGEND

- Proposed Open Pit Boundary (Terms of Reference Version)
- Overburden Samples
- Lake Sediment Samples

NOTES:
-

Datum: NAD83
Projection: UTM Zone 17N

0 0.25 0.5 1 1.5 2 Kilometres

N W E S

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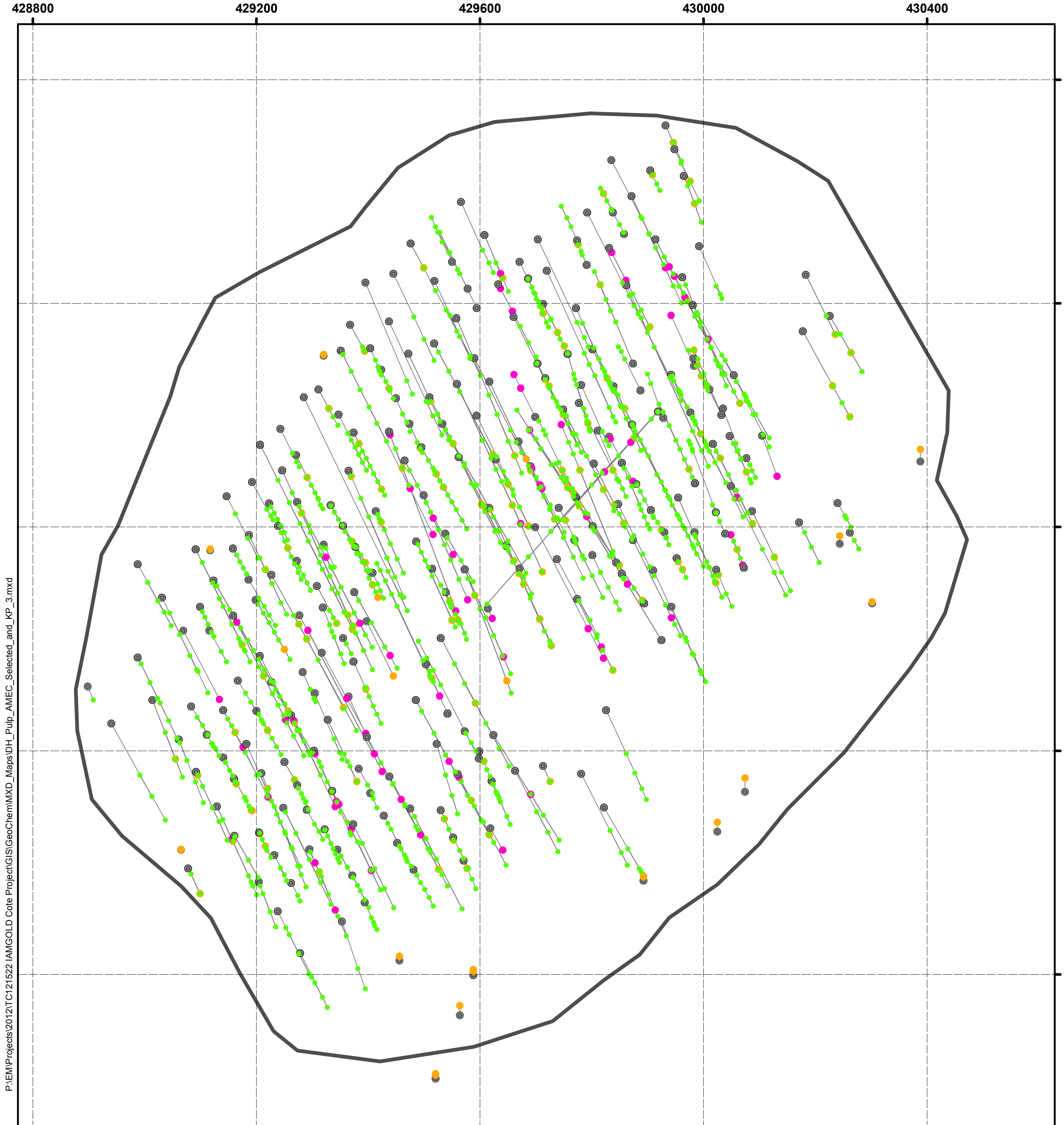
CÔTÉ GOLD PROJECT

Open Pit Area Overburden and Lake Sediments Samples

PROJECT N^{o}: TC121522	**FIGURE: 5**
SCALE: 1:23,000	DATE: November 2013



LEGEND

- Proposed Open Pit Boundary
- Drill Collar Location
- Drill hole Direction
- Knight Piésold Selected Drill Core Samples
- AMEC Selected Drill Core Samples
- AMEC Selected Pulp Samples

0 100 200 400 600 800 Metres

NOTES:
- Locations of samples are approximated from drill collar dip and azimuth.

Datum: NAD83
Projection: UTM Zone 17N

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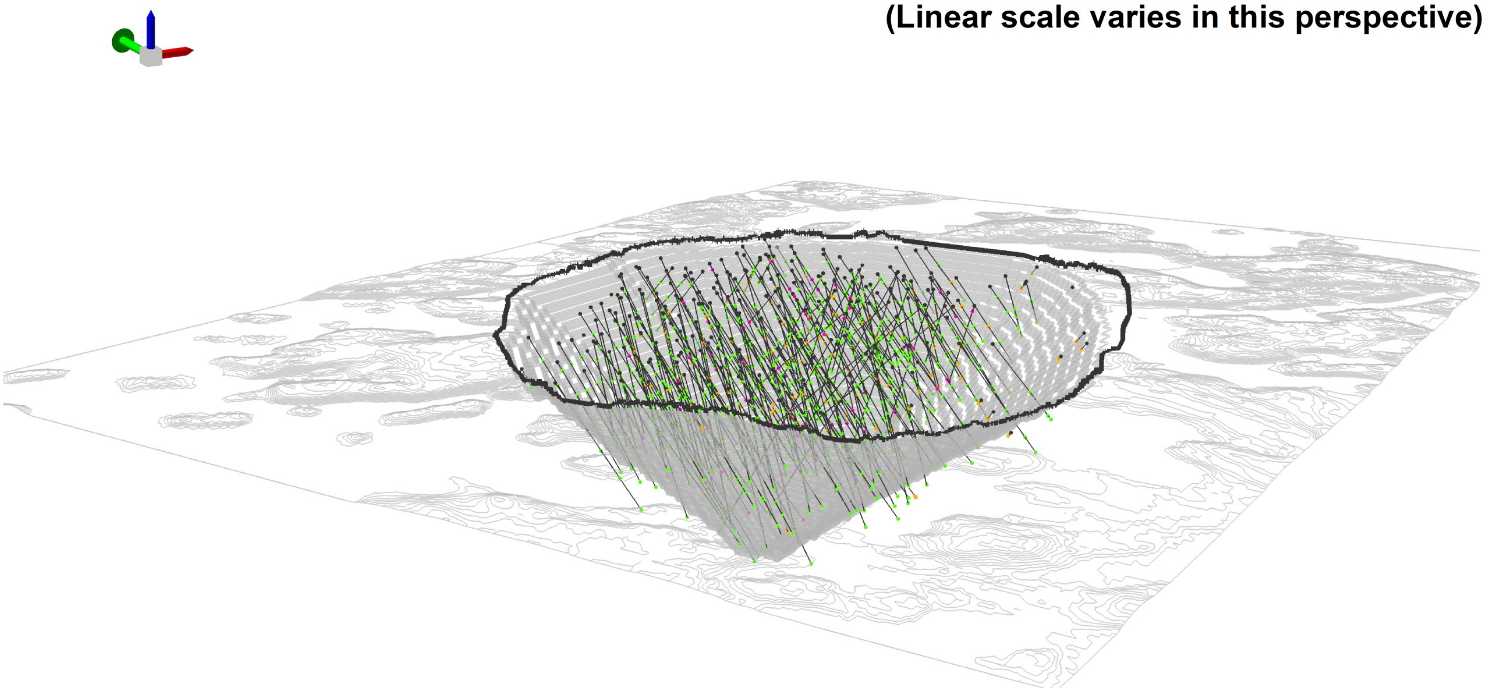
CÔTÉ GOLD PROJECT

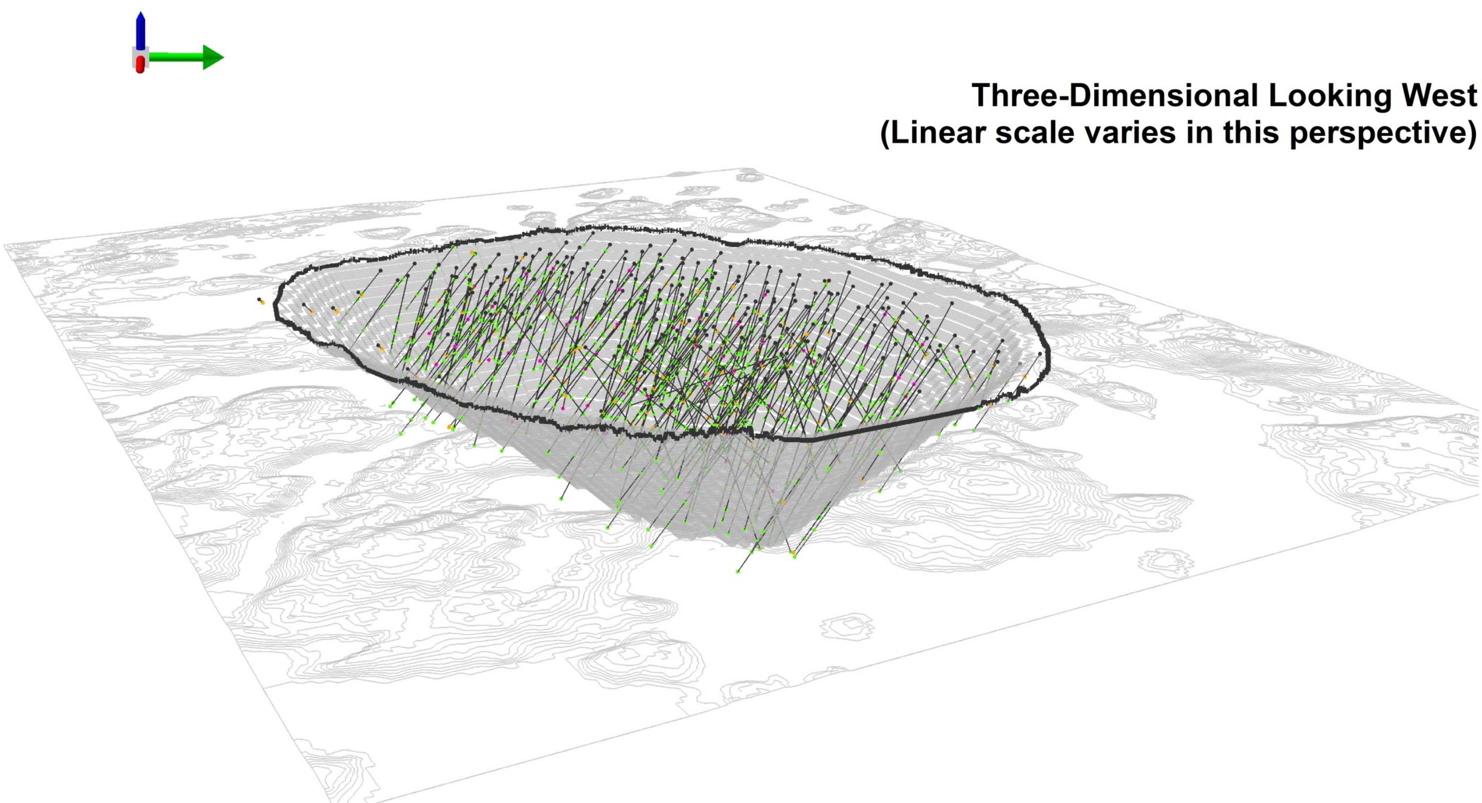
Plan View of Open Pit Mine Rock Samples

PROJECT N°: TC121522	**FIGURE: 6**
SCALE: 1:9,200	DATE: November 2013

Three-Dimensional Looking Northeast
(Linear scale varies in this perspective)



Three-Dimensional Looking West
(Linear scale varies in this perspective)



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LEGEND

- Proposed Open Pit Boundary
- Drill Collar Location
- Drill hole Direction
- Knight Piésold Selected Drill Core Samples
- AMEC Selected Drill Core Samples
- AMEC Selected Pulp Samples

NOTES:
- Locations of samples are approximated from drill collar dip and azimuth.
- Linear measurement scale varies in three-dimensional perspective renderings

Datum: NAD83
Projection: UTM Zone 17N

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CÔTÉ GOLD PROJECT

Oblique View of Open Pit Mine Rock Samples

PROJECT N^{o}: TC121522	**FIGURE: 7**
SCALE:	DATE: November 2013

APPENDICES

APPENDIX A – STATIC DATA

IAMGOLD

Table A-1: Overburden and Lake Sediments Acid Base Accounting Results

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Sample ID	Sample Type	From	To	Test Pit/Drill Hole	Lithology	Paste pH	Fizz Rate	Total Sulphur	Sulphate	Sulphide*	Total Carbon	Carbonate Carbon	Carbonate NP**	NP	MPA***	AP****	NPR****	Carbonate NPR**
		(m)						%					kg $CaCO_3$/tonne					
DH13-PO-06-SPT-10	Unnamed Pond - Lake Sediment	8.7	9.35	DH13-PO-06	Silt and Sand	8.28	4	0.036	0.02	0.02	1.79	1.55	129.43	137	0.62	0.50	274.0	258.9
DH13-FD-06-SPT-9	Three Ducks Lake - Lake Sediment	8.1	8.7	DH13-FD-06	Silty Sand	9.18	3	0.011	0.01	<0.01	0.239	0.19	16.08	19	0.31	0.31	60.8	51.5
DH13-FD-05-SPT-17	Three Ducks Lake - Lake Sediment	14.63	16.46	DH13-FD-05	Sand	8.92	2	0.008	<0.01	<0.01	0.208	0.17	14.08	17	0.31	0.31	54.4	45.0
DH12-PO-02R-SPT-2	Côté Lake - Lake Sediment	6.4	7	DH12-PO-02R	Organics	7.81	3	0.096	0.05	0.05	2.69	1.67	139.10	145	1.56	1.44	100.9	96.8
DH13-PO-17-SPT-1	Clam Lake - Lake Sediment	0.75	1.35	DH13-PO-17	Gravel	7.81	1	0.026	0.02	<0.01	0.224	0.01	0.83	3.8	0.31	0.31	12.2	2.7
TP13-FD-17-BU-1	Bagsverd Creek Realignment Overburden	1	1.4	TP13-FD-17	Sand	8.31	1	0.013	0.01	<0.01	0.055	0.01	0.58	3.7	0.41	0.31	11.8	1.9
TP13-FD-18-BU-2	Bagsverd Creek Realignment Overburden	3.5	3.8	TP13-FD-18	Sand	8.51	2	0.018	0.02	<0.01	0.830	0.39	32.36	36	0.56	0.31	115.2	103.5
TP13-FD-19-BU-1	Bagsverd Creek Realignment Overburden	1.4	1.6	TP13-FD-19	Sand	8.82	3	0.015	0.02	<0.01	1.13	1.06	88.56	90	0.47	0.31	288.0	283.4
TP13-FD-22-BU-1	Bagsverd Creek Realignment Overburden	1.6	2	TP13-FD-22	Sand	8.83	2	0.016	0.02	<0.01	0.624	0.35	29.19	32	0.50	0.31	102.4	93.4
DH13-FD-08-SPT-5	Bagsverd Creek Realignment Overburden	3.14	3.6	DH13-FD-08	Sand	8.08	3	0.155	0.04	0.12	3.14	2.18	181.80	181	4.84	3.59	50.4	50.6
TP13-WD-01A-BU-2	Mine Rock Area Overburden	1.2	1.6	TP13-WD-01A	Sand	7.29	1	0.016	0.02	<0.01	0.115	0.01	0.50	2.5	0.50	0.31	8.0	1.6
TP13-WD-03-BU-2	Mine Rock Area Overburden	1.1	1.5	TP13-WD-03	Sand	7.55	1	0.014	<0.01	<0.01	0.061	0.01	0.50	2.9	0.44	0.31	9.3	1.6
DH13-WD-01-SPT-7	Mine Rock Area Overburden			DH13-WD-01	Sand	8.88	3	0.012	0.01	<0.01	0.283	0.23	19.01	23	0.38	0.31	73.6	60.8
TP12-WD-07-BU-1	Mine Rock Area Overburden	3.4	3.7	TP12-WD-07	Sand	8.50	2	0.036	0.03	<0.01	0.076	0.02	1.67	5.5	1.13	0.31	17.6	5.3
TP12-WD-14-BU-1	Mine Rock Area Overburden	1.2	1.7	TP12-WD-14	Sand/Silt	6.44	1	0.022	0.02	<0.01	0.507	0.01	0.67	1.3	0.69	0.31	4.2	2.1
DH13-WD-03-SPT-5	Mine Rock Area Overburden			DH13-WD-03	Silt	8.67	3	0.032	0.01	0.02	1.54	1.24	103.58	109	1.00	0.69	158.5	150.7
DH13-WD-04-SPT-5	Mine Rock Area Overburden			DH13-WD-04	Silt	8.76	4	0.022	0.01	0.01	1.51	1.29	107.25	113	0.69	0.38	301.3	286.0
TP12-WD-01-BU-1	Mine Rock Area Overburden	3	3.5	TP12-WD-01	Silt/Sand	8.39	3	0.033	0.03	<0.01	1.13	1.12	93.74	91	1.03	0.31	291.2	300.0
TP12-WD-12-BU-1	Mine Rock Area Overburden	2	2.5	TP12-WD-12	Silt/Sand	5.24	1	0.009	<0.01	<0.01	0.042	0.00	0.33	2.5	0.28	0.31	8.0	1.1
DH13-WD-02-SPT-8	Mine Rock Area Overburden			DH13-WD-02	Silty Sand	8.60	3	0.027	0.02	<0.01	0.438	0.27	22.18	22	0.84	0.31	70.4	71.0
TP12-WD-10-BU-1	Mine Rock Area Overburden	2	2.4	TP12-WD-10	Till	8.03	1	0.016	0.02	<0.01	0.044	0.01	0.50	3.8	0.50	0.31	12.2	1.6
TP-17-1	Pit Overburden	0.5	2	TP-17-1	Gravelly Sand	6.44	1	0.014	0.01	<0.01	0.055	0.00	0.33	3.0	0.44	0.31	9.6	1.1
TP-2-1	Pit Overburden	0.6	2	TP-2-1	Sand	7.27	1	<0.01	<0.01	<0.01	0.106	0.00	0.33	3.8	0.16	0.31	12.2	1.1
TP-4-1	Pit Overburden	1.3	2.5	TP-4-1	Sand	7.82	1	0.020	0.02	<0.01	0.323	0.01	0.67	6.6	0.63	0.31	21.1	2.1
TP-35-1	Pit Overburden	0.5	4	TP-35-1	Sand	8.67	1	0.013	0.01	<0.01	0.131	0.10	8.34	10	0.41	0.31	32.0	26.7
TP12-PO-19-BU-2	Pit Overburden	1.5	1.7	TP12-PO-19	Sand	8.24	1	0.007	<0.01	<0.01	0.032	0.00	0.25	2.9	0.22	0.31	9.3	0.8
TP13-PO-34-BU-2	Pit Overburden	1.3	1.7	TP13-PO-34	Sand	6.68	1	0.022	0.02	<0.01	0.358	0.01	0.42	1.7	0.69	0.31	5.4	1.3
TP13-PO-40-BU-2	Pit Overburden	1.8	2.2	TP13-PO-40	Sand	8.17	1	0.007	<0.01	<0.01	0.022	0.01	0.50	2.9	0.22	0.31	9.3	1.6
TP13-PO-43-BU-2	Pit Overburden	1.6	2	TP13-PO-43	Sand	7.20	1	0.012	0.01	<0.01	0.060	0.01	0.50	2.3	0.38	0.31	7.4	1.6
DH13-PO-18-SPT-2	Pit Overburden	0.75	1.38	DH13-PO-18	Sand	8.62	1	0.020	0.01	0.01	0.082	0.02	2.00	4.6	0.63	0.31	14.7	6.4
TP13-PO-18-BU-1	Pit Overburden	0.5	0.9	TP13-PO-18	Sand	6.24	1	0.032	0.02	0.01	0.848	0.01	0.92	-0.3	1.00	0.38	-0.8	2.4
TP13-PO-21-BU-2	Pit Overburden	1.4	1.6	TP13-PO-21	Sand	7.64	1	0.021	0.02	<0.01	0.332	0.02	2.00	3.8	0.66	0.31	12.2	6.4
TP12-PO-09-BU-1	Pit Overburden	1	1.3	TP12-PO-09	Sand	8.48	1	0.013	0.01	<0.01	0.041	0.01	0.67	3.8	0.41	0.31	12.2	2.1
TP12-PO-16-BU-1 0.4-0.6m	Pit Overburden	0.4	0.6	TP12-PO-16	Sand	5.91	1	0.030	0.03	<0.01	0.650	0.01	0.67	-1.0	0.94	0.31	-3.2	2.1
TP12-PO-16-BU-1 0.6m	Pit Overburden	0.4	0.6	TP12-PO-16	Sand	7.43	1	0.016	0.02	<0.01	0.242	0.01	0.58	1.8	0.50	0.31	5.8	1.9
TP13-PO-27-BU-1	Pit Overburden	1.2	1.5	TP13-PO-27	Sand and Gravel	7.99	1	0.023	0.02	<0.01	0.456	0.04	3.42	7.5	0.72	0.31	24.0	10.9
DH13-PO-03-SPT-8	Pit Overburden	5.29	5.9	DH13-PO-03	Sand and Silt	9.09	3	0.015	0.02	<0.01	0.660	0.51	42.20	46	0.47	0.31	147.2	135.0
DH12-PO-21-SPT-5	Pit Overburden	3.05	3.6	DH12-PO-21	Sand/Silt	9.04	3	0.018	<0.01	<0.01	0.963	0.86	71.89	71	0.56	0.31	227.2	230.0
TP12-PO-18-BU-1	Pit Overburden	0.5	0.6	TP12-PO-18	Sand/Silt	6.08	1	0.026	0.03	<0.01	0.553	0.01	0.67	0.0	0.81	0.31	0.0	2.1
TP12-PO-28-BU-1	Pit Overburden	1	2.3	TP12-PO-28	Sand/Silt	8.93	3	0.016	<0.01	<0.01	1.32	1.25	104.58	104	0.50	0.31	332.8	334.6
DH13-PO-02-SPT-7	Pit Overburden	4.6	5.2	DH13-PO-02	Clay and Silt	8.32	4	0.031	0.02	0.01	2.92	2.60	216.83	235	0.97	0.34	683.6	630.8
TP-8-1	Pit Overburden	0.2	2.7	TP-8-1	Silt	7.85	1	0.014	0.01	<0.01	0.150	0.01	0.50	5.9	0.44	0.31	18.9	1.6
TP-105-1	Pit Overburden	0.1	0.4	TP-105-1	Silt	4.96	1	0.036	0.04	<0.01	1.36	0.01	0.50	-1.2	1.13	0.31	-3.8	1.6
DH12-PO-14-SPT-13	Pit Overburden	8.5	8.8	DH12-PO-14	Silt	8.39	4	0.029	<0.01	0.02	2.70	2.56	213.49	218	0.91	0.59	367.2	359.6
TP12-PO-03-BU-2 A	Pit Overburden	3.4	3.5	TP12-PO-03	Silt	7.92	1	0.023	0.01	0.01	0.145	0.01	0.83	3.6	0.72	0.41	8.9	2.1
TP12-PO-03-BU-2 B	Pit Overburden	3.4	3.5	TP12-PO-03	Silt	7.52	2	0.117	0.07	0.05	3.15	0.59	49.04	50	3.66	1.47	34.0	33.4
TP12-PO-22-BU-1	Pit Overburden	3	3.5	TP12-PO-22	Silt	8.76	3	0.008	<0.01	<0.01	0.703	0.71	59.54	58	0.25	0.31	185.6	190.5
TP13-PO-37-BU-1	Pit Overburden	1.9	2.2	TP13-PO-37	Silt and Sand	7.57	1	0.093	0.05	0.04	2.14	0.19	15.58	16	2.91	1.34	11.9	11.6
TP13-PO-25-BU-1	Pit Overburden	1.7	2.2	TP13-PO-25	Silty Gravelly Sand	8.69	3	0.026	0.02	<0.01	0.799	0.60	50.37	50	0.81	0.31	160.0	161.2
TP-106-1	Pit Overburden	0.1	1.3	TP-106-1	Silty Sand	7.55	1	0.014	0.01	<0.01	0.043	0.01	0.42	4.3	0.44	0.31	13.8	1.3
TP-109-1	Pit Overburden	0.1	1.1	TP-109-1	Silty Sand	7.71	1	0.020	0.02	<0.01	0.193	0.01	0.58	2.6	0.63	0.31	8.3	1.9
TP13-PO-10-BU-1	Pit Overburden	1	1.4	TP13-PO-10	Silty Sand	8.05	1	0.014	0.01	<0.01	0.044	0.01	0.83	3.6	0.44	0.31	11.5	2.7
DH13-PO-22-SPT-6	Pit Overburden	3.8	4.4	DH13-PO-22	Silty Sand	8.73	3	0.017	<0.01	<0.01	0.720	0.59	49.54	54	0.53	0.31	172.8	158.5
DH12-PO-05R-SPT-11	Pit Overburden	7.2	8.38	DH12-PO-05R	Till	9.21	2	0.028	<0.01	0.02	0.198	0.16	13.49	17	0.88	0.56	30.2	24.0
DH12-PO-13-SPT-2	Pit Overburden	0.75	1.4	DH12-PO-13	Till	8.65	1	0.014	0.01	<0.01	0.031	0.01	0.67	3.4	0.44	0.31	10.9	2.1
DH12-PO-20-SPT-7	Pit Overburden	6.2	6.8	DH12-PO-20	Till	9.15	3	0.013	0.01	<0.01	0.495	0.45	37.69	40	0.41	0.31	128.0	120.6
TP12-TMF-42-BU-1	Tailings Management Facility Overburden	1.5	2.1	TP12-TMF-42	Sand/Silt	7.21	1	0.018	0.02	<0.01	0.213	0.01	0.50	1.2	0.56	0.31	3.8	1.6
TP12-TMF-43-GR-1	Tailings Management Facility Overburden	2.2	2.8	TP12-TMF-43	Sand/Silt	9.02	2	0.018	<0.01	<0.01	0.250	0.19	16.25	20	0.56	0.31	64.0	52.0
TP12-TMF-18-BU-1	Tailings Management Facility Overburden	1	2	TP12-TMF-18	Sand	6.95	1	0.015	<0.01	<0.01	0.305	0.01	0.92	1.7	0.47	0.31	5.4	2.9
TP12-TMF-02-BU-3	Tailings Management Facility Overburden	4	5	TP12-TMF-02	Till	7.73	1	0.015	0.02	<0.01	0.044	0.01	0.42	3.0	0.47	0.31	9.6	1.3

*Calculated as the difference between measured total sulphur and sulphate sulphur

** Calculated from carbonate carbon content

*** Calculated from total sulphur content

**** Calculated as sulphide*31.25

Table A-2: Overburden and Lake Sediments Elemental Analysis Results

Sample ID	Sample Type	From	To	Test Pit/Drill Hole	Lithology	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
		(m)				µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
					Soil Standards (Agricultural or Other Property Use)		**11**	**210**				**1**	**19**		**62**						**2**		**37**		**45**	**1**	**1.2**				**1**	**1.9**	**86**			**0.16**
					Soil Standards (Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use)		**18**	**220**				**1.2**	**21**		**92**						**2**		**82**		**120**	**1.3**	**1.5**				**1**	**2.5**	**86**			**0.27**
					Sediment Standards (All Property Use)		**6**					**0.6**	**50**		**16**								**16**		**31**											**0.2**
DH13-PO-06-SPT-10	Unnamed Pond - Lake Sediment	8.7	9.35	DH13-PO-06	Silt and Sand	8000	1.4	42	0.20	<0.09	42000	0.06	6.3	49	16	15000	1700	11	15000	230	0.5	380	19	480	6.2	<0.80	0.06	<0.50	31	680	0.07	0.64	24	5.5	28	<0.05
DH13-FD-06-SPT-9	Three Ducks Lake - Lake Sediment	8.1	8.7	DH13-FD-06	Silty Sand	2000	0.5	12	0.07	<0.09	6900	<0.02	1.8	49	7.8	5200	470	4	2200	57	0.4	220	6.4	340	2.7	<0.80	<0.04	<0.50	10	260	0.02	0.50	10	2.2	8.5	<0.05
DH13-FD-05-SPT-17	Three Ducks Lake - Lake Sediment	14.63	16.46	DH13-FD-05	Sand	4000	0.6	14	0.11	<0.09	6000	0.03	3.4	43	10	8300	670	7	3800	110	0.4	270	8.9	260	3.2	<0.80	<0.04	<0.50	10	310	0.04	0.59	13	2.0	19	<0.05
DH12-PO-02R-SPT-2	Côté Lake - Lake Sediment	6.4	7	DH12-PO-02R	Organics	3100	2.5	16	0.10	<0.09	40000	0.11	3.3	20	24	6800	470	4	13000	150	0.7	160	11	530	4.4	<0.80	0.18	<0.50	26	300	0.05	0.74	12	3.8	25	<0.05
DH13-PO-17-SPT-1	Clam Lake - Lake Sediment	0.75	1.35	DH13-PO-17	Gravel	9200	1.2	28	0.25	0.12	2500	0.05	8.5	63	43	23000	1200	9	6200	170	1.6	280	21	410	3.5	<0.80	0.07	0.5	8.0	660	0.03	0.44	29	6.7	28	<0.05
TP13-FD-17-BU-1	Bagsverd Creek Realignment Overburden	1	1.4	TP13-FD-17	Sand	4400	1.4	15	0.13	<0.09	2500	0.05	4.0	36	27	9100	510	6	2600	120	0.3	270	13	460	2.6	<0.80	<0.04	<0.50	9.4	420	0.03	0.33	16	3.8	17	<0.05
TP13-FD-18-BU-2	Bagsverd Creek Realignment Overburden	3.5	3.8	TP13-FD-18	Sand	3900	<0.50	20	0.13	<0.09	11000	0.03	3.4	44	12	7800	780	6	4900	93	0.5	370	8.6	380	2.8	<0.80	0.05	<0.50	15	410	0.04	0.68	13	2.9	15	<0.05
TP13-FD-19-BU-1	Bagsverd Creek Realignment Overburden	1.4	1.6	TP13-FD-19	Sand	3800	<0.50	18	0.12	<0.09	25000	0.03	3.1	32	10	7300	760	5	9300	100	0.3	310	9.2	480	2.0	<0.80	0.10	<0.50	21	410	0.04	5.5	16	3.7	15	<0.05
TP13-FD-22-BU-1	Bagsverd Creek Realignment Overburden	1.6	2	TP13-FD-22	Sand	4100	<0.50	14	0.13	<0.09	9000	0.03	3.8	35	12	8900	560	6	5600	130	0.3	260	8.7	430	2.1	<0.80	0.06	<0.50	12	460	0.03	0.97	18	3.6	16	<0.05
DH13-FD-08-SPT-5	Bagsverd Creek Realignment Overburden	3.14	3.6	DH13-FD-08	Sand	2700	0.9	17	0.08	<0.09	58000	0.08	2.8	29	11	5900	570	4	10000	120	0.5	220	10	440	1.9	<0.80	0.15	0.8	35	290	0.05	1.4	11	3.2	15	<0.05
TP13-WD-01A-BU-2	Mine Rock Area Overburden	1.2	1.6	TP13-WD-01A	Sand	6000	1.1	25	0.14	<0.09	1800	<0.02	4.0	54	14	9800	770	4	2800	110	0.5	300	10	330	3.4	<0.80	0.06	<0.50	8.3	510	0.03	0.38	17	3.6	12	<0.05
TP13-WD-03-BU-2	Mine Rock Area Overburden	1.1	1.5	TP13-WD-03	Sand	5100	1.0	24	0.14	<0.09	1700	<0.02	4.2	51	15	9700	800	5	3000	120	0.4	220	11	320	3.1	<0.80	0.04	<0.50	7.3	470	0.03	0.36	18	3.1	14	<0.05
DH13-WD-01-SPT-7	Mine Rock Area Overburden			DH13-WD-01	Sand	4400	0.7	17	0.10	<0.09	9000	0.02	4.0	51	14	9800	710	6	4400	110	0.6	250	13	290	3.6	<0.80	<0.04	<0.50	12	400	0.03	0.44	17	3.1	19	<0.05
TP12-WD-07-BU-1	Mine Rock Area Overburden	3.4	3.7	TP12-WD-07	Sand	5800	0.6	28	0.10	<0.09	2500	0.03	6.1	46	22	12000	1500	6	4500	110	0.4	270	15	340	2.8	<0.80	0.07	<0.50	8.4	540	0.04	0.60	21	4.6	18	<0.05
TP12-WD-14-BU-1	Mine Rock Area Overburden	1.2	1.7	TP12-WD-14	Sand/Silt	6400	<0.50	17	0.18	<0.09	1600	0.03	3.8	49	16	10000	510	5	2400	100	0.5	230	10	310	1.6	<0.80	0.11	<0.50	8.9	470	0.03	0.49	18	4.8	12	<0.05
DH13-WD-03-SPT-5	Mine Rock Area Overburden			DH13-WD-03	Silt	4600	1.8	18	0.11	<0.09	29000	0.04	4.1	33	13	9200	820	7	12000	140	0.4	270	13	540	3.7	<0.80	0.06	<0.50	22	460	0.04	2.2	17	4.1	18	<0.05
DH13-WD-04-SPT-5	Mine Rock Area Overburden			DH13-WD-04	Silt	3600	0.9	17	0.11	<0.09	29000	0.03	3.0	32	8.7	7400	760	5	12000	120	0.4	320	9.4	530	3.9	<0.80	<0.04	<0.50	21	440	0.04	0.55	14	4.0	15	<0.05
TP12-WD-01-BU-1	Mine Rock Area Overburden	3	3.5	TP12-WD-01	Silt/Sand	3300	<0.50	13	0.09	<0.09	25000	0.03	3.2	17	12	6700	480	5	11000	100	0.4	130	10	550	0.96	<0.80	<0.04	<0.50	19	350	0.03	0.46	13	3.7	14	<0.05
TP12-WD-12-BU-1	Mine Rock Area Overburden	2	2.5	TP12-WD-12	Silt/Sand	2500	<0.50	9.5	0.10	<0.09	2100	0.04	2.4	14	22	4900	210	3	1400	44	0.3	84	7.6	600	1.1	<0.80	<0.04	0.60	6.9	350	<0.02	0.45	14	4.4	12	<0.05
DH13-WD-02-SPT-8	Mine Rock Area Overburden			DH13-WD-02	Silty Sand	3300	0.8	15	0.09	<0.09	8200	0.03	3.1	43	13	8000	560	5	3800	83	0.3	240	7.7	270	3.4	<0.80	0.11	<0.50	10	340	0.03	0.54	16	2.9	12	<0.05
TP12-WD-10-BU-1	Mine Rock Area Overburden	2	2.4	TP12-WD-10	Till	6300	<0.50	21	0.15	<0.09	2500	0.03	6.3	56	26	14000	790	8	5100	180	0.2	260	21	340	1.7	<0.80	<0.04	<0.50	9.5	600	0.05	0.41	27	4.5	21	<0.05
TP-17-1	Pit Overburden	0.5	2	TP-17-1	Gravelly Sand	5400	2.5	20	0.13	<0.09	1600	0.02	4.5	41	17	10000	500	5	2300	140	0.4	150	9.7	430	3.2	<0.80	0.06	<0.50	8.7	460	0.03	0.32	20	3.9	14	<0.05
TP-2-1	Pit Overburden	0.6	2	TP-2-1	Sand	2800	0.6	15	0.09	<0.09	1700	<0.02	2.1	47	5.4	4900	520	3	1200	46	0.5	220	5.8	400	3.1	<0.80	<0.04	<0.50	8.6	340	<0.02	0.36	9	2.4	8.4	<0.05
TP-4-1	Pit Overburden	1.3	2.5	TP-4-1	Sand	8300	6.2	34	0.20	<0.09	3500	0.21	7.6	50	51	19000	1000	8	4600	220	0.7	250	19	840	6.4	<0.80	0.14	<0.50	12	660	0.05	0.54	25	10	50	<0.05
TP-35-1	Pit Overburden	0.5	4	TP-35-1	Sand	4400	0.9	17	0.12	<0.09	4400	0.03	4.1	43	16	8900	530	4	3100	130	0.3	170	12	410	3.2	<0.80	<0.04	<0.50	9.5	420	0.04	0.28	16	4.4	14	<0.05
TP12-PO-19-BU-2	Pit Overburden	1.5	1.7	TP12-PO-19	Sand	2600	0.7	13	0.09	<0.09	1100	<0.02	2.2	40	46	5100	420	4	1400	95	0.3	190	5.9	220	2.8	<0.80	<0.04	<0.50	5.2	210	0.02	0.35	8	2.7	8.3	<0.05
TP13-PO-34-BU-2	Pit Overburden	1.3	1.7	TP13-PO-34	Sand	5900	1.2	16	0.11	<0.09	1500	0.06	4.3	40	19	11000	530	5	2600	110	0.4	210	10	350	3.4	<0.80	0.07	<0.50	6.5	490	0.03	0.33	22	3.2	23	<0.05
TP13-PO-40-BU-2	Pit Overburden	1.8	2.2	TP13-PO-40	Sand	3900	1.0	15	0.10	<0.09	1700	0.02	3.5	53	15	8300	510	4	2100	94	0.5	210	9.9	340	3.1	<0.80	0.04	<0.50	7.7	380	0.03	0.33	17	3.3	11	<0.05
TP13-PO-43-BU-2	Pit Overburden	1.6	2	TP13-PO-43	Sand	4700	0.9	24	0.11	<0.09	1600	0.03	3.4	52	16	8500	590	4	2200	94	0.5	280	9.1	310	3.1	<0.80	<0.04	<0.50	8.6	390	0.03	0.30	13	2.9	13	<0.05
DH13-PO-18-SPT-2	Pit Overburden	0.75	1.38	DH13-PO-18	Sand	8600	4.0	21	0.16	<0.09	3100	0.04	8.8	62	40	25000	790	8	6000	280	1.2	350	18	380	3.6	<0.80	0.08	<0.50	9.8	690	0.05	0.62	44	7.7	30	<0.05
TP13-PO-18-BU-1	Pit Overburden	0.5	0.9	TP13-PO-18	Sand	8900	1.1	15	0.15	<0.09	1200	0.06	3.8	42	50	13000	400	6	2900	100	0.4	150	10	290	3.8	<0.80	0.19	<0.50	4.7	570	0.02	0.30	25	3.0	20	<0.05
TP13-PO-21-BU-2	Pit Overburden	1.4	1.6	TP13-PO-21	Sand	8100	3.1	23	0.20	0.10	3000	0.03	8.1	57	37	18000	850	8	4600	220	1.5	250	20	410	3.7	<0.80	0.13	<0.50	9.4	580	0.04	0.42	34	5.8	24	<0.05
TP12-PO-09-BU-1	Pit Overburden	1	1.3	TP12-PO-09	Sand	5900	0.5	20	0.15	<0.09	2600	0.03	5.7	49	20	13000	620	6	3700	200	0.4	320	14	430	2.5	<0.80	0.04	<0.50	11	600	0.04	0.36	24	5.1	21	<0.05
12-PO-16-BU-1 0.4-0.6	Pit Overburden	0.4	0.6	TP12-PO-16	Sand	8400	0.5	19	0.19	<0.09	1600	<0.02	2.6	40	7.7	10000	220	5	1800	52	0.4	140	9.5	460	1.7	<0.80	0.28	<0.50	6.5	370	0.03	0.45	23	4.6	8.5	<0.05
TP12-PO-16-BU-1 0.6m	Pit Overburden	0.4	0.6	TP12-PO-16	Sand	6700	1.5	27	0.18	<0.09	1700	<0.02	5.6	52	100	12000	560	7	3100	170	1.0	320	12	220	1.6	<0.80	0.11	<0.50	9.1	500	0.04	0.53	21	5.6	15	<0.05
TP13-PO-27-BU-1	Pit Overburden	1.2	1.5	TP13-PO-27	Sand and Gravel	5700	1.5	21	0.14	<0.09	3500	0.05	5.4	49	24	11000	640	7	4100	110	0.4	310	12	400	4.4	<0.80	0.10	<0.50	10	500	0.04	0.54	21	4.2	23	<0.05
DH13-PO-03-SPT-8	Pit Overburden	5.29	5.9	DH13-PO-03	Sand and Silt	2700	0.8	14	0.09	<0.09	14000	<0.02	2.5	36	9.1	6300	570	4	5900	84	0.4	260	7.3	490	2.8	<0.80	<0.04	<0.50	15	380	0.02	0.45	12	3.1	11	<0.05
DH12-PO-21-SPT-5	Pit Overburden	3.05	3.6	DH12-PO-21	Sand/Silt	3700	<0.50	21	0.11	<0.09	22000	0.03	3.2	44	11	7300	810	5	7600	120	0.5	340	9.7	390	2.0	<0.80	<0.04	<0.50	22	420	0.03	0.44	13	3.4	13	<0.05
TP12-PO-18-BU-1	Pit Overburden	0.5	0.6	TP12-PO-18	Sand/Silt	7700	<0.50	21	0.19	<0.09	1000	0.04	4.1	51	7.1	9300	400	5	2100	74	0.4	210	12	320	1.7	<0.80	0.11	<0.50	6.6	590	0.03	0.37	18	2.6	11	<0.05
TP12-PO-28-BU-1	Pit Overburden	1	2.3	TP12-PO-28	Sand/Silt	4800	0.7	22	0.14	<0.09	29000	0.04	4.1	33	13	9600	760	7	12000	180	0.3	280	13	500	1.5	<0.80	0.05	<0.50	23	480	0.06	0.61	18	4.5	18	<0.05
DH13-PO-02-SPT-7	Pit Overburden	4.6	5.2	DH13-PO-02	Clay and Silt	6400	1.4	41	0.19	<0.09	64000	0.06	4.9	36	14	11000	1300	9	20000	210	0.3	380	17	510	4.1	<0.80	0.05	<0.50	46	580	0.06	0.53	19	5.1	22	<0.05
TP-8-1	Pit Overburden	0.2	2.7	TP-8-1	Silt	5600	0.6	22	0.16	<0.09	3000	0.06	4.8	44	57	10000	780	7	3200	93	0.4	230	15	640	3.8	<0.80	0.15	<0.50	12	560	0.06	0.41	19	6.3	20	<0.05
TP-105-1	Pit Overburden	0.1	0.4	TP-105-1	Silt	7100	0.7	19	0.12	<0.09	760	<0.02	1.6	18	10	5900	140	4	1300	27	0.4	44	8.0	210	4.7	<0.80	0.12	<0.50	3.3	390	0.03	0.37	16	1.9	7.4	<0.05
DH12-PO-14-SPT-13	Pit Overburden	8.5	8.8	DH12-PO-14	Silt	7400	0.8	46	0.20	<0.09	75000	0.06	5.8	42	17	13000	1500	10	23000	250	0.4	380	19	470	3.7	<0.80	0.06	<0.50	56	660	0.08	0.62	23	6.3	25	<0.05
TP12-PO-03-BU-2 A	Pit Overburden	3.4	3.5	TP12-PO-03	Silt	8900	<0.50	16	0.09	<0.09	2500	0.04	6.0	55	8.4	19000	540	8	6500	200	0.5	220	14	390	1.5	<0.80	0.05	<0.50	7.9	650	0.02	0.21	28	3.6	29	<0.05
TP12-PO-03-BU-2 B	Pit Overburden	3.4	3.5	TP12-PO-03	Silt	3200	1.1	12	0.11	<0.09	13000	0.18	4.3	19	49	5700	300	4	7300	75	0.5	120	14	560	2.8	<0.80	0.51	<0.50	12	270	0.06	0.80	15	5.6	23	<0.05
TP12-PO-22-BU-1	Pit Overburden	3	3.5	TP12-PO-22	Silt	3000	<0.50	11	0.10	<0.09	17000	0.03	2.8	14	13	6100	340	5	7800	87	0.2	130	8.9	520	0.94	<0.80	<0.04	<0.50	15	340	0.03	0.35	12	3.5	13	<0.05
TP13-PO-37-BU-1	Pit Overburden	1.9	2.2	TP13-PO-37	Silt and Sand	3700	1.3	14	0.09	<0.09	6600	0.08	3.8	52	13	6500	450	4	4500	66	0.8	220	14	560	3.7	<0.80	0.17	<0.50	10	370	0.06	0.86	14	4.2	15	<0.05
TP13-PO-25-BU-1	Pit Overburden	1.7	2.2	TP13-PO-25	Silty Gravelly Sand	5300	0.9	18	0.11	<0.09	17000	0.04	5.1	43	19	11000	690	6	7300	170	0.4	340	11	400	3.3	<0.80	0.05	<0.50	15	420	0.03	0.39	21	3.7	18	<0.05
TP-106-1	Pit Overburden	0.1	1.3	TP-106-1	Silty Sand	5000	2.8	16	0.11	<0.09	2100	0.02	4.7	39	29	11000	470	5	2800	120	0.3	210	10	380	3.5	<0.80	0.06	<0.50	7.1	430	0.03	0.32	20	4.9	15	<0.05
TP-109-1	Pit Overburden	0.1	1.1	TP-109-1	Silty Sand	6900	2.9	17	0.20	<0.09	1900	<0.02	5.2	43	94	12000	420	6	3600	120	0.7	180	13	230	4.2	<0.80	0.11	<0.50	6.9	480	0.03	0.99	21	9.0	15	<0.05
TP13-PO-10-BU-1	Pit Overburden	1	1.4	TP13-PO-10	Silty Sand	4800	4.0	21	0.12	<0.09	2200	<0.02	4.7	51	18	11000	600	6	2500	130	0.5	300	9.9	370	3.2	<0.80	0.05	<0.50	9.5	500	0.04	0.30	20	4.7	14	<0.05
DH13-PO-22-SPT-6	Pit Overburden	3.8	4.4	DH13-PO-22	Silty Sand	2600	0.9	12	0.08	<0.09	16000	0.03	2.7	36	13	6400	430	4	5900	90	0.5	190	8.9	520	3.2	<0.80	0.05	<0.50	16	350	0.02	0.41	12	3.2	12	<0.05
DH12-PO-05R-SPT-11	Pit Overburden	7.2	8.38	DH12-PO-05R	Till	4200	1.7	13	0.10	<0.09	6000	0.03	4.6	39	77	11300	640	6	3700	120	0.5	320	14	280	2.1	<0.80	0.08	<0.50	9.8	410	0.03	0.69	21	4.3	15	<0.05
DH12-PO-13-SPT-2	Pit Overburden	0.75	1.4	DH12-PO-13	Till	4300	1.7	12	0.17	0.09	2000	0.06	3.8	41	93	9800	440	5	2800	89	0.8	230	10	410	3.9	<0.80	0.05	<0.50	7.3	390	<0.02	0.46	15	5.6	28	<0.05
DH12-PO-20-SPT-7	Pit Overburden	6.2	6.8	DH12-PO-20	Till	4300	<0.50	16	0.10	<0.09	13000	0.03	3.8	41	14	10000	680	6	4900	130	0.6	290	11	290	2.6	<0.80	<0.04	<0.50	14	410	0.04	0.36	18	3.8	17	<0.05
TP12-TMF-42-BU-1	Tailings Management Facility Overburden	1.5	2.1	TP12-TMF-42	Sand/Silt	5200	<0.50	14	0.13	<0.09	1700	0.03	3.9	33	16	9900	360	6	2200	150	0.6	240	15	340	2.6	<0.80	0.10	<0.50	7.0	450	0.04	0.37	22	3.2	13	<0.05
TP12-TMF-43-GR-1	Tailings Management Facility Overburden	2.2	2.8	TP12-TMF-43	Sand/Silt	4100	<0.50	20	0.13	<0.09	6700	0.06	4.1	43	15	9600	1000	11	5500	120	14	280	18	550	3.1	<0.80	0.05	<0.50	13	510	0.06	0.44	21	3.2	20	<0.05
TP12-TMF-18-BU-1	Tailings Management Facility Overburden	1	2	TP12-TMF-18	Sand	5300	<0.50	20	0.19	<0.09	1900	0.03	3.2	48	17	8200	540	6	2200	85	0.6	270	10	390	3.0	<0.80	0.07	<0.50	10	490	0.04	0.67	16	4.4	14	<0.05
TP12-TMF-02-BU-3	Tailings Management Facility Overburden	4	5	TP12-TMF-02	Till	4900	<0.50	17	0.17	<0.09	2400	0.17	5.0	40	20	12000	690	8	3600	130	0.2	260	11	500	2.8	<0.80	0.06	<0.50	9.4	640	0.04	0.41	29	3.9	60	<0.05

Table A-3: Construction Rock Acid Base Accounting Results

Sample ID	Sample Type	From	To	Test Pit/Drill Hole	Lithology	Paste pH	Fizz Rate	Total Sulphur	Sulphate	Sulphide*	Total Carbon	Carbonate Carbon	Carbonate NP**	NP	MPA***	AP****	NPR****	Carbonate NPR**
		(m)						%					kg $CaCO_3$/tonne					
ARD-17 DH13-FD-09	Bagsverd Creek Realignment Rock	3.47	4.47	DH13-FD-09	Granodiorite	9.65	1	0.008	<0.01	<0.01	0.030	0.016	1.33	5.5	0.25	0.31	17.6	4.3
ARD-18 DH13-FD-09	Bagsverd Creek Realignment Rock	12.49	13.5	DH13-FD-09	Granodiorite	9.68	1	0.010	0.01	<0.01	0.054	0.048	4.00	8.0	0.31	0.31	25.6	12.8
ARD-19 DH12-TMF-04	Tailings Management Facility Rock	7	8	DH12-TMF-04	Granodiorite	10.02	2	0.007	<0.01	<0.01	0.074	0.069	5.75	9.9	0.22	0.31	31.7	18.4
ARD-20 DH12-TMF-07	Tailings Management Facility Rock	5.95	6.95	DH12-TMF-07	Granodiorite	9.97	1	0.006	<0.01	<0.01	0.019	0.013	1.08	5.7	0.19	0.31	18.2	3.5
ARD-22 DH12-TMF-09	Tailings Management Facility Rock	7.4	8.4	DH12-TMF-09	Granodiorite	9.17	1	0.017	0.02	<0.01	0.015	0.006	0.50	5.5	0.53	0.31	17.6	1.6
ARD-23 DH12-TMF-10	Tailings Management Facility Rock	4.3	5.3	DH12-TMF-10	Granodiorite	9.77	1	0.009	<0.01	<0.01	0.023	0.014	1.17	6.6	0.28	0.31	21.1	3.7
ARD-27 DH12-TMF-29	Tailings Management Facility Rock	17.5	18.5	DH12-TMF-29	Granodiorite	9.61	3	0.007	<0.01	<0.01	0.031	0.023	1.92	5.9	0.22	0.31	18.9	6.1
ARD-28 DH12-TMF-30	Tailings Management Facility Rock	6.66	7.66	DH12-TMF-30	Granodiorite	8.98	1	0.015	0.02	<0.01	0.052	0.029	2.42	8.7	0.47	0.31	27.8	7.7
ARD-21 DH12-TMF-08	Tailings Management Facility Rock	5.86	6.86	DH12-TMF-08	Diorite	9.25	1	0.127	0.03	0.10	0.041	0.027	2.25	25	3.97	3.03	8.2	0.7
ARD-24 DH12-TMF-13	Tailings Management Facility Rock	7.46	8.46	DH12-TMF-13	Mafic Dykes	8.84	1	0.056	0.04	0.02	0.044	0.029	2.42	13	1.75	0.50	26.0	4.8
ARD-25 DH12-TMF-14	Tailings Management Facility Rock	4.66	5.66	DH12-TMF-14	Mafic Dykes	8.95	3	0.066	0.05	0.02	1.30	1.307	108.91	117	2.06	0.50	234.0	217.8
ARD-26 DH12-TMF-15	Tailings Management Facility Rock	6.1	7.1	DH12-TMF-15	Mafic Dykes	9.06	2	0.053	0.03	0.02	0.606	0.612	51.04	62	1.66	0.72	86.3	71.0
ARD-29-DH12-TMF-31	Tailings Management Facility Rock	3.1	4.1	DH12-TMF-31	Mafic Dykes	8.81	1	0.078	0.04	0.04	1.08	1.055	87.90	96	2.44	1.19	80.8	74.0
ARD-30-DH12-TMF-32	Tailings Management Facility Rock	3.17	4.17	DH12-TMF-32	Mafic Dykes	8.68	3	0.079	0.06	0.02	2.25	2.262	188.47	194	2.47	0.59	326.7	317.4

*Calculated as the difference between measured total sulphur and sulphate sulphur

** Calculated from carbonate carbon content

*** Calculated from total sulphur content

**** Calculated as sulphide*31.25

IAMGOLD

Table A-4: Construction Rock Elemental Analysis Results

amec

Sample ID	Sample Type	From	To	Test Pit/ Drill Hole	Lithology	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
						µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
					Average Crustal	82300	1.8	425	3	0.025	41500	0.15	25	102	60	56300	20850	20	23300	950	1.2
		(m)			10x Average Crustal	823000	18	4250	30	0.25	415000	1.5	250	1020	600	563000	208500	200	233000	9500	12
ARD-17 DH13-FD-09	Bagsverd Creek Realignment Rock	3.47	4.47	DH13-FD-09	Granodiorite	3900	<0.50	18	0.21	<0.09	3200	<0.02	3.2	58	11	8200	720	8	4000	110	0.5
ARD-18 DH13-FD-09	Bagsverd Creek Realignment Rock	12.49	13.49	DH13-FD-09	Granodiorite	4600	<0.50	21	0.21	<0.09	4100	<0.02	3.7	60	9.5	10000	1000	13	5300	130	0.6
ARD-19 DH12-TMF-04	Tailings Management Facility Rock	7	8	DH12-TMF-04	Granodiorite	5300	0.6	48	0.26	0.41	5100	<0.02	3.9	57	7.9	11000	4100	56	4800	160	0.5
ARD-20 DH12-TMF-07	Tailings Management Facility Rock	5.95	6.95	DH12-TMF-07	Granodiorite	3400	<0.50	23	0.14	<0.09	3100	<0.02	2.7	57	1.8	7500	1600	18	3000	82	0.6
ARD-22 DH12-TMF-09	Tailings Management Facility Rock	7.4	8.4	DH12-TMF-09	Granodiorite	8200	<0.50	16	0.44	1.1	1900	<0.02	4.9	66	2.6	15000	570	18	10000	170	0.6
ARD-23 DH12-TMF-10	Tailings Management Facility Rock	4.3	5.3	DH12-TMF-10	Granodiorite	4400	<0.50	22	0.19	<0.09	3300	<0.02	3.9	54	11	8600	2300	10	4100	120	0.5
ARD-27 DH12-TMF-29	Tailings Management Facility Rock	17.5	18.5	DH12-TMF-29	Granodiorite	4100	<0.50	21	0.14	<0.09	2900	<0.02	3.3	50	3.0	7800	660	7	4100	110	0.4
ARD-28 DH12-TMF-30	Tailings Management Facility Rock	6.66	7.66	DH12-TMF-30	Granodiorite	4200	0.9	21	0.17	<0.09	3800	<0.02	3.4	51	2.1	7900	600	5	4100	82	0.5
ARD-21 DH12-TMF-08	Tailings Management Facility Rock	5.86	6.86	DH12-TMF-08	Diorite	10000	0.5	45	0.21	<0.09	9300	0.07	33	63	48	66000	2300	13	22000	700	0.6
ARD-24 DH12-TMF-13	Tailings Management Facility Rock	7.46	8.46	DH12-TMF-13	Intrusive Mafic	33000	<0.50	3.1	0.43	<0.09	4300	0.02	22	190	2.1	55000	65	42	41000	640	0.2
ARD-25 DH12-TMF-14	Tailings Management Facility Rock	4.66	5.66	DH12-TMF-14	Intrusive Mafic	23000	3.6	9.6	0.02	<0.09	42000	0.04	21	120	41	38000	700	15	22000	710	0.2
ARD-26 DH12-TMF-15	Tailings Management Facility Rock	6.1	7.1	DH12-TMF-15	Intrusive Mafic	28000	1.0	89	0.09	<0.09	22000	0.07	23	110	65	50000	3600	24	25000	500	0.5
ARD-29-DH12-TMF-31	Tailings Management Facility Rock	3.1	4.1	DH12-TMF-31	Intrusive Mafic	31000	0.7	5.5	0.14	<0.09	35000	<0.02	30	140	110	51000	170	31	35000	710	0.1
ARD-30-DH12-TMF-32	Tailings Management Facility Rock	3.17	4.17	DH12-TMF-32	Intrusive Mafic	33000	70	6.6	0.13	<0.09	71000	0.04	34	120	29	54000	770	17	24000	800	0.4

Sample ID	Sample Type	From	To	Test Pit/ Drill Hole	Lithology	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
						µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
					Average Crustal	23550	84	1050	14	0.2	0.05	2.3	370	5650	0.85	2.7	120	33	70	0.085
		(m)			10x Average Crustal	235500	840	10500	140	2	0.5	23	3700	56500	8.5	27	1200	330	700	0.85
ARD-17 DH13-FD-09	Bagsverd Creek Realignment Rock	3.47	4.47	DH13-FD-09	Granodiorite	580	6.5	540	2.7	<0.80	<0.04	<0.50	21	510	<0.02	0.61	14	3.2	22	<0.05
ARD-18 DH13-FD-09	Bagsverd Creek Realignment Rock	12.49	13.49	DH13-FD-09	Granodiorite	560	7.0	550	2.7	<0.80	<0.04	<0.50	21	590	0.04	0.87	17	3.6	27	<0.05
ARD-19 DH12-TMF-04	Tailings Management Facility Rock	7	8	DH12-TMF-04	Granodiorite	690	8.2	740	2.8	<0.80	0.04	<0.50	26	730	0.27	0.84	23	4.1	31	<0.05
ARD-20 DH12-TMF-07	Tailings Management Facility Rock	5.95	6.95	DH12-TMF-07	Granodiorite	660	5.7	610	1.8	<0.80	<0.04	<0.50	20	530	0.07	0.38	14	3.8	17	<0.05
ARD-22 DH12-TMF-09	Tailings Management Facility Rock	7.4	8.4	DH12-TMF-09	Granodiorite	540	13	540	2.1	<0.80	<0.04	<0.50	10	360	<0.02	0.45	23	3.1	33	<0.05
ARD-23 DH12-TMF-10	Tailings Management Facility Rock	4.3	5.3	DH12-TMF-10	Granodiorite	570	7.6	680	3.1	<0.80	0.05	<0.50	23	660	0.12	0.92	17	3.1	27	<0.05
ARD-27 DH12-TMF-29	Tailings Management Facility Rock	17.5	18.5	DH12-TMF-29	Granodiorite	520	9.7	470	2.3	<0.80	<0.04	<0.50	16	440	<0.02	0.16	12	2.0	24	<0.05
ARD-28 DH12-TMF-30	Tailings Management Facility Rock	6.66	7.66	DH12-TMF-30	Granodiorite	540	10	490	3.2	<0.80	<0.04	<0.50	20	390	<0.02	0.50	11	2.2	14	<0.05
ARD-21 DH12-TMF-08	Tailings Management Facility Rock	5.86	6.86	DH12-TMF-08	Diorite	1900	58	2000	2.4	<0.80	0.17	0.6	39	3100	0.12	0.11	110	16	74	<0.05
ARD-24 DH12-TMF-13	Tailings Management Facility Rock	7.46	8.46	DH12-TMF-13	Intrusive Mafic	260	100	800	1.7	<0.80	0.05	0.7	3.1	1100	<0.02	0.18	77	5.3	85	<0.05
ARD-25 DH12-TMF-14	Tailings Management Facility Rock	4.66	5.66	DH12-TMF-14	Intrusive Mafic	110	63	180	1.8	<0.80	0.12	<0.50	9.3	530	<0.02	0.004	55	1.0	36	<0.05
ARD-26 DH12-TMF-15	Tailings Management Facility Rock	6.1	7.1	DH12-TMF-15	Intrusive Mafic	210	56	520	2.2	<0.80	0.08	<0.50	17	1200	0.08	0.17	120	6.9	64	<0.05
ARD-29-DH12-TMF-31	Tailings Management Facility Rock	3.1	4.1	DH12-TMF-31	Intrusive Mafic	98	82	210	1.1	<0.80	0.14	<0.50	18	600	<0.02	0.013	99	3.0	45	<0.05
ARD-30-DH12-TMF-32	Tailings Management Facility Rock	3.17	4.17	DH12-TMF-32	Intrusive Mafic	91	79	230	1.8	<0.80	0.10	<0.50	36	53	<0.02	0.043	88	5.3	55	<0.05

Sample ID	Drillhole ID	From	To	Age	Consultant	Waste Classification	Lithology Name	Paste pH	Fizz Rate	Total Sulphur	Sulphate	Sulphide*	Total Carbon	Carbonate Carbon	Carbonate NP**	NP	AP*	MPA***	NPR	Carbonate NPR	NPR_{MPA}	Carbonate NPR_{MPA}
		(m)								%					kg $CaCO_3$/tonne							
ARD-1047487	E11-70	185.00	186.00	2011	AMEC	Mine Rock	Diorite Breccia	9.22	3	0.031	<0.01	0.02	0.386	0.342	32.17	32	0.66	0.97	48.8	49.0	33.0	33.2
ARD-1026152	E11-81	261.00	262.00	2011	AMEC	Mine Rock	Diorite Breccia	9.29	3	0.040	0.01	0.03	0.397	0.334	33.09	32	0.94	1.25	34.1	35.3	25.6	26.5
ARD-938691	E10-10	125.52	126.00	2010	AMEC	Mine Rock	Diorite Breccia	9.56	4	0.049	0.02	0.03	0.292	0.222	24.33	24	0.91	1.53	26.5	26.9	15.7	15.9
ARD-929111	E10-31	101.00	102.00	2010	AMEC	Mine Rock	Diorite Breccia	9.14	3	0.088	0.04	0.05	0.233	0.189	19.42	29	1.50	2.75	19.3	12.9	10.5	7.1
ARD-1048151	E11-65	147.60	148.60	2011	AMEC	Mine Rock	Diorite Breccia	9.10	3	0.097	0.03	0.07	0.285	0.228	23.75	24	2.09	3.03	11.5	11.3	7.9	7.8
ARD-1153209	E11-137	274.00	275.00	2011	AMEC	Mine Rock	Diorite Breccia	9.45	4	1.20	0.05	1.15	0.665	0.434	55.42	63	35.94	37.50	1.8	1.5	1.7	1.5
ARD-11	E11-087	84.30	86.50	2011	Knight Piésold	Mine Rock	Diorite Breccia	9.53	2	0.032	0.02	0.012	0.152	0.106	12.67	17	0.38	1.00	45.3	33.8	17.0	12.7
ARD-31	E12-179	354.75	356.85	2012	Knight Piésold	Mine Rock	Diorite Breccia	9.31	2	0.088	0.02	0.068	0.281	0.212	23.42	28	2.13	2.75	13.2	11.0	10.2	8.5
ARD-34	E11-075	95.40	97.50	2011	Knight Piésold	Mine Rock	Diorite Breccia	9.15	2	0.011	0.01	0.010	0.419	0.370	34.92	19	0.31	0.34	60.8	111.7	55.3	101.6
ARD-49	E11-140	372	373.90	2011	Knight Piésold	Mine Rock	Diorite Breccia	10.09	2	0.021	0.02	0.010	0.325	0.242	27.09	27	0.31	0.66	86.4	86.7	41.1	41.3
E11-077-2	E11-077	313	315.24	2011	Knight Piésold	Mine Rock	Diorite Breccia	8.88	3	0.034	0.02	0.014	0.773	0.696	64.42	64	0.44	1.06	146.3	147.2	60.2	60.6
E11-107-2	E11-107	153.77	155.54	2011	Knight Piésold	Mine Rock	Diorite Breccia	8.97	3	0.022	< 0.010	0.012	0.223	0.195	18.58	20	0.38	0.69	53.3	49.6	29.1	27.0
E11-110-2	E11-110	131.36	133.24	2011	Knight Piésold	Mine Rock	Diorite Breccia	9.02	2	0.114	0.03	0.084	0.058	0.043	4.83	11	2.63	3.56	4.2	1.8	3.1	1.4
ARD-1107358	E11-111	337.00	338.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	9.67	3	0.037	<0.01	0.03	0.082	0.065	6.83	13	0.84	1.16	15.4	8.1	11.2	5.9
ARD-90295	E11-87	89.00	90.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	9.40	3	0.039	0.02	0.02	0.160	0.124	13.33	20	0.59	1.22	33.7	22.5	16.4	10.9
ARD-1047357	E11-70	68.00	69.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	9.67	1	0.053	0.01	0.04	0.979	0.891	81.59	105	1.34	1.66	78.1	60.7	63.4	49.3
ARD-1117946	E11-122	130.00	131.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	9.61	3	0.058	0.02	0.04	0.649	0.604	54.09	54	1.19	1.81	45.5	45.5	29.8	29.8
ARD-1107356	E11-111	335.00	336.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	9.02	3	0.061	0.01	0.05	0.128	0.075	10.67	12	1.59	1.91	7.5	6.7	6.3	5.6
ARD-1070859	E11-97	58.00	59.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	9.51	3	0.074	0.02	0.05	1.36	1.317	113.34	126	1.69	2.31	74.7	67.2	54.5	49.0
ARD-1152087	E11-127	82.00	83.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	9.18	3	0.940	0.11	0.83	0.505	0.400	42.09	46	25.94	29.38	1.8	1.6	1.6	1.4
ARD-1284981	E12-00197	196.00	197.00	2012	AMEC	Mine Rock	Fault Breccia	8.51	2	0.069	0.05	0.02	0.046	0.013	3.83	9.0	0.59	2.16	15.2	6.5	4.2	1.8
ARD-1343542	E12-00211	160.00	161.00	2012	AMEC	Mine Rock	Hydrothermal Breccia	9.05	3	0.214	0.04	0.17	0.057	0.037	4.75	6.0	5.44	6.69	1.1	0.9	0.9	0.7
ARD-578580	E10-42	221.50	222.50	2010	AMEC	Mine Rock	Hydrothermal Breccia	8.60	3	0.441	0.20	0.24	1.38	1.263	115.01	139	7.53	13.78	18.5	15.3	10.1	8.3
ARD-1343545	E12-00211	162.00	163.00	2012	AMEC	Mine Rock	Hydrothermal Breccia	9.04	3	0.447	0.15	0.30	1.89	1.781	157.51	165	9.28	13.97	17.8	17.0	11.8	11.3
ARD-1336196	E12-00233	409.08	410.00	2012	AMEC	Mine Rock	Mafic Breccia	8.92	4	0.034	0.02	0.01	0.761	0.718	63.42	66	0.44	1.06	150.9	145.0	62.1	59.7
ARD-1486591	E12-00333	86.00	86.80	2012	AMEC	Mine Rock	Magma Mixing Breccia	9.35	3	0.025	0.02	<0.01	0.307	0.256	25.59	29	0.31	0.78	92.8	81.9	37.1	32.7
ARD-1350733	E12-00252	197.00	198.00	2012	AMEC	Mine Rock	Magma Mixing Breccia	9.06	2	0.027	0.02	<0.01	0.078	0.056	6.50	12	0.31	0.84	38.4	20.8	14.2	7.7
ARD-1258576	E12-00179	308.00	309.00	2012	AMEC	Mine Rock	Magma Mixing Breccia	9.47	4	0.042	0.01	0.03	0.467	0.416	38.92	39	1.00	1.31	39.0	38.9	29.7	29.7
ARD-1262116	E12-00289	103.00	104.35	2012	AMEC	Mine Rock	Magma Mixing Breccia	9.46	3	0.086	0.05	0.04	0.063	0.030	5.25	13	1.13	2.69	11.6	4.7	4.8	2.0
ARD-25	E10-30	211.22	213.22	2010	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.37	3	0.047	0.03	<0.02	0.293	0.226	18.85	25	0.53	1.47	47.1	35.5	47.1	46.0
ARD-27	E11-049	383.00	384.90	2011	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.12	2	0.013	0.01	<0.01	0.199	0.161	13.41	20	0.31	0.41	64.0	42.9	64.0	53.1
ARD-33	E11-048	164.30	166.60	2011	Knight Piésold	Mine Rock	Magma Mixing Breccia	8.43	2	0.145	0.04	<0.11	1.540	1.435	119.59	136	3.28	4.53	41.4	36.4	41.4	39.1
E10-013-2	E10-013	50.00	52.20	2010	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.03	3	0.075	0.01	<0.07	1.340	1.291	107.58	119	2.03	2.34	58.6	53.0	58.6	55.0
E10-031-3	E10-031	500.00	502.00	2010	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.20	3	0.156	0.05	<0.11	0.993	0.861	71.72	86	3.31	4.88	26.0	21.7	26.0	25.0
E11-054-4	E11-054	128.40	130.80	2011	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.61	3	0.019	0.02	<0.01	0.474	0.436	36.36	38	0.31	0.59	121.6	116.4	121.6	126.4
E11-100-2	E11-100	107.57	109.89	2011	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.07	4	0.075	0.01	<0.07	1.190	1.091	90.90	97	2.03	2.34	47.8	44.8	47.8	48.8
ARD-1306362	E12-00247	476.00	477.00	2012	AMEC	Mine Rock	Quartz Carbonate Heterolithic Breccia	8.37	4	0.016	0.02	<0.01	4.15	4.183	345.86	332	0.31	0.50	1062.4	1106.7	664.0	691.7
ARD-1317321	E12-00229	300.00	301.00	2012	AMEC	Mine Rock	Quartz Carbonate Heterolithic Breccia	8.40	3	0.049	0.03	0.02	3.19	3.122	265.85	268	0.59	1.53	451.4	447.7	175.0	173.6
ARD-1329877	E12-00186	172.00	172.92	2012	AMEC	Mine Rock	Fault	8.75	3	0.020	0.02	<0.01	0.024	0.006	2.00	0.60	0.31	0.63	1.9	6.4	1.0	3.2
ARD-1284982	E12-00197	197.00	198.00	2012	AMEC	Mine Rock	Fault	7.84	1	0.053	0.04	0.01	0.029	0.003	2.42	5.6	0.41	1.66	13.8	5.9	3.4	1.5
ARD-1172124	E11-95	165.00	166.00	2011	AMEC	Mine Rock	Fault	9.25	3	0.067	0.03	0.04	2.69	2.562	224.18	227	1.16	2.09	196.3	193.9	108.4	107.1
ARD-29	E11-061	262.30	264.00	2011	Knight Piésold	Mine Rock	Fault	8.21	1	0.023	0.02	0.010	0.048	0.020	4.00	7.3	0.31	0.72	23.4	12.8	10.2	5.6
E11-066-1	E11-066	312	316.2	2011	Knight Piésold	Mine Rock	Fault	8.03	2	0.045	0.02	0.025	0.257	0.234	21.42	24	0.78	1.41	30.7	27.4	17.1	15.2
ARD-573527A	E10-40	29.40	30.10	2010	AMEC	Mine Rock	Intrusive Feldspar Porphyry	9.73	2	0.020	0.01	0.01	0.219	0.190	18.25	21	0.31	0.63	67.2	58.4	33.6	29.2
ARD-1399888	E12-00228	128.60	129.60	2012	AMEC	Mine Rock	Intrusive Feldspar Porphyry	9.73	3	0.023	0.01	0.01	0.235	0.204	19.58	23	0.41	0.72	56.6	48.2	32.0	27.2
ARD-681852	E10-04	23.62	24.20	2010	AMEC	Mine Rock	Intrusive Feldspar Porphyry	9.76	3	0.025	0.02	<0.01	0.115	0.096	9.58	12	0.31	0.78	38.4	30.7	15.4	12.3
ARD-1361014	E12-00271	181.00	182.00	2012	AMEC	Mine Rock	Intrusive Feldspar Porphyry	9.55	3	0.050	0.03	0.02	0.192	0.162	16.00	21	0.63	1.56	33.6	25.6	13.4	10.2
ARD-227138	E13-00400	155.20	156.00	2013	AMEC	Mine Rock	Intrusive Feldspar Porphyry	9.50	4	0.084	<0.01	0.07	0.827	0.761	68.92	75	2.31	2.63	32.4	29.8	28.6	26.3
E11-111-1	E11-111	152.3	154.16	2011	Knight Piésold	Mine Rock	Intrusive Feldspar Porphyry	9.40	4	0.052	< 0.010	0.042	0.558	0.516	46.50	46	1.31	1.63	35.0	35.4	28.3	28.6
ARD-1398758	E12-00197	267.00	268.00	2012	AMEC	Mine Rock	Intermediate and Felsic Dykes	8.90	3	0.025	0.02	<0.01	0.025	0.011	2.08	1.2	0.31	0.78	3.8	6.7	1.5	2.7
ARD-931623	E10-11	150.68	151.50	2010	AMEC	Mine Rock	Intermediate and Felsic Dykes	9.78	3	0.027	<0.01	0.02	0.469	0.412	39.09	41	0.53	0.84	77.2	73.6	48.6	46.3
ARD-1326120	E12-00313	140.20	141.00	2012	AMEC	Mine Rock	Intermediate and Felsic Dykes	8.75	3	0.038	0.04	<0.01	0.414	0.396	34.50	45	0.31	1.19	144.0	110.4	37.9	29.1
ARD-1045336	E11-64	124.00	125.00	2011	AMEC	Mine Rock	Intermediate and Felsic Dykes	9.40	4	0.075	0.02	0.06	0.723	0.660	60.25	108	1.72	2.34	62.8	35.1	46.1	25.7
ARD-928214	E10-38	168.22	168.94	2010	AMEC	Mine Rock	Intermediate and Felsic Dykes	9.81	4	0.132	<0.01	0.12	1.02	0.985	85.01	101	3.81	4.13	26.5	22.3	24.5	20.6
ARD-571416	E10-47	97.50	98.08	2010	AMEC	Mine Rock	Intermediate and Felsic Dykes	9.27	3	0.446	<0.01	0.44	0.071	0.052	5.92	8.8	13.63	13.94	0.6	0.4	0.6	0.4
ARD-1308221	E12-00260	158.00	159.00	2012	AMEC	Mine Rock	Diorite	8.73	3	0.020	0.02	<0.01	0.433	0.382	36.09	43	0.31	0.63	137.6	115.5	68.8	57.7
ARD-70623	E10-47	412.05	413.02	2010	AMEC	Mine Rock	Diorite	9.05	3	0.020	0.01	0.01	0.297	0.254	24.75	25	0.31	0.63	80.0	79.2	40.0	39.6
ARD-1447030	E12-00331	303.00	303.90	2012	AMEC	Mine Rock	Diorite	8.75	2	0.022	0.02	<0.01	0.088	0.071	7.33	16	0.31	0.69	51.2	23.5	23.3	10.7
ARD-1171884	E11-102	100.00	101.00	2011	AMEC	Mine Rock	Diorite	9.57	1	0.023	0.01	0.01	0.080	0.064	6.67	13	0.41	0.72	32.0	16.4	18.1	9.3
ARD-1029210	E11-79	205.00	206.00	2011	AMEC	Mine Rock	Diorite	8.91	2	0.024	0.02	<0.01	0.226	0.192	18.83	25	0.31	0.75	80.0	60.3	33.3	25.1
ARD-1109100	E11-114	68.00	69.00	2011	AMEC	Mine Rock	Diorite	9.54	3	0.027	0.02	<0.01	0.480	0.438	40.00	39	0.31	0.84	124.8	128.0	46.2	47.4
ARD-1336164	E12-00233	380.00	381.00	2012	AMEC	Mine Rock	Diorite	8.67	4	0.031	0.02	0.01	0.765	0.732	63.75	68	0.34	0.97	197.8	185.5	70.2	65.8
ARD-1396533	E12-00222	282.00	283.00	2012	AMEC	Mine Rock	Diorite	8.67	3	0.039	0.02	0.02	0.886	0.845	73.84	79	0.59	1.22	133.1	124.4	64.8	60.6
ARD-1259369	E12-00233	113.00	114.00	2012	AMEC	Mine Rock	Diorite	9.77	4	0.045	0.04	<0.01	0.838	0.855	69.84	85	0.31	1.41	272.0	223.5	60.4	49.7
ARD-931559	E10-11	104.32	104.87	2010	AMEC	Mine Rock	Diorite	9.46	3	0.051	0.02	0.03	0.863	0.859	71.92	82	0.97	1.59	84.6	74.2	51.5	45.1
ARD-1335660	E12-00273	134.00	135.00	2012	AMEC	Mine Rock	Diorite	8.84	4	0.052	0.02	0.03	1.68	1.697	140.01	146	1.00	1.63	146.0	140.0	89.8	86.2
ARD-684437	E10-08	56.08	56.58	2010	AMEC	Mine Rock	Diorite	8.99	3	0.056	0.02	0.04	0.373	0.320	31.09	36	1.13	1.75	32.0	27.6	20.6	17.8
ARD-1387873	E12-00208	87.00	88.00	2012	AMEC	Mine Rock	Diorite	8.71	2	0.068	0.04	0.03	0.056	0.025	4.67	17	0.88	2.13	19.4	5.3	8.0	2.2
ARD-1105726	E11-116	15.00	16.00	2011	AMEC	Mine Rock	Diorite	9.05	4	0.070	0.03	0.04	0.557	0.474	46.42	96	1.25	2.19	76.8	37.1	43.9	21.2
ARD-1	DH12-PO-09	0.00	1.35	2012	AMEC	Mine Rock	Diorite	9.39	1	0.072	0.03	0.04	0.038	0.026	3.17	8.4	1.31	2.25	6.4	2.4	3.7	1.4
ARD-1334254	E12-00240	170.00	171.00	2012	AMEC	Mine Rock	Diorite	9.00	3	0.088	0.06	0.03	0.106	0.082	8.83	17	0.88	2.75	19.4	10.1	6.2	3.2
ARD-920512	E10-21	222.12	223.00	2010	AMEC	Mine Rock	Diorite	9.60	2	0.095	0.04	0.06	0.357	0.268	29.75	29	1.72	2.97	16.9	17.3	9.8	10.0
ARD-930693	E10-18	33.00	34.00	2010	AMEC	Mine Rock	Diorite	9.23	3	0.105	0.04	0.07	0.087	0.070	7.25	14	2.03	3.28	6.9	3.6	4.3	2.2
ARD-1363071	E12-00228	297.00	298.00	2012	AMEC	Mine Rock	Diorite	9.20	3	0.128	0.02	0.11	0.473	0.404	39.42	40	3.38	4.00	11.9	11.7	10.0	9.9
ARD-1313311	E12-00317	12.90	14.00	2012	AMEC	Mine Rock	Diorite	8.79	4	0.156	0.08	0.08	1.62	1.623	135.01	138	2.38	4.88	58.1	56.8	28.3	27.7
ARD-1262008	E12-00289	6.30	7.00	2012	AMEC	Mine Rock	Diorite	8.96	3	0.200	0.08	0.12	0.912	0.845	76.01	88	3.75	6.25	23.5	20.3	14.1	12.2
ARD-1260433	E12-00276	216.80	218.00	2012	AMEC	Mine Rock	Diorite	8.56	3	0.211	0.06	0.15	0.093	0.070	7.75	18	4.72	6.59	3.8	1.6	2.7	1.2
ARD-1152026	E11-127	26.80	27.50	2011	AMEC	Mine Rock	Diorite	8.72	3	0.257	0.08	0.18	2.26	2.081	188.35	190	5.53	8.03	34.4	34.1	23.7	23.5
ARD-1168407	E11-00168	371.00	372.00	2011	AMEC	Mine Rock	Diorite	9.11	3	0.366	0.05	0.32	0.723	0.604	60.25	67	9.88	11.44	6.8	6.1	5.9	5.3
ARD-12	E12-217	547.00	549.50	2012	Knight Piésold	Mine Rock	Diorite	9.37	2	0.039	0.02	0.019	0.272	0.226	22.67	27	0.59	1.22	45.5	38.2	22.2	18.6
ARD-18	E11-098	247.40	249.30	2011	Knight Piésold	Mine Rock	Diorite	9.35	3	0.064	0.03	0.034	0.436	0.360	36.34	41	1.06	2.00	38.6	34.2	20.5	18.2
ARD-37	E11-071	281.10	283.10	2011	Knight Piésold	Mine Rock	Diorite	9.67	2	0.058	0.02	0.038	0.263	0.230	21.92	31	1.19	1.81	26.1	18.5	17.1	12.1
ARD-47	E12-198	210.00	211.80	2012	Knight Piésold	Mine Rock	Diorite	9.67	2	0.110	0.03	0.080	0.272	0.234	22.67	27	2.50	3.44	10.8	9.1	7.9	6.6
ARD-51	E11-141	183.70	184.50	2011	Knight Piésold	Mine Rock	Diorite	9.34	2	0.046	0.02	0.026	1.14	1.065	95.01	96	0.81	1.44	118.2	116.9	66.8	66.1
ARD-58	CL10-01	227.50	229.50	2010	Knight Piésold	Mine Rock	Diorite	9.49	2	0.036	0.02	0.016	0.394	0.336	32.84	41	0.50	1.13	82.0	65.7	36.4	29.2
E10-013-1	E10-013	5.78	7.8	2010	Knight Piésold	Mine Rock	Diorite	9.19	2	0.052	0.02	0.032	0.235	0.185	19.58	29	1.00	1.63	29.0	19.6	17.8	12.1
E10-023-1	E10-023	30	31.9	2010	Knight Piésold	Mine Rock	Diorite	9.23	2	0.053	0.02	0.033	0.476	0.402	39.67	36	1.03	1.66	34.9	38.5	21.7	24.0
E10-031-2	E10-031	158	160.1	2010	Knight Piésold	Mine Rock	Diorite	9.58	2	0.201	0.04	0.161	0.520	0.422	43.34	41	5.03	6.28	8.1	8.6	6.5	6.9
E10-038-1	E10-038	74	75.9	2010	Knight Piésold	Mine Rock	Diorite	9.17	2	0.028	< 0.010	0.018	0.080	0.058	6.67	14	0.56	0.88	24.9	11.9	16.0	7.6
E10-038-3	E10-038	158	159.85	2010	Knight Piésold	Mine Rock	Diorite	9.06	2	0.123	0.03	0.093	0.114	0.090	9.50	15	2.91	3.84	5.2	3.3	3.9	2.5
E11-095-1	E11-095	284.6	286.4	2011	Knight Piésold	Mine Rock	Diorite	8.93	2	0.077	0.01	0.067	0.351	0.300	29.25	33	2.09	2.41	15.8	14.0	13.7	12.2
E11-100-3	E11-100	224.56	226.65	2011	Knight Piésold	Mine Rock	Diorite	9.61	3	0.018	< 0.010	0.010	0.466	0.426	38.84	39	0.31	0.56	124.8	124.3	69.3	69.0
E11-138-2	E11-138	211.3	213.33	2011	Knight Piésold	Mine Rock	Diorite	9.04	3	0.233	0.08	0.153	1.50	1.331	125.01	129	4.78	7.28	27.0	26.1	17.7	17.2
ARD-24	E11-062	15.90	17.80	2011	Knight Piésold	Mine Rock	Diorite	9.14	3	0.044	0.02	0.024	0.312	0.252	26.00	27	0.75	1.38	36.0	34.7	19.6	18.9
ARD-28	E11-049	38.30	40.20	2011	Knight Piésold	Mine Rock	Diorite	9.50	3	0.805	0.02	0.785	0.436	0.390	36.34	35	24.53	25.16	1.4	1.5	1.4	1.4
ARD-3	E10-036	103.30	105.20	2010	Knight Piésold	Mine Rock	Diorite	9.61	3	0.087	0.04	0.047	0.492	0.398	41.00	39	1.47	2.72	26.6	27.9	14.3	15.1
ARD-57	CL10-01	178.20	180.00	2010	Knight Piésold	Mine Rock	Diorite	9.10	2	0.135	0.02	0.115	0.792	0.750	66.00	67	3.59	4.22	18.6	18.4	15.9	15.6
E10-042-1	E10-042	14	16	2010	Knight Piésold	Mine Rock	Diorite	9.64	3	0.060	0.02	0.040	0.469	0.398	39.09	38	1.25	1.88	30.4	31.3	20.3	20.8
E10-042-2	E10-042	89.5	91.7	2010	Knight Piésold	Mine Rock	Diorite	9.30	3	0.547	0.09	0.457	0.285	0.198	23.75	25	14.28	17.09	1.8	1.7	1.5	1.4
E11-053-1	E11-053	152.59	154.4	2011	Knight Piésold	Mine Rock	Diorite	9.39	4	0.212	0.06	0.152	1.01	0.931	84.17	83	4.75	6.63	17.5	17.7	12.5	12.7
E11-097-1	E11-097	35.1	37.2	2011	Knight Piésold	Mine Rock	Diorite	9.39	1	0.018	0.02	0.010	0.054	0.037	4.50	9.7	0.31	0.56	31.0	14.4	17.2	8.0
ARD-1311777	E12-00356	100.80	101.70	2012	AMEC	Mine Rock	Quartz Diorite	9.32	3	0.023	<0.01	0.01	0.110	0.092	9.17	10	0.41	0.72	24.6	22.6	13.9	12.8
ARD-1049797	E11-75	58.00	59.00	2011	AMEC	Mine Rock	Quartz Diorite	8.71	3	0.028	0.02	<0.01	0.547	0.480	45.59	49	0.31	0.88	156.8	145.9	56.0	52.1
ARD-68989	E11-58	207.00	208.00	2011	AMEC	Mine Rock	Quartz Diorite	9.60	1	0.032	0.01	0.02	0.108	0.084	9.00	17	0.69	1.00	24.7	13.1	17.0	9.0
ARD-2	DH12-PO-10	2.29	3.46	2012	AMEC	Mine Rock	Quartz Diorite	8.83	3	0.038	0.02	0.02	0.871	0.793	72.59	74	0.56	1.19	131.6	129.0	62.3	61.1
ARD-1346137	E12-00180	129.00	130.00	2012	AMEC	Mine Rock	Quartz Diorite	8.93	3	0.052	0.02	0.03	0.768	0.722	64.00	72	1.00	1.63	72.0	64.0	44.3	39.4
ARD-1017819	E11-89	65.00	66.10	2011	AMEC	Mine Rock	Quartz Diorite	8.98	1	0.072	0.01	0.06	0.086	0.050	7.17	18	1.94	2.25	9.3	3.7	8.0	3.2
ARD-1353200	E12-00182	283.00	284.00	2012	AMEC	Mine Rock	Quartz Diorite	8.98	4	0.086	0.05	0.04	0.802	0.740	66.84	68	1.13	2.69	60.4	59.4	25.3	24.9
ARD-1057715	E11-85	89.00	90.00	2011	AMEC	Mine Rock	Quartz Diorite	8.83	3	0.093	0.02	0.07	0.192	0.137	16.00	21	2.28	2.91	9.2	7.0	7.2	5.5
ARD-1323885	E12-00251	276.00	277.00	2012	AMEC	Mine Rock	Quartz Diorite	9.03	4	0.093	0.03	0.06	0.648	0.560	54.00	63	1.97	2.91	32.0	27.4	21.7	18.6
ARD-1456517	E12-00309	154.00	155.00	2012	AMEC	Mine Rock	Quartz Diorite	9.31	3	0.100	0.04	0.06	0.477	0.400	39.75	49	1.88	3.13	26.1	21.2	15.7	12.7
ARD-1353098	E12-00182	191.00	192.00	2012	AMEC	Mine Rock	Quartz Diorite	9.45	4	0.169	0.07	0.10	0.629	0.564	52.42	58	3.09	5.28	18.7	16.9	11.0	9.9
ARD-1347633	E12-00206	79.00	80.00	2012	AMEC	Mine Rock	Tonalite	8.55	2	<0.01	<0.01	<0.01	0.183	0.143	15.25	16	0.31	0.30	51.2	48.8	53.3	50.8
ARD-11 -DH12-PO-20	DH12-PO-20	13.77	14.77	2012	AMEC	Mine Rock	Tonalite	9.60	3	0.006	<0.01	<0.01	0.632	0.596	52.67	50	0.31	0.30	160.0	168.5	166.7	175.6
ARD-13 DH12-PO-07R	DH12-PO-07R	6.38	7.38	2012	AMEC	Mine Rock	Tonalite	9.35	3	0.009	<0.01	<0.01	0.231	0.200	19.25	18	0.31	0.30	57.6	61.6	60.0	64.2
ARD-1114935	E11-00153-3	14.00	15.00	2011	AMEC	Mine Rock	Tonalite	9.24	3	0.010	0.01	<0.01	0.219	0.192	18.25	19	0.31	0.31	60.8	58.4	60.8	58.4
ARD-1329749	E12-00186	54.00	55.00	2012	AMEC	Mine Rock	Tonalite	8.68	3	0.011	0.01	<0.01	0.081	0.049	6.75	9.5	0.31	0.34	30.4	21.6	27.6	19.6
ARD-926721	E10-34	233.38	234.18	2010	AMEC	Mine Rock	Tonalite	9.06	3	0.011	0.01	<0.01	0.473	0.438	39.42	40	0.31	0.34	128.0	126.1	116.4	114.7
ARD-1313309	E12-00317	12.00	12.90	2012	AMEC	Mine Rock	Tonalite	8.93	3	0.012	0.01	<0.01	0.598	0.544	49.84	51	0.31	0.38	163.2	159.5	136.0	132.9
ARD-7 DH12-PO-16	DH12-PO-16	16.71	17.68	2012	AMEC	Mine Rock	Tonalite	9.25	3	0.012	0.01	<0.01	0.245	0.216	20.42	21	0.31	0.38	67.2	65.3	56.0	54.4
ARD-8 DH12-PO-15	DH12-PO-15	8.26	9.22	2012	AMEC	Mine Rock	Tonalite	9.50	3	0.013	0.01	<0.01	0.141	0.108	11.75	13	0.31	0.41	41.6	37.6	32.0	28.9
ARD-1008261	E11-84	336.00	337.00	2011	AMEC	Mine Rock	Tonalite	8.74	1	0.014	0.01	<0.01	0.066	0.048	5.50	7.3	0.31	0.44	23.4	17.6	16.7	12.6
ARD-1153674	E11-138	115.00	116.00	2011	AMEC	Mine Rock	Tonalite	9.53	3	0.014	<0.01	<0.01	0.305	0.282	25.42	24	0.31	0.44	76.8	81.3	54.9	58.1
ARD-1284846	E12-00197	75.00	76.00	2012	AMEC	Mine Rock	Tonalite	8.78	4	0.014	0.01	<0.01	0.143	0.109	11.92	13	0.31	0.44	41.6	38.1	29.7	27.2
ARD-5 DH12-PO-08R	DH12-PO-08R	6.64	7.64	2012	AMEC	Mine Rock	Tonalite	9.05	3	0.016	0.02	<0.01	0.424	0.390	35.34	37	0.31	0.50	118.4	113.1	74.0	70.7
ARD-16 DH12-PO-15	DH12-PO-15	6.03	7.03	2012	AMEC	Mine Rock	Tonalite	9.41	3	0.017	0.02	<0.01	0.290	0.248	24.17	24	0.31	0.53	76.8	77.3	45.2	45.5
ARD-1465755	E12-00358	120.00	121.00	2012	AMEC	Mine Rock	Tonalite	9.36	3	0.018	<0.01	<0.01	0.293	0.254	24.42	24	0.31	0.56	76.8	78.1	42.7	43.4
ARD-1108761	E11-107	243.00	244.00	2011	AMEC	Mine Rock	Tonalite	9.41	3	0.020	0.01	0.01	0.385	0.340	32.09	32	0.31	0.63	102.4	102.7	51.2	51.3
ARD-1390082	E12-00215	81.00	82.00	2012	AMEC	Mine Rock	Tonalite	9.27	3	0.020	0.01	0.01	0.273	0.222	22.75	24	0.31	0.63	76.8	72.8	38.4	36.4
ARD-1376168	E12-00213	154.80	155.80	2012	AMEC	Mine Rock	Tonalite	9.29	3	0.021	0.01	0.01	0.255	0.202	21.25	20	0.34	0.66	58.2	61.8	30.5	32.4
ARD-1117160	E11-119	39.90	40.60	2011	AMEC	Mine Rock	Tonalite	9.10	3	0.022	0.01	0.01	0.200	0.155	16.67	45	0.38	0.69	120.0	44.4	65.5	24.2
ARD-1328761	E11-00172	249.00	250.00	2011	AMEC	Mine Rock	Tonalite	9.40	3	0.023	0.01	0.01	0.199	0.167	16.58	18	0.41	0.72	44.3	40.8	25.0	23.1
ARD-15 DH12-PO-07R	DH12-PO-07R	9.32	10.15	2012	AMEC	Mine Rock	Tonalite	9.42	3	0.023	0.02	<0.01	0.306	0.264	25.50	24	0.31	0.72	76.8	81.6	33.4	35.5
ARD-1398253	E12-00216	50.00	51.00	2012	AMEC	Mine Rock	Tonalite	8.79	3	0.030	0.01	0.02	0.371	0.310	30.92	24	0.63	0.94	38.4	49.5	25.6	33.0
ARD-572129	E11-56	144.00	145.00	2011	AMEC	Mine Rock	Tonalite	9.62	2	0.030	0.02	0.01	0.152	0.117	12.67	13	0.31	0.94	41.6	40.5	13.9	13.5
ARD-246803	E13-00398	100.00	101.00	2013	AMEC	Mine Rock	Tonalite	8.88	3	0.031	0.01	0.02	0.352	0.290	29.34	30	0.66	0.97	45.7	44.7	31.0	30.3
ARD-1416171	E13-00394	182.00	183.00	2013	AMEC	Mine Rock	Tonalite	8.72	3	0.032	0.01	0.02	0.353	0.276	29.42	29	0.69	1.00	42.2	42.8	29.0	29.4
ARD-935087	E10-16	309.64	310.50	2010	AMEC	Mine Rock	Tonalite	9.63	3	0.032	0.01	0.02	0.611	0.558	50.92	50	0.69	1.00	72.7	74.1	50.0	50.9
ARD-1258760	E12-00179	476.00	477.00	2012	AMEC	Mine Rock	Tonalite	9.67	2	0.033	0.01	0.02	0.043	0.022	3.58	1.6	0.72	1.03	2.2	5.0	1.6	3.5
ARD-1359177	E12-00261	401.00	402.00	2012	AMEC	Mine Rock	Tonalite	9.27	3	0.034	0.02	0.01	0.323	0.274	26.92	28	0.44	1.06	64.0	61.5	26.4	25.3
ARD-1115728	E12-00209	90.11	91.00	2012	AMEC	Mine Rock	Tonalite	8.89	3	0.036	0.02	0.02	0.328	0.254	27.34	28	0.50	1.13	56.0	54.7	24.9	24.3
ARD-1167807	E11-00169	65.00	66.00	2011	AMEC	Mine Rock	Tonalite	9.28	3	0.037	0.02	0.02	0.300	0.260	25.00	47	0.53	1.16	88.5	47.1	40.6	21.6
ARD-1469044	E12-00329	135.00	135.50	2012	AMEC	Mine Rock	Tonalite	8.88	3	0.040	0.01	0.03	0.340	0.280	28.34	30	0.94	1.25	32.0	30.2	24.0	22.7
ARD-12 DH12-PO-21	DH12-PO-21	16.92	17.92	2012	AMEC	Mine Rock	Tonalite	9.37	3	0.041	0.01	0.03	0.516	0.478	43.00	42	0.97	1.28	43.4	44.4	32.8	33.6
ARD-929864	E10-38	446.00	447.00	2010	AMEC	Mine Rock	Tonalite	8.77	3	0.041	0.02	0.02	0.313	0.244	26.09	28	0.66	1.28	42.7	39.7	21.9	20.4
ARD-1344533	E12-00242	32.00	33.00	2012	AMEC	Mine Rock	Tonalite	8.77	3	0.047	0.03	0.02	0.085	0.045	7.08	11	0.53	1.47	20.7	13.3	7.5	4.8
ARD-1111278	E11-00140	119.00	120.00	2011	AMEC	Mine Rock	Tonalite	9.58	3	0.052	0.03	0.02	0.068	0.039	5.67	7.0	0.69	1.63	10.2	8.2	4.3	3.5
ARD-1390445	E12-00215	416.00	417.00	2012	AMEC	Mine Rock	Tonalite	9.22	3	0.053	0.03	0.02	0.242	0.187	20.17	22	0.72	1.66	30.6	28.1	13.3	12.2
ARD-1027713	E11-82	158.00	159.00	2011	AMEC	Mine Rock	Tonalite	8.84	4	0.058	0.02	0.04	0.696	0.620	58.00	108	1.19	1.81	90.9	48.8	59.6	32.0

Sample ID	Drillhole ID	From	To	Age	Consultant	Waste Classification	Lithology Name	Paste pH	Fizz Rate	Total Sulphur	Sulphate	Sulphide*	Total Carbon	Carbonate Carbon	Carbonate NP**	NP	AP*	MPA***	NPR	Carbonate NPR	NPR_{MPA}	Carbonate NPR_{MPA}
		(m)								%						kg $CaCO_3$/tonne						
ARD-1008450	E11-86	10.00	11.00	2011	AMEC	Mine Rock	Tonalite	9.57	3	0.062	0.02	0.04	0.338	0.266	28.17	27	1.31	1.94	20.6	21.5	13.9	14.5
ARD-1261924	E12-00270	150.00	151.00	2012	AMEC	Mine Rock	Tonalite	8.93	3	0.069	0.03	0.04	0.383	0.304	31.92	33	1.22	2.16	27.1	26.2	15.3	14.8
ARD-1173948	E11-106	440.00	441.00	2011	AMEC	Mine Rock	Tonalite	9.67	3	0.070	0.02	0.05	0.299	0.228	24.92	20	1.56	2.19	12.8	15.9	9.1	11.4
ARD-1120967	E11-136	7.00	8.00	2011	AMEC	Mine Rock	Tonalite	9.34	2	0.072	0.03	0.04	0.132	0.069	11.00	14	1.31	2.25	10.7	8.4	6.2	4.9
ARD-1413274	E12-00177	196.00	197.00	2012	AMEC	Mine Rock	Tonalite	9.48	4	0.083	0.02	0.06	0.357	0.290	29.75	31	1.97	2.59	15.7	15.1	12.0	11.5
ARD-1401198	E12-00337	68.00	69.00	2012	AMEC	Mine Rock	Tonalite	9.53	3	0.090	0.02	0.07	0.294	0.220	24.50	25	2.19	2.81	11.4	11.2	8.9	8.7
ARD-936266	E10-21	41.00	42.00	2010	AMEC	Mine Rock	Tonalite	9.48	3	0.091	0.03	0.06	0.348	0.278	29.00	30	1.91	2.84	15.7	15.2	10.5	10.2
ARD-951469	E11-90	451.00	452.00	2011	AMEC	Mine Rock	Tonalite	9.62	3	0.095	0.02	0.08	0.371	0.298	30.92	30	2.34	2.97	12.8	13.2	10.1	10.4
ARD-10 DH12-PO-18	DH12-PO-18	2.48	3.48	2012	AMEC	Mine Rock	Tonalite	9.74	3	0.103	0.02	0.08	0.444	0.374	37.00	36	2.59	3.22	13.9	14.3	11.2	11.5
ARD-68741	E11-54	190.30	191.20	2011	AMEC	Mine Rock	Tonalite	9.21	1	0.114	0.03	0.08	0.028	0.009	2.33	2.4	2.63	3.56	0.9	0.9	0.7	0.7
ARD-9 DH12-PO-19	DH12-PO-19	21.3	22.3	2012	AMEC	Mine Rock	Tonalite	9.67	3	0.116	0.04	0.08	0.414	0.328	34.50	33	2.38	3.63	13.9	14.5	9.1	9.5
ARD-1057141	E11-76	234.00	235.00	2011	AMEC	Mine Rock	Tonalite	9.32	3	0.120	<0.01	0.11	0.766	0.682	63.84	64	3.44	3.75	18.6	18.6	17.1	17.0
ARD-3	DH12-PO-11	2.30	3.25	2012	AMEC	Mine Rock	Tonalite	9.65	3	0.129	0.02	0.11	0.345	0.256	28.75	29	3.41	4.03	8.5	8.4	7.2	7.1
ARD-1341540	E12-00287	39.00	40.00	2012	AMEC	Mine Rock	Tonalite	9.11	4	0.145	0.04	0.11	1.17	1.111	97.51	98	3.28	4.53	29.9	29.7	21.6	21.5
ARD-1260435	E12-00276	219.30	220.00	2012	AMEC	Mine Rock	Tonalite	8.91	4	0.148	0.03	0.12	1.46	1.421	121.67	121	3.69	4.63	32.8	33.0	26.2	26.3
ARD-689315	E10-05	215.40	216.50	2010	AMEC	Mine Rock	Tonalite	9.39	3	0.153	0.03	0.12	0.314	0.230	26.17	26	3.84	4.78	6.8	6.8	5.4	5.5
ARD-1156837	E11-00142	281.00	282.00	2011	AMEC	Mine Rock	Tonalite	9.60	3	0.156	0.03	0.13	0.325	0.246	27.09	27	3.94	4.88	6.9	6.9	5.5	5.6
ARD-952686	E10-29	287.00	287.67	2010	AMEC	Mine Rock	Tonalite	9.05	3	0.181	0.04	0.14	0.527	0.428	43.92	47	4.41	5.66	10.7	10.0	8.3	7.8
ARD-227239	E13-00400	245.00	246.00	2013	AMEC	Mine Rock	Tonalite	9.28	3	0.200	0.03	0.17	0.542	0.452	45.17	48	5.31	6.25	9.0	8.5	7.7	7.2
ARD-1387476	E12-00196	514.50	515.30	2012	AMEC	Mine Rock	Tonalite	8.86	3	0.245	0.04	0.21	1.73	1.657	144.18	140	6.41	7.66	21.9	22.5	18.3	18.8
ARD-1371750	E12-00178	186.00	187.00	2012	AMEC	Mine Rock	Tonalite	9.38	3	0.332	0.02	0.31	0.039	0.021	3.25	5.0	9.75	10.38	0.5	0.3	0.5	0.3
ARD-1157490	E11-00144	333.00	334.00	2011	AMEC	Mine Rock	Tonalite	9.31	3	0.396	0.08	0.32	0.414	0.316	34.50	35	9.88	12.38	3.5	3.5	2.8	2.8
ARD-1385848	E12-00221	239.60	240.00	2012	AMEC	Mine Rock	Tonalite	9.18	3	0.494	0.12	0.37	0.156	0.065	13.00	14	11.69	15.44	1.2	1.1	0.9	0.8
ARD-1163047	E11-00150	86.00	87.00	2011	AMEC	Mine Rock	Tonalite	8.54	3	0.616	0.13	0.49	0.307	0.184	25.59	26	15.19	19.25	1.7	1.7	1.4	1.3
ARD-69669	E11-58	368.40	369.40	2011	AMEC	Mine Rock	Tonalite	9.10	2	1.44	<0.01	1.43	0.298	0.206	24.83	26	44.69	45.00	0.6	0.6	0.6	0.6
ARD-41	E11-120	74.50	76.40	2011	Knight Piésold	Mine Rock	Tonalite	8.98	2	0.149	0.04	0.109	0.448	0.348	37.34	39	3.41	4.66	11.4	11.0	8.4	8.0
ARD-6	E11-066	70.40	72.40	2011	Knight Piésold	Mine Rock	Tonalite	9.39	3	0.119	0.04	0.079	0.439	0.330	36.59	31	2.47	3.72	12.6	14.8	8.3	9.8
ARD-60	E12-213	138.90	141.00	2012	Knight Piésold	Mine Rock	Tonalite	8.49	2	0.206	0.05	0.156	0.159	0.091	13.25	16	4.88	6.44	3.3	2.7	2.5	2.1
E10-013-3	E10-013	60	62.28	2010	Knight Piésold	Mine Rock	Tonalite	9.55	2	0.086	0.02	0.066	0.527	0.444	43.92	42	2.06	2.69	20.4	21.3	15.6	16.3
E10-031-1	E10-031	9.1	11	2010	Knight Piésold	Mine Rock	Tonalite	8.77	2	0.024	0.01	0.014	0.253	0.206	21.08	21	0.44	0.75	48.0	48.2	28.0	28.1
E10-046-1	E10-046	15.8	18.07	2010	Knight Piésold	Mine Rock	Tonalite	9.07	2	0.010	0.01	0.010	0.250	0.200	20.83	21	0.31	0.31	67.2	66.7	67.2	66.7
E11-081-1	E11-081	376	378.25	2011	Knight Piésold	Mine Rock	Tonalite	9.78	3	0.062	0.01	0.052	0.882	0.801	73.50	70	1.63	1.94	43.1	45.2	36.1	37.9
ARD-13	E11-096	77.15	79.35	2011	Knight Piésold	Mine Rock	Tonalite	9.64	3	0.014	0.01	0.010	0.467	0.424	38.92	41	0.31	0.44	131.2	124.5	93.7	89.0
ARD-16	E11-098	24.40	26.60	2011	Knight Piésold	Mine Rock	Tonalite	9.17	3	0.020	0.02	0.010	0.252	0.197	21.00	21	0.31	0.63	67.2	67.2	33.6	33.6
ARD-21	E11-114	8.08	10.38	2011	Knight Piésold	Mine Rock	Tonalite	8.80	2	0.023	0.01	0.013	0.261	0.204	21.75	24	0.41	0.72	59.1	53.5	33.4	30.3
ARD-4	E10-045	229.60	231.80	2010	Knight Piésold	Mine Rock	Tonalite	9.72	2	0.035	0.02	0.015	0.163	0.117	13.58	15	0.47	1.09	32.0	29.0	13.7	12.4
ARD-45	E11-140	274.50	276.60	2011	Knight Piésold	Mine Rock	Tonalite	9.35	2	0.071	0.03	0.041	0.181	0.134	15.08	17	1.28	2.22	13.3	11.8	7.7	6.8
ARD-48	E11-129	57.1	59.60	2011	Knight Piésold	Mine Rock	Tonalite	9.99	2	0.049	0.03	0.019	0.356	0.302	29.67	29	0.59	1.53	48.8	50.0	18.9	19.4
E10-046-2	E10-046	95	97.2	2010	Knight Piésold	Mine Rock	Tonalite	9.46	3	0.103	0.03	0.073	0.876	0.769	73.00	70	2.28	3.22	30.7	32.0	21.7	22.7
E11-052-3	E11-052	221.5	223.13	2011	Knight Piésold	Mine Rock	Tonalite	9.30	4	0.298	0.04	0.258	0.686	0.576	57.17	54	8.06	9.31	6.7	7.1	5.8	6.1
E11-059-1	E11-059	25.57	27.61	2011	Knight Piésold	Mine Rock	Tonalite	9.02	2	0.018	0.02	0.010	0.115	0.090	9.58	11	0.31	0.56	35.2	30.7	19.6	17.0
E11-061-2	E11-061	338	340.2	2011	Knight Piésold	Mine Rock	Tonalite	9.43	3	0.144	< 0.010	0.134	0.512	0.450	42.67	42	4.19	4.50	10.0	10.2	9.3	9.5
E11-072-1	E11-072	155.5	157.65	2011	Knight Piésold	Mine Rock	Tonalite	9.60	2	0.085	0.04	0.045	0.354	0.290	29.50	28	1.41	2.66	19.9	21.0	10.5	11.1
E11-077-1	E11-077	142.7	144.85	2011	Knight Piésold	Mine Rock	Tonalite	8.73	2	0.019	0.02	0.010	0.284	0.204	23.67	24	0.31	0.59	76.8	75.7	40.4	39.9
E11-091-1	E11-091	13.9	15.95	2011	Knight Piésold	Mine Rock	Tonalite	8.88	2	0.097	0.04	0.057	0.086	0.036	7.17	9.5	1.78	3.03	5.3	4.0	3.1	2.4
E11-091-3	E11-091	311	313.13	2011	Knight Piésold	Mine Rock	Tonalite	9.45	2	0.020	0.02	0.010	0.348	0.292	29.00	28	0.31	0.63	89.6	92.8	44.8	46.4
E11-095-2	E11-095	18.9	20.9	2011	Knight Piésold	Mine Rock	Tonalite	9.68	3	0.094	0.03	0.064	0.460	0.390	38.34	36	2.00	2.94	18.0	19.2	12.3	13.1
E11-097-2	E11-097	153.7	155.7	2011	Knight Piésold	Mine Rock	Tonalite	9.79	2	0.022	0.01	0.012	0.337	0.276	28.09	27	0.38	0.69	72.0	74.9	39.3	40.9
E11-100-1	E11-100	39.45	41.62	2011	Knight Piésold	Mine Rock	Tonalite	9.15	3	0.470	0.12	0.350	0.380	0.278	31.67	30	10.94	14.69	2.7	2.9	2.0	2.2
E11-110-1	E11-110	8.2	10.12	2011	Knight Piésold	Mine Rock	Tonalite	9.36	3	0.029	< 0.010	0.019	0.389	0.342	32.42	30	0.59	0.91	50.5	54.6	33.1	35.8
E11-112-3	E11-112	161.4	163.71	2011	Knight Piésold	Mine Rock	Tonalite	9.52	3	0.027	0.03	0.010	0.146	0.113	12.17	14	0.31	0.84	44.8	38.9	16.6	14.4
E11-138-1	E11-138	15.5	17.88	2011	Knight Piésold	Mine Rock	Tonalite	9.36	3	0.133	0.03	0.103	0.619	0.522	51.59	48	3.22	4.16	14.9	16.0	11.5	12.4
ARD-1054224	E11-74	224.00	225.00	2011	AMEC	Mine Rock	Mafic Dykes	9.68	3	0.032	0.01	0.02	0.518	0.504	43.17	52	0.69	1.00	75.6	62.8	52.0	43.2
ARD-937698	E10-14	127.00	128.00	2010	AMEC	Mine Rock	Mafic Dykes	9.55	3	0.038	0.02	0.02	0.365	0.324	30.42	38	0.56	1.19	67.6	54.1	32.0	25.6
ARD-1105010	E11-110	105.00	106.00	2011	AMEC	Mine Rock	Mafic Dykes	9.19	3	0.054	0.01	0.04	1.43	1.389	119.17	121	1.38	1.69	88.0	86.7	71.7	70.6
ARD-1008033	E11-84	126.00	127.00	2011	AMEC	Mine Rock	Mafic Dykes	9.50	3	0.055	0.02	0.04	0.390	0.292	32.50	38	1.09	1.72	34.7	29.7	22.1	18.9
ARD-1299298	E12-00212	130.82	132.00	2012	AMEC	Mine Rock	Mafic Dykes	8.81	3	0.088	0.05	0.04	1.79	1.793	149.18	158	1.19	2.75	133.1	125.6	57.5	54.2
ARD-952486	E10-29	123.50	124.70	2010	AMEC	Mine Rock	Mafic Dykes	9.50	4	0.094	0.01	0.08	2.01	2.021	167.51	153	2.63	2.94	58.3	63.8	52.1	57.0
ARD-1288121	E12-00279	118.14	119.00	2012	AMEC	Mine Rock	Mafic Dykes	9.61	4	0.098	0.07	0.03	1.19	1.227	99.17	123	0.88	3.06	140.6	113.3	40.2	32.4
ARD-1070452	E11-93	337.51	339.00	2011	AMEC	Mine Rock	Mafic Dykes	8.62	3	0.129	0.03	0.10	0.412	0.346	34.34	45	3.09	4.03	14.5	11.1	11.2	8.5
ARD-14 DH12-PO-17	DH12-PO-17	8.29	9.29	2012	AMEC	Mine Rock	Mafic Dykes	9.29	1	0.130	0.03	0.10	0.015	0.004	1.25	11	3.13	4.06	3.5	0.4	2.7	0.3
ARD-1415660	E12-00330	268.00	269.00	2012	AMEC	Mine Rock	Mafic Dykes	8.52	4	0.134	0.07	0.06	0.656	0.596	54.67	59	2.00	4.19	29.5	27.3	14.1	13.1
ARD-6 DH12-PO-22	DH12-PO-22	23.56	24.56	2012	AMEC	Mine Rock	Mafic Dykes	8.83	3	0.154	0.07	0.08	1.74	1.745	145.01	164	2.63	4.81	62.5	55.2	34.1	30.1
ARD-1175183	E11-98	99.00	100.00	2011	AMEC	Mine Rock	Mafic Dykes	8.80	3	0.156	0.05	0.11	1.68	1.511	140.01	154	3.31	4.88	46.5	42.3	31.6	28.7
ARD-1396637	E12-00222	375.00	376.00	2012	AMEC	Mine Rock	Mafic Dykes	8.64	3	0.167	0.06	0.11	4.96	4.583	413.36	450	3.34	5.22	134.6	123.6	86.2	79.2
ARD-689119	E10-05	68.60	69.60	2010	AMEC	Mine Rock	Mafic Dykes	9.81	4	0.183	0.07	0.11	1.45	1.357	120.84	129	3.53	5.72	36.5	34.2	22.6	21.1
ARD-1113188	E11-00148	230.00	231.00	2011	AMEC	Mine Rock	Mafic Dykes	10.06	3	0.266	0.08	0.19	1.16	1.091	96.67	106	5.81	8.31	18.2	16.6	12.8	11.6
ARD-1008072	E11-84	162.55	163.55	2011	AMEC	Mine Rock	Mafic Dykes	8.97	3	0.483	0.03	0.45	0.444	0.384	37.00	1.9	14.16	15.09	0.1	2.6	0.1	2.5
ARD-53	E12-200	185.00	187.00	2012	Knight Piésold	Mine Rock	Mafic Dykes	8.95	2	0.072	0.01	0.062	1.82	1.721	151.68	150	1.94	2.25	77.4	78.3	66.7	67.4
ARD-55	E12-294	178.00	180.00	2012	Knight Piésold	Mine Rock	Mafic Dykes	8.80	2	0.114	0.02	0.094	0.090	0.077	7.50	15	2.94	3.56	5.1	2.6	4.2	2.1
E11-052-2	E11-052	125.15	127.25	2011	Knight Piésold	Mine Rock	Mafic Dykes	8.92	4	0.291	0.08	0.211	1.60	1.481	133.34	133	6.59	9.09	20.2	20.2	14.6	14.7
E11-062-3	E11-062	254.8	257.01	2011	Knight Piésold	Mine Rock	Mafic Dykes	9.50	4	0.267	0.14	0.127	1.22	1.129	101.67	112	3.97	8.34	28.2	25.6	13.4	12.2
ARD-4 DH12-PO-17	DH12-PO-17	6.21	7.21	2012	AMEC	Mine Rock	Diabase Dykes	9.37	1	0.122	0.03	0.09	0.017	0.005	1.42	9.1	2.88	3.81	3.2	0.5	2.4	0.4
ARD-1120993	E11-136	97.50	98.50	2011	AMEC	Mine Rock	Diabase Dykes	9.62	4	0.169	0.07	0.10	0.355	0.292	29.59	41	3.09	5.28	13.3	9.6	7.8	5.6
ARD-1153135	E11-137	187.00	188.00	2011	AMEC	Mine Rock	Diabase Dykes	9.56	3	0.199	0.02	0.18	0.023	0.006	1.92	12	5.59	6.22	2.1	0.3	1.9	0.3
ARD-937384	E10-08	96.90	97.81	2010	AMEC	Mine Rock	Diabase Dykes	9.05	3	0.417	0.07	0.35	0.642	0.608	53.50	68	10.84	13.03	6.3	4.9	5.2	4.1
ARD-15	E11-096	150.45	152.25	2011	Knight Piésold	Mine Rock	Diabase Dykes	9.99	1	0.068	0.03	0.038	0.025	0.011	2.08	10	1.19	2.13	8.4	1.8	4.7	1.0
ARD-35	E11-075	220.91	223.31	2011	Knight Piésold	Mine Rock	Diabase Dykes	9.40	2	0.126	0.03	0.096	0.499	0.448	41.59	51	3.00	3.94	17.0	13.9	13.0	10.6
ARD-42	E11-120	108.90	110.40	2011	Knight Piésold	Mine Rock	Diabase Dykes	9.38	2	0.058	0.02	0.038	2.37	2.402	197.51	204	1.19	1.81	171.8	166.3	112.6	109.0
ARD-50	E11-144	138.81	139.61	2011	Knight Piésold	Mine Rock	Diabase Dykes	10.15	2	0.115	< 0.010	0.105	0.141	0.105	11.75	22	3.28	3.59	6.7	3.6	6.1	3.3
E10-038-2	E10-038	101	103	2010	Knight Piésold	Mine Rock	Diabase Dykes	9.00	3	0.241	0.08	0.161	0.411	0.338	34.25	38	5.03	7.53	7.6	6.8	5.0	4.5
ARD-1261810	E12-00270	44.00	45.00	2012	AMEC	Mine Rock	Intrusive Mafic Lamprophyre	9.16	3	0.046	0.03	0.02	1.02	1.021	85.01	95	0.50	1.44	190.0	170.0	66.1	59.1
ARD-1298061	E12-00204	60.00	61.00	2012	AMEC	Mine Rock	Intrusive Mafic Lamprophyre	9.36	4	0.046	0.04	<0.01	0.368	0.346	30.67	51	0.31	1.44	163.2	98.1	35.5	21.3
ARD-1402452	E12-00310	170.00	171.50	2012	AMEC	Mine Rock	Intrusive Mafic Lamprophyre	9.75	3	0.062	0.03	0.03	2.26	2.262	188.35	203	1.00	1.94	203.0	188.3	104.8	97.2
ARD-1284878	E12-00197	103.52	104.36	2012	AMEC	Mine Rock	Intrusive Mafic Lamprophyre	8.49	4	0.124	0.06	0.06	1.07	1.015	89.17	99	2.00	3.88	49.5	44.6	25.5	23.0
ARD-681824	E09-03	224.50	225.00	2009	AMEC	Mine Rock	Quartz Sericite Schist	9.56	4	0.028	<0.01	0.02	0.964	0.907	80.34	70	0.56	0.88	124.4	142.8	80.0	91.8
ARD-950511	E10-27	285.00	286.00	2010	AMEC	Mine Rock	Quartz Sericite Schist	9.04	4	1.15	0.03	1.12	1.92	1.787	160.01	164	35.00	35.94	4.7	4.6	4.6	4.5
E10-031-4	E10-031	585	586.3	2010	Knight Piésold	Outside Pit	Diorite Breccia	9.38	2	0.137	0.04	0.097	0.321	0.244	26.75	26	3.03	4.28	8.6	8.8	6.1	6.2
E11-081-2	E11-081	511.66	513.5	2011	Knight Piésold	Outside Pit	Diorite Breccia	9.67	2	0.401	0.18	0.221	0.307	0.173	25.59	21	6.91	12.53	3.0	3.7	1.7	2.0
E11-081-3	E11-081	589	592.4	2011	Knight Piésold	Outside Pit	Diorite Breccia	9.62	2	0.255	0.04	0.215	0.476	0.360	39.67	32	6.72	7.97	4.8	5.9	4.0	5.0
ARD-8	E11-082	455.00	456.90	2011	Knight Piésold	Outside Pit	Magma Mixing Breccia	10.11	1	0.054	0.02	<0.03	0.086	0.066	5.50	16	1.06	1.69	15.1	5.2	15.1	6.7
E11-062-4	E11-062	395.50	397.39	2011	Knight Piésold	Outside Pit	Magma Mixing Breccia	9.44	3	0.020	0.01	<0.01	0.184	0.154	12.84	17	0.31	0.63	54.4	41.1	54.4	49.1
ARD-2	E10-036	376.50	378.75	2010	Knight Piésold	Outside Pit	Magma Mixing Breccia	9.97	3	0.025	0.02	<0.01	0.294	0.238	19.85	24	0.31	0.78	76.8	63.5	76.8	78.4
ARD-46	E11-145	483.30	485.10	2011	Knight Piésold	Outside Pit	Magma Mixing Breccia	9.56	2	0.013	0.01	<0.01	0.064	0.043	3.59	11	0.31	0.41	35.2	11.5	35.2	17.1
ARD-54	E12-205	668.00	669.60	2012	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.98	2	0.005	0.01	<0.01	0.162	0.125	10.41	18	0.31	0.30	57.6	33.3	57.6	43.2
ARD-52	E11-145	298.00	299.70	2011	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	9.96	2	0.010	0.01	0.010	0.175	0.156	14.58	19	0.31	0.31	60.8	46.7	60.8	46.7
ARD-9	E11-082	376.00	378.00	2011	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	9.80	2	0.022	0.01	0.012	0.307	0.262	25.59	28	0.38	0.69	74.7	68.2	40.7	37.2
ARD-30	E12-206	260.70	262.60	2012	Knight Piésold	Outside Pit	Diorite	9.44	3	0.011	0.01	0.010	0.533	0.510	44.42	49	0.31	0.34	156.8	142.1	142.5	129.2
ARD-23	E10-038	575.00	577.20	2010	Knight Piésold	Outside Pit	Diorite	9.64	2	0.010	0.01	0.010	0.157	0.125	13.08	15	0.31	0.31	48.0	41.9	48.0	41.9
ARD-1	E10-036	316.85	318.95	2010	Knight Piésold	Outside Pit	Tonalite	9.18	2	0.027	0.02	0.010	0.285	0.230	23.75	24	0.31	0.84	76.8	76.0	28.4	28.2
ARD-10	E11-087	242.90	244.90	2011	Knight Piésold	Outside Pit	Tonalite	9.93	2	0.084	0.01	0.074	0.445	0.384	37.09	38	2.31	2.63	16.4	16.0	14.5	14.1
ARD-40	E11-120	668.90	671.00	2011	Knight Piésold	Outside Pit	Tonalite	9.80	2	0.087	0.03	0.057	0.320	0.256	26.67	26	1.78	2.72	14.6	15.0	9.6	9.8
ARD-43	E11-122	384.00	385.90	2011	Knight Piésold	Outside Pit	Tonalite	9.97	2	0.034	0.01	0.024	0.238	0.178	19.83	21	0.75	1.06	28.0	26.4	19.8	18.7
ARD-7	E11-082	343.00	344.80	2011	Knight Piésold	Outside Pit	Tonalite	9.90	3	0.011	0.01	0.010	0.306	0.266	25.50	25	0.31	0.34	80.0	81.6	72.7	74.2
E11-081-4	E11-081	645.65	649	2011	Knight Piésold	Outside Pit	Tonalite	9.65	3	0.293	0.08	0.213	0.313	0.185	26.09	25	6.66	9.16	3.8	3.9	2.7	2.8
E11-138-3	E11-138	241	243.1	2011	Knight Piésold	Outside Pit	Tonalite	8.89	3	0.852	0.06	0.792	1.30	1.093	108.34	110	24.75	26.63	4.4	4.4	4.1	4.1
E11-053-3	E11-053	478.45	480.5	2011	Knight Piésold	Outside Pit	Diabase Dykes	9.48	2	0.300	0.07	0.230	0.049	0.035	4.08	14	7.19	9.38	1.9	0.6	1.5	0.4
E11-059-2	E11-059	492.4	493.9	2011	Knight Piésold	Outside Pit	Diabase Dykes	9.76	2	0.142	0.03	0.112	0.062	0.035	5.17	14	3.50	4.44	4.0	1.5	3.2	1.2
ARD-14	E11-096	467.44	469.94	2011	Knight Piésold	Ore Grade	Diorite Breccia	9.34	3	0.172	0.06	0.112	0.361	0.284	23.68	30	3.50	5.38	8.6	6.8	8.6	8.60
ARD-17	E11-098	222.00	224.00	2011	Knight Piésold	Ore Grade	Diorite Breccia	9.55	3	0.068	0.03	0.038	0.367	0.298	24.85	38	1.19	2.13	32.0	20.9	32.0	25.76
ARD-20	E11-099	261.90	264.00	2011	Knight Piésold	Ore Grade	Diorite Breccia	9.27	3	0.115	0.04	0.075	0.583	0.502	41.86	46	2.34	3.59	19.6	17.9	19.6	20.73
ARD-22	E11-114	16.50	18.50	2011	Knight Piésold	Ore Grade	Diorite Breccia	9.58	3	0.037	0.03	0.010	0.635	0.604	50.37	54	0.31	1.16	172.8	161.2	172.8	169.34
ARD-36	E11-071	535.70	537.80	2011	Knight Piésold	Ore Grade	Diorite Breccia	9.18	2	0.308	0.05	0.258	0.910	0.791	65.88	77	8.06	9.63	9.6	8.2	9.6	9.41
ARD-38	E11-078	267.30	269.60	2011	Knight Piésold	Ore Grade	Diorite Breccia	9.61	1	0.047	0.02	0.027	0.040	0.016	1.33	6.5	0.84	1.47	7.7	1.6	7.7	3.95
ARD-44	E11-122	100.20	102.40	2011	Knight Piésold	Ore Grade	Diorite Breccia	9.24	2	0.085	0.02	0.065	0.634	0.544	45.37	50	2.03	2.66	24.6	22.3	24.6	26.01
CL10-03-1	CL10-03	121.4	122.6	2010	Knight Piésold	Ore Grade	Diorite Breccia	8.42	3	3.77	0.18	3.590	0.562	0.278	23.18	44	112.19	117.81	0.4	0.2	0.4	0.42
E10-042-3	E10-042	478.5	480.7	2010	Knight Piésold	Ore Grade	Diorite Breccia	9.43	3	0.134	0.03	0.104	0.416	0.316	26.35	33	3.25	4.19	10.2	8.1	10.2	10.67
E11-051-1	E11-051	70.8	72.72	2011	Knight Piésold	Ore Grade	Diorite Breccia	8.88	3	0.064	0.02	0.044	0.391	0.320	26.69	33	1.38	2.00	24.0	19.4	24.0	23.70
E11-053-2	E11-053	224.02	226.35	2011	Knight Piésold	Ore Grade	Diorite Breccia	9.43	4	0.242	0.03	0.212	0.708	0.634	52.87	63	6.63	7.56	9.5	8.0	9.5	8.91
E11-054-1	E11-054	33.87	36.14	2011	Knight Piésold	Ore Grade	Diorite Breccia	8.69	3	0.048	0.02	0.028	0.528	0.446	37.19	44	0.88	1.50	50.3	42.5	50.3	50.29
E11-054-2	E11-054	50.46	52.61	2011	Knight Piésold	Ore Grade	Diorite Breccia	8.79	3	0.042	0.02	0.022	0.526	0.440	36.69	43	0.69	1.31	62.5	53.4	62.5	63.76
E11-061-1	E11-061	90.95	92.73	2011	Knight Piésold	Ore Grade	Diorite Breccia	9.19	3	0.040	< 0.010	0.030	0.241	0.204	17.01	22	0.94	1.25	23.5	18.1	23.5	21.42
E11-112-2	E11-112	137.83	139.07	2011	Knight Piésold	Ore Grade	Diorite Breccia	9.41	3	0.265	0.07	0.195	0.484	0.412	34.36	40	6.09	8.28	6.6	5.6	6.6	6.62
ARD-26	E10-028	37.20	39.40	2010	Knight Piésold	Ore Grade	Magma Mixing Breccia	9.00	2	0.012	0.01	0.010	0.152	0.126	10.49	16	0.31	0.38	51.2	33.6	51.2	40.54
E10-013-4	E10-013	125	127.1	2010	Knight Piésold	Ore Grade	Magma Mixing Breccia	9.03	3	0.152	0.03	0.122	0.513	0.378	31.52	42	3.81	4.75	11.0	8.3	11.0	11.21
ARD-39	E11-179	514.00	517.65	2011	Knight Piésold	Ore Grade	Fault	8.59	1	0.018	0.02	0.010	0.068	0.034	2.84	6.6	0.31	0.56	21.1	9.1	21.1	18.13
E11-054-5	E11-054	212.3	215.5	2011	Knight Piésold	Ore Grade	Fault	8.56	1	0.028	0.02	0.010	0.040	0.009	0.72	5.2	0.31	0.88	16.6	2.3	16.6	10.67
ARD-59	CL10-02A	102.00	104.00	2010	Knight Piésold	Ore Grade	Diorite	9.63	2	0.067	0.02	0.047	0.367	0.300	25.02	30	1.47	2.09	20.4	17.0	20.4	20.82
E11-112-4	E11-112	250.6	252.5	2011	Knight Piésold	Ore Grade	Diorite	9.26	4	0.052	< 0.010	0.042	0.739	0.680	56.71	56	1.31	1.63	42.7	43.2	42.7	46.92
ARD-56	E12-205	207.50	209.60	2012	Knight Piésold	Ore Grade	Diorite	9.48	2	0.048	0.02	0.028	0.178	0.127	10.57	17	0.88	1.50	19.4	12.1	19.4	16.95
E11-054-3	E11-054	75.15	77.44	2011	Knight Piésold	Ore Grade	Diorite	9.26	3	0.027	0.01	0.017	0.218	0.181	15.04	18	0.53	0.84	33.9	28.3	33.9	34.20
E11-062-2	E11-062	142.4	144.24	2011	Knight Piésold	Ore Grade	Diorite	9.37	4	0.082	0.02	0.062	1.15	1.105	92.07	94	1.94	2.56	48.5	47.5	48.5	49.47
E11-112-1	E11-112	56.41	58.12	2011	Knight Piésold	Ore Grade	Diorite	9.32	3	0.066	0.03	0.036	0.622	0.550	45.87	50	1.13	2.06	44.4	40.8	44.4	46.08
ARD-32	E11-048	325.10	327.10	2011	Knight Piésold	Ore Grade	Tonalite	9.41	2	0.073	0.02	0.053	0.217	0.153	12.74	19	1.66	2.28	11.5	7.7	11.5	10.92
E11-052-1	E11-052	92.75	95.05	2011	Knight Piésold	Ore Grade	Tonalite	8.92	3	0.031	< 0.010	0.021	0.442	0.388	32.36	36	0.66	0.97	54.9	49.3	54.9	56.13
E11-062-1	E11-062	91.7	93.74	2011	Knight Piésold	Ore Grade	Tonalite	8.91	3	0.028	< 0.010	0.018	0.283	0.234	19.51	24	0.56	0.88	42.7	34.7	42.7	41.93
ARD-19	E11-099	240.20	242.40	2011	Knight Piésold	Ore Grade	Tonalite	9.91	2	0.021	0.01	0.011	0.145	0.109	9.09	13	0.34	0.66	37.8	26.4	37.8	35.15
ARD-5	E11-066	509.90	511.90	2011	Knight Piésold	Ore Grade	Tonalite	9.45	2	0.102	0.04	0.062	0.105	0.056	4.67	14	1.94	3.19	7.2	2.4	7.2	4.52
E11-107-1	E11-107	40.1	42.1	2011	Knight Piésold	Ore Grade	Tonalite	9.54	3	0.051	< 0.010	0.041	0.562	0.566	47.20	45	1.28	1.59	35.1	36.8	35.1	36.56
E11-091-2	E11-091	93	94.95	2011	Knight Piésold	Ore Grade	Diabase Dykes	9.32	1	0.142	0.02	0.122	0.031	0.011	0.95	9.2	3.81	4.44	2.4	0.2	2.4	0.68

*Calculated as the difference between measured total sulphur and sulphate sulphur

** Calculated from total carbon content

*** Calculated from total sulphur content

Table A-6: Mine Rock Acid Base Accounting Results by Leco Carbon and Sulphur

Sample No	Drillhole ID	From	To	Age of Drillhole	Lithology	Total Carbon	Total Sulphur	MPA*	Carbonate NP**	Carbonate NPR_{MPA}
						%		kg $CaCO_3$/tonne		
1108761	E11-107	243.0	244.0	2011	Diorite Breccia	0.272	0.053	1.66	22.6	13.6
1486591	E12-00333	86.0	86.8	2012	Diorite Breccia	0.380	0.010	0.31	31.7	101.3
1049797	E11-75	58.0	59.0	2011	Diorite Breccia	0.560	0.010	0.31	46.7	149.3
1026152	E11-81	261.0	262.0	2011	Diorite Breccia	0.350	0.090	2.81	29.2	10.4
938691	E10-10	125.5	126.0	2010	Diorite Breccia	0.320	0.050	1.56	26.7	17.1
1117946	E11-122	130.0	131.0	2011	Diorite Breccia	0.415	0.032	1.01	34.5	34.2
929111	E10-31	101.0	102.0	2010	Diorite Breccia	0.690	0.030	0.94	57.5	61.3
936266	E10-21	41.0	42.0	2010	Diorite Breccia	0.350	0.040	1.25	29.2	23.3
1048151	E11-65	147.6	148.6	2011	Diorite Breccia	0.380	0.060	1.88	31.7	16.9
1156837	E11-00142	281.0	282.0	2011	Diorite Breccia	0.367	0.190	5.92	30.5	5.2
1168407	E11-00168	371.0	372.0	2011	Diorite Breccia	0.780	0.230	7.19	65.0	9.0
1157490	E11-00144	333.0	334.0	2011	Diorite Breccia	0.370	0.070	2.19	30.8	14.1
578580	E10-42	221.5	222.5	2010	Diorite Breccia	1.150	0.690	21.56	95.8	4.4
1153209	E11-137	274.0	275.0	2011	Diorite Breccia	1.040	0.100	3.13	86.7	27.7
578529	E10-42	174.5	175.5	2010	Diorite Breccia	0.310	0.010	0.31	25.8	82.7
681554	E09-03	70.5	71.0	2009	Diorite Breccia	0.110	0.010	0.31	9.2	29.3
930751	E10-18	75.1	75.5	2010	Diorite Breccia	0.330	0.010	0.31	27.5	88.0
952525	E10-29	155.0	156.0	2010	Diorite Breccia	0.680	0.010	0.31	56.7	181.3
1045680	E11-62	168.6	169.1	2011	Diorite Breccia	0.240	0.010	0.31	20.0	64.0
1047488	E11-70	186.0	187.0	2011	Diorite Breccia	0.370	0.010	0.31	30.8	98.7
1049838	E11-75	107.0	108.0	2011	Diorite Breccia	0.540	0.010	0.31	45.0	144.0
1108640	E11-107	131.0	132.0	2011	Diorite Breccia	0.240	0.010	0.31	20.0	64.0
1120794	E11-132	60.0	61.0	2011	Diorite Breccia	0.177	0.010	0.31	14.8	47.2
1157356	E11-00144	209.0	210.0	2011	Diorite Breccia	0.570	0.010	0.31	47.5	152.0
1331625	E12-00198	261.0	262.0	2012	Diorite Breccia	0.010	0.010	0.31	0.8	2.7
1343760	E12-00211	359.0	360.0	2012	Diorite Breccia	0.200	0.010	0.31	16.7	53.3
1359069	E12-00261	306.0	307.3	2012	Diorite Breccia	0.280	0.010	0.31	23.3	74.7
1380099	E12-00234	92.0	93.0	2012	Diorite Breccia	0.200	0.010	0.31	16.7	53.3
1116474	E11-117	399.0	400.0	2011	Diorite Breccia	0.341	0.011	0.36	28.4	79.9
1156779	E11-00142	228.0	229.0	2011	Diorite Breccia	0.262	0.012	0.37	21.8	58.6
1456676	E12-00309	299.0	300.0	2012	Diorite Breccia	0.205	0.013	0.41	17.1	42.1
926665	E10-34	190.5	191.3	2010	Diorite Breccia	0.441	0.015	0.47	36.8	78.4
73153	E11-51	67.0	68.0	2011	Diorite Breccia	0.650	0.020	0.63	54.2	86.7
933690	E10-20	128.0	129.0	2010	Diorite Breccia	0.360	0.020	0.63	30.0	48.0
1016763	E11-90	132.0	133.0	2011	Diorite Breccia	0.180	0.020	0.63	15.0	24.0
1048061	E11-65	66.0	67.0	2011	Diorite Breccia	0.630	0.020	0.63	52.5	84.0
1107187	E11-111	180.0	181.0	2011	Diorite Breccia	0.950	0.020	0.63	79.2	126.7
1157357	E11-00144	210.0	211.0	2011	Diorite Breccia	0.530	0.020	0.63	44.2	70.7
1173303	E11-100	143.0	144.0	2011	Diorite Breccia	0.330	0.020	0.63	27.5	44.0
1396259	E12-00243	120.0	121.0	2012	Diorite Breccia	0.120	0.020	0.63	10.0	16.0
1121504	E11-122	183.0	184.0	2011	Diorite Breccia	0.363	0.023	0.72	30.2	41.9
1486558	E12-00333	55.0	56.0	2012	Diorite Breccia	0.386	0.025	0.77	32.1	42.0
1120705	E11-125	85.0	86.0	2011	Diorite Breccia	0.693	0.027	0.85	57.8	67.7
1109047	E11-114	19.0	20.0	2011	Diorite Breccia	0.719	0.027	0.86	59.9	69.8
1156020	E11-136	122.0	123.0	2011	Diorite Breccia	0.499	0.028	0.88	41.6	47.0
29284	E11-77	285.0	286.0	2011	Diorite Breccia	0.542	0.030	0.94	45.2	48.2
69784	E11-58	471.3	472.3	2011	Diorite Breccia	0.040	0.030	0.94	3.3	3.6
928783	E10-08	326.0	327.0	2010	Diorite Breccia	0.420	0.030	0.94	35.0	37.3
930209	E10-19	91.0	91.7	2010	Diorite Breccia	0.980	0.030	0.94	81.7	87.1
930827	E10-18	129.8	130.8	2010	Diorite Breccia	0.640	0.030	0.94	53.3	56.9
933733	E10-20	160.0	160.5	2010	Diorite Breccia	0.540	0.030	0.94	45.0	48.0
936022	E10-17	265.0	265.5	2010	Diorite Breccia	0.600	0.030	0.94	50.0	53.3
1070378	E11-93	259.0	260.0	2011	Diorite Breccia	0.380	0.030	0.94	31.7	33.8
1157293	E11-00144	151.0	152.0	2011	Diorite Breccia	0.670	0.030	0.94	55.8	59.6
1157424	E11-00144	271.0	272.0	2011	Diorite Breccia	0.160	0.030	0.94	13.3	14.2
1175245	E11-98	224.0	225.0	2011	Diorite Breccia	0.260	0.030	0.94	21.7	23.1
1310197	E12-00318	194.0	195.0	2012	Diorite Breccia	0.920	0.030	0.94	76.7	81.8
1353457	E12-00182	520.0	521.0	2012	Diorite Breccia	0.040	0.030	0.94	3.3	3.6
1396326	E12-00243	182.0	183.0	2012	Diorite Breccia	0.400	0.030	0.94	33.3	35.6
29346	E11-77	342.0	343.0	2011	Diorite Breccia	1.110	0.040	1.25	92.5	74.0
924644	E10-26	294.6	295.3	2010	Diorite Breccia	0.360	0.040	1.25	30.0	24.0
927670	E10-37	110.1	110.8	2010	Diorite Breccia	0.570	0.040	1.25	47.5	38.0
950641	E10-27	382.8	383.3	2010	Diorite Breccia	0.180	0.040	1.25	15.0	12.0
951744	E11-57	110.0	111.0	2011	Diorite Breccia	1.350	0.040	1.25	112.5	90.0
955916	E10-33	226.7	227.7	2010	Diorite Breccia	0.330	0.040	1.25	27.5	22.0
1070346	E11-93	230.0	231.0	2011	Diorite Breccia	0.940	0.040	1.25	78.3	62.7
1108705	E11-107	190.0	191.0	2011	Diorite Breccia	0.250	0.040	1.25	20.8	16.7
1120010	E11-117	432.0	433.0	2011	Diorite Breccia	0.640	0.040	1.25	53.3	42.7
1284919	E12-00197	141.0	142.0	2012	Diorite Breccia	0.490	0.040	1.25	40.8	32.7
1298611	E12-00230	103.0	104.0	2012	Diorite Breccia	0.600	0.040	1.25	50.0	40.0
684032	E10-04	142.6	143.3	2010	Diorite Breccia	0.410	0.050	1.56	34.2	21.9
930288	E10-19	145.3	146.4	2010	Diorite Breccia	1.440	0.050	1.56	120.0	76.8
1116610	E11-118	104.0	105.0	2011	Diorite Breccia	0.040	0.050	1.56	3.3	2.1
1072070	E11-94	78.0	79.0	2011	Diorite Breccia	0.720	0.060	1.88	60.0	32.0
1072273	E11-90	501.0	502.0	2011	Diorite Breccia	0.280	0.060	1.88	23.3	12.4
1107250	E11-111	238.0	239.0	2011	Diorite Breccia	0.330	0.060	1.88	27.5	14.7
1258031	E11-00169	269.0	270.0	2011	Diorite Breccia	0.250	0.060	1.88	20.8	11.1
1353377	E12-00182	446.0	447.0	2012	Diorite Breccia	0.490	0.060	1.88	40.8	21.8
571347	E10-47	35.0	35.7	2010	Diorite Breccia	0.690	0.070	2.19	57.5	26.3
928736	E10-08	285.0	286.0	2010	Diorite Breccia	0.540	0.070	2.19	45.0	20.6
957685	E10-35	172.1	173.1	2010	Diorite Breccia	0.810	0.070	2.19	67.5	30.9
1049766	E11-75	23.0	24.0	2011	Diorite Breccia	1.280	0.070	2.19	106.7	48.8
1157498	E11-00144	340.0	341.0	2011	Diorite Breccia	0.320	0.070	2.19	26.7	12.2
1167536	E11-00161	502.0	503.0	2011	Diorite Breccia	0.470	0.070	2.19	39.2	17.9
1313478	E12-00317	219.0	220.0	2012	Diorite Breccia	0.330	0.070	2.19	27.5	12.6
1384268	E12-00241	35.0	36.4	2012	Diorite Breccia	0.490	0.070	2.19	40.8	18.7
1116552	E11-118	51.0	52.0	2011	Diorite Breccia	0.376	0.072	2.26	31.3	13.8
69725	E11-58	418.8	419.9	2011	Diorite Breccia	0.310	0.080	2.50	25.8	10.3
1116370	E11-117	304.0	305.0	2011	Diorite Breccia	0.300	0.080	2.50	25.0	10.0
1258628	E12-00179	356.0	357.0	2012	Diorite Breccia	0.220	0.080	2.50	18.3	7.3
1156888	E11-00142	328.0	329.0	2011	Diorite Breccia	0.822	0.080	2.50	68.5	27.4
1156734	E11-00142	187.0	188.0	2011	Diorite Breccia	0.452	0.087	2.71	37.7	13.9
1157433	E11-00144	280.0	281.0	2011	Diorite Breccia	0.650	0.090	2.81	54.2	19.3
1164055	E11-00144	393.0	394.0	2011	Diorite Breccia	0.120	0.090	2.81	10.0	3.6
1347150	E12-00194	417.0	418.0	2012	Diorite Breccia	0.290	0.090	2.81	24.2	8.6
1353523	E12-00182	581.0	582.0	2012	Diorite Breccia	0.560	0.090	2.81	46.7	16.6
1404086	E12-00323	434.0	435.0	2012	Diorite Breccia	0.156	0.100	3.12	13.0	4.2
934276	E10-09	147.4	148.6	2010	Diorite Breccia	0.320	0.100	3.13	26.7	8.5
1310138	E12-00318	139.0	140.0	2012	Diorite Breccia	0.120	0.100	3.13	10.0	3.2
1384330	E12-00241	93.0	94.0	2012	Diorite Breccia	0.220	0.100	3.13	18.3	5.9
928884	E10-08	408.4	409.0	2010	Diorite Breccia	0.350	0.110	3.44	29.2	8.5
929721	E10-31	578.0	579.0	2010	Diorite Breccia	0.280	0.110	3.44	23.3	6.8
953898	E10-43	521.2	522.1	2010	Diorite Breccia	0.420	0.110	3.44	35.0	10.2
1347072	E12-00194	349.0	350.0	2012	Diorite Breccia	1.300	0.110	3.44	108.3	31.5
928846	E10-08	379.0	380.0	2010	Diorite Breccia	0.350	0.120	3.75	29.2	7.8
1167285	E11-00161	271.0	272.0	2011	Diorite Breccia	0.740	0.130	4.06	61.7	15.2
1168230	E11-00168	208.0	209.0	2011	Diorite Breccia	0.320	0.130	4.06	26.7	6.6
1113282	E11-00148	315.0	316.0	2011	Diorite Breccia	0.759	0.141	4.40	63.2	14.4
1167195	E11-00161	188.0	189.0	2011	Diorite Breccia	0.560	0.150	4.69	46.7	10.0
1153261	E11-137	322.0	323.0	2011	Diorite Breccia	0.278	0.152	4.75	23.1	4.9
1356478	E12-00261	224.0	225.0	2012	Diorite Breccia	2.750	0.160	5.00	229.2	45.8
924250	E09-03	282.5	283.5	2009	Diorite Breccia	0.630	0.170	5.31	52.5	9.9
1157297	E11-00144	155.0	156.0	2011	Diorite Breccia	1.050	0.190	5.94	87.5	14.7
938630	E10-10	84.0	85.0	2010	Diorite Breccia	0.220	0.200	6.25	18.3	2.9
1072260	E11-90	488.0	489.0	2011	Diorite Breccia	0.320	0.200	6.25	26.7	4.3
1072516	E11-96	111.0	112.0	2011	Diorite Breccia	0.430	0.200	6.25	35.8	5.7
1156692	E11-00142	148.0	149.0	2011	Diorite Breccia	0.550	0.210	6.56	45.8	7.0
689241	E10-05	161.4	162.0	2010	Diorite Breccia	0.550	0.220	6.88	45.8	6.7
1271335	E11-00160	303.0	304.0	2011	Diorite Breccia	0.630	0.220	6.88	52.5	7.6
1072127	E11-94	131.0	132.0	2011	Diorite Breccia	0.290	0.230	7.19	24.2	3.4
935331	E10-17	125.5	126.0	2010	Diorite Breccia	0.400	0.250	7.81	33.3	4.3
952858	E10-29	433.0	434.0	2010	Diorite Breccia	1.160	0.250	7.81	96.7	12.4
1072705	E11-96	299.0	300.0	2011	Diorite Breccia	0.440	0.250	7.81	36.7	4.7
1072007	E11-94	22.0	23.0	2011	Diorite Breccia	0.820	0.280	8.75	68.3	7.8
937812	E10-14	214.5	215.6	2010	Diorite Breccia	0.450	0.300	9.38	37.5	4.0
1107140	E11-111	138.0	139.0	2011	Diorite Breccia	0.270	0.340	10.63	22.5	2.1
1116421	E11-117	351.0	352.0	2011	Diorite Breccia	1.040	0.340	10.63	86.7	8.2
1380053	E12-00234	50.0	51.0	2012	Diorite Breccia	0.470	0.360	11.25	39.2	3.5
937853	E10-14	254.0	255.3	2010	Diorite Breccia	0.440	0.400	12.50	36.7	2.9
950406	E10-27	184.5	185.3	2010	Diorite Breccia	0.160	0.490	15.31	13.3	0.9
1171963	E11-102	227.0	228.0	2011	Diorite Breccia	0.040	0.520	16.25	3.3	0.2
954891	E10-43	336.5	337.2	2010	Diorite Breccia	0.260	0.590	18.44	21.7	1.2
577979	E10-42	128.5	129.5	2010	Diorite Breccia	0.310	0.630	19.69	25.8	1.3
1047357	E11-70	68.0	69.0	2011	Diorite Mega Breccia	0.630	0.120	3.75	52.5	14.0
1105010	E11-110	105.0	106.0	2011	Diorite Mega Breccia	1.190	0.100	3.13	99.2	31.7
1008033	E11-84	126.0	127.0	2011	Diorite Mega Breccia	0.510	0.010	0.31	42.5	136.0
1107356	E11-111	335.0	336.0	2011	Diorite Mega Breccia	0.160	0.060	1.88	13.3	7.1
1070859	E11-97	58.0	59.0	2011	Diorite Mega Breccia	1.390	0.070	2.19	115.8	53.0
1152087	E11-127	82.0	83.0	2011	Diorite Mega Breccia	0.324	0.020	0.64	27.0	42.3
90235	E11-87	34.0	35.0	2011	Diorite Mega Breccia	0.160	0.010	0.31	13.3	42.7

Table A-6: Mine Rock Acid Base Accounting Results by Leco Carbon and Sulphur

Sample No	Drillhole ID	From	To	Age of Drillhole	Lithology	Total Carbon	Total Sulphur	MPA*	Carbonate NP**	Carbonate NPR_{MPA}
						%		kg $CaCO_3$/tonne		
1105125	E11-110	212.0	213.0	2011	Diorite Mega Breccia	0.200	0.010	0.31	16.7	53.3
1105132	E11-110	218.0	219.0	2011	Diorite Mega Breccia	0.040	0.010	0.31	3.3	10.7
1106427	E11-110	29.0	30.0	2011	Diorite Mega Breccia	0.230	0.010	0.31	19.2	61.3
1106482	E11-110	80.0	81.0	2011	Diorite Mega Breccia	0.280	0.010	0.31	23.3	74.7
1107674	E11-109	171.0	172.0	2011	Diorite Mega Breccia	0.510	0.010	0.31	42.5	136.0
1353838	E12-00194	134.0	135.0	2012	Diorite Mega Breccia	0.240	0.020	0.63	20.0	32.0
1105040	E11-110	133.0	134.0	2011	Diorite Mega Breccia	0.040	0.030	0.94	3.3	3.6
1027108	E11-83	9.0	10.0	2011	Diorite Mega Breccia	0.260	0.040	1.25	21.7	17.3
90295	E11-87	89.0	90.0	2011	Diorite Mega Breccia	0.240	0.050	1.56	20.0	12.8
1157808	E11-00135	68.0	69.0	2011	Diorite Mega Breccia	0.600	0.050	1.56	50.0	32.0
1175159	E11-98	77.0	78.0	2011	Diorite Mega Breccia	2.140	0.050	1.56	178.3	114.1
1054154	E11-74	160.0	161.0	2011	Diorite Mega Breccia	0.340	0.070	2.19	28.3	13.0
1106441	E11-110	42.0	43.0	2011	Diorite Mega Breccia	1.120	0.090	2.81	93.3	33.2
1353887	E12-00194	180.0	181.0	2012	Diorite Mega Breccia	1.300	0.090	2.81	108.3	38.5
1175182	E11-98	98.0	99.0	2011	Diorite Mega Breccia	1.380	0.120	3.75	115.0	30.7
1017502	E11-88	3.0	4.0	2011	Diorite Mega Breccia	0.290	0.220	6.88	24.2	3.5
1157855	E11-00135	111.0	112.0	2011	Diorite Mega Breccia	0.520	0.590	18.44	43.3	2.4
1105066	E11-110	157.0	158.0	2011	Diorite Mega Breccia	0.320	0.650	20.31	26.7	1.3
1152146	E11-127	135.0	136.2	2011	Diorite Mega Breccia	0.778	0.882	27.55	64.8	2.4
1336196	E12-00233	409.1	410.0	2012	Fault Breccia	0.950	0.010	0.31	79.2	253.4
1382475	E12-00185	245.0	246.0	2012	Fault Breccia	0.040	0.010	0.31	3.3	10.7
1382499	E12-00185	266.0	267.0	2012	Fault Breccia	3.370	0.010	0.31	280.9	898.7
1111988	E11-00147	382.0	383.0	2011	Fault Breccia	0.461	0.010	0.32	38.4	121.4
1436471	E12-00314	196.2	197.0	2012	Fault Breccia	1.520	0.049	1.53	126.7	83.1
1113522	E11-00147	413.0	414.0	2011	Fault Breccia	0.513	0.056	1.76	42.7	24.3
1113547	E11-00147	436.0	437.0	2011	Fault Breccia	0.160	0.070	2.19	13.3	6.1
1388968	E12-00331	247.2	248.2	2012	Fault Breccia	0.650	0.080	2.50	54.2	21.7
1343542	E12-00211	160.0	161.0	2012	Hydrothermal Breccia	0.160	0.120	3.75	13.3	3.6
1343533	E12-00211	152.6	153.4	2012	Hydrothermal Breccia	8.160	0.080	2.50	680.0	272.0
950562	E10-27	329.4	330.4	2010	Mafic Breccia	0.240	0.010	0.31	20.0	64.0
1338625	E12-00277	241.0	242.0	2012	Mafic Breccia	6.670	0.060	1.88	555.9	296.5
1435459	E12-00294	277.0	278.0	2012	Mafic Breccia	0.410	0.145	4.53	34.2	7.5
1435458	E12-00294	276.0	277.0	2012	Mafic Breccia	0.283	0.378	11.81	23.6	2.0
1350733	E12-00252	197.0	198.0	2012	Magma Mixing Breccia	0.140	0.070	2.19	11.7	5.3
1258576	E12-00179	308.0	309.0	2012	Magma Mixing Breccia	0.360	0.020	0.63	30.0	48.0
1344533	E12-00242	32.0	33.0	2012	Magma Mixing Breccia	0.070	0.030	0.94	5.8	6.2
1262008	E12-00289	6.3	7.0	2012	Magma Mixing Breccia	1.290	0.100	3.13	107.5	34.4
1258098	E11-00169	330.0	331.0	2011	Magma Mixing Breccia	0.280	0.010	0.31	23.3	74.7
1306941	E12-00290	85.0	86.0	2012	Magma Mixing Breccia	0.230	0.010	0.31	19.2	61.3
1435841	E12-00303	290.0	291.0	2012	Magma Mixing Breccia	0.763	0.010	0.31	63.6	203.5
1445368	E12-00360	200.0	201.0	2012	Magma Mixing Breccia	0.200	0.018	0.55	16.7	30.3
1344596	E12-00242	90.0	91.0	2012	Magma Mixing Breccia	0.120	0.020	0.63	10.0	16.0
1353936	E12-00194	225.0	226.0	2012	Magma Mixing Breccia	4.830	0.020	0.63	402.5	644.0
1384012	E12-00227	87.0	88.0	2012	Magma Mixing Breccia	1.170	0.020	0.63	97.5	156.0
1326242	E12-00313	250.7	252.0	2012	Magma Mixing Breccia	0.690	0.030	0.94	57.5	61.3
1349335	E12-00283	267.3	268.4	2012	Magma Mixing Breccia	0.160	0.030	0.94	13.3	14.2
1395222	E12-00316	137.0	138.0	2012	Magma Mixing Breccia	0.080	0.030	0.94	6.7	7.1
1262062	E12-00289	54.0	55.0	2012	Magma Mixing Breccia	0.010	0.040	1.25	0.8	0.7
1349302	E12-00283	237.0	238.0	2012	Magma Mixing Breccia	0.220	0.040	1.25	18.3	14.7
1361579	E12-00274	125.0	126.0	2012	Magma Mixing Breccia	0.520	0.040	1.25	43.3	34.7
1415543	E12-00330	160.0	161.0	2012	Magma Mixing Breccia	0.079	0.047	1.48	6.6	4.5
1435669	E12-00303	146.0	147.0	2012	Magma Mixing Breccia	0.555	0.048	1.51	46.3	30.7
1260963	E12-00293	222.0	222.5	2012	Magma Mixing Breccia	1.120	0.050	1.56	93.3	59.7
1349224	E12-00283	161.1	162.0	2012	Magma Mixing Breccia	0.400	0.050	1.56	33.3	21.3
1349261	E12-00283	196.0	197.0	2012	Magma Mixing Breccia	0.410	0.050	1.56	34.2	21.9
1260900	E12-00293	165.0	166.0	2012	Magma Mixing Breccia	0.280	0.060	1.88	23.3	12.4
1261347	E12-00296	69.0	70.0	2012	Magma Mixing Breccia	0.320	0.070	2.19	26.7	12.2
1298546	E12-00230	42.0	43.0	2012	Magma Mixing Breccia	0.160	0.120	3.75	13.3	3.6
1261293	E12-00296	20.0	21.0	2012	Magma Mixing Breccia	0.440	0.130	4.06	36.7	9.0
1297415	E12-00291	158.0	159.0	2012	Magma Mixing Breccia	0.330	0.160	5.00	27.5	5.5
1436544	E12-00314	259.2	260.0	2012	Magma Mixing Breccia	0.285	0.164	5.13	23.8	4.6
1297443	E12-00291	184.0	185.0	2012	Magma Mixing Breccia	1.520	0.190	5.94	126.7	21.3
1260834	E12-00293	107.0	107.6	2012	Magma Mixing Breccia	0.800	0.200	6.25	66.7	10.7
1317321	E12-00229	300.0	301.0	2012	Quartz Carbonate Heterolithic Breccia	5.020	0.050	1.56	418.4	267.8
1415660	E12-00330	268.0	269.0	2012	Quartz Carbonate Heterolithic Breccia	0.596	0.088	2.74	49.7	18.1
1310561	E12-00318	529.0	530.0	2012	Quartz Carbonate Heterolithic Breccia	0.750	0.070	2.19	62.5	28.6
1310585	E12-00318	552.0	553.0	2012	Quartz Carbonate Heterolithic Breccia	1.740	0.080	2.50	145.0	58.0
1306359	E12-00247	473.0	474.0	2012	Quartz Carbonate Heterolithic Breccia	1.210	0.110	3.44	100.8	29.3
1456032	E12-00281	519.0	520.0	2012	Quartz Carbonate Heterolithic Breccia	4.070	0.134	4.19	339.2	81.0
1329877	E12-00186	172.0	173.0	2012	Fault	0.020	0.010	0.31	1.7	5.3
1172124	E11-95	165.0	166.0	2011	Fault	2.650	0.060	1.88	220.8	117.8
1284981	E12-00197	196.0	197.0	2012	Fault	0.020	0.010	0.31	1.7	5.3
1029078	E11-79	82.0	84.0	2011	Fault	0.760	0.010	0.31	63.3	202.7
1436479	E12-00314	203.0	204.0	2012	Fault	0.485	0.010	0.31	40.4	129.3
1172097	E11-95	140.0	141.0	2011	Fault	1.820	0.020	0.63	151.7	242.7
1172122	E11-95	163.0	164.0	2011	Fault	3.620	0.020	0.63	301.7	482.7
1398715	E12-00197	228.0	229.0	2012	Fault	0.330	0.020	0.63	27.5	44.0
1304411	E12-00323	273.0	274.0	2012	Fault	0.380	0.090	2.81	31.7	11.3
1415679	E12-00330	285.0	286.0	2012	Fault	0.443	0.144	4.50	36.9	8.2
573527	E10-40	29.1	30.1	2010	Intrusive Feldspar Porphyry	0.390	0.060	1.88	32.5	17.3
1399888	E12-00228	128.6	129.6	2012	Intrusive Feldspar Porphyry	0.240	0.030	0.94	20.0	21.3
681852	E10-04	23.6	25.0	2010	Intrusive Feldspar Porphyry	0.110	0.010	0.31	9.2	29.3
1361014	E12-00271	181.0	182.0	2012	Intrusive Feldspar Porphyry	0.080	0.040	1.25	6.7	5.3
227138	E13-00400	155.2	156.0	2013	Intrusive Feldspar Porphyry	0.690	0.040	1.25	57.5	46.0
1117573	E11-115	249.0	250.0	2011	Intrusive Feldspar Porphyry	0.097	0.010	0.31	8.1	25.9
1260360	E12-00276	152.0	153.0	2012	Intrusive Feldspar Porphyry	0.010	0.010	0.31	0.8	2.7
1338587	E12-00277	206.0	207.0	2012	Intrusive Feldspar Porphyry	0.320	0.010	0.31	26.7	85.3
1435497	E12-00294	309.4	310.4	2012	Intrusive Feldspar Porphyry	0.198	0.014	0.45	16.5	36.7
1435818	E12-00303	272.8	273.3	2012	Intrusive Feldspar Porphyry	0.040	0.015	0.45	3.3	7.3
1456722	E12-00309	342.0	343.0	2012	Intrusive Feldspar Porphyry	0.506	0.017	0.53	42.2	78.9
1017615	E11-88	107.0	108.0	2011	Intrusive Feldspar Porphyry	0.060	0.020	0.63	5.0	8.0
1258041	E11-00169	278.0	279.0	2011	Intrusive Feldspar Porphyry	0.610	0.020	0.63	50.8	81.3
1325165	E12-00280	157.0	158.0	2012	Intrusive Feldspar Porphyry	0.160	0.020	0.63	13.3	21.3
1334523	E12-00296	229.0	230.0	2012	Intrusive Feldspar Porphyry	1.070	0.020	0.63	89.2	142.7
1386887	E12-00245	153.0	154.0	2012	Intrusive Feldspar Porphyry	0.080	0.020	0.63	6.7	10.7
1262151	E12-00289	132.0	133.0	2012	Intrusive Feldspar Porphyry	0.040	0.030	0.94	3.3	3.6
1317807	E12-00271	128.0	129.0	2012	Intrusive Feldspar Porphyry	0.160	0.030	0.94	13.3	14.2
1047705	E11-80	281.0	282.0	2011	Intrusive Feldspar Porphyry	0.240	0.040	1.25	20.0	16.0
1435876	E12-00303	319.4	320.0	2012	Intrusive Feldspar Porphyry	0.276	0.043	1.35	23.0	17.0
1071035	E11-97	221.0	222.0	2011	Intrusive Feldspar Porphyry	0.260	0.050	1.56	21.7	13.9
1388179	E12-00324	137.0	138.0	2012	Intrusive Feldspar Porphyry	0.710	0.060	1.88	59.2	31.6
1164846	E11-00151	254.0	255.0	2011	Intrusive Feldspar Porphyry	0.240	0.070	2.19	20.0	9.1
1447105	E12-00331	365.5	366.4	2012	Intrusive Feldspar Porphyry	0.452	0.073	2.28	37.7	16.5
1171777	E11-102	2.0	3.0	2011	Intrusive Feldspar Porphyry	0.060	0.080	2.50	5.0	2.0
1306959	E12-00290	102.0	103.5	2012	Intrusive Feldspar Porphyry	1.690	0.100	3.13	140.8	45.1
1436425	E12-00314	158.4	159.5	2012	Intrusive Feldspar Porphyry	0.660	0.100	3.13	55.0	17.6
1445396	E12-00360	225.8	227.0	2012	Intrusive Feldspar Porphyry	0.203	0.122	3.81	16.9	4.4
1415651	E12-00330	260.0	261.0	2012	Intrusive Feldspar Porphyry	3.140	0.137	4.28	261.7	61.1
1260426	E12-00276	211.0	211.5	2012	Intrusive Feldspar Porphyry	0.040	0.300	9.38	3.3	0.4
1398758	E12-00197	267.0	268.0	2012	Intermediate and Felsic Dykes	0.040	0.310	9.69	3.3	0.3
931623	E10-11	150.7	151.5	2010	Intermediate and Felsic Dykes	0.470	0.010	0.31	39.2	125.3
1326120	E12-00313	140.2	141.0	2012	Intermediate and Felsic Dykes	0.360	0.050	1.56	30.0	19.2
928214	E10-38	168.2	168.9	2010	Intermediate and Felsic Dykes	0.990	0.070	2.19	82.5	37.7
571416	E10-47	97.5	98.1	2010	Intermediate and Felsic Dykes	0.080	0.420	13.13	6.7	0.5
926548	E10-34	108.8	109.5	2010	Intermediate and Felsic Dykes	0.376	0.010	0.31	31.3	100.1
928416	E10-38	366.0	366.9	2010	Intermediate and Felsic Dykes	0.280	0.010	0.31	23.3	74.7
926573	E10-34	126.5	127.3	2010	Intermediate and Felsic Dykes	0.953	0.016	0.49	79.4	162.8
1326054	E12-00313	61.0	62.0	2012	Intermediate and Felsic Dykes	0.350	0.020	0.63	29.2	46.7
1258512	E12-00179	248.0	249.0	2012	Intermediate and Felsic Dykes	0.460	0.030	0.94	38.3	40.9
1398746	E12-00197	256.0	257.0	2012	Intermediate and Felsic Dykes	0.040	0.030	0.94	3.3	3.6
1304467	E12-00323	325.0	326.0	2012	Intermediate and Felsic Dykes	1.760	0.040	1.25	146.7	117.3
1435803	E12-00303	259.2	260.0	2012	Intermediate and Felsic Dykes	0.202	0.069	2.15	16.8	7.8
926537	E10-34	100.7	101.5	2010	Intermediate and Felsic Dykes	1.935	0.070	2.18	161.3	73.9
928418	E10-38	368.3	369.8	2010	Intermediate and Felsic Dykes	0.230	0.070	2.19	19.2	8.8
928217	E10-38	170.0	171.5	2010	Intermediate and Felsic Dykes	0.920	0.080	2.50	76.7	30.7
1431373	E12-00328	263.0	264.4	2012	Intermediate and Felsic Dykes	1.580	0.087	2.72	131.7	48.4
928110	E10-38	48.1	49.0	2010	Intermediate and Felsic Dykes	0.610	0.090	2.81	50.8	18.1
1474820	E12-00342	112.0	113.0	2012	Intermediate and Felsic Dykes	0.401	0.097	3.03	33.4	11.0
1469137	E12-00329	252.0	253.0	2012	Intermediate and Felsic Dykes	1.090	0.105	3.28	90.8	27.7
928398	E10-38	347.3	348.1	2010	Intermediate and Felsic Dykes	1.580	0.220	6.88	131.7	19.2
1483115	E12-00334	115.0	116.0	2012	Intermediate and Felsic Dykes	1.315	0.226	7.05	109.6	15.6
926721	E10-34	233.4	234.2	2010	Diorite	0.400	0.010	0.31	33.3	106.7
1308221	E12-00260	158.0	159.0	2012	Diorite	0.350	0.010	0.31	29.2	93.3
1171884	E11-102	100.0	101.0	2011	Diorite	0.080	0.010	0.31	6.7	21.3
1311777	E12-00356	100.8	101.7	2012	Diorite	0.120	0.020	0.63	10.0	16.0
1029210	E11-79	205.0	206.0	2011	Diorite	0.320	0.030	0.94	26.7	28.4
1336164	E12-00233	380.0	381.0	2012	Diorite	0.870	0.010	0.31	72.5	232.0
1054224	E11-74	224.0	225.0	2011	Diorite	0.790	0.010	0.31	65.8	210.7
929864	E10-38	446.0	447.0	2010	Diorite	0.350	0.050	1.56	29.2	18.7
1259369	E12-00233	113.0	114.0	2012	Diorite	0.520	0.030	0.94	43.3	46.2

Table A-6: Mine Rock Acid Base Accounting Results by Leco Carbon and Sulphur

Sample No	Drillhole ID	From	To	Age of Drillhole	Lithology	Total Carbon	Total Sulphur	MPA*	Carbonate NP**	Carbonate NPR_{MPA}
						%		kg $CaCO_3$/tonne		
931559	E10-11	104.3	104.9	2010	Diorite	1.290	0.020	0.63	107.5	172.0
684437	E10-08	56.1	56.6	2010	Diorite	0.350	0.010	0.31	29.2	93.3
1027713	E11-82	158.0	159.0	2011	Diorite	0.200	0.060	1.88	16.7	8.9
1387873	E12-00208	87.0	88.0	2012	Diorite	0.040	0.040	1.25	3.3	2.7
1105726	E11-116	15.0	16.0	2011	Diorite	1.020	0.030	0.94	85.0	90.7
1262116	E12-00289	103.0	104.4	2012	Diorite	0.040	0.080	2.50	3.3	1.3
1353200	E12-00182	283.0	284.0	2012	Diorite	1.110	0.060	1.88	92.5	49.3
1334254	E12-00240	170.0	171.0	2012	Diorite	0.160	0.070	2.19	13.3	6.1
920512	E10-21	222.1	223.0	2010	Diorite	0.310	0.010	0.31	25.8	82.7
930693	E10-18	33.0	34.0	2010	Diorite	0.150	0.040	1.25	12.5	10.0
1363071	E12-00228	297.0	298.0	2012	Diorite	0.600	0.080	2.50	50.0	20.0
952686	E10-29	287.0	287.7	2010	Diorite	0.320	0.080	2.50	26.7	10.7
577633	E10-39	71.5	72.5	2010	Diorite	0.510	0.010	0.31	42.5	136.0
681504	E09-03	18.0	19.5	2009	Diorite	0.010	0.010	0.31	0.8	2.7
920457	E10-26	153.0	153.7	2010	Diorite	0.340	0.010	0.31	28.3	90.7
920794	E10-24	64.5	65.0	2010	Diorite	0.910	0.010	0.31	75.8	242.7
927647	E10-37	90.8	91.5	2010	Diorite	0.290	0.010	0.31	24.2	77.3
927735	E10-37	163.7	165.0	2010	Diorite	0.360	0.010	0.31	30.0	96.0
931697	E10-11	192.0	192.5	2010	Diorite	0.660	0.010	0.31	55.0	176.0
936467	E10-21	193.0	194.0	2010	Diorite	0.710	0.010	0.31	59.2	189.3
939343	E10-23	161.1	162.0	2010	Diorite	0.280	0.010	0.31	23.3	74.7
939477	E10-23	277.8	279.0	2010	Diorite	0.420	0.010	0.31	35.0	112.0
952093	E10-28	45.0	45.5	2010	Diorite	0.650	0.010	0.31	54.2	173.3
953090	E10-07	258.0	259.0	2010	Diorite	0.340	0.010	0.31	28.3	90.7
955193	E10-33	460.9	461.4	2010	Diorite	0.190	0.010	0.31	15.8	50.7
957303	E10-35	461.0	462.0	2010	Diorite	0.600	0.010	0.31	50.0	160.0
1027005	E11-80	327.0	328.0	2011	Diorite	0.040	0.010	0.31	3.3	10.7
1045416	E11-64	197.0	198.0	2011	Diorite	0.100	0.010	0.31	8.3	26.7
1050614	E11-71	29.1	30.1	2011	Diorite	0.970	0.010	0.31	80.8	258.7
1052566	E11-74	308.0	309.0	2011	Diorite	0.200	0.010	0.31	16.7	53.3
1070805	E11-97	8.0	9.3	2011	Diorite	0.140	0.010	0.31	11.7	37.3
1105839	E11-116	119.0	120.0	2011	Diorite	0.680	0.010	0.31	56.7	181.3
1109694	E11-112	179.0	180.0	2011	Diorite	0.299	0.010	0.31	24.9	79.6
1109761	E11-112	241.0	242.0	2011	Diorite	0.321	0.010	0.31	26.8	85.6
1109826	E11-112	300.0	301.0	2011	Diorite	0.272	0.010	0.31	22.7	72.5
1157871	E11-00135	125.0	126.0	2011	Diorite	0.280	0.010	0.31	23.3	74.7
1173391	E11-100	222.0	223.0	2011	Diorite	0.380	0.010	0.31	31.7	101.3
1306249	E12-00247	371.0	372.0	2012	Diorite	0.450	0.010	0.31	37.5	120.0
1308103	E12-00260	49.0	50.0	2012	Diorite	1.380	0.010	0.31	115.0	368.0
1311579	E12-00357	167.0	168.0	2012	Diorite	1.030	0.010	0.31	85.8	274.7
1317206	E12-00229	194.0	195.0	2012	Diorite	0.500	0.010	0.31	41.7	133.3
1326019	E12-00313	28.0	29.0	2012	Diorite	0.910	0.010	0.31	75.8	242.7
1334077	E12-00240	8.0	9.0	2012	Diorite	0.500	0.010	0.31	41.7	133.3
1334431	E12-00240	331.0	332.0	2012	Diorite	0.080	0.010	0.31	6.7	21.3
1334492	E12-00240	387.0	388.0	2012	Diorite	0.730	0.010	0.31	60.8	194.7
1359952	E12-00266	432.0	433.0	2012	Diorite	0.190	0.010	0.31	15.8	50.7
1361653	E12-00274	194.0	195.4	2012	Diorite	0.320	0.010	0.31	26.7	85.3
1363006	E12-00228	237.0	238.0	2012	Diorite	0.720	0.010	0.31	60.0	192.0
1386945	E12-00245	206.0	207.0	2012	Diorite	0.210	0.010	0.31	17.5	56.0
1387070	E12-00196	172.3	173.1	2012	Diorite	0.770	0.010	0.31	64.2	205.3
1388845	E12-00331	141.2	142.0	2012	Diorite	0.140	0.010	0.31	11.7	37.3
1399938	E12-00228	174.0	175.0	2012	Diorite	1.380	0.010	0.31	115.0	368.0
1415708	E12-00330	314.0	315.0	2012	Diorite	0.114	0.010	0.31	9.5	30.4
1435210	E12-00294	22.0	23.0	2012	Diorite	0.010	0.010	0.31	0.8	2.7
1483217	E12-00334	223.0	224.0	2012	Diorite	0.080	0.011	0.33	6.7	20.0
1483935	E12-00336	235.0	236.0	2012	Diorite	0.157	0.013	0.41	13.0	31.9
1484845	E12-00339	233.0	234.0	2012	Diorite	0.257	0.013	0.41	21.4	52.1
935173	E10-17	11.0	12.0	2010	Diorite	0.201	0.015	0.47	16.7	35.7
1109631	E11-112	122.0	123.0	2011	Diorite	0.162	0.016	0.49	13.5	27.5
1473039	E12-00336	328.0	329.0	2012	Diorite	0.892	0.017	0.53	74.3	141.6
1415412	E12-00330	38.0	39.0	2012	Diorite	1.620	0.018	0.56	135.0	240.0
1435291	E12-00294	127.0	128.0	2012	Diorite	0.010	0.019	0.59	0.8	1.4
573550	E10-40	48.7	49.7	2010	Diorite	0.280	0.020	0.63	23.3	37.3
929170	E10-31	149.2	150.0	2010	Diorite	0.010	0.020	0.63	0.8	1.3
934987	E10-16	230.0	231.0	2010	Diorite	0.120	0.020	0.63	10.0	16.0
935396	E10-17	177.5	178.0	2010	Diorite	0.310	0.020	0.63	25.8	41.3
936319	E10-21	86.0	87.0	2010	Diorite	0.560	0.020	0.63	46.7	74.7
939408	E10-23	219.4	220.2	2010	Diorite	0.440	0.020	0.63	36.7	58.7
952621	E10-29	234.9	235.6	2010	Diorite	0.510	0.020	0.63	42.5	68.0
953925	E10-43	541.2	542.1	2010	Diorite	0.380	0.020	0.63	31.7	50.7
1045278	E11-64	70.0	71.0	2011	Diorite	0.370	0.020	0.63	30.8	49.3
1049182	E11-66	194.0	195.0	2011	Diorite	0.320	0.020	0.63	26.7	42.7
1104011	E11-102	271.0	272.0	2011	Diorite	2.440	0.020	0.63	203.3	325.4
1104531	E11-103	84.0	85.0	2011	Diorite	0.240	0.020	0.63	20.0	32.0
1157922	E11-00135	172.0	173.0	2011	Diorite	0.240	0.020	0.63	20.0	32.0
1164779	E11-00151	192.0	193.0	2011	Diorite	0.550	0.020	0.63	45.8	73.3
1174058	E11-101	10.0	11.0	2011	Diorite	0.040	0.020	0.63	3.3	5.3
1259491	E12-00233	223.0	224.0	2012	Diorite	1.250	0.020	0.63	104.2	166.7
1262215	E12-00289	187.0	188.0	2012	Diorite	0.120	0.020	0.63	10.0	16.0
1263698	E12-00282	187.0	188.0	2012	Diorite	0.230	0.020	0.63	19.2	30.7
1308285	E12-00260	217.0	218.0	2012	Diorite	0.120	0.020	0.63	10.0	16.0
1326524	E12-00300	90.0	91.0	2012	Diorite	0.330	0.020	0.63	27.5	44.0
1331558	E12-00198	199.0	200.0	2012	Diorite	0.280	0.020	0.63	23.3	37.3
1370125	E11-00163	124.2	125.3	2011	Diorite	0.320	0.020	0.63	26.7	42.7
1386829	E12-00245	100.0	101.0	2012	Diorite	0.260	0.020	0.63	21.7	34.7
90755	E11-63	184.0	185.0	2011	Diorite	0.101	0.025	0.77	8.4	11.0
1473002	E12-00336	295.0	296.0	2012	Diorite	0.241	0.026	0.82	20.1	24.4
29177	E11-77	167.0	168.0	2011	Diorite	0.080	0.030	0.94	6.7	7.1
73105	E11-51	23.0	24.0	2011	Diorite	0.240	0.030	0.94	20.0	21.3
573674	E10-40	160.0	161.0	2010	Diorite	0.470	0.030	0.94	39.2	41.8
927684	E10-37	121.1	122.0	2010	Diorite	0.300	0.030	0.94	25.0	26.7
928708	E10-08	264.0	265.0	2010	Diorite	1.490	0.030	0.94	124.2	132.5
936413	E10-21	154.0	155.0	2010	Diorite	0.310	0.030	0.94	25.8	27.6
955263	E10-33	509.9	511.0	2010	Diorite	0.270	0.030	0.94	22.5	24.0
955853	E10-33	182.3	183.3	2010	Diorite	0.710	0.030	0.94	59.2	63.1
957351	E10-35	503.8	504.8	2010	Diorite	0.260	0.030	0.94	21.7	23.1
1027158	E11-83	55.0	56.0	2011	Diorite	0.380	0.030	0.94	31.7	33.8
1048017	E11-65	27.0	28.0	2011	Diorite	0.080	0.030	0.94	6.7	7.1
1057841	E11-85	205.0	206.0	2011	Diorite	0.310	0.030	0.94	25.8	27.6
1164719	E11-00151	137.0	138.0	2011	Diorite	1.350	0.030	0.94	112.5	120.0
1306008	E12-00247	149.0	150.0	2012	Diorite	0.160	0.030	0.94	13.3	14.2
1306919	E12-00290	64.8	66.0	2012	Diorite	0.150	0.030	0.94	12.5	13.3
1308404	E12-00260	326.0	327.0	2012	Diorite	0.280	0.030	0.94	23.3	24.9
1308457	E12-00260	375.5	376.5	2012	Diorite	0.160	0.030	0.94	13.3	14.2
1325409	E12-00288	232.0	233.0	2012	Diorite	0.870	0.030	0.94	72.5	77.3
1346202	E12-00180	189.0	190.0	2012	Diorite	0.280	0.030	0.94	23.3	24.9
1352967	E12-00196	127.0	128.0	2012	Diorite	0.830	0.030	0.94	69.2	73.8
1353048	E12-00182	146.0	147.0	2012	Diorite	0.210	0.030	0.94	17.5	18.7
1353153	E12-00182	239.0	240.0	2012	Diorite	0.120	0.030	0.94	10.0	10.7
1357922	E12-00222	178.3	179.3	2012	Diorite	0.120	0.030	0.94	10.0	10.7
1395852	E12-00321	5.0	6.0	2012	Diorite	0.080	0.030	0.94	6.7	7.1
1117378	E11-119	262.1	263.1	2011	Diorite	0.100	0.035	1.11	8.3	7.5
1456633	E12-00309	259.0	260.0	2012	Diorite	0.079	0.037	1.14	6.6	5.8
928475	E10-38	414.8	416.0	2010	Diorite	0.270	0.040	1.25	22.5	18.0
933764	E10-20	183.1	183.9	2010	Diorite	0.420	0.040	1.25	35.0	28.0
937330	E10-07	165.5	166.0	2010	Diorite	0.480	0.040	1.25	40.0	32.0
952760	E10-29	350.0	351.0	2010	Diorite	0.160	0.040	1.25	13.3	10.7
1017291	E11-87	177.0	178.0	2011	Diorite	0.120	0.040	1.25	10.0	8.0
1175271	E11-98	248.0	249.0	2011	Diorite	0.280	0.040	1.25	23.3	18.7
1259307	E12-00233	58.0	59.0	2012	Diorite	0.160	0.040	1.25	13.3	10.7
1263557	E12-00282	70.8	71.4	2012	Diorite	0.570	0.040	1.25	47.5	38.0
1308169	E12-00260	110.0	111.0	2012	Diorite	0.100	0.040	1.25	8.3	6.7
1326588	E12-00300	149.0	150.0	2012	Diorite	0.210	0.040	1.25	17.5	14.0
1334580	E12-00296	282.0	283.0	2012	Diorite	0.260	0.040	1.25	21.7	17.3
1349059	E12-00283	10.0	10.9	2012	Diorite	1.020	0.040	1.25	85.0	68.0
1352846	E12-00196	21.9	22.7	2012	Diorite	0.310	0.040	1.25	25.8	20.7
1353315	E12-00182	389.0	390.0	2012	Diorite	0.120	0.040	1.25	10.0	8.0
1381385	E12-00259	130.0	131.0	2012	Diorite	0.040	0.040	1.25	3.3	2.7
1387139	E12-00196	229.0	230.0	2012	Diorite	0.340	0.040	1.25	28.3	22.7
1435430	E12-00294	250.0	251.0	2012	Diorite	0.317	0.048	1.50	26.4	17.6
29123	E11-77	117.0	118.0	2011	Diorite	0.750	0.050	1.56	62.5	40.0
924600	E10-26	262.0	263.0	2010	Diorite	0.430	0.050	1.56	35.8	22.9
928343	E10-38	295.5	297.0	2010	Diorite	0.240	0.050	1.56	20.0	12.8
934917	E10-16	169.4	170.6	2010	Diorite	0.080	0.050	1.56	6.7	4.3
1048749	E11-73	103.0	104.0	2011	Diorite	0.080	0.050	1.56	6.7	4.3
1050721	E11-71	126.3	127.3	2011	Diorite	0.370	0.050	1.56	30.8	19.7
1258479	E12-00179	217.0	218.0	2012	Diorite	0.040	0.050	1.56	3.3	2.1
1306176	E12-00247	304.0	305.0	2012	Diorite	0.110	0.050	1.56	9.2	5.9
1346061	E12-00180	58.0	59.0	2012	Diorite	0.120	0.050	1.56	10.0	6.4
1348066	E12-00240	455.0	456.0	2012	Diorite	0.444	0.050	1.56	37.0	23.7

Table A-6: Mine Rock Acid Base Accounting Results by Leco Carbon and Sulphur

Sample No	Drillhole ID	From	To	Age of Drillhole	Lithology	Total Carbon	Total Sulphur	MPA*	Carbonate NP**	Carbonate NPR_{MPA}
						%		kg $CaCO_3$/tonne		
1483171	E12-00334	168.0	169.5	2012	Diorite	0.159	0.051	1.58	13.3	8.4
1484786	E12-00339	179.0	180.0	2012	Diorite	0.966	0.053	1.65	80.5	48.7
1435270	E12-00294	108.0	109.0	2012	Diorite	0.662	0.057	1.78	55.2	31.0
29183	E11-77	172.0	173.0	2011	Diorite	0.160	0.060	1.88	13.3	7.1
928256	E10-38	210.0	211.0	2010	Diorite	0.440	0.060	1.88	36.7	19.6
928342	E10-38	294.2	295.5	2010	Diorite	0.200	0.060	1.88	16.7	8.9
930763	E10-18	83.0	84.0	2010	Diorite	0.500	0.060	1.88	41.7	22.2
953032	E10-07	204.5	205.0	2010	Diorite	0.940	0.060	1.88	78.3	41.8
1285407	E12-00210	147.0	148.0	2012	Diorite	0.220	0.060	1.88	18.3	9.8
1323959	E12-00251	340.1	341.0	2012	Diorite	0.520	0.060	1.88	43.3	23.1
1331680	E12-00198	312.0	313.0	2012	Diorite	0.810	0.060	1.88	67.5	36.0
1336051	E12-00233	278.6	279.1	2012	Diorite	0.230	0.060	1.88	19.2	10.2
1435762	E12-00303	222.0	223.0	2012	Diorite	0.235	0.062	1.94	19.6	10.1
920947	E10-24	181.0	182.0	2010	Diorite	0.630	0.070	2.19	52.5	24.0
929051	E10-31	49.0	50.0	2010	Diorite	0.520	0.070	2.19	43.3	19.8
1049245	E11-66	252.0	253.0	2011	Diorite	2.470	0.070	2.19	205.8	94.1
1162996	E11-00150	38.2	39.0	2011	Diorite	0.640	0.070	2.19	53.3	24.4
1351547	E12-00237	46.0	47.0	2012	Diorite	0.180	0.070	2.19	15.0	6.9
1381453	E12-00259	193.0	194.0	2012	Diorite	0.120	0.070	2.19	10.0	4.6
1381483	E12-00259	221.0	222.0	2012	Diorite	0.200	0.070	2.19	16.7	7.6
1388771	E12-00331	83.2	84.1	2012	Diorite	0.730	0.070	2.19	60.8	27.8
1435432	E12-00294	252.0	253.0	2012	Diorite	0.158	0.072	2.26	13.2	5.8
576712	E11-48	197.6	198.5	2011	Diorite	0.420	0.080	2.50	35.0	14.0
1008009	E11-84	103.0	104.0	2011	Diorite	1.430	0.080	2.50	119.2	47.7
1175113	E11-98	34.0	35.0	2011	Diorite	0.350	0.080	2.50	29.2	11.7
1306315	E12-00247	432.0	433.0	2012	Diorite	0.210	0.080	2.50	17.5	7.0
1344640	E12-00242	131.0	132.0	2012	Diorite	0.600	0.080	2.50	50.0	20.0
937395	E10-08	102.7	103.8	2010	Diorite	0.280	0.090	2.81	23.3	8.3
937440	E10-08	136.0	136.5	2010	Diorite	0.280	0.090	2.81	23.3	8.3
950466	E10-27	240.2	241.5	2010	Diorite	0.510	0.090	2.81	42.5	15.1
957641	E10-35	131.6	132.6	2010	Diorite	0.410	0.090	2.81	34.2	12.1
1070318	E11-93	204.0	205.0	2011	Diorite	3.790	0.090	2.81	315.9	112.3
1259424	E12-00233	164.0	165.0	2012	Diorite	0.270	0.090	2.81	22.5	8.0
1306195	E12-00247	321.0	321.7	2012	Diorite	0.200	0.090	2.81	16.7	5.9
1336102	E12-00233	323.0	324.0	2012	Diorite	0.160	0.090	2.81	13.3	4.7
1351670	E12-00237	160.0	161.0	2012	Diorite	0.370	0.090	2.81	30.8	11.0
1353264	E12-00182	342.0	343.0	2012	Diorite	0.130	0.090	2.81	10.8	3.9
1109571	E11-112	67.0	68.0	2011	Diorite	0.610	0.094	2.93	50.8	17.4
1415597	E12-00330	210.0	211.0	2012	Diorite	0.402	0.099	3.08	33.5	10.9
29061	E11-77	60.0	61.0	2011	Diorite	0.200	0.100	3.13	16.7	5.3
573634	E10-40	123.3	124.3	2010	Diorite	2.140	0.100	3.13	178.3	57.1
928951	E10-08	456.0	457.0	2010	Diorite	1.800	0.100	3.13	150.0	48.0
953862	E10-43	490.7	491.5	2010	Diorite	0.400	0.100	3.13	33.3	10.7
954844	E10-43	296.5	297.8	2010	Diorite	0.260	0.100	3.13	21.7	6.9
1048841	E11-73	185.0	186.0	2011	Diorite	0.220	0.100	3.13	18.3	5.9
1334194	E12-00240	115.0	116.0	2012	Diorite	0.470	0.100	3.13	39.2	12.5
1435262	E12-00294	101.0	102.0	2012	Diorite	0.830	0.107	3.34	69.2	20.7
1484944	E12-00339	302.0	303.0	2012	Diorite	0.542	0.108	3.37	45.2	13.4
1172244	E11-95	292.0	293.0	2011	Diorite	0.160	0.110	3.44	13.3	3.9
1483057	E12-00334	58.0	58.6	2012	Diorite	0.441	0.113	3.53	36.8	10.4
937057	E10-07	18.3	18.8	2010	Diorite	0.510	0.120	3.75	42.5	11.3
938728	E10-10	151.9	152.7	2010	Diorite	0.540	0.120	3.75	45.0	12.0
1308339	E12-00260	267.0	268.0	2012	Diorite	0.410	0.120	3.75	34.2	9.1
1437014	E12-00341	29.0	30.0	2012	Diorite	1.250	0.128	4.00	104.2	26.0
1057754	E11-85	125.0	126.0	2011	Diorite	1.450	0.130	4.06	120.8	29.7
1045542	E11-62	45.5	46.5	2011	Diorite	0.340	0.140	4.38	28.3	6.5
1306117	E12-00247	249.0	250.0	2012	Diorite	1.340	0.140	4.38	111.7	25.5
1388700	E12-00331	23.6	24.4	2012	Diorite	0.520	0.140	4.38	43.3	9.9
1172223	E11-95	273.0	274.0	2011	Diorite	0.360	0.150	4.69	30.0	6.4
924531	E10-26	208.0	209.0	2010	Diorite	0.880	0.160	5.00	73.3	14.7
1385752	E12-00221	150.0	151.0	2012	Diorite	0.180	0.160	5.00	15.0	3.0
1049027	E11-66	52.0	53.0	2011	Diorite	0.620	0.170	5.31	51.7	9.7
937263	E10-07	127.1	127.6	2010	Diorite	0.160	0.180	5.63	13.3	2.4
954935	E10-43	377.0	377.8	2010	Diorite	0.040	0.180	5.63	3.3	0.6
955796	E10-33	141.3	142.3	2010	Diorite	0.380	0.180	5.63	31.7	5.6
955974	E10-33	266.8	267.5	2010	Diorite	0.320	0.180	5.63	26.7	4.7
1017568	E11-88	64.0	65.0	2011	Diorite	0.210	0.180	5.63	17.5	3.1
1073165	E11-96	19.0	20.0	2011	Diorite	0.340	0.190	5.94	28.3	4.8
935027	E10-16	259.5	260.0	2010	Diorite	0.620	0.200	6.25	51.7	8.3
1070267	E11-93	156.0	157.0	2011	Diorite	0.250	0.200	6.25	20.8	3.3
681670	E09-03	131.5	132.0	2009	Diorite	1.970	0.220	6.88	164.2	23.9
937769	E10-14	177.0	177.5	2010	Diorite	0.720	0.220	6.88	60.0	8.7
1070411	E11-93	299.0	300.0	2011	Diorite	0.160	0.220	6.88	13.3	1.9
934741	E10-16	32.0	32.5	2010	Diorite	1.150	0.230	7.19	95.8	13.3
955069	E10-33	348.0	348.7	2010	Diorite	0.320	0.230	7.19	26.7	3.7
1070503	E11-93	385.8	387.0	2011	Diorite	0.160	0.250	7.81	13.3	1.7
1070113	E11-93	14.0	15.0	2011	Diorite	0.530	0.260	8.13	44.2	5.4
1351616	E12-00237	110.0	111.0	2012	Diorite	0.390	0.270	8.44	32.5	3.9
1104153	E11-102	400.0	401.0	2011	Diorite	2.620	0.460	14.38	218.3	15.2
1334302	E12-00240	213.0	214.0	2012	Diorite	0.240	0.580	18.13	20.0	1.1
1383990	E12-00182	94.0	95.0	2012	Diorite	1.500	1.220	38.13	125.0	3.3
935452	E10-17	219.5	220.0	2010	Diorite	0.329	1.910	59.69	27.4	0.5
1346137	E12-00180	129.0	130.0	2012	Quartz Diorite	1.250	0.100	3.13	104.2	33.3
1017819	E11-89	65.0	66.1	2011	Quartz Diorite	0.160	0.050	1.56	13.3	8.5
1057715	E11-85	89.0	90.0	2011	Quartz Diorite	0.140	0.070	2.19	11.7	5.3
1323885	E12-00251	276.0	277.0	2012	Quartz Diorite	0.640	0.070	2.19	53.3	24.4
1456517	E12-00309	154.0	155.0	2012	Quartz Diorite	0.462	0.087	2.72	38.5	14.1
689315	E10-05	215.4	216.5	2010	Quartz Diorite	0.340	0.010	0.31	28.3	90.7
1353098	E12-00182	191.0	192.0	2012	Quartz Diorite	0.740	0.050	1.56	61.7	39.5
684378	E10-08	22.6	23.1	2010	Quartz Diorite	0.290	0.010	0.31	24.2	77.3
689406	E10-05	297.5	298.5	2010	Quartz Diorite	1.200	0.010	0.31	100.0	320.0
689456	E10-05	341.1	342.0	2010	Quartz Diorite	0.270	0.010	0.31	22.5	72.0
1167865	E11-00169	119.0	120.0	2011	Quartz Diorite	0.630	0.010	0.31	52.5	168.0
1368213	E11-00162	198.5	199.0	2011	Quartz Diorite	0.470	0.010	0.31	39.2	125.3
1456685	E12-00309	306.7	307.5	2012	Quartz Diorite	0.041	0.010	0.31	3.4	10.9
1117353	E11-119	239.2	240.2	2011	Quartz Diorite	0.082	0.012	0.36	6.8	19.0
1456575	E12-00309	208.5	209.5	2012	Quartz Diorite	0.082	0.013	0.40	6.8	16.9
1415640	E12-00330	249.0	250.0	2012	Quartz Diorite	0.362	0.019	0.59	30.2	51.1
934235	E10-09	107.6	108.6	2010	Quartz Diorite	0.340	0.020	0.63	28.3	45.3
957943	E10-35	406.3	407.3	2010	Quartz Diorite	0.650	0.020	0.63	54.2	86.7
1121971	E11-124	178.0	179.0	2011	Quartz Diorite	0.320	0.020	0.63	26.7	42.7
1368251	E11-00162	229.2	229.9	2011	Quartz Diorite	0.040	0.020	0.63	3.3	5.3
1118008	E11-116	274.0	275.0	2011	Quartz Diorite	0.324	0.022	0.70	27.0	38.8
1435688	E12-00303	163.0	163.5	2012	Quartz Diorite	0.807	0.029	0.92	67.3	73.2
1116504	E11-118	7.0	8.0	2011	Quartz Diorite	1.420	0.030	0.94	118.3	126.2
90654	E11-63	85.0	86.0	2011	Quartz Diorite	0.177	0.037	1.16	14.8	12.7
573516	E10-40	19.6	20.6	2010	Quartz Diorite	0.300	0.040	1.25	25.0	20.0
689165	E10-05	106.3	107.1	2010	Quartz Diorite	0.340	0.040	1.25	28.3	22.7
1445324	E12-00360	160.0	161.0	2012	Quartz Diorite	0.122	0.043	1.33	10.2	7.6
1027765	E11-82	206.0	207.0	2011	Quartz Diorite	0.420	0.050	1.56	35.0	22.4
1258050	E11-00169	287.0	288.0	2011	Quartz Diorite	0.240	0.050	1.56	20.0	12.8
1258401	E12-00179	144.0	145.0	2012	Quartz Diorite	1.000	0.050	1.56	83.3	53.3
1456751	E12-00309	369.0	370.0	2012	Quartz Diorite	0.281	0.052	1.62	23.4	14.5
1435810	E12-00303	265.0	266.0	2012	Quartz Diorite	0.041	0.054	1.69	3.4	2.0
937351	E10-07	183.0	183.5	2010	Quartz Diorite	0.560	0.060	1.88	46.7	24.9
950499	E10-27	273.6	275.1	2010	Quartz Diorite	0.380	0.060	1.88	31.7	16.9
1057682	E11-85	59.0	60.0	2011	Quartz Diorite	0.080	0.060	1.88	6.7	3.6
1395236	E12-00316	150.0	151.0	2012	Quartz Diorite	0.160	0.060	1.88	13.3	7.1
1353074	E12-00182	168.0	169.0	2012	Quartz Diorite	0.120	0.080	2.50	10.0	4.0
1325216	E12-00280	200.0	201.0	2012	Quartz Diorite	0.090	0.100	3.13	7.5	2.4
1173119	E11-96	478.0	479.0	2011	Quartz Diorite	0.770	0.110	3.44	64.2	18.7
1017308	E11-87	192.0	193.0	2011	Quartz Diorite	0.210	0.140	4.38	17.5	4.0
934194	E10-09	68.3	69.6	2010	Quartz Diorite	0.340	0.240	7.50	28.3	3.8
1347633	E12-00206	79.0	80.0	2012	Tonalite	0.120	0.010	0.31	10.0	32.0
1114935	E11-00153-3	14.0	15.0	2011	Tonalite	0.081	0.010	0.31	6.8	21.6
1329749	E12-00186	54.0	55.0	2012	Tonalite	0.190	0.040	1.25	15.8	12.7
1153674	E11-138	115.0	116.0	2011	Tonalite	0.300	0.010	0.31	25.0	79.9
1284846	E12-00197	75.0	76.0	2012	Tonalite	0.140	0.020	0.63	11.7	18.7
1465755	E12-00358	120.0	121.0	2012	Tonalite	0.281	0.012	0.37	23.4	64.0
1390082	E12-00215	81.0	82.0	2012	Tonalite	0.340	0.020	0.63	28.3	45.3
1376168	E12-00213	154.8	155.8	2012	Tonalite	0.200	0.030	0.94	16.7	17.8
1117160	E11-119	39.7	40.6	2011	Tonalite	0.139	0.046	1.44	11.6	8.1
1328761	E11-00172	249.0	250.0	2011	Tonalite	0.350	0.020	0.63	29.2	46.7
1109100	E11-114	68.0	69.0	2011	Tonalite	0.476	0.025	0.80	39.6	49.8
1398253	E12-00216	50.0	51.0	2012	Tonalite	0.300	0.060	1.88	25.0	13.3
246803	E13-00398	100.0	101.0	2013	Tonalite	0.320	0.020	0.63	26.7	42.7
935087	E10-16	309.6	310.5	2010	Tonalite	0.510	0.010	0.31	42.5	136.0
1416171	E13-00394	182.0	183.0	2013	Tonalite	0.315	0.028	0.88	26.3	29.7
1258760	E12-00179	476.0	477.0	2012	Tonalite	0.040	0.060	1.88	3.3	1.8
1359177	E12-00261	401.0	402.0	2012	Tonalite	0.400	0.030	0.94	33.3	35.6

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Table A-6: Mine Rock Acid Base Accounting Results by Leco Carbon and Sulphur

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Sample No	Drillhole ID	From	To	Age of Drillhole	Lithology	Total Carbon	Total Sulphur	MPA*	Carbonate NP**	Carbonate NPR_{MPA}
						%		kg $CaCO_3$/tonne		
1115728	E12-00209	90.1	91.0	2012	Tonalite	0.540	0.450	14.06	45.0	3.2
1167807	E11-00169	65.0	66.0	2011	Tonalite	0.280	0.010	0.31	23.3	74.7
1396533	E12-00222	282.0	283.0	2012	Tonalite	0.940	0.010	0.31	78.3	250.7
1111278	E11-00140	119.0	120.0	2011	Tonalite	0.039	0.071	2.21	3.3	1.5
1335660	E12-00273	134.0	135.0	2012	Tonalite	1.640	0.020	0.63	136.7	218.7
1390445	E12-00215	416.0	417.0	2012	Tonalite	0.290	0.030	0.94	24.2	25.8
1008450	E11-86	10.0	11.0	2011	Tonalite	0.290	0.160	5.00	24.2	4.8
1261924	E12-00270	150.0	151.0	2012	Tonalite	0.560	0.030	0.94	46.7	49.8
1173948	E11-106	440.0	441.0	2011	Tonalite	0.340	0.080	2.50	28.3	11.3
1045336	E11-64	124.0	125.0	2011	Tonalite	0.570	0.030	0.94	47.5	50.7
1413274	E12-00177	196.0	197.0	2012	Tonalite	0.324	0.013	0.41	27.0	66.0
1401198	E12-00337	68.0	69.0	2012	Tonalite	1.040	0.042	1.33	86.7	65.4
951469	E11-90	451.0	452.0	2011	Tonalite	0.300	0.070	2.19	25.0	11.4
68741	E11-54	190.3	191.2	2011	Tonalite	0.010	0.020	0.63	0.8	1.3
1057141	E11-76	234.0	235.0	2011	Tonalite	0.780	0.100	3.13	65.0	20.8
1341540	E12-00287	39.0	40.0	2012	Tonalite	1.170	0.070	2.19	97.5	44.6
1313311	E12-00317	12.9	14.0	2012	Tonalite	1.710	0.030	0.94	142.5	152.0
227239	E13-00400	245.0	246.0	2013	Tonalite	0.520	0.120	3.75	43.3	11.6
1260433	E12-00276	216.8	218.0	2012	Tonalite	0.120	0.240	7.50	10.0	1.3
1387476	E12-00196	514.5	515.3	2012	Tonalite	0.440	0.230	7.19	36.7	5.1
1152026	E11-127	26.8	27.5	2011	Tonalite	2.020	0.120	3.75	168.3	44.9
1371750	E12-00178	186.0	187.0	2012	Tonalite	0.040	1.170	36.56	3.3	0.1
1008072	E11-84	162.6	163.6	2011	Tonalite	1.200	0.350	10.94	100.0	9.1
1385848	E12-00221	239.6	240.0	2012	Tonalite	0.300	0.170	5.31	25.0	4.7
1163047	E11-00150	86.0	87.0	2011	Tonalite	0.160	0.100	3.13	13.3	4.3
69669	E11-58	368.4	369.4	2011	Tonalite	0.230	0.580	18.13	19.2	1.1
29382	E11-77	375.0	376.0	2011	Tonalite	0.120	0.010	0.31	10.0	32.0
227194	E13-00400	205.0	206.0	2013	Tonalite	0.020	0.010	0.31	1.7	5.3
577207	E10-45	175.0	177.0	2010	Tonalite	0.010	0.010	0.31	0.8	2.7
577694	E10-39	126.7	127.7	2010	Tonalite	0.250	0.010	0.31	20.8	66.7
930092	E10-19	8.5	9.0	2010	Tonalite	0.160	0.010	0.31	13.3	42.7
933629	E10-20	80.3	80.9	2010	Tonalite	0.770	0.010	0.31	64.2	205.3
935167	E10-16	376.0	377.0	2010	Tonalite	0.137	0.010	0.31	11.4	36.4
951453	E11-90	436.0	437.0	2011	Tonalite	0.400	0.010	0.31	33.3	106.7
951800	E11-57	161.0	162.0	2011	Tonalite	0.720	0.010	0.31	60.0	192.0
952141	E10-28	85.0	85.5	2010	Tonalite	0.420	0.010	0.31	35.0	112.0
952441	E10-29	86.1	87.0	2010	Tonalite	1.640	0.010	0.31	136.7	437.4
956608	E10-45	228.6	229.6	2010	Tonalite	0.200	0.010	0.31	16.7	53.3
959430	E11-80	124.8	125.8	2011	Tonalite	0.040	0.010	0.31	3.3	10.7
1008325	E11-84	395.0	396.0	2011	Tonalite	1.790	0.010	0.31	149.2	477.4
1008545	E11-86	97.0	98.0	2011	Tonalite	0.080	0.010	0.31	6.7	21.3
1008587	E11-86	135.0	136.0	2011	Tonalite	0.080	0.010	0.31	6.7	21.3
1029271	E11-79	261.0	262.0	2011	Tonalite	0.140	0.010	0.31	11.7	37.3
1047626	E11-80	209.0	210.0	2011	Tonalite	0.200	0.010	0.31	16.7	53.3
1047699	E11-80	276.0	277.0	2011	Tonalite	0.060	0.010	0.31	5.0	16.0
1048111	E11-65	111.0	112.0	2011	Tonalite	0.310	0.010	0.31	25.8	82.7
1049084	E11-66	105.0	106.0	2011	Tonalite	0.200	0.010	0.31	16.7	53.3
1051956	E11-72	210.0	211.0	2011	Tonalite	0.370	0.010	0.31	30.8	98.7
1070919	E11-97	115.0	116.0	2011	Tonalite	0.270	0.010	0.31	22.5	72.0
1107573	E11-109	76.0	77.0	2011	Tonalite	0.310	0.010	0.31	25.8	82.7
1108578	E11-107	74.0	75.0	2011	Tonalite	0.340	0.010	0.31	28.3	90.7
1109161	E11-114	124.0	125.0	2011	Tonalite	0.658	0.010	0.31	54.8	175.5
1110036	E11-00139	110.0	111.0	2011	Tonalite	0.082	0.010	0.31	6.8	21.9
1110065	E11-00139	135.5	136.5	2011	Tonalite	0.080	0.010	0.31	6.7	21.3
1113029	E11-00148	90.0	91.0	2011	Tonalite	0.261	0.010	0.31	21.7	69.5
1115021	E11-00153-3	94.0	95.0	2011	Tonalite	0.238	0.010	0.31	19.8	63.3
1120904	E11-132	161.0	162.0	2011	Tonalite	0.241	0.010	0.31	20.1	64.3
1153159	E11-137	228.0	229.0	2011	Tonalite	1.250	0.010	0.31	104.2	333.4
1156287	E11-136	398.0	399.0	2011	Tonalite	0.345	0.010	0.31	28.8	92.0
1158413	E11-00143	82.0	83.0	2011	Tonalite	0.400	0.010	0.31	33.3	106.7
1163236	E11-00150	259.0	260.0	2011	Tonalite	0.180	0.010	0.31	15.0	48.0
1163335	E11-00150	350.0	351.0	2011	Tonalite	0.240	0.010	0.31	20.0	64.0
1172556	E11-108	402.0	403.0	2011	Tonalite	0.320	0.010	0.31	26.7	85.3
1175325	E11-98	298.0	299.0	2011	Tonalite	0.120	0.010	0.31	10.0	32.0
1258449	E12-00179	189.0	190.0	2012	Tonalite	0.280	0.010	0.31	23.3	74.7
1297330	E12-00291	80.0	81.0	2012	Tonalite	0.080	0.010	0.31	6.7	21.3
1298040	E12-00204	40.0	41.0	2012	Tonalite	0.630	0.010	0.31	52.5	168.0
1305947	E12-00247	92.0	92.6	2012	Tonalite	0.520	0.010	0.31	43.3	138.7
1309636	E12-00319	110.2	111.0	2012	Tonalite	0.100	0.010	0.31	8.3	26.7
1309766	E12-00319	221.0	222.0	2012	Tonalite	0.180	0.010	0.31	15.0	48.0
1311931	E12-00355	105.0	106.0	2012	Tonalite	0.200	0.010	0.31	16.7	53.3
1317764	E12-00271	88.0	89.0	2012	Tonalite	0.410	0.010	0.31	34.2	109.3
1328604	E11-00172	104.0	105.0	2011	Tonalite	0.245	0.010	0.31	20.4	65.3
1328669	E11-00172	164.0	165.0	2011	Tonalite	0.410	0.010	0.31	34.2	109.3
1329030	E12-00173	112.0	113.0	2012	Tonalite	0.280	0.010	0.31	23.3	74.7
1331507	E12-00198	151.0	152.0	2012	Tonalite	0.050	0.010	0.31	4.2	13.3
1335777	E12-00273	236.0	237.0	2012	Tonalite	0.180	0.010	0.31	15.0	48.0
1343649	E12-00211	257.4	258.0	2012	Tonalite	0.040	0.010	0.31	3.3	10.7
1359903	E12-00266	387.0	388.0	2012	Tonalite	0.100	0.010	0.31	8.3	26.7
1360681	E12-00224	329.0	330.0	2012	Tonalite	0.290	0.010	0.31	24.2	77.3
1364623	E12-00217	62.0	63.0	2012	Tonalite	0.240	0.010	0.31	20.0	64.0
1364751	E12-00217	168.0	169.0	2012	Tonalite	0.500	0.010	0.31	41.7	133.3
1364808	E12-00217	216.2	217.0	2012	Tonalite	0.350	0.010	0.31	29.2	93.3
1364871	E12-00217	271.0	272.0	2012	Tonalite	0.400	0.010	0.31	33.3	106.7
1374965	E12-00198	112.0	113.0	2012	Tonalite	0.220	0.010	0.31	18.3	58.7
1375316	E11-00171B	245.0	246.0	2011	Tonalite	0.200	0.010	0.31	16.7	53.3
1375370	E11-00171B	293.0	294.0	2011	Tonalite	0.180	0.010	0.31	15.0	48.0
1375432	E11-00171B	346.0	347.0	2011	Tonalite	0.180	0.010	0.31	15.0	48.0
1375759	E12-00175	107.0	108.0	2012	Tonalite	0.250	0.010	0.31	20.8	66.7
1376108	E12-00213	100.0	101.0	2012	Tonalite	0.220	0.010	0.31	18.3	58.7
1380216	E12-00234	200.0	201.0	2012	Tonalite	0.280	0.010	0.31	23.3	74.7
1381856	E12-00220	178.4	179.3	2012	Tonalite	2.530	0.010	0.31	210.8	674.7
1381908	E12-00220	225.0	226.0	2012	Tonalite	0.390	0.010	0.31	32.5	104.0
1382386	E12-00185	164.0	165.0	2012	Tonalite	0.160	0.010	0.31	13.3	42.7
1386767	E12-00245	44.0	45.0	2012	Tonalite	0.240	0.010	0.31	20.0	64.0
1390381	E12-00215	358.0	359.0	2012	Tonalite	0.060	0.010	0.31	5.0	16.0
1401269	E12-00337	132.0	133.0	2012	Tonalite	0.076	0.010	0.31	6.4	20.3
1413221	E12-00177	145.0	146.0	2012	Tonalite	0.198	0.010	0.31	16.5	52.8
1415522	E12-00330	139.0	140.0	2012	Tonalite	0.467	0.010	0.31	38.9	124.5
1436361	E12-00314	101.0	102.0	2012	Tonalite	0.687	0.010	0.31	57.3	183.2
1437178	E12-00341	183.0	184.0	2012	Tonalite	0.276	0.010	0.31	23.0	73.6
1455519	E12-00302	354.3	355.7	2012	Tonalite	0.605	0.010	0.31	50.4	161.3
1464052	E12-00340	143.0	144.0	2012	Tonalite	0.159	0.010	0.31	13.3	42.4
1464107	E12-00340	194.00	195.00	2012	Tonalite	0.438	0.010	0.31	36.5	116.8
1465801	E12-00358	158.2	159.0	2012	Tonalite	0.279	0.010	0.31	23.3	74.4
1469382	E12-00346	69.0	70.0	2012	Tonalite	0.010	0.010	0.31	0.8	2.7
1473505	E12-00349	113.0	114.3	2012	Tonalite	0.494	0.010	0.31	41.2	131.7
1401392	E12-00337	243.7	244.9	2012	Tonalite	0.192	0.012	0.39	16.0	41.3
1437295	E12-00341	294.0	295.0	2012	Tonalite	0.081	0.013	0.40	6.8	16.8
1445270	E12-00360	111.0	112.0	2012	Tonalite	0.205	0.013	0.41	17.1	42.1
1113134	E11-00148	183.0	184.0	2011	Tonalite	0.438	0.015	0.48	36.5	75.6
1465856	E12-00358	206.0	207.1	2012	Tonalite	0.242	0.017	0.52	20.2	38.6
1474379	E12-00348	231.5	232.5	2012	Tonalite	0.121	0.017	0.52	10.1	19.3
1473444	E12-00349	56.0	57.0	2012	Tonalite	0.163	0.017	0.53	13.6	25.9
1109283	E11-114	235.0	236.0	2011	Tonalite	0.485	0.017	0.54	40.4	74.9
1113077	E11-00148	133.0	134.0	2011	Tonalite	0.119	0.018	0.56	9.9	17.7
1455341	E12-00302	190.0	190.7	2012	Tonalite	0.204	0.018	0.56	17.0	30.4
1120776	E11-132	43.0	44.0	2011	Tonalite	0.080	0.019	0.60	6.6	11.0
571136	E10-46	204.0	205.0	2010	Tonalite	0.410	0.020	0.63	34.2	54.7
577566	E10-39	11.0	12.0	2010	Tonalite	0.550	0.020	0.63	45.8	73.3
928797	E10-08	337.0	338.0	2010	Tonalite	0.720	0.020	0.63	60.0	96.0
1008640	E11-86	184.0	185.0	2011	Tonalite	0.010	0.020	0.63	0.8	1.3
1029834	E11-92	170.8	172.0	2011	Tonalite	0.280	0.020	0.63	23.3	37.3
1029887	E11-92	220.0	221.0	2011	Tonalite	0.340	0.020	0.63	28.3	45.3
1049134	E11-66	150.0	151.0	2011	Tonalite	0.270	0.020	0.63	22.5	36.0
1051192	E11-78	11.0	12.0	2011	Tonalite	0.220	0.020	0.63	18.3	29.3
1051248	E11-78	62.0	63.0	2011	Tonalite	0.380	0.020	0.63	31.7	50.7
1051624	E11-72	275.0	276.0	2011	Tonalite	0.200	0.020	0.63	16.7	26.7
1053708	E11-81	57.0	58.0	2011	Tonalite	0.040	0.020	0.63	3.3	5.3
1107081	E11-111	83.9	85.0	2011	Tonalite	0.250	0.020	0.63	20.8	33.3
1107317	E11-111	299.0	300.0	2011	Tonalite	0.410	0.020	0.63	34.2	54.7
1107625	E11-109	126.0	127.0	2011	Tonalite	0.480	0.020	0.63	40.0	64.0
1121913	E11-124	125.0	126.0	2011	Tonalite	0.060	0.020	0.63	5.0	8.0
1156338	E11-136	445.0	446.0	2011	Tonalite	0.240	0.020	0.63	20.0	32.0
1157974	E11-00135	220.0	221.0	2011	Tonalite	0.100	0.020	0.63	8.3	13.3
1158477	E11-00143	140.0	141.0	2011	Tonalite	0.380	0.020	0.63	31.7	50.7
1163178	E11-00150	205.0	206.0	2011	Tonalite	0.190	0.020	0.63	15.8	25.3
1167470	E11-00161	441.0	441.8	2011	Tonalite	0.280	0.020	0.63	23.3	37.3
1167971	E11-00169	215.0	216.0	2011	Tonalite	0.380	0.020	0.63	31.7	50.7
1168456	E11-00168	417.0	418.0	2011	Tonalite	0.440	0.020	0.63	36.7	58.7

Table A-6: Mine Rock Acid Base Accounting Results by Leco Carbon and Sulphur

Sample No	Drillhole ID	From	To	Age of Drillhole	Lithology	Total Carbon	Total Sulphur	MPA*	Carbonate NP**	Carbonate NPR_{MPA}
						%		kg $CaCO_3$/tonne		
1172615	E11-108	456.0	457.0	2011	Tonalite	0.200	0.020	0.63	16.7	26.7
1172861	E11-115	11.0	12.0	2011	Tonalite	0.120	0.020	0.63	10.0	16.0
1173453	E11-100	277.0	278.0	2011	Tonalite	0.280	0.020	0.63	23.3	37.3
1174169	E11-101	112.8	114.1	2011	Tonalite	0.500	0.020	0.63	41.7	66.7
1175624	E11-99	361.2	362.0	2011	Tonalite	0.340	0.020	0.63	28.3	45.3
1175663	E11-99	396.0	397.0	2011	Tonalite	0.350	0.020	0.63	29.2	46.7
1261398	E12-00296	116.0	117.0	2012	Tonalite	0.450	0.020	0.63	37.5	60.0
1263625	E12-00282	127.1	127.8	2012	Tonalite	0.220	0.020	0.63	18.3	29.3
1284093	E12-00205	97.0	98.0	2012	Tonalite	0.180	0.020	0.63	15.0	24.0
1285351	E12-00210	94.8	95.8	2012	Tonalite	0.190	0.020	0.63	15.8	25.3
1288077	E12-00279	77.0	78.0	2012	Tonalite	0.200	0.020	0.63	16.7	26.7
1288142	E12-00279	137.0	138.0	2012	Tonalite	0.220	0.020	0.63	18.3	29.3
1305005	E12-00290	145.0	146.0	2012	Tonalite	0.240	0.020	0.63	20.0	32.0
1306915	E12-00290	61.0	62.0	2012	Tonalite	0.080	0.020	0.63	6.7	10.7
1310517	E12-00318	489.0	490.0	2012	Tonalite	0.080	0.020	0.63	6.7	10.7
1313368	E12-00317	66.0	67.0	2012	Tonalite	0.250	0.020	0.63	20.8	33.3
1317270	E12-00229	253.0	254.0	2012	Tonalite	1.540	0.020	0.63	128.3	205.3
1317704	E12-00271	33.0	34.0	2012	Tonalite	0.160	0.020	0.63	13.3	21.3
1326073	E12-00313	79.0	80.0	2012	Tonalite	0.290	0.020	0.63	24.2	38.7
1341141	E12-00278	110.0	111.0	2012	Tonalite	0.440	0.020	0.63	36.7	58.7
1343704	E12-00211	307.0	308.0	2012	Tonalite	0.300	0.020	0.63	25.0	40.0
1346256	E12-00180	236.0	237.0	2012	Tonalite	0.080	0.020	0.63	6.7	10.7
1349659	E12-00232	177.0	178.0	2012	Tonalite	0.120	0.020	0.63	10.0	16.0
1361712	E12-00274	248.0	249.0	2012	Tonalite	0.340	0.020	0.63	28.3	45.3
1362237	E12-00267	219.0	220.0	2012	Tonalite	0.340	0.020	0.63	28.3	45.3
1370006	E11-00163	15.0	16.0	2012	Tonalite	0.360	0.020	0.63	30.0	48.0
1374916	E12-00198	67.0	68.0	2012	Tonalite	0.520	0.020	0.63	43.3	69.3
1378706	E12-00277	42.0	43.0	2012	Tonalite	0.520	0.020	0.63	43.3	69.3
1382331	E12-00185	114.0	115.0	2012	Tonalite	0.150	0.020	0.63	12.5	20.0
1382585	E12-00185	379.0	380.0	2012	Tonalite	0.010	0.020	0.63	0.8	1.3
1383744	E12-00181	318.0	319.0	2012	Tonalite	0.360	0.020	0.63	30.0	48.0
1384903	E12-00248	172.0	173.0	2012	Tonalite	0.300	0.020	0.63	25.0	40.0
1386233	E12-00207	66.5	67.0	2012	Tonalite	2.860	0.020	0.63	238.3	381.4
1486512	E12-00333	15.0	16.0	2012	Tonalite	0.350	0.020	0.63	29.2	46.7
1108811	E11-107	288.0	289.0	2011	Tonalite	0.321	0.020	0.64	26.7	42.0
1474888	E12-00342	170.0	171.0	2012	Tonalite	0.237	0.021	0.66	19.8	29.8
1469046	E12-00329	136.3	137.0	2012	Tonalite	0.362	0.022	0.68	30.2	44.7
1455287	E12-00302	140.0	141.0	2012	Tonalite	1.640	0.022	0.70	136.7	195.3
1437121	E12-00341	129.2	130.0	2012	Tonalite	0.241	0.023	0.70	20.1	28.6
1111978	E11-00147	373.0	374.0	2011	Tonalite	0.340	0.023	0.73	28.3	38.7
1114008	E11-00140	156.0	157.0	2011	Tonalite	0.401	0.024	0.74	33.4	45.1
1469721	E12-00345	35.0	36.0	2012	Tonalite	0.199	0.026	0.82	16.6	20.3
1109218	E11-114	176.0	177.0	2011	Tonalite	0.235	0.028	0.86	19.5	22.7
1109886	E11-112	355.0	356.0	2011	Tonalite	0.353	0.028	0.89	29.4	33.2
1484728	E12-00339	122.0	123.0	2012	Tonalite	0.600	0.030	0.92	50.0	54.2
29236	E11-77	220.0	221.0	2011	Tonalite	0.080	0.030	0.94	6.7	7.1
68641	E11-54	103.4	104.4	2011	Tonalite	0.400	0.030	0.94	33.3	35.6
70674	E10-47	458.6	459.4	2010	Tonalite	0.240	0.030	0.94	20.0	21.3
92276	E11-92	118.0	119.0	2011	Tonalite	0.330	0.030	0.94	27.5	29.3
246864	E13-00398	153.0	154.0	2013	Tonalite	0.160	0.030	0.94	13.3	14.2
571469	E10-47	147.0	148.5	2010	Tonalite	0.200	0.030	0.94	16.7	17.8
576514	E11-48	21.0	22.5	2011	Tonalite	0.080	0.030	0.94	6.7	7.1
576646	E11-48	140.5	141.5	2011	Tonalite	0.200	0.030	0.94	16.7	17.8
956658	E10-45	274.6	275.6	2010	Tonalite	0.040	0.030	0.94	3.3	3.6
1008484	E11-86	41.0	42.0	2011	Tonalite	0.340	0.030	0.94	28.3	30.2
1047392	E11-70	100.0	101.0	2011	Tonalite	0.440	0.030	0.94	36.7	39.1
1108517	E11-107	19.0	19.7	2011	Tonalite	1.010	0.030	0.94	84.2	89.8
1120651	E11-125	36.0	37.0	2011	Tonalite	0.240	0.030	0.94	20.0	21.3
1175564	E11-99	306.0	307.0	2011	Tonalite	0.320	0.030	0.94	26.7	28.4
1256379	E12-00193	166.0	167.0	2012	Tonalite	0.080	0.030	0.94	6.7	7.1
1284024	E12-00205	38.0	39.0	2012	Tonalite	0.260	0.030	0.94	21.7	23.1
1284778	E12-00197	13.0	14.0	2012	Tonalite	0.320	0.030	0.94	26.7	28.4
1297380	E12-00291	126.0	127.0	2012	Tonalite	0.240	0.030	0.94	20.0	21.3
1298677	E12-00230	163.0	164.0	2012	Tonalite	0.240	0.030	0.94	20.0	21.3
1298746	E12-00230	225.0	226.0	2012	Tonalite	0.580	0.030	0.94	48.3	51.6
1311510	E12-00357	107.5	108.0	2012	Tonalite	0.410	0.030	0.94	34.2	36.4
1311570	E12-00357	159.0	160.0	2012	Tonalite	0.080	0.030	0.94	6.7	7.1
1311843	E12-00355	28.0	29.0	2012	Tonalite	0.340	0.030	0.94	28.3	30.2
1328816	E11-00172	300.0	301.0	2012	Tonalite	0.580	0.030	0.94	48.3	51.6
1342239	E12-00176	217.0	218.0	2012	Tonalite	0.110	0.030	0.94	9.2	9.8
1349767	E12-00232	276.3	277.3	2012	Tonalite	0.050	0.030	0.94	4.2	4.4
1363137	E12-00228	358.0	359.0	2012	Tonalite	0.320	0.030	0.94	26.7	28.4
1368149	E11-00162	143.0	144.0	2011	Tonalite	0.260	0.030	0.94	21.7	23.1
1371689	E12-00178	130.0	131.0	2012	Tonalite	0.180	0.030	0.94	15.0	16.0
1371889	E12-00178	315.0	316.0	2012	Tonalite	1.930	0.030	0.94	160.8	171.6
1380320	E12-00234	296.0	297.0	2012	Tonalite	0.320	0.030	0.94	26.7	28.4
1382555	E12-00185	318.0	319.0	2012	Tonalite	0.030	0.030	0.94	2.5	2.7
1384066	E12-00227	137.0	138.0	2012	Tonalite	0.450	0.030	0.94	37.5	40.0
1387938	E12-00208	145.0	146.0	2012	Tonalite	0.400	0.030	0.94	33.3	35.6
1388224	E12-00324	176.0	177.0	2012	Tonalite	0.360	0.030	0.94	30.0	32.0
1388908	E12-00331	198.0	199.0	2012	Tonalite	0.300	0.030	0.94	25.0	26.7
1395884	E12-00321	35.0	36.0	2012	Tonalite	0.420	0.030	0.94	35.0	37.3
1117211	E11-119	86.0	87.0	2011	Tonalite	0.203	0.031	0.95	16.9	17.7
1456079	E12-00281	561.0	562.0	2012	Tonalite	1.530	0.032	0.98	127.5	129.5
1455398	E12-00302	244.0	245.0	2012	Tonalite	0.395	0.032	0.99	32.9	33.2
1117896	E11-122	84.0	85.0	2011	Tonalite	0.399	0.035	1.11	33.3	30.1
1464645	E12-00354	87.0	88.0	2012	Tonalite	0.598	0.036	1.12	49.8	44.4
90694	E11-63	128.0	129.0	2011	Tonalite	0.118	0.037	1.15	9.8	8.5
1455581	E12-00302	413.0	414.0	2012	Tonalite	0.200	0.037	1.15	16.7	14.5
1437234	E12-00341	236.0	237.0	2012	Tonalite	0.160	0.037	1.16	13.3	11.5
90854	E11-92	52.0	53.0	2011	Tonalite	0.300	0.040	1.25	25.0	20.0
576574	E11-48	79.3	80.3	2011	Tonalite	0.200	0.040	1.25	16.7	13.3
577155	E10-45	127.0	128.0	2010	Tonalite	0.250	0.040	1.25	20.8	16.7
935250	E10-17	72.0	73.0	2010	Tonalite	0.280	0.040	1.25	23.3	18.7
952225	E10-28	144.0	145.0	2010	Tonalite	0.430	0.040	1.25	35.8	28.7
957140	E10-30	230.0	231.0	2010	Tonalite	0.320	0.040	1.25	26.7	21.3
1051896	E11-72	155.0	156.0	2011	Tonalite	0.250	0.040	1.25	20.8	16.7
1104484	E11-103	41.0	42.0	2011	Tonalite	0.360	0.040	1.25	30.0	24.0
1105787	E11-116	71.0	72.0	2011	Tonalite	0.340	0.040	1.25	28.3	22.7
1164067	E11-00144	404.0	405.0	2011	Tonalite	0.260	0.040	1.25	21.7	17.3
1172947	E11-115	134.0	135.3	2011	Tonalite	0.880	0.040	1.25	73.3	58.7
1174079	E11-101	29.0	30.0	2011	Tonalite	0.120	0.040	1.25	10.0	8.0
1317847	E12-00271	165.0	166.0	2012	Tonalite	0.080	0.040	1.25	6.7	5.3
1323716	E12-00251	121.3	122.0	2012	Tonalite	0.330	0.040	1.25	27.5	22.0
1326178	E12-00313	194.0	195.0	2012	Tonalite	0.100	0.040	1.25	8.3	6.7
1326284	E12-00313	307.0	308.0	2012	Tonalite	0.190	0.040	1.25	15.8	12.7
1328842	E11-00172	324.0	325.0	2011	Tonalite	0.570	0.040	1.25	47.5	38.0
1341594	E12-00287	91.0	91.9	2012	Tonalite	0.140	0.040	1.25	11.7	9.3
1341644	E12-00287	137.0	138.0	2012	Tonalite	0.320	0.040	1.25	26.7	21.3
1361492	E12-00274	45.0	46.0	2012	Tonalite	0.230	0.040	1.25	19.2	15.3
1371812	E12-00178	243.5	245.0	2012	Tonalite	1.360	0.040	1.25	113.3	90.7
1376219	E12-00213	202.0	202.6	2012	Tonalite	0.310	0.040	1.25	25.8	20.7
1382454	E12-00185	227.0	228.3	2012	Tonalite	0.200	0.040	1.25	16.7	13.3
1384196	E12-00227	250.0	251.0	2012	Tonalite	0.280	0.040	1.25	23.3	18.7
1384937	E12-00248	203.0	204.0	2012	Tonalite	0.450	0.040	1.25	37.5	30.0
1388083	E12-00324	53.0	53.7	2012	Tonalite	0.200	0.040	1.25	16.7	13.3
1390140	E12-00215	135.0	136.0	2012	Tonalite	0.420	0.040	1.25	35.0	28.0
1395944	E12-00321	90.0	91.0	2012	Tonalite	1.110	0.040	1.25	92.5	74.0
1437068	E12-00341	79.0	80.0	2012	Tonalite	0.078	0.043	1.33	6.5	4.9
1431335	E12-00328	227.0	228.0	2012	Tonalite	0.317	0.043	1.35	26.4	19.6
1153609	E11-138	57.0	58.0	2011	Tonalite	0.540	0.048	1.49	45.0	30.2
1111218	E11-00140	64.0	65.0	2011	Tonalite	0.019	0.049	1.55	1.6	1.0
246747	E13-00398	51.0	52.0	2013	Tonalite	0.360	0.050	1.56	30.0	19.2
957178	E10-30	260.5	261.0	2010	Tonalite	0.260	0.050	1.56	21.7	13.9
1052656	E11-74	391.0	392.0	2011	Tonalite	0.940	0.050	1.56	78.3	50.1
1057810	E11-85	176.0	177.0	2011	Tonalite	0.280	0.050	1.56	23.3	14.9
1163425	E11-00150	433.0	434.0	2011	Tonalite	0.250	0.050	1.56	20.8	13.3
1163480	E11-00150	482.0	483.0	2011	Tonalite	0.240	0.050	1.56	20.0	12.8
1171018	E11-94	259.0	260.0	2011	Tonalite	0.790	0.050	1.56	65.8	42.1
1285469	E12-00210	203.0	204.0	2012	Tonalite	0.100	0.050	1.56	8.3	5.3
1299415	E12-00212	236.9	237.4	2012	Tonalite	1.850	0.050	1.56	154.2	98.7
1338519	E12-00277	143.0	144.0	2012	Tonalite	0.470	0.050	1.56	39.2	25.1
1342172	E12-00176	155.0	156.0	2012	Tonalite	0.340	0.050	1.56	28.3	18.1
1349813	E12-00232	319.0	320.0	2012	Tonalite	0.320	0.050	1.56	26.7	17.1
1359809	E12-00266	299.0	300.0	2012	Tonalite	0.280	0.050	1.56	23.3	14.9
1383845	E12-00181	409.3	410.0	2012	Tonalite	0.080	0.050	1.56	6.7	4.3
1384840	E12-00248	114.0	115.0	2012	Tonalite	0.360	0.050	1.56	30.0	19.2
1390264	E12-00215	250.0	251.0	2012	Tonalite	0.280	0.050	1.56	23.3	14.9
1395197	E12-00316	114.0	115.0	2012	Tonalite	0.750	0.050	1.56	62.5	40.0
1469073	E12-00329	193.0	194.0	2012	Tonalite	0.279	0.050	1.58	23.3	14.8

Table A-6: Mine Rock Acid Base Accounting Results by Leco Carbon and Sulphur

Sample No	Drillhole ID	From	To	Age of Drillhole	Lithology	Total Carbon	Total Sulphur	MPA*	Carbonate NP**	Carbonate NPR_{MPA}
						%		kg $CaCO_3$/tonne		
1120966	E11-136	6.0	7.0	2011	Tonalite	0.139	0.051	1.59	11.5	7.3
1112007	E11-00145	34.0	35.0	2011	Tonalite	0.442	0.054	1.68	36.8	21.9
1469777	E12-00345	85.0	86.0	2012	Tonalite	0.366	0.057	1.77	30.5	17.3
926642	E10-34	175.8	176.9	2010	Tonalite	0.122	0.057	1.78	10.1	5.7
1016801	E11-90	167.0	168.0	2011	Tonalite	0.200	0.060	1.88	16.7	8.9
1027637	E11-82	88.0	89.0	2011	Tonalite	0.240	0.060	1.88	20.0	10.7
1050665	E11-71	74.7	75.7	2011	Tonalite	0.200	0.060	1.88	16.7	8.9
1054094	E11-74	105.0	106.0	2011	Tonalite	0.300	0.060	1.88	25.0	13.3
1070978	E11-97	169.0	170.0	2011	Tonalite	0.270	0.060	1.88	22.5	12.0
1107020	E11-111	28.0	29.0	2011	Tonalite	0.150	0.060	1.88	12.5	6.7
1260333	E12-00276	129.0	129.5	2012	Tonalite	0.320	0.060	1.88	26.7	14.2
1328551	E11-00172	55.0	56.0	2011	Tonalite	0.970	0.060	1.88	80.8	43.1
1335727	E12-00273	193.0	194.0	2012	Tonalite	0.060	0.060	1.88	5.0	2.7
1359030	E12-00261	273.0	274.0	2012	Tonalite	0.240	0.060	1.88	20.0	10.7
1362115	E12-00267	107.0	108.0	2012	Tonalite	0.280	0.060	1.88	23.3	12.4
1378754	E12-00277	86.0	87.0	2012	Tonalite	0.300	0.060	1.88	25.0	13.3
1380279	E12-00234	258.0	259.0	2012	Tonalite	0.120	0.060	1.88	10.0	5.3
1383807	E12-00181	375.0	376.0	2012	Tonalite	0.480	0.060	1.88	40.0	21.3
1401526	E12-00337	366.6	367.4	2012	Tonalite	1.870	0.064	2.01	155.8	77.7
684066	E10-04	175.5	176.3	2010	Tonalite	3.330	0.070	2.19	277.5	126.9
920900	E10-24	149.5	150.0	2010	Tonalite	0.200	0.070	2.19	16.7	7.6
957074	E10-30	176.9	177.4	2010	Tonalite	0.160	0.070	2.19	13.3	6.1
1008131	E11-84	217.0	217.6	2011	Tonalite	0.110	0.070	2.19	9.2	4.2
1026197	E11-81	302.0	303.0	2011	Tonalite	0.580	0.070	2.19	48.3	22.1
1027217	E11-83	108.8	110.0	2011	Tonalite	0.400	0.070	2.19	33.3	15.2
1045618	E11-62	112.6	113.6	2011	Tonalite	0.310	0.070	2.19	25.8	11.8
1157754	E11-00135	18.0	19.0	2011	Tonalite	0.350	0.070	2.19	29.2	13.3
1264312	E12-00284	112.0	113.0	2012	Tonalite	0.290	0.070	2.19	24.2	11.0
1338230	E12-00288	158.0	159.0	2012	Tonalite	1.500	0.070	2.19	125.0	57.1
1355839	E12-00272	126.0	127.0	2012	Tonalite	0.150	0.070	2.19	12.5	5.7
1360620	E12-00224	275.0	276.3	2012	Tonalite	0.220	0.070	2.19	18.3	8.4
1375820	E12-00175	161.0	162.0	2012	Tonalite	0.290	0.070	2.19	24.2	11.0
1375887	E12-00175	216.7	217.2	2012	Tonalite	0.730	0.070	2.19	60.8	27.8
1401330	E12-00337	187.0	188.0	2012	Tonalite	0.194	0.075	2.34	16.2	6.9
1455458	E12-00302	298.0	299.0	2012	Tonalite	0.365	0.077	2.41	30.4	12.6
69601	E11-58	308.4	309.4	2011	Tonalite	0.300	0.080	2.50	25.0	10.0
1029909	E11-90	357.0	358.2	2011	Tonalite	0.600	0.080	2.50	50.0	20.0
1168366	E11-00168	333.0	334.0	2011	Tonalite	0.340	0.080	2.50	28.3	11.3
1169541	E11-00143	197.0	198.0	2011	Tonalite	0.480	0.080	2.50	40.0	16.0
1299358	E12-00212	186.0	187.0	2012	Tonalite	0.280	0.080	2.50	23.3	9.3
1310462	E12-00318	439.0	440.0	2012	Tonalite	0.040	0.080	2.50	3.3	1.3
1311886	E12-00355	65.3	66.3	2012	Tonalite	2.080	0.080	2.50	173.3	69.3
1325106	E12-00280	101.6	102.0	2012	Tonalite	0.590	0.080	2.50	49.2	19.7
1329096	E12-00173	170.3	171.4	2012	Tonalite	3.610	0.080	2.50	300.9	120.3
1333344	E12-00236	299.0	300.0	2012	Tonalite	0.110	0.080	2.50	9.2	3.7
1336375	E12-00233	524.0	525.0	2012	Tonalite	0.430	0.080	2.50	35.8	14.3
1349110	E12-00283	56.0	57.0	2012	Tonalite	0.170	0.080	2.50	14.2	5.7
1350764	E12-00252	226.0	227.0	2012	Tonalite	0.120	0.080	2.50	10.0	4.0
1370068	E11-00163	73.0	74.0	2011	Tonalite	0.280	0.080	2.50	23.3	9.3
1387529	E12-00196	557.0	558.0	2012	Tonalite	0.400	0.080	2.50	33.3	13.3
1390318	E12-00215	300.0	301.0	2012	Tonalite	0.380	0.080	2.50	31.7	12.7
1436294	E12-00314	43.0	44.0	2012	Tonalite	0.634	0.087	2.71	52.8	19.5
1116725	E11-118	210.0	211.0	2011	Tonalite	0.236	0.088	2.74	19.6	7.2
1271260	E11-00160	237.0	238.0	2011	Tonalite	0.200	0.090	2.81	16.7	5.9
1333390	E12-00236	340.0	341.0	2012	Tonalite	0.260	0.090	2.81	21.7	7.7
1156242	E11-136	357.0	358.0	2011	Tonalite	0.417	0.093	2.90	34.7	12.0
1431297	E12-00328	171.0	172.0	2012	Tonalite	0.200	0.093	2.90	16.7	5.7
1415473	E12-00330	95.0	95.9	2012	Tonalite	0.353	0.095	2.97	29.4	9.9
1416107	E13-00394	126.0	127.0	2013	Tonalite	0.361	0.099	3.08	30.1	9.8
681950	E10-04	98.8	99.3	2010	Tonalite	0.310	0.100	3.13	25.8	8.3
934827	E10-16	91.0	92.0	2010	Tonalite	0.120	0.100	3.13	10.0	3.2
957598	E10-35	91.3	92.3	2010	Tonalite	0.390	0.100	3.13	32.5	10.4
1047567	E11-90	404.0	405.0	2011	Tonalite	0.320	0.100	3.13	26.7	8.5
1048789	E11-73	139.0	140.0	2011	Tonalite	0.080	0.100	3.13	6.7	2.1
1105955	E11-116	225.0	226.0	2011	Tonalite	0.360	0.100	3.13	30.0	9.6
1168616	E11-00154	109.0	110.0	2011	Tonalite	0.610	0.100	3.13	50.8	16.3
1172344	E11-95	382.9	384.0	2011	Tonalite	0.620	0.100	3.13	51.7	16.5
1334371	E12-00240	277.0	278.4	2012	Tonalite	0.370	0.100	3.13	30.8	9.9
1336320	E12-00233	473.0	474.0	2012	Tonalite	0.040	0.100	3.13	3.3	1.1
1364688	E12-00217	116.4	117.3	2012	Tonalite	0.040	0.100	3.13	3.3	1.1
1390498	E12-00215	465.0	466.0	2012	Tonalite	0.200	0.100	3.13	16.7	5.3
951840	E11-57	198.0	199.0	2011	Tonalite	0.060	0.110	3.44	5.0	1.5
1114985	E11-00153-3	61.0	62.0	2011	Tonalite	0.460	0.110	3.44	38.3	11.2
1115674	E12-00209	40.0	41.0	2012	Tonalite	0.100	0.110	3.44	8.3	2.4
1153128	E11-137	106.0	107.0	2011	Tonalite	0.040	0.110	3.44	3.3	1.0
1163110	E11-00150	144.0	145.0	2011	Tonalite	0.170	0.110	3.44	14.2	4.1
1313534	E12-00317	270.0	271.0	2012	Tonalite	0.240	0.110	3.44	20.0	5.8
1323608	E12-00251	22.0	23.0	2012	Tonalite	0.340	0.110	3.44	28.3	8.2
1341098	E12-00278	70.0	71.2	2012	Tonalite	1.350	0.110	3.44	112.5	32.7
1371943	E12-00178	365.0	366.0	2012	Tonalite	0.160	0.110	3.44	13.3	3.9
1381953	E12-00220	262.8	263.3	2012	Tonalite	0.300	0.110	3.44	25.0	7.3
1385814	E12-00221	207.0	208.0	2012	Tonalite	0.470	0.110	3.44	39.2	11.4
1120848	E11-132	109.0	110.0	2011	Tonalite	0.782	0.111	3.47	65.2	18.8
1115788	E12-00209	145.0	146.0	2012	Tonalite	0.390	0.120	3.75	32.5	8.7
1116260	E11-117	93.0	94.0	2011	Tonalite	0.120	0.120	3.75	10.0	2.7
1173243	E11-100	88.0	89.0	2011	Tonalite	0.690	0.120	3.75	57.5	15.3
1306069	E12-00247	205.0	206.0	2012	Tonalite	0.540	0.120	3.75	45.0	12.0
1347687	E12-00206	133.0	134.3	2012	Tonalite	0.310	0.120	3.75	25.8	6.9
1396594	E12-00222	336.6	337.5	2012	Tonalite	0.010	0.120	3.75	0.8	0.2
1117512	E11-115	193.0	194.0	2011	Tonalite	0.304	0.121	3.77	25.3	6.7
1113248	E11-00148	285.0	286.0	2011	Tonalite	0.380	0.130	4.06	31.7	7.8
1323660	E12-00251	70.0	70.7	2012	Tonalite	0.020	0.130	4.06	1.7	0.4
1334134	E12-00240	59.0	60.0	2012	Tonalite	0.160	0.130	4.06	13.3	3.3
1336217	E12-00233	427.7	429.0	2012	Tonalite	0.630	0.130	4.06	52.5	12.9
1368976	E12-00173	63.0	64.0	2012	Tonalite	0.180	0.130	4.06	15.0	3.7
1390202	E12-00215	192.0	193.0	2012	Tonalite	0.370	0.130	4.06	30.8	7.6
1412249	E11-00158	232.0	233.0	2011	Tonalite	0.202	0.138	4.31	16.8	3.9
1349176	E12-00283	116.0	117.0	2012	Tonalite	0.330	0.140	4.38	27.5	6.3
1352904	E12-00196	71.8	72.0	2012	Tonalite	1.250	0.140	4.38	104.2	23.8
1371630	E12-00178	75.0	76.0	2012	Tonalite	0.020	0.140	4.38	1.7	0.4
953177	E10-07	328.0	328.5	2010	Tonalite	0.790	0.150	4.69	65.8	14.0
1264346	E12-00284	143.0	144.3	2012	Tonalite	1.300	0.150	4.69	108.3	23.1
1347577	E12-00206	28.2	29.0	2012	Tonalite	0.330	0.150	4.69	27.5	5.9
1349707	E12-00232	220.8	221.6	2012	Tonalite	1.070	0.150	4.69	89.2	19.0
1384131	E12-00227	194.6	196.0	2012	Tonalite	0.240	0.150	4.69	20.0	4.3
1388142	E12-00324	105.0	106.0	2012	Tonalite	0.460	0.150	4.69	38.3	8.2
1116010	E11-106	497.0	498.0	2011	Tonalite	0.343	0.154	4.81	28.5	5.9
1464698	E12-00354	135.7	136.4	2012	Tonalite	2.140	0.158	4.94	178.3	36.1
932502	E10-08	177.3	178.2	2010	Tonalite	0.290	0.160	5.00	24.2	4.8
1172286	E11-95	330.0	331.0	2011	Tonalite	0.780	0.160	5.00	65.0	13.0
1309700	E12-00319	167.0	168.0	2012	Tonalite	0.340	0.160	5.00	28.3	5.7
1072741	E11-96	362.0	363.0	2011	Tonalite	0.280	0.170	5.31	23.3	4.4
1118064	E11-116	325.0	326.0	2011	Tonalite	1.140	0.170	5.31	95.0	17.9
955689	E10-33	54.1	55.1	2010	Tonalite	0.040	0.180	5.63	3.3	0.6
1341201	E12-00278	164.9	166.0	2012	Tonalite	0.300	0.180	5.63	25.0	4.4
1382659	E12-00185	446.6	447.3	2012	Tonalite	0.190	0.190	5.94	15.8	2.7
1401470	E12-00337	314.0	315.0	2012	Tonalite	0.351	0.191	5.97	29.3	4.9
959381	E11-80	80.2	81.3	2011	Tonalite	0.470	0.200	6.25	39.2	6.3
1017766	E11-89	16.0	16.8	2011	Tonalite	0.470	0.200	6.25	39.2	6.3
1070564	E11-93	445.0	446.0	2011	Tonalite	0.330	0.200	6.25	27.5	4.4
579777	E10-46	255.0	256.0	2010	Tonalite	0.270	0.210	6.56	22.5	3.4
1343591	E12-00211	204.0	205.0	2012	Tonalite	0.320	0.210	6.56	26.7	4.1
1153734	E11-138	170.0	170.5	2011	Tonalite	0.718	0.213	6.64	59.8	9.0
952814	E10-29	392.0	393.0	2010	Tonalite	1.440	0.240	7.50	120.0	16.0
1168288	E11-00168	260.0	261.0	2011	Tonalite	0.260	0.240	7.50	21.7	2.9
1049901	E11-75	165.0	166.0	2011	Tonalite	0.370	0.250	7.81	30.8	3.9
571076	E10-46	148.0	149.0	2010	Tonalite	0.270	0.260	8.13	22.5	2.8
1070231	E11-93	123.0	124.0	2011	Tonalite	0.420	0.260	8.13	35.0	4.3
1261869	E12-00270	99.0	100.0	2012	Tonalite	1.960	0.270	8.44	163.3	19.4
1070181	E11-93	76.0	77.0	2011	Tonalite	0.410	0.280	8.75	34.2	3.9
1070293	E11-93	181.0	182.0	2011	Tonalite	1.400	0.290	9.06	116.7	12.9
1412303	E11-00158	284.0	285.0	2011	Tonalite	0.310	0.296	9.25	25.8	2.8
69848	E11-58	526.6	527.6	2011	Tonalite	0.040	0.310	9.69	3.3	0.3
1362180	E12-00267	167.3	168.0	2012	Tonalite	1.030	0.330	10.31	85.8	8.3
1402425	E12-00310	143.3	144.3	2012	Tonalite	1.960	0.334	10.44	163.3	15.6
1256432	E12-00193	215.0	216.0	2012	Tonalite	0.040	0.380	11.88	3.3	0.3
929658	E10-31	535.6	536.3	2010	Tonalite	1.510	0.390	12.19	125.8	10.3
1016837	E11-90	200.0	201.0	2011	Tonalite	0.430	0.390	12.19	35.8	2.9
1057090	E11-76	187.0	188.0	2011	Tonalite	0.630	0.400	12.50	52.5	4.2
1342108	E12-00176	97.0	98.0	2012	Tonalite	0.160	0.410	12.81	13.3	1.0

Table A-6: Mine Rock Acid Base Accounting Results by Leco Carbon and Sulphur

Sample No	Drillhole ID	From	To	Age of Drillhole	Lithology	Total Carbon	Total Sulphur	MPA*	Carbonate NP**	Carbonate NPR_{MPA}
						%		kg $CaCO_3$/tonne		
953145	E10-07	305.0	305.5	2010	Tonalite	0.860	0.440	13.75	71.7	5.2
1026229	E11-81	332.0	333.0	2011	Tonalite	1.870	0.460	14.38	155.8	10.8
1008263	E11-84	337.8	339.0	2011	Tonalite	0.300	0.560	17.50	25.0	1.4
1398311	E12-00216	102.0	103.0	2012	Tonalite	0.230	0.580	18.13	19.2	1.1
928174	E10-38	128.5	129.7	2010	Tonalite	0.200	0.600	18.75	16.7	0.9
1364567	E12-00217	12.0	13.0	2012	Tonalite	0.390	1.040	32.50	32.5	1.0
937698	E10-14	127.0	128.0	2010	Mafic Dykes	0.400	0.010	0.31	33.3	106.7
1299298	E12-00212	130.8	132.0	2012	Mafic Dykes	1.630	0.050	1.56	135.8	86.9
952486	E10-29	123.5	124.7	2010	Mafic Dykes	2.000	0.060	1.88	166.7	88.9
1288121	E12-00279	118.1	119.0	2012	Mafic Dykes	0.380	0.070	2.19	31.7	14.5
1070452	E11-93	337.5	339.0	2011	Mafic Dykes	0.700	0.270	8.44	58.3	6.9
689119	E10-05	68.6	69.6	2010	Mafic Dykes	1.520	0.010	0.31	126.7	405.4
1113188	E11-00148	230.0	231.0	2011	Mafic Dykes	0.776	0.074	2.30	64.6	28.0
68678	E11-54	136.0	137.0	2011	Mafic Dykes	0.940	0.010	0.31	78.3	250.7
689497	E10-05	375.3	376.6	2010	Mafic Dykes	2.660	0.010	0.31	221.7	709.4
924822	E10-26	420.4	420.9	2010	Mafic Dykes	1.970	0.010	0.31	164.2	525.4
934215	E10-09	86.3	87.5	2010	Mafic Dykes	0.870	0.010	0.31	72.5	232.0
936227	E10-21	20.0	21.0	2010	Mafic Dykes	1.710	0.010	0.31	142.5	456.0
937661	E10-14	101.0	102.0	2010	Mafic Dykes	0.960	0.010	0.31	80.0	256.0
938749	E10-10	170.0	170.9	2010	Mafic Dykes	1.740	0.010	0.31	145.0	464.0
1384878	E12-00248	149.0	149.9	2012	Mafic Dykes	1.410	0.010	0.31	117.5	376.0
1404018	E12-00323	371.2	372.0	2012	Mafic Dykes	1.110	0.010	0.31	92.5	296.0
931592	E10-11	129.0	130.0	2010	Mafic Dykes	1.320	0.020	0.63	110.0	176.0
936379	E10-21	129.5	130.0	2010	Mafic Dykes	1.670	0.020	0.63	139.2	222.7
1297405	E12-00291	149.0	150.0	2012	Mafic Dykes	1.040	0.020	0.63	86.7	138.7
1326673	E12-00300	300.0	301.0	2012	Mafic Dykes	2.440	0.020	0.63	203.3	325.4
1474796	E12-00342	92.0	93.0	2012	Mafic Dykes	0.933	0.027	0.85	77.8	91.1
935187	E10-17	23.0	24.0	2010	Mafic Dykes	0.280	0.030	0.94	23.3	24.9
1284808	E12-00197	41.4	42.0	2012	Mafic Dykes	1.900	0.030	0.94	158.3	168.9
1435345	E12-00294	176.3	177.3	2012	Mafic Dykes	2.660	0.033	1.02	221.7	218.3
1486617	E12-00333	110.5	111.1	2012	Mafic Dykes	0.363	0.033	1.02	30.3	29.7
1413313	E12-00177	233.0	234.0	2012	Mafic Dykes	0.729	0.033	1.03	60.8	58.7
1435956	E12-00303	388.6	389.6	2012	Mafic Dykes	0.487	0.035	1.08	40.6	37.6
1435347	E12-00294	177.3	178.3	2012	Mafic Dykes	0.040	0.039	1.20	3.3	2.8
1174129	E11-101	75.0	76.0	2011	Mafic Dykes	0.280	0.040	1.25	23.3	18.7
1415674	E12-00330	281.0	282.0	2012	Mafic Dykes	1.890	0.048	1.49	157.5	105.7
928285	E10-38	238.5	239.2	2010	Mafic Dykes	1.960	0.050	1.56	163.3	104.5
935289	E10-17	97.2	98.0	2010	Mafic Dykes	1.620	0.050	1.56	135.0	86.4
930139	E10-19	39.9	40.4	2010	Mafic Dykes	1.040	0.060	1.88	86.7	46.2
934846	E10-16	105.0	105.5	2010	Mafic Dykes	0.500	0.060	1.88	41.7	22.2
1260403	E12-00276	190.0	191.0	2012	Mafic Dykes	0.010	0.060	1.88	0.8	0.4
1313495	E12-00317	235.0	236.0	2012	Mafic Dykes	1.520	0.060	1.88	126.7	67.6
573592	E10-40	85.6	86.6	2010	Mafic Dykes	1.930	0.070	2.19	160.8	73.5
684358	E10-08	8.1	8.7	2010	Mafic Dykes	0.250	0.070	2.19	20.8	9.5
920837	E10-24	100.0	101.0	2010	Mafic Dykes	1.190	0.070	2.19	99.2	45.3
1168732	E11-00154	216.0	217.0	2011	Mafic Dykes	0.140	0.070	2.19	11.7	5.3
1357977	E12-00222	230.0	231.0	2012	Mafic Dykes	0.560	0.070	2.19	46.7	21.3
928680	E10-08	242.0	243.0	2010	Mafic Dykes	1.310	0.080	2.50	109.2	43.7
1386204	E12-00207	40.1	41.0	2012	Mafic Dykes	0.670	0.080	2.50	55.8	22.3
928827	E10-08	360.8	361.8	2010	Mafic Dykes	0.320	0.100	3.13	26.7	8.5
1047603	E11-80	188.0	189.0	2011	Mafic Dykes	0.040	0.100	3.13	3.3	1.1
1360573	E12-00224	232.0	233.0	2012	Mafic Dykes	1.830	0.100	3.13	152.5	48.8
1435412	E12-00294	236.4	237.0	2012	Mafic Dykes	2.050	0.104	3.25	170.8	52.6
1029147	E11-79	147.0	148.0	2011	Mafic Dykes	0.240	0.110	3.44	20.0	5.8
1047653	E11-80	234.0	235.0	2011	Mafic Dykes	0.040	0.110	3.44	3.3	1.0
1106700	E11-108	351.3	352.0	2011	Mafic Dykes	3.050	0.110	3.44	254.2	73.9
1288195	E12-00279	187.0	188.1	2012	Mafic Dykes	0.740	0.110	3.44	61.7	17.9
1167262	E11-00161	250.3	251.0	2011	Mafic Dykes	1.410	0.120	3.75	117.5	31.3
573505	E10-40	10.0	11.0	2010	Mafic Dykes	1.090	0.150	4.69	90.8	19.4
1167916	E11-00169	164.9	165.9	2011	Mafic Dykes	2.010	0.160	5.00	167.5	33.5
1054018	E11-74	35.0	36.0	2011	Mafic Dykes	1.080	0.170	5.31	90.0	16.9
1337965	E12-00281	457.0	458.0	2012	Mafic Dykes	1.100	0.180	5.63	91.7	16.3
681769	E09-03	182.0	182.9	2009	Mafic Dykes	1.930	0.190	5.94	160.8	27.1
1298028	E12-00204	29.6	31.0	2012	Mafic Dykes	2.220	0.190	5.94	185.0	31.2
934810	E10-16	77.5	78.1	2010	Mafic Dykes	0.570	0.200	6.25	47.5	7.6
952193	E10-28	123.4	124.0	2010	Mafic Dykes	1.390	0.200	6.25	115.8	18.5
1412344	E11-00158	321.5	322.0	2011	Mafic Dykes	0.314	0.207	6.47	26.2	4.0
952387	E10-29	45.0	46.0	2010	Mafic Dykes	0.260	0.230	7.19	21.7	3.0
937144	E10-07	63.0	63.5	2010	Mafic Dykes	0.930	0.240	7.50	77.5	10.3
1310414	E12-00318	395.0	396.0	2012	Mafic Dykes	1.400	0.240	7.50	116.7	15.6
1116199	E11-117	37.0	38.0	2011	Mafic Dykes	1.330	0.260	8.13	110.8	13.6
1017344	E11-87	225.0	226.0	2011	Mafic Dykes	0.590	0.320	10.00	49.2	4.9
1435829	E12-00303	281.3	281.9	2012	Mafic Dykes	0.757	0.369	11.53	63.1	5.5
935150	E10-16	363.5	364.0	2010	Mafic Dykes	1.280	0.440	13.75	106.7	7.8
950441	E10-27	213.0	214.0	2010	Mafic Dykes	1.020	1.800	56.25	85.0	1.5
1120993	E11-136	97.5	98.5	2011	Diabase Dykes	0.157	0.113	3.53	13.0	3.7
1153135	E11-137	187.0	188.0	2011	Diabase Dykes	0.010	0.140	4.38	0.8	0.2
937384	E10-08	96.9	97.8	2010	Diabase Dykes	0.700	0.460	14.38	58.3	4.1
1017319	E11-87	202.0	203.0	2011	Diabase Dykes	0.080	0.010	0.31	6.7	21.3
1109116	E11-114	82.0	83.0	2011	Diabase Dykes	0.638	0.010	0.31	53.1	170.0
1117290	E11-119	156.6	157.6	2011	Diabase Dykes	1.755	0.010	0.31	146.3	468.0
1335825	E12-00273	295.1	296.0	2012	Diabase Dykes	0.120	0.010	0.31	10.0	32.0
1474390	E12-00348	278.0	279.0	2012	Diabase Dykes	2.410	0.010	0.31	200.8	642.7
1172192	E11-95	243.4	244.4	2011	Diabase Dykes	0.820	0.020	0.63	68.3	109.3
1313372	E12-00317	121.6	122.3	2011	Diabase Dykes	0.280	0.040	1.25	23.3	18.7
1049783	E11-75	41.0	42.0	2011	Diabase Dykes	0.370	0.060	1.88	30.8	16.4
1153121	E11-137	100.0	101.0	2011	Diabase Dykes	0.140	0.060	1.88	11.7	6.2
952559	E10-29	182.0	183.1	2010	Diabase Dykes	0.720	0.070	2.19	60.0	27.4
1355814	E12-00272	90.5	91.5	2012	Diabase Dykes	0.120	0.070	2.19	10.0	4.6
955128	E10-33	396.5	397.6	2010	Diabase Dykes	0.080	0.080	2.50	6.7	2.7
1027276	E11-83	163.0	164.0	2011	Diabase Dykes	0.640	0.080	2.50	53.3	21.3
1057062	E11-76	123.0	124.0	2011	Diabase Dykes	0.080	0.080	2.50	6.7	2.7
1116737	E11-118	221.0	222.0	2011	Diabase Dykes	0.060	0.081	2.53	5.0	2.0
1120988	E11-136	39.0	40.0	2011	Diabase Dykes	0.137	0.085	2.65	11.4	4.3
1464765	E12-00354	209.0	210.0	2012	Diabase Dykes	1.470	0.086	2.70	122.5	45.4
1047429	E11-70	132.7	133.7	2011	Diabase Dykes	1.420	0.090	2.81	118.3	42.1
934718	E10-16	9.9	11.0	2010	Diabase Dykes	0.200	0.100	3.13	16.7	5.3
1116326	E11-117	154.0	155.0	2011	Diabase Dykes	0.360	0.100	3.13	30.0	9.6
1264388	E12-00284	196.6	197.5	2012	Diabase Dykes	0.160	0.100	3.13	13.3	4.3
1474363	E12-00348	199.3	199.8	2012	Diabase Dykes	1.270	0.129	4.03	105.8	26.3
954508	E10-38	95.0	96.5	2010	Diabase Dykes	0.560	0.130	4.06	46.7	11.5
1349598	E12-00232	120.3	121.3	2012	Diabase Dykes	0.140	0.130	4.06	11.7	2.9
29007	E11-77	11.0	12.0	2011	Diabase Dykes	1.820	0.140	4.38	151.7	34.7
1116330	E11-117	267.0	268.0	2011	Diabase Dykes	0.100	0.140	4.38	8.3	1.9
1172872	E11-115	66.0	67.1	2011	Diabase Dykes	0.080	0.140	4.38	6.7	1.5
1045447	E11-64	226.0	227.0	2011	Diabase Dykes	0.190	0.170	5.31	15.8	3.0
1049959	E11-75	218.0	219.0	2011	Diabase Dykes	0.220	0.180	5.63	18.3	3.3
1172176	E11-95	213.0	213.6	2011	Diabase Dykes	1.030	0.210	6.56	85.8	13.1
1464742	E12-00354	186.0	187.0	2012	Diabase Dykes	2.780	0.226	7.06	231.7	32.8
1072626	E11-96	226.6	228.0	2011	Diabase Dykes	1.510	0.240	7.50	125.8	16.8
1172177	E11-95	213.6	214.6	2011	Diabase Dykes	3.260	0.260	8.13	271.7	33.4
1070403	E11-93	282.0	283.0	2011	Diabase Dykes	0.460	0.270	8.44	38.3	4.5
1045357	E11-64	143.0	144.0	2011	Diabase Dykes	0.470	0.380	11.88	39.2	3.3
931639	E10-11	159.3	160.3	2010	Diabase Dykes	0.620	0.440	13.75	51.7	3.8
928194	E10-38	146.9	148.2	2010	Diabase Dykes	0.040	0.520	16.25	3.3	0.2
1070872	E11-97	70.0	71.0	2011	Diabase Dykes	0.330	0.910	28.44	27.5	1.0
959461	E11-80	153.0	154.0	2011	Diabase Dykes	0.220	1.610	50.31	18.3	0.4
1261810	E12-00270	44.0	45.0	2012	Intrusive Mafic Lamprophyre	0.970	0.080	2.50	80.8	32.3
1298061	E12-00204	60.0	61.0	2012	Intrusive Mafic Lamprophyre	0.310	0.030	0.94	25.8	27.6
1402452	E12-00310	170.0	171.5	2012	Intrusive Mafic Lamprophyre	1.710	0.010	0.31	142.5	456.0
1284878	E12-00197	103.5	104.4	2012	Intrusive Mafic Lamprophyre	1.070	0.100	3.13	89.2	28.5
1469358	E12-00346	46.0	47.0	2012	Intrusive Mafic Lamprophyre	0.288	0.010	0.31	24.0	76.8
1386272	E12-00207	101.0	102.0	2012	Intrusive Mafic Lamprophyre	0.100	0.020	0.63	8.3	13.3
1117413	E11-119	293.6	294.6	2011	Intrusive Mafic Lamprophyre	0.479	0.025	0.77	39.9	51.8
1167233	E11-00161	222.9	224.1	2011	Intrusive Mafic Lamprophyre	1.210	0.030	0.94	100.8	107.6
1469420	E12-00346	103.0	104.2	2012	Intrusive Mafic Lamprophyre	1.340	0.042	1.30	111.7	85.9
1168677	E11-00154	165.0	166.0	2011	Intrusive Mafic Lamprophyre	0.450	0.050	1.56	37.5	24.0
1464005	E12-00340	100.0	101.0	2012	Intrusive Mafic Lamprophyre	1.180	0.082	2.57	98.3	38.2
1469842	E12-00345	143.6	144.6	2012	Intrusive Mafic Lamprophyre	0.123	0.092	2.86	10.3	3.6
1162497	E11-00139	75.5	76.5	2011	Intrusive Mafic Lamprophyre	0.020	0.100	3.13	1.7	0.5
1162480	E11-00139	59.6	60.6	2011	Intrusive Mafic Lamprophyre	0.010	0.110	3.44	0.8	0.2
681824	E09-03	224.5	225.0	2009	Quartz Sericite Schist	0.990	0.030	0.94	82.5	88.0
950511	E10-27	285.0	286.0	2010	Quartz Sericite Schist	1.890	0.110	3.44	157.5	45.8
953061	E10-07	229.8	231.0	2010	Quartz Sericite Schist	0.200	0.090	2.81	16.7	5.9

Table A-7: Mine Rock Net Acid Generation Results

Sample ID	Drill Hole ID	From	To	Consultant	Waste Classification	Lithology	Final pH	Vol NaOH to pH 4.5	Vol NaOH to pH 7.0	NAG (pH 4.5)	NAG (pH 7.0)
		(m)						mL		kg H_2SO_4/tonne	
ARD-11	E11-087	84.30	86.50	Knight Piésold	Mine Rock	Diorite Breccia	8.96	0.00	0.00	0.0	0.0
ARD-31	E12-179	354.75	356.85	Knight Piésold	Mine Rock	Diorite Breccia	10.52	0.00	0.00	0.0	0.0
ARD-34	E11-075	95.40	97.50	Knight Piésold	Mine Rock	Diorite Breccia	11.11	0.00	0.00	0.0	0.0
ARD-49	E11-140	372	373.90	Knight Piésold	Mine Rock	Diorite Breccia	11.07	0.00	0.00	0.0	0.0
E11-077-2	E11-077	313	315.24	Knight Piésold	Mine Rock	Diorite Breccia	11.30	0.00	0.00	0.0	0.0
E11-107-2	E11-107	153.77	155.54	Knight Piésold	Mine Rock	Diorite Breccia	8.84	0.00	0.00	0.0	0.0
E11-110-2	E11-110	131.36	133.24	Knight Piésold	Mine Rock	Diorite Breccia	7.51	0.00	0.00	0.0	0.0
ARD-25	E10-30	211.22	213.22	Knight Piésold	Mine Rock	Magma Mixing Breccia	10.87	0.00	0.00	0.0	0.0
ARD-27	E11-049	383.00	384.90	Knight Piésold	Mine Rock	Magma Mixing Breccia	8.74	0.00	0.00	0.0	0.0
ARD-33	E11-048	164.30	166.60	Knight Piésold	Mine Rock	Magma Mixing Breccia	11.28	0.00	0.00	0.0	0.0
E10-013-2	E10-013	50	52.2	Knight Piésold	Mine Rock	Magma Mixing Breccia	11.64	0.00	0.00	0.0	0.0
E10-031-3	E10-031	500	502	Knight Piésold	Mine Rock	Magma Mixing Breccia	11.61	0.00	0.00	0.0	0.0
E11-054-4	E11-054	128.4	130.8	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.95	0.00	0.00	0.0	0.0
E11-100-2	E11-100	107.57	109.89	Knight Piésold	Mine Rock	Magma Mixing Breccia	11.50	0.00	0.00	0.0	0.0
ARD-29	E11-061	262.30	264.00	Knight Piésold	Mine Rock	Fault	8.16	0.00	0.00	0.0	0.0
E11-066-1	E11-066	312	316.2	Knight Piésold	Mine Rock	Fault	10.76	0.00	0.00	0.0	0.0
E11-111-1	E11-111	152.3	154.16	Knight Piésold	Mine Rock	Intrusive Feldspar Porphyry	11.23	0.00	0.00	0.0	0.0
ARD-12	E12-217	547.00	549.50	Knight Piésold	Mine Rock	Diorite	10.27	0.00	0.00	0.0	0.0
ARD-18	E11-098	247.40	249.30	Knight Piésold	Mine Rock	Diorite	10.83	0.00	0.00	0.0	0.0
ARD-24	E11-062	15.90	17.80	Knight Piésold	Mine Rock	Diorite	10.65	0.00	0.00	0.0	0.0
ARD-28	E11-049	38.30	40.20	Knight Piésold	Mine Rock	Diorite	10.07	0.00	0.00	0.0	0.0
ARD-3	E10-036	103.30	105.20	Knight Piésold	Mine Rock	Diorite	11.24	0.00	0.00	0.0	0.0
ARD-37	E11-071	281.10	283.10	Knight Piésold	Mine Rock	Diorite	10.86	0.00	0.00	0.0	0.0
ARD-47	E12-198	210.00	211.80	Knight Piésold	Mine Rock	Diorite	10.82	0.00	0.00	0.0	0.0
ARD-51	E11-141	183.70	184.50	Knight Piésold	Mine Rock	Diorite	11.36	0.00	0.00	0.0	0.0
ARD-57	CL10-01	178.20	180.00	Knight Piésold	Mine Rock	Diorite	11.23	0.00	0.00	0.0	0.0
ARD-58	CL10-01	227.50	229.50	Knight Piésold	Mine Rock	Diorite	10.86	0.00	0.00	0.0	0.0
E10-013-1	E10-013	5.78	7.8	Knight Piésold	Mine Rock	Diorite	11.07	0.00	0.00	0.0	0.0
E10-023-1	E10-023	30	31.9	Knight Piésold	Mine Rock	Diorite	11.37	0.00	0.00	0.0	0.0
E10-031-2	E10-031	158	160.1	Knight Piésold	Mine Rock	Diorite	11.38	0.00	0.00	0.0	0.0
E10-038-1	E10-038	74	75.9	Knight Piésold	Mine Rock	Diorite	8.56	0.00	0.00	0.0	0.0
E10-038-3	E10-038	158	159.85	Knight Piésold	Mine Rock	Diorite	9.79	0.00	0.00	0.0	0.0
E10-042-1	E10-042	14	16	Knight Piésold	Mine Rock	Diorite	11.30	0.00	0.00	0.0	0.0
E10-042-2	E10-042	89.5	91.7	Knight Piésold	Mine Rock	Diorite	10.65	0.00	0.00	0.0	0.0
E11-053-1	E11-053	152.59	154.4	Knight Piésold	Mine Rock	Diorite	11.44	0.00	0.00	0.0	0.0
E11-095-1	E11-095	284.6	286.4	Knight Piésold	Mine Rock	Diorite	11.09	0.00	0.00	0.0	0.0
E11-097-1	E11-097	35.1	37.2	Knight Piésold	Mine Rock	Diorite	7.82	0.00	0.00	0.0	0.0
E11-100-3	E11-100	224.56	226.65	Knight Piésold	Mine Rock	Diorite	11.12	0.00	0.00	0.0	0.0
E11-138-2	E11-138	211.3	213.33	Knight Piésold	Mine Rock	Diorite	11.49	0.00	0.00	0.0	0.0
ARD-13	E11-096	77.15	79.35	Knight Piésold	Mine Rock	Tonalite	10.94	0.00	0.00	0.0	0.0
ARD-16	E11-098	24.40	26.60	Knight Piésold	Mine Rock	Tonalite	10.51	0.00	0.00	0.0	0.0
ARD-21	E11-114	8.08	10.38	Knight Piésold	Mine Rock	Tonalite	8.96	0.00	0.00	0.0	0.0
ARD-4	E10-045	229.60	231.80	Knight Piésold	Mine Rock	Tonalite	8.60	0.00	0.00	0.0	0.0
ARD-41	E11-120	74.50	76.40	Knight Piésold	Mine Rock	Tonalite	11.13	0.00	0.00	0.0	0.0
ARD-45	E11-140	274.50	276.60	Knight Piésold	Mine Rock	Tonalite	8.77	0.00	0.00	0.0	0.0
ARD-48	E11-129	57.1	59.60	Knight Piésold	Mine Rock	Tonalite	11.09	0.00	0.00	0.0	0.0
ARD-6	E11-066	70.40	72.40	Knight Piésold	Mine Rock	Tonalite	10.92	0.00	0.00	0.0	0.0
ARD-60	E12-213	138.90	141.00	Knight Piésold	Mine Rock	Tonalite	9.58	0.00	0.00	0.0	0.0
E10-013-3	E10-013	60	62.28	Knight Piésold	Mine Rock	Tonalite	11.34	0.00	0.00	0.0	0.0
E10-031-1	E10-031	9.1	11	Knight Piésold	Mine Rock	Tonalite	11.23	0.00	0.00	0.0	0.0
E10-046-1	E10-046	15.8	18.07	Knight Piésold	Mine Rock	Tonalite	11.21	0.00	0.00	0.0	0.0
E10-046-2	E10-046	95	97.2	Knight Piésold	Mine Rock	Tonalite	11.52	0.00	0.00	0.0	0.0
E11-052-3	E11-052	221.5	223.13	Knight Piésold	Mine Rock	Tonalite	11.22	0.00	0.00	0.0	0.0
E11-059-1	E11-059	25.57	27.61	Knight Piésold	Mine Rock	Tonalite	8.44	0.00	0.00	0.0	0.0
E11-061-2	E11-061	338	340.2	Knight Piésold	Mine Rock	Tonalite	11.41	0.00	0.00	0.0	0.0
E11-072-1	E11-072	155.5	157.65	Knight Piésold	Mine Rock	Tonalite	11.17	0.00	0.00	0.0	0.0
E11-077-1	E11-077	142.7	144.85	Knight Piésold	Mine Rock	Tonalite	9.68	0.00	0.00	0.0	0.0
E11-081-1	E11-081	376	378.25	Knight Piésold	Mine Rock	Tonalite	11.55	0.00	0.00	0.0	0.0
E11-091-1	E11-091	13.9	15.95	Knight Piésold	Mine Rock	Tonalite	8.15	0.00	0.00	0.0	0.0
E11-091-3	E11-091	311	313.13	Knight Piésold	Mine Rock	Tonalite	11.10	0.00	0.00	0.0	0.0
E11-095-2	E11-095	18.9	20.9	Knight Piésold	Mine Rock	Tonalite	11.26	0.00	0.00	0.0	0.0
E11-097-2	E11-097	153.7	155.7	Knight Piésold	Mine Rock	Tonalite	11.12	0.00	0.00	0.0	0.0
E11-100-1	E11-100	39.45	41.62	Knight Piésold	Mine Rock	Tonalite	11.02	0.00	0.00	0.0	0.0
E11-110-1	E11-110	8.2	10.12	Knight Piésold	Mine Rock	Tonalite	11.10	0.00	0.00	0.0	0.0
E11-112-3	E11-112	161.4	163.71	Knight Piésold	Mine Rock	Tonalite	10.06	0.00	0.00	0.0	0.0
E11-138-1	E11-138	15.5	17.88	Knight Piésold	Mine Rock	Tonalite	11.27	0.00	0.00	0.0	0.0
ARD-53	E12-200	185.00	187.00	Knight Piésold	Mine Rock	Mafic Dykes	11.39	0.00	0.00	0.0	0.0
ARD-55	E12-294	178.00	180.00	Knight Piésold	Mine Rock	Mafic Dykes	8.60	0.00	0.00	0.0	0.0
E11-052-2	E11-052	125.15	127.25	Knight Piésold	Mine Rock	Mafic Dykes	11.37	0.00	0.00	0.0	0.0
E11-062-3	E11-062	254.8	257.01	Knight Piésold	Mine Rock	Mafic Dykes	11.31	0.00	0.00	0.0	0.0
ARD-15	E11-096	150.45	152.25	Knight Piésold	Mine Rock	Diabase Dykes	7.39	0.00	0.00	0.0	0.0
ARD-35	E11-075	220.91	223.31	Knight Piésold	Mine Rock	Diabase Dykes	11.15	0.00	0.00	0.0	0.0
ARD-42	E11-120	108.90	110.40	Knight Piésold	Mine Rock	Diabase Dykes	11.53	0.00	0.00	0.0	0.0
ARD-50	E11-144	138.81	139.61	Knight Piésold	Mine Rock	Diabase Dykes	10.24	0.00	0.00	0.0	0.0
E10-038-2	E10-038	101	103	Knight Piésold	Mine Rock	Diabase Dykes	11.26	0.00	0.00	0.0	0.0
E10-031-4	E10-031	585	586.3	Knight Piésold	Outside Pit	Diorite Breccia	11.19	0.00	0.00	0.0	0.0
E11-081-2	E11-081	511.66	513.5	Knight Piésold	Outside Pit	Diorite Breccia	9.83	0.00	0.00	0.0	0.0
E11-081-3	E11-081	589	592.4	Knight Piésold	Outside Pit	Diorite Breccia	10.43	0.00	0.00	0.0	0.0
ARD-2	E10-036	376.50	378.75	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.95	0.00	0.00	0.0	0.0
ARD-46	E11-145	483.30	485.10	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.26	0.00	0.00	0.0	0.0
ARD-54	E12-205	668.00	669.60	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.38	0.00	0.00	0.0	0.0
ARD-8	E11-082	455.00	456.90	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.29	0.00	0.00	0.0	0.0
E11-062-4	E11-062	395.5	397.39	Knight Piésold	Outside Pit	Magma Mixing Breccia	10.39	0.00	0.00	0.0	0.0
ARD-52	E11-145	298.00	299.70	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	9.04	0.00	0.00	0.0	0.0
ARD-9	E11-082	376.00	378.00	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	9.62	0.00	0.00	0.0	0.0
ARD-23	E10-038	575.00	577.20	Knight Piésold	Outside Pit	Diorite	8.23	0.00	0.00	0.0	0.0
ARD-30	E12-206	260.70	262.60	Knight Piésold	Outside Pit	Diorite	11.24	0.00	0.00	0.0	0.0
ARD-1	E10-036	316.85	318.95	Knight Piésold	Outside Pit	Tonalite	10.82	0.00	0.00	0.0	0.0
ARD-10	E11-087	242.90	244.90	Knight Piésold	Outside Pit	Tonalite	10.94	0.00	0.00	0.0	0.0
ARD-40	E11-120	668.90	671.00	Knight Piésold	Outside Pit	Tonalite	10.81	0.00	0.00	0.0	0.0
ARD-43	E11-122	384.00	385.90	Knight Piésold	Outside Pit	Tonalite	8.88	0.00	0.00	0.0	0.0
ARD-7	E11-082	343.00	344.80	Knight Piésold	Outside Pit	Tonalite	10.75	0.00	0.00	0.0	0.0
E11-081-4	E11-081	645.65	649	Knight Piésold	Outside Pit	Tonalite	11.01	0.00	0.00	0.0	0.0
E11-138-3	E11-138	241	243.1	Knight Piésold	Outside Pit	Tonalite	11.25	0.00	0.00	0.0	0.0
E11-053-3	E11-053	478.45	480.5	Knight Piésold	Outside Pit	Diabase Dykes	5.14	0.00	0.34	0.0	1.1
E11-059-2	E11-059	492.4	493.9	Knight Piésold	Outside Pit	Diabase Dykes	7.86	0.00	0.00	0.0	0.0
ARD-14	E11-096	467.44	469.94	Knight Piésold	Ore Grade	Diorite Breccia	10.60	0.00	0.00	0.0	0.0
ARD-17	E11-098	222.00	224.00	Knight Piésold	Ore Grade	Diorite Breccia	10.86	0.00	0.00	0.0	0.0
ARD-20	E11-099	261.90	264.00	Knight Piésold	Ore Grade	Diorite Breccia	10.90	0.00	0.00	0.0	0.0
ARD-22	E11-114	16.50	18.50	Knight Piésold	Ore Grade	Diorite Breccia	11.23	0.00	0.00	0.0	0.0
ARD-36	E11-071	535.70	537.80	Knight Piésold	Ore Grade	Diorite Breccia	11.39	0.00	0.00	0.0	0.0
ARD-38	E11-078	267.30	269.60	Knight Piésold	Ore Grade	Diorite Breccia	7.92	0.00	0.00	0.0	0.0
ARD-44	E11-122	100.20	102.40	Knight Piésold	Ore Grade	Diorite Breccia	11.16	0.00	0.00	0.0	0.0
E11-112-2	E11-112	137.83	139.07	Knight Piésold	Ore Grade	Diorite Breccia	11.22	0.00	0.00	0.0	0.0
E11-061-1	E11-061	90.95	92.73	Knight Piésold	Ore Grade	Diorite Breccia	11.05	0.00	0.00	0.0	0.0
E11-054-1	E11-054	33.87	36.14	Knight Piésold	Ore Grade	Diorite Breccia	11.41	0.00	0.00	0.0	0.0
E11-054-2	E11-054	50.46	52.61	Knight Piésold	Ore Grade	Diorite Breccia	11.42	0.00	0.00	0.0	0.0
E11-053-2	E11-053	224.02	226.35	Knight Piésold	Ore Grade	Diorite Breccia	11.29	0.00	0.00	0.0	0.0
E11-051-1	E11-051	70.8	72.72	Knight Piésold	Ore Grade	Diorite Breccia	11.11	0.00	0.00	0.0	0.0
CL10-03-1	CL10-03	121.4	122.6	Knight Piésold	Ore Grade	Diorite Breccia	9.72	0.00	0.00	0.0	0.0
E10-042-3	E10-042	478.5	480.7	Knight Piésold	Ore Grade	Diorite Breccia	11.10	0.00	0.00	0.0	0.0
ARD-26	E10-028	37.20	39.40	Knight Piésold	Ore Grade	Magma Mixing Breccia	8.12	0.00	0.00	0.0	0.0
E10-013-4	E10-013	125	127.1	Knight Piésold	Ore Grade	Magma Mixing Breccia	11.50	0.00	0.00	0.0	0.0
ARD-39	E11-179	514.00	517.65	Knight Piésold	Ore Grade	Fault	7.81	0.00	0.00	0.0	0.0
E11-054-5	E11-054	212.3	215.5	Knight Piésold	Ore Grade	Fault	7.04	0.00	0.00	0.0	0.0
ARD-56	E12-205	207.50	209.60	Knight Piésold	Ore Grade	Diorite	8.49	0.00	0.00	0.0	0.0
ARD-59	CL10-02A	102.00	104.00	Knight Piésold	Ore Grade	Diorite	10.85	0.00	0.00	0.0	0.0
E11-112-1	E11-112	56.41	58.12	Knight Piésold	Ore Grade	Diorite	11.15	0.00	0.00	0.0	0.0
E11-062-2	E11-062	142.4	144.24	Knight Piésold	Ore Grade	Diorite	11.50	0.00	0.00	0.0	0.0
E11-054-3	E11-054	75.15	77.44	Knight Piésold	Ore Grade	Diorite	9.54	0.00	0.00	0.0	0.0
E11-112-4	E11-112	250.6	252.5	Knight Piésold	Ore Grade	Diorite	11.18	0.00	0.00	0.0	0.0
ARD-19	E11-099	240.20	242.40	Knight Piésold	Ore Grade	Tonalite	8.65	0.00	0.00	0.0	0.0
ARD-32	E11-048	325.10	327.10	Knight Piésold	Ore Grade	Tonalite	10.48	0.00	0.00	0.0	0.0
ARD-5	E11-066	509.90	511.90	Knight Piésold	Ore Grade	Tonalite	8.11	0.00	0.00	0.0	0.0
E11-062-1	E11-062	91.7	93.74	Knight Piésold	Ore Grade	Tonalite	10.82	0.00	0.00	0.0	0.0
E11-107-1	E11-107	40.1	42.1	Knight Piésold	Ore Grade	Tonalite	11.16	0.00	0.00	0.0	0.0
E11-052-1	E11-052	92.75	95.05	Knight Piésold	Ore Grade	Tonalite	11.25	0.00	0.00	0.0	0.0
E11-091-2	E11-091	93	94.95	Knight Piésold	Ore Grade	Diabase Dykes	7.46	0.00	0.00	0.0	0.0

Sample ID	Drillhole ID	From	To	Age	Consultant	Waste Classification	Lithology Name	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg	S	Ag
							Unit	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
							Average Crustal	82300	1.8	425	3	0.025	41500	0.15	25	102	60	56300	20850	20	23300	950	1.2	23550	84	1050	14	0.2	0.05	2.3	370	5650	0.85	2.7	120	33	70	0.085		
		(m)					10x Average Crustal	823000	18	4250	30	0.25	415000	1.5	250	1020	600	563000	208500	200	233000	9500	12	235500	840	10500	140	2	0.5	23	3700	56500	8.5	27	1200	330	700	0.85		
ARD-1047487	E11-70	185.00	186.00	2011	AMEC	Mine Rock	Diorite Breccia	6600	3.1	6.5	0.22	<0.09	11000	0.09	2.7	50	62	11000	500	4	5300	98	0.7	370	6.9	40	7.6	<0.80	0.09	<0.50	8.4	72	<0.02	1.2	8	8.5	29	<0.05		
ARD-1026152	E11-81	261.00	262.00	2011	AMEC	Mine Rock	Diorite Breccia	9100	0.7	5.1	0.27	<0.09	11000	<0.02	3.5	44	44	18000	670	12	6600	120	0.6	300	7.2	12	2.1	<0.80	0.11	0.6	8.6	29	<0.02	0.99	13	5.4	10	<0.05		
ARD-938691	E10-10	125.52	126.00	2010	AMEC	Mine Rock	Diorite Breccia	2400	0.9	15	0.24	<0.09	8700	<0.02	2.0	43	30	4900	390	2	1900	70	0.6	460	2.4	41	0.91	<0.80	0.12	1.1	10	250	<0.02	0.71	7	6.0	5.3	<0.05		
ARD-929111	E10-31	101.00	102.00	2010	AMEC	Mine Rock	Diorite Breccia	23000	1.7	7.3	0.22	0.15	12000	<0.02	14	60	3.9	48000	420	24	23000	580	0.2	300	21	1100	0.44	<0.80	0.11	1.6	17	940	<0.02	0.18	84	8.1	51	<0.05		
ARD-1048151	E11-65	147.60	148.60	2011	AMEC	Mine Rock	Diorite Breccia	5900	2.1	8.4	0.34	<0.09	9300	<0.02	4.8	55	46	12000	710	6	4200	110	0.9	350	7.2	28	1.5	<0.80	0.29	<0.50	5.7	210	<0.02	1.00	8	16	11	<0.05		
ARD-1153209	E11-137	274.00	275.00	2011	AMEC	Mine Rock	Diorite Breccia	16000	5.0	220	1.1	2.0	24000	1.4	15	210	1700	46000	9100	10	20000	320	2800	330	56	780	3.9	<0.80	3.9	2.7	82	1200	0.22	1.3	65	29	31	<0.05		
ARD-11	E11-087	84.30	86.50	2011	Knight Piésold	Mine Rock	Diorite Breccia	59000	1.5	390	1.2	< 0.090	12000	0.12	4.5	100	35	18000	12000	8	4200	180	1.0		7.2		1.8	< 0.800	1.0	1.3	84	1800	0.06	1.8	14	25	17	< 0.050	550	0.16
ARD-31	E12-179	354.75	356.85	2012	Knight Piésold	Mine Rock	Diorite Breccia	55000	7.0	89	1.1	< 0.090	11000	0.47	4.9	110	53	22000	9100	9	8500	200	0.8		11		21	< 0.800	< 0.700	2.5	46	1500	0.08	1.5	19	29	120	< 0.050	1100	0.21
ARD-34	E11-075	95.40	97.50	2011	Knight Piésold	Mine Rock	Diorite Breccia	68000	1.5	160	1.2	< 0.090	21000	0.16	3.0	92	15	16000	7500	9	4300	280	0.8		6.5		1.9	< 0.800	0.8	2.1	120	2300	0.05	1.6	28	23	18	< 0.050	460	0.23
ARD-49	E11-140	372	373.90	2011	Knight Piésold	Mine Rock	Diorite Breccia	61000	0.9	230	0.95	< 0.090	14000	0.14	2.9	98	49	14000	11000	7	5100	210	0.7		6.9		1.7	< 0.800	0.8	3.0	82	2300	0.08	1.3	15	20	13	< 0.050	450	0.23
E11-077-2	E11-077	313	315.24	2011	Knight Piésold	Mine Rock	Diorite Breccia	66000	1.1	46	0.89	0.10	31000	0.19	6.2	140	100	27000	4400	17	11000	340	0.6		15		1.4	< 0.800	< 0.700	5.8	95	3400	0.04	1.1	45	28	29	< 0.100	780	0.30
ARD-1107358	E11-111	337.00	338.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	15000	0.9	110	0.22	<0.09	5100	<0.02	7.3	72	4.6	24000	4400	23	15000	230	0.6	270	31	320	0.92	<0.80	<0.04	<0.50	18	1200	0.09	0.52	36	5.8	32	<0.05		
ARD-90295	E11-87	89.00	90.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	16000	1.2	21	0.26	<0.09	6800	<0.02	10	72	26	32000	1200	30	16000	310	0.7	250	23	420	2.0	<0.80	0.09	<0.50	7.8	1100	<0.02	0.59	45	9.7	38	<0.05		
ARD-1047357	E11-70	68.00	69.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	5600	1.8	3.1	0.06	<0.09	28000	0.02	3.4	21	7.0	10000	180	6	5100	170	0.6	480	13	200	2.5	<0.80	0.09	<0.50	11	290	<0.02	1.6	12	17	9.1	<0.05		
ARD-1117946	E11-122	130.00	131.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	3400	1.9	7.6	0.22	<0.09	20000	0.03	1.7	43	400	5700	1000	3	1700	120	0.8	360	3.6	11	4.0	<0.80	0.33	0.9	10	190	<0.02	1.8	4	27	9.5	<0.05		
ARD-1107356	E11-111	335.00	336.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	4000	1.4	16	0.24	<0.09	4900	0.03	3.0	58	17	6000	640	4	2700	58	0.7	540	5.4	57	1.3	<0.80	<0.04	<0.50	14	320	<0.02	1.1	6	8.8	7.2	<0.05		
ARD-1070859	E11-97	58.00	59.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	18000	2.2	120	0.22	<0.09	43000	0.05	15	260	36	30000	5400	14	19000	560	0.2	160	24	1200	2.2	<0.80	0.07	<0.50	35	1100	0.09	0.42	57	5.1	41	<0.05		
ARD-1152087	E11-127	82.00	83.00	2011	AMEC	Mine Rock	Diorite Mega Breccia	7200	1.0	14	0.19	0.80	16000	0.02	11	110	27	17000	450	7	7900	150	0.6	300	29	360	2.2	<0.80	0.74	<0.50	22	140	<0.02	0.56	16	7.8	15	<0.05		
ARD-1284981	E12-00197	196.00	197.00	2012	AMEC	Mine Rock	Fault Breccia	30000	1.6	13	0.88	<0.09	7800	<0.02	18	50	990	55000	1200	39	28000	500	0.2	130	51	430	0.69	<0.80	0.08	1.3	19	860	<0.02	0.18	91	8.7	60	<0.05		
ARD-1343542	E12-00211	160.00	161.00	2012	AMEC	Mine Rock	Hydrothermal Breccia	8900	4.7	19	0.19	1.4	1600	0.04	8.3	45	8.3	20000	950	7	8100	140	47	180	8.2	54	2.7	<0.80	0.22	0.5	2.7	60	0.04	1.0	16	4.1	13	<0.05		
ARD-578580	E10-42	221.50	222.50	2010	AMEC	Mine Rock	Hydrothermal Breccia	39000	4.2	6.3	0.48	0.46	41000	<0.02	4.6	20	48	85000	500	22	28000	460	0.7	160	26	1000	12	<0.80	0.44	2.8	36	79	<0.02	1.4	190	20	55	<0.05		
ARD-1343545	E12-00211	162.00	163.00	2012	AMEC	Mine Rock	Hydrothermal Breccia	18000	9.3	1.8	0.19	0.34	59000	0.03	19	28	1300	36000	59	18	15000	380	0.5	270	14	1800	0.72	<0.80	0.55	<0.50	34	240	<0.02	0.38	99	25	52	<0.05		
ARD-1336196	E12-00233	409.08	410.00	2012	AMEC	Mine Rock	Mafic Breccia	13000	0.9	2.0	0.15	<0.09	24000	<0.02	7.6	43	7.8	34000	290	16	15000	320	0.3	430	22	750	0.35	<0.80	0.08	2.3	9.9	670	<0.02	0.29	77	14	27	<0.05		
ARD-1486591	E12-00333	86.00	86.80	2012	AMEC	Mine Rock	Magma Mixing Breccia	10000	0.8	69	0.21	<0.09	11000	<0.02	7.8	35	49	34000	3800	8	4800	250	2.4	420	5.2	520	2.4	<0.80	0.13	1.1	13	830	0.07	2.0	14	32	24	<0.05		
ARD-1350733	E12-00252	197.00	198.00	2012	AMEC	Mine Rock	Magma Mixing Breccia	5400	1.5	3.6	0.20	<0.09	9300	0.03	2.8	39	82	8900	290	3	3100	120	0.6	490	5.8	1200	1.6	<0.80	0.18	3.3	14	2000	<0.02	1.3	16	24	14	<0.05		
ARD-1258576	E12-00179	308.00	309.00	2012	AMEC	Mine Rock	Magma Mixing Breccia	12000	1.5	6.8	0.26	<0.09	14000	<0.02	5.9	39	28	22000	600	11	9700	220	0.5	470	16	300	0.65	<0.80	0.11	2.3	6.2	430	<0.02	0.95	40	15	20	<0.05		
ARD-1262116	E12-00289	103.00	104.35	2012	AMEC	Mine Rock	Magma Mixing Breccia	12000	3.8	110	0.14	<0.09	3700	0.27	6.1	62	58	23000	6900	13	7500	200	1.1	480	19	270	5.5	<0.80	0.13	0.7	7.7	1100	0.10	0.88	31	10	44	<0.05		
ARD-25	E10-30	211.22	213.22	2010	Knight Piésold	Mine Rock	Magma Mixing Breccia	62000	2.0	120.0	1.10	<0.09	13000	0.17	3.0	91	69	13000	9700	8	4600	130	0.4		5.9		2.8	<0.80	0.70	2.2	75	2200	<0.08	1.6	17	30	13	<0.05	670	0.23
ARD-27	E11-049	383.00	384.90	2011	Knight Piésold	Mine Rock	Magma Mixing Breccia	59000	7.4	62.0	1.30	<0.09	17000	0.15	4.6	96	27	24000	3900	10	8500	250	0.7		9.6		2.1	<0.80	0.90	4.1	92	1700	<0.05	1.5	22	38	24	<0.05	330	0.21
ARD-33	E11-048	164.30	166.60	2011	Knight Piésold	Mine Rock	Magma Mixing Breccia	21000	1.3	16.0	0.42	0.47	47000	0.05	5.9	130	640	9700	1300	12	3100	250	3.9		6.5		1.0	<0.80	0.70	1.5	28	590	<0.02	0.7	8	27	10	<0.05	2100	0.11
E10-013-2	E10-013	50.00	52.20	2010	Knight Piésold	Mine Rock	Magma Mixing Breccia	53000	1.2	250.0	0.88	<0.09	50000	0.19	25.0	180	4	59000	6200	36	29000	470	0.2		49.0		1.0	<0.80	0.70	0.7	170	5400	<0.08	1.0	130	21	65	<0.10	1500	0.32
E10-031-3	E10-031	500.00	502.00	2010	Knight Piésold	Mine Rock	Magma Mixing Breccia	62000	1.3	79.0	1.00	0.14	34000	0.25	17.0	160	58	40000	2700	29	22000	410	1.3		39.0		2.4	<0.80	0.70	0.5	200	3300	<0.03	1.5	78	19	42	<0.10	2100	0.36
E11-054-4	E11-054	128.40	130.80	2011	Knight Piésold	Mine Rock	Magma Mixing Breccia	77000	0.5	220.0	1.50	<0.09	16000	0.02	1.1	190	30	4500	22000	3	1500	65	0.8		2.4		0.7	<0.80	0.70	8.0	48	1800	<0.16	1.2	2	31	3	<0.10	330	0.08
ARD-1306362	E12-00247	476.00	477.00	2012	AMEC	Mine Rock	Quartz Carbonate Heterolithic Breccia	1000	0.8	1.3	0.15	<0.09	120000	<0.02	2.1	33	6.6	2800	32	<2.00	1100	560	0.5	110	8.9	27	0.08	<0.80	0.06	<0.50	43	86	<0.02	0.027	5	41	3.5	<0.05		
ARD-1317321	E12-00229	300.00	301.00	2012	AMEC	Mine Rock	Quartz Carbonate Heterolithic Breccia	1000	0.9	1.0	0.15	0.16	96000	<0.02	3.7	39	53	2700	31	<2.00	910	370	0.6	170	4.8	120	<0.05	<0.80	0.13	<0.50	32	140	<0.02	0.051	3	42	2.9	<0.05		
ARD-1329877	E12-00186	172.00	172.92	2012	AMEC	Mine Rock	Fault	4500	2.1	13	0.32	<0.09	1300	0.02	3.1	63	140	10000	580	3	3200	110	0.7	470	4.9	110	0.35	<0.80	0.08	<0.50	3.6	210	<0.02	0.71	7	13	11	<0.05		
ARD-1284982	E12-00197	197.00	198.00	2012	AMEC	Mine Rock	Fault	22000	4.3	12	1.8	<0.09	8700	<0.02	11	31	1900	46000	470	21	18000	310	0.1	160	32	380	0.89	<0.80	0.20	1.6	17	340	<0.02	0.46	51	28	47	<0.05		
ARD-1172124	E11-95	165.00	166.00	2011	AMEC	Mine Rock	Fault	4600	2.9	4.9	0.48	0.26	81000	<0.02	8.8	44	81	26000	68	4	4600	310	0.3	270	16	480	2.8	<0.80	0.12	1.5	24	2000	<0.02	0.16	62	21	15	<0.05		
ARD-29	E11-061	262.30	264.00	2011	Knight Piésold	Mine Rock	Fault	55000	2.2	62	1.4	0.24	8200	0.06	12	110	520	29000	4200	13	10000	290	0.5		18		0.91	< 0.800	< 0.700	3.6	40	2200	0.04	0.51	34	25	30	< 0.050	170	0.20
E11-066-1	E11-066	312	316.2	2011	Knight Piésold	Mine Rock	Fault	59000	2.8	53	1.1	0.25	18000	0.10	10	97	200	33000	3600	13	12000	690	0.6		15		0.84	< 0.800	< 0.700	5.1	53	3700	0.05	0.59	40	37	31	< 0.100	350	0.87
ARD-573527A	E10-40	29.40	30.10	2010	AMEC	Mine Rock	Intrusive Feldspar Porphyry	7700	<0.50	9.4	0.15	<0.09	8400	<0.02	3.9	50	17	15000	410	8	6900	210	1.0	420	9.4	370	0.44	<0.80	0.05	0.8	16	620	<0.02	0.36	22	4.1	18	<0.05		
ARD-1399888	E12-00228	128.60	129.60	2012	AMEC	Mine Rock	Intrusive Feldspar Porphyry	12000	2.8	5.4	0.09	<0.09	8200	<0.02	8.1	42	16	23000	280	13	8900	270	0.7	460	16	510	0.23	<0.80	<0.04	<0.50	9.6	460	<0.02	0.22	35	2.1	26	<0.05		
ARD-681852	E10-04	23.62	24.20	2010	AMEC	Mine Rock	Intrusive Feldspar Porphyry	6900	0.6	14	0.15	<0.09	5700	0.02	3.7	25	63	13000	600	7	4100	110	0.4	320	6.7	520	0.85	<0.80	0.09	0.8	10	410	<0.02	0.88	7	8.6	15	<0.05		
ARD-1361014	E12-00271	181.00	182.00	2012	AMEC	Mine Rock	Intrusive Feldspar Porphyry	10000	1.1	94	0.10	<0.09	8300	<0.02	7.5	35	10	18000	3300	10	8600	240	0.9	450	12	510	0.50	<0.80	<0.04	<0.50	17	840	0.04	0.34	26	3.4	27	<0.05		
ARD-227138	E13-00400	155.20	156.00	2013	AMEC	Mine Rock	Intrusive Feldspar Porphyry	23000	1.0	97	0.14	0.25	27000	<0.02	11	65	510	36000	9300	20	22000	510	0.3	310	55	570	0.36	<0.80	0.84	1.9	13	1400	0.15	0.32	87	10	42	<0.05		
ARD-1398758	E12-00197	267.00	268.00	2012	AMEC	Mine Rock	Intermediate and Felsic Dykes	7100	<0.50	7.1	0.47	<0.09	600	<0.02	1.3	51	3.1	14000	1000	6	6200	150	1.3	140	4.0	15	0.53	<0.80	<0.04	<0.50	1.7	36	<0.02	0.50	4	5.4	14	<0.05		
ARD-931623	E10-11	150.68	151.50	2010	AMEC	Mine Rock	Intermediate and Felsic Dykes	8100	<0.50	18	0.11	<0.09	15000	<0.02	5.1	18	2.1	17000	950	7	7000	170	0.4	450	6.3	440	0.25	<0.80	<0.04	<0.50	20	320	<0.02	0.10	15	1.9	13	<0.05		
ARD-1326120	E12-00313	140.20	141.00	2012	AMEC	Mine Rock	Intermediate and Felsic Dykes	20000	2.0	8.2	0.25	<0.09	17000	0.02	14	320	52	34000	500	26	24000	430	0.2	290	66	1300	0.38	<0.80	0.06	<0.50	13	760	<0.02	0.39	58	5.9	60	<0.05		
ARD-1045336	E11-64	124.00	125.00	2011	AMEC	Mine Rock	Intermediate and Felsic Dykes	7200	1.4	12	0.14	<0.09	22000	<0.02	5.4	24	9.5	13000	1000	9	4500	170	0.3	240	7.9	400	1.6	<0.80	0.05	<0.50	17	29	<0.02	0.22	5	3.0	9.5	<0.05		
ARD-928214	E10-38	168.22	168.94	2010	AMEC	Mine Rock	Intermediate and Felsic Dykes	21000	1.0	250	0.26	<0.09	37000	<0.02	17	8.6	42	48000	10000	10	17000	670	0.2	290	2.0	1700	0.70	<0.80	0.13	<0.50	22	2100	0.22	0.18	110	3.9	44	<0.05		
ARD-571416	E10-47	97.50	98.08	2010	AMEC	Mine Rock	Intermediate and Felsic Dykes	2500	7.8	45	0.14	0.24	2400	<0.02	5.8	48	7.5	6800	1600	<2.00	1100	45	0.6	190	4.3	130	1.7	<0.80	0.17	<0.50	7.7	37	<0.02	1.2	1	9.6	4.6	<0.05		
ARD-1308221	E12-00260	158.00	159.00	2012	AMEC	Mine Rock	Diorite	9700	1.9	2.7	0.11	<0.09	19000	<0.02	4.3	34	7.2	22000	130	9	6200	260	0.5	430	7.9	1900	1.3	<0.80	0.06	1.3	18	1000	<0.02	0.29	13	12	19	<0.05		
ARD-70623	E10-47	412.05	413.02	2010	AMEC	Mine Rock	Diorite	9100	0.9	14	0.18	<0.09	11000	<0.02	4.0	46	48	18000	910	10	7200	160	0.5	470	9.2	440	1.1	<0.80	0.08	1.3	8.5	600	<0.02	0.87	34	15	20	<0.05		
ARD-1447030	E12-00331	303.00	303.90	2012	AMEC	Mine Rock	Diorite	10000	2.8	7.2	0.22	<0.09	9700	<0.02	7.8	34	16	26000	760	8	7200	260	0.7	870	9.2	1100	0.57	<0.80	0.08	1.7	13	980	<0.02	0.32	27	14	25	<0.05		
ARD-1171884	E11-102	100.00	101.00	2011	AMEC	Mine Rock	Diorite	18000	1.3	140	0.06	<0.09	5800	<0.02	12	36	3.7	29000	7400	16	17000	280	0.3	290	25	320	0.56	<0.80	<0.04	<0.50	15	1200	0.12	0.070	40	2.4	30	<0.05		
ARD-1029210	E11-79	205.00	206.00	2011	AMEC	Mine Rock	Diorite	12000	1.5	3.1	0.19	<0.09	12000	<0.02	7.2	68	22	23000	440	11	11000	240	0.4	480	19	670	1.0	<0.80	0.10	1.6	11	1100	<0.02	0.22	45	14	26	<0.05		
ARD-1109100	E11-114	68.00	69.00	2011	AMEC	Mine Rock	Diorite	2400	0.9	7.8	0.23	0.10	13000	<0.02	0.92	59	13	3100	960	3	800	85	0.8	370	2.0	12	2.1	<0.80	0.10	<0.50	6.2	50	<0.02	0.68	<1.00	18	4.1	<0.05		
ARD-1336164	E12-00233	380.00	381.00	2012	AMEC	Mine Rock	Diorite	17000	0.9	3.6	0.31	<0.09	26000	<0.02	8.0	64	7.6	36000	540	23	18000	450	0.4	450	28	950	0.12	<0.80	0.08	2.5	10	1200	<0.02	0.31	72	17	35	<0.05		
ARD-1396533	E12-00222	282.00	283.00	2012	AMEC	Mine Rock	Diorite	17000	0.6	9.1	0.13	<0.09	30000	<0.02	6.8	17	75	48000	460	11	15000	620	0.4	420	11	790	0.36	<0.80	0.07	1.8	14	1500	<0.02	0.24	66	13	44	<0.05		
ARD-1259369	E12-00233	113.00	114.00	2012	AMEC	Mine Rock	Diorite	44000	1.0	330	0.17	<0.09	26000	<0.02	31	180	4.5	66000	32000	42	42000	710	0.3	340	200	300	<0.05	<0.80	0.04	1.9	16	2700	0.69	0.048	83	2.7	68	<0.05		
ARD-931559	E10-11	104.32	104.87	2010	AMEC	Mine Rock	Diorite	34000	2.3	120	0.13	<0.09	29000	<0.02	20	220	27	48000	15000	32	32000	640	0.3	340	96	420	1.9	<0.80	0.07	0.6	20	1600	0.36	0.066	88	2.6	44	<0.05		
ARD-1335660	E12-00273	134.00	135.00	2012	AMEC	Mine Rock	Diorite	29000	1.5	12	0.49	<0.09	56000	0.03	21	530	27	47000	280	31	38000	710	0.2	170	130	1400	0.32	<0.80	0.07	<0.50	68	800	<0.02	0.28	92	8.3	55	<0.05		
ARD-684437	E10-08	56.08	56.58	2010	AMEC	Mine Rock	Diorite	23000	1.1	33	0.12	<0.09	13000	<0.02	11	110	100	45000	2900	18	21000	450	0.3	390	28	110	0.39	<0.80	0.10	1.8	10	880	0.04	0.18	74	7.3	38	<0.05		
ARD-1387873	E12-00208	87.00	88.00	2012	AMEC	Mine Rock	Diorite	32000	1.4	4.7	0.54	<0.09	5000	<0.02	17	32	39	66000	450	61	40000	450	0.6	340	18	910	0.44	<0.80	0.15	3.4	9.4	710	<0.02	0.17	110	11	41	<0.05		
ARD-1105726	E11-116	15.00	16.00	2011	AMEC	Mine Rock	Diorite	20000	3.5	1.6	0.05	<0.09	18000	<0.02	14	210	310	32000	200	11	18000	360	1.0	150	39	550	0.63	<0.80	0.18	0.6	13	750	<0.02	0.055	42	2.0	32	<0.05		
ARD-1	DH12-PO-09	0.00	1.35	2012	AMEC	Mine Rock	Diorite	17000	<0.50	2.5	0.04	<0.09	3200	0.06	20	94	84	31000	170	8	13000	440	0.3	120	59	200	0.49	<0.80	0.16	<0.50	3.4	1000	<0.02	0.014	28	1.4	35	<0.05		
ARD-1334254	E12-00240	170.00	171.00	2012	AMEC	Mine Rock	Diorite	24000	20	3.9	0.08	0.11	4800	0.09	53	140	30	34000	130	12	30000	360	1.0	63	430	260	3.7	<0.80	0.12	<0.50	2.6	510	<0.02	0.017	21	1.4	52	<0.05		
ARD-920512	E10-21	222.12	223.00	2010	AMEC	Mine Rock	Diorite	2300	1.4	9.2	0.23	<0.09	11000	0.08	1.8	38	46	3600	650	3	980	68	2.8	550	2.8	11	6.5	<0.80	0.16	<0.50	5.0	20	<0.02	1.0	2	15	8.8	<0.05		
ARD-930693	E10-18	33.00	34.00	2010	AMEC	Mine Rock	Diorite	17000	2.9	10	0.06	<0.09	5000	<0.02	19	53	28	29000	1000	14	16000	360	0.3	260	83	270	0.22	<0.80	0.14	<0.50	9.6	1000	<0.02	0.025	43	1.3	29	<0.05		
ARD-1363071	E12-00228	297.00	298.00	2012	AMEC	Mine Rock	Diorite	17000	4.5	2.5	0.10	<0.09	17000	<0.02	17	64	240	37000	300	14	15000	440	0.5	350	33	440	1.5	<0.80	0.21	0.5	12	830	<0.02	0.044	68	4.9	37	<0.05		
ARD-1313311	E12-00317	12.90	14.00	2012	AMEC	Mine Rock	Diorite	40000	2.1	3.7	0.13	<0.09	50000	<0.02	27	130	18	66000	140	22	31000	630	0.4	56	55	190	0.56	<0.80	0.23	<0.50	42	330	<0.02	0.33	120	6.3	79	<0.05		
ARD-1262008	E12-00289	6.30	7.00	2012	AMEC	Mine Rock	Diorite	28000	4.4	26	0.31	<0.09	36000	0.03	22	60	18	61000	560	24	29000	670	0.1	230	23	2500	0.51	<0.80	0.18	<0.50	28	1300	<0.02	0.58	120	8.2	58	<0.05		
ARD-1260433	E12-00276	216.80	218.00	2012	AMEC	Mine Rock	Diorite	35000	4.3	1.8	0.25	<0.09	5500	0.02	27	250	2.2	63000	58	50	44000	420	0.2	230	81	840	0.14	<0.80	0.17	0.6	6.9	760	<0.02	0.47	110	6.6	60	<0.05		
ARD-1152026	E11-127	26.80	27.50	2011	AMEC	Mine Rock	Diorite	22000	1.8	1.4	0.30	<0.09	58000	0.06	20	270	5.2	41000	45	28	29000	540	0.2	170	43	1800	0.65	<0.80	0.17	<0.50	39	48	<0.02	0.41	79	11	38	<0.05		
ARD-1168407	E11-00168	371.00	372.00	2011	AMEC	Mine Rock	Diorite	16000	1.5	80	0.14	0.19	24000	<0.02	14	21	1300	39000	5100	13	10000	260	0.5	320	29	1100	1.0	<0.80	1.5	13	16	750	0.12	0.67	32	17	27	<0.05		
ARD-12	E12-217	547.00	549.50	2012	Knight Piésold	Mine Rock	Diorite	77000	0.5	41	0.55	0.13	42000	< 0.020	18	76	29	62000	4000	21	25000	720	0.5		52		1.1	< 0.800	< 0.700	3.9	160	4200	0.03	0.38	130	18	50	< 0.050	1200	< 0.010
ARD-18	E11-098	247.40	249.30	2011	Knight Piésold	Mine Rock	Diorite	87000	0.8	310	0.84	0.27	46000	0.02	12	85	230	49000	18000	21	22000	440	2.2		41		3.1	< 0.800	0.8	6.5	250	3400	0.21	0.25	110	29	42	< 0.050	1500	0.17
ARD-37	E11-071	281.10	283.10	2011	Knight Piésold	Mine Rock	Diorite	70000	2.3	270	0.80	< 0.090	52000	0.04	20	150	34	69000	10000	18	31000	840	0.8		40		3.3	< 0.800	< 0.700	5.1	330	5300	0.17	0.86	140	31	77	< 0.050	1500	0.08
ARD-47	E12-198	210.00	211.80	2012	Knight Piésold	Mine Rock	Diorite	56000	4.5	210	0.67	< 0.090	63000	0.08	44	320	76	78000	9500	11	49000	1100	0.2		200		1.9	< 0.800	< 0.700	< 0.500	150	4900	0.09	0.32	180	13	81	< 0.050	2200	0.07
ARD-51	E11-141	183.70	184.50	2011	Knight Piésold	Mine Rock	Diorite	63000	1.9	55	0.84	< 0.090	54000	0.15	15	50	42	65000	2800	16	14000	1000	0.5		9.8		1.5	< 0.800	< 0.700	2.4	100	7300	0.02	0.86	42	38	49	< 0.050	1400	0.23
ARD-58	CL10-01	227.50	229.50	2010	Knight Piésold	Mine Rock	Diorite	66000	2.1	210	1.3	< 0.090	49000	0.12	24	370	85	46000	5100	13	38000	640	0.2		86		5.6	< 0.800	< 0.700	< 0.500	450	3600	0.07	0.83	110	11	64	< 0.050	1200	0.09
E10-013-1	E10-013	5.78	7.8	2010	Knight Piésold	Mine Rock	Diorite	52000	7.2	120	0.71	< 0.090	54000	0.06	31	310	21	70000	8100	38	36000	870	0.4		135		1.6	< 0.800	< 0.700	1.4	270	6000	0.13	0.32	110	15	51	< 0.100	1300	0.12
E10-023-1	E10-023	30	31.9	2010	Knight Piésold	Mine Rock	Diorite	59000	1.5	180	1.2	0.10	17000	0.24	2.5	180	150	8500	9600	5	2100	100	1.3		3.8		2.8	< 0.800	0.9	2.3	69	680	0.10	1.7	< 1.000	25	15	< 0.100	890	0.39
E10-031-2	E10-031	158	160.1	2010	Knight Piésold	Mine Rock	Diorite	58000	2.9	180	1.2	0.31	17000	0.50	3.3	150	110	12000	16000	6	4000	120	1.5		7.8		15	< 0.800	< 0.700	2.7	110	880	0.17	1.7	5	15	36	< 0.100	2000	0.56
E10-038-1	E10-038	74	75.9	2010	Knight Piésold	Mine Rock	Diorite	80000	0.8	250	0.82	< 0.090	63000	0.03	16	120	15	60000	9500	18	23000	720	1.2		39		1.4	< 0.800	< 0.700	4.1	260	4900	0.12	0.18	100	35	44	< 0.100	1100	0.10
E10-038-3	E10-038	158	159.85	2010	Knight Piésold	Mine Rock	Diorite	36000	2.4	57	0.32	< 0.090	67000	0.08	45	220	100	83000	2900	19	30000	1200	0.3		120		2.0	1.5	< 0.700	< 0.500	180	5600	0.03	0.088	210	13	82	< 0.100	2100	0.10
E11-095-1	E11-095	284.6	286.4	2011	Knight Piésold	Mine Rock	Diorite	68000	1.7	87	0.74	0.12	50000	0.13	19	100	82	69000	6000	13	20000	1100	0.9		27		2.1	< 0.800	< 0.700	5.7	180	9000	0.04	0.85	70	35	55	< 0.100	1600	0.19
E11-138-2	E11-138	211.3	213.33	2011	Knight Piésold	Mine Rock	Diorite	64000	3.3	63	1.5	0.21	52000	0.27	24	74	77	54000	460	33	28000	560	0.6		35		2.3	< 0.800	< 0.700	0.8	320	2500	< 0.020	1.8	110	18	65	< 0.100	2700	0.32
ARD-24	E11-062	15.90	17.80	2011	Knight Piésold	Mine Rock	Diorite	65000	0.9	75	0.98	0.10	14000	0.09	3.8	100	160	12000	5500	8	4000	140	0.8		4.9		1.2	< 0.800	< 0.700	1.9	69	1400	0.05	0.72	25	15	11	< 0.050	680	0.13
ARD-28	E11-049	38.30	40.20	2011	Knight Piésold	Mine Rock	Diorite	34000	15	460	1.2	0.23	13000	0.20	3.3	71	39	17000	32000	6	2400	180	5.9		4.3		4.0	< 0.800	< 0.700	3.1	31	900	0.17	1.6	15	6.1	22	< 0.050	6500	0.25
ARD-3	E10-036	103.30	105.20	2010	Knight Piésold	Mine Rock	Diorite	74000	2.6	140	1.1	< 0.090	25000	0.10	1.0	120	45	4200	13000	4	800	130	1.2		1.6		3.2	< 0.800	< 0.700	2.6	120	1700	0.12	1.5	13	71	5.5	< 0.050	1400	0.19
ARD-57	CL10-01	178.20	180.00	2010	Knight Piésold	Mine Rock	Diorite	72000	3.3	15	0.52	< 0.090	60000	< 0.020	38	210	130	83000	1300	27	46000	1000	0.2		120		1.3	< 0.800	< 0.700	0.5	150	5300	< 0.020	0.17	180	15	87	< 0.050	2400	0.03
E10-042-1	E10-042	14	16	2010	Knight Piésold	Mine Rock	Diorite	64000	23	460	0.87	0.13	15000	0.28	4.5	150	93	20000	15000	6	3500	120	0.8		7.3		4.3	< 0.800	< 0.700	1.6	100	1300	0.24	1.6	12	11	40	< 0.100	740	0.32
E10-042-2	E10-042	89.5	91.7	2010	Knight Piésold	Mine Rock	Diorite	67000	19	540	2.3	0.23	20000	0.29	18	150	970	36000	16000	13	8300	340	1.7		34		3.5	< 0.800	< 0.700	4.1	190	2500	0.20	1.5	35	27	78	< 0.100	4400	0.46
E11-097-1	E11-097	35.1	37.2	2011	Knight Piésold	Mine Rock	Diorite	76000	1.9	240	0.74	< 0.090	39000	0.16	16	140	12	44000	11000	16	17000	580	1.3		46		3.7	< 0.800	< 0.700	2.6	170	3600	0.10	0.84	70	23	51	< 0.100	620	0.17
ARD-1311777	E12-00356	100.80	101.70	2012	AMEC	Mine Rock	Quartz Diorite	4400	0.8	8.1	0.47	<0.09	4200	<0.02	0.61	48	120	5000	940	8	3800	79	1.0	560	1.7	86	0.60	<0.80	0.14	1.7	5.1	550	<0.02	1.1	7	28	7.4	<0.05		
ARD-1049797	E11-75	58.00	59.00	2011	AMEC	Mine Rock	Quartz Diorite	8700	1.5	2.2	0.16	<0.09	20000	<0.02	4.9	36	14	18000	200	7	7000	260	0.6	290	10	1300	1.9	<0.80	0.06	2.6	18	1500	<0.02	0.40	37	11	21	<0.05		
ARD-68989	E11-58	207.00	208.00	2011	AMEC	Mine Rock	Quartz Diorite	22000	2.2	70	0.12	<0.09	8300	<0.02	12	64	6.0	39000	7700	24	18000	300	1.0	370	31	530	0.76	<0.80	0.05	1.6	14	1600	0.14	0.29	62	7.4	34	<0.05		
ARD-2	DH12-PO-10	2.29	3.46	2012	AMEC	Mine Rock	Quartz Diorite	6900	1.6	4.5	0.21	<0.09	31000	0.02	5.5	32	24	17000	370	5	4500	340	0.7	400	5.4	950	1.7	<0.80	0.09	0.8	25	1500	<0.02	0.20	9	9.5	17	<0.05		
ARD-1346137	E12-00180	129.00	130.00	2012	AMEC	Mine Rock	Quartz Diorite	14000	3.6	58	0.19	<0.09	27000	<0.02	8.0	26	36	31000	2400	8	8900	230	0.6	360	15	1200	2.0	<0.80	0.22	4.1	23	890	0.06	1.5	39	34	26	<0.05		
ARD-1017819	E11-89	65.00	66.10	2011	AMEC	Mine Rock	Quartz Diorite	22000	1.3	6.3	0.38	<0.09	5600	<0.02	16	65	17	41000	650	44	25000	360	1.7	200	32	1000	2.0	<0.80	0.10	0.7	11	1000	<0.02	0.51	67	4.4	38	<0.05		
ARD-1353200	E12-00182	283.00	284.00	2012	AMEC	Mine Rock	Quartz Diorite	26000	2.9	4.5	0.21	<0.09	27000	<0.02	17	180	31	49000	570	19	26000	660	0.2	340	84	800	0.20	<0.80	0.14	1.0	15	780	<0.02	0.27	80	13	54	<0.05		
ARD-1057715	E11-85	89.00	90.00	2011	AMEC	Mine Rock	Quartz Diorite	12000	0.9	3.9	0.13	<0.09	12000	<0.02	11	28	83	29000	500	8	7200	300	0.9	520	8.4	650	1.2	<0.80	0.14	1.6	11	1900	<0.02	0.33	35	7.3	26	<0.05		
ARD-1323885	E12-00251	276.00	277.00	2012	AMEC	Mine Rock	Quartz Diorite	11000	4.5	9.6	0.17	2.7	22000	0.03	6.7	36	470	25000	380	7	6800	170	0.9	450	13	1300	3.6	<0.80	0.61	2.0	15	530	<0.02	1.4	26	48	18	<0.05		
ARD-1456517	E12-00309	154.00	155.00	2012	AMEC	Mine Rock	Quartz Diorite	12000	1.4	4.8	0.22	<0.09	19000	<0.02	8.0	38	110	28000	280	9	8500	290	2.1	390	13	2100	0.70	<0.80	0.24	1.7	19	800	<0.02	0.50	26	21	22	<0.05		
ARD-1353098	E12-00182	191.00	192.00	2012	AMEC	Mine Rock	Quartz Diorite	19000	1.0	59	0.27	0.13	19000	<0.02	11	34	120	45000	3000	15	13000	340	0.4	340	15	620	0.77	<0.80	0.27	2.6	9.9	840	0.08	0.35	79	12	32	<0.05		

Table A-8: Mine Rock Elemental Analysis Results

Sample ID	Drillhole ID	From	To	Age	Consultant	Waste Classification	Lithology Name	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg	S	Ag
							Unit	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
							Average Crustal	82300	1.8	425	3	0.025	41500	0.15	25	102	60	56300	20850	20	23300	950	1.2	23550	84	1050	14	0.2	0.05	2.3	370	5650	0.85	2.7	120	33	70	0.085		
		(m)					10x Average Crustal	823000	18	4250	30	0.25	415000	1.5	250	1020	600	563000	208500	200	233000	9500	12	235500	840	10500	140	2	0.5	23	3700	56500	8.5	27	1200	330	700	0.85		
ARD-1347633	E12-00206	79.00	80.00	2012	AMEC	Mine Rock	Tonalite	6500	0.8	19	0.32	<0.09	6800	<0.02	3.9	46	31	17000	960	8	2800	170	1.0	400	6.5	200	1.3	<0.80	0.12	0.9	12	470	<0.02	0.98	6	16	14	<0.05		
ARD-11 -DH12-PO-20	DH12-PO-20	13.77	14.77	2012	AMEC	Mine Rock	Tonalite	1100	0.6	5.3	0.16	<0.09	19000	<0.02	0.52	60	7.9	1300	530	<2.00	52	81	0.8	490	2.0	10	4.2	<0.80	<0.04	<0.50	9.5	22	<0.02	0.39	<1.00	12	2.4	<0.05		
ARD-13 DH12-PO-07R	DH12-PO-07R	6.38	7.38	2012	AMEC	Mine Rock	Tonalite	1700	<0.50	7.8	0.22	<0.09	7500	<0.02	0.89	49	8.5	2500	580	<2.00	380	44	0.7	600	2.1	37	2.9	<0.80	<0.04	<0.50	5.1	92	<0.02	0.65	1	6.2	3.3	<0.05		
ARD-1114935	E11-00153-3	14.00	15.00	2011	AMEC	Mine Rock	Tonalite	1700	0.6	4.7	0.14	<0.09	6600	<0.02	0.50	54	14	1900	540	<2.00	350	52	0.7	630	1.8	10	1.5	<0.80	0.04	<0.50	6.7	10	<0.02	0.83	<1.00	5.3	2.7	<0.05		
ARD-1329749	E12-00186	54.00	55.00	2012	AMEC	Mine Rock	Tonalite	4400	2.7	28	0.18	<0.09	3700	0.05	2.3	55	24	12000	910	4	1800	150	0.7	420	5.1	110	2.4	<0.80	0.07	<0.50	12	450	<0.02	0.80	5	11	20	<0.05		
ARD-926721	E10-34	233.38	234.18	2010	AMEC	Mine Rock	Tonalite	4300	0.9	7.1	0.24	<0.09	14000	0.04	1.4	35	9.2	6000	770	8	2400	100	0.5	380	3.6	350	7.2	<0.80	0.07	<0.50	8.0	59	<0.02	1.1	4	17	11	<0.05		
ARD-1313309	E12-00317	12.00	12.90	2012	AMEC	Mine Rock	Tonalite	4300	1.2	22	0.14	<0.09	18000	0.03	2.5	45	22	7300	450	4	2800	150	0.6	450	6.3	270	2.2	<0.80	0.06	<0.50	19	280	<0.02	0.66	10	11	10	<0.05		
ARD-7 DH12-PO-16	DH12-PO-16	16.71	17.68	2012	AMEC	Mine Rock	Tonalite	4300	<0.50	12	0.08	<0.09	7800	0.03	2.3	56	23	7300	900	4	2900	81	0.6	350	4.7	49	2.9	<0.80	<0.04	<0.50	3.9	200	<0.02	0.22	6	6.0	10	<0.05		
ARD-8 DH12-PO-15	DH12-PO-15	8.26	9.22	2012	AMEC	Mine Rock	Tonalite	5300	0.9	35	0.09	<0.09	5300	0.02	3.4	48	8.5	11000	1800	4	2800	140	1.0	410	4.2	140	2.9	<0.80	<0.04	<0.50	6.7	450	0.03	0.79	6	6.8	19	<0.05		
ARD-1008261	E11-84	336.00	337.00	2011	AMEC	Mine Rock	Tonalite	4100	0.5	9.5	0.13	<0.09	1900	<0.02	1.3	59	110	6900	570	4	3600	60	10	350	3.1	13	1.0	<0.80	0.07	<0.50	2.2	85	<0.02	0.22	2	2.7	6.8	<0.05		
ARD-1153674	E11-138	115.00	116.00	2011	AMEC	Mine Rock	Tonalite	2600	0.5	44	0.11	<0.09	8900	0.02	0.60	44	7.5	2500	1000	2	1300	62	3.5	250	1.8	16	2.3	<0.80	<0.04	<0.50	12	12	<0.02	0.99	<1.00	4.1	5.3	<0.05		
ARD-1284846	E12-00197	75.00	76.00	2012	AMEC	Mine Rock	Tonalite	4600	1.4	27	0.27	<0.09	5300	0.02	2.5	60	27	13000	1000	3	2000	100	0.7	440	4.5	95	1.4	<0.80	0.11	<0.50	7.6	380	<0.02	1.7	5	19	12	<0.05		
ARD-5 DH12-PO-08R	DH12-PO-08R	6.64	7.64	2012	AMEC	Mine Rock	Tonalite	6500	0.8	28	0.09	<0.09	14000	0.03	3.6	42	3.7	11000	1300	6	4300	160	0.7	390	6.5	290	3.3	<0.80	<0.04	<0.50	11	320	0.02	0.56	9	7.6	16	<0.05		
ARD-16 DH12-PO-15	DH12-PO-15	6.03	7.03	2012	AMEC	Mine Rock	Tonalite	5300	1.1	24	0.16	<0.09	9400	0.02	3.6	46	7.9	12000	1100	4	3200	170	1.4	440	4.8	150	3.3	<0.80	0.04	<0.50	9.6	430	<0.02	1.0	7	10	18	<0.05		
ARD-1465755	E12-00358	120.00	121.00	2012	AMEC	Mine Rock	Tonalite	1600	1.4	6.0	0.09	<0.09	8500	<0.02	0.52	48	20	1600	510	<2.00	140	45	0.7	630	1.8	13	1.4	<0.80	0.09	<0.50	7.7	25	<0.02	0.35	<1.00	7.4	3.1	<0.05		
ARD-1108761	E11-107	243.00	244.00	2011	AMEC	Mine Rock	Tonalite	2000	3.8	8.1	0.30	<0.09	11000	0.04	1.3	47	17	3300	720	<2.00	780	62	0.7	480	3.5	20	3.0	<0.80	0.07	<0.50	5.5	100	<0.02	0.89	2	8.9	9.6	<0.05		
ARD-1390082	E12-00215	81.00	82.00	2012	AMEC	Mine Rock	Tonalite	4600	0.9	17	0.51	<0.09	8500	<0.02	2.3	39	31	10000	840	4	2000	93	0.7	420	5.2	200	0.49	<0.80	0.08	0.6	6.7	160	<0.02	1.6	4	18	7.6	<0.05		
ARD-1376168	E12-00213	154.80	155.80	2012	AMEC	Mine Rock	Tonalite	3800	2.0	69	0.19	<0.09	7800	0.02	2.3	50	28	18000	2500	2	1000	120	0.8	480	2.5	300	1.4	<0.80	0.23	0.7	16	370	0.04	1.2	2	18	7.8	<0.05		
ARD-1117160	E11-119	39.90	40.60	2011	AMEC	Mine Rock	Tonalite	4200	1.1	12	0.17	<0.09	6700	<0.02	3.2	45	60	13000	560	4	2900	100	0.5	440	4.5	140	1.1	<0.80	0.11	<0.50	8.2	370	<0.02	1.1	12	15	9.9	<0.05		
ARD-1328761	E11-00172	249.00	250.00	2011	AMEC	Mine Rock	Tonalite	2600	0.9	7.7	0.12	<0.09	5900	<0.02	1.4	36	6.7	2900	920	2	1200	48	0.6	460	3.4	17	1.3	<0.80	0.06	<0.50	4.5	31	<0.02	1.6	1	4.0	5.2	<0.05		
ARD-15 DH12-PO-07R	DH12-PO-07R	9.32	10.15	2012	AMEC	Mine Rock	Tonalite	1400	<0.50	6.8	0.09	<0.09	9400	0.03	0.77	57	130	2100	460	<2.00	210	69	0.9	550	2.0	24	2.8	<0.80	0.06	<0.50	7.7	62	<0.02	0.31	<1.00	4.4	5.0	<0.05		
ARD-1398253	E12-00216	50.00	51.00	2012	AMEC	Mine Rock	Tonalite	4500	1.4	39	0.35	1.1	11000	0.03	2.2	38	160	13000	1200	3	1800	140	0.6	390	2.4	160	0.72	<0.80	0.15	1.0	6.7	380	<0.02	1.0	2	26	11	<0.05		
ARD-572129	E11-56	144.00	145.00	2011	AMEC	Mine Rock	Tonalite	2700	1.4	11	0.25	<0.09	4800	<0.02	1.3	39	77	4400	910	<2.00	1300	54	3.4	400	2.2	24	1.2	<0.80	0.06	<0.50	3.1	52	<0.02	0.62	2	4.3	4.9	<0.05		
ARD-246803	E13-00398	100.00	101.00	2013	AMEC	Mine Rock	Tonalite	4400	1.8	42	0.11	<0.09	11000	0.03	1.8	49	42	11000	1300	4	1500	120	0.6	440	4.4	120	18	<0.80	0.19	<0.50	10	280	<0.02	1.8	4	21	8.0	<0.05		
ARD-1416171	E13-00394	182.00	183.00	2013	AMEC	Mine Rock	Tonalite	3900	1.7	8.0	0.17	<0.09	11000	0.04	1.3	50	100	6500	750	4	2200	94	0.6	490	4.0	120	3.0	<0.80	0.17	<0.50	11	210	<0.02	0.73	3	19	9.4	<0.05		
ARD-935087	E10-16	309.64	310.50	2010	AMEC	Mine Rock	Tonalite	6300	<0.50	23	0.14	<0.09	19000	<0.02	4.8	23	6.0	13000	1000	9	4100	170	0.5	370	6.4	420	0.09	<0.80	0.06	<0.50	12	31	<0.02	0.084	8	2.0	18	<0.05		
ARD-1258760	E12-00179	476.00	477.00	2012	AMEC	Mine Rock	Tonalite	3400	1.1	10	0.09	<0.09	1300	<0.02	2.3	38	54	6300	520	3	2600	56	0.5	440	5.7	47	0.43	<0.80	0.05	<0.50	3.9	150	<0.02	0.77	5	3.6	6.8	<0.05		
ARD-1359177	E12-00261	401.00	402.00	2012	AMEC	Mine Rock	Tonalite	3000	2.0	34	0.10	<0.09	9100	0.03	1.9	39	34	5700	1700	2	1100	98	0.5	340	3.9	97	2.1	<0.80	0.12	<0.50	7.0	250	0.02	1.3	2	21	6.8	<0.05		
ARD-1115728	E12-00209	90.11	91.00	2012	AMEC	Mine Rock	Tonalite	5400	1.3	12	0.25	0.26	10000	0.03	3.8	59	220	11000	550	6	3800	130	0.9	450	6.1	230	2.6	<0.80	0.22	0.7	10	140	<0.02	1.6	10	11	11	<0.05		
ARD-1167807	E11-00169	65.00	66.00	2011	AMEC	Mine Rock	Tonalite	5300	1.1	6.5	0.11	<0.09	8600	0.03	1.8	43	23	9100	500	11	3300	77	0.5	430	5.1	22	1.2	<0.80	0.07	<0.50	5.5	24	<0.02	1.1	5	4.3	11	<0.05		
ARD-1469044	E12-00329	135.00	135.50	2012	AMEC	Mine Rock	Tonalite	7100	1.0	18	0.57	0.10	10000	0.03	2.6	58	3.4	17000	640	10	5500	150	47	410	4.6	120	0.69	<0.80	0.11	1.0	7.3	58	<0.02	1.4	9	11	8.5	<0.05		
ARD-12 DH12-PO-21	DH12-PO-21	16.92	17.92	2012	AMEC	Mine Rock	Tonalite	5400	1.1	26	0.16	<0.09	15000	0.08	2.6	50	110	12000	2500	6	3500	230	0.9	140	6.7	19	3.5	<0.80	0.06	<0.50	14	160	0.03	1.2	10	6.5	32	<0.05		
ARD-929864	E10-38	446.00	447.00	2010	AMEC	Mine Rock	Tonalite	5000	4.3	4.5	0.21	<0.09	10000	0.04	2.2	56	270	9000	370	9	3100	92	0.7	470	4.3	230	6.5	<0.80	0.37	1.5	6.5	92	<0.02	2.7	6	17	15	<0.05		
ARD-1344533	E12-00242	32.00	33.00	2012	AMEC	Mine Rock	Tonalite	6900	7.4	16	0.35	0.14	5000	<0.02	3.3	56	200	14000	670	10	3500	130	1.1	490	4.3	220	4.5	<0.80	1.1	2.8	12	440	<0.02	2.6	7	31	9.1	<0.05		
ARD-1111278	E11-00140	119.00	120.00	2011	AMEC	Mine Rock	Tonalite	2700	1.2	6.6	0.65	<0.09	2200	0.02	1.8	44	32	5200	710	<2.00	1500	49	0.5	460	2.6	32	0.95	<0.80	0.07	<0.50	2.5	100	<0.02	1.1	3	11	6.6	<0.05		
ARD-1390445	E12-00215	416.00	417.00	2012	AMEC	Mine Rock	Tonalite	4200	1.5	35	0.24	<0.09	7600	<0.02	3.2	42	23	14000	1100	4	2500	100	0.6	470	3.7	170	0.98	<0.80	0.17	0.7	7.3	210	<0.02	1.7	3	23	8.0	<0.05		
ARD-1027713	E11-82	158.00	159.00	2011	AMEC	Mine Rock	Tonalite	3200	1.8	7.2	0.31	<0.09	20000	0.02	2.6	52	41	6100	470	2	2300	120	0.7	370	3.9	33	1.6	<0.80	0.14	<0.50	16	140	<0.02	0.52	4	6.0	6.8	<0.05		
ARD-1008450	E11-86	10.00	11.00	2011	AMEC	Mine Rock	Tonalite	2400	0.8	53	0.13	<0.09	9400	<0.02	2.6	41	120	6800	1600	<2.00	1000	92	0.6	310	3.5	130	2.0	<0.80	0.14	<0.50	12	140	<0.02	1.4	1	14	3.8	<0.05		
ARD-1261924	E12-00270	150.00	151.00	2012	AMEC	Mine Rock	Tonalite	6500	2.2	7.8	0.34	<0.09	12000	<0.02	5.0	55	10	12000	490	7	6200	150	0.8	500	7.9	120	1.7	<0.80	0.11	0.9	12	360	<0.02	1.00	17	11	18	<0.05		
ARD-1173948	E11-106	440.00	441.00	2011	AMEC	Mine Rock	Tonalite	2200	1.1	11	0.27	0.11	8300	<0.02	1.6	40	470	4000	680	<2.00	1000	56	0.8	530	2.9	38	0.78	<0.80	0.36	<0.50	5.6	13	<0.02	1.1	1	6.1	3.7	<0.05		
ARD-1120967	E11-136	7.00	8.00	2011	AMEC	Mine Rock	Tonalite	3400	1.2	7.1	0.33	<0.09	5000	0.15	2.0	57	29	5900	720	4	1700	57	0.7	390	4.2	30	15	<0.80	0.21	<0.50	4.7	190	<0.02	1.5	2	18	36	<0.05		
ARD-1413274	E12-00177	196.00	197.00	2012	AMEC	Mine Rock	Tonalite	4400	1.1	31	0.13	0.14	11000	<0.02	4.2	36	200	12000	1000	3	1900	96	0.5	470	4.7	180	1.7	<0.80	0.28	0.7	10	100	<0.02	1.5	3	20	6.9	<0.05		
ARD-1401198	E12-00337	68.00	69.00	2012	AMEC	Mine Rock	Tonalite	2700	0.7	20	0.24	<0.09	8700	<0.02	2.7	48	42	8000	1000	<2.00	610	74	0.8	460	2.7	84	1.5	<0.80	0.17	1.1	13	240	<0.02	0.89	<1.00	13	5.2	<0.05		
ARD-936266	E10-21	41.00	42.00	2010	AMEC	Mine Rock	Tonalite	4100	5.5	12	0.14	<0.09	10000	0.05	2.5	38	110	7700	710	4	2200	93	1.3	380	4.3	220	2.9	<0.80	0.20	<0.50	6.0	160	<0.02	1.3	2	15	14	<0.05		
ARD-951469	E11-90	451.00	452.00	2011	AMEC	Mine Rock	Tonalite	1900	0.5	12	0.16	<0.09	10000	<0.02	1.8	48	85	3700	1000	<2.00	1100	88	0.6	310	4.5	14	2.3	<0.80	0.19	<0.50	9.3	13	<0.02	0.75	<1.00	4.3	3.4	<0.05		
ARD-10 DH12-PO-18	DH12-PO-18	2.48	3.48	2012	AMEC	Mine Rock	Tonalite	3500	4.6	14	0.13	<0.09	14000	0.08	1.8	47	130	6700	890	3	1600	93	0.9	370	3.8	120	14	<0.80	0.22	<0.50	8.9	24	<0.02	0.94	2	13	23	<0.05		
ARD-68741	E11-54	190.30	191.20	2011	AMEC	Mine Rock	Tonalite	1400	1.2	4.3	0.46	0.16	850	<0.02	8.4	63	110	3100	350	<2.00	430	23	1.1	480	4.4	23	0.73	<0.80	0.15	0.7	2.5	180	<0.02	0.59	2	13	3.2	<0.05		
ARD-9 DH12-PO-19	DH12-PO-19	21.3	22.3	2012	AMEC	Mine Rock	Tonalite	4800	1.4	15	0.18	<0.09	13000	<0.02	3.9	36	23	12000	550	4	2800	150	4.3	460	5.8	250	2.6	<0.80	0.15	<0.50	12	260	<0.02	1.6	11	18	12	<0.05		
ARD-1057141	E11-76	234.00	235.00	2011	AMEC	Mine Rock	Tonalite	10000	2.6	8.2	0.15	0.14	23000	<0.02	7.1	40	15	21000	990	10	6900	160	0.8	210	10	16	2.2	<0.80	0.20	<0.50	11	27	<0.02	1.1	9	7.0	14	<0.05		
ARD-3	DH12-PO-11	2.30	3.25	2012	AMEC	Mine Rock	Tonalite	3300	1.1	45	0.19	<0.09	9400	<0.02	4.4	43	34	14000	1300	<2.00	1100	130	0.7	330	2.2	150	1.6	<0.80	0.20	<0.50	12	110	<0.02	1.1	<1.00	10	4.8	<0.05		
ARD-1341540	E12-00287	39.00	40.00	2012	AMEC	Mine Rock	Tonalite	8400	1.3	17	0.30	<0.09	36000	0.03	12	97	45	21000	750	13	8200	310	0.9	320	11	820	0.30	<0.80	0.15	<0.50	24	41	<0.02	0.69	45	9.2	31	<0.05		
ARD-1260435	E12-00276	219.30	220.00	2012	AMEC	Mine Rock	Tonalite	11000	1.5	7.2	0.15	<0.09	45000	<0.02	11	16	3.4	27000	310	15	12000	310	0.4	460	21	160	0.10	<0.80	0.13	<0.50	16	290	<0.02	1.4	35	15	22	<0.05		
ARD-689315	E10-05	215.40	216.50	2010	AMEC	Mine Rock	Tonalite	5700	3.5	9.8	0.22	0.21	8800	0.03	4.6	41	500	12000	1000	5	4000	88	1.3	330	6.5	32	2.0	<0.80	0.49	<0.50	15	21	<0.02	1.1	5	3.8	15	<0.05		
ARD-1156837	E11-00142	281.00	282.00	2011	AMEC	Mine Rock	Tonalite	3900	1.1	22	0.15	0.25	9700	0.07	1.6	35	610	10000	1500	<2.00	1900	90	0.6	370	5.0	200	2.8	<0.80	0.37	1.0	8.6	140	0.02	1.1	4	14	9.5	<0.05		
ARD-952686	E10-29	287.00	287.67	2010	AMEC	Mine Rock	Tonalite	11000	2.0	18	0.31	0.19	17000	0.02	8.5	45	40	23000	1000	10	8200	310	0.5	510	17	340	2.1	<0.80	0.23	1.0	17	580	<0.02	0.94	30	17	23	<0.05		
ARD-227239	E13-00400	245.00	246.00	2013	AMEC	Mine Rock	Tonalite	7100	1.2	11	0.26	0.17	16000	0.03	5.9	93	98	11000	560	6	7300	160	1.3	350	27	300	0.90	<0.80	0.26	<0.50	7.5	190	<0.02	1.0	13	8.1	15	<0.05		
ARD-1387476	E12-00196	514.50	515.30	2012	AMEC	Mine Rock	Tonalite	9300	1.3	37	0.22	0.10	38000	<0.02	5.3	39	55	24000	2700	12	16000	650	0.4	460	15	290	0.41	<0.80	0.27	0.5	23	250	0.05	0.67	20	13	15	<0.05		
ARD-1371750	E12-00178	186.00	187.00	2012	AMEC	Mine Rock	Tonalite	3800	1.8	8.9	0.84	<0.09	1100	<0.02	3.2	50	26	9600	1000	2	2500	65	12	280	3.3	23	0.89	<0.80	0.20	<0.50	3.7	67	<0.02	1.9	4	9.5	6.5	<0.05		
ARD-1157490	E11-00144	333.00	334.00	2011	AMEC	Mine Rock	Tonalite	10000	11	7.7	0.18	0.16	12000	0.02	5.8	38	390	24000	910	11	8500	160	0.6	370	9.6	17	2.3	<0.80	0.62	0.8	6.8	100	<0.02	1.2	19	7.5	16	<0.05		
ARD-1385848	E12-00221	239.60	240.00	2012	AMEC	Mine Rock	Tonalite	3200	2.1	15	0.14	0.22	6400	0.05	6.3	45	680	8900	480	3	1700	66	0.8	480	4.8	240	2.1	<0.80	0.79	0.8	14	330	<0.02	1.2	6	12	9.0	<0.05		
ARD-1163047	E11-00150	86.00	87.00	2011	AMEC	Mine Rock	Tonalite	3800	14	7.2	0.16	0.09	11000	0.08	3.7	52	160	11000	500	3	2400	80	0.7	490	8.5	290	16	<0.80	0.85	<0.50	8.3	350	<0.02	0.88	7	14	21	<0.05		
ARD-69669	E11-58	368.40	369.40	2011	AMEC	Mine Rock	Tonalite	4300	19	13	0.75	1.3	8700	<0.02	4.6	30	7.3	17000	1500	2	2600	130	1.1	74	4.8	140	6.4	<0.80	0.32	<0.50	4.1	16	<0.02	1.1	<1.00	12	6.5	<0.05		
ARD-41	E11-120	74.50	76.40	2011	Knight Piésold	Mine Rock	Tonalite	70000	1.3	110	1.6	< 0.090	18000	0.14	7.3	89	20	24000	4100	15	11000	220	0.8		9.1		1.2	< 0.800	< 0.700	4.3	58	2100	0.03	1.8	19	40	19	< 0.050	1600	0.26
ARD-6	E11-066	70.40	72.40	2011	Knight Piésold	Mine Rock	Tonalite	66000	1.2	260	1.3	0.24	26000	0.14	8.9	160	160	23000	9200	11	13000	280	0.9		21		2.3	< 0.800	< 0.700	2.9	160	2000	0.12	1.1	40	15	28	< 0.050	1600	0.17
ARD-60	E12-213	138.90	141.00	2012	Knight Piésold	Mine Rock	Tonalite	62000	1.2	500	1.4	< 0.090	8900	0.18	4.3	95	16	25000	25000	5	1600	170	0.5		2.5		2.6	< 0.800	1.1	4.8	56	1600	0.15	2.0	2	34	14	< 0.050	1900	0.33
E10-013-3	E10-013	60	62.28	2010	Knight Piésold	Mine Rock	Tonalite	64000	< 0.500	420	1.2	< 0.090	17000	0.25	4.1	140	28	15000	15000	6	3500	110	0.7		6.5		1.3	< 0.800	< 0.700	1.1	150	1500	0.15	1.1	12	19	8.5	< 0.100	1200	0.41
E10-031-1	E10-031	9.1	11	2010	Knight Piésold	Mine Rock	Tonalite	60000	1.2	200	1.2	< 0.090	15000	0.22	3.3	150	14	20000	6100	5	2500	150	1.5		6.2		1.7	< 0.800	< 0.700	2.3	110	1500	0.05	1.3	2	26	13	< 0.100	430	0.34
E10-046-1	E10-046	15.8	18.07	2010	Knight Piésold	Mine Rock	Tonalite	60000	0.6	520	1.4	< 0.090	9600	0.30	4.0	190	21	25000	23000	4	1500	200	0.9		2.5		3.0	< 0.800	< 0.700	3.0	67	1800	0.12	1.5	7	38	17	< 0.100	180	1.1
E11-081-1	E11-081	376	378.25	2011	Knight Piésold	Mine Rock	Tonalite	73000	0.5	400	0.72	< 0.090	27000	0.16	5.4	86	7.1	19000	21000	8	4800	190	0.4		7.7		1.5	< 0.800	< 0.700	1.2	120	2100	0.25	0.54	35	4.2	9.0	< 0.100	1100	0.20
ARD-13	E11-096	77.15	79.35	2011	Knight Piésold	Mine Rock	Tonalite	68000	< 0.500	77	0.95	< 0.090	29000	0.14	8.6	75	10	31000	3200	12	13000	400	0.5		23		1.5	< 0.800	< 0.700	3.6	130	3000	0.06	1.3	62	22	24	< 0.050	710	0.17
ARD-16	E11-098	24.40	26.60	2011	Knight Piésold	Mine Rock	Tonalite	60000	1.7	180	1.2	< 0.090	13000	0.20	0.98	100	130	4300	9100	4	1400	110	1.0		2.4		5.2	< 0.800	0.9	1.9	81	1600	0.07	1.0	5	18	16	< 0.050	480	0.46
ARD-21	E11-114	8.08	10.38	2011	Knight Piésold	Mine Rock	Tonalite	63000	1.2	73	1.2	< 0.090	19000	0.19	4.6	110	14	20000	3900	15	3600	180	0.9		7.7		3.6	< 0.800	< 0.700	2.5	110	1700	0.03	1.6	22	25	19	< 0.050	590	0.24
ARD-4	E10-045	229.60	231.80	2010	Knight Piésold	Mine Rock	Tonalite	51000	0.7	35	1.4	< 0.090	5600	0.16	1.1	120	44	2200	3600	< 2.000	380	110	1.4		1.7		1.0	< 0.800	< 0.700	2.4	24	790	0.02	0.87	< 1.000	18	3.1	< 0.050	440	0.19
ARD-45	E11-140	274.50	276.60	2011	Knight Piésold	Mine Rock	Tonalite	64000	2.0	220	1.2	< 0.090	7900	0.15	3.8	99	32	12000	8900	5	2800	68	0.9		4.1		2.3	< 0.800	< 0.700	3.4	50	1600	0.07	1.7	5	24	12	< 0.050	900	0.28
ARD-48	E11-129	57.1	59.60	2011	Knight Piésold	Mine Rock	Tonalite	58000	2.5	160	0.81	< 0.090	12000	0.17	1.7	130	15	9500	11000	8	2800	94	1.0		3.7		1.9	< 0.800	< 0.700	1.3	40	990	0.08	1.6	10	12	14	< 0.050	700	0.25
E10-046-2	E10-046	95	97.2	2010	Knight Piésold	Mine Rock	Tonalite	85000	1.4	82	0.86	0.31	28000	0.30	4.2	45	28	6700	3900	< 2.000	1100	110	0.4		2.1		1.0	< 0.800	< 0.700	5.6	92	2200	0.03	2.1	7	46	5.1	< 0.100	1700	0.66
E11-059-1	E11-059	25.57	27.61	2011	Knight Piésold	Mine Rock	Tonalite	61000	2.3	440	1.2	< 0.090	7800	0.29	2.5	190	19	17000	25000	4	2600	120	1.1		4.3		2.4	< 0.800	< 0.700	2.2	49	1400	0.08	2.7	< 1.000	32	16	< 0.100	170	0.34
E11-061-2	E11-061	338	340.2	2011	Knight Piésold	Mine Rock	Tonalite	71000	0.5	210	0.63	0.09	34000	0.09	14	120	77	51000	18000	23	25000	360	1.8		33		2.3	< 0.800	< 0.700	5.9	180	5000	0.27	1.5	59	27	43	< 0.100	2100	0.19
E11-072-1	E11-072	155.5	157.65	2011	Knight Piésold	Mine Rock	Tonalite	72000	4.1	150	1.3	0.11	14000	0.46	1.5	100	47	7500	13000	7	1500	110	1.1		2.7		8.5	< 0.800	< 0.700	3.9	110	1100	0.10	1.9	4	20	45	< 0.100	1100	0.44
E11-077-1	E11-077	142.7	144.85	2011	Knight Piésold	Mine Rock	Tonalite	67000	0.5	120	1.2	< 0.090	19000	0.25	3.2	180	27	15000	5800	10	4100	200	1.5		7.0		3.0	< 0.800	< 0.700	5.2	110	1900	0.04	1.1	12	22	19	< 0.100	470	0.32
E11-091-1	E11-091	13.9	15.95	2011	Knight Piésold	Mine Rock	Tonalite	62000	2.3	190	1.4	< 0.090	18000	0.26	4.9	170	42	18000	6400	6	5700	210	1.6		10		4.0	< 0.800	< 0.700	2.0	130	2000	0.07	1.7	19	37	14	< 0.100	1300	0.44
E11-091-3	E11-091	311	313.13	2011	Knight Piésold	Mine Rock	Tonalite	61000	1.5	82	1.2	< 0.090	12000	0.47	1.9	180	9.7	7100	7900	6	2200	74	1.0		4.2		2.3	< 0.800	< 0.700	2.5	59	1000	0.09	1.9	< 1.000	16	8.1	< 0.100	390	1.0
E11-095-2	E11-095	18.9	20.9	2011	Knight Piésold	Mine Rock	Tonalite	66000	4.5	280	0.75	0.11	15000	2.3	3.5	160	190	16000	14000	7	4300	120	1.0		9.8		50	< 0.800	< 0.700	1.4	79	1000	0.18	1.7	13	9.7	590	< 0.100	810	0.41
E11-097-2	E11-097	153.7	155.7	2011	Knight Piésold	Mine Rock	Tonalite	63000	< 0.500	490	1.5	< 0.090	11000	0.32	2.6	130	23	14000	22000	8	2400	160	2.1		4.2		2.6	< 0.800	< 0.700	3.0	61	1200	0.13	4.2	3	33	15	< 0.100	290	0.43
E11-138-1	E11-138	15.5	17.88	2011	Knight Piésold	Mine Rock	Tonalite	54000	3.5	230	0.85	0.33	19000	0.20	1.5	190	110	5200	15000	2	440	120	4.6		2.4		3.0	< 0.800	< 0.700	1.3	95	610	0.12	0.95	6	12	7.6	< 0.100	1400	0.22
ARD-1054224	E11-74	224.00	225.00	2011	AMEC	Mine Rock	Mafic Dykes	34000	2.4	230	0.15	<0.09	18000	<0.02	22	180	10	45000	23000	34	34000	560	0.4	200	130	380	3.4	<0.80	<0.04	0.6	20	2200	0.48	0.059	54	2.7	71	<0.05		
ARD-937698	E10-14	127.00	128.00	2010	AMEC	Mine Rock	Mafic Dykes	35000	4.4	190	0.16	<0.09	14000	<0.02	20	230	13	49000	21000	42	34000	510	0.4	220	98	380	0.21	<0.80	<0.04	<0.50	17	2300	0.39	0.032	58	2.9	51	<0.05		
ARD-1105010	E11-110	105.00	106.00	2011	AMEC	Mine Rock	Mafic Dykes	18000	0.9	9.7	0.16	<0.09	42000	<0.02	6.6	60	110	32000	1300	13	16000	400	0.9	210	14	50	0.96	<0.80	0.23	2.6	16	900	0.03	0.62	54	29	29	<0.05		
ARD-1008033	E11-84	126.00	127.00	2011	AMEC	Mine Rock	Mafic Dykes	11000	2.0	7.8	0.15	<0.09	14000	0.04	3.8	26	260	18000	650	10	8500	240	5.8	290	9.6	690	2.5	<0.80	0.17	3.2	11	900	<0.02	0.60	37	15	33	<0.05		
ARD-1299298	E12-00212	130.82	132.00	2012	AMEC	Mine Rock	Mafic Dykes	34000	1.1	43	0.67	<0.09	59000	0.04	23	260	43	52000	1300	47	42000	740	0.2	140	59	1000	0.75	<0.80	0.12	<0.50	110	390	0.03	0.26	130	13	52	<0.05		
ARD-952486	E10-29	123.50	124.70	2010	AMEC	Mine Rock	Mafic Dykes	24000	3.9	500	1.1	0.13	53000	0.06	20	15	68	55000	17000	27	24000	660	0.1	390	19	1600	0.64	<0.80	0.22	1.5	124	1700	0.54	0.65	120	13	43	<0.05		
ARD-1288121	E12-00279	118.14	119.00	2012	AMEC	Mine Rock	Mafic Dykes	38000	1.5	540	0.98	<0.09	42000	<0.02	23	290	150	62000	28000	26	39000	680	0.5	270	63	1400	0.74	<0.80	0.23	3.3	75	2500	0.42	0.44	120	11	71	<0.05		
ARD-1070452	E11-93	337.51	339.00	2011	AMEC	Mine Rock	Mafic Dykes	15000	2.3	96	0.20	<0.09	15000	0.05	18	410	42	28000	5200	19	16000	400	0.2	210	80	1100	3.2	<0.80	0.12	<0.50	15	1400	0.10	0.41	53	4.7	42	<0.05		
ARD-14 DH12-PO-17	DH12-PO-17	8.29	9.29	2012	AMEC	Mine Rock	Mafic Dykes	14000	1.2	21	0.12	<0.09	7700	0.10	21	16	98	50000	1800	14	11000	330	0.5	900	25	580	4.3	<0.80	0.28	<0.50	11	2500	0.04	0.52	150	12	51	<0.05		
ARD-1415660	E12-00330	268.00	269.00	2012	AMEC	Mine Rock	Mafic Dykes	24000	1.8	1.7	0.15	<0.09	20000	<0.02	19	160	160	47000	150	32	27000	540	0.7	240	69	270	<0.05	<0.80	0.16	0.6	7.1	720	<0.02	0.10	69	8.1	43	<0.05		
ARD-6 DH12-PO-22	DH12-PO-22	23.56	24.56	2012	AMEC	Mine Rock	Mafic Dykes	27000	1.8	6.0	0.74	<0.09	61000	0.03	26	330	65	43000	1000	44	38000	880	0.1	140	69	1300	1.8	<0.80	0.15	<0.50	61	1400	<0.02	0.38	76	6.3	85	<0.05		
ARD-1175183	E11-98	99.00	100.00	2011	AMEC	Mine Rock	Mafic Dykes	34000	110	5.2	0.33	<0.09	52000	0.03	24	430	40	48000	1000	25	37000	990	0.1	73	120	1300	3.5	<0.80	0.19	<0.50	44	290	0.03	0.21	86	5.8	56	<0.05		
ARD-1396637	E12-00222	375.00	376.00	2012	AMEC	Mine Rock	Mafic Dykes	15000	1.9	2.2	0.09	0.15	160000	<0.02	16	38	26	34000	110	17	17000	960	0.4	170	20	660	0.58	<0.80	0.22	<0.50	44	560	<0.02	0.097	69	58	30	<0.05		
ARD-689119	E10-05	68.60	69.60	2010	AMEC	Mine Rock	Mafic Dykes	27000	1.3	290	0.70	<0.09	44000	0.03	25	150	120	49000	18000	20	27000	720	0.1	210	28	1000	1.1	<0.80	0.24	<0.50	55	1800	0.44	0.31	140	3.8	51	<0.05		
ARD-1113188	E11-00148	230.00	231.00	2011	AMEC	Mine Rock	Mafic Dykes	27000	1.3	440	0.79	0.31	37000	0.06	20	320	52	36000	27000	23	29000	600	0.3	400	62	850	1.6	<0.80	0.18	<0.50	65	1900	0.64	0.38	92	2.8	60	<0.05		
ARD-1008072	E11-84	162.55	163.55	2011	AMEC	Mine Rock	Mafic Dykes	30000	2.0	10	0.28	0.27	19000	0.03	33	140	32	66000	350	44	33000	470	0.2	180	39	1800	1.0	<0.80	0.33	<0.50	18	1100	<0.02	0.86	97	11	48	<0.05		
ARD-53	E12-200	185.00	187.00	2012	Knight Piésold	Mine Rock	Mafic Dykes	61000	1.0	9.8	0.23	< 0.090	53000	0.02	36	170	93	71000	1400	18	36000	890	0.1		120		0.74	< 0.800	0.8	1.1	81	3500	< 0.020	0.069	170	13	96	< 0.050	1700	0.06
ARD-55	E12-294	178.00	180.00	2012	Knight Piésold	Mine Rock	Mafic Dykes	62000	1.6	28	0.44	< 0.090	5400	< 0.020	38	200	44	100000	2000	63	50000	800	0.2		110		1.1	< 0.800	< 0.700	5.7	24	4600	0.03	0.28	190	14	94	< 0.050	1500	< 0.010

Table A-8: Mine Rock Elemental Analysis Results

Sample ID	Drillhole ID	From (m)	To (m)	Age	Consultant	Waste Classification	Lithology Name	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu
							Unit	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
							Average Crustal	82300	1.8	425	3	0.025	41500	0.15	25	102	60
							10x Average Crustal	823000	18	4250	30	0.25	415000	1.5	250	1020	600
ARD-4 DH12-PO-17	DH12-PO-17	6.21	7.21	2012	AMEC	Mine Rock	Diabase Dykes	12000	1.1	22	0.08	<0.09	7200	0.08	20	16	94
ARD-1120993	E11-136	97.50	98.50	2011	AMEC	Mine Rock	Diabase Dykes	12000	4.4	31	0.18	0.11	18000	1.3	25	16	96
ARD-1153135	E11-137	187.00	188.00	2011	AMEC	Mine Rock	Diabase Dykes	12000	0.8	43	0.19	0.29	6200	0.06	18	24	99
ARD-937384	E10-08	96.90	97.81	2010	AMEC	Mine Rock	Diabase Dykes	25000	3.4	7.1	0.56	0.24	28000	0.07	29	16	75
ARD-15	E11-096	150.45	152.25	2011	Knight Piésold	Mine Rock	Diabase Dykes	65000	0.7	270	0.64	< 0.090	49000	0.39	38	33	91
ARD-35	E11-075	220.91	223.31	2011	Knight Piésold	Mine Rock	Diabase Dykes	65000	1.4	270	0.59	< 0.090	47000	0.13	35	77	160
ARD-42	E11-120	108.90	110.40	2011	Knight Piésold	Mine Rock	Diabase Dykes	58000	6.5	340	0.56	< 0.090	68000	0.02	35	170	65
ARD-50	E11-144	138.81	139.61	2011	Knight Piésold	Mine Rock	Diabase Dykes	59000	3.0	490	0.98	< 0.090	36000	0.39	35	28	110
E10-038-2	E10-038	101	103	2010	Knight Piésold	Mine Rock	Diabase Dykes	49000	1.1	210	1.1	< 0.090	66000	0.08	44	330	120
ARD-1261810	E12-00270	44.00	45.00	2012	AMEC	Mine Rock	Intrusive Mafic Lamprophyre	20000	1.3	140	0.73	<0.09	34000	0.05	16	260	43
ARD-1298061	E12-00204	60.00	61.00	2012	AMEC	Mine Rock	Intrusive Mafic Lamprophyre	18000	8.0	470	0.70	<0.09	16000	0.07	16	170	49
ARD-1402452	E12-00310	170.00	171.50	2012	AMEC	Mine Rock	Intrusive Mafic Lamprophyre	38000	1.4	2100	1.0	<0.09	71000	0.11	28	400	3.5
ARD-1284878	E12-00197	103.52	104.36	2012	AMEC	Mine Rock	Intrusive Mafic Lamprophyre	30000	1.6	4.0	0.49	<0.09	36000	0.02	18	240	5.3
ARD-681824	E09-03	224.50	225.00	2009	AMEC	Mine Rock	Quartz Sericite Schist	3600	0.5	15	0.21	<0.09	18000	0.02	3.9	24	1.5
ARD-950511	E10-27	285.00	286.00	2010	AMEC	Mine Rock	Quartz Sericite Schist	28000	58	11	0.27	0.18	61000	<0.02	25	53	78
E10-031-4	E10-031	585	586.3	2010	Knight Piésold	Outside Pit	Diorite Breccia	57000	2.3	90	0.99	< 0.090	11000	0.33	3.8	96	98
E11-081-2	E11-081	511.66	513.5	2011	Knight Piésold	Outside Pit	Diorite Breccia	60000	0.8	280	1.6	0.41	7400	0.29	4.8	160	580
E11-081-3	E11-081	589	592.4	2011	Knight Piésold	Outside Pit	Diorite Breccia	55000	3.0	87	0.98	1.6	10000	0.44	2.6	110	570
ARD-8	E11-082	455.00	456.90	2011	Knight Piésold	Outside Pit	Magma Mixing Breccia	73000	0.8	270.0	1.20	<0.09	33000	0.12	13.0	150	45
ARD-2	E10-036	376.50	378.75	2010	Knight Piésold	Outside Pit	Magma Mixing Breccia	40000	1.1	94.0	1.20	<0.09	10000	0.14	2.0	86	30
ARD-46	E11-145	483.30	485.10	2011	Knight Piésold	Outside Pit	Magma Mixing Breccia	72000	1.7	290.0	1.00	<0.09	22000	0.17	7.3	120	18
ARD-54	E12-205	668.00	669.60	2012	Knight Piésold	Outside Pit	Magma Mixing Breccia	70000	3.2	110.0	1.00	<0.09	26000	0.15	4.1	120	5
ARD-52	E11-145	298.00	299.70	2011	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	78000	0.9	580	0.79	< 0.090	27000	0.08	7.6	60	22
ARD-9	E11-082	376.00	378.00	2011	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	75000	0.7	520	0.74	< 0.090	20000	0.07	8.9	68	2.3
ARD-30	E12-206	260.70	262.60	2012	Knight Piésold	Outside Pit	Diorite	97000	0.6	180	0.63	< 0.090	41000	< 0.020	15	27	5.7
ARD-23	E10-038	575.00	577.20	2010	Knight Piésold	Outside Pit	Diorite	57000	< 0.500	84	1.9	< 0.090	7000	0.20	0.94	110	25
ARD-1	E10-036	316.85	318.95	2010	Knight Piésold	Outside Pit	Tonalite	65000	0.7	140	1.3	< 0.090	15000	0.13	2.0	83	42
ARD-10	E11-087	242.90	244.90	2011	Knight Piésold	Outside Pit	Tonalite	65000	< 0.500	550	1.3	< 0.090	17000	0.17	6.7	68	130
ARD-40	E11-120	668.90	671.00	2011	Knight Piésold	Outside Pit	Tonalite	60000	< 0.500	250	1.5	0.10	11000	0.18	4.0	90	480
ARD-43	E11-122	384.00	385.90	2011	Knight Piésold	Outside Pit	Tonalite	62000	1.4	90	1.7	< 0.090	9400	0.18	2.0	100	14
ARD-7	E11-082	343.00	344.80	2011	Knight Piésold	Outside Pit	Tonalite	60000	< 0.500	290	0.96	< 0.090	10000	0.16	0.99	95	80
E11-081-4	E11-081	645.65	649	2011	Knight Piésold	Outside Pit	Tonalite	60000	2.5	400	1.4	0.62	10000	0.22	4.7	130	730
E11-138-3	E11-138	241	243.1	2011	Knight Piésold	Outside Pit	Tonalite	51000	4.5	120	1.3	0.43	41000	0.23	26	350	490
E11-059-2	E11-059	492.4	493.9	2011	Knight Piésold	Outside Pit	Diabase Dykes	65000	1.5	550	0.93	< 0.090	40000	0.28	39	55	110
ARD-14	E11-096	467.44	469.94	2011	Knight Piésold	Ore Grade	Diorite Breccia	57000	2.2	91	1.1	0.73	13000	0.25	2.4	94	1100
ARD-17	E11-098	222.00	224.00	2011	Knight Piésold	Ore Grade	Diorite Breccia	59000	< 0.500	240	0.79	< 0.090	21000	0.18	9.6	88	17
ARD-20	E11-099	261.90	264.00	2011	Knight Piésold	Ore Grade	Diorite Breccia	58000	1.2	35	0.98	0.69	20000	0.16	3.9	76	390
ARD-22	E11-114	16.50	18.50	2011	Knight Piésold	Ore Grade	Diorite Breccia	77000	< 0.500	70	0.87	< 0.090	34000	0.10	11	120	30
ARD-36	E11-071	535.70	537.80	2011	Knight Piésold	Ore Grade	Diorite Breccia	60000	3.8	240	1.0	< 0.090	31000	0.12	16	140	57
ARD-38	E11-078	267.30	269.60	2011	Knight Piésold	Ore Grade	Diorite Breccia	51000	< 0.500	30	0.61	0.25	1800	0.12	3.0	130	220
ARD-44	E11-122	100.20	102.40	2011	Knight Piésold	Ore Grade	Diorite Breccia	67000	1.9	170	0.71	< 0.090	19000	0.11	4.5	91	28
CL10-03-1	CL10-03	121.4	122.6	2010	Knight Piésold	Ore Grade	Diorite Breccia	59000	48	360	1.2	1.7	18000	0.19	27	140	1340
E10-042-3	E10-042	478.5	480.7	2010	Knight Piésold	Ore Grade	Diorite Breccia	66000	2.6	220	1.2	0.29	14000	0.28	4.4	180	170
E11-051-1	E11-051	70.8	72.72	2011	Knight Piésold	Ore Grade	Diorite Breccia	62000	2.7	120	1.1	< 0.090	19000	0.17	5.7	110	200
E11-054-1	E11-054	33.87	36.14	2011	Knight Piésold	Ore Grade	Diorite Breccia	47000	2.0	92	1.2	0.33	3600	0.16	7.2	120	300
E11-054-2	E11-054	50.46	52.61	2011	Knight Piésold	Ore Grade	Diorite Breccia	63000	1.7	88	0.86	< 0.090	24000	0.19	6.0	130	20
E11-061-1	E11-061	90.95	92.73	2011	Knight Piésold	Ore Grade	Diorite Breccia	81000	1.1	80	0.76	< 0.090	58000	< 0.020	20	150	120
ARD-26	E10-028	37.20	39.40	2010	Knight Piésold	Ore Grade	Magma Mixing Breccia	58000	3.4	71	1.1	< 0.090	13000	0.14	3.1	110	21
E10-013-4	E10-013	125	127.1	2010	Knight Piésold	Ore Grade	Magma Mixing Breccia	53000	1.5	79	1.0	< 0.090	17000	0.20	6.8	140	30
ARD-39	E11-179	514.00	517.65	2011	Knight Piésold	Ore Grade	Fault	31000	0.6	15	0.71	0.38	5800	0.05	7.1	140	260
E11-054-5	E11-054	212.3	215.5	2011	Knight Piésold	Ore Grade	Fault	63000	3.6	49	0.88	< 0.090	26000	0.15	6.3	150	39
ARD-59	CL10-02A	102.00	104.00	2010	Knight Piésold	Ore Grade	Diorite	64000	0.7	420	1.3	0.17	12000	0.21	21	91	270
ARD-56	E12-205	207.50	209.60	2012	Knight Piésold	Ore Grade	Diorite	70000	0.8	270	1.2	< 0.090	13000	0.19	2.8	120	20
E11-054-3	E11-054	75.15	77.44	2011	Knight Piésold	Ore Grade	Diorite	63000	1.1	110	1.0	< 0.090	9500	0.33	1.7	110	26
ARD-32	E11-048	325.10	327.10	2011	Knight Piésold	Ore Grade	Tonalite	58000	2.0	120	1.2	< 0.090	8200	0.16	2.5	110	230
ARD-19	E11-099	240.20	242.40	2011	Knight Piésold	Ore Grade	Tonalite	56000	< 0.500	100	1.2	< 0.090	5400	0.16	0.94	110	41
ARD-5	E11-066	509.90	511.90	2011	Knight Piésold	Ore Grade	Tonalite	53000	1.5	20	0.84	< 0.090	7100	0.15	7.2	100	58
E11-091-2	E11-091	93	94.95	2011	Knight Piésold	Ore Grade	Diabase Dykes	65000	3.2	360	0.56	< 0.090	55000	0.29	45	59	120

Sample ID	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg	S	Ag
Unit	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
Average Crustal	56300	20850	20	23300	950	1.2	23550	84	1050	14	0.2	0.05	2.3	370	5650	0.85	2.7	120	33	70	0.085		
10x Average Crustal	563000	208500	200	233000	9500	12	235500	840	10500	140	2	0.5	23	3700	56500	8.5	27	1200	330	700	0.85		
ARD-4 DH12-PO-17	46000	1800	11	8600	270	0.6	830	23	560	4.8	<0.80	0.25	<0.50	9.6	2400	0.04	0.52	150	11	41	<0.05		
ARD-1120993	64000	2500	12	10000	650	0.8	650	18	1200	39	<0.80	0.39	<0.50	17	3000	0.08	0.60	150	9.9	300	<0.05		
ARD-1153135	41000	2600	9	7300	210	1.8	970	23	410	6.3	<0.80	0.30	0.7	13	2600	0.10	0.43	130	9.1	42	<0.05		
ARD-937384	64000	780	27	28000	550	0.5	330	23	1100	3.4	<0.80	0.48	0.9	16	4000	0.04	0.38	170	11	53	<0.05		
ARD-15	93000	14000	11	29000	1300	0.3		54		18	< 0.800	1.4	1.6	160	7400	0.26	1.0	240	27	120	< 0.050	1700	0.19
ARD-35	100000	18000	18	30000	1400	0.4		44		2.2	< 0.800	0.9	1.0	160	8200	0.28	0.45	250	25	120	< 0.050	2400	0.15
ARD-42	67000	16000	27	30000	730	3.1		72		0.99	< 0.800	< 0.700	< 0.500	78	3400	0.11	0.061	170	13	76	< 0.050	1900	< 0.010
ARD-50	84000	13000	17	20000	1300	0.8		25		24	< 0.800	< 0.700	1.2	260	8900	0.13	1.1	210	20	120	< 0.050	1900	0.31
E10-038-2	76000	9000	17	38000	1100	0.5		97		1.7	< 0.800	< 0.700	< 0.500	210	5100	0.12	0.46	190	13	71	< 0.100	3400	0.14
ARD-1261810	34000	7300	28	26000	630	0.2	240	35	1200	0.56	<0.80	0.12	<0.50	47	1900	0.16	0.37	74	5.4	51	<0.05		
ARD-1298061	33000	5500	18	24000	550	0.2	320	40	1600	1.6	<0.80	0.12	<0.50	57	1600	0.12	0.54	67	4.0	57	<0.05		
ARD-1402452	52000	36000	25	48000	780	0.1	230	140	1500	2.5	<0.80	0.07	0.8	340	2500	0.57	0.21	110	9.8	56	<0.05		
ARD-1284878	57000	290	40	39000	640	0.2	170	54	1200	1.2	<0.80	0.13	<0.50	12	780	<0.02	0.60	90	9.5	56	<0.05		
ARD-681824	13000	1100	5	4300	220	0.3	360	5.9	370	<0.05	<0.80	<0.04	<0.50	18	16	<0.02	0.091	2	1.5	9.5	<0.05		
ARD-950511	62000	1000	27	19000	510	0.2	120	33	430	6.8	<0.80	1.13	1.5	39	54	<0.02	0.14	50	18	38	<0.05		
E10-031-4	15000	9400	10	5600	130	0.9		5.6		2.5	< 0.800	< 0.700	1.8	42	1600	0.07	1.7	13	11	13	< 0.100	1500	0.60
E11-081-2	20000	13000	7	2900	86	0.9		4.3		3.1	< 0.800	< 0.700	8.3	66	1500	0.12	1.9	< 1.000	16	19	< 0.100	1900	0.83
E11-081-3	17000	9800	11	6100	150	2.2		7.0		7.2	< 0.800	0.8	6.1	48	980	0.11	1.8	20	10.0	36	< 0.100	2300	1.3
ARD-8	43000	14000	14	19000	490	0.7		29.0		4.3	<0.80	0.70	2.1	230	3800	<0.26	1.1	71	26	52	<0.05	1200	0.15
ARD-2	8100	9100	6	2100	75	0.9		3.6		1.8	<0.80	0.70	2.2	44	1100	<0.09	1.1	9	7	16	<0.05	480	0.18
ARD-46	26000	15000	13	7800	250	0.9		20.0		3.1	<0.80	0.70	1.4	130	2900	<0.15	1.4	35	15	24	<0.05	480	0.24
ARD-54	21000	6100	9	5400	260	1.0		9.6		3.1	<0.80	0.70	2.2	170	3000	<0.04	0.9	23	22	24	<0.05	500	0.18
ARD-52	24000	17000	11	7500	370	0.4		8.5		5.7	< 0.800	< 0.700	< 0.500	410	2300	0.14	1.0	52	6.8	41	< 0.050	580	0.10
ARD-9	24000	16000	10	8100	300	0.5		8.4		3.2	< 0.800	< 0.700	0.9	290	1900	0.12	1.0	48	7.0	40	< 0.050	650	0.04
ARD-30	53000	16000	28	25000	420	0.2		30		0.56	< 0.800	< 0.700	4.5	210	4200	0.16	0.094	120	18	43	< 0.050	790	< 0.010
ARD-23	5300	9800	10	3500	55	0.9		2.5		2.1	< 0.800	< 0.700	1.9	74	750	0.13	1.8	4	21	8.7	< 0.050	200	0.29
ARD-1	6600	8000	6	2500	71	0.8		2.4		2.2	< 0.800	0.9	2.5	110	770	0.08	1.3	3	20	11	< 0.050	630	0.51
ARD-10	20000	21000	7	3600	230	1.2		7.6		2.6	< 0.800	< 0.700	1.8	73	1800	0.13	3.3	22	24	18	< 0.050	1200	0.88
ARD-40	22000	12000	6	2600	140	1.0		2.9		2.0	< 0.800	0.9	8.1	66	1300	0.10	1.9	1	16	10	< 0.050	1000	0.38
ARD-43	6700	9100	5	2500	60	1.0		3.4		1.7	< 0.800	< 0.700	2.9	69	1100	0.09	1.7	4	20	9.9	< 0.050	600	0.32
ARD-7	7200	15000	2	1800	72	0.9		2.5		1.2	< 0.800	< 0.700	1.8	70	1000	0.06	1.5	4	10	5.6	< 0.050	310	0.18
E11-081-4	18000	14000	4	2100	100	1.3		3.8		2.3	< 0.800	< 0.700	9.1	86	1600	0.09	1.8	1	14	10	< 0.100	2700	0.83
E11-138-3	35000	3500	27	30000	510	1.0		159		2.8	< 0.800	0.7	1.4	140	1300	< 0.020	1.1	53	20	76	< 0.100	7600	0.36
E11-059-2	96000	18000	9	20000	1100	1.0		27		10	< 0.800	< 0.700	1.7	290	10000	0.31	1.2	200	19	110	< 0.100	2000	0.35
ARD-14	8900	5100	4	2600	99	0.5		3.8		6.3	< 0.800	0.7	5.6	59	2100	0.03	1.6	14	16	17	< 0.050	1900	0.58
ARD-17	47000	15000	29	21000	450	21		14		5.5	< 0.800	< 0.700	5.5	82	2700	0.31	2.0	55	45	40	< 0.050	990	0.25
ARD-20	23000	3700	11	11000	140	0.5		12		1.7	< 0.800	< 0.700	3.0	65	820	0.04	1.1	23	13	20	< 0.050	1300	0.29
ARD-22	48000	9500	29	25000	340	0.3		29		1.9	< 0.800	< 0.700	7.7	140	5700	0.17	1.3	73	34	39	< 0.050	830	0.27
ARD-36	39000	9100	26	19000	330	0.9		27		1.6	< 0.800	< 0.700	3.6	110	2800	0.07	1.5	68	21	37	< 0.050	3300	0.22
ARD-38	13000	3400	8	5600	68	3.8		5.9		1.0	< 0.800	< 0.700	0.8	23	910	0.02	0.88	14	9.9	14	< 0.050	510	0.27
ARD-44	14000	18000	12	7400	110	2.6		8.1		2.2	< 0.800	0.8	3.3	56	1100	0.22	1.8	27	22	11	< 0.050	1300	0.18
CL10-03-1	50000	30000	9	5500	160	1.2		8.1		12	< 0.800	6.9	9.5	44	1300	0.33	1.6	13	27	17	< 0.100	36000	0.82
E10-042-3	15000	12000	14	6300	110	1.4		9.0		2.3	< 0.800	< 0.700	4.5	120	1500	0.15	1.6	19	11	27	< 0.100	960	0.54
E11-051-1	25000	6000	11	11000	250	1.0		13		2.1	< 0.800	< 0.700	4.5	97	2400	0.05	1.8	27	32	28	< 0.100	910	0.34
E11-054-1	16000	14000	8	5300	140	0.9		6.7		0.86	< 0.800	< 0.700	3.0	34	1200	0.10	1.1	13	29	21	< 0.100	350	0.39
E11-054-2	27000	5500	13	13000	240	1.2		13		2.1	< 0.800	< 0.700	3.7	130	2700	0.03	1.1	29	25	25	< 0.100	670	0.23
E11-061-1	72000	8500	16	32000	660	1.3		54		1.3	< 0.800	< 0.700	8.3	190	5200	0.10	0.29	130	26	53	< 0.100	1300	0.06
ARD-26	13000	4500	6	5000	130	0.4		7.9		2.6	< 0.800	< 0.700	2.2	87	1500	0.04	1.9	15	28	12	< 0.050	330	0.18
E10-013-4	22000	5500	10	9200	170	1.9		10		3.0	< 0.800	< 0.700	1.8	62	1500	0.06	1.6	21	19	17	< 0.100	1700	0.36
ARD-39	9600	830	5	4100	190	1.1		7.2		0.75	< 0.800	< 0.700	1.4	20	1500	< 0.020	0.50	17	30	11	< 0.050	120	0.33
E11-054-5	29000	3500	13	13000	290	1.4		16		2.6	< 0.800	< 0.700	6.9	92	4300	< 0.020	1.7	32	39	30	< 0.100	780	0.35
ARD-59	16000	21000	5	2400	130	1.4		6.0		3.7	< 0.800	< 0.700	1.4	60	1100	0.10	3.1	7	19	13	< 0.050	970	0.37
ARD-56	17000	15000	10	2800	140	1.0		5.2		3.4	< 0.800	< 0.700	3.0	97	2000	0.11	1.7	6	28	16	< 0.050	750	0.30
E11-054-3	7300	8100	4	2100	65	1.0		3.7		1.4	< 0.800	< 0.700	1.7	83	880	0.07	1.2	2	13	8.9	< 0.100	380	0.44
ARD-32	9500	8300	5	2600	75	0.8		3.9		1.8	< 0.800	< 0.700	2.4	50	1300	0.06	1.6	6	23	15	< 0.050	880	0.25
ARD-19	4600	9600	4	1700	40	1.1		2.4		1.1	< 0.800	< 0.700	2.6	50	750	0.10	0.94	2	9.9	9.1	< 0.050	360	0.25
ARD-5	18000	2500	9	6500	140	2.0		7.0		1.2	< 0.800	1.1	3.4	37	1900	0.02	1.7	20	31	17	< 0.050	1100	0.27
E11-091-2	94000	13000	11	30000	1200	0.7		60		7.6	< 0.800	< 0.700	1.3	140	6900	0.26	0.88	220	27	84	< 0.100	2300	0.36

Table A-9: Mine Rock Whole Rock Results

Sample ID	Drill Hole ID	From	To	Consultant	Waste Classification	Lithology	SiO_2	Al_2O_3	Fe_2O_3	MgO	CaO	Na_2O	K_2O	TiO_2	P_2O_5	MnO	Cr_2O_3	V_2O_5	LOI	Sum
		(m)				Units	%	%	%	%	%	%	%	%	%	%	%	%	%	%
ARD-11	E11-087	84.30	86.50	Knight Piésold	Mine Rock	Diorite Breccia	74.3	12.4	2.87	0.81	1.79	4.11	1.34	0.32	0.04	0.03	0.02	<0.01	1.58	99.6
ARD-31	E12-179	354.75	356.85	Knight Piésold	Mine Rock	Diorite Breccia	74.6	11.2	3.26	1.56	1.68	4.00	0.97	0.32	0.16	0.03	0.02	<0.01	2.58	100.4
ARD-34	E11-075	95.40	97.50	Knight Piésold	Mine Rock	Diorite Breccia	70.6	13.8	2.42	0.83	3.22	5.67	0.78	0.39	0.08	0.03	<0.01	<0.01	2.45	100.2
ARD-49	E11-140	372.00	373.90	Knight Piésold	Mine Rock	Diorite Breccia	74.1	12.3	2.15	0.94	2.14	4.40	1.17	0.43	0.02	0.03	0.02	<0.01	2.07	99.8
E11-077-2	E11-077	313.00	315.24	Knight Piésold	Mine Rock	Diorite Breccia	65.2	13.5	4.09	1.92	4.62	5.49	0.44	0.56	0.08	0.05	0.03	0.01	4.37	100.3
E11-107-2	E11-107	153.77	155.54	Knight Piésold	Mine Rock	Diorite Breccia	69.7	13.5	3.80	2.03	2.22	4.77	0.97	0.59	0.02	0.03	0.01	0.01	2.52	100.2
E11-110-2	E11-110	131.36	133.24	Knight Piésold	Mine Rock	Diorite Breccia	51.0	15.5	12.7	5.24	8.64	2.91	0.73	1.51	0.20	0.15	0.02	0.05	2.35	101.0
ARD-25	E10-30	211.22	213.22	Knight Piésold	Mine Rock	Magma Mixing Breccia	74.8	12.8	2.03	0.87	2.04	4.84	1.05	0.48	0.02	0.02	0.02	<0.01	2.14	101.1
ARD-27	E11-049	383.00	384.90	Knight Piésold	Mine Rock	Magma Mixing Breccia	72.7	12.1	3.77	1.56	2.63	4.74	0.41	0.32	<0.01	0.03	0.02	<0.01	1.94	100.2
ARD-33	E11-048	164.30	166.60	Knight Piésold	Mine Rock	Magma Mixing Breccia	77.7	4.38	1.49	0.59	7.19	1.94	0.12	0.12	0.02	0.03	0.01	<0.01	5.99	99.6
E10-013-2	E10-013	50.00	52.20	Knight Piésold	Mine Rock	Magma Mixing Breccia	47.7	14.2	9.15	6.37	7.51	4.05	0.61	0.98	0.56	0.06	0.03	0.04	8.11	99.3
E10-031-3	E10-031	500.00	502.00	Knight Piésold	Mine Rock	Magma Mixing Breccia	58.4	12.6	6.13	4.08	5.41	4.84	0.29	0.61	0.36	0.06	0.04	0.02	5.87	98.7
E11-054-4	E11-054	128.40	130.80	Knight Piésold	Mine Rock	Magma Mixing Breccia	69.2	15.9	0.64	0.31	2.37	5.10	2.23	0.65	<0.01	<0.01	0.04	<0.01	2.80	99.2
E11-100-2	E11-100	107.57	109.89	Knight Piésold	Mine Rock	Magma Mixing Breccia	54.1	15.2	7.10	3.42	7.56	3.77	0.88	1.38	0.19	0.09	0.01	0.02	6.50	100.2
ARD-29	E11-061	262.30	264.00	Knight Piésold	Mine Rock	Fault	70.5	11.4	4.45	1.86	1.28	2.64	0.46	0.57	0.03	0.04	0.02	<0.01	7.21	100.5
E11-066-1	E11-066	312.00	316.20	Knight Piésold	Mine Rock	Fault	67.1	11.7	4.77	2.00	2.66	3.57	0.36	0.68	0.15	0.08	0.01	0.02	7.56	100.6
E11-111-1	E11-111	152.30	154.16	Knight Piésold	Mine Rock	Intrusive Feldspar Porphyry	49.9	19.0	9.45	4.09	7.81	4.39	0.67	0.93	0.01	0.09	0.01	0.03	4.37	100.7
ARD-12	E12-217	547.00	549.50	Knight Piésold	Mine Rock	Diorite	53.2	17.2	9.39	5.03	6.50	4.43	0.42	0.82	0.08	0.12	<0.01	0.03	3.34	100.6
ARD-18	E11-098	247.40	249.30	Knight Piésold	Mine Rock	Diorite	51.9	18.6	7.74	4.09	7.34	4.51	1.87	0.58	0.05	0.07	0.02	0.03	3.50	100.3
ARD-24	E11-062	15.90	17.80	Knight Piésold	Mine Rock	Diorite	73.2	12.8	1.79	0.74	2.04	5.95	0.56	0.25	0.05	0.01	0.01	<0.01	2.22	99.6
ARD-28	E11-049	38.30	40.20	Knight Piésold	Mine Rock	Diorite	76.0	11.5	2.49	0.60	2.01	0.19	3.86	0.17	0.01	<0.01	0.01	<0.01	3.31	100.2
ARD-3	E10-036	103.30	105.20	Knight Piésold	Mine Rock	Diorite	71.7	15.1	0.61	0.18	3.83	4.19	1.46	0.87	<0.01	0.02	0.02	<0.01	2.43	100.4
ARD-37	E11-071	281.10	283.10	Knight Piésold	Mine Rock	Diorite	51.7	14.9	10.9	5.86	7.91	3.35	1.04	0.90	0.36	0.13	0.03	0.03	3.17	100.2
ARD-47	E12-198	210.00	211.80	Knight Piésold	Mine Rock	Diorite	48.1	13.2	12.1	9.53	9.51	1.87	0.98	0.82	0.13	0.19	0.07	0.04	3.65	100.2
ARD-51	E11-141	183.70	184.50	Knight Piésold	Mine Rock	Diorite	54.7	12.5	9.68	2.46	8.11	3.94	0.29	1.56	0.66	0.17	0.01	<0.01	5.68	99.8
ARD-57	CL10-01	178.20	180.00	Knight Piésold	Mine Rock	Diorite	46.3	14.2	12.4	8.29	8.78	2.04	0.09	0.84	0.09	0.18	0.04	0.04	6.63	100.0
ARD-58	CL10-01	227.50	229.50	Knight Piésold	Mine Rock	Diorite	57.3	12.9	6.82	6.63	7.22	4.22	0.51	0.59	0.21	0.10	0.07	0.03	3.68	100.3
E10-013-1	E10-013	5.78	7.80	Knight Piésold	Mine Rock	Diorite	46.7	16.3	10.7	8.55	8.13	2.44	0.83	1.15	0.17	0.13	0.05	0.03	4.36	99.5
E10-023-1	E10-023	30.00	31.90	Knight Piésold	Mine Rock	Diorite	75.6	11.9	1.24	0.39	2.58	4.40	0.96	0.26	0.02	<0.01	0.02	<0.01	2.62	100.0
E10-031-2	E10-031	158.00	160.10	Knight Piésold	Mine Rock	Diorite	74.1	11.9	1.84	0.76	2.51	3.36	1.62	0.28	0.04	0.01	0.03	<0.01	2.71	99.2
E10-038-1	E10-038	74.00	75.90	Knight Piésold	Mine Rock	Diorite	49.5	18.9	8.90	4.95	9.45	3.29	0.97	0.79	0.07	0.12	0.03	0.02	2.93	99.9
E10-038-3	E10-038	158.00	159.85	Knight Piésold	Mine Rock	Diorite	47.2	14.8	12.9	8.00	10.1	1.54	0.30	0.91	0.07	0.18	0.03	0.05	3.51	99.6
E10-042-1	E10-042	14.00	16.00	Knight Piésold	Mine Rock	Diorite	72.6	13.3	2.80	0.68	2.32	3.89	1.58	0.23	0.05	<0.01	0.02	<0.01	2.78	100.3
E10-042-2	E10-042	89.50	91.70	Knight Piésold	Mine Rock	Diorite	67.9	13.2	5.15	1.45	2.89	3.76	1.65	0.40	0.08	0.04	0.03	0.01	2.04	98.5
E11-053-1	E11-053	152.59	154.40	Knight Piésold	Mine Rock	Diorite	60.6	14.2	5.37	2.60	5.93	3.51	1.61	1.17	0.02	0.05	0.02	0.01	5.05	100.1
E11-095-1	E11-095	284.60	286.40	Knight Piésold	Mine Rock	Diorite	55.0	13.7	10.5	3.65	7.54	3.72	0.58	1.58	0.51	0.18	0.01	0.02	2.42	99.4
E11-097-1	E11-097	35.10	37.20	Knight Piésold	Mine Rock	Diorite	61.8	15.7	6.51	3.09	5.77	3.48	1.09	0.59	0.09	0.09	0.02	0.01	1.64	99.8
E11-100-3	E11-100	224.56	226.65	Knight Piésold	Mine Rock	Diorite	61.0	15.1	6.27	3.21	5.59	3.77	1.22	0.60	0.09	0.07	0.01	0.02	3.18	100.2
E11-138-2	E11-138	211.30	213.33	Knight Piésold	Mine Rock	Diorite	51.2	13.4	7.89	5.08	7.52	5.13	0.04	0.76	0.57	0.09	<0.01	0.03	7.48	99.2
ARD-13	E11-096	77.15	79.35	Knight Piésold	Mine Rock	Tonalite	64.2	14.6	5.08	2.38	4.71	4.90	0.36	0.54	0.08	0.07	0.02	0.01	3.04	100.0
ARD-16	E11-098	24.40	26.60	Knight Piésold	Mine Rock	Tonalite	77.1	12.4	0.65	0.24	1.92	4.82	0.99	0.26	<0.01	0.02	0.01	<0.01	1.49	99.9
ARD-21	E11-114	8.08	10.38	Knight Piésold	Mine Rock	Tonalite	73.7	12.7	2.97	0.69	2.87	5.05	0.41	0.31	0.08	0.02	0.02	<0.01	1.75	100.6
ARD-4	E10-045	229.60	231.80	Knight Piésold	Mine Rock	Tonalite	80.3	10.3	0.32	0.10	0.83	5.41	0.38	0.28	<0.01	<0.01	0.02	<0.01	0.96	98.9
ARD-41	E11-120	74.50	76.40	Knight Piésold	Mine Rock	Tonalite	68.8	13.4	3.52	1.83	2.60	5.90	0.41	0.35	0.06	0.03	0.02	<0.01	2.90	99.9
ARD-45	E11-140	274.50	276.60	Knight Piésold	Mine Rock	Tonalite	75.7	12.4	1.71	0.54	1.15	5.21	0.90	0.31	0.04	0.01	0.02	0.01	1.50	99.4
ARD-48	E11-129	57.10	59.60	Knight Piésold	Mine Rock	Tonalite	76.8	11.8	1.44	0.55	1.76	4.25	1.12	0.32	0.03	0.01	0.02	<0.01	2.11	100.2
ARD-6	E11-066	70.40	72.40	Knight Piésold	Mine Rock	Tonalite	68.1	13.0	3.45	2.28	3.95	4.81	0.98	0.34	0.12	0.04	0.03	0.01	2.49	99.7
ARD-60	E12-213	138.90	141.00	Knight Piésold	Mine Rock	Tonalite	74.8	12.1	3.72	0.30	1.28	4.24	2.77	0.29	0.04	0.02	0.01	<0.01	1.56	101.1
E10-013-3	E10-013	60.00	62.28	Knight Piésold	Mine Rock	Tonalite	71.5	12.8	2.20	0.61	2.53	4.52	1.54	0.29	0.06	<0.01	0.03	<0.01	2.84	98.9
E10-031-1	E10-031	9.10	11.00	Knight Piésold	Mine Rock	Tonalite	73.1	12.5	3.02	0.48	2.34	4.99	0.64	0.33	0.07	<0.01	0.02	<0.01	1.80	99.4
E10-046-1	E10-046	15.80	18.07	Knight Piésold	Mine Rock	Tonalite	72.7	12.1	3.65	0.29	1.44	4.22	2.54	0.30	0.05	0.02	0.03	<0.01	1.66	98.9
E10-046-2	E10-046	95.00	97.20	Knight Piésold	Mine Rock	Tonalite	61.4	18.3	1.01	0.21	4.43	10.0	0.39	0.38	0.05	<0.01	<0.01	<0.01	3.44	99.6
E11-052-3	E11-052	221.50	223.13	Knight Piésold	Mine Rock	Tonalite	71.6	11.6	2.65	1.30	3.56	3.63	1.35	0.42	0.08	0.03	0.01	0.01	3.30	99.6
E11-059-1	E11-059	25.57	27.61	Knight Piésold	Mine Rock	Tonalite	74.3	12.1	2.46	0.47	1.15	4.15	2.64	0.23	0.02	<0.01	0.02	<0.01	1.28	98.8
E11-061-2	E11-061	338.00	340.20	Knight Piésold	Mine Rock	Tonalite	58.8	14.2	7.57	4.44	5.15	3.00	1.80	0.71	0.04	0.06	0.03	0.02	3.38	99.2
E11-072-1	E11-072	155.50	157.65	Knight Piésold	Mine Rock	Tonalite	71.9	14.6	1.11	0.32	2.17	5.37	1.30	0.43	0.02	<0.01	0.01	<0.01	1.84	99.1
E11-077-1	E11-077	142.70	144.85	Knight Piésold	Mine Rock	Tonalite	70.9	13.0	2.11	0.75	2.81	5.36	0.57	0.31	0.06	0.03	0.02	<0.01	2.22	98.2
E11-081-1	E11-081	376.00	378.25	Knight Piésold	Mine Rock	Tonalite	65.7	14.8	2.75	0.90	4.11	3.62	2.19	0.36	0.10	0.02	<0.01	0.01	4.77	99.4
E11-091-1	E11-091	13.90	15.95	Knight Piésold	Mine Rock	Tonalite	73.1	12.5	2.69	1.04	2.69	4.92	0.65	0.33	0.10	0.02	0.02	<0.01	1.26	99.4
E11-091-3	E11-091	311.00	313.13	Knight Piésold	Mine Rock	Tonalite	75.9	12.4	1.04	0.42	1.79	5.20	0.80	0.38	0.01	<0.01	0.04	<0.01	2.25	100.2
E11-095-2	E11-095	18.90	20.90	Knight Piésold	Mine Rock	Tonalite	72.1	13.3	2.39	0.79	2.17	4.45	1.45	0.22	0.04	0.01	0.02	<0.01	2.53	99.5
E11-097-2	E11-097	153.70	155.70	Knight Piésold	Mine Rock	Tonalite	74.0	12.5	2.10	0.45	1.64	3.91	2.36	0.20	0.02	0.02	0.02	<0.01	2.20	99.5
E11-100-1	E11-100	39.45	41.62	Knight Piésold	Mine Rock	Tonalite	77.3	11.3	1.52	0.20	1.82	3.08	1.77	0.36	<0.01	<0.01	0.02	<0.01	1.86	99.3
E11-110-1	E11-110	8.20	10.12	Knight Piésold	Mine Rock	Tonalite	75.0	12.5	1.57	0.38	2.02	4.06	1.81	0.26	0.03	0.01	0.01	<0.01	2.40	100.1
E11-112-3	E11-112	161.40	163.71	Knight Piésold	Mine Rock	Tonalite	75.2	12.9	1.74	0.41	1.93	4.51	1.50	0.16	0.03	<0.01	0.02	<0.01	1.47	99.8
E11-138-1	E11-138	15.50	17.88	Knight Piésold	Mine Rock	Tonalite	77.6	11.0	0.79	0.10	2.90	2.63	1.64	0.23	<0.01	<0.01	0.03	<0.01	3.17	100.2
ARD-53	E12-200	185.00	187.00	Knight Piésold	Mine Rock	Mafic Dykes	44.9	13.7	12.1	7.34	8.79	2.12	0.11	0.79	0.06	0.15	0.04	0.05	10.9	101.1
ARD-55	E12-294	178.00	180.00	Knight Piésold	Mine Rock	Mafic Dykes	45.2	16.2	16.5	11.9	0.85	1.80	0.21	0.95	0.08	0.14	0.04	0.05	6.91	100.8
E11-052-2	E11-052	125.15	127.25	Knight Piésold	Mine Rock	Mafic Dykes	50.2	13.7	8.95	3.59	8.68	3.62	0.55	2.50	0.29	0.13	<0.01	<0.01	7.76	100.0
E11-062-3	E11-062	254.80	257.01	Knight Piésold	Mine Rock	Mafic Dykes	50.8	13.6	8.95	5.20	6.93	3.84	2.68	0.89	0.60	0.10	0.02	0.03	5.76	99.5
ARD-15	E11-096	150.45	152.25	Knight Piésold	Mine Rock	Diabase Dykes	51.2	13.0	14.5	5.14	7.46	3.77	1.46	1.25	0.15	0.25	<0.01	0.06	1.80	100.1
ARD-35	E11-075	220.91	223.31	Knight Piésold	Mine Rock	Diabase Dykes	48.3	13.5	15.3	5.53	7.02	2.62	1.90	1.41	0.14	0.25	0.01	0.07	4.20	100.3
ARD-42	E11-120	108.90	110.40	Knight Piésold	Mine Rock	Diabase Dykes	44.9	12.2	10.9	5.81	10.7	0.48	1.72	0.68	0.06	0.14	0.03	0.04	12.7	100.3
ARD-50	E11-144	138.81	139.61	Knight Piésold	Mine Rock	Diabase Dykes	53.7	12.7	14.2	3.89	5.92	3.87	1.40	1.65	0.34	0.23	<0.01	0.05	2.09	100.1
E10-038-2	E10-038	101.00	103.00	Knight Piésold	Mine Rock	Diabase Dykes	47.4	13.4	11.7	8.23	10.0	2.50	0.90	0.83	0.19	0.16	0.05	0.04	3.76	99.2
E10-031-4	E10-031	585.00	586.30	Knight Piésold	Outside Pit	Diorite Breccia	74.8	11.8	2.27	1.05	1.59	4.47	0.98	0.37	0.01	0.01	0.02	<0.01	2.07	99.4
E11-081-2	E11-081	511.66	513.50	Knight Piésold	Outside Pit	Diorite Breccia	74.4	12.2	2.93	0.57	1.10	4.48	1.30	0.28	0.04	<0.01	0.03	<0.01	1.64	99.0
E11-081-3	E11-081	589.00	592.40	Knight Piésold	Outside Pit	Diorite Breccia	74.1	11.2	2.56	1.10	1.52	4.22	1.01	0.26	0.06	0.02	0.01	<0.01	2.19	98.2
ARD-2	E10-036	376.50	378.75	Knight Piésold	Outside Pit	Magma Mixing Breccia	73.1	13.9	1.19	0.57	1.58	5.88	0.99	0.24	<0.01	<0.01	0.01	<0.01	1.75	99.3
ARD-46	E11-145	483.30	485.10	Knight Piésold	Outside Pit	Magma Mixing Breccia	70.5	13.8	3.81	1.33	3.25	4.09	1.48	0.46	0.06	0.03	0.02	<0.01	1.08	99.9
ARD-54	E12-205	668.00	669.60	Knight Piésold	Outside Pit	Magma Mixing Breccia	70.2	14.3	3.29	1.02	4.01	4.82	0.65	0.51	0.11	0.04	0.02	0.01	1.80	100.8
ARD-8	E11-082	455.00	456.90	Knight Piésold	Outside Pit	Magma Mixing Breccia	63.2	14.5	6.49	3.40	5.02	3.96	1.45	0.64	0.16	0.08	0.03	<0.01	1.32	100.2
E11-062-4	E11-062	395.50	397.39	Knight Piésold	Outside Pit	Magma Mixing Breccia	73.7	13.1	2.61	0.61	2.44	4.35	1.31	0.33	0.06	0.02	0.08	<0.01	1.62	100.2
ARD-52	E11-145	298.00	299.70	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	67.0	15.9	3.73	1.36	4.08	4.29	1.85	0.40	0.14	0.04	0.01	<0.01	1.62	100.3
ARD-9	E11-082	376.00	378.00	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	66.5	15.7	3.72	1.52	3.16	4.77	1.75	0.39	0.14	0.05	0.01	0.01	2.46	100.2
ARD-23	E10-038	575.00	577.20	Knight Piésold	Outside Pit	Diorite	77.1	12.2	0.85	0.71	1.11	4.34	1.08	0.31	<0.01	<0.01	0.02	<0.01	1.78	99.5
ARD-30	E12-206	260.70	262.60	Knight Piésold	Outside Pit	Diorite	48.6	20.0	7.97	4.56	6.17	3.96	1.60	0.75	0.10	0.06	<0.01	0.02	5.38	99.2
ARD-1	E10-036	316.85	318.95	Knight Piésold	Outside Pit	Tonalite	75.5	13.1	0.97	0.48	2.21	5.22	0.85	0.19	0.02	0.01	0.01	<0.01	1.77	100.4
ARD-10	E11-087	242.90	244.90	Knight Piésold	Outside Pit	Tonalite	71.8	12.9	2.96	0.69	2.47	3.53	2.36	0.29	0.04	0.03	0.01	<0.01	2.44	99.5
ARD-40	E11-120	668.90	671.00	Knight Piésold	Outside Pit	Tonalite	74.9	12.1	3.28	0.52	1.58	4.32	1.25	0.26	0.04	0.01	0.01	<0.01	2.07	100.3
ARD-43	E11-122	384.00	385.90	Knight Piésold	Outside Pit	Tonalite	76.3	12.5	1.01	0.49	1.42	5.06	0.96	0.36	<0.01	<0.01	0.02	<0.01	1.67	99.8
ARD-7	E11-082	343.00	344.80	Knight Piésold	Outside Pit	Tonalite	76.8	12.2	1.14	0.32	1.53	4.38	1.65	0.25	0.01	<0.01	0.02	<0.01	1.82	100.1
E11-081-4	E11-081	645.65	649.00	Knight Piésold	Outside Pit	Tonalite	73.9	12.1	2.56	0.42	1.53	4.57	1.47	0.29	0.04	<0.01	0.02	<0.01	1.86	98.7
E11-138-3	E11-138	241.00	243.10	Knight Piésold	Outside Pit	Tonalite	60.9	10.3	5.26	5.39	6.21	2.75	0.36	0.47	0.18	0.07	0.06	0.02	6.71	98.6
E11-053-3	E11-053	478.45	480.50	Knight Piésold	Outside Pit	Diabase Dykes	52.0	12.6	10.3	7.78	8.33	2.73	2.68	0.81	0.42	0.17	0.05	0.03	2.27	100.1
E11-059-2	E11-059	492.40	493.90	Knight Piésold	Outside Pit	Diabase Dykes	53.7	13.1	14.7	3.50	6.05	3.58	1.88	1.72	0.34	0.18	<0.01	0.05	0.84	99.6
ARD-14	E11-096	467.44	469.94	Knight Piésold	Ore Grade	Diorite Breccia	76.0	11.6	1.33	0.49	1.98	5.40	0.55	0.53	0.01	0.02	0.01	<0.01	1.49	99.4
ARD-17	E11-098	222.00	224.00	Knight Piésold	Ore Grade	Diorite Breccia	65.3	11.9	7.09	3.81	3.16	3.51	1.58	0.45	0.27	0.06	0.01	<0.01	2.53	99.6
ARD-20	E11-099	261.90	264.00	Knight Piésold	Ore Grade	Diorite Breccia	71.0	11.8	3.44	1.99	2.85	4.82	0.39	0.21	<0.01	0.03	0.01	<0.01	3.06	99.6
ARD-22	E11-114	16.50	18.50	Knight Piésold	Ore Grade	Diorite Breccia	58.0	15.1	7.08	4.36	5.10	4.02	0.96	1.02	0.04	0.06	0.02	0.02	4.59	100.4
ARD-36	E11-071	535.70	537.80	Knight Piésold	Ore Grade	Diorite Breccia	62.7	12.1	5.95	3.50	4.64	3.40	0.95	0.61	0.18	0.05	0.03	0.01	5.15	99.3
ARD-38	E11-078	267.30	269.60	Knight Piésold	Ore Grade	Diorite Breccia	81.2	9.93	1.86	0.96	0.25	4.64	0.36	0.26	<0.01	<0.01	0.01	<0.01	0.96	100.4
ARD-44	E11-122	100.20	102.40	Knight Piésold	Ore Grade	Diorite Breccia	69.6	13.8	2.16	1.39	2.85	3.31	2.03	0.89	<0.01	0.02	0.01	<0.01	3.81	99.8
E11-112-2	E11-112	137.83	139.07	Knight Piésold	Ore Grade	Diorite Breccia	60.3	14.1	7.39	4.25	4.95	3.07	1.76	0.70	0.04	0.06	0.03	0.02	3.50	100.1
E11-061-1	E11-061	90.95	92.73	Knight Piésold	Ore Grade	Diorite Breccia	49.4	16.5	11.2	5.94	8.59	3.05	0.80	0.85	0.05	0.11	0.04	0.03	3.25	99.8
E11-054-1	E11-054	33.87	36.14	Knight Piésold	Ore Grade	Diorite Breccia	68.0	12.3	4.29	2.35	3.87	4.41	0.34	0.75	0.02	0.04	0.03	<0.01	3.52	100.0
E11-054-2	E11-054	50.46	52.61	Knight Piésold	Ore Grade	Diorite Breccia	68.0	12.8	4.11	2.32	3.71	4.35	0.56	0.51	0.02	0.03	0.02	<0.01	3.54	100.0
E11-053-2	E11-053	224.02	226.35	Knight Piésold	Ore Grade	Diorite Breccia	56.5	12.7	7.80	5.48	7.50	4.04	1.13	0.84	0.19	0.10	0.03	0.02	3.85	100.1
E11-051-1	E11-051	70.80	72.72	Knight Piésold	Ore Grade	Diorite Breccia	70.2	12.3	3.68	1.92	2.81	4.53	0.62	0.43	0.02	0.04	0.01	<0.01	2.58	99.2
CL10-03-1	CL10-03	121.40	122.60	Knight Piésold	Ore Grade	Diorite Breccia	65.2	11.9	7.24	0.99	2.59	0.75	3.30	0.41	0.03	0.01	0.02	<0.01	3.70	96.1
E10-042-3	E10-042	478.50	480.70	Knight Piésold	Ore Grade	Diorite Breccia	71.9	13.2	2.20	1.11	2.00	4.79	1.27	0.33	0.04	<0.01	0.02	<0.01	2.50	99.4
ARD-26	E10-028	37.20	39.40	Knight Piésold	Ore Grade	Magma Mixing Breccia	75.6	12.2	2.04	0.95	1.97	5.23	0.48	0.28	0.01	0.01	0.02	<0.01	1.67	100.4
E10-013-4	E10-013	125.00	127.10	Knight Piésold	Ore Grade	Magma Mixing Breccia	71.9	10.7	3.36	1.67	2.53	4.01	0.56	0.30	<0.01	0.02	0.01	<0.01	3.02	98.2
ARD-39	E11-179	514.00	517.65	Knight Piésold	Ore Grade	Fault	85.2	6.14	1.44	0.74	0.84	2.00	0.08	0.28	0.05	0.02	0.02	<0.01	3.63	100.4
E11-054-5	E11-054	212.30	215.50	Knight Piésold	Ore Grade	Fault	79.1	9.54	2.35	0.95	0.54	3.54	1.44	0.28	0.09	<0.01	0.04	<0.01	2.86	100.7
ARD-56	E12-205	207.50	209.60	Knight Piésold	Ore Grade	Diorite	75.5	12.4	2.28	0.48	1.64	4.85	1.43	0.31	0.05	0.03	0.02	<0.01	1.72	100.7
ARD-59	CL10-02A	102.00	104.00	Knight Piésold	Ore Grade	Diorite	74.4	12.5	2.31	0.45	1.74	3.93	2.17	0.24	0.03	<0.01	0.01	<0.01	2.65	100.5
E11-112-1	E11-112	56.41	58.12	Knight Piésold	Ore Grade	Diorite	65.8	16.8	1.69	0.73	3.67	5.70	1.61	0.51	<0.01	0.03	0.02	<0.01	3.55	100.1
E11-062-2	E11-062	142.40	144.24	Knight Piésold	Ore Grade	Diorite	51.5	16.6	8.91	3.59	7.23	3.76	1.50	1.16	0.07	0.07	0.01	0.04	6.31	100.8
E11-054-3	E11-054	75.15	77.44	Knight Piésold	Ore Grade	Diorite	76.1	12.5	1.04	0.39	1.39	5.26	0.82	0.27	0.02	<0.01	0.02	<0.01	1.41	99.2
E11-112-4	E11-112	250.60	252.50	Knight Piésold	Ore Grade	Diorite	71.1	12.6	2.33	1.40	4.22	3.83	1.02	0.48	0.02	0.02	0.01	<0.01	3.70	100.7
ARD-19	E11-099	240.20	242.40	Knight Piésold	Ore Grade	Tonalite	79.9	11.1	0.69	0.27	0.77	4.52	1.01	0.28	<0.01	<0.01	0.01	<0.01	1.06	99.6
ARD-32	E11-048	325.10	327.10	Knight Piésold	Ore Grade	Tonalite	77.5	12.2	1.48	0.53	1.26	5.10	0.90	0.30	0.04	0.01	0.02	<0.01	1.72	101.0
ARD-5	E11-066	509.90	511.90	Knight Piésold	Ore Grade	Tonalite	75.2	11.7	2.92	1.26	1.15	5.56	0.29	0.34	0.24	0.01	0.02	<0.01	1.43	100.1
E11-062-1	E11-062	91.70	93.74	Knight Piésold	Ore Grade	Tonalite	75.7	12.1	2.09	0.39	1.79	4.19	1.59	0.26	0.03	<0.01	<0.01	<0.01	2.07	100.3
E11-107-1	E11-107	40.10	42.10	Knight Piésold	Ore Grade	Tonalite	67.6	15.5	2.19	1.20	3.60	4.30	2.00	0.82	0.01	<0.01	0.02	<0.01	2.98	100.2
E11-052-1	E11-052	92.75	95.05	Knight Piésold	Ore Grade	Tonalite	72.9	12.8	2.18	0.90	2.44	5.75	0.47	0.31	0.05	<0.01	<0.01	<0.01	2.61	100.4
E11-091-2	E11-091	93.00	94.95	Knight Piésold	Ore Grade	Diabase Dykes	51.6	13.3	14.6	5.52	8.21	2.67	1.33	1.15	0.14	0.22	<0.01	0.06	1.23	100.1

Table A-10: Mine Rock Shake Flask Extraction Results

Sample ID	Drill Hole ID	From	To	Consultant	Waste Classification	Lithology	pH	Alkalinity	Conductivity	Cl	SO_4	Hg	Ag	Al	As	Ba	B	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Na	Ni	Pb	Si	Sb	Se	Sn	Sr	Ti	Tl	U	V	Zn
							Units	mg/L as $CaCO_3$	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
						O.Reg 560/94	6.5-9								0.5									0.3									0.2										0.5
		(m)				PWQO	6.5-8.5					0.0002	0.0001	0.015-0.075	0.1		0.2	0.011-1.1			0.0002	0.0009	0.001	0.005	0.3					0.04		0.025	0.005-0.025		0.02	0.1					0.005	0.006	0.03
ARD-11	E11-087	84.30	86.50	Knight Piésold	Mine Rock	Diorite Breccia	8.93	42	90	2.1	<2.0	0.00003	<0.00001	1.25	0.0026	0.00737	0.0833	0.00002	<0.00001	4.05	0.000003	0.000194	0.0007	0.0008	0.348	2.450	0.001	0.447	0.00443	0.00028	15.30	0.0003	0.00007	5.99	0.0008	<0.001	0.00004	0.0069	0.0241	<0.00002	0.000433	0.00412	0.001
ARD-31	E12-179	354.75	356.85	Knight Piésold	Mine Rock	Diorite Breccia	9.27	38	89	2.1	<2.0	0.00003	<0.00001	0.67	0.0122	0.00047	0.0424	<0.00002	<0.00001	5.28	0.000004	0.000160	<0.001	<0.001	0.012	2.150	<0.001	0.670	0.00019	0.00054	13.50	0.0003	0.00027	3.12	0.0009	<0.001	<0.00001	0.0132	0.0003	<0.00002	0.000041	0.00361	<0.001
ARD-34	E11-075	95.40	97.50	Knight Piésold	Mine Rock	Diorite Breccia	8.37	41	89	2.8	<2.0	0.00001	<0.00001	0.70	0.0038	0.00045	0.0488	<0.00002	<0.00001	3.92	<0.000003	0.000149	0.0006	0.0006	0.006	1.500	<0.001	0.380	0.00018	0.00069	13.80	0.0001	<0.00002	3.48	0.0010	<0.001	0.00007	0.0108	0.0003	<0.00002	0.000117	0.00966	<0.001
ARD-49	E11-140	372.00	373.90	Knight Piésold	Mine Rock	Diorite Breccia	8.24	41	92	2.2	<2.0	<0.00001	<0.00001	0.74	0.0026	0.00052	0.0459	<0.00002	<0.00001	4.06	<0.000003	0.000204	<0.001	0.0006	0.016	1.780	<0.001	0.424	0.00024	0.00020	13.70	0.0001	0.00003	4.04	0.0005	<0.001	0.00010	0.0082	0.0013	<0.00002	0.000077	0.00404	<0.001
E11-077-2	E11-077	313.00	315.24	Knight Piésold	Mine Rock	Diorite Breccia	7.82	30	79	6.3	<2.0	<0.0001	<0.00001	0.71	0.0009	0.00033	0.0120	<0.00002	<0.00001	5.22	<0.000003	0.000017	<0.001	<0.001	<0.003	0.924	<0.001	0.572	0.00022	0.00021	10.40	<0.0001	<0.00002	3.69	0.0003	<0.001	<0.00001	0.0188	0.0001	<0.00002	0.000058	0.00977	<0.001
E11-107-2	E11-107	153.77	155.54	Knight Piésold	Mine Rock	Diorite Breccia	8.37	31	83	5.2	0.6	<0.0001	<0.00001	0.58	0.0009	0.00042	0.0098	<0.00002	<0.00001	5.60	<0.000003	0.000012	<0.001	<0.001	0.012	2.460	<0.001	0.616	0.00028	0.00028	8.68	<0.0001	<0.00002	3.75	0.0006	<0.001	<0.00001	0.0219	0.0009	<0.00002	0.000193	0.00711	<0.001
E11-110-2	E11-110	131.36	133.24	Knight Piésold	Mine Rock	Diorite Breccia	9.24	35	92	2.8	2.0	<0.0001	<0.00001	0.42	0.0048	0.00087	0.0612	<0.00002	<0.00001	5.03	<0.000003	0.000125	<0.001	0.0008	0.312	1.290	<0.001	0.712	0.00308	0.00036	12.30	0.0002	<0.00002	5.23	0.0008	<0.001	<0.00001	0.0238	0.0120	<0.00002	0.000048	0.02720	<0.001
ARD-25	E10-30	211.22	213.22	Knight Piésold	Mine Rock	Magma Mixing Breccia	8.87	44	98	2.3	<2.0	0.00004	<0.00001	1.02	0.0051	0.00162	0.0552	<0.00002	<0.00001	4.89	<0.000003	0.000208	0.0010	0.0016	0.171	1.750	<0.001	0.453	0.00191	0.00061	15.80	0.0002	0.00011	5.33	0.0010	<0.001	0.00009	0.0063	0.0177	<0.00002	0.000441	0.00441	0.001
ARD-27	E11-049	383.00	384.90	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.47	41	94	3.4	<2.0	0.00003	<0.00001	0.48	0.0143	0.00054	0.0520	<0.00002	<0.00001	4.38	<0.000003	0.000106	<0.001	<0.001	0.026	1.120	<0.001	0.441	0.00037	0.00024	15.10	0.0001	0.00003	4.89	0.0007	<0.001	0.00001	0.0122	0.0009	<0.00002	0.000118	0.00447	<0.001
ARD-33	E11-048	164.30	166.60	Knight Piésold	Mine Rock	Magma Mixing Breccia	7.83	34	91	5.8	<2.0	0.00001	0.00003	0.13	0.0012	0.00049	0.0345	<0.00002	<0.00001	6.56	<0.000003	0.000161	<0.001	0.0010	<0.003	1.670	0.001	0.534	0.00011	0.01040	9.93	0.0002	<0.00002	5.88	0.0008	<0.001	0.00004	0.0153	<0.0001	<0.00002	0.000119	0.00405	<0.001
E10-013-2	E10-013	50.00	52.20	Knight Piésold	Mine Rock	Magma Mixing Breccia	7.74	31	79	<2.0	<2.0	<0.0001	<0.00001	0.55	0.0004	0.00102	0.0085	<0.00002	<0.00001	6.20	<0.000003	0.000015	<0.001	<0.001	<0.003	3.010	<0.001	0.885	0.00016	0.00016	7.15	<0.0001	<0.00002	2.26	0.0007	<0.001	<0.00001	0.0339	0.0001	<0.00002	0.000019	0.00656	<0.001
E10-031-3	E10-031	500.00	502.00	Knight Piésold	Mine Rock	Magma Mixing Breccia	7.67	29	78	<2.0	3.2	<0.0001	<0.00001	0.54	0.0016	0.00242	0.0124	<0.00002	<0.00001	6.60	<0.000003	0.000014	<0.001	<0.001	<0.003	0.856	<0.001	0.991	0.00018	0.00148	8.43	<0.0001	<0.00002	2.47	0.0006	<0.001	<0.00001	0.0430	0.0002	<0.00002	0.000015	0.00609	<0.001
E11-054-4	E11-054	128.40	130.80	Knight Piésold	Mine Rock	Magma Mixing Breccia	8.67	43	99	4.2	<2.0	<0.0001	<0.00001	0.62	0.0028	0.00231	0.1200	<0.00002	<0.00001	3.62	<0.000003	0.000047	0.0008	0.0019	0.024	5.920	<0.001	0.177	0.00136	0.00073	14.90	0.0001	0.00003	5.33	0.0005	<0.001	0.00005	0.0041	0.0028	<0.00002	0.001500	0.00309	<0.001
E11-100-2	E11-100	107.57	109.89	Knight Piésold	Mine Rock	Magma Mixing Breccia	8.23	34	78	2.3	0.9	<0.0001	<0.00001	1.04	0.0008	0.00080	0.0094	<0.00002	<0.00001	5.53	<0.000003	0.000019	<0.001	0.0006	<0.003	4.380	<0.001	0.579	0.00031	0.00198	7.52	<0.0001	<0.00002	2.22	0.0006	<0.001	<0.00001	0.0148	0.0004	<0.00002	0.000069	0.00598	<0.001
ARD-29	E11-061	262.30	264.00	Knight Piésold	Mine Rock	Fault	8.86	62	129	2.0	<2.0	0.00003	<0.00001	0.18	0.0257	0.00133	0.3000	<0.00002	<0.00001	8.24	0.000003	0.000181	0.0016	0.0093	0.168	0.728	0.004	0.942	0.00421	0.00386	20.50	0.0004	0.00008	13.40	0.0007	<0.001	0.00003	0.0139	0.0023	<0.00002	0.000087	0.00416	0.002
E11-066-1	E11-066	312.00	316.20	Knight Piésold	Mine Rock	Fault	8.68	65	158	6.3	<2.0	<0.0001	0.00002	0.15	0.0047	0.00240	0.2610	<0.00002	<0.00001	12.4	<0.000003	0.000062	<0.001	0.0028	0.089	0.829	0.002	1.230	0.00361	0.00059	21.20	0.0003	<0.00002	14.90	0.0004	<0.001	0.00003	0.0267	0.0037	<0.00002	0.000140	0.00343	0.002
E11-111-1	E11-111	152.30	154.16	Knight Piésold	Mine Rock	Intrusive Feldspar Porphyry	8.40	34	79	1.2	0.3	<0.0001	<0.00001	1.12	0.0003	0.00120	0.0105	<0.00002	<0.00001	5.50	<0.000003	0.000027	<0.001	<0.001	0.010	6.630	<0.001	0.543	0.00031	0.00014	6.35	<0.0001	<0.00002	1.94	0.0005	<0.001	<0.00001	0.0222	0.0006	<0.00002	0.000036	0.00558	<0.001
ARD-12	E12-217	547.00	549.50	Knight Piésold	Mine Rock	Diorite	8.26	35	73	<2.0	<2.0	0.00002	<0.00001	0.69	0.0005	0.00030	0.0714	<0.00002	<0.00001	3.87	<0.000003	0.000075	<0.001	0.0005	0.008	0.617	<0.001	0.454	0.00016	0.00011	12.40	<0.0001	<0.00002	3.44	0.0005	<0.001	0.00006	0.0102	0.0003	<0.00002	0.000016	0.01510	<0.001
ARD-18	E11-098	247.40	249.30	Knight Piésold	Mine Rock	Diorite	8.77	42	95	<2.0	<2.0	0.00002	0.00051	0.82	0.0007	0.00065	0.0575	<0.00002	<0.00001	3.94	<0.000003	0.000094	<0.001	<0.001	0.018	5.470	<0.001	0.359	0.00023	0.00018	14.20	0.0001	0.00002	3.64	0.0006	<0.001	0.00001	0.0141	0.0008	<0.00002	0.000006	0.01460	<0.001
ARD-24	E11-062	15.90	17.80	Knight Piésold	Mine Rock	Diorite	9.28	37	80	2.5	<2.0	0.00003	<0.00001	0.49	0.0014	0.00031	0.0418	<0.00002	<0.00001	4.40	<0.000003	0.000090	<0.001	0.0006	<0.003	0.502	<0.001	0.416	0.00014	0.00020	13.00	<0.0001	0.00005	5.46	0.0006	<0.001	<0.00001	0.0063	0.0001	<0.00002	0.000149	0.00794	<0.001
ARD-28	E11-049	38.30	40.20	Knight Piésold	Mine Rock	Diorite	8.29	47	128	<2.0	6.5	0.00002	0.00003	1.05	0.0058	0.00258	0.0780	<0.00002	<0.00001	7.79	0.000004	0.000112	0.0005	<0.001	0.047	15.100	0.001	0.457	0.00124	0.00142	10.20	0.0002	0.00014	2.65	0.0011	<0.001	0.00004	0.0069	0.0028	<0.00002	0.001550	0.00211	<0.001
ARD-3	E10-036	103.30	105.20	Knight Piésold	Mine Rock	Diorite	8.54	43	89	2.4	<2.0	0.00002	0.00005	1.20	0.0024	0.00052	0.0827	<0.00002	<0.00001	4.49	<0.000003	0.000084	0.0005	0.0007	<0.003	3.110	0.002	0.168	0.00022	0.00064	13.80	0.0001	<0.00002	3.86	0.0010	<0.001	0.00007	0.0076	0.0012	<0.00002	0.001560	0.00495	<0.001
ARD-37	E11-071	281.10	283.10	Knight Piésold	Mine Rock	Diorite	7.91	36	86	<2.0	<2.0	0.00001	<0.00001	0.42	0.0018	0.00119	0.0482	<0.00002	<0.00001	3.49	<0.000003	0.000155	<0.001	<0.001	0.026	4.590	<0.001	0.328	0.00047	0.00023	12.60	0.0002	<0.00002	4.32	0.0006	<0.001	0.00006	0.0134	0.0014	<0.00002	0.000008	0.01840	<0.001
ARD-47	E12-198	210.00	211.80	Knight Piésold	Mine Rock	Diorite	8.34	37	81	<2.0	<2.0	<0.00001	<0.00001	0.15	0.0018	0.00050	0.0632	<0.00002	<0.00001	4.98	<0.000003	0.000207	0.0006	<0.001	0.018	1.770	<0.001	0.616	0.00039	0.00007	9.94	0.0002	0.00003	6.96	0.0006	<0.001	0.00010	0.0220	0.0009	<0.00002	0.000008	0.02180	<0.001
ARD-51	E11-141	183.70	184.50	Knight Piésold	Mine Rock	Diorite	8.04	40	89	3.3	<2.0	<0.00001	<0.00001	0.91	0.0007	0.00052	0.0462	<0.00002	<0.00001	4.96	<0.000003	0.000192	<0.001	<0.001	<0.003	1.940	<0.001	0.557	0.00013	0.00008	11.60	0.0001	<0.00002	1.91	0.0006	<0.001	0.00004	0.0104	0.0004	<0.00002	0.000010	0.00244	<0.001
ARD-57	CL10-01	178.20	180.00	Knight Piésold	Mine Rock	Diorite	8.03	34	79	2.5	<2.0	<0.00001	0.00001	0.36	0.0012	0.00052	0.0426	<0.00002	<0.00001	4.77	<0.000003	0.000221	<0.001	0.0005	0.008	1.420	<0.001	0.603	0.00021	0.00011	10.10	0.0001	<0.00002	2.95	0.0007	<0.001	0.00036	0.0263	0.0004	<0.00002	0.000003	0.01220	0.002
ARD-58	CL10-01	227.50	229.50	Knight Piésold	Mine Rock	Diorite	8.12	42	100	3.0	4.6	<0.00001	<0.00001	0.21	0.0015	0.00244	0.0555	<0.00002	<0.00001	4.49	<0.000003	0.000254	0.0011	0.0006	0.025	1.960	<0.001	0.532	0.00052	0.00004	14.50	0.0002	0.00002	7.36	0.0007	<0.001	0.00006	0.0255	0.0017	<0.00002	0.000009	0.02360	<0.001
E10-013-1	E10-013	5.78	7.80	Knight Piésold	Mine Rock	Diorite	8.17	33	83	<2.0	<2.0	<0.0001	<0.00001	0.19	0.0022	0.00087	0.0858	<0.00002	<0.00001	3.64	<0.000003	0.000024	<0.001	<0.001	0.022	6.990	<0.001	0.488	0.00031	0.00024	9.62	0.0001	0.00002	3.23	0.0012	<0.001	0.00010	0.0075	0.0014	<0.00002	0.000118	0.00606	<0.001
E10-023-1	E10-023	30.00	31.90	Knight Piésold	Mine Rock	Diorite	7.82	26	88	6.9	<2.0	<0.0001	<0.00001	0.76	0.0056	0.00041	0.0087	<0.00002	<0.00001	6.03	<0.000003	0.000042	<0.001	0.0008	<0.003	4.180	<0.001	0.328	0.00053	0.00684	10.20	<0.0001	<0.00002	4.55	0.0007	<0.001	<0.00001	0.0091	<0.0001	<0.00002	0.001540	0.00229	<0.001
E10-031-2	E10-031	158.00	160.10	Knight Piésold	Mine Rock	Diorite	7.89	37	106	2.9	3.0	<0.0001	<0.00001	0.59	0.0255	0.00092	0.0969	<0.00002	<0.00001	5.92	<0.000003	0.000059	<0.001	0.0011	0.047	8.700	<0.001	0.406	0.00056	0.00469	12.40	0.0006	0.00046	3.65	0.0022	0.002	0.00006	0.0122	0.0005	<0.00002	0.000905	0.00266	<0.001
E10-038-1	E10-038	74.00	75.90	Knight Piésold	Mine Rock	Diorite	8.08	32	86	3.3	<2.0	<0.0001	<0.00001	0.31	0.0011	0.00139	0.0859	<0.00002	<0.00001	5.01	<0.000003	0.000050	<0.001	<0.001	0.065	4.580	<0.001	0.618	0.00097	0.00046	11.00	0.0001	0.00004	3.38	0.0009	<0.001	0.00009	0.0141	0.0018	<0.00002	0.000025	0.00872	<0.001
E10-038-3	E10-038	158.00	159.85	Knight Piésold	Mine Rock	Diorite	8.43	31	76	<2.0	<2.0	<0.0001	<0.00001	0.17	0.0007	0.00093	0.0975	<0.00002	<0.00001	4.98	<0.000003	0.000041	<0.001	<0.001	0.055	0.907	<0.001	0.814	0.00073	0.00013	10.10	0.0002	<0.00002	3.92	0.0007	<0.001	0.00007	0.0185	0.0009	<0.00002	0.000008	0.01220	<0.001
E10-042-1	E10-042	14.00	16.00	Knight Piésold	Mine Rock	Diorite	7.90	39	96	2.0	<2.0	<0.0001	<0.00001	1.08	0.0273	0.00106	0.0063	<0.00002	<0.00001	6.16	<0.000003	0.000407	<0.001	0.0013	0.005	7.670	<0.001	0.336	0.00050	0.00259	8.20	0.0104	<0.00002	2.89	0.0009	<0.001	0.00007	0.0105	0.0001	<0.00002	0.000919	0.00241	<0.001
E10-042-2	E10-042	89.50	91.70	Knight Piésold	Mine Rock	Diorite	7.82	32	127	2.6	<6.7	<0.0001	<0.00001	0.37	0.0035	0.00227	0.0871	<0.00002	<0.00001	7.34	<0.000003	0.000023	<0.001	<0.001	0.027	8.010	<0.001	0.957	0.00030	0.00109	14.20	<0.0004	<0.00002	2.61	0.0011	<0.001	<0.00001	0.0191	0.0013	<0.00002	0.000162	0.00276	<0.001
E11-053-1	E11-053	152.59	154.40	Knight Piésold	Mine Rock	Diorite	8.68	36	92	2.1	1.2	<0.0001	<0.00001	1.08	0.0044	0.00055	0.0134	<0.00002	<0.00001	5.03	<0.000003	0.000033	<0.001	<0.001	0.003	9.560	<0.001	0.471	0.00029	0.00061	7.04	<0.0001	0.00006	2.84	0.0007	<0.001	<0.00001	0.0176	0.0004	<0.00002	0.000257	0.00802	<0.001
E11-095-1	E11-095	284.60	286.40	Knight Piésold	Mine Rock	Diorite	7.84	31	82	5.6	<2.0	<0.0001	<0.00001	0.73	0.0019	0.00066	0.0256	<0.00002	<0.00001	5.03	<0.000003	0.000031	<0.001	<0.001	0.018	1.400	<0.001	0.613	0.00045	0.00055	11.50	0.0001	<0.00002	3.69	0.0004	<0.001	0.00007	0.0230	0.0013	<0.00002	0.000065	0.01210	<0.001
E11-097-1	E11-097	35.10	37.20	Knight Piésold	Mine Rock	Diorite	8.99	37	86	3.6	<2.0	<0.0001	<0.00001	0.73	0.0061	0.00341	0.1170	<0.00002	<0.00001	2.62	<0.000003	0.000216	0.0008	<0.001	0.361	6.900	<0.001	0.392	0.00412	0.00026	13.10	0.0006	0.00010	5.52	0.0011	<0.001	0.00002	0.0050	0.0159	<0.00002	0.000112	0.01080	<0.001
E11-100-3	E11-100	224.56	226.65	Knight Piésold	Mine Rock	Diorite	8.58	36	89	2.5	0.5	<0.0001	<0.00001	0.99	0.0072	0.00257	0.0190	<0.00002	<0.00001	3.83	<0.000003	0.000023	<0.001	<0.001	0.019	11.400	<0.001	0.294	0.00037	0.00039	7.38	<0.0001	<0.00002	3.85	0.0012	<0.001	<0.00001	0.0103	0.0013	<0.00002	0.000039	0.01030	<0.001
E11-138-2	E11-138	211.30	213.33	Knight Piésold	Mine Rock	Diorite	7.63	34	83	2.7	3.4	<0.0001	<0.00001	0.46	0.0004	0.0104	0.0081	<0.00002	<0.00001	7.04	<0.000003	0.000041	<0.001	<0.001	<0.003	0.566	<0.001	1.290	0.00041	0.00034	8.76	0.0001	<0.00002	2.05	0.0003	<0.001	<0.00001	0.0983	<0.0001	<0.00002	0.000040	0.00482	<0.001
ARD-13	E11-096	77.15	79.35	Knight Piésold	Mine Rock	Tonalite	9.21	39	89	<2.0	<2.0	0.00003	<0.00001	0.66	0.0007	0.00058	0.0458	<0.00002	<0.00001	4.63	<0.000003	0.000108	<0.001	<0.001	0.006	1.450	<0.001	0.442	0.00014	0.00066	13.30	0.0002	0.00002	4.07	0.0008	<0.001	0.00014	0.0136	0.0007	<0.00002	0.000262	0.00910	<0.001
ARD-16	E11-098	24.40	26.60	Knight Piésold	Mine Rock	Tonalite	9.03	39	87	3.3	<2.0	0.00002	<0.00001	1.13	0.0051	0.00372	0.0529	0.00002	<0.00001	4.40	0.000003	0.000116	<0.001	0.0015	0.076	1.480	0.001	0.282	0.00172	0.00070	15.70	0.0002	0.00052	7.19	0.0008	<0.001	0.00002	0.0063	0.0139	<0.00002	0.000411	0.00202	0.001
ARD-21	E11-114	8.08	10.38	Knight Piésold	Mine Rock	Tonalite	8.92	40	87	3.1	<2.0	0.00002	<0.00001	0.74	0.0021	0.00067	0.0533	<0.00002	<0.00001	4.69	0.000003	0.000091	<0.001	0.0011	0.058	0.664	0.001	0.329	0.00053	0.00033	14.60	<0.0001	0.00009	4.70	0.0006	<0.001	0.00019	0.0051	0.0036	<0.00002	0.000196	0.00538	0.003
ARD-4	E10-045	229.60	231.80	Knight Piésold	Mine Rock	Tonalite	8.12	38	83	2.6	<2.0	0.00002	<0.00001	0.64	0.0014	0.00090	0.0667	0.00003	<0.00001	4.22	<0.000003	0.000107	<0.001	0.0022	0.019	0.757	<0.001	0.316	0.00106	0.00095	14.70	0.0001	0.00003	8.46	0.0008	<0.001	0.00006	0.0054	0.0086	<0.00002	0.000615	0.00079	<0.001
ARD-41	E11-120	74.50	76.40	Knight Piésold	Mine Rock	Tonalite	7.99	41	100	5.5	<2.0	<0.00001	<0.00001	0.36	0.0012	0.00050	0.0450	<0.00002	<0.00001	5.06	0.000022	0.000183	<0.001	0.0006	0.006	0.442	<0.001	0.635	0.00027	0.00042	15.00	0.0002	0.00002	4.31	0.0006	<0.001	0.00024	0.0164	0.0005	<0.00002	0.000153	0.00606	<0.001
ARD-45	E11-140	274.50	276.60	Knight Piésold	Mine Rock	Tonalite	8.12	39	87	3.2	<2.0	<0.00001	<0.00001	0.72	0.0032	0.00103	0.0493	<0.00002	<0.00001	3.71	0.000005	0.000207	<0.001	0.0008	0.059	1.100	<0.001	0.311	0.00048	0.00051	14.10	0.0002	0.00004	4.56	0.0009	<0.001	0.00017	0.0059	0.0036	<0.00002	0.000428	0.00203	<0.001
ARD-48	E11-129	57.10	59.60	Knight Piésold	Mine Rock	Tonalite	8.07	40	84	<2.0	<2.0	<0.00001	<0.00001	0.90	0.0032	0.00048	0.0467	<0.00002	<0.00001	4.19	<0.000003	0.000182	<0.001	0.0006	0.012	1.960	0.001	0.325	0.00021	0.00036	13.20	0.0001	0.00002	3.65	0.0007	<0.001	0.00012	0.0072	0.0012	<0.00002	0.000429	0.00322	<0.001
ARD-6	E11-066	70.40	72.40	Knight Piésold	Mine Rock	Tonalite	9.32	39	87	2.5	<2.0	0.00003	<0.00001	0.39	0.0023	0.00085	0.0517	<0.00002	<0.00001	4.24	<0.000003	0.000107	0.0006	0.0007	0.012	2.770	<0.001	0.528	0.00030	0.00052	13.10	0.0001	0.00003	4.45	0.0009	<0.001	0.00006	0.0141	0.0007	<0.00002	0.000051	0.01050	0.001
ARD-60	E12-213	138.90	141.00	Knight Piésold	Mine Rock	Tonalite	8.08	43	108	6.7	<2.0	<0.00001	<0.00001	1.35	0.0028	0.0128	0.0594	<0.00002	<0.00001	3.80	<0.000003	0.000328	<0.001	0.0008	0.431	5.820	0.002	0.214	0.00340	0.00030	15.20	0.0002	0.00016	6.88	0.0008	<0.001	0.00020	0.0124	0.0220	<0.00002	0.000898	0.00117	<0.001
E10-013-3	E10-013	60.00	62.28	Knight Piésold	Mine Rock	Tonalite	8.32	25	98	3.9	<2.0	<0.0001	<0.00001	0.51	0.0019	0.00080	0.0800	<0.00002	<0.00001	4.29	<0.000003	0.000031	<0.001	0.0006	0.049	5.850	<0.001	0.360	0.00052	0.00088	14.00	0.0004	<0.00002	4.28	0.0012	<0.001	0.00012	0.0110	0.0007	<0.00002	0.000719	0.00351	<0.001
E10-031-1	E10-031	9.10	11.00	Knight Piésold	Mine Rock	Tonalite	7.74	36	122	14.0	<2.0	<0.0001	<0.00001	0.35	0.0035	0.00089	0.0847	<0.00002	<0.00001	5.97	<0.000003	0.000025	<0.001	<0.001	0.029	1.770	<0.001	0.430	0.00027	0.00061	17.40	0.0001	<0.00002	4.29	0.0007	<0.001	0.00002	0.0180	0.0008	<0.00002	0.000407	0.00189	<0.001
E10-046-1	E10-046	15.80	18.07	Knight Piésold	Mine Rock	Tonalite	9.25	62	163	10.0	2.5	<0.0001	<0.00001	0.39	0.0030	0.00463	0.2020	<0.00002	<0.00001	3.55	<0.000003	0.000091	0.0009	0.0031	0.226	5.630	0.002	0.211	0.00246	0.00067	29.30	<0.0001	0.00011	6.10	0.0006	<0.001	0.00010	0.0080	0.0067	<0.00002	0.000395	0.00197	<0.001
E10-046-2	E10-046	95.00	97.20	Knight Piésold	Mine Rock	Tonalite	7.65	28	113	12.0	3.4	<0.0001	<0.00001	0.61	0.0015	0.00120	0.0219	<0.00002	<0.00001	7.89	0.000003	0.000051	<0.001	0.0013	<0.003	0.914	<0.001	0.472	0.00061	0.00127	14.20	0.0002	<0.00002	5.26	0.0005	<0.001	0.00003	0.0320	0.0002	<0.00002	0.006190	0.00521	<0.001
E11-052-3	E11-052	221.50	223.13	Knight Piésold	Mine Rock	Tonalite	8.22	34	95	5.0	2.4	<0.0001	<0.00001	0.80	0.0031	0.00109	0.0102	<0.00002	<0.00001	6.46	<0.000003	0.000040	<0.001	0.0019	0.004	7.770	<0.001	0.670	0.00093	0.00068	7.65	<0.0001	0.00003	3.50	0.0015	<0.001	<0.00001	0.0313	0.0004	<0.00002	0.000096	0.00769	<0.001
E11-059-1	E11-059	25.57	27.61	Knight Piésold	Mine Rock	Tonalite	8.58	41	113	8.3	<2.0	<0.0001	<0.00001	0.57	0.0189	0.00375	0.1140	0.00002	<0.00001	4.79	0.000006	0.000091	<0.001	0.0011	0.352	4.690	<0.001	0.528	0.00456	0.00056	16.40	0.0002	0.00016	6.91	0.0005	<0.001	0.00005	0.0094	0.0098	<0.00002	0.001660	0.00249	0.001
E11-061-2	E11-061	338.00	340.20	Knight Piésold	Mine Rock	Tonalite	7.97	36	109	3.6	3.2	<0.0001	<0.00001	0.72	0.0010	0.00299	0.0126	<0.00002	<0.00001	5.08	<0.000003	0.000024	<0.001	<0.001	0.012	13.900	<0.001	0.638	0.00023	0.00097	6.81	0.0001	<0.00002	2.43	0.0007	<0.001	0.00003	0.0324	0.0007	<0.00002	0.000043	0.00492	<0.001
E11-072-1	E11-072	155.50	157.65	Knight Piésold	Mine Rock	Tonalite	8.85	43	104	3.7	<2.0	<0.0001	<0.00001	0.73	0.0082	0.00063	0.1070	<0.00002	<0.00001	4.31	<0.000003	0.000025	<0.001	0.0010	0.019	3.700	0.001	0.235	0.00033	0.00199	16.90	0.0001	0.00011	4.67	0.0009	<0.001	0.00009	0.0082	0.0008	<0.00002	0.001880	0.00210	<0.001
E11-077-1	E11-077	142.70	144.85	Knight Piésold	Mine Rock	Tonalite	8.40	34	117	12	<2.0	<0.0001	<0.00001	0.27	0.0042	0.00054	0.1050	<0.00002	<0.00001	5.70	<0.000003	0.000055	<0.001	0.0064	0.022	1.230	<0.001	0.566	0.00036	0.00135	17.20	0.0002	0.00015	5.48	0.0007	<0.001	0.00039	0.0165	0.0009	<0.00002	0.000430	0.00624	0.004
E11-081-1	E11-081	376.00	378.25	Knight Piésold	Mine Rock	Tonalite	7.94	37	87	2.8	<2.0	<0.0001	<0.00001	1.18	0.0016	0.00060	0.0081	<0.00002	<0.00001	5.35	<0.000003	0.000018	<0.001	<0.001	0.003	8.130	<0.001	0.558	0.00065	0.00136	8.34	0.0001	<0.00002	2.86	0.0011	<0.001	<0.00001	0.0182	0.0005	<0.00002	0.000057	0.00309	<0.001
E11-091-1	E11-091	13.90	15.95	Knight Piésold	Mine Rock	Tonalite	7.93	33	110	10	2.1	<0.0001	<0.00001	0.30	0.0085	0.00117	0.0928	<0.00002	<0.00001	5.90	<0.000003	0.000058	<0.001	<0.001	0.105	1.390	<0.001	0.714	0.00112	0.00327	15.70	0.0002	0.00013	6.28	0.0006	<0.001	0.00005	0.0162	0.0028	<0.00002	0.001100	0.01020	<0.001
E11-091-3	E11-091	311.00	313.13	Knight Piésold	Mine Rock	Tonalite	9.34	57	145	7.3	3.4	<0.0001	<0.00001	0.49	0.0058	0.00058	0.1060	<0.00002	<0.00001	4.04	<0.000003	0.000037	0.0012	0.0007	0.037	2.570	<0.001	0.292	0.00033	0.00134	26.70	<0.0001	0.00008	5.85	0.0009	<0.001	0.00012	0.0087	0.0006	<0.00002	0.001460	0.00234	<0.001
E11-095-2	E11-095	18.90	20.90	Knight Piésold	Mine Rock	Tonalite	7.92	34	86	3.3	<2.0	<0.0001	<0.00001	1.13	0.0366	0.00064	0.0051	<0.00002	<0.00001	5.56	<0.000003	0.000032	<0.001	<0.001	0.006	6.820	<0.001	0.365	0.00043	0.00140	8.92	0.0002	0.00017	3.19	0.0009	<0.001	0.00002	0.0095	0.0004	<0.00002	0.001410	0.00307	<0.001
E11-097-2	E11-097	153.70	155.70	Knight Piésold	Mine Rock	Tonalite	8.57	35	104	3.9	<2.0	<0.0001	<0.00001	0.54	0.0046	0.00369	0.150	<0.00002	<0.00001	3.96	<0.000003	0.000071	<0.001	0.0008	0.181	9.060	0.002	0.250	0.00274	0.00593	15.90	0.0002	0.00017	6.46	0.0013	<0.001	0.00006	0.0082	0.0056	<0.00002	0.004560	0.00291	<0.001
E11-100-1	E11-100	39.45	41.62	Knight Piésold	Mine Rock	Tonalite	8.03	34	100	5.9	2.1	<0.0001	0.00001	0.86	0.0025	0.00055	0.0091	<0.00002	<0.00001	7.14	<0.000003	0.000035	<0.001	0.0005	0.004	8.440	0.001	0.262	0.00091	0.00697	7.82	<0.0001	0.00015	3.90	0.0006	<0.001	<0.00001	0.0129	0.0005	<0.00002	0.000772	0.00147	<0.001
E11-110-1	E11-110	8.20	10.12	Knight Piésold	Mine Rock	Tonalite	8.85	40	103	4.4	1.2	<0.0001	<0.00001	0.63	0.0067	0.00194	0.0379	<0.00002	<0.00001	4.85	<0.000003	0.000028	<0.001	0.0009	0.019	6.610	<0.001	0.241	0.00026	0.00399	13.30	<0.0001	0.00006	4.99	0.0011	<0.001	<0.00001	0.0165	0.0016	<0.00002	0.001100	0.00258	<0.001
E11-112-3	E11-112	161.40	163.71	Knight Piésold	Mine Rock	Tonalite	9.13	44	103	3.3	1.2	<0.0001	<0.00001	0.82	0.0074	0.00808	0.0542	<0.00002	<0.00001	3.83	<0.000003	0.000072	<0.001	0.0015	0.166	4.360	0.002	0.258	0.00190	0.00398	16.00	0.0002	0.00086	7.96	0.0011	<0.001	<0.00001	0.0133	0.0086	<0.00002	0.002080	0.00305	<0.001
E11-138-1	E11-138	15.50	17.88	Knight Piésold	Mine Rock	Tonalite	8.04	36	94	4.0	2.7	<0.0001	<0.00001	1.11	0.0026	0.00055	0.0112	<0.00002	0.00002	6.78	<0.000003	0.000805	<0.001	0.0072	<0.003	6.630	0.001	0.368	0.00134	0.00280	9.18	0.0002	0.00005	3.58	0.0005	0.003	<0.00001	0.0138	0.0001	<0.00002	0.001680	0.00314	<0.001
ARD-53	E12-200	185.00	187.00	Knight Piésold	Mine Rock	Mafic Dykes	7.96	39	82	<2.0	<2.0	<0.00001	0.00024	0.63	0.0004	0.00040	0.0527	<0.00002	<0.00001	6.33	<0.000003	0.000204	<0.001	0.0005	<0.003	0.304	<0.001	0.882	0.00011	0.00007	9.79	0.0001	0.00002	1.40	0.0006	<0.001	0.00010	0.0275	0.0003	<0.00002	0.000001	0.00144	<0.001
ARD-55	E12-294	178.00	180.00	Knight Piésold	Mine Rock	Mafic Dykes	7.96	40	87	2.6	<2.0	<0.00001	0.00005	0.54	0.0005	0.00072	0.0662	<0.00002	<0.00001	4.75	<0.000003	0.000201	0.0005	<0.001	0.004	1.660	<0.001	0.681	0.00016	0.00016	12.50	0.0001	0.00003	1.48	0.0004	<0.001	0.00010	0.0365	0.0004	<0.00002	<0.000001	0.00132	0.003
E11-052-2	E11-052	125.15	127.25	Knight Piésold	Mine Rock	Mafic Dykes	7.98	35	94	5.2	2.3	<0.0001	<0.00001	0.85	0.0010	0.00056	0.0085	<0.00002	<0.00001	8.55	<0.000003	0.000026	<0.001	<0.001	<0.003	2.330	<0.001	1.210	0.00092	0.00151	7.40	<0.0001	0.00004	1.31	0.0009	<0.001	<0.00001	0.0240	0.0002	<0.00002	0.000020	0.00081	<0.001
E11-062-3	E11-062	254.80	257.01	Knight Piésold	Mine Rock	Mafic Dykes	9.00	45	116	2.4	1.8	<0.0001	<0.00001	0.86	0.0035	0.0104	0.0127	<0.00002	<0.00001	2.88	<0.000003	0.000034	<0.001	0.0008	0.009	21.200	<0.001	0.275	0.00022	0.00249	7.78	<0.0001	<0.00002	3.45	0.0011	<0.001	<0.00001	0.0264	0.0010	<0.00002	0.000054	0.02510	<0.001
ARD-15	E11-096	150.45	152.25	Knight Piésold	Mine Rock	Diabase Dykes	9.30	45	98	2.2	<2.0	0.00003	<0.00001	1.10	0.0014	0.00400	0.0626	<0.00002	<0.00001	2.00	0.000006	0.000791	0.0006	0.0013	1.24	0.772	<0.001	0.511	0.02890	0.00091	20.90	0.0009	0.00061	7.92	0.0008	<0.001	0.00011	0.0080	0.0717	<0.00002	0.000036	0.05100	0.003
ARD-35	E11-075	220.91	223.31	Knight Piésold	Mine Rock	Diabase Dykes	8.53	47	98	<2.0	<2.0	<0.00001	<0.00001	0.55	0.0014	0.00045	0.0833	<0.00002	<0.00001	2.60	<0.000003	0.000175	0.0006	<0.001	0.072	2.140	<0.001	0.360	0.00116	0.00048	16.60	0.0002	0.00002	3.90	0.0010	<0.001	0.00004	0.0164	0.0028	<0.00002	0.000011	0.03280	<0.001
ARD-42	E11-120	108.90	110.40	Knight Piésold	Mine Rock	Diabase Dykes	8.20	56	125	4.1	<2.0	<0.00001	<0.00001	0.49	0.0008	0.00130	0.0427	<0.00002	<0.00001	6.85	0.000042	0.000175	0.0007	0.0005	<0.003	9.920	<0.001	1.770	0.00035	0.00036	9.47	0.0003	0.00004	1.37	0.0005	<0.001	0.00007	0.0218	0.0002	<0.00002	0.000012	0.00179	0.003
ARD-50	E11-144	138.81	139.61	Knight Piésold	Mine Rock	Diabase Dykes	8.67	55	118	3.9	<2.0	<0.00001	<0.00001	0.56	0.0021	0.00371	0.0814	<0.00002	<0.00001	2.13	<0.000003	0.000467	0.0006	0.0007	0.714	0.804	0.001	0.440	0.01350	0.00044	22.10	0.0003	0.00039	8.07	0.0011	<0.001	0.00007	0.0077	0.0398	<0.00002	0.000030	0.04750	0.002
E10-038-2	E10-038	101.00	103.00	Knight Piésold	Mine Rock	Diabase Dykes	7.82	26	78	2.2	5.8	<0.0001	<0.00001	0.30	0.0006	0.00100	0.0191	<0.00002	<0.00001	6.66	<0.000003	0.000021	<0.001	<0.001	0.011	3.190	<0.001	1.25	0.00028	0.00017	5.19	0.0001	<0.00002	5.02	0.0006	<0.001	0.00004	0.0311	0.0005	<0.00002	0.000002	0.01600	<0.001
E10-031-4	E10-031	585.00	586.30	Knight Piésold	Outside Pit	Diorite Breccia	8.08	39	107	4.1	2.6	<0.0001	<0.00001	0.37	0.0090	0.00055	0.0731	<0.00002	<0.00001	5.77	<0.000003	0.000033	<0.001	0.0006	0.024	3.410	<0.001	0.642	0.00021	0.00067	14.70	0.0002	0.00002	4.32	0.0029	<0.001	0.00005	0.0107	0.0008	<0.00002	0.000209	0.00333	<0.001
E11-081-2	E11-081	511.66	513.50	Knight Piésold	Outside Pit	Diorite Breccia	8.10	54	141	4.8	4.4	<0.0001	<0.00001	0.39	0.0012	0.00199	0.0961	<0.00002	<0.00001	8.15	<0.000003	0.000040	<0.001	0.0006	0.065	6.520	0.002	1.580	0.00036	0.00047	17.00	0.0002	0.00006	3.15	0.0013	<0.001	0.00003	0.0172	<0.0001	<0.00002	0.000958	0.00075	<0.001
E11-081-3	E11-081	589.00	592.40	Knight Piésold	Outside Pit	Diorite Breccia	8.42	50	122	3.4	2.6	<0.0001	<0.00001	0.30	0.0032	0.00078	0.0870	<0.00002	<0.00001	6.74	<0.000003	0.000028	<0.001	0.0009	0.023	4.590	0.001	1.620	0.00017	0.00036	15.30	0.0002	0.00003	3.80	0.0027	0.002	<0.00001	0.0128	0.0006	<0.00002	0.000430	0.00356	<0.001
ARD-2	E10-036	376.50	378.75	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.49	39	86	2.3	<2.0	0.00003	0.00013	0.55	0.0032	0.00021	0.0629	<0.00002	<0.00001	4.75	<0.000003	0.000098	<0.001	0.0009	0.006	1.280	<0.001	0.301	0.00026	0.00180	13.70	0.0003	<0.00002	5.44	0.0008	<0.001	0.00003	0.0161	0.0005	<0.00002	0.000352	0.00223	<0.001
ARD-46	E11-145	483.30	485.10	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.62	47	99	<2.0	<2.0	<0.00001	<0.00001	1.63	0.0072	0.00796	0.0631	<0.00002	<0.00001	2.71	<0.000003	0.000402	0.0011	0.0006	0.553	5.380	0.002	0.376	0.00533	0.00039	14.70	0.0007	0.00022	7.45	0.0010	<0.001	0.00010	0.0102	0.0391	<0.00002	0.000251	0.00669	0.002
ARD-54	E12-205	668.00	669.60	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.12	39	91	5.0	<2.0	<0.00001	0.00001	1.29	0.0076	0.00218	0.0812	<0.00002	<0.00001	4.26	<0.000003	0.000278	0.0005	0.0006	0.288	1.870	0.001	0.435	0.00272	0.00009	14.50	0.0003	0.00008	6.52	0.0006	<0.001	0.00008	0.0128	0.0172	<0.00002	0.000066	0.00426	<0.001
ARD-8	E11-082	455.00	456.90	Knight Piésold	Outside Pit	Magma Mixing Breccia	9.38	49	109	2.0	<2.0	0.00002	<0.00001	0.56	0.0034	0.00272	0.0842	<0.00002	<0.00001	2.60	<0.000003	0.000172	0.0017	<0.001	0.186	9.290	<0.001	0.286	0.00323	0.00054	15.70	0.0003	0.00006	6.30	0.0011	<0.001	<0.00001	0.0084	0.0117	<0.00002	0.000051	0.01630	<0.001
E11-062-4	E11-062	395.50	397.39	Knight Piésold	Outside Pit	Magma Mixing Breccia	9.27	41	100	3.7	0.8	<0.0001	<0.00001	1.03	0.0104	0.00720	0.0616	<0.00002	<0.00001	4.00	<0.000003	0.000093	<0.001	0.0016	0.268	5.850	0.001	0.322	0.00322	0.00044	13.80	0.0001	0.00022	7.04	0.0010	<0.001	0.00001	0.0110	0.0140	<0.00002	0.001330	0.00527	<0.001
ARD-52	E11-145	298.00	299.70	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	8.36	49	96	<2.0	<2.0	<0.00001	0.00036	2.21	0.0012	0.0168	0.0873	<0.00002	<0.00001	3.34	<0.000003	0.000412	0.0008	0.0006	0.584	5.190	0.002	0.449	0.00700	0.00004	14.40	0.0003	0.00009	8.81	0.0008	<0.001	0.00005	0.0146	0.0417	<0.00002	0.000109	0.00875	0.002
ARD-9	E11-082	376.00	378.00	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	9.37	40	88	<2.0	<2.0	0.00003	<0.00001	0.81	0.0009	0.00096	0.0733	<0.00002	<0.00001	3.61	0.000013	0.000107	<0.001	<0.001	0.025	2.600	<0.001	0.342	0.00045	0.00019	14.70	0.0001	<0.00002	4.51	0.0006	<0.001	<0.00001	0.0117	0.0018	<0.00002	0.000074	0.00800	<0.001
ARD-23	E10-038	575.00	577.20	Knight Piésold	Outside Pit	Diorite	8.93	47	93	2.2	<2.0	0.00002	<0.00001	1.42	0.0014	0.00367	0.0676	0.00008	0.00009	3.58	<0.000003	0.000132	0.0007	0.0013	0.143	1.870	0.002	0.396	0.00294	0.00038	16.90	0.0002	0.0002	6.21	0.0009	<0.001	0.00034	0.0091	0.0171	<0.00002	0.000463	0.00200	0.001
ARD-30	E12-206	260.70	262.60	Knight Piésold	Outside Pit	Diorite	9.09	43	86	<2.0	<2.0	0.00003	<0.00001	1.06	0.0003	0.00049	0.0559	<0.00002	<0.00001	3.92	<0.000003	0.000092	<0.001	<0.001	0.009	3.220	<0.001	0.445	0.00012	0.00019	14.00	<0.0001	0.00006	1.96	0.0005	<0.001	<0.00001	0.0126	0.0004	<0.00002	0.000008	0.00512	<0.001
ARD-1	E10-036	316.85	318.95	Knight Piésold	Outside Pit	Tonalite	8.77	40	83	3.4	<2.0	0.00002	0.00018	0.60	0.0028	0.00065	0.0988	<0.00002	<0.00001	3.90	<0.000003	0.000088	<0.001	0.0012	0.011	1.110	0.001	0.235	0.00038	0.00173	14.20	0.0001	<0.00002	5.71	0.0008	<0.001	0.00003	0.0131	0.0010	<0.00002	0.000337	0.00222	<0.001
ARD-10	E11-087	242.90	244.90	Knight Piésold	Outside Pit	Tonalite	8.98	42	92	<2.0	<2.0	0.00002	<0.00001	0.87	0.0012	0.00105	0.0651	<0.00002	<0.00001	4.66	<0.000003	0.000117	<0.001	0.0005	0.006	6.890	0.001	0.272	0.00015	0.00146	10.80	0.0007	<0.00002	3.77	0.0010	<0.001	<0.00001	0.0082	0.0005	<0.00002	0.001280	0.00496	<0.001
ARD-40	E11-120	668.90	671.00	Knight Piésold	Outside Pit	Tonalite	8.28	45	96	<2.0	<2.0	<0.00001	<0.00001	1.06	0.0009	0.00224	0.0608	0.00002	<0.00001	4.25	0.000019	0.000217	0.0006	0.0022	0.238	2.770	<0.001	0.365	0.00144	0.00058	15.20	0.0002	0.00007	3.91	0.0007	<0.001	0.00013	0.0074	0.0091	<0.00002	0.000118	0.00248	<0.001
E11-081-4	E11-081	645.65	649.00	Knight Piésold	Outside Pit	Tonalite	8.70	42	122	8.0	2.6	<0.0001	<0.00001	0.69	0.0087	0.00459	0.1120	<0.00002	0.00007	5.85	<0.000003	0.000057	<0.001	0.0046	0.220	5.630	0.001	0.349	0.00146	0.00044	16.70	0.0002	0.00016	5.51	0.0010	0.002	0.00007	0.0166	0.0022	<0.00002	0.000592	0.00125	<0.001
ARD-43	E11-122	384.00	385.90	Knight Piésold	Outside Pit	Tonalite	8.11	46	97	3.5	<2.0	0.00001	<0.00001	1.11	0.0029	0.00160	0.0637	0.00003	<0.00001	3.50	0.000005	0.000199	0.0007	0.0006	0.111	1.450	0.001	0.282	0.00103	0.00218	16.70	0.0002	0.00007	6.36	0.0007	<0.001	0.00007	0.0047	0.0106	<0.00002	0.000331	0.00213	0.001
ARD-7	E11-082	343.00	344.80	Knight Piésold	Outside Pit	Tonalite	8.71	35	142	2.6	24.0	0.00002	<0.00001	0.54	0.0022	0.00151	0.0526	<0.00002	<0.00001	7.94	<0.000003	0.000101	<0.001	0.0005	0.005	8.200	<0.001	1.220	0.00012	0.00785	14.00	0.0002	0.00003	3.70	0.0010	<0.001	0.00002	0.0208	0.0006	<0.00002	0.000531	0.00176	<0.001
E11-138-3	E11-138	241.00	243.10	Knight Piésold	Outside Pit	Tonalite	7.55	28	94	4.6	6.6	<0.0001	<0.00001	0.36	0.0016	0.00209	0.0075	<0.00002	<0.00001	9.00	<0.000003	0.000024	<0.001	<0.001	<0.003	2.500	<0.001	1.600	0.00047	0.00062	6.04	0.0002	<0.00002	2.11	0.0005	<0.001	0.00002	0.0905	<0.0001	<0.00002	0.000001	0.00292	<0.001
E11-053-3	E11-053	478.45	480.50	Knight Piésold	Outside Pit	Diabase Dykes	9.52	40	92	1.0	1.3	<0.0001	<0.00001	0.47	0.0037	0.00480	0.0446	<0.00002	<0.00001	4.75	<0.000003	0.000234	0.0025	0.0010	0.506	5.260	<0.001	0.900	0.00769	0.00012	11.60	0.0005	0.00006	12.90	0.0007	<0.001	<0.00001	0.0270	0.0198	<0.00002	0.000044	0.03630	<0.001
E11-059-2	E11-059	492.40	493.90	Knight Piésold	Outside Pit	Diabase Dykes	9.34	72	157	3.0	2.3	<0.0001	<0.00001	1.24	0.0075	0.00737	0.2520	<0.00002	<0.00001	1.05	<0.000003	0.001098	<0.001	0.0011	1.75	2.330	<0.001	0.546	0.01440	0.00072	34.70	0.0009	0.00089	8.57	0.0007	<0.001	0.00005	0.0044	0.0513	<0.00002	0.000142	0.06170	0.005
ARD-14	E11-096	467.44	469.94	Knight Piésold	Ore Grade	Diorite Breccia	9.13	41	93	2.5	<2.0	0.00003	<0.00001	0.69	0.0036	0.00100	0.0506	<0.00002	<0.00001	5.15	<0.000003	0.000120	<0.001	0.0038	0.084	0.773	<0.001	0.454	0.00080	0.00149	14.90	0.0002	0.00021	5.45	0.0008	<0.001	0.00018	0.0099	0.0081	<0.00002	0.000158	0.00433	<0.001
ARD-17	E11-098	222.00	224.00	Knight Piésold	Ore Grade	Diorite Breccia	9.54	51	116	2.2	<2.0	0.00002	<0.00001	0.64	0.0020	0.00128	0.0530	<0.00002	<0.00001	3.19	0.000030	0.000092	<0.001	<0.001	0.024	11.000	0.001	0.256	0.00033	0.11400	15.40	<0.0001	0.00005	4.14	0.0008	<0.001	<0.00001	0.0104	0.0011	<0.00002	0.000111	0.01270	<0.001
ARD-20	E11-099	261.90	264.00	Knight Piésold	Ore Grade	Diorite Breccia	9.22	37	87	2.7	<2.0	0.00002	0.00004	0.52	0.0009	0.00036	0.0418	<0.00002	<0.00001	4.78	0.000003	0.000070	<0.001	<0.001	<0.003	0.627	<0.001	0.738	0.00007	0.00131	13.40	<0.0001	0.00002	2.65	0.0007	<0.001	0.00005	0.0126	<0.0001	<0.00002	0.000022	0.00382	<0.001
ARD-22	E11-114	16.50	18.50	Knight Piésold	Ore Grade	Diorite Breccia	9.07	42	88	<2.0	<2.0	0.00002	<0.00001	0.67	0.0004	0.00066	0.0438	<0.00002	<0.00001	4.06	<0.000003	0.000084	<0.001	<0.001	0.006	5.630	<0.001	0.433	0.00012	0.00020	12.00	<0.0001	0.00004	2.74	0.0006	<0.001	0.00008	0.0069	0.0006	<0.00002	0.000015	0.00656	0.002
ARD-36	E11-071	535.70	537.80	Knight Piésold	Ore Grade	Diorite Breccia	8.05	41	96	<2.0	2.1	<0.00001	<0.00001	0.60	0.0015	0.00071	0.0516	<0.00002	<0.00001	5.45	<0.000003	0.000167	0.0006	<0.001	0.004	2.830	<0.001	0.770	0.00013	0.00026	11.80	0.0001	0.00003	1.97	0.0006	<0.001	0.00003	0.0191	0.0004	<0.00002	0.000010	0.00392	<0.001
ARD-38	E11-078	267.30	269.60	Knight Piésold	Ore Grade	Diorite Breccia	8.24	41	87	<2.0	<2.0	<0.00001	<0.00001	0.71	0.0022	0.00115	0.0529	<0.00002	0.00010	4.02	<0.000003	0.000241	<0.001	0.0031	0.246	0.549	<0.001	0.534	0.00192	0.00304	14.30	0.0002	0.00011	6.60	0.0007	<0.001	0.00005	0.0061	0.0127	<0.00002	0.000235	0.00517	0.001
ARD-44	E11-122	100.20	102.40	Knight Piésold	Ore Grade	Diorite Breccia	8.29	46	111	4.4	<2.0	<0.00001	<0.00001	0.95	0.0020	0.00059	0.0422	<0.00002	<0.00001	5.24	<0.000003	0.000195	0.0005	0.0005	0.004	6.220	0.001	0.646	0.00014	0.00151	13.10	0.0002	0.00032	2.66	0.0013	<0.001	0.00004	0.0098	0.0004	<0.00002	0.000262	0.00425	<0.001
E11-112-2	E11-112	137.83	139.07	Knight Piésold	Ore Grade	Diorite Breccia	9.02	44	109	2.6	2.0	<0.0001	<0.00001	0.46	0.0012	0.00155	0.0398	<0.00002	<0.00001	3.83	<0.000003	0.000042	<0.001	0.0005	0.025	11.500	<0.001	0.401	0.00030	0.00100	11.80	<0.0001	<0.00002	3.31	0.0008	<0.001	<0.00001	0.0184	0.0018	<0.00002	0.000063	0.00733	<0.001
E11-061-1	E11-061	90.95	92.73	Knight Piésold	Ore Grade	Diorite Breccia	7.71	28	82	4.0	<2.0	<0.0001	<0.00001	0.72	0.0017	0.00147	0.0164	<0.00002	<0.00001	5.30	<0.000003	0.000024	<0.001	0.0010	0.019	7.270	<0.001	0.578	0.00033	0.00007	6.02	0.0001	<0.00002	2.71	0.0004	<0.001	<0.00001	0.0180	0.0007	<0.00002	0.000001	0.00834	<0.001
E11-054-1	E11-054	33.87	36.14	Knight Piésold	Ore Grade	Diorite Breccia	7.52	26	98	9.6	<2.0	<0.0001	<0.00001	0.50	0.0028	0.00055	0.0127	<0.00002	<0.00001	8.00	<0.000003	0.000022	<0.001	0.0010	0.004	1.430	<0.001	1.160	0.00041	0.00027	9.57	0.0002	<0.00002	2.82	0.0006	<0.001	0.00011	0.0213	0.0004	<0.00002	0.000041	0.00329	<0.001
E11-054-2	E11-054	50.46	52.61	Knight Piésold	Ore Grade	Diorite Breccia	7.49	26	69	6.5	<2.0	<0.0001	<0.00001	0.46	0.0015	0.00050	0.0066	<0.00002	<0.00001	6.59	<0.000003	0.000015	<0.001	<0.001	0.006	1.720	<0.001	0.836	0.00035	0.00010	8.27	0.0001	<0.00002	3.34	0.0004	<0.001	<0.00001	0.0165	0.0003	<0.00002	0.000043	0.00439	<0.001
E11-053-2	E11-053	224.02	226.35	Knight Piésold	Ore Grade	Diorite Breccia	9.26	35	96	2.3	2.2	<0.0001	<0.00001	0.43	0.0063	0.00382	0.0210	<0.00002	<0.00001	4.02	<0.000003	0.000029	<0.001	0.0006	0.014	11.000	<0.001	0.400	0.00032	0.00093	8.16	0.0002	<0.00002	5.79	0.0009	<0.001	0.00001	0.0352	0.0009	<0.00002	0.000054	0.02250	<0.001
E11-051-1	E11-051	70.80	72.72	Knight Piésold	Ore Grade	Diorite Breccia	7.59	26	80	6.5	<2.0	<0.0001	<0.00001	0.51	0.0031	0.00073	0.0149	<0.00002	<0.00001	6.16	<0.000003	0.000016	<0.001	0.0009	0.012	2.830	<0.001	0.788	0.00044	0.00068	9.46	<0.0001	<0.00002	3.46	0.0006	<0.001	0.00002	0.0141	0.0002	<0.00002	0.000171	0.00453	<0.001
CL10-03-1	CL10-03	121.40	122.60	Knight Piésold	Ore Grade	Diorite Breccia	7.43	16	176	2.7	18.0	<0.0001	0.00008	0.59	0.0017	0.00149	0.0146	<0.00002	0.00001	17.9	<0.000003	0.000040	<0.001	0.0021	<0.003	19.000	<0.001	1.390	0.00152	0.00662	2.89	0.0002	<0.00002	1.73	0.0014	0.003	<0.00001	0.0341	0.0003	<0.00002	0.000849	0.00033	<0.001
E10-042-3	E10-042	478.50	480.70	Knight Piésold	Ore Grade	Diorite Breccia	7.83	35	100	6.3	2.3	<0.0001	<0.00001	0.83	0.0026	0.00058	0.0113	<0.00002	<0.00001	6.43	<0.000003	0.000021	<0.001	0.0008	0.006	5.970	<0.001	0.777	0.00036	0.00315	10.40	0.0002	0.00003	2.97	0.0009	<0.001	0.00007	0.0228	0.0003	<0.00002	0.000189	0.00432	<0.001
ARD-26	E10-028	37.20	39.40	Knight Piésold	Ore Grade	Magma Mixing Breccia	9.30	38	86	2.9	<2.0	0.00003	<0.00001	0.75	0.0072	0.00096	0.0501	<0.00002	<0.00001	4.77	0.000004	0.000140	0.0005	0.0008	0.139	0.745	<0.001	0.578	0.00161	0.00044	14.90	0.0002	0.00006	5.19	0.0009	<0.001	0.00002	0.0086	0.0110	<0.00002	0.000185	0.00673	0.001
E10-013-4	E10-013	125.00	127.10	Knight Piésold	Ore Grade	Magma Mixing Breccia	7.70	34	96	6.8	<2.0	<0.0001	<0.00001	0.54	0.0018	0.00038	0.0076	<0.00002	<0.00001	6.85	<0.000003	0.000027	<0.001	<0.001	0.007	3.100	<0.001	0.829	0.00031	0.00191	9.91	0.0002	<0.00002	3.53	0.0009	<0.001	<0.00001	0.0222	0.0001	<0.00002	0.000294	0.00403	<0.001
ARD-39	E11-179	514.00	517.65	Knight Piésold	Ore Grade	Fault	8.21	65	140	<2.0	<2.0	<0.00001	0.00008	0.54	0.0020	0.00707	0.2570	0.00003	0.00004	9.45	0.000035	0.001870	0.0017	0.0220	0.234	0.965	0.016	0.819	0.03180	0.00104	21.80	0.0014	0.00025	15.60	0.0006	<0.001	0.00007	0.0264	0.0141	<0.00002	0.000205	0.01250	0.001
E11-054-5	E11-054	212.30	215.50	Knight Piésold	Ore Grade	Fault	7.59	43	180	3.0	<2.0	<0.0001	0.00005	0.14	0.0090	0.00179	0.3070	0.00003	0.00002	8.31	<0.000003	0.000172	<0.001	0.0446	0.102	1.480	0.002	1.380	0.00391	0.00037	14.90	0.0002	0.00003	16.20	0.0005	<0.001	0.00002	0.0135	0.0024	<0.00002	0.000172	0.00660	0.002
ARD-56	E12-205	207.50	209.60	Knight Piésold	Ore Grade	Diorite	8.00	39	89	3.1	<2.0	<0.00001	0.00002	1.37	0.0031	0.00489	0.0509	<0.00002	<0.00001	4.15	<0.000003	0.000282	<0.001	0.0007	0.304	2.590	0.002	0.305	0.00234	0.00140	13.50	0.0002	0.00016	7.11	0.0009	<0.001	0.00010	0.0086	0.0153	<0.00002	0.000305	0.00200	<0.001
ARD-59	CL10-02A	102.00	104.00	Knight Piésold	Ore Grade	Diorite	7.99	44	97	2.5	<2.0	<0.00001	<0.00001	1.17	0.0028	0.00516	0.0552	<0.00002	0.00001	4.55	0.000016	0.000306	0.0006	0.0029	0.233	3.980	0.001	0.311	0.00160	0.00181	13.90	0.0003	0.00032	5.66	0.0008	<0.001	0.00007	0.0070	0.0118	<0.00002	0.001490	0.00186	0.002
E11-112-1	E11-112	56.41	58.12	Knight Piésold	Ore Grade	Diorite	8.75	39	89	2.9	0.8	<0.0001	<0.00001	1.21	0.0022	0.00024	0.0106	<0.00002	<0.00001	5.15	<0.000003	0.000044	0.0008	0.0007	<0.003	6.490	<0.001	0.371	0.00075	0.00146	9.42	<0.0001	0.00002	3.47	0.0007	<0.001	0.00002	0.0079	0.0003	<0.00002	0.000644	0.00411	<0.001
E11-062-2	E11-062	142.40	144.24	Knight Piésold	Ore Grade	Diorite	8.33	38	90	2.3	0.8	<0.0001	<0.00001	1.31	0.0050	0.00094	0.0102	<0.00002	<0.00001	5.16	<0.000003	0.000025	<0.001	<0.001	0.003	9.660	<0.001	0.500	0.00025	0.00150	6.96	<0.0001	<0.00002	1.82	0.0010	<0.001	<0.00001	0.0197	0.0003	<0.00002	0.000068	0.00813	<0.001
E11-054-3	E11-054	75.15	77.44	Knight Piésold	Ore Grade	Diorite	8.62	42	106	6.0	<2.0	<0.0001	<0.00001	0.42	0.0069	0.00084	0.0924	<0.00002	<0.00001	5.21	<0.000003	0.000042	<0.001	0.0008	0.063	1.770	<0.001	0.350	0.00068	0.00155	16.60	0.0002	0.00007	5.77	0.0007	<0.001	0.00009	0.0084	0.0012	<0.00002	0.001020	0.00212	0.001
E11-112-4	E11-112	250.60	252.50	Knight Piésold	Ore Grade	Diorite	8.44	33	84	4.2	0.9	<0.0001	<0.00001	0.70	0.0017	0.00044	0.0114	<0.00002	<0.00001	5.84	<0.000003	0.000030	<0.001	<0.001	<0.003	4.310	<0.001	0.881	0.00053	0.00107	7.32	<0.0001	0.00006	3.63	0.0009	<0.001	<0.00001	0.0150	0.0001	<0.00002	0.000141	0.00306	<0.001
ARD-19	E11-099	240.20	242.40	Knight Piésold	Ore Grade	Tonalite	8.97	46	98	2.4	<2.0	0.00002	0.00004	1.39	0.0013	0.00581	0.0784	0.00007	0.00001	3.90	0.000005	0.000183	0.0007	0.0020	0.288	2.030	0.002	0.394	0.00378	0.00148	17.30	0.0003	0.00025	6.59	0.0008	<0.001	0.00023	0.0058	0.0349	<0.00002	0.000469	0.00156	0.002
ARD-32	E11-048	325.10	327.10	Knight Piésold	Ore Grade	Tonalite	8.21	42	99	2.8	2.1	<0.00001	0.00046	0.62	0.0032	0.00066	0.0524	<0.00002	<0.00001	4.53	0.000007	0.000147	0.0006	0.0013	0.045	1.540	<0.001	0.381	0.00036	0.00078	14.90	0.0002	0.00007	4.49	0.0009	<0.001	0.00009	0.0115	0.0029	<0.00002	0.000596	0.00291	<0.001
ARD-5	E11-066	509.90	511.90	Knight Piésold	Ore Grade	Tonalite	9.07	37	88	2.9	<2.0	0.00003	0.00001	1.09	0.0042	0.00077	0.0676	0.00003	0.00001	3.51	<0.000003	0.000272	<0.001	0.0009	0.397	0.296	<0.001	0.566	0.00357	0.00097	16.10	0.0003	0.00011	6.24	0.0009	<0.001	0.00009	0.0092	0.0270	<0.00002	0.000391	0.00777	0.001
E11-062-1	E11-062	91.70	93.74	Knight Piésold	Ore Grade	Tonalite	9.01	38	108	8.5	0.7	<0.0001	<0.00001	0.63	0.0059	0.00318	0.0438	<0.00002	<0.00001	4.78	<0.000003	0.000042	<0.001	0.0018	0.079	6.640	<0.001	0.236	0.00088	0.00051	13.50	<0.0001	0.00018	5.80	0.0008	<0.001	<0.00001	0.0141	0.0060	<0.00002	0.001520	0.00317	<0.001
E11-107-1	E11-107	40.10	42.10	Knight Piésold	Ore Grade	Tonalite	8.30	36	87	2.0	0.7	<0.0001	<0.00001	1.25	0.0005	0.00038	0.0080	<0.00002	<0.00001	4.95	<0.000003	0.000014	<0.001	<0.001	0.006	8.940	<0.001	0.332	0.00039	0.00061	7.20	<0.0001	<0.00002	3.90	0.0008	<0.001	<0.00001	0.0058	0.0010	<0.00002	0.001550	0.00546	<0.001
E11-052-1	E11-052	92.75	95.05	Knight Piésold	Ore Grade	Tonalite	8.61	31	98	9.0	1.2	<0.0001	<0.00001	0.53	0.0047	0.00040	0.0083	<0.00002	<0.00001	6.17	<0.000003	0.000050	<0.001	0.0009	0.006	1.220	<0.001	0.624	0.00048	0.00129	11.70	0.0003	0.00005	4.93	0.0006	<0.001	<0.00001	0.0134	0.0005	<0.00002	0.000317	0.01090	<0.001
E11-091-2	E11-091	93.00	94.95	Knight Piésold	Ore Grade	Diabase Dykes	9.06	39	99	<2.0	3.7	<0.0001	<0.00001	0.56	0.0081	0.00199	0.1470	<0.00002	<0.00001	3.65	<0.000003	0.000292	<0.001	0.0010	0.523	4.260	<0.001	0.658	0.00609	0.00251	15.40	0.0005	0.00012	5.56	0.0015	<0.001	0.00004	0.0172	0.0215	<0.00002	0.000074	0.03970	0.001

Table A-11: Mine Rock Synthetic Precipitation Leaching Procedure Results

Sample ID	Drill Hole ID	From	To	Consultant	Waste Classification	Lithology	pH	Alkalinity	Conductivity	Cl	SO_4	Hg	Ag	Al	As	Ba	B	Be	Bi	Ca	Cd
							Units	mg/L as $CaCO_3$	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
						O.Reg 560/94	6.5-9								0.5						
		(m)				PWQO	6.5-8.5					0.0002	0.0001	0.015-0.075	0.1		0.2	0.011-1.1			0.0002
ARD-11	E11-087	84.30	86.50	Knight Piésold	Mine Rock	Diorite Breccia	9.28	31	70	<2.0	3.1	<0.00001	<0.00001	1.15	0.0007	0.00514	0.0350	0.00002	<0.00001	5.69	<0.000003
ARD-31	E12-179	354.75	356.85	Knight Piésold	Mine Rock	Diorite Breccia	8.35	31	69	<2.0	2.9	0.00001	0.00005	0.98	0.0022	0.00099	0.0357	<0.00002	0.00001	6.32	<0.000003
ARD-34	E11-075	95.40	97.50	Knight Piésold	Mine Rock	Diorite Breccia	9.00	34	74	<2.0	2.6	0.00002	0.00002	0.83	0.0011	0.00119	0.0395	<0.00002	<0.00001	6.30	<0.000003
ARD-49	E11-140	372.00	373.90	Knight Piésold	Mine Rock	Diorite Breccia	9.09	30	67	<2.0	2.5	0.00001	<0.00001	0.97	0.0009	0.00207	0.0425	<0.00002	<0.00001	5.98	<0.000003
E11-077-2	E11-077	313.00	315.24	Knight Piésold	Mine Rock	Diorite Breccia	7.71	25	61	<2.0	3.0	<0.0001	<0.00001	0.55	0.0004	0.00077	0.0688	<0.00002	<0.00001	6.79	<0.000003
E11-107-2	E11-107	153.77	155.54	Knight Piésold	Mine Rock	Diorite Breccia	9.28	28	65	<2.0	2.6	<0.0001	<0.00001	0.48	0.0002	0.00071	0.0298	<0.00002	<0.00001	6.94	0.000009
E11-110-2	E11-110	131.36	133.24	Knight Piésold	Mine Rock	Diorite Breccia	9.15	25	58	<2.0	2.8	<0.0001	<0.00001	1.22	0.0006	0.00200	0.0958	<0.00002	<0.00001	5.53	<0.000003
ARD-25	E10-30	211.22	213.22	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.36	32	80	3.4	2.9	<0.00001	0.00002	0.93	0.0013	0.00138	0.0511	<0.00002	<0.00001	6.69	0.000003
ARD-27	E11-049	383.00	384.90	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.29	31	67	<2.0	2.6	<0.00001	0.00002	0.77	0.0031	0.00132	0.0433	<0.00002	<0.00001	6.15	0.000003
ARD-33	E11-048	164.30	166.60	Knight Piésold	Mine Rock	Magma Mixing Breccia	8.69	32	69	<2.0	2.7	0.00001	0.00002	0.31	0.0003	0.00032	0.0344	<0.00002	<0.00001	7.06	<0.000003
E10-013-2	E10-013	50.00	52.20	Knight Piésold	Mine Rock	Magma Mixing Breccia	8.78	28	65	<2.0	2.8	<0.0001	<0.00001	0.41	<0.0002	0.00067	0.0708	<0.00002	<0.00001	6.49	<0.000003
E10-031-3	E10-031	500.00	502.00	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.10	28	64	<2.0	3.3	<0.0001	<0.00001	0.56	0.0005	0.00095	0.0602	<0.00002	<0.00001	7.13	0.000019
E11-054-4	E11-054	128.40	130.80	Knight Piésold	Mine Rock	Magma Mixing Breccia	8.04	30	63	<2.0	2.8	<0.0001	<0.00001	1.29	0.0006	0.00487	0.0885	0.00002	<0.00001	6.20	<0.000003
E11-100-2	E11-100	107.57	109.89	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.17	28	64	<2.0	3.0	<0.0001	<0.00001	0.67	0.0003	0.00062	0.0229	<0.00002	<0.00001	7.19	<0.000003
ARD-29	E11-061	262.30	264.00	Knight Piésold	Mine Rock	Fault	8.06	36	76	<2.0	3.2	<0.00001	0.00008	4.24	0.0076	0.00523	0.2000	0.00042	0.00003	4.52	0.000051
E11-066-1	E11-066	312.00	316.20	Knight Piésold	Mine Rock	Fault	8.82	35	79	<2.0	3.1	<0.0001	0.00011	0.55	0.0013	0.00152	0.1390	0.00003	<0.00001	6.50	0.000010
E11-111-1	E11-111	152.30	154.16	Knight Piésold	Mine Rock	Intrusive Feldspar Porphyry	9.27	31	72	<2.0	2.7	<0.0001	<0.00001	0.65	<0.0002	0.00136	0.0288	<0.00002	<0.00001	7.51	<0.000003
ARD-12	E12-217	547.00	549.50	Knight Piésold	Mine Rock	Diorite	9.27	37	74	<2.0	3.0	<0.00001	<0.00001	0.96	0.0003	0.00060	0.0615	<0.00002	<0.00001	5.82	<0.000003
ARD-18	E11-098	247.40	249.30	Knight Piésold	Mine Rock	Diorite	8.61	32	75	<2.0	2.9	<0.00001	<0.00001	0.74	0.0003	0.00123	0.0624	<0.00002	<0.00001	6.04	<0.000003
ARD-24	E11-062	15.90	17.80	Knight Piésold	Mine Rock	Diorite	9.27	30	70	<2.0	2.9	<0.00001	0.00002	0.50	0.0005	0.00052	0.0403	<0.00002	<0.00001	6.24	<0.000003
ARD-28	E11-049	38.30	40.20	Knight Piésold	Mine Rock	Diorite	7.98	34	79	<2.0	3.8	<0.00001	0.00001	0.92	0.0021	0.00418	0.0588	<0.00002	0.00002	6.93	0.000011
ARD-3	E10-036	103.30	105.20	Knight Piésold	Mine Rock	Diorite	8.19	33	73	<2.0	3.0	<0.00001	<0.00001	0.91	0.0010	0.00145	0.0527	<0.00002	<0.00001	6.51	0.000005
ARD-37	E11-071	281.10	283.10	Knight Piésold	Mine Rock	Diorite	8.33	34	71	<2.0	2.6	0.00001	0.00001	0.70	0.0004	0.00324	0.0480	<0.00002	<0.00001	6.07	<0.000003
ARD-47	E12-198	210.00	211.80	Knight Piésold	Mine Rock	Diorite	9.39	33	71	<2.0	2.9	0.00002	<0.00001	1.13	0.0006	0.00227	0.0343	<0.00002	<0.00001	6.63	<0.000003
ARD-51	E11-141	183.70	184.50	Knight Piésold	Mine Rock	Diorite	8.85	34	72	<2.0	3.0	0.00001	0.00007	0.82	<0.0002	0.00083	0.0328	<0.00002	<0.00001	6.80	<0.000003
ARD-57	CL10-01	178.20	180.00	Knight Piésold	Mine Rock	Diorite	9.38	34	74	<2.0	3.0	0.00001	<0.00001	1.00	<0.0002	0.00074	0.0462	<0.00002	<0.00001	6.25	<0.000003
ARD-58	CL10-01	227.50	229.50	Knight Piésold	Mine Rock	Diorite	9.05	33	73	<2.0	3.1	0.00001	<0.00001	1.62	0.0005	0.00689	0.0439	0.00002	<0.00001	6.79	<0.000003
E10-013-1	E10-013	5.78	7.80	Knight Piésold	Mine Rock	Diorite	8.53	25	57	<2.0	2.6	<0.0001	<0.00001	0.53	0.0005	0.00122	0.0555	<0.00002	<0.00001	5.97	<0.000003
E10-023-1	E10-023	30.00	31.90	Knight Piésold	Mine Rock	Diorite	7.77	22	63	<2.0	2.9	<0.0001	<0.00001	0.41	0.0012	0.00078	0.0697	<0.00002	<0.00001	6.71	<0.000003
E10-031-2	E10-031	158.00	160.10	Knight Piésold	Mine Rock	Diorite	8.88	31	67	<2.0	3.1	<0.0001	<0.00001	1.26	0.0027	0.00410	0.0808	0.00003	0.00003	6.97	<0.000003
E10-038-1	E10-038	74.00	75.90	Knight Piésold	Mine Rock	Diorite	7.95	25	63	<2.0	2.8	<0.0001	<0.00001	0.79	0.0003	0.00490	0.0734	<0.00002	<0.00001	5.94	<0.000003
E10-038-3	E10-038	158.00	159.85	Knight Piésold	Mine Rock	Diorite	7.94	21	47	<2.0	2.4	<0.0001	<0.00001	0.44	<0.0002	0.00091	0.0697	<0.00002	<0.00001	6.14	<0.000003
E10-042-1	E10-042	14.00	16.00	Knight Piésold	Mine Rock	Diorite	8.91	32	68	<2.0	3.1	<0.0001	<0.00001	0.52	0.0066	0.00113	0.0736	<0.00002	<0.00001	7.07	<0.000003
E10-042-2	E10-042	89.50	91.70	Knight Piésold	Mine Rock	Diorite	8.14	27	66	<2.0	3.6	<0.0001	<0.00001	0.72	0.0015	0.00371	0.0861	<0.00002	<0.00001	6.76	<0.000003
E11-053-1	E11-053	152.59	154.40	Knight Piésold	Mine Rock	Diorite	9.14	28	70	<2.0	2.8	<0.0001	<0.00001	0.60	0.0012	0.00069	0.0747	<0.00002	<0.00001	6.71	0.000003
E11-095-1	E11-095	284.60	286.40	Knight Piésold	Mine Rock	Diorite	8.06	28	64	<2.0	3.0	<0.0001	<0.00001	0.54	0.0006	0.00074	0.0677	<0.00002	0.00001	6.14	<0.000003
E11-097-1	E11-097	35.10	37.20	Knight Piésold	Mine Rock	Diorite	7.69	23	48	<2.0	2.8	<0.0001	<0.00001	1.29	0.0006	0.00610	0.0823	<0.00002	<0.00001	4.04	<0.000003
E11-100-3	E11-100	224.56	226.65	Knight Piésold	Mine Rock	Diorite	8.36	28	64	<2.0	2.4	<0.0001	<0.00001	0.53	0.0012	0.00274	0.0347	<0.00002	<0.00001	6.12	<0.000003
E11-138-2	E11-138	211.30	213.33	Knight Piésold	Mine Rock	Diorite	7.78	27	59	<2.0	3.0	<0.0001	<0.00001	0.51	0.0003	0.00248	0.0743	<0.00002	<0.00001	6.79	<0.000003
ARD-13	E11-096	77.15	79.35	Knight Piésold	Mine Rock	Tonalite	8.41	32	72	<2.0	3.1	<0.00001	<0.00001	0.54	<0.0002	0.00090	0.0391	<0.00002	<0.00001	6.19	<0.000003
ARD-16	E11-098	24.40	26.60	Knight Piésold	Mine Rock	Tonalite	9.24	34	72	<2.0	3.3	<0.00001	<0.00001	1.09	0.0012	0.00297	0.0456	<0.00002	<0.00001	5.84	0.000003
ARD-21	E11-114	8.08	10.38	Knight Piésold	Mine Rock	Tonalite	9.11	33	71	<2.0	2.8	<0.00001	0.00010	0.82	0.0006	0.00109	0.0446	<0.00002	<0.00001	6.41	0.000007
ARD-4	E10-045	229.60	231.80	Knight Piésold	Mine Rock	Tonalite	8.12	35	74	<2.0	3.2	<0.00001	<0.00001	0.63	0.0004	0.00074	0.0526	<0.00002	<0.00001	6.19	0.000003
ARD-41	E11-120	74.50	76.40	Knight Piésold	Mine Rock	Tonalite	9.19	35	78	<2.0	3.0	0.00002	<0.00001	0.63	<0.0002	0.00056	0.0430	<0.00002	<0.00001	6.41	<0.000003
ARD-45	E11-140	274.50	276.60	Knight Piésold	Mine Rock	Tonalite	9.00	31	65	<2.0	2.5	0.00001	<0.00001	1.37	0.0008	0.00357	0.0382	0.00003	<0.00001	5.83	<0.000003
ARD-48	E11-129	57.10	59.60	Knight Piésold	Mine Rock	Tonalite	9.25	31	65	5.9	2.6	0.00001	<0.00001	0.84	0.0009	0.00171	0.0372	0.00009	<0.00001	5.98	<0.000003
ARD-6	E11-066	70.40	72.40	Knight Piésold	Mine Rock	Tonalite	9.26	31	67	<2.0	2.8	<0.00001	<0.00001	0.48	0.0006	0.00097	0.0416	<0.00002	<0.00001	5.64	<0.000003
ARD-60	E12-213	138.90	141.00	Knight Piésold	Mine Rock	Tonalite	8.87	31	71	<2.0	2.4	<0.00001	0.00001	1.82	0.0007	0.01980	0.0472	0.00004	0.00002	5.53	<0.000003
E10-013-3	E10-013	60.00	62.28	Knight Piésold	Mine Rock	Tonalite	8.47	27	62	<2.0	2.8	<0.0001	<0.00001	0.61	0.0003	0.00205	0.0806	<0.00002	<0.00001	6.44	<0.000003
E10-031-1	E10-031	9.10	11.00	Knight Piésold	Mine Rock	Tonalite	8.96	26	62	2.5	2.8	<0.0001	<0.00001	0.95	0.0006	0.00229	0.0670	<0.00002	<0.00001	7.24	<0.000003
E10-046-1	E10-046	15.80	18.07	Knight Piésold	Mine Rock	Tonalite	9.10	30	70	<2.0	2.9	<0.0001	<0.00001	0.85	0.0004	0.00795	0.0707	<0.00002	<0.00001	6.06	0.000003
E10-046-2	E10-046	95.00	97.20	Knight Piésold	Mine Rock	Tonalite	8.63	26	66	2.1	3.0	<0.0001	<0.00001	0.59	0.0004	0.00096	0.0654	<0.00002	<0.00001	7.39	0.000004
E11-052-3	E11-052	221.50	223.13	Knight Piésold	Mine Rock	Tonalite	9.05	29	71	<2.0	2.8	<0.0001	<0.00001	0.60	0.0010	0.00134	0.0721	<0.00002	<0.00001	6.70	<0.000003
E11-059-1	E11-059	25.57	27.61	Knight Piésold	Mine Rock	Tonalite	7.79	28	60	<2.0	2.7	<0.0001	<0.00001	1.23	0.0028	0.00705	0.1060	0.00003	0.00003	5.92	0.000007
E11-061-2	E11-061	338.00	340.20	Knight Piésold	Mine Rock	Tonalite	8.33	30	71	<2.0	2.9	<0.0001	<0.00001	0.79	0.0004	0.00552	0.0764	<0.00002	<0.00001	5.70	<0.000003
E11-072-1	E11-072	155.50	157.65	Knight Piésold	Mine Rock	Tonalite	8.44	26	60	<2.0	2.7	<0.0001	<0.00001	1.50	0.0011	0.00281	0.0832	0.00003	<0.00001	6.49	<0.000003
E11-077-1	E11-077	142.70	144.85	Knight Piésold	Mine Rock	Tonalite	8.14	31	70	<2.0	3.2	<0.0001	<0.00001	1.28	0.0010	0.00295	0.0800	0.00003	<0.00001	7.23	<0.000003
E11-081-1	E11-081	376.00	378.25	Knight Piésold	Mine Rock	Tonalite	8.54	31	65	<2.0	2.7	<0.0001	<0.00001	0.64	0.0005	0.00123	0.0708	<0.00002	<0.00001	6.22	<0.000003
E11-091-1	E11-091	13.90	15.95	Knight Piésold	Mine Rock	Tonalite	8.93	26	63	2.2	3.0	<0.0001	<0.00001	0.73	0.0012	0.00495	0.0833	<0.00002	<0.00001	6.11	<0.000003
E11-091-3	E11-091	311.00	313.13	Knight Piésold	Mine Rock	Tonalite	8.57	28	66	<2.0	2.9	<0.0001	<0.00001	0.72	0.0010	0.00111	0.0660	<0.00002	<0.00001	6.36	<0.000003
E11-095-2	E11-095	18.90	20.90	Knight Piésold	Mine Rock	Tonalite	8.01	30	63	<2.0	2.9	<0.0001	<0.00001	0.73	0.0059	0.00226	0.0943	<0.00002	<0.00001	6.76	<0.000003
E11-097-2	E11-097	153.70	155.70	Knight Piésold	Mine Rock	Tonalite	7.80	27	61	<2.0	2.6	<0.0001	<0.00001	1.44	0.0007	0.00751	0.0912	0.00003	<0.00001	5.83	0.000007
E11-100-1	E11-100	39.45	41.62	Knight Piésold	Mine Rock	Tonalite	9.04	30	71	<2.0	2.9	<0.0001	<0.00001	0.59	0.0007	0.00122	0.0325	<0.00002	<0.00001	7.58	<0.000003
E11-110-1	E11-110	8.20	10.12	Knight Piésold	Mine Rock	Tonalite	7.95	31	70	<2.0	2.8	<0.0001	<0.00001	1.00	0.0012	0.00628	0.0852	<0.00002	<0.00001	6.62	<0.000003
E11-112-3	E11-112	161.40	163.71	Knight Piésold	Mine Rock	Tonalite	9.13	25	61	<2.0	2.8	<0.0001	<0.00001	1.34	0.0010	0.01270	0.1000	0.00002	<0.00001	5.94	0.000012
E11-138-1	E11-138	15.50	17.88	Knight Piésold	Mine Rock	Tonalite	7.80	29	62	<2.0	2.9	<0.0001	<0.00001	0.84	0.0007	0.00155	0.0870	<0.00002	0.00003	7.41	<0.000003
ARD-53	E12-200	185.00	187.00	Knight Piésold	Mine Rock	Mafic Dykes	8.73	36	77	<2.0	2.6	0.00001	0.00003	0.78	<0.0002	0.00039	0.0384	<0.00002	<0.00001	6.35	<0.000003
ARD-55	E12-294	178.00	180.00	Knight Piésold	Mine Rock	Mafic Dykes	8.30	37	77	<2.0	3.2	0.00001	0.00002	1.05	0.0002	0.00065	0.0431	<0.00002	<0.00001	5.15	<0.000003
E11-052-2	E11-052	125.15	127.25	Knight Piésold	Mine Rock	Mafic Dykes	9.03	30	66	<2.0	3.0	<0.0001	<0.00001	0.74	0.0007	0.00056	0.0617	<0.00002	<0.00001	7.98	<0.000003
E11-062-3	E11-062	254.80	257.01	Knight Piésold	Mine Rock	Mafic Dykes	9.35	32	74	<2.0	3.0	<0.0001	<0.00001	0.54	0.0007	0.00609	0.0866	<0.00002	<0.00001	5.39	0.000004
ARD-15	E11-096	150.45	152.25	Knight Piésold	Mine Rock	Diabase Dykes	7.90	32	66	<2.0	3.1	<0.00001	<0.00001	1.16	0.0004	0.00354	0.0516	<0.00002	<0.00001	4.25	0.000008
ARD-35	E11-075	220.91	223.31	Knight Piésold	Mine Rock	Diabase Dykes	8.77	35	70	<2.0	2.7	0.00002	0.00003	4.49	0.0003	0.01280	0.0436	0.00003	0.00001	8.08	<0.000003
ARD-42	E11-120	108.90	110.40	Knight Piésold	Mine Rock	Diabase Dykes	8.64	38	77	<2.0	2.7	0.00002	<0.00001	0.75	<0.0002	0.00061	0.0287	<0.00002	<0.00001	6.76	<0.000003
ARD-50	E11-144	138.81	139.61	Knight Piésold	Mine Rock	Diabase Dykes	8.84	36	78	<2.0	3.0	0.00002	0.00027	1.22	0.0004	0.00766	0.0525	<0.00002	0.00001	5.10	0.000004
E10-038-2	E10-038	101.00	103.00	Knight Piésold	Mine Rock	Diabase Dykes	8.64	29	67	<2.0	3.5	<0.0001	<0.00001	1.24	0.0003	0.00346	0.0787	<0.00002	<0.00001	6.98	0.000003
E10-031-4	E10-031	585.00	586.30	Knight Piésold	Outside Pit	Diorite Breccia	8.17	27	65	<2.0	3.0	<0.0001	<0.00001	0.97	0.0007	0.00147	0.0661	<0.00002	<0.00001	7.10	0.000027
E11-081-2	E11-081	511.66	513.50	Knight Piésold	Outside Pit	Diorite Breccia	7.99	32	69	<2.0	3.3	<0.0001	<0.00001	0.90	0.0005	0.00282	0.1010	<0.00002	0.00001	6.91	<0.000003
E11-081-3	E11-081	589.00	592.40	Knight Piésold	Outside Pit	Diorite Breccia	8.20	30	65	<2.0	3.0	<0.0001	<0.00001	0.58	0.0010	0.00087	0.0715	<0.00002	0.00003	6.94	<0.000003
ARD-2	E10-036	376.50	378.75	Knight Piésold	Outside Pit	Magma Mixing Breccia	9.49	31	71	<2.0	3.1	<0.00001	<0.00001	0.87	0.0007	0.00101	0.0505	0.00002	<0.00001	6.25	0.000005
ARD-46	E11-145	483.30	485.10	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.90	35	72	<2.0	2.8	0.00002	<0.00001	1.30	0.0015	0.00757	0.0474	<0.00002	<0.00001	4.90	<0.000003
ARD-54	E12-205	668.00	669.60	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.08	34	75	<2.0	2.7	0.00002	0.00003	3.04	0.0020	0.00800	0.0417	0.00004	<0.00001	6.52	<0.000003
ARD-8	E11-082	455.00	456.90	Knight Piésold	Outside Pit	Magma Mixing Breccia	9.28	31	72	<2.0	3.0	<0.00001	<0.00001	0.77	0.0009	0.00431	0.0492	<0.00002	<0.00001	4.72	0.000005
E11-062-4	E11-062	395.50	397.39	Knight Piésold	Outside Pit	Magma Mixing Breccia	9.27	30	70	<2.0	3.0	<0.0001	<0.00001	1.16	0.0013	0.00965	0.1230	0.00003	<0.00001	5.59	<0.000003
ARD-52	E11-145	298.00	299.70	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	8.65	29	66	<2.0	2.9	0.00001	0.00004	3.30	<0.0002	0.02710	0.0401	0.00003	<0.00001	6.14	<0.000003
ARD-9	E11-082	376.00	378.00	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	9.25	33	70	<2.0	3.0	<0.00001	<0.00001	0.69	0.0003	0.00170	0.0496	<0.00002	<0.00001	5.85	<0.000003
ARD-23	E10-038	575.00	577.20	Knight Piésold	Outside Pit	Diorite	7.84	31	64	<2.0	2.8	<0.00001	0.00004	1.45	0.0004	0.00207	0.0423	0.00010	0.00004	5.83	0.000009
ARD-30	E12-206	260.70	262.60	Knight Piésold	Outside Pit	Diorite	8.59	28	67	<2.0	2.6	<0.00001	<0.00001	0.79	<0.0002	0.00043	0.0452	<0.00002	<0.00001	6.03	<0.000003
ARD-1	E10-036	316.85	318.95	Knight Piésold	Outside Pit	Tonalite	8.02	30	65	<2.0	2.9	<0.00001	<0.00001	1.03	0.0005	0.00166	0.0458	<0.00002	<0.00001	6.12	0.000004
ARD-10	E11-087	242.90	244.90	Knight Piésold	Outside Pit	Tonalite	7.97	34	74	<2.0	3.0	<0.00001	<0.00001	0.56	0.0004	0.00120	0.0518	<0.00002	<0.00001	6.03	0.000003
ARD-40	E11-120	668.90	671.00	Knight Piésold	Outside Pit	Tonalite	8.78	29	63	<2.0	2.4	0.00001	0.00002	1.61	<0.0002	0.00445	0.0317	0.00004	0.00002	6.41	<0.000003
ARD-43	E11-122	384.00	385.90	Knight Piésold	Outside Pit	Tonalite	8.29	31	69	<2.0	2.2	0.00001	<0.00001	1.46	0.0006	0.00217	0.0402	0.00008	<0.00001	6.15	<0.000003
ARD-7	E11-082	343.00	344.80	Knight Piésold	Outside Pit	Tonalite	9.23	31	68	<2.0	3.0	<0.00001	<0.00001	0.83	0.0008	0.00276	0.0453	<0.00002	<0.00001	6.32	<0.000003
E11-081-4	E11-081	645.65	649.00	Knight Piésold	Outside Pit	Tonalite	7.55	22	62	<2.0	3.0	<0.0001	0.00003	1.15	0.0018	0.00636	0.0813	0.00002	0.00006	6.66	<0.000003
E11-138-3	E11-138	241.00	243.10	Knight Piésold	Outside Pit	Tonalite	7.67	25	60	<2.0	3.4	<0.0001	<0.00001	0.33	0.0008	0.00084	0.0683	<0.00002	<0.00001	6.84	<0.000003
E11-053-3	E11-053	478.45	480.50	Knight Piésold	Outside Pit	Diabase Dykes	9.22	26	60	<2.0	2.6	<0.0001	<0.00001	0.85	0.0008	0.00794	0.0821	0.00003	<0.00001	5.10	<0.000003
E11-059-2	E11-059	492.40	493.90	Knight Piésold	Outside Pit	Diabase Dykes	8.51	28	62	<2.0	3.2	<0.0001	<0.00001	1.49	0.0006	0.00957	0.0933	<0.00002	0.00002	3.96	0.000008
ARD-14	E11-096	467.44	469.94	Knight Piésold	Ore Grade	Diorite Breccia	7.98	33	71	<2.0	3.0	<0.00001	<0.00001	1.21	0.0011	0.00208	0.0412	0.00003	0.00003	6.31	0.000008
ARD-17	E11-098	222.00	224.00	Knight Piésold	Ore Grade	Diorite Breccia	9.32	35	75	<2.0	2.7	<0.00001	<0.00001	0.65	0.0009	0.00283	0.0520	<0.00002	<0.00001	5.29	<0.000003
ARD-20	E11-099	261.90	264.00	Knight Piésold	Ore Grade	Diorite Breccia	8.00	33	70	<2.0	3.0	<0.00001	0.00025	0.54	0.0005	0.00042	0.0473	<0.00002	<0.00001	6.55	0.000010
ARD-22	E11-114	16.50	18.50	Knight Piésold	Ore Grade	Diorite Breccia	8.00	33	71	<2.0	2.8	<0.00001	0.00004	0.56	0.0002	0.00075	0.0360	<0.00002	<0.00001	6.45	<0.000003
ARD-36	E11-071	535.70	537.80	Knight Piésold	Ore Grade	Diorite Breccia	8.31	38	79	<2.0	2.8	0.00001	0.00002	0.70	0.0011	0.00077	0.0453	<0.00002	<0.00001	6.89	<0.000003
ARD-38	E11-078	267.30	269.60	Knight Piésold	Ore Grade	Diorite Breccia	8.80	33	69	<2.0	2.8	0.00001	0.00001	1.30	0.0002	0.00135	0.0486	0.00003	0.00006	4.79	<0.000003
ARD-44	E11-122	100.20	102.40	Knight Piésold	Ore Grade	Diorite Breccia	9.09	37	75	<2.0	2.8	0.00001	<0.00001	0.91	0.0006	0.00085	0.0362	<0.00002	<0.00001	6.63	<0.000003
E11-112-2	E11-112	137.83	139.07	Knight Piésold	Ore Grade	Diorite Breccia	9.06	29	66	<2.0	2.6	<0.0001	<0.00001	1.55	0.0003	0.00565	0.0930	0.00002	<0.00001	6.34	0.000006
E11-061-1	E11-061	90.95	92.73	Knight Piésold	Ore Grade	Diorite Breccia	8.28	28	64	<2.0	2.6	<0.0001	<0.00001	0.49	0.0008	0.00673	0.0778	<0.00002	<0.00001	5.76	<0.000003
E11-054-1	E11-054	33.87	36.14	Knight Piésold	Ore Grade	Diorite Breccia	7.81	29	67	<2.0	2.9	<0.0001	<0.00001	0.42	0.0013	0.00100	0.0824	<0.00002	0.00001	7.23	<0.000003
E11-054-2	E11-054	50.46	52.61	Knight Piésold	Ore Grade	Diorite Breccia	8.24	30	65	<2.0	2.8	<0.0001	<0.00001	0.49	0.0006	0.00062	0.0832	<0.00002	<0.00001	6.67	<0.000003
E11-053-2	E11-053	224.02	226.35	Knight Piésold	Ore Grade	Diorite Breccia	9.16	28	67	<2.0	2.7	<0.0001	<0.00001	0.39	0.0012	0.00287	0.0754	<0.00002	<0.00001	5.46	<0.000003
E11-051-1	E11-051	70.80	72.72	Knight Piésold	Ore Grade	Diorite Breccia	7.88	18	60	<2.0	2.8	<0.0001	<0.00001	0.42	0.0004	0.00061	0.0622	<0.00002	<0.00001	6.29	<0.000003
CL10-03-1	CL10-03	121.40	122.60	Knight Piésold	Ore Grade	Diorite Breccia	8.16	34	85	<2.0	4.8	<0.0001	<0.00001	0.47	0.0018	0.00104	0.0631	<0.00002	<0.00001	10.1	<0.000003
E10-042-3	E10-042	478.50	480.70	Knight Piésold	Ore Grade	Diorite Breccia	8.64	33	73	<2.0	3.5	<0.0001	<0.00001	1.10	0.0006	0.00204	0.0757	0.00003	<0.00001	6.95	0.000006
ARD-26	E10-028	37.20	39.40	Knight Piésold	Ore Grade	Magma Mixing Breccia	8.00	32	68	<2.0	2.7	<0.00001	0.00002	0.82	0.0018	0.00106	0.0406	<0.00002	<0.00001	6.23	0.000008
E10-013-4	E10-013	125.00	127.10	Knight Piésold	Ore Grade	Magma Mixing Breccia	7.94	25	60	<2.0	3.0	<0.0001	<0.00001	0.52	0.0004	0.00062	0.0593	<0.00002	<0.00001	6.85	<0.000003
ARD-39	E11-179	514.00	517.65	Knight Piésold	Ore Grade	Fault	9.02	30	67	<2.0	2.3	0.00002	0.00007	0.76	0.0005	0.00361	0.1380	0.00012	0.00004	3.63	<0.000003
E11-054-5	E11-054	212.30	215.50	Knight Piésold	Ore Grade	Fault	8.07	23	57	<2.0	3.0	<0.0001	0.00006	0.59	0.0021	0.00232	0.1120	0.00007	0.00002	3.97	0.000026
ARD-56	E12-205	207.50	209.60	Knight Piésold	Ore Grade	Diorite	8.39	34	71	<2.0	2.9	0.00001	0.00001	1.15	0.0006	0.00422	0.0403	<0.00002	<0.00001	5.77	<0.000003
ARD-59	CL10-02A	102.00	104.00	Knight Piésold	Ore Grade	Diorite	8.88	31	68	<2.0	2.9	<0.00001	<0.00001	1.24	0.0009	0.00636	0.0617	<0.00002	0.00002	6.03	<0.000003
E11-112-1	E11-112	56.41	58.12	Knight Piésold	Ore Grade	Diorite	9.03	30	66	<2.0	2.7	<0.0001	<0.00001	0.72	0.0005	0.00077	0.1020	<0.00002	<0.00001	6.60	0.000028
E11-062-2	E11-062	142.40	144.24	Knight Piésold	Ore Grade	Diorite	9.17	28	63	<2.0	2.6	<0.0001	<0.00001	0.74	0.0014	0.00093	0.0851	<0.00002	<0.00001	6.49	<0.000003
E11-054-3	E11-054	75.15	77.44	Knight Piésold	Ore Grade	Diorite	8.31	29	63	<2.0	3.0	<0.0001	<0.00001	1.35	0.0013	0.00243	0.0841	0.00003	<0.00001	6.46	0.000005
E11-112-4	E11-112	250.60	252.50	Knight Piésold	Ore Grade	Diorite	8.98	28	63	<2.0	2.6	<0.0001	<0.00001	0.76	0.0010	0.00097	0.1020	<0.00002	<0.00001	7.07	0.000005
ARD-19	E11-099	240.20	242.40	Knight Piésold	Ore Grade	Tonalite	7.87	28	60	<2.0	2.5	<0.00001	<0.00001	1.74	0.0003	0.00344	0.0542	0.00007	<0.00001	5.64	0.000011
ARD-32	E11-048	325.10	327.10	Knight Piésold	Ore Grade	Tonalite	8.91	34	70	<2.0	2.5	0.00001	0.00004	1.62	0.0005	0.00253	0.0335	0.00012	0.00002	6.92	<0.000003
ARD-5	E11-066	509.90	511.90	Knight Piésold	Ore Grade	Tonalite	7.87	32	69	<2.0	3.2	0.00001	<0.00001	0.97	0.0012	0.00078	0.0504	0.00002	0.00002	5.13	0.000009
E11-062-1	E11-062	91.70	93.74	Knight Piésold	Ore Grade	Tonalite	8.96	29	71	<2.0	2.9	<0.0001	<0.00001	1.26	0.0013	0.00741	0.1140	0.00003	<0.00001	6.20	<0.000003
E11-107-1	E11-107	40.10	42.10	Knight Piésold	Ore Grade	Tonalite	9.18	28	63	<2.0	2.5	<0.0001	<0.00001	0.84	0.0003	0.00124	0.0313	<0.00002	<0.00001	7.37	<0.000003
E11-052-1	E11-052	92.75	95.05	Knight Piésold	Ore Grade	Tonalite	8.95	26	63	<2.0	2.7	<0.0001	<0.00001	0.50	0.0014	0.00058	0.0714	0.00003	<0.00001	7.13	<0.000003
E11-091-2	E11-091	93.00	94.95	Knight Piésold	Ore Grade	Diabase Dykes	8.82	21	51	<2.0	2.8	<0.0001	<0.00001	1.16	0.0008	0.00640	0.0828	<0.00002	<0.00001	4.65	0.000004

Sample ID	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Na	Ni	Pb	Si	Sb	Se	Sn	Sr	Ti	Tl	U	V	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
O.Reg 560/94			0.3									0.2										0.5
PWQO	0.0009	0.001	0.005	0.3					0.04		0.025	0.005-0.025		0.02	0.1					0.005	0.006	0.03
ARD-11	0.000083	0.0006	0.0012	0.328	0.544	<0.001	0.293	0.00501	0.00006	8.97	<0.0001	0.00009	3.57	<0.0002	<0.001	0.00006	0.0064	0.0235	<0.00002	0.000071	0.00084	0.013
ARD-31	0.000047	<0.001	0.0011	0.475	0.466	<0.001	0.524	0.00533	0.00017	7.96	0.0003	0.00054	3.05	0.0003	<0.001	0.00011	0.0087	0.0089	<0.00002	0.000022	0.00114	0.003
ARD-34	0.000057	0.0006	0.0006	0.196	0.691	<0.001	0.317	0.00318	0.00007	9.32	0.0001	0.00005	2.67	0.0004	<0.001	0.00015	0.0095	0.0125	<0.00002	0.000023	0.00208	0.004
ARD-49	0.000119	0.0007	0.0009	0.241	0.683	<0.001	0.315	0.00409	0.00004	8.23	0.0002	0.00008	3.26	<0.0002	<0.001	0.00016	0.0071	0.0185	<0.00002	0.000024	0.00089	0.002
E11-077-2	0.000016	<0.001	<0.001	0.023	0.159	<0.001	0.294	0.00041	0.00001	6.21	0.0001	0.00009	2.29	0.0002	<0.001	0.00004	0.0091	0.0015	<0.00002	0.000008	0.00149	<0.001
E11-107-2	<0.000002	<0.001	<0.001	0.048	0.389	<0.001	0.379	0.00071	0.00003	5.34	0.0008	0.00020	1.94	0.0002	<0.001	0.00002	0.0126	0.0037	<0.00002	0.000012	0.00125	0.001
E11-110-2	0.000358	0.0012	0.0011	1.010	0.365	<0.001	0.895	0.01110	0.00001	6.13	0.0016	0.00015	4.62	0.0003	<0.001	0.00003	0.0145	0.0438	<0.00002	0.000007	0.00613	0.002
ARD-25	0.000163	0.0007	0.0012	0.114	2.310	<0.001	0.252	0.00156	0.00011	9.76	<0.0001	0.00015	3.54	0.0002	<0.001	0.00005	0.0060	0.0076	<0.00002	0.000046	0.00071	0.001
ARD-27	0.000175	<0.001	0.0007	0.211	0.407	<0.001	0.338	0.00274	0.00004	7.89	<0.0001	0.00006	3.14	0.0002	<0.001	0.00006	0.0084	0.0112	<0.00002	0.000024	0.00080	<0.001
ARD-33	0.000065	0.0005	0.0021	0.057	0.121	<0.001	0.241	0.00127	0.00170	7.48	0.0001	0.00006	2.16	0.0002	<0.001	0.00016	0.0085	0.0014	<0.00002	0.000017	0.00089	<0.001
E10-013-2	0.000020	<0.001	<0.001	0.008	0.431	<0.001	0.520	0.00013	0.00003	7.11	<0.0001	0.00009	1.53	0.0004	<0.001	0.00006	0.0189	0.0005	<0.00002	0.000002	0.00250	<0.001
E10-031-3	0.000054	0.0009	<0.001	0.107	0.169	<0.001	0.588	0.00162	0.00020	7.00	0.0002	0.00013	1.70	0.0004	<0.001	0.00007	0.0210	0.0057	<0.00002	0.000004	0.00221	<0.001
E11-054-4	0.000025	0.0008	0.0012	0.051	1.380	<0.001	0.181	0.00127	0.00008	7.03	0.0001	0.00011	4.70	0.0003	<0.001	0.00028	0.0052	0.0075	<0.00002	0.000298	0.00060	0.002
E11-100-2	<0.000002	<0.001	<0.001	0.005	0.836	<0.001	0.416	0.00017	0.00021	4.71	0.0003	0.00023	1.53	0.0002	<0.001	<0.00001	0.0096	0.0003	<0.00002	0.000008	0.00154	<0.001
ARD-29	0.00204	0.0115	0.135	5.130	0.408	0.002	1.730	0.07080	0.00042	15.50	0.0026	0.00015	17.1	<0.0002	<0.001	0.00007	0.0088	0.0182	<0.00002	0.000121	0.00611	0.006
E11-066-1	0.000183	0.0010	0.0054	0.536	0.410	<0.001	0.691	0.01400	0.00007	10.70	0.0003	0.00012	6.40	0.0002	<0.001	0.00009	0.0128	0.0092	<0.00002	0.000036	0.00234	<0.001
E11-111-1	<0.000002	<0.001	<0.001	0.019	1.530	<0.001	0.504	0.00028	0.00001	5.77	0.0003	0.00016	1.45	0.0003	<0.001	<0.00001	0.0133	0.0011	<0.00002	0.000002	0.00154	<0.001
ARD-12	0.000258	0.0013	0.0028	0.854	0.127	<0.001	0.831	0.01140	0.00003	10.70	0.0007	0.00007	3.10	0.0002	<0.001	0.00009	0.0085	0.0309	<0.00002	0.000005	0.00524	0.005
ARD-18	0.000030	0.0010	0.0017	0.191	1.390	<0.001	0.491	0.00218	0.00046	10.00	<0.0001	0.00007	2.75	0.0002	<0.001	0.00007	0.0123	0.0076	<0.00002	0.000004	0.00268	<0.001
ARD-24	0.000095	<0.001	0.0042	0.075	0.137	<0.001	0.226	0.00154	0.00005	8.44	<0.0001	0.00004	2.71	0.0002	<0.001	0.00008	0.0050	0.0044	<0.00002	0.000020	0.00133	<0.001
ARD-28	0.000138	0.0011	0.0008	0.113	2.640	<0.001	0.249	0.00218	0.00029	9.00	<0.0001	0.00026	2.60	0.0003	<0.001	0.00006	0.0043	0.0044	<0.00002	0.000300	0.00061	0.002
ARD-3	<0.000002	0.0008	0.0011	0.029	0.493	0.001	0.134	0.00154	0.00029	8.88	<0.0001	0.00012	2.78	0.0020	<0.001	0.00009	0.0077	0.0050	<0.00002	0.000253	0.00088	<0.001
ARD-37	0.000115	0.0011	<0.001	0.138	1.550	<0.001	0.478	0.00227	0.00004	8.49	0.0002	0.00005	2.53	<0.0002	<0.001	0.00008	0.0138	0.0108	<0.00002	0.000004	0.00389	<0.001
ARD-47	0.000820	0.0080	0.0019	0.948	0.364	<0.001	1.250	0.01860	0.00002	8.02	0.0039	0.00012	4.00	<0.0002	<0.001	0.00004	0.0162	0.0800	<0.00002	0.000008	0.00751	0.002
ARD-51	0.000091	<0.001	<0.001	0.220	0.370	<0.001	0.420	0.00401	0.00003	8.31	0.0001	0.00003	1.89	0.0002	<0.001	0.00009	0.0083	0.0119	<0.00002	0.000007	0.00104	0.001
ARD-57	0.000369	0.0033	0.0015	0.730	0.109	<0.001	0.945	0.01310	0.00001	8.99	0.0014	0.00006	2.62	<0.0002	<0.001	0.00020	0.0171	0.0385	<0.00002	0.000005	0.00571	0.017
ARD-58	0.000726	0.0163	0.0014	1.250	0.440	0.001	1.420	0.02140	0.00001	9.39	0.0030	0.00010	5.25	<0.0002	<0.001	0.00009	0.0226	0.1160	<0.00002	0.000022	0.00797	0.003
E10-013-1	0.000069	0.0008	0.0010	0.101	1.610	<0.001	0.679	0.00141	0.00003	5.10	0.0004	0.00060	1.95	0.0003	<0.001	0.00015	0.0072	0.0067	<0.00002	0.000009	0.00177	0.002
E10-023-1	0.000028	<0.001	0.0006	0.011	0.480	<0.001	0.168	0.00026	0.00090	6.76	<0.0001	0.00013	2.07	0.0003	<0.001	0.00006	0.0052	0.0003	<0.00002	0.000072	0.00032	<0.001
E10-031-2	0.000076	<0.001	0.0017	0.225	1.210	<0.001	0.283	0.00346	0.00044	7.99	0.0003	0.00113	4.09	0.0006	<0.001	0.00016	0.0095	0.0086	<0.00002	0.000163	0.00064	0.002
E10-038-1	0.000125	0.0007	0.0008	0.346	1.060	<0.001	0.716	0.00492	0.00006	6.10	0.0005	0.00013	3.17	0.0003	<0.001	0.00017	0.0098	0.0201	<0.00002	0.000008	0.00301	0.002
E10-038-3	0.000068	<0.001	<0.001	0.095	0.168	<0.001	0.706	0.00600	0.00003	3.39	0.0002	0.00015	2.61	<0.0002	<0.001	0.00006	0.0101	0.0038	<0.00002	0.000001	0.00375	<0.001
E10-042-1	0.000123	<0.001	0.0007	0.018	0.787	<0.001	0.187	0.00016	0.00022	7.85	0.0018	0.00013	2.20	0.0003	<0.001	0.00005	0.0066	0.0005	<0.00002	0.000062	0.00047	<0.001
E10-042-2	0.000064	0.0005	0.0016	0.131	1.500	<0.001	0.398	0.00136	0.00013	7.40	0.0003	0.00014	2.72	0.0004	<0.001	0.00028	0.0092	0.0083	<0.00002	0.000021	0.00128	0.001
E11-053-1	<0.000002	<0.001	0.0007	0.010	2.250	<0.001	0.345	0.00030	0.00006	6.23	0.0013	0.00085	2.01	0.0003	<0.001	<0.00001	0.0107	0.0009	<0.00002	0.000018	0.00170	<0.001
E11-095-1	0.000056	<0.001	<0.001	0.133	0.327	<0.001	0.411	0.00215	0.00007	6.54	0.0002	0.00012	2.49	0.0003	<0.001	0.00008	0.0109	0.0088	<0.00002	0.000007	0.00226	0.001
E11-097-1	0.000276	0.0010	0.0007	0.522	1.820	<0.001	0.564	0.00763	0.00003	5.34	0.0007	0.00049	4.52	0.0003	<0.001	0.00013	0.0060	0.0281	<0.00002	0.000028	0.00220	0.002
E11-100-3	0.000007	<0.001	<0.001	0.049	2.410	<0.001	0.385	0.00078	0.00003	5.12	0.0004	0.00015	1.95	0.0003	<0.001	0.00017	0.0070	0.0034	<0.00002	0.000003	0.00146	0.001
E11-138-2	0.000019	<0.001	<0.001	0.012	0.102	<0.001	0.562	0.00024	<0.00001	5.00	0.0001	0.00010	1.97	<0.0002	<0.001	0.00015	0.0404	0.0002	<0.00002	0.000006	0.00233	0.001
ARD-13	<0.000002	<0.001	0.0006	0.014	0.532	<0.001	0.309	0.00023	0.00015	7.39	<0.0001	0.00006	2.07	0.0002	<0.001	0.00004	0.0096	0.0008	<0.00002	0.000015	0.00167	<0.001
ARD-16	0.000019	0.0005	0.0016	0.069	0.339	<0.001	0.184	0.00209	0.00014	9.86	<0.0001	0.00043	3.92	<0.0002	<0.001	0.00007	0.0056	0.0073	<0.00002	0.000058	0.00042	0.001
ARD-21	0.000091	<0.001	0.0009	0.088	0.182	<0.001	0.209	0.00094	0.00008	9.57	<0.0001	0.00012	3.25	0.0003	<0.001	0.00010	0.0051	0.0034	<0.00002	0.000033	0.00088	0.001
ARD-4	<0.000002	0.0006	0.0016	0.023	0.261	<0.001	0.199	0.00185	0.00011	9.65	<0.0001	0.00007	3.47	<0.0002	<0.001	0.00010	0.0055	0.0029	<0.00002	0.000136	0.00018	<0.001
ARD-41	0.000051	0.0006	0.0006	0.176	0.203	<0.001	0.521	0.00189	0.00011	9.92	0.0001	0.00004	2.53	<0.0002	<0.001	0.00007	0.0136	0.0046	<0.00002	0.000028	0.00150	<0.001
ARD-45	0.000156	0.0006	0.0010	0.253	0.330	<0.001	0.234	0.00276	0.00010	8.56	0.0002	0.00023	4.64	<0.0002	<0.001	0.00022	0.0059	0.0123	<0.00002	0.000119	0.00052	0.001
ARD-48	0.000111	0.0005	<0.001	0.087	0.444	<0.001	0.206	0.00147	0.00008	7.11	0.0001	0.00011	2.78	<0.0002	<0.001	0.00009	0.0064	0.0046	<0.00002	0.000076	0.00062	<0.001
ARD-6	<0.000002	0.0007	0.0012	0.050	0.643	<0.001	0.386	0.00093	0.00011	7.79	<0.0001	0.00007	2.15	0.0003	<0.001	0.00009	0.0100	0.0027	<0.00002	0.000007	0.00163	0.002
ARD-60	0.000427	0.0005	0.0013	0.994	2.240	0.001	0.195	0.01020	0.00011	8.96	0.0001	0.00022	5.86	<0.0002	<0.001	0.00032	0.0108	0.0479	<0.00002	0.000307	0.00038	0.003
E10-013-3	0.000030	<0.001	0.0005	0.056	0.710	<0.001	0.241	0.00058	0.00009	6.95	<0.0001	0.00012	2.73	0.0004	<0.001	0.00008	0.0095	0.0035	<0.00002	0.000046	0.00056	0.001
E10-031-1	0.000074	0.0005	0.0009	0.314	0.358	<0.001	0.253	0.00356	0.00008	6.80	0.0002	0.00021	3.58	<0.0002	<0.001	0.00025	0.0123	0.0101	<0.00002	0.000046	0.00047	0.002
E10-046-1	0.000104	<0.001	0.0017	0.205	1.600	<0.001	0.165	0.00306	0.00004	8.76	<0.0001	0.00021	3.68	0.0003	<0.001	0.00008	0.0092	0.0106	<0.00002	0.000097	0.00034	0.001
E10-046-2	0.000043	<0.001	0.0543	0.048	0.161	<0.001	0.190	0.00107	0.00018	7.74	0.0001	0.00293	2.88	0.0003	<0.001	0.00039	0.0130	0.0055	<0.00002	0.001888	0.00072	0.033
E11-052-3	0.000007	<0.001	0.0015	0.089	0.781	<0.001	0.308	0.00182	0.00009	6.37	0.0002	0.00015	2.49	0.0002	<0.001	<0.00001	0.0129	0.0073	<0.00002	0.000014	0.00128	<0.001
E11-059-1	0.000052	<0.001	0.0009	0.257	1.080	<0.001	0.305	0.00377	0.00008	6.62	0.0001	0.00019	5.79	0.0004	<0.001	0.00012	0.0069	0.0113	<0.00002	0.000229	0.00041	0.002
E11-061-2	0.000160	0.0011	0.0012	0.317	3.190	<0.001	0.613	0.00320	0.00018	5.43	0.0004	0.00012	2.71	0.0004	<0.001	0.00008	0.0189	0.0237	<0.00002	0.000042	0.00222	0.002
E11-072-1	0.000037	0.0005	0.0007	0.101	0.642	<0.001	0.165	0.00261	0.00020	6.92	0.0001	0.00040	4.97	<0.0002	<0.001	0.00012	0.0078	0.0099	<0.00002	0.000240	0.00040	0.002
E11-077-1	0.000105	<0.001	0.0007	0.347	0.376	<0.001	0.406	0.00514	0.00018	8.89	0.0003	0.00025	5.19	0.0003	<0.001	0.00023	0.0125	0.0218	<0.00002	0.000071	0.00150	0.002
E11-081-1	0.000030	<0.001	0.0006	0.021	1.590	<0.001	0.328	0.00096	0.00020	6.00	0.0001	0.00012	2.34	0.0004	<0.001	0.00028	0.0094	0.0006	<0.00002	0.000027	0.00094	0.001
E11-091-1	0.000079	0.0008	0.0008	0.213	0.325	<0.001	0.396	0.00388	0.00053	7.54	0.0002	0.00032	3.55	<0.0002	<0.001	0.00025	0.0113	0.0103	<0.00002	0.000089	0.00175	0.001
E11-091-3	0.000029	<0.001	0.0005	0.044	0.429	<0.001	0.185	0.00071	0.00015	7.86	0.0001	0.00018	3.16	<0.0002	<0.001	0.00007	0.0080	0.0031	<0.00002	0.000075	0.00036	<0.001
E11-095-2	0.000037	<0.001	0.0011	0.077	0.825	<0.001	0.227	0.00078	0.00013	6.70	0.0002	0.00076	3.05	0.0004	<0.001	0.00015	0.0063	0.0011	<0.00002	0.000125	0.00065	0.004
E11-097-2	0.000059	<0.001	0.0005	0.278	1.740	<0.001	0.196	0.00571	0.00055	6.58	0.0002	0.00024	5.97	0.0004	<0.001	0.00008	0.0084	0.0140	<0.00002	0.000847	0.00043	0.001
E11-100-1	<0.000002	<0.001	<0.001	0.028	0.934	<0.001	0.166	0.00066	0.00060	6.41	0.0006	0.00042	2.51	0.0003	<0.001	<0.00001	0.0074	0.0029	<0.00002	0.000096	0.00032	0.001
E11-110-1	<0.000002	<0.001	0.0007	0.122	1.300	<0.001	0.179	0.00243	0.00013	7.43	0.0002	0.00027	3.98	0.0004	<0.001	<0.00001	0.0144	0.0071	<0.00002	0.000191	0.00049	<0.001
E11-112-3	0.000042	<0.001	0.0014	0.250	1.680	<0.001	0.226	0.00470	0.00046	6.37	0.0005	0.00087	5.72	0.0004	<0.001	<0.00001	0.0140	0.0165	<0.00002	0.000269	0.00071	0.003
E11-138-1	0.000223	<0.001	0.0054	0.037	0.871	<0.001	0.188	0.00178	0.00026	6.09	0.0001	0.00018	3.73	0.0003	<0.001	0.00010	0.0076	0.0009	<0.00002	0.000282	0.00041	0.001
ARD-53	0.000144	0.0014	0.0007	0.275	0.112	<0.001	0.629	0.00496	0.00002	10.30	0.0006	0.00005	1.44	<0.0002	<0.001	0.00007	0.0132	0.0090	<0.00002	0.000002	0.00205	0.002
ARD-55	0.000285	0.0025	0.0006	0.774	0.498	0.001	1.040	0.00807	0.00006	11.20	0.0010	0.00009	1.91	<0.0002	<0.001	0.00014	0.0229	0.0183	<0.00002	0.000005	0.00332	0.002
E11-052-2	0.000002	<0.001	0.0010	0.095	0.310	<0.001	0.520	0.00148	0.00021	5.78	0.0004	0.00028	1.68	0.0003	<0.001	<0.00001	0.0106	0.0050	<0.00002	0.000006	0.00069	0.001
E11-062-3	<0.000002	<0.001	<0.001	0.052	5.200	<0.001	0.436	0.00077	0.00033	6.13	0.0002	0.00049	2.19	0.0004	<0.001	<0.00001	0.0251	0.0050	<0.00002	0.000008	0.00421	<0.001
ARD-15	0.000613	0.0006	0.0019	1.250	0.352	<0.001	0.703	0.02160	0.00017	10.70	0.0006	0.00051	4.68	<0.0002	<0.001	0.00005	0.0122	0.0589	<0.00002	0.000013	0.00961	0.006
ARD-35	0.00327	0.0056	0.0116	6.890	1.450	0.003	3.290	0.08890	0.00011	10.50	0.0039	0.00016	10.6	0.0003	<0.001	0.00008	0.0373	0.1790	<0.00002	0.000020	0.02190	0.011
ARD-42	0.000036	0.0006	<0.001	0.039	1.460	<0.001	0.806	0.00075	0.00008	7.77	<0.0001	0.00004	1.25	<0.0002	<0.001	0.00005	0.0117	0.0004	<0.00002	0.000001	0.00174	0.002
ARD-50	0.000759	0.0008	0.0018	1.660	0.431	0.001	0.917	0.03410	0.00010	12.40	0.0007	0.00059	5.61	0.0004	<0.001	0.00013	0.0153	0.0989	<0.00002	0.000020	0.01120	0.005
E10-038-2	0.000631	0.0054	0.0022	1.210	0.556	<0.001	1.370	0.01680	0.00002	6.82	0.0016	0.00009	5.40	0.0003	<0.001	0.00004	0.0133	0.0818	<0.00002	0.000018	0.00711	0.002
E10-031-4	0.000062	<0.001	0.0013	0.232	0.515	<0.001	0.351	0.00301	0.00007	7.31	0.0002	0.00022	3.67	0.0004	<0.001	0.00008	0.0069	0.0066	<0.00002	0.000030	0.00071	0.001
E11-081-2	0.000047	<0.001	0.0030	0.198	1.370	<0.001	0.638	0.00151	0.00005	7.05	0.0002	0.00035	3.81	0.0004	<0.001	0.00008	0.0101	0.0024	<0.00002	0.000104	0.00029	<0.001
E11-081-3	0.000026	<0.001	0.0041	0.094	0.814	<0.001	0.752	0.00113	0.00005	5.30	0.0002	0.00022	2.78	0.0006	<0.001	0.00007	0.0103	0.0011	<0.00002	0.000049	0.00084	0.001
ARD-2	<0.000002	<0.001	0.0011	0.113	0.295	<0.001	0.191	0.00210	0.00030	8.64	<0.0001	0.00016	3.40	0.0002	<0.001	0.00009	0.0107	0.0076	<0.00002	0.000065	0.00049	0.001
ARD-46	0.000250	0.0010	0.0005	0.363	2.200	0.002	0.312	0.00566	0.00010	9.89	0.0005	0.00017	4.23	<0.0002	<0.001	0.00024	0.0103	0.0289	<0.00002	0.000042	0.00152	0.002
ARD-54	0.000442	0.0012	0.0011	1.510	0.819	0.002	0.833	0.01720	0.00004	10.90	0.0010	0.00026	7.39	<0.0002	<0.001	0.00018	0.0141	0.0825	<0.00002	0.000052	0.00256	0.004
ARD-8	0.000099	0.0018	0.0012	0.258	3.590	<0.001	0.487	0.00400	0.00008	8.73	0.0001	0.00045	3.15	0.0003	<0.001	0.00009	0.0108	0.0163	<0.00002	0.000009	0.00295	0.001
E11-062-4	0.000059	<0.001	0.0009	0.204	1.740	<0.001	0.215	0.00433	0.00004	8.65	0.0010	0.00029	5.06	0.0003	<0.001	<0.00001	0.0080	0.0137	<0.00002	0.000142	0.00081	0.001
ARD-52	0.000760	0.0010	0.0011	1.570	2.200	0.002	0.887	0.02600	0.00003	8.20	0.0008	0.00024	7.49	<0.0002	<0.001	0.00010	0.0234	0.1200	<0.00002	0.000061	0.00416	0.005
ARD-9	<0.000002	0.0006	0.0010	0.042	0.494	<0.001	0.260	0.00071	0.00003	9.21	<0.0001	0.00009	2.66	0.0002	<0.001	0.00004	0.0111	0.0026	<0.00002	0.000008	0.00131	0.009
ARD-23	0.000114	<0.001	0.0014	0.226	0.518	0.001	0.368	0.00444	0.00009	8.44	<0.0001	0.00017	4.28	0.0002	<0.001	0.00006	0.0094	0.0046	<0.00002	0.000117	0.00050	<0.001
ARD-30	0.000079	<0.001	0.0008	0.058	0.635	<0.001	0.462	0.00063	0.00002	5.99	<0.0001	0.00006	1.79	<0.0002	<0.001	0.00005	0.0105	0.0029	<0.00002	0.000001	0.00170	0.002
ARD-1	<0.000002	<0.001	0.0013	0.090	0.287	<0.001	0.208	0.00190	0.00034	7.65	<0.0001	0.00014	3.69	0.0002	<0.001	0.00008	0.0117	0.0046	<0.00002	0.000072	0.00053	0.002
ARD-10	<0.000002	<0.001	0.0010	0.037	1.800	<0.001	0.184	0.00074	0.00025	8.88	<0.0001	0.00004	2.33	0.0002	<0.001	0.00004	0.0065	0.0026	<0.00002	0.000135	0.00088	0.003
ARD-40	0.000313	<0.001	0.0129	1.120	0.767	<0.001	0.402	0.00880	0.00009	6.71	0.0001	0.00015	3.87	<0.0002	<0.001	0.00018	0.0085	0.0134	<0.00002	0.000055	0.00103	0.003
ARD-43	0.000128	0.0006	0.0005	0.239	0.412	<0.001	0.268	0.00358	0.00017	9.24	0.0002	0.00012	4.45	<0.0002	<0.001	0.00009	0.0058	0.0104	<0.00002	0.000103	0.00062	0.002
ARD-7	<0.000002	<0.001	0.0010	0.098	0.676	<0.001	0.180	0.00143	0.00052	7.93	<0.0001	0.00013	2.99	0.0003	<0.001	0.00006	0.0084	0.0033	<0.00002	0.000131	0.00041	0.016
E11-081-4	0.000070	<0.001	0.0105	0.261	1.270	<0.001	0.230	0.00300	0.00007	6.34	0.0002	0.00029	4.89	0.0003	<0.001	0.00013	0.0120	0.0055	<0.00002	0.000143	0.00033	0.001
E11-138-3	0.000020	<0.001	<0.001	<0.003	0.315	<0.001	0.592	0.00009	0.00007	4.55	0.0001	0.00006	1.65	0.0003	<0.001	0.00004	0.0328	<0.0001	<0.00002	0.000007	0.00137	<0.001
E11-053-3	0.000309	0.0029	0.0008	0.605	1.280	<0.001	0.946	0.01120	<0.00001	6.38	0.0008	0.00043	5.22	0.0003	<0.001	<0.00001	0.0189	0.0354	<0.00002	0.000016	0.00574	0.002
E11-059-2	0.000709	<0.001	0.0016	1.250	1.440	0.001	0.589	0.01290	0.00007	9.43	0.0006	0.00043	5.72	0.0004	<0.001	0.00005	0.0156	0.0738	<0.00002	0.000021	0.00792	0.003
ARD-14	0.000100	<0.001	0.0145	0.400	0.236	<0.001	0.336	0.00548	0.00027	8.58	<0.0001	0.00076	4.12	0.0002	<0.001	0.00013	0.0075	0.0152	<0.00002	0.000056	0.00119	0.002
ARD-17	0.000075	<0.001	0.0011	0.251	3.530	0.001	0.461	0.00276	0.06600	8.38	<0.0001	0.00023	2.57	0.0003	<0.001	0.00015	0.0105	0.0123	<0.00002	0.000020	0.00245	0.001
ARD-20	0.000102	<0.001	0.0012	0.050	0.149	<0.001	0.461	0.00056	0.00019	7.95	<0.0001	0.00004	2.04	0.0003	<0.001	0.00011	0.0094	0.0001	<0.00002	0.000005	0.00083	0.004
ARD-22	0.000077	<0.001	0.0006	0.006	1.410	<0.001	0.450	0.00008	0.00005	6.85	<0.0001	0.00004	1.65	0.0003	<0.001	0.00005	0.0056	0.0004	<0.00002	0.000003	0.00122	<0.001
ARD-36	0.000073	0.0009	0.0008	0.069	0.588	<0.001	0.474	0.00090	0.00007	9.85	0.0001	0.00006	1.78	<0.0002	<0.001	0.00006	0.0137	0.0020	<0.00002	0.000005	0.00153	<0.001
ARD-38	0.000135	0.0006	0.0037	0.447	0.207	<0.001	0.469	0.00425	0.00068	10.80	0.0002	0.00014	4.53	<0.0002	<0.001	0.00007	0.0053	0.0109	<0.00002	0.000055	0.00130	0.001
ARD-44	0.000090	0.0007	0.0007	0.130	0.981	<0.001	0.462	0.00191	0.00027	8.96	0.0002	0.00006	2.35	0.0003	<0.001	0.00006	0.0072	0.0014	<0.00002	0.000051	0.00113	<0.001
E11-112-2	0.000300	0.0034	0.0015	1.100	3.220	0.001	1.030	0.01130	0.00009	5.16	0.0011	0.00042	4.52	0.0005	<0.001	0.00006	0.0162	0.0670	<0.00002	0.000034	0.00344	0.002
E11-061-1	0.000215	<0.001	0.0009	0.022	1.910	<0.001	0.488	0.00046	0.00002	5.58	0.0003	0.00012	2.02	0.0003	<0.001	0.00007	0.0136	0.0010	<0.00002	0.000042	0.00227	0.002
E11-054-1	0.000018	<0.001	0.0005	0.030	0.319	<0.001	0.460	0.00051	0.00004	5.96	0.0002	0.00010	2.11	0.0002	<0.001	0.00004	0.0102	0.0037	<0.00002	0.000011	0.00103	<0.001
E11-054-2	0.000018	<0.001	<0.001	0.037	0.399	<0.001	0.445	0.00054	0.00001	6.31	0.0001	0.00011	2.36	0.0002	<0.001	0.00006	0.0095	0.0021	<0.00002	0.000015	0.00125	<0.001
E11-053-2	0.000010	<0.001	0.0012	0.066	3.000	<0.001	0.428	0.00101	0.00009	6.13	0.0004	0.00054	2.47	0.0003	<0.001	<0.00001	0.0238	0.0049	<0.00002	0.000003	0.00306	<0.001
E11-051-1	0.000016	<0.001	<0.001	0.008	0.471	<0.001	0.338	0.00014	0.00004	5.99	<0.0001	0.00012	1.87	0.0003	<0.001	0.00007	0.0058	0.0003	<0.00002	0.000003	0.00068	<0.001
CL10-03-1	0.000036	<0.001	0.0024	0.050	2.190	<0.001	0.320	0.00047	0.00070	6.90	0.0001	0.00018	1.65	0.0005	<0.001	0.00012	0.0109	0.0011	<0.00002	0.000106	0.00025	0.001
E10-042-3	0.000067	0.0022	0.0027	0.450	0.721	0.001	0.542	0.00383	0.00039	9.21	0.0004	0.00017	3.22	0.0004	<0.001	0.00018	0.0108	0.0066	<0.00002	0.000038	0.00129	0.001
ARD-26	0.000106	0.0007	0.0008	0.158	0.273	<0.001	0.378	0.00208	0.00009	8.24	<0.0001	0.00013	3.03	0.0003	<0.001	0.00006	0.0072	0.0118	<0.00002	0.000040	0.00126	0.001
E10-013-4	0.000033	<0.001	0.0005	0.105	0.354	<0.001	0.398	0.00131	0.00037	6.04	0.0001	0.00016	2.12	0.0003	<0.001	0.00006	0.0103	0.0027	<0.00002	0.000028	0.00085	<0.001
ARD-39	0.000729	0.0019	0.0197	0.431	0.443	0.004	0.452	0.02620	0.00017	11.50	0.0006	0.00018	5.81	0.0002	<0.001	0.00016	0.0087	0.0299	<0.00002	0.000047	0.00462	0.002
E11-054-5	0.000398	0.0009	0.0347	0.502	0.541	<0.001	0.719	0.00729	0.00005	8.10	0.0003	0.00027	5.18	0.0003	<0.001	0.00013	0.0061	0.0135	<0.00002	0.000071	0.00280	0.003
ARD-56	0.000042	0.0005	0.0005	0.191	0.648	0.001	0.214	0.00201	0.00024	9.84	0.0001	0.00017	3.96	0.0003	<0.001	0.00046	0.0068	0.0086	<0.00002	0.000045	0.00063	0.001
ARD-59	0.000189	0.0006	0.0042	0.336	0.915	<0.001	0.222	0.00426	0.00036	8.49	0.0002	0.00046	4.10	<0.0002	<0.001	0.00022	0.0066	0.0109	<0.00002	0.000438	0.00050	0.001
E11-112-1	0.000018	<0.001	<0.001	0.037	0.889	<0.001	0.265	0.00079	0.00017	6.47	0.0010	0.00023	2.83	0.0006	<0.001	0.00001	0.0056	0.0027	<0.00003	0.000062	0.00089	<0.001
E11-062-2	<0.000002	<0.001	<0.001	0.066	2.070	<0.001	0.392	0.00071	0.00017	4.60	0.0002	0.00014	1.93	0.0003	<0.001	<0.00001	0.0114	0.0037	<0.00002	0.000005	0.00263	<0.001
E11-054-3	0.000051	<0.001	0.0007	0.129	0.397	<0.001	0.224	0.00213	0.00023	7.10	0.0002	0.00015	5.96	0.0003	<0.001	0.00009	0.0068	0.0057	<0.00002	0.000138	0.00045	0.001
E11-112-4	0.000033	<0.001	0.0026	0.192	0.591	<0.001	0.426	0.00302	0.00009	6.05	0.0026	0.00260	3.11	0.0003	<0.001	0.00020	0.0075	0.0041	<0.00002	0.000021	0.00070	0.001
ARD-19	0.000096	<0.001	0.0023	0.612	0.502	0.001	0.463	0.00630	0.00036	7.51	<0.0001	0.00020	5.26	<0.0002	<0.001	0.00013	0.0060	0.0076	<0.00002	0.000126	0.00043	0.003
ARD-32	0.000139	0.0007	0.0063	0.819	0.410	<0.001	0.491	0.00856	0.00012	9.01	0.0004	0.00017	4.32	0.0002	<0.001	0.00018	0.0105	0.0277	<0.00002	0.000214	0.00106	0.003
ARD-5	0.000086	0.0006	0.0011	0.253	0.141	<0.001	0.357	0.00248	0.00025	10.10	<0.0001	0.00034	3.58	0.0003	<0.001	0.00006	0.0088	0.0161	<0.00002	0.000086	0.00161	0.004
E11-062-1	0.000034	<0.001	0.0019	0.214	1.290	<0.001	0.178	0.00363	0.00004	8.01	0.0002	0.00031	5.57	0.0003	<0.001	0.00002	0.0096	0.0168	<0.00002	0.000252	0.00056	0.001
E11-107-1	<0.000002	<0.001	0.0008	0.054	1.470	<0.001	0.250	0.00089	0.00006	4.93	0.0009	0.00025	2.81	0.0003	<0.001	0.00144	0.0051	0.0063	<0.00002	0.000182	0.00082	<0.001
E11-052-1	<0.000002	<0.001	<0.001	0.056	0.220	<0.001	0.307	0.00081	0.00019	5.68	0.0003	0.00021	2.57	0.0003	<0.001	<0.00001	0.0076	0.0024	<0.00002	0.000025	0.00169	<0.001
E11-091-2	0.000402	<0.001	0.0025	0.778	1.240	<0.001	0.692	0.01250	0.00025	5.78	0.0007	0.00034	4.10	<0.0002	<0.001	0.00049	0.0148	0.0464	<0.00002	0.000008	0.00727	0.003

Table A-12: Mine Rock NAG Leachate Results

Sample ID	Drill Hole ID	From	To	Consultant	Waste Classification	Lithology	pH	Alkalinity	Conductivity	Cl	SO_4	Hg	Ag	Al	As	Ba	Be	Bi	Ca
		(m)	(m)				Units	mg/L as $CaCO_3$	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
						O.Reg 560/94	6.5-9								0.5				
						PWQO	6.5-8.5					0.0002	0.0001	0.015-0.075	0.1		0.011-1.1		
ARD-11	E11-087	84.30	86.50	Knight Piésold	Mine Rock	Diorite Breccia	8.78	111	209	<2.0	8.4	<0.00001	0.00001	1.47	0.0029	0.00196	<0.00002	<0.00001	42.9
ARD-31	E12-179	354.75	356.85	Knight Piésold	Mine Rock	Diorite Breccia	10.00	88	182	<2.0	14.0	<0.00001	<0.00001	3.63	0.0006	0.00098	<0.00002	<0.00001	58.1
ARD-34	E11-075	95.40	97.50	Knight Piésold	Mine Rock	Diorite Breccia	9.69	60	117	<2.0	<2.0	<0.00001	<0.00001	3.60	<0.0002	0.00141	<0.00002	<0.00001	31.3
ARD-49	E11-140	372.00	373.90	Knight Piésold	Mine Rock	Diorite Breccia	9.99	67	141	<2.0	3.7	<0.00001	<0.00001	3.85	<0.0002	0.00168	<0.00002	<0.00001	39.8
E11-077-2	E11-077	313.00	315.24	Knight Piésold	Mine Rock	Diorite Breccia	9.86	75	148	<2.0	5.8	<0.0001	<0.00001	4.62	<0.0002	0.00282	<0.00002	<0.00001	40.5
E11-107-2	E11-107	153.77	155.54	Knight Piésold	Mine Rock	Diorite Breccia	8.53	151	268	1.7	3.9	<0.0001	<0.00001	0.58	0.0010	0.00075	<0.00002	<0.00001	63.9
E11-110-2	E11-110	131.36	133.24	Knight Piésold	Mine Rock	Diorite Breccia	7.39	15	115	<2.0	31.0	<0.0001	<0.00001	0.14	0.0126	0.00058	<0.00002	<0.00001	16.5
ARD-25	E10-30	211.22	213.22	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.97	57	130	<2.0	9.8	0.00001	<0.00001	3.00	0.0010	0.00090	<0.00002	<0.00001	55.7
ARD-27	E11-049	383.00	384.90	Knight Piésold	Mine Rock	Magma Mixing Breccia	8.92	109	190	<2.0	2.2	0.00003	<0.00001	1.32	0.0078	0.00923	<0.00002	<0.00001	38.9
ARD-33	E11-048	164.30	166.60	Knight Piésold	Mine Rock	Magma Mixing Breccia	10.20	75	197	2.1	20.0	<0.00001	<0.00001	2.55	<0.0002	0.00100	<0.00002	<0.00001	60.6
E10-013-2	E10-013	50.00	52.20	Knight Piésold	Mine Rock	Magma Mixing Breccia	10.80	79	198	<2.0	5.9	<0.0001	<0.00001	3.27	0.0003	0.00174	<0.00002	<0.00001	56.5
E10-031-3	E10-031	500.00	502.00	Knight Piésold	Mine Rock	Magma Mixing Breccia	9.26	56	133	<2.0	13.0	<0.0001	<0.00001	4.40	0.0002	0.00544	<0.00002	<0.00001	55.3
E11-054-4	E11-054	128.40	130.80	Knight Piésold	Mine Rock	Magma Mixing Breccia	10.20	92	185	<2.0	3.6	<0.0001	<0.00001	3.40	0.0005	0.00312	<0.00002	<0.00001	46.8
E11-100-2	E11-100	107.57	109.89	Knight Piésold	Mine Rock	Magma Mixing Breccia	11.20	145	388	<2.0	7.4	<0.0001	<0.00001	3.88	<0.0002	0.00334	<0.00002	<0.00001	66.7
ARD-29	E11-061	262.30	264.00	Knight Piésold	Mine Rock	Fault	7.37	10	28	<2.0	<2.0	0.00001	<0.00001	0.08	0.0095	0.00089	<0.00002	<0.00001	2.31
E11-066-1	E11-066	312.00	316.20	Knight Piésold	Mine Rock	Fault	8.98	65	128	<2.0	<2.0	<0.0001	0.00001	0.30	0.0009	0.00172	<0.00002	<0.00001	26.0
E11-111-1	E11-111	152.30	154.16	Knight Piésold	Mine Rock	Intrusive Feldspar Porphyry	10.50	102	204	<2.0	5.6	<0.0001	<0.00001	3.15	0.0003	0.00431	<0.00002	<0.00001	49.5
ARD-12	E12-217	547.00	549.50	Knight Piésold	Mine Rock	Diorite	10.30	89	178	<2.0	5.6	<0.00001	<0.00001	2.74	<0.0002	0.00129	<0.00002	<0.00001	44.9
ARD-18	E11-098	247.40	249.30	Knight Piésold	Mine Rock	Diorite	9.98	74	157	<2.0	12.0	<0.00001	<0.00001	3.75	<0.0002	0.00584	<0.00002	<0.00001	52.6
ARD-24	E11-062	15.90	17.80	Knight Piésold	Mine Rock	Diorite	10.20	86	179	<2.0	9.5	0.00004	<0.00001	4.10	<0.0002	0.00137	<0.00002	<0.00001	47.3
ARD-28	E11-049	38.30	40.20	Knight Piésold	Mine Rock	Diorite	9.88	82	393	<2.0	130.0	<0.00001	<0.00001	1.66	0.0015	0.00229	<0.00002	<0.00001	90.4
ARD-3	E10-036	103.30	105.20	Knight Piésold	Mine Rock	Diorite	10.70	102	242	<2.0	14.0	<0.00001	<0.00001	6.54	<0.0002	0.00089	<0.00002	<0.00001	64.7
ARD-37	E11-071	281.10	283.10	Knight Piésold	Mine Rock	Diorite	9.96	78	181	<2.0	9.8	<0.00001	<0.00001	1.97	0.0008	0.01820	<0.00002	<0.00001	40.1
ARD-47	E12-198	210.00	211.80	Knight Piésold	Mine Rock	Diorite	9.74	58	145	<2.0	15.0	0.00002	<0.00001	1.67	0.0003	0.00227	<0.00002	<0.00001	44.6
ARD-51	E11-141	183.70	184.50	Knight Piésold	Mine Rock	Diorite	11.00	105	281	<2.0	4.7	<0.00001	<0.00001	4.28	<0.0002	0.00178	<0.00002	<0.00001	56.5
ARD-57	CL10-01	178.20	180.00	Knight Piésold	Mine Rock	Diorite	10.50	58	180	<2.0	11.0	0.00001	<0.00001	2.20	<0.0002	0.00130	<0.00002	<0.00001	65.0
ARD-58	CL10-01	227.50	229.50	Knight Piésold	Mine Rock	Diorite	9.19	66	140	<2.0	5.6	<0.00001	<0.00001	2.33	<0.0002	0.06420	<0.00002	<0.00001	42.4
E10-013-1	E10-013	5.78	7.80	Knight Piésold	Mine Rock	Diorite	9.71	80	159	<2.0	4.8	<0.0001	<0.00001	0.89	0.0032	0.00599	<0.00002	<0.00001	28.6
E10-023-1	E10-023	30.00	31.90	Knight Piésold	Mine Rock	Diorite	8.85	47	118	<2.0	9.9	<0.0001	<0.00001	3.64	0.0004	0.00046	<0.00002	<0.00001	37.2
E10-031-2	E10-031	158.00	160.10	Knight Piésold	Mine Rock	Diorite	9.56	48	145	<2.0	26.0	<0.0001	<0.00001	4.02	0.0006	0.00042	<0.00002	<0.00001	42.9
E10-038-1	E10-038	74.00	75.90	Knight Piésold	Mine Rock	Diorite	7.70	69	138	<2.0	<2.0	<0.0001	<0.00001	0.32	0.0021	0.01580	<0.00002	<0.00001	20.3
E10-038-3	E10-038	158.00	159.85	Knight Piésold	Mine Rock	Diorite	8.42	55	156	<2.0	23.0	<0.0001	<0.00001	0.39	0.0024	0.00465	<0.00002	<0.00001	27.9
E10-042-1	E10-042	14.00	16.00	Knight Piésold	Mine Rock	Diorite	9.04	52	117	<2.0	11.0	<0.0001	<0.00001	4.49	0.0020	0.00153	<0.00002	<0.00001	34.9
E10-042-2	E10-042	89.50	91.70	Knight Piésold	Mine Rock	Diorite	9.22	63	233	<2.0	70.0	<0.0001	<0.00001	1.95	0.0032	0.00306	<0.00002	<0.00001	53.6
E11-053-1	E11-053	152.59	154.40	Knight Piésold	Mine Rock	Diorite	11.20	118	427	<2.0	21.0	<0.0001	<0.00001	3.92	0.0003	0.00437	<0.00002	<0.00001	65.9
E11-095-1	E11-095	284.60	286.40	Knight Piésold	Mine Rock	Diorite	7.98	39	125	<2.0	13.0	<0.0001	<0.00001	2.60	0.0003	0.00118	<0.00002	<0.00001	53.7
E11-097-1	E11-097	35.10	37.20	Knight Piésold	Mine Rock	Diorite	7.47	53	97	<2.0	<2.0	<0.0001	<0.00001	0.27	0.0076	0.02600	<0.00002	<0.00001	10.5
E11-100-3	E11-100	224.56	226.65	Knight Piésold	Mine Rock	Diorite	10.50	90	182	<2.0	<2.0	<0.0001	<0.00001	2.01	0.0005	0.00586	<0.00002	<0.00001	33.2
E11-138-2	E11-138	211.30	213.33	Knight Piésold	Mine Rock	Diorite	10.20	86	177	<2.0	12.0	<0.0001	<0.00001	3.69	<0.0002	0.02420	<0.00002	<0.00001	56.0
ARD-13	E11-096	77.15	79.35	Knight Piésold	Mine Rock	Tonalite	10.60	99	214	<2.0	<2.0	0.00001	<0.00001	3.53	<0.0002	0.01940	<0.00002	<0.00001	50.8
ARD-16	E11-098	24.40	26.60	Knight Piésold	Mine Rock	Tonalite	10.20	91	176	<2.0	6.1	<0.00001	<0.00001	3.84	0.0012	0.00114	<0.00002	<0.00001	46.6
ARD-21	E11-114	8.08	10.38	Knight Piésold	Mine Rock	Tonalite	9.08	112	198	2.2	4.7	<0.00001	<0.00001	1.61	0.0024	0.00068	<0.00002	<0.00001	46.9
ARD-4	E10-045	229.60	231.80	Knight Piésold	Mine Rock	Tonalite	9.15	114	210	<2.0	8.5	<0.00001	<0.00001	1.86	0.0016	0.00025	<0.00002	<0.00001	42.9
ARD-41	E11-120	74.50	76.40	Knight Piésold	Mine Rock	Tonalite	10.20	80	201	3.6	18.0	<0.00001	<0.00001	3.40	<0.0002	0.00141	<0.00002	<0.00001	51.9
ARD-45	E11-140	274.50	276.60	Knight Piésold	Mine Rock	Tonalite	8.26	115	252	2.0	21.0	<0.00001	<0.00001	1.36	0.0044	0.00058	<0.00002	<0.00001	51.3
ARD-48	E11-129	57.10	59.60	Knight Piésold	Mine Rock	Tonalite	9.83	52	133	<2.0	9.6	<0.00001	<0.00001	3.74	0.0002	0.00037	<0.00002	<0.00001	46.1
ARD-6	E11-066	70.40	72.40	Knight Piésold	Mine Rock	Tonalite	10.40	90	222	<2.0	16.0	0.00003	<0.00001	3.36	<0.0002	0.03230	<0.00002	<0.00001	51.3
ARD-60	E12-213	138.90	141.00	Knight Piésold	Mine Rock	Tonalite	7.91	52	231	2.8	55.0	<0.00001	<0.00001	1.57	0.0026	0.00335	<0.00002	<0.00001	40.6
E10-013-3	E10-013	60.00	62.28	Knight Piésold	Mine Rock	Tonalite	10.30	53	148	<2.0	13.0	<0.0001	<0.00001	4.26	0.0002	0.00108	<0.00002	<0.00001	38.7
E10-031-1	E10-031	9.10	11.00	Knight Piésold	Mine Rock	Tonalite	8.31	71	147	2.7	4.0	<0.0001	<0.00001	2.00	0.0006	0.00232	<0.00002	<0.00001	26.5
E10-046-1	E10-046	15.80	18.07	Knight Piésold	Mine Rock	Tonalite	9.11	55	120	4.5	<2.0	<0.0001	<0.00001	3.35	0.0007	0.00194	<0.00002	<0.00001	44.0
E10-046-2	E10-046	95.00	97.20	Knight Piésold	Mine Rock	Tonalite	10.40	118	179	<2.0	18.0	<0.0001	<0.00001	5.63	0.0003	0.00150	<0.00002	<0.00001	40.2
E11-052-3	E11-052	221.50	223.13	Knight Piésold	Mine Rock	Tonalite	10.70	80	270	<2.0	35.0	<0.0001	<0.00001	2.74	<0.0002	0.00166	<0.00002	<0.00001	57.6
E11-059-1	E11-059	25.57	27.61	Knight Piésold	Mine Rock	Tonalite	7.91	90	183	2.6	4.3	<0.0001	<0.00001	0.78	0.0085	0.00255	<0.00002	<0.00001	32.1
E11-061-2	E11-061	338.00	340.20	Knight Piésold	Mine Rock	Tonalite	10.20	71	213	<2.0	23.0	<0.0001	<0.00001	1.58	<0.0002	0.00699	<0.00002	<0.00001	42.8
E11-072-1	E11-072	155.50	157.65	Knight Piésold	Mine Rock	Tonalite	9.94	64	161	<2.0	20.0	<0.0001	<0.00001	3.02	0.0012	0.00146	<0.00002	<0.00001	52.6
E11-077-1	E11-077	142.70	144.85	Knight Piésold	Mine Rock	Tonalite	9.09	136	262	5.7	5.5	<0.0001	<0.00001	0.46	0.0016	0.00296	<0.00002	<0.00001	52.8
E11-081-1	E11-081	376.00	378.25	Knight Piésold	Mine Rock	Tonalite	10.60	97	214	<2.0	7.0	<0.0001	<0.00001	6.27	<0.0002	0.00084	<0.00002	<0.00001	44.1
E11-091-1	E11-091	13.90	15.95	Knight Piésold	Mine Rock	Tonalite	7.33	40	150	3.1	33.0	<0.0001	<0.00001	0.61	0.0043	0.00097	<0.00002	<0.00001	24.8
E11-091-3	E11-091	311.00	313.13	Knight Piésold	Mine Rock	Tonalite	10.10	82	154	<2.0	4.3	<0.0001	<0.00001	2.79	0.0007	0.00404	<0.00002	<0.00001	43.8
E11-095-2	E11-095	18.90	20.90	Knight Piésold	Mine Rock	Tonalite	10.20	34	139	<2.0	18.0	<0.0001	<0.00001	3.72	0.0005	0.00125	<0.00002	<0.00001	39.4
E11-097-2	E11-097	153.70	155.70	Knight Piésold	Mine Rock	Tonalite	9.99	81	174	<2.0	3.8	<0.0001	<0.00001	3.82	0.0004	0.00222	<0.00002	<0.00001	49.3
E11-100-1	E11-100	39.45	41.62	Knight Piésold	Mine Rock	Tonalite	9.88	80	271	<2.0	80.0	<0.0001	<0.00001	2.22	0.0007	0.00044	<0.00002	<0.00001	67.0
E11-110-1	E11-110	8.20	10.12	Knight Piésold	Mine Rock	Tonalite	10.50	73	173	<2.0	6.9	<0.0001	<0.00001	2.70	0.0003	0.00184	<0.00002	<0.00001	40.3
E11-112-3	E11-112	161.40	163.71	Knight Piésold	Mine Rock	Tonalite	9.79	83	186	3.2	11.0	<0.0001	<0.00001	1.98	0.0014	0.00526	<0.00002	<0.00001	35.8
E11-138-1	E11-138	15.50	17.88	Knight Piésold	Mine Rock	Tonalite	9.54	79	176	<2.0	17.0	<0.0001	<0.00001	4.25	0.0007	0.00057	<0.00002	<0.00001	39.9
ARD-53	E12-200	185.00	187.00	Knight Piésold	Mine Rock	Mafic Dykes	10.90	86	257	<2.0	9.7	<0.00001	0.00001	2.74	<0.0002	0.00077	<0.00002	<0.00001	80.2
ARD-55	E12-294	178.00	180.00	Knight Piésold	Mine Rock	Mafic Dykes	7.44	17	142	<2.0	42.0	0.00002	<0.00001	0.26	0.0011	0.00351	<0.00002	<0.00001	20.8
E11-052-2	E11-052	125.15	127.25	Knight Piésold	Mine Rock	Mafic Dykes	11.20	135	426	<2.0	31.0	<0.0001	<0.00001	3.92	0.0003	0.00185	<0.00002	<0.00001	78.0
E11-062-3	E11-062	254.80	257.01	Knight Piésold	Mine Rock	Mafic Dykes	10.50	103	242	<2.0	18.0	<0.0001	<0.00001	2.60	<0.0002	0.01230	<0.00002	<0.00001	49.7
ARD-15	E11-096	150.45	152.25	Knight Piésold	Mine Rock	Diabase Dykes	7.57	13	74	<2.0	18.0	<0.00001	<0.00001	0.30	0.0018	0.00058	<0.00002	<0.00001	5.51
ARD-35	E11-075	220.91	223.31	Knight Piésold	Mine Rock	Diabase Dykes	7.55	16	339	<2.0	20.0	<0.00001	<0.00001	2.92	0.0004	0.00087	<0.00002	<0.00001	51.0
ARD-42	E11-120	108.90	110.40	Knight Piésold	Mine Rock	Diabase Dykes	10.90	96	280	<2.0	4.0	<0.00001	<0.00001	2.47	<0.0002	0.00196	<0.00002	<0.00001	76.9
ARD-50	E11-144	138.81	139.61	Knight Piésold	Mine Rock	Diabase Dykes	8.30	68	186	<2.0	26.0	<0.00001	<0.00001	1.07	0.0040	0.00099	<0.00002	<0.00001	31.6
E10-038-2	E10-038	101.00	103.00	Knight Piésold	Mine Rock	Diabase Dykes	9.98	58	188	3.7	29.0	<0.0001	<0.00001	2.06	0.0003	0.02880	<0.00002	<0.00001	53.3
E10-031-4	E10-031	585.00	586.30	Knight Piésold	Outside Pit	Diorite Breccia	7.98	52	150	<2.0	26.0	<0.0001	<0.00001	2.20	0.0006	0.00046	<0.00002	<0.00001	43.8
E11-081-2	E11-081	511.66	513.50	Knight Piésold	Outside Pit	Diorite Breccia	7.70	28	286	<2.0	94.0	<0.0001	<0.00001	0.30	0.0014	0.00172	<0.00002	<0.00001	44.2
E11-081-3	E11-081	589.00	592.40	Knight Piésold	Outside Pit	Diorite Breccia	7.96	40	221	<2.0	51.0	<0.0001	<0.00001	0.42	0.0016	0.00100	<0.00002	<0.00001	45.3
ARD-2	E10-036	376.50	378.75	Knight Piésold	Outside Pit	Magma Mixing Breccia	9.32	96	180	<2.0	7.0	0.00001	<0.00001	2.28	0.0010	0.00025	<0.00002	<0.00001	51.9
ARD-46	E11-145	483.30	485.10	Knight Piésold	Outside Pit	Magma Mixing Breccia	7.55	60	126	2.1	3.5	<0.00001	<0.00001	0.54	0.0051	0.01770	<0.00002	<0.00001	11.9
ARD-54	E12-205	668.00	669.60	Knight Piésold	Outside Pit	Magma Mixing Breccia	7.89	127	233	2.4	<2.0	<0.00001	<0.00001	1.26	0.0110	0.00681	<0.00002	<0.00001	53.3
ARD-8	E11-082	455.00	456.90	Knight Piésold	Outside Pit	Magma Mixing Breccia	8.25	66	164	<2.0	13.0	<0.00001	<0.00001	1.30	0.0013	0.02810	<0.00002	<0.00001	17.6
E11-062-4	E11-062	395.50	397.39	Knight Piésold	Outside Pit	Magma Mixing Breccia	9.68	90	164	<2.0	6.5	<0.0001	<0.00001	2.00	0.0022	0.00435	<0.00002	<0.00001	33.9
ARD-52	E11-145	298.00	299.70	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	8.16	124	231	<2.0	2.3	<0.00001	<0.00001	1.82	0.0004	0.01270	<0.00002	<0.00001	41.4
ARD-9	E11-082	376.00	378.00	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	9.60	105	171	<2.0	3.2	0.00003	<0.00001	2.78	<0.0002	0.00196	<0.00002	<0.00001	38.5
ARD-23	E10-038	575.00	577.20	Knight Piésold	Outside Pit	Diorite	8.25	146	252	<2.0	2.6	<0.00001	0.00001	1.12	0.0011	0.00015	<0.00002	<0.00001	52.7
ARD-30	E12-206	260.70	262.60	Knight Piésold	Outside Pit	Diorite	10.60	86	190	<2.0	<2.0	0.00001	<0.00001	4.78	<0.0002	0.00296	<0.00002	<0.00001	63.1
ARD-1	E10-036	316.85	318.95	Knight Piésold	Outside Pit	Tonalite	9.93	89	161	<2.0	6.2	<0.00001	<0.00001	3.21	<0.0002	0.00079	<0.00002	<0.00001	44.6
ARD-10	E11-087	242.90	244.90	Knight Piésold	Outside Pit	Tonalite	10.30	93	200	<2.0	13.0	<0.00001	0.00001	4.01	<0.0002	0.00495	<0.00002	<0.00001	43.8
ARD-40	E11-120	668.90	671.00	Knight Piésold	Outside Pit	Tonalite	9.53	42	132	<2.0	19.0	0.00001	<0.00001	3.94	<0.0002	0.00109	<0.00002	<0.00001	48.9
ARD-43	E11-122	384.00	385.90	Knight Piésold	Outside Pit	Tonalite	8.17	157	283	2.9	10.0	<0.00001	<0.00001	1.34	0.0038	0.00023	<0.00002	<0.00001	63.8
ARD-7	E11-082	343.00	344.80	Knight Piésold	Outside Pit	Tonalite	10.40	106	195	<2.0	2.6	<0.00001	<0.00001	3.61	0.0002	0.00270	<0.00002	<0.00001	53.1
E11-081-4	E11-081	645.65	649.00	Knight Piésold	Outside Pit	Tonalite	9.90	90	253	<2.0	38.0	<0.0001	<0.00001	2.56	0.0005	0.00277	<0.00002	<0.00001	51.3
E11-138-3	E11-138	241.00	243.10	Knight Piésold	Outside Pit	Tonalite	9.86	61	240	<2.0	54.0	<0.0001	<0.00001	3.64	0.0003	0.00465	<0.00002	<0.00001	61.0
E11-053-3	E11-053	478.45	480.50	Knight Piésold	Outside Pit	Diabase Dykes	5.48	<2	219	<2.0	90.0	<0.0001	0.00002	0.15	<0.0002	0.05420	0.00009	<0.00001	22.8
E11-059-2	E11-059	492.40	493.90	Knight Piésold	Outside Pit	Diabase Dykes	7.02	9	135	<2.0	39.0	<0.0001	<0.00001	0.14	0.0028	0.00650	<0.00002	<0.00001	11.8
ARD-14	E11-096	467.44	469.94	Knight Piésold	Ore Grade	Diorite Breccia	10.40	102	230	<2.0	27.0	<0.00001	<0.00001	2.69	<0.0002	0.00312	<0.00002	<0.00001	60.4
ARD-17	E11-098	222.00	224.00	Knight Piésold	Ore Grade	Diorite Breccia	10.10	65	166	<2.0	11.0	0.00001	<0.00001	2.42	<0.0002	0.00850	<0.00002	<0.00001	42.6
ARD-20	E11-099	261.90	264.00	Knight Piésold	Ore Grade	Diorite Breccia	10.30	100	213	<2.0	16.0	0.00003	<0.00001	2.85	<0.0002	0.00140	<0.00002	<0.00001	59.2
ARD-22	E11-114	16.50	18.50	Knight Piésold	Ore Grade	Diorite Breccia	10.60	113	234	<2.0	3.8	<0.00001	<0.00001	2.77	<0.0002	0.00757	<0.00002	<0.00001	61.3
ARD-36	E11-071	535.70	537.80	Knight Piésold	Ore Grade	Diorite Breccia	10.60	80	238	<2.0	26.0	<0.00001	<0.00001	4.22	0.0002	0.00219	<0.00002	<0.00001	70.3
ARD-38	E11-078	267.30	269.60	Knight Piésold	Ore Grade	Diorite Breccia	7.37	17	81	<2.0	15.0	<0.00001	<0.00001	0.48	0.0015	0.00032	<0.00002	<0.00001	9.20
ARD-44	E11-122	100.20	102.40	Knight Piésold	Ore Grade	Diorite Breccia	9.98	68	157	<2.0	13.0	0.00002	<0.00001	3.77	<0.0002	0.00036	<0.00002	<0.00001	52.5
E11-112-2	E11-112	137.83	139.07	Knight Piésold	Ore Grade	Diorite Breccia	10.60	95	285	<2.0	34.0	<0.0001	<0.00001	1.58	<0.0002	0.00652	<0.00002	<0.00001	48.2
E11-061-1	E11-061	90.95	92.73	Knight Piésold	Ore Grade	Diorite Breccia	9.94	85	186	<2.0	7.1	<0.0001	<0.00001	2.09	0.0004	0.00922	<0.00002	<0.00001	29.3
E11-054-1	E11-054	33.87	36.14	Knight Piésold	Ore Grade	Diorite Breccia	8.28	45	119	<2.0	5.2	<0.0001	<0.00001	3.90	0.0005	0.00134	<0.00002	<0.00001	45.6
E11-054-2	E11-054	50.46	52.61	Knight Piésold	Ore Grade	Diorite Breccia	10.60	52	165	<2.0	3.7	<0.0001	<0.00001	4.10	0.0002	0.00115	<0.00002	<0.00001	41.0
E11-053-2	E11-053	224.02	226.35	Knight Piésold	Ore Grade	Diorite Breccia	10.80	86	314	<2.0	28.0	<0.0001	<0.00001	2.16	0.0002	0.01710	<0.00002	<0.00001	46.3
E11-051-1	E11-051	70.80	72.72	Knight Piésold	Ore Grade	Diorite Breccia	8.72	41	113	<2.0	13.0	<0.0001	<0.00001	2.95	<0.0002	0.00295	<0.00002	<0.00001	43.7
CL10-03-1	CL10-03	121.40	122.60	Knight Piésold	Ore Grade	Diorite Breccia	6.99	11	687	2.5	330.0	<0.0001	0.00011	0.53	0.0038	0.00122	<0.00002	<0.00001	138
E10-042-3	E10-042	478.50	480.70	Knight Piésold	Ore Grade	Diorite Breccia	8.56	64	171	<2.0	22.0	<0.0001	<0.00001	2.68	0.0003	0.00846	<0.00002	<0.00001	27.5
ARD-26	E10-028	37.20	39.40	Knight Piésold	Ore Grade	Magma Mixing Breccia	8.58	132	232	<2.0	<2.0	<0.00001	<0.00001	1.39	0.0072	0.00098	<0.00002	<0.00001	48.1
E10-013-4	E10-013	125.00	127.10	Knight Piésold	Ore Grade	Magma Mixing Breccia	9.07	49	146	5.0	17.0	<0.0001	<0.00001	4.10	0.0004	0.00046	<0.00002	<0.00001	37.4
ARD-39	E11-179	514.00	517.65	Knight Piésold	Ore Grade	Fault	7.52	35	57	<2.0	<2.0	<0.00001	0.00002	0.06	0.0009	0.00492	<0.00002	<0.00001	10.8
E11-054-5	E11-054	212.30	215.50	Knight Piésold	Ore Grade	Fault	7.33	14	57	<2.0	8.8	<0.0001	0.00001	0.07	0.0021	0.00159	<0.00002	<0.00001	5.85
ARD-56	E12-205	207.50	209.60	Knight Piésold	Ore Grade	Diorite	7.96	116	235	<2.0	16.0	<0.00001	<0.00001	1.15	0.0024	0.00090	<0.00002	<0.00001	46.1
ARD-59	CL10-02A	102.00	104.00	Knight Piésold	Ore Grade	Diorite	10.00	57	145	<2.0	15.0	<0.00001	<0.00001	3.96	<0.0002	0.00242	<0.00002	<0.00001	40.8
E11-112-1	E11-112	56.41	58.12	Knight Piésold	Ore Grade	Diorite	10.90	95	244	<2.0	11.0	<0.0001	<0.00001	4.21	<0.0002	0.00046	<0.00002	<0.00001	49.4
E11-062-2	E11-062	142.40	144.24	Knight Piésold	Ore Grade	Diorite	10.70	141	279	<2.0	8.5	<0.0001	<0.00001	4.25	<0.0002	0.00459	<0.00002	<0.00001	64.9
E11-054-3	E11-054	75.15	77.44	Knight Piésold	Ore Grade	Diorite	8.82	122	249	<2.0	7.0	<0.0001	<0.00001	0.88	0.0039	0.00605	<0.00002	<0.00001	49.4
E11-112-4	E11-112	250.60	252.50	Knight Piésold	Ore Grade	Diorite	10.80	92	255	<2.0	7.8	<0.0001	<0.00001	3.20	0.0003	0.00128	<0.00002	<0.00001	51.4
ARD-19	E11-099	240.20	242.40	Knight Piésold	Ore Grade	Tonalite	8.50	116	163	<2.0	6.5	<0.00001	<0.00001	1.40	0.0016	0.00025	<0.00002	<0.00001	41.9
ARD-32	E11-048	325.10	327.10	Knight Piésold	Ore Grade	Tonalite	9.76	66	158	<2.0	17.0	0.00001	<0.00001	3.13	0.0004	0.00086	<0.00002	<0.00001	41.0
ARD-5	E11-066	509.90	511.90	Knight Piésold	Ore Grade	Tonalite	8.10	69	184	<2.0	27.0	<0.00001	0.00004	1.16	0.0022	0.00028	<0.00002	<0.00001	31.6
E11-062-1	E11-062	91.70	93.74	Knight Piésold	Ore Grade	Tonalite	10.10	103	181	<2.0	9.4	<0.0001	<0.00001	3.16	0.0005	0.00639	<0.00002	<0.00001	50.5
E11-107-1	E11-107	40.10	42.10	Knight Piésold	Ore Grade	Tonalite	10.50	85	189	<2.0	9.1	<0.0001	<0.00001	2.14	<0.0002	0.00128	<0.00002	<0.00001	40.2
E11-052-1	E11-052	92.75	95.05	Knight Piésold	Ore Grade	Tonalite	10.80	83	235	<2.0	8.8	<0.0001	<0.00001	3.28	0.0003	0.00109	<0.00002	<0.00001	49.9
E11-091-2	E11-091	93.00	94.95	Knight Piésold	Ore Grade	Diabase Dykes	6.93	6	117	<2.0	41.0	<0.0001	<0.00001	0.03	0.0013	0.00559	<0.00002	<0.00001	7.98

Sample ID	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Ni	Pb	S	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
O.Reg 560/94				0.3								0.2											0.5
PWQO	0.0002	0.0009	0.001	0.005	0.3					0.04	0.025	0.005-0.025		0.02	0.1					0.005	0.006		0.03
ARD-11	<0.000003	0.000027	0.0288	0.0011	<0.003	3.52	0.002	0.173	0.01530	0.00421	0.0003	<0.00002	3.88	0.0005	<0.001	0.00017	0.0231	0.0028	<0.00002	0.000197	0.00485	0.000003	<0.001
ARD-31	<0.000003	0.000042	0.0280	<0.001	<0.003	4.47	0.001	0.004	0.00029	0.00187	0.0003	0.00008	6.98	0.0010	<0.001	0.00033	0.0345	0.0001	<0.00002	0.000003	0.00554	<0.000001	<0.001
ARD-34	<0.000003	0.000023	0.0308	<0.001	<0.003	4.25	0.002	0.006	0.00440	0.00232	<0.0001	<0.00002	1.18	0.0004	<0.001	0.00014	0.0269	0.0004	<0.00002	0.000023	0.01080	0.000001	<0.001
ARD-49	<0.000003	0.000045	0.0276	<0.001	<0.003	6.86	0.002	0.002	0.00015	0.00157	<0.0001	<0.00002	2.17	0.0005	<0.001	0.00007	0.0279	0.0001	<0.00002	0.000004	0.00555	<0.000001	<0.001
E11-077-2	<0.000003	0.000021	0.0405	0.0009	0.004	2.06	<0.001	0.002	0.00022	0.00129	0.0002	0.00002	1.92	0.0002	<0.001	0.00022	0.0364	<0.0001	<0.00002	0.000001	0.00832	<0.000001	<0.001
E11-107-2	<0.000003	0.000061	0.0515	0.0011	<0.003	2.21	0.001	0.318	0.01070	0.00217	<0.0001	<0.00002	2.64	0.0003	<0.001	0.00017	0.0409	0.0036	<0.00002	0.000256	0.01018	0.000005	<0.001
E11-110-2	<0.000003	0.000122	0.0258	0.0006	0.025	1.42	0.002	0.853	0.00058	0.00329	<0.0001	<0.00002	11.5	0.0003	0.002	0.00014	0.0242	0.0024	<0.00002	0.000007	0.02840	0.000008	<0.001
ARD-25	<0.000003	0.000044	0.0319	<0.001	<0.003	1.87	0.001	0.003	0.00011	0.00174	0.0003	<0.00002	4.50	0.0008	<0.001	0.00026	0.0275	<0.0001	0.00012	0.000005	0.00241	<0.000001	<0.001
ARD-27	<0.000003	0.000036	0.0355	0.0009	0.003	8.22	0.003	0.013	0.00746	0.00147	0.0003	0.00002	1.45	0.0005	<0.001	0.00029	0.0260	0.0011	0.00006	0.000046	0.00762	0.000006	0.001
ARD-33	<0.000003	0.000035	0.0334	<0.001	<0.003	1.06	0.002	0.003	0.00005	0.02820	<0.0001	<0.00002	8.50	0.0006	0.001	<0.00001	0.0429	<0.0001	<0.00002	<0.000001	0.00096	<0.000001	<0.001
E10-013-2	<0.000003	0.000072	0.0206	<0.001	0.012	1.60	<0.001	0.002	0.00040	0.00127	0.0009	<0.00002	3.25	0.0004	<0.001	0.00036	0.1290	0.0001	<0.00002	<0.000001	0.00618	<0.000001	<0.001
E10-031-3	<0.000003	0.000150	0.0393	0.0008	0.010	1.62	<0.001	0.003	0.00218	0.00476	0.0199	0.00003	5.97	0.0004	0.001	0.00029	0.1400	0.0001	<0.00002	<0.000001	0.00944	0.000001	<0.001
E11-054-4	<0.000003	0.000027	0.0640	0.0007	<0.003	4.13	<0.001	0.002	0.00017	0.00328	0.0004	0.00005	2.20	0.0006	<0.001	0.00048	0.0187	<0.0001	<0.00002	0.000030	0.00103	0.000001	0.001
E11-100-2	<0.000003	0.000054	0.0174	0.0009	0.007	8.39	<0.001	0.002	0.00043	0.00345	<0.0001	0.00003	3.90	0.0004	<0.001	0.00034	0.0855	<0.0001	<0.00002	0.000002	0.00650	<0.000001	<0.001
ARD-29	<0.000003	0.000014	0.0282	0.0006	0.019	0.67	0.002	0.073	0.00067	0.00115	<0.0001	<0.00002	0.23	0.0010	<0.001	0.00016	0.0047	0.0004	<0.00002	<0.000001	0.01480	0.000016	0.002
E11-066-1	<0.000003	0.000068	0.0160	0.0006	<0.003	1.10	<0.001	0.002	0.00009	0.00124	0.0005	0.00002	0.81	<0.000	<0.001	0.00019	0.0320	0.0007	<0.00002	0.000014	0.00879	0.000004	0.002
E11-111-1	<0.000003	0.000059	0.0179	0.0007	<0.003	13.4	<0.001	0.002	0.00068	0.00275	0.0002	<0.00002	2.90	0.0005	<0.001	0.00020	0.0561	<0.0001	0.00005	0.000003	0.01330	<0.000001	<0.001
ARD-12	<0.000003	0.000015	0.0196	<0.001	<0.003	2.22	<0.001	0.003	0.00015	0.00298	0.0003	<0.00002	2.85	0.0006	<0.001	0.00019	0.0251	<0.0001	<0.00002	<0.000001	0.03130	<0.000001	<0.001
ARD-18	0.000008	0.000029	0.0196	0.0007	<0.003	9.36	0.001	0.003	0.00006	0.02310	0.0003	0.00004	5.17	0.0008	<0.001	0.00017	0.0507	<0.0001	0.00004	<0.000001	0.01570	<0.000001	<0.001
ARD-24	<0.000003	0.000015	0.0363	<0.001	<0.003	2.33	0.002	0.003	0.00024	0.00160	0.0003	<0.00002	4.15	0.0009	<0.001	0.00016	0.0306	<0.0001	<0.00002	0.000005	0.00510	<0.000001	<0.001
ARD-28	0.000007	0.000073	0.0233	<0.001	<0.003	4.13	0.001	0.003	0.00016	0.03860	0.0006	<0.00002	45.5	0.0010	0.001	0.00140	0.1010	0.0005	0.00004	0.000004	0.00048	<0.000001	<0.001
ARD-3	<0.000003	0.000021	0.0309	0.0007	<0.003	4.00	0.002	0.006	0.00049	0.00311	0.0004	0.00004	6.36	0.0010	<0.001	0.00018	0.0427	<0.0001	<0.00002	0.000010	0.00078	<0.000001	0.003
ARD-37	<0.000003	0.000028	0.0272	<0.001	<0.003	17.1	<0.001	0.002	0.00008	0.00520	<0.0001	<0.00002	4.34	0.0005	<0.001	<0.00001	0.0264	0.0002	<0.00002	<0.000001	0.02750	<0.000001	<0.001
ARD-47	<0.000003	0.000034	0.0559	<0.001	<0.003	2.37	<0.001	0.004	0.00011	0.00130	<0.0001	<0.00002	6.00	0.0005	<0.001	0.00007	0.0358	0.0003	<0.00002	0.000004	0.02740	<0.000001	<0.001
ARD-51	<0.000003	0.000053	0.0075	0.0005	0.006	2.20	<0.001	0.002	0.00030	0.00199	<0.0001	<0.00002	2.75	0.0005	<0.001	0.00019	0.0391	<0.0001	<0.00002	<0.000001	0.00299	<0.000001	<0.001
ARD-57	<0.000003	0.000080	0.0289	0.0008	0.004	0.84	<0.001	0.002	0.00025	0.00193	<0.0001	0.00003	5.36	0.0004	0.001	0.00029	0.0403	<0.0001	<0.00002	<0.000001	0.01260	<0.000001	<0.001
ARD-58	<0.000003	0.000046	0.0807	<0.001	<0.003	12.3	<0.001	0.002	0.00009	0.00040	<0.0001	<0.00002	2.86	0.0004	<0.001	0.00012	0.0776	<0.0001	<0.00002	<0.000001	0.02730	<0.000001	<0.001
E10-013-1	<0.000003	0.000073	0.0612	0.0005	0.006	17.1	<0.001	0.007	0.00014	0.00273	0.0008	0.00007	2.36	0.0005	<0.001	0.00017	0.0164	0.0008	<0.00002	0.000004	0.03010	0.000001	0.002
E10-023-1	<0.000003	0.000057	0.0763	0.0005	<0.003	2.97	0.002	0.004	0.00030	0.00563	0.0026	<0.00002	4.25	0.0005	0.001	0.00018	0.0230	0.0003	<0.00002	0.000008	0.00154	<0.000001	<0.001
E10-031-2	<0.000003	0.000028	0.0344	0.0005	<0.003	5.32	0.001	0.004	0.00016	0.01010	0.0006	<0.00002	10.2	0.0007	0.002	0.00015	0.0572	0.0002	<0.00002	0.000002	0.00156	<0.000001	<0.001
E10-038-1	<0.000003	0.000025	0.0364	0.0005	0.015	13.0	0.001	0.184	0.00123	0.00855	0.0002	<0.00002	0.56	0.0003	<0.001	0.00011	0.0233	0.0048	0.00003	0.000028	0.02460	0.000006	<0.001
E10-038-3	<0.000003	0.000026	0.0548	0.0006	0.009	1.05	<0.001	0.024	0.00028	0.00171	0.0002	0.00003	7.69	0.0003	0.003	0.00011	0.0226	0.0007	<0.00002	0.000016	0.03490	0.000005	<0.001
E10-042-1	<0.000003	0.000075	0.0373	<0.001	<0.003	5.28	0.001	0.004	0.00003	0.00186	0.0005	<0.00002	4.73	0.0006	<0.001	0.00008	0.0520	0.0002	<0.00002	0.000005	0.00290	<0.000001	<0.001
E10-042-2	<0.000003	0.000080	0.0289	0.0010	<0.003	9.04	0.002	0.003	0.00002	0.00931	0.0006	0.00006	25.8	0.0006	0.003	0.00021	0.0348	0.0006	0.00004	0.000010	0.00873	0.000001	0.001
E11-053-1	<0.000003	0.000077	0.0169	0.0010	0.006	17.6	<0.001	0.002	0.00033	0.00352	<0.0001	0.00017	8.86	0.0004	0.002	0.00019	0.0376	0.0001	0.00010	0.000007	0.00603	0.000002	<0.001
E11-095-1	<0.000003	0.000029	0.0329	0.0005	<0.003	2.15	<0.001	0.002	0.00004	0.00556	0.0005	0.00002	5.63	0.0003	<0.001	0.00033	0.0328	0.0001	<0.00002	0.000018	0.01380	0.000001	<0.001
E11-097-1	<0.000003	0.000030	0.0335	0.0009	0.011	13.9	0.003	1.040	0.00353	0.00595	0.0001	0.00003	0.42	0.0007	<0.001	0.00027	0.0103	0.0093	0.00004	0.000181	0.01490	0.000003	<0.001
E11-100-3	<0.000003	0.000038	0.0305	<0.001	0.006	20.1	<0.001	<0.001	0.00008	0.00479	0.0001	<0.00002	1.22	0.0005	<0.001	0.00014	0.0335	<0.0001	<0.00002	0.000002	0.01590	<0.000001	<0.001
E11-138-2	<0.000003	0.000030	0.0131	0.0012	0.015	0.89	<0.001	0.002	0.00087	0.00165	0.0003	<0.00002	4.13	<0.000	<0.001	0.00052	0.2800	<0.0001	<0.00002	0.000001	0.00733	<0.000001	<0.001
ARD-13	<0.000003	0.000032	0.0179	0.0007	<0.003	10.1	<0.001	0.002	0.00007	0.00174	0.0003	0.00003	1.50	0.0008	<0.001	0.00021	0.0329	<0.0001	0.00004	0.000002	0.01440	<0.000001	0.003
ARD-16	<0.000003	0.000030	0.0339	<0.001	<0.003	2.31	0.004	0.003	0.00020	0.00290	0.0003	0.00004	2.99	0.0012	0.001	0.00041	0.0311	0.0001	<0.00002	0.000007	0.00040	<0.000001	0.001
ARD-21	<0.000003	0.000031	0.0416	<0.001	<0.003	1.38	0.007	0.068	0.01400	0.00187	0.0003	<0.00002	2.41	0.0088	<0.001	0.00017	0.0300	0.0004	<0.00002	0.000054	0.00465	0.000002	<0.001
ARD-4	0.000004	0.000027	0.0415	0.0010	0.007	0.95	<0.001	0.076	0.02610	0.01260	0.0003	<0.00002	3.75	0.0006	<0.001	0.00039	0.0178	0.0008	<0.00002	0.000077	<0.00003	0.000002	<0.001
ARD-41	<0.000003	0.000034	0.0283	<0.001	<0.003	3.48	<0.001	0.002	0.00019	0.00188	<0.0001	<0.00002	8.02	0.0005	0.002	0.00010	0.0340	0.0001	<0.00002	0.000004	0.00636	<0.000001	<0.001
ARD-45	<0.000003	0.000038	0.0372	0.0019	<0.003	2.14	0.001	0.215	0.00465	0.00256	<0.0001	<0.00002	8.79	0.0007	0.001	0.00008	0.0216	0.0027	<0.00002	0.000303	0.00137	0.000004	<0.001
ARD-48	<0.000003	0.000043	0.0348	<0.001	<0.003	2.83	0.001	0.002	0.00008	0.00314	<0.0001	<0.00002	4.50	0.0006	<0.001	0.00014	0.0234	<0.0001	<0.00002	0.000007	0.00160	<0.000001	<0.001
ARD-6	0.000006	0.000036	0.0353	<0.001	<0.003	15.3	<0.001	0.002	0.00031	0.00385	0.0003	0.00002	6.66	0.0010	0.001	0.00010	0.0656	0.0002	0.00003	0.000006	0.01280	0.000001	<0.001
ARD-60	<0.000003	0.000049	0.0479	<0.001	0.004	7.04	0.004	0.042	0.00030	0.00219	<0.0001	<0.00002	20.4	0.0003	<0.001	0.00009	0.0296	0.0012	<0.00002	0.000235	0.00081	0.000003	<0.001
E10-013-3	<0.000003	0.000054	0.0491	0.0007	<0.003	4.59	<0.001	0.003	0.00011	0.00110	0.0006	0.00004	5.52	0.0005	<0.001	0.00026	0.0708	0.0003	<0.00002	0.000002	0.00219	0.000001	0.002
E10-031-1	<0.000003	0.000016	0.1200	<0.001	<0.003	2.36	0.001	0.007	0.00103	0.01130	0.0015	<0.00002	2.09	0.0005	<0.001	0.00021	0.0610	0.0007	<0.00002	0.000081	0.00265	0.000003	<0.001
E10-046-1	<0.000003	0.000056	0.1030	<0.001	<0.003	9.88	0.002	0.002	0.00010	0.00246	0.0007	<0.00002	0.98	0.0005	<0.001	0.00012	0.0332	0.0006	<0.00002	0.000009	0.00233	0.000002	<0.001
E10-046-2	<0.000003	0.000058	0.0360	0.0005	0.003	1.55	0.001	0.004	0.00030	0.00409	0.0009	<0.00002	7.16	0.0004	0.001	0.00024	0.0291	0.0002	<0.00002	0.000007	0.00096	<0.000001	<0.001
E11-052-3	<0.000003	0.000121	0.0304	0.0014	<0.003	3.55	<0.001	0.003	0.00025	0.00350	<0.0001	<0.00002	13.8	0.0003	0.001	0.00015	0.1020	0.0002	<0.00002	0.000002	0.00317	0.000001	<0.001
E11-059-1	<0.000003	0.000042	0.1070	0.0035	0.008	4.34	0.002	0.590	0.01160	0.00375	0.0004	<0.00002	2.07	0.0006	<0.001	0.00038	0.0216	0.0039	<0.00002	0.001060	<0.00003	0.000015	<0.001
E11-061-2	<0.000003	0.000025	0.0207	0.0009	0.010	20.1	<0.001	<0.001	0.00008	0.01010	0.0004	<0.00002	9.28	0.0005	0.002	0.00007	0.0340	0.0001	0.00002	0.000016	0.01310	0.000001	<0.001
E11-072-1	<0.000003	0.000029	0.0605	0.0007	<0.003	2.47	0.001	0.002	0.00012	0.00606	0.0003	0.00004	7.00	0.0005	<0.001	0.00024	0.0360	<0.0001	<0.00002	0.000007	0.00048	0.000010	<0.001
E11-077-1	<0.000003	0.000028	0.0907	0.0006	<0.003	5.31	0.002	0.082	0.00575	0.00337	0.0005	<0.00002	1.78	0.0002	<0.001	0.00009	0.0342	0.0018	<0.00002	0.000085	0.00755	0.000004	<0.001
E11-081-1	0.000006	0.000025	0.0165	0.0015	0.011	6.98	<0.001	0.002	0.00077	0.00144	0.0005	0.00005	3.43	0.0006	<0.001	0.00055	0.0532	<0.0001	<0.00002	0.000036	0.00199	0.000001	0.001
E11-091-1	<0.000003	0.000034	0.0989	0.0019	0.006	1.49	<0.001	0.955	0.00207	0.00715	0.0002	0.00002	10.7	0.0003	<0.001	0.00020	0.0263	0.0048	<0.00002	0.000549	0.00754	0.000015	<0.001
E11-091-3	<0.000003	0.000045	0.0979	0.0006	<0.003	2.14	0.001	0.005	0.00070	0.00314	0.0002	0.00002	1.43	0.0005	<0.001	0.00030	0.0311	<0.0001	<0.00002	0.000031	0.00188	0.000005	0.001
E11-095-2	<0.000003	0.000021	0.0396	0.0009	<0.003	3.63	0.001	0.003	0.00013	0.00344	0.0004	0.00012	7.01	0.0004	<0.001	0.00043	0.0443	0.0001	<0.00002	0.000014	0.00161	<0.000001	0.002
E11-097-2	<0.000003	0.000023	0.0299	0.0009	<0.003	8.99	0.002	0.002	0.00007	0.01110	0.0002	0.00004	1.25	0.0005	<0.001	0.00034	0.0520	<0.0001	<0.00002	0.000039	0.00269	0.000002	<0.001
E11-100-1	<0.000003	0.000055	0.0588	<0.001	<0.003	3.30	0.001	0.002	0.00003	0.00508	0.0001	0.00004	28.4	0.0004	0.003	0.00009	0.0597	0.0004	<0.00002	0.000009	0.00214	0.000001	<0.001
E11-110-1	<0.000003	0.000078	0.0696	0.0005	<0.003	3.95	0.001	0.002	0.00013	0.00237	<0.0001	<0.00002	3.37	0.0004	<0.001	0.00029	0.1090	<0.0001	<0.00002	0.000007	0.00127	<0.000001	<0.001
E11-112-3	<0.000003	0.000102	0.0593	0.0022	0.004	8.76	0.002	0.003	0.00133	0.00506	<0.0001	0.00004	5.06	0.0004	0.001	0.00027	0.0338	0.0007	<0.00002	0.000228	0.00442	0.000023	<0.001
E11-138-1	<0.000003	0.000018	0.0479	0.0010	<0.003	4.59	0.001	0.002	0.00079	0.03600	0.0002	<0.00002	5.72	0.0003	<0.001	0.00036	0.0573	<0.0001	<0.00002	0.000008	0.00062	<0.000001	<0.001
ARD-53	<0.000003	0.000070	0.0180	<0.001	<0.003	0.66	<0.001	0.003	0.00017	0.00147	<0.0001	<0.00002	5.10	0.0005	<0.001	0.00040	0.0687	<0.0001	<0.00002	0.000001	0.00423	<0.000001	<0.001
ARD-55	<0.000003	0.000054	0.0332	<0.001	0.004	2.84	<0.001	0.230	0.00027	0.00120	<0.0001	<0.00002	14.6	0.0003	0.004	0.00001	0.0206	0.0003	<0.00002	0.000001	0.04130	0.000001	<0.001
E11-052-2	<0.000003	0.000247	0.0073	0.0019	0.008	2.22	<0.001	0.003	0.00088	0.00414	<0.0001	<0.00002	12.7	0.0004	0.004	0.00023	0.0506	0.0002	<0.00002	0.000002	0.00094	<0.000001	<0.001
E11-062-3	<0.000003	0.000037	0.0123	0.0007	0.004	26.7	<0.001	0.002	0.00015	0.00094	<0.0001	0.00003	7.28	0.0005	<0.001	0.00015	0.0943	<0.0001	0.00008	0.000003	0.01910	<0.000001	<0.001
ARD-15	0.000008	0.000032	0.0079	0.0006	0.019	2.64	0.001	1.870	0.00278	0.00285	<0.0001	0.00008	6.47	0.0009	0.002	0.00031	0.0209	0.0126	<0.00002	0.000041	0.04970	0.000003	0.004
ARD-35	<0.000003	0.000033	0.0152	<0.001	<0.003	4.75	<0.001	0.002	0.00007	0.00268	<0.0001	<0.00002	8.03	0.0007	0.002	0.00002	0.0556	<0.0001	<0.00002	0.000001	0.03040	<0.000001	<0.001
ARD-42	<0.000003	0.000050	0.0205	<0.001	0.003	3.00	<0.001	0.002	0.00020	0.03040	<0.0001	<0.00002	3.07	0.0005	<0.001	0.00017	0.0930	<0.0001	0.00004	0.000001	0.00307	<0.000001	<0.001
ARD-50	<0.000003	0.000036	0.0114	<0.001	0.004	2.75	0.001	0.009	0.00015	0.00371	<0.0001	<0.00002	9.57	0.0007	0.002	<0.00001	0.0345	0.0004	<0.00002	0.000008	0.07590	<0.000001	<0.001
E10-038-2	<0.000003	0.000030	0.0605	0.0006	<0.003	7.19	<0.001	0.004	0.00027	0.00287	0.0003	<0.00002	10.1	0.0004	0.003	0.00020	0.0476	<0.0001	<0.00002	0.000002	0.01650	0.000003	<0.001
E10-031-4	<0.000003	0.000097	0.0448	<0.001	<0.003	2.84	0.001	0.004	0.00088	0.00417	0.0098	0.00003	10.1	0.0007	0.002	0.00016	0.0308	0.0005	<0.00002	0.000007	0.00324	0.000002	0.001
E11-081-2	<0.000003	0.000028	0.0516	0.0009	0.007	4.05	0.002	0.090	0.00016	0.00203	0.0004	0.00002	33.5	0.0010	0.010	0.00008	0.0513	0.0005	<0.00002	0.000085	<0.00003	0.000003	<0.001
E11-081-3	0.000005	0.000035	0.0426	0.0007	0.004	2.70	0.002	0.006	0.00007	0.01630	0.0005	<0.00002	19.4	0.0009	0.007	0.00020	0.0706	0.0003	<0.00002	0.000111	0.00171	0.000002	<0.001
ARD-2	<0.000003	0.000036	0.0258	<0.001	<0.003	2.00	0.001	0.046	0.01910	0.00286	0.0004	0.00003	3.47	0.0007	<0.001	0.00016	0.0227	0.0005	<0.00002	0.000031	0.00181	0.000001	0.003
ARD-46	<0.000003	0.000030	0.0228	0.0005	0.009	16.9	0.007	0.700	0.00543	0.00249	<0.0001	<0.00002	1.27	0.0005	<0.001	0.00013	0.0159	0.0147	0.00005	0.000420	0.01600	0.000001	<0.001
ARD-54	<0.000003	0.000051	0.0430	0.0005	<0.003	5.92	0.004	0.287	0.01980	0.00146	<0.0001	<0.00002	1.29	0.0005	<0.001	0.00011	0.0330	0.0036	0.00003	0.000106	0.00595	<0.000001	<0.001
ARD-8	<0.000003	0.000013	0.0280	0.0009	0.006	22.8	0.010	0.056	0.00267	0.00236	0.0001	0.00002	5.27	0.0008	<0.001	0.00026	0.0156	0.0037	0.00005	0.000022	0.01970	<0.000001	0.021
E11-062-4	<0.000003	0.000034	0.0512	<0.001	<0.003	9.25	0.002	0.002	0.00016	0.00271	0.0001	0.00003	3.09	0.0005	<0.001	0.00008	0.0375	0.0004	<0.00002	0.000121	0.00669	0.000003	<0.001
ARD-52	<0.000003	0.000045	0.0159	0.0009	<0.003	19.7	0.006	0.019	0.00669	0.00044	<0.0001	<0.00002	1.77	0.0003	<0.001	0.00009	0.0309	0.0026	0.00003	0.000081	0.01570	<0.000001	<0.001
ARD-9	<0.000003	0.000009	0.0199	<0.001	0.034	3.60	0.001	0.020	0.02310	0.00042	0.0002	0.00002	1.93	0.0005	<0.001	0.00027	0.0474	0.0005	<0.00002	0.000010	0.00861	<0.000001	0.009
ARD-23	<0.000003	0.000037	0.0296	0.0015	<0.003	2.16	0.001	0.707	0.04660	0.00267	0.0004	<0.00002	1.71	0.0005	<0.001	0.00054	0.0314	0.0018	<0.00002	0.000310	0.00087	0.000002	<0.001
ARD-30	<0.000003	0.000038	0.0089	<0.001	<0.003	5.32	<0.001	0.002	0.00005	0.00148	0.0004	<0.00002	1.60	0.0006	<0.001	0.00015	0.0564	<0.0001	0.00002	<0.000001	0.00841	<0.000001	<0.001
ARD-1	<0.000003	0.000079	0.0308	<0.001	<0.003	1.89	0.002	0.010	0.01300	0.00192	0.0003	<0.00002	3.15	0.0008	<0.001	0.00018	0.0393	0.0001	<0.00002	0.000014	0.00075	<0.000001	<0.001
ARD-10	<0.000003	<0.000002	0.0105	<0.001	<0.003	11.2	0.001	0.001	0.00009	0.00633	0.0003	<0.00002	5.18	0.0010	<0.001	0.00016	0.0303	0.0002	0.00003	0.000005	0.00250	<0.000001	<0.001
ARD-40	<0.000003	0.000045	0.0144	<0.001	<0.003	4.01	0.001	0.003	0.00034	0.00381	<0.0001	<0.00002	8.05	0.0006	0.002	0.00005	0.0425	0.0004	<0.00002	0.000002	0.00111	<0.000001	<0.001
ARD-43	<0.000003	0.000065	0.0354	0.0022	<0.003	1.96	0.001	0.617	0.05110	0.00329	0.0001	<0.00002	4.96	0.0005	<0.001	0.00040	0.0245	0.0038	<0.00002	0.000372	0.00154	0.000004	<0.001
ARD-7	<0.000003	0.000013	0.0251	<0.001	<0.003	3.23	0.001	0.003	0.00017	0.00291	0.0003	0.00003	1.96	0.0008	<0.001	0.00015	0.0469	<0.0001	<0.00002	0.000007	0.00083	<0.000001	<0.001
E11-081-4	<0.000003	0.000030	0.0326	0.0011	<0.003	4.77	0.001	0.002	0.00004	0.00332	0.0005	0.00004	14.4	0.0008	0.006	0.00022	0.0749	0.0002	<0.00002	0.000017	0.00420	0.000003	0.002
E11-138-3	<0.000003	0.000024	0.0799	0.0022	0.008	2.32	<0.001	0.003	0.00034	0.00395	0.0003	<0.00002	18.2	0.0003	0.004	0.00039	0.2520	0.0001	<0.00002	0.000001	0.00386	<0.000001	0.002
E11-053-3	<0.000003	0.074900	0.0548	0.0726	<0.003	7.08	0.005	5.800	0.23500	0.00021	0.0248	<0.00002	31.3	0.0002	0.004	0.00012	0.0494	0.0009	0.00003	0.000006	0.02950	0.000276	0.007
E11-059-2	<0.000003	0.000058	0.0191	0.0008	0.048	6.48	0.003	0.786	0.00109	0.00402	0.0002	0.00007	13.6	0.0006	0.003	0.00023	0.0311	0.0109	<0.00002	0.000049	0.05220	0.000008	<0.001
ARD-14	<0.000003	0.000030	0.0301	0.0012	<0.003	1.09	<0.001	0.004	0.00011	0.00351	0.0004	0.00021	10.3	0.0008	0.007	0.00018	0.0394	0.0001	<0.00002	0.000001	0.00077	<0.000001	<0.001
ARD-17	0.000095	0.000011	0.0193	<0.001	<0.003	26.2	<0.001	0.001	0.00006	0.20800	0.0002	0.00003	4.56	0.0008	<0.001	0.00010	0.0188	<0.0001	0.00004	0.000001	0.02810	<0.000001	0.002
ARD-20	<0.000003	0.000030	0.0236	0.0011	<0.003	1.03	<0.001	0.002	0.00020	0.00348	0.0004	0.00006	6.41	0.0008	0.002	0.00045	0.0633	<0.0001	<0.00002	0.000002	0.00253	<0.000001	<0.001
ARD-22	<0.000003	0.000035	0.0227	<0.001	<0.003	13.2	<0.001	0.002	0.00019	0.00227	0.0004	<0.00002	2.37	0.0009	<0.001	0.00020	0.0372	<0.0001	0.00006	0.000002	0.00778	<0.000001	<0.001
ARD-36	<0.000003	0.000057	0.0210	<0.001	0.004	2.89	<0.001	0.002	0.00020	0.00262	<0.0001	<0.00002	11.2	0.0005	0.002	0.00017	0.1090	<0.0001	<0.00002	0.000001	0.00476	<0.000001	<0.001
ARD-38	<0.000003	0.000031	0.0295	0.0020	0.009	1.42	<0.001	1.010	0.00099	0.03240	0.0001	<0.00002	5.79	0.0005	0.002	0.00016	0.0088	0.0038	<0.00002	0.000059	0.00506	0.000007	<0.001
ARD-44	<0.000003	0.000057	0.0179	<0.001	<0.003	4.38	<0.001	0.002	0.00046	0.02399	<0.0001	<0.00002	5.47	0.0008	<0.001	0.00016	0.0385	<0.0001	<0.00002	0.000005	0.00228	<0.000001	<0.001
E11-112-2	<0.000003	0.000175	0.0235	0.0019	<0.003	19.6	<0.001	0.001	0.00250	0.01080	0.0001	<0.00002	13.2	0.0003	0.002	0.00012	0.0352	0.0002	0.00003	0.000079	0.01210	0.000045	<0.001
E11-061-1	<0.000003	0.000019	0.0232	<0.001	0.003	16.6	<0.001	0.007	0.00036	0.00155	0.0003	0.00007	3.25	0.0005	<0.001	0.00010	0.0208	0.0003	<0.00002	0.000009	0.02320	0.000003	<0.001
E11-054-1	0.000003	0.000027	0.0440	0.0010	<0.003	2.10	<0.001	0.002	0.00015	0.00264	0.0004	0.00008	2.77	0.0007	<0.001	0.00067	0.0422	<0.0001	<0.00002	0.000061	0.00554	0.000001	0.001
E11-054-2	<0.000003	0.000068	0.0387	0.0010	0.004	3.52	<0.001	0.002	0.00021	0.00260	0.0004	0.00009	2.18	0.0007	<0.001	0.00069	0.0561	<0.0001	<0.00002	0.000007	0.00466	0.000001	0.001
E11-053-2	<0.000003	0.000060	0.0242	0.0009	<0.003	30.9	<0.001	0.001	0.00009	0.00275	0.0001	<0.00002	11.0	0.0004	0.001	0.00010	0.0585	0.0002	0.00009	0.000004	0.01810	0.000001	<0.001
E11-051-1	<0.000003	0.000082	0.0513	<0.001	<0.003	6.28	<0.001	0.001	0.00012	0.00228	0.0002	<0.00002	5.44	0.0004	0.001	0.00014	0.0297	0.0007	0.00003	0.000020	0.00777	0.000001	<0.001
CL10-03-1	<0.000003	0.000126	<0.001	0.0011	<0.003	9.32	0.003	0.124	0.00083	0.00522	0.0012	<0.00002	117	0.0008	0.027	0.00002	0.1570	0.0001	<0.00002	0.000021	0.00029	0.000004	<0.001
E10-042-3	<0.000003	0.000068	0.0596	<0.001	0.004	3.21	0.001	0.003	0.00013	0.00913	0.0005	<0.00002	8.31	0.0003	0.002	0.00020	0.1750	0.0002	<0.00002	0.000002	0.00240	<0.000001	<0.001
ARD-26	<0.000003	0.000038	0.0399	0.0014	<0.003	1.19	0.001	0.386	0.03640	0.00118	0.0003	<0.00002	1.38	0.0011	<0.001	0.00063	0.0280	0.0017	<0.00002	0.000144	0.00219	0.000001	<0.001
E10-013-4	<0.000003	0.000050	0.0356	0.0006	0.011	6.15	<0.001	0.002	0.00014	0.00908	0.0006	<0.00002	6.98	0.0005	<0.001	0.00024	0.0317	0.0002	<0.00002	0.000003	0.00429	<0.000001	<0.001
ARD-39	<0.000003	0.000047	0.0381	0.0012	<0.003	0.94	0.002	0.664	0.04080	0.00320	0.0001	<0.00002	0.41	0.0005	<0.001	0.00013	0.0294	0.0211	<0.00002	0.000330	0.00781	0.000007	<0.001
E11-054-5	<0.000003	0.000154	0.0377	0.0016	0.018	1.44	0.001	0.916	0.00778	0.00207	0.0009	0.00002	3.14	0.0004	<0.001	0.00018	0.0106	0.0150	<0.00002	0.000733	0.00579	0.000017	<0.001
ARD-56	<0.000003	0.000047	0.0375	0.0014	<0.003	3.10	0.003	0.409	0.00898	0.00208	<0.0001	<0.00002	6.36	0.0005	<0.001	0.00014	0.0215	0.0021	<0.00002	0.000241	0.00283	0.000004	<0.001
ARD-59	<0.000003	0.000044	0.0185	<0.001	<0.003	4.82	0.002	0.002	0.00011	0.00526	<0.0001	<0.00002	6.16	0.0006	0.002	0.00014	0.0413	<0.0001	<0.00002	0.000008	0.00141	<0.000001	<0.001
E11-112-1	0.000037	0.000421	0.0233	0.0095	<0.003	3.73	0.001	0.004	0.00703	0.08496	0.0005	0.00002	5.35	0.0004	<0.001	0.00022	0.0371	<0.0001	0.00002	0.000318	0.00153	0.000121	0.001
E11-062-2	<0.000003	0.000050	0.0117	0.0013	0.013	17.2	<0.001	0.002	0.00046	0.00210	<0.0001	<0.00002	4.39	0.0004	<0.001	0.00026	0.0635	<0.0001	0.00010	0.000006	0.01270	0.000001	<0.001
E11-054-3	<0.000003	0.000045	0.0866	0.0027	<0.003	1.34	<0.001	0.117	0.01770	0.00385	0.0005	<0.00002	3.48	0.0006	<0.001	0.00021	0.0266	0.0011	<0.00002	0.000220	<0.00003	0.000009	<0.001
E11-112-4	<0.000003	0.000070	0.0358	0.0010	<0.003	4.12	<0.001	0.004	0.00053	0.00248	<0.0001	0.00004	3.90	0.0004	<0.001	0.00028	0.0436	<0.0001	0.00002	0.000016	0.00302	0.000004	<0.001
ARD-19	<0.000003	0.000027	0.0315	0.0023	<0.003	1.90	<0.001	0.281	0.02620	0.00661	0.0003	<0.00002	2.97	0.0004	<0.001	0.00045	0.0174	0.0023	<0.00002	0.000183	0.00014	<0.000001	<0.001
ARD-32	<0.000003	0.000038	0.0363	<0.001	0.023	2.18	0.001	0.003	0.00010	0.00131	0.0003	<0.00002	6.31	0.0007	0.001	0.00024	0.0268	0.0001	<0.00002	0.000034	0.00130	<0.000001	<0.001
ARD-5	0.000004	0.000032	0.0331	0.0011	0.004	0.85	0.002	0.981	0.00246	0.01450	0.0002	<0.00002	10.1	0.0007	0.003	0.00021	0.0199	0.0026	<0.00002	0.000170	0.00797	0.000003	0.016
E11-062-1	<0.000003	0.000044	0.0737	0.0007	<0.003	4.04	0.002	0.003	0.00016	0.00443	0.0001	0.00002	4.27	0.0004	0.001	0.00022	0.0508	0.0001	<0.00002	0.000048	0.00246	0.000003	<0.001
E11-107-1	<0.000003	0.000040	0.0345	0.0007	<0.003	12.7	<0.001	<0.001	0.00015	0.00858	<0.0001	<0.00002	4.09	0.0004	<0.001	0.00019	0.0448	<0.0001	0.00004	0.000008	0.00562	0.000001	<0.001
E11-052-1	<0.000003	0.000617	0.0714	0.0007	<0.003	2.04	0.001	0.004	0.00210	0.00274	<0.0001	<0.00002	4.40	0.0005	<0.001	0.00016	0.0263	<0.0001	<0.00002	0.000006	0.00503	0.000002	<0.001
E11-091-2	<0.000003	0.000460	0.0145	0.0009	0.018	5.41	<0.001	3.640	0.01040	0.00251	0.0002	0.00003	13.3	0.0006	0.003	0.00021	0.0261	0.0093	<0.00002	0.000022	0.08210	0.000018	0.001

IAMGOLD

Table A-13: Mine Rock Rietveld XRD Results

Sample ID	Drill Hole ID	From	To	Consultant	Waste	Lithology	Mineral/Compound	Quartz	Albite	Actinolite	Clinozoisite	Biotite	Microcline	Calcite	Chlorite	Ankerite	Muscovite	Pyrite	Diopside	Ilmenite	Stilpnomelane
		(m)			Classification	Units	Formula	SiO_2	$NaAlSi_3O_8$	$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$	$Ca_2Al_3O(SiO_4)Si_2O_7(OH)$	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$	$KAlSi_3O_8$	$CaCO_3$	$(Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$	$CaFe(CO_3)_2$	$KAl_2(AlSi_3O_{10})(OH)_2$	FeS_2	$CaMgSi_2O_6$	$FeTiO_3$	$KFe^{2+}_{4.3}Mg_{1.4}Fe^{3+}_{2.3}Si_{10}Al_2O_{24}(OH)_3 \cdot 2(H2O)$
ARD-11	E11-087	84.30	86.50	Knight Piésold	Mine Rock	Diorite Breccia	(wt %)	40.6	47.5	-	-	-	-	0.6	1.8	-	8.5	-	-	-	-
ARD-31	E12-179	354.75	356.85	Knight Piésold	Mine Rock	Diorite Breccia	(wt %)	42.0	49.1	-	-	-	-	1.2	1.9	-	5.8	-	-	-	-
ARD-34	E11-075	95.40	97.50	Knight Piésold	Mine Rock	Diorite Breccia	(wt %)	27.6	65.7	-	-	-	-	2.1	1.5	-	2.9	-	-	-	-
ARD-49	E11-140	372	373.90	Knight Piésold	Mine Rock	Diorite Breccia	(wt %)	35.6	54.4	-	-	-	-	1.5	2.1	-	6.5	-	-	-	-
E11-077-2	E11-077	313	315.24	Knight Piésold	Mine Rock	Diorite Breccia	(wt %)	52.8	33.9	-	-	1.9	0.6	4.1	4.1	-	2.6	-	-	-	-
ARD-25	E10-30	211.22	213.22	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	42.5	48.6	-	-	-	-	1.4	1.4	-	6.1	-	-	-	-
ARD-27	E11-049	383.00	384.90	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	37.4	58.3	-	-	-	-	0.6	2.2	-	1.3	-	-	-	-
ARD-33	E11-048	164.30	166.60	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	64.3	24.6	-	-	-	-	9.6	1.6	-	-	-	-	-	-
E10-013-2	E10-013	50	52.2	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	17.8	50.0	-	-	0.3	0.0	7.7	16.5	-	6.2	-	-	-	-
E10-031-3	E10-031	500	502	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	50.2	34.8	-	-	-	0.8	3.4	5.8	-	4.9	0.0	-	-	-
E11-054-4	E11-054	128.4	130.8	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	56.2	29.0	-	-	-	1.1	2.7	0.1	-	10.8	-	-	-	-
ARD-29	E11-061	262.30	264.00	Knight Piésold	Mine Rock	Fault	(wt %)	40.4	44.6	-	-	-	-	-	-	-	8.2	-	-	-	-
E11-066-1	E11-066	312	316.2	Knight Piésold	Mine Rock	Fault	(wt %)	37.7	46.4	-	-	0.3	0.9	1.7	3.9	-	6.1	0.0	-	-	-
ARD-12	E12-217	547.00	549.50	Knight Piésold	Mine Rock	Diorite	(wt %)	12.5	54.2	-	-	-	0.6	2.5	10.6	-	1.7	-	-	-	-
ARD-18	E11-098	247.40	249.30	Knight Piésold	Mine Rock	Diorite	(wt %)	5.2	57.8	-	-	-	3.2	3.4	7.3	-	5.5	-	-	-	-
ARD-24	E11-062	15.90	17.80	Knight Piésold	Mine Rock	Diorite	(wt %)	34.0	60.0	-	-	-	-	2.7	1.0	-	2.3	-	-	-	-
ARD-28	E11-049	38.30	40.20	Knight Piésold	Mine Rock	Diorite	(wt %)	66.1	-	-	-	-	-	3.4	1.3	-	29	0.2	-	-	-
ARD-3	E10-036	103.30	105.20	Knight Piésold	Mine Rock	Diorite	(wt %)	34.4	30.4	-	-	-	-	2.8	-	-	9.2	-	-	-	-
ARD-37	E11-071	281.10	283.10	Knight Piésold	Mine Rock	Diorite	(wt %)	12.3	54.3	-	-	-	0.3	1.4	8.5	-	1.0	-	-	-	-
ARD-47	E12-198	210.00	211.80	Knight Piésold	Mine Rock	Diorite	(wt %)	7.5	27.0	-	-	-	6.1	2.1	15.1	-	-	-	-	-	-
ARD-51	E11-141	183.70	184.50	Knight Piésold	Mine Rock	Diorite	(wt %)	26.2	45.2	-	-	-	0.6	7.5	9.4	-	-	-	-	-	-
ARD-57	CL10-01	178.20	180.00	Knight Piésold	Mine Rock	Diorite	(wt %)	24.8	28.6	-	-	-	2.1	0.0	23.8	-	-	-	-	-	-
ARD-58	CL10-01	227.50	229.50	Knight Piésold	Mine Rock	Diorite	(wt %)	16.2	53.3	-	-	-	1.5	0.0	6.2	-	0.1	-	-	-	-
E10-013-1	E10-013	5.78	7.8	Knight Piésold	Mine Rock	Diorite	(wt %)	13.4	37.6	-	13.3	1.1	0.0	1.6	17.9	-	3.6	-	-	-	-
E10-023-1	E10-023	30	31.9	Knight Piésold	Mine Rock	Diorite	(wt %)	71.1	20.4	-	-	0.9	0.8	1.3	0.6	-	4.8	-	-	-	-
E10-031-2	E10-031	158	160.1	Knight Piésold	Mine Rock	Diorite	(wt %)	72.9	16.0	-	-	0.6	0.9	1.1	0.7	-	7.7	-	-	-	-
E10-038-1	E10-038	74	75.9	Knight Piésold	Mine Rock	Diorite	(wt %)	18.7	33.6	10.5	19.1	2.8	1.8	0.3	8.6	-	4.6	-	-	-	-
E10-038-3	E10-038	158	159.85	Knight Piésold	Mine Rock	Diorite	(wt %)	29.8	15.8	21.0	19.2	-	1.5	-	12.7	-	-	-	-	-	-
E10-042-1	E10-042	14	16	Knight Piésold	Mine Rock	Diorite	(wt %)	42.1	39.2	-	-	7.1	0.0	2.4	0.1	-	9.0	-	-	-	-
E10-042-2	E10-042	89.5	91.7	Knight Piésold	Mine Rock	Diorite	(wt %)	44.1	44.0	-	-	2.5	2.8	1.2	0.4	0.3	4.9	-	-	-	-
E11-095-1	E11-095	284.6	286.4	Knight Piésold	Mine Rock	Diorite	(wt %)	40.5	31.9	-	7.0	1.5	1.1	3.8	1.4	-	-	-	-	-	0.2
E11-097-1	E11-097	35.1	37.2	Knight Piésold	Mine Rock	Diorite	(wt %)	56.6	22.2	-	8.2	3.0	0.8	0.2	3.1	-	3.4	-	-	-	-
E11-138-2	E11-138	211.3	213.33	Knight Piésold	Mine Rock	Diorite	(wt %)	32.0	40.6	-	-	-	0.8	12.8	12.5	-	-	0.1	-	-	-
ARD-13	E11-096	77.15	79.35	Knight Piésold	Mine Rock	Tonalite	(wt %)	26.6	57.8	-	-	-	-	3.8	8.2	-	2.7	-	-	-	-
ARD-16	E11-098	24.40	26.60	Knight Piésold	Mine Rock	Tonalite	(wt %)	39.1	52.8	-	-	-	-	1.3	0.7	-	6.1	-	-	-	-
ARD-21	E11-114	8.08	10.38	Knight Piésold	Mine Rock	Tonalite	(wt %)	38.2	55.0	-	-	-	-	1.1	1.0	-	3.2	-	-	-	-
ARD-4	E10-045	229.60	231.80	Knight Piésold	Mine Rock	Tonalite	(wt %)	40.2	55.8	-	-	-	-	1.8	0.4	-	1.9	-	-	-	-
ARD-41	E11-120	74.50	76.40	Knight Piésold	Mine Rock	Tonalite	(wt %)	26.6	62.6	-	-	-	-	2.7	5.8	-	2.2	-	-	-	-
ARD-45	E11-140	274.50	276.60	Knight Piésold	Mine Rock	Tonalite	(wt %)	35.6	57.3	-	-	-	-	0.9	1.4	-	4.7	-	-	-	-
ARD-48	E11-129	57.1	59.60	Knight Piésold	Mine Rock	Tonalite	(wt %)	46.8	42.4	-	-	-	-	2.0	1.7	-	7.2	-	-	-	-
ARD-6	E11-066	70.40	72.40	Knight Piésold	Mine Rock	Tonalite	(wt %)	27.3	57.1	-	-	-	-	4.0	4.4	-	1.6	-	-	-	-
ARD-60	E12-213	138.90	141.00	Knight Piésold	Mine Rock	Tonalite	(wt %)	34.1	53.4	-	-	-	-	0.7	1.4	-	2.8	-	-	-	-
E10-013-3	E10-013	60	62.28	Knight Piésold	Mine Rock	Tonalite	(wt %)	43.0	47.1	-	-	0.4	0.0	1.1	0.1	-	8.2	0.0	-	-	-
E10-031-1	E10-031	9.1	11	Knight Piésold	Mine Rock	Tonalite	(wt %)	64.5	27.7	-	-	1.3	0.8	0.7	1.2	0.3	3.4	-	-	-	-
E10-046-1	E10-046	15.8	18.07	Knight Piésold	Mine Rock	Tonalite	(wt %)	66.6	23.6	-	-	2.4	2.0	0.7	0.4	-	4.3	0.1	-	-	-
E10-046-2	E10-046	95	97.2	Knight Piésold	Mine Rock	Tonalite	(wt %)	0.0	94.9	-	-	0.7	0.2	2.9	0.2	-	1.1	0.0	-	-	-
E11-059-1	E11-059	25.57	27.61	Knight Piésold	Mine Rock	Tonalite	(wt %)	66.7	24.7	-	-	-	2.1	0.9	0.2	0.2	5.3	0.0	-	-	-
E11-061-2	E11-061	338	340.2	Knight Piésold	Mine Rock	Tonalite	(wt %)	56.0	22.8	-	-	8.2	1.3	3.7	6.9	1.1	-	-	-	-	-
E11-072-1	E11-072	155.5	157.65	Knight Piésold	Mine Rock	Tonalite	(wt %)	60.1	28.8	-	-	0.8	1.3	0.9	0.4	-	7.6	-	-	-	-
E11-077-1	E11-077	142.7	144.85	Knight Piésold	Mine Rock	Tonalite	(wt %)	63.9	27.7	0.2	-	1.0	0.7	1.3	1.5	0.1	3.3	-	-	-	-
E11-081-1	E11-081	376	378.25	Knight Piésold	Mine Rock	Tonalite	(wt %)	58.4	22.2	-	-	-	-	4.5	0.8	1.7	14.1	-	-	-	-
E11-091-1	E11-091	13.9	15.95	Knight Piésold	Mine Rock	Tonalite	(wt %)	66.1	27.0	1.2	-	1.2	1.0	0.2	0.9	0.3	2.0	0.0	-	-	-
E11-091-3	E11-091	311	313.13	Knight Piésold	Mine Rock	Tonalite	(wt %)	67.3	25.1	0.1	-	0.9	1.0	0.9	0.2	-	4.4	-	-	-	-
E11-095-2	E11-095	18.9	20.9	Knight Piésold	Mine Rock	Tonalite	(wt %)	68.1	21.6	-	-	-	0.7	2.4	0.5	-	6.8	-	-	-	-
E11-097-2	E11-097	153.7	155.7	Knight Piésold	Mine Rock	Tonalite	(wt %)	65.4	21.1	-	-	1.4	1.8	1.7	0.3	-	8.3	-	-	-	-
E11-138-1	E11-138	15.5	17.88	Knight Piésold	Mine Rock	Tonalite	(wt %)	78.7	10.0	-	-	0.3	0.9	3.4	0.1	-	6.7	-	-	-	-
ARD-53	E12-200	185.00	187.00	Knight Piésold	Mine Rock	Mafic Dykes	(wt %)	32.8	28.0	-	-	-	1.8	10.4	27.0	-	-	-	-	-	-
ARD-55	E12-294	178.00	180.00	Knight Piésold	Mine Rock	Mafic Dykes	(wt %)	31.8	24.5	-	-	-	2.5	0.0	41.2	-	-	-	-	-	-
ARD-15	E11-096	150.45	152.25	Knight Piésold	Mine Rock	Diabase Dykes	(wt %)	1.1	46.3	-	-	-	-	-	7.0	-	4.9	-	18.0	-	1.2
ARD-35	E11-075	220.91	223.31	Knight Piésold	Mine Rock	Diabase Dykes	(wt %)	5.1	32.7	-	-	-	-	5.7	9.2	-	8.3	-	12.7	-	0.4
ARD-42	E11-120	108.90	110.40	Knight Piésold	Mine Rock	Diabase Dykes	(wt %)	37.7	10.0	-	-	-	-	20.5	22.4	-	9.4	-	-	-	-
ARD-50	E11-144	138.81	139.61	Knight Piésold	Mine Rock	Diabase Dykes	(wt %)	4.4	45.5	-	-	-	-	1.0	7.3	-	4.2	-	11.5	-	1.3
E10-038-2	E10-038	101	103	Knight Piésold	Mine Rock	Diabase Dykes	(wt %)	14.3	28.1	32.9	8.5	-	2.1	2.3	11.9	-	-	-	-	-	-
E10-031-4	E10-031	585	586.3	Knight Piésold	Outside Pit	Diorite Breccia	(wt %)	66.3	24.7	-	-	1.3	1.2	1.0	1.4	-	4.1	-	-	-	-
E11-081-2	E11-081	511.66	513.5	Knight Piésold	Outside Pit	Diorite Breccia	(wt %)	65.7	23.5	-	-	-	-	0.9	0.3	1.9	7.9	-	-	-	-
E11-081-3	E11-081	589	592.4	Knight Piésold	Outside Pit	Diorite Breccia	(wt %)	71.5	21.0	-	-	-	-	0.6	0.2	0.1	4.8	0.0	-	-	-
ARD-2	E10-036	376.50	378.75	Knight Piésold	Outside Pit	Magma Mixing Breccia	(wt %)	32.8	58.0	-	-	-	-	1.9	2.3	-	5.0	-	-	-	-
ARD-46	E11-145	483.30	485.10	Knight Piésold	Outside Pit	Magma Mixing Breccia	(wt %)	38.9	50.1	-	-	3.8	-	1.2	1.7	-	2.8	-	-	-	-
ARD-54	E12-205	668.00	669.60	Knight Piésold	Outside Pit	Magma Mixing Breccia	(wt %)	32.3	57.0	-	-	1.3	0.5	1.0	2.2	-	1.3	-	-	-	-
ARD-8	E11-082	455.00	456.90	Knight Piésold	Outside Pit	Magma Mixing Breccia	(wt %)	24.2	53.9	-	-	6.9	-	1.7	2.9	0.2	2.3	-	-	-	-
ARD-52	E11-145	298.00	299.70	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	(wt %)	28.5	34.5	-	-	2.7	-	1.1	2.0	-	3.3	-	-	-	-
ARD-9	E11-082	376.00	378.00	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	(wt %)	27.6	56.3	-	-	-	-	1.9	2.9	-	9.9	-	-	-	-
ARD-23	E10-038	575.00	577.20	Knight Piésold	Outside Pit	Diorite	(wt %)	46.1	45.4	-	-	-	-	0.9	0.7	-	6.9	-	-	-	-
ARD-30	E12-206	260.70	262.60	Knight Piésold	Outside Pit	Diorite	(wt %)	11.2	51.3	-	-	-	1.9	4.6	15.0	-	6.6	-	-	-	-
ARD-1	E10-036	316.85	318.95	Knight Piésold	Outside Pit	Tonalite	(wt %)	40.3	50.6	-	-	-	-	2.2	2.1	-	4.8	-	-	-	-
ARD-10	E11-087	242.90	244.90	Knight Piésold	Outside Pit	Tonalite	(wt %)	41.1	42.5	-	-	-	-	3.2	0.8	-	12.5	-	-	-	-
ARD-40	E11-120	668.90	671.00	Knight Piésold	Outside Pit	Tonalite	(wt %)	40.0	49.5	-	-	-	-	1.4	2.0	-	7.1	-	-	-	-
ARD-43	E11-122	384.00	385.90	Knight Piésold	Outside Pit	Tonalite	(wt %)	40.2	51.5	-	-	-	-	1.1	0.7	-	6.5	-	-	-	-
ARD-7	E11-082	343.00	344.80	Knight Piésold	Outside Pit	Tonalite	(wt %)	40.6	46.5	-	-	-	-	2.3	0.7	-	9.5	-	-	-	-
E11-081-4	E11-081	645.65	649	Knight Piésold	Outside Pit	Tonalite	(wt %)	66.9	24.7	-	-	-	-	2.2	0.1	-	6.1	0.0	-	-	-
E11-138-3	E11-138	241	243.1	Knight Piésold	Outside Pit	Tonalite	(wt %)	65.0	18.1	0.0	-	-	0.7	6.8	6.1	-	3.1	0.2	-	-	-
E11-059-2	E11-059	492.4	493.9	Knight Piésold	Outside Pit	Diabase Dykes	(wt %)	30.8	37.8	1.0	-	-	3.1	0.2	1.7	0.0	7.8	0.1	14.6	1.6	1.3
ARD-14	E11-096	467.44	469.94	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	38.0	55.8	-	-	-	-	2.0	0.8	-	3.3	-	-	-	-
ARD-17	E11-098	222.00	224.00	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	44.3	39.0	-	-	4.0	-	3.8	4.4	-	0.1	-	-	-	-
ARD-20	E11-099	261.90	264.00	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	39.8	51.4	-	-	-	-	3.1	2.8	-	2.9	-	-	-	-
ARD-22	E11-114	16.50	18.50	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	25.7	54.2	-	-	2.5	-	5.1	8.4	-	2.6	-	-	-	-
ARD-36	E11-071	535.70	537.80	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	43.2	41.2	-	-	-	-	3.6	6.4	-	5.6	-	-	-	-
ARD-38	E11-078	267.30	269.60	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	47.0	48.5	-	-	-	-	0.3	2.3	-	2.0	-	-	-	-
ARD-44	E11-122	100.20	102.40	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	42.4	37.8	-	-	-	-	3.4	3.6	-	12.7	-	-	-	-
E11-061-1	E11-061	90.95	92.73	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	22.4	32.0	11.8	13.9	3.8	1.8	2.4	11.8	-	-	-	-	-	-
E11-054-1	E11-054	33.87	36.14	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	63.7	25.8	-	-	-	0.7	2.8	4.1	-	2.6	0.1	-	-	-
E11-054-2	E11-054	50.46	52.61	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	64.0	25.3	-	-	-	0.5	2.3	4.1	-	3.9	-	-	-	-
E11-051-1	E11-051	70.8	72.72	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	41.9	47.7	-	-	0.4	0.2	2.2	4.7	0.1	2.8	-	-	-	-
CL10-03-1	CL10-03	121.4	122.6	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	52.8	7.7	-	-	21.3	0.0	2.8	0.1	-	13.9	1.4	-	-	-
E10-042-3	E10-042	478.5	480.7	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	39.5	51.7	-	-	0.5	0.5	1.5	0.2	-	6.1	0.0	-	-	-
ARD-26	E10-028	37.20	39.40	Knight Piésold	Ore Grade	Magma Mixing Breccia	(wt %)	41.4	53.8	-	-	-	-	1.1	0.7	-	2.3	-	-	-	-
E10-013-4	E10-013	125	127.1	Knight Piésold	Ore Grade	Magma Mixing Breccia	(wt %)	50.4	43.6	-	-	0.8	0.0	1.0	0.1	-	4.0	-	-	-	-
ARD-39	E11-179	514.00	517.65	Knight Piésold	Ore Grade	Fault	(wt %)	65.9	29.2	-	-	-	-	-	-	-	-	-	-	-	-
E11-054-5	E11-054	212.3	215.5	Knight Piésold	Ore Grade	Fault	(wt %)	51.0	41.7	-	-	0.6	3.1	0.2	0.1	-	2.4	-	-	-	-
ARD-56	E12-205	207.50	209.60	Knight Piésold	Ore Grade	Diorite	(wt %)	38.0	56.5	-	-	-	-	1.2	1.2	-	3.0	-	-	-	-
ARD-59	CL10-02A	102.00	104.00	Knight Piésold	Ore Grade	Diorite	(wt %)	39.7	46.5	-	-	-	-	1.6	1.0	-	10.2	-	-	-	-
E11-054-3	E11-054	75.15	77.44	Knight Piésold	Ore Grade	Diorite	(wt %)	66.3	26.3	-	-	-	0.6	1.5	0.6	-	4.7	-	-	-	-
ARD-19	E11-099	240.20	242.40	Knight Piésold	Ore Grade	Tonalite	(wt %)	47.4	45.3	-	-	-	-	1.0	0.4	-	6.1	-	-	-	-
ARD-32	E11-048	325.10	327.10	Knight Piésold	Ore Grade	Tonalite	(wt %)	39.7	52.9	-	-	-	-	1.1	0.8	-	5.6	-	-	-	-
ARD-5	E11-066	509.90	511.90	Knight Piésold	Ore Grade	Tonalite	(wt %)	37.7	58.7	-	-	-	-	0.8	0.9	-	1.9	-	-	-	-
E11-091-2	E11-091	93	94.95	Knight Piésold	Ore Grade	Diabase Dykes	(wt %)	23.3	41.3	2.2	-	2.9	1.1	-	4.0	0.5	6.2	-	18.6	-	-

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Table A-13: Mine Rock Rietveld XRD Results

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Sample ID	Drill Hole ID	From	To	Consultant	Waste	Lithology	Mineral/Compound	Amphibole	Hematite	Dolomite	Magnetite	Montmorillonite	Talc	Albite intermediate	Microcline maximum	Microcline intermediate2	Rutile	Epidote	Enstatite	Monticellite	Norbergite	Nontronite
		(m)			Classification	Units	Formula	$(Na,K)Ca_2(Fe,Mg)_5(Al,Si)_8O_{22}(OH)_2$	Fe_2O_3	$CaMg(CO_3)_2$	Fe_3O_4	$(Al,Mg)_8(Si_4O_{10})_3(OH)_{10}*12H_2O$	$Mg_3Si_4O_{10}(OH)_2$	$NaAlSi_3O_8$	$KAlSi_3O_8$	$KAlSi_3O_8$	TiO_2	$Ca_2(Al,Fe)Al_2O(SiO_4)(Si_2O_7)(OH)$	$MgSiO_3$	$CaMgSiO_4$	$Mg_3(SiO_4)(F,OH)_2$	$Fe_2(Al,Si)_4O_{10}(OH)_2Na_{0.3}(H_2O)_4$
ARD-11	E11-087	84.30	86.50	Knight Piésold	Mine Rock	Diorite Breccia	(wt %)	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-
ARD-31	E12-179	354.75	356.85	Knight Piésold	Mine Rock	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-34	E11-075	95.40	97.50	Knight Piésold	Mine Rock	Diorite Breccia	(wt %)	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-
ARD-49	E11-140	372	373.90	Knight Piésold	Mine Rock	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-077-2	E11-077	313	315.24	Knight Piésold	Mine Rock	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-25	E10-30	211.22	213.22	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-27	E11-049	383.00	384.90	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-
ARD-33	E11-048	164.30	166.60	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E10-013-2	E10-013	50	52.2	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	-	0.4	-	1.1	-	-	-	-	-	-	-	-	-	-	-
E10-031-3	E10-031	500	502	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-054-4	E11-054	128.4	130.8	Knight Piésold	Mine Rock	Magma Mixing Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-29	E11-061	262.30	264.00	Knight Piésold	Mine Rock	Fault	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.8
E11-066-1	E11-066	312	316.2	Knight Piésold	Mine Rock	Fault	(wt %)	-	-	-	-	3.0	-	-	-	-	-	-	-	-	-	-
ARD-12	E12-217	547.00	549.50	Knight Piésold	Mine Rock	Diorite	(wt %)	8.4	-	-	-	-	-	-	-	-	-	9.5	-	-	-	-
ARD-18	E11-098	247.40	249.30	Knight Piésold	Mine Rock	Diorite	(wt %)	8.2	-	-	-	-	-	-	-	-	-	9.4	-	-	-	-
ARD-24	E11-062	15.90	17.80	Knight Piésold	Mine Rock	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-28	E11-049	38.30	40.20	Knight Piésold	Mine Rock	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-3	E10-036	103.30	105.20	Knight Piésold	Mine Rock	Diorite	(wt %)	-	-	-	-	-	0.6	22.6	-	-	-	-	-	-	-	-
ARD-37	E11-071	281.10	283.10	Knight Piésold	Mine Rock	Diorite	(wt %)	10.5	-	-	0.7	-	-	-	-	-	-	11.1	-	-	-	-
ARD-47	E12-198	210.00	211.80	Knight Piésold	Mine Rock	Diorite	(wt %)	30.8	-	0.0	-	-	-	-	-	-	-	11.4	-	-	-	-
ARD-51	E11-141	183.70	184.50	Knight Piésold	Mine Rock	Diorite	(wt %)	4.1	-	-	-	-	-	-	-	-	-	7.0	-	-	-	-
ARD-57	CL10-01	178.20	180.00	Knight Piésold	Mine Rock	Diorite	(wt %)	9.5	-	-	-	-	-	-	-	-	-	11.3	-	-	-	-
ARD-58	CL10-01	227.50	229.50	Knight Piésold	Mine Rock	Diorite	(wt %)	16.3	-	-	-	-	-	-	-	-	-	6.4	-	-	-	-
E10-013-1	E10-013	5.78	7.8	Knight Piésold	Mine Rock	Diorite	(wt %)	11.6	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-
E10-023-1	E10-023	30	31.9	Knight Piésold	Mine Rock	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E10-031-2	E10-031	158	160.1	Knight Piésold	Mine Rock	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E10-038-1	E10-038	74	75.9	Knight Piésold	Mine Rock	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E10-038-3	E10-038	158	159.85	Knight Piésold	Mine Rock	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E10-042-1	E10-042	14	16	Knight Piésold	Mine Rock	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E10-042-2	E10-042	89.5	91.7	Knight Piésold	Mine Rock	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-095-1	E11-095	284.6	286.4	Knight Piésold	Mine Rock	Diorite	(wt %)	12.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-097-1	E11-097	35.1	37.2	Knight Piésold	Mine Rock	Diorite	(wt %)	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-138-2	E11-138	211.3	213.33	Knight Piésold	Mine Rock	Diorite	(wt %)	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-13	E11-096	77.15	79.35	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-
ARD-16	E11-098	24.40	26.60	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-21	E11-114	8.08	10.38	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	1.6	-	-	-	-	-	-	-	-	-	-	-	-
ARD-4	E10-045	229.60	231.80	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-41	E11-120	74.50	76.40	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-45	E11-140	274.50	276.60	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-48	E11-129	57.1	59.60	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-6	E11-066	70.40	72.40	Knight Piésold	Mine Rock	Tonalite	(wt %)	4.5	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-
ARD-60	E12-213	138.90	141.00	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	0.0	-	-	-	-	7.6	-	-	-	-	-	-	-
E10-013-3	E10-013	60	62.28	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-		-	-	-	-	-	-	-	-	-	-	-	-
E10-031-1	E10-031	9.1	11	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-		-	-	-	-	-	-	-	-	-	-	-	-
E10-046-1	E10-046	15.8	18.07	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-		-	-	-	-	-	-	-	-	-	-	-	-
E10-046-2	E10-046	95	97.2	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-		-	-	-	-	-	-	-	-	-	-	-	-
E11-059-1	E11-059	25.57	27.61	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-		-	-	-	-	-	-	-	-	-	-	-	-
E11-061-2	E11-061	338	340.2	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-		-	-	-	-	-	-	-	-	-	-	-	-
E11-072-1	E11-072	155.5	157.65	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-		-	-	-	-	-	-	-	-	-	-	-	-
E11-077-1	E11-077	142.7	144.85	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-
E11-081-1	E11-081	376	378.25	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-091-1	E11-091	13.9	15.95	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-091-3	E11-091	311	313.13	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-095-2	E11-095	18.9	20.9	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-097-2	E11-097	153.7	155.7	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-138-1	E11-138	15.5	17.88	Knight Piésold	Mine Rock	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-53	E12-200	185.00	187.00	Knight Piésold	Mine Rock	Mafic Dykes	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-55	E12-294	178.00	180.00	Knight Piésold	Mine Rock	Mafic Dykes	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-15	E11-096	150.45	152.25	Knight Piésold	Mine Rock	Diabase Dykes	(wt %)	5.4	-	-	1.8	-	-	-	-	5.8	-	-	4.2	2.7	1.6	-
ARD-35	E11-075	220.91	223.31	Knight Piésold	Mine Rock	Diabase Dykes	(wt %)	4.5	-	-	3.3	-	-	-	-	6.6	-	-	6.2	3.0	2.3	-
ARD-42	E11-120	108.90	110.40	Knight Piésold	Mine Rock	Diabase Dykes	(wt %)	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-
ARD-50	E11-144	138.81	139.61	Knight Piésold	Mine Rock	Diabase Dykes	(wt %)	6.2	-	-	3.3	-	-	-	-	6.4	-	-	5.7	2.2	1.1	-
E10-038-2	E10-038	101	103	Knight Piésold	Mine Rock	Diabase Dykes	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E10-031-4	E10-031	585	586.3	Knight Piésold	Outside Pit	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-081-2	E11-081	511.66	513.5	Knight Piésold	Outside Pit	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-081-3	E11-081	589	592.4	Knight Piésold	Outside Pit	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-2	E10-036	376.50	378.75	Knight Piésold	Outside Pit	Magma Mixing Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-46	E11-145	483.30	485.10	Knight Piésold	Outside Pit	Magma Mixing Breccia	(wt %)	-	-	0.1	-	-	-	-	1.3	-	-	-	-	-	-	-
ARD-54	E12-205	668.00	669.60	Knight Piésold	Outside Pit	Magma Mixing Breccia	(wt %)	3.4	-	0.1	0.8	-	-	-	-	-	0.0	-	-	-	-	-
ARD-8	E11-082	455.00	456.90	Knight Piésold	Outside Pit	Magma Mixing Breccia	(wt %)	6.6	-	-	-	-	-	-	1.5	-	-	-	-	-	-	-
ARD-52	E11-145	298.00	299.70	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	(wt %)	-	-	0.1	-	-	-	26.7	1.1	-	-	-	-	-	-	-
ARD-9	E11-082	376.00	378.00	Knight Piésold	Outside Pit	Intrusive Feldspar Porphyry	(wt %)	-	-	1.0	-	-	-	-	-	-	0.4	-	-	-	-	-
ARD-23	E10-038	575.00	577.20	Knight Piésold	Outside Pit	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-30	E12-206	260.70	262.60	Knight Piésold	Outside Pit	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	9.3	-	-	-	-
ARD-1	E10-036	316.85	318.95	Knight Piésold	Outside Pit	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-10	E11-087	242.90	244.90	Knight Piésold	Outside Pit	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-40	E11-120	668.90	671.00	Knight Piésold	Outside Pit	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-43	E11-122	384.00	385.90	Knight Piésold	Outside Pit	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-7	E11-082	343.00	344.80	Knight Piésold	Outside Pit	Tonalite	(wt %)	-	-	-	-	-	0.4	-	-	-	-	-	-	-	-	-
E11-081-4	E11-081	645.65	649	Knight Piésold	Outside Pit	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-138-3	E11-138	241	243.1	Knight Piésold	Outside Pit	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-059-2	E11-059	492.4	493.9	Knight Piésold	Outside Pit	Diabase Dykes	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-14	E11-096	467.44	469.94	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-17	E11-098	222.00	224.00	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-20	E11-099	261.90	264.00	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-22	E11-114	16.50	18.50	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	1.4	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-
ARD-36	E11-071	535.70	537.80	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-38	E11-078	267.30	269.60	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-44	E11-122	100.20	102.40	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-
E11-061-1	E11-061	90.95	92.73	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-054-1	E11-054	33.87	36.14	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-054-2	E11-054	50.46	52.61	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-051-1	E11-051	70.8	72.72	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CL10-03-1	CL10-03	121.4	122.6	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E10-042-3	E10-042	478.5	480.7	Knight Piésold	Ore Grade	Diorite Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-26	E10-028	37.20	39.40	Knight Piésold	Ore Grade	Magma Mixing Breccia	(wt %)	-	-	0.8	-	-	-	-	-	-	-	-	-	-	-	-
E10-013-4	E10-013	125	127.1	Knight Piésold	Ore Grade	Magma Mixing Breccia	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-39	E11-179	514.00	517.65	Knight Piésold	Ore Grade	Fault	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.9
E11-054-5	E11-054	212.3	215.5	Knight Piésold	Ore Grade	Fault	(wt %)	-	-	-	-	0.8	-	-	-	-	-	-	-	-	-	-
ARD-56	E12-205	207.50	209.60	Knight Piésold	Ore Grade	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-59	CL10-02A	102.00	104.00	Knight Piésold	Ore Grade	Diorite	(wt %)	-	-	-	-	-	-	-	0.9	-	-	-	-	-	-	-
E11-054-3	E11-054	75.15	77.44	Knight Piésold	Ore Grade	Diorite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-19	E11-099	240.20	242.40	Knight Piésold	Ore Grade	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-32	E11-048	325.10	327.10	Knight Piésold	Ore Grade	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARD-5	E11-066	509.90	511.90	Knight Piésold	Ore Grade	Tonalite	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E11-091-2	E11-091	93	94.95	Knight Piésold	Ore Grade	Diabase Dykes	(wt %)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

IAMGOLD

Table A-14: Humidity Cell Acid Base Accounting Results

amec

Sample ID	Knight Piésold Sample ID	Lithology	Paste pH	Fizz Rate	Total Sulphur	Sulphate	Sulphide	Total Carbon	Carbonate Carbon	NP	Carbonate NP	AP	MPA	NPR_{MPA}	Carbonate NPR_{MPA}
					%					kg $CaCO_3$/tonne					
HC1	Altered Tonalite South	Tonalite	9.17	3	0.03	<0.01	0.02	0.28	0.21	25	24	0.63	0.94	27	25
HC2	Altered Tonalite North	Tonalite	8.85	3	0.09	<0.01	0.08	0.60	0.48	50	50	2.56	2.88	17	17
HC3	Tonalite South	Tonalite	8.95	3	0.03	<0.01	0.02	0.41	0.29	31	34	0.56	0.88	35	39
HC4	Tonalite North	Tonalite	9.55	3	0.04	0.01	0.03	0.29	0.22	24	24	0.97	1.28	19	19
HC5	Tonalite Breccia South	Magma Mixing Breccia	9.46	3	0.82	0.11	0.71	0.38	0.22	34	32	22	26	1.3	1.2
HC6	Tonalite Breccia North	Tonalite	9.09	3	0.07	0.02	0.05	0.47	0.37	38	39	1.56	2.19	17	18
HC7	Altered Tonalite Breccia South	Magma Mixing Breccia	9.05	3	0.17	0.04	0.13	0.39	0.29	32	33	3.91	5.16	6	6
HC8	Altered Tonalite Breccia North	Tonalite	8.84	4	0.02	<0.01	0.01	0.73	0.59	60	61	0.44	0.75	80	81
HC9	Diorite South	Diorite	9.25	4	0.02	<0.01	<0.01	0.48	0.40	47	40	0.31	0.47	100	86
HC10	Diorite North	Diorite	9.37	4	0.03	<0.01	0.02	0.51	0.41	47	42	0.50	0.81	58	52
HC11	Altered Diorite South	Diorite Breccia	9.41	4	0.14	0.03	0.11	0.54	0.46	50	45	3.56	4.50	11	10
HC12	Altered Diorite North	Diorite Breccia	9.36	4	0.06	0.02	0.04	0.61	0.49	52	51	1.19	1.81	29	28
HC13	Diorite Breccia South	Diorite	9.27	3	0.08	<0.01	0.07	0.39	0.28	38	33	2.25	2.56	15	13
HC14	Diorite Breccia North	Diorite	9.2	3	0.11	0.03	0.08	0.49	0.38	39	41	2.38	3.31	12	12

Table A-15: Humidity Cell Elemental Content

Sample ID	Knight Piésold Sample ID	Lithology	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Na	Ni
			µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
HC1	Altered Tonalite South	Tonalite	6900	9.3	45	0.15	<0.09	8800	0.05	4.3	38	110	15000	2300	6	3600	130	1.2	320	9
HC2	Altered Tonalite North	Tonalite	8400	8.6	8.9	0.35	0.52	22000	0.06	4.2	34	230	17000	630	8	7300	210	3.5	290	11
HC3	Tonalite South	Tonalite	3000	3.1	11	0.42	<0.09	9100	0.03	2.2	46	100	5700	790	5	1600	96	2.2	340	8.7
HC4	Tonalite North	Tonalite	4900	2.4	15	0.22	<0.09	10000	0.02	3.1	35	130	9700	680	3	3400	98	1.5	220	8.3
HC5	Tonalite Breccia South	Magma Mixing Breccia	14000	6.8	146	0.36	2.4	13000	0.06	17	69	2800	30000	8300	14	9600	280	7.6	290	34
HC6	Tonalite Breccia North	Tonalite	8600	2.8	10	0.37	0.41	16000	<0.02	5.1	54	350	18000	540	5	5400	140	1.7	370	13
HC7	Altered Tonalite Breccia South	Magma Mixing Breccia	7900	2.3	25	0.27	0.15	13000	0.02	14	56	340	16000	2900	8	5900	140	2	340	13
HC8	Altered Tonalite Breccia North	Tonalite	9200	0.9	6.1	0.38	0.61	24000	<0.02	4.7	64	59	17000	500	10	8100	220	5.1	390	13
HC9	Diorite South	Diorite	16000	5.8	26	0.06	<0.09	20000	0.04	11	80	22	28000	2500	14	15000	320	1.1	380	45
HC10	Diorite North	Diorite	14000	7.2	39	0.18	<0.09	17000	<0.02	10	54	57	25000	3700	10	12000	250	1.5	290	25
HC11	Altered Diorite South	Diorite Breccia	13000	1.2	47	0.1	<0.09	21000	<0.02	11	79	95	23000	3300	9	11000	270	0.4	370	20
HC12	Altered Diorite North	Diorite Breccia	9300	13	21	0.08	0.14	21000	0.02	7.7	45	380	18000	1400	8	6500	180	0.7	300	13
HC13	Diorite Breccia South	Diorite	18000	5.3	95	0.21	<0.09	14000	0.13	11	88	370	30000	7000	19	16000	300	1.4	300	30
HC14	Diorite Breccia North	Diorite	7100	2	8.3	0.24	0.26	16000	<0.02	3	52	600	15000	760	7	4800	160	1.2	310	9

Sample ID	Knight Piésold Sample ID	Lithology	P	Pb	Sb	Se	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
			µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
HC1	Altered Tonalite South	Tonalite	390	2.2	<0.80	0.142	<0.70	<0.50	12	500	0.04	1.6	10	13	17	<0.05
HC2	Altered Tonalite North	Tonalite	540	3.9	<0.80	0.337	<0.70	1.5	13	550	<0.02	0.97	12	14	27	0.06
HC3	Tonalite South	Tonalite	160	2.5	<0.80	0.112	<0.70	<0.50	10	210	<0.02	1	3	11	10	<0.05
HC4	Tonalite North	Tonalite	220	1.3	<0.80	0.122	<0.70	<0.50	12	140	<0.02	0.84	6	10	14	<0.05
HC5	Tonalite Breccia South	Magma Mixing Breccia	270	3.3	<0.80	3.08	2.8	<0.50	18	970	0.11	0.79	24	9.5	29	<0.05
HC6	Tonalite Breccia North	Tonalite	180	2	<0.80	0.484	<0.70	0.6	10	170	<0.02	1.1	12	14	14	<0.05
HC7	Altered Tonalite Breccia South	Magma Mixing Breccia	79	2.6	<0.80	0.313	<0.70	1.1	15	670	0.05	0.89	14	11	17	<0.05
HC8	Altered Tonalite Breccia North	Tonalite	370	4.2	<0.80	0.115	<0.70	1.1	8.4	330	<0.02	0.67	22	15	16	<0.05
HC9	Diorite South	Diorite	850	2.5	<0.80	0.066	<0.70	0.9	16	960	0.04	0.17	46	6	36	<0.05
HC10	Diorite North	Diorite	370	0.91	<0.80	0.169	<0.70	0.8	18	710	0.06	0.89	40	26	21	<0.05
HC11	Altered Diorite South	Diorite Breccia	460	1.5	<0.80	0.253	<0.70	1	21	720	0.08	0.63	49	11	20	<0.05
HC12	Altered Diorite North	Diorite Breccia	260	1	<0.80	0.204	<0.70	<0.50	14	300	0.04	0.65	14	12	18	<0.05
HC13	Diorite Breccia South	Diorite	250	4.1	<0.80	0.234	<0.70	0.8	25	1200	0.11	0.52	44	9.2	39	<0.05
HC14	Diorite Breccia North	Diorite	83	2.2	<0.80	0.396	<0.70	0.7	12	140	<0.02	0.86	10	7.7	11	<0.05

Table A-16: Tailings Acid Base Accounting Results

Comp	CN Test No.	P_{80}, µm	Paste pH	Fizz Rate	Total Sulphur	Sulphate	Sulphide*	Total Carbon	Carbonate Carbon	Carbonate NP**	NP	AP***	NPR	Carbonate NPR
					%					kg $CaCO_3$/tonne				
C25-01	CN-40	96	8.75	3	0.205	0.04	0.165	0.577	2.47	41.2	47	5.16	9.1	8.0
C25-02	CN-37	94	9.27	3	0.023	0.01	0.013	0.113	0.46	7.7	9.6	0.41	23.6	18.9
C25-03	CN-101	93	8.84	3	0.105	0.04	0.065	0.558	2.40	40.0	46	2.03	22.6	19.7
C25-04	CN-102	99	9.17	3	0.047	0.02	0.027	0.25	0.979	16.3	17	0.84	20.1	19.4
C25-05	CN-86	93	9.12	3	0.053	0.02	0.033	0.292	1.24	20.7	24	1.03	23.3	20.1
C25-06	CN-103	92	9.20	3	0.038	0.02	0.018	0.281	1.11	18.5	30	0.56	53.3	32.9
C25-07	CN-104 RG	94	8.56	3	0.627	0.06	0.567	1.13	5.19	86.6	100	17.72	5.6	4.9
C25-08	CN-105	76	9.12	3	0.148	0.04	0.108	0.035	0.06	1.0	5.8	3.38	1.7	0.3
C25-09	CN-106	91	9.04	3	0.181	0.04	0.141	0.395	1.66	27.7	33	4.41	7.5	6.3
C25-10	CN-93	103	8.77	3	0.011	0.01	<0.01	0.24	1.04	17.3	20	0.31	64.0	55.5
C25-11	CN-107 RG	96	9.01	3	0.023	0.02	<0.01	0.497	2.15	35.9	39	0.31	124.8	114.8
C25-12	CN-181	98	8.89	3	0.182	0.07	0.112	1.16	5.29	88.2	82	3.50	23.4	25.2
C25-13	CN-182	99	8.80	3	0.324	0.08	0.244	0.484	2.09	34.9	39	7.63	5.1	4.6
C25-14	CN-183	106	8.91	3	0.112	0.02	0.092	0.523	2.47	41.2	45	2.88	15.7	14.3
C25-15	CN-111	95	9.14	3	0.007	<0.01	<0.01	0.369	1.51	25.2	30	0.31	96.0	80.6
C25-16	CN-112	99	8.98	3	0.052	0.01	0.042	0.226	0.829	13.8	19	1.31	14.5	10.5
C25-17	CN-38	139	8.88	3	0.424	0.08	0.344	0.504	1.86	31.0	36	10.75	3.3	2.9
C25-18	CN-84	88	9.22	3	0.018	0.02	<0.01	0.410	1.74	29.0	32	0.31	102.4	92.9
C25-19	CN-41	86	8.93	3	0.128	<0.01	0.118	0.682	3.07	51.2	56	3.69	15.2	13.9
C25-20	CN-113	92	9.07	3	0.114	0.02	0.094	0.578	2.41	40.2	51	2.94	17.4	13.7
C25-21	CN-114	98	9.27	3	0.008	<0.01	<0.01	0.153	0.615	10.3	14	0.31	44.8	32.8
C25-22	CN-115	86	9.20	3	0.028	0.02	<0.01	0.160	0.644	10.7	17	0.31	54.4	34.4
C25-23	CN-116	95	8.93	3	0.032	0.01	0.022	0.44	1.97	32.9	39	0.69	56.7	47.8
C25-24	CN-117 RG	109	8.87	3	0.043	0.02	0.023	0.245	0.999	16.7	21	0.72	29.2	23.2
C25-25	CN-50	95	9.18	3	0.069	0.02	0.049	0.612	2.74	45.7	50	1.53	32.7	29.8
C25-26	CN-31	91	9.07	3	0.265	<0.01	0.255	0.502	1.83	30.5	30	7.97	3.8	3.8
C25-27	CN-78	102	9.00	3	0.017	<0.01	<0.01	0.215	0.859	14.3	22	0.31	70.4	45.8
C25-28	CN-118	91	9.26	3	0.04	0.02	0.02	0.463	1.92	32.0	39	0.63	62.4	51.2
C25-29	CN-119	106	9.16	3	0.021	0.01	0.011	0.496	2.14	35.7	39	0.34	113.5	103.8
C25-30	CN-120	113	8.99	3	0.105	0.04	0.065	0.613	2.72	45.4	50	2.03	24.6	22.3
C25-31	CN-185	107	8.90	3	0.134	0.04	0.094	0.394	1.69	28.2	33	2.94	11.2	9.6
C25-32	CN-122	90	9.14	3	0.024	0.01	0.014	0.159	0.639	10.7	18	0.44	41.1	24.4
C25-33	CN-186	92	8.99	3	0.039	0.02	0.019	0.376	1.66	27.7	31	0.59	52.2	46.6
C25-34	CN-80	98	9.07	3	0.034	0.02	0.014	0.353	1.50	25.0	28	0.44	64.0	57.2
C25-35	CN-124	98	8.92	3	0.161	0.07	0.091	0.427	1.86	31.0	35	2.84	12.3	10.9
C25-36	CN-26	96	8.93	3	0.136	0.02	0.116	0.700	2.98	49.7	56	3.63	15.4	13.7
C25-37	CN-187	100	8.79	3	0.224	0.04	0.184	0.322	1.32	22.0	14	5.75	2.4	3.8
C25-38	CN-126	110	9.05	3	0.127	0.03	0.097	0.523	2.35	39.2	41	3.03	13.5	12.9
C25-39	CN-127	86	9.28	3	0.075	0.04	0.035	0.173	0.699	11.7	16	1.09	14.6	10.7
C25-40	CN-128	101	8.99	3	0.079	0.03	0.049	0.494	2.16	36.0	41	1.53	26.8	23.5
C25-41	CN-91	92	9.07	3	0.073	0.01	0.063	0.302	1.23	20.5	28	1.97	14.2	10.4
C25-42	CN-39	97	9.20	3	0.111	0.04	0.071	0.395	1.6	26.7	29	2.22	13.1	12.0
C25-43	CN-129	89	8.84	3	0.213	0.07	0.143	0.551	2.33	38.9	45	4.47	10.1	8.7
C25-44	CN-188	107	8.96	3	0.109	0.03	0.079	0.598	2.67	44.5	48	2.47	19.4	18.0
C25-45	CN-97	93	8.66	3	0.477	0.1	0.377	0.106	0.35	5.8	11	11.78	0.9	0.5
C25-46	CN-131	102	9.11	3	0.049	0.02	0.029	0.461	1.93	32.2	38	0.91	41.9	35.5
C25-47	CN-189	100	8.27	3	1.93	0.23	1.7	0.025	0.045	0.8	5	53.13	0.1	0.01
C25-48	CN-190	94	9.07	3	0.05	0.02	0.03	0.319	1.42	23.7	27	0.94	28.8	25.3
C25-49	CN-52	107	9.03	3	0.039	<0.01	0.029	0.185	0.734	12.2	18	0.91	19.9	13.5
C25-50	CN-191	88	8.84	3	0.070	0.03	0.04	0.376	1.66	27.7	35	1.25	28.0	22.1
C25-51	CN-134 RG	101	8.98	3	0.046	0.03	0.016	0.383	1.43	23.9	32	0.50	64.0	47.7
C25-52	CN-29	97	9.11	3	0.087	0.04	0.047	0.324	1.29	21.5	25	1.47	17.0	14.6
C25-53	CN-192	101	9.11	3	0.032	0.02	0.012	0.366	1.68	28.0	30	0.38	80.0	74.7
C25-54	CN-193	105	8.68	3	0.392	0.04	0.352	0.420	1.76	29.4	34	11.00	3.1	2.7
C25-55	CN-194	107	9.05	4	0.048	0.03	0.018	0.806	3.56	59.4	62	0.56	110.2	105.6
C25-56	CN-195	103	8.92	3	0.059	0.02	0.039	0.856	4.12	68.7	75	1.22	61.5	56.4
C25-57	CN-138 RG	97	8.99	3	0.122	0.04	0.082	0.526	2.33	38.9	42	2.56	16.4	15.2
C25-58	CN-196	97	9.07	3	0.01	<0.01	<0.01	0.242	1.03	17.2	20	0.31	64.0	55.0
C25-59	CN-139	113	9.06	3	0.028	0.02	<0.01	0.472	2.16	36.0	38	0.31	121.6	115.3
C25-60	CN-140 RG	94	9.41	3	0.022	0.02	<0.01	0.317	1.40	23.4	26	0.31	83.2	74.7
C25-61	CN-141	92	9.12	3	0.167	0.03	0.137	0.584	2.55	42.5	46	4.28	10.7	9.9
C25-62	CN-197	101	8.76	3	0.174	<0.01	0.164	0.603	2.46	41.0	45	5.13	8.8	8.0
C25-63	CN-143	88	9.17	3	0.024	0.01	0.014	0.604	2.76	46.0	49	0.44	112.0	105.2
C25-64	CN-198	101	9.07	3	0.033	0.02	0.013	0.782	3.28	54.7	58	0.41	142.8	134.7
C25-65	CN-145	93	8.90	3	0.173	0.03	0.143	0.317	1.34	22.3	28	4.47	6.3	5.0
C25-66	CN-199	101	8.97	3	0.026	<0.01	0.016	0.900	4.01	66.9	69	0.50	138.0	133.8
C25-67	CN-200R	97	8.92	4	0.564	0.19	0.374	0.942	4.43	73.9	81	11.69	6.9	6.3
C25-68	CN-146	105	9.29	3	0.009	<0.01	<0.01	0.312	1.40	23.4	25	0.31	80.0	74.7
C25-69	CN-201	109	9.21	3	0.017	<0.01	<0.01	0.308	1.33	22.2	25	0.31	80.0	71.0
C25-70	CN-36	105	9.41	3	0.022	0.01	0.012	0.952	4.39	73.2	71	0.38	189.3	195.3
C25-71	CN-147 RG	96	8.78	3	0.019	0.02	<0.01	0.408	1.85	30.9	35	0.31	112.0	98.7
C25-72	CN-202	102	9.05	4	0.04	0.03	0.01	0.654	3.03	50.5	48	0.31	153.6	161.7
C25-73	CN-203	101	8.90	3	0.127	0.04	0.087	0.536	2.27	37.9	41	2.72	15.1	13.9
C25-74	CN-149	89	8.98	3	0.067	0.04	0.027	0.205	0.849	14.2	18	0.84	21.3	16.8
C25-75	CN-150	101	9.16	3	0.063	0.03	0.033	0.532	2.36	39.4	46	1.03	44.6	38.2
C25-76	CN-151 RG	101	9.06	3	0.084	0.02	0.064	0.274	1.14	19.0	22	2.00	11.0	9.5
C25-77	CN-82	88	9.03	3	0.078	0.02	0.058	0.456	2.00	33.4	39	1.81	21.5	18.4
C25-78	CN-204	102	8.93	3	0.079	0.02	0.059	0.683	2.92	48.7	54	1.84	29.3	26.4
C25-79	CN-43	103	8.70	3	0.725	<0.01	0.715	0.540	2.21	36.9	64.2	22.34	2.9	1.6
C25-80	CN-153	94	9.18	3	0.134	0.02	0.114	0.332	1.40	23.4	27	3.56	7.6	6.6
C25-81	CN-51	95	9.53	3	0.061	0.01	0.051	0.362	1.54	25.7	28	1.59	17.6	16.1
C25-82	CN-154	96	9.12	3	0.039	0.02	0.019	0.593	2.81	46.9	59	0.59	99.4	78.9
C25-83	CN-155	89	8.48	3	0.195	0.06	0.135	0.452	1.85	30.9	20	4.22	4.7	7.3
C25-84	CN-96	92	8.61	3	0.091	0.04	0.051	0.314	1.32	22.0	26	1.59	16.3	13.8
C25-85	CN-205	101	8.93	3	0.105	0.06	0.045	0.615	2.68	44.7	48	1.41	34.1	31.8
C25-86	CN-27	108	9.09	3	0.06	0.02	0.04	0.232	0.944	15.7	19	1.25	15.2	12.6
C25-87	CN-206	104	8.94	3	0.086	0.02	0.066	0.354	1.51	25.2	28	2.06	13.6	12.2
C25-88	CN-158	104	8.90	3	0.092	0.04	0.052	0.250	1.01	16.8	23	1.63	14.2	10.4
C25-89	CN-56	111	8.89	3	0.378	0.03	0.348	0.357	1.26	21.0	28	10.88	2.6	1.9
C25-90	CN-159 RG	90	8.92	3	0.019	0.02	<0.01	0.124	0.495	8.3	12	0.31	38.4	26.4
C25-91	CN-160	61	8.29	3	0.592	0.09	0.502	0.762	3.25	54.2	64	15.69	4.1	3.5
C25-92	CN-161	94	8.76	3	0.043	0.02	0.023	0.032	0.075	1.3	3.2	0.72	4.5	1.7
C25-93	CN-35	111	9.13	3	0.055	0.02	0.035	0.393	1.63	27.2	70	1.09	64.0	24.9

* Calculated as the difference between measured total sulphur and sulphate

** Carbonate NP calculated from carbonate carbon

*** AP calculated from sulphide sulphur

Table A-17: Tailings Net Acid Generation Results

Comp	CN Test	P_{80}, µm	Final pH units	Vol. of NaOH, mL		NAG, kg/tonne H_2SO_4	
				to pH 4.5	to pH 7.0	to pH 4.5	to pH 7.0
C25-01	CN-40	96	10.59	0.00	0.00	0.0	0.0
C25-02	CN-37	94	10.28	0.00	0.00	0.0	0.0
C25-03	CN-101	93	10.77	0.00	0.00	0.0	0.0
C25-04	CN-102	99	9.88	0.00	0.00	0.0	0.0
C25-05	CN-86	93	10.74	0.00	0.00	0.0	0.0
C25-06	CN-103	92	10.68	0.00	0.00	0.0	0.0
C25-07	CN-104 RG	94	11.16	0.00	0.00	0.0	0.0
C25-08	CN-105	76	4.62	0.00	0.73	0.0	2.2
C25-09	CN-106	91	10.68	0.00	0.00	0.0	0.0
C25-10	CN-93	103	10.40	0.00	0.00	0.0	0.0
C25-11	CN-107 RG	96	10.83	0.00	0.00	0.0	0.0
C25-12	CN-181	98	10.37	0.00	0.00	0.0	0.0
C25-13	CN-182	99	10.76	0.00	0.00	0.0	0.0
C25-14	CN-183	106	10.96	0.00	0.00	0.0	0.0
C25-15	CN-111	95	10.80	0.00	0.00	0.0	0.0
C25-16	CN-112	99	10.53	0.00	0.00	0.0	0.0
C25-17	CN-38	139	10.25	0.00	0.00	0.0	0.0
C25-18	CN-84	88	10.91	0.00	0.00	0.0	0.0
C25-19	CN-41	86	11.16	0.00	0.00	0.0	0.0
C25-20	CN-113	92	11.09	0.00	0.00	0.0	0.0
C25-21	CN-114	98	8.76	0.00	0.00	0.0	0.0
C25-22	CN-115	86	9.98	0.00	0.00	0.0	0.0
C25-23	CN-116	95	10.67	0.00	0.00	0.0	0.0
C25-24	CN-117 RG	109	10.27	0.00	0.00	0.0	0.0
C25-25	CN-50	95	10.98	0.00	0.00	0.0	0.0
C25-26	CN-31	91	10.75	0.00	0.00	0.0	0.0
C25-27	CN-78	102	9.77	0.00	0.00	0.0	0.0
C25-28	CN-118	91	10.27	0.00	0.00	0.0	0.0
C25-29	CN-119	106	10.28	0.00	0.00	0.0	0.0
C25-30	CN-120	113	10.59	0.00	0.00	0.0	0.0
C25-31	CN-185	107	10.84	0.00	0.00	0.0	0.0
C25-32	CN-122	90	9.06	0.00	0.00	0.0	0.0
C25-33	CN-186	92	10.94	0.00	0.00	0.0	0.0
C25-34	CN-80	98	10.91	0.00	0.00	0.0	0.0
C25-35	CN-124	98	10.66	0.00	0.00	0.0	0.0
C25-36	CN-26	96	11.08	0.00	0.00	0.0	0.0
C25-37	CN-187	100	10.55	0.00	0.00	0.0	0.0
C25-38	CN-126	110	10.46	0.00	0.00	0.0	0.0
C25-39	CN-127	86	9.83	0.00	0.00	0.0	0.0
C25-40	CN-128	101	10.69	0.00	0.00	0.0	0.0
C25-41	CN-91	92	10.67	0.00	0.00	0.0	0.0
C25-42	CN-39	97	10.74	0.00	0.00	0.0	0.0
C25-43	CN-129	89	10.69	0.00	0.00	0.0	0.0
C25-44	CN-188	107	11.1	0.00	0.00	0.0	0.0
C25-45	CN-97	93	3.64	0.48	1.58	1.6	5.1
C25-46	CN-131	102	10.73	0.00	0.00	0.0	0.0
C25-47	CN-189	100	2.29	11.25	12.90	36.0	42.0
C25-48	CN-190	94	10.81	0.00	0.00	0.0	0.0
C25-49	CN-52	107	10.64	0.00	0.00	0.0	0.0
C25-50	CN-191	88	10.9	0.00	0.00	0.0	0.0
C25-51	CN-134 RG	101	10.53	0.00	0.00	0.0	0.0
C25-52	CN-29	97	11.65	0.00	0.00	0.0	0.0
C25-53	CN-192	101	11.01	0.00	0.00	0.0	0.0
C25-54	CN-193	105	10.38	0.00	0.00	0.0	0.0
C25-55	CN-194	107	10.69	0.00	0.00	0.0	0.0
C25-56	CN-195	103	11.07	0.00	0.00	0.0	0.0
C25-57	CN-138 RG	97	10.54	0.00	0.00	0.0	0.0
C25-58	CN-196	97	10.37	0.00	0.00	0.0	0.0
C25-59	CN-139	113	10.79	0.00	0.00	0.0	0.0
C25-60	CN-140 RG	94	10.32	0.00	0.00	0.0	0.0
C25-61	CN-141	92	10.64	0.00	0.00	0.0	0.0
C25-62	CN-197	101	10.97	0.00	0.00	0.0	0.0
C25-63	CN-143	88	10.78	0.00	0.00	0.0	0.0
C25-64	CN-198	101	11.11	0.00	0.00	0.0	0.0
C25-65	CN-145	93	10.15	0.00	0.00	0.0	0.0
C25-66	CN-199	101	11.18	0.00	0.00	0.0	0.0
C25-67	CN-200R	97	10.96	0.00	0.00	0.0	0.0
C25-68	CN-146	105	10.54	0.00	0.00	0.0	0.0
C25-69	CN-201	109	10.89	0.00	0.00	0.0	0.0
C25-70	CN-36	105	10.7	0.00	0.00	0.0	0.0
C25-71	CN-147 RG	96	10.44	0.00	0.00	0.0	0.0
C25-72	CN-202	102	10.75	0.00	0.00	0.0	0.0
C25-73	CN-203	101	11.04	0.00	0.00	0.0	0.0
C25-74	CN-149	89	9.94	0.00	0.00	0.0	0.0
C25-75	CN-150	101	10.87	0.00	0.00	0.0	0.0
C25-76	CN-151 RG	101	10.27	0.00	0.00	0.0	0.0
C25-77	CN-82	88	10.82	0.00	0.00	0.0	0.0
C25-78	CN-204	102	11.05	0.00	0.00	0.0	0.0
C25-79	CN-43	103	10.72	0.00	0.00	0.0	0.0
C25-80	CN-153	94	10.45	0.00	0.00	0.0	0.0
C25-81	CN-51	95	10.72	0.00	0.00	0.0	0.0
C25-82	CN-154	96	10.47	0.00	0.00	0.0	0.0
C25-83	CN-155	89	10.08	0.00	0.00	0.0	0.0
C25-84	CN-96	92	10.47	0.00	0.00	0.0	0.0
C25-85	CN-205	101	11.14	0.00	0.00	0.0	0.0
C25-86	CN-27	108	10.58	0.00	0.00	0.0	0.0
C25-87	CN-206	104	10.89	0.00	0.00	0.0	0.0
C25-88	CN-158	104	10.09	0.00	0.00	0.0	0.0
C25-89	CN-56	111	10.41	0.00	0.00	0.0	0.0
C25-90	CN-159 RG	90	8.40	0.00	0.00	0.0	0.0
C25-91	CN-160	61	10.68	0.00	0.00	0.0	0.0
C25-92	CN-161	94	7.07	0.00	0.00	0.0	0.0
C25-93	CN-35	111	10.33	0.00	0.00	0.0	0.0

Table A-18: Tailings Elemental Content Results

Sample ID	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Sn	Sr	Ti	Tl	U	V	Y	Zn	Hg
	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g	µg/g
Average Crustal	**82300**	**1.8**	**425**	**3**	**0.025**	**41500**	**0.15**	**25**	**102**	**60**	**56300**	**20850**	**20**	**23300**	**950**	**1.2**	**23550**	**84**	**1050**	**14**	**0.2**	**0.05**	**2.3**	**370**	**5650**	**0.85**	**2.7**	**120**	**33**	**70**	**0.085**
10x Average Crustal	**823000**	**18**	**4250**	**30**	**0.25**	**415000**	**1.5**	**250**	**1020**	**600**	**563000**	**208500**	**200**	**233000**	**9500**	**12**	**235500**	**840**	**10500**	**140**	**2**	**0.5**	**23**	**3700**	**56500**	**8.5**	**27**	**1200**	**330**	**700**	**0.85**
CN-26 Res Cut A	7300	5.7	28	0.56	0.11	22000	0.1	9.9	380	200	20000	1100	10	8100	340	3.1	140	160	550	1.5	<0.80	0.26	<0.50	32	370	0.03	0.72	32	14	28	<0.05
CN-27 Res Cut A	7400	2.4	8.5	0.41	0.18	7200	0.07	8	400	150	20000	200	9	6200	160	2.7	150	180	39	1.4	<0.80	0.26	<0.50	8.8	160	0.03	1.1	10	11	16	<0.05
CN-29 Res Cut A	2100	2	9.8	0.14	0.12	9300	0.05	4.2	350	280	9200	390	<2.00	1400	130	2.2	120	150	75	2.1	<0.80	0.43	<0.50	11	12	<0.02	1.1	<1.00	6.5	6.2	<0.05
CN-31 Res Cut A	9200	3.1	15	0.31	1.5	14000	0.25	8	330	360	28000	1100	9	7800	240	5	120	150	320	3.8	<0.80	0.56	1.2	14	150	0.04	1.4	32	9.4	37	<0.05
CN-35 Res Cut A	4400	5.9	6.9	0.17	0.21	11000	0.11	5.6	390	290	13000	360	4	3400	160	2.4	120	170	69	4.1	<0.80	0.44	<0.50	8.8	24	<0.02	1	4	8.1	17	<0.05
CN-36 Res Cut A	1900	1	3.9	0.16	<0.09	20000	<0.02	4.2	390	86	9700	320	2	5600	220	2.6	93	160	26	1.2	<0.80	0.12	<0.50	12	4.7	<0.02	0.73	10	3.7	7	<0.05
CN-37 Res Cut A	3100	2.3	3.8	0.32	<0.09	3500	<0.02	4.4	430	120	10000	270	4	2600	120	2.8	130	170	24	1.1	<0.80	0.09	<0.50	2.5	52	<0.02	0.69	14	5.4	7.2	<0.05
CN-38 Res Cut A	2300	7.2	3.8	0.21	0.8	12000	0.31	7.1	410	1500	13000	410	4	2200	210	2.2	110	180	11	4.3	<0.80	2.03	<0.50	7.9	11	<0.02	0.54	10	6.7	41	<0.05
CN-39 Res Cut A	1800	1.3	7.3	0.11	0.16	10000	0.03	5.5	490	270	9500	510	<2.00	1600	200	2.6	120	210	160	1.7	<0.80	0.27	<0.50	8.3	31	<0.02	0.83	11	5.6	7.7	<0.05
CN-41 Res Cut A	11000	2.1	10	0.31	0.11	22000	0.04	12	460	96	28000	350	12	12000	360	2.4	99	180	590	1.5	<0.80	0.27	<0.50	17	360	<0.02	0.95	36	13	25	<0.05
CN-42 Res Cut A	9100	6.4	5.4	0.28	2.3	17000	0.07	21	330	110	26000	330	12	8900	230	14	110	130	260	9.2	<0.80	1.03	<0.50	9.2	120	<0.02	1	20	10	22	<0.05
CN-50 Res Cut A	5000	1.7	4.4	0.32	<0.09	19000	0.02	6.1	270	150	11000	250	9	5500	190	2.1	130	110	520	2	<0.80	0.14	<0.50	11	52	<0.02	1.1	9	15	10	<0.05
CN-51 Res Cut A	2200	4.2	4.6	0.1	<0.09	10000	0.03	4.2	370	260	8600	330	<2.00	1300	130	2.1	140	150	50	1.9	<0.80	0.22	<0.50	6.7	9.8	<0.02	0.81	11	5.2	7.4	<0.05
CN-52 Res Cut A	9200	2.1	28	0.18	<0.09	7500	0.04	8.7	280	120	21000	2000	10	9000	210	1.7	200	120	180	1.6	<0.80	0.21	<0.50	8.4	530	0.04	0.55	17	7.9	21	<0.05
CN-56 Res Cut A	6000	4.6	5.4	0.26	2.4	10000	0.06	6.4	260	1400	18000	690	6	5100	150	1.7	150	110	30	3	<0.80	1.8	0.5	9.6	33	<0.02	1	6	6.9	16	<0.05
CN-78 Res Cut A	9500	3.5	17	0.2	<0.09	8400	0.03	9.7	440	69	21000	1400	12	9400	230	2.2	220	190	230	2.1	<0.80	0.11	1.4	8.7	570	0.03	0.42	22	7.2	21	<0.05
CN-80 Res Cut A	1500	21	5.1	0.14	<0.09	10000	0.07	4.1	460	43	6200	350	2	600	140	2.4	210	190	21	4.5	<0.80	0.18	<0.50	9.2	170	<0.02	1.1	11	36	13	<0.05
CN-82 Res Cut A	9200	2.3	11	0.41	<0.09	16000	<0.02	14	600	24	23000	450	10	11000	340	2.6	170	210	610	1.6	<0.80	0.14	<0.50	17	630	<0.02	0.77	31	12	29	<0.05
CN-84 Res Cut A	3200	1.6	6	0.18	<0.09	12000	<0.02	6.1	570	27	10000	390	4	2700	170	3.1	170	240	70	1.7	<0.80	0.07	<0.50	8.1	35	<0.02	0.78	4	5	8	<0.05
CN-86 Res Cut A	3200	1.4	7.7	0.19	<0.09	8700	<0.02	5.8	550	61	11000	770	4	2800	160	2.8	140	230	61	1.4	<0.80	0.15	<0.50	7.6	42	<0.02	0.79	1	5.1	7.8	<0.05
CN-91 Res Cut A	6900	4.1	31	0.23	<0.09	11000	0.02	11	450	110	17000	1500	8	6300	270	2.3	200	180	420	1.9	<0.80	0.17	<0.50	12	490	0.05	0.7	23	9.8	20	<0.05
CN-93 Res Cut A	1900	3.5	6.6	0.22	<0.09	7600	0.06	4.3	460	72	6800	250	2	1300	130	2.5	200	190	40	3	<0.80	0.09	<0.50	7.7	200	<0.02	0.37	<1.00	9.2	13	<0.05
CN-96 Res Cut A	2600	4.5	6.4	0.22	0.22	9000	0.03	5.8	480	150	11000	290	3	1500	140	3.7	140	190	100	2.5	<0.80	0.25	<0.50	5.6	25	<0.02	1.1	<1.00	12	10	<0.05
CN-97 Res Cut A	6300	6	9.2	0.65	0.4	4600	0.39	8	370	470	21000	700	10	4200	170	2.5	190	150	380	17	<0.80	0.75	1.3	6.4	320	<0.02	0.9	6	29	53	<0.05
CN-101 Res Cut A	5600	1.8	120	0.31	0.14	15000	0.03	8.7	470	240	16000	2500	5	6700	270	2.6	140	190	290	2.5	<0.80	0.31	<0.50	29	240	0.07	0.89	14	6.3	18	<0.05
CN-102 Res Cut A	1600	1.5	5.4	0.27	0.96	6600	<0.02	5.2	520	180	7200	260	<2.00	1000	120	2.7	150	210	100	2.3	<0.80	0.21	<0.50	4.4	29	<0.02	0.92	13	12	4.1	<0.05
CN-103 Res Cut A	3100	2.2	2.9	0.2	<0.09	8100	<0.02	3.4	240	67	9600	220	3	2300	110	1.7	150	98	16	1.9	<0.80	0.15	<0.50	4	38	<0.02	1	3	12	6.4	<0.05
CN-104RG Res Cut A	19000	2.2	62	0.28	0.2	38000	0.03	20	530	93	40000	4600	29	23000	770	9.5	170	220	880	1.5	<0.80	0.58	1.2	40	850	0.13	0.39	71	10	36	<0.05
CN-105 Res Cut A	5700	1.8	4.7	0.62	0.38	2100	0.02	16	630	400	17000	120	7	5200	200	3.2	240	260	290	1.7	<0.80	0.26	<0.50	4.9	130	<0.02	0.6	16	9.4	17	<0.05
CN-106 Res Cut A	7500	3.1	4.8	0.49	0.3	13000	<0.02	14	570	350	21000	210	10	7800	220	3.1	160	230	320	1.5	<0.80	0.42	0.5	7.9	250	<0.02	0.79	22	9.5	17	<0.05
CN-107RG Res Cut A	3200	1.8	4.6	0.18	0.3	14000	0.03	7	720	35	9900	660	4	2400	200	3.8	140	300	140	4.6	<0.80	0.11	<0.50	9.2	7.8	<0.02	1.1	11	6.2	8.5	<0.05
CN-111 Res Cut A	6100	2.4	5	0.19	<0.09	11000	0.02	5.9	380	38	16000	250	6	5100	190	3.8	140	160	99	2.5	<0.80	0.04	<0.50	6.3	81	<0.02	1.4	13	8.7	12	<0.05
CN-112 Res Cut A	3500	6.5	5.1	0.42	0.12	8000	0.09	5.4	420	160	12000	280	4	1800	130	2.3	170	180	220	6.1	<0.80	0.25	0.6	6.3	160	<0.02	1.4	4	23	24	<0.05
CN-113 Res Cut A	20000	3	52	0.22	<0.09	19000	0.03	19	640	140	38000	6600	21	22000	530	3.1	130	270	340	1.9	<0.80	0.23	<0.50	14	840	0.12	0.39	44	7.1	39	<0.05
CN-114 Res Cut A	2800	1.1	3.7	1.2	0.11	5100	<0.02	4.7	480	79	10000	190	3	2000	120	3	200	200	63	1.2	<0.80	0.08	<0.50	3.5	140	<0.02	0.73	3	13	6.7	<0.05
CN-115 Res Cut A	9400	0.8	32	0.15	<0.09	7600	0.02	9.1	420	89	23000	2900	10	8400	220	2.4	280	180	130	3.4	<0.80	0.19	1	7.8	890	0.06	0.69	23	8.8	18	<0.05
CN-116 Res Cut A	7100	2	18	0.15	<0.09	14000	0.03	7.7	310	80	16000	1700	8	6500	190	2	160	140	84	2.5	<0.80	0.12	<0.50	7.2	300	0.04	0.98	17	16	15	<0.05
CN-117RG Res Cut A	4000	2	7.7	0.31	0.1	8200	0.03	4.7	280	220	11000	440	4	3200	140	1.9	190	120	220	1.5	<0.80	0.19	<0.50	5.9	230	<0.02	0.65	9	10	11	<0.05
CN-118 Res Cut A	4500	1.3	19	0.25	<0.09	14000	0.07	7.9	490	160	14000	870	5	4500	210	2.8	170	210	280	2.8	<0.80	0.16	<0.50	16	77	<0.02	0.87	13	8.9	18	<0.05
CN-119 Res Cut A	4000	1.2	6	0.36	0.1	14000	0.03	6.4	460	52	11000	350	6	3900	190	2.4	140	180	220	1.5	<0.80	0.1	<0.50	11	65	<0.02	1.3	7	12	12	<0.05
CN-120 Res Cut A	9600	5.5	18	0.21	0.1	19000	0.12	8.9	530	510	25000	1000	10	7900	260	3	170	220	96	7.2	<0.80	0.74	1.7	9.8	260	0.02	0.97	19	12	47	<0.05
CN-122 Res Cut A	12000	2.7	47	0.1	<0.09	8200	0.03	12	540	39	26000	4000	14	11000	270	2.8	300	240	540	3.1	<0.80	0.11	0.7	7.4	870	0.07	0.46	25	13	29	<0.05
CN-124 Res Cut A	4100	4.3	15	0.35	0.38	13000	<0.02	8.9	590	90	17000	640	3	3100	250	3	130	240	350	1.7	<0.80	0.22	<0.50	15	240	<0.02	1.3	15	19	11	<0.05
CN-126 Res Cut A	1000	7.1	5.1	0.19	0.2	16000	0.09	4.7	550	73	6700	570	<2.00	400	300	4	95	230	20	3.6	<0.80	0.11	<0.50	7.5	9.5	<0.02	1	10	5.7	17	<0.05
CN-127 Res Cut A	4500	1.4	3.5	0.65	0.13	5600	0.02	6	310	88	13000	170	6	4300	140	2.1	150	120	180	1.5	<0.80	0.14	<0.50	4.1	60	<0.02	0.45	9	7.1	12	<0.05
CN-128 Res Cut A	9700	5.1	47	0.13	0.17	16000	0.06	8.5	480	330	26000	2700	10	7100	240	2.6	160	200	230	2.6	<0.80	0.5	2	8.8	380	0.05	0.91	20	21	26	<0.05
CN-129 Res Cut A	11000	1.5	64	0.16	<0.09	18000	0.12	14	440	500	25000	4500	12	8600	270	2.4	160	180	280	2.4	<0.80	0.56	<0.50	18	720	0.12	0.38	34	8.7	29	<0.05
CN-131 Res Cut A	6700	4.3	4.2	0.21	0.11	15000	0.02	8.4	610	120	19000	340	7	6200	220	3.4	130	250	53	2.1	<0.80	0.17	<0.50	7.7	36	<0.02	1.4	11	11	13	<0.05
CN-134RG Res Cut A	9800	0.9	3.6	0.38	0.18	13000	<0.02	9.7	620	150	25000	280	15	9100	220	3.2	150	250	650	1.3	<0.80	0.22	0.8	6.9	280	<0.02	1.4	27	26	19	<0.05
CN-138RG Res Cut A	2400	3.9	4.6	0.1	0.11	16000	0.04	6.5	490	76	8200	320	4	1700	180	3.1	160	200	130	2.8	<0.80	0.28	<0.50	11	110	<0.02	0.97	<1.00	30	7.7	<0.05
CN-140RG Res Cut A	2600	1.1	4.9	0.19	0.11	9700	0.03	4.6	370	51	7700	330	3	2000	120	2.4	170	150	120	1.8	<0.80	0.08	<0.50	4.9	31	<0.02	1	<1.00	6.5	6.1	<0.05
CN-141 Res Cut A	2500	2.7	6.1	0.24	0.09	17000	0.03	6.7	560	67	9900	440	4	1800	200	2.5	110	230	90	2.2	<0.80	0.22	0.6	12	17	<0.02	0.69	2	7.1	9.7	<0.05
CN-143 Res Cut A	12000	1.3	12	0.19	<0.09	19000	0.02	9.2	410	98	27000	1100	10	10000	310	2.2	130	180	82	5.3	<0.80	0.13	0.9	11	320	0.02	1	26	13	22	<0.05
CN-145 Res Cut A	10000	1.9	42	0.18	1.2	11000	0.07	10	460	1100	26000	3100	10	9700	310	6.6	150	190	98	6.8	<0.80	2.69	2.3	9.1	720	0.09	1.4	27	12	28	<0.05
CN-146 Res Cut A	1500	1	3.7	0.11	<0.09	9000	0.05	3	340	55	5100	270	<2.00	1000	130	2.1	110	140	5	2.3	<0.80	0.1	<0.50	5.5	19	<0.02	1.2	12	12	7.8	<0.05
CN-147RG Res Cut A	4900	1.3	3	0.18	<0.09	16000	<0.02	5.5	240	81	14000	110	5	4300	230	1.6	110	100	880	1.4	<0.80	0.15	2.9	12	1100	<0.02	0.49	10	13	17	<0.05
CN-149 Res Cut A	5000	0.5	2.3	0.13	0.57	6500	<0.02	5.8	320	340	14000	140	7	4500	130	6.6	130	130	7	1.2	<0.80	0.29	0.7	3.3	67	<0.02	0.4	11	4.8	12	<0.05
CN-150 Res Cut A	7900	3	130	0.49	<0.09	18000	0.05	10	520	47	19000	4300	9	8600	330	2.7	170	200	450	3.9	<0.80	0.12	1.3	28	700	0.11	0.87	28	11	29	<0.05
CN-151RG Res Cut A	2400	1	5.5	0.23	0.27	7800	0.03	4.9	430	250	9100	280	4	1600	130	2.6	130	170	58	5.4	<0.80	0.26	0.6	7.1	19	<0.02	1.4	13	6.2	7.8	<0.05
CN-153 Res Cut A	4800	1.9	4.2	0.21	0.29	9700	<0.02	6.8	460	190	15000	290	6	4100	160	2.7	130	190	45	1.5	<0.80	0.28	0.9	6.2	23	<0.02	1.2	7	8.8	9	<0.05
CN-154 Res Cut A	9900	1	13	0.25	<0.09	19000	<0.02	10	560	71	26000	600	9	9000	340	2.7	130	230	180	1.8	<0.80	0.17	1.5	17	240	<0.02	1.3	21	15	20	<0.05
CN-155 Res Cut A	3900	5.6	5.1	0.19	0.31	11000	0.05	5.4	510	110	16000	700	4	4000	190	3.3	130	210	93	2.3	<0.80	0.26	1.3	11	47	0.03	1.3	3	7.2	12	<0.05
CN-158 Res Cut A	1700	5.6	5.1	0.35	0.47	7500	0.02	4.2	470	110	7400	270	<2.00	880	130	2.5	150	190	50	2.6	<0.80	0.15	0.6	4.7	36	<0.02	1	12	7.7	6.4	<0.05
CN-159RG Res Cut A	3600	<0.50	4.7	0.52	0.14	4600	0.02	6.4	630	52	12000	250	7	3800	150	9.3	120	260	95	2.2	<0.80	0.14	1.3	4.4	210	<0.02	1.6	<1.00	22	9.2	<0.05
CN-160 Res Cut A	24000	7.7	49	0.25	7.9	26000	0.09	23	570	550	51000	3500	29	28000	700	3.9	140	210	640	2.1	<0.80	0.4	1	14	920	0.08	0.27	75	5.6	62	<0.05
CN-161 Res Cut A	4500	0.9	4	0.5	0.71	1300	0.05	6.6	570	200	15000	180	5	4700	140	2.9	110	230	220	1.6	<0.80	0.18	1	2.3	100	<0.02	0.87	4	13	13	<0.05
CN-40 Res Cut A	7800	1.9	58	0.21	0.21	18000	0.04	9.6	420	260	21000	1000	9	8000	280	3.1	110	170	670	2.3	<0.80	0.39	0.7	21	84	0.03	1.3	16	12	34	<0.05
CN-139 Res Cut A	3100	1.4	4.7	0.35	<0.09	15000	<0.02	6	570	54	10000	260	4	2000	190	3.7	160	230	150	1.4	<0.80	0.17	0.9	8.8	220	<0.02	1.3	4	37	6.8	<0.05
CN181 Res Cut A	3700	3.9	5.5	0.22	0.48	20000	0.12	7	430	230	20000	510	7	9100	320	2.1	63	180	67	3.3	<0.80	0.37	0.7	40	32	<0.02	0.86	2	4.4	19	<0.05
CN182 Res Cut A	5400	2.1	14	0.21	1.7	15000	<0.02	11	420	800	17000	710	6	5500	220	7.9	79	170	420	1.5	<0.80	1.02	0.6	16	120	<0.02	1.1	14	10	15	<0.05
CN183 Res Cut A	8700	2.1	27	0.2	0.22	17000	0.02	12	450	160	24000	1300	9	9100	290	2.1	110	190	310	2	<0.80	0.34	1.4	18	440	0.04	0.83	31	12	20	<0.05
CN185 Res Cut A	6000	2.3	3.7	0.45	0.26	13000	<0.02	11	430	120	20000	150	6	6000	210	2.1	88	170	490	1.2	<0.80	0.27	0.8	12	220	<0.02	0.88	18	14	15	<0.05
CN186 Res Cut A	3600	2	7.2	0.43	0.2	11000	<0.02	7	470	120	16000	210	4	2100	150	2.2	93	190	170	0.94	<0.80	0.21	0.7	6.6	91	<0.02	1.1	12	16	9.4	<0.05
CN187 Res Cut A	3800	15	5	0.2	1	9900	0.23	7.8	460	710	15000	270	5	2500	130	2.1	88	190	180	7.7	<0.80	0.78	0.9	6	20	<0.02	1.2	12	9.5	76	<0.05
CN188 Res Cut A	6300	1.2	6.1	0.22	0.2	19000	<0.02	12	470	140	17000	220	8	7500	220	2.1	100	180	530	0.61	<0.80	0.21	0.9	14	81	<0.02	0.72	20	13	10	<0.05
CN189 Res Cut A	5600	45	5.9	0.3	1.4	1000	0.04	17	340	72	29000	350	4	4900	170	1.5	39	140	190	3.1	<0.80	1.3	0.5	1.9	72	<0.02	0.96	9	9.7	22	<0.05
CN190 Res Cut A	6700	2.6	4.4	0.21	<0.09	9900	0.03	10	420	30	18000	360	7	6200	190	12	96	180	35	1.8	<0.80	0.13	0.9	5.5	170	<0.02	1.2	13	10	14	<0.05
CN191 Res Cut A	18000	1.8	67	0.15	<0.09	14000	<0.02	15	410	63	37000	6600	20	19000	390	2.1	160	170	540	1.6	<0.80	0.13	1.4	9.5	870	0.15	0.27	60	9.2	29	<0.05
CN192 Res Cut A	3000	2.7	8.7	0.16	<0.09	12000	0.04	6.2	440	34	11000	310	5	1600	160	2	95	180	140	3.1	<0.80	0.11	<0.50	6.8	92	<0.02	1.4	14	17	11	<0.05
CN193 Res Cut A	6000	4.1	3.6	0.25	1.3	12000	0.1	11	380	1200	20000	330	6	4900	170	1.8	82	160	60	5.1	<0.80	1.54	1.1	8.7	24	<0.02	0.86	11	4.6	18	<0.05
CN195 Res Cut A	15000	1.3	20	0.25	<0.09	28000	<0.02	13	340	120	34000	1600	14	14000	420	1.6	100	140	290	0.84	<0.80	0.18	1.4	14	520	0.03	0.5	59	15	33	<0.05
CN196 Res Cut A	3300	0.6	2.8	0.37	0.18	7400	0.02	7.3	450	67	11000	140	5	3000	120	2.4	100	190	110	0.82	<0.80	0.09	0.6	4.2	140	<0.02	0.71	3	9.1	9.8	<0.05
CN197 Res Cut A	6700	1.6	55	0.42	0.26	18000	<0.02	9.7	410	56	19000	1300	10	7600	260	2.2	87	180	410	1.3	<0.80	0.24	1.2	39	170	0.05	1.3	20	7.7	16	<0.05
CN198 Res Cut A	7800	1	12	0.46	<0.09	23000	<0.02	9.2	470	63	20000	120	8	8600	300	2	100	170	420	0.66	<0.80	0.09	0.7	11	220	<0.02	0.5	33	14	17	<0.05
CN199 Res Cut A	2900	1.3	6.4	0.17	<0.09	25000	0.06	7.8	430	31	9800	200	4	3500	260	2.2	86	170	260	2.5	<0.80	0.06	<0.50	25	11	<0.02	0.81	6	6.5	13	<0.05
CN201 Res Cut A	2300	1.7	3.8	0.18	<0.09	9200	0.04	5.3	430	65	8400	200	2	1200	140	2.2	100	180	78	3	<0.80	0.07	0.5	5.1	41	<0.02	0.61	13	7.5	9.9	<0.05
CN203 Res Cut A	6900	2.1	5.5	0.22	0.15	16000	0.32	8.7	450	250	18000	560	8	5700	160	3.7	120	180	39	8.5	<0.80	0.43	1.2	8.3	280	0.02	1.9	10	33	43	<0.05
CN204 Res Cut A	7400	2.8	6.4	0.25	0.13	20000	0.02	11	440	210	19000	280	10	8200	280	2	98	170	350	1.1	<0.80	0.21	1.1	19	190	<0.02	0.86	22	14	19	<0.05
CN205 Res Cut A	4200	2.1	4.4	0.2	0.17	18000	0.03	8.2	420	96	13000	180	5	3800	190	1.8	100	170	180	4.2	<0.80	0.32	0.6	12	120	<0.02	0.77	8	10	13	<0.05
CN206 Res Cut A	3000	4.4	8.7	0.18	0.13	11000	0.05	6.9	450	110	12000	380	3	1800	160	1.9	83	180	190	4.6	<0.80	0.18	<0.50	8.6	74	<0.02	1.1	<1.00	19	13	<0.05
CN194 Res Cut D	4800	1.3	18	0.23	<0.09	21000	<0.02	7.9	440	88	14000	1100	6	7400	320	1.8	130	180	390	1.1	<0.80	0.1	0.6	29	81	<0.02	0.67	12	5.3	9.4	<0.05
CN200R Res Cut D	13000	12	20	0.27	0.29	31000	0.06	21	460	350	29000	3900	14	16000	440	2.5	78	190	200	2.3	<0.80	0.74	1.1	29	350	0.14	1.2	34	31	63	<0.05
CN202 Res Cut D	3300	1.2	47	0.26	0.2	17000	0.03	8.4	480	140	12000	1000	3	5400	250	2.4	110	200	280	2.2	<0.80	0.16	0.5	30	89	0.03	1.1	9	7	12	<0.05

APPENDIX B – KINETIC DATA

Table B-1: Humidity Cell 1 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	7.67	13.91	1.64	0.8	5.6	0.000008	0.00001	0.12	0.0029	0.001	0.00002	0.0166	0.00001	3.6	0.000003	0.00006	0.0004	0.0009	0.005	1.9	0.001
24-Dec-12	1	7.84	24.55	1.96	0.9	1.8	0.000010	0.00014	0.08	0.0019	0.005	0.00002	0.0245	0.00001	5.2	0.000003	0.00009	0.0005	0.0009	0.003	1.5	0.001
31-Dec-12	2	7.73	16.93	1.99	0.7	0.4	0.000010	0.00001	0.08	0.0021	0.001	0.00002	0.0066	0.00001	5.9	0.000013	0.00003	0.0005	0.0005	0.003	1.4	0.001
8-Jan-13	3	7.62	13.93	1.99	0.4	0.2	0.000010	0.00001	0.08	0.0020	0.001	0.00002	0.0042	0.00001	4.8	0.000003	0.00007	0.0005	0.0005	0.005	1.2	0.001
15-Jan-13	4	7.50	21.76	1.98	0.4	0.2	0.000010	0.00001	0.09	0.0018	0.002	0.00002	0.0058	0.00001	5.1	0.000003	0.00001	0.0005	0.0005	0.005	1.1	0.001
22-Jan-13	5	7.31	12.88	1.98	0.3	0.2	0.000010	0.00001	0.08	0.0016	0.001	0.00002	0.0026	0.00001	4.4	0.000004	0.00020	0.0005	0.0005	0.023	1.1	0.001
29-Jan-13	6	7.15	12.83	1.97	0.3																	
5-Feb-13	7	7.45	12.87	1.98	0.2																	
12-Feb-13	8	7.25	1.95	4.87	0.3																	
19-Feb-13	9	7.46	31.62	1.98	0.4																	
26-Feb-13	10	7.51	10.00	2.00	0.3	0.2	0.000010	0.00001	0.09	0.0014	0.002	0.00002	0.0011	0.00001	4.2	0.000003	0.00009	0.0005	0.0005	0.003	0.8	0.001
5-Mar-13	11	7.21	10.89	1.98	0.3																	
12-Mar-13	12	7.19	10.86	1.97	0.3																	
19-Mar-13	13	7.22	9.98	2.00	0.3																	
26-Mar-13	14	7.37	10.88	1.98	0.3																	
2-Apr-13	15	7.04	10.81	1.97	0.3	0.2	0.000010	0.00001	0.07	0.0009	0.002	0.00002	0.0022	0.00001	4.1	0.000003	0.00010	0.0005	0.0005	0.003	0.7	0.001
9-Apr-13	16	7.30	10.91	1.98	0.5																	
16-Apr-13	17	7.38	10.85	1.97	0.2																	
23-Apr-13	18	7.71	13.93	1.99	0.3																	
30-Apr-13	19	7.48	10.78	1.96	0.2																	
7-May-13	20	7.53	9.80	1.96	0.2	0.2	0.000010	0.00001	0.06	0.0008	0.001	0.00002	0.0009	0.00001	4.1	0.000003	0.00002	0.0005	0.0005	0.003	0.6	0.001
14-May-13	21	7.34	10.87	1.98	0.3																	
21-May-13	22	7.50	10.98	2.00	0.3																	
28-May-13	23	7.61	11.56	1.93	0.2																	
4-Jun-13	24	7.32	10.84	1.97	0.2																	
11-Jun-13	25	7.23	10.99	2.00	0.2	0.2	0.000010	0.00001	0.06	0.0007	0.002	0.00002	0.0002	0.00001	4.1	0.000003	0.00000	0.0005	0.0005	0.003	0.6	0.001
18-Jun-13	26	7.18	9.92	1.98	0.5																	
25-Jun-13	27	7.38	10.91	1.98	0.2																	
2-Jul-13	28	7.50	9.99	2.00	0.2																	
9-Jul-13	29	7.66	9.88	1.98	0.2																	
16-Jul-13	30	7.40	11.12	2.02	0.2	0.2	0.000010	0.00001	0.06	0.0006	0.002	0.00002	0.0007	0.00001	4.0	0.000003	0.00006	0.0005	0.0005	0.003	0.7	0.001
23-Jul-13	31	7.46	10.95	1.99	0.2																	
30-Jul-13	32	7.50	9.65	1.93	1.2																	
6-Aug-13	33	7.33	9.91	1.98	0.2																	
13-Aug-13	34	7.52	11.01	2.00	0.2																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	0.17	0.003	0.0020	3.54	0.0002	0.007	0.00008	0.0006	0.001	0.87	0.0024	0.0142	0.0003	0.00002	0.000009	0.0004	0.00074	0.008	0.000113	0.002
24-Dec-12	1	0.31	0.005	0.0041	2.47	0.0001	0.009	0.00014	0.0009	0.001	0.56	0.0024	0.0185	0.0001	0.00002	0.000049	0.0072	0.00051	0.010	0.000150	0.002
31-Dec-12	2	0.31	0.008	0.0029	1.49	0.0001	0.009	0.00004	0.0010	0.001	0.75	0.0018	0.0191	0.0001	0.00002	0.000004	0.0078	0.00064	0.010	0.000062	0.002
8-Jan-13	3	0.20	0.006	0.0009	0.65	0.0001	0.009	0.00002	0.0005	0.001	0.58	0.0008	0.0127	0.0001	0.00002	0.000004	0.0057	0.00048	0.020	0.000048	0.002
15-Jan-13	4	0.21	0.006	0.0005	0.51	0.0001	0.013	0.00002	0.0004	0.001	0.60	0.0007	0.0139	0.0001	0.00002	0.000004	0.0050	0.00055	0.010	0.000029	0.002
22-Jan-13	5	0.19	0.005	0.0004	0.35	0.0002	0.009	0.00003	0.0004	0.001	0.59	0.0005	0.0132	0.0002	0.00002	0.000038	0.0041	0.00038	0.010	0.000043	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.11	0.005	0.0002	0.17	0.0001	0.009	0.00002	0.0002	0.001	0.50	0.0002	0.0086	0.0001	0.00002	0.000004	0.0019	0.00033	0.010	0.000016	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.07	0.005	0.0001	0.12	0.0001	0.009	0.00002	0.0002	0.001	0.44	0.0003	0.0068	0.0001	0.00002	0.000004	0.0017	0.00025	0.010	0.000014	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.05	0.006	0.0001	0.08	0.0001	0.009	0.00002	0.0002	0.001	0.38	0.0002	0.0058	0.0001	0.00002	0.000004	0.0011	0.00019	0.010	0.000015	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.05	0.006	0.0001	0.09	0.0001	0.009	0.00003	0.0002	0.001	0.39	0.0002	0.0051	0.0001	0.00002	0.000004	0.0012	0.00017	0.010	0.000012	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.05	0.006	0.0001	0.08	0.0001	0.079	0.00002	0.0003	0.001	0.35	0.0002	0.0045	0.0001	0.00002	0.000004	0.0009	0.00014	0.010	0.000006	0.003
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

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Table B-2: Humidity Cell 2 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	7.94	17.47	1.59	1.3	9.5	0.00001	0.00001	0.06	0.0022	0.0008	0.000016	0.0148	0.00001	4.6	0.000002	0.000033	0.0004	0.0012	0.003	1.39	0.0008
24-Dec-12	1	7.91	26.78	1.98	3.4	3.7	0.00001	0.00011	0.05	0.0013	0.0011	0.000020	0.0199	0.00001	6.5	0.000003	0.000073	0.0005	0.0009	0.003	0.93	0.0010
31-Dec-12	2	8.17	23.90	1.99	2.5	1.0	0.00002	0.00001	0.05	0.0011	0.0008	0.000020	0.0104	0.00001	6.5	0.000003	0.000019	0.0005	0.0007	0.003	0.65	0.0010
8-Jan-13	3	7.53	16.88	1.99	1.5	0.3	0.00001	0.00001	0.05	0.0011	0.0006	0.000020	0.0068	0.00001	5.6	0.000003	0.000044	0.0005	0.0009	0.005	0.48	0.0010
15-Jan-13	4	7.47	19.82	1.98	1.2	0.2	0.00001	0.00001	0.06	0.0010	0.0012	0.000020	0.0059	0.00001	5.7	0.000003	0.000009	0.0007	0.0005	0.004	0.40	0.0010
22-Jan-13	5	7.59	14.79	1.97	0.9	0.2	0.00001	0.00001	0.06	0.0009	0.0006	0.000020	0.0035	0.00001	4.9	0.000006	0.000035	0.0005	0.0005	0.014	0.37	0.0010
29-Jan-13	6	7.63	14.82	1.98	0.8																	
5-Feb-13	7	7.58	16.78	1.97	1.0																	
12-Feb-13	8	7.37	1.95	25.38	0.6																	
19-Feb-13	9	7.53	13.78	1.97	0.5																	
26-Feb-13	10	7.62	14.76	1.97	0.7	0.2	0.00001	0.00001	0.05	0.0009	0.0005	0.000020	0.0014	0.00001	5.6	0.000003	0.000077	0.0005	0.0005	0.003	0.25	0.0010
5-Mar-13	11	7.45	13.85	1.98	0.6																	
12-Mar-13	12	7.60	6.92	1.98	0.7																	
19-Mar-13	13	7.41	13.83	1.98	0.7																	
26-Mar-13	14	7.33	11.81	1.97	0.6																	
2-Apr-13	15	7.00	11.89	1.98	0.7	0.2	0.00001	0.00001	0.05	0.0006	0.0004	0.000020	0.0025	0.00001	5.1	0.000003	0.000099	0.0005	0.0005	0.003	0.20	0.0010
9-Apr-13	16	7.36	13.93	1.99	1.0																	
16-Apr-13	17	7.35	16.73	1.97	0.7																	
23-Apr-13	18	7.41	12.97	2.00	0.9																	
30-Apr-13	19	7.44	12.64	1.94	0.6																	
7-May-13	20	7.42	10.76	1.96	0.8	0.2	0.00001	0.00001	0.05	0.0006	0.0003	0.000020	0.0010	0.00001	4.7	0.000003	0.000014	0.0005	0.0005	0.003	0.16	0.0010
14-May-13	21	7.38	11.81	1.97	0.8																	
21-May-13	22	7.56	11.95	1.99	1.1																	
28-May-13	23	7.41	11.76	1.96	1.1																	
4-Jun-13	24	7.28	10.89	1.98	1.2																	
11-Jun-13	25	7.10	11.94	1.99	1.0	0.2	0.00001	0.00001	0.04	0.0006	0.0005	0.000020	0.0002	0.00001	5.0	0.000003	0.000009	0.0005	0.0005	0.003	0.15	0.0010
18-Jun-13	26	7.24	10.82	1.97	1.1																	
25-Jun-13	27	7.40	12.87	1.98	0.9																	
2-Jul-13	28	7.53	11.95	1.99	0.9																	
9-Jul-13	29	7.57	13.18	2.03	0.7																	
16-Jul-13	30	7.41	4.01	2.00	0.6	0.5	0.00001	0.00001	0.04	0.0006	0.0003	0.000020	0.0008	0.00001	5.3	0.000003	0.000062	0.0005	0.0005	0.003	0.15	0.0010
23-Jul-13	31	7.44	11.07	2.01	0.5																	
30-Jul-13	32	7.55	11.80	1.97	0.7																	
6-Aug-13	33	7.45	11.02	2.00	0.5																	
13-Aug-13	34	7.46	11.00	2.00	0.5																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.37	0.004	0.0013	5.88	0.0002	0.007	0.00007	0.0005	0.0008	0.75	0.0044	0.022	0.00048	0.00002	0.000003	0.0001	0.0006	0.008	0.000035	0.002
24-Dec-12	1	0.66	0.007	0.0044	4.22	0.0001	0.009	0.00021	0.0007	0.0010	0.61	0.0028	0.030	0.00020	0.00002	0.000033	0.0013	0.0006	0.010	0.000122	0.002
31-Dec-12	2	0.61	0.007	0.0039	2.13	0.0001	0.009	0.00006	0.0006	0.0010	0.73	0.0020	0.026	0.00020	0.00002	0.000004	0.0018	0.0008	0.010	0.000054	0.002
8-Jan-13	3	0.45	0.005	0.0020	1.16	0.0001	0.009	0.00002	0.0005	0.0010	0.62	0.0011	0.019	0.00020	0.00002	0.000004	0.0016	0.0006	0.020	0.000046	0.002
15-Jan-13	4	0.44	0.005	0.0013	0.89	0.0001	0.016	0.00002	0.0005	0.0010	0.61	0.0010	0.018	0.00010	0.00002	0.000004	0.0016	0.0007	0.010	0.000027	0.002
22-Jan-13	5	0.40	0.005	0.0010	0.64	0.0001	0.009	0.00002	0.0005	0.0010	0.61	0.0007	0.018	0.00010	0.00002	0.000015	0.0014	0.0005	0.010	0.000030	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.28	0.007	0.0004	0.30	0.0001	0.009	0.00002	0.0002	0.0010	0.55	0.0003	0.012	0.00010	0.00002	0.000004	0.0010	0.0004	0.010	0.000020	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.22	0.005	0.0002	0.21	0.0001	0.009	0.00002	0.0002	0.0010	0.50	0.0004	0.010	0.00010	0.00002	0.000004	0.0008	0.0004	0.010	0.000013	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.17	0.006	0.0002	0.14	0.0001	0.009	0.00002	0.0002	0.0010	0.40	0.0003	0.008	0.00010	0.00002	0.000004	0.0005	0.0003	0.010	0.000011	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.16	0.006	0.0003	0.13	0.0001	0.009	0.00002	0.0003	0.0010	0.42	0.0003	0.007	0.00010	0.00002	0.000004	0.0004	0.0003	0.010	0.000011	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.14	0.006	0.0002	0.11	0.0001	0.013	0.00002	0.0003	0.0010	0.42	0.0002	0.007	0.00010	0.00002	0.000004	0.0003	0.0002	0.010	0.000007	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

Table B-3: Humidity Cell 3 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	7.74	17.33	1.7	1.0	14.0	0.00001	0.00001	0.08	0.0027	0.0012	0.00002	0.0116	0.00001	5.22	0.000004	0.000080	0.0004	0.0022	0.004	2.43	0.001
24-Dec-12	1	7.92	22.56	2.0	1.7	3.6	0.00001	0.00006	0.04	0.0026	0.0014	0.00002	0.0128	0.00001	5.74	0.000003	0.000089	0.0005	0.0014	0.003	1.26	0.001
31-Dec-12	2	7.82	19.80	2.0	0.8	0.7	0.00001	0.00001	0.07	0.0025	0.0010	0.00002	0.0057	0.00001	5.78	0.000003	0.000022	0.0006	0.0013	0.003	0.92	0.001
8-Jan-13	3	7.68	16.73	2.0	0.4	0.2	0.00001	0.00001	0.05	0.0021	0.0007	0.00002	0.0038	0.00001	4.95	0.000003	0.000041	0.0005	0.0005	0.003	0.72	0.001
15-Jan-13	4	7.38	15.82	2.0	0.4	0.2	0.00001	0.00001	0.08	0.0018	0.0009	0.00002	0.0031	0.00001	5.24	0.000003	0.000010	0.0005	0.0005	0.004	0.69	0.001
22-Jan-13	5	7.15	15.89	2.0	0.3	0.2	0.00001	0.00001	0.06	0.0014	0.0006	0.00002	0.0020	0.00001	4.45	0.000004	0.000083	0.0005	0.0005	0.008	0.61	0.001
29-Jan-13	6	7.14	13.82	2.0	0.3																	
5-Feb-13	7	7.45	15.74	2.0	0.2																	
12-Feb-13	8	7.38	17.51	1.9	0.3																	
19-Feb-13	9	7.23	11.69	1.9	0.2																	
26-Feb-13	10	7.46	11.76	2.0	0.6	0.2	0.00001	0.00001	0.07	0.0011	0.0008	0.00002	0.0008	0.00001	4.70	0.000008	0.000131	0.0005	0.0005	0.003	0.50	0.001
5-Mar-13	11	7.23	11.81	2.0	0.4																	
12-Mar-13	12	7.46	13.87	2.0	0.3																	
19-Mar-13	13	7.29	10.77	2.0	0.2																	
26-Mar-13	14	7.33	12.73	2.0	0.2																	
2-Apr-13	15	7.70	12.75	2.0	0.2	0.2	0.00001	0.00001	0.05	0.0007	0.0005	0.00002	0.0019	0.00001	4.22	0.000003	0.000088	0.0005	0.0005	0.003	0.40	0.001
9-Apr-13	16	7.30	11.77	2.0	0.2																	
16-Apr-13	17	7.28	12.74	2.0	0.2																	
23-Apr-13	18	7.49	14.71	1.7	0.2																	
30-Apr-13	19	7.46	22.36	1.9	0.3																	
7-May-13	20	7.48	11.83	2.0	0.2	0.2	0.00001	0.00001	0.06	0.0007	0.0005	0.00002	0.0009	0.00001	4.46	0.000003	0.000009	0.0005	0.0005	0.003	0.38	0.001
14-May-13	21	7.47	11.87	2.0	0.2																	
21-May-13	22	7.54	12.84	2.0	0.2																	
28-May-13	23	7.45	10.73	2.0	0.9																	
4-Jun-13	24	7.22	13.83	2.0	0.2																	
11-Jun-13	25	7.17	10.80	2.0	0.2	0.2	0.00001	0.00001	0.04	0.0006	0.0005	0.00002	0.0002	0.00001	4.25	0.000003	0.000005	0.0005	0.0005	0.003	0.34	0.001
18-Jun-13	26	7.39	8.85	2.0	0.2																	
25-Jun-13	27	7.42	10.88	2.0	0.2																	
2-Jul-13	28	7.60	11.90	2.0	0.2																	
9-Jul-13	29	7.66	10.92	2.0	0.2																	
16-Jul-13	30	7.49	12.08	2.0	0.2	0.2	0.00001	0.00001	0.05	0.0006	0.0006	0.00002	0.0007	0.00001	4.77	0.000003	0.000071	0.0005	0.0005	0.003	0.36	0.001
23-Jul-13	31	7.41	11.04	2.0	0.2																	
30-Jul-13	32	7.54	11.08	2.0	0.3																	
6-Aug-13	33	7.34	10.97	2.0	0.2																	
13-Aug-13	34	7.51	11.86	2.0	0.2																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.45	0.0054	0.0012	8.10	0.0002	0.008	0.00007	0.0007	0.001	1.21	0.0029	0.034	0.0003	0.00002	0.000049	0.0008	0.00062	0.01	0.00031	0.002
24-Dec-12	1	0.56	0.0079	0.0038	3.82	0.0001	0.009	0.00008	0.0012	0.001	0.76	0.0028	0.034	0.0001	0.00002	0.000039	0.0091	0.00048	0.01	0.00026	0.002
31-Dec-12	2	0.45	0.0060	0.0026	1.75	0.0001	0.063	0.00003	0.0009	0.001	0.88	0.0020	0.030	0.0003	0.00002	0.000004	0.0070	0.00074	0.01	0.00012	0.002
8-Jan-13	3	0.32	0.0049	0.0011	0.85	0.0001	0.009	0.00002	0.0007	0.001	0.70	0.0011	0.022	0.0001	0.00002	0.000005	0.0042	0.00036	0.01	0.00009	0.002
15-Jan-13	4	0.34	0.0042	0.0018	0.71	0.0001	0.009	0.00002	0.0006	0.001	0.75	0.0009	0.024	0.0001	0.00002	0.000004	0.0035	0.00037	0.01	0.00006	0.002
22-Jan-13	5	0.28	0.0049	0.0005	0.44	0.0001	0.009	0.00002	0.0005	0.001	0.66	0.0006	0.022	0.0001	0.00002	0.000007	0.0024	0.00025	0.01	0.00005	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.25	0.0053	0.0002	0.21	0.0001	0.009	0.00002	0.0003	0.001	0.60	0.0002	0.017	0.0001	0.00002	0.000004	0.0013	0.00018	0.01	0.00003	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.13	0.0020	0.0002	0.14	0.0001	0.009	0.00002	0.0002	0.001	0.50	0.0003	0.013	0.0001	0.00003	0.000004	0.0011	0.00016	0.01	0.00002	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.10	0.0021	0.0003	0.11	0.0001	0.009	0.00002	0.0002	0.001	0.43	0.0002	0.012	0.0001	0.00002	0.000004	0.0008	0.00015	0.01	0.00002	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.08	0.0025	0.0001	0.09	0.0001	0.009	0.00002	0.0003	0.001	0.45	0.0002	0.010	0.0001	0.00002	0.000004	0.0007	0.00011	0.01	0.00002	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.08	0.0031	0.0001	0.08	0.0001	0.009	0.00003	0.0003	0.001	0.46	0.0002	0.010	0.0001	0.00002	0.000004	0.0006	0.00010	0.01	0.00001	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

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Table B-4: Humidity Cell 4 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	7.76	20.60	1.65	0.8	4.7	0.00001	0.00001	0.13	0.0025	0.0014	0.00002	0.0077	0.00001	4.38	0.000032	0.00028	0.0004	0.0030	0.009	2.18	0.001
24-Dec-12	1	7.87	25.64	1.97	0.9	1.0	0.00001	0.00003	0.06	0.0023	0.0020	0.00002	0.0088	0.00001	4.81	0.000027	0.00021	0.0005	0.0028	0.003	1.07	0.001
31-Dec-12	2	7.76	16.71	1.97	0.5	0.2	0.00001	0.00001	0.07	0.0017	0.0016	0.00002	0.0030	0.00001	5.49	0.000004	0.00004	0.0005	0.0010	0.003	0.82	0.001
8-Jan-13	3	7.51	14.82	1.98	0.3	0.2	0.00001	0.00001	0.04	0.0014	0.0015	0.00002	0.0024	0.00001	5.16	0.000004	0.00004	0.0005	0.0005	0.003	0.64	0.001
15-Jan-13	4	7.52	14.85	1.98	0.3	0.2	0.00001	0.00001	0.08	0.0013	0.0015	0.00002	0.0019	0.00001	4.94	0.000003	0.00001	0.0005	0.0005	0.006	0.48	0.001
22-Jan-13	5	7.62	12.83	1.97	0.2	0.2	0.00001	0.00001	0.05	0.0011	0.0012	0.00002	0.0015	0.00001	4.43	0.000003	0.00002	0.0005	0.0005	0.005	0.42	0.001
29-Jan-13	6	7.62	11.76	1.96	0.2																	
5-Feb-13	7	7.51	12.92	1.99	0.2																	
12-Feb-13	8	7.36	15.74	1.97	0.2																	
19-Feb-13	9	7.25	13.78	1.97	0.5																	
26-Feb-13	10	7.43	10.84	1.97	0.4	0.2	0.00001	0.00001	0.09	0.0008	0.0012	0.00002	0.0007	0.00001	4.74	0.000007	0.00010	0.0005	0.0006	0.003	0.22	0.001
5-Mar-13	11	7.39	11.87	1.98	0.2																	
12-Mar-13	12	7.47	13.75	1.96	0.2																	
19-Mar-13	13	7.40	12.00	2.00	0.2																	
26-Mar-13	14	7.42	11.78	1.96	0.2																	
2-Apr-13	15	7.92	10.90	1.98	0.2	0.2	0.00001	0.00001	0.05	0.0005	0.0008	0.00002	0.0016	0.00001	4.52	0.000003	0.00010	0.0005	0.0005	0.003	0.15	0.001
9-Apr-13	16	7.28	11.89	1.98	0.4																	
16-Apr-13	17	7.30	12.83	1.97	0.4																	
23-Apr-13	18	7.63	14.75	1.97	0.4																	
30-Apr-13	19	7.39	11.68	1.95	0.3																	
7-May-13	20	7.27	9.91	1.98	0.6	0.2	0.00001	0.00001	0.07	0.0004	0.0007	0.00002	0.0008	0.00001	4.54	0.000003	0.00001	0.0005	0.0005	0.003	0.12	0.001
14-May-13	21	7.35	10.87	1.98	0.4																	
21-May-13	22	7.59	11.96	1.99	0.6																	
28-May-13	23	7.51	10.80	1.96	0.5																	
4-Jun-13	24	7.32	9.92	1.98	0.5																	
11-Jun-13	25	7.21	11.83	1.97	0.3	0.6	0.00001	0.00001	0.05	0.0004	0.0008	0.00002	0.0002	0.00001	4.58	0.000003	0.00000	0.0005	0.0005	0.003	0.10	0.001
18-Jun-13	26	7.38	9.88	1.98	0.3																	
25-Jun-13	27	7.49	10.88	1.98	0.3																	
2-Jul-13	28	7.53	11.04	2.01	0.2																	
9-Jul-13	29	7.50	11.15	2.03	0.2																	
16-Jul-13	30	7.52	11.06	2.01	0.2	0.3	0.00001	0.00001	0.05	0.0003	0.0007	0.00002	0.0005	0.00001	4.95	0.000003	0.00007	0.0005	0.0005	0.003	0.09	0.001
23-Jul-13	31	7.41	10.96	1.99	0.2																	
30-Jul-13	32	7.55	10.76	1.96	0.2																	
6-Aug-13	33	7.47	11.03	2.01	0.2																	
13-Aug-13	34	7.54	11.90	1.98	0.2																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.20	0.004	0.0007	4.30	0.0003	0.007	0.00006	0.0005	0.001	1.11	0.0019	0.016	0.0007	0.00002	0.000012	0.00046	0.00102	0.01	0.00032	0.0016
24-Dec-12	1	0.27	0.007	0.0017	2.32	0.0003	0.009	0.00012	0.0007	0.001	0.64	0.0016	0.019	0.0003	0.00002	0.000022	0.00521	0.00075	0.01	0.00034	0.0020
31-Dec-12	2	0.26	0.005	0.0008	0.94	0.0001	0.034	0.00003	0.0005	0.001	0.74	0.0010	0.018	0.0003	0.00002	0.000004	0.00438	0.00086	0.01	0.00010	0.0020
8-Jan-13	3	0.21	0.005	0.0004	0.49	0.0001	0.009	0.00002	0.0004	0.001	0.66	0.0006	0.015	0.0001	0.00002	0.000004	0.00304	0.00057	0.01	0.00007	0.0020
15-Jan-13	4	0.20	0.005	0.0009	0.36	0.0001	0.010	0.00002	0.0004	0.001	0.60	0.0005	0.014	0.0002	0.00002	0.000004	0.00233	0.00064	0.01	0.00005	0.0020
22-Jan-13	5	0.19	0.005	0.0002	0.26	0.0002	0.009	0.00002	0.0003	0.001	0.62	0.0004	0.014	0.0002	0.00002	0.000005	0.00191	0.00045	0.01	0.00004	0.0020
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.15	0.006	0.0001	0.13	0.0001	0.010	0.00007	0.0002	0.001	0.52	0.0001	0.010	0.0001	0.00002	0.000004	0.00096	0.00034	0.01	0.00002	0.0020
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.09	0.005	0.0001	0.10	0.0001	0.009	0.00002	0.0002	0.001	0.47	0.0002	0.008	0.0001	0.00002	0.000004	0.00075	0.00028	0.01	0.00001	0.0020
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.07	0.006	0.0001	0.08	0.0002	0.009	0.00002	0.0002	0.001	0.42	0.0001	0.008	0.0001	0.00002	0.000004	0.00052	0.00020	0.01	0.00002	0.0020
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.07	0.007	0.0002	0.07	0.0001	0.009	0.00002	0.0003	0.001	0.41	0.0002	0.007	0.0001	0.00002	0.000004	0.00045	0.00018	0.01	0.00001	0.0020
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.06	0.007	0.0001	0.06	0.0001	0.009	0.00002	0.0003	0.001	0.41	0.0001	0.007	0.0001	0.00002	0.000004	0.00035	0.00014	0.01	0.00001	0.0020
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

Table B-5: Humidity Cell 5 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	8.16	24.07	1.66	3.82	4.1	0.00001	0.00001	0.17	0.0033	0.0014	0.00002	0.0143	0.00002	4.13	0.000002	0.00011	0.0004	0.0032	0.015	4.52	0.001
24-Dec-12	1	7.91	25.66	1.97	6.91	1.8	0.00001	0.00015	0.07	0.0018	0.0022	0.00002	0.0184	0.00001	5.81	0.000010	0.00012	0.0005	0.0024	0.003	3.44	0.001
31-Dec-12	2	7.53	16.81	1.98	6.33	0.5	0.00001	0.00001	0.05	0.0013	0.0021	0.00002	0.0105	0.00001	6.05	0.000007	0.00008	0.0005	0.0013	0.003	2.96	0.001
8-Jan-13	3	7.68	14.81	1.97	3.95	0.2	0.00001	0.00001	0.07	0.0012	0.0018	0.00002	0.0070	0.00001	5.51	0.000004	0.00009	0.0005	0.0005	0.003	2.55	0.001
15-Jan-13	4	7.32	13.85	1.98	3.76	0.2	0.00001	0.00001	0.07	0.0010	0.0019	0.00002	0.0053	0.00001	5.52	0.000003	0.00048	0.0008	0.0011	0.006	2.09	0.001
22-Jan-13	5	7.52	13.89	1.98	3.27	0.2	0.00001	0.00001	0.06	0.0010	0.0020	0.00002	0.0037	0.00001	4.90	0.000003	0.00006	0.0005	0.0008	0.007	2.01	0.001
29-Jan-13	6	7.55	13.85	1.98	3.16																	
5-Feb-13	7	7.51	11.90	1.98	3.17																	
12-Feb-13	8	7.35	11.86	1.98	3.06																	
19-Feb-13	9	7.48	14.88	1.98	2.58																	
26-Feb-13	10	7.42	12.92	1.99	2.98	0.2	0.00001	0.00002	0.07	0.0006	0.0020	0.00002	0.0016	0.00001	5.33	0.000003	0.00011	0.0005	0.0010	0.003	1.40	0.001
5-Mar-13	11	7.31	12.82	1.97	3.16																	
12-Mar-13	12	7.43	13.76	1.97	3.05																	
19-Mar-13	13	7.34	11.90	1.98	2.98																	
26-Mar-13	14	7.38	7.88	1.97	2.86																	
2-Apr-13	15	7.04	11.81	1.97	2.95	0.2	0.00003	0.00001	0.06	0.0006	0.0024	0.00002	0.0023	0.00001	5.02	0.000003	0.00015	0.0005	0.0009	0.003	1.25	0.001
9-Apr-13	16	7.30	12.92	1.99	2.78																	
16-Apr-13	17	7.45	11.78	1.96	3.04																	
23-Apr-13	18	7.48	12.77	1.96	2.85																	
30-Apr-13	19	7.35	10.76	1.96	1.86																	
7-May-13	20	7.23	8.86	1.97	2.36	0.2	0.00001	0.00001	0.04	0.0004	0.0020	0.00002	0.0012	0.00001	4.62	0.000003	0.00003	0.0005	0.0009	0.003	1.13	0.001
14-May-13	21	7.34	10.86	1.97	2.37																	
21-May-13	22	7.22	10.88	1.98	2.67																	
28-May-13	23	7.45	10.62	1.93	2.32																	
4-Jun-13	24	7.24	9.83	1.97	2.36																	
11-Jun-13	25	7.14	9.80	1.96	2.16	0.4	0.00001	0.00001	0.05	0.0004	0.0024	0.00002	0.0003	0.00001	4.49	0.000005	0.00003	0.0005	0.0009	0.003	1.01	0.001
18-Jun-13	26	7.38	10.82	1.97	2.56																	
25-Jun-13	27	7.37	9.87	1.97	2.27																	
2-Jul-13	28	7.38	8.97	1.99	2.59																	
9-Jul-13	29	7.56	10.95	1.99	2.39																	
16-Jul-13	30	7.20	9.09	2.02	2.12	0.4	0.00001	0.00001	0.04	0.0004	0.0027	0.00002	0.0008	0.00001	4.91	0.000003	0.00010	0.0005	0.0009	0.003	1.10	0.001
23-Jul-13	31	7.36	11.04	5.02	2.11																	
30-Jul-13	32	7.43	10.09	2.02	2.32																	
6-Aug-13	33	7.36	10.03	2.01	2.21																	
13-Aug-13	34	7.40	10.01	2.00	2.20																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.24	0.004	0.0118	4.358	0.0003	0.007	0.00007	0.0011	0.002	0.88	0.0024	0.0135	0.0013	0.00002	0.000007	0.00043	0.00092	0.01	0.000168	0.002
24-Dec-12	1	0.47	0.008	0.0245	3.543	0.0001	0.009	0.00009	0.0012	0.003	0.52	0.0019	0.0202	0.0001	0.00002	0.000023	0.00348	0.00050	0.01	0.000138	0.002
31-Dec-12	2	0.45	0.011	0.0177	1.701	0.0001	0.039	0.00002	0.0010	0.002	0.57	0.0013	0.0187	0.0002	0.00002	0.000004	0.00344	0.00068	0.01	0.000051	0.002
8-Jan-13	3	0.35	0.010	0.0100	0.948	0.0001	0.009	0.00002	0.0008	0.002	0.54	0.0007	0.0142	0.0001	0.00002	0.000004	0.00257	0.00034	0.01	0.000038	0.002
15-Jan-13	4	0.35	0.010	0.0086	0.702	0.0001	0.009	0.00002	0.0007	0.002	0.53	0.0006	0.0143	0.0001	0.00002	0.000004	0.00233	0.00048	0.01	0.000036	0.004
22-Jan-13	5	0.33	0.010	0.0071	0.486	0.0001	0.009	0.00002	0.0006	0.001	0.56	0.0004	0.0141	0.0001	0.00002	0.000004	0.00185	0.00024	0.01	0.000029	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.22	0.012	0.0055	0.209	0.0001	0.009	0.00002	0.0003	0.001	0.50	0.0002	0.0095	0.0001	0.00002	0.000004	0.00097	0.00018	0.01	0.000013	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.17	0.010	0.0057	0.157	0.0001	0.009	0.00002	0.0003	0.002	0.49	0.0003	0.0079	0.0001	0.00002	0.000004	0.00083	0.00021	0.01	0.000011	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.10	0.010	0.0049	0.108	0.0001	0.009	0.00002	0.0002	0.001	0.39	0.0002	0.0061	0.0001	0.00002	0.000004	0.00042	0.00017	0.01	0.000007	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.09	0.008	0.0064	0.098	0.0001	0.009	0.00002	0.0003	0.001	0.39	0.0002	0.0052	0.0001	0.00002	0.000004	0.00049	0.00026	0.01	0.000008	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.09	0.009	0.0058	0.091	0.0001	0.009	0.00002	0.0003	0.001	0.43	0.0003	0.0053	0.0001	0.00002	0.000004	0.00038	0.00011	0.01	0.000005	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

Table B-6: Humidity Cell 6 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	8.48	21.58	1.66	1.5	10.0	0.00001	0.00001	0.08	0.0026	0.0013	0.00002	0.0248	0.00001	5.31	0.000002	0.00026	0.0005	0.0071	0.007	1.31	0.001
24-Dec-12	1	7.96	24.48	1.96	2.2	1.9	0.00001	0.00001	0.05	0.0029	0.0014	0.00002	0.0245	0.00001	6.06	0.000009	0.00015	0.0005	0.0043	0.003	0.64	0.001
31-Dec-12	2	8.12	16.93	1.99	1.2	0.3	0.00001	0.00001	0.07	0.0037	0.0011	0.00002	0.0083	0.00001	5.64	0.000006	0.00006	0.0005	0.0023	0.003	0.42	0.001
8-Jan-13	3	7.86	15.86	1.98	0.7	0.2	0.00001	0.00001	0.09	0.0032	0.0009	0.00002	0.0041	0.00001	5.28	0.000003	0.00007	0.0005	0.0005	0.003	0.30	0.001
15-Jan-13	4	7.60	17.82	1.98	0.8	0.2	0.00002	0.00001	0.08	0.0029	0.0009	0.00002	0.0026	0.00001	5.78	0.000003	0.00003	0.0005	0.0010	0.005	0.27	0.001
22-Jan-13	5	7.56	14.70	1.96	0.7	0.2	0.00001	0.00001	0.07	0.0027	0.0008	0.00002	0.0020	0.00001	5.10	0.000003	0.00005	0.0005	0.0007	0.005	0.23	0.001
29-Jan-13	6	7.60	13.75	1.96	0.6																	
5-Feb-13	7	7.64	21.82	1.98	0.6																	
12-Feb-13	8	7.39	14.93	1.99	0.5																	
19-Feb-13	9	7.56	15.79	1.97	0.6																	
26-Feb-13	10	7.51	13.86	1.98	0.6	0.2	0.00001	0.00001	0.08	0.0020	0.0009	0.00002	0.0009	0.00001	6.08	0.000003	0.00011	0.0005	0.0007	0.003	0.14	0.001
5-Mar-13	11	7.46	13.89	1.98	0.6																	
12-Mar-13	12	7.49	12.87	1.98	0.6																	
19-Mar-13	13	7.43	12.83	1.97	0.6																	
26-Mar-13	14	7.46	12.82	1.97	0.6																	
2-Apr-13	15	7.89	11.88	1.98	0.6	0.2	0.00001	0.00001	0.06	0.0013	0.0011	0.00002	0.0016	0.00001	5.19	0.000003	0.00012	0.0005	0.0005	0.003	0.10	0.001
9-Apr-13	16	7.36	12.84	1.98	2.3																	
16-Apr-13	17	7.16	13.79	1.97	0.6																	
23-Apr-13	18	7.51	13.87	19.82	0.6																	
30-Apr-13	19	7.45	10.84	1.97	0.4																	
7-May-13	20	7.48	11.88	1.98	0.5	0.2	0.00001	0.00001	0.06	0.0011	0.0005	0.00002	0.0008	0.00001	4.74	0.000003	0.00002	0.0005	0.0005	0.003	0.08	0.001
14-May-13	21	7.44	10.81	1.97	0.5																	
21-May-13	22	7.52	11.82	1.97	0.6																	
28-May-13	23	7.53	19.52	1.95	0.5																	
4-Jun-13	24	7.27	10.96	1.99	0.5																	
11-Jun-13	25	7.18	11.83	1.97	0.4	0.2	0.00001	0.00001	0.04	0.0010	0.0005	0.00002	0.0002	0.00001	4.50	0.000003	0.00002	0.0005	0.0005	0.003	0.07	0.001
18-Jun-13	26	7.42	10.80	1.96	0.6																	
25-Jun-13	27	7.46	10.87	1.98	0.5																	
2-Jul-13	28	7.64	11.00	2.00	0.5																	
9-Jul-13	29	7.62	12.06	2.01	0.5																	
16-Jul-13	30	7.51	11.02	2.00	0.4	0.2	0.00001	0.00001	0.05	0.0009	0.0005	0.00002	0.0005	0.00001	4.81	0.000003	0.00009	0.0005	0.0005	0.003	0.07	0.001
23-Jul-13	31	7.42	11.00	2.00	0.5																	
30-Jul-13	32	7.58	12.12	2.02	0.5																	
6-Aug-13	33	7.53	11.09	2.02	0.5																	
13-Aug-13	34	7.56	12.00	2.00	0.5																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.310	0.005	0.0053	6.45	0.0007	0.007	0.00012	0.0008	0.001	0.96	0.0022	0.030	0.0002	0.00002	0.000051	0.00068	0.00076	0.01	0.00096	0.002
24-Dec-12	1	0.406	0.005	0.0105	2.88	0.0006	0.009	0.00006	0.0014	0.001	0.67	0.0019	0.029	0.0001	0.00002	0.000038	0.00707	0.00064	0.01	0.00069	0.002
31-Dec-12	2	0.318	0.004	0.0050	1.02	0.0004	0.034	0.00003	0.0010	0.001	0.69	0.0014	0.022	0.0002	0.00002	0.000004	0.00602	0.00065	0.01	0.00028	0.002
8-Jan-13	3	0.239	0.004	0.0023	0.50	0.0002	0.009	0.00002	0.0008	0.001	0.62	0.0007	0.017	0.0001	0.00002	0.000008	0.00385	0.00051	0.01	0.00019	0.002
15-Jan-13	4	0.254	0.004	0.0021	0.49	0.0001	0.022	0.00002	0.0007	0.001	0.64	0.0006	0.019	0.0001	0.00002	0.000004	0.00311	0.00050	0.01	0.00014	0.002
22-Jan-13	5	0.218	0.005	0.0014	0.29	0.0003	0.009	0.00002	0.0006	0.001	0.61	0.0005	0.018	0.0001	0.00002	0.000008	0.00234	0.00040	0.01	0.00012	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.138	0.007	0.0007	0.16	0.0001	0.010	0.00002	0.0003	0.001	0.56	0.0002	0.012	0.0001	0.00002	0.000004	0.00122	0.00028	0.01	0.00006	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.083	0.006	0.0004	0.11	0.0002	0.009	0.00002	0.0002	0.001	0.48	0.0003	0.009	0.0001	0.00002	0.000004	0.00092	0.00024	0.01	0.00004	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.056	0.006	0.0005	0.09	0.0001	0.009	0.00002	0.0002	0.001	0.39	0.0002	0.007	0.0001	0.00002	0.000004	0.00062	0.00018	0.01	0.00003	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.049	0.006	0.0005	0.08	0.0001	0.009	0.00002	0.0003	0.001	0.37	0.0002	0.005	0.0001	0.00002	0.000004	0.00056	0.00014	0.01	0.00003	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.062	0.007	0.0003	0.07	0.0001	0.009	0.00002	0.0004	0.001	0.38	0.0002	0.005	0.0001	0.00002	0.000004	0.00047	0.00012	0.01	0.00002	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

Table B-7: Humidity Cell 7 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	8.03	17.72	1.69	3.2	9.3	0.00001	0.00001	0.07	0.003	0.001	0.00002	0.0090	0.00001	6.38	0.000003	0.00019	0.0004	0.0012	0.005	2.12	0.001
24-Dec-12	1	8.3	23.59	1.97	4.1	2.2	0.00001	0.00004	0.05	0.003	0.001	0.00002	0.0109	0.00001	6.71	0.000006	0.00020	0.0005	0.0009	0.003	1.14	0.001
31-Dec-12	2	7.67	19.80	1.98	2.4	0.4	0.00001	0.00001	0.05	0.004	0.001	0.00002	0.0046	0.00001	6.44	0.000005	0.00008	0.0005	0.0005	0.003	0.95	0.001
8-Jan-13	3	7.47	15.78	1.97	1.2	0.2	0.00001	0.00002	0.07	0.003	0.001	0.00002	0.0020	0.00001	5.52	0.000003	0.00011	0.0005	0.0005	0.003	0.78	0.001
15-Jan-13	4	7.42	14.81	1.97	1.1	0.2	0.00001	0.00004	0.07	0.003	0.001	0.00002	0.0017	0.00001	5.47	0.000003	0.00005	0.0005	0.0005	0.004	0.71	0.001
22-Jan-13	5	7.64	14.78	1.97	0.9	0.2	0.00001	0.00001	0.07	0.002	0.001	0.00002	0.0016	0.00001	4.90	0.000003	0.00004	0.0005	0.0005	0.003	0.71	0.001
29-Jan-13	6	7.76	13.76	1.97	0.8																	
5-Feb-13	7	7.42	11.76	1.96	0.8																	
12-Feb-13	8	7.36	17.55	1.95	0.7																	
19-Feb-13	9	7.37	11.70	1.95	0.6																	
26-Feb-13	10	7.51	12.75	1.96	0.7	0.2	0.00001	0.00001	0.08	0.002	0.001	0.00002	0.0008	0.00001	5.13	0.000003	0.00012	0.0005	0.0005	0.003	0.54	0.001
5-Mar-13	11	7.37	13.79	1.97	0.6																	
12-Mar-13	12	7.51	14.73	1.96	0.7																	
19-Mar-13	13	7.49	12.82	1.97	0.6																	
26-Mar-13	14	6.52	23.57	1.96	0.8																	
2-Apr-13	15	8.1	12.87	1.98	0.8	0.2	0.00001	0.00001	0.08	0.001	0.001	0.00002	0.0016	0.00001	4.79	0.000003	0.00020	0.0005	0.0005	0.003	0.46	0.001
9-Apr-13	16	7.42	11.83	1.97	0.6																	
16-Apr-13	17	7.42	11.82	1.97	0.6																	
23-Apr-13	18	7.35	9.79	1.96	0.6																	
30-Apr-13	19	7.43	14.61	1.95	0.4																	
7-May-13	20	7.42	10.88	1.98	0.5	0.2	0.00001	0.00001	0.06	0.001	0.001	0.00002	0.0008	0.00001	4.17	0.000003	0.00002	0.0005	0.0005	0.003	0.43	0.001
14-May-13	21	7.12	8.92	1.98	0.5																	
21-May-13	22	7.54	10.89	1.98	0.7																	
28-May-13	23	7.57	10.73	1.95	0.5																	
4-Jun-13	24	7.38	10.85	1.97	0.5																	
11-Jun-13	25	7.22	10.87	1.98	0.5	0.2	0.00001	0.00001	0.07	0.001	0.001	0.00002	0.0002	0.00001	4.65	0.000003	0.00003	0.0005	0.0005	0.003	0.40	0.001
18-Jun-13	26	7.23	9.84	1.97	0.5																	
25-Jun-13	27	7.46	10.89	1.98	0.4																	
2-Jul-13	28	7.55	9.90	1.98	0.5																	
9-Jul-13	29	7.49	10.03	2.01	0.5																	
16-Jul-13	30	7.39	10.00	2.00	0.5	0.2	0.00001	0.00001	0.06	0.001	0.001	0.00002	0.0006	0.00001	4.28	0.000003	0.00010	0.0005	0.0005	0.003	0.39	0.001
23-Jul-13	31	7.38	9.87	1.97	0.5																	
30-Jul-13	32	7.55	10.06	2.01	0.5																	
6-Aug-13	33	7.5	9.94	1.99	0.5																	
13-Aug-13	34	7.5	9.90	1.98	0.5																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.43	0.004	0.00131	6.00	0.0003	0.008	0.00008	0.0006	0.001	1.04	0.0023	0.032	0.0003	0.00002	0.000005	0.0003	0.0008	0.01	0.00024	0.002
24-Dec-12	1	0.53	0.005	0.00406	2.78	0.0001	0.009	0.00024	0.0008	0.001	0.68	0.0022	0.031	0.0001	0.00002	0.000019	0.0036	0.0006	0.01	0.00038	0.002
31-Dec-12	2	0.44	0.005	0.00300	1.09	0.0002	0.022	0.00005	0.0006	0.001	0.75	0.0015	0.026	0.0003	0.00002	0.000004	0.0036	0.0008	0.01	0.00014	0.002
8-Jan-13	3	0.30	0.005	0.00116	0.50	0.0001	0.009	0.00002	0.0005	0.001	0.61	0.0009	0.018	0.0001	0.00002	0.000019	0.0024	0.0006	0.01	0.00009	0.002
15-Jan-13	4	0.29	0.005	0.00110	0.39	0.0001	0.012	0.00002	0.0005	0.001	0.58	0.0007	0.018	0.0001	0.00002	0.000004	0.0022	0.0005	0.01	0.00007	0.002
22-Jan-13	5	0.26	0.005	0.00088	0.28	0.0001	0.009	0.00002	0.0004	0.001	0.59	0.0005	0.018	0.0001	0.00002	0.000004	0.0019	0.0004	0.01	0.00007	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.18	0.006	0.00038	0.14	0.0001	0.009	0.00002	0.0002	0.001	0.48	0.0002	0.013	0.0001	0.00002	0.000004	0.0011	0.0004	0.01	0.00003	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.12	0.005	0.00022	0.10	0.0013	0.009	0.00002	0.0002	0.001	0.43	0.0004	0.009	0.0001	0.00002	0.000004	0.0008	0.0003	0.01	0.00002	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.08	0.006	0.00019	0.08	0.0001	0.011	0.00005	0.0002	0.001	0.35	0.0003	0.007	0.0001	0.00002	0.000004	0.0005	0.0002	0.01	0.00002	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.08	0.005	0.00015	0.08	0.0001	0.009	0.00003	0.0002	0.001	0.35	0.0003	0.007	0.0001	0.00002	0.000004	0.0005	0.0002	0.01	0.00002	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.11	0.005	0.00010	0.06	0.0001	0.014	0.00002	0.0003	0.001	0.35	0.0003	0.006	0.0001	0.00002	0.000004	0.0004	0.0002	0.01	0.00002	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

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Table B-8: Humidity Cell 8 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	8.10	22.33	1.65	0.8	12.4	0.00001	0.00001	0.08	0.0013	0.0024	0.00002	0.0131	0.00001	5.90	0.000002	0.00010	0.0004	0.0009	0.002	0.992	0.001
24-Dec-12	1	8.30	23.69	1.97	1.2	5.1	0.00001	0.00001	0.05	0.0024	0.0020	0.00002	0.0177	0.00001	6.07	0.000010	0.00011	0.0005	0.0005	0.003	0.519	0.001
31-Dec-12	2	8.56	23.90	1.99	1.0	1.4	0.00001	0.00011	0.05	0.0030	0.0014	0.00002	0.0088	0.00001	5.95	0.000003	0.00005	0.0005	0.0005	0.003	0.390	0.001
8-Jan-13	3	8.69	21.69	1.97	0.5	0.4	0.00001	0.00001	0.08	0.0039	0.0011	0.00002	0.0045	0.00001	7.00	0.000003	0.00010	0.0005	0.0005	0.003	0.367	0.001
15-Jan-13	4	7.70	15.89	1.99	0.4	0.2	0.00001	0.00002	0.07	0.0031	0.0012	0.00002	0.0038	0.00001	6.03	0.000003	0.00003	0.0008	0.0005	0.004	0.283	0.001
22-Jan-13	5	7.61	16.71	1.97	0.4	0.2	0.00001	0.00004	0.05	0.0030	0.0012	0.00002	0.0025	0.00001	5.16	0.000006	0.00002	0.0005	0.0005	0.003	0.258	0.001
29-Jan-13	6	7.70	14.75	1.97	0.3																	
5-Feb-13	7	7.64	16.81	1.98	0.3																	
12-Feb-13	8	7.46	12.46	1.31	0.3																	
19-Feb-13	9	7.72	14.73	1.96	0.3																	
26-Feb-13	10	7.58	13.93	1.99	0.3	0.2	0.00001	0.00001	0.06	0.0024	0.0013	0.00002	0.0012	0.00001	5.77	0.000019	0.00004	0.0005	0.0005	0.003	0.208	0.001
5-Mar-13	11	7.58	14.82	1.98	0.3																	
12-Mar-13	12	7.50	13.86	1.98	0.3																	
19-Mar-13	13	7.69	16.83	1.98	0.3																	
26-Mar-13	14	7.44	13.75	1.96	0.3																	
2-Apr-13	15	8.84	13.83	1.98	0.3	0.2	0.00001	0.00001	0.06	0.0019	0.0009	0.00002	0.0017	0.00001	5.45	0.000004	0.00013	0.0005	0.0005	0.003	0.166	0.001
9-Apr-13	16	7.38	13.82	1.97	0.3																	
16-Apr-13	17	7.31	16.69	1.96	0.3																	
23-Apr-13	18	7.32	12.83	1.97	0.3																	
30-Apr-13	19	7.52	12.58	1.94	0.2																	
7-May-13	20	7.58	12.84	1.98	0.5	0.2	0.00001	0.00001	0.08	0.0019	0.0009	0.00002	0.0017	0.00001	5.28	0.000003	0.00002	0.0005	0.0005	0.003	0.161	0.001
14-May-13	21	7.37	11.78	1.96	0.2																	
21-May-13	22	7.68	12.87	1.98	0.3																	
28-May-13	23	7.53	12.68	1.95	0.3																	
4-Jun-13	24	7.59	12.88	1.98	0.3																	
11-Jun-13	25	7.23	11.88	1.98	0.3	0.2	0.00001	0.00001	0.08	0.0015	0.0008	0.00002	0.0002	0.00001	5.66	0.000003	0.00003	0.0005	0.0005	0.003	0.142	0.001
18-Jun-13	26	7.59	11.88	1.98	0.2																	
25-Jun-13	27	7.51	11.84	1.97	0.2																	
2-Jul-13	28	7.80	13.05	2.01	0.2																	
9-Jul-13	29	7.56	12.14	2.02	0.3																	
16-Jul-13	30	7.49	2.01	2.01	0.3	0.2	0.00001	0.00001	0.05	0.0014	0.0008	0.00002	0.0006	0.00001	5.32	0.000010	0.00009	0.0005	0.0005	0.003	0.144	0.001
23-Jul-13	31	7.65	13.99	2.00	0.2																	
30-Jul-13	32	7.60	13.12	2.02	0.7																	
6-Aug-13	33	7.57	14.00	2.00	0.2																	
13-Aug-13	34	7.63	12.95	1.99	0.3																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.39	0.003	0.01	7.85	0.0002	0.007	0.00006	0.0005	0.001	0.76	0.0018	0.0367	0.0001	0.00002	0.000003	0.0001	0.0008	0.01	0.00013	0.002
24-Dec-12	1	0.52	0.005	0.03	5.07	0.0003	0.009	0.00022	0.0008	0.001	0.61	0.0017	0.0357	0.0001	0.00002	0.000013	0.0008	0.0012	0.01	0.00017	0.002
31-Dec-12	2	0.46	0.006	0.02	2.06	0.0002	0.009	0.00008	0.0007	0.001	0.65	0.0011	0.0308	0.0001	0.00002	0.000004	0.0014	0.0014	0.01	0.00012	0.002
8-Jan-13	3	0.43	0.006	0.01	1.25	0.0001	0.009	0.00003	0.0005	0.001	0.75	0.0006	0.0285	0.0001	0.00002	0.000019	0.0015	0.0012	0.02	0.00011	0.002
15-Jan-13	4	0.38	0.006	0.02	0.82	0.0001	0.016	0.00002	0.0006	0.001	0.61	0.0006	0.0247	0.0001	0.00002	0.000004	0.0019	0.0014	0.01	0.00011	0.002
22-Jan-13	5	0.34	0.006	0.02	0.56	0.0001	0.009	0.00002	0.0006	0.001	0.60	0.0004	0.0233	0.0001	0.00002	0.000004	0.0017	0.0011	0.01	0.00009	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.24	0.007	0.02	0.24	0.0002	0.009	0.00004	0.0002	0.001	0.52	0.0002	0.0157	0.0001	0.00002	0.000004	0.0013	0.0009	0.01	0.00007	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.17	0.006	0.03	0.16	0.0001	0.009	0.00002	0.0002	0.001	0.44	0.0003	0.0118	0.0001	0.00002	0.000004	0.0011	0.0007	0.01	0.00008	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.14	0.005	0.03	0.13	0.0001	0.009	0.00002	0.0002	0.001	0.42	0.0002	0.0100	0.0001	0.00002	0.000004	0.0008	0.0007	0.01	0.00004	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.13	0.005	0.03	0.11	0.0001	0.014	0.00002	0.0002	0.001	0.42	0.0005	0.0090	0.0001	0.00002	0.000004	0.0006	0.0006	0.01	0.00004	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.10	0.005	0.04	0.08	0.0001	0.009	0.00002	0.0003	0.001	0.41	0.0005	0.0074	0.0001	0.00002	0.000004	0.0005	0.0005	0.01	0.00003	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

Table B-9: Humidity Cell 9 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	8.24	18.45	1.6	0.6	3.9	0.00001	0.00001	0.14	0.0018	0.001	0.00002	0.0201	0.00001	4.19	0.000140	0.00003	0.0004	0.0010	0.003	1.76	0.001
24-Dec-12	1	8.29	23.64	2.0	1.1	1.6	0.00001	0.00001	0.06	0.0026	0.001	0.00002	0.0296	0.00001	4.53	0.000003	0.00004	0.0005	0.0005	0.003	1.23	0.001
31-Dec-12	2	8.48	21.96	2.0	0.8	0.3	0.00001	0.00005	0.05	0.0035	0.001	0.00002	0.0174	0.00001	4.62	0.000003	0.00002	0.0005	0.0005	0.003	1.15	0.001
8-Jan-13	3	7.76	15.84	2.0	0.5	0.2	0.00001	0.00001	0.06	0.0038	0.001	0.00002	0.0097	0.00001	4.25	0.000003	0.00009	0.0005	0.0005	0.003	1.07	0.001
15-Jan-13	4	7.48	16.88	2.0	0.4	0.2	0.00001	0.00001	0.07	0.0039	0.001	0.00002	0.0072	0.00001	5.59	0.000003	0.00002	0.0005	0.0005	0.004	1.19	0.001
22-Jan-13	5	7.21	15.90	2.0	0.3	0.2	0.00001	0.00003	0.05	0.0042	0.001	0.00002	0.0051	0.00001	4.34	0.000003	0.00002	0.0005	0.0005	0.003	1.07	0.001
29-Jan-13	6	7.18	12.90	2.0	0.3																	
5-Feb-13	7	7.64	12.87	2.0	0.2																	
12-Feb-13	8	7.41	13.80	2.0	0.2																	
19-Feb-13	9	7.39	13.72	2.0	0.2																	
26-Feb-13	10	7.05	14.90	2.0	0.4	0.2	0.00001	0.00001	0.07	0.0050	0.001	0.00002	0.0022	0.00001	4.82	0.000003	0.00007	0.0005	0.0005	0.003	0.86	0.001
5-Mar-13	11	7.2	13.92	2.0	0.3																	
12-Mar-13	12	7.41	10.91	2.0	0.3																	
19-Mar-13	13	7.46	13.89	2.0	0.3																	
26-Mar-13	14	6.46	25.64	2.0	0.3																	
2-Apr-13	15	8.33	11.92	2.0	0.3	0.2	0.00001	0.00001	0.07	0.0051	0.001	0.00002	0.0024	0.00001	4.57	0.000003	0.00011	0.0005	0.0005	0.003	0.79	0.001
9-Apr-13	16	7.46	15.86	2.0	0.4																	
16-Apr-13	17	7.45	12.78	2.0	0.2																	
23-Apr-13	18	7.1	10.93	2.0	0.2																	
30-Apr-13	19	7.51	12.66	1.9	0.2																	
7-May-13	20	7.49	11.90	2.0	0.2	0.2	0.00001	0.00001	0.08	0.0052	0.001	0.00002	0.0014	0.00001	4.33	0.000003	0.00001	0.0005	0.0005	0.003	0.77	0.001
14-May-13	21	7.44	12.81	2.0	0.2																	
21-May-13	22	7.65	11.90	2.0	0.2																	
28-May-13	23	7.56	10.68	1.9	0.2																	
4-Jun-13	24	7.37	12.90	2.0	0.2																	
11-Jun-13	25	7.25	12.92	2.0	0.2	0.2	0.00001	0.00001	0.09	0.0057	0.001	0.00002	0.0005	0.00001	5.02	0.000003	0.00003	0.0005	0.0005	0.003	0.72	0.001
18-Jun-13	26	7.49	12.81	2.0	0.3																	
25-Jun-13	27	7.52	11.89	2.0	0.2																	
2-Jul-13	28	7.76	11.99	2.0	0.2																	
9-Jul-13	29	7.57	15.42	2.1	0.2																	
16-Jul-13	30	7.56	10.93	2.0	0.2	0.3	0.00001	0.00001	0.07	0.0056	0.001	0.00002	0.0010	0.00001	4.43	0.000003	0.00010	0.0005	0.0005	0.003	0.69	0.001
23-Jul-13	31	7.39	11.89	2.0	0.2																	
30-Jul-13	32	7.62	12.11	2.0	0.2																	
6-Aug-13	33	7.56	11.96	2.0	0.2																	
13-Aug-13	34	7.64	12.97	2.0	0.2																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.32	0.002	0.0006	4.42	0.0002	0.007	0.00010	0.0006	0.001	0.73	0.00233	0.024	0.0001	0.00002	0.000003	0.000006	0.002	0.01	0.000006	0.002
24-Dec-12	1	0.60	0.003	0.0011	3.37	0.0001	0.009	0.00002	0.0007	0.001	0.52	0.00099	0.029	0.0001	0.00002	0.000004	0.000040	0.002	0.01	0.000015	0.002
31-Dec-12	2	0.61	0.004	0.0011	1.60	0.0002	0.032	0.00002	0.0006	0.001	0.58	0.00048	0.028	0.0001	0.00002	0.000004	0.000110	0.003	0.01	0.000015	0.002
8-Jan-13	3	0.51	0.003	0.0007	0.85	0.0002	0.009	0.00002	0.0005	0.001	0.52	0.00028	0.023	0.0001	0.00002	0.000014	0.000139	0.003	0.01	0.000013	0.002
15-Jan-13	4	0.65	0.004	0.0007	0.77	0.0001	0.021	0.00002	0.0005	0.001	0.66	0.00030	0.030	0.0001	0.00002	0.000004	0.000147	0.002	0.01	0.000006	0.002
22-Jan-13	5	0.55	0.003	0.0004	0.49	0.0002	0.009	0.00002	0.0005	0.001	0.57	0.00025	0.026	0.0001	0.00002	0.000004	0.000109	0.002	0.01	0.000009	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.40	0.003	0.0004	0.21	0.0002	0.009	0.00002	0.0002	0.001	0.51	0.00006	0.018	0.0001	0.00002	0.000004	0.000127	0.002	0.01	0.000005	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.30	0.002	0.0004	0.15	0.0001	0.009	0.00002	0.0002	0.001	0.45	0.00014	0.014	0.0001	0.00002	0.000004	0.000127	0.001	0.01	0.000005	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.23	0.002	0.0007	0.11	0.0001	0.009	0.00002	0.0002	0.001	0.38	0.00009	0.012	0.0001	0.00002	0.000004	0.000069	0.001	0.01	0.000003	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.23	0.002	0.0020	0.11	0.0001	0.009	0.00003	0.0003	0.001	0.40	0.00011	0.011	0.0001	0.00002	0.000004	0.000083	0.001	0.01	0.000005	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.18	0.002	0.0005	0.08	0.0001	0.009	0.00002	0.0003	0.001	0.39	0.00008	0.009	0.0001	0.00002	0.000004	0.000059	0.001	0.01	0.000003	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

Table B-10: Humidity Cell 10 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	7.93	19.11	1.7	1.2	5.7	0.00001	0.00002	0.1828	0.0015	0.0008	0.00002	0.0145	0.00001	4.63	0.000002	0.000071	0.0004	0.0013	0.003	2.89	0.001
24-Dec-12	1	8.39	30.69	2.0	1.7	1.2	0.00001	0.00001	0.0891	0.0013	0.0009	0.00002	0.0169	0.00001	5.43	0.000005	0.000059	0.0005	0.0005	0.003	1.78	0.001
31-Dec-12	2	8.21	23.14	2.0	1.0	0.2	0.00001	0.00003	0.0805	0.0015	0.0008	0.00002	0.0088	0.00001	5.86	0.000003	0.000034	0.0005	0.0005	0.003	1.64	0.001
8-Jan-13	3	7.81	16.73	2.0	0.5	0.2	0.00001	0.00001	0.1082	0.0014	0.0009	0.00002	0.0044	0.00001	5.39	0.000003	0.000098	0.0005	0.0005	0.003	1.44	0.001
15-Jan-13	4	7.51	15.98	2.0	0.5	0.2	0.00001	0.00001	0.0899	0.0014	0.0008	0.00002	0.0034	0.00001	5.61	0.000003	0.000019	0.0005	0.0005	0.006	1.24	0.001
22-Jan-13	5	7.27	15.81	2.0	0.4	0.2	0.00001	0.00002	0.0790	0.0014	0.0008	0.00002	0.0023	0.00001	4.87	0.000003	0.000019	0.0005	0.0005	0.003	1.17	0.001
29-Jan-13	6	7.45	13.87	2.0	0.4																	
5-Feb-13	7	7.64	15.90	2.0	0.3																	
12-Feb-13	8	7.34	14.43	1.7	0.2																	
19-Feb-13	9	7.82	14.87	2.0	0.3																	
26-Feb-13	10	7.72	13.87	2.0	1.1	0.2	0.00001	0.00001	0.0991	0.0012	0.0010	0.00002	0.0011	0.00001	5.47	0.000009	0.000137	0.0005	0.0005	0.003	0.90	0.001
5-Mar-13	11	7.59	12.83	2.0	0.3																	
12-Mar-13	12	7.64	14.81	2.0	0.3																	
19-Mar-13	13	7.51	13.93	2.0	0.3																	
26-Mar-13	14	7.43	7.94	2.0	0.3																	
2-Apr-13	15	8.47	11.84	2.0	0.3	0.2	0.00001	0.00001	0.0888	0.0010	0.0008	0.00002	0.0016	0.00001	5.12	0.000003	0.000102	0.0005	0.0005	0.003	0.77	0.001
9-Apr-13	16	7.46	13.87	2.0	0.3																	
16-Apr-13	17	7.56	13.73	2.0	0.4																	
23-Apr-13	18	7.53	12.90	2.0	0.3																	
30-Apr-13	19	7.52	11.71	2.0	0.2																	
7-May-13	20	7.41	10.95	2.0	0.2	0.2	0.00001	0.00001	0.0697	0.0010	0.0008	0.00002	0.0009	0.00001	4.72	0.000003	0.000013	0.0005	0.0005	0.003	0.70	0.001
14-May-13	21	7.59	11.89	2.0	0.6																	
21-May-13	22	7.66	11.94	2.0	0.3																	
28-May-13	23	7.6	11.71	2.0	0.4																	
4-Jun-13	24	7.43	12.92	2.0	0.3																	
11-Jun-13	25	7.36	11.93	2.0	0.2	0.2	0.00001	0.00001	0.0994	0.0009	0.0009	0.00002	0.0002	0.00001	5.70	0.000003	0.000008	0.0005	0.0005	0.003	0.70	0.001
18-Jun-13	26	7.5	11.81	2.0	0.2																	
25-Jun-13	27	7.55	11.98	2.0	0.2																	
2-Jul-13	28	7.77	12.04	2.0	0.2																	
9-Jul-13	29	7.66	12.11	2.0	0.2																	
16-Jul-13	30	7.44	10.02	2.0	0.2	0.2	0.00001	0.00001	0.0601	0.0009	0.0010	0.00002	0.0005	0.00001	5.06	0.000003	0.000089	0.0005	0.0005	0.003	0.69	0.001
23-Jul-13	31	7.57	11.96	2.0	0.2																	
30-Jul-13	32	7.55	12.12	2.0	0.8																	
6-Aug-13	33	7.59	12.08	2.0	0.2																	
13-Aug-13	34	7.61	11.96	2.0	0.2																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.23	0.0021	0.00475	5.78	0.0002	0.007	0.00003	0.0006	0.001	0.77	0.00132	0.021	0.0004	0.00002	0.000003	0.00015	0.00181	0.01	0.000061	0.002
24-Dec-12	1	0.36	0.0049	0.00812	3.15	0.0001	0.009	0.00005	0.0010	0.001	0.50	0.00061	0.024	0.0002	0.00002	0.000005	0.00145	0.00146	0.01	0.000082	0.002
31-Dec-12	2	0.39	0.0060	0.00346	1.42	0.0001	0.044	0.00002	0.0009	0.001	0.59	0.00036	0.025	0.0002	0.00002	0.000004	0.00205	0.00156	0.01	0.000058	0.002
8-Jan-13	3	0.32	0.0056	0.00131	0.67	0.0001	0.009	0.00002	0.0007	0.001	0.55	0.00018	0.020	0.0001	0.00002	0.000015	0.00196	0.00142	0.01	0.000052	0.002
15-Jan-13	4	0.33	0.0064	0.00117	0.50	0.0001	0.009	0.00002	0.0007	0.001	0.53	0.00021	0.020	0.0001	0.00002	0.000004	0.00235	0.00139	0.01	0.000047	0.002
22-Jan-13	5	0.32	0.0057	0.00077	0.34	0.0001	0.009	0.00002	0.0006	0.001	0.52	0.00014	0.020	0.0001	0.00002	0.000004	0.00216	0.00118	0.01	0.000040	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.33	0.0072	0.00047	0.16	0.0001	0.009	0.00002	0.0002	0.001	0.52	0.00002	0.016	0.0001	0.00002	0.000004	0.00188	0.00108	0.01	0.000028	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.17	0.0046	0.00035	0.12	0.0001	0.009	0.00002	0.0002	0.001	0.45	0.00009	0.011	0.0001	0.00002	0.000004	0.00150	0.00076	0.01	0.000024	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.12	0.0055	0.00044	0.08	0.0004	0.009	0.00002	0.0002	0.001	0.36	0.00011	0.008	0.0001	0.00002	0.000004	0.00090	0.00060	0.01	0.000018	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.13	0.0054	0.00053	0.09	0.0001	0.015	0.00002	0.0003	0.001	0.40	0.00012	0.009	0.0001	0.00002	0.000004	0.00072	0.00058	0.01	0.000017	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.11	0.0061	0.00023	0.07	0.0001	0.009	0.00002	0.0003	0.001	0.37	0.00006	0.007	0.0001	0.00002	0.000004	0.00064	0.00047	0.01	0.000023	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

Table B-11: Humidity Cell 11 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	7.80	19.39	1.6	1.4	6.0	0.00001	0.00001	0.15	0.0035	0.0018	0.00002	0.0167	0.00001	4.11	0.000002	0.000036	0.0004	0.0006	0.005	3.70	0.001
24-Dec-12	1	8.24	25.66	2.0	4.5	2.7	0.00001	0.00001	0.07	0.0027	0.0032	0.00002	0.0241	0.00001	5.70	0.000003	0.000051	0.0005	0.0005	0.003	2.44	0.001
31-Dec-12	2	7.55	17.03	2.0	4.3	0.9	0.00001	0.00004	0.06	0.0026	0.0032	0.00002	0.0160	0.00001	5.30	0.000004	0.000025	0.0005	0.0005	0.003	2.08	0.001
8-Jan-13	3	7.76	15.71	2.0	2.4	0.3	0.00001	0.00001	0.06	0.0027	0.0029	0.00002	0.0088	0.00001	4.80	0.000003	0.000091	0.0005	0.0005	0.003	1.87	0.001
15-Jan-13	4	7.51	16.90	2.0	2.0	0.2	0.00001	0.00001	0.08	0.0024	0.0038	0.00002	0.0077	0.00001	5.48	0.000003	0.000023	0.0005	0.0005	0.004	1.74	0.001
22-Jan-13	5	7.49	15.87	2.0	1.6	0.2	0.00001	0.00002	0.07	0.0022	0.0032	0.00002	0.0053	0.00001	4.52	0.000003	0.000018	0.0005	0.0005	0.003	1.64	0.001
29-Jan-13	6	7.43	12.82	2.0	1.3																	
5-Feb-13	7	7.56	14.84	2.0	1.3																	
12-Feb-13	8	7.34	25.71	2.0	1.1																	
19-Feb-13	9	7.82	5.96	2.0	0.9																	
26-Feb-13	10	7.5	13.94	2.0	0.8	0.2	0.00001	0.00001	0.10	0.0016	0.0227	0.00002	0.0032	0.00001	22.31	0.000018	0.000160	0.0005	0.0010	0.003	2.84	0.013
5-Mar-13	11	7.48	11.89	2.0	5.2																	
12-Mar-13	12	7.5	12.74	2.0	1.8																	
19-Mar-13	13	7.28	11.94	2.0	1.3																	
26-Mar-13	14	7.33	12.90	2.0	1.4																	
2-Apr-13	15	7.88	13.87	2.0	1.2	0.2	0.00001	0.00001	0.07	0.0015	0.0031	0.00002	0.0026	0.00001	4.49	0.000003	0.000120	0.0005	0.0005	0.003	1.15	0.001
9-Apr-13	16	7.3	12.90	2.0	3.0																	
16-Apr-13	17	7.3	21.74	2.0	0.9																	
23-Apr-13	18	7.34	10.93	2.0	3.3																	
30-Apr-13	19	7.37	15.65	2.0	0.7																	
7-May-13	20	7.41	9.86	2.0	0.8	0.2	0.00001	0.00001	0.05	0.0015	0.0036	0.00002	0.0014	0.00001	3.95	0.000003	0.000014	0.0005	0.0005	0.003	1.05	0.001
14-May-13	21	7.22	10.80	2.0	0.8																	
21-May-13	22	7.53	10.98	2.0	0.9																	
28-May-13	23	7.43	10.76	2.0	1.1																	
4-Jun-13	24	7.03	15.98	2.0	0.9																	
11-Jun-13	25	7.09	9.97	2.0	0.8	0.2	0.00001	0.00001	0.07	0.0014	0.0037	0.00002	0.0005	0.00001	4.72	0.000003	0.000012	0.0005	0.0005	0.003	1.04	0.001
18-Jun-13	26	7.35	10.79	2.0	0.8																	
25-Jun-13	27	7.36	10.85	2.0	0.7																	
2-Jul-13	28	7.44	10.98	2.0	0.8																	
9-Jul-13	29	7.61	12.05	2.0	0.7																	
16-Jul-13	30	7.34	10.03	2.0	0.6	0.2	0.00001	0.00001	0.05	0.0015	0.0038	0.00002	0.0008	0.00001	4.27	0.000003	0.000095	0.0005	0.0036	0.003	0.98	0.001
23-Jul-13	31	7.46	12.07	2.0	0.8																	
30-Jul-13	32	7.52	11.06	2.0	0.7																	
6-Aug-13	33	7.44	11.06	2.0	0.7																	
13-Aug-13	34	7.42	10.98	2.0	0.7																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.30	0.004	0.0020	5.16	0.0002	0.007	0.00011	0.0008	0.001	0.52	0.00385	0.02	0.0002	0.00002	0.000003	0.00003	0.0007	0.01	0.000011	0.002
24-Dec-12	1	0.71	0.011	0.0026	4.11	0.0001	0.009	0.00009	0.0010	0.001	0.41	0.00243	0.03	0.0001	0.00002	0.000005	0.00022	0.0005	0.01	0.000021	0.002
31-Dec-12	2	0.66	0.013	0.0019	2.05	0.0001	0.009	0.00004	0.0009	0.001	0.43	0.00139	0.02	0.0001	0.00002	0.000004	0.00035	0.0007	0.01	0.000013	0.002
8-Jan-13	3	0.54	0.010	0.0009	1.10	0.0001	0.009	0.00002	0.0007	0.001	0.41	0.00085	0.02	0.0001	0.00002	0.000013	0.00023	0.0005	0.01	0.000010	0.002
15-Jan-13	4	0.60	0.011	0.0007	0.89	0.0001	0.011	0.00002	0.0008	0.001	0.46	0.00083	0.02	0.0001	0.00002	0.000004	0.00030	0.0006	0.01	0.000004	0.002
22-Jan-13	5	0.54	0.011	0.0005	0.60	0.0001	0.009	0.00002	0.0006	0.001	0.46	0.00061	0.02	0.0001	0.00002	0.000004	0.00025	0.0005	0.01	0.000007	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	7.54	0.064	0.0003	0.45	0.0003	0.009	0.00004	0.0004	0.001	0.53	0.00025	0.13	0.0002	0.00002	0.000004	0.00412	0.0005	0.01	0.000011	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.50	0.009	0.0002	0.15	0.0001	0.009	0.00002	0.0002	0.001	0.40	0.00033	0.01	0.0001	0.00002	0.000004	0.00033	0.0004	0.01	0.000003	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.31	0.009	0.0002	0.11	0.0001	0.009	0.00002	0.0002	0.001	0.33	0.00025	0.01	0.0001	0.00002	0.000004	0.00031	0.0004	0.01	0.000002	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.29	0.009	0.0002	0.11	0.0001	0.014	0.00002	0.0003	0.001	0.37	0.00026	0.01	0.0001	0.00002	0.000004	0.00036	0.0003	0.01	0.000003	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.21	0.009	0.0001	0.08	0.0001	0.013	0.00010	0.0003	0.001	0.35	0.00042	0.01	0.0001	0.00002	0.000004	0.00029	0.0003	0.01	0.000001	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

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Table B-12: Humidity Cell 12 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	7.95	18.24	1.66	1.4	8.1	0.000008	0.000008	0.07	0.0018	0.00073	0.00002	0.0096	0.000008	4.90	0.000002	0.00005	0.0004	0.0020	0.003	1.76	0.001
24-Dec-12	1	8.01	20.52	1.95	2.0	2.7	0.000010	0.000010	0.03	0.0018	0.00074	0.00002	0.0113	0.000010	5.30	0.000003	0.00005	0.0005	0.0010	0.003	0.90	0.001
31-Dec-12	2	7.78	16.88	1.99	1.8	0.7	0.000010	0.000020	0.06	0.0017	0.00058	0.00002	0.0061	0.000010	5.88	0.000003	0.00002	0.0005	0.0007	0.003	0.72	0.001
8-Jan-13	3	8.01	7.95	1.14	0.2	0.1	0.000006	0.000006	0.07	0.0009	0.00016	0.00001	0.0007	0.000006	2.90	0.000002	0.00017	0.0003	0.0003	0.002	0.23	0.001
15-Jan-13	4	7.53	14.72	1.96	1.0	0.2	0.000010	0.000010	0.05	0.0013	0.00040	0.00002	0.0021	0.000010	4.76	0.000003	0.00003	0.0005	0.0006	0.007	0.35	0.001
22-Jan-13	5	7.55	15.97	2.00	0.8	0.2	0.000010	0.000010	0.04	0.0010	0.00053	0.00002	0.0014	0.000010	4.90	0.000003	0.00002	0.0005	0.0005	0.003	0.34	0.001
29-Jan-13	6	7.5	13.85	1.98	0.8																	
5-Feb-13	7	7.61	12.78	1.97	0.7																	
12-Feb-13	8	7.35	13.83	1.98	0.7																	
19-Feb-13	9	7.42	12.91	1.99	0.6																	
26-Feb-13	10	7.44	11.86	1.98	0.9	0.2	0.000010	0.000010	0.07	0.0007	0.00043	0.00002	0.0006	0.000010	4.86	0.000003	0.00006	0.0005	0.0005	0.003	0.18	0.001
5-Mar-13	11	7.41	11.90	1.98	0.7																	
12-Mar-13	12	7.64	12.88	1.98	0.7																	
19-Mar-13	13	7.33	9.94	1.99	1.2																	
26-Mar-13	14	6.45	24.65	1.97	0.7																	
2-Apr-13	15	7.02	10.89	1.98	0.6	0.2	0.000010	0.000010	0.06	0.0005	0.00024	0.00002	0.0012	0.000010	4.71	0.000003	0.00011	0.0005	0.0005	0.003	0.12	0.001
9-Apr-13	16	7.52	13.86	1.98	1.0																	
16-Apr-13	17	7.24	14.76	1.97	0.7																	
23-Apr-13	18	7.57	11.84	1.97	0.7																	
30-Apr-13	19	7.62	10.77	1.96	0.5																	
7-May-13	20	7.41	10.80	1.96	0.6	0.2	0.000010	0.000010	0.05	0.0005	0.00027	0.00002	0.0006	0.000010	4.26	0.000003	0.00001	0.0005	0.0010	0.003	0.10	0.001
14-May-13	21	7.27	9.89	1.98	0.5																	
21-May-13	22	7.37	9.94	1.99	0.7																	
28-May-13	23	7.59	10.69	1.94	0.6																	
4-Jun-13	24	7.25	11.93	1.99	0.6																	
11-Jun-13	25	7.22	9.91	1.98	0.5	0.2	0.000010	0.000010	0.06	0.0004	0.00024	0.00002	0.0002	0.000010	4.76	0.000003	0.00001	0.0005	0.0005	0.003	0.08	0.001
18-Jun-13	26	7.28	9.82	1.96	0.6																	
25-Jun-13	27	7.39	9.94	1.99	0.6																	
2-Jul-13	28	7.48	10.02	2.00	0.6																	
9-Jul-13	29	7.62	11.09	2.02	0.6																	
16-Jul-13	30	7.37	9.05	2.01	0.5	0.2	0.000010	0.000010	0.03	0.0004	0.00021	0.00002	0.0003	0.000010	4.39	0.000003	0.00010	0.0005	0.0005	0.003	0.08	0.001
23-Jul-13	31	7.43	10.02	2.00	0.5																	
30-Jul-13	32	7.52	10.04	2.01	1.6																	
6-Aug-13	33	7.37	9.99	2.00	0.5																	
13-Aug-13	34	7.61	10.99	2.00	0.5																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.37	0.005	0.0045	5.47	0.0003	0.007	0.00006	0.0007	0.0008	0.87	0.00188	0.0255	0.00017	0.00002	0.000003	0.0003	0.00037	0.01	0.000194	0.002
24-Dec-12	1	0.50	0.007	0.0083	3.13	0.0001	0.009	0.00004	0.0011	0.0010	0.51	0.00109	0.0252	0.00010	0.00002	0.000005	0.0022	0.00029	0.01	0.000126	0.002
31-Dec-12	2	0.52	0.008	0.0052	1.49	0.0001	0.028	0.00003	0.0010	0.0010	0.59	0.00062	0.0245	0.00010	0.00002	0.000004	0.0024	0.00032	0.01	0.000077	0.002
8-Jan-13	3	0.18	0.003	0.0006	0.22	0.0001	0.005	0.00001	0.0002	0.0006	0.29	0.00015	0.0087	0.00006	0.00001	0.000005	0.0006	0.00015	0.01	0.000031	0.001
15-Jan-13	4	0.35	0.008	0.0018	0.39	0.0001	0.014	0.00002	0.0007	0.0010	0.46	0.00033	0.0158	0.00010	0.00002	0.000004	0.0018	0.00025	0.01	0.000043	0.002
22-Jan-13	5	0.37	0.007	0.0015	0.32	0.0001	0.009	0.00002	0.0005	0.0010	0.50	0.00027	0.0183	0.00010	0.00002	0.000004	0.0017	0.00017	0.01	0.000045	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.26	0.008	0.0011	0.14	0.0001	0.009	0.00002	0.0002	0.0010	0.42	0.00005	0.0116	0.00010	0.00002	0.000004	0.0011	0.00015	0.01	0.000025	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.18	0.008	0.0010	0.09	0.0001	0.009	0.00002	0.0002	0.0010	0.38	0.00011	0.0087	0.00010	0.00002	0.000004	0.0008	0.00013	0.01	0.000019	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.14	0.009	0.0013	0.08	0.0002	0.009	0.00002	0.0002	0.0010	0.32	0.00010	0.0070	0.00010	0.00002	0.000004	0.0006	0.00014	0.01	0.000017	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.15	0.009	0.0011	0.08	0.0001	0.019	0.00002	0.0003	0.0010	0.33	0.00010	0.0068	0.00010	0.00002	0.000004	0.0005	0.00009	0.01	0.000016	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.13	0.010	0.0010	0.06	0.0001	0.016	0.00002	0.0003	0.0010	0.33	0.00008	0.0057	0.00010	0.00002	0.000004	0.0004	0.00008	0.01	0.000011	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

Table B-13: Humidity Cell 13 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	8.06	19.49	1.6	1.1	3.3	0.00001	0.00001	0.16	0.0016	0.0010	0.00002	0.0162	0.00001	4.51	0.000002	0.000031	0.0004	0.0008	0.006	2.40	0.001
24-Dec-12	1	8.25	26.78	2.0	1.7	0.9	0.00001	0.00001	0.07	0.0012	0.0014	0.00002	0.0216	0.00001	6.13	0.000003	0.000047	0.0005	0.0005	0.005	1.63	0.001
31-Dec-12	2	8.12	20.73	2.0	1.4	0.2	0.00001	0.00002	0.06	0.0013	0.0013	0.00002	0.0108	0.00001	5.51	0.000003	0.000018	0.0005	0.0005	0.003	1.53	0.001
8-Jan-13	3	7.99	21.78	2.0	0.7	0.2	0.00001	0.00001	0.12	0.0013	0.0012	0.00002	0.0054	0.00001	6.96	0.000004	0.000083	0.0005	0.0005	0.005	1.49	0.001
15-Jan-13	4	7.49	21.82	2.0	0.6	0.2	0.00001	0.00001	0.09	0.0013	0.0013	0.00002	0.0046	0.00001	6.29	0.000003	0.000015	0.0005	0.0005	0.005	1.23	0.001
22-Jan-13	5	7.26	16.85	2.0	0.5	0.2	0.00001	0.00001	0.07	0.0012	0.0013	0.00002	0.0031	0.00001	5.21	0.000005	0.000016	0.0005	0.0005	0.003	1.13	0.001
29-Jan-13	6	7.46	15.81	2.0	0.4																	
5-Feb-13	7	7.66	13.85	2.0	0.4																	
12-Feb-13	8	7.41	17.68	2.0	0.4																	
19-Feb-13	9	7.33	15.79	2.0	0.3																	
26-Feb-13	10	7.47	12.87	2.0	0.4	0.2	0.00001	0.00001	0.09	0.0009	0.0015	0.00002	0.0016	0.00001	5.51	0.000003	0.000036	0.0005	0.0009	0.003	0.87	0.001
5-Mar-13	11	7.48	14.81	2.0	0.4																	
12-Mar-13	12	7.51	13.76	2.0	0.4																	
19-Mar-13	13	7.35	13.89	2.0	0.4																	
26-Mar-13	14	7.45	14.79	2.0	0.3																	
2-Apr-13	15	8.05	10.86	2.0	0.4	0.2	0.00001	0.00001	0.07	0.0008	0.0014	0.00002	0.0018	0.00001	5.28	0.000003	0.000120	0.0005	0.0005	0.003	0.73	0.001
9-Apr-13	16	7.34	12.86	2.0	0.3																	
16-Apr-13	17	7.59	13.80	2.0	0.3																	
23-Apr-13	18	7.53	12.56	1.9	0.4																	
30-Apr-13	19	7.58	11.72	2.0	0.2																	
7-May-13	20	7.47	11.81	2.0	0.4	0.2	0.00001	0.00001	0.07	0.0007	0.0013	0.00002	0.0008	0.00001	4.55	0.000003	0.000045	0.0005	0.0006	0.003	0.66	0.001
14-May-13	21	7.27	11.82	2.0	0.3																	
21-May-13	22	7.49	11.94	2.0	0.4																	
28-May-13	23	7.45	11.70	2.0	0.3																	
4-Jun-13	24	7.23	16.78	2.0	0.3																	
11-Jun-13	25	7.19	11.87	2.0	0.3	0.2	0.00001	0.00001	0.08	0.0005	0.0014	0.00002	0.0002	0.00001	5.12	0.000003	0.000008	0.0005	0.0005	0.003	0.61	0.001
18-Jun-13	26	7.52	12.88	2.0	0.4																	
25-Jun-13	27	7.44	11.92	2.0	0.4																	
2-Jul-13	28	7.69	11.04	2.0	0.3																	
9-Jul-13	29	7.61	10.95	2.0	0.4																	
16-Jul-13	30	7.53	11.12	2.0	0.3	0.2	0.00001	0.00001	0.05	0.0005	0.0016	0.00002	0.0005	0.00001	4.88	0.000003	0.000088	0.0005	0.0005	0.003	0.62	0.001
23-Jul-13	31	7.53	12.07	2.0	0.3																	
30-Jul-13	32	7.63	12.14	2.0	0.3																	
6-Aug-13	33	7.51	11.04	2.0	0.3																	
13-Aug-13	34	7.68	13.09	2.0	0.3																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.30	0.0021	0.00071	3.43	0.0002	0.007	0.00002	0.0006	0.001	0.83	0.00214	0.025	0.0005	0.00002	0.000003	0.0002	0.0029	0.01	0.000106	0.002
24-Dec-12	1	0.55	0.0064	0.00119	2.24	0.0001	0.009	0.00002	0.0008	0.001	0.62	0.00099	0.037	0.0003	0.00002	0.000007	0.0021	0.0023	0.01	0.000092	0.002
31-Dec-12	2	0.47	0.0075	0.00078	0.82	0.0001	0.009	0.00002	0.0007	0.001	0.75	0.00052	0.030	0.0003	0.00002	0.000004	0.0024	0.0023	0.01	0.000054	0.002
8-Jan-13	3	0.50	0.0067	0.00030	0.52	0.0001	0.009	0.00002	0.0006	0.001	0.72	0.00024	0.032	0.0001	0.00002	0.000009	0.0020	0.0020	0.01	0.000042	0.002
15-Jan-13	4	0.44	0.0072	0.00035	0.37	0.0001	0.016	0.00002	0.0006	0.001	0.62	0.00025	0.029	0.0001	0.00002	0.000004	0.0021	0.0021	0.01	0.000031	0.002
22-Jan-13	5	0.38	0.0067	0.00021	0.23	0.0001	0.010	0.00002	0.0004	0.001	0.56	0.00016	0.026	0.0001	0.00002	0.000004	0.0018	0.0017	0.01	0.000027	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.24	0.0074	0.00015	0.12	0.0001	0.011	0.00004	0.0002	0.001	0.49	0.00003	0.017	0.0001	0.00002	0.000004	0.0013	0.0015	0.01	0.000015	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.18	0.0061	0.00008	0.08	0.0001	0.009	0.00002	0.0002	0.001	0.43	0.00011	0.013	0.0001	0.00002	0.000004	0.0010	0.0010	0.01	0.000012	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.13	0.0065	0.00010	0.06	0.0001	0.009	0.00002	0.0002	0.001	0.35	0.00015	0.010	0.0001	0.00002	0.000004	0.0006	0.0007	0.01	0.000010	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.13	0.0059	0.00013	0.07	0.0001	0.015	0.00002	0.0002	0.001	0.35	0.00009	0.009	0.0001	0.00002	0.000004	0.0005	0.0007	0.01	0.000009	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.12	0.0064	0.00007	0.05	0.0001	0.014	0.00002	0.0003	0.001	0.34	0.00015	0.008	0.0001	0.00002	0.000004	0.0005	0.0006	0.01	0.000007	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				

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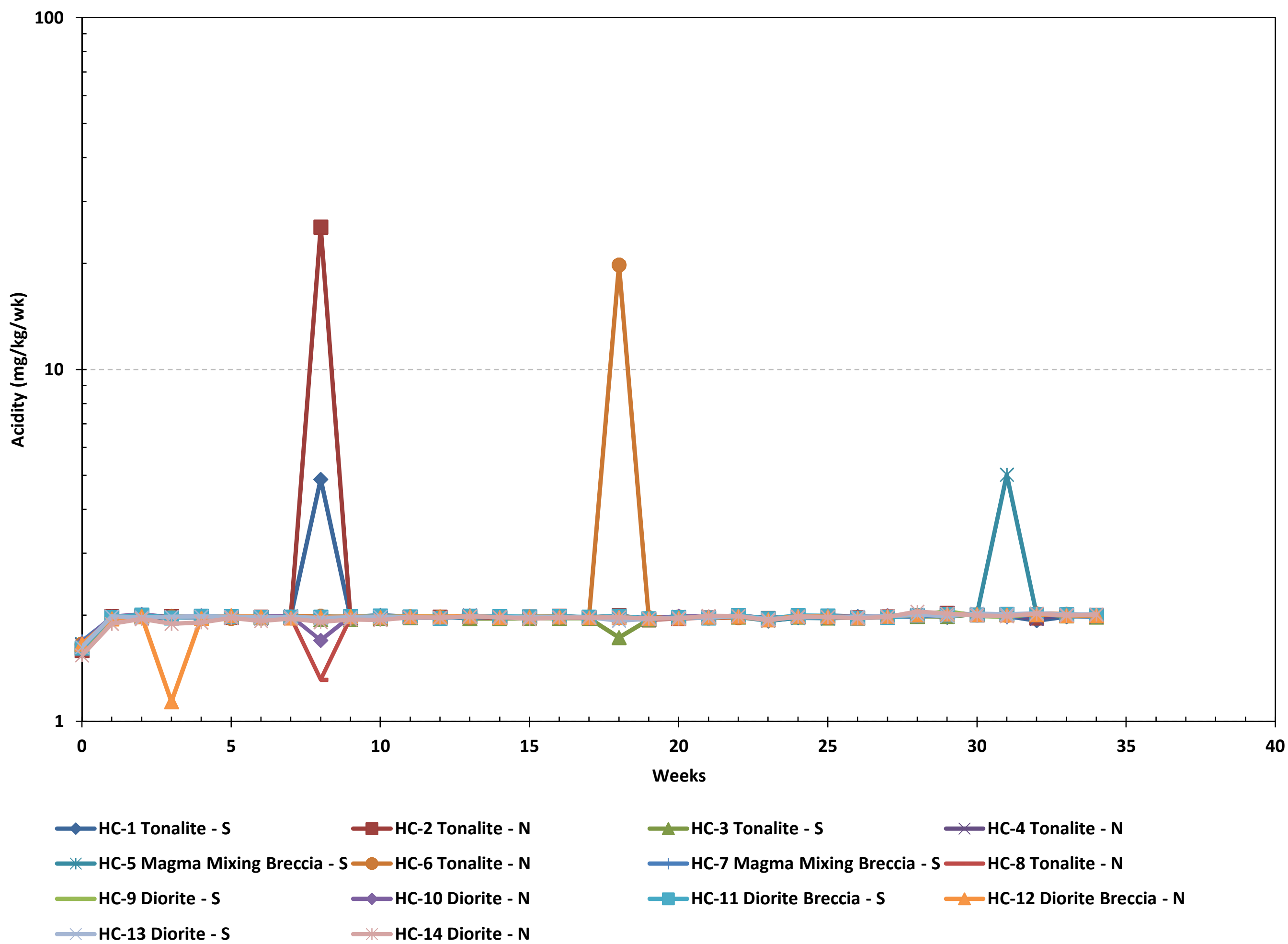
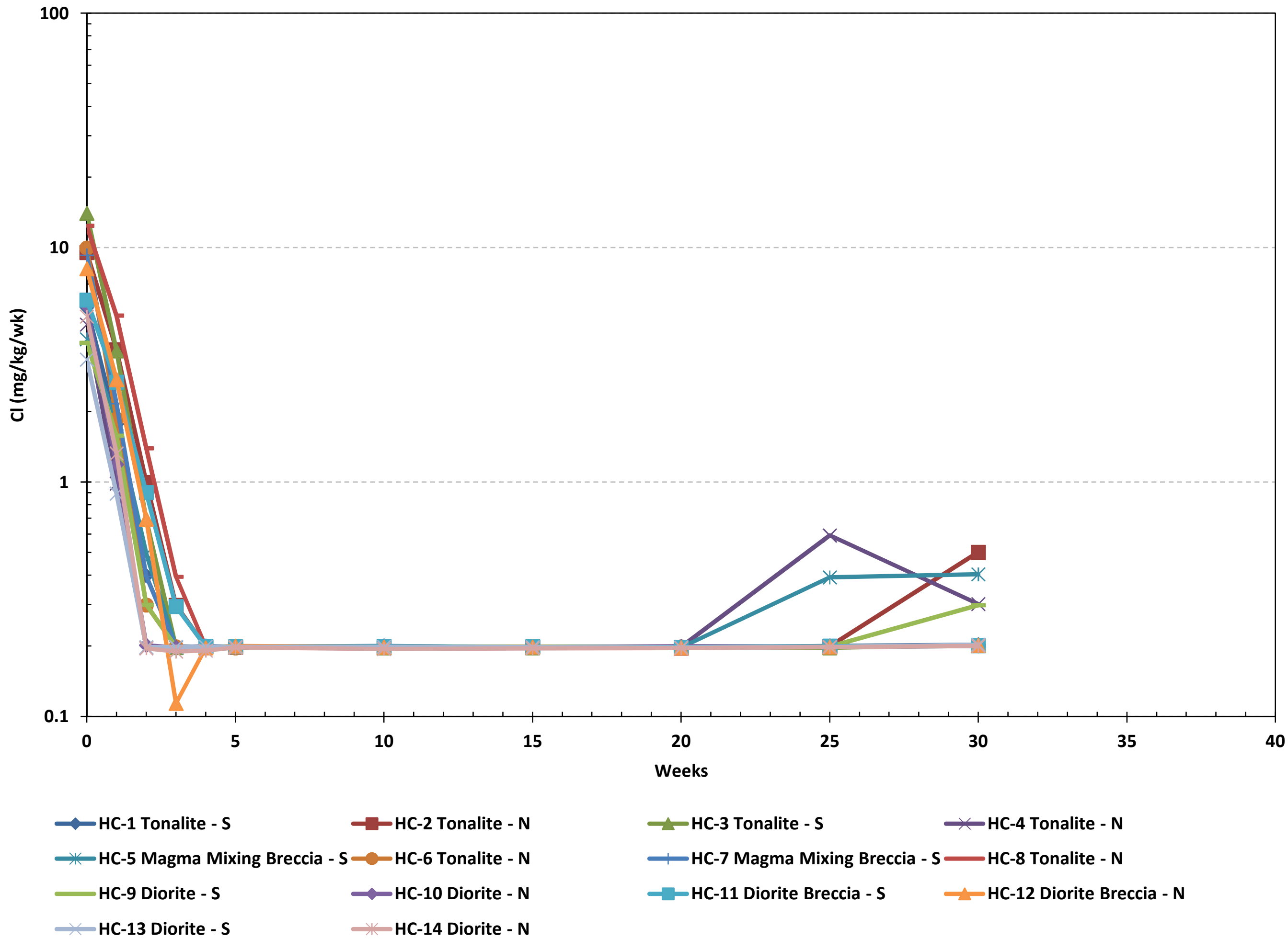
Table B-14: Humidity Cell 14 Loading Rates

Date	Cycle	pH	Alkalinity	Acidity	Sulphate	Cl	Hg	Ag	Al	As	Ba	Be	B	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li
		units	mg/kg/wk as $CaCO_3$	mg/kg/wk as $CaCO_3$	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12	0	7.99	20.02	1.5	1.2	5.1	0.00001	0.00001	0.11	0.0022	0.0015	0.000015	0.0084	0.00001	4.60	0.000002	0.00006	0.0004	0.0015	0.005	1.61	0.001
24-Dec-12	1	8.50	21.76	1.9	1.0	1.3	0.00001	0.00001	0.06	0.0027	0.0019	0.000019	0.0093	0.00001	4.64	0.000003	0.00006	0.0005	0.0010	0.003	0.77	0.001
31-Dec-12	2	7.49	15.62	2.0	0.8	0.2	0.00001	0.00001	0.08	0.0033	0.0017	0.000020	0.0039	0.00001	4.21	0.000003	0.00003	0.0005	0.0006	0.003	0.68	0.001
8-Jan-13	3	7.77	14.19	1.9	0.5	0.2	0.00001	0.00001	0.09	0.0031	0.0015	0.000019	0.0019	0.00001	5.17	0.000003	0.00013	0.0005	0.0005	0.003	0.58	0.001
15-Jan-13	4	7.59	14.31	1.9	0.5	0.2	0.00001	0.00001	0.07	0.0029	0.0016	0.000019	0.0016	0.00001	5.25	0.000003	0.00003	0.0005	0.0005	0.005	0.49	0.001
22-Jan-13	5	7.35	15.73	2.0	0.4	0.2	0.00001	0.00001	0.06	0.0029	0.0015	0.000020	0.0011	0.00001	4.68	0.000003	0.00002	0.0005	0.0005	0.003	0.44	0.001
29-Jan-13	6	7.38	10.60	1.9	0.4																	
5-Feb-13	7	7.63	13.69	2.0	0.4																	
12-Feb-13	8	7.35	14.36	1.9	0.4																	
19-Feb-13	9	7.46	11.69	1.9	0.4																	
26-Feb-13	10	7.47	11.64	1.9	0.5	0.2	0.00001	0.00001	0.08	0.0028	0.0017	0.000019	0.0006	0.00001	4.55	0.000003	0.00003	0.0005	0.0006	0.003	0.30	0.001
5-Mar-13	11	7.67	11.84	2.0	0.5																	
12-Mar-13	12	7.80	13.78	2.0	0.4																	
19-Mar-13	13	7.45	11.92	2.0	0.6																	
26-Mar-13	14	6.55	17.78	2.0	0.4																	
2-Apr-13	15	8.63	13.66	2.0	0.4	0.2	0.00001	0.00001	0.06	0.0024	0.0012	0.000020	0.0011	0.00001	4.68	0.000003	0.00012	0.0005	0.0005	0.003	0.26	0.001
9-Apr-13	16	7.57	12.81	2.0	0.4																	
16-Apr-13	17	7.30	11.81	2.0	0.4																	
23-Apr-13	18	7.31	19.72	2.0	0.4																	
30-Apr-13	19	7.35	9.79	2.0	0.3																	
7-May-13	20	7.44	9.78	2.0	0.5	0.2	0.00001	0.00001	0.06	0.0023	0.0011	0.000020	0.0004	0.00001	4.45	0.000003	0.00007	0.0005	0.0005	0.003	0.24	0.001
14-May-13	21	7.52	9.96	2.0	0.3																	
21-May-13	22	7.68	10.95	2.0	0.4																	
28-May-13	23	7.58	10.65	1.9	0.4																	
4-Jun-13	24	7.21	9.92	2.0	0.4																	
11-Jun-13	25	7.00	9.88	2.0	0.3	0.2	0.00001	0.00001	0.08	0.0025	0.0012	0.000020	0.0002	0.00001	5.09	0.000003	0.00002	0.0005	0.0005	0.003	0.24	0.001
18-Jun-13	26	7.19	8.83	2.0	0.4																	
25-Jun-13	27	7.47	10.88	2.0	0.4																	
2-Jul-13	28	7.64	11.28	2.1	0.4																	
9-Jul-13	29	7.51	11.12	2.0	0.3																	
16-Jul-13	30	7.43	9.99	2.0	0.3	0.2	0.00001	0.00001	0.06	0.0024	0.0011	0.000020	0.0003	0.00001	4.63	0.000003	0.00011	0.0005	0.0005	0.003	0.24	0.001
23-Jul-13	31	7.53	10.95	2.0	0.3																	
30-Jul-13	32	7.57	12.12	2.0	0.4																	
6-Aug-13	33	7.50	10.99	2.0	0.3																	
13-Aug-13	34	7.54	11.04	2.0	0.3																	

Date	Cycle	Mg	Mn	Mo	Na	Ni	P	Pb	Sb	Se	Si	Sn	Sr	Ti	Tl	Th	U	V	W	Y	Zn
		mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk	mg/kg/wk
18-Dec-12		0.35	0.0025	0.00065	3.96	0.0002	0.007	0.00006	0.0005	0.001	0.85	0.00095	0.017	0.0003	0.00002	0.000003	0.0002	0.00079	0.01	0.00014	0.002
24-Dec-12	1	0.41	0.0053	0.00195	2.11	0.0001	0.009	0.00003	0.0005	0.001	0.45	0.00041	0.015	0.0001	0.00002	0.000008	0.0027	0.00064	0.01	0.00016	0.002
31-Dec-12	2	0.35	0.0051	0.00126	0.85	0.0001	0.009	0.00002	0.0005	0.001	0.61	0.00030	0.012	0.0001	0.00002	0.000004	0.0029	0.00066	0.01	0.00009	0.002
8-Jan-13	3	0.35	0.0048	0.00048	0.54	0.0001	0.009	0.00002	0.0004	0.001	0.54	0.00014	0.012	0.0001	0.00002	0.000009	0.0023	0.00058	0.01	0.00008	0.002
15-Jan-13	4	0.33	0.0056	0.00040	0.39	0.0001	0.023	0.00002	0.0004	0.001	0.51	0.00014	0.012	0.0001	0.00002	0.000004	0.0023	0.00052	0.01	0.00006	0.002
22-Jan-13	5	0.29	0.0062	0.00029	0.28	0.0001	0.009	0.00002	0.0003	0.001	0.49	0.00011	0.012	0.0001	0.00002	0.000004	0.0023	0.00043	0.01	0.00006	0.002
29-Jan-13	6																				
5-Feb-13	7																				
12-Feb-13	8																				
19-Feb-13	9																				
26-Feb-13	10	0.17	0.0055	0.00012	0.13	0.0002	0.009	0.00002	0.0002	0.001	0.42	0.00002	0.008	0.0001	0.00002	0.000004	0.0012	0.00035	0.01	0.00004	0.002
5-Mar-13	11																				
12-Mar-13	12																				
19-Mar-13	13																				
26-Mar-13	14																				
2-Apr-13	15	0.12	0.0055	0.00010	0.10	0.0001	0.009	0.00002	0.0002	0.001	0.39	0.00006	0.006	0.0001	0.00002	0.000004	0.0010	0.00028	0.01	0.00003	0.002
9-Apr-13	16																				
16-Apr-13	17																				
23-Apr-13	18																				
30-Apr-13	19																				
7-May-13	20	0.09	0.0064	0.00009	0.08	0.0001	0.011	0.00002	0.0002	0.001	0.34	0.00009	0.005	0.0001	0.00002	0.000004	0.0006	0.00022	0.01	0.00003	0.002
14-May-13	21																				
21-May-13	22																				
28-May-13	23																				
4-Jun-13	24																				
11-Jun-13	25	0.08	0.0061	0.00013	0.08	0.0001	0.015	0.00003	0.0003	0.001	0.36	0.00009	0.006	0.0001	0.00002	0.000004	0.0005	0.00027	0.01	0.00003	0.002
18-Jun-13	26																				
25-Jun-13	27																				
2-Jul-13	28																				
9-Jul-13	29																				
16-Jul-13	30	0.06	0.0066	0.00007	0.06	0.0001	0.009	0.00002	0.0002	0.001	0.35	0.00006	0.005	0.0001	0.00002	0.000004	0.0004	0.00018	0.01	0.00002	0.002
23-Jul-13	31																				
30-Jul-13	32																				
6-Aug-13	33																				
13-Aug-13	34																				



IAMGOLD CORPORATION	amec
Côté Gold Project	
Humidity Cell Acidity	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-1



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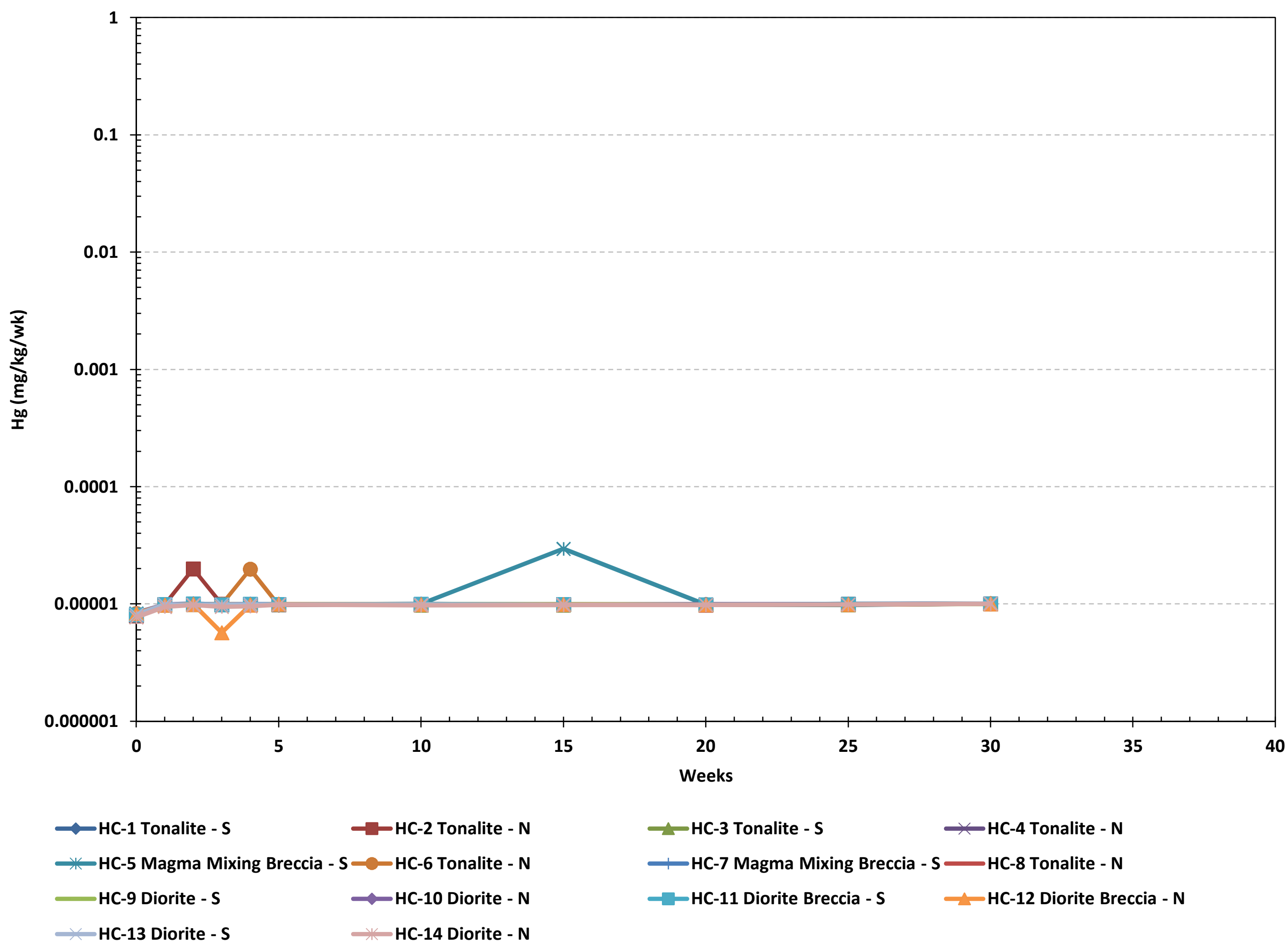
Côté Gold Project

Humidity Cell
Chloride Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-2



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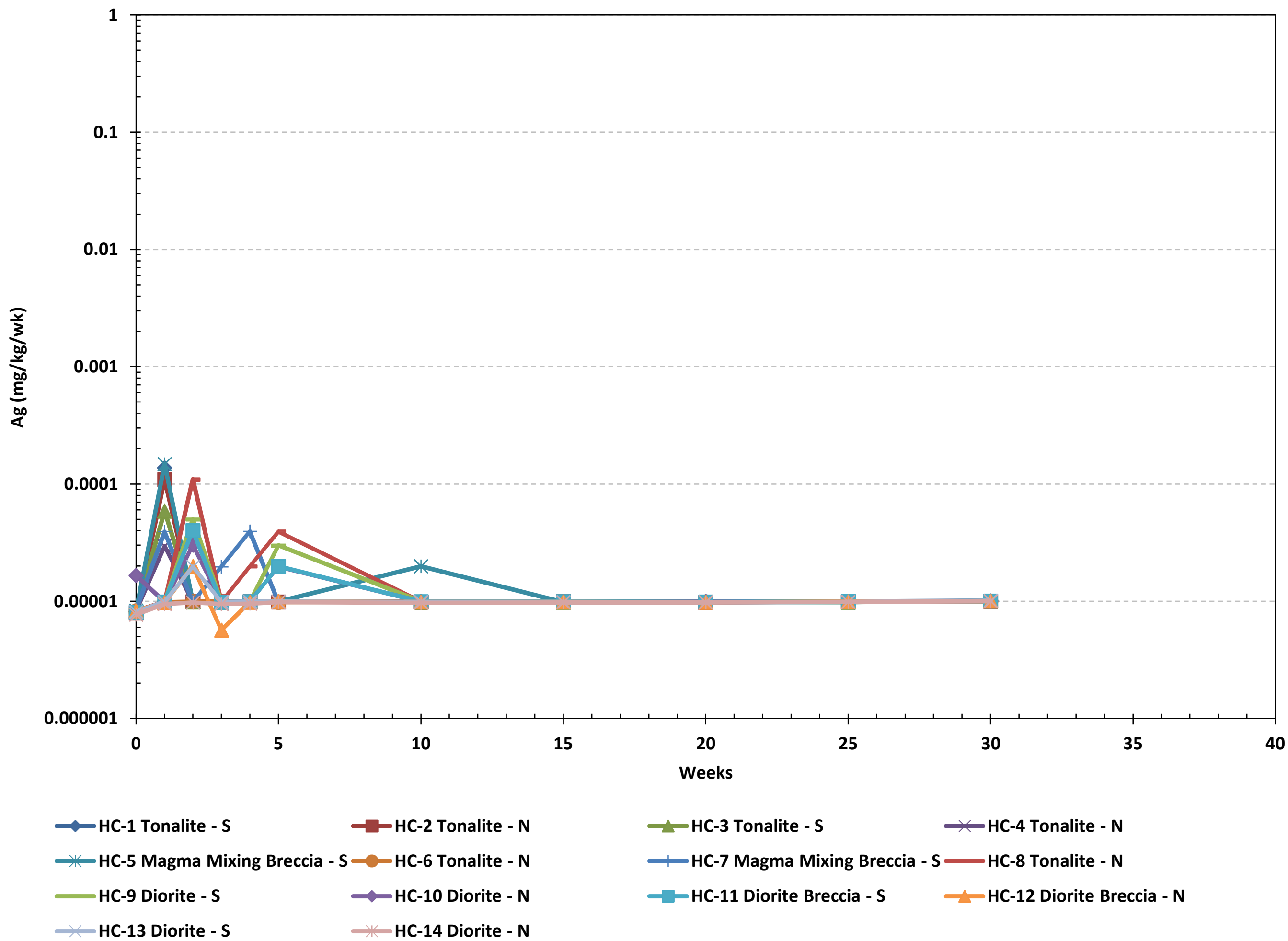
Côté Gold Project		
Humidity Cell Mercury Loading Rates		
Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-3



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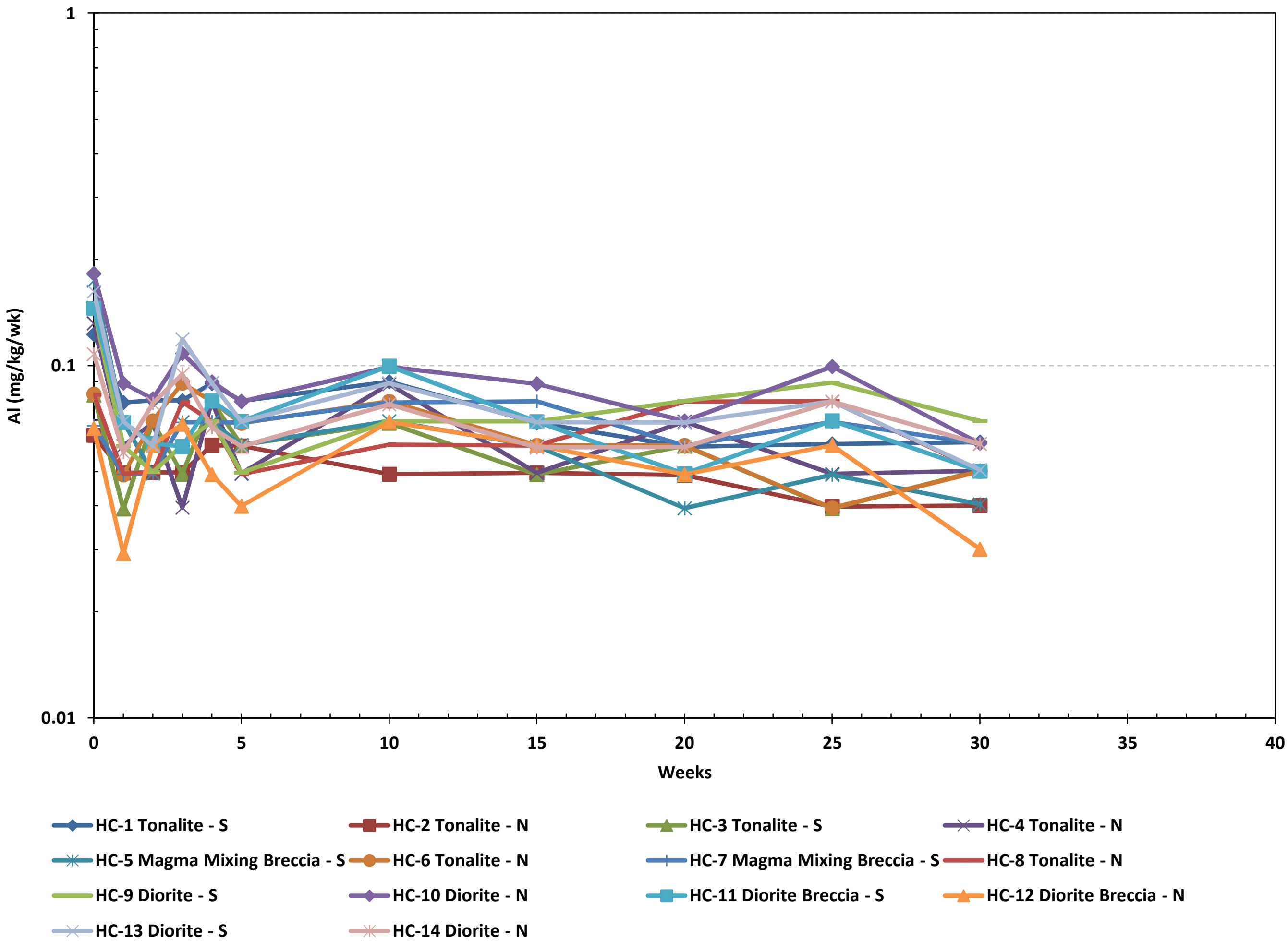
Côté Gold Project

Humidity Cell
Silver Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-4



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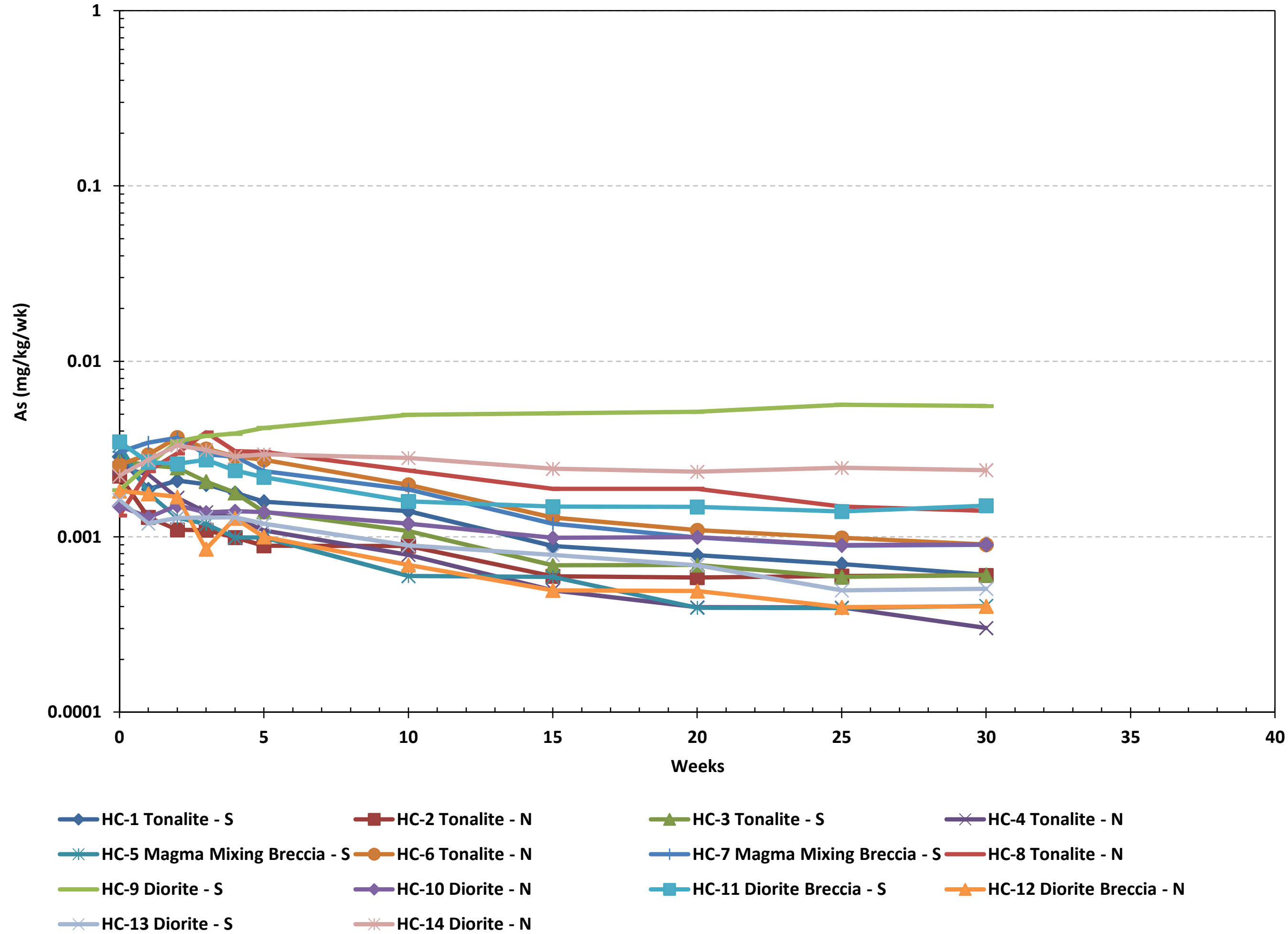
Côté Gold Project

Humidity Cell
Aluminum Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-5



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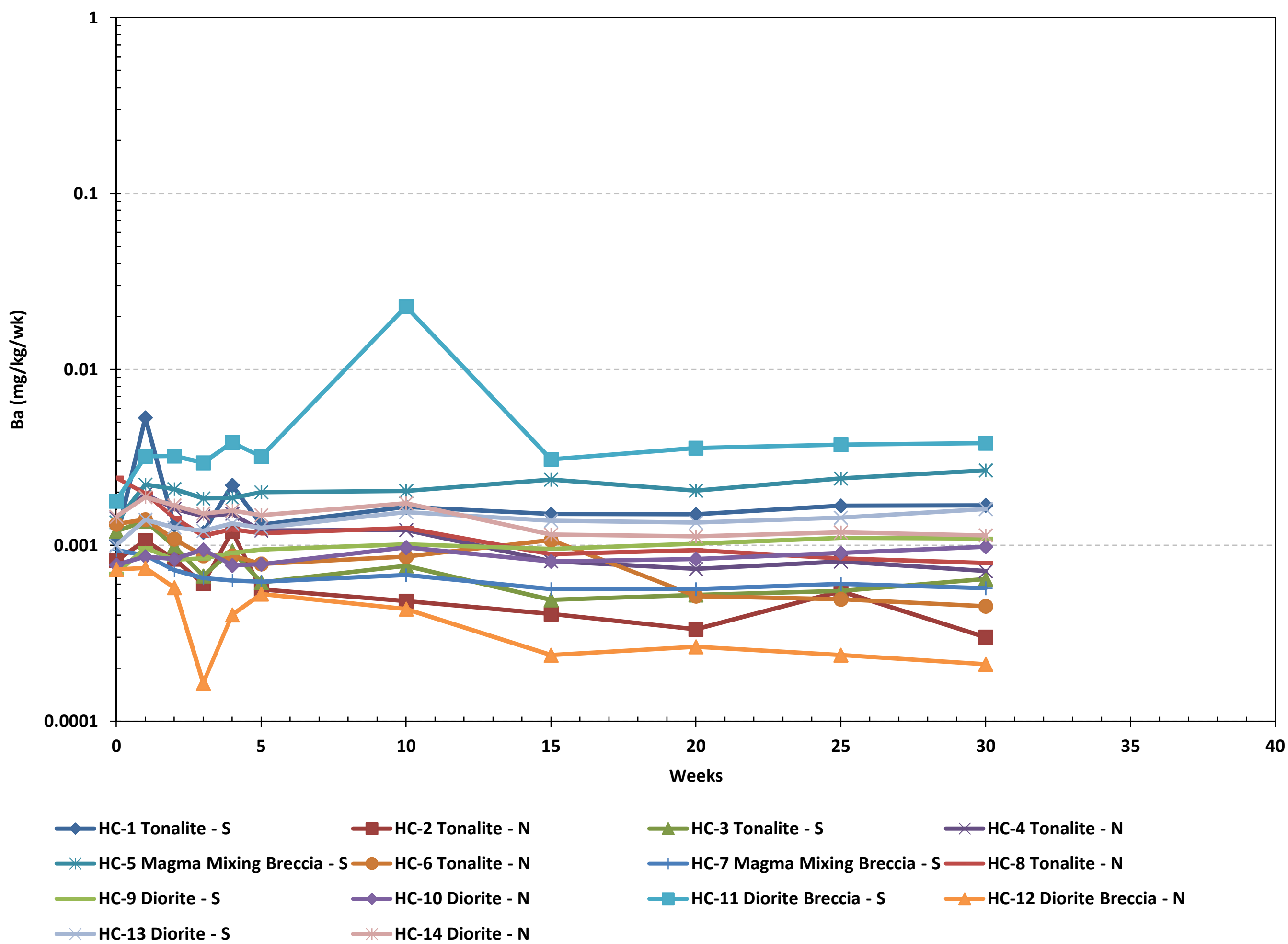
Côté Gold Project

Humidity Cell
Arsenic Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-6



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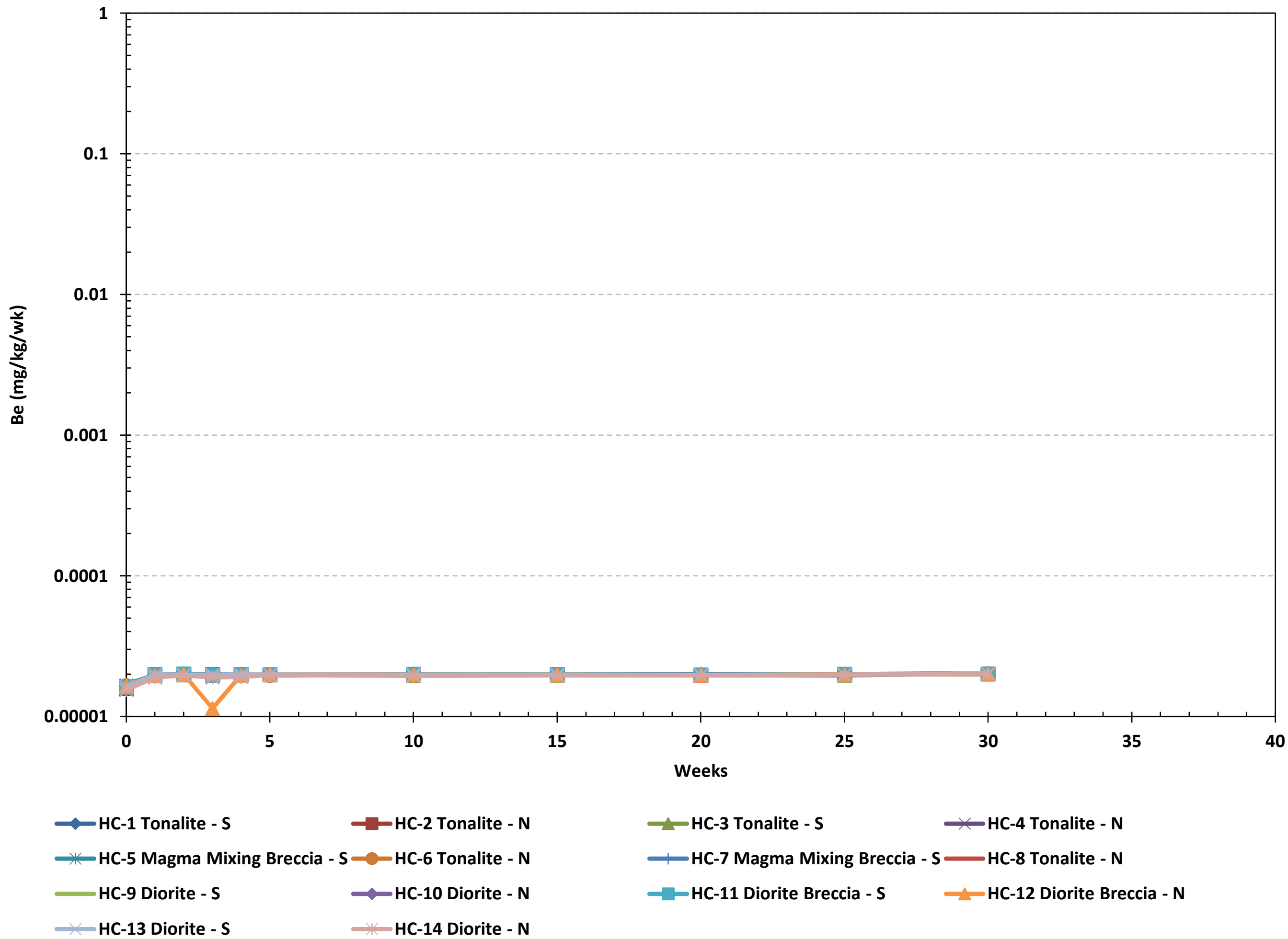
Côté Gold Project

Humidity Cell
Barium Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-7



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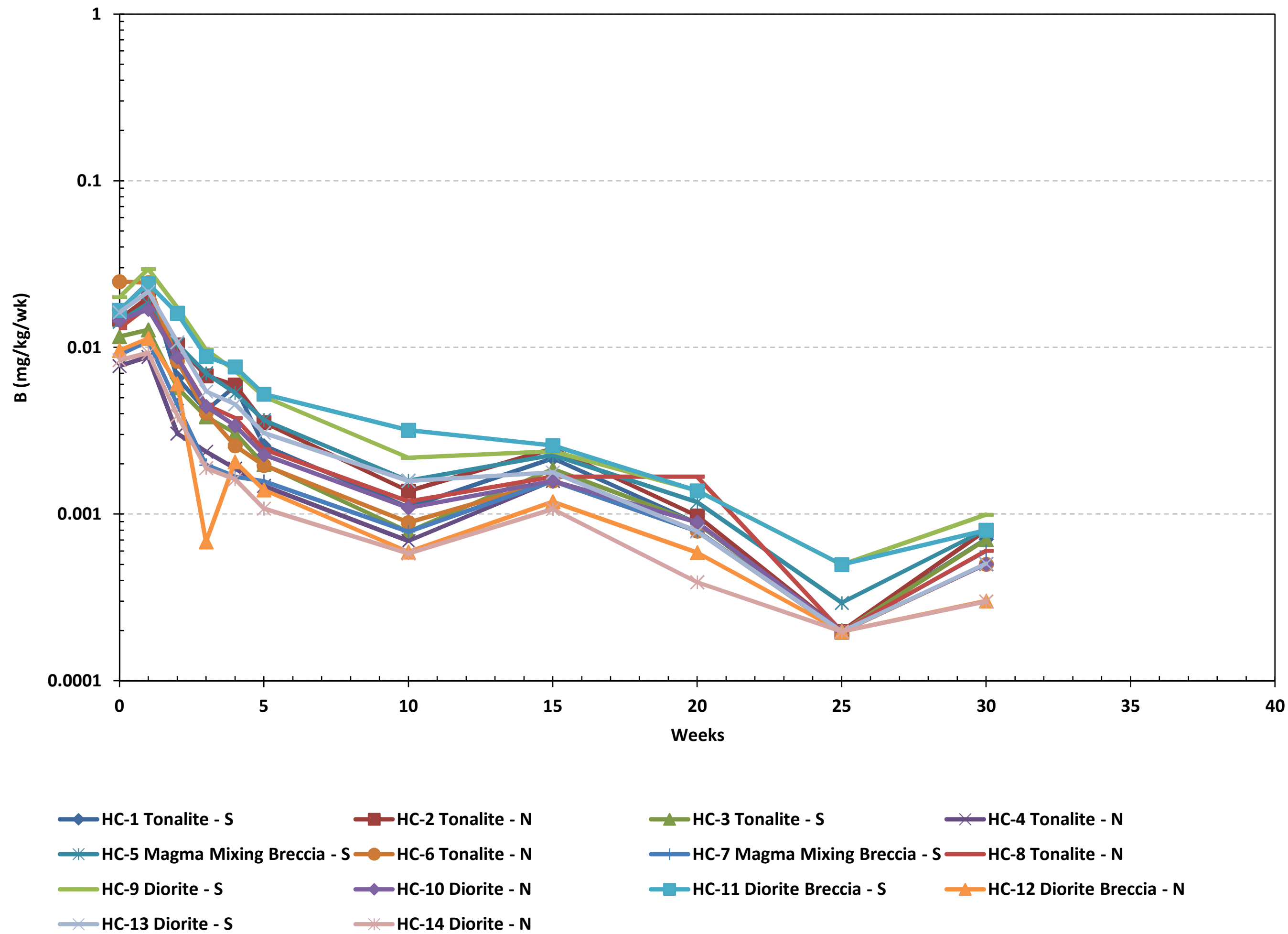
Côté Gold Project

Humidity Cell
Beryllium Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-8



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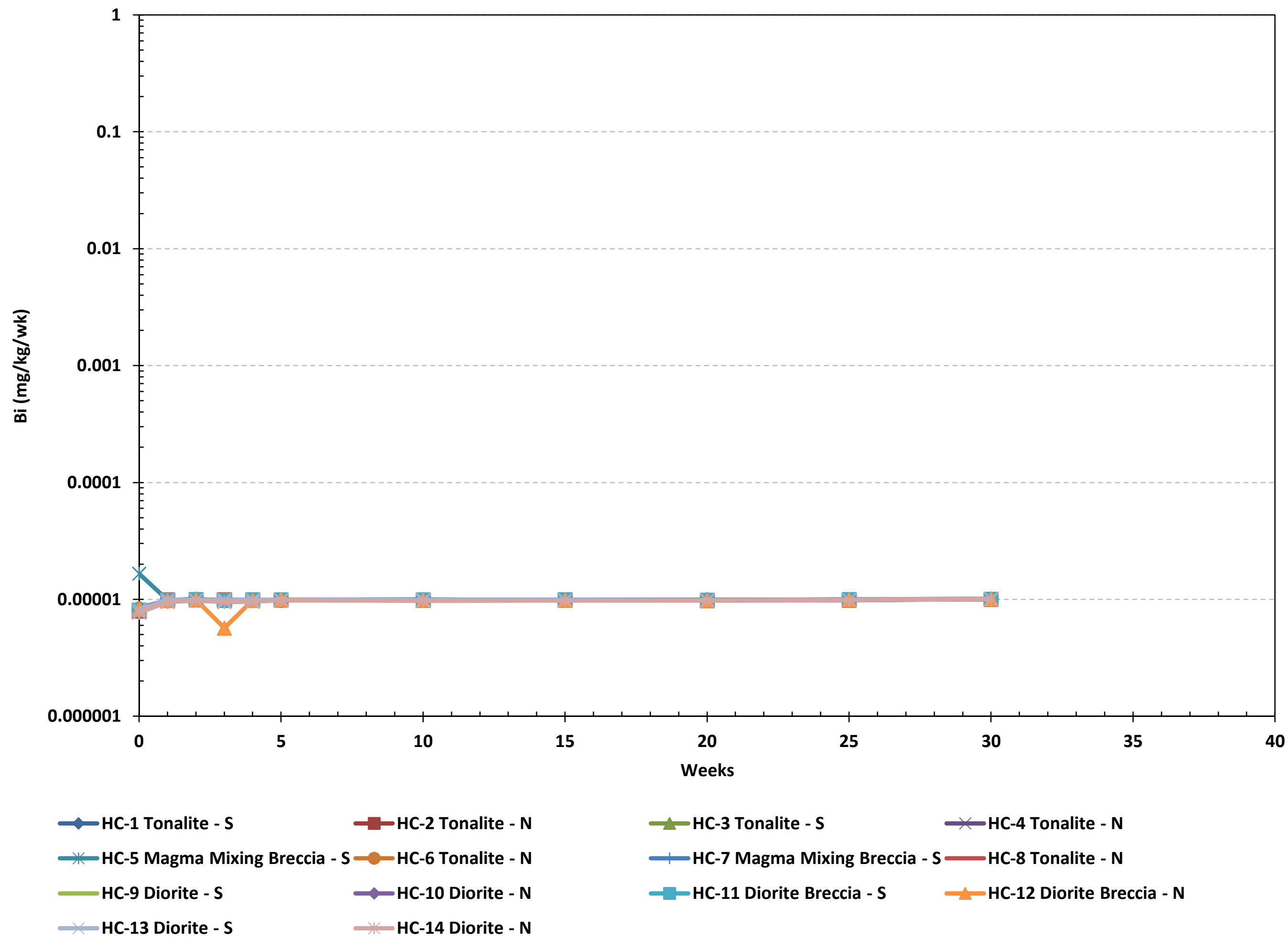
Côté Gold Project

Humidity Cell
Boron Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-9



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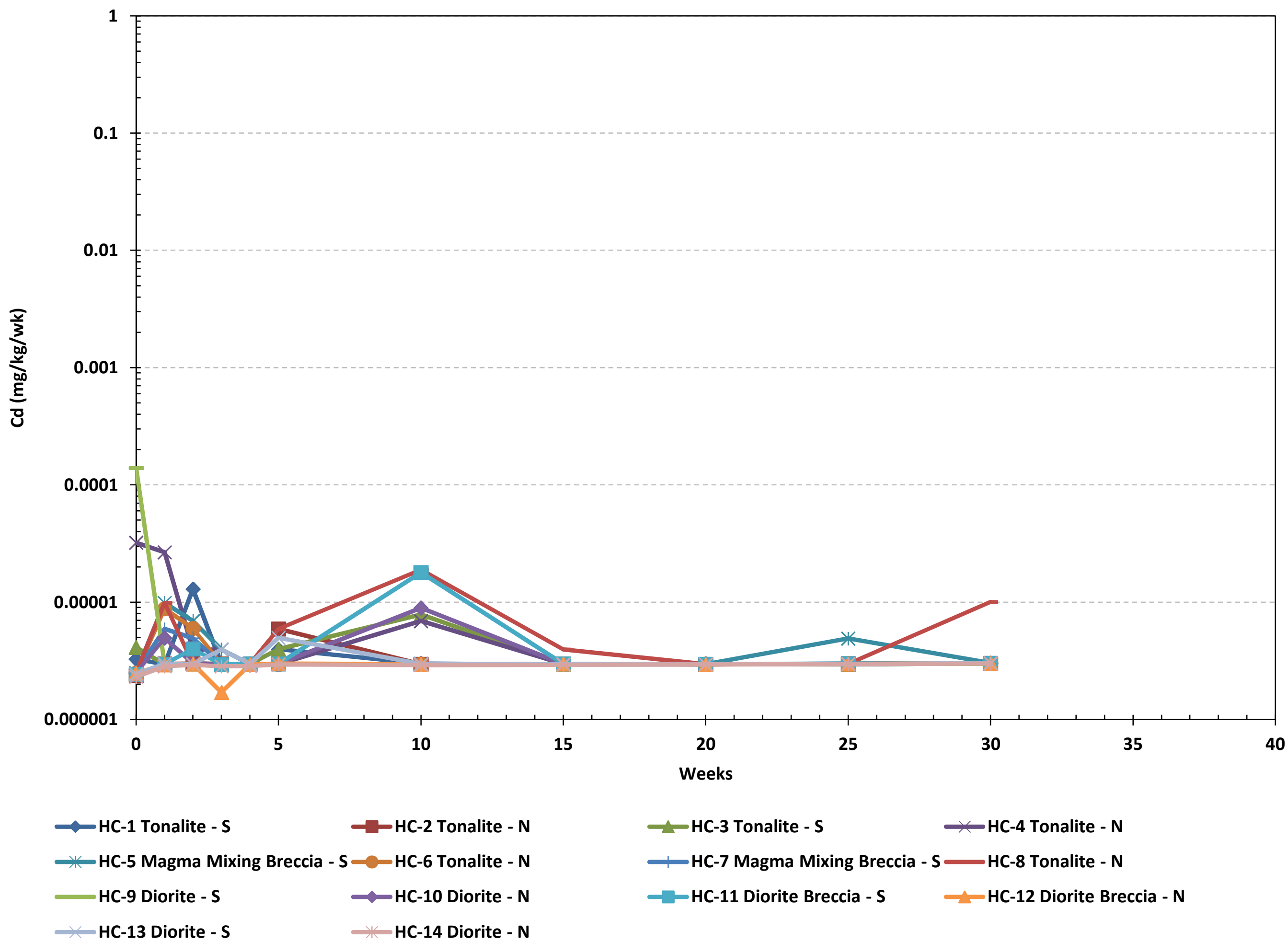
Côté Gold Project	
Humidity Cell Bismuth Loading Rates	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-10



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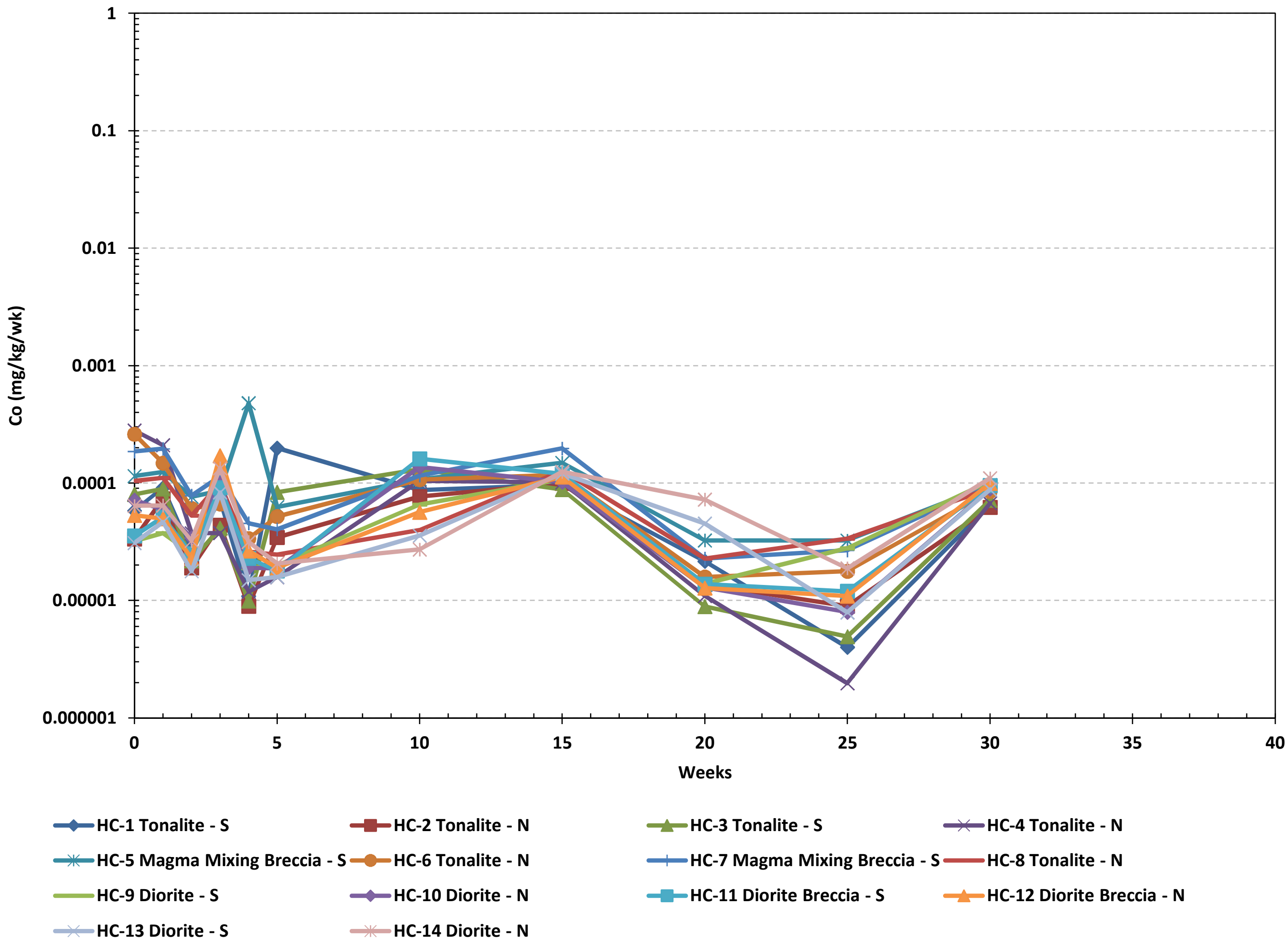
Côté Gold Project

Humidity Cell
Cadmium Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-11



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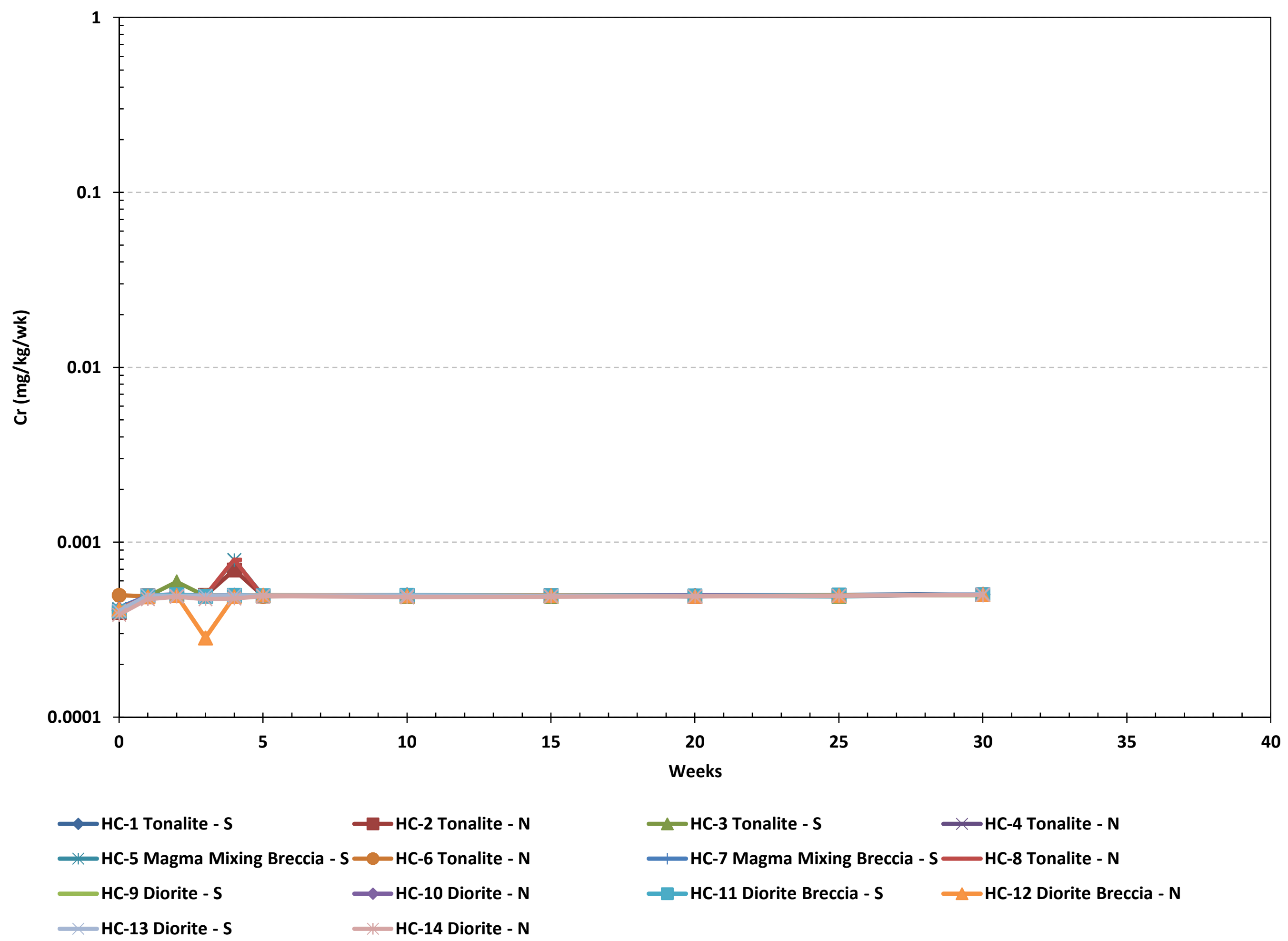
Côté Gold Project

Humidity Cell
Cobalt Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-12



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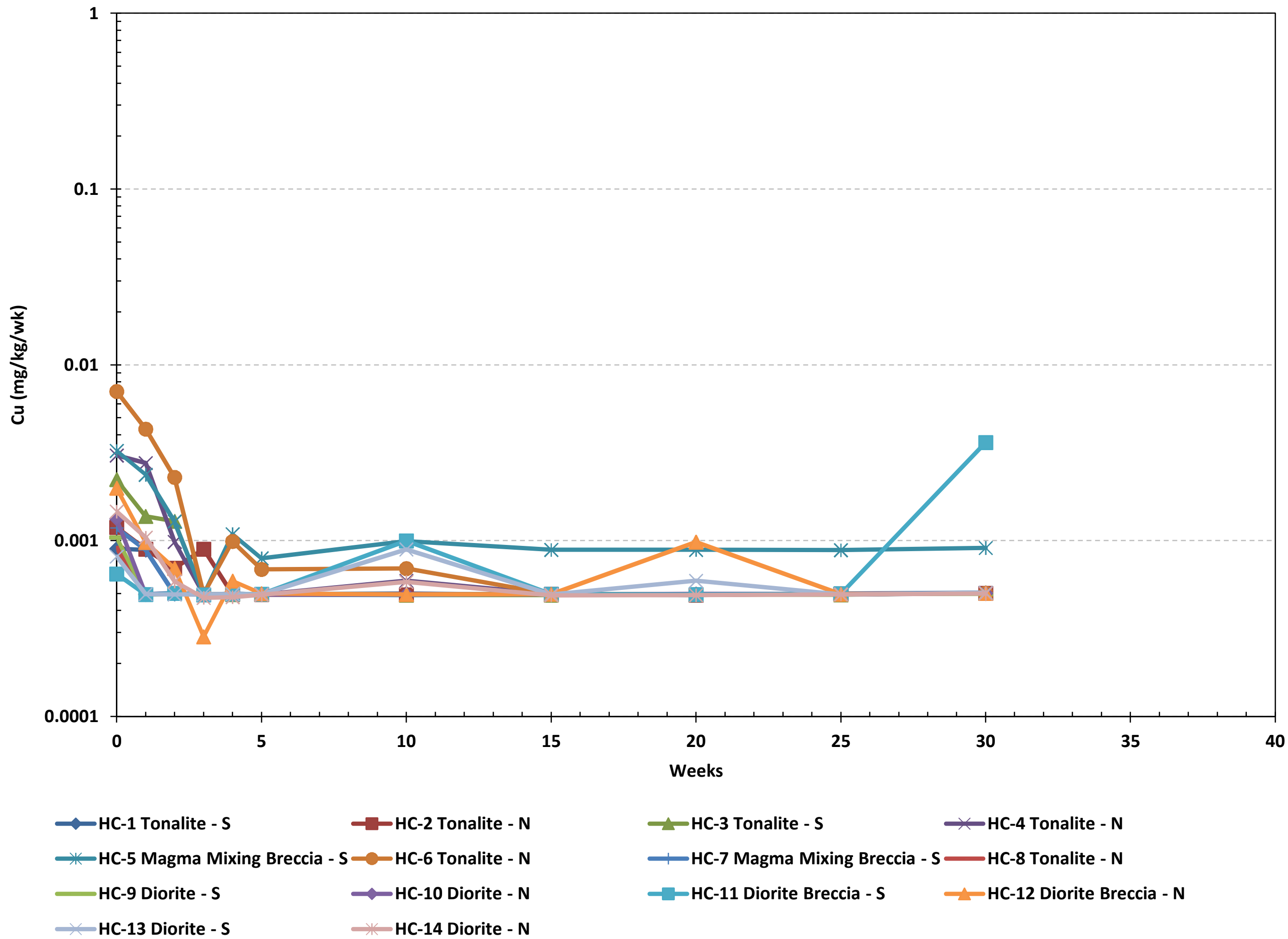
Côté Gold Project

Humidity Cell
Chromium Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-13



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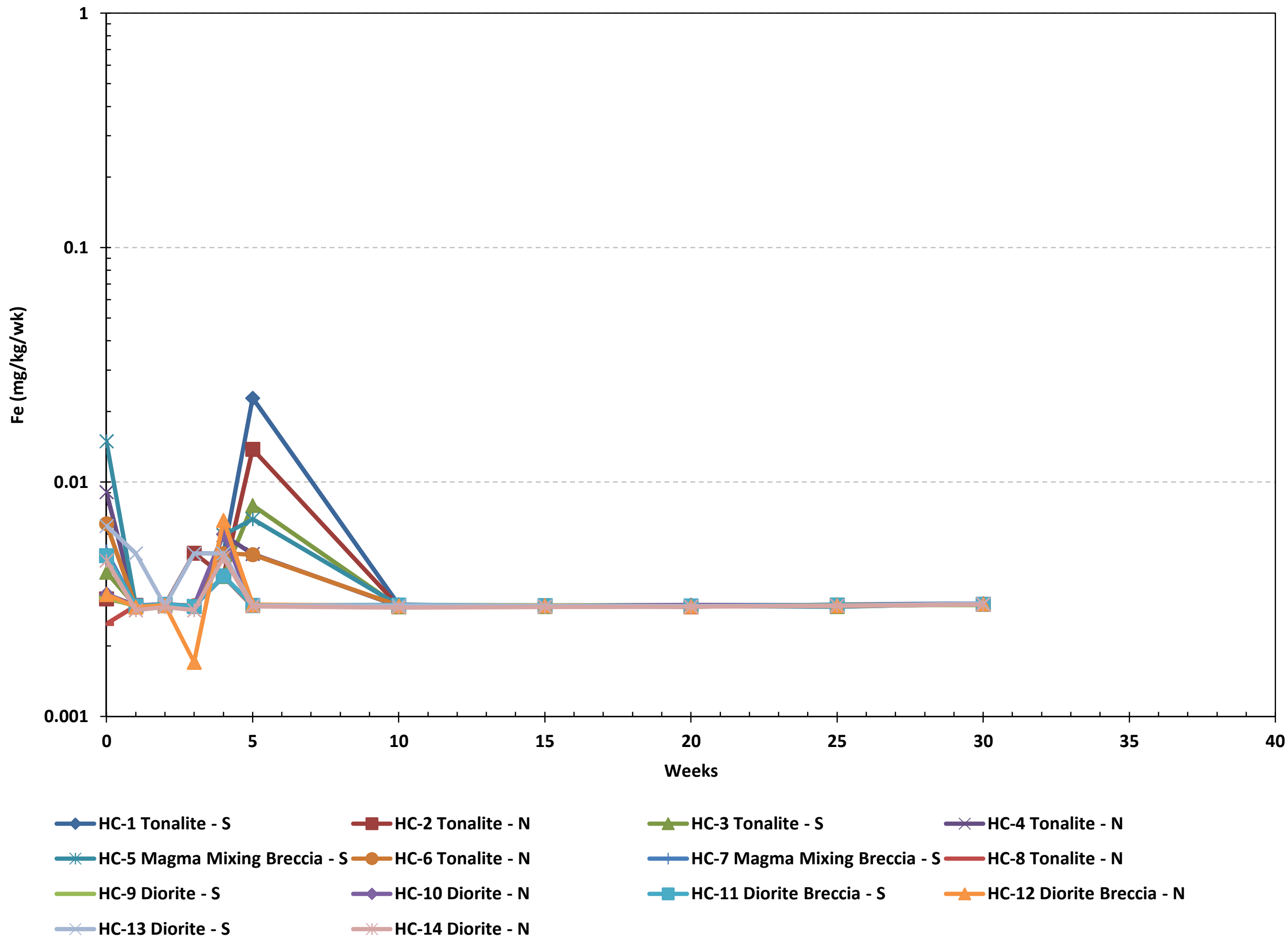
Côté Gold Project

Humidity Cell
Copper Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-14

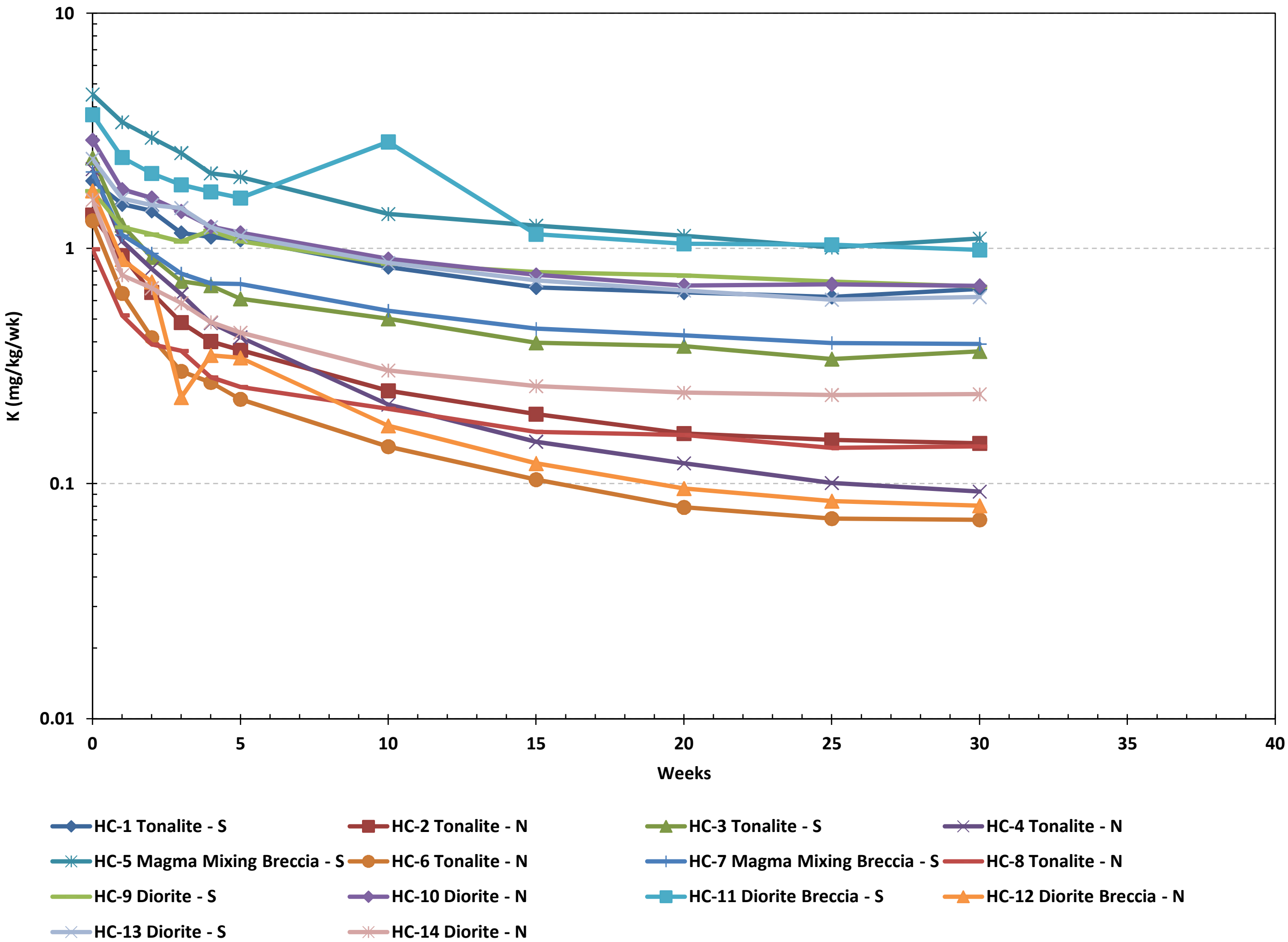


IAMGOLD CORPORATION amec

Côté Gold Project

Humidity Cell
Iron Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-15

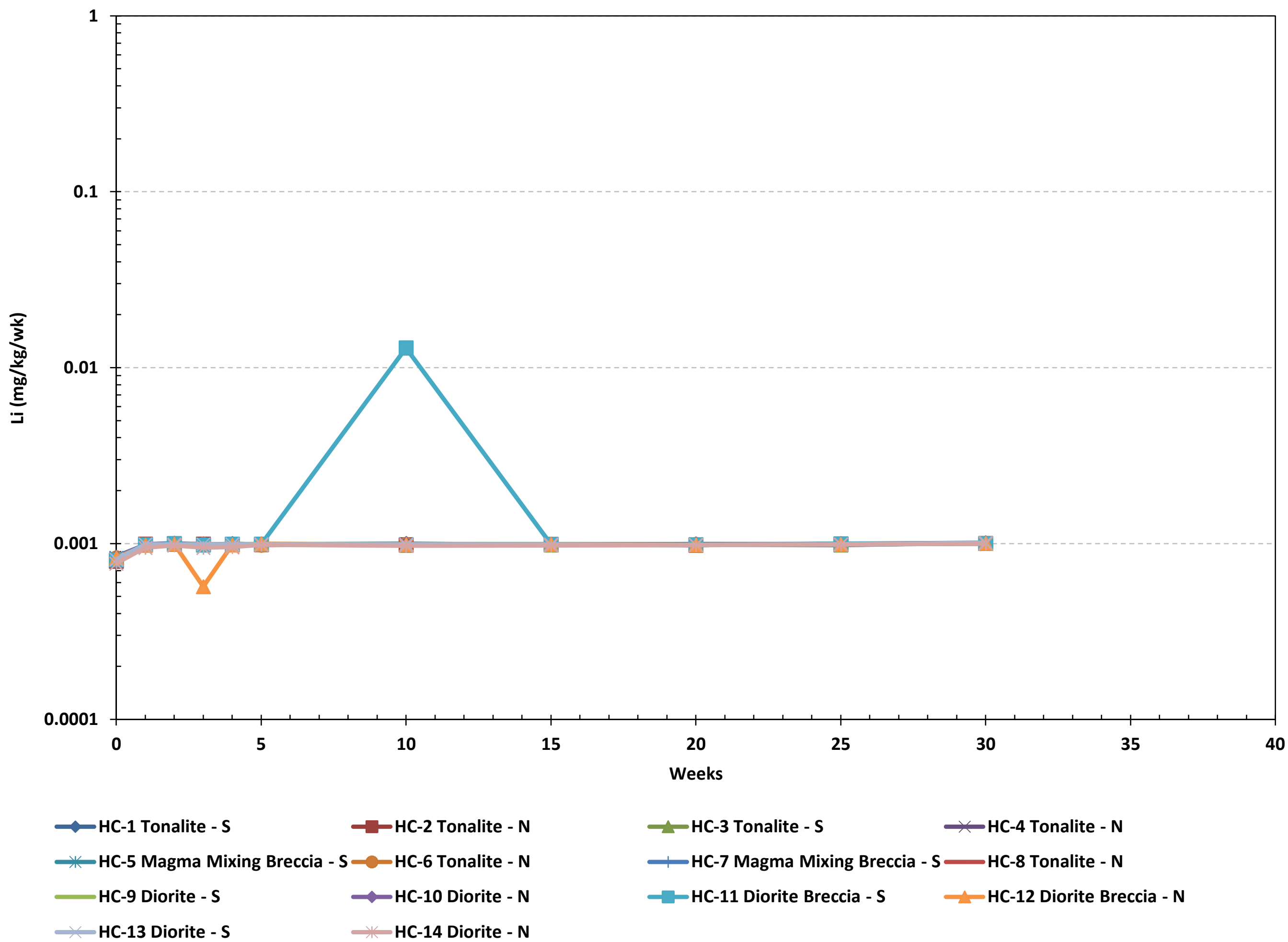


IAMGOLD CORPORATION amec

Côté Gold Project

Humidity Cell
Potassium Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-16



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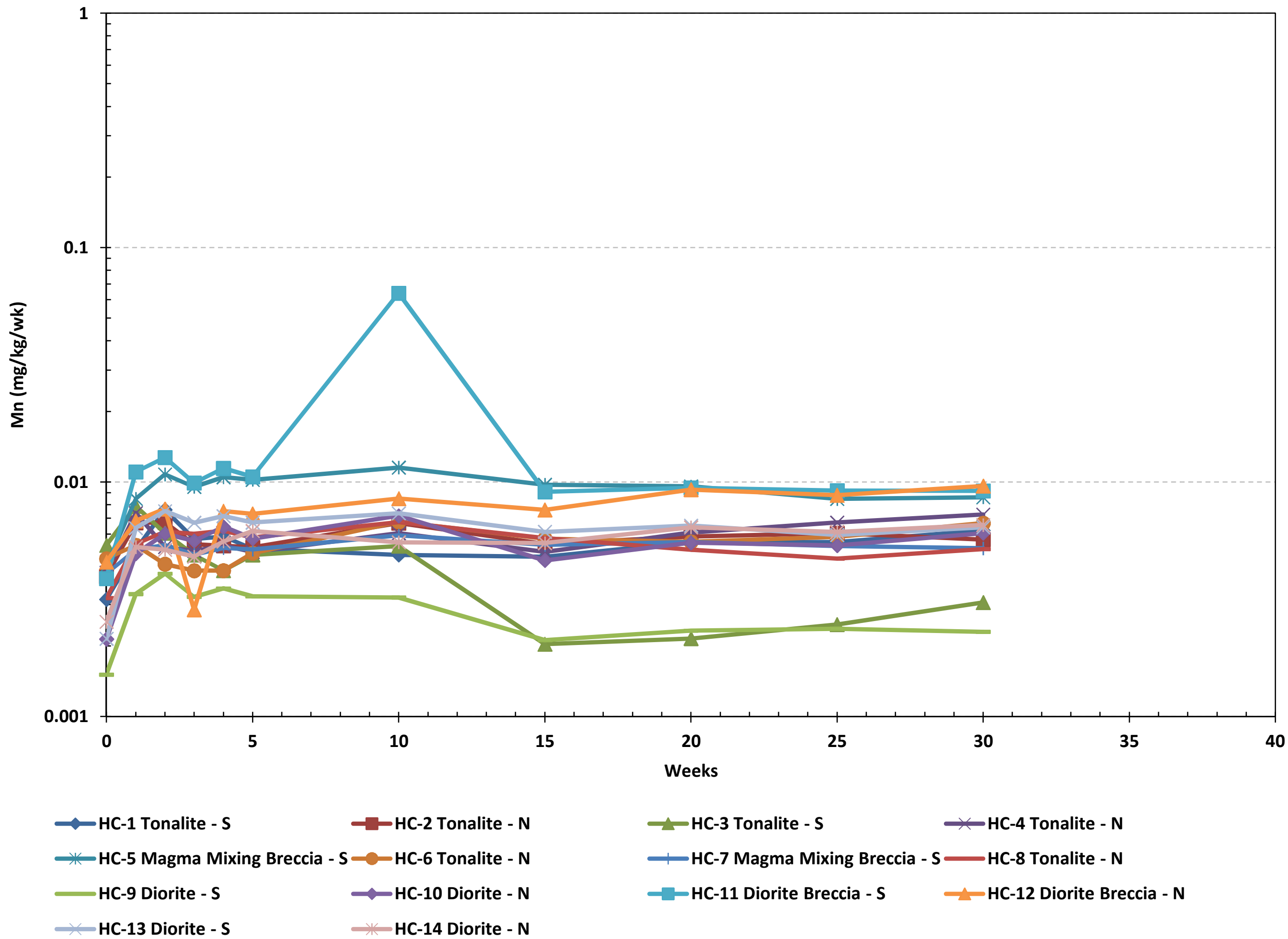
Côté Gold Project

Humidity Cell
Lithium Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-17



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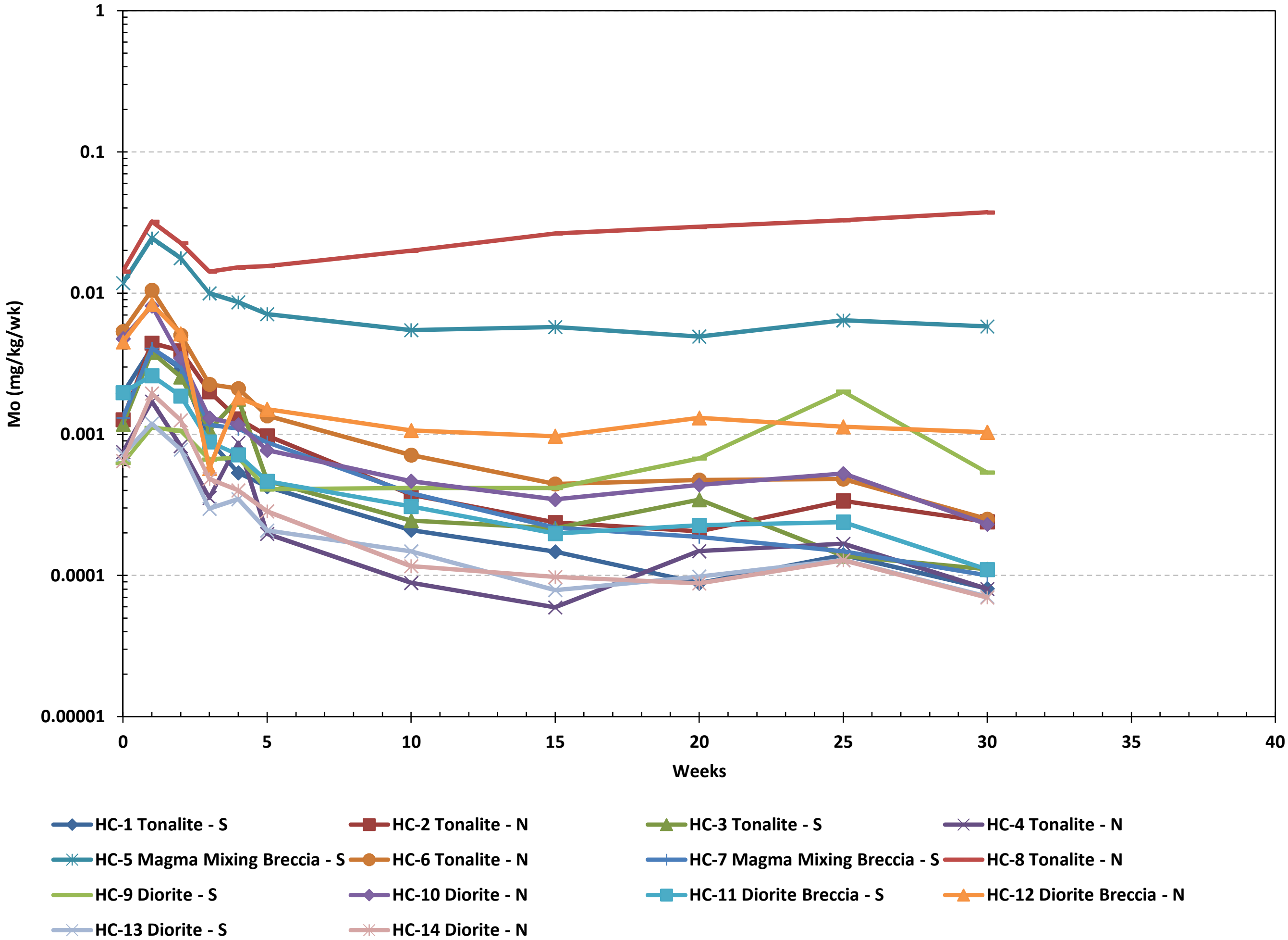
Côté Gold Project	
Humidity Cell Manganese Loading Rates	
Drawn by: LC · Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-18

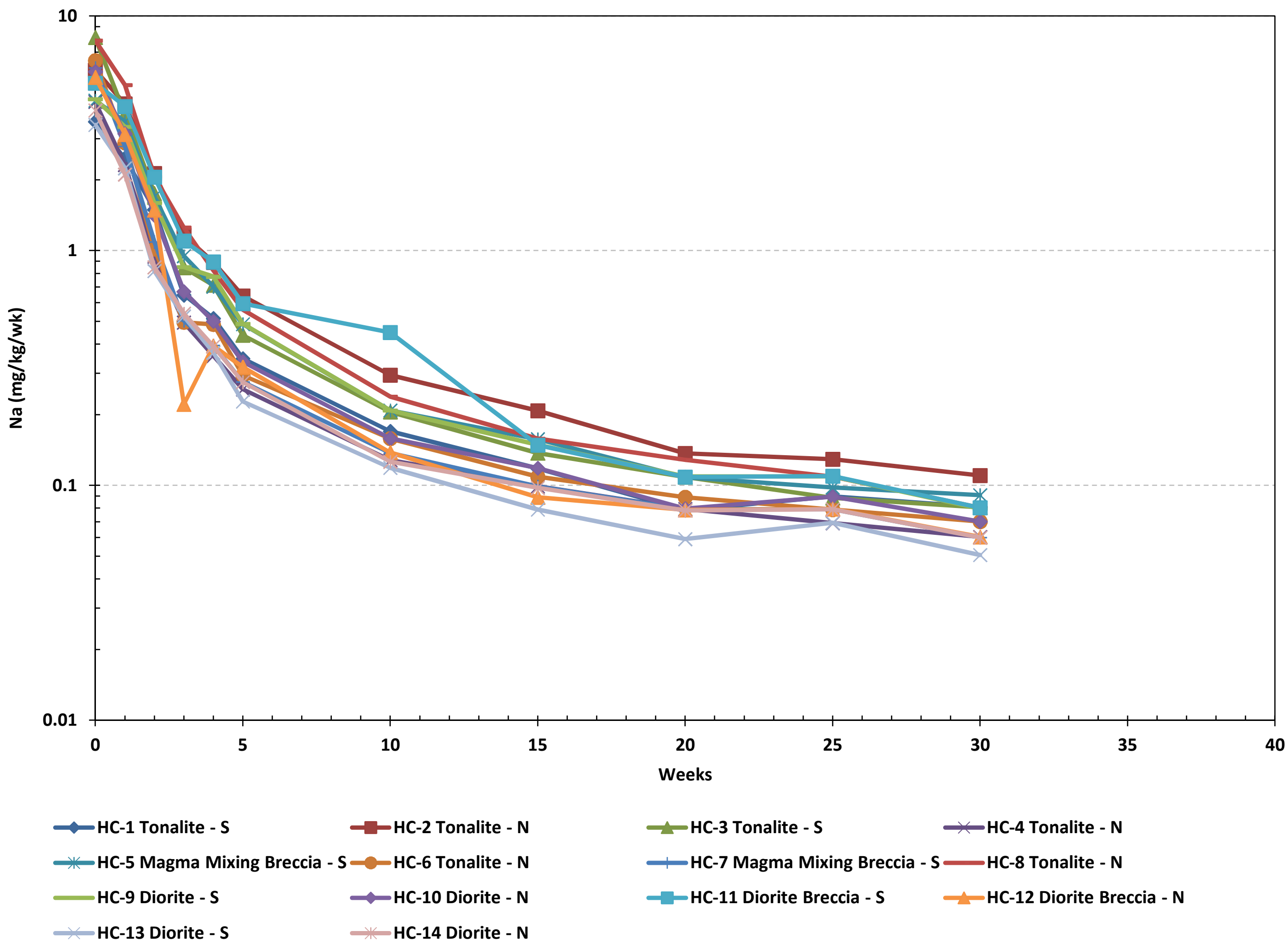


IAMGOLD CORPORATION amec

Côté Gold Project

Humidity Cell
Molybdenum Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-19

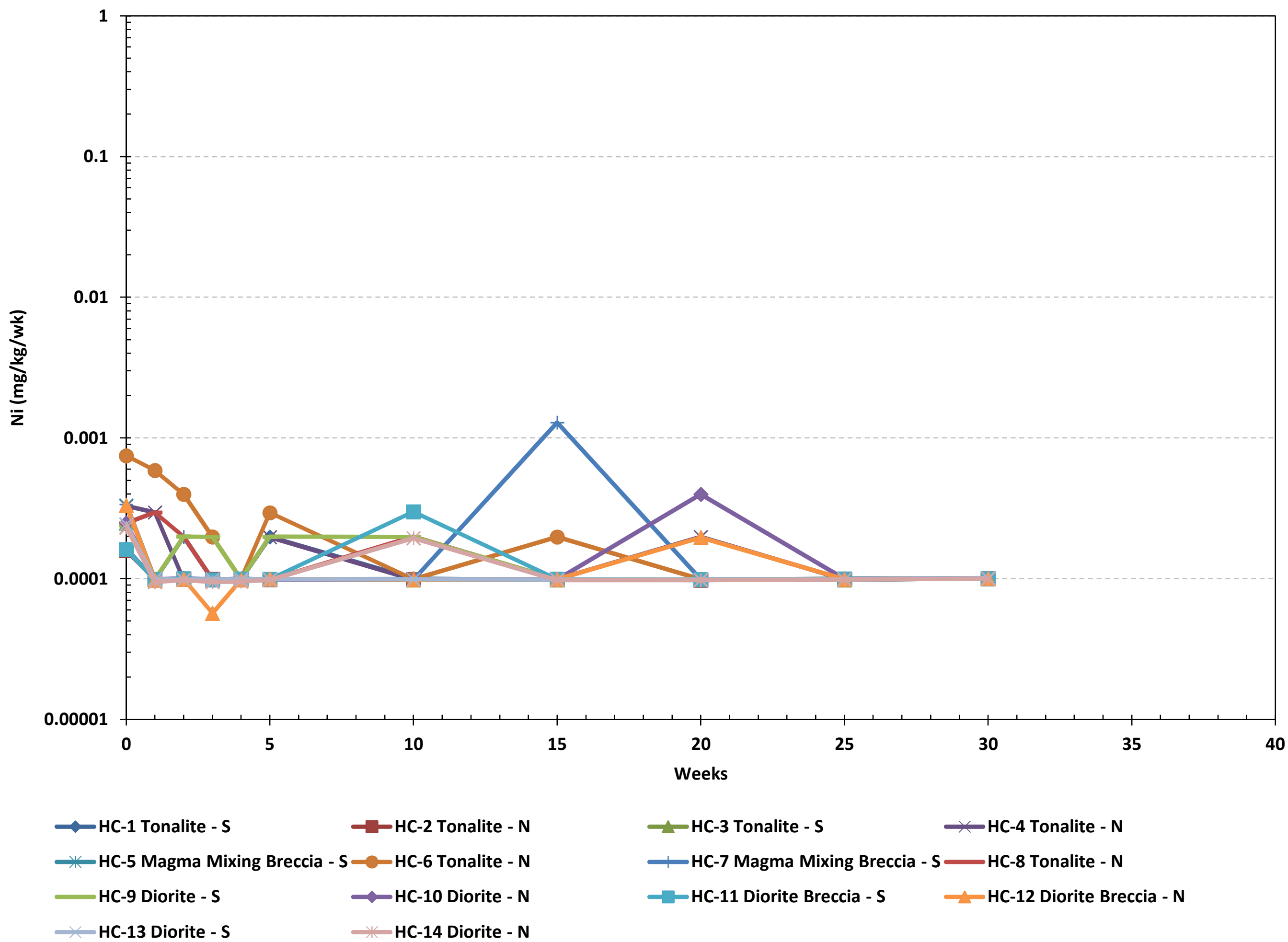


IAMGOLD CORPORATION amec

Côté Gold Project

Humidity Cell
Sodium Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-20



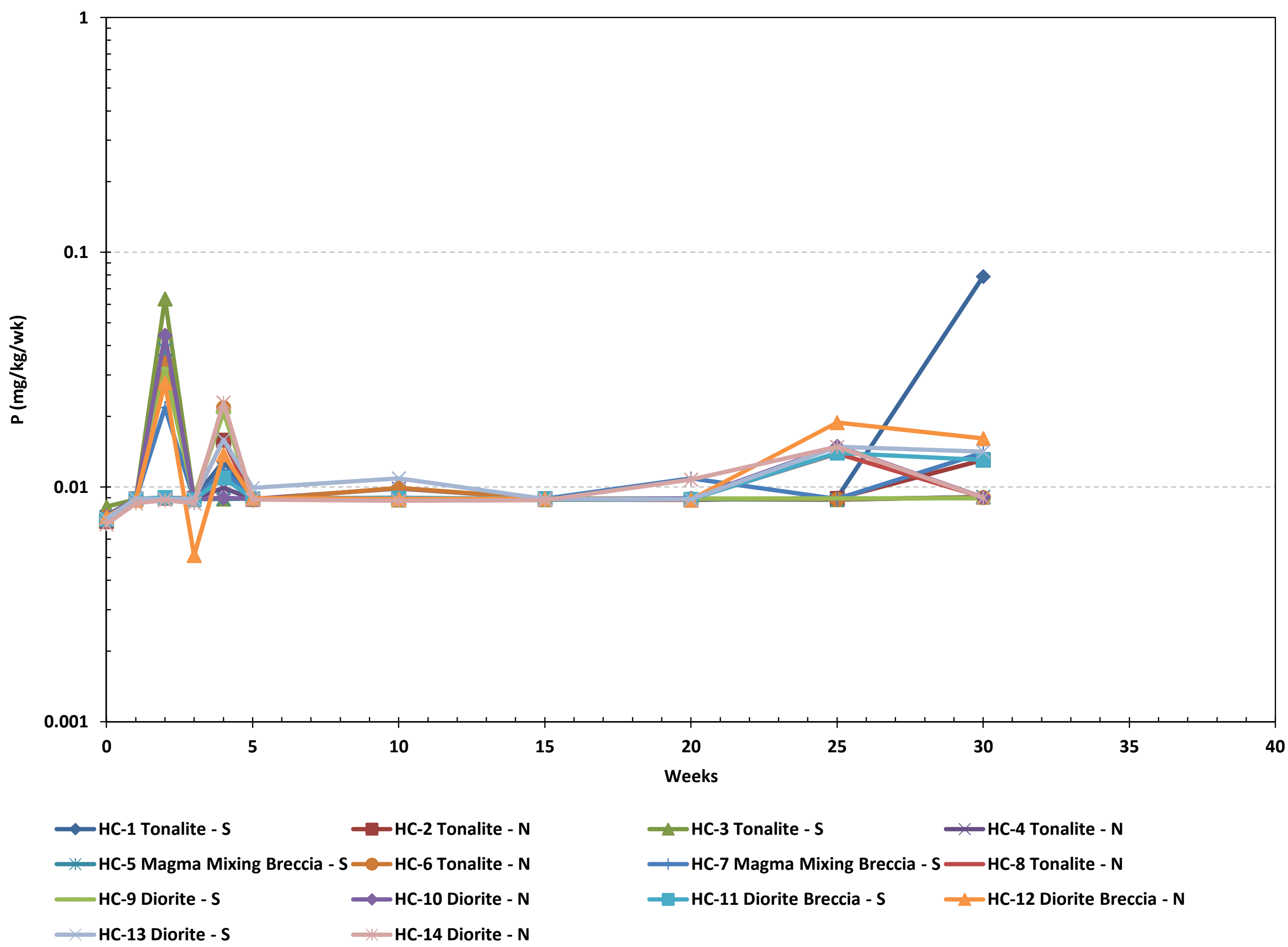
IAMGOLD CORPORATION

amec

Côté Gold Project

Humidity Cell
Nickel Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-21

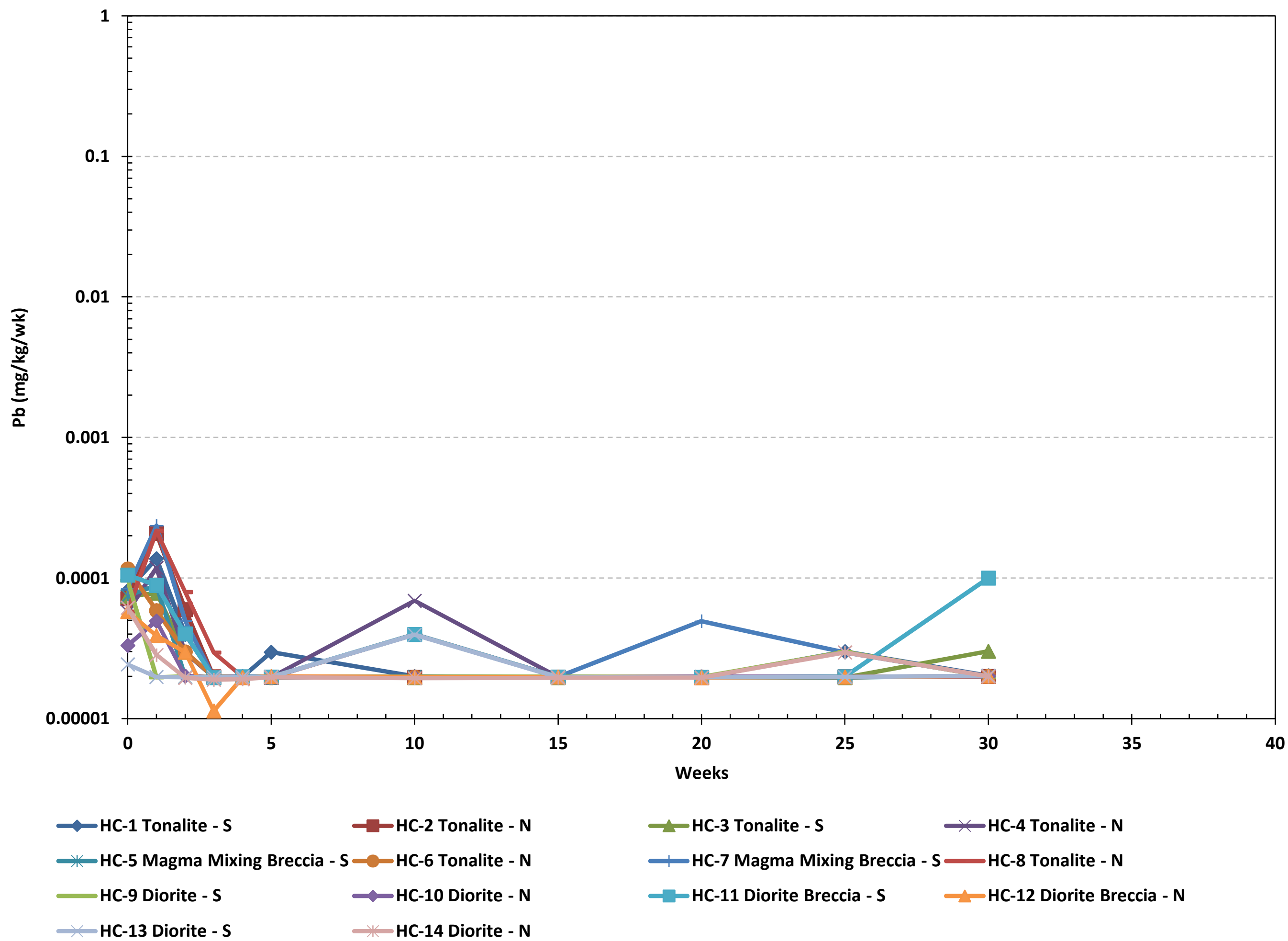


IAMGOLD CORPORATION | amec

Côté Gold Project

Humidity Cell
Phosphorus Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-22

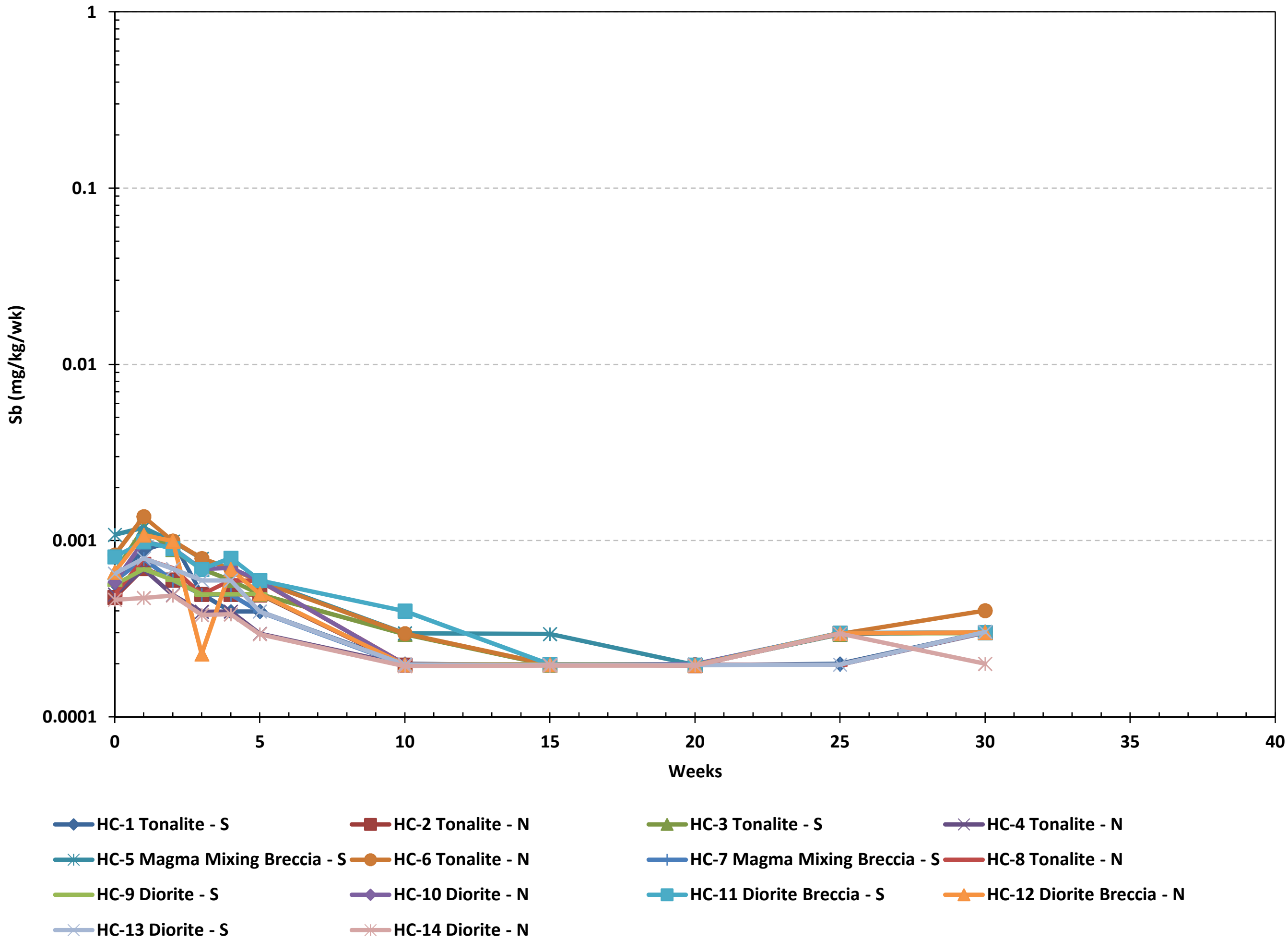


IAMGOLD CORPORATION | amec

Côté Gold Project

Humidity Cell
Lead Loading Rates

Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-23

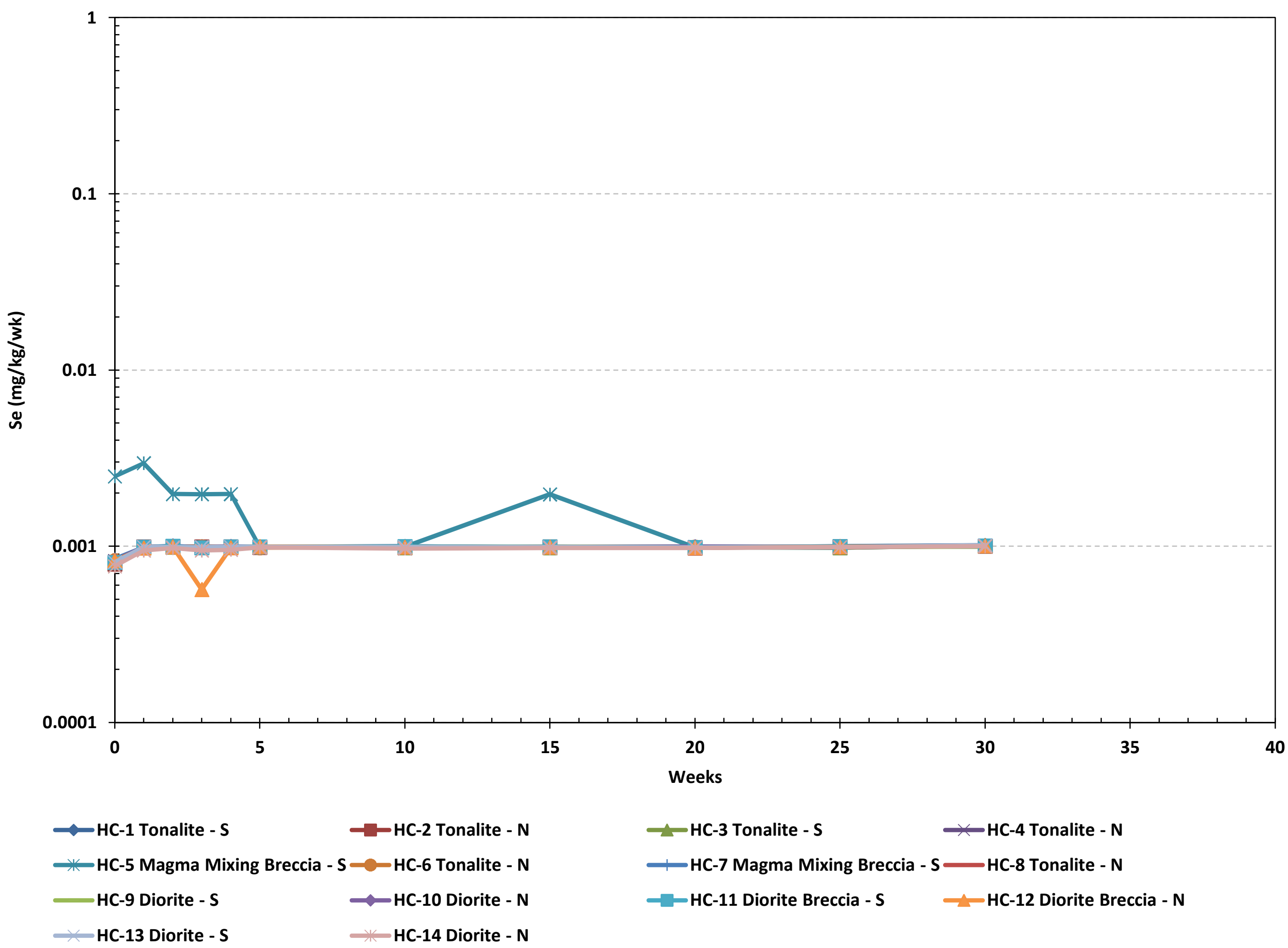


IAMGOLD CORPORATION | amec

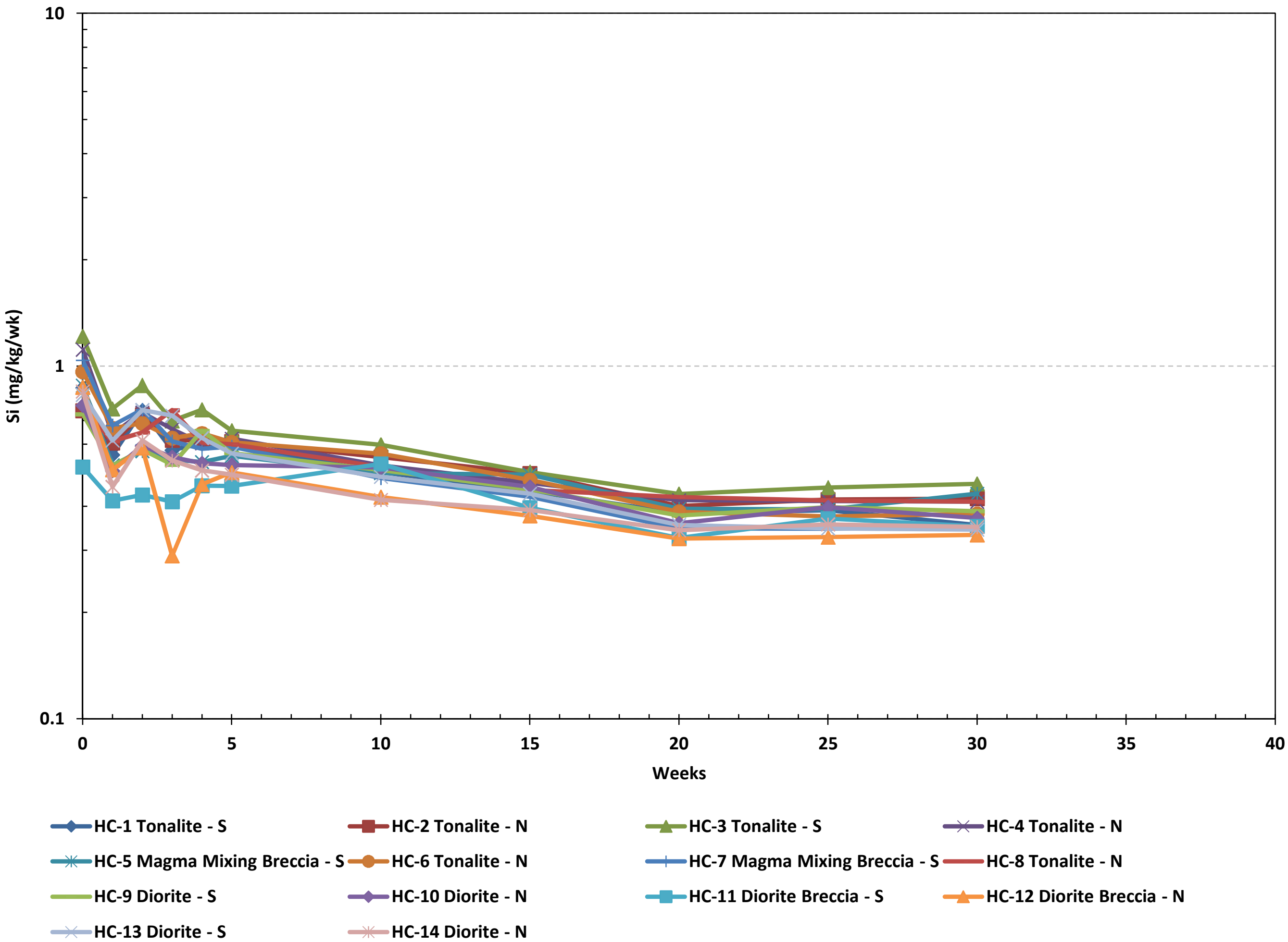
Côté Gold Project

Humidity Cell
Antimony Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-24



IAMGOLD CORPORATION	amec
Côté Gold Project	
Humidity Cell Selenium Loading Rates	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-25

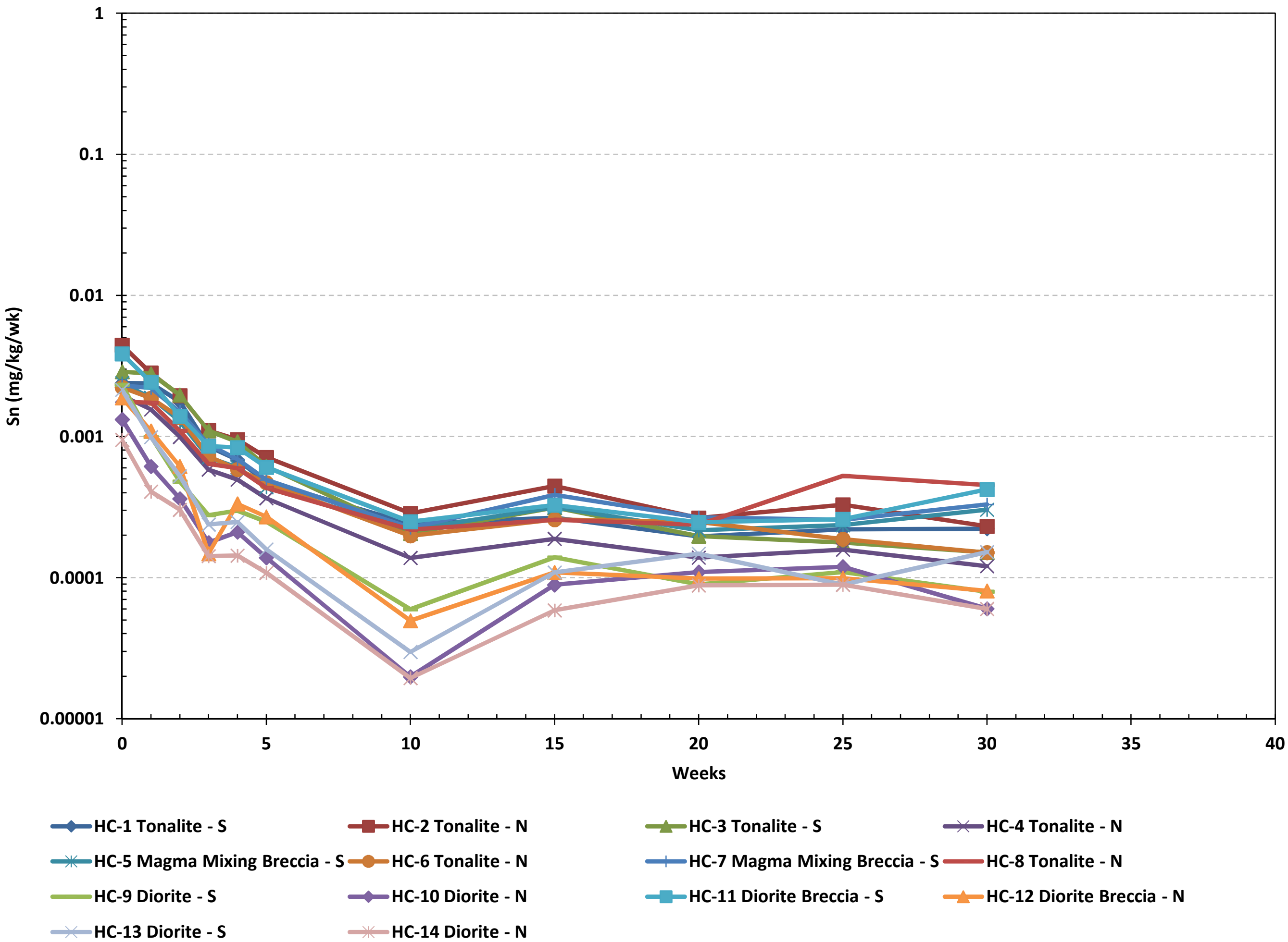


IAMGOLD CORPORATION amec

Côté Gold Project

Humidity Cell
Silicon Loading Rates

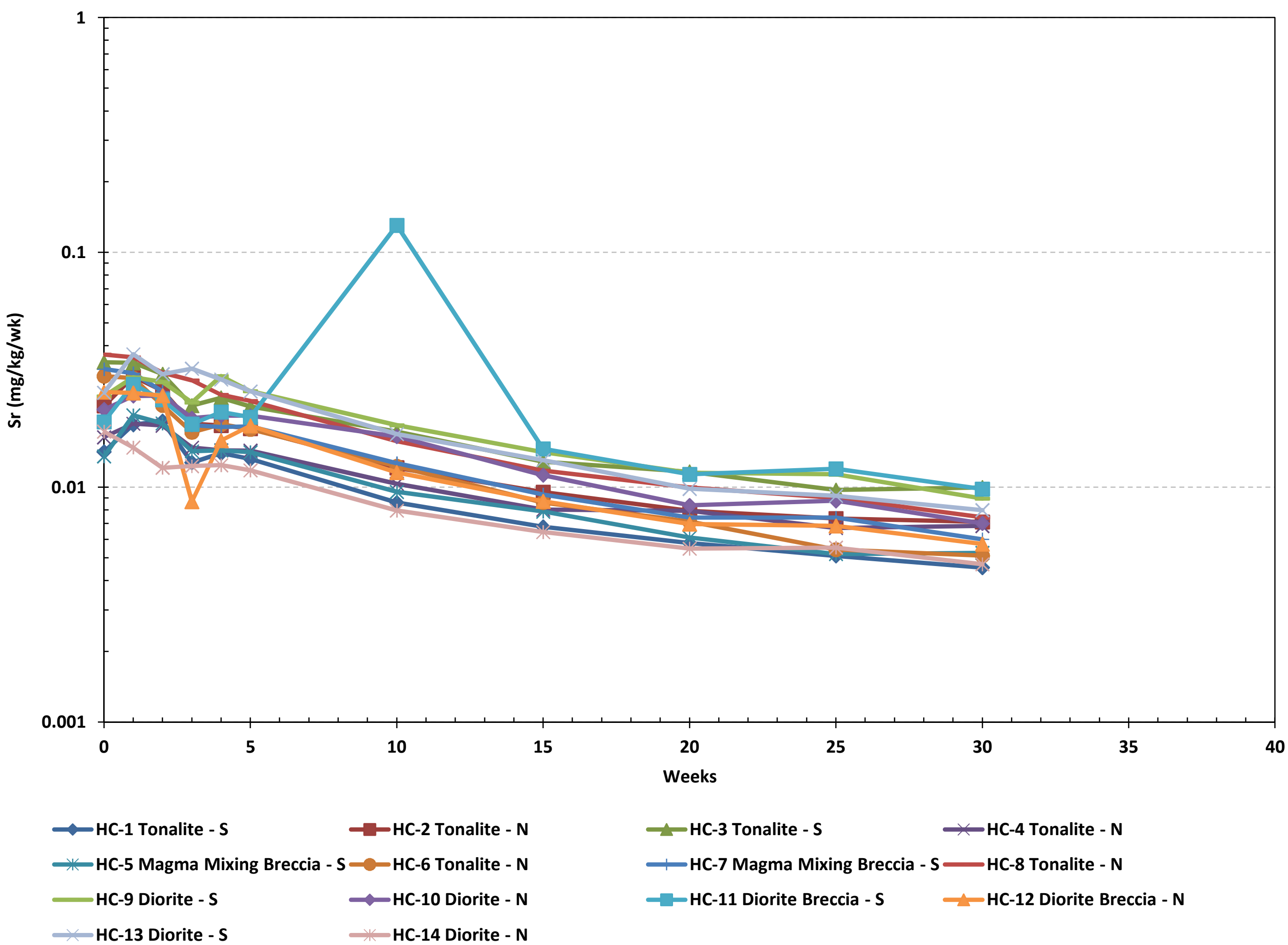
Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-26



IAMGOLD CORPORATION

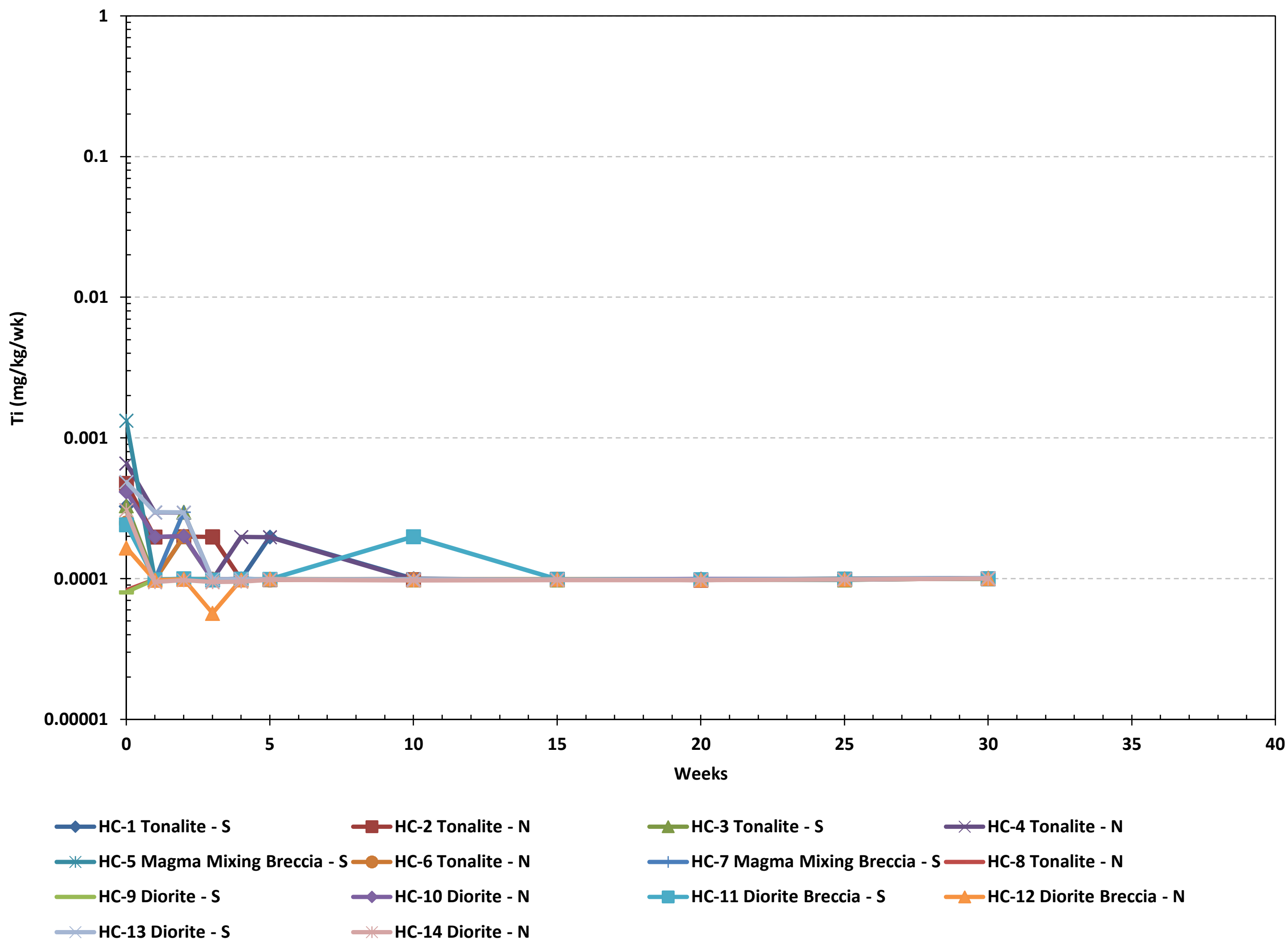
amec

Côté Gold Project	
Humidity Cell Tin Loading Rates	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-27

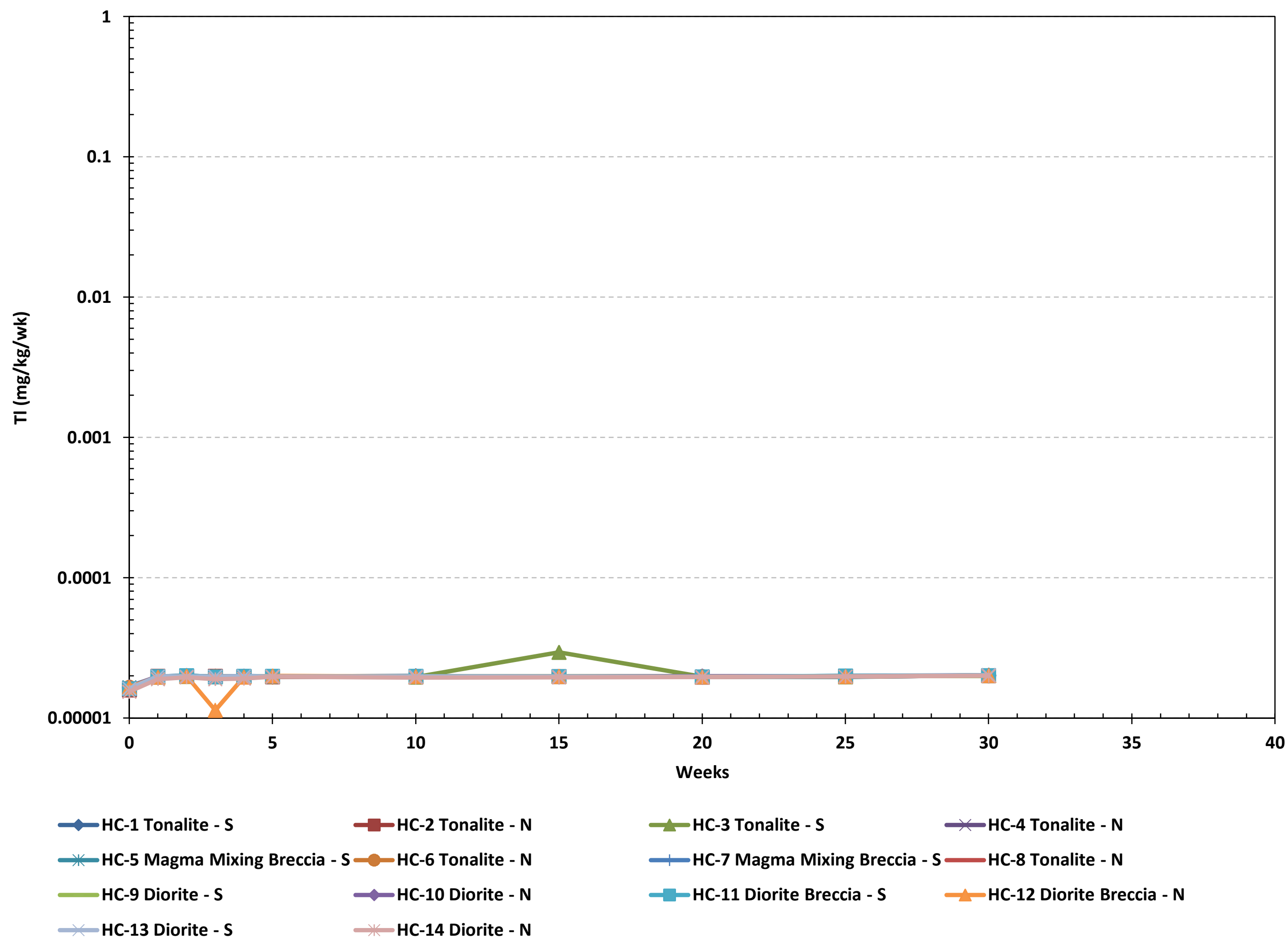


IAMGOLD CORPORATION | amec

Côté Gold Project	
Humidity Cell Strontium Loading Rates	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-28



IAMGOLD CORPORATION	amec
Côté Gold Project	
Humidity Cell Titanium Loading Rates	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-29



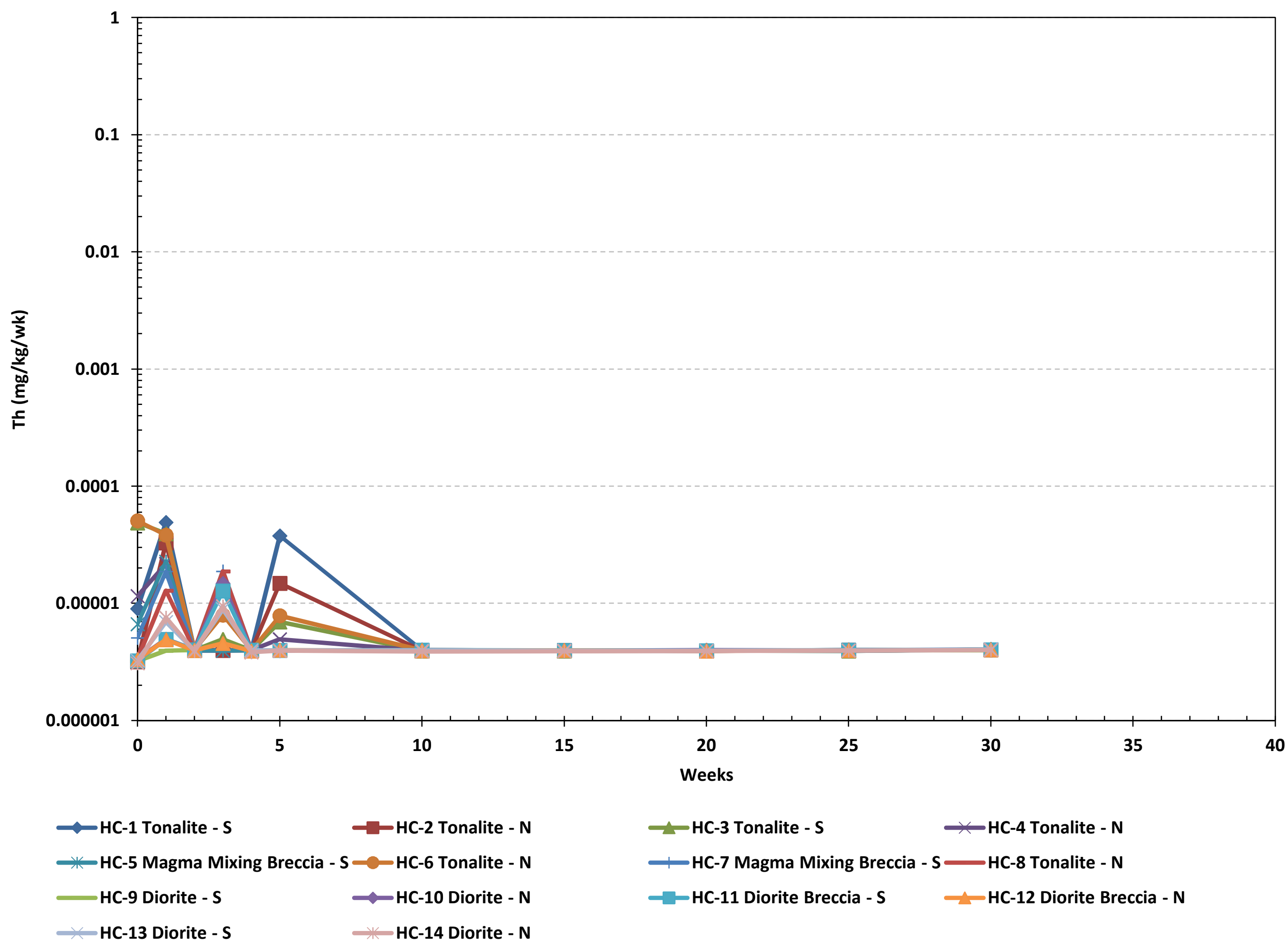
IAMGOLD CORPORATION

amec

Côté Gold Project

Humidity Cell
Thallium Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-30



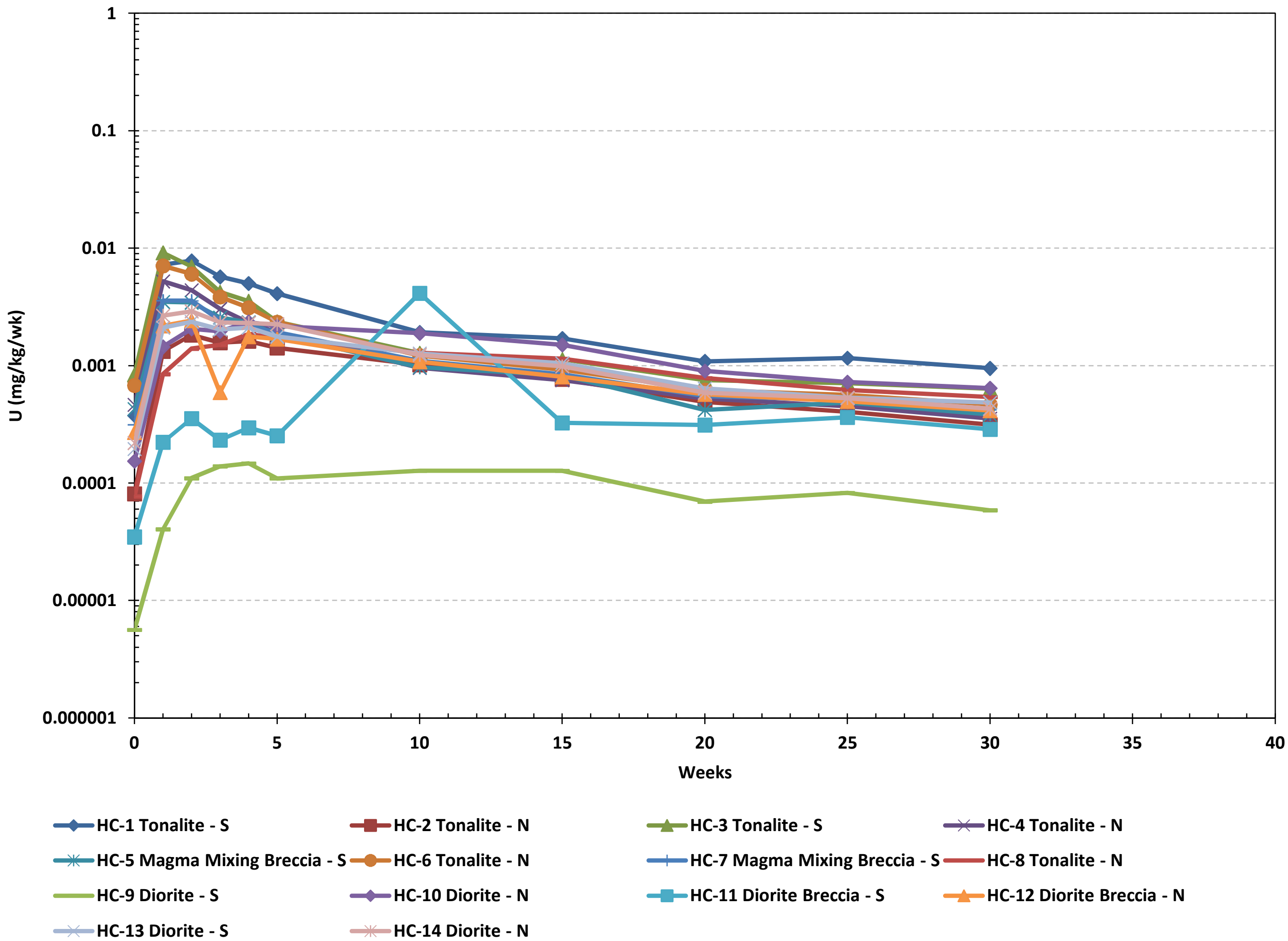
IAMGOLD CORPORATION

amec

Côté Gold Project

Humidity Cell
Thorium Loading Rates

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-31

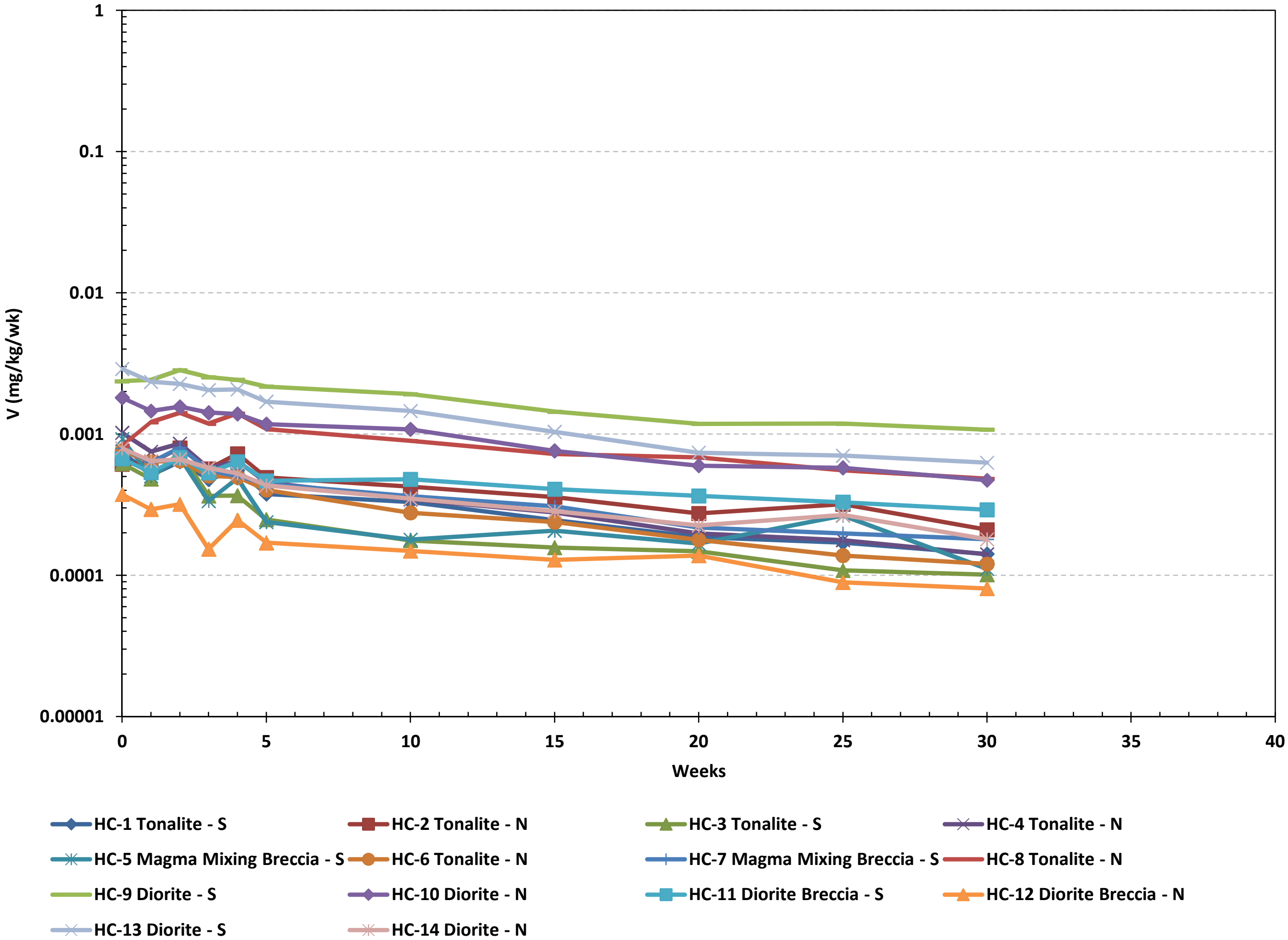


IAMGOLD CORPORATION amec

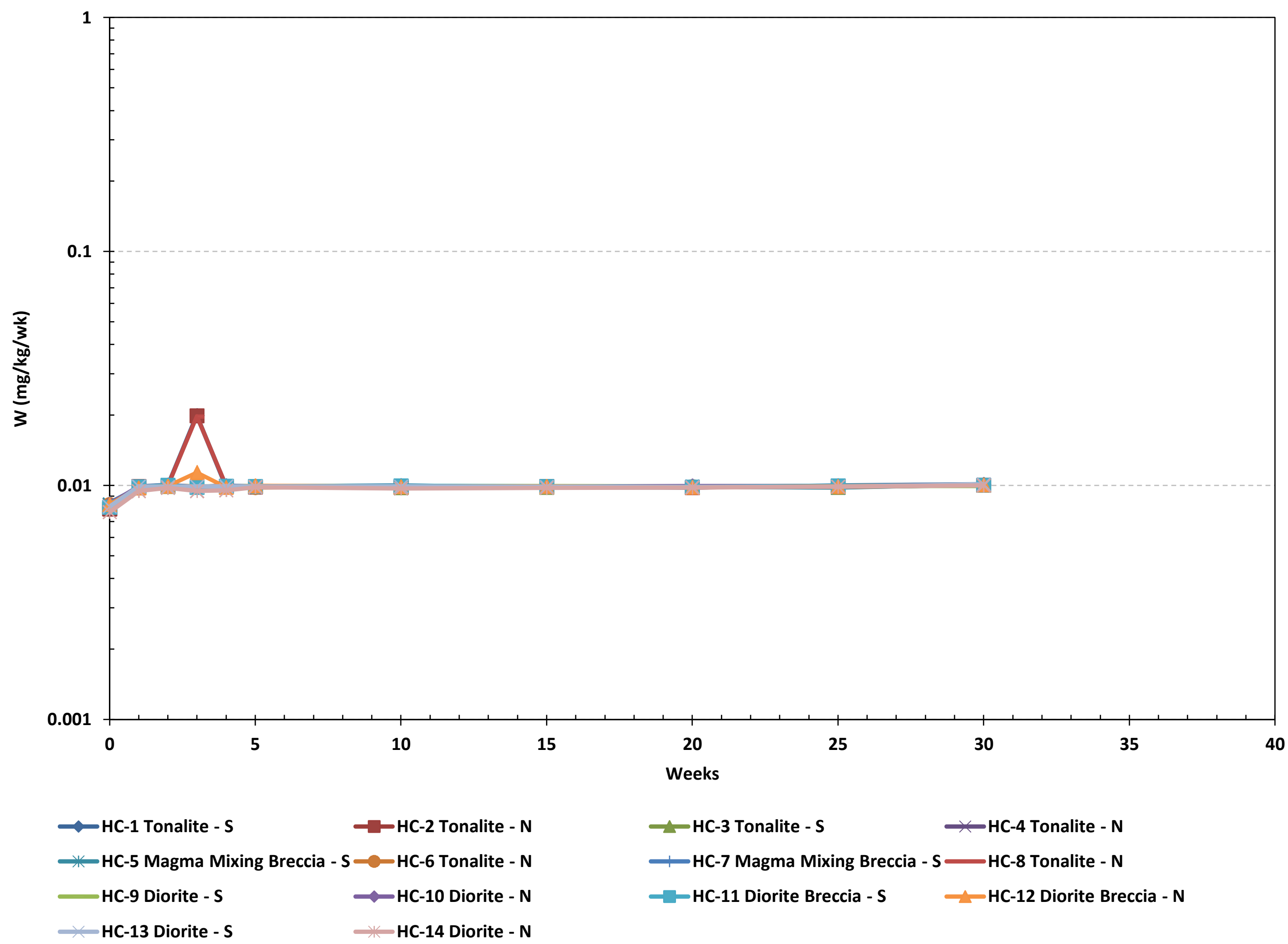
Côté Gold Project

Humidity Cell
Uranium Loading Rates

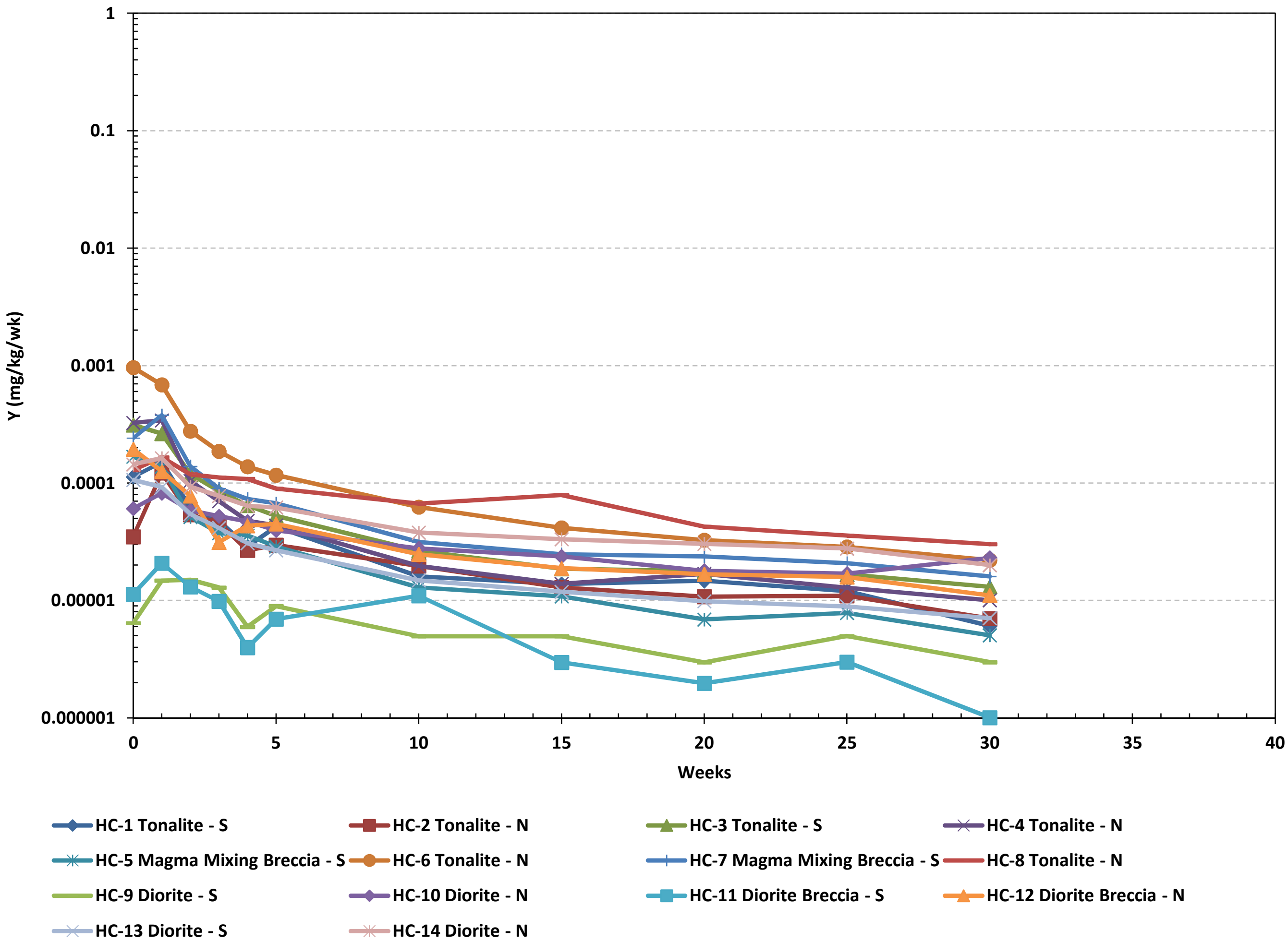
Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-32



IAMGOLD CORPORATION	amec
Côté Gold Project	
Humidity Cell Vanadium Loading Rates	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-33



IAMGOLD CORPORATION	amec
Côté Gold Project	
Humidity Cell Tungsten Loading Rates	
Drawn by: LC Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-34

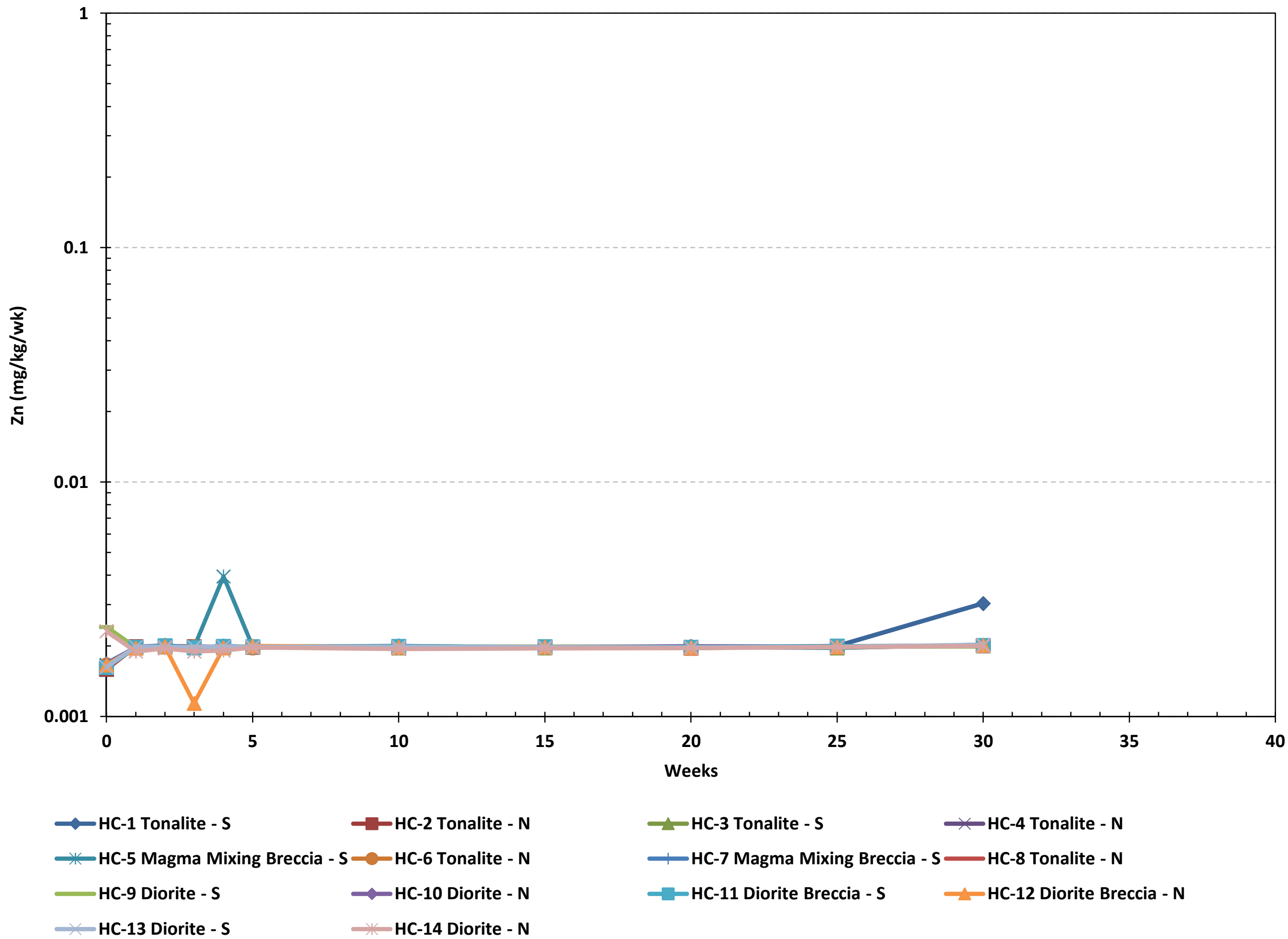


IAMGOLD CORPORATION | amec

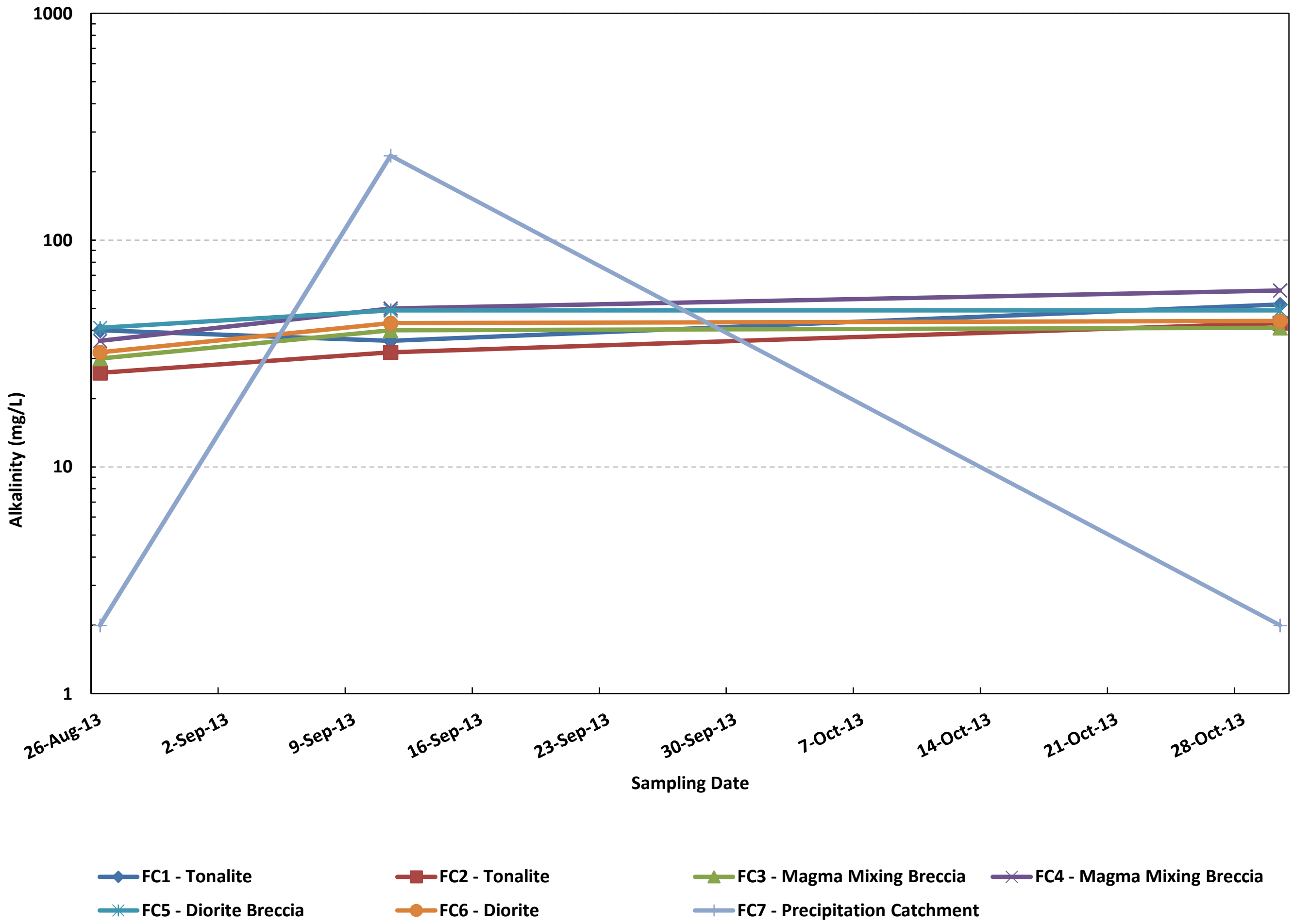
Côté Gold Project

Humidity Cell
Yttrium Loading Rates

Drawn by: LC	Checked by: SW
Date: December 2013	
Project: TC121522	GRAPHIC B-35



IAMGOLD CORPORATION		amec	
Côté Gold Project			
Humidity Cell Zinc Loading Rates			
Drawn by: LC	Checked by: SW	Date: December 2013	
Project: TC121522		GRAPHIC B-36	

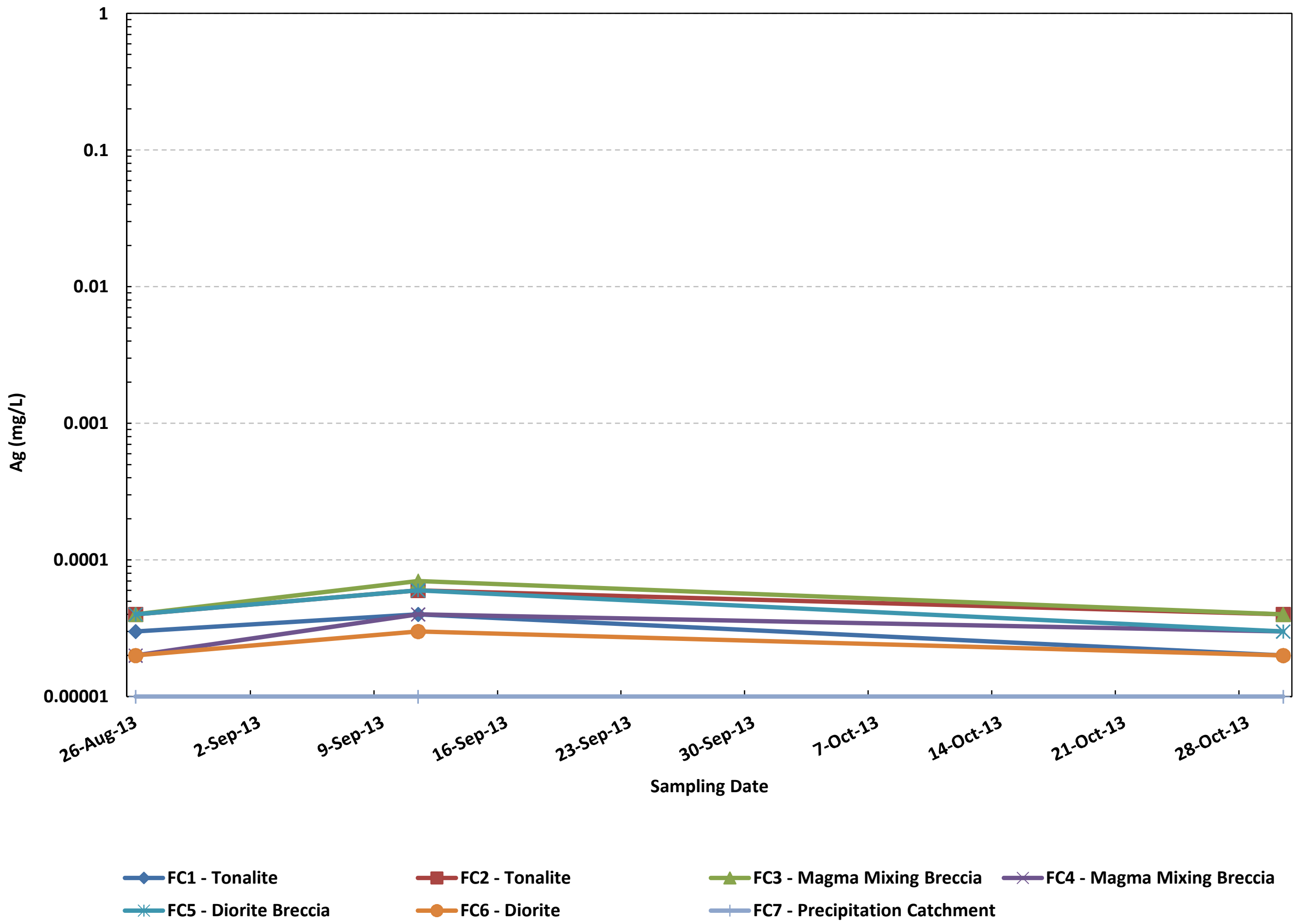


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Alkalinity

Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-37

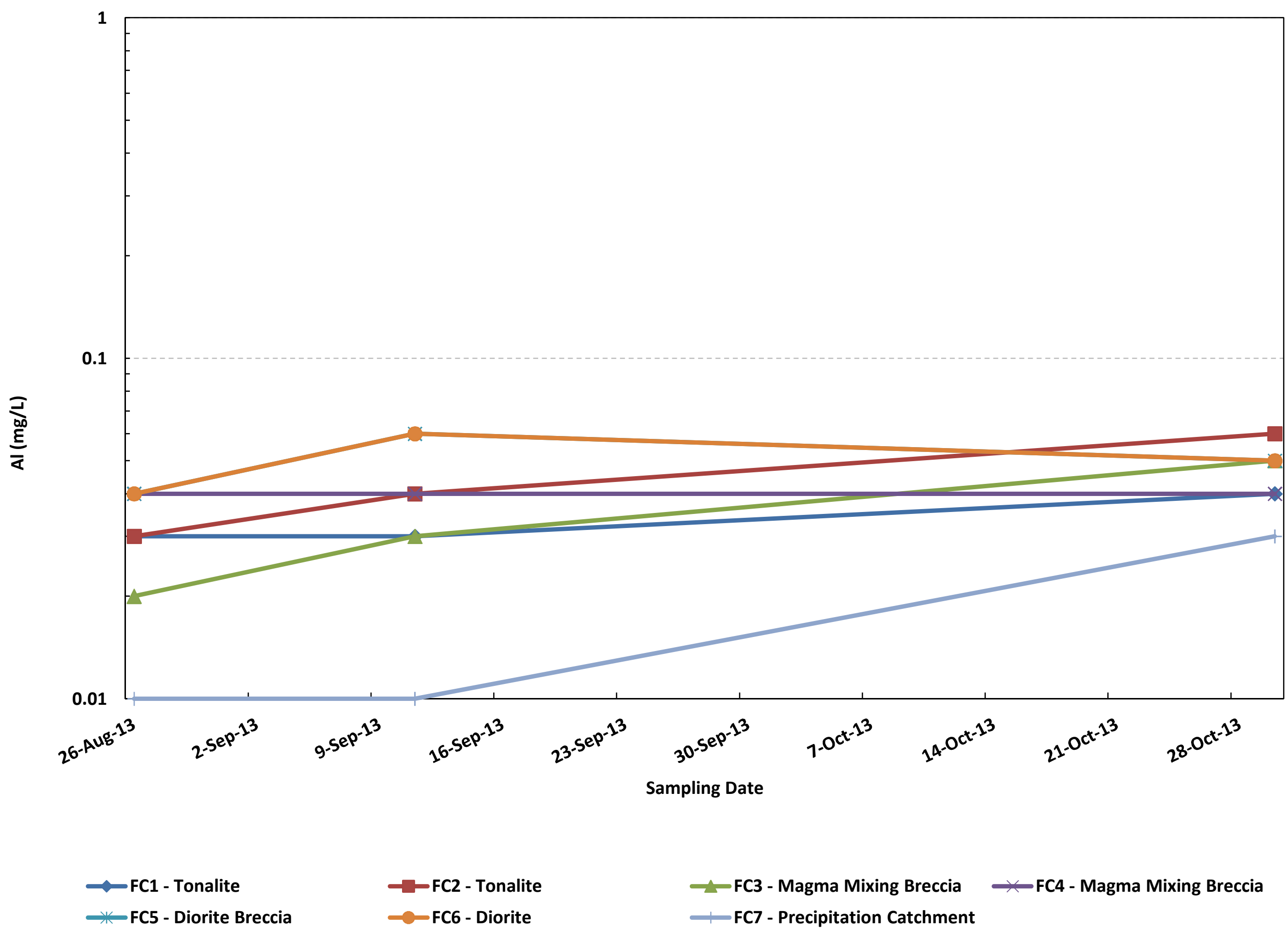


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Silver Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-38

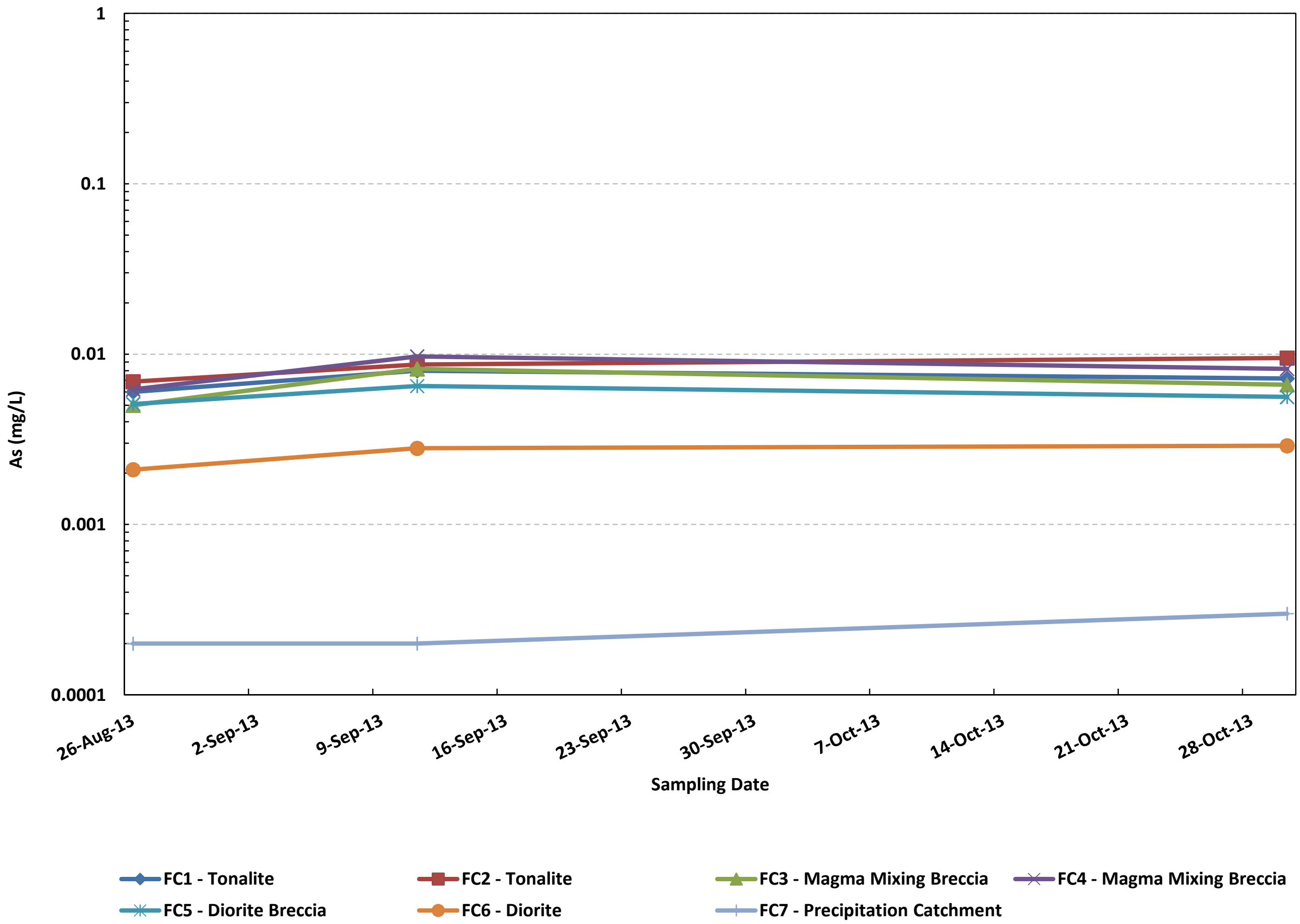


IAMGOLD CORPORATION amec

Côté Gold Project

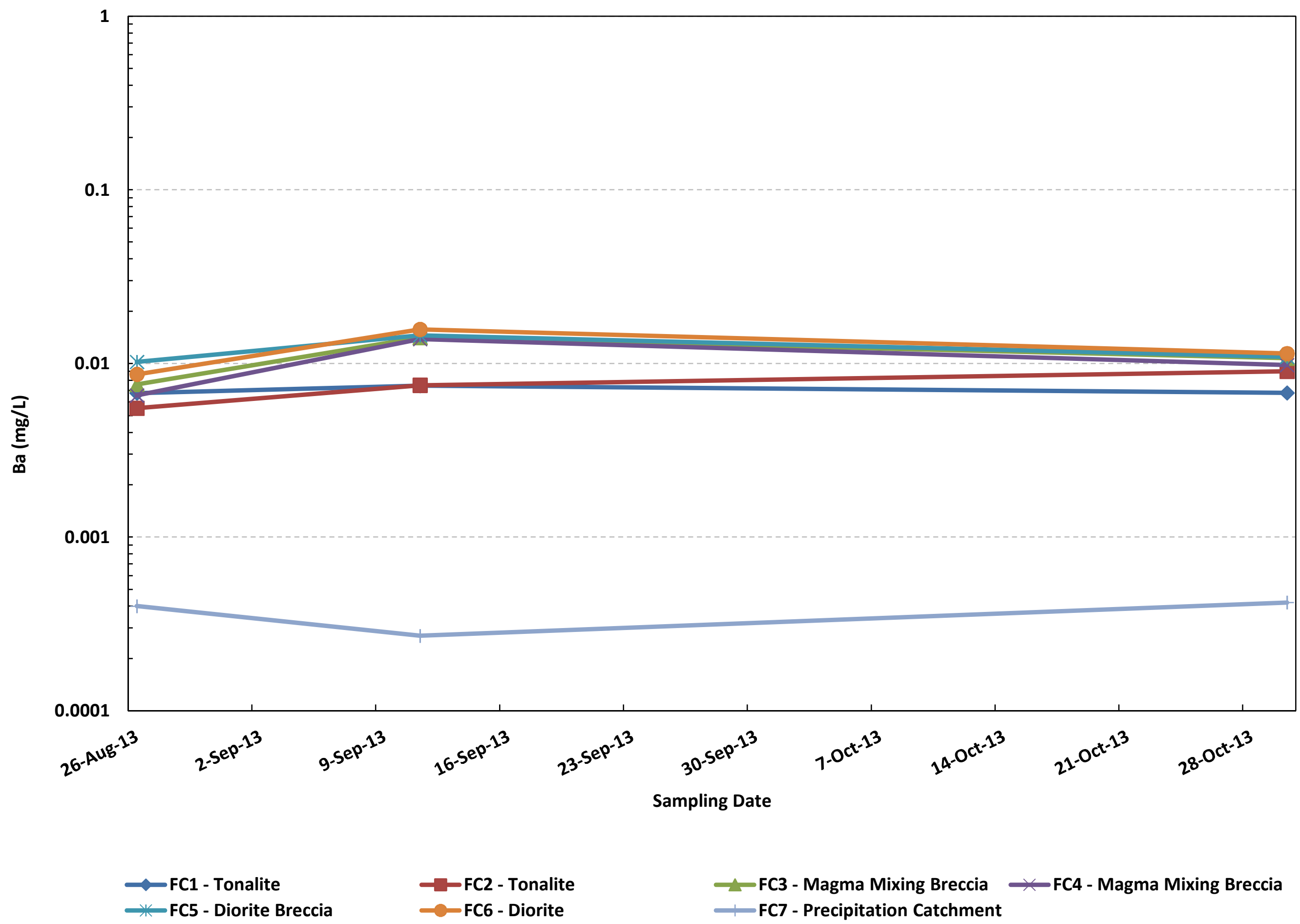
Field Cell
Aluminum Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-39



IAMGOLD CORPORATION amec

Côté Gold Project	
Field Cell Arsenic Concentrations	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-40

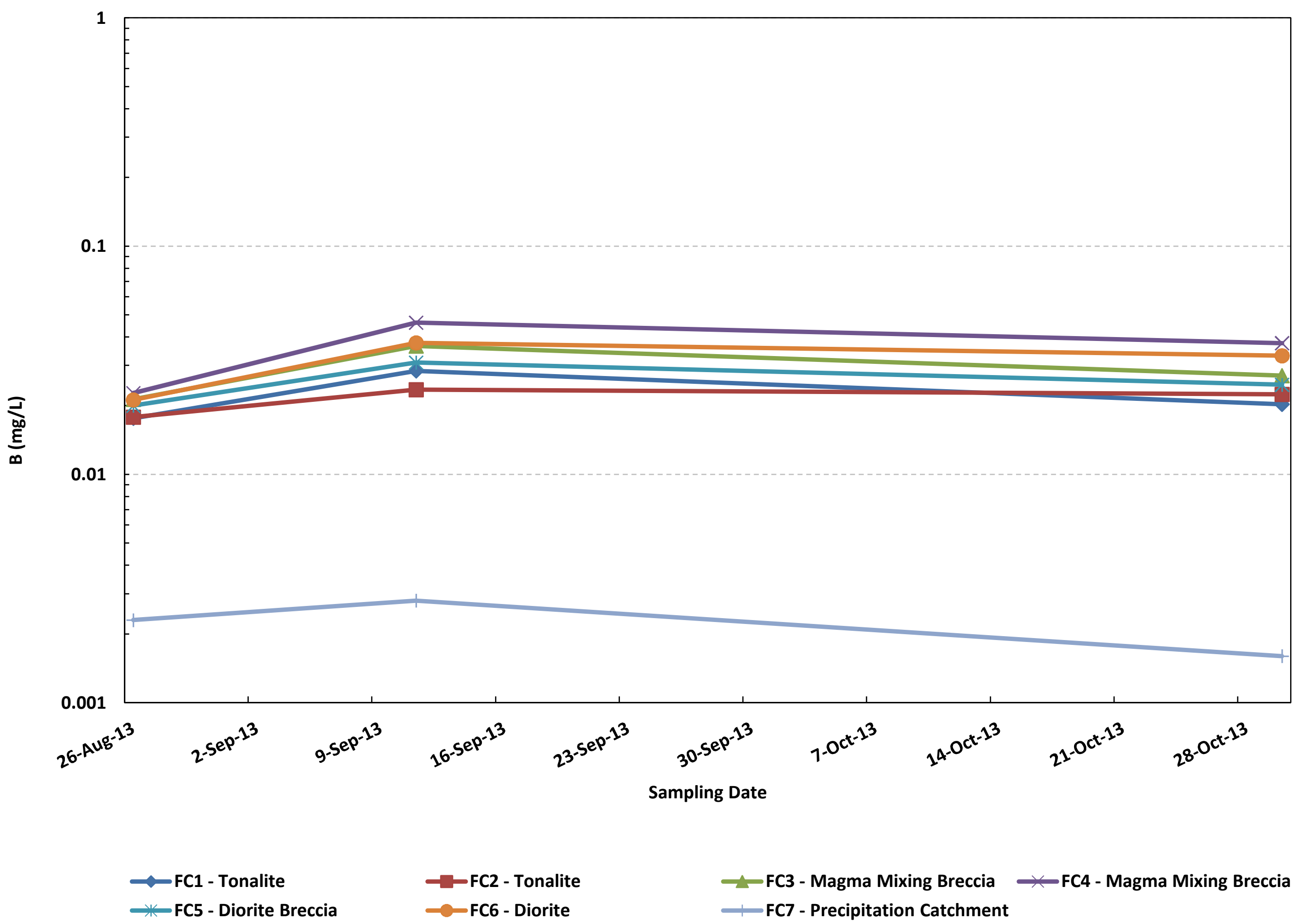


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Barium Concentrations

Drawn by: LC	Checked by: SW
Date: December 2013	
Project: TC121522	GRAPHIC B-41

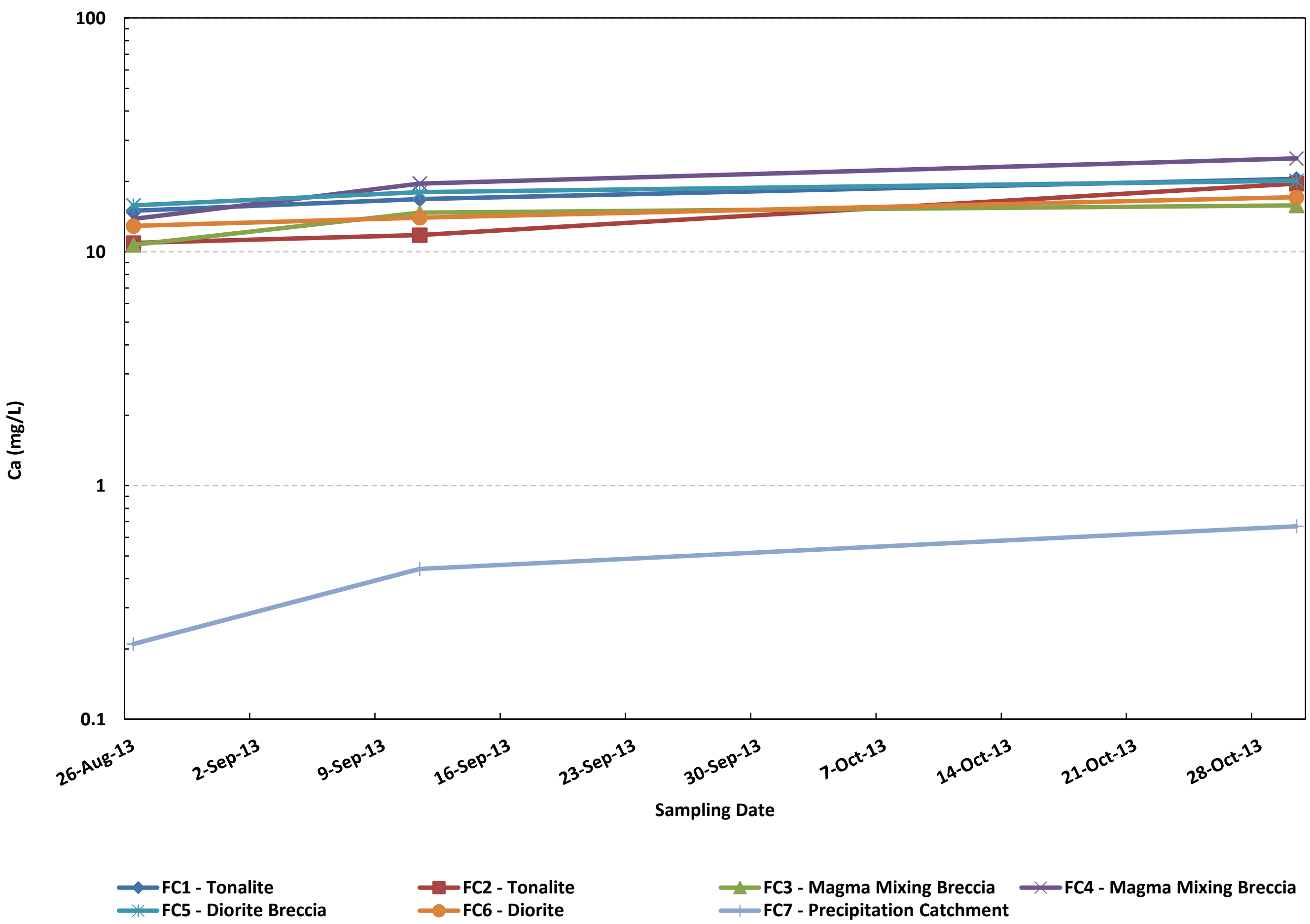


IAMGOLD CORPORATION amec

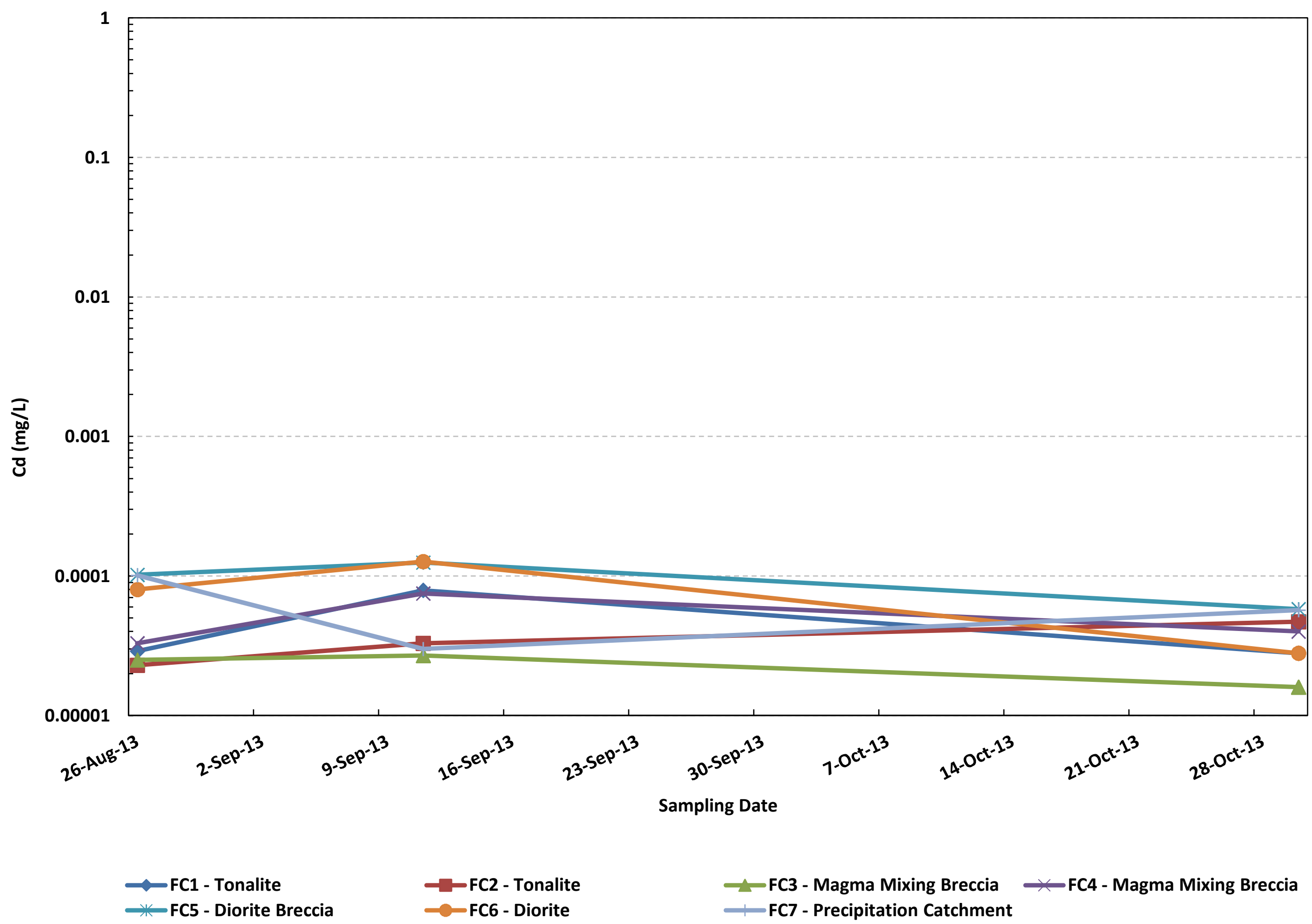
Côté Gold Project

Field Cell
Boron Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-42



IAMGOLD CORPORATION		amec	
Côté Gold Project			
Field Cell Calcium Concentrations			
Drawn by: LC	Checked by: SW	Date: December 2013	
Project: TC121522		GRAPHIC B-43	

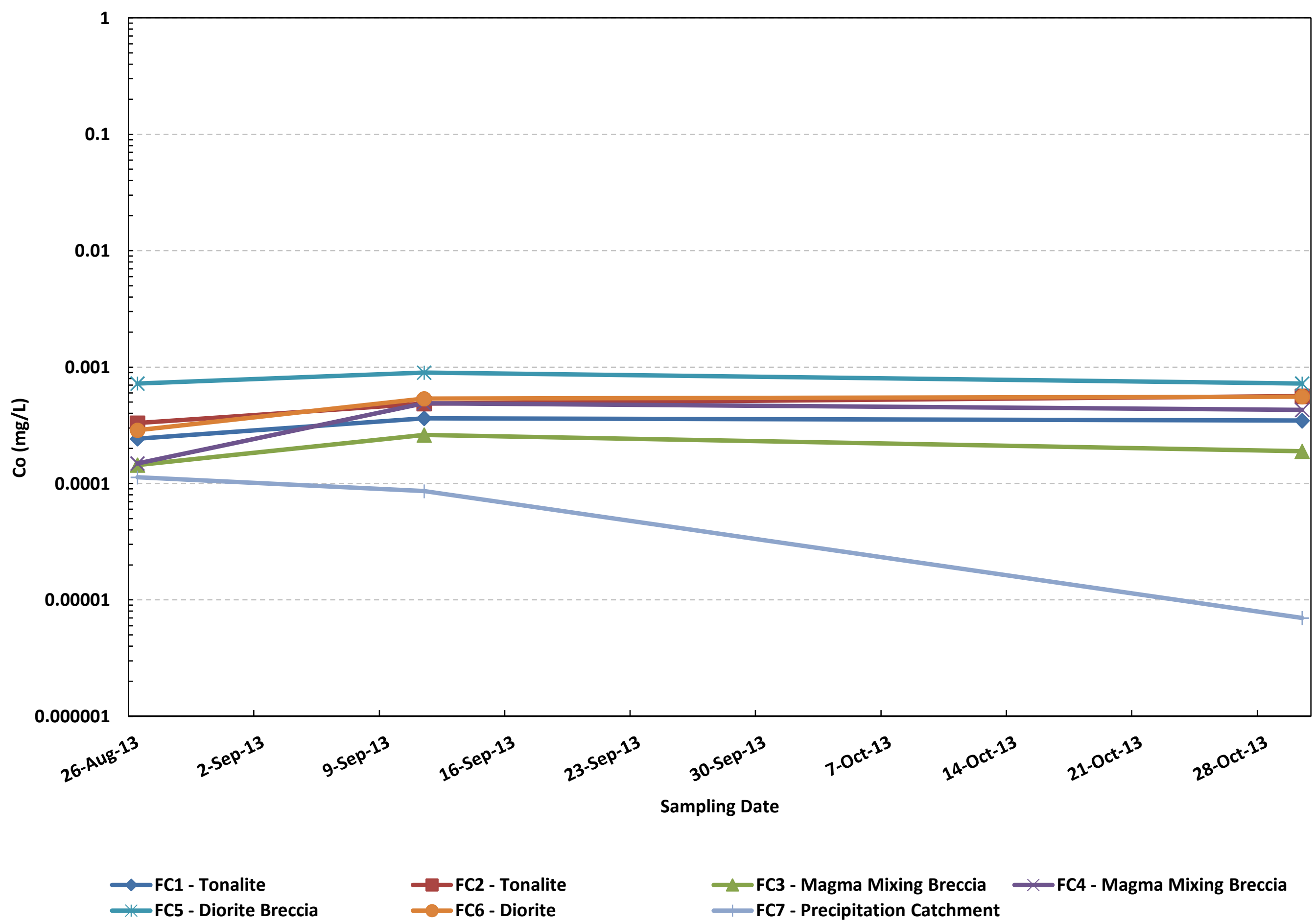


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Cadmium Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-44

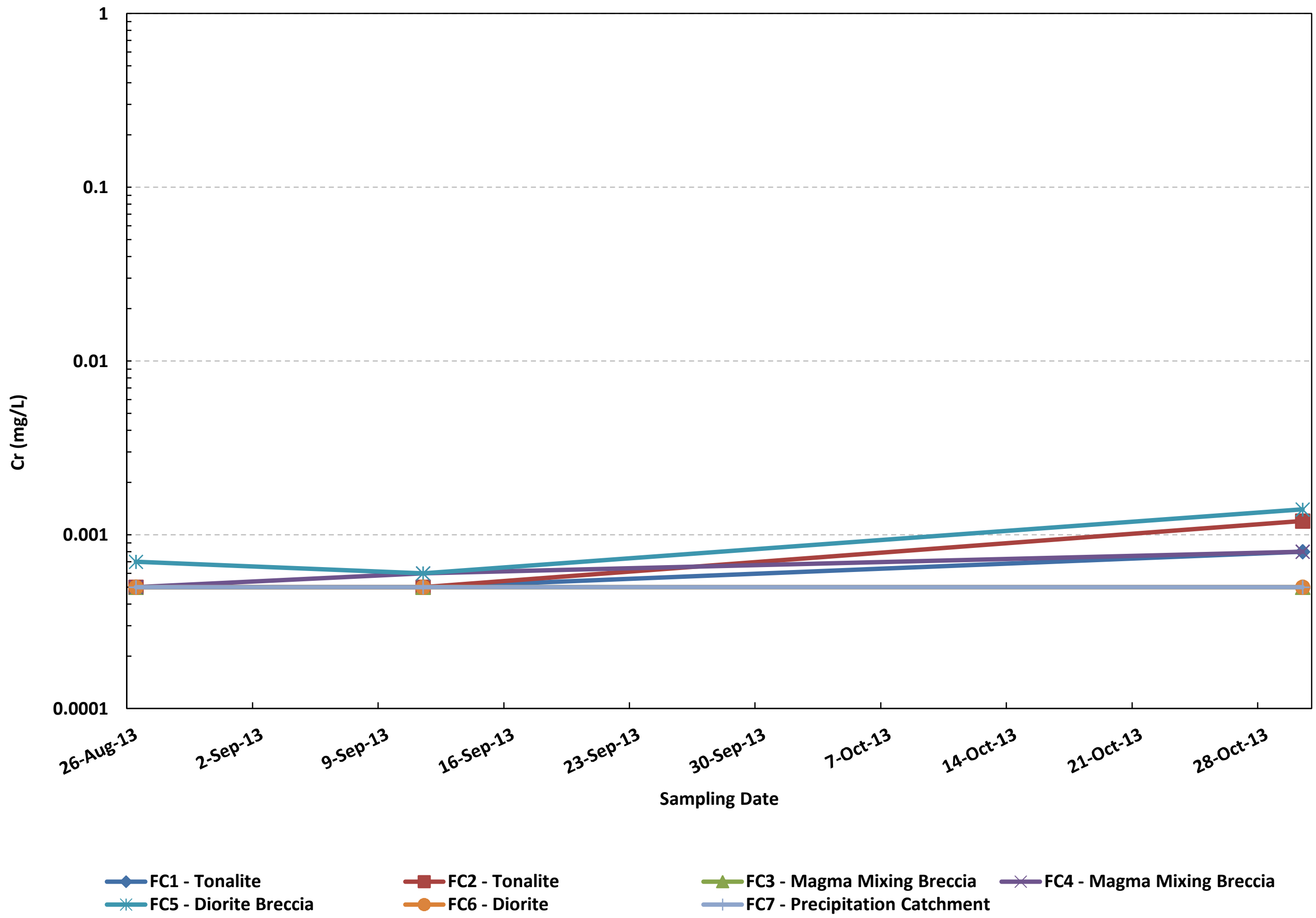


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Cobalt Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-45

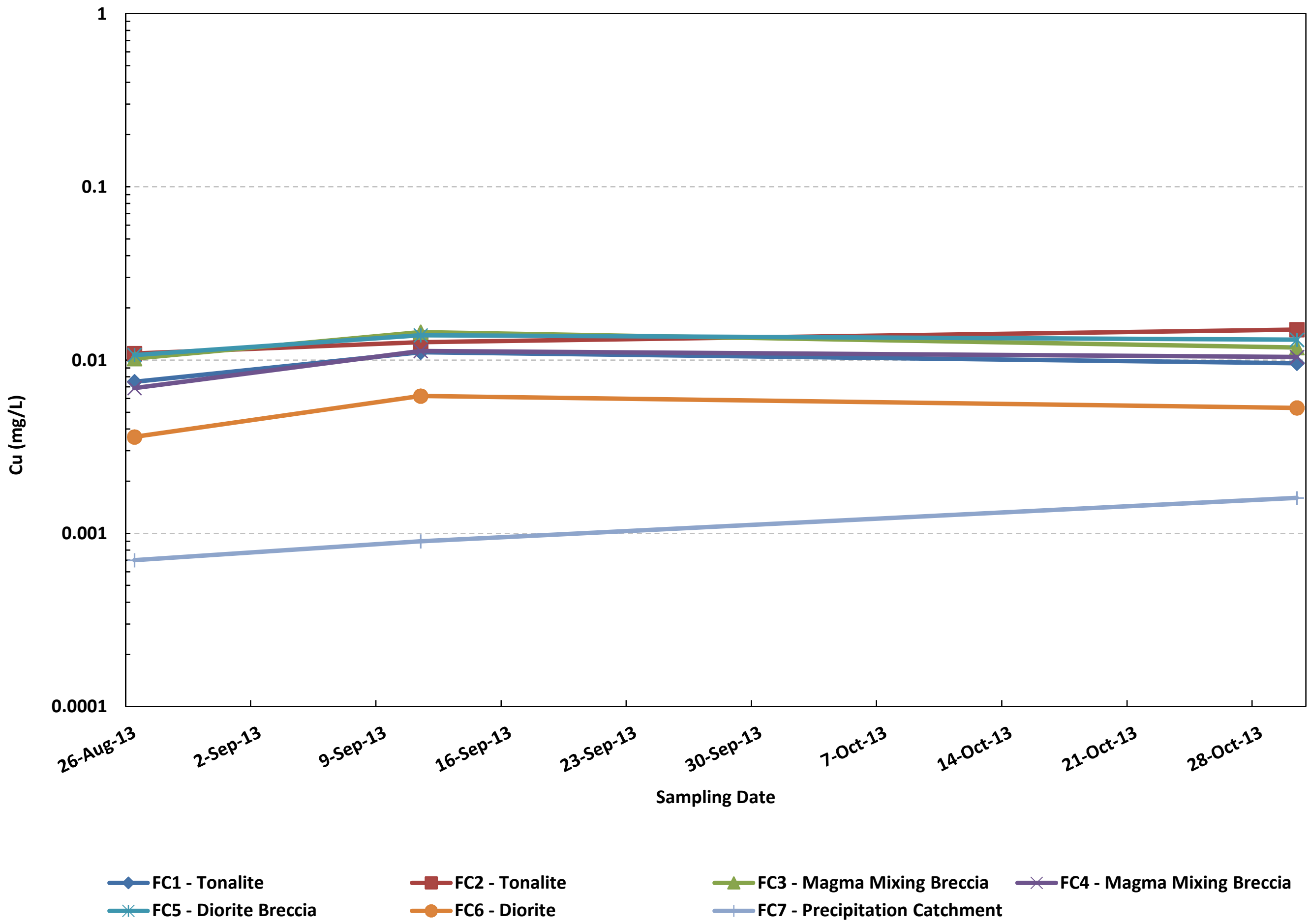


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Chromium Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-46



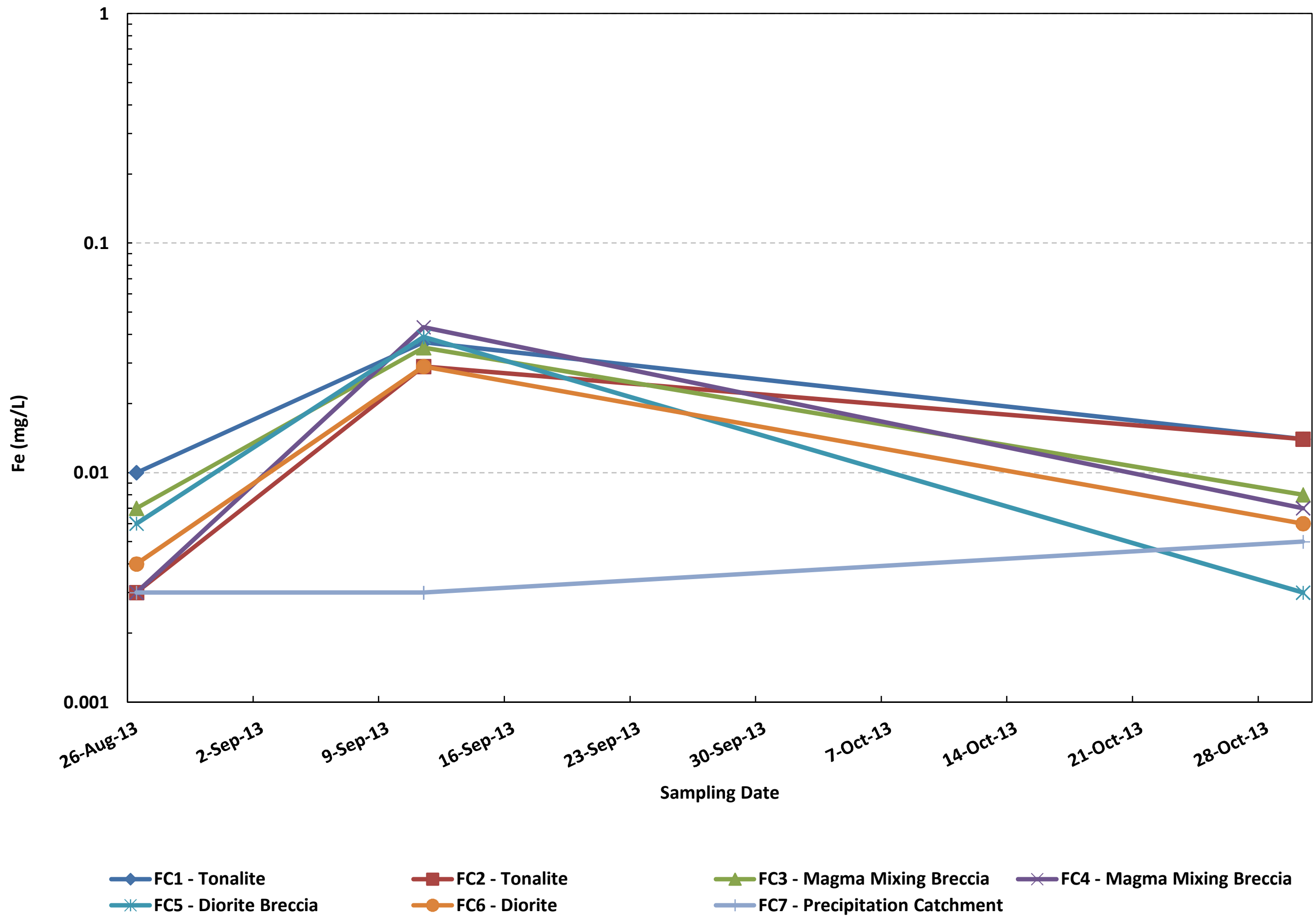
IAMGOLD CORPORATION

amec

Côté Gold Project

Field Cell
Copper Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-47

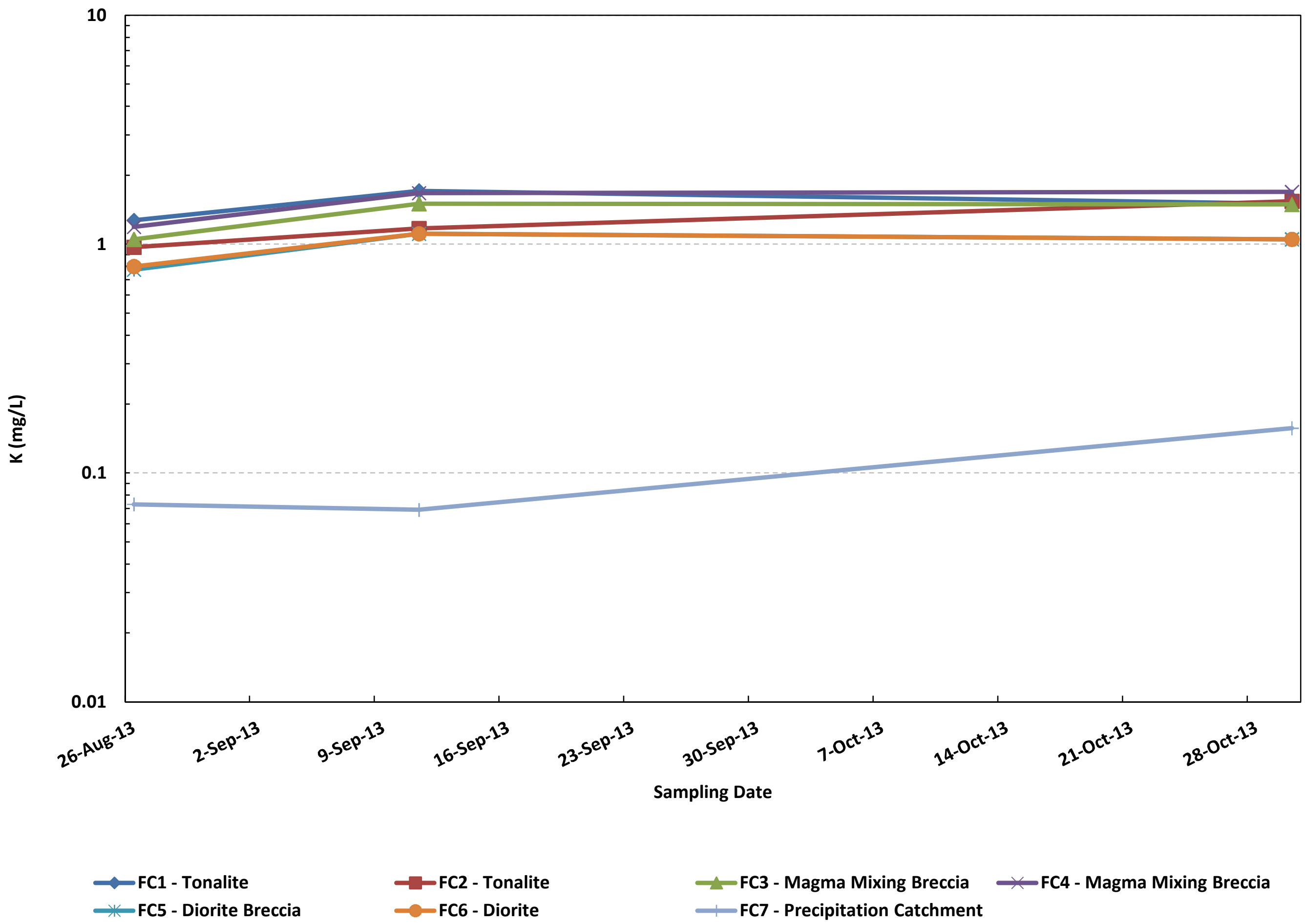


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Iron Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-48

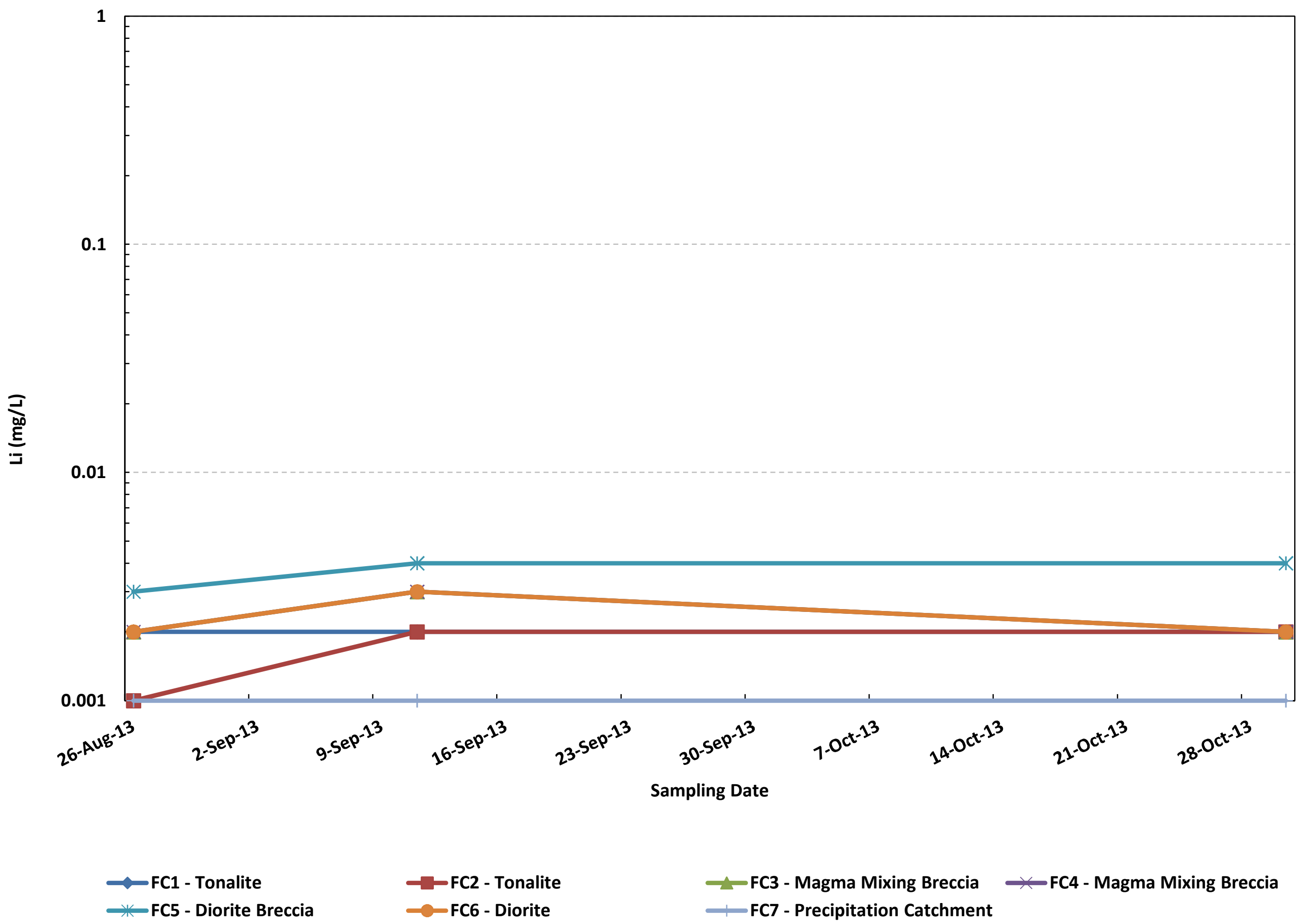


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Potassium Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-49



IAMGOLD CORPORATION amec

Côté Gold Project			
Field Cell Lithium Concentrations			
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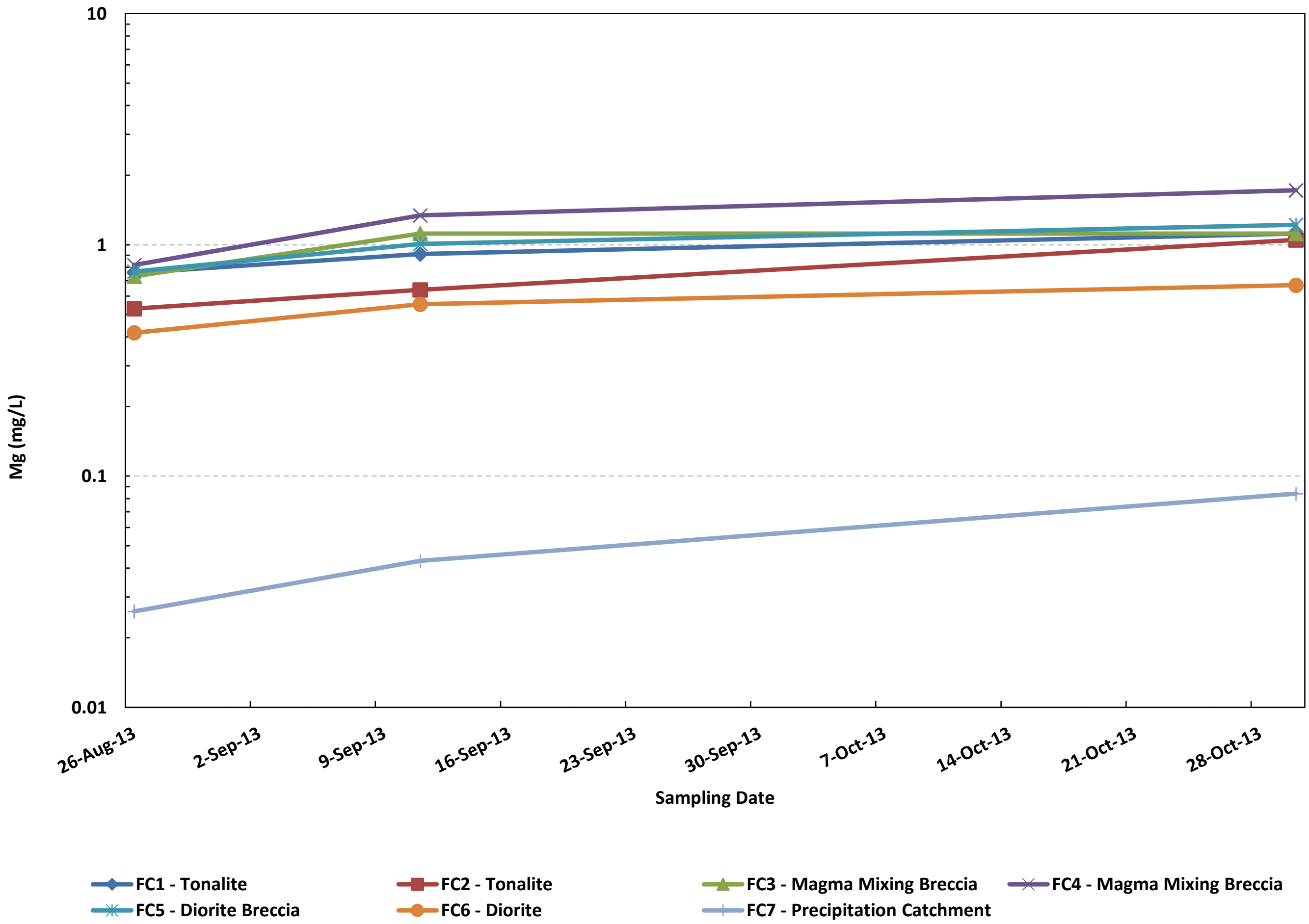
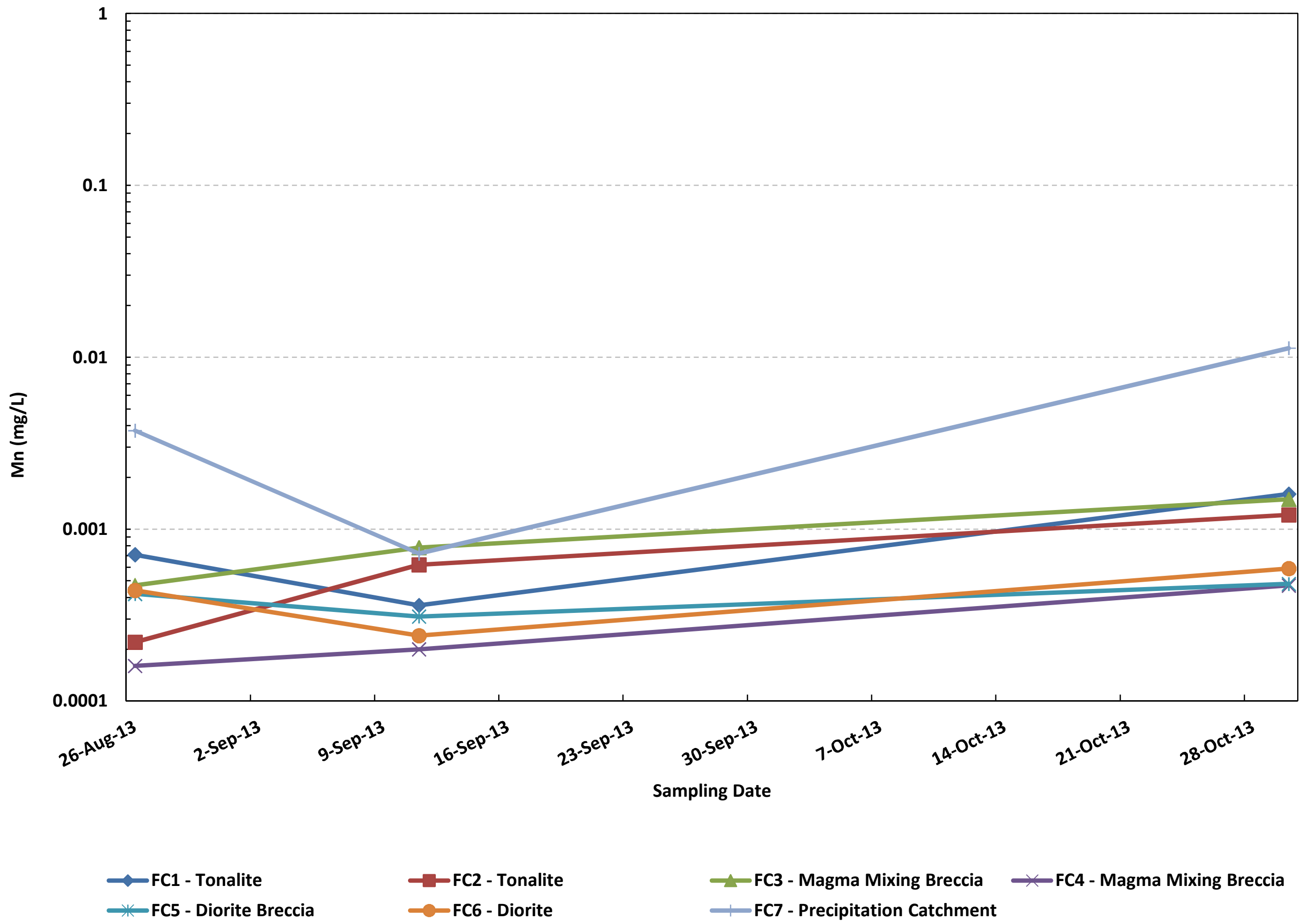


IAMGOLD CORPORATION amec

Côté Gold Project

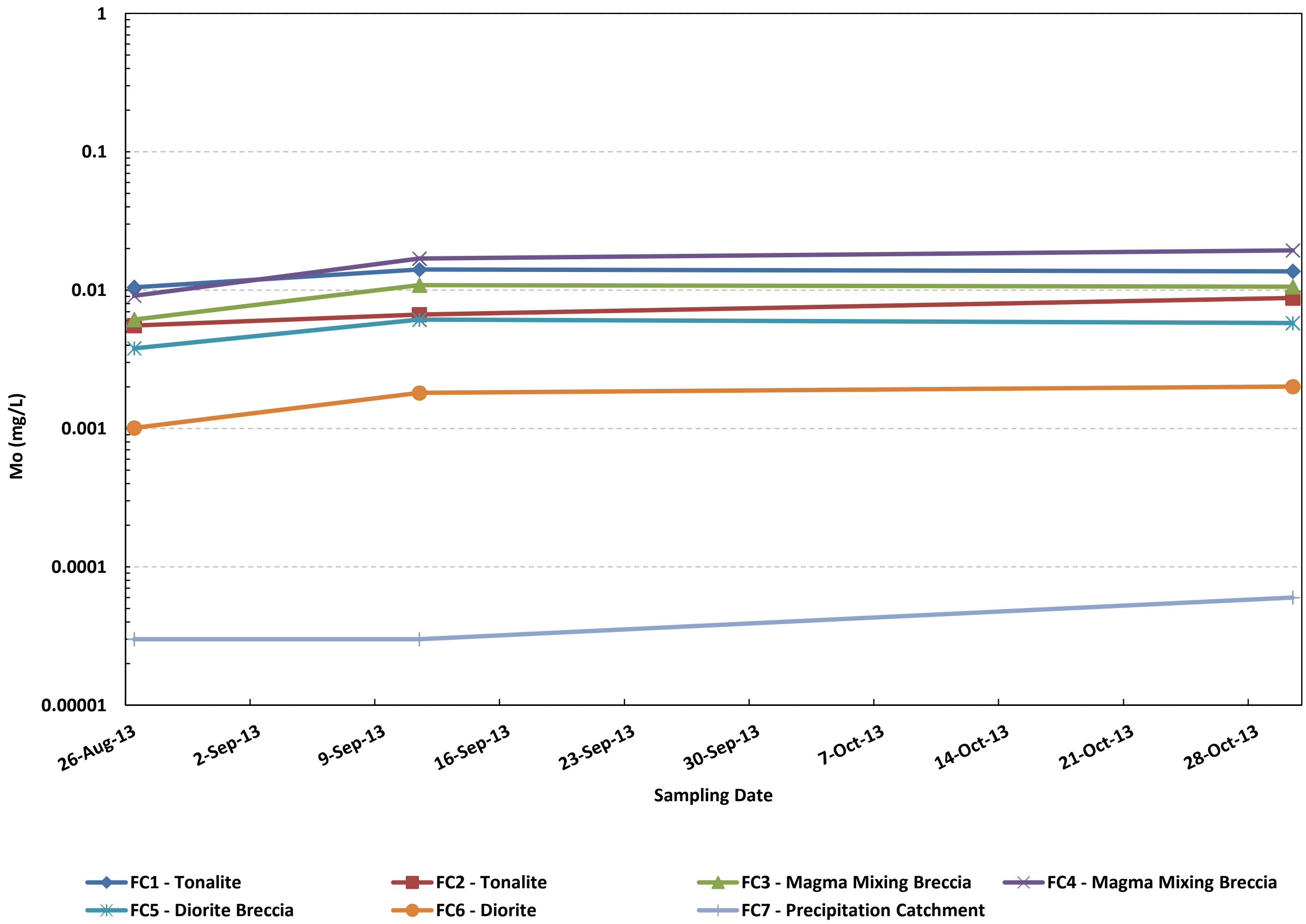
Field Cell
Magnesium Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-51

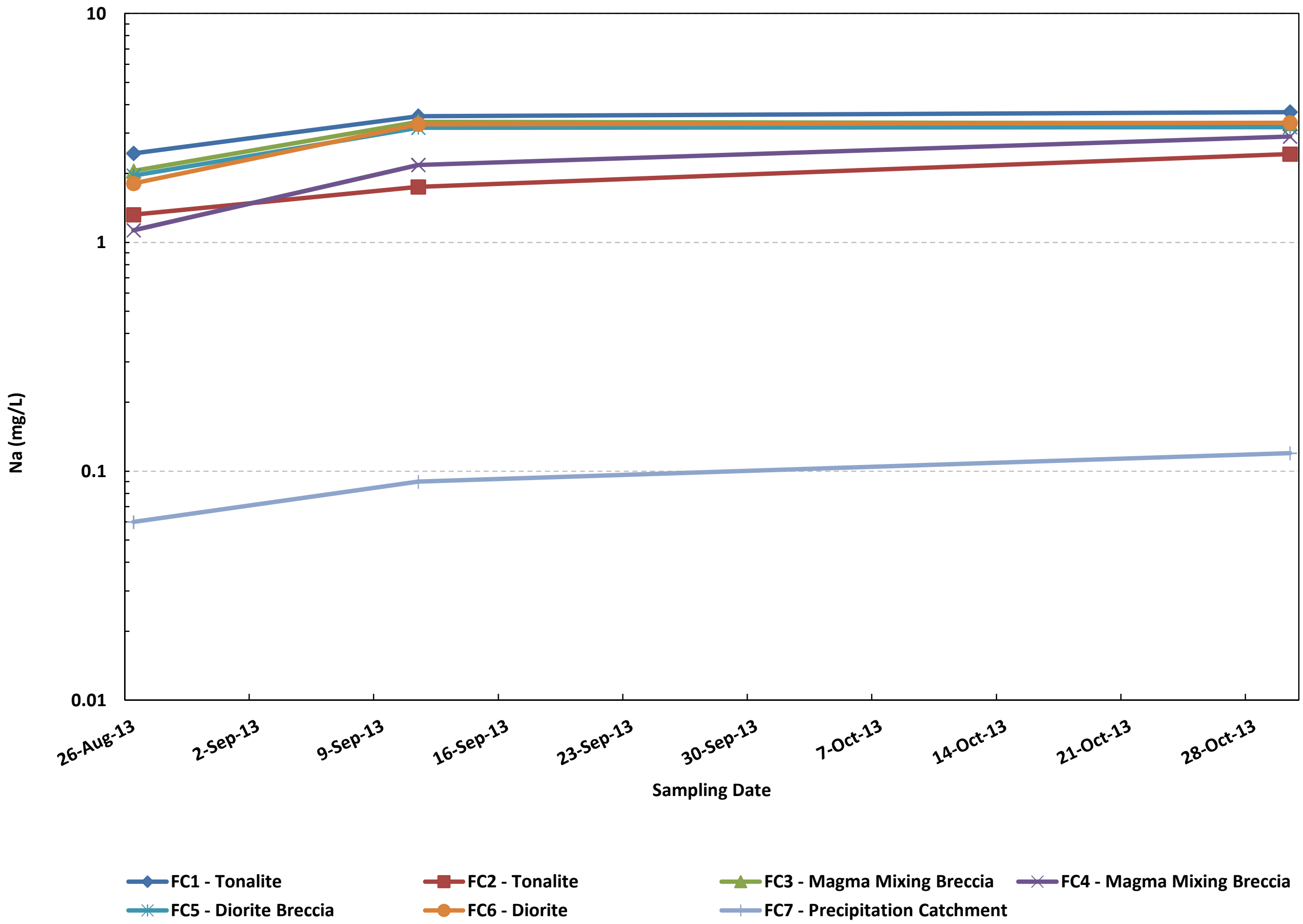


IAMGOLD CORPORATION amec

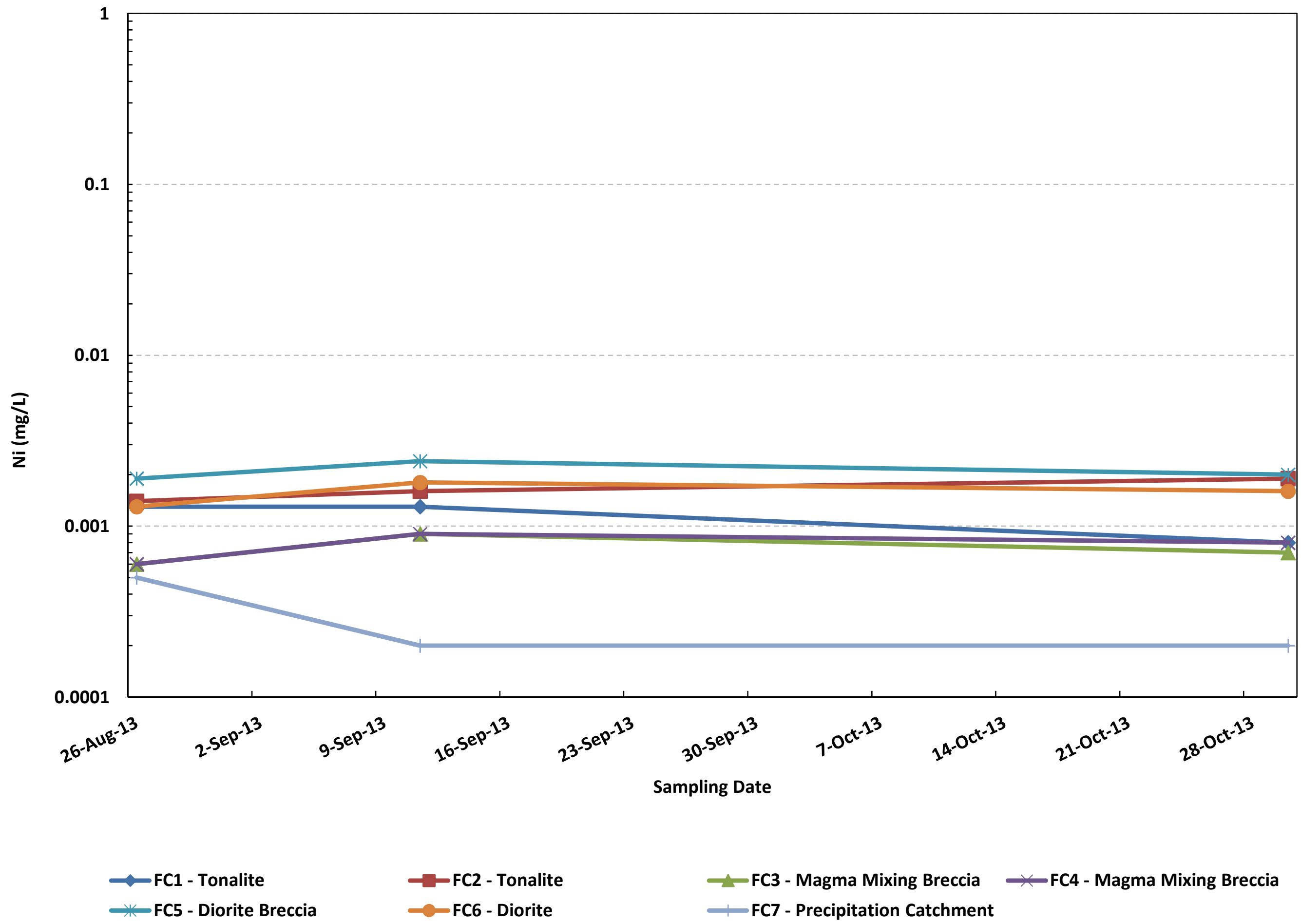
Côté Gold Project	
Field Cell Manganese Concentrations	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-52



IAMGOLD CORPORATION	amec
Côté Gold Project	
Field Cell Molybdenum Concentrations	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-53



IAMGOLD CORPORATION	amec
Côté Gold Project	
Field Cell Sodium Concentrations	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-54

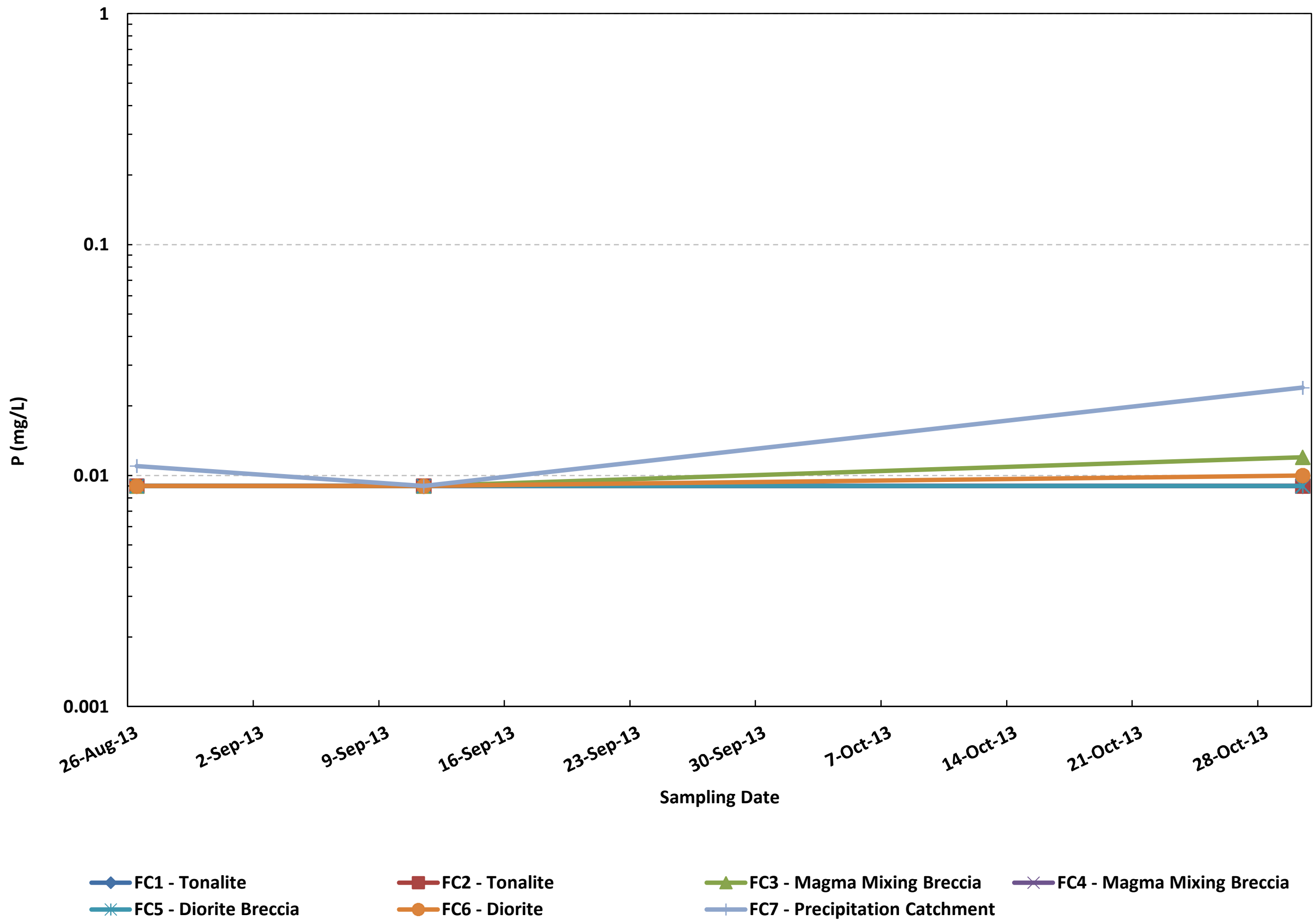


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Nickel Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-55

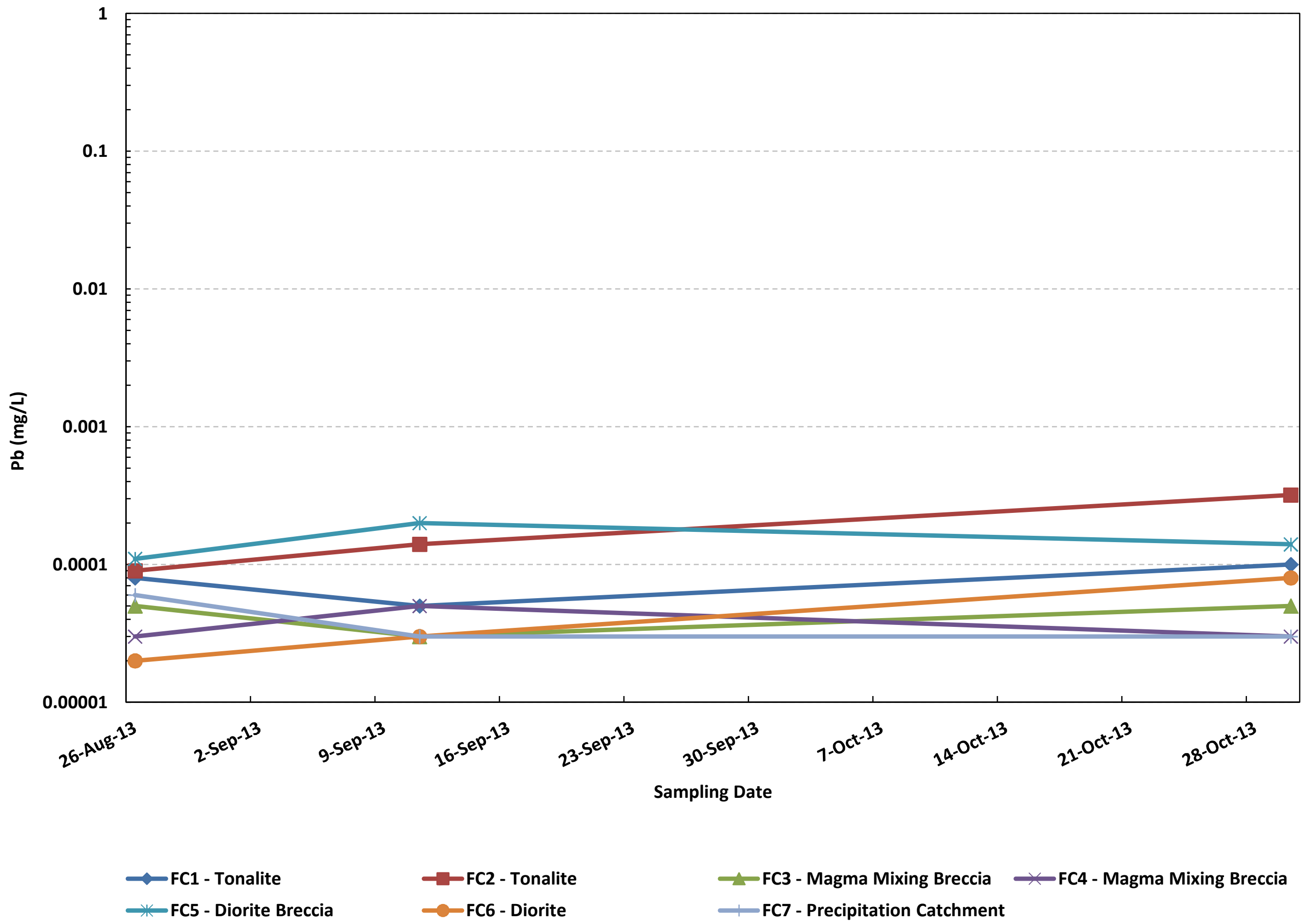


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Phosphorus Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-56



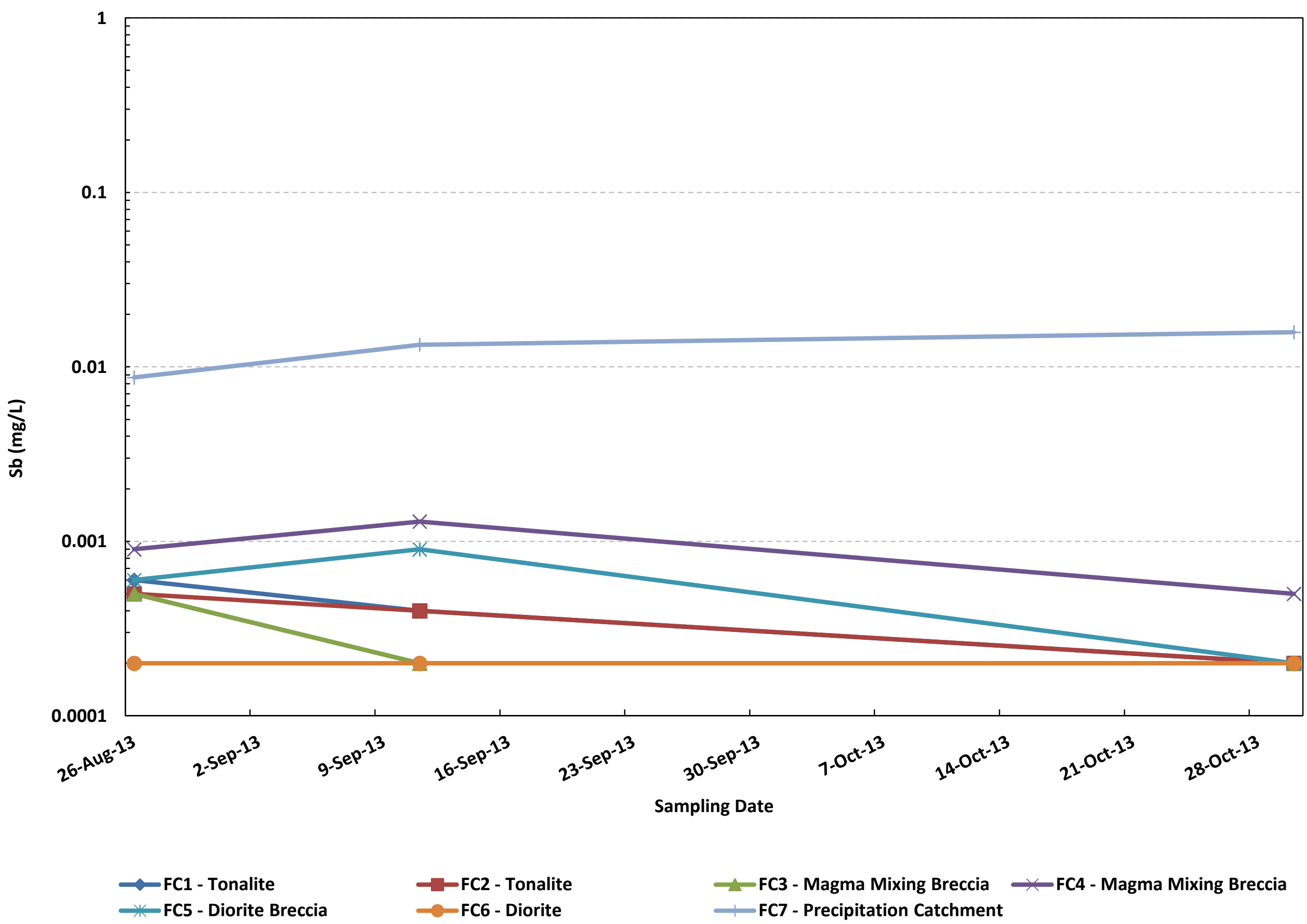
IAMGOLD CORPORATION

amec

Côté Gold Project

Field Cell
Lead Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-57

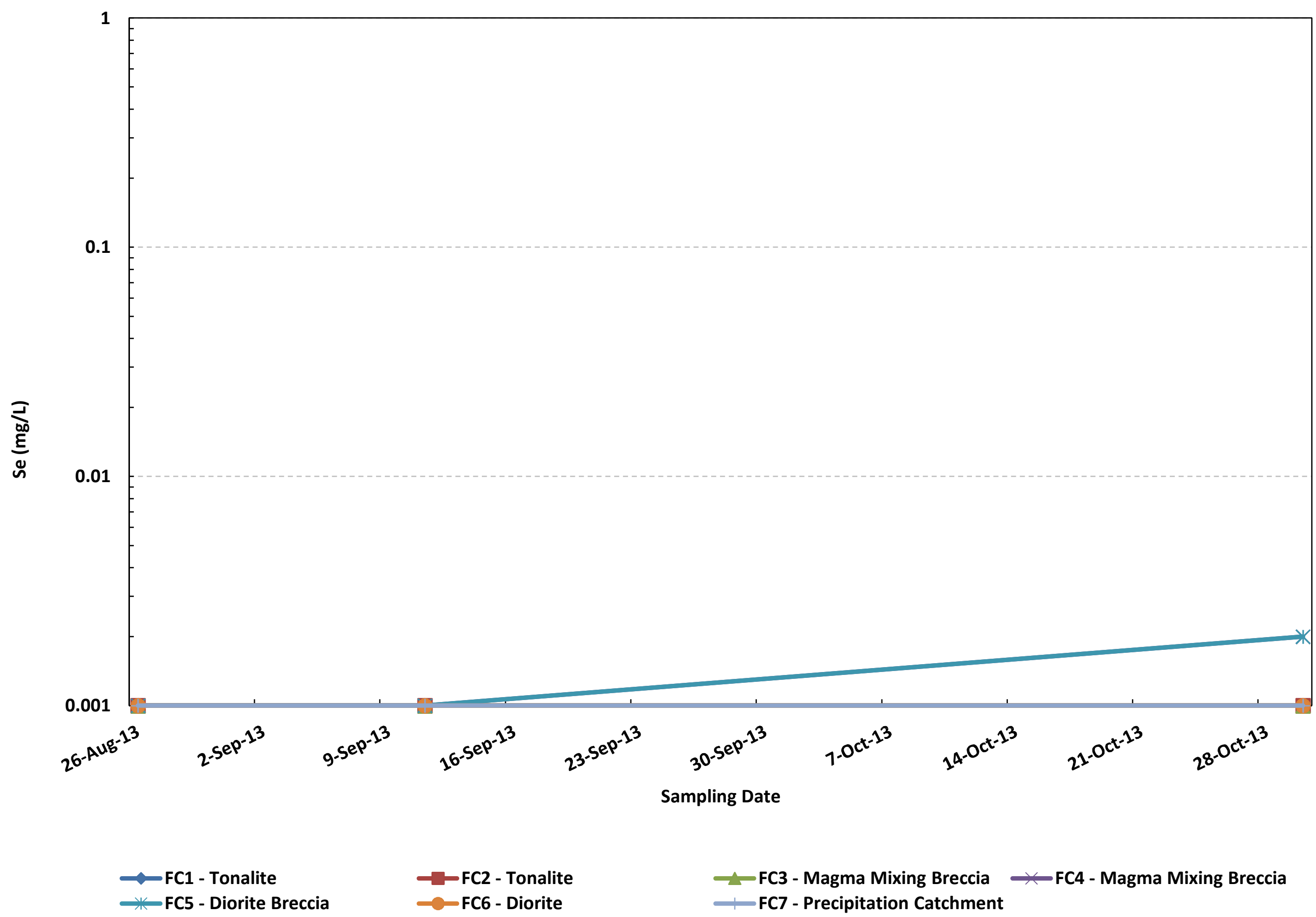


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Antimony Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-58

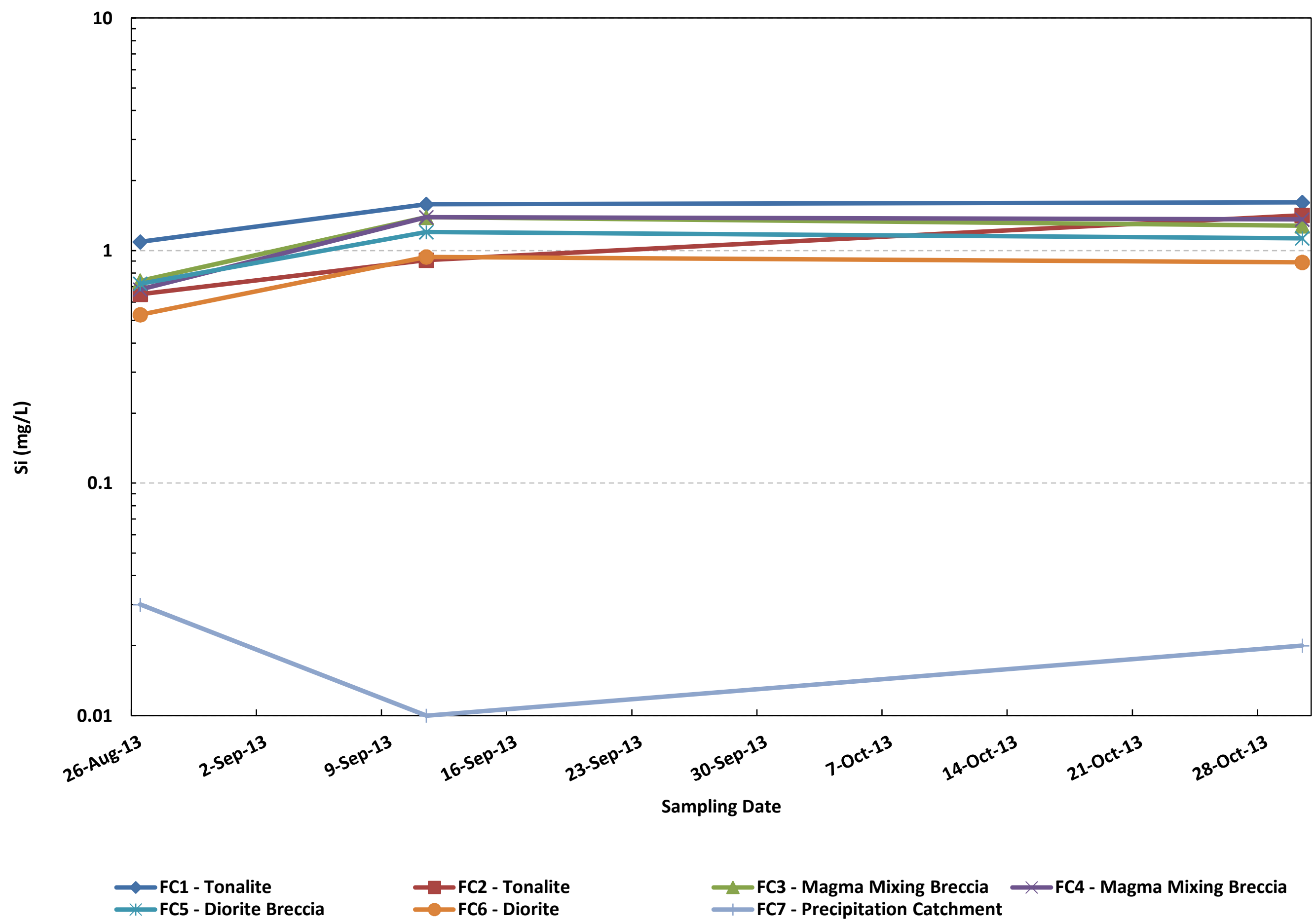


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Selenium Concentrations

Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-59

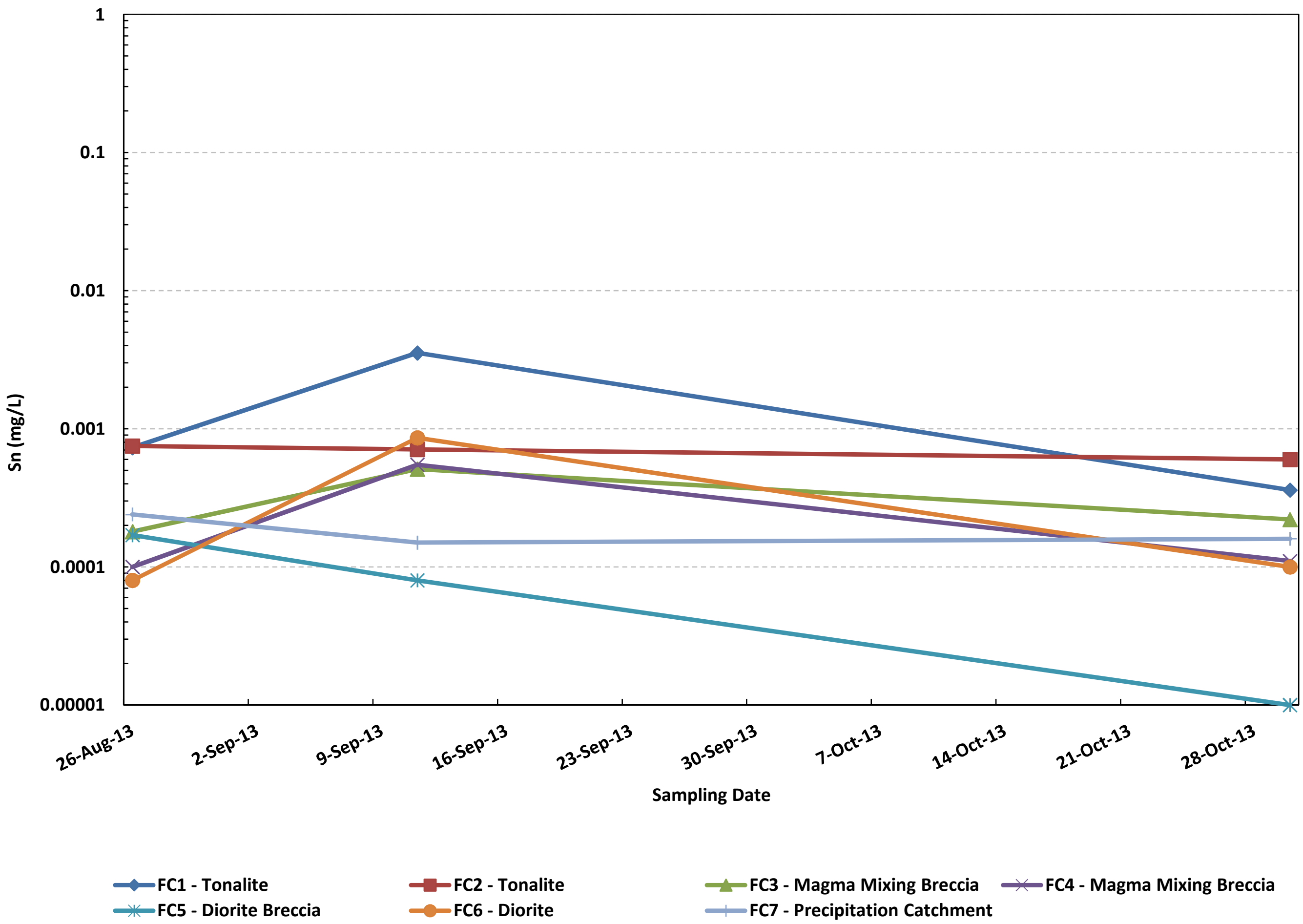


IAMGOLD CORPORATION | amec

Côté Gold Project

Field Cell
Silicon Concentrations

Drawn by: LC	Checked by: SW
Date: December 2013	
Project: TC121522	GRAPHIC B-60



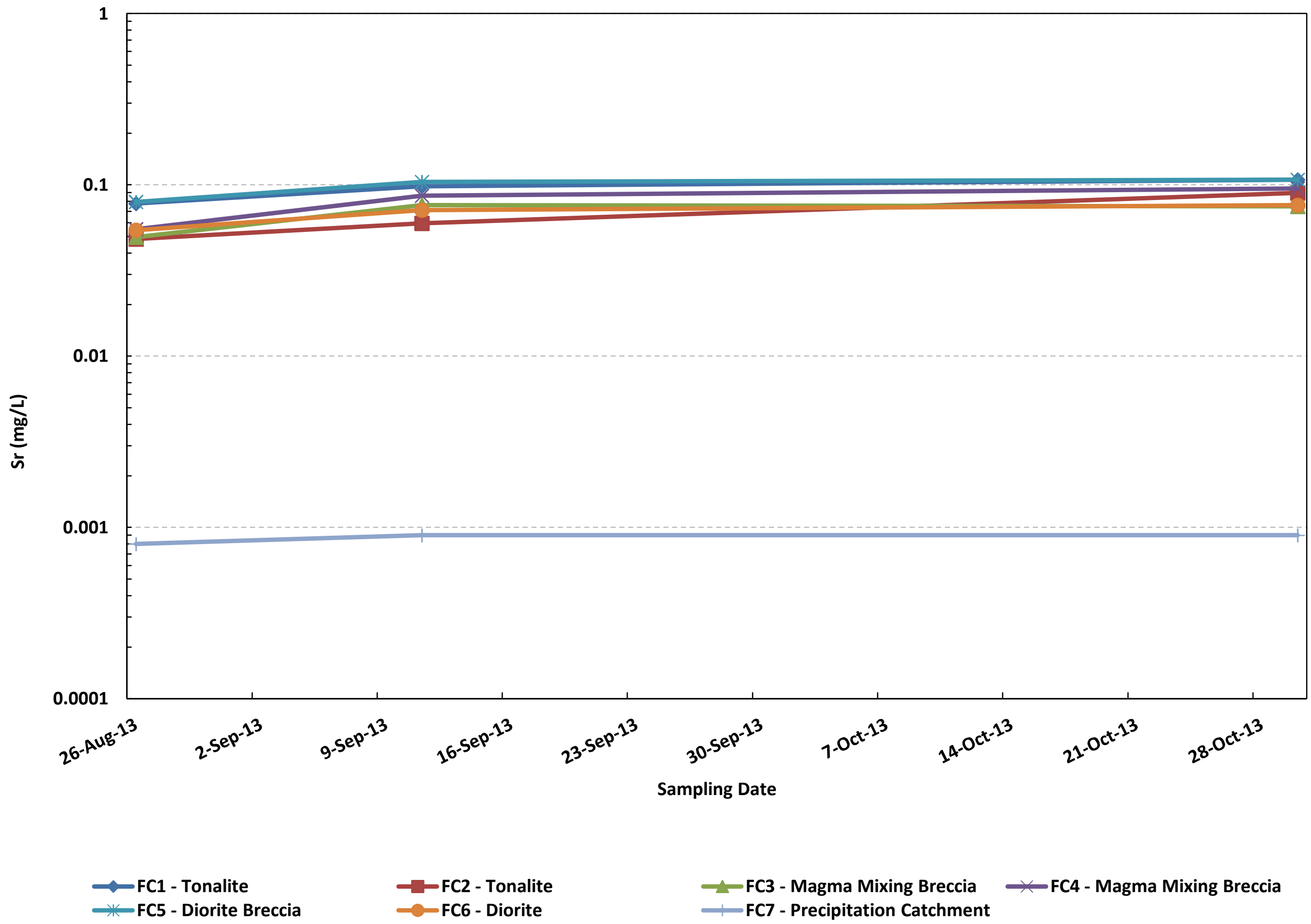
IAMGOLD CORPORATION

amec

Côté Gold Project

Field Cell
Tin Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-61

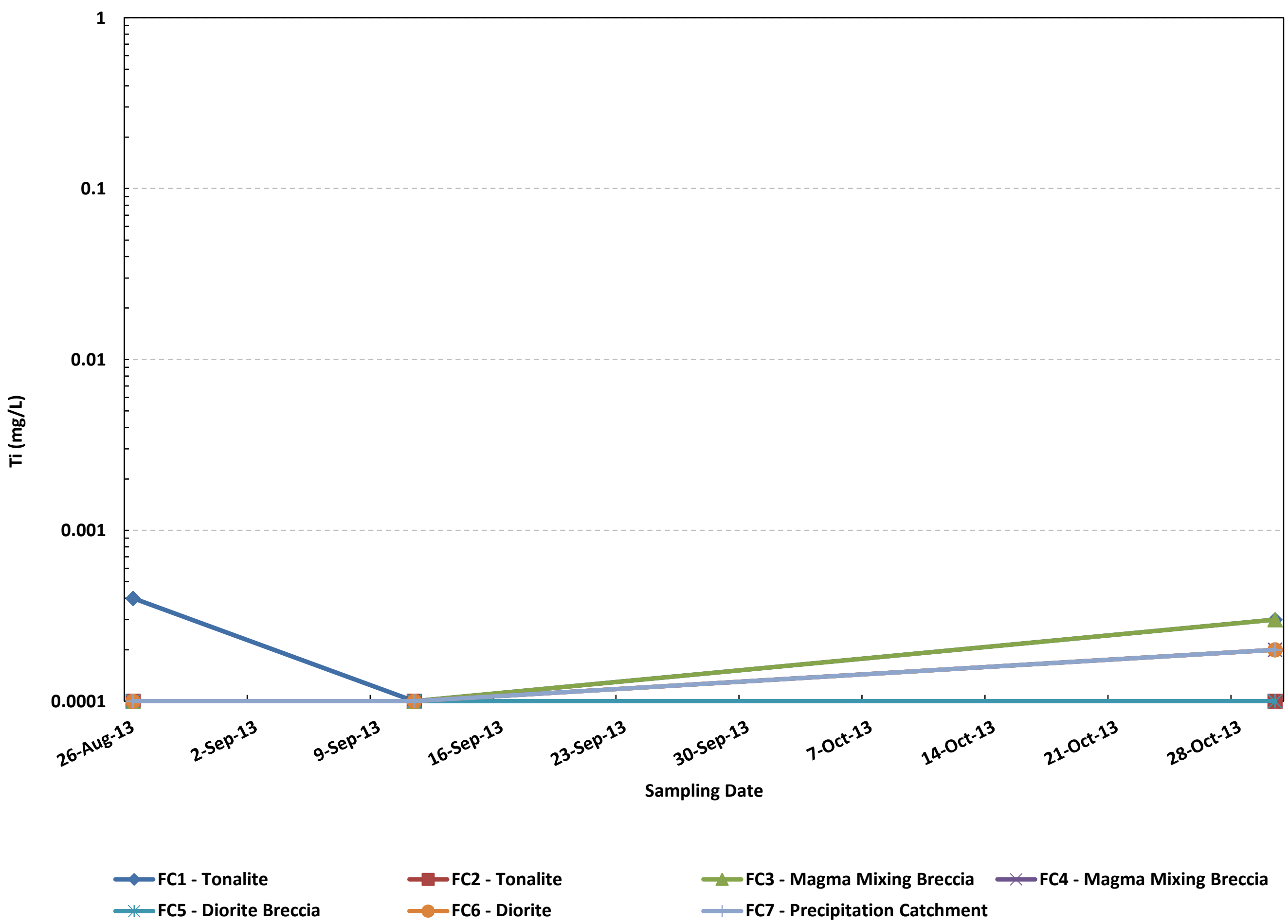


IAMGOLD CORPORATION | amec

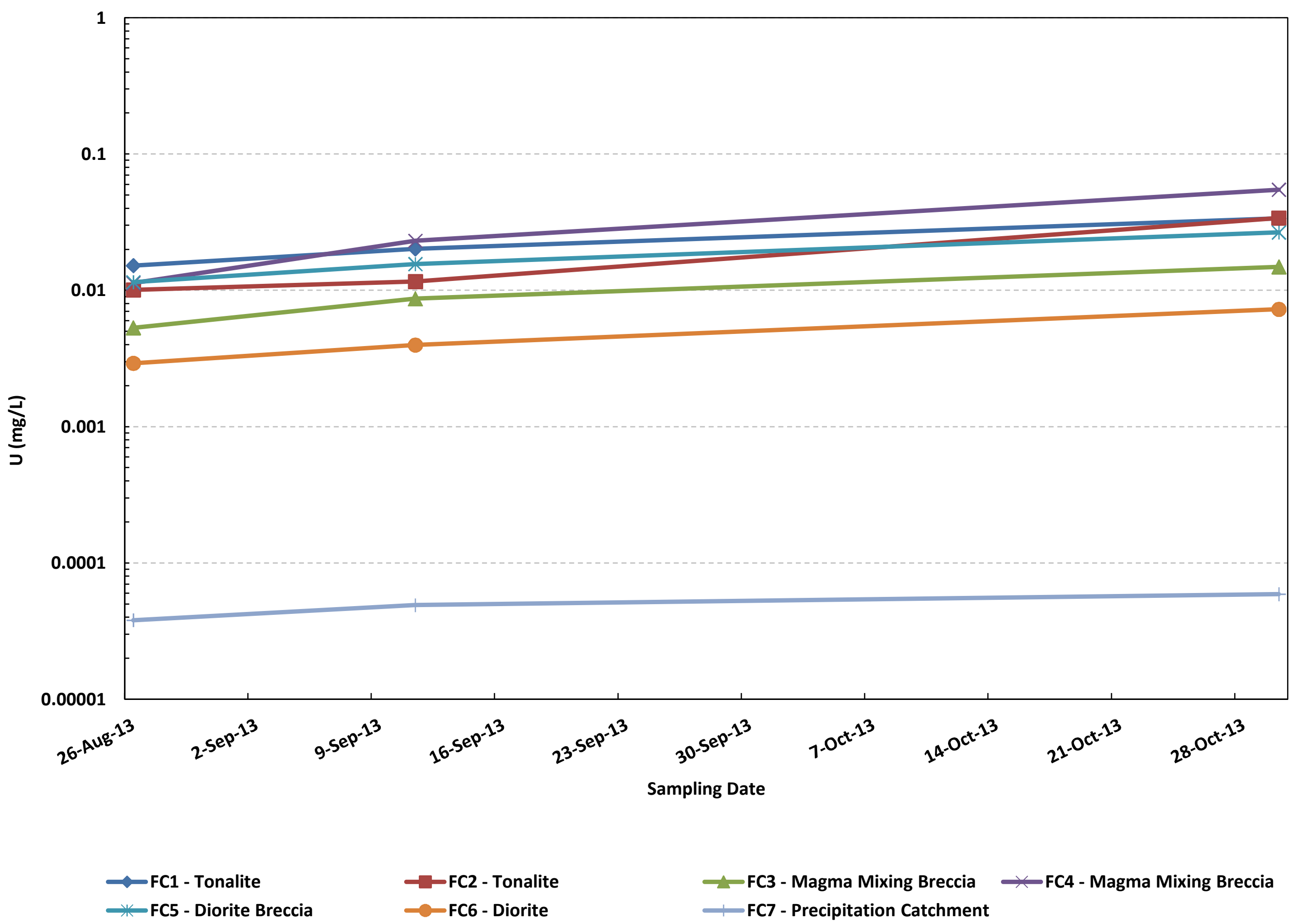
Côté Gold Project

Field Cell
Strontium Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-62



IAMGOLD CORPORATION	amec
Côté Gold Project	
Field Cell Titanium Concentrations	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	GRAPHIC B-63

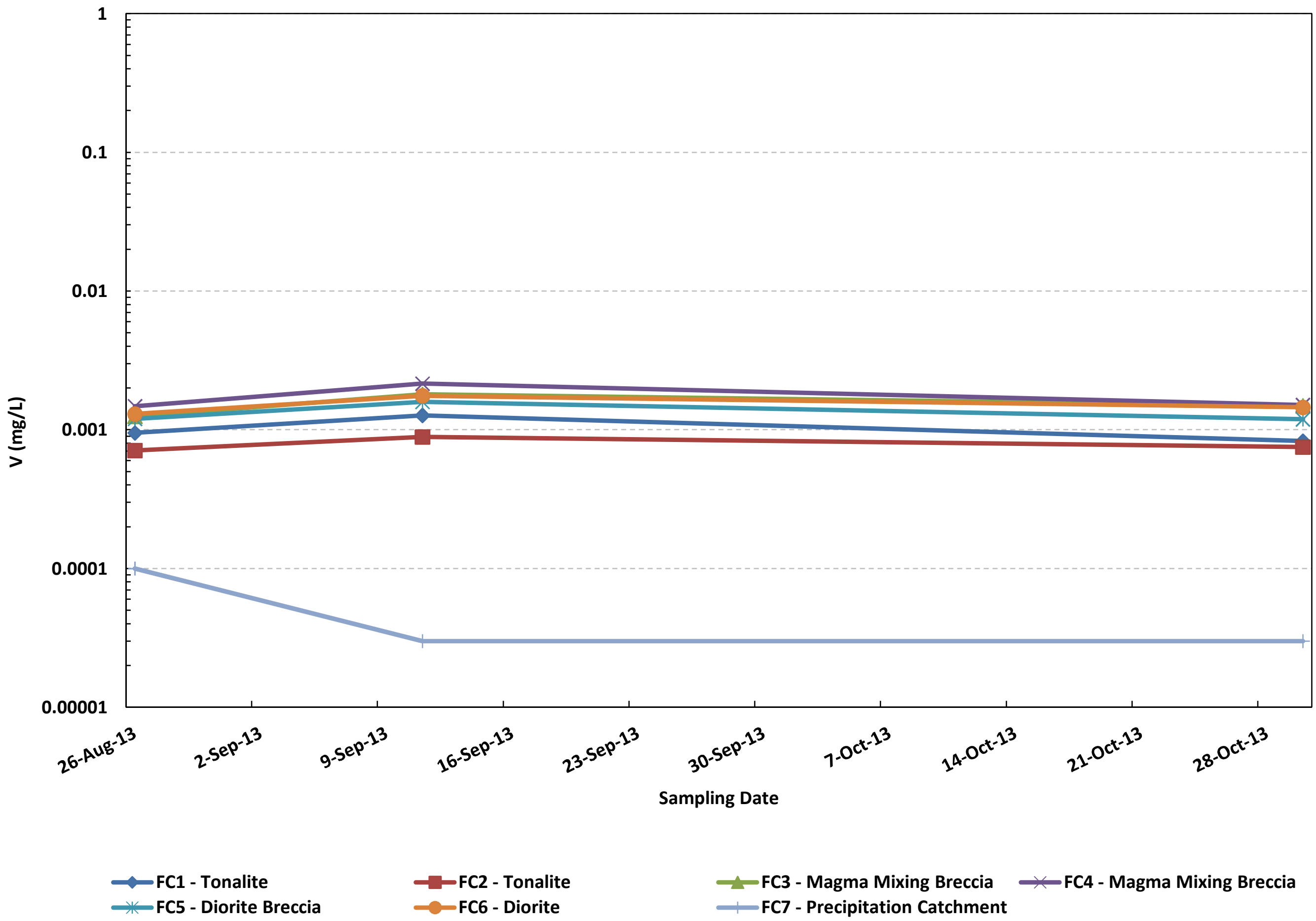


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Uranium Concentrations

Drawn by: LC	Checked by: SW
Date: December 2013	
Project: TC121522	GRAPHIC B-64

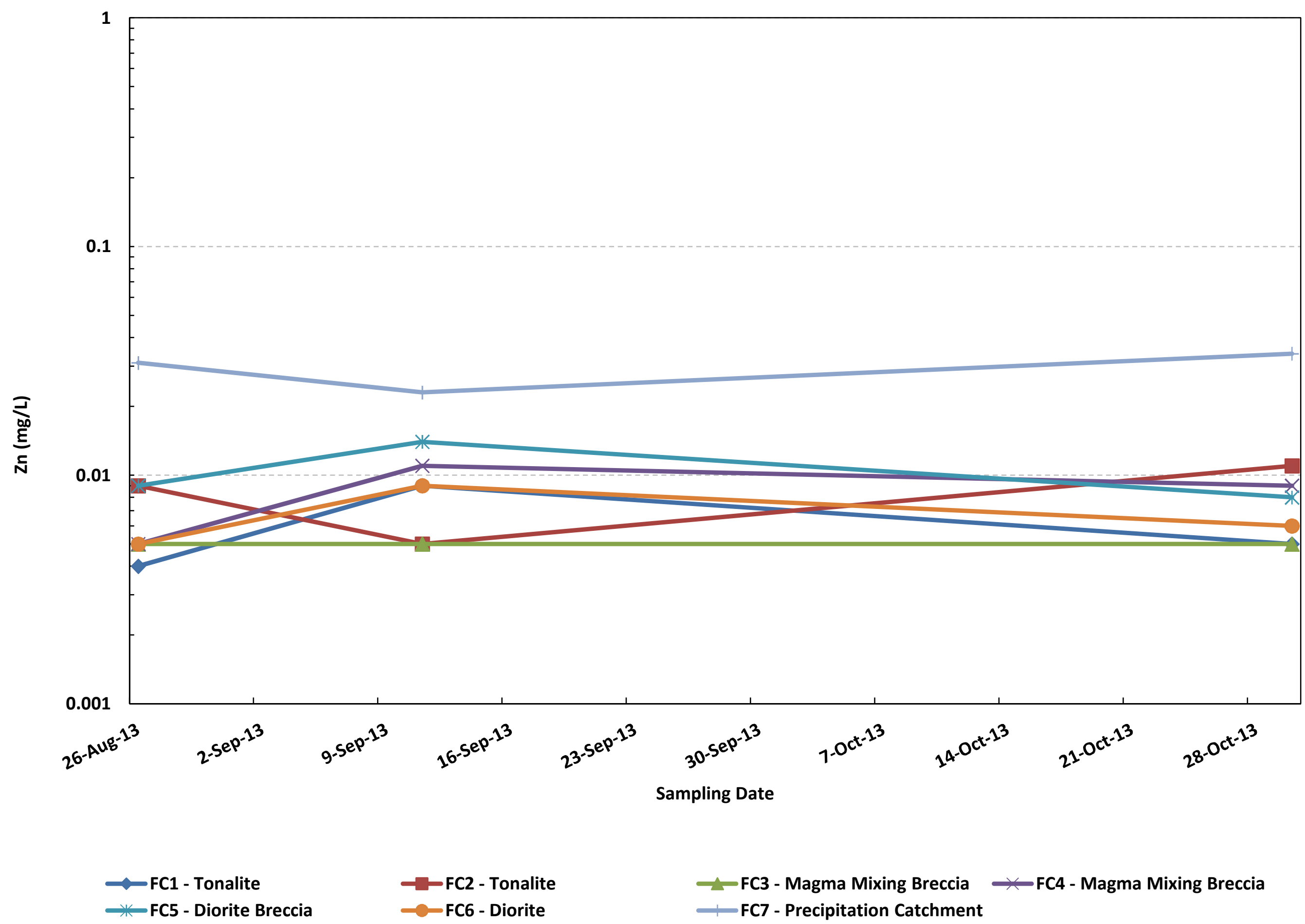


IAMGOLD CORPORATION amec

Côté Gold Project

Field Cell
Vanadium Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-65



IAMGOLD CORPORATION

amec

Côté Gold Project

Field Cell
Zinc Concentrations

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		GRAPHIC B-66

APPENDIX C – QA/QC

QA/QC FOR ACID BASE ACCOUNTING AND LECO CARBON SULPHUR ANALYTICAL RESULTS

Côté Gold Project
Geochemical Characterization Report
December 2013
Project #TC121522

1.0 INTRODUCTION

AMEC completed additional Quality Assurance/Quality Control (QA/QC) measures to identify and resolve potential concerns regarding the use of proxy carbon and sulphur analysis of drill core pulp samples for further Acid Base Accounting (ABA) characterization of mine rock. The program was developed as part of the geochemical baseline metal leaching/acid rock drainage (ML/ARD) characterization study for the Cote Gold Project. The program included a streamlined analytical regimen, namely analysis by the Leco furnace method for carbon and sulphur for determination of the Carbonate Neutralization Potential (Carbonate NP) and Maximum Potential Acidity (MPA).

2.0 PROGRAM SUMMARY

Materials analyzed for this program included original half core exploration pulps previously sampled by IAMGOLD and stored at Accurassay, (Thunder Bay, ON) and remaining half core material sampled from the IAMGOLD core library by AMEC and submitted to SGS Lakefield (Lakefield, ON) in July 2013.

The use of drill core for ABA analysis is an accepted and common industry approach for the characterization of mine rock. The use of pulverized drill core is also an acceptable practice; however differences in storage and sampling methodologies for core and pulp samples may result in some variation between the two sample sets. Measures were built into the geochemical program to validate the use of the archived pulps for proxy determination of Carbonate NP and MPA for mine rock.

The QA/QC program was designed to address:

1) Potential ageing (oxidation) effects in the stored pulp samples;

2) Sub-sample variability (nugget effect) between pulps and core sources; and,

3) Intra-laboratory analytical checks.

The program included analyses of sub-sets of sample pairs to validate the approach of using pulps in place of drill core samples. The initial QA/QC assessment identified scatter among the total sulphur content of the drill core samples relative to the corresponding stored pulp samples. Checks were undertaken to address the observed lack of reproducibility in total sulphur content between the drill core and pulp samples.

The complete QA/QC program included the following components:

- Verification of sample handling, storage, splitting and shipping procedures with Accurassay and SGS laboratories.

- ABA of drill core paired with pulps completed by SGS Lakefield (35 samples);
- Analysis of pulp samples for carbon and sulphur by Leco induction furnace (Leco) conducted at Western University (London, ON) correlated with carbon and sulphur analysis for drill core samples conducted by SGS Lakefield (129 samples);
- Laboratory cross checking of results for pulp samples (samples analyzed at Western University were sent to SGS Lakefield) (35 samples);
- Analyses of drill core pulp splits for carbon and sulphur by Leco conducted by SGS Lakefield (5 splits for 6 samples); and,
- Analyses of pulp splits for carbon and sulphur by Leco conducted by SGS Lakefield, Western University and Accurassay (58 samples).

3.0 DRILL CORE VS PULPS

3.1 ABA Comparison

Checks were built into the analytical program to verify the use of stored pulps instead of drill core. A total of 35 pulp samples selected by AMEC, were retrieved from storage in Thunder Bay by Accurassay staff, and shipped to SGS Lakefield for ABA analysis. The selected pulp samples corresponded to drill core samples that were also submitted to SGS Lakefield for ABA analyses.

The carbon content between the core and pulp samples had strong agreement (Graphic C-1), however the sulphur content exhibited wide scatter among the positive correlation (Graphic C-2). The scatter in total sulphur content showed no evidence that the pulp or core samples had either consistently higher or lower sulphur content.

The total sulphur content of the drill core and pulp samples were compared to the sulphide sulphur content (Graphic C-3). The analysis suggests that the sulphur was mainly in the form of sulphide sulphur for both the drill core and pulp samples, particularly for samples with sulphur content greater than 0.1%. The overall analysis suggests that ageing does not appear to be a factor in the Leco sulphur discrepancies.

3.2 Leco Carbon and Sulphur Comparison

A total of 129 drill core samples were analyzed for ABA that corresponded to pulp samples analyzed for carbon and sulphur by Leco. Samples analysed by Leco at Western University were performed on approximately 50 to 75 mg of sample in duplicates. Samples analyzed by Leco and conducted at SGS Lakefield were completed on single 500 mg samples with blank and duplicate checks after approximately 10 samples.

Similar to ABA analysis of drill core and pulps, the total carbon content between the core and pulp samples had strong agreement about the 1 to 1 line (Graphic C-4). The correlation coefficient for the carbon content between the drill core and pulp samples was approximately

0.8. The correlation between total sulphur for the drill core and pulp samples had some variation resulting in a weak positive correlation (Graphic C-5). The total sulphur content between drill core and pulps was weakly positively correlated, with a correlation coefficient of approximately 0.2.

A total of 26 pulp samples had sulphur contents at or less than the method detection limit (MDL) of 0.01%. A subset of these pulp samples at MDL exhibited skewed results with detectable sulphur content in the drill core samples in the range of 0.05 to 0.2%. This was interpreted to be related to the lower mass of analysis completed by the Western laboratory combined with the low and heterogeneous nature of the sulphur in these samples. All pulp samples with sulphur content less than the MDL were non-potentially acid generating (NPAG). Removal of pulp sample analyses reported at or below the 0.01% MDL is indicated as a conservative measure given this observation.

The total carbon content from the pulps was determined to be reasonable for the estimate of Carbonate NP. The observed variability in the Leco sulphur data was likely a result in the difference in the total sample mass analyzed by each of the laboratories. The mass of sample analyzed at Western University was approximately 20 to 30% of that used at SGS Lakefield, and may have exaggerated the effects of heterogeneity and/or nugget effects between samples.

Variation in sulphur content was not definitely explained by the QA/QC checks, and additional testing was undertaken to identify potential sources of discrepancy in the laboratory results.

4.0 INTRA-LABORATORY COMPARISON

Pulp samples (34) analyzed by Leco at Western University (London, ON), were shipped to SGS Lakefield (ON) to assess disagreement (if any) in the analytical results between the two certified laboratories.

The results for total carbon content between the two laboratories were similar (Graphic C-6). One sample analyzed at Western University had concentrations at instrument detection (0.01%) whereas the same sample analyzed by SGS Lakefield had a total carbon content of 0.8%. The results for total sulphur content between the two laboratories were also strongly comparable (Graphic C-7).

The intra-laboratory assessment suggested that the variability in total sulphur content was likely not explained by inferior analytical operations by any one laboratory.

5.0 SAMPLING VARIABILITY CHECKS

A program was developed to determine if the variability in total sulphur content could be explained by heterogeneity within the mine rock. The program included assessment of variability within the drill core including variability within the sub-sampling of the pulps and core.

5.1 Drill Core Sampling Variability

Six drill core samples were selected to represent the various rock classifications, and to span the range in total carbon and total sulphur content of the mine rock. The drill core was crushed, homogenized and split into quarters. The samples were then pulverized and analyzed by Leco for carbon and sulphur content by SGS Lakefield. The results were combined with previously analyzed carbon and sulphur content results for splits of the same core, resulting in a total of five spits for each drill core for comparison.

The results of the drill core sub-sampling comparison are shown in Graphic C-8. The relative standard error (standard error/mean) ranged between 1% and 11% for the total carbon content of the drill core. The relative standard error ranged between 3% and 27% for the total sulphur content of the six drill core samples. The results suggest that drill core splitting may result in relatively low variability in the total carbon content of the drill core samples relative to the variability in total sulphur content. The results suggest that sulphur content at a small scale (within the drill core) is likely heterogeneously distributed and may be due to a nugget effect.

5.2 Pulp Sub-Sampling Variability

The pulps were stored at Accurassay, and were homogenized and shipped for analysis to Western University or SGS Lakefield, or were analyzed at Accurassay for Leco carbon and sulphur. A total of 58 pulp samples were split and analyzed by Leco by two or three of the aforementioned laboratories.

The results are shown in Graphics C-9 through C-12. Variability was observed among all sub-samples for total carbon and total sulphur content. In general, the range of sulphur content was greater relative to the ranged in carbon content.

Of these samples, 12 of the samples were split three times and analyzed separately by all three laboratories. The relative standard error ranged from 1% to 29% for the total carbon content of the 12 sub-samples. The relative standard error ranged from 6% to 58% for total sulphur content, where five of the 12 samples had relative standard errors greater than 50%.

5.3 Overall Sampling Variability

The five drill core sample splits were compared to the pulp sub-samples that corresponded to that same drill core. The overall comparison for total carbon content between the core splits and pulp sub-samples are shown in Graphic C-13, and the total sulphur contents are shown in Graphic C-14.

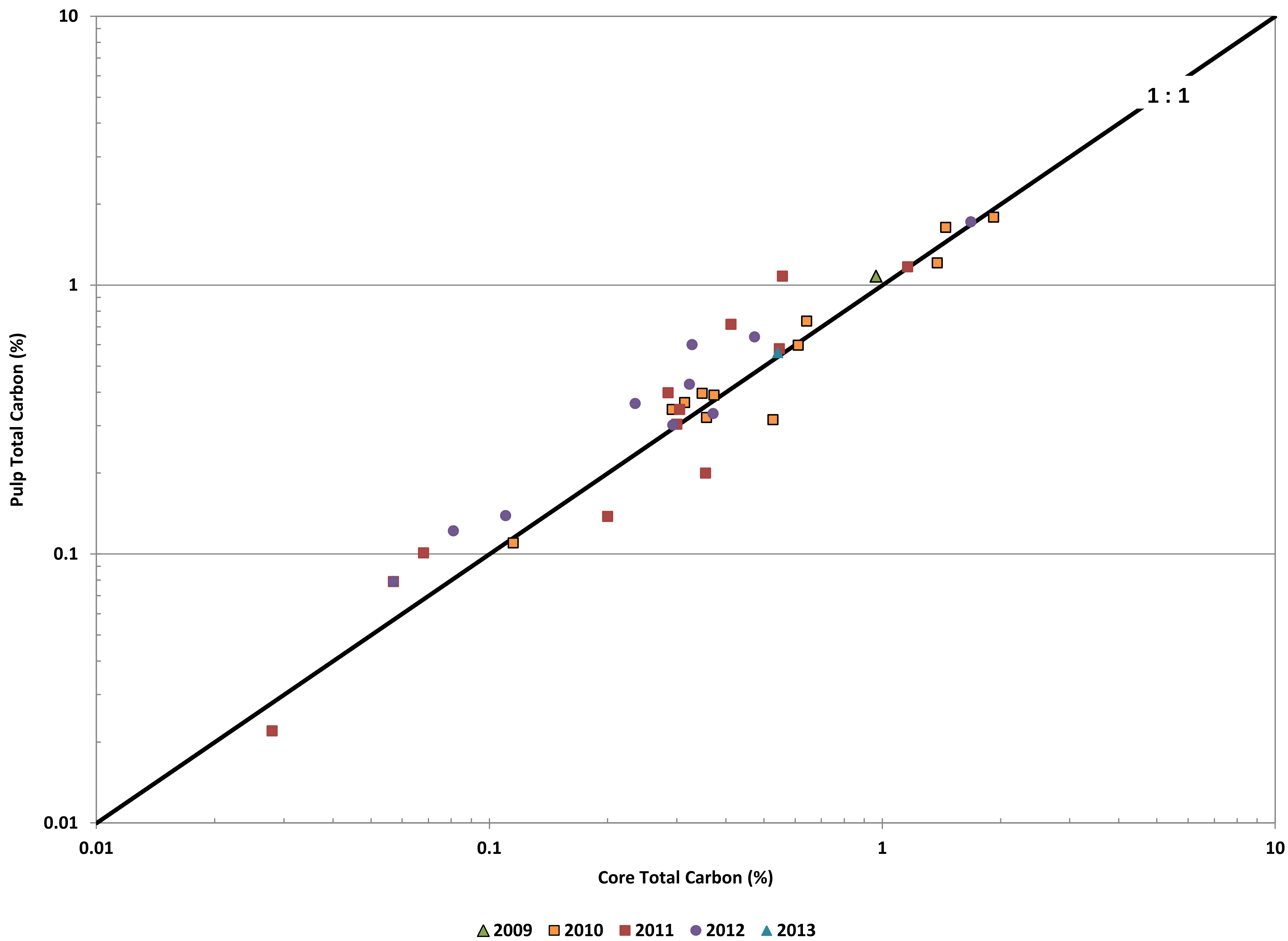
The carbon content of the pulp sub-samples were similar to the range of carbon content of the drill core samples, with some pulp samples having slightly higher or lower carbon content than the drill core samples.

The sulphur content of the pulp sub-samples exhibited greater variability than the drill core splits for most samples. The sulphur content of the pulp samples were lower relative to the drill core samples for two samples, and were higher relative to the drill core samples for two samples. The sulphur content of the pulp sub-samples bracketed the total sulphur content of the drill core splits for the two remaining samples.

The results reveal that the drill core samples exhibit less variability in total sulphur content than the pulp samples. The sub-sampling methodology employed for the pulps may result in the increased heterogeneity in the sample splits compared to the sampling methodology employed for the drill core.

6.0 SUMMARY OF FINDINGS

- Storage conditions of the pulp samples were acceptable and do not show evidence of ageing;
- The intra-laboratory analytical assessment showed reliable reproducibility between the laboratories;
- The sulphur content generally exhibits low variability in the intra-laboratory comparison, but moderate variability among checks between pulps and cores.
-
- Variability in total sulphur content was greater than that for the total carbon content for both the drill core and pulp samples;
- A subset of pulp samples exhibited high variability in sulphur results in comparison to core samples which was interpretted to be due to the low sulphur content and lower analytical sub-sample size of this analysing laboratory;
- Sulphur content at a small scale (within the drill core) is likely heterogeneously distributed and may be due to a nugget effect;
- The overall comparison between drill core and pulp samples revealed similar range in Carbonate NP/MPA ratios, and were suitable for the determination of acid generating potential of the mine rock; and,
- Due to the high variability in Leco sulphur results at and below the 0.01% detection limit for pulps, this subset of samples from the pulp data set were removed from further analysis on a conservative basis to avoid possible over-representation of low AP samples in the data.

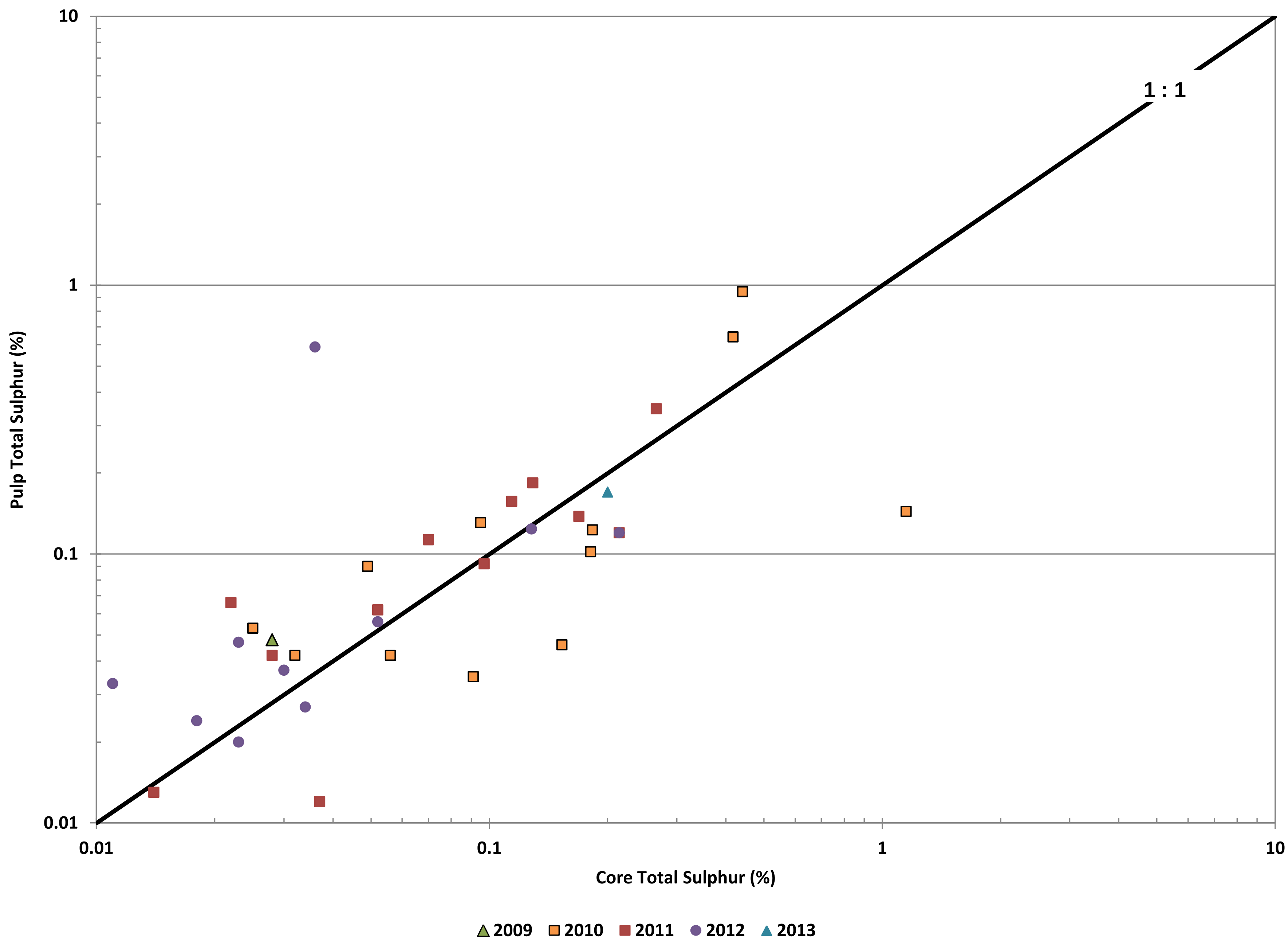


IAMGOLD amec

Côté Gold Project

Core vs Pulp Total Carbon from ABA

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-1

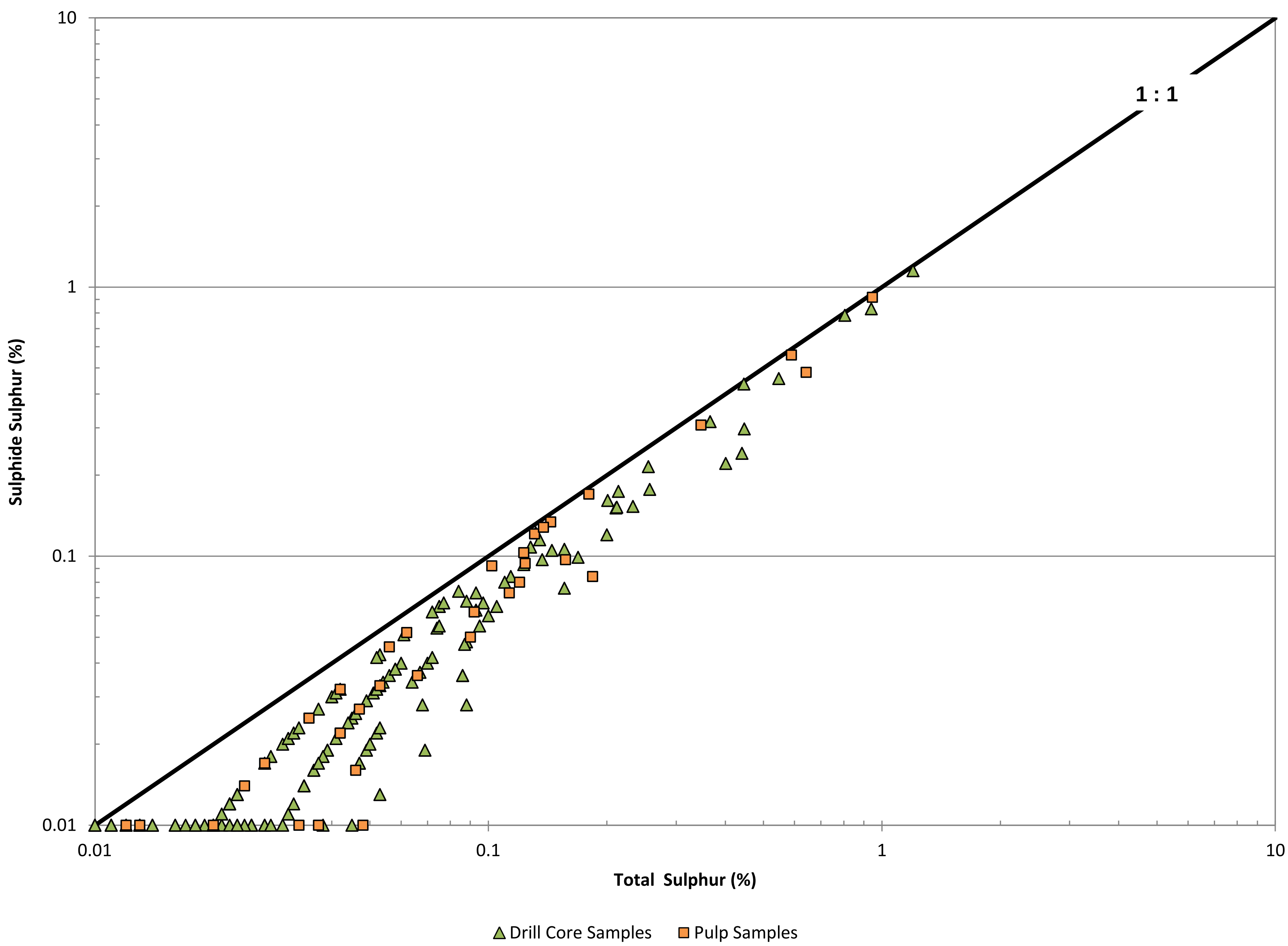


IAMGOLD amec

Côté Gold Project

Core vs Pulp Total Sulphur from ABA

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-2



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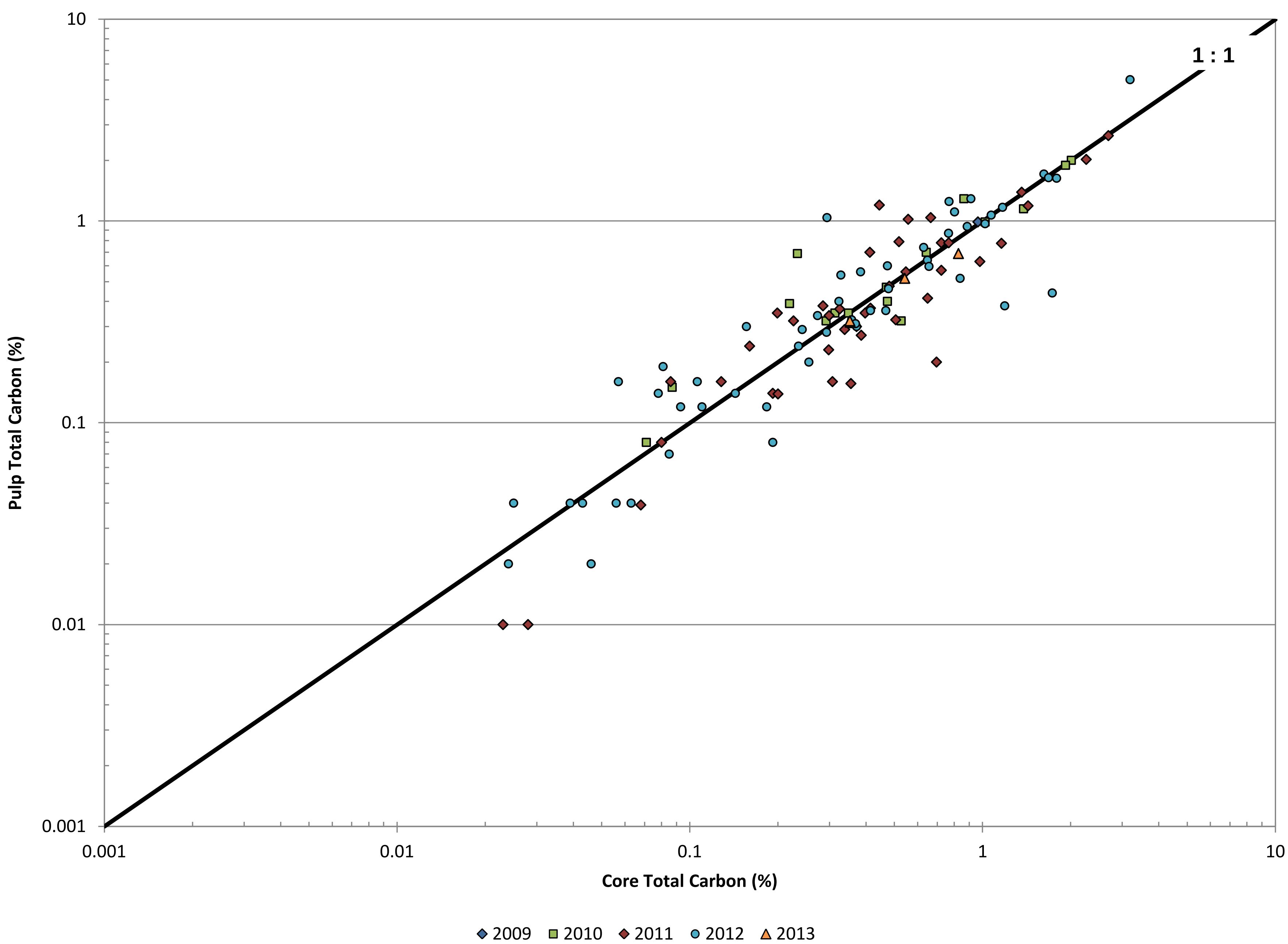
Côté Gold Project

Core and Pulp Total Sulphur vs Sulphide Sulphur

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-3

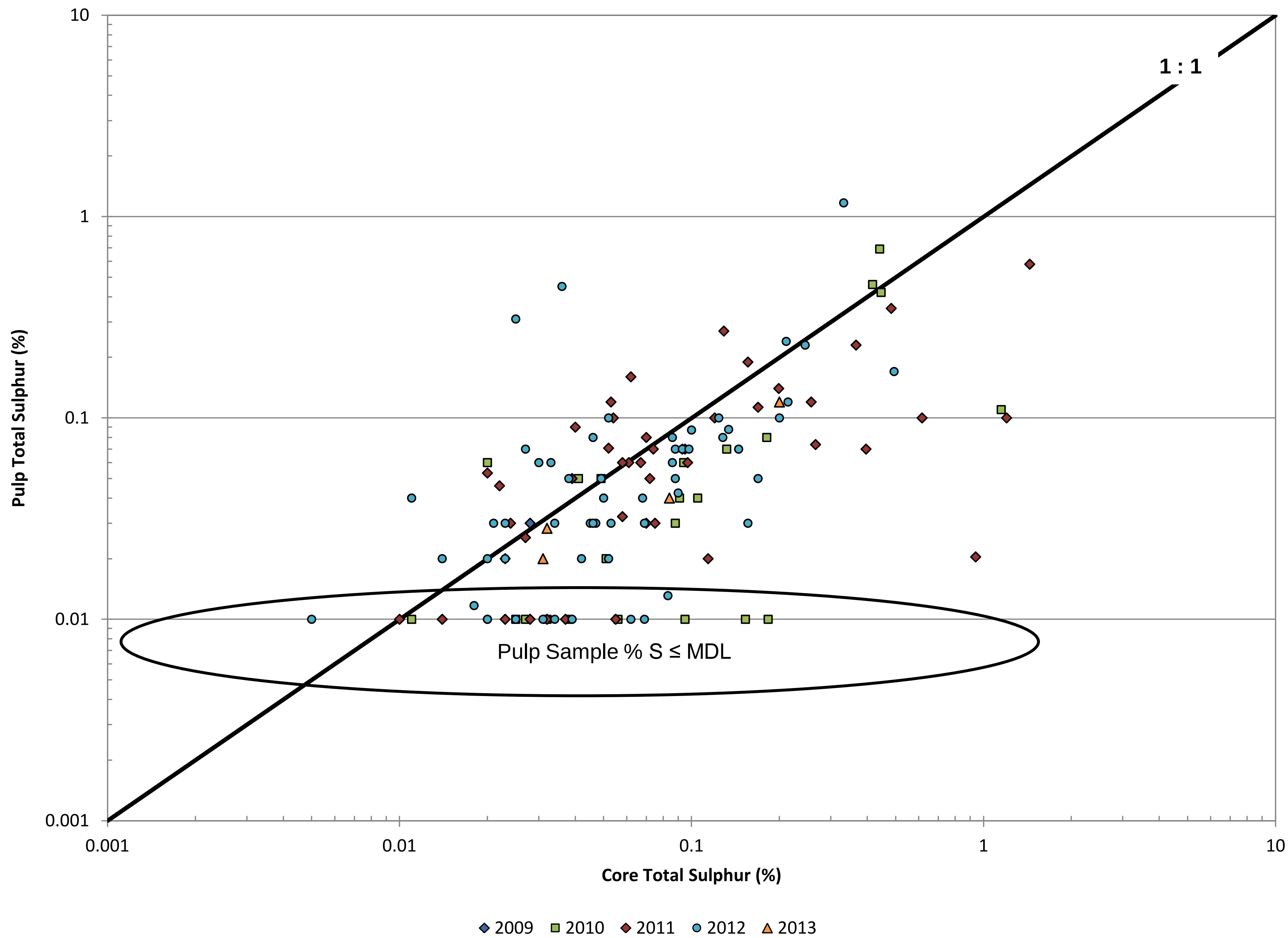


IAMGOLD amec

Côté Gold Project

Core vs Pulp Total Carbon from Leco

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-4

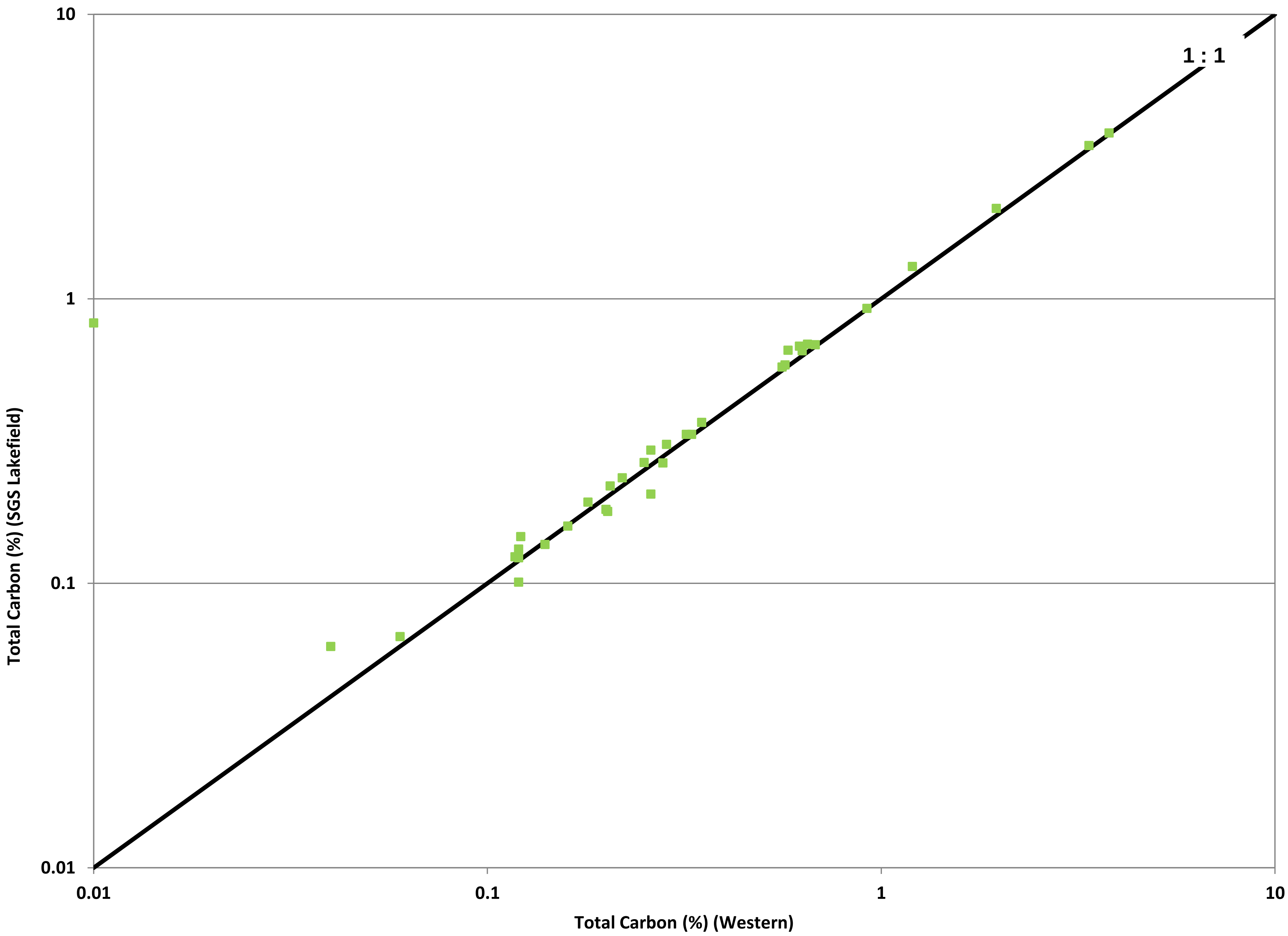


IAMGOLD amec

Côté Gold Project

Core vs Pulp Total Sulphur from Leco

Drawn by: KS Checked by: SW	Date: December 2013
Project: TC121522	Graphic C-5

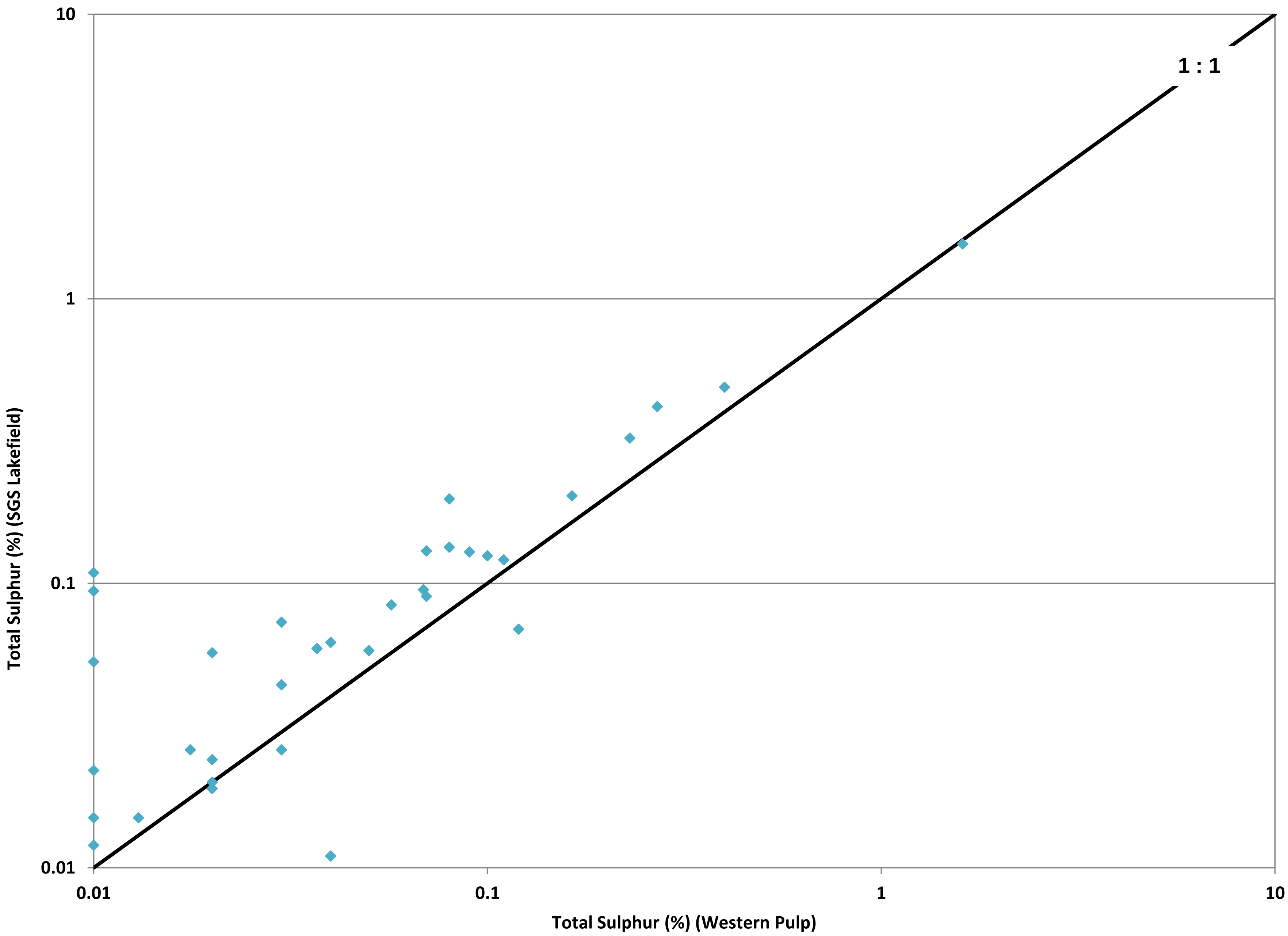


IAMGOLD amec

Côté Gold Project

Pulps Total Carbon Intra-Laboratory Comparison

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-6

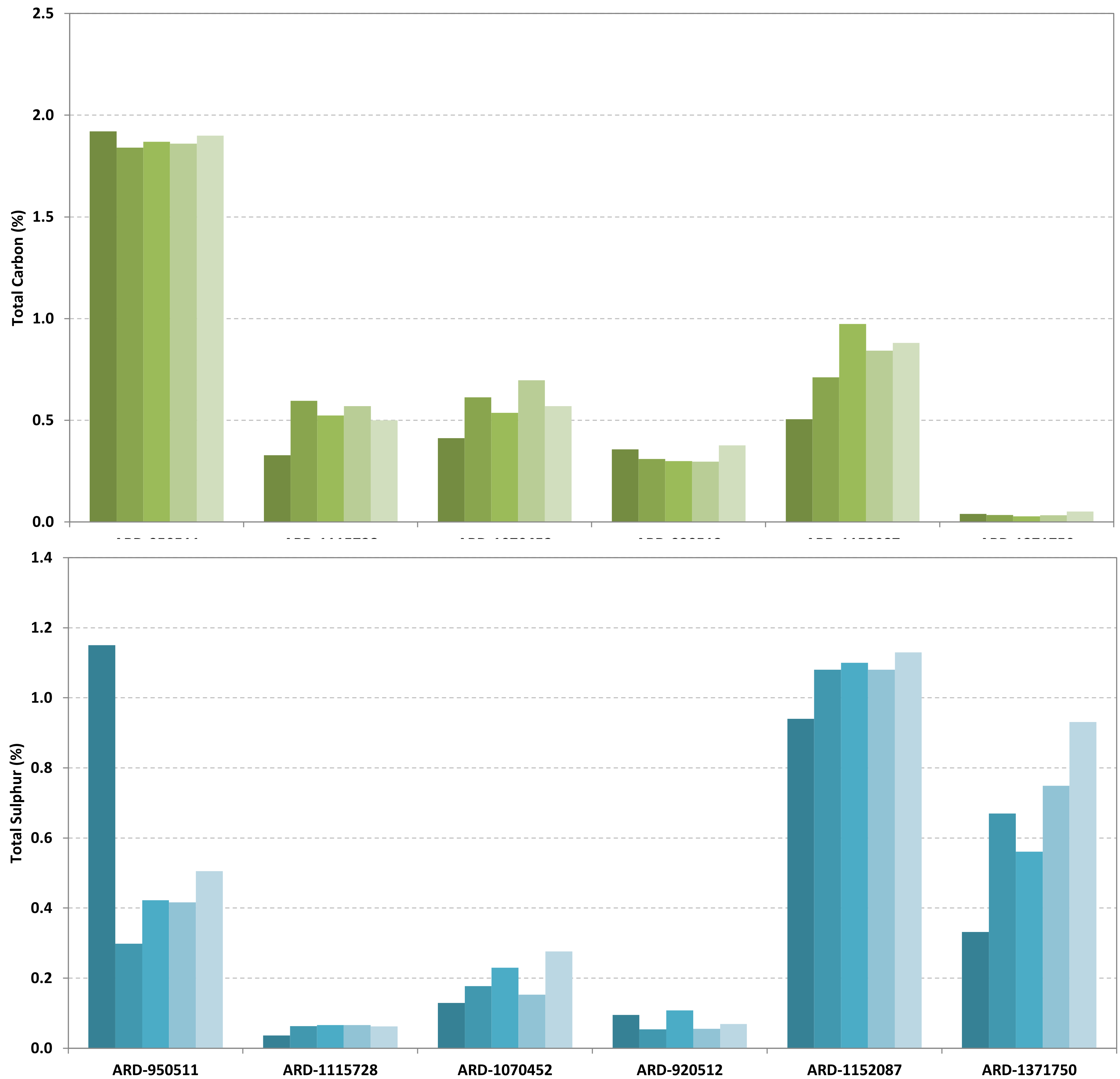


IAMGOLD amec

Côté Gold Project

Pulps Total Sulphur Intra-Laboratory Comparison

Drawn by: KS	Checked by: SW
Date: December 2013	
Project: TC121522	Graphic C-7

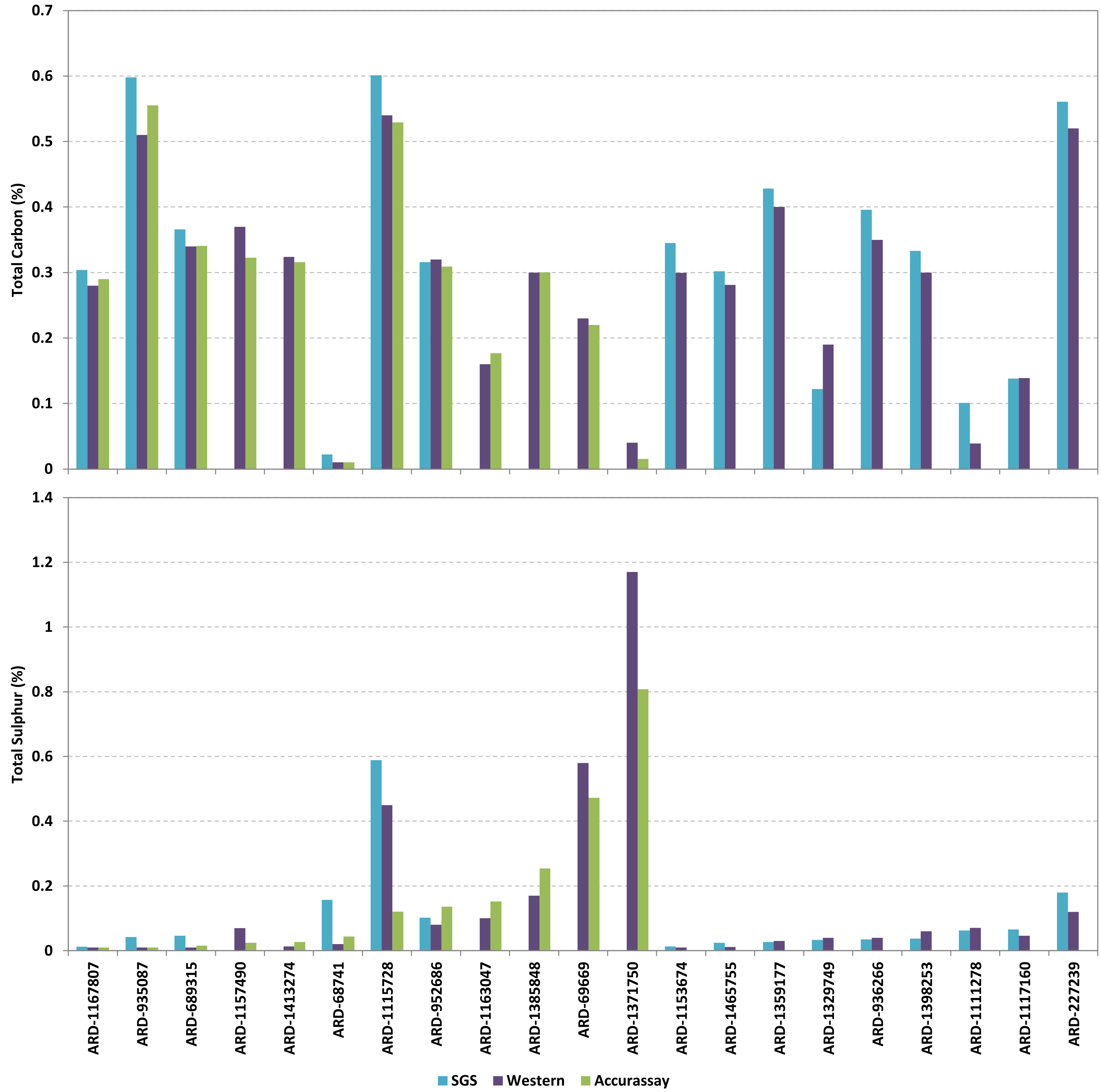


IAMGOLD amec

Côté Gold Project

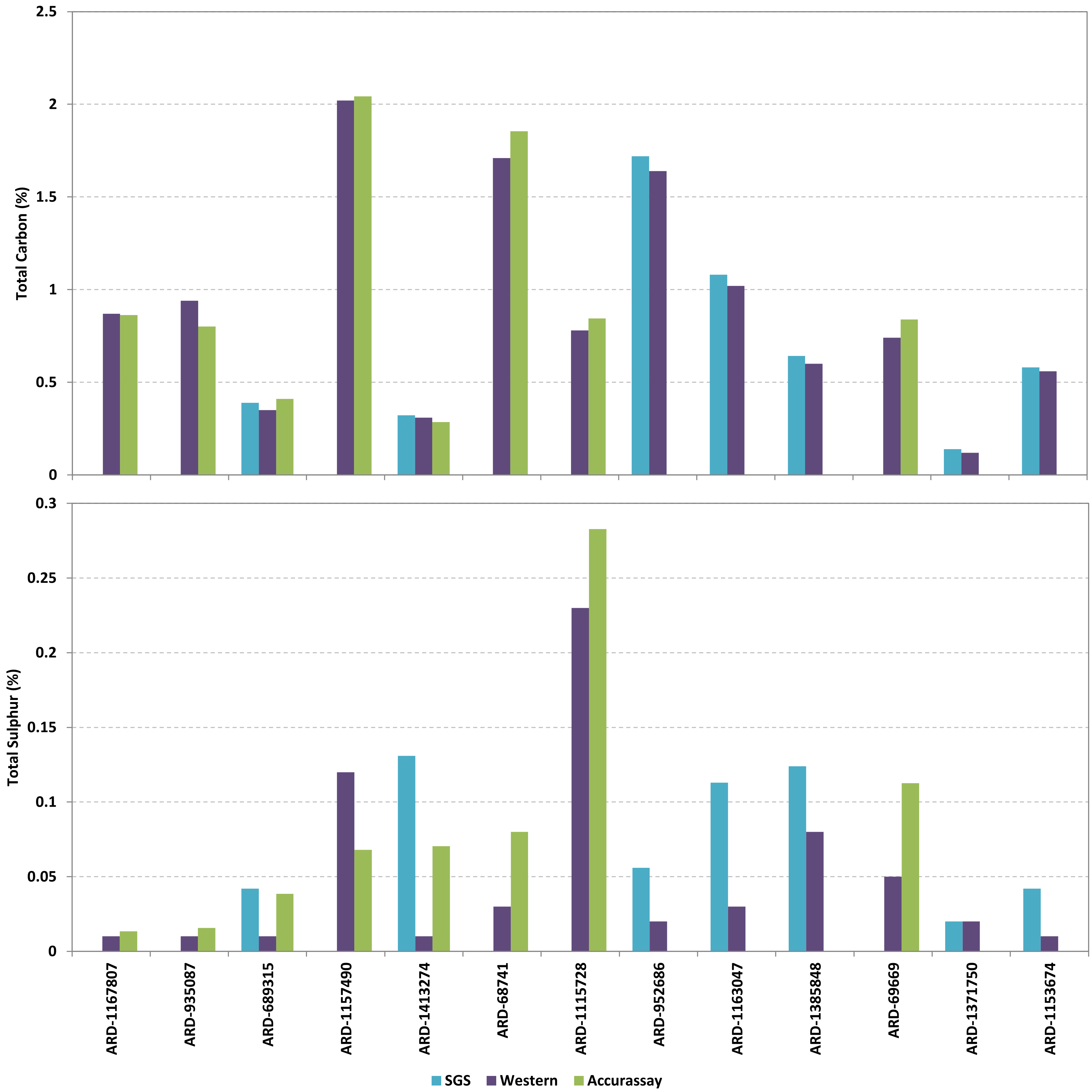
Drill Core Split Samples

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-8



IAMGOLD amec

Côté Gold Project	
Pulp Split Samples (Tonalite)	
Drawn by: KS / Checked by: SW	Date: December 2013
Project: TC121522	Graphic C-9

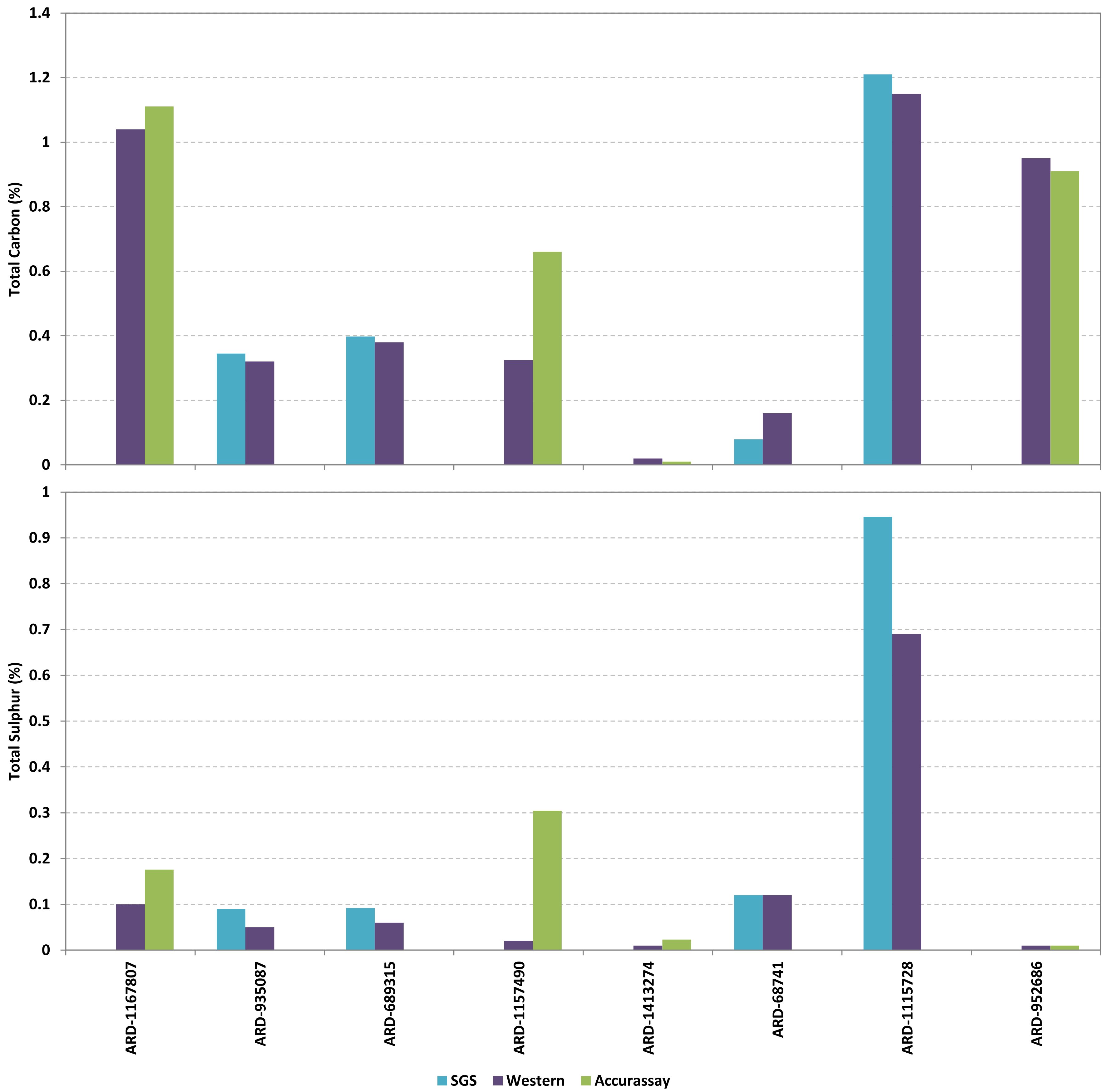


IAMGOLD amec

Côté Gold Project

Pulp Split Samples (Diorite)

Drawn by: KS Checked by: SW	Date: December 2013
Project: TC121522	Graphic C-10



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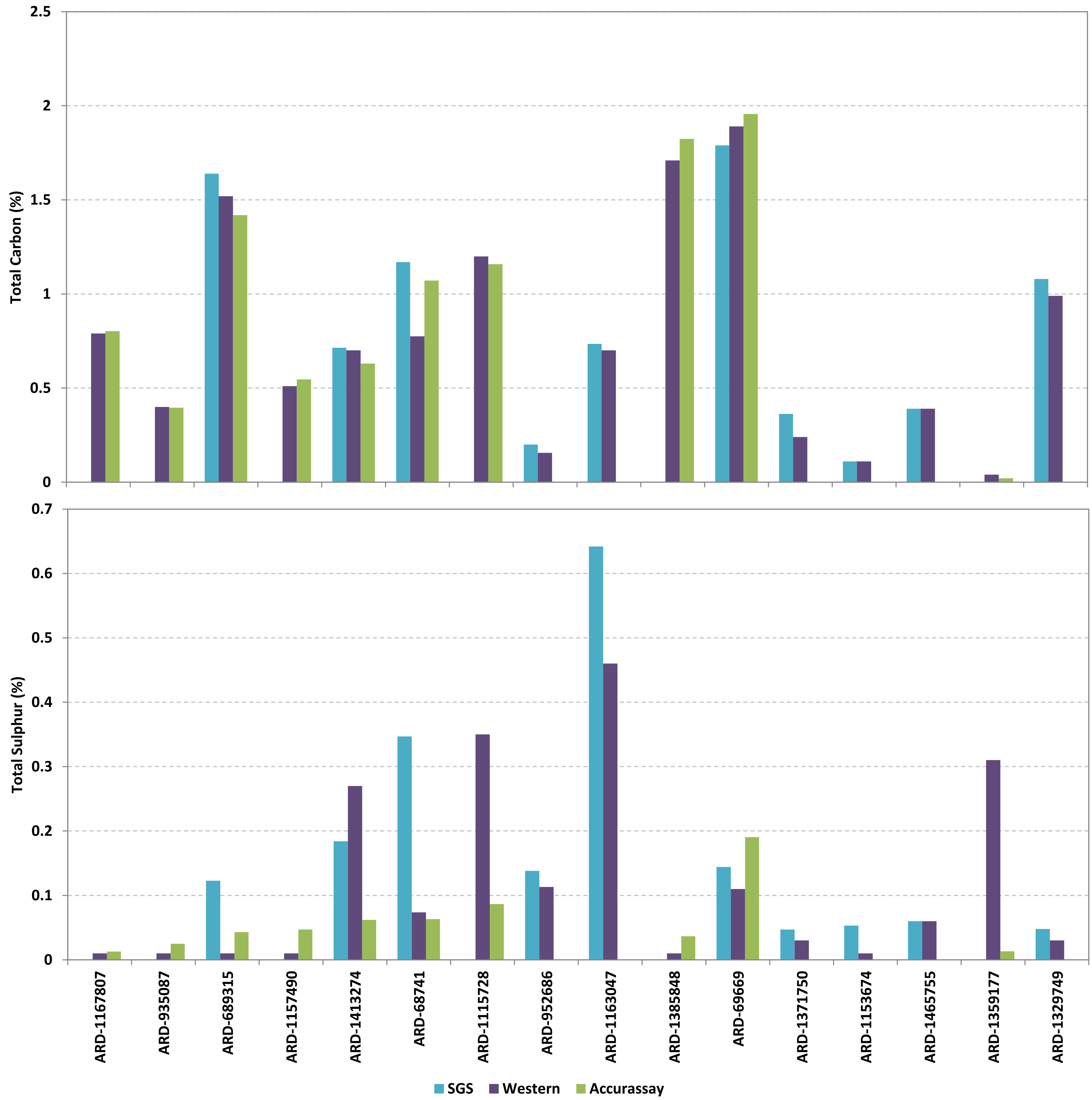
Côté Gold Project

Pulp Split Samples (Breccia)

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-11



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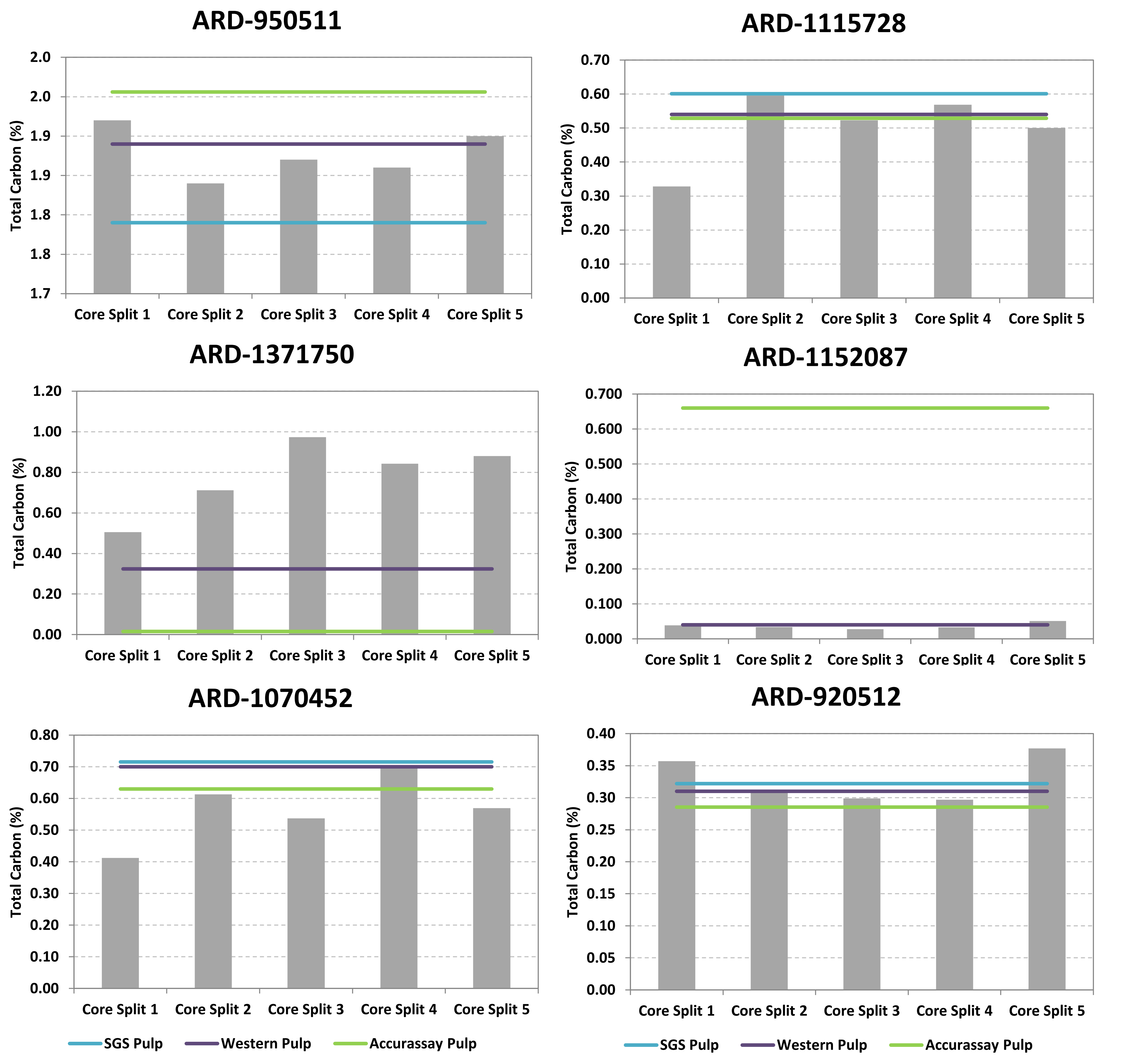
Côté Gold Project

Pulp Split Samples (Other Rock Groups)

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-12



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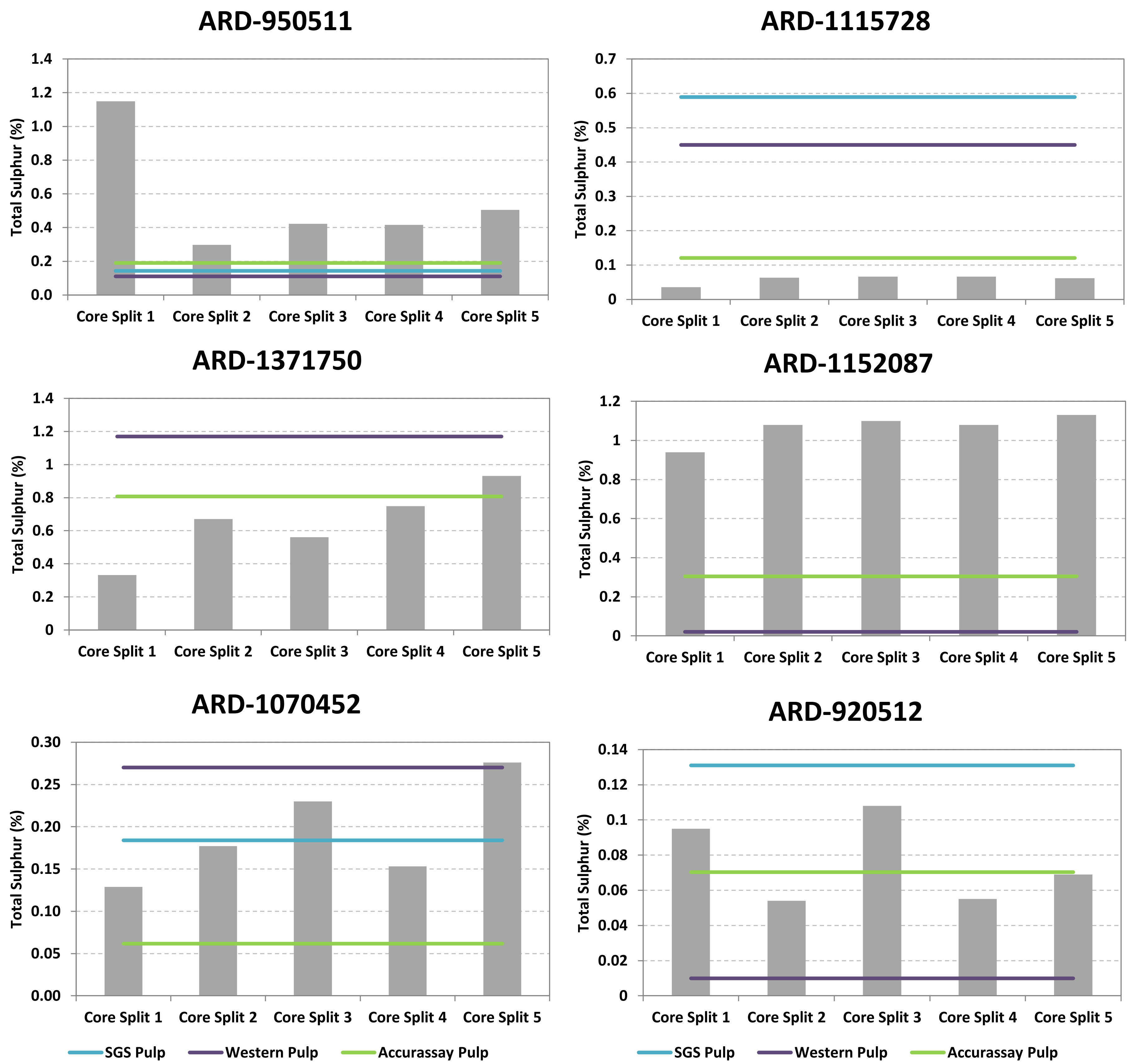
Côté Gold Project

Drill Core and Pulp Samples Total Carbon Variability

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-13



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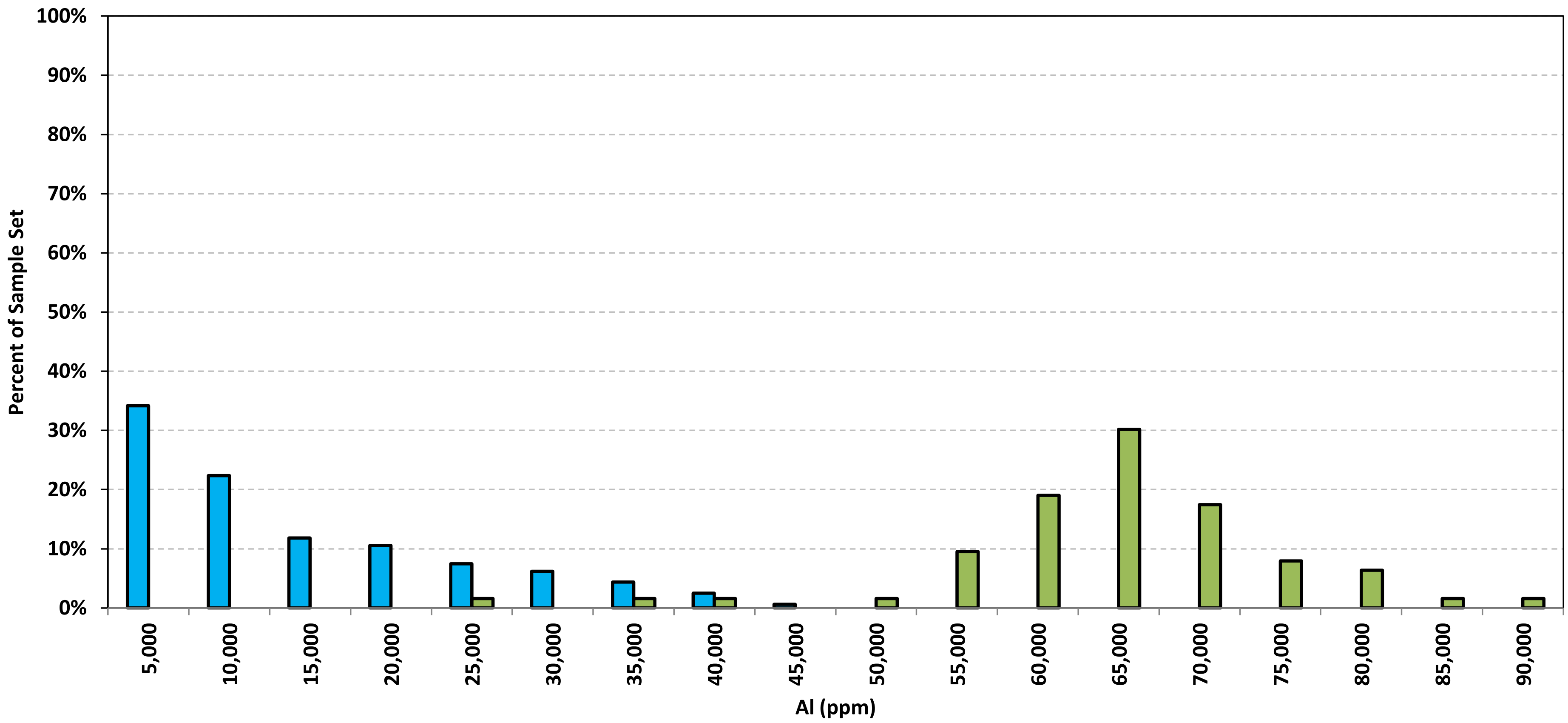
Côté Gold Project

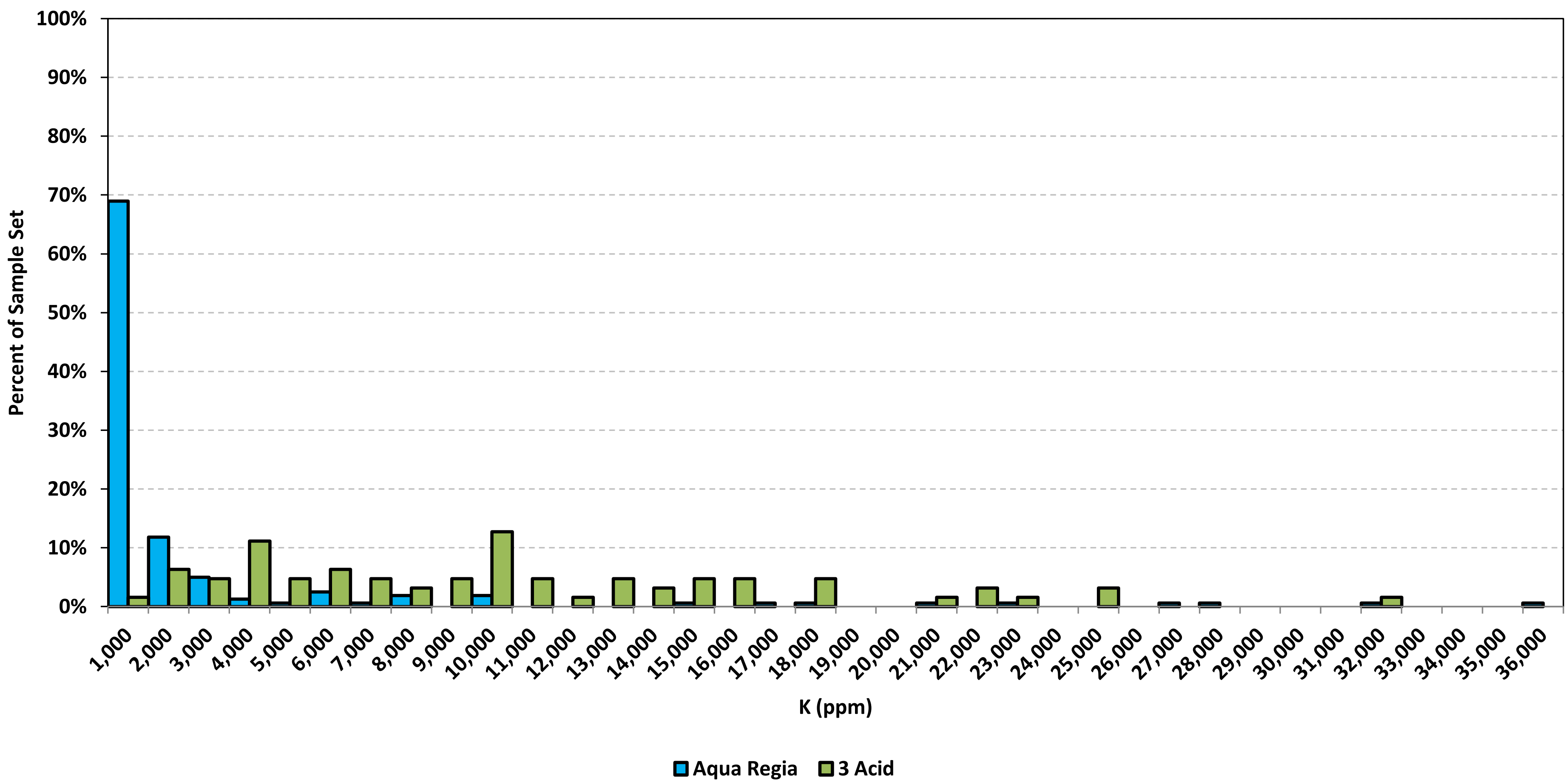
Drill Core and Pulp Samples Total Sulphur Variability

Drawn by: KS	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-14

ELEMENTAL CONTENT FREQUENCY DISTRIBUTION COMPARISON FOR 3 ACID AND AQUA REGIA

Côté Gold Project
Geochemical Characterization Report
December 2013
Project #TC121522



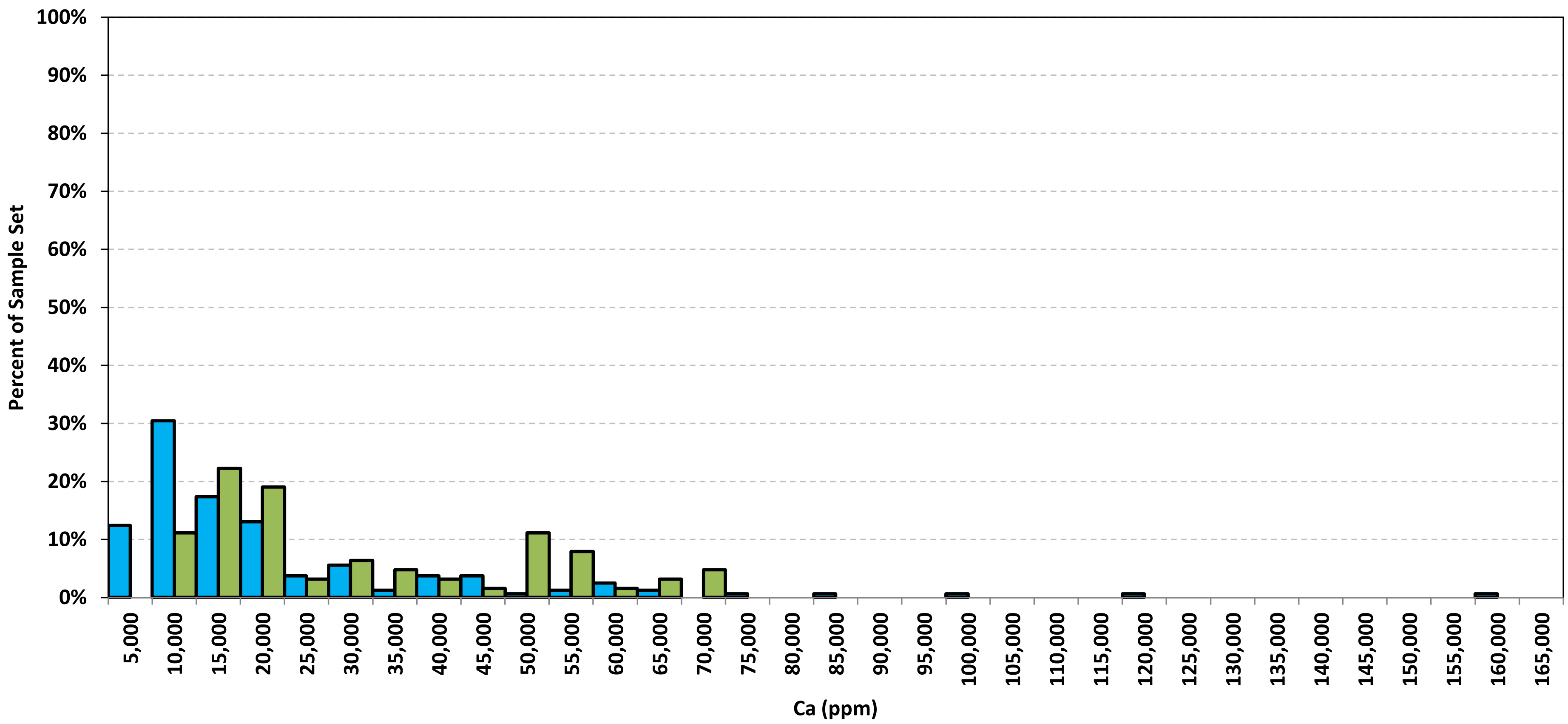


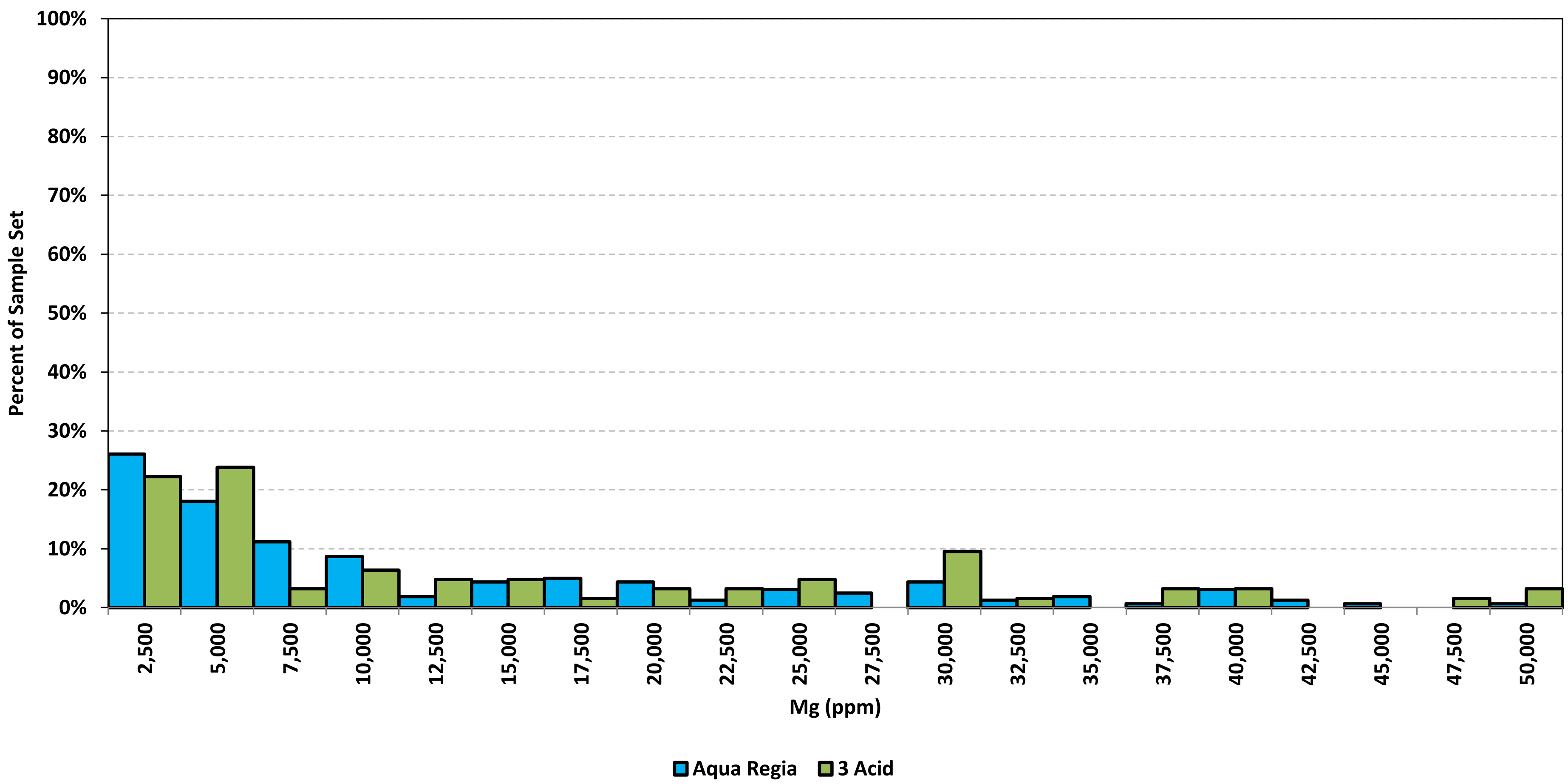
IAMGOLD amec

Côté Gold Project

Elemental Content Frequency Distribution for Aluminum & Potassium

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-15



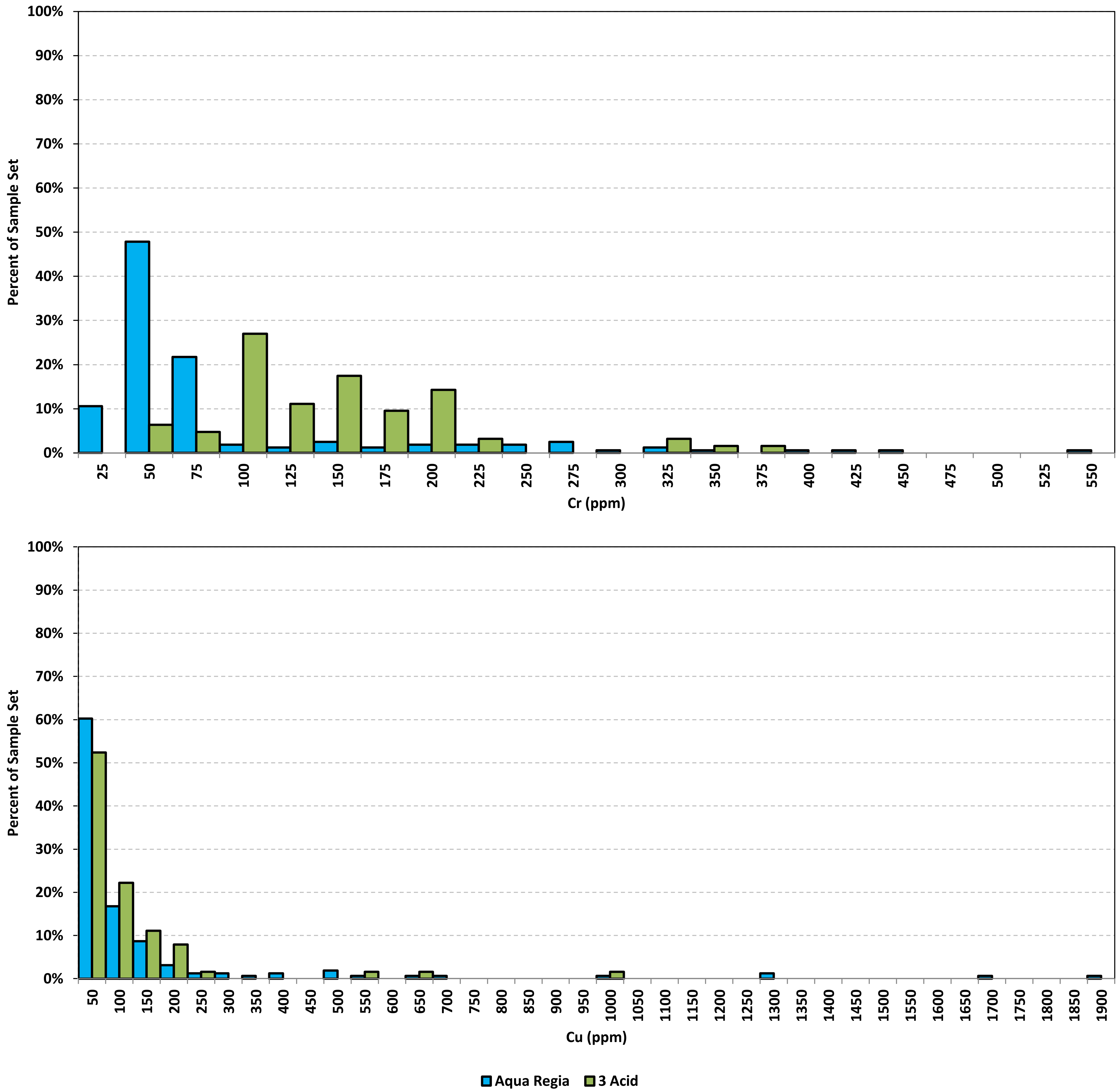


IAMGOLD amec

Côté Gold Project

Elemental Content Frequency Distribution for Calcium & Magnesium

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-16

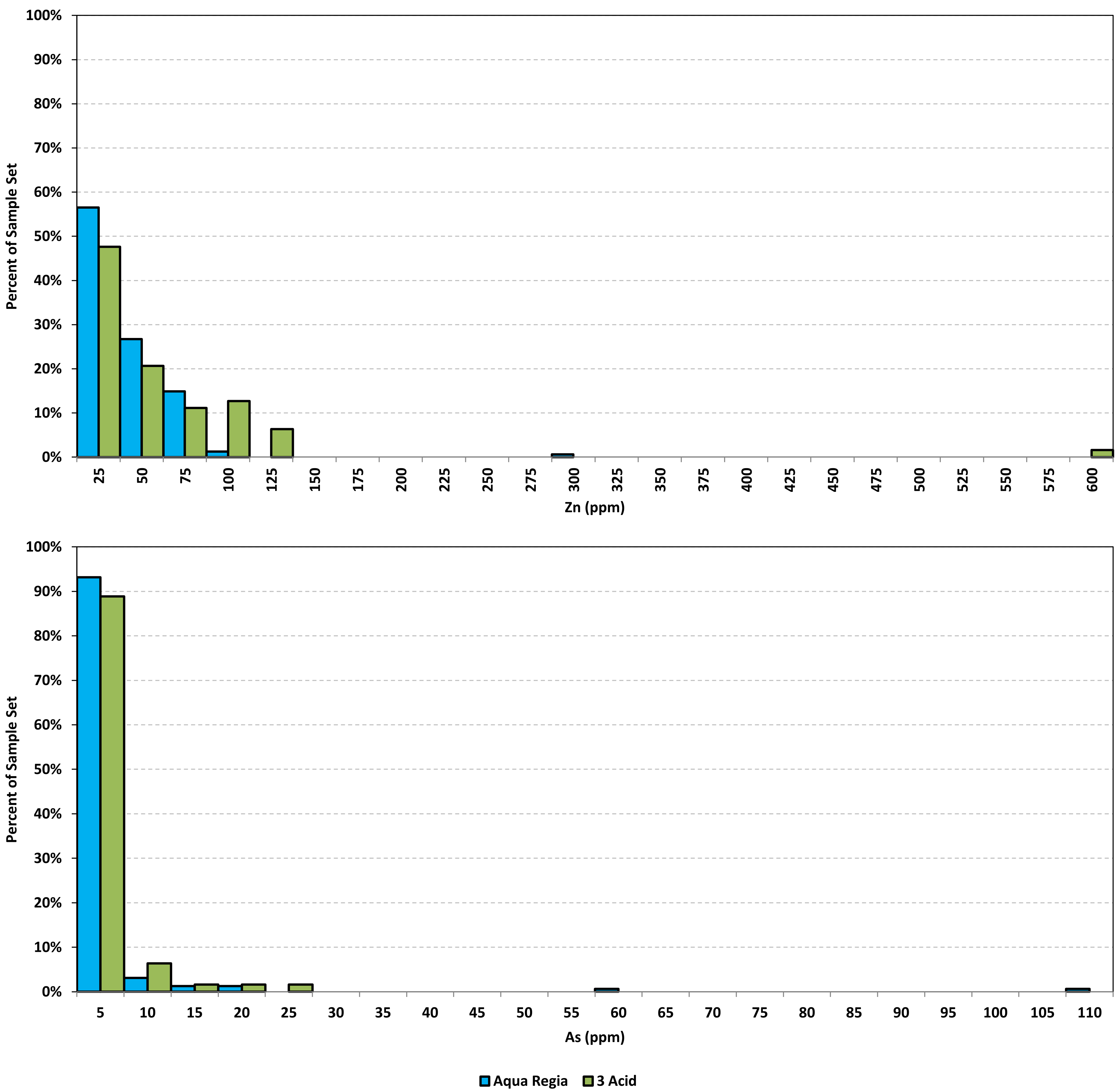


IAMGOLD amec

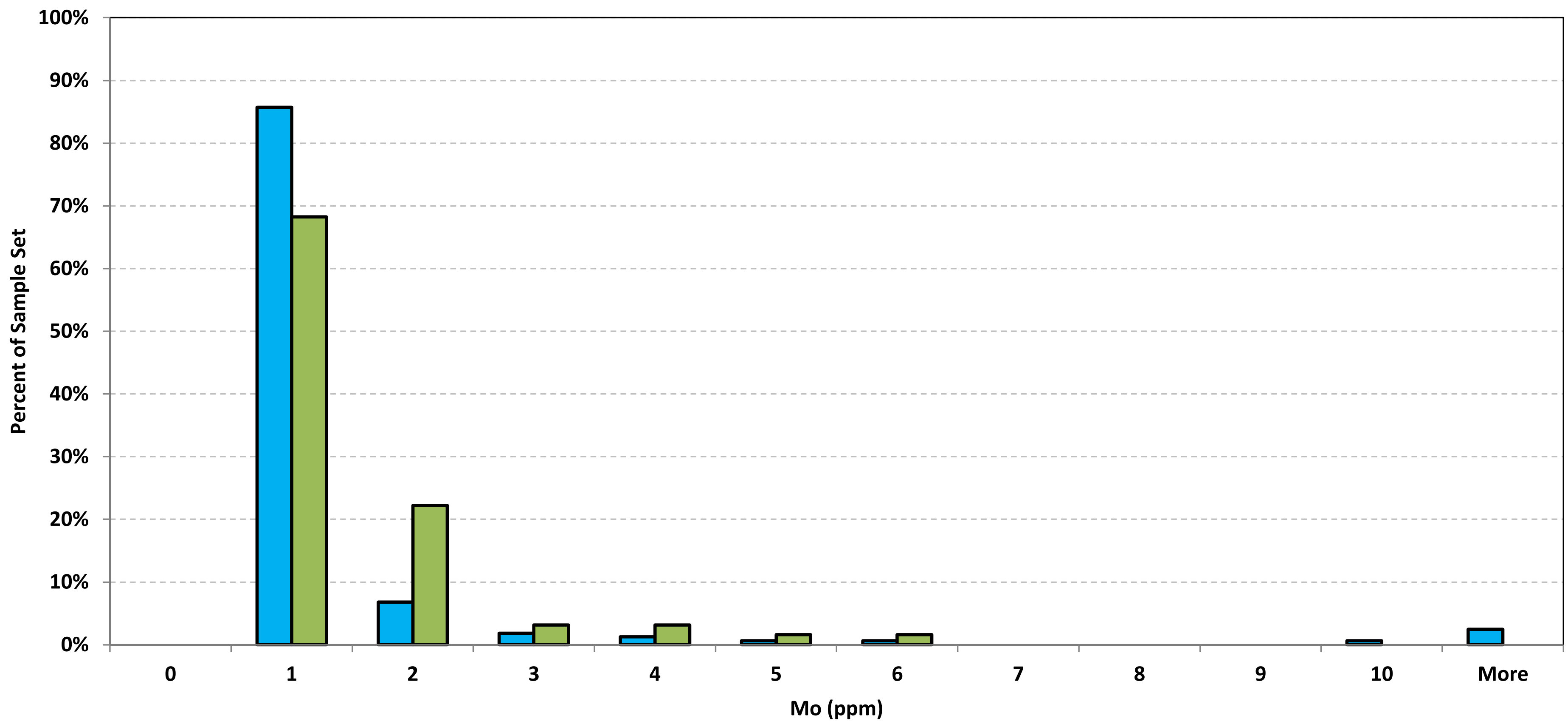
Côté Gold Project

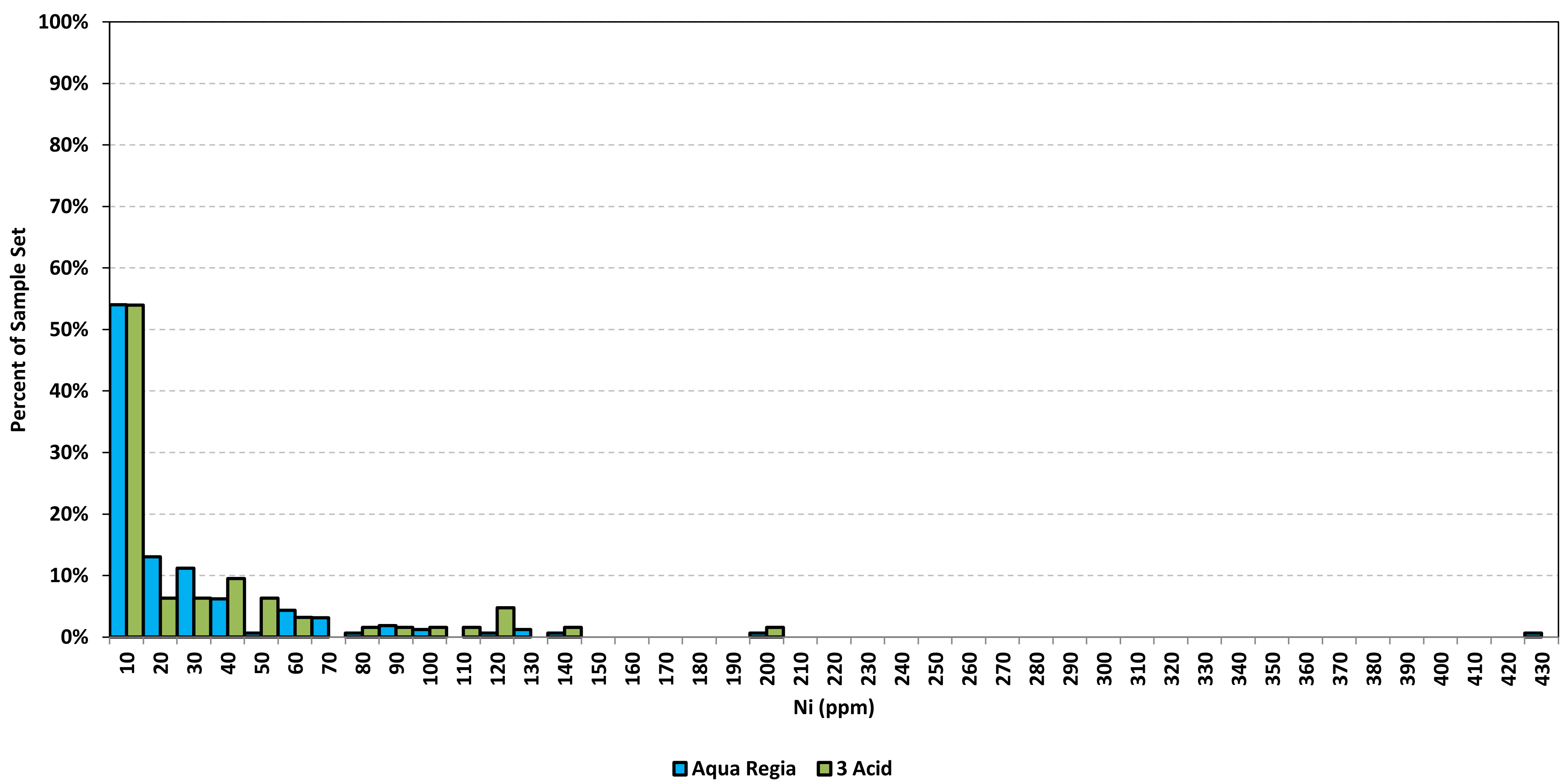
Elemental Content Frequency Distribution for Chromium & Copper

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-17



Côté Gold Project	
Elemental Content Frequency Distribution for Zinc & Arsenic	
Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	Graphic C-18



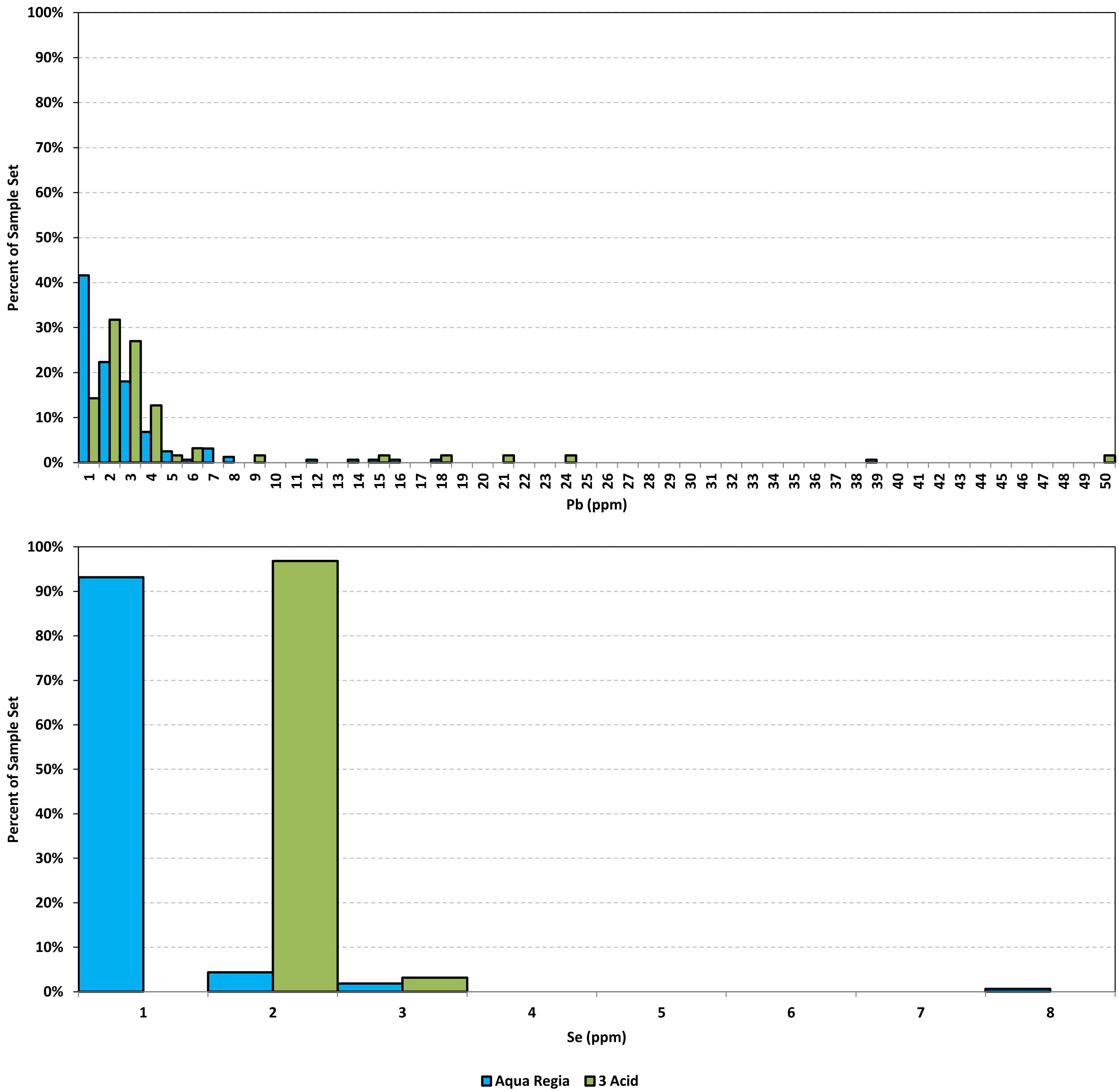


IAMGOLD amec

Côté Gold Project

Elemental Content Frequency Distribution for Molybdenum & Nickel

Drawn by: LC / Checked by: SW	Date: December 2013
Project: TC121522	Graphic C-19

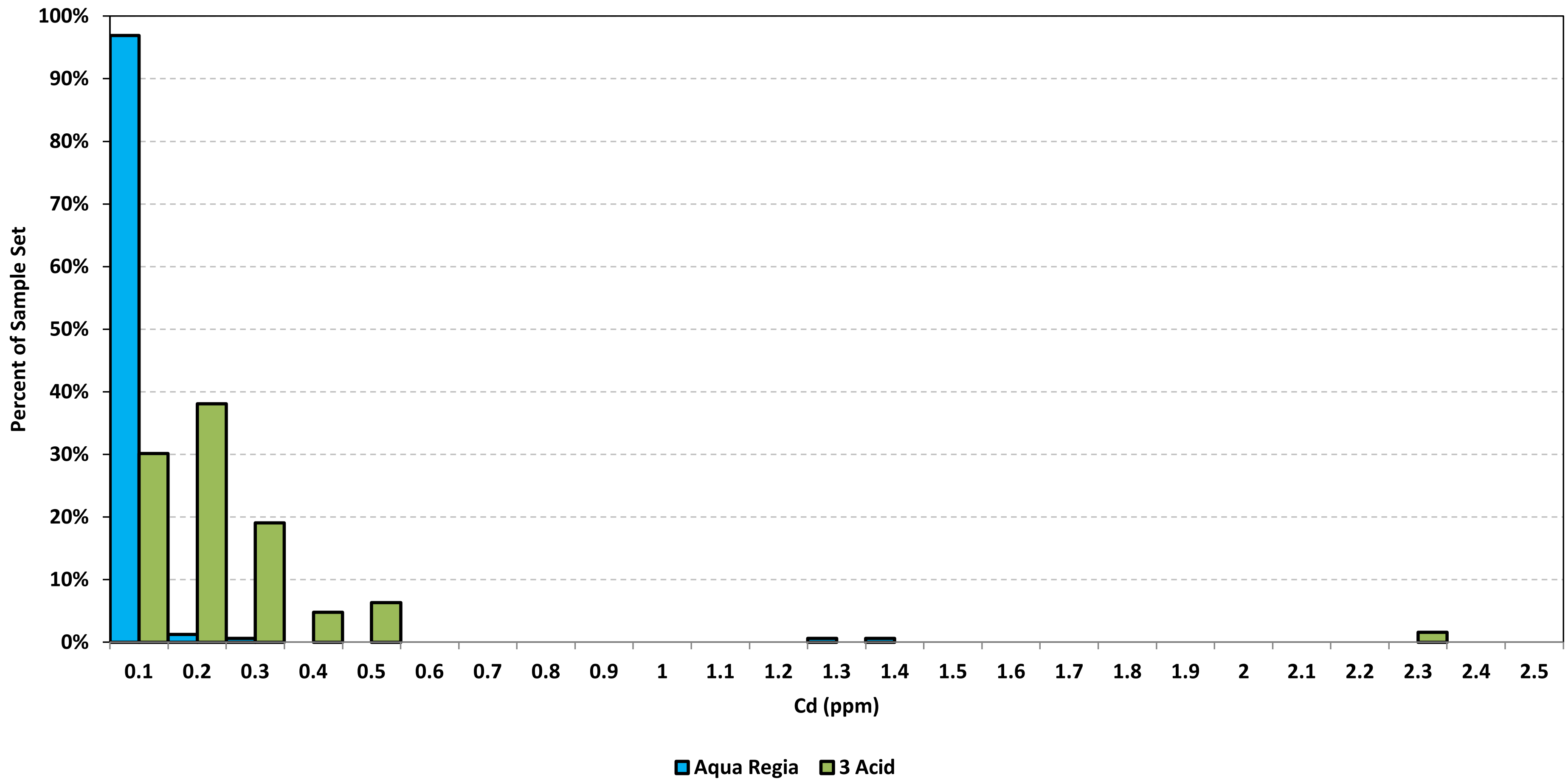


IAMGOLD amec

Côté Gold Project

Elemental Content Frequency Distribution for Lead and Selenium

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-20



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Côté Gold Project

Elemental Content Frequency Distribution for Cadmium

Drawn by: LC	Checked by: SW	Date: December 2013
Project: TC121522		Graphic C-21

APPENDIX D – CERTIFICATES OF ANALYSIS

ACID BASE ACCOUNTING

Côté Gold Project
Geochemical Characterization Report
December 2013
Project #TC121522

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

ABA - Modified Sobek

August-30-13

IAMGOLD Corporation
Attn : Steve Woolfenden

401 Bay Street Suite 3200 PO Box 153
Toronto, ON
M5H 2Y4,

Phone: (416) 594-2884
Fax:(416) 360-4750

Date Rec. : 26 July 2013
LR Report: **CA12690-JUL13**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
3: Analysis Approval Date	29-Aug-13	29-Aug-13	29-Aug-13	29-Aug-13	29-Aug-13	29-Aug-13	29-Aug-13	29-Aug-13
4: Analysis Approval Time	12:56	12:56	12:56	12:56	12:56	12:56	12:56	12:56
5: ARD-1390082	9.27	3	1.96	20.00	0.10	0.10	10.42	1.46
6: ARD-1390445	9.22	3	1.97	20.00	0.10	0.10	11.27	1.40
7: ARD-1398253	8.79	3	2.04	20.00	0.10	0.10	10.28	1.60
8: ARD-1385848	9.18	3	1.99	20.00	0.10	0.10	14.50	1.29
9: ARD-1363071	9.20	3	2.01	28.70	0.10	0.10	12.54	1.72
10: ARD-1399888	9.73	3	1.98	20.00	0.10	0.10	11.05	1.47
11: ARD-1317321	8.40	3	2.04	156.30	0.10	0.10	46.99	1.55
12: ARD-1260433	8.56	3	2.02	20.00	0.10	0.10	12.67	1.66
13: ARD-1260435	8.91	4	1.99	68.70	0.10	0.10	20.42	1.71
14: ARD-1288121	9.61	4	1.97	81.00	0.10	0.10	32.39	1.60
15: ARD-1334254	9.00	3	2.00	20.00	0.10	0.10	13.19	1.41
16: ARD-1344533	8.77	3	2.00	20.00	0.10	0.10	15.66	1.22
17: ARD-1323885	9.03	4	2.02	40.00	0.10	0.10	14.64	1.63
18: ARD-1261924	8.93	3	2.00	20.00	0.10	0.10	6.74	1.72
19: ARD-1335660	8.84	4	2.00	92.20	0.10	0.10	33.71	1.62
20: ARD-1262008	8.96	3	1.98	60.20	0.10	0.10	25.21	1.60
21: ARD-1262116	9.46	3	2.02	20.00	0.10	0.10	14.86	1.28
22: ARD-1402452	9.75	3	2.02	111.00	0.10	0.10	28.81	1.84
23: ARD-1313309	8.93	3	2.02	31.40	0.10	0.10	10.71	1.63

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

ABA - Modified Sobek

LR Report : CA12690-JUL13

Sample ID	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
24: ARD-1313311	8.79	4	1.99	89.70	0.10	0.10	34.93	1.57
25: ARD-1371750	9.38	3	2.02	20.00	0.10	0.10	17.96	1.08
26: ARD-1343542	9.05	3	1.98	20.00	0.10	0.10	17.62	1.18
27: ARD-1343545	9.04	3	2.03	93.80	0.10	0.10	26.79	1.68
28: ARD-1299298	8.81	3	2.03	90.40	0.10	0.10	26.24	1.76
29: ARD-1376168	9.29	3	1.99	20.00	0.10	0.10	11.91	1.46
30: ARD-1396533	8.67	3	1.98	52.50	0.10	0.10	21.09	1.57
31: ARD-1396637	8.64	3	2.02	255.60	0.10	0.10	73.86	1.58
32: ARD-1308221	8.73	3	2.00	27.80	0.10	0.10	10.71	1.72
33: ARD-1261810	9.16	3	2.01	66.00	0.10	0.10	27.87	1.54
34: ARD-1456517	9.31	3	1.99	38.90	0.10	0.10	19.23	1.52
35: ARD-1398758	8.90	3	1.97	20.00	0.10	0.10	19.54	1.09
36: ARD-1259369	9.77	4	2.02	68.10	0.10	0.10	33.94	1.57
37: ARD-1336164	8.67	4	1.99	40.00	0.10	0.10	12.73	1.85
38: ARD-1336196	8.92	4	2.02	40.00	0.10	0.10	13.26	1.78
39: ARD-1306362	8.37	4	2.02	165.00	0.10	0.10	30.97	1.90
40: ARD-1350733	9.06	2	1.98	20.00	0.10	0.10	15.08	1.23
41: ARD-1359177	9.27	3	1.99	20.00	0.10	0.10	8.89	1.49
42: ARD-1361014	9.55	3	2.01	20.00	0.10	0.10	11.64	1.40
43: ARD-1341540	9.11	4	2.00	60.50	0.10	0.10	21.36	1.59
44: ARD-1326120	8.75	3	1.98	27.60	0.10	0.10	9.93	1.74
45: ARD-1413274	9.48	4	1.98	40.00	0.10	0.10	7.67	1.56
46: ARD-1258576	9.47	4	1.96	40.00	0.10	0.10	13.07	1.57
47: ARD-1258760	9.67	2	2.03	20.00	0.10	0.10	19.35	1.04
48: ARD-1346137	8.93	3	2.02	52.20	0.10	0.10	23.19	1.55
49: ARD-1353098	9.45	4	1.99	40.00	0.10	0.10	16.77	1.76
50: ARD-1353200	8.98	4	2.01	51.50	0.10	0.10	23.96	1.53
51: ARD-1329749	8.68	3	1.96	20.00	0.10	0.10	16.29	1.20
52: ARD-1329877	8.75	3	2.03	20.00	0.10	0.10	19.77	1.05
53: ARD-1387476	8.86	3	2.00	91.90	0.10	0.10	35.81	1.58
54: ARD-1284846	8.78	4	1.97	40.00	0.10	0.10	14.73	1.20
55: ARD-681824	9.56	4	2.05	53.20	0.10	0.10	24.66	1.53
56: ARD-681852	9.76	3	2.01	20.00	0.10	0.10	15.04	1.28
57: ARD-689119	9.81	4	1.98	88.60	0.10	0.10	37.54	1.58
58: ARD-938691	9.56	4	1.98	40.00	0.10	0.10	10.45	1.36

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Sample ID	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
59: ARD-930693	9.23	3	2.02	20.00	0.10	0.10	14.18	1.39
60: ARD-952486	9.50	4	2.01	103.80	0.10	0.10	42.41	1.59
61: ARD-1284878	8.49	4	2.02	57.00	0.10	0.10	16.84	1.80
62: ARD-1298061	9.36	4	1.99	40.00	0.10	0.10	19.81	1.55
63: ARD-1387873	8.71	2	2.01	24.70	0.10	0.10	17.90	1.61
64: ARD-1115728	8.89	3	2.05	20.00	0.10	0.10	8.39	1.55
65: ARD-920512	9.60	2	2.02	20.00	0.10	0.10	8.17	1.54
66: ARD-950511	9.04	4	1.99	95.40	0.10	0.10	29.98	1.66
67: ARD-952686	9.05	3	1.99	31.60	0.10	0.10	13.03	1.65
68: ARD-1469044	8.88	3	2.02	20.00	0.10	0.10	8.04	1.64
69: ARD-1486591	9.35	3	2.03	20.00	0.10	0.10	8.29	1.96
70: ARD-1401198	9.53	3	2.02	20.00	0.10	0.10	10.05	1.46
71: ARD-1311777	9.32	3	2.05	20.00	0.10	0.10	15.92	1.18
72: ARD-1416171	8.72	3	2.00	20.00	0.10	0.10	8.35	1.60
73: ARD-246803	8.88	3	2.02	20.00	0.10	0.10	7.70	1.62
74: ARD-227138	9.50	4	1.99	53.00	0.10	0.10	23.01	1.55
75: ARD-689315	9.39	3	1.98	20.00	0.10	0.10	9.49	1.52
76: ARD-684437	8.99	3	2.02	28.60	0.10	0.10	13.92	1.73
77: ARD-937384	9.05	3	2.06	46.60	0.10	0.10	18.72	1.79
78: ARD-931559	9.46	3	2.00	56.60	0.10	0.10	23.98	1.58
79: ARD-931623	9.78	3	2.02	29.40	0.10	0.10	12.69	1.56
80: ARD-937698	9.55	3	1.97	26.20	0.10	0.10	11.40	1.77
81: ARD-935087	9.63	3	2.02	31.70	0.10	0.10	11.69	1.65
82: ARD-1284981	8.51	2	1.99	20.00	0.10	0.10	16.42	1.61
83: ARD-1284982	7.84	1	1.99	20.00	0.10	0.10	17.78	1.42
84: ARD-1347633	8.55	2	1.98	20.00	0.10	0.10	13.81	1.39
85: ARD-929864	8.77	3	2.02	20.00	0.10	0.10	8.70	1.53
86: ARD-573527A	9.73	2	1.99	20.00	0.10	0.10	11.71	1.39
87: ARD-1163047	8.54	3	2.03	20.00	0.10	0.10	9.45	1.47
88: ARD-1114935	9.24	3	2.02	20.00	0.10	0.10	12.49	1.27
89: ARD-1167807	9.28	3	2.01	20.00	0.10	0.10	1.11	1.45
90: ARD-1328761	9.40	3	1.98	20.00	0.10	0.10	12.97	1.29
91: ARD-1415660	8.52	4	2.03	40.00	0.10	0.10	16.12	1.67
92: ARD-1447030	8.75	2	2.04	20.00	0.10	0.10	13.29	1.41
93: ARD-1465755	9.36	3	2.03	20.00	0.10	0.10	10.17	1.38

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Sample ID	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
94: ARD-227239	9.28	3	2.00	30.90	0.10	0.10	11.88	1.54
95: ARD-936266	9.48	3	2.02	20.00	0.10	0.10	7.79	1.57
96: ARD-929111	9.14	3	1.99	25.30	0.10	0.10	13.80	1.60
97: ARD-578580	8.60	3	2.02	71.60	0.10	0.10	15.44	1.73
98: ARD-571416	9.27	3	2.13	20.00	0.10	0.10	16.27	1.16
99: ARD-70623	9.05	3	1.98	20.00	0.10	0.10	9.98	1.54
100: ARD-1111278	9.58	3	2.04	20.00	0.10	0.10	17.14	0.98
101: ARD-1156837	9.60	3	2.02	20.00	0.10	0.10	9.08	1.52
102: ARD-1157490	9.31	3	2.03	26.30	0.10	0.10	12.18	1.48
103: ARD-1113188	10.06	3	1.99	54.30	0.10	0.10	12.06	1.98
104: ARD-1168407	9.11	3	2.05	44.80	0.10	0.10	17.19	1.69
105: ARD-1173948	9.67	3	1.97	20.00	0.10	0.10	12.29	1.27
106: ARD-1107356	9.02	3	2.05	20.00	0.10	0.10	15.00	1.13
107: ARD-1107358	9.67	3	2.03	20.00	0.10	0.10	14.78	1.24
108: ARD-1152026	8.72	3	1.97	95.20	0.10	0.10	20.45	1.89
109: ARD-1152087	9.18	3	2.01	32.90	0.10	0.10	14.43	1.54
110: ARD-1120993	9.62	4	2.00	40.00	0.10	0.10	23.59	1.57
111: ARD-1153135	9.56	3	2.04	20.00	0.10	0.10	14.92	1.51
112: ARD-1153209	9.45	4	2.02	40.00	0.10	0.10	14.37	1.89
113: ARD-1153674	9.53	3	2.01	20.00	0.10	0.10	10.16	1.47
114: ARD-68741	9.21	1	2.02	20.00	0.10	0.10	19.05	1.11
115: ARD-1048151	9.10	3	1.98	20.00	0.10	0.10	10.44	1.48
116: ARD-1047357	9.67	1	2.01	50.60	0.10	0.10	8.57	1.59
117: ARD-1047487	9.22	3	2.01	20.00	0.10	0.10	7.02	1.70
118: ARD-1057141	9.32	3	1.99	39.70	0.10	0.10	14.30	1.63
119: ARD-1029210	8.91	2	2.03	20.00	0.10	0.10	9.81	1.66
120: ARD-1026152	9.29	3	2.00	20.00	0.10	0.10	7.33	1.84
121: ARD-1027713	8.84	4	2.01	57.40	0.10	0.10	14.20	1.50
122: ARD-1008072	8.97	3	2.00	20.00	0.10	0.10	19.24	1.69
123: ARD-1008261	8.74	1	2.02	20.00	0.10	0.10	17.05	1.11
124: ARD-1057715	8.83	3	2.06	20.00	0.10	0.10	11.52	1.53
125: ARD-926721	9.06	3	2.00	27.70	0.10	0.10	11.71	1.53
126: ARD-928214	9.81	4	2.03	63.20	0.10	0.10	22.28	1.81
127: ARD-1171884	9.57	1	1.98	20.00	0.10	0.10	14.78	1.37
128: ARD-1108761	9.41	3	2.01	20.00	0.10	0.10	7.23	1.60

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Sample ID	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
129: ARD-1105010	9.19	3	1.99	69.10	0.10	0.10	20.94	1.75
130: ARD-1109100	9.54	3	2.08	27.40	0.10	0.10	11.35	1.51
131: ARD-1117160	9.10	3	2.03	20.00	0.10	0.10	1.87	1.33
132: ARD-1117946	9.61	3	2.03	36.00	0.10	0.10	14.02	1.53
133: ARD-572129	9.62	2	2.01	20.00	0.10	0.10	14.77	1.21
134: ARD-68989	9.60	1	2.02	20.00	0.10	0.10	13.05	1.64
135: ARD-1	9.39	1	2.04	20.00	0.10	0.10	16.58	1.28
136: ARD-2	8.83	3	2.03	44.60	0.10	0.10	14.64	1.69
137: ARD-3	9.65	3	2.01	20.00	0.10	0.10	8.20	1.64
138: ARD-1105726	9.05	4	2.14	51.60	0.10	0.10	10.71	1.95
139: ARD-1120967	9.34	2	2.02	20.00	0.10	0.10	14.44	1.26
140: ARD-69669	9.10	2	2.03	20.00	0.10	0.10	9.59	1.52
141: ARD-1045336	9.40	4	2.11	58.90	0.10	0.10	13.31	1.70
142: ARD-951469	9.62	3	2.11	20.00	0.10	0.10	7.20	1.57
143: ARD-1172124	9.25	3	2.00	139.60	0.10	0.10	48.74	1.54
144: ARD-1070859	9.51	3	2.08	77.20	0.10	0.10	24.71	1.81
145: ARD-1054224	9.68	3	2.05	32.70	0.10	0.10	11.40	1.99
146: ARD-1049797	8.71	3	2.14	32.40	0.10	0.10	11.34	1.71
147: ARD-1008033	9.50	3	2.07	27.30	0.10	0.10	11.79	1.57
148: ARD-1008450	9.57	3	2.13	20.00	0.10	0.10	8.53	1.48
149: ARD-90295	9.40	3	1.99	20.00	0.10	0.10	12.04	1.52
150: ARD-1017819	8.98	1	1.98	20.00	0.10	0.10	12.82	1.60
151: ARD-1070452	8.62	3	2.11	29.50	0.10	0.10	10.65	1.91
152: ARD-1175183	8.80	3	2.06	88.80	0.10	0.10	25.31	1.78
153: TP-2-1	7.27	1	2.04	20.00	0.10	0.10	18.47	1.09
154: TP-4-1	7.82	1	2.03	20.00	0.10	0.10	17.33	1.29
155: TP-8-1	7.85	1	2.04	20.00	0.10	0.10	17.58	1.19
156: TP-17-1	6.44	1	2.00	20.00	0.10	0.10	18.82	1.10
157: TP-35-1	8.67	1	2.02	20.00	0.10	0.10	15.80	1.25
158: TP-105-1	4.96	1	1.97	20.00	0.10	0.10	20.47	1.20
159: TP-106-1	7.55	1	1.98	20.00	0.10	0.10	18.30	1.16
160: TP-109-1	7.71	1	2.02	20.00	0.10	0.10	18.94	1.21
161: TP13-PO-10-BU-1	8.05	1	2.03	20.00	0.10	0.10	18.55	1.19
162: TP12-PO-19-BU-2	8.24	1	1.96	20.00	0.10	0.10	18.88	1.04
163: TP13-PO-25-BU-1	8.69	3	2.04	31.60	0.10	0.10	11.35	1.94

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Sample ID	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
164: TP13-PO-27-BU-1	7.99	1	1.99	20.00	0.10	0.10	17.03	1.27
165: TP13-PO-34-BU-2	6.68	1	2.11	20.00	0.10	0.10	19.30	1.22
166: TP13-PO-37-BU-1	7.57	1	2.09	20.00	0.10	0.10	13.40	1.43
167: TP13-PO-40-BU-2	8.17	1	2.06	20.00	0.10	0.10	18.82	1.07
168: TP13-PO-43-BU-2	7.20	1	2.09	20.00	0.10	0.10	19.05	1.18
169: DH13-PO-02-SPT-7	8.32	4	2.05	132.20	0.10	0.10	36.02	1.72
170: DH13-PO-03-SPT-8	9.09	3	2.05	30.40	0.10	0.10	11.51	1.65
171: DH13-PO-22-SPT-6	8.73	3	2.05	30.90	0.10	0.10	8.80	1.72
172: DH13-PO-06-SPT-10	8.28	4	2.10	94.90	0.10	0.10	37.50	1.57
174: DH13-FD-06-SPT-9	9.18	3	2.02	20.00	0.10	0.10	12.41	1.23
175: TP13-WD-01A-BU-2	7.29	1	2.02	20.00	0.10	0.10	19.01	1.17
176: TP13-WD-03-BU-2	7.55	1	2.01	20.00	0.10	0.10	18.85	1.11
183: DH13-WD-01-SPT-7	8.88	3	2.05	20.00	0.10	0.10	10.51	1.39
184: DH13-WD-02-SPT-8	8.60	3	2.01	20.00	0.10	0.10	11.07	1.43
185: DH13-WD-03-SPT-5	8.67	3	2.00	70.70	0.10	0.10	27.00	1.55
186: DH13-WD-04-SPT-5	8.76	4	2.02	61.20	0.10	0.10	15.56	1.79
194: ARD-4 DH12-PO-17	9.37	1	2.05	20.00	0.10	0.10	16.26	1.53
195: ARD-5 DH12-PO-08R	9.05	3	2.04	27.10	0.10	0.10	11.89	1.56
196: ARD-6 DH12-PO-22	8.83	3	1.99	94.20	0.10	0.10	28.99	1.71
197: ARD-7 DH12-PO-16	9.25	3	2.11	20.00	0.10	0.10	11.28	1.45
198: ARD-8 DH12-PO-15	9.50	3	2.12	20.00	0.10	0.10	14.52	1.30
199: ARD-9 DH12-PO-19	9.67	3	2.08	24.50	0.10	0.10	10.60	1.57
200: ARD-10 DH12-PO-18	9.74	3	2.10	25.60	0.10	0.10	10.66	1.56
201: ARD-11 -DH12-PO-20	9.60	3	2.10	32.00	0.10	0.10	11.06	1.58
202: ARD-12 DH12-PO-21	9.37	3	2.09	31.60	0.10	0.10	14.18	1.52
203: ARD-13 DH12-PO-07R	9.35	3	2.02	20.00	0.10	0.10	12.64	1.32
204: ARD-14 DH12-PO-17	9.29	1	2.04	20.00	0.10	0.10	15.62	1.71
205: ARD-15 DH12-PO-07R	9.42	3	1.99	20.00	0.10	0.10	10.58	1.42
206: ARD-16 DH12-PO-15	9.41	3	2.01	20.00	0.10	0.10	10.27	1.54
207: ARD-17 DH13-FD-09	9.65	1	2.00	20.00	0.10	0.10	17.79	1.09
208: ARD-18 DH13-FD-09	9.68	1	2.10	20.00	0.10	0.10	16.62	1.22
209: ARD-19 DH12-TMF-04	10.02	2	2.04	20.00	0.10	0.10	15.96	1.26
210: ARD-20 DH12-TMF-07	9.97	1	2.02	20.00	0.10	0.10	17.71	1.20
211: ARD-21 DH12-TMF-08	9.25	1	2.12	28.70	0.10	0.10	18.28	1.87
212: ARD-22 DH12-TMF-09	9.17	1	2.02	20.00	0.10	0.10	17.79	1.15

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213: ARD-23 DH12-TMF-10	9.77	1	2.03	20.00	0.10	0.10	17.33	1.15
214: ARD-24 DH12-TMF-13	8.84	1	2.09	20.00	0.10	0.10	14.52	1.56
215: ARD-25 DH12-TMF-14	8.95	3	2.14	70.00	0.10	0.10	20.02	1.88
216: ARD-26 DH12-TMF-15	9.06	2	2.01	55.20	0.10	0.10	30.28	1.58
217: ARD-27 DH12-TMF-29	9.61	3	2.05	20.00	0.10	0.10	17.57	1.19
218: ARD-28 DH12-TMF-30	8.98	1	2.09	20.00	0.10	0.10	16.35	1.19
219: ARD-29-DH12-TMF-31	8.81	1	2.09	55.60	0.10	0.10	15.31	1.95
220: ARD-30-DH12-TMF-32	8.68	3	2.03	107.00	0.10	0.10	28.29	1.80
221: DH13-FD-05-SPT-17	8.92	2	1.99	20.00	0.10	0.10	13.34	1.28
222: DH12-PO-02R-SPT-2	7.81	3	2.05	78.50	0.10	0.10	18.87	1.75
223: DH13-PO-17-SPT-1	7.81	1	2.07	20.00	0.10	0.10	18.43	1.14
224: TP13-FD-17-BU-1	8.31	1	2.04	20.00	0.10	0.10	18.50	1.12
225: TP13-FD-18-BU-2	8.51	2	2.09	27.30	0.10	0.10	12.24	1.59
226: TP13-FD-19-BU-1	8.82	3	2.09	47.30	0.10	0.10	9.90	1.95
227: TP13-FD-22-BU-1	8.83	2	2.02	20.00	0.10	0.10	7.20	1.74
228: DH13-FD-08-SPT-5	8.08	3	2.10	104.50	0.10	0.10	28.34	1.67
229: TP12-TMF-42-BU-1	7.21	1	2.03	20.00	0.10	0.10	19.51	1.18
230: TP12-TMF-43-GR-1	9.02	2	2.10	20.00	0.10	0.10	11.63	1.42
231: TP12-TMF-18-BU-1	6.95	1	2.06	20.00	0.10	0.10	19.31	1.23
232: TP12-TMF-02-BU-3	7.73	1	2.05	20.00	0.10	0.10	18.76	1.16
234: DH13-PO-18-SPT-2	8.62	1	2.06	20.00	0.10	0.10	18.12	1.21
235: TP13-PO-18-BU-1	6.24	1	2.11	20.00	0.10	0.10	20.14	1.40
237: TP13-PO-21-BU-2	7.64	1	2.02	20.00	0.10	0.10	18.48	1.26
242: DH12-PO-05R-SPT-11	9.21	2	2.01	20.00	0.10	0.10	13.14	1.36
244: DH12-PO-13-SPT-2	8.65	1	2.00	20.00	0.10	0.10	18.64	1.15
245: DH12-PO-14-SPT-13	8.39	4	2.12	128.10	0.10	0.10	35.50	1.71
246: DH12-PO-20-SPT-7	9.15	3	2.09	30.00	0.10	0.10	13.24	1.58
247: DH12-PO-21-SPT-5	9.04	3	2.03	47.70	0.10	0.10	18.71	1.63
248: TP12-PO-03-BU-2 A	7.92	1	2.07	20.00	0.10	0.10	18.53	1.17
249: TP12-PO-03-BU-2 B	7.52	2	1.98	30.60	0.10	0.10	10.84	1.68
251: TP12-PO-09-BU-1	8.48	1	2.06	20.00	0.10	0.10	18.45	1.19
252: TP12-PO-16-BU-1 0.4-0.6m	5.91	1	2.07	20.00	0.10	0.10	20.40	1.38
253: TP12-PO-16-BU-1 0.6m	7.43	1	2.02	20.00	0.10	0.10	19.27	1.20
254: TP12-PO-18-BU-1	6.08	1	2.01	20.00	0.10	0.10	20.00	1.32
255: TP12-PO-22-BU-1	8.76	3	2.03	32.00	0.10	0.10	8.55	1.77

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Sample ID	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
258: TP12-PO-28-BU-1	8.93	3	2.11	69.60	0.10	0.10	25.55	1.63
261: TP12-WD-14-BU-1	6.44	1	2.15	20.00	0.10	0.10	19.44	1.24
262: TP12-WD-01-BU-1	8.39	3	2.01	50.20	0.10	0.10	13.74	1.76
263: TP12-WD-07-BU-1	8.50	2	2.03	20.00	0.10	0.10	17.75	1.22
264: TP12-WD-10-BU-1	8.03	1	2.12	20.00	0.10	0.10	18.38	1.22
265: TP12-WD-12-BU-1	5.24	1	2.02	20.00	0.10	0.10	19.00	1.12

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

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.
```

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

OnLine LIMS

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ABA - Modified Sobek

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August-30-13

Date Rec. : 26 July 2013
LR Report: **CA12690-JUL13**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
3: Analysis Approval Date	29-Aug-13	---	---	---	26-Aug-13	---	29-Aug-13	26-Aug-13	30-Aug-13
4: Analysis Approval Time	12:56	---	---	---	14:19	---	13:00	14:24	15:09
5: ARD-1390082	24	0.31	24.1	78.1	0.020	0.01	0.01	0.273	1.11
6: ARD-1390445	22	0.62	21.6	35.5	0.053	0.03	0.02	0.242	0.934
7: ARD-1398253	24	0.62	23.2	38.1	0.030	0.01	0.02	0.371	1.55
8: ARD-1385848	14	11.6	2.24	1.19	0.494	0.12	0.37	0.156	0.325
9: ARD-1363071	40	3.44	36.8	11.7	0.128	0.02	0.11	0.473	2.02
10: ARD-1399888	23	0.31	22.3	72.3	0.023	0.01	0.01	0.235	1.02
11: ARD-1317321	268	0.62	267	429	0.049	0.03	0.02	3.19	15.6
12: ARD-1260433	18	4.69	13.4	3.86	0.211	0.06	0.15	0.093	0.350
13: ARD-1260435	121	3.75	118	32.3	0.148	0.03	0.12	1.46	7.10
14: ARD-1288121	123	0.94	122	132	0.098	0.07	0.03	1.19	6.13
15: ARD-1334254	17	0.94	16.1	18.1	0.088	0.06	0.03	0.106	0.410
16: ARD-1344533	11	0.62	10.2	17.3	0.047	0.03	0.02	0.085	0.225
17: ARD-1323885	63	1.88	60.9	33.5	0.093	0.03	0.06	0.648	2.80
18: ARD-1261924	33	1.25	32.0	26.6	0.069	0.03	0.04	0.383	1.52
19: ARD-1335660	146	0.94	145	156	0.052	0.02	0.03	1.68	8.48
20: ARD-1262008	88	3.75	84.6	23.6	0.200	0.08	0.12	0.912	4.22
21: ARD-1262116	13	1.25	11.4	10.2	0.086	0.05	0.04	0.063	0.150
22: ARD-1402452	203	0.94	202	217	0.062	0.03	0.03	2.26	11.3

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ABA - Modified Sobek

LR Report : **CA12690-JUL13**

Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
23: ARD-1313309	51	0.31	50.9	165	0.012	0.01	< 0.01	0.598	2.72
24: ARD-1313311	138	2.50	135	55.0	0.156	0.08	0.08	1.62	8.11
25: ARD-1371750	5.0	9.69	-4.69	0.52	0.332	0.02	0.31	0.039	0.105
26: ARD-1343542	6.0	5.31	0.69	1.13	0.214	0.04	0.17	0.057	0.185
27: ARD-1343545	165	9.38	156	17.6	0.447	0.15	0.30	1.89	8.90
28: ARD-1299298	158	1.25	157	126	0.088	0.05	0.04	1.79	8.96
29: ARD-1376168	20	0.31	20.0	65.0	0.021	0.01	0.01	0.255	1.01
30: ARD-1396533	79	0.62	78.7	127	0.039	0.02	0.02	0.886	4.22
31: ARD-1396637	450	3.44	446	131	0.167	0.06	0.11	4.96	22.9
32: ARD-1308221	43	0.31	42.4	138	0.020	0.02	< 0.01	0.433	1.91
33: ARD-1261810	95	0.62	94.3	152	0.046	0.03	0.02	1.02	5.10
34: ARD-1456517	49	1.88	47.5	26.3	0.100	0.04	0.06	0.477	2.00
35: ARD-1398758	1.2	0.31	0.89	3.87	0.025	0.02	< 0.01	0.025	0.055
36: ARD-1259369	85	0.31	84.3	271	0.045	0.04	0.01	0.838	4.27
37: ARD-1336164	68	0.31	68.2	219	0.031	0.02	0.01	0.765	3.66
38: ARD-1336196	66	0.31	65.9	212	0.034	0.02	0.01	0.761	3.59
39: ARD-1306362	332	0.31	331	1070	0.016	0.02	< 0.01	4.15	20.9
40: ARD-1350733	12	0.31	12.1	39.7	0.027	0.02	0.01	0.078	0.280
41: ARD-1359177	28	0.31	27.6	89.3	0.034	0.02	0.01	0.323	1.37
42: ARD-1361014	21	0.62	20.2	33.3	0.050	0.03	0.02	0.192	0.809
43: ARD-1341540	98	3.12	94.7	31.3	0.145	0.04	0.10	1.17	5.55
44: ARD-1326120	45	0.31	44.3	144	0.038	0.04	< 0.01	0.414	1.98
45: ARD-1413274	31	1.88	29.2	16.6	0.083	0.02	0.06	0.357	1.45
46: ARD-1258576	39	0.94	38.2	41.7	0.042	0.01	0.03	0.467	2.08
47: ARD-1258760	1.6	0.62	0.98	2.56	0.033	0.01	0.02	0.043	0.110
48: ARD-1346137	72	0.94	70.9	76.6	0.052	0.02	0.03	0.768	3.61
49: ARD-1353098	58	3.12	55.3	18.7	0.169	0.07	0.10	0.629	2.82
50: ARD-1353200	68	1.25	67.2	54.8	0.086	0.05	0.04	0.802	3.70
51: ARD-1329749	9.5	0.31	9.19	30.6	0.011	0.01	< 0.01	0.081	0.245
52: ARD-1329877	0.60	0.31	0.29	1.94	0.020	0.02	< 0.01	0.024	0.030
53: ARD-1387476	140	6.25	134	22.4	0.245	0.04	0.20	1.73	8.28
54: ARD-1284846	13	0.31	13.0	42.9	0.014	0.01	< 0.01	0.143	0.545
55: ARD-681824	70	0.62	69.0	111	0.028	< 0.01	0.02	0.964	4.53
56: ARD-681852	12	0.31	12.0	39.4	0.025	0.02	0.01	0.115	0.480

OnLine LIMS

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Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
57: ARD-689119	129	3.44	125	37.5	0.183	0.07	0.11	1.45	6.78
58: ARD-938691	24	0.94	23.0	25.5	0.049	0.02	0.03	0.292	1.11
59: ARD-930693	14	1.88	12.5	7.68	0.105	0.04	0.06	0.087	0.350
60: ARD-952486	153	2.50	150	61.1	0.094	0.01	0.08	2.01	10.1
61: ARD-1284878	99	1.88	97.5	53.0	0.124	0.06	0.06	1.07	5.07
62: ARD-1298061	51	0.31	50.4	162	0.046	0.04	0.01	0.368	1.73
63: ARD-1387873	17	0.94	16.0	18.0	0.068	0.04	0.03	0.056	0.125
64: ARD-1115728	28	0.62	27.7	45.3	0.036	0.02	0.02	0.328	1.27
65: ARD-920512	29	1.88	27.4	15.6	0.095	0.04	0.06	0.357	1.34
66: ARD-950511	164	35.0	129	4.70	1.15	0.03	1.12	1.92	8.93
67: ARD-952686	47	4.38	42.3	10.7	0.181	0.04	0.14	0.527	2.14
68: ARD-1469044	30	0.94	28.7	31.6	0.040	0.01	0.03	0.340	1.40
69: ARD-1486591	29	0.31	28.5	92.2	0.025	0.02	0.01	0.307	1.28
70: ARD-1401198	25	2.19	22.4	11.2	0.090	0.02	0.07	0.294	1.10
71: ARD-1311777	10	0.62	9.38	16.0	0.023	< 0.01	0.02	0.110	0.460
72: ARD-1416171	29	0.62	28.5	46.6	0.032	0.01	0.02	0.353	1.38
73: ARD-246803	30	0.62	29.8	48.6	0.031	0.01	0.02	0.352	1.45
74: ARD-227138	75	2.50	72.9	30.2	0.084	< 0.01	0.08	0.827	3.80
75: ARD-689315	26	3.75	22.8	7.07	0.153	0.03	0.12	0.314	1.15
76: ARD-684437	36	1.25	35.0	29.0	0.056	0.02	0.04	0.373	1.60
77: ARD-937384	68	10.9	56.8	6.19	0.417	0.07	0.35	0.642	3.04
78: ARD-931559	82	0.94	80.7	87.0	0.051	0.02	0.03	0.863	4.29
79: ARD-931623	41	0.62	40.8	66.2	0.027	< 0.01	0.02	0.469	2.06
80: ARD-937698	38	0.62	37.0	60.2	0.038	0.02	0.02	0.365	1.62
81: ARD-935087	50	0.62	48.9	79.2	0.032	0.01	0.02	0.611	2.79
82: ARD-1284981	9.0	0.62	8.38	14.4	0.069	0.05	0.02	0.046	0.065
83: ARD-1284982	5.6	0.31	5.29	17.9	0.053	0.04	0.01	0.029	0.015
84: ARD-1347633	16	0.31	15.3	50.3	< 0.005	< 0.01	< 0.01	0.183	0.714
85: ARD-929864	28	0.62	27.4	44.8	0.041	0.02	0.02	0.313	1.22
86: ARD-573527A	21	0.31	20.5	66.6	0.020	0.01	0.01	0.219	0.949
87: ARD-1163047	26	15.3	10.7	1.70	0.616	0.13	0.49	0.307	0.919
88: ARD-1114935	19	0.31	18.3	60.0	0.010	0.01	< 0.01	0.219	0.959
89: ARD-1167807	47	0.62	46.4	75.2	0.037	0.02	0.02	0.300	1.30
90: ARD-1328761	18	0.31	17.5	57.0	0.023	0.01	0.01	0.199	0.834

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91: ARD-1415660	59	1.88	56.9	31.4	0.134	0.07	0.06	0.656	2.98
92: ARD-1447030	16	0.31	16.1	52.9	0.022	0.02	< 0.01	0.088	0.355
93: ARD-1465755	24	0.31	23.9	77.4	0.018	< 0.01	0.01	0.293	1.27
94: ARD-227239	48	5.31	42.3	8.96	0.200	0.03	0.17	0.542	2.26
95: ARD-936266	30	1.88	28.3	16.1	0.091	0.03	0.06	0.348	1.39
96: ARD-929111	29	1.56	27.3	18.5	0.088	0.04	0.05	0.233	0.944
97: ARD-578580	139	7.50	132	18.5	0.441	0.20	0.24	1.38	6.31
98: ARD-571416	8.8	14.1	-5.26	0.63	0.446	< 0.01	0.45	0.071	0.260
99: ARD-70623	25	0.31	25.0	81.0	0.020	0.01	0.01	0.297	1.27
100: ARD-1111278	7.0	0.62	6.38	11.2	0.052	0.03	0.02	0.068	0.195
101: ARD-1156837	27	4.06	22.9	6.65	0.156	0.03	0.13	0.325	1.23
102: ARD-1157490	35	10.0	24.8	3.48	0.396	0.08	0.32	0.414	1.58
103: ARD-1113188	106	5.94	100	17.9	0.266	0.08	0.19	1.16	5.45
104: ARD-1168407	67	10.0	57.3	6.73	0.366	0.05	0.32	0.723	3.02
105: ARD-1173948	20	1.56	18.0	12.5	0.070	0.02	0.05	0.299	1.14
106: ARD-1107356	12	1.56	10.6	7.81	0.061	0.01	0.05	0.128	0.375
107: ARD-1107358	13	0.94	12.0	13.8	0.037	< 0.01	0.03	0.082	0.325
108: ARD-1152026	190	5.62	184	33.7	0.257	0.08	0.18	2.26	10.4
109: ARD-1152087	46	25.9	20.0	1.77	0.940	0.11	0.83	0.505	2.00
110: ARD-1120993	41	3.12	37.9	13.1	0.169	0.07	0.10	0.355	1.46
111: ARD-1153135	12	5.62	6.88	2.22	0.199	0.02	0.18	0.023	0.030
112: ARD-1153209	63	35.9	27.5	1.76	1.20	0.05	1.15	0.665	2.17
113: ARD-1153674	24	0.31	24.2	78.4	0.014	< 0.01	0.01	0.305	1.41
114: ARD-68741	2.4	2.50	-0.10	0.96	0.114	0.03	0.08	0.028	0.045
115: ARD-1048151	24	2.19	21.9	11.0	0.097	0.03	0.07	0.285	1.14
116: ARD-1047357	105	1.25	103	83.7	0.053	0.01	0.04	0.979	4.45
117: ARD-1047487	32	0.94	31.4	34.5	0.031	< 0.01	0.03	0.386	1.71
118: ARD-1057141	64	3.75	60.0	17.0	0.120	< 0.01	0.12	0.766	3.41
119: ARD-1029210	25	0.31	24.8	81.0	0.024	0.02	< 0.01	0.226	0.959
120: ARD-1026152	32	0.94	30.8	33.8	0.040	0.01	0.03	0.397	1.67
121: ARD-1027713	108	1.25	106	86.0	0.058	0.02	0.04	0.696	3.10
122: ARD-1008072	1.9	14.1	-12.16	0.14	0.483	0.03	0.45	0.444	1.92
123: ARD-1008261	7.3	0.31	6.99	23.5	0.014	0.01	< 0.01	0.066	0.240
124: ARD-1057715	21	2.19	18.4	9.42	0.093	0.02	0.07	0.192	0.684

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ABA - Modified Sobek

LR Report : **CA12690-JUL13**

Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
125: ARD-926721	40	0.31	39.7	129	0.011	0.01	< 0.01	0.473	2.19
126: ARD-928214	101	4.38	96.4	23.0	0.132	< 0.01	0.14	1.02	4.92
127: ARD-1171884	13	0.31	12.9	42.2	0.023	0.01	0.01	0.080	0.320
128: ARD-1108761	32	0.31	31.5	102	0.020	0.01	0.01	0.385	1.70
129: ARD-1105010	121	1.25	120	96.8	0.054	0.01	0.04	1.43	6.94
130: ARD-1109100	39	0.31	38.3	124	0.027	0.02	0.01	0.480	2.19
131: ARD-1117160	45	0.31	44.4	143	0.022	0.01	0.01	0.200	0.774
132: ARD-1117946	54	1.25	52.8	43.3	0.058	0.02	0.04	0.649	3.02
133: ARD-572129	13	0.31	12.7	41.6	0.030	0.02	0.01	0.152	0.585
134: ARD-68989	17	0.62	16.6	27.5	0.032	0.01	0.02	0.108	0.420
135: ARD-1	8.4	1.25	7.15	6.72	0.072	0.03	0.04	0.038	0.130
136: ARD-2	74	0.62	73.2	118	0.038	0.02	0.02	0.871	3.96
137: ARD-3	29	3.44	26.0	8.55	0.129	0.02	0.11	0.345	1.28
138: ARD-1105726	96	1.25	94.2	76.4	0.070	0.03	0.04	0.557	2.37
139: ARD-1120967	14	1.25	12.6	11.0	0.072	0.03	0.04	0.132	0.345
140: ARD-69669	26	44.7	-19.09	0.57	1.44	< 0.01	1.43	0.298	1.03
141: ARD-1045336	108	1.56	106	69.1	0.075	0.02	0.05	0.723	3.30
142: ARD-951469	30	2.19	28.1	13.9	0.095	0.02	0.07	0.371	1.49
143: ARD-1172124	227	1.25	226	182	0.067	0.03	0.04	2.69	12.8
144: ARD-1070859	126	1.56	125	80.8	0.074	0.02	0.05	1.36	6.58
145: ARD-1054224	52	0.62	51.4	83.2	0.032	0.01	0.02	0.518	2.52
146: ARD-1049797	49	0.31	48.9	157	0.028	0.02	0.01	0.547	2.40
147: ARD-1008033	38	1.25	36.2	30.0	0.055	0.02	0.04	0.390	1.46
148: ARD-1008450	27	1.25	25.6	21.5	0.062	0.02	0.04	0.338	1.33
149: ARD-90295	20	0.62	19.4	32.0	0.039	0.02	0.02	0.160	0.620
150: ARD-1017819	18	1.88	16.2	9.65	0.072	0.01	0.06	0.086	0.250
151: ARD-1070452	45	3.12	41.6	14.3	0.129	0.03	0.10	0.412	1.73
152: ARD-1175183	154	3.44	151	44.8	0.156	0.05	0.11	1.68	7.55
153: TP-2-1	3.8	0.31	3.49	12.3	< 0.005	< 0.01	< 0.01	0.106	0.020
154: TP-4-1	6.6	0.31	6.29	21.3	0.020	0.02	< 0.01	0.323	0.040
155: TP-8-1	5.9	0.31	5.59	19.0	0.014	0.01	< 0.01	0.150	0.030
156: TP-17-1	3.0	0.31	2.69	9.68	0.014	0.01	< 0.01	0.055	0.020
157: TP-35-1	10	0.31	10.1	33.5	0.013	0.01	< 0.01	0.131	0.500
158: TP-105-1	-1.200	0.31	-1.51	-3.87	0.036	0.04	< 0.01	1.36	0.030

OnLine LIMS

SGS Canada Inc.
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Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
159: TP-106-1	4.3	0.31	3.99	13.9	0.014	0.01	< 0.01	0.043	0.025
160: TP-109-1	2.6	0.31	2.29	8.39	0.020	0.02	< 0.01	0.193	0.035
161: TP13-PO-10-BU-1	3.6	0.31	3.29	11.6	0.014	0.01	< 0.01	0.044	0.050
162: TP12-PO-19-BU-2	2.9	0.31	2.59	9.35	0.007	< 0.01	< 0.01	0.032	0.015
163: TP13-PO-25-BU-1	50	0.31	49.3	159	0.026	0.02	0.01	0.799	3.02
164: TP13-PO-27-BU-1	7.5	0.31	7.19	24.2	0.023	0.02	< 0.01	0.456	0.205
165: TP13-PO-34-BU-2	1.7	0.31	1.39	5.48	0.022	0.02	< 0.01	0.358	0.025
166: TP13-PO-37-BU-1	16	1.25	14.6	12.6	0.093	0.05	0.04	2.14	0.934
167: TP13-PO-40-BU-2	2.9	0.31	2.59	9.35	0.007	< 0.01	< 0.01	0.022	0.030
168: TP13-PO-43-BU-2	2.3	0.31	1.99	7.42	0.012	0.01	< 0.01	0.060	0.030
169: DH13-PO-02-SPT-7	235	0.31	234	751	0.031	0.02	0.01	2.92	13.0
170: DH13-PO-03-SPT-8	46	0.31	45.8	149	0.015	0.02	< 0.01	0.660	2.53
171: DH13-PO-22-SPT-6	54	0.31	53.6	172	0.017	< 0.01	0.01	0.720	2.97
172: DH13-PO-06-SPT-10	137	0.62	136	219	0.036	0.02	0.02	1.79	7.76
174: DH13-FD-06-SPT-9	19	0.31	18.5	60.6	0.011	0.01	< 0.01	0.239	0.964
175: TP13-WD-01A-BU-2	2.5	0.31	2.19	8.06	0.016	0.02	< 0.01	0.115	0.030
176: TP13-WD-03-BU-2	2.9	0.31	2.59	9.28	0.014	< 0.01	0.01	0.061	0.030
183: DH13-WD-01-SPT-7	23	0.31	22.8	74.5	0.012	0.01	< 0.01	0.283	1.14
184: DH13-WD-02-SPT-8	22	0.31	21.9	71.0	0.027	0.02	0.01	0.438	1.33
185: DH13-WD-03-SPT-5	109	0.62	109	175	0.032	0.01	0.02	1.54	6.21
186: DH13-WD-04-SPT-5	113	0.31	113	362	0.022	0.01	0.01	1.51	6.43
194: ARD-4 DH12-PO-17	9.1	2.81	6.29	3.24	0.122	0.03	0.09	0.017	0.025
195: ARD-5 DH12-PO-08R	37	0.31	37.0	120	0.016	0.02	< 0.01	0.424	1.95
196: ARD-6 DH12-PO-22	164	2.50	161	65.5	0.154	0.07	0.08	1.74	8.72
197: ARD-7 DH12-PO-16	21	0.31	20.4	66.8	0.012	0.01	< 0.01	0.245	1.08
198: ARD-8 DH12-PO-15	13	0.31	12.6	41.6	0.013	0.01	< 0.01	0.141	0.540
199: ARD-9 DH12-PO-19	33	2.50	30.9	13.4	0.116	0.04	0.08	0.414	1.64
200: ARD-10 DH12-PO-18	36	2.50	33.1	14.2	0.103	0.02	0.08	0.444	1.87
201: ARD-11 -DH12-PO-20	50	0.31	49.5	161	0.006	< 0.01	< 0.01	0.632	2.98
202: ARD-12 DH12-PO-21	42	0.94	40.8	44.5	0.041	0.01	0.03	0.516	2.39
203: ARD-13 DH12-PO-07R	18	0.31	17.9	58.7	0.009	< 0.01	< 0.01	0.231	0.999
204: ARD-14 DH12-PO-17	11	3.12	7.58	3.42	0.130	0.03	0.10	0.015	0.020
205: ARD-15 DH12-PO-07R	24	0.31	23.4	76.5	0.023	0.02	< 0.01	0.306	1.32
206: ARD-16 DH12-PO-15	24	0.31	23.9	78.1	0.017	0.02	< 0.01	0.290	1.24

OnLine LIMS

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ABA - Modified Sobek

LR Report : CA12690-JUL13

Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
207: ARD-17 DH13-FD-09	5.5	0.31	5.19	17.7	0.008	< 0.01	< 0.01	0.030	0.080
208: ARD-18 DH13-FD-09	8.0	0.31	7.69	25.8	0.010	0.01	< 0.01	0.054	0.240
209: ARD-19 DH12-TMF-04	9.9	0.31	9.59	31.9	0.007	< 0.01	< 0.01	0.074	0.345
210: ARD-20 DH12-TMF-07	5.7	0.31	5.39	18.4	0.006	< 0.01	< 0.01	0.019	0.065
211: ARD-21 DH12-TMF-08	25	3.12	21.5	7.87	0.127	0.03	0.10	0.041	0.135
212: ARD-22 DH12-TMF-09	5.5	0.31	5.19	17.7	0.017	0.02	< 0.01	0.015	0.030
213: ARD-23 DH12-TMF-10	6.6	0.31	6.29	21.3	0.009	< 0.01	< 0.01	0.023	0.070
214: ARD-24 DH12-TMF-13	13	0.62	12.5	21.0	0.056	0.04	0.02	0.044	0.145
215: ARD-25 DH12-TMF-14	117	0.62	116	187	0.066	0.05	0.02	1.30	6.53
216: ARD-26 DH12-TMF-15	62	0.62	61.4	99.2	0.053	0.03	0.02	0.606	3.06
217: ARD-27 DH12-TMF-29	5.9	0.31	5.59	19.0	0.007	< 0.01	< 0.01	0.031	0.115
218: ARD-28 DH12-TMF-30	8.7	0.31	8.39	28.1	0.015	0.02	< 0.01	0.052	0.145
219: ARD-29-DH12-TMF-31	96	1.25	95.2	77.1	0.078	0.04	0.04	1.08	5.27
220: ARD-30-DH12-TMF-32	194	0.62	193	310	0.079	0.06	0.02	2.25	11.3
221: DH13-FD-05-SPT-17	17	0.31	16.4	53.9	0.008	< 0.01	< 0.01	0.208	0.844
222: DH12-PO-02R-SPT-2	145	1.56	144	93.1	0.096	0.05	0.05	2.69	8.34
223: DH13-PO-17-SPT-1	3.8	0.31	3.49	12.2	0.026	0.02	0.01	0.224	0.050
224: TP13-FD-17-BU-1	3.7	0.31	3.39	11.9	0.013	0.01	< 0.01	0.055	0.035
225: TP13-FD-18-BU-2	36	0.31	35.7	116	0.018	0.02	< 0.01	0.830	1.94
226: TP13-FD-19-BU-1	90	0.31	89.2	289	0.015	0.02	< 0.01	1.13	5.31
227: TP13-FD-22-BU-1	32	0.31	31.4	102	0.016	0.02	< 0.01	0.624	1.75
228: DH13-FD-08-SPT-5	181	3.75	178	48.3	0.155	0.04	0.12	3.14	10.9
229: TP12-TMF-42-BU-1	1.2	0.31	0.89	3.87	0.018	0.02	< 0.01	0.213	0.030
230: TP12-TMF-43-GR-1	20	0.31	19.6	63.7	0.018	< 0.01	0.01	0.250	0.974
231: TP12-TMF-18-BU-1	1.7	0.31	1.39	5.44	0.015	< 0.01	0.01	0.305	0.055
232: TP12-TMF-02-BU-3	3.0	0.31	2.69	9.68	0.015	0.02	< 0.01	0.044	0.025
234: DH13-PO-18-SPT-2	4.6	0.31	4.29	14.7	0.020	0.01	0.01	0.082	0.120
235: TP13-PO-18-BU-1	-0.300	0.31	-0.61	-0.96	0.032	0.02	0.01	0.848	0.055
237: TP13-PO-21-BU-2	3.8	0.31	3.49	12.3	0.021	0.02	< 0.01	0.332	0.120
242: DH12-PO-05R-SPT-11	17	0.62	16.5	27.4	0.028	< 0.01	0.02	0.198	0.809
244: DH12-PO-13-SPT-2	3.4	0.31	3.09	11.0	0.014	0.01	< 0.01	0.031	0.040
245: DH12-PO-14-SPT-13	218	0.62	218	349	0.029	< 0.01	0.02	2.70	12.8
246: DH12-PO-20-SPT-7	40	0.31	39.8	129	0.013	0.01	< 0.01	0.495	2.26
247: DH12-PO-21-SPT-5	71	0.31	71.1	228	0.018	< 0.01	0.01	0.963	4.31

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ABA - Modified Sobek

LR Report : CA12690-JUL13

Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
248: TP12-PO-03-BU-2 A	3.6	0.31	3.29	11.5	0.023	0.01	0.01	0.145	0.050
249: TP12-PO-03-BU-2 B	50	1.56	48.3	31.9	0.117	0.07	0.05	3.15	2.94
251: TP12-PO-09-BU-1	3.8	0.31	3.49	12.3	0.013	0.01	< 0.01	0.041	0.040
252: TP12-PO-16-BU-1 0.4-0.6m	-1.000	0.31	-1.31	-3.23	0.030	0.03	< 0.01	0.650	0.040
253: TP12-PO-16-BU-1 0.6m	1.8	0.31	1.49	5.81	0.016	0.02	< 0.01	0.242	0.035
254: TP12-PO-18-BU-1	0.000	0.31	-0.31	0.00	0.026	0.03	< 0.01	0.553	0.040
255: TP12-PO-22-BU-1	58	0.31	57.5	186	0.008	< 0.01	< 0.01	0.703	3.57
258: TP12-PO-28-BU-1	104	0.31	104	334	0.016	< 0.01	0.01	1.32	6.27
261: TP12-WD-14-BU-1	1.3	0.31	0.99	4.19	0.022	0.02	< 0.01	0.507	0.040
262: TP12-WD-01-BU-1	91	0.31	90.4	293	0.033	0.03	< 0.01	1.13	5.62
263: TP12-WD-07-BU-1	5.5	0.31	5.19	17.6	0.036	0.03	0.01	0.076	0.100
264: TP12-WD-10-BU-1	3.8	0.31	3.49	12.3	0.016	0.02	< 0.01	0.044	0.030
265: TP12-WD-12-BU-1	2.5	0.31	2.19	8.06	0.009	< 0.01	< 0.01	0.042	0.020

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

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.
```

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OnLine LIMS

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Modified ABA (Price 1997) Sobek

10-July-2012

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Date Rec. : 14 June 2012
LR Report: **CA11081-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Sample ID	Sample Date & Time	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
3: Analysis Approval Date		03-Jul-12	03-Jul-12	03-Jul-12	03-Jul-12	03-Jul-12	03-Jul-12	03-Jul-12	03-Jul-12
4: Analysis Approval Time		13:27	13:27	13:27	13:27	13:27	13:27	13:27	13:27
5: E11-61-1 CL-Geochem	08-Jun-12	9.19	3	1.99	20.00	0.10	0.10	11.13	1.60
6: E11-61-2 CL-Geochem	08-Jun-12	9.43	3	2.04	27.60	0.10	0.10	10.54	1.72
7: E11-81-1 CL-Geochem	08-Jun-12	9.78	3	1.98	39.20	0.10	0.10	11.60	1.88
8: E11-81-2 CL-Geochem	08-Jun-12	9.67	2	2.00	20.00	0.10	0.10	11.51	1.66
9: E11-81-3 CL-Geochem	08-Jun-12	9.62	2	2.03	25.50	0.10	0.10	12.54	1.62
10: E11-81-4 CL-Geochem	08-Jun-12	9.65	3	1.99	20.00	0.10	0.10	10.08	1.61
11: E11-54-1 33.87-36.14 m CL-Geochem	08-Jun-12	8.69	3	1.98	28.90	0.10	0.10	11.42	1.81
12: E11-54-2 CL-Geochem	08-Jun-12	8.79	3	2.00	29.00	0.10	0.10	11.69	1.73
13: E11-54-3 CL-Geochem	08-Jun-12	9.26	3	2.00	20.00	0.10	0.10	12.88	1.28
14: E11-54-4 CL-Geochem	08-Jun-12	9.61	3	1.97	20.00	0.10	0.10	5.16	1.89
15: E11-59-1 CL-Geochem	08-Jun-12	9.02	2	1.98	20.00	0.10	0.10	15.65	1.27
16: E11-59-2 CL-Geochem	08-Jun-12	9.76	2	2.01	20.00	0.10	0.10	14.40	1.84
17: E11-95-1 CL-Geochem	08-Jun-12	8.93	2	2.04	25.20	0.10	0.10	11.78	1.67
18: E11-95-2 CL-Geochem	08-Jun-12	9.68	3	2.00	25.80	0.10	0.10	11.25	1.64
19: E11-97-1 CL-Geochem	08-Jun-12	9.39	1	1.99	20.00	0.10	0.10	16.14	1.32
20: E11-97-2 CL-Geochem	08-Jun-12	9.79	2	1.98	20.00	0.10	0.10	9.38	1.66
21: E11-138-1 CL-Geochem	08-Jun-12	9.36	3	1.98	29.30	0.10	0.10	10.12	1.68

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Sample ID	Sample Date & Time	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
22: E11-138-2 CL-Geochem	08-Jun-12	9.04	3	2.00	72.50	0.10	0.10	20.83	1.82
23: E11-138-3 CL-Geochem	08-Jun-12	8.89	3	2.00	63.10	0.10	0.10	18.96	1.89
24: E11-77-1 CL-Geochem	08-Jun-12	8.73	2	2.00	20.00	0.10	0.10	10.46	1.61
25: E11-77-2 CL-Geochem	08-Jun-12	8.88	3	1.98	37.20	0.10	0.10	11.97	1.84
26: E10-38-1 CL-Geochem	08-Jun-12	9.17	2	2.00	20.00	0.10	0.10	14.26	1.56
27: E10-38-2 CL-Geochem	08-Jun-12	9.00	3	2.07	27.30	0.10	0.10	11.56	1.85
28: E10-38-3 CL-Geochem	08-Jun-12	9.06	2	1.97	20.00	0.10	0.10	13.96	1.50
29: E11-91-1 CL-Geochem	08-Jun-12	8.88	2	2.02	20.00	0.10	0.10	16.17	1.26
30: E11-91-2 CL-Geochem	08-Jun-12	9.32	1	2.06	20.00	0.10	0.10	16.22	1.53
31: E11-91-3 CL-Geochem	08-Jun-12	9.45	2	1.99	20.00	0.10	0.10	8.97	1.54
32: E11-72-1 CL-Geochem	08-Jun-12	9.60	2	2.04	20.00	0.10	0.10	8.73	1.55
33: E10-31-1 CL-Geochem	08-Jun-12	8.77	2	2.04	20.00	0.10	0.10	11.46	1.47
34: E10-31-2 CL-Geochem	08-Jun-12	9.58	2	2.02	28.60	0.10	0.10	11.96	1.64
35: E10-31-3 CL-Geochem	08-Jun-12	9.20	3	2.01	49.60	0.10	0.10	15.14	1.92
36: E10-31-4 CL-Geochem	08-Jun-12	9.38	2	2.06	20.00	0.10	0.10	9.22	1.50
37: E10-23-1 CL-Geochem	08-Jun-12	9.23	2	2.05	25.50	0.10	0.10	10.91	1.58
38: E10-46-1 CL-Geochem	08-Jun-12	9.07	2	2.07	20.00	0.10	0.10	11.42	1.55
39: E10-46-2 CL-Geochem	08-Jun-12	9.46	3	2.00	42.20	0.10	0.10	14.07	1.60
40: E10-13-1 CL-Geochem	08-Jun-12	9.19	2	2.02	25.80	0.10	0.10	14.24	1.78
41: E10-13-2 CL-Geochem	08-Jun-12	9.03	3	1.99	64.50	0.10	0.10	17.05	1.83
42: E10-13-3 CL-Geochem	08-Jun-12	9.55	2	1.96	27.70	0.10	0.10	11.34	1.57
43: E10-13-4 CL-Geochem	08-Jun-12	9.03	3	2.02	28.30	0.10	0.10	11.52	1.66
44: CL10-3-1 CL-Geochem	08-Jun-12	8.42	3	2.00	29.00	0.10	0.10	11.40	1.68
45: E10-42-1 CL-Geochem	08-Jun-12	9.64	3	2.07	28.10	0.10	0.10	12.26	1.67
46: E10-42-2 CL-Geochem	08-Jun-12	9.30	3	2.04	20.00	0.10	0.10	9.91	1.87
47: E10-42-3 CL-Geochem	08-Jun-12	9.43	3	2.06	20.00	0.10	0.10	6.32	1.89
48: E11-66-1 CL-Geochem	08-Jun-12	8.03	2	1.99	20.00	0.10	0.10	10.45	1.69
49: E11-54-1 212.3-215.5m CL-Geochem	08-Jun-12	8.56	1	1.97	20.00	0.10	0.10	17.97	1.18
50: E11-51-1 CL-Geochem	08-Jun-12	8.88	3	1.99	20.00	0.10	0.10	6.94	1.75

OnLine LIMS

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Modified ABA (Price 1997) Sobek

July-10-12

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Date Rec. : 14 June 2012
LR Report: **CA11081-JUN12**
Reference: PO# TRR 04509

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CERTIFICATE OF ANALYSIS

Final Report

Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
3: Analysis Approval Date	03-Jul-12	03-Jul-12	03-Jul-12	03-Jul-12	27-Jun-12	09-Jul-12	09-Jul-12	27-Jun-12	28-Jun-12
4: Analysis Approval Time	13:27	13:27	13:27	13:27	09:51	15:33	15:32	09:52	10:49
5: E11-61-1 CL-Geochem	22	0.94	21.4	23.7	0.040	< 0.01	0.03	0.241	1.02
6: E11-61-2 CL-Geochem	42	4.28	37.5	9.76	0.144	< 0.01	0.14	0.512	2.25
7: E11-81-1 CL-Geochem	70	1.54	68.2	45.1	0.062	0.01	0.05	0.882	4.00
8: E11-81-2 CL-Geochem	21	6.99	14.2	3.03	0.401	0.18	0.22	0.307	0.862
9: E11-81-3 CL-Geochem	32	6.86	25.0	4.65	0.255	0.04	0.22	0.476	1.80
10: E11-81-4 CL-Geochem	25	6.69	18.2	3.72	0.293	0.08	0.21	0.313	0.926
11: E11-54-1 33.87-36.14 m CL-Geochem	44	0.94	43.2	46.9	0.048	0.02	0.03	0.528	2.23
12: E11-54-2 CL-Geochem	43	0.62	42.7	69.8	0.042	0.02	0.02	0.526	2.20
13: E11-54-3 CL-Geochem	18	0.31	17.5	57.4	0.027	0.01	0.01	0.218	0.902
14: E11-54-4 CL-Geochem	38	0.31	37.4	122	0.019	0.02	< 0.01	0.474	2.18
15: E11-59-1 CL-Geochem	11	0.31	10.7	35.5	0.018	0.02	< 0.01	0.115	0.449
16: E11-59-2 CL-Geochem	14	3.37	10.5	4.12	0.142	0.03	0.11	0.062	0.174
17: E11-95-1 CL-Geochem	33	2.07	30.8	15.9	0.077	0.01	0.07	0.351	1.50
18: E11-95-2 CL-Geochem	36	1.95	34.4	18.7	0.094	0.03	0.06	0.460	1.95
19: E11-97-1 CL-Geochem	9.7	0.31	9.39	31.3	0.018	0.02	< 0.01	0.054	0.186
20: E11-97-2 CL-Geochem	27	0.31	26.5	86.5	0.022	0.01	0.01	0.337	1.38
21: E11-138-1 CL-Geochem	48	3.34	45.1	14.5	0.133	0.03	0.11	0.619	2.61

OnLine LIMS

SGS Canada Inc.
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Modified ABA (Price 1997) Sobek

LR Report : CA11081-JUN12

Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
22: E11-138-2 CL-Geochem	129	4.66	125	27.7	0.233	0.08	0.15	1.50	6.65
23: E11-138-3 CL-Geochem	110	24.8	85.5	4.45	0.852	0.06	0.79	1.30	5.46
24: E11-77-1 CL-Geochem	24	0.31	23.5	76.8	0.019	0.02	< 0.01	0.284	1.02
25: E11-77-2 CL-Geochem	64	0.62	63.1	103	0.034	0.02	0.02	0.773	3.48
26: E10-38-1 CL-Geochem	14	0.58	13.8	24.8	0.028	< 0.01	0.02	0.080	0.290
27: E10-38-2 CL-Geochem	38	5.05	32.9	7.52	0.241	0.08	0.16	0.411	1.69
28: E10-38-3 CL-Geochem	15	2.85	12.4	5.36	0.123	0.03	0.09	0.114	0.451
29: E11-91-1 CL-Geochem	9.5	1.95	7.55	4.88	0.097	0.04	0.06	0.086	0.181
30: E11-91-2 CL-Geochem	9.2	3.74	5.46	2.46	0.142	0.02	0.12	0.031	0.057
31: E11-91-3 CL-Geochem	28	0.31	27.4	89.4	0.020	0.02	< 0.01	0.348	1.46
32: E11-72-1 CL-Geochem	28	1.54	26.1	17.9	0.085	0.04	0.05	0.354	1.45
33: E10-31-1 CL-Geochem	21	0.31	20.6	67.4	0.024	0.01	0.01	0.253	1.03
34: E10-31-2 CL-Geochem	41	4.91	36.3	8.39	0.201	0.04	0.16	0.520	2.11
35: E10-31-3 CL-Geochem	86	3.38	82.3	25.4	0.156	0.05	0.11	0.993	4.30
36: E10-31-4 CL-Geochem	26	2.90	23.3	9.04	0.137	0.04	0.09	0.321	1.22
37: E10-23-1 CL-Geochem	36	1.25	34.4	28.5	0.053	0.02	0.04	0.476	2.01
38: E10-46-1 CL-Geochem	21	0.31	20.4	66.8	0.010	0.01	< 0.01	0.250	1.00
39: E10-46-2 CL-Geochem	70	2.28	68.0	30.8	0.103	0.03	0.07	0.876	3.84
40: E10-13-1 CL-Geochem	29	0.94	27.7	30.4	0.052	0.02	0.03	0.235	0.925
41: E10-13-2 CL-Geochem	119	1.96	117	60.8	0.075	0.01	0.06	1.34	6.45
42: E10-13-3 CL-Geochem	42	2.03	39.7	20.6	0.086	0.02	0.06	0.527	2.22
43: E10-13-4 CL-Geochem	42	3.71	37.8	11.2	0.152	0.03	0.12	0.513	1.89
44: CL10-3-1 CL-Geochem	44	112	-68.3	0.39	3.77	0.18	3.59	0.562	1.39
45: E10-42-1 CL-Geochem	38	1.25	37.0	30.6	0.060	0.02	0.04	0.469	1.99
46: E10-42-2 CL-Geochem	25	14.4	10.3	1.71	0.547	0.09	0.46	0.285	0.990
47: E10-42-3 CL-Geochem	33	3.19	30.0	10.4	0.134	0.03	0.10	0.416	1.58
48: E11-66-1 CL-Geochem	24	0.62	23.4	38.7	0.045	0.02	0.02	0.257	1.17
49: E11-54-1 212.3-215.5m CL-Geochem	5.2	0.31	4.89	16.8	0.028	0.02	0.01	0.040	0.043
50: E11-51-1 CL-Geochem	33	1.39	31.4	23.6	0.064	0.02	0.04	0.391	1.60

OnLine LIMS

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OnLine LIMS

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Modified ABA

Project : IAMGold Cote Lake

January-08-13

Knight Piesold Limited
Attn : Amber Blackwell

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165 ext. 241
Fax:

Date Rec. : 13 November 2012
LR Report: **CA10182-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
3: Analysis Approval Date		20-Dec-12	20-Dec-12	20-Dec-12	20-Dec-12	20-Dec-12	20-Dec-12	20-Dec-12	20-Dec-12
4: Analysis Approval Time		11:01	11:01	11:01	11:01	11:01	11:01	11:01	11:01
5: E10-036 ARD-1	10-Nov-12	9.18	2	2.01	20.00	0.10	0.10	10.34	1.34
6: E10-036 ARD-2	10-Nov-12	9.97	3	2.02	20.00	0.10	0.10	10.23	1.33
7: E10-036 ARD-3	10-Nov-12	9.61	3	2.03	25.60	0.10	0.10	9.73	1.55
8: E10-045 ARD-4	10-Nov-12	9.72	2	2.03	20.00	0.10	0.10	13.94	1.10
9: E11-066 ARD-5	10-Nov-12	9.45	2	2.00	20.00	0.10	0.10	14.39	1.25
10: E11-066 ARD-6	10-Nov-12	9.39	3	2.03	20.00	0.10	0.10	7.29	1.83
11: E11-082 ARD-7	10-Nov-12	9.90	3	2.02	20.00	0.10	0.10	9.78	1.36
12: E11-082 ARD-8	10-Nov-12	10.11	1	2.00	20.00	0.10	0.10	13.73	1.40
13: E11-082 ARD-9	10-Nov-12	9.80	2	2.03	20.00	0.10	0.10	8.71	1.57
14: E11-087 ARD-10	10-Nov-12	9.93	2	2.02	28.70	0.10	0.10	13.34	1.50
15: E11-087 ARD-11	10-Nov-12	9.53	2	2.02	20.00	0.10	0.10	13.25	1.19
16: E12-217 ARD-12	10-Nov-12	9.37	2	1.99	20.00	0.10	0.10	9.30	1.73
17: E11-096 ARD-13	10-Nov-12	9.64	3	2.03	27.20	0.10	0.10	10.58	1.72
18: E11-096 ARD-14	10-Nov-12	9.34	3	1.99	20.00	0.10	0.10	8.18	1.42
19: E11-096 ARD-15	10-Nov-12	9.99	1	2.01	20.00	0.10	0.10	15.79	1.21
20: E11-098 ARD-16	10-Nov-12	9.17	3	2.01	20.00	0.10	0.10	11.51	1.22
21: E11-098 ARD-17	10-Nov-12	9.55	3	2.00	27.60	0.10	0.10	12.62	1.78

OnLine LIMS

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Modified ABA

Project : IAMGold Cote Lake

LR Report : **CA10182-NOV12**

Sample ID	Sample Date & Time	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
22: E11-098 ARD-18	10-Nov-12	9.35	3	2.01	27.30	0.10	0.10	10.84	1.79
23: E11-099 ARD-19	10-Nov-12	9.91	2	2.01	20.00	0.10	0.10	14.78	1.15
24: E11-099 ARD-20	10-Nov-12	9.27	3	2.01	28.80	0.10	0.10	10.11	1.56
25: E11-114 ARD-21	10-Nov-12	8.80	2	1.99	20.00	0.10	0.10	10.61	1.33
26: E11-114 ARD-22	10-Nov-12	9.58	3	2.00	31.60	0.10	0.10	9.90	1.71
27: E10-038 ARD-23	10-Nov-12	9.64	2	2.01	20.00	0.10	0.10	14.12	1.17
28: E11-062 ARD-24	10-Nov-12	9.14	3	2.01	20.00	0.10	0.10	9.07	1.41
29: E10-30 ARD-25	10-Nov-12	9.37	3	2.02	20.00	0.10	0.10	9.90	1.34
30: E10-028 ARD-26	10-Nov-12	9.00	2	2.03	20.00	0.10	0.10	13.72	1.05
31: E11-049 ARD-27	10-Nov-12	9.12	2	2.04	20.00	0.10	0.10	11.94	1.28
32: E11-049 ARD-28	10-Nov-12	9.50	3	2.03	20.00	0.10	0.10	5.89	1.61
33: E11-061 ARD-29	10-Nov-12	8.21	1	2.02	20.00	0.10	0.10	17.04	1.18
34: E12-206 ARD-30	10-Nov-12	9.44	3	1.95	29.00	0.10	0.10	9.90	1.82
35: E12-179 ARD-31	10-Nov-12	9.31	2	2.00	20.00	0.10	0.10	8.87	1.55
36: E11-048 ARD-32	10-Nov-12	9.41	2	1.99	20.00	0.10	0.10	12.27	1.18
37: E11-048 ARD-33	10-Nov-12	8.43	2	1.98	76.00	0.10	0.10	22.24	1.56
38: E11-075 ARD-34	10-Nov-12	9.15	2	2.01	20.00	0.10	0.10	12.47	1.48
39: E11-075 ARD-35	10-Nov-12	9.40	2	2.03	32.85	0.10	0.10	12.16	1.96
40: E11-071 ARD-36	10-Nov-12	9.18	2	2.00	43.50	0.10	0.10	12.56	1.81
41: E11-071 ARD-37	10-Nov-12	9.67	2	1.97	25.00	0.10	0.10	12.65	1.51
42: E11-078 ARD-38	10-Nov-12	9.61	1	1.97	20.00	0.10	0.10	17.42	0.99
43: E11-179 ARD-39	10-Nov-12	8.59	1	2.01	20.00	0.10	0.10	17.34	1.03
44: E11-120 ARD-40	10-Nov-12	9.80	2	1.99	20.00	0.10	0.10	9.49	1.39
45: E11-120 ARD-41	10-Nov-12	8.98	2	2.04	27.20	0.10	0.10	11.46	1.50
46: E11-120 ARD-42	10-Nov-12	9.38	2	1.99	121.90	0.10	0.10	40.86	1.59
47: E11-122 ARD-43	10-Nov-12	9.97	2	2.04	20.00	0.10	0.10	11.61	1.15
48: E11-122 ARD-44	10-Nov-12	9.24	2	1.95	29.60	0.10	0.10	9.97	1.62
49: E11-140 ARD-45	10-Nov-12	9.35	2	1.96	20.00	0.10	0.10	13.41	1.19
50: E11-145 ARD-46	10-Nov-12	9.56	2	2.01	20.00	0.10	0.10	15.70	1.23
51: E12-198 ARD-47	10-Nov-12	9.67	2	2.01	20.00	0.10	0.10	9.22	1.65
52: E11-129 ARD-48	10-Nov-12	9.99	2	2.00	20.00	0.10	0.10	8.47	1.42
53: E11-140 ARD-49	10-Nov-12	10.09	2	1.96	20.00	0.10	0.10	9.24	1.43
54: E11-144 ARD-50	10-Nov-12	10.15	2	2.02	20.00	0.10	0.10	10.96	1.97
55: E11-141 ARD-51	10-Nov-12	9.34	2	2.00	52.40	0.10	0.10	14.01	1.88

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Modified ABA

Project : IAMGold Cote Lake

LR Report : **CA10182-NOV12**

Sample ID	Sample Date & Time	Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units
56: E11-145 ARD-52	10-Nov-12	9.96	2	1.98	20.00	0.10	0.10	12.46	1.35
57: E12-200 ARD-53	10-Nov-12	8.95	2	2.05	83.60	0.10	0.10	22.01	1.69
58: E12-205 ARD-54	10-Nov-12	8.98	2	2.00	20.00	0.10	0.10	12.86	1.28
59: E12-294 ARD-55	10-Nov-12	8.80	2	1.96	20.00	0.10	0.10	14.05	1.38
60: E12-205 ARD-56	10-Nov-12	9.48	2	2.05	20.00	0.10	0.10	13.14	1.28
61: CL10-01 ARD-57	10-Nov-12	9.10	2	2.02	41.90	0.10	0.10	14.71	1.64
62: CL10-01 ARD-58	10-Nov-12	9.49	2	1.96	28.70	0.10	0.10	12.80	1.62
63: CL10-02A ARD-59	10-Nov-12	9.63	2	1.95	20.00	0.10	0.10	8.27	1.47
64: E12-213 ARD-60	10-Nov-12	8.49	2	2.00	20.00	0.10	0.10	13.54	1.23

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Modified ABA

Project : IAMGold Cote Lake

January-08-13

Knight Piesold Limited
Attn : Amber Blackwell

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165 ext. 241
Fax:

Date Rec. : 13 November 2012
LR Report: **CA10182-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
3: Analysis Approval Date	20-Dec-12	---	---	---	11-Dec-12	---	12-Dec-12	11-Dec-12	12-Dec-12
4: Analysis Approval Time	11:01	---	---	---	11:50	---	14:01	11:50	14:01
5: E10-036 ARD-1	24	0.31	23.7	76.8	0.027	0.02	0.01	0.285	1.15
6: E10-036 ARD-2	24	0.31	23.9	77.4	0.025	0.02	0.01	0.294	1.19
7: E10-036 ARD-3	39	1.56	37.5	25.0	0.087	0.04	0.05	0.492	1.99
8: E10-045 ARD-4	15	0.31	14.6	47.7	0.035	0.02	0.01	0.163	0.585
9: E11-066 ARD-5	14	1.88	12.1	7.47	0.102	0.04	0.06	0.105	0.280
10: E11-066 ARD-6	31	2.50	28.8	12.5	0.119	0.04	0.08	0.439	1.65
11: E11-082 ARD-7	25	0.31	25.0	81.6	0.011	0.01	< 0.01	0.306	1.33
12: E11-082 ARD-8	16	0.94	14.8	16.7	0.054	0.02	0.03	0.086	0.330
13: E11-082 ARD-9	28	0.31	27.5	89.0	0.022	0.01	0.01	0.307	1.31
14: E11-087 ARD-10	38	2.19	35.8	17.4	0.084	0.01	0.07	0.445	1.92
15: E11-087 ARD-11	17	0.31	16.4	53.4	0.032	0.02	0.01	0.152	0.530
16: E12-217 ARD-12	27	0.62	26.3	43.0	0.039	0.02	0.02	0.272	1.13
17: E11-096 ARD-13	41	0.31	40.6	132	0.014	0.01	< 0.01	0.467	2.12
18: E11-096 ARD-14	30	3.44	26.3	8.64	0.172	0.06	0.11	0.361	1.42
19: E11-096 ARD-15	10	1.25	9.25	8.40	0.068	0.03	0.04	0.025	0.055
20: E11-098 ARD-16	21	0.31	20.8	68.1	0.020	0.02	< 0.01	0.252	0.984
21: E11-098 ARD-17	38	1.25	36.2	30.0	0.068	0.03	0.04	0.367	1.49

OnLine LIMS

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Modified ABA

Project : IAMGold Cote Lake

LR Report : **CA10182-NOV12**

Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
22: E11-098 ARD-18	41	0.94	40.0	43.6	0.064	0.03	0.03	0.436	1.80
23: E11-099 ARD-19	13	0.31	12.7	41.6	0.021	0.01	0.01	0.145	0.545
24: E11-099 ARD-20	46	2.50	44.0	18.6	0.115	0.04	0.08	0.583	2.51
25: E11-114 ARD-21	24	0.31	23.3	75.5	0.023	0.01	0.01	0.261	1.02
26: E11-114 ARD-22	54	0.31	54.0	174	0.037	0.03	0.01	0.635	3.02
27: E10-038 ARD-23	15	0.31	14.3	47.1	0.010	0.01	< 0.01	0.157	0.624
28: E11-062 ARD-24	27	0.62	26.6	43.5	0.044	0.02	0.02	0.312	1.26
29: E10-30 ARD-25	25	0.62	24.4	40.0	0.047	0.03	0.02	0.293	1.13
30: E10-028 ARD-26	16	0.31	15.2	50.0	0.012	0.01	< 0.01	0.152	0.629
31: E11-049 ARD-27	20	0.31	19.5	63.9	0.013	0.01	< 0.01	0.199	0.804
32: E11-049 ARD-28	35	24.7	10.1	1.41	0.805	0.02	0.79	0.436	1.95
33: E11-061 ARD-29	7.3	0.31	6.99	23.5	0.023	0.02	< 0.01	0.048	0.100
34: E12-206 ARD-30	49	0.31	48.7	158	0.011	0.01	< 0.01	0.533	2.55
35: E12-179 ARD-31	28	2.19	25.6	12.7	0.088	0.02	0.07	0.281	1.06
36: E11-048 ARD-32	19	1.56	17.8	12.4	0.073	0.02	0.05	0.217	0.764
37: E11-048 ARD-33	136	3.12	133	43.5	0.145	0.04	0.10	1.54	7.17
38: E11-075 ARD-34	19	0.31	18.4	60.3	0.011	0.01	< 0.01	0.419	1.85
39: E11-075 ARD-35	51	3.12	47.9	16.3	0.126	0.03	0.10	0.499	2.24
40: E11-071 ARD-36	77	8.12	69.2	9.51	0.308	0.05	0.26	0.910	3.95
41: E11-071 ARD-37	31	1.25	30.2	25.1	0.058	0.02	0.04	0.263	1.15
42: E11-078 ARD-38	6.5	0.94	5.56	6.93	0.047	0.02	0.03	0.040	0.080
43: E11-179 ARD-39	6.6	0.31	6.29	21.3	0.018	0.02	< 0.01	0.068	0.170
44: E11-120 ARD-40	26	1.88	24.5	14.1	0.087	0.03	0.06	0.320	1.28
45: E11-120 ARD-41	39	3.44	35.2	11.2	0.149	0.04	0.11	0.448	1.74
46: E11-120 ARD-42	204	1.25	202	163	0.058	0.02	0.04	2.37	12.0
47: E11-122 ARD-43	21	0.62	20.0	33.0	0.034	0.01	0.02	0.238	0.889
48: E11-122 ARD-44	50	2.19	48.1	23.0	0.085	0.02	0.07	0.634	2.72
49: E11-140 ARD-45	17	1.25	15.6	13.4	0.071	0.03	0.04	0.181	0.669
50: E11-145 ARD-46	11	0.31	10.4	34.5	0.013	0.01	< 0.01	0.064	0.215
51: E12-198 ARD-47	27	2.50	24.3	10.7	0.110	0.03	0.08	0.272	1.17
52: E11-129 ARD-48	29	0.62	28.2	46.1	0.049	0.03	0.02	0.356	1.51
53: E11-140 ARD-49	27	0.31	27.1	88.4	0.021	0.02	< 0.01	0.325	1.21
54: E11-144 ARD-50	22	3.44	19.0	6.52	0.115	< 0.01	0.11	0.141	0.525
55: E11-141 ARD-51	96	0.94	95.1	102	0.046	0.02	0.03	1.14	5.32

OnLine LIMS

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Modified ABA

Project : IAMGold Cote Lake

LR Report : **CA10182-NOV12**

Sample ID	NP t CaCO3/1000 t	AP t CaCO3/1000 t	Net NP t CaCO3/1000 t	NP/AP ratio	Sulphur (total) %	Acid Leachable SO4-S %	Sulphide %	Carbon (total) %	Carbonate %
56: E11-145 ARD-52	19	0.31	18.8	61.6	0.010	0.01	< 0.01	0.175	0.779
57: E12-200 ARD-53	150	1.88	148	80.1	0.072	0.01	0.06	1.82	8.60
58: E12-205 ARD-54	18	0.31	17.5	57.4	0.005	< 0.01	< 0.01	0.162	0.624
59: E12-294 ARD-55	15	2.81	12.4	5.40	0.114	0.02	0.09	0.090	0.385
60: E12-205 ARD-56	17	0.94	15.8	17.8	0.048	0.02	0.03	0.178	0.634
61: CL10-01 ARD-57	67	3.75	63.6	17.9	0.135	0.02	0.12	0.792	3.75
62: CL10-01 ARD-58	41	0.62	40.0	65.0	0.036	0.02	0.02	0.394	1.68
63: CL10-02A ARD-59	30	1.56	28.5	19.3	0.067	0.02	0.05	0.367	1.50
64: E12-213 ARD-60	16	5.00	11.1	3.22	0.206	0.05	0.16	0.159	0.455

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Modified ABA (Price 1997) Sobek

28-June-2012

Trelawney Mining and Exploration Inc.
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Toronto, ON
N5X 1A6, Canada

Phone: 416-363-8567
Fax:416-216-8535

Date Rec. : 14 June 2012
LR Report: **CA11087-JUN12**
Reference: PO# TRR 04509

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CERTIFICATE OF ANALYSIS
Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-112-1 CL-Geochem	6: E11-112-2 CL-Geochem	7: E11-112-3 CL-Geochem	8: E11-112-4 CL-Geochem	9: E11-053-1 CL-Geochem	10: E11-053-2 CL-Geochem	11: E11-053-3 CL-Geochem
Sample Date & Time			08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Paste pH [units]	28-Jun-12	11:27	9.32	9.41	9.52	9.26	9.39	9.43	9.48
Fizz Rate [---]	28-Jun-12	11:27	3	3	3	4	4	4	2
Sample weight [g]	28-Jun-12	11:27	1.98	2.06	2.14	2.02	2.09	2.07	2.11
HCl added [mL]	28-Jun-12	11:27	29.70	27.30	20.00	40.00	54.70	40.00	20.00
HCl [Normality]	28-Jun-12	11:27	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	28-Jun-12	11:27	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to [pH=8.3 mL]	28-Jun-12	11:27	9.92	10.70	14.04	17.33	20.00	14.00	13.99
Final pH [units]	28-Jun-12	11:27	1.61	1.75	1.38	1.55	1.67	1.96	1.45
NP [t CaCO3/1000 t]	28-Jun-12	11:27	50	40	14	56	83	63	14
AP [t CaCO3/1000 t]	28-Jun-12	11:27	1.25	6.18	0.31	1.56	4.68	6.62	7.10
Net NP [t CaCO3/1000 t]	28-Jun-12	11:27	48.6	34.1	13.6	54.5	78.3	56.2	7.10
NP/AP [ratio]	28-Jun-12	11:27	39.9	6.52	44.8	36.0	17.7	9.48	2.00
Sulphur (total) [%]	22-Jun-12	13:42	0.066	0.265	0.027	0.052	0.212	0.242	0.300
Acid Leachable SO4-S [%]	28-Jun-12	11:26	0.03	0.07	0.03	< 0.01	0.06	0.03	0.07
Sulphide [%]	26-Jun-12	12:57	0.04	0.20	< 0.01	0.05	0.15	0.21	0.23
Carbon (total) [%]	22-Jun-12	13:42	0.622	0.484	0.146	0.739	1.01	0.708	0.049
Carbonate [%]	25-Jun-12	17:08	2.75	2.06	0.565	3.40	4.65	3.17	0.177

OnLine LIMS

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

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

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OnLine LIMS

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Modified ABA (Price 1997) Sobek

June-28-12

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Phone: 416-363-8567
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Date Rec. : 14 June 2012
LR Report: **CA11087-JUN12**
Reference: PO# TRR 04509

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	**12: E11-052-1 CL-Geochem**	**13: E11-052-2 CL-Geochem**	**14: E11-052-3 CL-Geochem**	**15: E11-110-1 CL-Geochem**	**16: E11-110-2 CL-Geochem**	**17: E11-062-1 CL-Geochem**	**18: E11-062-2 CL-Geochem**	**19: E11-062-3 CL-Geochem**
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Paste pH [units]	8.92	8.92	9.30	9.36	9.02	8.91	9.37	9.50
Fizz Rate [---]	3	4	4	3	2	3	4	4
Sample weight [g]	2.01	2.13	2.08	2.02	2.08	1.97	2.09	2.08
HCl added [mL]	20.00	76.70	40.00	20.00	20.00	20.00	59.30	82.50
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to [pH=8.3 mL]	5.68	20.00	17.66	7.69	15.26	10.72	20.00	36.06
Final pH [units]	1.82	1.82	1.53	1.63	1.40	1.42	1.77	1.60
NP [t CaCO3/1000 t]	36	133	54	30	11	24	94	112
AP [t CaCO3/1000 t]	0.94	6.63	8.01	0.62	2.75	0.62	1.97	4.13
Net NP [t CaCO3/1000 t]	34.7	126	45.7	29.9	8.65	23.0	92.0	107
NP/AP [ratio]	37.9	20.1	6.70	49.2	4.15	38.1	47.8	27.0
Sulphur (total) [%]	0.031	0.291	0.298	0.029	0.114	0.028	0.082	0.267
Acid Leachable SO4-S [%]	< 0.01	0.08	0.04	< 0.01	0.03	< 0.01	0.02	0.14
Sulphide [%]	0.03	0.21	0.26	0.02	0.09	0.02	0.06	0.13
Carbon (total) [%]	0.442	1.60	0.686	0.389	0.058	0.283	1.15	1.22
Carbonate [%]	1.94	7.40	2.88	1.71	0.215	1.17	5.52	5.64

OnLine LIMS

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

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

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June-28-12

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LR Report: **CA11087-JUN12**
Reference: PO# TRR 04509

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	20: E11-062-4 CL-Geochem	21: E11-111-1 CL-Geochem	22: E11-100-1 CL-Geochem	23: E11-100-2 CL-Geochem	24: E11-100-3 CL-Geochem	25: E11-107-1 CL-Geochem	26: E11-107-2 CL-Geochem	27: Bulk Sample-1 CL-Geochem	28: Bulk Sample-2 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Paste pH [units]	9.44	9.40	9.15	9.07	9.61	9.54	8.97	9.38	8.86
Fizz Rate [---]	3	4	3	4	3	3	3	2	2
Sample weight [g]	2.06	2.05	1.96	2.04	1.98	2.00	2.00	2.12	2.06
HCl added [mL]	20.00	40.00	20.00	59.00	25.60	28.20	20.00	20.00	20.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to [pH=8.3 mL]	12.93	20.96	8.30	19.40	10.09	10.04	12.07	15.79	17.82
Final pH [units]	1.43	1.54	1.53	1.74	1.78	1.63	1.41	1.22	1.16
NP [t CaCO3/1000 t]	17	46	30	97	39	45	20	9.9	5.3
AP [t CaCO3/1000 t]	0.62	1.41	11.1	2.39	0.62	1.25	0.62	0.94	0.31
Net NP [t CaCO3/1000 t]	16.6	45.0	18.7	94.7	38.6	44.2	19.2	8.96	4.99
NP/AP [ratio]	27.7	33.0	2.69	40.6	63.2	36.3	31.9	10.5	17.1
Sulphur (total) [%]	0.020	0.052	0.470	0.075	0.018	0.051	0.022	0.026	0.011
Acid Leachable SO4-S [%]	< 0.01	< 0.01	0.12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Sulphide [%]	0.02	0.04	0.35	0.08	0.02	0.04	0.02	0.03	0.01
Carbon (total) [%]	0.184	0.558	0.380	1.19	0.466	0.562	0.223	0.110	0.058
Carbonate [%]	0.770	2.58	1.39	5.45	2.13	2.83	0.973	0.409	0.156

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

*AP (Acid Potential) = % Sulphide Sulphur x 31.25
*Net NP (Net Neutralization Potential) = NP-AP
NP/AP Ratio = NP/AP
*Results expressed as tonnes CaCO3 equivalent/1000 tonnes of material
Samples with a % Sulphide value of <0.01 will be calculated using a 0.01 value.

Sulphur analysis performed following BC ARD Guidelines (Price 1997)

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ABA - Modified Sobek

22-October-2013

IAMGOLD Corporation
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Date Rec. : 12 September 2013
LR Report: **CA14465-SEP13**

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: CG-HC-1	6: CG-HC-2	7: CG-HC-3	8: CG-HC-4	9: CG-HC-5	10: CG-HC-6
Sample Date & Time			Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A
Paste pH [units]	28-Sep-13	11:36	9.17	8.85	8.95	9.55	9.46	9.09
Fizz Rate [---]	28-Sep-13	11:36	3	3	3	3	3	3
Sample weight [g]	28-Sep-13	11:36	2.00	2.01	2.01	2.03	2.01	2.04
HCl added [mL]	28-Sep-13	11:36	20.00	32.00	20.00	20.00	27.80	29.50
HCl [Normality]	28-Sep-13	11:36	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	28-Sep-13	11:36	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	28-Sep-13	11:36	10.16	11.88	7.41	10.43	14.12	14.12
Final pH [units]	28-Sep-13	11:36	1.60	1.62	1.62	1.39	1.56	1.49
NP [t CaCO3/1000 t]	28-Sep-13	11:36	25	50	31	24	34	38
AP [t CaCO3/1000 t]	---	---	0.94	2.81	0.62	0.94	22.2	1.56
Net NP [t CaCO3/1000 t]	---	---	23.7	47.2	30.7	22.7	11.8	36.1
NP/AP [ratio]	---	---	26.2	17.8	50.1	25.2	1.53	24.1
Sulphur (total) [%]	10-Oct-13	21:16	0.030	0.092	0.028	0.041	0.817	0.070
Acid Leachable SO4-S [%]	---	---	< 0.01	< 0.01	< 0.01	0.01	0.11	0.02
Sulphide [%]	10-Oct-13	21:14	0.03	0.09	0.02	0.03	0.71	0.05
Carbon (total) [%]	10-Oct-13	21:16	0.283	0.603	0.409	0.286	0.380	0.468
Carbonate [%]	10-Oct-13	21:13	1.04	2.39	1.47	1.09	1.11	1.84

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ABA - Modified Sobek

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22-October-2013

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Date Rec. : 12 September 2013
LR Report: **CA14465-SEP13**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	**11: CG-HC-7**	**12: CG-HC-8**	**13: CG-HC-9**	**14: CG-HC-10**	**15: CG-HC-11**	**16: CG-HC-12**	**17: CG-HC-13**	**18: CG-HC-14**
Sample Date & Time	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A
Paste pH [units]	9.05	8.84	9.25	9.37	9.27	9.20	9.41	9.36
Fizz Rate [---]	3	4	4	4	3	3	4	4
Sample weight [g]	1.98	2.02	1.99	2.04	2.02	2.02	2.00	2.00
HCl added [mL]	20.00	40.00	40.00	40.00	29.00	28.60	40.00	40.00
HCl [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH [Normality]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
NaOH to pH=8.3 [mL]	7.24	15.85	21.45	20.97	13.73	13.74	20.00	19.38
Final pH [units]	1.78	1.60	1.53	1.54	1.80	1.55	1.54	1.50
NP [t CaCO3/1000 t]	32	60	47	47	38	39	50	52
AP [t CaCO3/1000 t]	4.06	0.62	0.31	0.94	2.50	2.50	3.44	1.25
Net NP [t CaCO3/1000 t]	28.1	59.2	46.3	45.7	35.3	36.9	46.6	50.4
NP/AP [ratio]	7.93	95.7	149	49.7	15.1	15.8	14.5	41.3
Sulphur (total) [%]	0.165	0.024	0.015	0.026	0.082	0.106	0.144	0.058
Acid Leachable SO4-S [%]	0.04	< 0.01	< 0.01	< 0.01	< 0.01	0.03	0.03	0.02
Sulphide [%]	0.13	0.02	0.01	0.03	0.08	0.08	0.11	0.04
Carbon (total) [%]	0.392	0.726	0.482	0.508	0.392	0.493	0.540	0.609
Carbonate [%]	1.43	2.94	1.98	2.07	1.38	1.90	2.31	2.44

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OnLine LIMS

0000042104

Results from Variability Samples Cyanidation Residue ABA

Comp	CN Test No.	P_{80}, µm	Analyses (g/t) Paste pH units	Fizz Rate ---	Sample weight g	HCl added mL	HCl Normality	NaOH Normality	NaOH to pH=8.3 mL	Final pH units	NP t $CaCO_3$/1000 t	AP t $CaCO_3$/1000 t	Net NP t $CaCO_3$/1000 t	NP/AP ratio	S %	Acid Leachable SO4-S %	Sulphide %	C %	CO_3 %
C25-01	CN-40	96	8.75	3	1.99	29.2	0.1	0.1	10.4	1.59	47	5	42.2	9.44	0.205	0.04	0.16	0.577	2.47
C25-02	CN-37	94	9.27	3	1.99	20.0	0.1	0.1	16.2	1.11	9.6	0.31	9.29	30.7	0.023	0.01	0.01	0.113	0.46
C25-03	CN-101	93	8.84	3	2.04	29.4	0.1	0.1	10.4	1.72	46	2.19	44.3	21.3	0.105	0.04	0.07	0.558	2.40
C25-04	CN-102	99	9.17	3	2.00	20.0	0.1	0.1	13.1	1.16	17	0.94	16.3	18.3	0.047	0.02	0.03	0.25	0.979
C25-05	CN-86	93	9.12	3	2.00	20.0	0.1	0.1	10.6	1.39	24	0.94	22.7	25.2	0.053	0.02	0.03	0.292	1.24
C25-06	CN-103	92	9.20	3	1.98	20.0	0.1	0.1	8.27	1.3	30	0.62	29.0	47.4	0.038	0.02	0.02	0.281	1.11
C25-07	CN-104 RG	94	8.56	3	1.99	60.9	0.1	0.1	21.3	1.59	100	17.8	81.8	5.59	0.627	0.06	0.57	1.13	5.19
C25-08	CN-105	76	9.12	3	2.01	20.0	0.1	0.1	17.7	1.05	5.8	3.44	2.36	1.69	0.148	0.04	0.11	0.035	0.06
C25-09	CN-106	91	9.04	3	2.05	20.0	0.1	0.1	6.56	1.64	33	4.38	28.4	7.50	0.181	0.04	0.14	0.395	1.66
C25-10	CN-93	103	8.77	3	1.99	20.0	0.1	0.1	11.8	1.32	20	0.31	20.2	66.1	0.011	0.01	< 0.01	0.24	1.04
C25-11	CN-107 RG	96	9.01	3	2.05	29.0	0.1	0.1	13.2	1.47	39	0.31	38.3	125	0.023	0.02	< 0.01	0.497	2.15
C25-12	CN-181	98	8.89	3	2.01	48.1	0.1	0.1	15.3	1.74	82	3.44	78.1	23.7	0.182	0.07	0.11	1.16	5.29
C25-13	CN-182	99	8.80	3	2.00	20.0	0.1	0.1	4.29	1.85	39	7.5	31.8	5.24	0.324	0.08	0.24	0.484	2.09
C25-14	CN-183	106	8.91	3	2.01	31.1	0.1	0.1	13.0	1.53	45	2.81	42.3	16.0	0.112	0.02	0.09	0.523	2.47
C25-15	CN-111	95	9.14	3	1.97	20.0	0.1	0.1	7.98	1.49	30	0.31	30.2	98.4	0.007	< 0.01	< 0.01	0.369	1.51
C25-16	CN-112	99	8.98	3	2.00	20.0	0.1	0.1	12.3	1.26	19	1.25	18.0	15.4	0.052	0.01	0.04	0.226	0.829
C25-17	CN-38	139	8.88	3	2.04	24.2	0.1	0.1	9.7	1.56	36	10.6	24.9	3.34	0.424	0.08	0.34	0.504	1.86
C25-18	CN-84	88	9.22	3	1.99	20.0	0.1	0.1	7.14	1.59	32	0.31	32.0	104	0.018	0.02	< 0.01	0.410	1.74
C25-19	CN-41	86	8.93	3	2.04	33.0	0.1	0.1	10.2	1.67	56	3.75	52.2	14.9	0.128	< 0.01	0.12	0.682	3.07
C25-20	CN-113	92	9.07	3	2.01	31.1	0.1	0.1	10.7	1.7	51	2.81	47.9	18.0	0.114	0.02	0.09	0.578	2.41
C25-21	CN-114	98	9.27	3	1.94	20.0	0.1	0.1	14.6	1.18	14	0.31	13.8	45.5	0.008	< 0.01	< 0.01	0.153	0.615
C25-22	CN-115	86	9.20	3	1.99	20.0	0.1	0.1	13.3	1.4	17	0.31	16.6	54.1	0.028	0.02	0.01	0.160	0.644
C25-23	CN-116	95	8.93	3	1.97	25.9	0.1	0.1	10.6	1.56	39	0.62	38.2	62.1	0.032	0.01	0.02	0.44	1.97
C25-24	CN-117 RG	109	8.87	3	2.00	20.0	0.1	0.1	11.5	1.32	21	0.62	20.8	34.2	0.043	0.02	0.02	0.245	0.999
C25-25	CN-50	95	9.18	3	2.06	31.1	0.1	0.1	10.6	1.58	50	1.56	48.3	31.9	0.069	0.02	0.05	0.612	2.74
C25-26	CN-31	91	9.07	3	2.03	20.0	0.1	0.1	7.69	1.52	30	8.12	22.2	3.73	0.265	< 0.01	0.26	0.502	1.83
C25-27	CN-78	102	9.00	3	2.02	20.0	0.1	0.1	11.3	1.49	22	0.31	21.3	69.1	0.017	< 0.01	0.01	0.215	0.859
C25-28	CN-118	91	9.26	3	1.99	24.0	0.1	0.1	8.61	1.56	39	0.62	38.1	61.9	0.04	0.02	0.02	0.463	1.92
C25-29	CN-119	106	9.16	3	1.98	27.2	0.1	0.1	11.7	1.53	39	0.31	38.9	125	0.021	0.01	0.01	0.496	2.14
C25-30	CN-120	113	8.99	3	1.97	31.1	0.1	0.1	11.2	1.7	50	1.88	48.5	26.9	0.105	0.04	0.06	0.613	2.72
C25-31	CN-185	107	8.90	3	2.02	20.0	0.1	0.1	6.63	1.58	33	2.81	30.3	11.8	0.134	0.04	0.09	0.394	1.69
C25-32	CN-122	90	9.14	3	2.00	20.0	0.1	0.1	12.8	1.44	18	0.31	17.8	57.9	0.024	0.01	0.01	0.159	0.639
C25-33	CN-186	92	8.99	3	1.98	20.0	0.1	0.1	7.86	1.47	31	0.62	30.1	49.1	0.039	0.02	0.02	0.376	1.66
C25-34	CN-80	98	9.07	3	2.01	20.0	0.1	0.1	8.82	1.49	28	0.31	27.5	89.0	0.034	0.02	0.01	0.353	1.50
C25-35	CN-124	98	8.92	3	2.05	20.0	0.1	0.1	5.71	1.84	35	2.81	32.1	12.4	0.161	0.07	0.09	0.427	1.86
C25-36	CN-26	96	8.93	3	1.98	31.4	0.1	0.1	9.4	1.68	56	3.75	51.8	14.8	0.136	0.02	0.12	0.700	2.98
C25-37	CN-187	100	8.79	3	1.99	20.0	0.1	0.1	14.4	1.36	14	5.62	8.48	2.51	0.224	0.04	0.18	0.322	1.32
C25-38	CN-126	110	9.05	3	1.99	25.9	0.1	0.1	9.54	1.57	41	3.12	38.0	13.2	0.127	0.03	0.1	0.523	2.35
C25-39	CN-127	86	9.28	3	1.99	20.0	0.1	0.1	13.6	1.22	16	1.25	14.8	12.9	0.075	0.04	0.04	0.173	0.699
C25-40	CN-128	101	8.99	3	1.99	25.3	0.1	0.1	8.92	1.71	41	1.56	39.6	26.4	0.079	0.03	0.05	0.494	2.16
C25-41	CN-91	92	9.07	3	1.95	20.0	0.1	0.1	9.23	1.57	28	1.88	25.7	14.7	0.073	0.01	0.06	0.302	1.23
C25-42	CN-39	97	9.20	3	2.03	20.0	0.1	0.1	8.28	1.52	29	2.19	26.7	13.2	0.111	0.04	0.07	0.395	1.6
C25-43	CN-129	89	8.84	3	2.02	30.5	0.1	0.1	12.4	1.7	45	4.38	40.4	10.2	0.213	0.07	0.14	0.551	2.33
C25-44	CN-188	107	8.96	3	2.08	31.5	0.1	0.1	11.6	1.58	48	2.5	45.3	19.1	0.109	0.03	0.08	0.598	2.67
C25-45	CN-97	93	8.66	3	2.02	20.0	0.1	0.1	15.6	1.2	11	11.9	-0.88	0.93	0.477	0.1	0.38	0.106	0.35
C25-46	CN-131	102	9.11	3	2.04	25.2	0.1	0.1	9.75	1.58	38	0.94	37.0	40.4	0.049	0.02	0.03	0.461	1.93
C25-47	CN-189	100	8.27	3	2.02	20.0	0.1	0.1	18	1.08	5	53.1	-48.1	0.09	1.93	0.23	1.7	0.025	0.045
C25-48	CN-190	94	9.07	3	1.99	20.0	0.1	0.1	9.42	1.44	27	0.94	25.7	28.4	0.05	0.02	0.03	0.319	1.42
C25-49	CN-52	107	9.03	3	1.98	20.0	0.1	0.1	12.7	1.37	18	0.94	17.6	19.7	0.039	< 0.01	0.03	0.185	0.734
C25-50	CN-191	88	8.84	3	2.04	25.5	0.1	0.1	11.3	1.58	35	1.25	33.6	27.8	0.070	0.03	0.04	0.376	1.66
C25-51	CN-134 RG	101	8.98	3	2.00	20.0	0.1	0.1	6.99	1.75	32	0.62	31.9	52	0.046	0.03	0.02	0.383	1.43
C25-52	CN-29	97	9.11	3	1.98	20.0	0.1	0.1	10.3	1.36	25	1.56	23.0	15.7	0.087	0.04	0.05	0.324	1.29
C25-53	CN-192	101	9.11	3	1.99	20.0	0.1	0.1	8.1	1.48	30	0.31	29.6	95.7	0.032	0.02	0.01	0.366	1.68
C25-54	CN-193	105	8.68	3	1.98	20.0	0.1	0.1	6.52	1.61	34	10.9	23.2	3.12	0.392	0.04	0.35	0.420	1.76
C25-55	CN-194	107	9.05	4	1.99	40.0	0.1	0.1	15.4	1.64	62	0.62	61.3	99.0	0.048	0.03	0.02	0.806	3.56
C25-56	CN-195	103	8.92	3	2.03	44.2	0.1	0.1	13.8	1.71	75	1.25	73.6	59.9	0.059	0.02	0.04	0.856	4.12
C25-57	CN-138 RG	97	8.99	3	1.95	25.9	0.1	0.1	9.35	1.61	42	2.5	39.9	17.0	0.122	0.04	0.08	0.526	2.33
C25-58	CN-196	97	9.07	3	2.00	20.0	0.1	0.1	12.0	1.3	20	0.31	19.8	64.3	0.01	< 0.01	0.01	0.242	1.03
C25-59	CN-139	113	9.06	3	2.06	20.0	0.1	0.1	4.54	1.94	38	0.31	37.2	120	0.028	0.02	0.01	0.472	2.16
C25-60	CN-140 RG	94	9.41	3	2.05	20.0	0.1	0.1	9.38	1.43	26	0.31	25.6	83.5	0.022	0.02	< 0.01	0.317	1.40
C25-61	CN-141	92	9.12	3	2.05	29.6	0.1	0.1	10.8	1.53	46	4.38	41.5	10.5	0.167	0.03	0.14	0.584	2.55
C25-62	CN-197	101	8.76	3	2.03	29.4	0.1	0.1	11.0	1.58	45	5.31	39.9	8.51	0.174	< 0.01	0.17	0.603	2.46
C25-63	CN-143	88	9.17	3	2.04	29.7	0.1	0.1	9.72	1.78	49	0.31	48.7	157	0.024	0.01	0.01	0.604	2.76
C25-64	CN-198	101	9.07	3	2.01	37.0	0.1	0.1	13.5	1.53	58	0.31	58.1	187	0.033	0.02	0.01	0.782	3.28
C25-65	CN-145	93	8.90	3	1.99	20.0	0.1	0.1	8.66	1.72	28	4.38	24.1	6.51	0.173	0.03	0.14	0.317	1.34
C25-66	CN-199	101	8.97	3	1.95	37.1	0.1	0.1	10.3	1.66	69	0.94	67.8	73.3	0.026	< 0.01	0.03	0.900	4.01
C25-67	CN-200R	97	8.92	4	2.00	54.9	0.1	0.1	22.6	1.53	81	11.6	69.1	6.98	0.564	0.19	0.37	0.942	4.43
C25-68	CN-146	105	9.29	3	2.00	20.0	0.1	0.1	10.1	1.42	25	0.31	24.6	80.3	0.009	< 0.01	< 0.01	0.312	1.40
C25-69	CN-201	109	9.21	3	2.01	20.0	0.1	0.1	10.1	1.33	25	4.06	20.5	6.06	0.017	< 0.01	0.13	0.308	1.33
C25-70	CN-36	105	9.41	3	2.02	20.0	0.1	0.1	15.5	1.09	71	0.31	70.3	226	0.022	0.01	0.01	0.952	4.39
C25-71	CN-147 RG	96	8.78	3	1.97	20.0	0.1	0.1	6.21	1.75	35	0.31	34.7	113	0.019	0.02	< 0.01	0.408	1.85
C25-72	CN-202	102	9.05	4	2.11	40.0	0.1	0.1	19.8	1.5	48	0.31	47.6	153	0.04	0.03	0.01	0.654	3.03
C25-73	CN-203	101	8.90	3	1.99	27.3	0.1	0.1	11.1	1.59	41	2.81	37.9	14.5	0.127	0.04	0.09	0.536	2.27
C25-74	CN-149	89	8.98	3	1.99	20.0	0.1	0.1	12.9	1.26	18	0.94	16.9	19.0	0.067	0.04	0.03	0.205	0.849
C25-75	CN-150	101	9.16	3	1.97	27.2	0.1	0.1	9.16	1.76	46	0.94	44.9	48.9	0.063	0.03	0.03	0.532	2.36
C25-76	CN-151 RG	101	9.06	3	2.02	20.0	0.1	0.1	11.1	1.39	22	1.88	20.2	11.8	0.084	0.02	0.06	0.274	1.14
C25-77	CN-82	88	9.03	3	1.98	24.5	0.1	0.1	9.03	1.58	39	1.88	37.2	20.9	0.078	0.02	0.06	0.456	2.00
C25-78	CN-204	102	8.93	3	2.04	35.1	0.1	0.1	13.3	1.52	54	1.88	51.7	28.6	0.079	0.02	0.06	0.683	2.92
C25-79	CN-43	103	8.70	3	2.03	30.9	0.1	0.1	28.9	1.5	64.2	23.4	40.8	2.74	0.725	< 0.01	0.75	0.540	2.21
C25-80	CN-153	94	9.18	3	2.02	20.0	0.1	0.1	8.95	1.53	27	3.44	24.0	7.97	0.134	0.02	0.11	0.332	1.40
C25-81	CN-51	95	9.53	3	2.04	20.0	0.1	0.1	8.42	1.43	28	1.56	26.8	18.2	0.061	0.01	0.05	0.362	1.54
C25-82	CN-154	96	9.12	3	2.03	31.1	0.1	0.1	7.08	1.69	59	0.62	58.6	94.7	0.039	0.02	0.02	0.593	2.81
C25-83	CN-155	89	8.48	3	1.96	20.0	0.1	0.1	12.0	1.7	20	4.38	16.1	4.69	0.195	0.06	0.14	0.452	1.85
C25-84	CN-96	92	8.61	3	2.04	20.0	0.1	0.1	9.57	1.36	26	1.56	24.0	16.4	0.091	0.04	0.05	0.314	1.32
C25-85	CN-205	101	8.93	3	2.06	29.5	0.1	0.1	9.9	1.56	48	1.56	46.0	30.5	0.105	0.06	0.05	0.615	2.68
C25-86	CN-27	108	9.09	3	2.04	20.0	0.1	0.1	12.4	1.24	19	1.25	17.4	14.9	0.06	0.02	0.04	0.232	0.944
C25-87	CN-206	104	8.94	3	1.99	20.0	0.1	0.1	8.68	1.43	28	2.19	26.3	13.0	0.086	0.02	0.07	0.354	1.51
C25-88	CN-158	104	8.90	3	1.96	20.0	0.1	0.1	11.0	1.31	23	1.56	21.2	14.6	0.092	0.04	0.05	0.250	1.01
C25-89	CN-56	111	8.89	3	2.02	20.0	0.1	0.1	8.56	1.53	28	10.9	17.4	2.59	0.378	0.03	0.35	0.357	1.26
C25-90	CN-159 RG	90	8.92	3	2.02	20.0	0.1	0.1	15.0	1.23	12	0.31	12.0	39.7	0.019	0.02	< 0.01	0.124	0.495
C25-91	CN-160	61	8.29	3	2.02	36.0	0.1	0.1	9.99	1.89	64	15.6	48.8	4.12	0.592	0.09	0.5	0.762	3.25
C25-92	CN-161	94	8.76	3	2.08	20.0	0.1	0.1	18.7	1.11	3.2	0.62	2.58	5.12	0.043	0.02	0.02	0.032	0.075
C25-93	CN-35	111	9.13	3	2.00	44.3	0.1	0.1	16.2	1.57	70	1.25	69.0	56.2	0.055	0.02	0.04	0.393	1.63

LECO CARBON AND SULPHUR

Iamgold
Date Created: 13-08-19 02:05:13 PM
Job Number: 201310606
Date Received: 07/22/2013 **Certificate of Analysis**
Number of Samples: 1157
Type of Sample: Pulp's
Date Completed: 08/19/2013
Project ID:

Acc #	Client ID	Carbon	Sulphur
		ALTC1	ALTS1
		%	%
78596	E029007	1.82	0.14
78597	E029061	0.20	0.10
78598	E029123	0.75	0.05
78599	E029177	0.08	0.03
78600	E029183	0.16	0.06
78601	E029236	0.08	0.03
78602	E029284	0.54	0.03
78603	E029346	1.11	0.04
78604	E029382	0.12	0.01
78605	E068641	0.40	0.03
78606	E068678	0.94	0.01
78607	E068741	< 0.01	0.02
78608	E68881	No Sample Received	
78609	E68936	No Sample Received	
78610	E68989	No Sample Received	
78611	E69541	No Sample Received	
78612	E069601	0.30	0.08
78613	E069669	0.23	0.58
78614	E069725	0.31	0.08
78615	E069784	0.04	0.03
78616	E069848	0.04	0.31
78617	E70549	No Sample Received	
78618	E70623	No Sample Received	
78619	E70674	0.24	0.03
78620	E073105	0.24	0.03
78621	E073153	0.65	0.02
78622	E73908	No Sample Received	
78623	E73968	No Sample Received	
78624	E90235	0.16	< 0.01
78625	E90295	0.24	0.05
78626	E90654	0.18	0.04
78627	E90694	0.12	0.04
78628	E90755	0.10	0.02
78629	E90854	0.30	0.04
78630	E92276	0.33	0.03
78631	E227138	0.69	0.04
78632	E227194	0.02	< 0.01
78633	E227239	0.52	0.12
78634	E246747	0.36	0.05
78635	E246803	0.32	0.02
78636	E246864	0.16	0.03
78637	E571076	0.27	0.26
78638	E571136	0.41	0.02
78639	E571347	0.69	0.07
78640	E571416	0.08	0.42
78641	E571469	0.20	0.03
78642	E572129	No Sample Received	
78643	E573505	1.09	0.15
78644	E573516	0.30	0.04
78645	E573527	0.39	0.06
78646	E573550	0.28	0.02
78647	E573592	1.93	0.07
78648	E573634	2.14	0.10
78649	E573674	0.47	0.03
78650	E576514	0.08	0.03
78651	E576574	0.20	0.04
78652	E576646	0.20	0.03
78653	E576712	0.42	0.08
78654	E577155	0.25	0.04
78655	E577207	< 0.01	0.01
78656	E577566	0.55	0.02
78657	E577633	0.51	< 0.01
78658	E577694	0.25	< 0.01
78659	E577979	0.31	0.63
78660	E578529	0.31	< 0.01
78661	E578580	1.15	0.69
78662	E579777	0.27	0.21
78663	E681504	< 0.01	< 0.01
78664	E681554	0.11	< 0.01
78665	E681670	1.97	0.22
78666	E681769	1.93	0.19
78667	E681824	0.99	0.03
78668	E681852	0.11	< 0.01
78669	E681880	No Sample Received	
78670	E681950	0.31	0.10
78671	E684032	0.41	0.05
78672	E684066	3.33	0.07
78673	E684358	0.25	0.07
78674	E684378	0.29	< 0.01
78675	E684437	0.35	< 0.01
78676	E689119	1.52	< 0.01
78677	E689165	0.34	0.04
78678	E689241	0.55	0.22
78679	E689315	0.34	< 0.01
78680	E689406	1.20	< 0.01
78681	E689456	0.27	< 0.01
78682	E689497	2.66	< 0.01
78683	E920457	0.34	< 0.01
78772	E936022	0.60	0.03
78773	E936060	No Sample Received	
78774	E936227	1.71	0.01
78775	E936266	0.35	0.04
78776	E936319	0.56	0.02
78777	E936379	1.67	0.02
78778	E936413	0.31	0.03
78779	E936467	0.71	0.01
78780	E937057	0.51	0.12
78781	E937144	0.93	0.24
78782	E937263	0.16	0.18
78783	E937330	0.48	0.04
78784	E937351	0.56	0.06
78785	E937384	0.70	0.46

Acc #	Client ID	Carbon	Sulphur
		ALTC1	ALTS1
		%	%
78684	E920512	0.31	0.01
78685	E920794	0.91	0.01
78686	E920837	1.19	0.07
78687	E920900	0.20	0.07
78688	E920947	0.63	0.07
78689	E924250	0.63	0.17
78690	E924531	0.88	0.16
78691	E924600	0.43	0.05
78692	E924644	0.36	0.04
78693	E924822	1.97	0.01
78694	E926537	1.94	0.07
78695	E926548	0.38	< 0.01
78696	E926573	0.95	0.02
78697	E926642	0.12	0.06
78698	E926665	0.44	0.02
78699	E926721	0.40	0.01
78700	E927647	0.29	< 0.01
78701	E927670	0.57	0.04
78702	E927684	0.30	0.03
78703	E927735	0.36	0.01
78704	E928110	0.61	0.09
78705	E928174	0.20	0.60
78706	E928194	0.04	0.52
78707	E928214	0.99	0.07
78708	E928217	0.92	0.08
78709	E928256	0.44	0.06
78710	E928285	1.96	0.05
78711	E928342	0.20	0.06
78712	E928343	0.24	0.05
78713	E928398	1.58	0.22
78714	E928416	0.28	0.01
78715	E928418	0.23	0.07
78716	E928475	0.27	0.04
78717	E928680	1.31	0.08
78718	E928708	1.49	0.03
78719	E928736	0.54	0.07
78720	E928783	0.42	0.03
78721	E928797	0.72	0.02
78722	E928827	0.32	0.10
78723	E928846	0.35	0.12
78724	E928884	0.35	0.11
78725	E928951	1.80	0.10
78726	E929051	0.52	0.07
78727	E929111	0.69	0.03
78728	E929170	0.01	0.02
78729	E929658	1.51	0.39
78730	E929721	0.28	0.11
78731	E929864	0.35	0.05
78732	E930092	0.16	< 0.01
78733	E930139	1.04	0.06
78734	E930209	0.98	0.03
78735	E930288	1.44	0.05
78736	E930693	0.15	0.04
78737	E930751	0.33	< 0.01
78738	E930763	0.50	0.06
78739	E930827	0.64	0.03
78740	E931559	1.29	0.02
78741	E931592	1.32	0.02
78742	E931623	0.47	0.01
78743	E931639	0.62	0.44
78744	E931697	0.66	0.01
78745	E932502	0.29	0.16
78746	E933629	0.77	0.01
78747	E933690	0.36	0.02
78748	E933733	0.54	0.03
78749	E933764	0.42	0.04
78750	E934194	0.34	0.24
78751	E934215	0.87	< 0.01
78752	E934235	0.34	0.02
78753	E934276	0.32	0.10
78754	E934718	0.20	0.10
78755	E934741	1.15	0.23
78756	E934810	0.57	0.20
78757	E934827	0.12	0.10
78758	E934846	0.50	0.06
78759	E934917	0.08	0.05
78760	E934987	0.12	0.02
78761	E935027	0.62	0.20
78762	E935087	0.51	< 0.01
78763	E935150	1.28	0.44
78764	E935167	0.14	< 0.01
78765	E935173	0.20	0.01
78766	E935187	0.28	0.03
78767	E935250	0.28	0.04
78768	E935289	1.62	0.05
78769	E935331	0.40	0.25
78770	E935396	0.31	0.02
78771	E935452	0.33	1.91
78874	E1016801	0.20	0.06
78875	E1016837	0.43	0.39
78876	E1017253	No Sample Received	
78877	E1017291	0.12	0.04
78878	E1017308	0.21	0.14
78879	E1017319	0.08	0.01
78880	E1017344	0.59	0.32
78881	E1017502	0.29	0.22
78882	E1017568	0.21	0.18
78883	E1017615	0.06	0.02
78884	E1017766	0.47	0.20
78885	E1017819	0.16	0.05
78886	E1026152	0.35	0.09
78887	E1026197	0.58	0.07

Iamgold
Date Created: 13-08-19 02:05:13 PM
Job Number: 201310606
Date Received: 07/22/2013

Certificate of Analysis

Number of Samples: 1157
Type of Sample: Pulp's
Date Completed: 08/19/2013
Project ID:

Acc #	Client ID	Carbon	Sulphur
		ALTC1	ALTS1
		%	%
78786	E937395	0.28	0.09
78787	E937440	0.28	0.09
78788	E937661	0.96	0.01
78789	E937698	0.40	< 0.01
78790	E937769	0.72	0.22
78791	E937812	0.45	0.30
78792	E937853	0.44	0.40
78793	E938630	0.22	0.20
78794	E938691	0.32	0.05
78795	E938728	0.54	0.12
78796	E938749	1.74	0.01
78797	E939343	0.28	< 0.01
78798	E939408	0.44	0.02
78799	E939477	0.42	0.01
78800	E950406	0.16	0.49
78801	E950441	1.02	1.80
78802	E950466	0.51	0.09
78803	E950499	0.38	0.06
78804	E950511	1.89	0.11
78805	E950562	0.24	0.01
78806	E950641	0.18	0.04
78807	E951453	0.40	< 0.01
78808	E951469	0.30	0.07
78809	E951744	1.35	0.04
78810	E951800	0.72	< 0.01
78811	E951840	0.06	0.11
78812	E952093	0.65	< 0.01
78813	E952141	0.42	< 0.01
78814	E952193	1.39	0.20
78815	E952225	0.43	0.04
78816	E952387	0.26	0.23
78817	E952441	1.64	< 0.01
78818	E952486	2.00	0.06
78819	E952525	0.68	0.01
78820	E952559	0.72	0.07
78821	E952621	0.51	0.02
78822	E952686	0.32	0.08
78823	E952760	0.16	0.04
78824	E952814	1.44	0.24
78825	E952858	1.16	0.25
78826	E953032	0.94	0.06
78827	E953061	0.20	0.09
78828	E953090	0.34	0.01
78829	E953145	0.86	0.44
78830	E953177	0.79	0.15
78831	E953862	0.40	0.10
78832	E953898	0.42	0.11
78833	E953925	0.38	0.02
78834	E954508	0.56	0.13
78835	E954844	0.26	0.10
78836	E954891	0.26	0.59
78837	E954935	0.04	0.18
78838	E955069	0.32	0.23
78839	E955128	0.08	0.08
78840	E955193	0.19	< 0.01
78841	E955263	0.27	0.03
78842	E955689	0.04	0.18
78843	E955757	No Sample Received	
78844	E955796	0.38	0.18
78845	E955853	0.71	0.03
78846	E955916	0.33	0.04
78847	E955974	0.32	0.18
78848	E956608	0.20	0.01
78849	E956658	0.04	0.03
78850	E957074	0.16	0.07
78851	E957140	0.32	0.04
78852	E957178	0.26	0.05
78853	E957303	0.60	< 0.01
78854	E957351	0.26	0.03
78855	E957598	0.39	0.10
78856	E957641	0.41	0.09
78857	E957685	0.81	0.07
78858	E957943	0.65	0.02
78859	E959381	0.47	0.20
78860	E959430	0.04	0.01
78861	E959461	0.22	1.61
78862	E1008009	1.43	0.08
78863	E1008033	0.51	< 0.01
78864	E1008072	1.20	0.35
78865	E1008131	0.11	0.07
78866	E1008263	0.30	0.56
78867	E1008325	1.79	< 0.01
78868	E1008450	0.29	0.16
78869	E1008484	0.34	0.03
78870	E1008545	0.08	< 0.01
78871	E1008587	0.08	0.01
78872	E1008640	< 0.01	0.02
78873	E1016763	0.18	0.02
78976	E1070411	0.16	0.22
78977	E1070452	0.70	0.27
78978	E1070503	0.16	0.25
78979	E1070564	0.33	0.20
78980	E1070805	0.14	< 0.01
78981	E1070859	1.39	0.07
78982	E1070872	0.33	0.91
78983	E1070919	0.27	< 0.01
78984	E1070978	0.27	0.06
78985	E1071035	0.26	0.05
78986	E1072007	0.82	0.28
78987	E1072070	0.72	0.06
78988	E1072127	0.29	0.23
78989	E1072260	0.32	0.20

Acc #	Client ID	Carbon	Sulphur
		ALTC1	ALTS1
		%	%
78888	E1026229	1.87	0.46
78889	E1027005	0.04	< 0.01
78890	E1027108	0.26	0.04
78891	E1027158	0.38	0.03
78892	E1027217	0.40	0.07
78893	E1027276	0.64	0.08
78894	E1027637	0.24	0.06
78895	E1027660	No Sample Received	
78896	E1027713	0.20	0.06
78897	E1027765	0.42	0.05
78898	E1029078	0.76	0.01
78899	E1029147	0.24	0.11
78900	E1029210	0.32	0.03
78901	E1029271	0.14	< 0.01
78902	E1029834	0.28	0.02
78903	E1029887	0.34	0.02
78904	E1029909	0.60	0.08
78905	E1045278	0.37	0.02
78906	E1045336	0.57	0.03
78907	E1045357	0.47	0.38
78908	E1045416	0.10	0.01
78909	E1045447	0.19	0.17
78910	E1045542	0.34	0.14
78911	E1045618	0.31	0.07
78912	E1045680	0.24	< 0.01
78913	E1047357	0.63	0.12
78914	E1047392	0.44	0.03
78915	E1047429	1.42	0.09
78916	E1047488	0.37	0.01
78917	E1047567	0.32	0.10
78918	E1047603	0.04	0.10
78919	E1047626	0.20	0.01
78920	E1047653	0.04	0.11
78921	E1047699	0.06	< 0.01
78922	E1047705	0.24	0.04
78923	E1048017	0.08	0.03
78924	E1048061	0.63	0.02
78925	E1048111	0.31	< 0.01
78926	E1048151	0.38	0.06
78927	E1048749	0.08	0.05
78928	E1048789	0.08	0.10
78929	E1048841	0.22	< 0.10
78930	E1049027	0.62	0.17
78931	E1049084	0.20	0.01
78932	E1049134	0.27	0.02
78933	E1049182	0.32	0.02
78934	E1049245	2.47	0.07
78935	E1049766	1.28	0.07
78936	E1049783	0.37	0.06
78937	E1049797	0.56	0.01
78938	E1049838	0.54	0.01
78939	E1049901	0.37	0.25
78940	E1049959	0.22	0.18
78941	E1050614	0.97	0.01
78942	E1050665	0.20	0.06
78943	E1050721	0.37	0.05
78944	E1051192	0.22	0.02
78945	E1051248	0.38	0.02
78946	E1051624	0.20	0.02
78947	E1051659	No Sample Received	
78948	E1051896	0.25	0.04
78949	E1051956	0.37	0.01
78950	E1052532	No Sample Received	
78951	E1052566	0.20	0.01
78952	E1052656	0.94	0.05
78953	E1053708	0.04	0.02
78954	E1054018	1.08	0.17
78955	E1054094	0.30	0.06
78956	E1054154	0.34	0.07
78957	E1054224	0.79	0.01
78958	E1057062	0.08	0.08
78959	E1057090	0.63	0.40
78960	E1057141	0.78	0.10
78961	E1057682	0.08	0.06
78962	E1057715	0.14	0.07
78963	E1057754	1.45	0.13
78964	E1057810	0.28	0.05
78965	E1057841	0.31	0.03
78966	E1070113	0.53	0.26
78967	E1070114	No Sample Received	
78968	E1070181	0.41	0.28
78969	E1070231	0.42	0.26
78970	E1070267	0.25	0.20
78971	E1070293	1.40	0.29
78972	E1070318	3.79	0.09
78973	E1070346	0.94	0.04
78974	E1070378	0.38	0.03
78975	E1070403	0.46	0.27
79078	E1117290	1.76	< 0.01
79079	E1117353	0.08	0.01
79080	E1117378	0.10	0.04
79081	E1117413	0.48	0.02
79082	E1117512	0.30	0.12
79083	E1117573	0.10	< 0.01
79084	E1117896	0.40	0.04
79085	E1117946	0.41	0.03
79086	E1118008	0.32	0.02
79087	E1118064	1.14	0.17
79088	E1120010	0.64	0.04
79089	E1120651	0.24	0.03
79090	E1120705	0.69	0.03
79091	E1120776	0.08	0.02

Iamgold
Date Created: 13-08-19 02:05:13 PM
Job Number: 201310606
Date Received: 07/22/2013

Certificate of Analysis

Number of Samples: 1157
Type of Sample: Pulp's
Date Completed: 08/19/2013
Project ID:

Acc #	Client ID	Carbon ALTC1 %	Sulphur ALTS1 %
1	E1072273	0.28	0.06
78991	E1072516	0.43	0.20
78992	E1072626	1.51	0.24
78993	E1072705	0.44	0.25
78994	E1072741	0.28	0.17
78995	E1073165	0.34	0.19
78996	E1104011	2.44	0.02
78997	E1104153	2.62	0.46
78998	E1104484	0.36	0.04
78999	E1104531	0.24	0.02
79000	E1105010	1.19	0.10
79001	E1105040	0.04	0.03
79002	E1105066	0.32	0.65
79003	E1105125	0.20	< 0.01
79004	E1105132	0.04	0.01
79005	E1105726	1.02	0.03
79006	E1105787	0.34	0.04
79007	E1105839	0.68	< 0.01
79008	E1105955	0.36	0.10
79009	E1106427	0.23	0.01
79010	E1106441	1.12	0.09
79011	E1106482	0.28	0.01
79012	E1106700	3.05	0.11
79013	E1107020	0.15	0.06
79014	E1107081	0.25	0.02
79015	E1107140	0.27	0.34
79016	E1107187	0.95	0.02
79017	E1107250	0.33	0.06
79018	E1107317	0.41	0.02
79019	E1107356	0.16	0.06
79020	E1107573	0.31	< 0.01
79021	E1107625	0.48	0.02
79022	E1107674	0.51	0.01
79023	E1108517	1.01	0.03
79024	E1108578	0.34	< 0.01
79025	E1108640	0.24	< 0.01
79026	E1108705	0.25	0.04
79027	E1108761	0.27	0.05
79028	E1108811	0.32	0.02
79029	E1109047	0.72	0.03
79030	E1109100	0.48	0.03
79031	E1109116	0.64	< 0.01
79032	E1109161	0.66	< 0.01
79033	E1109218	0.23	0.03
79034	E1109283	0.48	0.02
79035	E1109571	0.61	0.09
79036	E1109631	0.16	0.02
79037	E1109694	0.30	< 0.01
79038	E1109761	0.32	< 0.01
79039	E1109826	0.27	< 0.01
79040	E1109886	0.35	0.03
79041	E1110036	0.08	< 0.01
79042	E1110065	0.08	0.01
79043	E1111218	0.02	0.05
79044	E1111278	0.04	0.07
79045	E1111978	0.34	0.02
79046	E1111988	0.46	0.01
79047	E1112007	0.44	0.05
79048	E1113029	0.26	< 0.01
79049	E1113077	0.12	0.02
79050	E1113134	0.44	0.02
79051	E1113188	0.78	0.07
79052	E1113248	0.38	0.13
79053	E1113282	0.76	0.14
79054	E1113522	0.51	0.06
79055	E1113547	0.16	0.07
79056	E1114008	0.40	0.02
79057	E1114935	0.08	< 0.01
79058	E1114985	0.46	0.11
79059	E1115021	0.24	< 0.01
79060	E1115674	0.10	0.11
79061	E1115728	0.54	0.45
79062	E1115788	0.39	0.12
79063	E1116010	0.34	0.15
79064	E1116199	1.33	0.26
79065	E1116260	0.12	0.12
79066	E1116326	0.36	0.10
79067	E1116330	0.10	0.14
79068	E1116370	0.30	0.08
79069	E1116421	1.04	0.34
79070	E1116474	0.34	0.01
79071	E1116504	1.42	0.03
79072	E1116552	0.38	0.07
79073	E1116610	0.04	0.05
79074	E1116725	0.24	0.09
79075	E1116737	0.06	0.08
79076	E1117160	0.14	0.05
79077	E1117211	0.20	0.03
79180	E1172176	1.03	0.21
79181	E1172177	3.26	0.26
79182	E1172192	0.82	0.02
79183	E1172223	0.36	0.15
79184	E1172244	0.16	0.11
79185	E1172286	0.78	0.16
79186	E1172344	0.62	0.10
79187	E1172556	0.32	0.01
79188	E1172615	0.20	0.02
79189	E1172861	0.12	0.02
79190	E1172872	0.08	0.14
79191	E1172947	0.88	0.04
79192	E1173119	0.77	0.11
79193	E1173243	0.69	0.12

Acc #	Client ID	Carbon ALTC1 %	Sulphur ALTS1 %
79092	E1120794	0.18	< 0.01
79093	E1120848	0.78	0.11
79094	E1120904	0.24	< 0.01
79095	E1120966	0.14	0.05
79096	E1120988	0.14	0.08
79097	E1120993	0.16	0.11
79098	E1121504	0.36	0.02
79099	E1121913	0.06	0.02
79100	E1121971	0.32	0.02
79101	E1152026	2.02	0.12
79102	E1152087	0.32	0.02
79103	E1152146	0.78	0.88
79104	E1152508	No Sample Received	
79105	E1153121	0.14	0.06
79106	E1153128	0.04	0.11
79107	E1153135	< 0.01	0.14
79108	E1153159	1.25	< 0.01
79109	E1153209	1.04	0.10
79110	E1153261	0.28	0.15
79111	E1153609	0.54	0.05
79112	E1153674	0.30	< 0.01
79113	E1153734	0.72	0.21
79114	E1156020	0.50	0.03
79115	E1156242	0.42	0.09
79116	E1156287	0.35	< 0.01
79117	E1156338	0.24	0.02
79118	E1156692	0.55	0.21
79119	E1156734	0.45	0.09
79120	E1156779	0.26	0.01
79121	E1156837	0.37	0.19
79122	E1156888	0.82	0.08
79123	E1157293	0.67	0.03
79124	E1157297	1.05	0.19
79125	E1157356	0.57	0.01
79126	E1157357	0.53	0.02
79127	E1157424	0.16	0.03
79128	E1157433	0.65	0.09
79129	E1157490	0.37	0.07
79130	E1157498	0.32	0.07
79131	E1157754	0.35	0.07
79132	E1157808	0.60	0.05
79133	E1157855	0.52	0.59
79134	E1157871	0.28	0.01
79135	E1157922	0.24	0.02
79136	E1157974	0.10	0.02
79137	E1158413	0.40	0.01
79138	E1158477	0.38	0.02
79139	E1162480	< 0.01	0.11
79140	E1162497	0.02	0.10
79141	E1162996	0.64	0.07
79142	E1163047	0.16	0.10
79143	E1163110	0.17	0.11
79144	E1163178	0.19	0.02
79145	E1163236	0.18	0.01
79146	E1163335	0.24	0.01
79147	E1163425	0.25	0.05
79148	E1163480	0.24	0.05
79149	E1164055	0.12	0.09
79150	E1164067	0.26	0.04
79151	E1164719	1.35	0.03
79152	E1164779	0.55	0.02
79153	E1164846	0.24	0.07
79154	E1167195	0.56	0.15
79155	E1167233	1.21	0.03
79156	E1167262	1.41	0.12
79157	E1167285	0.74	0.13
79158	E1167470	0.28	0.02
79159	E1167536	0.47	0.07
79160	E1167807	0.28	< 0.01
79161	E1167865	0.63	0.01
79162	E1167916	2.01	0.16
79163	E1167971	0.38	0.02
79164	E1168230	0.32	0.13
79165	E1168288	0.26	0.24
79166	E1168366	0.34	0.08
79167	E1168407	0.78	0.23
79168	E1168456	0.44	0.02
79169	E1168616	0.61	0.10
79170	E1168677	0.45	0.05
79171	E1168732	0.14	0.07
79172	E1169541	0.48	0.08
79173	E1171018	0.79	0.05
79174	E1171777	0.06	0.08
79175	E1171884	0.08	0.01
79176	E1171963	0.04	0.52
79177	E1172097	1.82	0.02
79178	E1172122	3.62	0.02
79179	E1172124	2.65	0.06
79285	E1298677	0.24	0.03
79286	E1298746	0.58	0.03
79287	E1299298	1.63	0.05
79288	E1299358	0.28	0.08
79289	E1299415	1.85	0.05
79290	E1304411	0.38	0.09
79291	E1304467	1.76	0.04
79292	E1305005	0.24	0.02
79293	E1305947	0.52	0.01
79294	E1306008	0.16	0.03
79295	E1306069	0.54	0.12
79296	E1306117	1.34	0.14
79297	E1306176	0.11	0.05
79298	E1306195	0.20	0.09

Iamgold
Date Created: 13-08-19 02:05:13 PM
Job Number: 201310606
Date Received: 07/22/2013

Certificate of Analysis

Number of Samples: 1157
Type of Sample: Pulp's
Date Completed: 08/19/2013
Project ID:

Acc #	Client ID	Carbon ALTC1 %	Sulphur ALTS1 %
79194	E1173303	0.33	0.02
79195	E1173391	0.38	0.01
79196	E1173453	0.28	0.02
79197	E1173948	0.34	0.08
79198	E1174058	0.04	0.02
79199	E1174079	0.12	0.04
79200	E1174129	0.28	0.04
79201	E1174169	0.50	0.02
79202	E1175113	0.35	0.08
79203	E1175159	2.14	0.05
79204	E1175182	1.38	0.12
79205	E1175245	0.26	0.03
79206	E1175271	0.28	0.04
79207	E1175325	0.12	0.01
79208	E1175564	0.32	0.03
79209	E1175624	0.34	0.02
79210	E1175663	0.35	0.02
79211	E1256333	No Sample Received	
79212	E1256379	0.08	0.03
79213	E1256432	0.04	0.38
79214	E1258031	0.25	0.06
79215	E1258041	0.61	0.02
79216	E1258050	0.24	0.05
79217	E1258098	0.28	0.01
79218	E1258401	1.00	0.05
79219	E1258449	0.28	0.01
79220	E1258479	0.04	0.05
79221	E1258512	0.46	0.03
79222	E1258576	0.36	0.02
79223	E1258628	0.22	0.08
79224	E1258760	0.04	0.06
79225	E1259307	0.16	0.04
79226	E1259369	0.52	0.03
79227	E1259424	0.27	0.09
79228	E1259491	1.25	0.02
79229	E1260333	0.32	0.06
79230	E1260360	< 0.01	< 0.01
79231	E1260403	< 0.01	0.06
79232	E1260426	0.04	0.30
79233	E1260433	0.12	0.24
79234	E1260834	0.80	0.20
79235	E1260900	0.28	0.06
79236	E1260963	1.12	0.05
79237	E1261293	0.44	0.13
79238	E1261347	0.32	0.07
79239	E1261398	0.45	0.02
79240	E1261810	0.97	0.08
79241	E1261869	1.96	0.27
79242	E1261924	0.56	0.03
79243	E1262008	1.29	0.10
79244	E1262062	< 0.01	0.04
79245	E1262116	0.04	0.08
79246	E1262151	0.04	0.03
79247	E1262215	0.12	0.02
79248	E1263557	0.57	0.04
79249	E1263625	0.22	0.02
79253	E1263698	0.23	0.02
79254	E1264312	0.29	0.07
79255	E1264346	1.30	0.15
79256	E1264388	0.16	0.10
79257	E1271260	0.20	0.09
79258	E1271283	No Sample Received	
79259	E1271335	0.63	0.22
79260	E1284024	0.26	0.03
79261	E1284093	0.18	0.02
79262	E1284778	0.32	0.03
79263	E1284808	1.90	0.03
79264	E1284846	0.14	0.02
79265	E1284878	1.07	0.10
79266	E1284919	0.49	0.04
79267	E1284981	0.02	0.01
79268	E1285351	0.19	0.02
79269	E1285407	0.22	0.06
79270	E1285469	0.10	0.05
79271	E1288077	0.20	0.02
79272	E1288121	0.38	0.07
79273	E1288142	0.22	0.02
79274	E1288195	0.74	0.11
79275	E1297330	0.08	0.01
79276	E1297380	0.24	0.03
79277	E1297405	1.04	0.02
79278	E1297415	0.33	0.16
79279	E1297443	1.52	0.19
79280	E1298028	2.22	0.19
79281	E1298040	0.63	0.01
79282	E1298061	0.31	0.03
79283	E1298546	0.16	0.12
79284	E1298611	0.60	0.04
79387	E1334492	0.73	0.01
79388	E1334523	1.07	0.02
79389	E1334580	0.26	0.04
79390	E1335660	1.64	0.02
79391	E1335727	0.06	0.06
79392	E1335777	0.18	0.01
79393	E1335825	0.12	0.01
79394	E1336051	0.23	0.06
79395	E1336102	0.16	0.09
79396	E1336164	0.87	0.01
79397	E1336196	0.95	< 0.01
79398	E1336217	0.63	0.13
79399	E1336320	0.04	0.10
79400	E1336375	0.43	0.08

Acc #	Client ID	Carbon ALTC1 %	Sulphur ALTS1 %
79299	E1306249	0.45	0.01
79300	E1306315	0.21	0.08
79301	E1306359	1.21	0.11
79302	E1306915	0.08	0.02
79303	E1306919	0.15	0.03
79304	E1306941	0.23	0.01
79305	E1306959	1.69	0.10
79306	E1308103	1.38	0.01
79307	E1308169	0.10	0.04
79308	E1308221	0.35	< 0.01
79309	E1308285	0.12	0.02
79310	E1308339	0.41	0.12
79311	E1308404	0.28	0.03
79312	E1308457	0.16	0.03
79313	E1309636	0.10	0.01
79314	E1309700	0.34	0.16
79315	E1309766	0.18	0.01
79316	E1310138	0.12	0.10
79317	E1310197	0.92	0.03
79318	E1310414	1.40	0.24
79319	E1310462	0.04	0.08
79320	E1310517	0.08	0.02
79321	E1310561	0.75	0.07
79322	E1310585	1.74	0.08
79323	E1311510	0.41	0.03
79324	E1311570	0.08	0.03
79325	E1311579	1.03	0.01
79326	E1311777	0.12	0.02
79327	E1311843	0.34	0.03
79328	E1311886	2.08	0.08
79329	E1311931	0.20	0.01
79330	E1313311	1.71	0.03
79331	E1313368	0.25	0.02
79332	E1313372	0.28	0.04
79333	E1313478	0.33	0.07
79334	E1313495	1.52	0.06
79335	E1313534	0.24	0.11
79336	E1317206	0.50	0.01
79337	E1317270	1.54	0.02
79338	E1317321	5.02	0.05
79339	E1317704	0.16	0.02
79340	E1317764	0.41	0.01
79341	E1317807	0.16	0.03
79342	E1317847	0.08	0.04
79343	E1323608	0.34	0.11
79344	E1323660	0.02	0.13
79345	E1323716	0.33	0.04
79346	E1323885	0.64	0.07
79347	E1323959	0.52	0.06
79348	E1325047	No Sample Received	
79349	E1325106	0.59	0.08
79350	E1325165	0.16	0.02
79351	E1325216	0.09	0.10
79352	E1325409	0.87	0.03
79353	E1326019	0.91	0.01
79354	E1326054	0.35	0.02
79355	E1326073	0.29	0.02
79356	E1326120	0.36	0.05
79357	E1326178	0.10	0.04
79358	E1326242	0.69	0.03
79359	E1326284	0.19	0.04
79360	E1326524	0.33	0.02
79361	E1326588	0.21	0.04
79362	E1326673	2.44	0.02
79363	E1328551	0.97	0.06
79364	E1328604	0.25	0.01
79365	E1328669	0.41	0.01
79366	E1328761	0.35	0.02
79367	E1328816	0.58	0.03
79368	E1328842	0.57	0.04
79369	E1329030	0.28	0.01
79370	E1329096	3.61	0.08
79371	E1329749	0.19	0.04
79372	E1329819	No Sample Received	
79373	E1329877	0.02	0.01
79374	E1331507	0.05	0.01
79375	E1331558	0.28	0.02
79376	E1331625	0.01	< 0.01
79377	E1331680	0.81	0.06
79378	E1333344	0.11	0.08
79379	E1333390	0.26	0.09
79380	E1334077	0.50	0.01
79381	E1334134	0.16	0.13
79382	E1334194	0.47	0.10
79383	E1334254	0.16	0.07
79384	E1334302	0.24	0.58
79385	E1334371	0.37	0.10
79386	E1334431	0.08	< 0.01
79489	E1361712	0.34	0.02
79490	E1362115	0.28	0.06
79491	E1362180	1.03	0.33
79492	E1362237	0.34	0.02
79493	E1363006	0.72	< 0.01
79494	E1363071	0.60	0.08
79495	E1363137	0.32	0.03
79496	E1364567	0.39	1.04
79497	E1364623	0.24	< 0.01
79498	E1364688	0.04	0.10
79499	E1364751	0.50	< 0.01
79500	E1364808	0.35	0.01
79501	E1364871	0.40	0.01
79502	E1368149	0.26	0.03

Iamgold
Date Created: 13-08-19 02:05:13 PM
Job Number: 201310606
Date Received: 07/22/2013 **Certificate of Analysis**
Number of Samples: 1157
Type of Sample: Pulp's
Date Completed: 08/19/2013
Project ID:

Acc #	Client ID	Carbon ALTC1 %	Sulphur ALTS1 %
79401	E1337965	1.10	0.18
79402	E1338230	1.50	0.07
79403	E1338267	No Sample Received	
79404	E1338519	0.47	0.05
79405	E1338587	0.32	< 0.01
79406	E1338625	6.67	0.06
79407	E1341098	1.35	0.11
79408	E1341141	0.44	0.02
79409	E1341201	0.30	0.18
79410	E1341540	1.17	0.07
79411	E1341594	0.14	0.04
79412	E1341644	0.32	0.04
79413	E1342108	0.16	0.41
79414	E1342172	0.34	0.05
79415	E1342239	0.11	0.03
79416	E1343533	8.16	0.08
79417	E1343542	0.16	0.12
79418	E1343591	0.32	0.21
79419	E1343649	0.04	< 0.01
79420	E1343704	0.30	0.02
79421	E1343760	0.20	0.01
79422	E1344533	0.07	0.03
79423	E1344596	0.12	0.02
79424	E1344640	0.60	0.08
79425	E1346009	No Sample Received	
79426	E1346061	0.12	0.05
79427	E1346137	1.25	0.10
79428	E1346160	No Sample Received	
79429	E1346202	0.28	0.03
79430	E1346256	0.08	0.02
79431	E1347072	1.30	0.11
79432	E1347150	0.29	0.09
79433	E1347577	0.33	0.15
79434	E1347633	0.12	0.01
79435	E1347687	0.31	0.12
79436	E1348066	0.44	0.05
79437	E1349059	1.02	0.04
79438	E1349110	0.17	0.08
79439	E1349176	0.33	0.14
79440	E1349224	0.40	0.05
79441	E1349261	0.41	0.05
79442	E1349302	0.22	0.04
79443	E1349335	0.16	0.03
79444	E1349598	0.14	0.13
79445	E1349659	0.12	0.02
79446	E1349707	1.07	0.15
79447	E1349767	0.05	0.03
79448	E1349813	0.32	0.05
79449	E1350733	0.14	0.07
79450	E1350764	0.12	0.08
79451	E1351547	0.18	0.07
79452	E1351616	0.39	0.27
79453	E1351670	0.37	0.09
79454	E1352846	0.31	0.04
79455	E1352904	1.25	0.14
79456	E1352967	0.83	0.03
79457	E1353048	0.21	0.03
79458	E1353074	0.12	0.08
79459	E1353098	0.74	0.05
79460	E1353153	0.12	0.03
79461	E1353200	1.11	0.06
79462	E1353264	0.13	0.09
79463	E1353315	0.12	0.04
79464	E1353377	0.49	0.06
79465	E1353457	0.04	0.03
79466	E1353523	0.56	0.09
79467	E1353838	0.24	0.02
79468	E1353887	1.30	0.09
79469	E1353936	4.83	0.02
79470	E1355814	0.12	0.07
79471	E1355839	0.15	0.07
79472	E1356478	2.75	0.16
79473	E1357922	0.12	0.03
79474	E1357977	0.56	0.07
79475	E1359030	0.24	0.06
79476	E1359069	0.28	0.01
79477	E1359132	No Sample Received	
79478	E1359177	0.40	0.03
79479	E1359809	0.28	0.05
79480	E1359903	0.10	< 0.01
79481	E1359952	0.19	< 0.01
79482	E1360573	1.83	0.10
79483	E1360620	0.22	0.07
79484	E1360681	0.29	0.01
79485	E1361014	0.08	0.04
79486	E1361492	0.23	0.04
79487	E1361579	0.52	0.04
79488	E1361653	0.32	0.01
79591	E1390140	0.42	0.04
79592	E1390202	0.37	0.13
79593	E1390264	0.28	0.05
79594	E1390318	0.38	0.08
79595	E1390381	0.06	0.01
79596	E1390445	0.29	0.03
79597	E1390498	0.20	0.10
79598	E1395197	0.75	0.05
79599	E1395222	0.08	0.03
79600	E1395236	0.16	0.06
79601	E1395852	0.08	0.03
79602	E1395884	0.42	0.03
79603	E1395944	1.11	0.04
79604	E1396259	0.12	0.02

Acc #	Client ID	Carbon ALTC1 %	Sulphur ALTS1 %
79503	E1368213	0.47	0.01
79504	E1368251	0.04	0.02
79505	E1368976	0.18	0.13
79506	E1370006	0.36	0.02
79507	E1370068	0.28	0.08
79508	E1370125	0.32	0.02
79509	E1371630	0.02	0.14
79510	E1371689	0.18	0.03
79511	E1371750	0.04	1.17
79512	E1371812	1.36	0.04
79513	E1371889	1.93	0.03
79514	E1371943	0.16	0.11
79515	E1374916	0.52	0.02
79516	E1374965	0.22	0.01
79517	E1375316	0.20	0.01
79518	E1375370	0.18	0.01
79519	E1375432	0.18	< 0.01
79520	E1375759	0.25	0.01
79521	E1375820	0.29	0.07
79522	E1375887	0.73	0.07
79523	E1376108	0.22	< 0.01
79524	E1376168	0.20	0.03
79525	E1376219	0.31	0.04
79526	E1378706	0.52	0.02
79527	E1378754	0.30	0.06
79528	E1380053	0.47	0.36
79529	E1380099	0.20	0.01
79530	E1380160	No Sample Received	
79531	E1380216	0.28	< 0.01
79532	E1380279	0.12	0.06
79533	E1380320	0.32	0.03
79534	E1381385	0.04	0.04
79535	E1381453	0.12	0.07
79536	E1381483	0.20	0.07
79537	E1381856	2.53	0.01
79538	E1381908	0.39	0.01
79539	E1381953	0.30	0.11
79540	E1382331	0.15	0.02
79541	E1382386	0.16	0.01
79542	E1382454	0.20	0.04
79543	E1382475	0.04	< 0.01
79544	E1382499	3.37	0.01
79545	E1382555	0.03	0.03
79546	E1382585	< 0.01	0.02
79547	E1382659	0.19	0.19
79548	E1382729	No Sample Received	
79549	E1383744	0.36	0.02
79550	E1383807	0.48	0.06
79551	E1383845	0.08	0.05
79552	E1383990	1.50	1.22
79553	E1384012	1.17	0.02
79554	E1384066	0.45	0.03
79555	E1384131	0.24	0.15
79556	E1384196	0.28	0.04
79557	E1384268	0.49	0.07
79558	E1384330	0.22	0.10
79559	E1384840	0.36	0.05
79560	E1384878	1.41	0.01
79561	E1384903	0.30	0.02
79562	E1384937	0.45	0.04
79563	E1385752	0.18	0.16
79564	E1385814	0.47	0.11
79565	E1385848	0.30	0.17
79566	E1386169	No Sample Received	
79567	E1386204	0.67	0.08
79568	E1386233	2.86	0.02
79569	E1386272	0.10	0.02
79570	E1386767	0.24	0.01
79571	E1386829	0.26	0.02
79572	E1386887	0.08	0.02
79573	E1386945	0.21	0.01
79574	E1387070	0.77	0.01
79575	E1387139	0.34	0.04
79576	E1387476	0.44	0.23
79577	E1387529	0.40	0.08
79578	E1387873	0.04	0.04
79579	E1387938	0.40	0.03
79580	E1388083	0.20	0.04
79581	E1388142	0.46	0.15
79582	E1388179	0.71	0.06
79583	E1388224	0.36	0.03
79584	E1388700	0.52	0.14
79585	E1388771	0.73	0.07
79586	E1388845	0.14	< 0.01
79587	E1388908	0.30	0.03
79588	E1388968	0.65	0.08
79589	E1390020	No Sample Received	
79590	E1390082	0.34	0.02
79693	E1445368	0.20	0.02
79694	E1445396	0.20	0.12
79695	E1447030	No Sample Received	
79696	E1447105	0.45	0.07
79697	E1455287	1.64	0.02
79698	E1455341	0.20	0.02
79699	E1455398	0.40	0.03
79700	E1455458	0.37	0.08
79701	E1455519	0.61	< 0.01
79702	E1455581	0.20	0.04
79703	E1456032	4.07	0.13
79704	E1456079	1.53	0.03
79705	E1456517	0.46	0.09
79706	E1456575	0.08	0.01

Iamgold
Date Created: 13-08-19 02:05:13 PM
Job Number: 201310606
Date Received: 07/22/2013

Certificate of Analysis

Number of Samples: 1157
Type of Sample: Pulp's
Date Completed: 08/19/2013
Project ID:

Acc #	Client ID	Carbon ALTC1 %	Sulphur ALTS1 %
79605	E1396326	0.40	0.03
79606	E1396533	0.94	0.01
79607	E1396594	< 0.01	0.12
79608	E1396637	No Sample Received	
79609	E1396692	No Sample Received	
79610	E1396745	No Sample Received	
79611	E1396790	No Sample Received	
79612	E1398253	0.30	0.06
79613	E1398311	0.23	0.58
79614	E1398715	0.33	0.02
79615	E1398746	0.04	0.03
79616	E1398758	0.04	0.31
79617	E1399004	No Sample Received	
79618	E1399061	No Sample Received	
79619	E1399116	No Sample Received	
79620	E1399888	0.24	0.03
79621	E1399938	1.38	< 0.01
79622	E1401135	No Sample Received	
79623	E1401198	1.04	0.04
79624	E1401269	0.08	< 0.01
79625	E1401330	0.19	0.07
79626	E1401392	0.19	0.01
79627	E1401470	0.35	0.19
79628	E1401526	1.87	0.06
79629	E1402425	1.96	0.33
79630	E1402452	1.71	< 0.01
79631	E1402505	No Sample Received	
79632	E1404018	1.11	< 0.01
79633	E1404086	0.16	0.10
79634	E1412249	0.20	0.14
79635	E1412303	0.31	0.30
79636	E1412344	0.31	0.21
79637	E1413221	0.20	< 0.01
79638	E1413274	0.32	0.01
79639	E1413313	0.73	0.03
79640	E1415412	1.62	0.02
79641	E1415473	0.35	0.10
79642	E1415522	0.47	< 0.01
79643	E1415543	0.08	0.05
79644	E1415597	0.40	0.10
79645	E1415640	0.36	0.02
79646	E1415651	3.14	0.14
79647	E1415660	0.60	0.09
79648	E1415674	1.89	0.05
79649	E1415679	0.44	0.14
79650	E1415708	0.11	< 0.01
79651	E1416107	0.36	0.10
79652	E1416171	0.32	0.03
79653	E1431297	0.20	0.09
79654	E1431335	0.32	0.04
79655	E1431373	1.58	0.09
79656	E1435210	< 0.01	< 0.01
79657	E1435262	0.83	0.11
79658	E1435270	0.66	0.06
79659	E1435291	< 0.01	0.02
79660	E1435345	2.66	0.03
79661	E1435347	0.04	0.04
79662	E1435412	2.05	0.10
79663	E1435430	0.32	0.05
79664	E1435432	0.16	0.07
79665	E1435458	0.28	0.38
79666	E1435459	0.41	0.15
79667	E1435497	0.20	0.01
79668	E1435633	No Sample Received	
79669	E1435669	0.56	0.05
79670	E1435688	0.81	0.03
79671	E1435762	0.24	0.06
79672	E1435803	0.20	0.07
79673	E1435810	0.04	0.05
79674	E1435818	0.04	0.01
79675	E1435829	0.76	0.37
79676	E1435841	0.76	< 0.01
79677	E1435876	0.28	0.04
79678	E1435956	0.49	0.03
79679	E1436294	0.63	0.09
79680	E1436361	0.69	< 0.01
79681	E1436425	0.66	0.10
79682	E1436471	1.52	0.05
79683	E1436479	0.49	< 0.01
79684	E1436544	0.29	0.16
79685	E1437014	1.25	0.13
79686	E1437068	0.08	0.04
79687	E1437121	0.24	0.02
79688	E1437178	0.28	< 0.01
79689	E1437234	0.16	0.04
79690	E1437295	0.08	0.01
79691	E1445270	0.21	0.01
79692	E1445324	0.12	0.04

Acc #	Client ID	Carbon ALTC1 %	Sulphur ALTS1 %
79707	E1456633	0.08	0.04
79708	E1456676	0.21	0.01
79709	E1456685	0.04	< 0.01
79710	E1456722	0.51	0.02
79711	E1456751	0.28	0.05
79712	E1464005	1.18	0.08
79713	E1464052	0.16	< 0.01
79714	E1464107	0.44	< 0.01
79715	E1464645	0.60	0.04
79716	E1464698	2.14	0.16
79717	E1464742	2.78	0.23
79718	E1464765	1.47	0.09
79719	E1465755	0.28	0.01
79720	E1465801	0.28	< 0.01
79721	E1465856	0.24	0.02
79722	E1469046	0.36	0.02
79723	E1469073	0.28	0.05
79724	E1469137	1.09	0.11
79725	E1469358	0.29	< 0.01
79726	E1469382	< 0.01	< 0.01
79727	E1469420	1.34	0.04
79728	E1469721	0.20	0.03
79729	E1469777	0.37	0.06
79730	E1469842	0.12	0.09
79731	E1473002	0.24	0.03
79732	E1473039	0.89	0.02
79733	E1473444	0.16	0.02
79734	E1473505	0.49	< 0.01
79735	E1474363	1.27	0.13
79736	E1474379	0.12	0.02
79737	E1474390	2.41	< 0.01
79738	E1474796	0.93	0.03
79739	E1474820	0.40	0.10
79740	E1474888	0.24	0.02
79741	E1483057	0.44	0.11
79742	E1483115	1.32	0.23
79743	E1483171	0.16	0.05
79744	E1483217	0.08	0.01
79745	E1483935	0.16	0.01
79746	E1484728	0.60	0.03
79747	E1484786	0.97	0.05
79748	E1484845	0.26	0.01
79749	E1484944	0.54	0.11
79750	E1486216	No Sample Received	
79751	E1486220	No Sample Received	
79752	E1486512	0.35	0.02
79753	E1486558	0.39	0.02
79754	E1486591	0.38	< 0.01
79755	E1486617	0.36	0.03

Iamgold
Date Created: 13-08-19 02:05:13 PM
Job Number: 201310606
Date Received: 07/22/2013

Certificate of Analysis

Number of Samples: 1157
Type of Sample: Pulp's
Date Completed: 08/19/2013
Project ID:

CRM's Used

Name	Actual TS %	Expected TS %	Name	Actual TC %	Expected TC %
RTS-1	1.71	1.66	AR4014	5.92	5.87
RTS-1	1.68	1.66	AR4014	5.84	5.87
RTS-1	1.62	1.66	AR4014	5.85	5.87
RTS-1	1.70	1.66	AR4014	5.91	5.87
RTS-1	1.64	1.66	AR4014	5.83	5.87
RTS-1	1.67	1.66	AR4014	5.87	5.87
RTS-1	1.67	1.66	AR4014	5.94	5.87
RTS-1	1.71	1.66	AR4014	5.80	5.87
RTS-1	1.61	1.66	AR4014	5.99	5.87
RTS-1	1.69	1.66	AR4014	5.75	5.87
RTS-1	1.65	1.66	AR4014	5.89	5.87
RTS-1	1.65	1.66	AR4014	5.82	5.87
RTS-1	1.67	1.66	AR4014	5.90	5.87
RTS-1	1.65	1.66	AR4014	5.91	5.87
RTS-1	1.66	1.66	AR4014	5.91	5.87
RTS-1	1.68	1.66	AR4014	5.89	5.87
RTS-1	1.70	1.66	AR4014	5.81	5.87
RTS-1	1.62	1.66	AR4014	5.94	5.87
RTS-1	1.67	1.66	AR4014	5.86	5.87
RTS-1	1.64	1.66	AR4014	5.92	5.87
RTS-1	1.67	1.66	AR4014	5.84	5.87
RTS-1	1.68	1.66	AR4014	5.84	5.87
RTS-1	1.67	1.66	AR4014	5.96	5.87
RTS-1	1.63	1.66	AR4014	5.86	5.87
RTS-1	1.68	1.66	AR4014	5.88	5.87
RTS-1	1.66	1.66	AR4014	5.87	5.87
RTS-1	1.64	1.66	AR4014	5.90	5.87
RTS-1	1.65	1.66	AR4014	5.84	5.87
RTS-1	1.68	1.66	AR4014	5.89	5.87
RTS-1	1.66	1.66	AR4014	5.83	5.87
RTS-1	1.67	1.66	AR4014	5.89	5.87
RTS-1	1.68	1.66	AR4014	5.91	5.87
RTS-1	1.62	1.66	AR4014	5.77	5.87
RTS-1	1.64	1.66	AR4014	5.93	5.87
RTS-1	1.68	1.66	AR4014	5.86	5.87
RTS-1	1.66	1.66	AR4014	5.88	5.87
RTS-1	1.59	1.66	AR4014	5.87	5.87
RTS-1	1.67	1.66	AR4014	5.87	5.87
RTS-1	1.72	1.66	AR4014	5.89	5.87
RTS-1	1.66	1.66	AR4014	5.83	5.87
RTS-1	1.64	1.66	AR4014	5.89	5.87
RTS-1	1.67	1.66	AR4014	5.87	5.87
RTS-1	1.64	1.66	AR4014	5.87	5.87
RTS-1	1.67	1.66	AR4014	5.94	5.87
RTS-1	1.67	1.66	AR4014	5.82	5.87
RTS-1	1.66	1.66	AR4014	5.85	5.87
RTS-1	1.68	1.66	AR4014	5.88	5.87
RTS-1	1.64	1.66	AR4014	5.86	5.87
RTS-1	1.73	1.66	AR4014	5.92	5.87
RTS-1	1.65	1.66	AR4014	5.82	5.87
RTS-1	1.67	1.66	AR4014	5.87	5.87
RTS-1	1.66	1.66	AR4014	5.92	5.87
RTS-1	1.63	1.66	AR4014	5.85	5.87
RTS-1	1.73	1.66	AR4014	5.85	5.87
RTS-1	1.61	1.66	AR4014	5.88	5.87
RTS-1	1.70	1.66	AR4014	5.82	5.87
RTS-1	1.68	1.66	AR4014	5.92	5.87
RTS-1	1.60	1.66	AR4014	5.87	5.87
RTS-1	1.66	1.66	AR4014	5.86	5.87
RTS-1	1.65	1.66	AR4014	5.88	5.87
RTS-1	1.67	1.66	AR4014	5.90	5.87
RTS-1	1.67	1.66	AR4014	5.84	5.87
RTS-1	1.64	1.66	AR4014	5.89	5.87
RTS-1	1.67	1.66	AR4014	5.85	5.87
RTS-1	1.70	1.66	AR4014	5.85	5.87
RTS-1	1.60	1.66	AR4014	5.92	5.87
RTS-1	1.68	1.66	AR4014	5.85	5.87
RTS-1	1.75	1.66	AR4014	5.85	5.87
RTS-1	1.59	1.66	AR4014	5.85	5.87
RTS-1	1.68	1.66	AR4014	5.89	5.87
RTS-1	1.66	1.66	AR4014	5.83	5.87
RTS-1	1.68	1.66	AR4014	5.90	5.87
RTS-1	1.65	1.66	AR4014	5.82	5.87
RTS-1	1.69	1.66	AR4014	5.88	5.87
RTS-1	1.60	1.66	AR4014	5.86	5.87
RTS-1	1.69	1.66	AR4014	5.86	5.87
RTS-1	1.66	1.66	AR4014	5.89	5.87
RTS-1	1.66	1.66	AR4014	5.84	5.87
RTS-1	1.67	1.66	AR4014	5.85	5.87
RTS-1	1.67	1.66	AR4014	5.88	5.87
RTS-1	1.65	1.66	AR4014	5.89	5.87
RTS-1	1.67	1.66	AR4014	5.84	5.87
RTS-1	1.66	1.66	AR4014	5.81	5.87
RTS-1	1.68	1.66	AR4014	5.89	5.87
RTS-1	1.66	1.66	AR4014	5.91	5.87
RTS-1	1.66	1.66	AR4014	5.87	5.87
RTS-1	1.67	1.66	AR4014	5.86	5.87
RTS-1	1.66	1.66	AR4014	5.86	5.87
RTS-1	1.67	1.66	AR4014	5.86	5.87
RTS-1	1.64	1.66	AR4014	5.89	5.87
RTS-1	1.65	1.66	AR4014	5.89	5.87
RTS-1	1.71	1.66	AR4014	5.86	5.87
RTS-1	1.66	1.66	AR4014	5.86	5.87
RTS-1	1.69	1.66	AR4014	5.90	5.87
RTS-1	1.70	1.66	AR4014	5.85	5.87
RTS-1	1.69	1.66	AR4014	5.86	5.87
RTS-1	1.69	1.66	AR4014	5.88	5.87
RTS-1	1.65	1.66			
RTS-1	1.69	1.66			

NET ACID GENERATION

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

NAG Test

Project : IAMGold Cote Lake

December-20-12

Knight Piesold Limited
Attn : Steve Aiken

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165 ext. 241
Fax:

Date Rec. : 13 November 2012
LR Report: **CA10183-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Sample weight g	Vol H2O2 mL	Final pH units	NaOH Normality	Vol NaOH to PH 4.5 mL	Vol NaOH to PH 7.0 mL	NAG (pH 4.5) kg H2SO4/tonne	NAG (pH 7.0) kg H2SO4/tonne
3: Analysis Approval Date		19-Dec-12	19-Dec-12	19-Dec-12	19-Dec-12	19-Dec-12	19-Dec-12	19-Dec-12	19-Dec-12
4: Analysis Approval Time		15:02	15:02	15:02	15:02	15:02	15:02	15:02	15:02
5: E10-036 ARD-1	10-Nov-12	1.55	150	10.82	0.10	0.00	0.00	0.0	0.0
6: E10-036 ARD-2	10-Nov-12	1.51	150	8.95	0.10	0.00	0.00	0.0	0.0
7: E10-036 ARD-3	10-Nov-12	1.50	150	11.24	0.10	0.00	0.00	0.0	0.0
8: E10-045 ARD-4	10-Nov-12	1.52	150	8.60	0.10	0.00	0.00	0.0	0.0
9: E11-066 ARD-5	10-Nov-12	1.48	150	8.11	0.10	0.00	0.00	0.0	0.0
10: E11-066 ARD-6	10-Nov-12	1.50	150	10.92	0.10	0.00	0.00	0.0	0.0
11: E11-082 ARD-7	10-Nov-12	1.54	150	10.75	0.10	0.00	0.00	0.0	0.0
12: E11-082 ARD-8	10-Nov-12	1.52	150	8.29	0.10	0.00	0.00	0.0	0.0
13: E11-082 ARD-9	10-Nov-12	1.52	150	9.62	0.10	0.00	0.00	0.0	0.0
14: E11-087 ARD-10	10-Nov-12	1.53	150	10.94	0.10	0.00	0.00	0.0	0.0
15: E11-087 ARD-11	10-Nov-12	1.52	150	8.96	0.10	0.00	0.00	0.0	0.0
16: E12-217 ARD-12	10-Nov-12	1.50	150	10.27	0.10	0.00	0.00	0.0	0.0
17: E11-096 ARD-13	10-Nov-12	1.52	150	10.94	0.10	0.00	0.00	0.0	0.0
18: E11-096 ARD-14	10-Nov-12	1.48	150	10.60	0.10	0.00	0.00	0.0	0.0
19: E11-096 ARD-15	10-Nov-12	1.51	150	7.39	0.10	0.00	0.00	0.0	0.0
20: E11-098 ARD-16	10-Nov-12	1.53	150	10.51	0.10	0.00	0.00	0.0	0.0
21: E11-098 ARD-17	10-Nov-12	1.55	150	10.86	0.10	0.00	0.00	0.0	0.0
22: E11-098 ARD-18	10-Nov-12	1.52	150	10.83	0.10	0.00	0.00	0.0	0.0

OnLine LIMS

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

Sample ID	Sample Date & Time	Sample weight g	Vol H2O2 mL	Final pH units	NaOH Normality	Vol NaOH to PH 4.5 mL	Vol NaOH to PH 7.0 mL	NAG (pH 4.5) kg H2SO4/tonne	NAG (pH 7.0) kg H2SO4/tonne
23: E11-099 ARD-19	10-Nov-12	1.55	150	8.65	0.10	0.00	0.00	0.0	0.0
24: E11-099 ARD-20	10-Nov-12	1.49	150	10.90	0.10	0.00	0.00	0.0	0.0
25: E11-114 ARD-21	10-Nov-12	1.53	150	8.96	0.10	0.00	0.00	0.0	0.0
26: E11-114 ARD-22	10-Nov-12	1.54	150	11.23	0.10	0.00	0.00	0.0	0.0
27: E10-038 ARD-23	10-Nov-12	1.53	150	8.23	0.10	0.00	0.00	0.0	0.0
28: E11-062 ARD-24	10-Nov-12	1.50	150	10.65	0.10	0.00	0.00	0.0	0.0
29: E10-30 ARD-25	10-Nov-12	1.52	150	10.87	0.10	0.00	0.00	0.0	0.0
30: E10-028 ARD-26	10-Nov-12	1.47	150	8.12	0.10	0.00	0.00	0.0	0.0
31: E11-049 ARD-27	10-Nov-12	1.50	150	8.74	0.10	0.00	0.00	0.0	0.0
32: E11-049 ARD-28	10-Nov-12	1.54	150	10.07	0.10	0.00	0.00	0.0	0.0
33: E11-061 ARD-29	10-Nov-12	1.52	150	8.16	0.10	0.00	0.00	0.0	0.0
34: E12-206 ARD-30	10-Nov-12	1.52	150	11.24	0.10	0.00	0.00	0.0	0.0
35: E12-179 ARD-31	10-Nov-12	1.52	150	10.52	0.10	0.00	0.00	0.0	0.0
36: E11-048 ARD-32	10-Nov-12	1.52	150	10.48	0.10	0.00	0.00	0.0	0.0
37: E11-048 ARD-33	10-Nov-12	1.57	150	11.28	0.10	0.00	0.00	0.0	0.0
38: E11-075 ARD-34	10-Nov-12	1.53	150	11.11	0.10	0.00	0.00	0.0	0.0
39: E11-075 ARD-35	10-Nov-12	1.53	150	11.15	0.10	0.00	0.00	0.0	0.0
40: E11-071 ARD-36	10-Nov-12	1.58	150	11.39	0.10	0.00	0.00	0.0	0.0
41: E11-071 ARD-37	10-Nov-12	1.47	150	10.86	0.10	0.00	0.00	0.0	0.0
42: E11-078 ARD-38	10-Nov-12	1.47	150	7.92	0.10	0.00	0.00	0.0	0.0
43: E11-179 ARD-39	10-Nov-12	1.57	150	7.81	0.10	0.00	0.00	0.0	0.0
44: E11-120 ARD-40	10-Nov-12	1.53	150	10.81	0.10	0.00	0.00	0.0	0.0
45: E11-120 ARD-41	10-Nov-12	1.57	150	11.13	0.10	0.00	0.00	0.0	0.0
46: E11-120 ARD-42	10-Nov-12	1.53	150	11.53	0.10	0.00	0.00	0.0	0.0
47: E11-122 ARD-43	10-Nov-12	1.48	150	8.88	0.10	0.00	0.00	0.0	0.0
48: E11-122 ARD-44	10-Nov-12	1.49	150	11.16	0.10	0.00	0.00	0.0	0.0
49: E11-140 ARD-45	10-Nov-12	1.50	150	8.77	0.10	0.00	0.00	0.0	0.0
50: E11-145 ARD-46	10-Nov-12	1.59	150	8.26	0.10	0.00	0.00	0.0	0.0
51: E12-198 ARD-47	10-Nov-12	1.50	150	10.82	0.10	0.00	0.00	0.0	0.0
52: E11-129 ARD-48	10-Nov-12	1.50	150	11.09	0.10	0.00	0.00	0.0	0.0
53: E11-140 ARD-49	10-Nov-12	1.56	150	11.07	0.10	0.00	0.00	0.0	0.0
54: E11-144 ARD-50	10-Nov-12	1.58	150	10.24	0.10	0.00	0.00	0.0	0.0
55: E11-141 ARD-51	10-Nov-12	1.52	150	11.36	0.10	0.00	0.00	0.0	0.0
56: E11-145 ARD-52	10-Nov-12	1.48	150	9.04	0.10	0.00	0.00	0.0	0.0
57: E12-200 ARD-53	10-Nov-12	1.48	150	11.39	0.10	0.00	0.00	0.0	0.0

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NAG Test

Project : IAMGold Cote Lake

LR Report : **CA10183-NOV12**

Sample ID	Sample Date & Time	Sample weight g	Vol H2O2 mL	Final pH units	NaOH Normality	Vol NaOH to PH 4.5 mL	Vol NaOH to PH 7.0 mL	NAG (pH 4.5) kg H2SO4/tonne	NAG (pH 7.0) kg H2SO4/tonne
58: E12-205 ARD-54	10-Nov-12	1.56	150	8.38	0.10	0.00	0.00	0.0	0.0
59: E12-294 ARD-55	10-Nov-12	1.47	150	8.60	0.10	0.00	0.00	0.0	0.0
60: E12-205 ARD-56	10-Nov-12	1.59	150	8.49	0.10	0.00	0.00	0.0	0.0
61: CL10-01 ARD-57	10-Nov-12	1.57	150	11.23	0.10	0.00	0.00	0.0	0.0
62: CL10-01 ARD-58	10-Nov-12	1.50	150	10.86	0.10	0.00	0.00	0.0	0.0
63: CL10-02A ARD-59	10-Nov-12	1.56	150	10.85	0.10	0.00	0.00	0.0	0.0
64: E12-213 ARD-60	10-Nov-12	1.48	150	9.58	0.10	0.00	0.00	0.0	0.0

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

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

OnLine LIMS

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July-17-12

Trelawney Mining and Exploration Inc.
Attn : Steve Norregaard

130 King St. W. Suite 2810
Toronto, ON
N5X 1A6, Canada

Phone: 416-363-8567
Fax:416-216-8535

Date Rec. : 14 June 2012
LR Report: **CA11114-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Sample weight g	Vol H2O2 mL	Final pH units	NaOH Normality	Vol NaOH to PH 4.5 mL	Vol NaOH to PH 7.0 mL	NAG (pH 4.5) kg H2SO4/tonne	NAG (pH 7.0) kg H2SO4/tonne
3: Analysis Approval Date		06-Jul-12	06-Jul-12	06-Jul-12	06-Jul-12	06-Jul-12	06-Jul-12	06-Jul-12	06-Jul-12
4: Analysis Approval Time		16:42	16:42	16:42	16:42	16:42	16:42	16:42	16:42
5: E11-61-1 CL-Geochem	08-Jun-12	1.49	150	11.05	0.10	0.00	0.00	0.0	0.0
6: E11-61-2 CL-Geochem	08-Jun-12	1.49	150	11.41	0.10	0.00	0.00	0.0	0.0
7: E11-81-1 CL-Geochem	08-Jun-12	1.50	150	11.55	0.10	0.00	0.00	0.0	0.0
8: E11-81-2 CL-Geochem	08-Jun-12	1.50	150	9.83	0.10	0.00	0.00	0.0	0.0
9: E11-81-3 CL-Geochem	08-Jun-12	1.55	150	10.43	0.10	0.00	0.00	0.0	0.0
10: E11-81-4 CL-Geochem	08-Jun-12	1.51	150	11.01	0.10	0.00	0.00	0.0	0.0
11: E11-54-1 33.87-36.14 m CL-Geochem	08-Jun-12	1.50	150	11.41	0.10	0.00	0.00	0.0	0.0
12: E11-54-2 CL-Geochem	08-Jun-12	1.52	150	11.42	0.10	0.00	0.00	0.0	0.0
13: E11-54-3 CL-Geochem	08-Jun-12	1.52	150	9.54	0.10	0.00	0.00	0.0	0.0
14: E11-54-4 CL-Geochem	08-Jun-12	1.48	150	9.95	0.10	0.00	0.00	0.0	0.0
15: E11-59-1 CL-Geochem	08-Jun-12	1.56	150	8.44	0.10	0.00	0.00	0.0	0.0
16: E11-59-2 CL-Geochem	08-Jun-12	1.56	150	7.86	0.10	0.00	0.00	0.0	0.0
17: E11-95-1 CL-Geochem	08-Jun-12	1.51	150	11.09	0.10	0.00	0.00	0.0	0.0
18: E11-95-2 CL-Geochem	08-Jun-12	1.51	150	11.26	0.10	0.00	0.00	0.0	0.0
19: E11-97-1 CL-Geochem	08-Jun-12	1.51	150	7.82	0.10	0.00	0.00	0.0	0.0
20: E11-97-2 CL-Geochem	08-Jun-12	1.54	150	11.12	0.10	0.00	0.00	0.0	0.0
21: E11-138-1 CL-Geochem	08-Jun-12	1.52	150	11.27	0.10	0.00	0.00	0.0	0.0
22: E11-138-2 CL-Geochem	08-Jun-12	1.53	150	11.49	0.10	0.00	0.00	0.0	0.0

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NAG Test

LR Report : **CA11114-JUN12**

Sample ID	Sample Date & Time	Sample weight g	Vol H2O2 mL	Final pH units	NaOH Normality	Vol NaOH to PH 4.5 mL	Vol NaOH to PH 7.0 mL	NAG (pH 4.5) kg H2SO4/tonne	NAG (pH 7.0) kg H2SO4/tonne
23: E11-138-3 CL-Geochem	08-Jun-12	1.52	150	11.25	0.10	0.00	0.00	0.0	0.0
24: E11-77-1 CL-Geochem	08-Jun-12	1.54	150	9.68	0.10	0.00	0.00	0.0	0.0
25: E11-77-2 CL-Geochem	08-Jun-12	1.59	150	11.30	0.10	0.00	0.00	0.0	0.0
26: E10-38-1 CL-Geochem	08-Jun-12	1.51	150	8.56	0.10	0.00	0.00	0.0	0.0
27: E10-38-2 CL-Geochem	08-Jun-12	1.49	150	11.26	0.10	0.00	0.00	0.0	0.0
28: E10-38-3 CL-Geochem	08-Jun-12	1.47	150	9.79	0.10	0.00	0.00	0.0	0.0
29: E11-91-1 CL-Geochem	08-Jun-12	1.58	150	8.15	0.10	0.00	0.00	0.0	0.0
30: E11-91-2 CL-Geochem	08-Jun-12	1.55	150	7.46	0.10	0.00	0.00	0.0	0.0
31: E11-91-3 CL-Geochem	08-Jun-12	1.56	150	11.10	0.10	0.00	0.00	0.0	0.0
32: E11-72-1 CL-Geochem	08-Jun-12	1.54	150	11.17	0.10	0.00	0.00	0.0	0.0
33: E10-31-1 CL-Geochem	08-Jun-12	1.52	150	11.23	0.10	0.00	0.00	0.0	0.0
34: E10-31-2 CL-Geochem	08-Jun-12	1.58	150	11.38	0.10	0.00	0.00	0.0	0.0
35: E10-31-3 CL-Geochem	08-Jun-12	1.54	150	11.61	0.10	0.00	0.00	0.0	0.0
36: E10-31-4 CL-Geochem	08-Jun-12	1.52	150	11.19	0.10	0.00	0.00	0.0	0.0
37: E10-23-1 CL-Geochem	08-Jun-12	1.54	150	11.37	0.10	0.00	0.00	0.0	0.0
38: E10-46-1 CL-Geochem	08-Jun-12	1.58	150	11.21	0.10	0.00	0.00	0.0	0.0
39: E10-46-2 CL-Geochem	08-Jun-12	1.55	150	11.52	0.10	0.00	0.00	0.0	0.0
40: E10-13-1 CL-Geochem	08-Jun-12	1.58	150	11.07	0.10	0.00	0.00	0.0	0.0
41: E10-13-2 CL-Geochem	08-Jun-12	1.52	150	11.64	0.10	0.00	0.00	0.0	0.0
42: E10-13-3 CL-Geochem	08-Jun-12	1.52	150	11.34	0.10	0.00	0.00	0.0	0.0
43: E10-13-4 CL-Geochem	08-Jun-12	1.54	150	11.50	0.10	0.00	0.00	0.0	0.0
44: CL10-3-1 CL-Geochem	08-Jun-12	1.56	150	9.72	0.10	0.00	0.00	0.0	0.0
45: E10-42-1 CL-Geochem	08-Jun-12	1.52	150	11.30	0.10	0.00	0.00	0.0	0.0
46: E10-42-2 CL-Geochem	08-Jun-12	1.55	150	10.65	0.10	0.00	0.00	0.0	0.0
47: E10-42-3 CL-Geochem	08-Jun-12	1.58	150	11.10	0.10	0.00	0.00	0.0	0.0
48: E11-66-1 CL-Geochem	08-Jun-12	1.58	150	10.76	0.10	0.00	0.00	0.0	0.0
49: E11-54-1 212.3-215.5m CL-Geochem	08-Jun-12	1.54	150	7.04	0.10	0.00	0.00	0.0	0.0
50: E11-51-1 CL-Geochem	08-Jun-12	1.55	150	11.11	0.10	0.00	0.00	0.0	0.0

OnLine LIMS

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NAG = (49 x Vol. of base x N of base)/sample weight
kg H2SO4/tonne
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Brian Graham B.Sc.
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NAG Test

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N5X 1A6, Canada

Phone: 416-363-8567
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Wednesday, June 27, 2012

Date Rec. : 14 June 2012
LR Report: **CA11115-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Sample weight g	Vol H2O2 mL	Final pH units	NaOH Normality	Vol NaOH to PH 4.5 mL	Vol NaOH to PH 7.0 mL	NAG (pH 4.5) kg H2SO4/tonne	NAG (pH 7.0) kg H2SO4/tonne
3: Analysis Approval Date		26-Jun-12	26-Jun-12	26-Jun-12	26-Jun-12	26-Jun-12	26-Jun-12	26-Jun-12	26-Jun-12
4: Analysis Approval Time		13:13	13:13	13:13	13:13	13:13	13:13	13:13	13:13
5: E11-112-1 CL-Geochem	08-Jun-12	1.47	150	11.15	0.10	0.00	0.00	0.0	0.0
6: E11-112-2 CL-Geochem	08-Jun-12	1.51	150	11.22	0.10	0.00	0.00	0.0	0.0
7: E11-112-3 CL-Geochem	08-Jun-12	1.47	150	10.06	0.10	0.00	0.00	0.0	0.0
8: E11-112-4 CL-Geochem	08-Jun-12	1.49	150	11.18	0.10	0.00	0.00	0.0	0.0
9: E11-053-1 CL-Geochem	08-Jun-12	1.49	150	11.44	0.10	0.00	0.00	0.0	0.0
10: E11-053-2 CL-Geochem	08-Jun-12	1.50	150	11.29	0.10	0.00	0.00	0.0	0.0
11: E11-053-3 CL-Geochem	08-Jun-12	1.57	150	5.14	0.10	0.00	0.34	0.0	1.1
12: E11-052-1 CL-Geochem	08-Jun-12	1.58	150	11.25	0.10	0.00	0.00	0.0	0.0
13: E11-052-2 CL-Geochem	08-Jun-12	1.48	150	11.37	0.10	0.00	0.00	0.0	0.0
14: E11-052-3 CL-Geochem	08-Jun-12	1.57	150	11.22	0.10	0.00	0.00	0.0	0.0
15: E11-110-1 CL-Geochem	08-Jun-12	1.53	150	11.10	0.10	0.00	0.00	0.0	0.0
16: E11-110-2 CL-Geochem	08-Jun-12	1.46	150	7.51	0.10	0.00	0.00	0.0	0.0
17: E11-062-1 CL-Geochem	08-Jun-12	1.50	150	10.82	0.10	0.00	0.00	0.0	0.0
18: E11-062-2 CL-Geochem	08-Jun-12	1.55	150	11.50	0.10	0.00	0.00	0.0	0.0
19: E11-062-3 CL-Geochem	08-Jun-12	1.50	150	11.31	0.10	0.00	0.00	0.0	0.0
20: E11-062-4 CL-Geochem	08-Jun-12	1.47	150	10.39	0.10	0.00	0.00	0.0	0.0
21: E11-111-1 CL-Geochem	08-Jun-12	1.52	150	11.23	0.10	0.00	0.00	0.0	0.0
22: E11-100-1 CL-Geochem	08-Jun-12	1.59	150	11.02	0.10	0.00	0.00	0.0	0.0

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NAG Test

LR Report : **CA11115-JUN12**

Sample ID	Sample Date & Time	Sample weight g	Vol H2O2 mL	Final pH units	NaOH Normality	Vol NaOH to PH 4.5 mL	Vol NaOH to PH 7.0 mL	NAG (pH 4.5) kg H2SO4/tonne	NAG (pH 7.0) kg H2SO4/tonne
23: E11-100-2 CL-Geochem	08-Jun-12	1.56	150	11.50	0.10	0.00	0.00	0.0	0.0
24: E11-100-3 CL-Geochem	08-Jun-12	1.51	150	11.12	0.10	0.00	0.00	0.0	0.0
25: E11-107-1 CL-Geochem	08-Jun-12	1.56	150	11.16	0.10	0.00	0.00	0.0	0.0
26: E11-107-2 CL-Geochem	08-Jun-12	1.52	150	8.84	0.10	0.00	0.00	0.0	0.0
27: Bulk Sample-1 CL-Geochem	08-Jun-12	1.56	150	10.11	0.10	0.00	0.00	0.0	0.0
28: Bulk Sample-2 CL-Geochem	08-Jun-12	1.49	150	7.84	0.10	0.00	0.00	0.0	0.0

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

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Environmental Services, Analytical

OnLine LIMS

Results from Variability Samples Cyanidation Residue NAG

Comp	CN Test No.	P_{80}, µm	Analyses (g/t)							
							Vol. of NaOH, mL		NAG, kg/t H_2SO_4	
			Sample weight g	Vol H_2O_2 mL	Final pH units	NaOH Normality	to pH = 4.5	to pH = 7.0	@ pH = 4.5	@ pH = 7.0
C25-01	CN-40	96	1.48	150	10.59	0.10	0.00	0.00	0.0	0.0
C25-02	CN-37	94	1.53	150	10.28	0.10	0.00	0.00	0.0	0.0
C25-03	CN-101	93	1.51	150	10.77	0.10	0.00	0.00	0.0	0.0
C25-04	CN-102	99	1.49	150	9.88	0.10	0.00	0.00	0.0	0.0
C25-05	CN-86	93	1.47	150	10.74	0.10	0.00	0.00	0.0	0.0
C25-06	CN-103	92	1.53	150	10.68	0.10	0.00	0.00	0.0	0.0
C25-07	CN-104 RG	94	1.50	150	11.16	0.10	0.00	0.00	0.0	0.0
C25-08	CN-105	76	1.59	150	4.62	0.10	0.00	0.73	0.0	2.2
C25-09	CN-106	91	1.51	150	10.68	0.10	0.00	0.00	0.0	0.0
C25-10	CN-93	103	1.51	150	10.40	0.10	0.00	0.00	0.0	0.0
C25-11	CN-107 RG	96	1.48	150	10.83	0.10	0.00	0.00	0.0	0.0
C25-12	CN-181	98	1.51	150	10.37	0.10	0.00	0.00	0.0	0.0
C25-13	CN-182	99	1.52	150	10.76	0.10	0.00	0.00	0.0	0.0
C25-14	CN-183	106	1.55	150	10.96	0.10	0.00	0.00	0.0	0.0
C25-15	CN-111	95	1.49	150	10.80	0.10	0.00	0.00	0.0	0.0
C25-16	CN-112	99	1.52	150	10.53	0.10	0.00	0.00	0.0	0.0
C25-17	CN-38	139	1.47	150	10.25	0.10	0.00	0.00	0.0	0.0
C25-18	CN-84	88	1.51	150	10.91	0.10	0.00	0.00	0.0	0.0
C25-19	CN-41	86	1.52	150	11.16	0.10	0.00	0.00	0.0	0.0
C25-20	CN-113	92	1.49	150	11.09	0.10	0.00	0.00	0.0	0.0
C25-21	CN-114	98	1.49	150	8.76	0.10	0.00	0.00	0.0	0.0
C25-22	CN-115	86	1.54	150	9.98	0.10	0.00	0.00	0.0	0.0
C25-23	CN-116	95	1.53	150	10.67	0.10	0.00	0.00	0.0	0.0
C25-24	CN-117 RG	109	1.52	150	10.27	0.10	0.00	0.00	0.0	0.0
C25-25	CN-50	95	1.52	150	10.98	0.10	0.00	0.00	0.0	0.0
C25-26	CN-31	91	1.48	150	10.75	0.10	0.00	0.00	0.0	0.0
C25-27	CN-78	102	1.49	150	9.77	0.10	0.00	0.00	0.0	0.0
C25-28	CN-118	91	1.50	150	10.27	0.10	0.00	0.00	0.0	0.0
C25-29	CN-119	106	1.55	150	10.28	0.10	0.00	0.00	0.0	0.0
C25-30	CN-120	113	1.55	150	10.59	0.10	0.00	0.00	0.0	0.0
C25-31	CN-185	107	1.50	150	10.84	0.10	0.00	0.00	0.0	0.0
C25-32	CN-122	90	1.48	150	9.06	0.10	0.00	0.00	0.0	0.0
C25-33	CN-186	92	1.49	150	10.94	0.10	0.00	0.00	0.0	0.0
C25-34	CN-80	98	1.48	150	10.91	0.10	0.00	0.00	0.0	0.0
C25-35	CN-124	98	1.49	150	10.66	0.10	0.00	0.00	0.0	0.0
C25-36	CN-26	96	1.54	150	11.08	0.10	0.00	0.00	0.0	0.0
C25-37	CN-187	100	1.52	150	10.55	0.10	0.00	0.00	0.0	0.0
C25-38	CN-126	110	1.49	150	10.46	0.10	0.00	0.00	0.0	0.0
C25-39	CN-127	86	1.50	150	9.83	0.10	0.00	0.00	0.0	0.0
C25-40	CN-128	101	1.52	150	10.69	0.10	0.00	0.00	0.0	0.0
C25-41	CN-91	92	1.52	150	10.67	0.10	0.00	0.00	0.0	0.0
C25-42	CN-39	97	1.49	150	10.74	0.10	0.00	0.00	0.0	0.0
C25-43	CN-129	89	1.48	150	10.69	0.10	0.00	0.00	0.0	0.0
C25-44	CN-188	107	1.53	150	11.1	0.10	0.00	0.00	0.0	0.0
C25-45	CN-97	93	1.51	150	3.64	0.10	0.48	1.58	1.6	5.1
C25-46	CN-131	102	1.55	150	10.73	0.10	0.00	0.00	0.0	0.0
C25-47	CN-189	100	1.51	150	2.29	0.10	11.25	12.90	36.0	42.0
C25-48	CN-190	94	1.52	150	10.81	0.10	0.00	0.00	0.0	0.0
C25-49	CN-52	107	1.51	150	10.64	0.10	0.00	0.00	0.0	0.0
C25-50	CN-191	88	1.53	150	10.9	0.10	0.00	0.00	0.0	0.0
C25-51	CN-134 RG	101	1.49	150	10.53	0.10	0.00	0.00	0.0	0.0
C25-52	CN-29	97	1.51	150	11.65	0.10	0.00	0.00	0.0	0.0
C25-53	CN-192	101	1.51	150	11.01	0.10	0.00	0.00	0.0	0.0
C25-54	CN-193	105	1.51	150	10.38	0.10	0.00	0.00	0.0	0.0
C25-55	CN-194	107	1.51	150	10.69	0.10	0.00	0.00	0.0	0.0
C25-56	CN-195	103	1.51	150	11.07	0.10	0.00	0.00	0.0	0.0
C25-57	CN-138 RG	97	1.53	150	10.54	0.10	0.00	0.00	0.0	0.0
C25-58	CN-196	97	1.49	150	10.37	0.10	0.00	0.00	0.0	0.0
C25-59	CN-139	113	1.50	150	10.79	0.10	0.00	0.00	0.0	0.0
C25-60	CN-140 RG	94	1.49	150	10.32	0.10	0.00	0.00	0.0	0.0
C25-61	CN-141	92	1.51	150	10.64	0.10	0.00	0.00	0.0	0.0
C25-62	CN-197	101	1.52	150	10.97	0.10	0.00	0.00	0.0	0.0
C25-63	CN-143	88	1.48	150	10.78	0.10	0.00	0.00	0.0	0.0
C25-64	CN-198	101	1.49	150	11.11	0.10	0.00	0.00	0.0	0.0
C25-65	CN-145	93	1.50	150	10.15	0.10	0.00	0.00	0.0	0.0
C25-66	CN-199	101	1.52	150	11.18	0.10	0.00	0.00	0.0	0.0
C25-67	CN-200R	97	1.52	150	10.96	0.10	0.00	0.00	0.0	0.0
C25-68	CN-146	105	1.49	150	10.54	0.10	0.00	0.00	0.0	0.0
C25-69	CN-201	109	1.53	150	10.89	0.10	0.00	0.00	0.0	0.0

Results from Variability Samples Cyanidation Residue NAG

Comp	CN Test No.	P_{80}, µm	Analyses (g/t)							
							Vol. of NaOH, mL		NAG, kg/t H_2SO_4	
			Sample weight g	Vol H_2O_2 mL	Final pH units	NaOH Normality	to pH = 4.5	to pH = 7.0	@ pH = 4.5	@ pH = 7.0
C25-70	CN-36	105	1.49	150	10.7	0.10	0.00	0.00	0.0	0.0
C25-71	CN-147 RG	96	1.49	150	10.44	0.10	0.00	0.00	0.0	0.0
C25-72	CN-202	102	1.52	150	10.75	0.10	0.00	0.00	0.0	0.0
C25-73	CN-203	101	1.51	150	11.04	0.10	0.00	0.00	0.0	0.0
C25-74	CN-149	89	1.50	150	9.94	0.10	0.00	0.00	0.0	0.0
C25-75	CN-150	101	1.53	150	10.87	0.10	0.00	0.00	0.0	0.0
C25-76	CN-151 RG	101	1.53	150	10.27	0.10	0.00	0.00	0.0	0.0
C25-77	CN-82	88	1.48	150	10.82	0.10	0.00	0.00	0.0	0.0
C25-78	CN-204	102	1.51	150	11.05	0.10	0.00	0.00	0.0	0.0
C25-79	CN-43	103	1.52	150	10.72	0.10	0.00	0.00	0.0	0.0
C25-80	CN-153	94	1.47	150	10.45	0.10	0.00	0.00	0.0	0.0
C25-81	CN-51	95	1.54	150	10.72	0.10	0.00	0.00	0.0	0.0
C25-82	CN-154	96	1.55	150	10.47	0.10	0.00	0.00	0.0	0.0
C25-83	CN-155	89	1.54	150	10.08	0.10	0.00	0.00	0.0	0.0
C25-84	CN-96	92	1.49	150	10.47	0.10	0.00	0.00	0.0	0.0
C25-85	CN-205	101	1.52	150	11.14	0.10	0.00	0.00	0.0	0.0
C25-86	CN-27	108	1.49	150	10.58	0.10	0.00	0.00	0.0	0.0
C25-87	CN-206	104	1.53	150	10.89	0.10	0.00	0.00	0.0	0.0
C25-88	CN-158	104	1.50	150	10.09	0.10	0.00	0.00	0.0	0.0
C25-89	CN-56	111	1.52	150	10.41	0.10	0.00	0.00	0.0	0.0
C25-90	CN-159 RG	90	1.50	150	8.40	0.10	0.00	0.00	0.0	0.0
C25-91	CN-160	61	1.51	150	10.68	0.10	0.00	0.00	0.0	0.0
C25-92	CN-161	94	1.50	150	7.07	0.10	0.00	0.00	0.0	0.0
C25-93	CN-35	111	1.48	150	10.33	0.10	0.00	0.00	0.0	0.0

ELEMENTAL CONTENT

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

August-28-13

IAMGOLD Corporation
Attn : Steve Woolfenden

401 Bay Street Suite 3200 PO Box 153
Toronto, ON
M5H 2Y4,

Phone: (416) 594-2884
Fax:(416) 360-4750

Date Rec. : 26 July 2013
LR Report: **CA12691-JUL13**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
3: Analysis Approval Date	21-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13	21-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13
4: Analysis Approval Time	14:39	13:12	13:12	13:12	13:13	14:42	13:13	13:13	13:13	13:14
5: ARD-1390082	4600	0.9	17	0.51	< 0.09	8500	< 0.02	2.3	39	31
6: ARD-1390445	4200	1.5	35	0.24	< 0.09	7600	< 0.02	3.2	42	23
7: ARD-1398253	4500	1.4	39	0.35	1.1	11000	0.03	2.2	38	160
8: ARD-1385848	3200	2.1	15	0.14	0.22	6400	0.05	6.3	45	680
9: ARD-1363071	17000	4.5	2.5	0.10	< 0.09	17000	< 0.02	17	64	240
10: ARD-1399888	12000	2.8	5.4	0.09	< 0.09	8200	< 0.02	8.1	42	16
11: ARD-1317321	1000	0.9	1.0	0.15	0.16	96000	< 0.02	3.7	39	53
12: ARD-1260433	35000	4.3	1.8	0.25	< 0.09	5500	0.02	27	250	2.2
13: ARD-1260435	11000	1.5	7.2	0.15	< 0.09	45000	< 0.02	11	16	3.4
14: ARD-1288121	38000	1.5	540	0.98	< 0.09	42000	< 0.02	23	290	150
15: ARD-1334254	24000	20	3.9	0.08	0.11	4800	0.09	53	140	30
16: ARD-1344533	6900	7.4	16	0.35	0.14	5000	< 0.02	3.3	56	200
17: ARD-1323885	11000	4.5	9.6	0.17	2.7	22000	0.03	6.7	36	470
18: ARD-1261924	6500	2.2	7.8	0.34	< 0.09	12000	< 0.02	5.0	55	10
19: ARD-1335660	29000	1.5	12	0.49	< 0.09	56000	0.03	21	530	27
20: ARD-1262008	28000	4.4	26	0.31	< 0.09	36000	0.03	22	60	18
21: ARD-1262116	12000	3.8	110	0.14	< 0.09	3700	0.27	6.1	62	58
22: ARD-1402452	38000	1.4	2100	1.0	< 0.09	71000	0.11	28	400	3.5
23: ARD-1313309	4300	1.2	22	0.14	< 0.09	18000	0.03	2.5	45	22
24: ARD-1313311	40000	2.1	3.7	0.13	< 0.09	50000	< 0.02	27	130	18

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Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
25: ARD-1371750	3800	1.8	8.9	0.84	< 0.09	1100	< 0.02	3.2	50	26
26: ARD-1343542	8900	4.7	19	0.19	1.4	1600	0.04	8.3	45	8.3
27: ARD-1343545	18000	9.3	1.8	0.19	0.34	59000	0.03	19	28	1300
28: ARD-1299298	34000	1.1	43	0.67	< 0.09	59000	0.04	23	260	43
29: ARD-1376168	3800	2.0	69	0.19	< 0.09	7800	0.02	2.3	50	28
30: ARD-1396533	17000	0.6	9.1	0.13	< 0.09	30000	< 0.02	6.8	17	75
31: ARD-1396637	15000	1.9	2.2	0.09	0.15	160000	< 0.02	16	38	26
32: ARD-1308221	9700	1.9	2.7	0.11	< 0.09	19000	< 0.02	4.3	34	7.2
33: ARD-1261810	20000	1.3	140	0.73	< 0.09	34000	0.05	16	260	43
34: ARD-1456517	12000	1.4	4.8	0.22	< 0.09	19000	< 0.02	8.0	38	110
35: ARD-1398758	7100	< 0.5	7.1	0.47	< 0.09	600	< 0.02	1.3	51	3.1
36: ARD-1259369	44000	1.0	330	0.17	< 0.09	26000	< 0.02	31	180	4.5
37: ARD-1336164	17000	0.9	3.6	0.31	< 0.09	26000	< 0.02	8.0	64	7.6
38: ARD-1336196	13000	0.9	2.0	0.15	< 0.09	24000	< 0.02	7.6	43	7.8
39: ARD-1306362	1000	0.8	1.3	0.15	< 0.09	120000	< 0.02	2.1	33	6.6
40: ARD-1350733	5400	1.5	3.6	0.20	< 0.09	9300	0.03	2.8	39	82
41: ARD-1359177	3000	2.0	34	0.10	< 0.09	9100	0.03	1.9	39	34
42: ARD-1361014	10000	1.1	94	0.10	< 0.09	8300	< 0.02	7.5	35	10
43: ARD-1341540	8400	1.3	17	0.30	< 0.09	36000	0.03	12	97	45
44: ARD-1326120	20000	2.0	8.2	0.25	< 0.09	17000	0.02	14	320	52
45: ARD-1413274	4400	1.1	31	0.13	0.14	11000	< 0.02	4.2	36	200
46: ARD-1258576	12000	1.5	6.8	0.26	< 0.09	14000	< 0.02	5.9	39	28
47: ARD-1258760	3400	1.1	10	0.09	< 0.09	1300	< 0.02	2.3	38	54
48: ARD-1346137	14000	3.6	58	0.19	< 0.09	27000	< 0.02	8.0	26	36
49: ARD-1353098	19000	1.0	59	0.27	0.13	19000	< 0.02	11	34	120
50: ARD-1353200	26000	2.9	4.5	0.21	< 0.09	27000	< 0.02	17	180	31
51: ARD-1329749	4400	2.7	28	0.18	< 0.09	3700	0.05	2.3	55	24
52: ARD-1329877	4500	2.1	13	0.32	< 0.09	1300	0.02	3.1	63	140
53: ARD-1387476	9300	1.3	37	0.22	0.10	38000	< 0.02	5.3	39	55
54: ARD-1284846	4600	1.4	27	0.27	< 0.09	5300	0.02	2.5	60	27
55: ARD-681824	3600	0.5	15	0.21	< 0.09	18000	0.02	3.9	24	1.5
56: ARD-681852	6900	0.6	14	0.15	< 0.09	5700	0.02	3.7	25	63
57: ARD-689119	27000	1.3	290	0.70	< 0.09	44000	0.03	25	150	120
58: ARD-938691	2400	0.9	15	0.24	< 0.09	8700	< 0.02	2.0	43	30
59: ARD-930693	17000	2.9	10	0.06	< 0.09	5000	< 0.02	19	53	28
60: ARD-952486	24000	3.9	500	1.1	0.13	53000	0.06	20	15	68

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Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
61: ARD-1284878	30000	1.6	4.0	0.49	< 0.09	36000	0.02	18	240	5.3
62: ARD-1298061	18000	8.0	470	0.70	< 0.09	16000	0.07	16	170	49
63: ARD-1387873	32000	1.4	4.7	0.54	< 0.09	5000	< 0.02	17	32	39
64: ARD-1115728	5400	1.3	12	0.25	0.26	10000	0.03	3.8	59	220
65: ARD-920512	2300	1.4	9.2	0.23	< 0.09	11000	0.08	1.8	38	46
66: ARD-950511	28000	58	11	0.27	0.18	61000	< 0.02	25	53	78
67: ARD-952686	11000	2.0	18	0.31	0.19	17000	0.02	8.5	45	40
68: ARD-1469044	7100	1.0	18	0.57	0.10	10000	0.03	2.6	58	3.4
69: ARD-1486591	10000	0.8	69	0.21	< 0.09	11000	< 0.02	7.8	35	49
70: ARD-1401198	2700	0.7	20	0.24	< 0.09	8700	< 0.02	2.7	48	42
71: ARD-1311777	4400	0.8	8.1	0.47	< 0.09	4200	< 0.02	0.61	48	120
72: ARD-1416171	3900	1.7	8.0	0.17	< 0.09	11000	0.04	1.3	50	100
73: ARD-246803	4400	1.8	42	0.11	< 0.09	11000	0.03	1.8	49	42
74: ARD-227138	23000	1.0	97	0.14	0.25	27000	< 0.02	11	65	510
75: ARD-689315	5700	3.5	9.8	0.22	0.21	8800	0.03	4.6	41	500
76: ARD-684437	23000	1.1	33	0.12	< 0.09	13000	< 0.02	11	110	100
77: ARD-937384	25000	3.4	7.1	0.56	0.24	28000	0.07	29	16	75
78: ARD-931559	34000	2.3	120	0.13	< 0.09	29000	< 0.02	20	220	27
79: ARD-931623	8100	< 0.5	18	0.11	< 0.09	15000	< 0.02	5.1	18	2.1
80: ARD-937698	35000	4.4	190	0.16	< 0.09	14000	< 0.02	20	230	13
81: ARD-935087	6300	< 0.5	23	0.14	< 0.09	19000	< 0.02	4.8	23	6.0
82: ARD-1284981	30000	1.6	13	0.88	< 0.09	7800	< 0.02	18	50	990
83: ARD-1284982	22000	4.3	12	1.8	< 0.09	8700	< 0.02	11	31	1900
84: ARD-1347633	6500	0.8	19	0.32	< 0.09	6800	< 0.02	3.9	46	31
85: ARD-929864	5000	4.3	4.5	0.21	< 0.09	10000	0.04	2.2	56	270
86: ARD-573527A	7700	< 0.5	9.4	0.15	< 0.09	8400	< 0.02	3.9	50	17
87: ARD-1163047	3800	14	7.2	0.16	0.09	11000	0.08	3.7	52	160
88: ARD-1114935	1700	0.6	4.7	0.14	< 0.09	6600	< 0.02	0.50	54	14
89: ARD-1167807	5300	1.1	6.5	0.11	< 0.09	8600	0.03	1.8	43	23
90: ARD-1328761	2600	0.9	7.7	0.12	< 0.09	5900	< 0.02	1.4	36	6.7
91: ARD-1415660	24000	1.8	1.7	0.15	< 0.09	20000	< 0.02	19	160	160
92: ARD-1447030	10000	2.8	7.2	0.22	< 0.09	9700	< 0.02	7.8	34	16
93: ARD-1465755	1600	1.4	6.0	0.09	< 0.09	8500	< 0.02	0.52	48	20
94: ARD-227239	7100	1.2	11	0.26	0.17	16000	0.03	5.9	93	98
95: ARD-936266	4100	5.5	12	0.14	< 0.09	10000	0.05	2.5	38	110
96: ARD-929111	23000	1.7	7.3	0.22	0.15	12000	< 0.02	14	60	3.9

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Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
97: ARD-578580	39000	4.2	6.3	0.48	0.46	41000	< 0.02	4.6	20	48
98: ARD-571416	2500	7.8	45	0.14	0.24	2400	< 0.02	5.8	48	7.5
99: ARD-70623	9100	0.9	14	0.18	< 0.09	11000	< 0.02	4.0	46	48
100: ARD-1111278	2700	1.2	6.6	0.65	< 0.09	2200	0.02	1.8	44	32
101: ARD-1156837	3900	1.1	22	0.15	0.25	9700	0.07	1.6	35	610
102: ARD-1157490	10000	11	7.7	0.18	0.16	12000	0.02	5.8	38	390
103: ARD-1113188	27000	1.3	440	0.79	0.31	37000	0.06	20	320	52
104: ARD-1168407	16000	1.5	80	0.14	0.19	24000	< 0.02	14	21	1300
105: ARD-1173948	2200	1.1	11	0.27	0.11	8300	< 0.02	1.6	40	470
106: ARD-1107356	4000	1.4	16	0.24	< 0.09	4900	0.03	3.0	58	17
107: ARD-1107358	15000	0.9	110	0.22	< 0.09	5100	< 0.02	7.3	72	4.6
108: ARD-1152026	22000	1.8	1.4	0.30	< 0.09	58000	0.06	20	270	5.2
109: ARD-1152087	7200	1.0	14	0.19	0.80	16000	0.02	11	110	27
110: ARD-1120993	12000	4.4	31	0.18	0.11	18000	1.3	25	16	96
111: ARD-1153135	12000	0.8	43	0.19	0.29	6200	0.06	18	24	99
112: ARD-1153209	16000	5.0	220	1.1	2.0	24000	1.4	15	210	1700
113: ARD-1153674	2600	0.5	44	0.11	< 0.09	8900	0.02	0.60	44	7.5
114: ARD-68741	1400	1.2	4.3	0.46	0.16	850	< 0.02	8.4	63	110
115: ARD-1048151	5900	2.1	8.4	0.34	< 0.09	9300	< 0.02	4.8	55	46
116: ARD-1047357	5600	1.8	3.1	0.06	< 0.09	28000	0.02	3.4	21	7.0
117: ARD-1047487	6600	3.1	6.5	0.22	< 0.09	11000	0.09	2.7	50	62
118: ARD-1057141	10000	2.6	8.2	0.15	0.14	23000	< 0.02	7.1	40	15
119: ARD-1029210	12000	1.5	3.1	0.19	< 0.09	12000	< 0.02	7.2	68	22
120: ARD-1026152	9100	0.7	5.1	0.27	< 0.09	11000	< 0.02	3.5	44	44
121: ARD-1027713	3200	1.8	7.2	0.31	< 0.09	20000	0.02	2.6	52	41
122: ARD-1008072	30000	2.0	10	0.28	0.27	19000	0.03	33	140	32
123: ARD-1008261	4100	0.5	9.5	0.13	< 0.09	1900	< 0.02	1.3	59	110
124: ARD-1057715	12000	0.9	3.9	0.13	< 0.09	12000	< 0.02	11	28	83
125: ARD-926721	4300	0.9	7.1	0.24	< 0.09	14000	0.04	1.4	35	9.2
126: ARD-928214	21000	1.0	250	0.26	< 0.09	37000	< 0.02	17	8.6	42
127: ARD-1171884	18000	1.3	140	0.06	< 0.09	5800	< 0.02	12	36	3.7
128: ARD-1108761	2000	3.8	8.1	0.30	< 0.09	11000	0.04	1.3	47	17
129: ARD-1105010	18000	0.9	9.7	0.16	< 0.09	42000	< 0.02	6.6	60	110
130: ARD-1109100	2400	0.9	7.8	0.23	0.10	13000	< 0.02	0.92	59	13
131: ARD-1117160	4200	1.1	12	0.17	< 0.09	6700	< 0.02	3.2	45	60
132: ARD-1117946	3400	1.9	7.6	0.22	< 0.09	20000	0.03	1.7	43	400

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Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
133: ARD-572129	2700	1.4	11	0.25	< 0.09	4800	< 0.02	1.3	39	77
134: ARD-68989	22000	2.2	70	0.12	< 0.09	8300	< 0.02	12	64	6.0
135: ARD-1	17000	< 0.5	2.5	0.04	< 0.09	3200	0.06	20	94	84
136: ARD-2	6900	1.6	4.5	0.21	< 0.09	31000	0.02	5.5	32	24
137: ARD-3	3300	1.1	45	0.19	< 0.09	9400	< 0.02	4.4	43	34
138: ARD-1105726	20000	3.5	1.6	0.05	< 0.09	18000	< 0.02	14	210	310
139: ARD-1120967	3400	1.2	7.1	0.33	< 0.09	5000	0.15	2.0	57	29
140: ARD-69669	4300	19	13	0.75	1.3	8700	< 0.02	4.6	30	7.3
141: ARD-1045336	7200	1.4	12	0.14	< 0.09	22000	< 0.02	5.4	24	9.5
142: ARD-951469	1900	0.5	12	0.16	< 0.09	10000	< 0.02	1.8	48	85
143: ARD-1172124	4600	2.9	4.9	0.48	0.26	81000	< 0.02	8.8	44	81
144: ARD-1070859	18000	2.2	120	0.22	< 0.09	43000	0.05	15	260	36
145: ARD-1054224	34000	2.4	230	0.15	< 0.09	18000	< 0.02	22	180	10
146: ARD-1049797	8700	1.5	2.2	0.16	< 0.09	20000	< 0.02	4.9	36	14
147: ARD-1008033	11000	2.0	7.8	0.15	< 0.09	14000	0.04	3.8	26	260
148: ARD-1008450	2400	0.8	53	0.13	< 0.09	9400	< 0.02	2.6	41	120
149: ARD-90295	16000	1.2	21	0.26	< 0.09	6800	< 0.02	10	72	26
150: ARD-1017819	22000	1.3	6.3	0.38	< 0.09	5600	< 0.02	16	65	17
151: ARD-1070452	15000	2.3	96	0.20	< 0.09	15000	0.05	18	410	42
152: ARD-1175183	34000	110	5.2	0.33	< 0.09	52000	0.03	24	430	40
153: TP-2-1	2800	0.6	15	0.09	< 0.09	1700	< 0.02	2.1	47	5.4
154: TP-4-1	8300	6.2	34	0.20	< 0.09	3500	0.21	7.6	50	51
155: TP-8-1	5600	0.6	22	0.16	< 0.09	3000	0.06	4.8	44	57
156: TP-17-1	5400	2.5	20	0.13	< 0.09	1600	0.02	4.5	41	17
157: TP-35-1	4400	0.9	17	0.12	< 0.09	4400	0.03	4.1	43	16
158: TP-105-1	7100	0.7	19	0.12	< 0.09	760	< 0.02	1.6	18	10
159: TP-106-1	5000	2.8	16	0.11	< 0.09	2100	0.02	4.7	39	29
160: TP-109-1	6900	2.9	17	0.20	< 0.09	1900	< 0.02	5.2	43	94
161: TP13-PO-10-BU-1	4800	4.0	21	0.12	< 0.09	2200	< 0.02	4.7	51	18
162: TP12-PO-19-BU-2	2600	0.7	13	0.09	< 0.09	1100	< 0.02	2.2	40	46
163: TP13-PO-25-BU-1	5300	0.9	18	0.11	< 0.09	17000	0.04	5.1	43	19
164: TP13-PO-27-BU-1	5700	1.5	21	0.14	< 0.09	3500	0.05	5.4	49	24
165: TP13-PO-34-BU-2	5900	1.2	16	0.11	< 0.09	1500	0.06	4.3	40	19
166: TP13-PO-37-BU-1	3700	1.3	14	0.09	< 0.09	6600	0.08	3.8	52	13
167: TP13-PO-40-BU-2	3900	1.0	15	0.10	< 0.09	1700	0.02	3.5	53	15
168: TP13-PO-43-BU-2	4700	0.9	24	0.11	< 0.09	1600	0.03	3.4	52	16

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Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
169: DH13-PO-02-SPT-7	6400	1.4	41	0.19	< 0.09	64000	0.06	4.9	36	14
170: DH13-PO-03-SPT-8	2700	0.8	14	0.09	< 0.09	14000	< 0.02	2.5	36	9.1
171: DH13-PO-22-SPT-6	2600	0.9	12	0.08	< 0.09	16000	0.03	2.7	36	13
172: DH13-PO-06-SPT-10	8000	1.4	42	0.20	< 0.09	42000	0.06	6.3	49	16
174: DH13-FD-06-SPT-9	2000	0.5	12	0.07	< 0.09	6900	< 0.02	1.8	49	7.8
175: TP13-WD-01A-BU-2	6000	1.1	25	0.14	< 0.09	1800	< 0.02	4.0	54	14
176: TP13-WD-03-BU-2	5100	1.0	24	0.14	< 0.09	1700	< 0.02	4.2	51	15
182: TP13-WD-16-BU-2	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold
183: DH13-WD-01-SPT-7	4400	0.7	17	0.10	< 0.09	9000	0.02	4.0	51	14
184: DH13-WD-02-SPT-8	3300	0.8	15	0.09	< 0.09	8200	0.03	3.1	43	13
185: DH13-WD-03-SPT-5	4600	1.8	18	0.11	< 0.09	29000	0.04	4.1	33	13
186: DH13-WD-04-SPT-5	3600	0.9	17	0.11	< 0.09	29000	0.03	3.0	32	8.7
194: ARD-4 DH12-PO-17	12000	1.1	22	0.08	< 0.09	7200	0.08	20	16	94
195: ARD-5 DH12-PO-08R	6500	0.8	28	0.09	< 0.09	14000	0.03	3.6	42	3.7
196: ARD-6 DH12-PO-22	27000	1.8	6.0	0.74	< 0.09	61000	0.03	26	330	65
197: ARD-7 DH12-PO-16	4300	< 0.5	12	0.08	< 0.09	7800	0.03	2.3	56	23
198: ARD-8 DH12-PO-15	5300	0.9	35	0.09	< 0.09	5300	0.02	3.4	48	8.5
199: ARD-9 DH12-PO-19	4800	1.4	15	0.18	< 0.09	13000	< 0.02	3.9	36	23
200: ARD-10 DH12-PO-18	3500	4.6	14	0.13	< 0.09	14000	0.08	1.8	47	130
201: ARD-11 -DH12-PO-20	1100	0.6	5.3	0.16	< 0.09	19000	< 0.02	0.52	60	7.9
202: ARD-12 DH12-PO-21	5400	1.1	26	0.16	< 0.09	15000	0.08	2.6	50	110
203: ARD-13 DH12-PO-07R	1700	< 0.5	7.8	0.22	< 0.09	7500	< 0.02	0.89	49	8.5
204: ARD-14 DH12-PO-17	14000	1.2	21	0.12	< 0.09	7700	0.10	21	16	98
205: ARD-15 DH12-PO-07R	1400	< 0.5	6.8	0.09	< 0.09	9400	0.03	0.77	57	130
206: ARD-16 DH12-PO-15	5300	1.1	24	0.16	< 0.09	9400	0.02	3.6	46	7.9
207: ARD-17 DH13-FD-09	3900	< 0.5	18	0.21	< 0.09	3200	< 0.02	3.2	58	11
208: ARD-18 DH13-FD-09	4600	< 0.5	21	0.21	< 0.09	4100	< 0.02	3.7	60	9.5
209: ARD-19 DH12-TMF-04	5300	0.6	48	0.26	0.41	5100	< 0.02	3.9	57	7.9
210: ARD-20 DH12-TMF-07	3400	< 0.5	23	0.14	< 0.09	3100	< 0.02	2.7	57	1.8
211: ARD-21 DH12-TMF-08	10000	0.5	45	0.21	< 0.09	9300	0.07	33	63	48
212: ARD-22 DH12-TMF-09	8200	< 0.5	16	0.44	1.1	1900	< 0.02	4.9	66	2.6
213: ARD-23 DH12-TMF-10	4400	< 0.5	22	0.19	< 0.09	3300	< 0.02	3.9	54	11
214: ARD-24 DH12-TMF-13	33000	< 0.5	3.1	0.43	< 0.09	4300	0.02	22	190	2.1
215: ARD-25 DH12-TMF-14	23000	3.6	9.6	0.02	< 0.09	42000	0.04	21	120	41
216: ARD-26 DH12-TMF-15	28000	1.0	89	0.09	< 0.09	22000	0.07	23	110	65
217: ARD-27 DH12-TMF-29	4100	< 0.5	21	0.14	< 0.09	2900	< 0.02	3.3	50	3.0

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Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g
218: ARD-28 DH12-TMF-30	4200	0.9	21	0.17	< 0.09	3800	< 0.02	3.4	51	2.1
219: ARD-29-DH12-TMF-31	31000	0.7	5.5	0.14	< 0.09	35000	< 0.02	30	140	110
220: ARD-30-DH12-TMF-32	33000	70	6.6	0.13	< 0.09	71000	0.04	34	120	29
221: DH13-FD-05-SPT-17	4000	0.6	14	0.11	< 0.09	6000	0.03	3.4	43	10
222: DH12-PO-02R-SPT-2	3100	2.5	16	0.10	< 0.09	40000	0.11	3.3	20	24
223: DH13-PO-17-SPT-1	9200	1.2	28	0.25	0.12	2500	0.05	8.5	63	43
224: TP13-FD-17-BU-1	4400	1.4	15	0.13	< 0.09	2500	0.05	4.0	36	27
225: TP13-FD-18-BU-2	3900	< 0.5	20	0.13	< 0.09	11000	0.03	3.4	44	12
226: TP13-FD-19-BU-1	3800	< 0.5	18	0.12	< 0.09	25000	0.03	3.1	32	10
227: TP13-FD-22-BU-1	4100	< 0.5	14	0.13	< 0.09	9000	0.03	3.8	35	12
228: DH13-FD-08-SPT-5	2700	0.9	17	0.08	< 0.09	58000	0.08	2.8	29	11
229: TP12-TMF-42-BU-1	5200	< 0.5	14	0.13	< 0.09	1700	0.03	3.9	33	16
230: TP12-TMF-43-GR-1	4100	< 0.5	20	0.13	< 0.09	6700	0.06	4.1	43	15
231: TP12-TMF-18-BU-1	5300	< 0.5	20	0.19	< 0.09	1900	0.03	3.2	48	17
232: TP12-TMF-02-BU-3	4900	< 0.5	17	0.17	< 0.09	2400	0.17	5.0	40	20
234: DH13-PO-18-SPT-2	8600	4.0	21	0.16	< 0.09	3100	0.04	8.8	62	40
235: TP13-PO-18-BU-1	8900	1.1	15	0.15	< 0.09	1200	0.06	3.8	42	50
237: TP13-PO-21-BU-2	8100	3.1	23	0.20	0.10	3000	0.03	8.1	57	37
242: DH12-PO-05R-SPT-11	4200	1.7	13	0.10	< 0.09	6000	0.03	4.6	39	77
244: DH12-PO-13-SPT-2	4300	1.7	12	0.17	0.09	2000	0.06	3.8	41	93
245: DH12-PO-14-SPT-13	7400	0.8	46	0.20	< 0.09	75000	0.06	5.8	42	17
246: DH12-PO-20-SPT-7	4300	< 0.5	16	0.10	< 0.09	13000	0.03	3.8	41	14
247: DH12-PO-21-SPT-5	3700	< 0.5	21	0.11	< 0.09	22000	0.03	3.2	44	11
248: TP12-PO-03-BU-2 A	8900	< 0.5	16	0.09	< 0.09	2500	0.04	6.0	55	8.4
249: TP12-PO-03-BU-2 B	3200	1.1	12	0.11	< 0.09	13000	0.18	4.3	19	49
251: TP12-PO-09-BU-1	5900	0.5	20	0.15	< 0.09	2600	0.03	5.7	49	20
252: TP12-PO-16-BU-1 0.4-0.6m	8400	0.5	19	0.19	< 0.09	1600	< 0.02	2.6	40	7.7
253: TP12-PO-16-BU-1 0.6m	6700	1.5	27	0.18	< 0.09	1700	< 0.02	5.6	52	100
254: TP12-PO-18-BU-1	7700	< 0.5	21	0.19	< 0.09	1000	0.04	4.1	51	7.1
255: TP12-PO-22-BU-1	3000	< 0.5	11	0.10	< 0.09	17000	0.03	2.8	14	13
258: TP12-PO-28-BU-1	4800	0.7	22	0.14	< 0.09	29000	0.04	4.1	33	13
261: TP12-WD-14-BU-1	6400	< 0.5	17	0.18	< 0.09	1600	0.03	3.8	49	16
262: TP12-WD-01-BU-1	3300	< 0.5	13	0.09	< 0.09	25000	0.03	3.2	17	12
263: TP12-WD-07-BU-1	5800	0.6	28	0.10	< 0.09	2500	0.03	6.1	46	22
264: TP12-WD-10-BU-1	6300	< 0.5	21	0.15	< 0.09	2500	0.03	6.3	56	26
265: TP12-WD-12-BU-1	2500	< 0.5	9.5	0.10	< 0.09	2100	0.04	2.4	14	22

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August-28-13

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Date Rec. : 26 July 2013
LR Report: **CA12691-JUL13**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Fe µg/g	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Na µg/g	Ni µg/g	P µg/g	Pb µg/g
3: Analysis Approval Date	21-Aug-13	21-Aug-13	22-Aug-13	21-Aug-13	22-Aug-13	22-Aug-13	21-Aug-13	22-Aug-13	21-Aug-13	22-Aug-13
4: Analysis Approval Time	14:42	14:44	13:14	14:47	13:15	13:15	14:54	13:16	14:54	13:16
5: ARD-1390082	10000	840	4	2000	93	0.7	420	5.2	200	0.49
6: ARD-1390445	14000	1100	4	2500	100	0.6	470	3.7	170	0.98
7: ARD-1398253	13000	1200	3	1800	140	0.6	390	2.4	160	0.72
8: ARD-1385848	8900	480	3	1700	66	0.8	480	4.8	240	2.1
9: ARD-1363071	37000	300	14	15000	440	0.5	350	33	440	1.5
10: ARD-1399888	23000	280	13	8900	270	0.7	460	16	510	0.23
11: ARD-1317321	2700	31	< 2	910	370	0.6	170	4.8	120	< 0.05
12: ARD-1260433	63000	58	50	44000	420	0.2	230	81	840	0.14
13: ARD-1260435	27000	310	15	12000	310	0.4	460	21	160	0.10
14: ARD-1288121	62000	28000	26	39000	680	0.5	270	63	1400	0.74
15: ARD-1334254	34000	130	12	30000	360	1.0	63	430	260	3.7
16: ARD-1344533	14000	670	10	3500	130	1.1	490	4.3	220	4.5
17: ARD-1323885	25000	380	7	6800	170	0.9	450	13	1300	3.6
18: ARD-1261924	12000	490	7	6200	150	0.8	500	7.9	120	1.7
19: ARD-1335660	47000	280	31	38000	710	0.2	170	130	1400	0.32
20: ARD-1262008	61000	560	24	29000	670	0.1	230	23	2500	0.51
21: ARD-1262116	23000	6900	13	7500	200	1.1	480	19	270	5.5
22: ARD-1402452	52000	36000	25	48000	780	0.1	230	140	1500	2.5
23: ARD-1313309	7300	450	4	2800	150	0.6	450	6.3	270	2.2

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24: ARD-1313311	66000	140	22	31000	630	0.4	56	55	190	0.56
25: ARD-1371750	9600	1000	2	2500	65	12	280	3.3	23	0.89
26: ARD-1343542	20000	950	7	8100	140	47	180	8.2	54	2.7
27: ARD-1343545	36000	59	18	15000	380	0.5	270	14	1800	0.72
28: ARD-1299298	52000	1300	47	42000	740	0.2	140	59	1000	0.75
29: ARD-1376168	18000	2500	2	1000	120	0.8	480	2.5	300	1.4
30: ARD-1396533	48000	460	11	15000	620	0.4	420	11	790	0.36
31: ARD-1396637	34000	110	17	17000	960	0.4	170	20	660	0.58
32: ARD-1308221	22000	130	9	6200	260	0.5	430	7.9	1900	1.3
33: ARD-1261810	34000	7300	28	26000	630	0.2	240	35	1200	0.56
34: ARD-1456517	28000	280	9	8500	290	2.1	390	13	2100	0.70
35: ARD-1398758	14000	1000	6	6200	150	1.3	140	4.0	15	0.53
36: ARD-1259369	66000	32000	42	42000	710	0.3	340	200	300	< 0.05
37: ARD-1336164	36000	540	23	18000	450	0.4	450	28	950	0.12
38: ARD-1336196	34000	290	16	15000	320	0.3	430	22	750	0.35
39: ARD-1306362	2800	32	< 2	1100	560	0.5	110	8.9	27	0.08
40: ARD-1350733	8900	290	3	3100	120	0.6	490	5.8	1200	1.6
41: ARD-1359177	5700	1700	2	1100	98	0.5	340	3.9	97	2.1
42: ARD-1361014	18000	3300	10	8600	240	0.9	450	12	510	0.50
43: ARD-1341540	21000	750	13	8200	310	0.9	320	11	820	0.30
44: ARD-1326120	34000	500	26	24000	430	0.2	290	66	1300	0.38
45: ARD-1413274	12000	1000	3	1900	96	0.5	470	4.7	180	1.7
46: ARD-1258576	22000	600	11	9700	220	0.5	470	16	300	0.65
47: ARD-1258760	6300	520	3	2600	56	0.5	440	5.7	47	0.43
48: ARD-1346137	31000	2400	8	8900	230	0.6	360	15	1200	2.0
49: ARD-1353098	45000	3000	15	13000	340	0.4	340	15	620	0.77
50: ARD-1353200	49000	570	19	26000	660	0.2	340	84	800	0.20
51: ARD-1329749	12000	910	4	1800	150	0.7	420	5.1	110	2.4
52: ARD-1329877	10000	580	3	3200	110	0.7	470	4.9	110	0.35
53: ARD-1387476	24000	2700	12	16000	650	0.4	460	15	290	0.41
54: ARD-1284846	13000	1000	3	2000	100	0.7	440	4.5	95	1.4
55: ARD-681824	13000	1100	5	4300	220	0.3	360	5.9	370	< 0.05
56: ARD-681852	13000	600	7	4100	110	0.4	320	6.7	520	0.85
57: ARD-689119	49000	18000	20	27000	720	0.1	210	28	1000	1.1
58: ARD-938691	4900	390	2	1900	70	0.6	460	2.4	41	0.91

OnLine LIMS

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Sample ID	Fe µg/g	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Na µg/g	Ni µg/g	P µg/g	Pb µg/g
59: ARD-930693	29000	1000	14	16000	360	0.3	260	83	270	0.22
60: ARD-952486	55000	17000	27	24000	660	0.1	390	19	1600	0.64
61: ARD-1284878	57000	290	40	39000	640	0.2	170	54	1200	1.2
62: ARD-1298061	33000	5500	18	24000	550	0.2	320	40	1600	1.6
63: ARD-1387873	66000	450	61	40000	450	0.6	340	18	910	0.44
64: ARD-1115728	11000	550	6	3800	130	0.9	450	6.1	230	2.6
65: ARD-920512	3600	650	3	980	68	2.8	550	2.8	11	6.5
66: ARD-950511	62000	1000	27	19000	510	0.2	120	33	430	6.8
67: ARD-952686	23000	1000	10	8200	310	0.5	510	17	340	2.1
68: ARD-1469044	17000	640	10	5500	150	47	410	4.6	120	0.69
69: ARD-1486591	34000	3800	8	4800	250	2.4	420	5.2	520	2.4
70: ARD-1401198	8000	1000	< 2	610	74	0.8	460	2.7	84	1.5
71: ARD-1311777	5000	940	8	3800	79	1.0	560	1.7	86	0.60
72: ARD-1416171	6500	750	4	2200	94	0.6	490	4.0	120	3.0
73: ARD-246803	11000	1300	4	1500	120	0.6	440	4.4	120	18
74: ARD-227138	36000	9300	20	22000	510	0.3	310	55	570	0.36
75: ARD-689315	12000	1000	5	4000	88	1.3	330	6.5	32	2.0
76: ARD-684437	45000	2900	18	21000	450	0.3	390	28	110	0.39
77: ARD-937384	64000	780	27	28000	550	0.5	330	23	1100	3.4
78: ARD-931559	48000	15000	32	32000	640	0.3	340	96	420	1.9
79: ARD-931623	17000	950	7	7000	170	0.4	450	6.3	440	0.25
80: ARD-937698	49000	21000	42	34000	510	0.4	220	98	380	0.21
81: ARD-935087	13000	1000	9	4100	170	0.5	370	6.4	420	0.09
82: ARD-1284981	55000	1200	39	28000	500	0.2	130	51	430	0.69
83: ARD-1284982	46000	470	21	18000	310	0.1	160	32	380	0.89
84: ARD-1347633	17000	960	8	2800	170	1.0	400	6.5	200	1.3
85: ARD-929864	9000	370	9	3100	92	0.7	470	4.3	230	6.5
86: ARD-573527A	15000	410	8	6900	210	1.0	420	9.4	370	0.44
87: ARD-1163047	11000	500	3	2400	80	0.7	490	8.5	290	16
88: ARD-1114935	1900	540	< 2	350	52	0.7	630	1.8	10	1.5
89: ARD-1167807	9100	500	11	3300	77	0.5	430	5.1	22	1.2
90: ARD-1328761	2900	920	2	1200	48	0.6	460	3.4	17	1.3
91: ARD-1415660	47000	150	32	27000	540	0.7	240	69	270	< 0.05
92: ARD-1447030	26000	760	8	7200	260	0.7	870	9.2	1100	0.57
93: ARD-1465755	1600	510	< 2	140	45	0.7	630	1.8	13	1.4

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Sample ID	Fe µg/g	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Na µg/g	Ni µg/g	P µg/g	Pb µg/g
94: ARD-227239	11000	560	6	7300	160	1.3	350	27	300	0.90
95: ARD-936266	7700	710	4	2200	93	1.3	380	4.3	220	2.9
96: ARD-929111	48000	420	24	23000	580	0.2	300	21	1100	0.44
97: ARD-578580	85000	500	22	28000	460	0.7	160	26	1000	12
98: ARD-571416	6800	1600	< 2	1100	45	0.6	190	4.3	130	1.7
99: ARD-70623	18000	910	10	7200	160	0.5	470	9.2	440	1.1
100: ARD-1111278	5200	710	< 2	1500	49	0.5	460	2.6	32	0.95
101: ARD-1156837	10000	1500	< 2	1900	90	0.6	370	5.0	200	2.8
102: ARD-1157490	24000	910	11	8500	160	0.6	370	9.6	17	2.3
103: ARD-1113188	36000	27000	23	29000	600	0.3	400	62	850	1.6
104: ARD-1168407	39000	5100	13	10000	260	0.5	320	29	1100	1.0
105: ARD-1173948	4000	680	< 2	1000	56	0.8	530	2.9	38	0.78
106: ARD-1107356	6000	640	4	2700	58	0.7	540	5.4	57	1.3
107: ARD-1107358	24000	4400	23	15000	230	0.6	270	31	320	0.92
108: ARD-1152026	41000	45	28	29000	540	0.2	170	43	1800	0.65
109: ARD-1152087	17000	450	7	7900	150	0.6	300	29	360	2.2
110: ARD-1120993	64000	2500	12	10000	650	0.8	650	18	1200	39
111: ARD-1153135	41000	2600	9	7300	210	1.8	970	23	410	6.3
112: ARD-1153209	46000	9100	10	20000	320	2800	330	56	780	3.9
113: ARD-1153674	2500	1000	2	1300	62	3.5	250	1.8	16	2.3
114: ARD-68741	3100	350	< 2	430	23	1.1	480	4.4	23	0.73
115: ARD-1048151	12000	710	6	4200	110	0.9	350	7.2	28	1.5
116: ARD-1047357	10000	180	6	5100	170	0.6	480	13	200	2.5
117: ARD-1047487	11000	500	4	5300	98	0.7	370	6.9	40	7.6
118: ARD-1057141	21000	990	10	6900	160	0.8	210	10	16	2.2
119: ARD-1029210	23000	440	11	11000	240	0.4	480	19	670	1.0
120: ARD-1026152	18000	670	12	6600	120	0.6	300	7.2	12	2.1
121: ARD-1027713	6100	470	2	2300	120	0.7	370	3.9	33	1.6
122: ARD-1008072	66000	350	44	33000	470	0.2	180	39	1800	1.0
123: ARD-1008261	6900	570	4	3600	60	10	350	3.1	13	1.0
124: ARD-1057715	29000	500	8	7200	300	0.9	520	8.4	650	1.2
125: ARD-926721	6000	770	8	2400	100	0.5	380	3.6	350	7.2
126: ARD-928214	48000	10000	10	17000	670	0.2	290	2.0	1700	0.70
127: ARD-1171884	29000	7400	16	17000	280	0.3	290	25	320	0.56
128: ARD-1108761	3300	720	< 2	780	62	0.7	480	3.5	20	3.0

OnLine LIMS

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Sample ID	Fe µg/g	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Na µg/g	Ni µg/g	P µg/g	Pb µg/g
129: ARD-1105010	32000	1300	13	16000	400	0.9	210	14	50	0.96
130: ARD-1109100	3100	960	3	800	85	0.8	370	2.0	12	2.1
131: ARD-1117160	13000	560	4	2900	100	0.5	440	4.5	140	1.1
132: ARD-1117946	5700	1000	3	1700	120	0.8	360	3.6	11	4.0
133: ARD-572129	4400	910	< 2	1300	54	3.4	400	2.2	24	1.2
134: ARD-68989	39000	7700	24	18000	300	1.0	370	31	530	0.76
135: ARD-1	31000	170	8	13000	440	0.3	120	59	200	0.49
136: ARD-2	17000	370	5	4500	340	0.7	400	5.4	950	1.7
137: ARD-3	14000	1300	< 2	1100	130	0.7	330	2.2	150	1.6
138: ARD-1105726	32000	200	11	18000	360	1.0	150	39	550	0.63
139: ARD-1120967	5900	720	4	1700	57	0.7	390	4.2	30	15
140: ARD-69669	17000	1500	2	2600	130	1.1	74	4.8	140	6.4
141: ARD-1045336	13000	1000	9	4500	170	0.3	240	7.9	400	1.6
142: ARD-951469	3700	1000	< 2	1100	88	0.6	310	4.5	14	2.3
143: ARD-1172124	26000	68	4	4600	310	0.3	270	16	480	2.8
144: ARD-1070859	30000	5400	14	19000	560	0.2	160	24	1200	2.2
145: ARD-1054224	45000	23000	34	34000	560	0.4	200	130	380	3.4
146: ARD-1049797	18000	200	7	7000	260	0.6	290	10	1300	1.9
147: ARD-1008033	18000	650	10	8500	240	5.8	290	9.6	690	2.5
148: ARD-1008450	6800	1600	< 2	1000	92	0.6	310	3.5	130	2.0
149: ARD-90295	32000	1200	30	16000	310	0.7	250	23	420	2.0
150: ARD-1017819	41000	650	44	25000	360	1.7	200	32	1000	2.0
151: ARD-1070452	28000	5200	19	16000	400	0.2	210	80	1100	3.2
152: ARD-1175183	48000	1000	25	37000	990	0.1	73	120	1300	3.5
153: TP-2-1	4900	520	3	1200	46	0.5	220	5.8	400	3.1
154: TP-4-1	19000	1000	8	4600	220	0.7	250	19	840	6.4
155: TP-8-1	10000	780	7	3200	93	0.4	230	15	640	3.8
156: TP-17-1	10000	500	5	2300	140	0.4	150	9.7	430	3.2
157: TP-35-1	8900	530	4	3100	130	0.3	170	12	410	3.2
158: TP-105-1	5900	140	4	1300	27	0.4	44	8.0	210	4.7
159: TP-106-1	11000	470	5	2800	120	0.3	210	10	380	3.5
160: TP-109-1	12000	420	6	3600	120	0.7	180	13	230	4.2
161: TP13-PO-10-BU-1	11000	600	6	2500	130	0.5	300	9.9	370	3.2
162: TP12-PO-19-BU-2	5100	420	4	1400	95	0.3	190	5.9	220	2.8
163: TP13-PO-25-BU-1	11000	690	6	7300	170	0.4	340	11	400	3.3

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Sample ID	Fe µg/g	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Na µg/g	Ni µg/g	P µg/g	Pb µg/g
164: TP13-PO-27-BU-1	11000	640	7	4100	110	0.4	310	12	400	4.4
165: TP13-PO-34-BU-2	11000	530	5	2600	110	0.4	210	10	350	3.4
166: TP13-PO-37-BU-1	6500	450	4	4500	66	0.8	220	14	560	3.7
167: TP13-PO-40-BU-2	8300	510	4	2100	94	0.5	210	9.9	340	3.1
168: TP13-PO-43-BU-2	8500	590	4	2200	94	0.5	280	9.1	310	3.1
169: DH13-PO-02-SPT-7	11000	1300	9	20000	210	0.3	380	17	510	4.1
170: DH13-PO-03-SPT-8	6300	570	4	5900	84	0.4	260	7.3	490	2.8
171: DH13-PO-22-SPT-6	6400	430	4	5900	90	0.5	190	8.9	520	3.2
172: DH13-PO-06-SPT-10	15000	1700	11	15000	230	0.5	380	19	480	6.2
174: DH13-FD-06-SPT-9	5200	470	4	2200	57	0.4	220	6.4	340	2.7
175: TP13-WD-01A-BU-2	9800	770	4	2800	110	0.5	300	10	330	3.4
176: TP13-WD-03-BU-2	9700	800	5	3000	120	0.4	220	11	320	3.1
182: TP13-WD-16-BU-2	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold
183: DH13-WD-01-SPT-7	9800	710	6	4400	110	0.6	250	13	290	3.6
184: DH13-WD-02-SPT-8	8000	560	5	3800	83	0.3	240	7.7	270	3.4
185: DH13-WD-03-SPT-5	9200	820	7	12000	140	0.4	270	13	540	3.7
186: DH13-WD-04-SPT-5	7400	760	5	12000	120	0.4	320	9.4	530	3.9
194: ARD-4 DH12-PO-17	46000	1800	11	8600	270	0.6	830	23	560	4.8
195: ARD-5 DH12-PO-08R	11000	1300	6	4300	160	0.7	390	6.5	290	3.3
196: ARD-6 DH12-PO-22	43000	1000	44	38000	880	0.1	140	69	1300	1.8
197: ARD-7 DH12-PO-16	7300	900	4	2900	81	0.6	350	4.7	49	2.9
198: ARD-8 DH12-PO-15	11000	1800	4	2800	140	1.0	410	4.2	140	2.9
199: ARD-9 DH12-PO-19	12000	550	4	2800	150	4.3	460	5.8	250	2.6
200: ARD-10 DH12-PO-18	6700	890	3	1600	93	0.9	370	3.8	120	14
201: ARD-11 -DH12-PO-20	1300	530	< 2	52	81	0.8	490	2.0	10	4.2
202: ARD-12 DH12-PO-21	12000	2500	6	3500	230	0.9	140	6.7	19	3.5
203: ARD-13 DH12-PO-07R	2500	580	< 2	380	44	0.7	600	2.1	37	2.9
204: ARD-14 DH12-PO-17	50000	1800	14	11000	330	0.5	900	25	580	4.3
205: ARD-15 DH12-PO-07R	2100	460	< 2	210	69	0.9	550	2.0	24	2.8
206: ARD-16 DH12-PO-15	12000	1100	4	3200	170	1.4	440	4.8	150	3.3
207: ARD-17 DH13-FD-09	8200	720	8	4000	110	0.5	580	6.5	540	2.7
208: ARD-18 DH13-FD-09	10000	1000	13	5300	130	0.6	560	7.0	550	2.7
209: ARD-19 DH12-TMF-04	11000	4100	56	4800	160	0.5	690	8.2	740	2.8
210: ARD-20 DH12-TMF-07	7500	1600	18	3000	82	0.6	660	5.7	610	1.8
211: ARD-21 DH12-TMF-08	66000	2300	13	22000	700	0.6	1900	58	2000	2.4

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212: ARD-22 DH12-TMF-09	15000	570	18	10000	170	0.6	540	13	540	2.1
213: ARD-23 DH12-TMF-10	8600	2300	10	4100	120	0.5	570	7.6	680	3.1
214: ARD-24 DH12-TMF-13	55000	65	42	41000	640	0.2	260	100	800	1.7
215: ARD-25 DH12-TMF-14	38000	700	15	22000	710	0.2	110	63	180	1.8
216: ARD-26 DH12-TMF-15	50000	3600	24	25000	500	0.5	210	56	520	2.2
217: ARD-27 DH12-TMF-29	7800	660	7	4100	110	0.4	520	9.7	470	2.3
218: ARD-28 DH12-TMF-30	7900	600	5	4100	82	0.5	540	10	490	3.2
219: ARD-29-DH12-TMF-31	51000	170	31	35000	710	0.1	98	82	210	1.1
220: ARD-30-DH12-TMF-32	54000	770	17	24000	800	0.4	91	79	230	1.8
221: DH13-FD-05-SPT-17	8300	670	7	3800	110	0.4	270	8.9	260	3.2
222: DH12-PO-02R-SPT-2	6800	470	4	13000	150	0.7	160	11	530	4.4
223: DH13-PO-17-SPT-1	23000	1200	9	6200	170	1.6	280	21	410	3.5
224: TP13-FD-17-BU-1	9100	510	6	2600	120	0.3	270	13	460	2.6
225: TP13-FD-18-BU-2	7800	780	6	4900	93	0.5	370	8.6	380	2.8
226: TP13-FD-19-BU-1	7300	760	5	9300	100	0.3	310	9.2	480	2.0
227: TP13-FD-22-BU-1	8900	560	6	5600	130	0.3	260	8.7	430	2.1
228: DH13-FD-08-SPT-5	5900	570	4	10000	120	0.5	220	10	440	1.9
229: TP12-TMF-42-BU-1	9900	360	6	2200	150	0.6	240	15	340	2.6
230: TP12-TMF-43-GR-1	9600	1000	11	5500	120	14	280	18	550	3.1
231: TP12-TMF-18-BU-1	8200	540	6	2200	85	0.6	270	10	390	3.0
232: TP12-TMF-02-BU-3	12000	690	8	3600	130	0.2	260	11	500	2.8
234: DH13-PO-18-SPT-2	25000	790	8	6000	280	1.2	350	18	380	3.6
235: TP13-PO-18-BU-1	13000	400	6	2900	100	0.4	150	10	290	3.8
237: TP13-PO-21-BU-2	18000	850	8	4600	220	1.5	250	20	410	3.7
242: DH12-PO-05R-SPT-11	11300	640	6	3700	120	0.5	320	14	280	2.1
244: DH12-PO-13-SPT-2	9800	440	5	2800	89	0.8	230	10	410	3.9
245: DH12-PO-14-SPT-13	13000	1500	10	23000	250	0.4	380	19	470	3.7
246: DH12-PO-20-SPT-7	10000	680	6	4900	130	0.6	290	11	290	2.6
247: DH12-PO-21-SPT-5	7300	810	5	7600	120	0.5	340	9.7	390	2.0
248: TP12-PO-03-BU-2 A	19000	540	8	6500	200	0.5	220	14	390	1.5
249: TP12-PO-03-BU-2 B	5700	300	4	7300	75	0.5	120	14	560	2.8
251: TP12-PO-09-BU-1	13000	620	6	3700	200	0.4	320	14	430	2.5
252: TP12-PO-16-BU-1 0.4-0.6m	10000	220	5	1800	52	0.4	140	9.5	460	1.7
253: TP12-PO-16-BU-1 0.6m	12000	560	7	3100	170	1.0	320	12	220	1.6
254: TP12-PO-18-BU-1	9300	400	5	2100	74	0.4	210	12	320	1.7

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LR Report : **CA12691-JUL13**

Sample ID	Fe µg/g	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Na µg/g	Ni µg/g	P µg/g	Pb µg/g
255: TP12-PO-22-BU-1	6100	340	5	7800	87	0.2	130	8.9	520	0.94
258: TP12-PO-28-BU-1	9600	760	7	12000	180	0.3	280	13	500	1.5
261: TP12-WD-14-BU-1	10000	510	5	2400	100	0.5	230	10	310	1.6
262: TP12-WD-01-BU-1	6700	480	5	11000	100	0.4	130	10	550	0.96
263: TP12-WD-07-BU-1	12000	1500	6	4500	110	0.4	270	15	340	2.8
264: TP12-WD-10-BU-1	14000	790	8	5100	180	0.2	260	21	340	1.7
265: TP12-WD-12-BU-1	4900	210	3	1400	44	0.3	84	7.6	600	1.1

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

OnLine LIMS

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August-28-13

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Date Rec. : 26 July 2013
LR Report: **CA12691-JUL13**

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CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sb µg/g	Se (CRI) µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
3: Analysis Approval Date	22-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13	22-Aug-13	28-Aug-13
4: Analysis Approval Time	13:16	13:17	13:17	13:17	13:18	13:19	13:19	13:19	13:19	13:20	08:29
5: ARD-1390082	< 0.8	0.08	0.6	6.7	160	< 0.02	1.6	4	18	7.6	< 0.05
6: ARD-1390445	< 0.8	0.17	0.7	7.3	210	< 0.02	1.7	3	23	8.0	< 0.05
7: ARD-1398253	< 0.8	0.15	1.0	6.7	380	< 0.02	1.0	2	26	11	< 0.05
8: ARD-1385848	< 0.8	0.79	0.8	14	330	< 0.02	1.2	6	12	9.0	< 0.05
9: ARD-1363071	< 0.8	0.21	0.5	12	830	< 0.02	0.044	68	4.9	37	< 0.05
10: ARD-1399888	< 0.8	< 0.04	< 0.5	9.6	460	< 0.02	0.22	35	2.1	26	< 0.05
11: ARD-1317321	< 0.8	0.13	< 0.5	32	140	< 0.02	0.051	3	42	2.9	< 0.05
12: ARD-1260433	< 0.8	0.17	0.6	6.9	760	< 0.02	0.47	110	6.6	60	< 0.05
13: ARD-1260435	< 0.8	0.13	< 0.5	16	290	< 0.02	1.4	35	15	22	< 0.05
14: ARD-1288121	< 0.8	0.23	3.3	75	2500	0.42	0.44	120	11	71	< 0.05
15: ARD-1334254	< 0.8	0.12	< 0.5	2.6	510	< 0.02	0.017	21	1.4	52	< 0.05
16: ARD-1344533	< 0.8	1.1	2.8	12	440	< 0.02	2.6	7	31	9.1	< 0.05
17: ARD-1323885	< 0.8	0.61	2.0	15	530	< 0.02	1.4	26	48	18	< 0.05
18: ARD-1261924	< 0.8	0.11	0.9	12	360	< 0.02	1.00	17	11	18	< 0.05
19: ARD-1335660	< 0.8	0.07	< 0.5	68	800	< 0.02	0.28	92	8.3	55	< 0.05
20: ARD-1262008	< 0.8	0.18	< 0.5	28	1300	< 0.02	0.58	120	8.2	58	< 0.05
21: ARD-1262116	< 0.8	0.13	0.7	7.7	1100	0.10	0.88	31	10	44	< 0.05
22: ARD-1402452	< 0.8	0.07	0.8	340	2500	0.57	0.21	110	9.8	56	< 0.05
23: ARD-1313309	< 0.8	0.06	< 0.5	19	280	< 0.02	0.66	10	11	10	< 0.05

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LR Report : **CA12691-JUL13**

Sample ID	Sb µg/g	Se (CRI) µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
24: ARD-1313311	< 0.8	0.23	< 0.5	42	330	< 0.02	0.33	120	6.3	79	< 0.05
25: ARD-1371750	< 0.8	0.20	< 0.5	3.7	67	< 0.02	1.9	4	9.5	6.5	< 0.05
26: ARD-1343542	< 0.8	0.22	0.5	2.7	60	0.04	1.0	16	4.1	13	< 0.05
27: ARD-1343545	< 0.8	0.55	< 0.5	34	240	< 0.02	0.38	99	25	52	< 0.05
28: ARD-1299298	< 0.8	0.12	< 0.5	110	390	0.03	0.26	130	13	52	< 0.05
29: ARD-1376168	< 0.8	0.23	0.7	16	370	0.04	1.2	2	18	7.8	< 0.05
30: ARD-1396533	< 0.8	0.07	1.8	14	1500	< 0.02	0.24	66	13	44	< 0.05
31: ARD-1396637	< 0.8	0.22	< 0.5	44	560	< 0.02	0.097	69	58	30	< 0.05
32: ARD-1308221	< 0.8	0.06	1.3	18	1000	< 0.02	0.29	13	12	19	< 0.05
33: ARD-1261810	< 0.8	0.12	< 0.5	47	1900	0.16	0.37	74	5.4	51	< 0.05
34: ARD-1456517	< 0.8	0.24	1.7	19	800	< 0.02	0.50	26	21	22	< 0.05
35: ARD-1398758	< 0.8	< 0.04	< 0.5	1.7	36	< 0.02	0.50	4	5.4	14	< 0.05
36: ARD-1259369	< 0.8	0.04	1.9	16	2700	0.69	0.048	83	2.7	68	< 0.05
37: ARD-1336164	< 0.8	0.08	2.5	10	1200	< 0.02	0.31	72	17	35	< 0.05
38: ARD-1336196	< 0.8	0.08	2.3	9.9	670	< 0.02	0.29	77	14	27	< 0.05
39: ARD-1306362	< 0.8	0.06	< 0.5	43	86	< 0.02	0.027	5	41	3.5	< 0.05
40: ARD-1350733	< 0.8	0.18	3.3	14	2000	< 0.02	1.3	16	24	14	< 0.05
41: ARD-1359177	< 0.8	0.12	< 0.5	7.0	250	0.02	1.3	2	21	6.8	< 0.05
42: ARD-1361014	< 0.8	< 0.04	< 0.5	17	840	0.04	0.34	26	3.4	27	< 0.05
43: ARD-1341540	< 0.8	0.15	< 0.5	24	41	< 0.02	0.69	45	9.2	31	< 0.05
44: ARD-1326120	< 0.8	0.06	< 0.5	13	760	< 0.02	0.39	58	5.9	60	< 0.05
45: ARD-1413274	< 0.8	0.28	0.7	10	100	< 0.02	1.5	3	20	6.9	< 0.05
46: ARD-1258576	< 0.8	0.11	2.3	6.2	430	< 0.02	0.95	40	15	20	< 0.05
47: ARD-1258760	< 0.8	0.05	< 0.5	3.9	150	< 0.02	0.77	5	3.6	6.8	< 0.05
48: ARD-1346137	< 0.8	0.22	4.1	23	890	0.06	1.5	39	34	26	< 0.05
49: ARD-1353098	< 0.8	0.27	2.6	9.9	840	0.08	0.35	79	12	32	< 0.05
50: ARD-1353200	< 0.8	0.14	1.0	15	780	< 0.02	0.27	80	13	54	< 0.05
51: ARD-1329749	< 0.8	0.07	< 0.5	12	450	< 0.02	0.80	5	11	20	< 0.05
52: ARD-1329877	< 0.8	0.08	< 0.5	3.6	210	< 0.02	0.71	7	13	11	< 0.05
53: ARD-1387476	< 0.8	0.27	0.5	23	250	0.05	0.67	20	13	15	< 0.05
54: ARD-1284846	< 0.8	0.11	< 0.5	7.6	380	< 0.02	1.7	5	19	12	< 0.05
55: ARD-681824	< 0.8	< 0.04	< 0.5	18	16	< 0.02	0.091	2	1.5	9.5	< 0.05
56: ARD-681852	< 0.8	0.09	0.8	10	410	< 0.02	0.88	7	8.6	15	< 0.05
57: ARD-689119	< 0.8	0.24	< 0.5	55	1800	0.44	0.31	140	3.8	51	< 0.05
58: ARD-938691	< 0.8	0.12	1.1	10	250	< 0.02	0.71	7	6.0	5.3	< 0.05

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59: ARD-930693	< 0.8	0.14	< 0.5	9.6	1000	< 0.02	0.025	43	1.3	29	< 0.05
60: ARD-952486	< 0.8	0.22	1.5	124	1700	0.54	0.65	120	13	43	< 0.05
61: ARD-1284878	< 0.8	0.13	< 0.5	12	780	< 0.02	0.60	90	9.5	56	< 0.05
62: ARD-1298061	< 0.8	0.12	< 0.5	57	1600	0.12	0.54	67	4.0	57	< 0.05
63: ARD-1387873	< 0.8	0.15	3.4	9.4	710	< 0.02	0.17	110	11	41	< 0.05
64: ARD-1115728	< 0.8	0.22	0.7	10	140	< 0.02	1.6	10	11	11	< 0.05
65: ARD-920512	< 0.8	0.16	< 0.5	5.0	20	< 0.02	1.0	2	15	8.8	< 0.05
66: ARD-950511	< 0.8	1.13	1.5	39	54	< 0.02	0.14	50	18	38	< 0.05
67: ARD-952686	< 0.8	0.23	1.0	17	580	< 0.02	0.94	30	17	23	< 0.05
68: ARD-1469044	< 0.8	0.11	1.0	7.3	58	< 0.02	1.4	9	11	8.5	< 0.05
69: ARD-1486591	< 0.8	0.13	1.1	13	830	0.07	2.0	14	32	24	< 0.05
70: ARD-1401198	< 0.8	0.17	1.1	13	240	< 0.02	0.89	< 1	13	5.2	< 0.05
71: ARD-1311777	< 0.8	0.14	1.7	5.1	550	< 0.02	1.1	7	28	7.4	< 0.05
72: ARD-1416171	< 0.8	0.17	< 0.5	11	210	< 0.02	0.73	3	19	9.4	< 0.05
73: ARD-246803	< 0.8	0.19	< 0.5	10	280	< 0.02	1.8	4	21	8.0	< 0.05
74: ARD-227138	< 0.8	0.84	1.9	13	1400	0.15	0.32	87	10	42	< 0.05
75: ARD-689315	< 0.8	0.49	< 0.5	15	21	< 0.02	1.1	5	3.8	15	< 0.05
76: ARD-684437	< 0.8	0.10	1.8	10	880	0.04	0.18	74	7.3	38	< 0.05
77: ARD-937384	< 0.8	0.48	0.9	16	4000	0.04	0.38	170	11	53	< 0.05
78: ARD-931559	< 0.8	0.07	0.6	20	1600	0.36	0.066	88	2.6	44	< 0.05
79: ARD-931623	< 0.8	< 0.04	< 0.5	20	320	< 0.02	0.10	15	1.9	13	< 0.05
80: ARD-937698	< 0.8	< 0.04	< 0.5	17	2300	0.39	0.032	58	2.9	51	< 0.05
81: ARD-935087	< 0.8	0.06	< 0.5	12	31	< 0.02	0.084	8	2.0	18	< 0.05
82: ARD-1284981	< 0.8	0.08	1.3	19	860	< 0.02	0.18	91	8.7	60	< 0.05
83: ARD-1284982	< 0.8	0.20	1.6	17	340	< 0.02	0.46	51	28	47	< 0.05
84: ARD-1347633	< 0.8	0.12	0.9	12	470	< 0.02	0.98	6	16	14	< 0.05
85: ARD-929864	< 0.8	0.37	1.5	6.5	92	< 0.02	2.7	6	17	15	< 0.05
86: ARD-573527A	< 0.8	0.05	0.8	16	620	< 0.02	0.36	22	4.1	18	< 0.05
87: ARD-1163047	< 0.8	0.85	< 0.5	8.3	350	< 0.02	0.88	7	14	21	< 0.05
88: ARD-1114935	< 0.8	0.04	< 0.5	6.7	10	< 0.02	0.83	< 1	5.3	2.7	< 0.05
89: ARD-1167807	< 0.8	0.07	< 0.5	5.5	24	< 0.02	1.1	5	4.3	11	< 0.05
90: ARD-1328761	< 0.8	0.06	< 0.5	4.5	31	< 0.02	1.6	1	4.0	5.2	< 0.05
91: ARD-1415660	< 0.8	0.16	0.6	7.1	720	< 0.02	0.10	69	8.1	43	< 0.05
92: ARD-1447030	< 0.8	0.08	1.7	13	980	< 0.02	0.32	27	14	25	< 0.05
93: ARD-1465755	< 0.8	0.09	< 0.5	7.7	25	< 0.02	0.35	< 1	7.4	3.1	< 0.05

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LR Report : **CA12691-JUL13**

Sample ID	Sb µg/g	Se (CRI) µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
94: ARD-227239	< 0.8	0.26	< 0.5	7.5	190	< 0.02	1.0	13	8.1	15	< 0.05
95: ARD-936266	< 0.8	0.20	< 0.5	6.0	160	< 0.02	1.3	2	15	14	< 0.05
96: ARD-929111	< 0.8	0.11	1.6	17	940	< 0.02	0.18	84	8.1	51	< 0.05
97: ARD-578580	< 0.8	0.44	2.8	36	79	< 0.02	1.4	190	20	55	< 0.05
98: ARD-571416	< 0.8	0.17	< 0.5	7.7	37	< 0.02	1.2	1	9.6	4.6	< 0.05
99: ARD-70623	< 0.8	0.08	1.3	8.5	600	< 0.02	0.87	34	15	20	< 0.05
100: ARD-1111278	< 0.8	0.07	< 0.5	2.5	100	< 0.02	1.1	3	11	6.6	< 0.05
101: ARD-1156837	< 0.8	0.37	1.0	8.6	140	0.02	1.1	4	14	9.5	< 0.05
102: ARD-1157490	< 0.8	0.62	0.8	6.8	100	< 0.02	1.2	19	7.5	16	< 0.05
103: ARD-1113188	< 0.8	0.18	< 0.5	65	1900	0.64	0.38	92	2.8	60	< 0.05
104: ARD-1168407	< 0.8	1.5	13	16	750	0.12	0.67	32	17	27	< 0.05
105: ARD-1173948	< 0.8	0.36	< 0.5	5.6	13	< 0.02	1.1	1	6.1	3.7	< 0.05
106: ARD-1107356	< 0.8	< 0.04	< 0.5	14	320	< 0.02	1.1	6	8.8	7.2	< 0.05
107: ARD-1107358	< 0.8	< 0.04	< 0.5	18	1200	0.09	0.52	36	5.8	32	< 0.05
108: ARD-1152026	< 0.8	0.17	< 0.5	39	48	< 0.02	0.41	79	11	38	< 0.05
109: ARD-1152087	< 0.8	0.74	< 0.5	22	140	< 0.02	0.56	16	7.8	15	< 0.05
110: ARD-1120993	< 0.8	0.39	< 0.5	17	3000	0.08	0.60	150	9.9	300	< 0.05
111: ARD-1153135	< 0.8	0.30	0.7	13	2600	0.10	0.43	130	9.1	42	< 0.05
112: ARD-1153209	< 0.8	3.9	2.7	82	1200	0.22	1.3	65	29	31	< 0.05
113: ARD-1153674	< 0.8	< 0.04	< 0.5	12	12	< 0.02	0.99	< 1	4.1	5.3	< 0.05
114: ARD-68741	< 0.8	0.15	0.7	2.5	180	< 0.02	0.59	2	13	3.2	< 0.05
115: ARD-1048151	< 0.8	0.29	< 0.5	5.7	210	< 0.02	1.00	8	16	11	< 0.05
116: ARD-1047357	< 0.8	0.09	< 0.5	11	290	< 0.02	1.6	12	17	9.1	< 0.05
117: ARD-1047487	< 0.8	0.09	< 0.5	8.4	72	< 0.02	1.2	8	8.5	29	< 0.05
118: ARD-1057141	< 0.8	0.20	< 0.5	11	27	< 0.02	1.1	9	7.0	14	< 0.05
119: ARD-1029210	< 0.8	0.10	1.6	11	1100	< 0.02	0.22	45	14	26	< 0.05
120: ARD-1026152	< 0.8	0.11	0.6	8.6	29	< 0.02	0.99	13	5.4	10	< 0.05
121: ARD-1027713	< 0.8	0.14	< 0.5	16	140	< 0.02	0.52	4	6.0	6.8	< 0.05
122: ARD-1008072	< 0.8	0.33	< 0.5	18	1100	< 0.02	0.86	97	11	48	< 0.05
123: ARD-1008261	< 0.8	0.07	< 0.5	2.2	85	< 0.02	0.22	2	2.7	6.8	< 0.05
124: ARD-1057715	< 0.8	0.14	1.6	11	1900	< 0.02	0.33	35	7.3	26	< 0.05
125: ARD-926721	< 0.8	0.07	< 0.5	8.0	59	< 0.02	1.1	4	17	11	< 0.05
126: ARD-928214	< 0.8	0.13	< 0.5	22	2100	0.22	0.18	110	3.9	44	< 0.05
127: ARD-1171884	< 0.8	< 0.04	< 0.5	15	1200	0.12	0.070	40	2.4	30	< 0.05
128: ARD-1108761	< 0.8	0.07	< 0.5	5.5	100	< 0.02	0.89	2	8.9	9.6	< 0.05

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LR Report : **CA12691-JUL13**

Sample ID	Sb µg/g	Se (CRI) µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
129: ARD-1105010	< 0.8	0.23	2.6	16	900	0.03	0.62	54	29	29	< 0.05
130: ARD-1109100	< 0.8	0.10	< 0.5	6.2	50	< 0.02	0.68	< 1	18	4.1	< 0.05
131: ARD-1117160	< 0.8	0.11	< 0.5	8.2	370	< 0.02	1.1	12	15	9.9	< 0.05
132: ARD-1117946	< 0.8	0.33	0.9	10	190	< 0.02	1.8	4	27	9.5	< 0.05
133: ARD-572129	< 0.8	0.06	< 0.5	3.1	52	< 0.02	0.62	2	4.3	4.9	< 0.05
134: ARD-68989	< 0.8	0.05	1.6	14	1600	0.14	0.29	62	7.4	34	< 0.05
135: ARD-1	< 0.8	0.16	< 0.5	3.4	1000	< 0.02	0.014	28	1.4	35	< 0.05
136: ARD-2	< 0.8	0.09	0.8	25	1500	< 0.02	0.20	9	9.5	17	< 0.05
137: ARD-3	< 0.8	0.20	< 0.5	12	110	< 0.02	1.1	< 1	10	4.8	< 0.05
138: ARD-1105726	< 0.8	0.18	0.6	13	750	< 0.02	0.055	42	2.0	32	< 0.05
139: ARD-1120967	< 0.8	0.21	< 0.5	4.7	190	< 0.02	1.5	2	18	36	< 0.05
140: ARD-69669	< 0.8	0.32	< 0.5	4.1	16	< 0.02	1.1	< 1	12	6.5	< 0.05
141: ARD-1045336	< 0.8	0.05	< 0.5	17	29	< 0.02	0.22	5	3.0	9.5	< 0.05
142: ARD-951469	< 0.8	0.19	< 0.5	9.3	13	< 0.02	0.75	< 1	4.3	3.4	< 0.05
143: ARD-1172124	< 0.8	0.12	1.5	24	2000	< 0.02	0.16	62	21	15	< 0.05
144: ARD-1070859	< 0.8	0.07	< 0.5	35	1100	0.09	0.42	57	5.1	41	< 0.05
145: ARD-1054224	< 0.8	< 0.04	0.6	20	2200	0.48	0.059	54	2.7	71	< 0.05
146: ARD-1049797	< 0.8	0.06	2.6	18	1500	< 0.02	0.40	37	11	21	< 0.05
147: ARD-1008033	< 0.8	0.17	3.2	11	900	< 0.02	0.60	37	15	33	< 0.05
148: ARD-1008450	< 0.8	0.14	< 0.5	12	140	< 0.02	1.4	1	14	3.8	< 0.05
149: ARD-90295	< 0.8	0.09	< 0.5	7.8	1100	< 0.02	0.59	45	9.7	38	< 0.05
150: ARD-1017819	< 0.8	0.10	0.7	11	1000	< 0.02	0.51	67	4.4	38	< 0.05
151: ARD-1070452	< 0.8	0.12	< 0.5	15	1400	0.10	0.41	53	4.7	42	< 0.05
152: ARD-1175183	< 0.8	0.19	< 0.5	44	290	0.03	0.21	86	5.8	56	< 0.05
153: TP-2-1	< 0.8	< 0.04	< 0.5	8.6	340	< 0.02	0.36	9	2.4	8.4	< 0.05
154: TP-4-1	< 0.8	0.14	< 0.5	12	660	0.05	0.54	25	10	50	< 0.05
155: TP-8-1	< 0.8	0.15	< 0.5	12	560	0.06	0.41	19	6.3	20	< 0.05
156: TP-17-1	< 0.8	0.06	< 0.5	8.7	460	0.03	0.32	20	3.9	14	< 0.05
157: TP-35-1	< 0.8	< 0.04	< 0.5	9.5	420	0.04	0.28	16	4.4	14	< 0.05
158: TP-105-1	< 0.8	0.12	< 0.5	3.3	390	0.03	0.37	16	1.9	7.4	< 0.05
159: TP-106-1	< 0.8	0.06	< 0.5	7.1	430	0.03	0.32	20	4.9	15	< 0.05
160: TP-109-1	< 0.8	0.11	< 0.5	6.9	480	0.03	0.99	21	9.0	15	< 0.05
161: TP13-PO-10-BU-1	< 0.8	0.05	< 0.5	9.5	500	0.04	0.30	20	4.7	14	< 0.05
162: TP12-PO-19-BU-2	< 0.8	< 0.04	< 0.5	5.2	210	0.02	0.35	8	2.7	8.3	< 0.05
163: TP13-PO-25-BU-1	< 0.8	0.05	< 0.5	15	420	0.03	0.39	21	3.7	18	< 0.05

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LR Report : **CA12691-JUL13**

Sample ID	Sb µg/g	Se (CRI) µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
164: TP13-PO-27-BU-1	< 0.8	0.10	< 0.5	10	500	0.04	0.54	21	4.2	23	< 0.05
165: TP13-PO-34-BU-2	< 0.8	0.07	< 0.5	6.5	490	0.03	0.33	22	3.2	23	< 0.05
166: TP13-PO-37-BU-1	< 0.8	0.17	< 0.5	10	370	0.06	0.86	14	4.2	15	< 0.05
167: TP13-PO-40-BU-2	< 0.8	0.04	< 0.5	7.7	380	0.03	0.33	17	3.3	11	< 0.05
168: TP13-PO-43-BU-2	< 0.8	< 0.04	< 0.5	8.6	390	0.03	0.30	13	2.9	13	< 0.05
169: DH13-PO-02-SPT-7	< 0.8	0.05	< 0.5	46	580	0.06	0.53	19	5.1	22	< 0.05
170: DH13-PO-03-SPT-8	< 0.8	< 0.04	< 0.5	15	380	0.02	0.45	12	3.1	11	< 0.05
171: DH13-PO-22-SPT-6	< 0.8	0.05	< 0.5	16	350	0.02	0.41	12	3.2	12	< 0.05
172: DH13-PO-06-SPT-10	< 0.8	0.06	< 0.5	31	680	0.07	0.64	24	5.5	28	< 0.05
174: DH13-FD-06-SPT-9	< 0.8	< 0.04	< 0.5	10	260	0.02	0.50	10	2.2	8.5	< 0.05
175: TP13-WD-01A-BU-2	< 0.8	0.06	< 0.5	8.3	510	0.03	0.38	17	3.6	12	< 0.05
176: TP13-WD-03-BU-2	< 0.8	0.04	< 0.5	7.3	470	0.03	0.36	18	3.1	14	< 0.05
182: TP13-WD-16-BU-2	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold	Hold
183: DH13-WD-01-SPT-7	< 0.8	< 0.04	< 0.5	12	400	0.03	0.44	17	3.1	19	< 0.05
184: DH13-WD-02-SPT-8	< 0.8	0.11	< 0.5	10	340	0.03	0.54	16	2.9	12	< 0.05
185: DH13-WD-03-SPT-5	< 0.8	0.06	< 0.5	22	460	0.04	2.2	17	4.1	18	< 0.05
186: DH13-WD-04-SPT-5	< 0.8	< 0.04	< 0.5	21	440	0.04	0.55	14	4.0	15	< 0.05
194: ARD-4 DH12-PO-17	< 0.8	0.25	< 0.5	9.6	2400	0.04	0.52	150	11	41	< 0.05
195: ARD-5 DH12-PO-08R	< 0.8	< 0.04	< 0.5	11	320	0.02	0.56	9	7.6	16	< 0.05
196: ARD-6 DH12-PO-22	< 0.8	0.15	< 0.5	61	1400	< 0.02	0.38	76	6.3	85	< 0.05
197: ARD-7 DH12-PO-16	< 0.8	< 0.04	< 0.5	3.9	200	< 0.02	0.22	6	6.0	10	< 0.05
198: ARD-8 DH12-PO-15	< 0.8	< 0.04	< 0.5	6.7	450	0.03	0.79	6	6.8	19	< 0.05
199: ARD-9 DH12-PO-19	< 0.8	0.15	< 0.5	12	260	< 0.02	1.6	11	18	12	< 0.05
200: ARD-10 DH12-PO-18	< 0.8	0.22	< 0.5	8.9	24	< 0.02	0.94	2	13	23	< 0.05
201: ARD-11 -DH12-PO-20	< 0.8	< 0.04	< 0.5	9.5	22	< 0.02	0.39	< 1	12	2.4	< 0.05
202: ARD-12 DH12-PO-21	< 0.8	0.06	< 0.5	14	160	0.03	1.2	10	6.5	32	< 0.05
203: ARD-13 DH12-PO-07R	< 0.8	< 0.04	< 0.5	5.1	92	< 0.02	0.65	1	6.2	3.3	< 0.05
204: ARD-14 DH12-PO-17	< 0.8	0.28	< 0.5	11	2500	0.04	0.52	150	12	51	< 0.05
205: ARD-15 DH12-PO-07R	< 0.8	0.06	< 0.5	7.7	62	< 0.02	0.31	< 1	4.4	5.0	< 0.05
206: ARD-16 DH12-PO-15	< 0.8	0.04	< 0.5	9.6	430	< 0.02	1.0	7	10	18	< 0.05
207: ARD-17 DH13-FD-09	< 0.8	< 0.04	< 0.5	21	510	< 0.02	0.61	14	3.2	22	< 0.05
208: ARD-18 DH13-FD-09	< 0.8	< 0.04	< 0.5	21	590	0.04	0.87	17	3.6	27	< 0.05
209: ARD-19 DH12-TMF-04	< 0.8	0.04	< 0.5	26	730	0.27	0.84	23	4.1	31	< 0.05
210: ARD-20 DH12-TMF-07	< 0.8	< 0.04	< 0.5	20	530	0.07	0.38	14	3.8	17	< 0.05
211: ARD-21 DH12-TMF-08	< 0.8	0.17	0.6	39	3100	0.12	0.11	110	16	74	< 0.05

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Sample ID	Sb µg/g	Se (CRI) µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
212: ARD-22 DH12-TMF-09	< 0.8	< 0.04	< 0.5	10	360	< 0.02	0.45	23	3.1	33	< 0.05
213: ARD-23 DH12-TMF-10	< 0.8	0.05	< 0.5	23	660	0.12	0.92	17	3.1	27	< 0.05
214: ARD-24 DH12-TMF-13	< 0.8	0.05	0.7	3.1	1100	< 0.02	0.18	77	5.3	85	< 0.05
215: ARD-25 DH12-TMF-14	< 0.8	0.12	< 0.5	9.3	530	< 0.02	0.004	55	1.0	36	< 0.05
216: ARD-26 DH12-TMF-15	< 0.8	0.08	< 0.5	17	1200	0.08	0.17	120	6.9	64	< 0.05
217: ARD-27 DH12-TMF-29	< 0.8	< 0.04	< 0.5	16	440	< 0.02	0.16	12	2.0	24	< 0.05
218: ARD-28 DH12-TMF-30	< 0.8	< 0.04	< 0.5	20	390	< 0.02	0.50	11	2.2	14	< 0.05
219: ARD-29-DH12-TMF-31	< 0.8	0.14	< 0.5	18	600	< 0.02	0.013	99	3.0	45	< 0.05
220: ARD-30-DH12-TMF-32	< 0.8	0.10	< 0.5	36	53	< 0.02	0.043	88	5.3	55	< 0.05
221: DH13-FD-05-SPT-17	< 0.8	< 0.04	< 0.5	10	310	0.04	0.59	13	2.0	19	< 0.05
222: DH12-PO-02R-SPT-2	< 0.8	0.18	< 0.5	26	300	0.05	0.74	12	3.8	25	< 0.05
223: DH13-PO-17-SPT-1	< 0.8	0.07	0.5	8.0	660	0.03	0.44	29	6.7	28	< 0.05
224: TP13-FD-17-BU-1	< 0.8	< 0.04	< 0.5	9.4	420	0.03	0.33	16	3.8	17	< 0.05
225: TP13-FD-18-BU-2	< 0.8	0.05	< 0.5	15	410	0.04	0.68	13	2.9	15	< 0.05
226: TP13-FD-19-BU-1	< 0.8	0.10	< 0.5	21	410	0.04	5.5	16	3.7	15	< 0.05
227: TP13-FD-22-BU-1	< 0.8	0.06	< 0.5	12	460	0.03	0.97	18	3.6	16	< 0.05
228: DH13-FD-08-SPT-5	< 0.8	0.15	0.8	35	290	0.05	1.4	11	3.2	15	< 0.05
229: TP12-TMF-42-BU-1	< 0.8	0.10	< 0.5	7.0	450	0.04	0.37	22	3.2	13	< 0.05
230: TP12-TMF-43-GR-1	< 0.8	0.05	< 0.5	13	510	0.06	0.44	21	3.2	20	< 0.05
231: TP12-TMF-18-BU-1	< 0.8	0.07	< 0.5	10	490	0.04	0.67	16	4.4	14	< 0.05
232: TP12-TMF-02-BU-3	< 0.8	0.06	< 0.5	9.4	640	0.04	0.41	29	3.9	60	< 0.05
234: DH13-PO-18-SPT-2	< 0.8	0.08	< 0.5	9.8	690	0.05	0.62	44	7.7	30	< 0.05
235: TP13-PO-18-BU-1	< 0.8	0.19	< 0.5	4.7	570	0.02	0.30	25	3.0	20	< 0.05
237: TP13-PO-21-BU-2	< 0.8	0.13	< 0.5	9.4	580	0.04	0.42	34	5.8	24	< 0.05
242: DH12-PO-05R-SPT-11	< 0.8	0.08	< 0.5	9.8	410	0.03	0.69	21	4.3	15	< 0.05
244: DH12-PO-13-SPT-2	< 0.8	0.05	< 0.5	7.3	390	< 0.02	0.46	15	5.6	28	< 0.05
245: DH12-PO-14-SPT-13	< 0.8	0.06	< 0.5	56	660	0.08	0.62	23	6.3	25	< 0.05
246: DH12-PO-20-SPT-7	< 0.8	< 0.04	< 0.5	14	410	0.04	0.36	18	3.8	17	< 0.05
247: DH12-PO-21-SPT-5	< 0.8	< 0.04	< 0.5	22	420	0.03	0.44	13	3.4	13	< 0.05
248: TP12-PO-03-BU-2 A	< 0.8	0.05	< 0.5	7.9	650	0.02	0.21	28	3.6	29	< 0.05
249: TP12-PO-03-BU-2 B	< 0.8	0.51	< 0.5	12	270	0.06	0.80	15	5.6	23	< 0.05
251: TP12-PO-09-BU-1	< 0.8	0.04	< 0.5	11	600	0.04	0.36	24	5.1	21	< 0.05
252: TP12-PO-16-BU-1 0.4-0.6m	< 0.8	0.28	< 0.5	6.5	370	0.03	0.45	23	4.6	8.5	< 0.05
253: TP12-PO-16-BU-1 0.6m	< 0.8	0.11	< 0.5	9.1	500	0.04	0.53	21	5.6	15	< 0.05
254: TP12-PO-18-BU-1	< 0.8	0.11	< 0.5	6.6	590	0.03	0.37	18	2.6	11	< 0.05

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LR Report : **CA12691-JUL13**

Sample ID	Sb µg/g	Se (CRI) µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
255: TP12-PO-22-BU-1	< 0.8	< 0.04	< 0.5	15	340	0.03	0.35	12	3.5	13	< 0.05
258: TP12-PO-28-BU-1	< 0.8	0.05	< 0.5	23	480	0.06	0.61	18	4.5	18	< 0.05
261: TP12-WD-14-BU-1	< 0.8	0.11	< 0.5	8.9	470	0.03	0.49	18	4.8	12	< 0.05
262: TP12-WD-01-BU-1	< 0.8	< 0.04	< 0.5	19	350	0.03	0.46	13	3.7	14	< 0.05
263: TP12-WD-07-BU-1	< 0.8	0.07	< 0.5	8.4	540	0.04	0.60	21	4.6	18	< 0.05
264: TP12-WD-10-BU-1	< 0.8	< 0.04	< 0.5	9.5	600	0.05	0.41	27	4.5	21	< 0.05
265: TP12-WD-12-BU-1	< 0.8	< 0.04	0.6	6.9	350	< 0.02	0.45	14	4.4	12	< 0.05

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

OnLine LIMS

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Project : IAMGold Cote Lake

Knight Piesold Limited
Attn : Steve Aiken

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165

Monday, December 17, 2012

Date Rec. : 13 November 2012
LR Report: **CA10185-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Hg µg/g	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g	Li µg/g
3: Analysis Approval Date		30-Nov-12	10-Dec-12	11-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	11-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	11-Dec-12	12-Dec-12	11-Dec-12
4: Analysis Approval Time		15:02	08:40	14:51	08:40	08:40	08:40	08:40	14:51	08:41	08:41	08:41	08:41	14:52	09:44	09:23
5: E10-036 ARD-1	10-Nov-12	< 0.05	0.51	65000	0.7	140	1.3	< 0.09	15000	0.13	2.0	83	42	6600	8000	6
6: E10-036 ARD-2	10-Nov-12	< 0.05	0.18	40000	1.1	94	1.2	< 0.09	10000	0.14	2.0	86	30	8100	9100	6
7: E10-036 ARD-3	10-Nov-12	< 0.05	0.19	74000	2.6	140	1.1	< 0.09	25000	0.10	1.0	120	45	4200	13000	4
8: E10-045 ARD-4	10-Nov-12	< 0.05	0.19	51000	0.7	35	1.4	< 0.09	5600	0.16	1.1	120	44	2200	3600	< 2
9: E11-066 ARD-5	10-Nov-12	< 0.05	0.27	53000	1.5	20	0.84	< 0.09	7100	0.15	7.2	100	58	18000	2500	9
10: E11-066 ARD-6	10-Nov-12	< 0.05	0.17	66000	1.2	260	1.3	0.24	26000	0.14	8.9	160	160	23000	9200	11
11: E11-082 ARD-7	10-Nov-12	< 0.05	0.18	60000	< 0.5	290	0.96	< 0.09	10000	0.16	0.99	95	80	7200	15000	2
12: E11-082 ARD-8	10-Nov-12	< 0.05	0.15	73000	0.8	270	1.2	< 0.09	33000	0.12	13	150	45	43000	14000	14
13: E11-082 ARD-9	10-Nov-12	< 0.05	0.04	75000	0.7	520	0.74	< 0.09	20000	0.07	8.9	68	2.3	24000	16000	10
14: E11-087 ARD-10	10-Nov-12	< 0.05	0.88	65000	< 0.5	550	1.3	< 0.09	17000	0.17	6.7	68	130	20000	21000	7
15: E11-087 ARD-11	10-Nov-12	< 0.05	0.16	59000	1.5	390	1.2	< 0.09	12000	0.12	4.5	100	35	18000	12000	8
16: E12-217 ARD-12	10-Nov-12	< 0.05	< 0.01	77000	0.5	41	0.55	0.13	42000	< 0.02	18	76	29	62000	4000	21
17: E11-096 ARD-13	10-Nov-12	< 0.05	0.17	68000	< 0.5	77	0.95	< 0.09	29000	0.14	8.6	75	10	31000	3200	12
18: E11-096 ARD-14	10-Nov-12	< 0.05	0.58	57000	2.2	91	1.1	0.73	13000	0.25	2.4	94	1100	8900	5100	4
19: E11-096 ARD-15	10-Nov-12	< 0.05	0.19	65000	0.7	270	0.64	< 0.09	49000	0.39	38	33	91	93000	14000	11
20: E11-098 ARD-16	10-Nov-12	< 0.05	0.46	60000	1.7	180	1.2	< 0.09	13000	0.20	0.98	100	130	4300	9100	4
21: E11-098 ARD-17	10-Nov-12	< 0.05	0.25	59000	< 0.5	240	0.79	< 0.09	21000	0.18	9.6	88	17	47000	15000	29
22: E11-098 ARD-18	10-Nov-12	< 0.05	0.17	87000	0.8	310	0.84	0.27	46000	0.02	12	85	230	49000	18000	21
23: E11-099 ARD-19	10-Nov-12	< 0.05	0.25	56000	< 0.5	100	1.2	< 0.09	5400	0.16	0.94	110	41	4600	9600	4
24: E11-099 ARD-20	10-Nov-12	< 0.05	0.29	58000	1.2	35	0.98	0.69	20000	0.16	3.9	76	390	23000	3700	11
25: E11-114 ARD-21	10-Nov-12	< 0.05	0.24	63000	1.2	73	1.2	< 0.09	19000	0.19	4.6	110	14	20000	3900	15

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Project : IAMGold Cote Lake
LR Report : CA10185-NOV12

Sample ID	Sample Date & Time	Hg µg/g	Ag µg/g	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g	K µg/g	Li µg/g
26: E11-114 ARD-22	10-Nov-12	< 0.05	0.27	77000	< 0.5	70	0.87	< 0.09	34000	0.10	11	120	30	48000	9500	29
27: E10-038 ARD-23	10-Nov-12	< 0.05	0.29	57000	< 0.5	84	1.9	< 0.09	7000	0.20	0.94	110	25	5300	9800	10
28: E11-062 ARD-24	10-Nov-12	< 0.05	0.13	65000	0.9	75	0.98	0.10	14000	0.09	3.8	100	160	12000	5500	8
29: E10-30 ARD-25	10-Nov-12	< 0.05	0.23	62000	2.0	120	1.1	< 0.09	13000	0.17	3.0	91	69	13000	9700	8
30: E10-028 ARD-26	10-Nov-12	< 0.05	0.18	58000	3.4	71	1.1	< 0.09	13000	0.14	3.1	110	21	13000	4500	6
31: E11-049 ARD-27	10-Nov-12	< 0.05	0.21	59000	7.4	62	1.3	< 0.09	17000	0.15	4.6	96	27	24000	3900	10
32: E11-049 ARD-28	10-Nov-12	< 0.05	0.25	34000	15	460	1.2	0.23	13000	0.20	3.3	71	39	17000	32000	6
33: E11-061 ARD-29	10-Nov-12	< 0.05	0.20	55000	2.2	62	1.4	0.24	8200	0.06	12	110	520	29000	4200	13
34: E12-206 ARD-30	10-Nov-12	< 0.05	< 0.01	97000	0.6	180	0.63	< 0.09	41000	< 0.02	15	27	5.7	53000	16000	28
35: E12-179 ARD-31	10-Nov-12	< 0.05	0.21	55000	7.0	89	1.1	< 0.09	11000	0.47	4.9	110	53	22000	9100	9
36: E11-048 ARD-32	10-Nov-12	< 0.05	0.25	58000	2.0	120	1.2	< 0.09	8200	0.16	2.5	110	230	9500	8300	5
37: E11-048 ARD-33	10-Nov-12	< 0.05	0.11	21000	1.3	16	0.42	0.47	47000	0.05	5.9	130	640	9700	1300	12
38: E11-075 ARD-34	10-Nov-12	< 0.05	0.23	68000	1.5	160	1.2	< 0.09	21000	0.16	3.0	92	15	16000	7500	9
39: E11-075 ARD-35	10-Nov-12	< 0.05	0.15	65000	1.4	270	0.59	< 0.09	47000	0.13	35	77	160	100000	18000	18
40: E11-071 ARD-36	10-Nov-12	< 0.05	0.22	60000	3.8	240	1.0	< 0.09	31000	0.12	16	140	57	39000	9100	26
41: E11-071 ARD-37	10-Nov-12	< 0.05	0.08	70000	2.3	270	0.80	< 0.09	52000	0.04	20	150	34	69000	10000	18
42: E11-078 ARD-38	10-Nov-12	< 0.05	0.27	51000	< 0.5	30	0.61	0.25	1800	0.12	3.0	130	220	13000	3400	8
43: E11-179 ARD-39	10-Nov-12	< 0.05	0.33	31000	0.6	15	0.71	0.38	5800	0.05	7.1	140	260	9600	830	5
44: E11-120 ARD-40	10-Nov-12	< 0.05	0.38	60000	< 0.5	250	1.5	0.10	11000	0.18	4.0	90	480	22000	12000	6
45: E11-120 ARD-41	10-Nov-12	< 0.05	0.26	70000	1.3	110	1.6	< 0.09	18000	0.14	7.3	89	20	24000	4100	15
46: E11-120 ARD-42	10-Nov-12	< 0.05	< 0.01	58000	6.5	340	0.56	< 0.09	68000	0.02	35	170	65	67000	16000	27
47: E11-122 ARD-43	10-Nov-12	< 0.05	0.32	62000	1.4	90	1.7	< 0.09	9400	0.18	2.0	100	14	6700	9100	5
48: E11-122 ARD-44	10-Nov-12	< 0.05	0.18	67000	1.9	170	0.71	< 0.09	19000	0.11	4.5	91	28	14000	18000	12
49: E11-140 ARD-45	10-Nov-12	< 0.05	0.28	64000	2.0	220	1.2	< 0.09	7900	0.15	3.8	99	32	12000	8900	5
50: E11-145 ARD-46	10-Nov-12	< 0.05	0.24	72000	1.7	290	1.0	< 0.09	22000	0.17	7.3	120	18	26000	15000	13
51: E12-198 ARD-47	10-Nov-12	< 0.05	0.07	56000	4.5	210	0.67	< 0.09	63000	0.08	44	320	76	78000	9500	11
52: E11-129 ARD-48	10-Nov-12	< 0.05	0.25	58000	2.5	160	0.81	< 0.09	12000	0.17	1.7	130	15	9500	11000	8
53: E11-140 ARD-49	10-Nov-12	< 0.05	0.23	61000	0.9	230	0.95	< 0.09	14000	0.14	2.9	98	49	14000	11000	7
54: E11-144 ARD-50	10-Nov-12	< 0.05	0.31	59000	3.0	490	0.98	< 0.09	36000	0.39	35	28	110	84000	13000	17
55: E11-141 ARD-51	10-Nov-12	< 0.05	0.23	63000	1.9	55	0.84	< 0.09	54000	0.15	15	50	42	65000	2800	16
56: E11-145 ARD-52	10-Nov-12	< 0.05	0.10	78000	0.9	580	0.79	< 0.09	27000	0.08	7.6	60	22	24000	17000	11
57: E12-200 ARD-53	10-Nov-12	< 0.05	0.06	61000	1.0	9.8	0.23	< 0.09	53000	0.02	36	170	93	71000	1400	18
58: E12-205 ARD-54	10-Nov-12	< 0.05	0.18	70000	3.2	110	1.0	< 0.09	26000	0.15	4.1	120	4.7	21000	6100	9
59: E12-294 ARD-55	10-Nov-12	< 0.05	< 0.01	62000	1.6	28	0.44	< 0.09	5400	< 0.02	38	200	44	100000	2000	63
60: E12-205 ARD-56	10-Nov-12	< 0.05	0.30	70000	0.8	270	1.2	< 0.09	13000	0.19	2.8	120	20	17000	15000	10
61: CL10-01 ARD-57	10-Nov-12	< 0.05	0.03	72000	3.3	15	0.52	< 0.09	60000	< 0.02	38	210	130	83000	1300	27
62: CL10-01 ARD-58	10-Nov-12	< 0.05	0.09	66000	2.1	210	1.3	< 0.09	49000	0.12	24	370	85	46000	5100	13
63: CL10-02A ARD-59	10-Nov-12	< 0.05	0.37	64000	0.7	420	1.3	0.17	12000	0.21	21	91	270	16000	21000	5
64: E12-213 ARD-60	10-Nov-12	< 0.05	0.33	62000	1.2	500	1.4	< 0.09	8900	0.18	4.3	95	16	25000	25000	5

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Project : IAMGold Cote Lake

Monday, December 17, 2012

Knight Piesold Limited
Attn : Steve Aiken

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165

Date Rec. : 13 November 2012
LR Report: **CA10185-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Mg µg/g	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	S µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g
3: Analysis Approval Date	12-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	14-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12
4: Analysis Approval Time	09:45	08:41	08:41	08:41	08:41	15:36	08:42	08:42	08:42	08:42	09:52	08:42	08:42	08:42	08:42	08:42
5: E10-036 ARD-1	2500	71	0.8	2.4	2.2	630	< 0.8	0.9	2.5	110	770	0.08	1.3	3	20	11
6: E10-036 ARD-2	2100	75	0.9	3.6	1.8	480	< 0.8	< 0.7	2.2	44	1100	0.09	1.1	9	6.9	16
7: E10-036 ARD-3	800	130	1.2	1.6	3.2	1400	< 0.8	< 0.7	2.6	120	1700	0.12	1.5	13	71	5.5
8: E10-045 ARD-4	380	110	1.4	1.7	1.0	440	< 0.8	< 0.7	2.4	24	790	0.02	0.87	< 1	18	3.1
9: E11-066 ARD-5	6500	140	2.0	7.0	1.2	1100	< 0.8	1.1	3.4	37	1900	0.02	1.7	20	31	17
10: E11-066 ARD-6	13000	280	0.9	21	2.3	1600	< 0.8	< 0.7	2.9	160	2000	0.12	1.1	40	15	28
11: E11-082 ARD-7	1800	72	0.9	2.5	1.2	310	< 0.8	< 0.7	1.8	70	1000	0.06	1.5	4	10	5.6
12: E11-082 ARD-8	19000	490	0.7	29	4.3	1200	< 0.8	< 0.7	2.1	230	3800	0.26	1.1	71	26	52
13: E11-082 ARD-9	8100	300	0.5	8.4	3.2	650	< 0.8	< 0.7	0.9	290	1900	0.12	1.0	48	7.0	40
14: E11-087 ARD-10	3600	230	1.2	7.6	2.6	1200	< 0.8	< 0.7	1.8	73	1800	0.13	3.3	22	24	18
15: E11-087 ARD-11	4200	180	1.0	7.2	1.8	550	< 0.8	1.0	1.3	84	1800	0.06	1.8	14	25	17
16: E12-217 ARD-12	25000	720	0.5	52	1.1	1200	< 0.8	< 0.7	3.9	160	4200	0.03	0.38	130	18	50
17: E11-096 ARD-13	13000	400	0.5	23	1.5	710	< 0.8	< 0.7	3.6	130	3000	0.06	1.3	62	22	24
18: E11-096 ARD-14	2600	99	0.5	3.8	6.3	1900	< 0.8	0.7	5.6	59	2100	0.03	1.6	14	16	17
19: E11-096 ARD-15	29000	1300	0.3	54	18	1700	< 0.8	1.4	1.6	160	7400	0.26	1.0	240	27	120
20: E11-098 ARD-16	1400	110	1.0	2.4	5.2	480	< 0.8	0.9	1.9	81	1600	0.07	1.0	5	18	16
21: E11-098 ARD-17	21000	450	21	14	5.5	990	< 0.8	< 0.7	5.5	82	2700	0.31	2.0	55	45	40
22: E11-098 ARD-18	22000	440	2.2	41	3.1	1500	< 0.8	0.8	6.5	250	3400	0.21	0.25	110	29	42
23: E11-099 ARD-19	1700	40	1.1	2.4	1.1	360	< 0.8	< 0.7	2.6	50	750	0.10	0.94	2	9.9	9.1
24: E11-099 ARD-20	11000	140	0.5	12	1.7	1300	< 0.8	< 0.7	3.0	65	820	0.04	1.1	23	13	20
25: E11-114 ARD-21	3600	180	0.9	7.7	3.6	590	< 0.8	< 0.7	2.5	110	1700	0.03	1.6	22	25	19

OnLine LIMS

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Project : IAMGold Cote Lake
LR Report : CA10185-NOV12

Sample ID	Mg µg/g	Mn µg/g	Mo µg/g	Ni µg/g	Pb µg/g	S µg/g	Sb µg/g	Se µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g
26: E11-114 ARD-22	25000	340	0.3	29	1.9	830	< 0.8	< 0.7	7.7	140	5700	0.17	1.3	73	34	39
27: E10-038 ARD-23	3500	55	0.9	2.5	2.1	200	< 0.8	< 0.7	1.9	74	750	0.13	1.8	4	21	8.7
28: E11-062 ARD-24	4000	140	0.8	4.9	1.2	680	< 0.8	< 0.7	1.9	69	1400	0.05	0.72	25	15	11
29: E10-30 ARD-25	4600	130	0.4	5.9	2.8	670	< 0.8	< 0.7	2.2	75	2200	0.08	1.6	17	30	13
30: E10-028 ARD-26	5000	130	0.4	7.9	2.6	330	< 0.8	< 0.7	2.2	87	1500	0.04	1.9	15	28	12
31: E11-049 ARD-27	8500	250	0.7	9.6	2.1	330	< 0.8	0.9	4.1	92	1700	0.05	1.5	22	38	24
32: E11-049 ARD-28	2400	180	5.9	4.3	4.0	6500	< 0.8	< 0.7	3.1	31	900	0.17	1.6	15	6.1	22
33: E11-061 ARD-29	10000	290	0.5	18	0.91	170	< 0.8	< 0.7	3.6	40	2200	0.04	0.51	34	25	30
34: E12-206 ARD-30	25000	420	0.2	30	0.56	790	< 0.8	< 0.7	4.5	210	4200	0.16	0.094	120	18	43
35: E12-179 ARD-31	8500	200	0.8	11	21	1100	< 0.8	< 0.7	2.5	46	1500	0.08	1.5	19	29	120
36: E11-048 ARD-32	2600	75	0.8	3.9	1.8	880	< 0.8	< 0.7	2.4	50	1300	0.06	1.6	6	23	15
37: E11-048 ARD-33	3100	250	3.9	6.5	1.0	2100	< 0.8	< 0.7	1.5	28	590	< 0.02	0.68	8	27	10
38: E11-075 ARD-34	4300	280	0.8	6.5	1.9	460	< 0.8	0.8	2.1	120	2300	0.05	1.6	28	23	18
39: E11-075 ARD-35	30000	1400	0.4	44	2.2	2400	< 0.8	0.9	1.0	160	8200	0.28	0.45	250	25	120
40: E11-071 ARD-36	19000	330	0.9	27	1.6	3300	< 0.8	< 0.7	3.6	110	2800	0.07	1.5	68	21	37
41: E11-071 ARD-37	31000	840	0.8	40	3.3	1500	< 0.8	< 0.7	5.1	330	5300	0.17	0.86	140	31	77
42: E11-078 ARD-38	5600	68	3.8	5.9	1.0	510	< 0.8	< 0.7	0.8	23	910	0.02	0.88	14	9.9	14
43: E11-179 ARD-39	4100	190	1.1	7.2	0.75	120	< 0.8	< 0.7	1.4	20	1500	< 0.02	0.50	17	30	11
44: E11-120 ARD-40	2600	140	1.0	2.9	2.0	1000	< 0.8	0.9	8.1	66	1300	0.10	1.9	1	16	10
45: E11-120 ARD-41	11000	220	0.8	9.1	1.2	1600	< 0.8	< 0.7	4.3	58	2100	0.03	1.8	19	40	19
46: E11-120 ARD-42	30000	730	3.1	72	0.99	1900	< 0.8	< 0.7	< 0.5	78	3400	0.11	0.061	170	13	76
47: E11-122 ARD-43	2500	60	1.0	3.4	1.7	600	< 0.8	< 0.7	2.9	69	1100	0.09	1.7	4	20	9.9
48: E11-122 ARD-44	7400	110	2.6	8.1	2.2	1300	< 0.8	0.8	3.3	56	1100	0.22	1.8	27	22	11
49: E11-140 ARD-45	2800	68	0.9	4.1	2.3	900	< 0.8	< 0.7	3.4	50	1600	0.07	1.7	5	24	12
50: E11-145 ARD-46	7800	250	0.9	20	3.1	480	< 0.8	< 0.7	1.4	130	2900	0.15	1.4	35	15	24
51: E12-198 ARD-47	49000	1100	0.2	200	1.9	2200	< 0.8	< 0.7	< 0.5	150	4900	0.09	0.32	180	13	81
52: E11-129 ARD-48	2800	94	1.0	3.7	1.9	700	< 0.8	< 0.7	1.3	40	990	0.08	1.6	10	12	14
53: E11-140 ARD-49	5100	210	0.7	6.9	1.7	450	< 0.8	0.8	3.0	82	2300	0.08	1.3	15	20	13
54: E11-144 ARD-50	20000	1300	0.8	25	24	1900	< 0.8	< 0.7	1.2	260	8900	0.13	1.1	210	20	120
55: E11-141 ARD-51	14000	1000	0.5	9.8	1.5	1400	< 0.8	< 0.7	2.4	100	7300	0.02	0.86	42	38	49
56: E11-145 ARD-52	7500	370	0.4	8.5	5.7	580	< 0.8	< 0.7	< 0.5	410	2300	0.14	1.0	52	6.8	41
57: E12-200 ARD-53	36000	890	0.1	120	0.74	1700	< 0.8	0.8	1.1	81	3500	< 0.02	0.069	170	13	96
58: E12-205 ARD-54	5400	260	1.0	9.6	3.1	500	< 0.8	< 0.7	2.2	170	3000	0.04	0.90	23	22	24
59: E12-294 ARD-55	50000	800	0.2	110	1.1	1500	< 0.8	< 0.7	5.7	24	4600	0.03	0.28	190	14	94
60: E12-205 ARD-56	2800	140	1.0	5.2	3.4	750	< 0.8	< 0.7	3.0	97	2000	0.11	1.7	6	28	16
61: CL10-01 ARD-57	46000	1000	0.2	120	1.3	2400	< 0.8	< 0.7	0.5	150	5300	< 0.02	0.17	180	15	87
62: CL10-01 ARD-58	38000	640	0.2	86	5.6	1200	< 0.8	< 0.7	< 0.5	450	3600	0.07	0.83	110	11	64
63: CL10-02A ARD-59	2400	130	1.4	6.0	3.7	970	< 0.8	< 0.7	1.4	60	1100	0.10	3.1	7	19	13
64: E12-213 ARD-60	1600	170	0.5	2.5	2.6	1900	< 0.8	1.1	4.8	56	1600	0.15	2.0	2	34	14

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27-November-2013

Trelawney Mining and Exploration Inc.
Attn : Steve Norregaard

130 King St. W. Suite 2810
Toronto, ON
N5X 1A6, Canada

Phone: 416-363-8567
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Date Rec. : 14 June 2012
LR Report: **CA11085-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-61-1 CL-Geochem	6: E11-61-2 CL-Geochem	7: E11-81-1 CL-Geochem	8: E11-81-2 CL-Geochem	9: E11-81-3 CL-Geochem	10: E11-81-4 CL-Geochem	11: E11-54-1 33.87-36.14 m CL-Geochem	12: E11-54-2 CL-Geochem	13: E11-54-3 CL-Geochem	14: E11-54-4 CL-Geochem	15: E11-59-1 CL-Geochem	16: E11-59-2 CL-Geochem
Sample Date & Time			08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Mercury [µg/g]	26-Jun-12	12:31	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Silver [µg/g]	29-Jun-12	10:59	0.06	0.19	0.20	0.83	1.3	0.83	0.35	0.23	0.44	0.08	0.34	0.35
Aluminum [µg/g]	28-Jun-12	14:44	81000	71000	73000	60000	55000	60000	63000	63000	63000	77000	61000	65000
Arsenic [µg/g]	29-Jun-12	10:59	1.1	0.5	0.5	0.8	3.0	2.5	3.6	1.7	1.1	< 0.5	2.3	1.5
Barium [µg/g]	29-Jun-12	10:59	80	210	400	280	87	400	49	88	110	220	440	550
Beryllium [µg/g]	29-Jun-12	10:59	0.76	0.63	0.72	1.6	0.98	1.4	0.88	0.86	1.0	1.5	1.2	0.93
Bismuth [µg/g]	29-Jun-12	10:59	< 0.09	0.09	< 0.09	0.41	1.6	0.62	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09
Calcium [µg/g]	28-Jun-12	14:44	58000	34000	27000	7400	10000	10000	26000	24000	9500	16000	7800	40000
Cadmium [µg/g]	29-Jun-12	10:59	< 0.02	0.09	0.16	0.29	0.44	0.22	0.15	0.19	0.33	< 0.02	0.29	0.28
Cobalt [µg/g]	29-Jun-12	10:59	20	14	5.4	4.8	2.6	4.7	6.3	6.0	1.7	1.1	2.5	39
Chromium [µg/g]	29-Jun-12	10:59	150	120	86	160	110	130	150	130	110	190	190	55
Copper [µg/g]	29-Jun-12	10:59	120	77	7.1	580	570	730	39	20	26	30	19	110
Iron [µg/g]	28-Jun-12	14:44	72000	51000	19000	20000	17000	18000	29000	27000	7300	4500	17000	96000
Potassium [µg/g]	28-Jun-12	14:44	8500	18000	21000	13000	9800	14000	3500	5500	8100	22000	25000	18000
Lithium [µg/g]	29-Jun-12	11:00	16	23	8	7	11	4	13	13	4	3	4	9
Magnesium [µg/g]	28-Jun-12	14:44	32000	25000	4800	2900	6100	2100	13000	13000	2100	1500	2600	20000
Manganese [µg/g]	29-Jun-12	11:00	660	360	190	86	150	100	290	240	65	65	120	1100
Molybdenum [µg/g]	29-Jun-12	11:00	1.3	1.8	0.4	0.9	2.2	1.3	1.4	1.2	1.0	0.8	1.1	1.0
Nickel [µg/g]	29-Jun-12	11:00	54	33	7.7	4.3	7.0	3.8	16	13	3.7	2.4	4.3	27
Lead [µg/g]	29-Jun-12	11:00	1.3	2.3	1.5	3.1	7.2	2.3	2.6	2.1	1.4	0.67	2.4	10

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LR Report : **CA11085-JUN12**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-61-1 CL-Geochem	6: E11-61-2 CL-Geochem	7: E11-81-1 CL-Geochem	8: E11-81-2 CL-Geochem	9: E11-81-3 CL-Geochem	10: E11-81-4 CL-Geochem	11: E11-54-1 33.87-36.14 m CL-Geochem	12: E11-54-2 CL-Geochem	13: E11-54-3 CL-Geochem	14: E11-54-4 CL-Geochem	15: E11-59-1 CL-Geochem	16: E11-59-2 CL-Geochem
Sulphur [µg/g]	28-Jun-12	14:44	1300	2100	1100	1900	2300	2700	780	670	380	330	170	2000
Antimony [µg/g]	29-Jun-12	11:00	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	29-Jun-12	11:00	< 0.7	< 0.7	< 0.7	< 0.7	0.8	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	29-Jun-12	11:00	8.3	5.9	1.2	8.3	6.1	9.1	6.9	3.7	1.7	8.0	2.2	1.7
Strontium [µg/g]	29-Jun-12	11:00	190	180	120	66	48	86	92	130	83	48	49	290
Titanium [µg/g]	28-Jun-12	14:44	5200	5000	2100	1500	980	1600	4300	2700	880	1800	1400	10000
Thallium [µg/g]	29-Jun-12	11:00	0.10	0.27	0.25	0.12	0.11	0.09	< 0.02	0.03	0.07	0.16	0.08	0.31
Uranium [µg/g]	29-Jun-12	11:00	0.29	1.5	0.54	1.9	1.8	1.8	1.7	1.1	1.2	1.2	2.7	1.2
Vanadium [µg/g]	29-Jun-12	11:00	130	59	35	< 1	20	1	32	29	2	2	< 1	200
Yttrium [µg/g]	29-Jun-12	11:00	26	27	4.2	16	10.0	14	39	25	13	31	32	19
Zinc [µg/g]	29-Jun-12	11:00	53	43	9.0	19	36	10	30	25	8.9	3.1	16	110

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Date Rec. : 14 June 2012
LR Report: **CA11085-JUN12**
Reference: PO# TRR 04509

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CERTIFICATE OF ANALYSIS
Final Report

Analysis	16: E11-59-2 CL-Geochem	17: E11-95-1 CL-Geochem	18: E11-95-2 CL-Geochem	19: E11-97-1 CL-Geochem	20: E11-97-2 CL-Geochem	21: E11-138-1 CL-Geochem	22: E11-138-2 CL-Geochem	23: E11-138-3 CL-Geochem	24: E11-77-1 CL-Geochem	25: E11-77-2 CL-Geochem	26: E10-38-1 CL-Geochem	27: E10-38-2 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Mercury [µg/g]	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Silver [µg/g]	0.35	0.19	0.41	0.17	0.43	0.22	0.32	0.36	0.32	0.30	0.10	0.14
Aluminum [µg/g]	65000	68000	66000	76000	63000	54000	64000	51000	67000	66000	80000	49000
Arsenic [µg/g]	1.5	1.7	4.5	1.9	< 0.5	3.5	3.3	4.5	0.5	1.1	0.8	1.1
Barium [µg/g]	550	87	280	240	490	230	63	120	120	46	250	210
Beryllium [µg/g]	0.93	0.74	0.75	0.74	1.5	0.85	1.5	1.3	1.2	0.89	0.82	1.1
Bismuth [µg/g]	< 0.09	0.12	0.11	< 0.09	< 0.09	0.33	0.21	0.43	< 0.09	0.10	< 0.09	< 0.09
Calcium [µg/g]	40000	50000	15000	39000	11000	19000	52000	41000	19000	31000	63000	66000
Cadmium [µg/g]	0.28	0.13	2.3	0.16	0.32	0.20	0.27	0.23	0.25	0.19	0.03	0.08
Cobalt [µg/g]	39	19	3.5	16	2.6	1.5	24	26	3.2	6.2	16	44
Chromium [µg/g]	55	100	160	140	130	190	74	350	180	140	120	330
Copper [µg/g]	110	82	190	12	23	110	77	490	27	100	15	120
Iron [µg/g]	96000	69000	16000	44000	14000	5200	54000	35000	15000	27000	60000	76000
Potassium [µg/g]	18000	6000	14000	11000	22000	15000	460	3500	5800	4400	9500	9000
Lithium [µg/g]	9	13	7	16	8	2	33	27	10	17	18	17
Magnesium [µg/g]	20000	20000	4300	17000	2400	440	28000	30000	4100	11000	23000	38000
Manganese [µg/g]	1100	1100	120	580	160	120	560	510	200	340	720	1100
Molybdenum [µg/g]	1.0	0.9	1.0	1.3	2.1	4.6	0.6	1.0	1.5	0.6	1.2	0.5
Nickel [µg/g]	27	27	9.8	46	4.2	2.4	35	159	7.0	15	39	97
Lead [µg/g]	10	2.1	50	3.7	2.6	3.0	2.3	2.8	3.0	1.4	1.4	1.7

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Analysis	16: E11-59-2 CL-Geochem	17: E11-95-1 CL-Geochem	18: E11-95-2 CL-Geochem	19: E11-97-1 CL-Geochem	20: E11-97-2 CL-Geochem	21: E11-138-1 CL-Geochem	22: E11-138-2 CL-Geochem	23: E11-138-3 CL-Geochem	24: E11-77-1 CL-Geochem	25: E11-77-2 CL-Geochem	26: E10-38-1 CL-Geochem	27: E10-38-2 CL-Geochem
Sulphur [µg/g]	2000	1600	810	620	290	1400	2700	7600	470	780	1100	3400
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	1.7	5.7	1.4	2.6	3.0	1.3	0.8	1.4	5.2	5.8	4.1	< 0.5
Strontium [µg/g]	290	180	79	170	61	95	320	140	110	95	260	210
Titanium [µg/g]	10000	9000	1000	3600	1200	610	2500	1300	1900	3400	4900	5100
Thallium [µg/g]	0.31	0.04	0.18	0.10	0.13	0.12	< 0.02	< 0.02	0.04	0.04	0.12	0.12
Uranium [µg/g]	1.2	0.85	1.7	0.84	4.2	0.95	1.8	1.1	1.1	1.1	0.18	0.46
Vanadium [µg/g]	200	70	13	70	3	6	110	53	12	45	100	190
Yttrium [µg/g]	19	35	9.7	23	33	12	18	20	22	28	35	13
Zinc [µg/g]	110	55	590	51	15	7.6	65	76	19	29	44	71

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	**28: E10-38-3 CL-Geochem**	**29: E11-91-1 CL-Geochem**	**30: E11-91-2 CL-Geochem**	**31: E11-91-3 CL-Geochem**	**32: E11-72-1 CL-Geochem**	**33: E10-31-1 CL-Geochem**	**34: E10-31-2 CL-Geochem**	**35: E10-31-3 CL-Geochem**	**36: E10-31-4 CL-Geochem**	**37: E10-23-1 CL-Geochem**	**38: E10-46-1 CL-Geochem**	**39: E10-46-2 CL-Geochem**	**40: E10-13-1 CL-Geochem**
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Mercury [µg/g]	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Silver [µg/g]	0.10	0.44	0.36	1.0	0.44	0.34	0.56	0.36	0.60	0.39	1.1	0.66	0.12
Aluminum [µg/g]	36000	62000	65000	61000	72000	60000	58000	62000	57000	59000	60000	85000	52000
Arsenic [µg/g]	2.4	2.3	3.2	1.5	4.1	1.2	2.9	1.3	2.3	1.5	0.6	1.4	7.2
Barium [µg/g]	57	190	360	82	150	200	180	79	90	180	520	82	120
Beryllium [µg/g]	0.32	1.4	0.56	1.2	1.3	1.2	1.2	1.0	0.99	1.2	1.4	0.86	0.71
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	0.11	< 0.09	0.31	0.14	< 0.09	0.10	< 0.09	0.31	< 0.09
Calcium [µg/g]	67000	18000	55000	12000	14000	15000	17000	34000	11000	17000	9600	28000	54000
Cadmium [µg/g]	0.08	0.26	0.29	0.47	0.46	0.22	0.50	0.25	0.33	0.24	0.30	0.30	0.06
Cobalt [µg/g]	45	4.9	45	1.9	1.5	3.3	3.3	17	3.8	2.5	4.0	4.2	31
Chromium [µg/g]	220	170	59	180	100	150	150	160	96	180	190	45	310
Copper [µg/g]	100	42	120	9.7	47	14	110	58	98	150	21	28	21
Iron [µg/g]	83000	18000	94000	7100	7500	20000	12000	40000	15000	8500	25000	6700	70000
Potassium [µg/g]	2900	6400	13000	7900	13000	6100	16000	2700	9400	9600	23000	3900	8100
Lithium [µg/g]	19	6	11	6	7	5	6	29	10	5	4	< 2	38
Magnesium [µg/g]	30000	5700	30000	2200	1500	2500	4000	22000	5600	2100	1500	1100	36000
Manganese [µg/g]	1200	210	1200	74	110	150	120	410	130	100	200	110	870
Molybdenum [µg/g]	0.3	1.6	0.7	1.0	1.1	1.5	1.5	1.3	0.9	1.3	0.9	0.4	0.4
Nickel [µg/g]	120	10	60	4.2	2.7	6.2	7.8	39	5.6	3.8	2.5	2.1	135
Lead [µg/g]	2.0	4.0	7.6	2.3	8.5	1.7	15	2.4	2.5	2.8	3.0	1.0	1.6

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LR Report : **CA11085-JUN12**

Analysis	**28: E10-38-3 CL-Geochem**	**29: E11-91-1 CL-Geochem**	**30: E11-91-2 CL-Geochem**	**31: E11-91-3 CL-Geochem**	**32: E11-72-1 CL-Geochem**	**33: E10-31-1 CL-Geochem**	**34: E10-31-2 CL-Geochem**	**35: E10-31-3 CL-Geochem**	**36: E10-31-4 CL-Geochem**	**37: E10-23-1 CL-Geochem**	**38: E10-46-1 CL-Geochem**	**39: E10-46-2 CL-Geochem**	**40: E10-13-1 CL-Geochem**
Sulphur [µg/g]	2100	1300	2300	390	1100	430	2000	2100	1500	890	180	1700	1300
Antimony [µg/g]	1.5	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	0.9	< 0.7	< 0.7	< 0.7
Tin [µg/g]	< 0.5	2.0	1.3	2.5	3.9	2.3	2.7	< 0.5	1.8	2.3	3.0	5.6	1.4
Strontium [µg/g]	180	130	140	59	110	110	110	200	42	69	67	92	270
Titanium [µg/g]	5600	2000	6900	1000	1100	1500	880	3300	1600	680	1800	2200	6000
Thallium [µg/g]	0.03	0.07	0.26	0.09	0.10	0.05	0.17	0.03	0.07	0.10	0.12	0.03	0.13
Uranium [µg/g]	0.088	1.7	0.88	1.9	1.9	1.3	1.7	1.5	1.7	1.7	1.5	2.1	0.32
Vanadium [µg/g]	210	19	220	< 1	4	2	5	78	13	< 1	7	7	110
Yttrium [µg/g]	13	37	27	16	20	26	15	19	11	25	38	46	15
Zinc [µg/g]	82	14	84	8.1	45	13	36	42	13	15	17	5.1	51

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	**40: E10-13-1 CL-Geochem**	**41: E10-13-2 CL-Geochem**	**42: E10-13-3 CL-Geochem**	**43: E10-13-4 CL-Geochem**	**44: CL10-3-1 CL-Geochem**	**45: E10-42-1 CL-Geochem**	**46: E10-42-2 CL-Geochem**	**47: E10-42-3 CL-Geochem**	**48: E11-66-1 CL-Geochem**	**49: E11-54-1 212.3-215.5m CL-Geochem**	**50: E11-51-1 CL-Geochem**
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Mercury [µg/g]	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Silver [µg/g]	0.12	0.32	0.41	0.36	0.82	0.32	0.46	0.54	0.87	0.39	0.34
Aluminum [µg/g]	52000	53000	64000	53000	59000	64000	67000	66000	59000	47000	62000
Arsenic [µg/g]	7.2	1.2	< 0.5	1.5	48	23	19	2.6	2.8	2.0	2.7
Barium [µg/g]	120	250	420	79	360	460	540	220	53	92	120
Beryllium [µg/g]	0.71	0.88	1.2	1.0	1.2	0.87	2.3	1.2	1.1	1.2	1.1
Bismuth [µg/g]	< 0.09	< 0.09	< 0.09	< 0.09	1.7	0.13	0.23	0.29	0.25	0.33	< 0.09
Calcium [µg/g]	54000	50000	17000	17000	18000	15000	20000	14000	18000	3600	19000
Cadmium [µg/g]	0.06	0.19	0.25	0.20	0.19	0.28	0.29	0.28	0.10	0.16	0.17
Cobalt [µg/g]	31	25	4.1	6.8	27	4.5	18	4.4	10	7.2	5.7
Chromium [µg/g]	310	180	140	140	140	150	150	180	97	120	110
Copper [µg/g]	21	4.3	28	30	1340	93	970	170	200	300	200
Iron [µg/g]	70000	59000	15000	22000	50000	20000	36000	15000	33000	16000	25000
Potassium [µg/g]	8100	6200	15000	5500	30000	15000	16000	12000	3600	14000	6000
Lithium [µg/g]	38	36	6	10	9	6	13	14	13	8	11
Magnesium [µg/g]	36000	29000	3500	9200	5500	3500	8300	6300	12000	5300	11000
Manganese [µg/g]	870	470	110	170	160	120	340	110	690	140	250
Molybdenum [µg/g]	0.4	0.2	0.7	1.9	1.2	0.8	1.7	1.4	0.6	0.9	1.0
Nickel [µg/g]	135	49	6.5	10	8.1	7.3	34	9.0	15	6.7	13
Lead [µg/g]	1.6	0.99	1.3	3.0	12	4.3	3.5	2.3	0.84	0.86	2.1

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LR Report : **CA11085-JUN12**

Analysis	40: E10-13-1 CL-Geochem	41: E10-13-2 CL-Geochem	42: E10-13-3 CL-Geochem	43: E10-13-4 CL-Geochem	44: CL10-3-1 CL-Geochem	45: E10-42-1 CL-Geochem	46: E10-42-2 CL-Geochem	47: E10-42-3 CL-Geochem	48: E11-66-1 CL-Geochem	49: E11-54-1 212.3-215.5m CL-Geochem	50: E11-51-1 CL-Geochem
Sulphur [µg/g]	1300	1500	1200	1700	36000	740	4400	960	350	350	910
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	6.9	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	1.4	0.7	1.1	1.8	9.5	1.6	4.1	4.5	5.1	3.0	4.5
Strontium [µg/g]	270	170	150	62	44	100	190	120	53	34	97
Titanium [µg/g]	6000	5400	1500	1500	1300	1300	2500	1500	3700	1200	2400
Thallium [µg/g]	0.13	0.08	0.15	0.06	0.33	0.24	0.20	0.15	0.05	0.10	0.05
Uranium [µg/g]	0.32	1.0	1.1	1.6	1.6	1.6	1.5	1.6	0.59	1.1	1.8
Vanadium [µg/g]	110	130	12	21	13	12	35	19	40	13	27
Yttrium [µg/g]	15	21	19	19	27	11	27	11	37	29	32
Zinc [µg/g]	51	65	8.5	17	17	40	78	27	31	21	28

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CERTIFICATE OF ANALYSIS

Final Report

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Sample Date & Time			08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Mercury [µg/g]	22-Jun-12	19:10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Silver [µg/g]	27-Jun-12	11:18	0.09	0.12	0.15	0.09	0.21	0.23	0.04	0.81	0.25	0.05	0.12	0.06
Aluminum [µg/g]	26-Jun-12	09:52	82000	70000	65000	61000	71000	61000	63000	63000	69000	58000	63000	78000
Arsenic [µg/g]	27-Jun-12	11:19	0.5	0.7	< 0.5	0.9	1.6	1.3	4.4	1.7	4.8	2.2	1.1	7.7
Barium [µg/g]	27-Jun-12	11:19	130	190	680	140	150	210	660	83	120	300	500	99
Beryllium [µg/g]	27-Jun-12	11:19	1.1	0.70	0.93	1.0	0.92	1.5	2.1	1.1	0.84	1.3	1.2	0.60
Bismuth [µg/g]	27-Jun-12	11:19	0.52	0.13	< 0.09	< 0.09	< 0.09	< 0.09	0.10	0.14	0.28	0.15	< 0.09	0.11
Calcium [µg/g]	26-Jun-12	09:54	25000	33000	13000	28000	40000	48000	56000	16000	58000	24000	14000	58000
Cadmium [µg/g]	27-Jun-12	11:19	0.14	0.09	0.31	0.20	0.23	0.16	0.15	0.19	0.04	0.19	0.25	0.07
Cobalt [µg/g]	27-Jun-12	11:19	3.0	18	1.9	4.3	11	21	37	3.4	14	5.4	2.4	30
Chromium [µg/g]	27-Jun-12	11:19	85	140	100	98	110	180	280	97	35	130	100	110
Copper [µg/g]	27-Jun-12	11:19	37	74	78	60	120	170	93	20	680	210	62	69
Iron [µg/g]	26-Jun-12	09:54	11000	50000	12000	15000	36000	51000	67000	15000	60000	18000	11000	83000
Potassium [µg/g]	26-Jun-12	09:54	16000	17000	14000	9600	15000	11000	25000	4500	5400	13000	17000	7200
Lithium [µg/g]	27-Jun-12	11:19	9	22	6	9	17	13	10	8	17	8	3	13
Magnesium [µg/g]	26-Jun-12	09:54	4100	24000	2200	7800	15000	29000	43000	5100	20000	7400	2000	30000
Manganese [µg/g]	27-Jun-12	11:19	200	350	120	200	350	620	970	140	790	280	160	900
Molybdenum [µg/g]	27-Jun-12	11:19	11	1.2	1.0	0.7	0.7	0.5	0.3	0.7	0.7	0.9	0.8	0.7
Nickel [µg/g]	27-Jun-12	11:19	5.5	28	4.8	6.8	15	46	60	6.5	15	8.4	4.1	38
Lead [µg/g]	27-Jun-12	11:19	2.3	2.0	6.5	3.7	45	3.0	8.3	1.2	1.6	2.8	4.2	1.7
Sulphur [µg/g]	26-Jun-12	09:54	1300	3100	440	1000	2500	3100	3700	670	3700	3100	570	2000

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LR Report : **CA11091-JUN12**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-112-1 CL-Geochem	6: E11-112-2 CL-Geochem	7: E11-112-3 CL-Geochem	8: E11-112-4 CL-Geochem	9: E11-053-1 CL-Geochem	10: E11-053-2 CL-Geochem	11: E11-053-3 CL-Geochem	12: E11-052-1 CL-Geochem	13: E11-052-2 CL-Geochem	14: E11-052-3 CL-Geochem	15: E11-110-1 CL-Geochem	16: E11-110-2 CL-Geochem
Antimony [µg/g]	27-Jun-12	11:19	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium [µg/g]	27-Jun-12	11:19	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	1.1	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	27-Jun-12	11:19	5.9	5.2	1.6	2.7	8.8	4.2	1.4	3.1	15	4.3	2.0	2.6
Strontium [µg/g]	27-Jun-12	11:19	110	170	130	110	99	230	530	54	71	110	180	220
Titanium [µg/g]	26-Jun-12	09:54	1700	4100	1000	1700	5500	4900	5000	1400	13000	1800	1500	8800
Thallium [µg/g]	27-Jun-12	11:19	0.16	0.31	0.14	0.12	0.50	0.24	0.22	0.05	0.05	0.10	0.13	0.09
Uranium [µg/g]	27-Jun-12	11:19	1.3	1.3	2.2	1.5	1.6	1.2	1.2	1.2	1.4	1.1	1.5	0.40
Vanadium [µg/g]	27-Jun-12	11:19	16	60	5	14	62	78	120	24	52	25	4	140
Yttrium [µg/g]	27-Jun-12	11:19	25	26	9.1	18	39	28	17	18	38	19	18	26
Zinc [µg/g]	27-Jun-12	11:19	18	48	83	34	87	64	130	17	42	37	44	61

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Wednesday, June 27, 2012

Trelawney Mining and Exploration Inc.
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Toronto, ON
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Phone: 416-363-8567
Fax:416-216-8535

Date Rec. : 14 June 2012
LR Report: **CA11091-JUN12**
Reference: PO# TRR 04509

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CERTIFICATE OF ANALYSIS
Final Report

Analysis	**17: E11-062-1 CL-Geochem**	**18: E11-062-2 CL-Geochem**	**19: E11-062-3 CL-Geochem**	**20: E11-062-4 CL-Geochem**	**21: E11-111-1 CL-Geochem**	**22: E11-100-1 CL-Geochem**	**23: E11-100-2 CL-Geochem**	**24: E11-100-3 CL-Geochem**	**25: E11-107-1 CL-Geochem**	**26: E11-107-2 CL-Geochem**	**27: Bulk Sample-1 CL-Geochem**	**28: Bulk Sample-2 CL-Geochem**
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Mercury [µg/g]	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Silver [µg/g]	0.14	0.13	0.10	0.10	0.06	0.11	0.09	0.05	0.09	0.07	0.08	0.17
Aluminum [µg/g]	60000	82000	69000	66000	94000	56000	77000	77000	77000	69000	62000	60000
Arsenic [µg/g]	1.6	1.5	3.7	1.2	1.4	5.3	1.0	6.5	< 0.5	< 0.5	2.5	1.8
Barium [µg/g]	400	240	670	510	75	150	89	170	130	120	110	85
Beryllium [µg/g]	1.3	0.96	1.7	1.2	0.97	0.86	1.1	0.73	1.0	0.95	0.93	1.3
Bismuth [µg/g]	0.16	< 0.09	< 0.09	< 0.09	0.11	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	0.23	< 0.09
Calcium [µg/g]	12000	49000	47000	17000	53000	12000	51000	38000	24000	16000	4900	3700
Cadmium [µg/g]	0.28	0.02	0.30	0.22	< 0.02	0.20	0.10	0.14	0.07	0.20	0.23	0.26
Cobalt [µg/g]	2.6	11	27	4.0	15	1.9	12	15	4.1	4.7	2.1	1.4
Chromium [µg/g]	100	85	94	100	87	100	110	120	99	130	120	120
Copper [µg/g]	180	99	49	47	16	88	31	12	53	13	100	58
Iron [µg/g]	14000	61000	61000	18000	64000	10000	48000	43000	15000	26000	9400	5700
Potassium [µg/g]	15000	15000	25000	12000	6700	16000	8400	12000	19000	9300	8400	6700
Lithium [µg/g]	4	17	28	8	19	4	21	15	10	12	5	3
Magnesium [µg/g]	2000	20000	29000	3300	23000	900	19000	18000	6600	12000	2600	1300
Manganese [µg/g]	150	510	680	220	560	120	550	480	170	230	74	68
Molybdenum [µg/g]	0.8	0.5	0.3	1.0	0.5	1.1	0.6	0.8	1.5	0.8	1.1	7.5
Nickel [µg/g]	4.2	25	27	7.5	28	2.6	28	49	13	14	4.3	3.0
Lead [µg/g]	3.1	2.0	2.1	3.4	1.6	6.2	2.3	1.9	2.0	1.4	2.1	2.0
Sulphur [µg/g]	540	1600	3400	450	1200	3700	1500	640	810	420	370	200
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8

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LR Report : **CA11091-JUN12**

Analysis	**17: E11-062-1 CL-Geochem**	**18: E11-062-2 CL-Geochem**	**19: E11-062-3 CL-Geochem**	**20: E11-062-4 CL-Geochem**	**21: E11-111-1 CL-Geochem**	**22: E11-100-1 CL-Geochem**	**23: E11-100-2 CL-Geochem**	**24: E11-100-3 CL-Geochem**	**25: E11-107-1 CL-Geochem**	**26: E11-107-2 CL-Geochem**	**27: Bulk Sample-1 CL-Geochem**	**28: Bulk Sample-2 CL-Geochem**
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	1.0	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	1.5	6.3	1.6	1.5	9.5	4.8	7.0	1.9	7.6	5.1	2.7	1.8
Strontium [µg/g]	84	160	240	100	220	57	150	130	110	100	54	49
Titanium [µg/g]	1500	6900	5500	2000	5300	1500	6500	3700	2800	3200	940	760
Thallium [µg/g]	0.10	0.22	0.62	0.12	0.14	0.18	0.12	0.19	0.22	0.12	0.12	0.10
Uranium [µg/g]	2.3	0.67	1.6	2.4	0.43	0.85	2.2	0.69	1.5	1.4	1.4	1.2
Vanadium [µg/g]	6	150	120	14	110	2	89	74	22	28	1	< 1
Yttrium [µg/g]	32	29	26	29	44	9.2	58	21	36	32	15	13
Zinc [µg/g]	43	62	120	61	49	29	48	48	18	37	20	15

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03-October-2013

IAMGOLD Corporation
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Date Rec. : 12 September 2013
LR Report: **CA14466-SEP13**

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: CG-HC-1	6: CG-HC-2	7: CG-HC-3	8: CG-HC-4	9: CG-HC-5	10: CG-HC-6
Sample Date & Time			Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A
Aluminum [µg/g]	03-Oct-13	10:07	6900	8400	3000	4900	14000	8600
Arsenic [µg/g]	23-Sep-13	18:11	9.3	8.6	3.1	2.4	6.8	2.8
Barium [µg/g]	23-Sep-13	18:11	45	8.9	11	15	146	10
Beryllium [µg/g]	23-Sep-13	18:11	0.15	0.35	0.42	0.22	0.36	0.37
Bismuth [µg/g]	23-Sep-13	18:11	< 0.09	0.52	< 0.09	< 0.09	2.4	0.41
Calcium [µg/g]	03-Oct-13	10:07	8800	22000	9100	10000	13000	16000
Cadmium [µg/g]	23-Sep-13	18:11	0.05	0.06	0.03	0.02	0.06	< 0.02
Cobalt [µg/g]	23-Sep-13	18:11	4.3	4.2	2.2	3.1	17	5.1
Chromium [µg/g]	23-Sep-13	18:11	38	34	46	35	69	54
Copper [µg/g]	23-Sep-13	18:11	110	230	100	130	2800	350
Iron [µg/g]	03-Oct-13	10:07	15000	17000	5700	9700	30000	18000
Potassium [µg/g]	03-Oct-13	10:07	2300	630	790	680	8300	540
Lithium [µg/g]	23-Sep-13	18:11	6	8	5	3	14	5
Magnesium [µg/g]	03-Oct-13	10:07	3600	7300	1600	3400	9600	5400
Manganese [µg/g]	23-Sep-13	18:11	130	210	96	98	280	140
Molybdenum [µg/g]	23-Sep-13	18:11	1.2	3.5	2.2	1.5	7.6	1.7
Sodium [µg/g]	03-Oct-13	10:07	320	290	340	220	290	370
Nickel [µg/g]	23-Sep-13	18:11	9.0	11	8.7	8.3	34	13
Phosphorus [µg/g]	03-Oct-13	10:07	390	540	160	220	270	180

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LR Report : **CA14466-SEP13**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: CG-HC-1	6: CG-HC-2	7: CG-HC-3	8: CG-HC-4	9: CG-HC-5	10: CG-HC-6
Lead [µg/g]	23-Sep-13	18:12	2.2	3.9	2.5	1.3	3.3	2.0
Antimony [µg/g]	23-Sep-13	18:12	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium (CRI) [mg/L]	03-Oct-13	10:07	0.142	0.337	0.112	0.122	3.08	0.484
Selenium [µg/g]	23-Sep-13	18:12	< 0.7	< 0.7	< 0.7	< 0.7	2.8	< 0.7
Tin [µg/g]	23-Sep-13	18:12	< 0.5	1.5	< 0.5	< 0.5	< 0.5	0.6
Strontium [µg/g]	23-Sep-13	18:12	12	13	10	12	18	10
Titanium [µg/g]	23-Sep-13	18:12	500	550	210	140	970	170
Thallium [µg/g]	23-Sep-13	18:12	0.04	< 0.02	< 0.02	< 0.02	0.11	< 0.02
Uranium [µg/g]	23-Sep-13	18:12	1.6	0.97	1.0	0.84	0.79	1.1
Vanadium [µg/g]	23-Sep-13	18:12	10	12	3	6	24	12
Yttrium [µg/g]	23-Sep-13	18:12	13	14	11	10.0	9.5	14
Zinc [µg/g]	23-Sep-13	18:12	17	27	10	14	29	14
Mercury [µg/g]	25-Sep-13	18:05	< 0.05	0.06	< 0.05	< 0.05	< 0.05	< 0.05

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Date Rec. : 12 September 2013
LR Report: **CA14466-SEP13**

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	11: CG-HC-7	12: CG-HC-8	13: CG-HC-9	14: CG-HC-10	15: CG-HC-11	16: CG-HC-12	17: CG-HC-13	18: CG-HC-14
Sample Date & Time	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A
Aluminum [µg/g]	7900	9200	16000	14000	18000	7100	13000	9300
Arsenic [µg/g]	2.3	0.9	5.8	7.2	5.3	2.0	1.2	13
Barium [µg/g]	25	6.1	26	39	95	8.3	47	21
Beryllium [µg/g]	0.27	0.38	0.06	0.18	0.21	0.24	0.10	0.08
Bismuth [µg/g]	0.15	0.61	< 0.09	< 0.09	< 0.09	0.26	< 0.09	0.14
Calcium [µg/g]	13000	24000	20000	17000	14000	16000	21000	21000
Cadmium [µg/g]	0.02	< 0.02	0.04	< 0.02	0.13	< 0.02	< 0.02	0.02
Cobalt [µg/g]	14	4.7	11	10	11	3.0	11	7.7
Chromium [µg/g]	56	64	80	54	88	52	79	45
Copper [µg/g]	340	59	22	57	370	600	95	380
Iron [µg/g]	16000	17000	28000	25000	30000	15000	23000	18000
Potassium [µg/g]	2900	500	2500	3700	7000	760	3300	1400
Lithium [µg/g]	8	10	14	10	19	7	9	8
Magnesium [µg/g]	5900	8100	15000	12000	16000	4800	11000	6500
Manganese [µg/g]	140	220	320	250	300	160	270	180
Molybdenum [µg/g]	2.0	5.1	1.1	1.5	1.4	1.2	0.4	0.7
Sodium [µg/g]	340	390	380	290	300	310	370	300
Nickel [µg/g]	13	13	45	25	30	9.0	20	13
Phosphorus [µg/g]	79	370	850	370	250	83	460	260

OnLine LIMS

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LR Report : **CA14466-SEP13**

Analysis	**11: CG-HC-7**	**12: CG-HC-8**	**13: CG-HC-9**	**14: CG-HC-10**	**15: CG-HC-11**	**16: CG-HC-12**	**17: CG-HC-13**	**18: CG-HC-14**
Lead [µg/g]	2.6	4.2	2.5	0.91	4.1	2.2	1.5	1.00
Antimony [µg/g]	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Selenium (CRI) [mg/L]	0.313	0.115	0.066	0.169	0.234	0.396	0.253	0.204
Selenium [µg/g]	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7
Tin [µg/g]	1.1	1.1	0.9	0.8	0.8	0.7	1.0	< 0.5
Strontium [µg/g]	15	8.4	16	18	25	12	21	14
Titanium [µg/g]	670	330	960	710	1200	140	720	300
Thallium [µg/g]	0.05	< 0.02	0.04	0.06	0.11	< 0.02	0.08	0.04
Uranium [µg/g]	0.89	0.67	0.17	0.89	0.52	0.86	0.63	0.65
Vanadium [µg/g]	14	22	46	40	44	10	49	14
Yttrium [µg/g]	11	15	6.0	26	9.2	7.7	11	12
Zinc [µg/g]	17	16	36	21	39	11	20	18
Mercury [µg/g]	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

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06-December-2013

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Date Rec. : 02 December 2013
LR Report: **CA14003-DEC13**
Reference: PO #7247

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CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g
3: Analysis Approval Date	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13
4: Analysis Approval Time	09:02	14:50	14:50	14:50	14:50	09:02	14:50	14:50	14:50	14:50	09:02
5: CN-26 Res Cut A	7300	5.7	28	0.56	0.11	22000	0.10	9.9	380	200	20000
6: CN-27 Res Cut A	7400	2.4	8.5	0.41	0.18	7200	0.07	8.0	400	150	20000
7: CN-29 Res Cut A	2100	2.0	9.8	0.14	0.12	9300	0.05	4.2	350	280	9200
8: CN-31 Res Cut A	9200	3.1	15	0.31	1.5	14000	0.25	8.0	330	360	28000
9: CN-35 Res Cut A	4400	5.9	6.9	0.17	0.21	11000	0.11	5.6	390	290	13000
10: CN-36 Res Cut A	1900	1.0	3.9	0.16	< 0.09	20000	< 0.02	4.2	390	86	9700
11: CN-37 Res Cut A	3100	2.3	3.8	0.32	< 0.09	3500	< 0.02	4.4	430	120	10000
12: CN-38 Res Cut A	2300	7.2	3.8	0.21	0.80	12000	0.31	7.1	410	1500	13000
13: CN-39 Res Cut A	1800	1.3	7.3	0.11	0.16	10000	0.03	5.5	490	270	9500
14: CN-41 Res Cut A	11000	2.1	10	0.31	0.11	22000	0.04	12	460	96	28000
15: CN-42 Res Cut A	9100	6.4	5.4	0.28	2.3	17000	0.07	21	330	110	26000
16: CN-50 Res Cut A	5000	1.7	4.4	0.32	< 0.09	19000	0.02	6.1	270	150	11000
17: CN-51 Res Cut A	2200	4.2	4.6	0.10	< 0.09	10000	0.03	4.2	370	260	8600
18: CN-52 Res Cut A	9200	2.1	28	0.18	< 0.09	7500	0.04	8.7	280	120	21000
19: CN-56 Res Cut A	6000	4.6	5.4	0.26	2.4	10000	0.06	6.4	260	1400	18000
20: CN-78 Res Cut A	9500	3.5	17	0.20	< 0.09	8400	0.03	9.7	440	69	21000
21: CN-80 Res Cut A	1500	21	5.1	0.14	< 0.09	10000	0.07	4.1	460	43	6200
22: CN-82 Res Cut A	9200	2.3	11	0.41	< 0.09	16000	< 0.02	14	600	24	23000
23: CN-84 Res Cut A	3200	1.6	6.0	0.18	< 0.09	12000	< 0.02	6.1	570	27	10000

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LR Report : **CA14003-DEC13**

Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g
24: CN-86 Res Cut A	3200	1.4	7.7	0.19	< 0.09	8700	< 0.02	5.8	550	61	11000
25: CN-91 Res Cut A	6900	4.1	31	0.23	< 0.09	11000	0.02	11	450	110	17000
26: CN-93 Res Cut A	1900	3.5	6.6	0.22	< 0.09	7600	0.06	4.3	460	72	6800
27: CN-96 Res Cut A	2600	4.5	6.4	0.22	0.22	9000	0.03	5.8	480	150	11000
28: CN-97 Res Cut A	6300	6.0	9.2	0.65	0.40	4600	0.39	8.0	370	470	21000
29: CN-101 Res Cut A	5600	1.8	120	0.31	0.14	15000	0.03	8.7	470	240	16000
30: CN-102 Res Cut A	1600	1.5	5.4	0.27	0.96	6600	< 0.02	5.2	520	180	7200
31: CN-103 Res Cut A	3100	2.2	2.9	0.20	< 0.09	8100	< 0.02	3.4	240	67	9600
32: CN-104RG Res Cut A	19000	2.2	62	0.28	0.20	38000	0.03	20	530	93	40000
33: CN-105 Res Cut A	5700	1.8	4.7	0.62	0.38	2100	0.02	16	630	400	17000
34: CN-106 Res Cut A	7500	3.1	4.8	0.49	0.30	13000	< 0.02	14	570	350	21000
35: CN-107RG Res Cut A	3200	1.8	4.6	0.18	0.30	14000	0.03	7.0	720	35	9900
36: CN-111 Res Cut A	6100	2.4	5.0	0.19	< 0.09	11000	0.02	5.9	380	38	16000
37: CN-112 Res Cut A	3500	6.5	5.1	0.42	0.12	8000	0.09	5.4	420	160	12000
38: CN-113 Res Cut A	20000	3.0	52	0.22	< 0.09	19000	0.03	19	640	140	38000
39: CN-114 Res Cut A	2800	1.1	3.7	1.2	0.11	5100	< 0.02	4.7	480	79	10000
40: CN-115 Res Cut A	9400	0.8	32	0.15	< 0.09	7600	0.02	9.1	420	89	23000
41: CN-116 Res Cut A	7100	2.0	18	0.15	< 0.09	14000	0.03	7.7	310	80	16000
42: CN-117RG Res Cut A	4000	2.0	7.7	0.31	0.10	8200	0.03	4.7	280	220	11000
43: CN-118 Res Cut A	4500	1.3	19	0.25	< 0.09	14000	0.07	7.9	490	160	14000
44: CN-119 Res Cut A	4000	1.2	6.0	0.36	0.10	14000	0.03	6.4	460	52	11000
45: CN-120 Res Cut A	9600	5.5	18	0.21	0.10	19000	0.12	8.9	530	510	25000
46: CN-122 Res Cut A	12000	2.7	47	0.10	< 0.09	8200	0.03	12	540	39	26000
47: CN-124 Res Cut A	4100	4.3	15	0.35	0.38	13000	< 0.02	8.9	590	90	17000
48: CN-126 Res Cut A	1000	7.1	5.1	0.19	0.20	16000	0.09	4.7	550	73	6700
49: CN-127 Res Cut A	4500	1.4	3.5	0.65	0.13	5600	0.02	6.0	310	88	13000
50: CN-128 Res Cut A	9700	5.1	47	0.13	0.17	16000	0.06	8.5	480	330	26000
51: CN-129 Res Cut A	11000	1.5	64	0.16	< 0.09	18000	0.12	14	440	500	25000
52: CN-131 Res Cut A	6700	4.3	4.2	0.21	0.11	15000	0.02	8.4	610	120	19000
53: CN-134RG Res Cut A	9800	0.9	3.6	0.38	0.18	13000	< 0.02	9.7	620	150	25000
54: CN-138RG Res Cut A	2400	3.9	4.6	0.10	0.11	16000	0.04	6.5	490	76	8200
55: CN-140RG Res Cut A	2600	1.1	4.9	0.19	0.11	9700	0.03	4.6	370	51	7700
56: CN-141 Res Cut A	2500	2.7	6.1	0.24	0.09	17000	0.03	6.7	560	67	9900
57: CN-143 Res Cut A	12000	1.3	12	0.19	< 0.09	19000	0.02	9.2	410	98	27000
58: CN-145 Res Cut A	10000	1.9	42	0.18	1.2	11000	0.07	10	460	1100	26000
59: CN-146 Res Cut A	1500	1.0	3.7	0.11	< 0.09	9000	0.05	3.0	340	55	5100

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LR Report : **CA14003-DEC13**

Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g
60: CN-147RG Res Cut A	4900	1.3	3.0	0.18	< 0.09	16000	< 0.02	5.5	240	81	14000
61: CN-149 Res Cut A	5000	0.5	2.3	0.13	0.57	6500	< 0.02	5.8	320	340	14000
62: CN-150 Res Cut A	7900	3.0	130	0.49	< 0.09	18000	0.05	10	520	47	19000
63: CN-151RG Res Cut A	2400	1.0	5.5	0.23	0.27	7800	0.03	4.9	430	250	9100
64: CN-153 Res Cut A	4800	1.9	4.2	0.21	0.29	9700	< 0.02	6.8	460	190	15000
65: CN-154 Res Cut A	9900	1.0	13	0.25	< 0.09	19000	< 0.02	10	560	71	26000
66: CN-155 Res Cut A	3900	5.6	5.1	0.19	0.31	11000	0.05	5.4	510	110	16000
67: CN-158 Res Cut A	1700	5.6	5.1	0.35	0.47	7500	0.02	4.2	470	110	7400
68: CN-159RG Res Cut A	3600	< 0.5	4.7	0.52	0.14	4600	0.02	6.4	630	52	12000
69: CN-160 Res Cut A	24000	7.7	49	0.25	7.9	26000	0.09	23	570	550	51000
70: CN-161 Res Cut A	4500	0.9	4.0	0.50	0.71	1300	0.05	6.6	570	200	15000
71: CN-40 Res Cut A	7800	1.9	58	0.21	0.21	18000	0.04	9.6	420	260	21000
72: CN-139 Res Cut A	3100	1.4	4.7	0.35	< 0.09	15000	< 0.02	6.0	570	54	10000
73: CN181 Res Cut A	3700	3.9	5.5	0.22	0.48	20000	0.12	7.0	430	230	20000
74: CN182 Res Cut A	5400	2.1	14	0.21	1.7	15000	< 0.02	11	420	800	17000
75: CN183 Res Cut A	8700	2.1	27	0.20	0.22	17000	0.02	12	450	160	24000
76: CN185 Res Cut A	6000	2.3	3.7	0.45	0.26	13000	< 0.02	11	430	120	20000
77: CN186 Res Cut A	3600	2.0	7.2	0.43	0.20	11000	< 0.02	7.0	470	120	16000
78: CN187 Res Cut A	3800	15	5.0	0.20	1.00	9900	0.23	7.8	460	710	15000
79: CN188 Res Cut A	6300	1.2	6.1	0.22	0.20	19000	< 0.02	12	470	140	17000
80: CN189 Res Cut A	5600	45	5.9	0.30	1.4	1000	0.04	17	340	72	29000
81: CN190 Res Cut A	6700	2.6	4.4	0.21	< 0.09	9900	0.03	10	420	30	18000
82: CN191 Res Cut A	18000	1.8	67	0.15	< 0.09	14000	< 0.02	15	410	63	37000
83: CN192 Res Cut A	3000	2.7	8.7	0.16	< 0.09	12000	0.04	6.2	440	34	11000
84: CN193 Res Cut A	6000	4.1	3.6	0.25	1.3	12000	0.10	11	380	1200	20000
85: CN195 Res Cut A	15000	1.3	20	0.25	< 0.09	28000	< 0.02	13	340	120	34000
86: CN196 Res Cut A	3300	0.6	2.8	0.37	0.18	7400	0.02	7.3	450	67	11000
87: CN197 Res Cut A	6700	1.6	55	0.42	0.26	18000	< 0.02	9.7	410	56	19000
88: CN198 Res Cut A	7800	1.0	12	0.46	< 0.09	23000	< 0.02	9.2	470	63	20000
89: CN199 Res Cut A	2900	1.3	6.4	0.17	< 0.09	25000	0.06	7.8	430	31	9800
90: CN201 Res Cut A	2300	1.7	3.8	0.18	< 0.09	9200	0.04	5.3	430	65	8400
91: CN203 Res Cut A	6900	2.1	5.5	0.22	0.15	16000	0.32	8.7	450	250	18000
92: CN204 Res Cut A	7400	2.8	6.4	0.25	0.13	20000	0.02	11	440	210	19000
93: CN205 Res Cut A	4200	2.1	4.4	0.20	0.17	18000	0.03	8.2	420	96	13000
94: CN206 Res Cut A	3000	4.4	8.7	0.18	0.13	11000	0.05	6.9	450	110	12000
95: CN194 Res Cut D	4800	1.3	18	0.23	< 0.09	21000	< 0.02	7.9	440	88	14000

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LR Report : **CA14003-DEC13**

Sample ID	Al µg/g	As µg/g	Ba µg/g	Be µg/g	Bi µg/g	Ca µg/g	Cd µg/g	Co µg/g	Cr µg/g	Cu µg/g	Fe µg/g
96: CN200R Res Cut D	13000	12	20	0.27	0.29	31000	0.06	21	460	350	29000
97: CN202 Res Cut D	3300	1.2	47	0.26	0.20	17000	0.03	8.4	480	140	12000

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

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06-December-2013

Trelawney Mining and Exploration Inc.
Attn : Dave Brown

3 Mesomikenda Lake Rd Box 100
Gogama, ON
P0M 1W0, Canada

Phone: 705-269-0010 x110
Fax:705-269-8212

Date Rec. : 02 December 2013
LR Report: **CA14003-DEC13**
Reference: PO #7247

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Na µg/g	Ni µg/g	P µg/g	Pb µg/g	Sb µg/g
3: Analysis Approval Date	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13
4: Analysis Approval Time	09:02	14:50	09:02	14:50	14:50	09:02	14:50	09:02	14:50	14:50
5: CN-26 Res Cut A	1100	10	8100	340	3.1	140	160	550	1.5	< 0.8
6: CN-27 Res Cut A	200	9	6200	160	2.7	150	180	39	1.4	< 0.8
7: CN-29 Res Cut A	390	< 2	1400	130	2.2	120	150	75	2.1	< 0.8
8: CN-31 Res Cut A	1100	9	7800	240	5.0	120	150	320	3.8	< 0.8
9: CN-35 Res Cut A	360	4	3400	160	2.4	120	170	69	4.1	< 0.8
10: CN-36 Res Cut A	320	2	5600	220	2.6	93	160	26	1.2	< 0.8
11: CN-37 Res Cut A	270	4	2600	120	2.8	130	170	24	1.1	< 0.8
12: CN-38 Res Cut A	410	4	2200	210	2.2	110	180	11	4.3	< 0.8
13: CN-39 Res Cut A	510	< 2	1600	200	2.6	120	210	160	1.7	< 0.8
14: CN-41 Res Cut A	350	12	12000	360	2.4	99	180	590	1.5	< 0.8
15: CN-42 Res Cut A	330	12	8900	230	14	110	130	260	9.2	< 0.8
16: CN-50 Res Cut A	250	9	5500	190	2.1	130	110	520	2.0	< 0.8
17: CN-51 Res Cut A	330	< 2	1300	130	2.1	140	150	50	1.9	< 0.8
18: CN-52 Res Cut A	2000	10	9000	210	1.7	200	120	180	1.6	< 0.8
19: CN-56 Res Cut A	690	6	5100	150	1.7	150	110	30	3.0	< 0.8
20: CN-78 Res Cut A	1400	12	9400	230	2.2	220	190	230	2.1	< 0.8
21: CN-80 Res Cut A	350	2	600	140	2.4	210	190	21	4.5	< 0.8
22: CN-82 Res Cut A	450	10	11000	340	2.6	190	210	610	1.6	< 0.8

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LR Report : **CA14003-DEC13**

Sample ID	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Na µg/g	Ni µg/g	P µg/g	Pb µg/g	Sb µg/g
23: CN-84 Res Cut A	390	4	2700	170	3.1	170	240	70	1.7	< 0.8
24: CN-86 Res Cut A	770	4	2800	160	2.8	140	230	61	1.4	< 0.8
25: CN-91 Res Cut A	1500	8	6300	270	2.3	200	180	420	1.9	< 0.8
26: CN-93 Res Cut A	250	2	1300	130	2.5	200	190	40	3.0	< 0.8
27: CN-96 Res Cut A	290	3	1500	140	3.7	140	190	100	2.5	< 0.8
28: CN-97 Res Cut A	700	10	4200	170	2.5	190	150	380	17	< 0.8
29: CN-101 Res Cut A	2500	5	6700	270	2.6	140	190	290	2.5	< 0.8
30: CN-102 Res Cut A	260	< 2	1000	120	2.7	150	210	100	2.3	< 0.8
31: CN-103 Res Cut A	220	3	2300	110	1.7	150	98	16	1.9	< 0.8
32: CN-104RG Res Cut A	4600	29	23000	770	9.5	170	220	880	1.5	< 0.8
33: CN-105 Res Cut A	120	7	5200	200	3.2	240	260	290	1.7	< 0.8
34: CN-106 Res Cut A	210	10	7800	220	3.1	160	230	320	1.5	< 0.8
35: CN-107RG Res Cut A	660	4	2400	200	3.8	140	300	140	4.6	< 0.8
36: CN-111 Res Cut A	250	6	5100	190	3.8	140	160	99	2.5	< 0.8
37: CN-112 Res Cut A	280	4	1800	130	2.3	170	180	220	6.1	< 0.8
38: CN-113 Res Cut A	6600	21	22000	530	3.1	130	270	340	1.9	< 0.8
39: CN-114 Res Cut A	190	3	2000	120	3.0	200	200	63	1.2	< 0.8
40: CN-115 Res Cut A	2900	10	8400	220	2.4	280	180	130	3.4	< 0.8
41: CN-116 Res Cut A	1700	8	6500	190	2.0	160	140	84	2.5	< 0.8
42: CN-117RG Res Cut A	440	4	3200	140	1.9	190	120	220	1.5	< 0.8
43: CN-118 Res Cut A	870	5	4500	210	2.8	170	210	280	2.8	< 0.8
44: CN-119 Res Cut A	350	6	3900	190	2.4	140	180	220	1.5	< 0.8
45: CN-120 Res Cut A	1000	10	7900	260	3.0	170	220	96	7.2	< 0.8
46: CN-122 Res Cut A	4000	14	11000	270	2.8	300	240	540	3.1	< 0.8
47: CN-124 Res Cut A	640	3	3100	250	3.0	130	240	350	1.7	< 0.8
48: CN-126 Res Cut A	570	< 2	400	300	4.0	95	230	20	3.6	< 0.8
49: CN-127 Res Cut A	170	6	4300	140	2.1	150	120	180	1.5	< 0.8
50: CN-128 Res Cut A	2700	10	7100	240	2.6	160	200	230	2.6	< 0.8
51: CN-129 Res Cut A	4500	12	8600	270	2.4	160	180	280	2.4	< 0.8
52: CN-131 Res Cut A	340	7	6200	220	3.4	130	250	53	2.1	< 0.8
53: CN-134RG Res Cut A	280	15	9100	220	3.2	150	250	650	1.3	< 0.8
54: CN-138RG Res Cut A	320	4	1700	180	3.1	160	200	130	2.8	< 0.8
55: CN-140RG Res Cut A	330	3	2000	120	2.4	170	150	120	1.8	< 0.8
56: CN-141 Res Cut A	440	4	1800	200	2.5	110	230	90	2.2	< 0.8
57: CN-143 Res Cut A	1100	10	10000	310	2.2	130	180	82	5.3	< 0.8

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LR Report : CA14003-DEC13

Sample ID	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Na µg/g	Ni µg/g	P µg/g	Pb µg/g	Sb µg/g
58: CN-145 Res Cut A	3100	10	9700	310	6.6	150	190	98	6.8	< 0.8
59: CN-146 Res Cut A	270	< 2	1000	130	2.1	110	140	5	2.3	< 0.8
60: CN-147RG Res Cut A	110	5	4300	230	1.6	110	100	880	1.4	< 0.8
61: CN-149 Res Cut A	140	7	4500	130	6.6	130	130	7	1.2	< 0.8
62: CN-150 Res Cut A	4300	9	8600	330	2.7	170	200	450	3.9	< 0.8
63: CN-151RG Res Cut A	280	4	1600	130	2.6	130	170	58	5.4	< 0.8
64: CN-153 Res Cut A	290	6	4100	160	2.7	130	190	45	1.5	< 0.8
65: CN-154 Res Cut A	600	9	9000	340	2.7	130	230	180	1.8	< 0.8
66: CN-155 Res Cut A	700	4	4000	190	3.3	130	210	93	2.3	< 0.8
67: CN-158 Res Cut A	270	< 2	880	130	2.5	150	190	50	2.6	< 0.8
68: CN-159RG Res Cut A	250	7	3800	150	9.3	120	260	95	2.2	< 0.8
69: CN-160 Res Cut A	3500	29	28000	700	3.9	140	210	640	2.1	< 0.8
70: CN-161 Res Cut A	180	5	4700	140	2.9	110	230	220	1.6	< 0.8
71: CN-40 Res Cut A	1000	9	8000	280	3.1	110	170	670	2.3	< 0.8
72: CN-139 Res Cut A	260	4	2000	190	3.7	160	230	150	1.4	< 0.8
73: CN181 Res Cut A	510	7	9100	320	2.1	63	180	67	3.3	< 0.8
74: CN182 Res Cut A	710	6	5500	220	7.9	79	170	420	1.5	< 0.8
75: CN183 Res Cut A	1300	9	9100	290	2.1	110	190	310	2.0	< 0.8
76: CN185 Res Cut A	150	6	6000	210	2.1	88	170	490	1.2	< 0.8
77: CN186 Res Cut A	210	4	2100	150	2.2	93	190	170	0.94	< 0.8
78: CN187 Res Cut A	270	5	2500	130	2.1	88	190	180	7.7	< 0.8
79: CN188 Res Cut A	220	8	7500	220	2.1	100	180	530	0.61	< 0.8
80: CN189 Res Cut A	350	4	4900	170	1.5	39	140	190	3.1	< 0.8
81: CN190 Res Cut A	360	7	6200	190	12	96	180	35	1.8	< 0.8
82: CN191 Res Cut A	6600	20	19000	390	2.1	160	170	540	1.6	< 0.8
83: CN192 Res Cut A	310	5	1600	160	2.0	95	180	140	3.1	< 0.8
84: CN193 Res Cut A	330	6	4900	170	1.8	82	160	60	5.1	< 0.8
85: CN195 Res Cut A	1600	14	14000	420	1.6	100	140	290	0.84	< 0.8
86: CN196 Res Cut A	140	5	3000	120	2.4	100	190	110	0.82	< 0.8
87: CN197 Res Cut A	1300	10	7600	260	2.2	87	180	410	1.3	< 0.8
88: CN198 Res Cut A	120	8	8600	300	2.0	100	170	420	0.66	< 0.8
89: CN199 Res Cut A	200	4	3500	260	2.2	86	170	260	2.5	< 0.8
90: CN201 Res Cut A	200	2	1200	140	2.2	100	180	78	3.0	< 0.8
91: CN203 Res Cut A	560	8	5700	160	3.7	120	180	39	8.5	< 0.8
92: CN204 Res Cut A	280	10	8200	280	2.0	98	170	350	1.1	< 0.8

SGS Canada Inc.
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LR Report : **CA14003-DEC13**

Sample ID	K µg/g	Li µg/g	Mg µg/g	Mn µg/g	Mo µg/g	Na µg/g	Ni µg/g	P µg/g	Pb µg/g	Sb µg/g
93: CN205 Res Cut A	180	5	3800	190	1.8	100	170	180	4.2	< 0.8
94: CN206 Res Cut A	380	3	1800	160	1.9	83	180	190	4.6	< 0.8
95: CN194 Res Cut D	1100	6	7400	320	1.8	130	180	390	1.1	< 0.8
96: CN200R Res Cut D	3900	14	16000	440	2.5	78	190	200	2.3	< 0.8
97: CN202 Res Cut D	1000	3	5400	250	2.4	110	200	280	2.2	< 0.8

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

OnLine LIMS

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06-December-2013

Trelawney Mining and Exploration Inc.
Attn : Dave Brown

3 Mesomikenda Lake Rd Box 100
Gogama, ON
P0M 1W0, Canada

Phone: 705-269-0010 x110
Fax:705-269-8212

Date Rec. : 02 December 2013
LR Report: **CA14003-DEC13**
Reference: PO #7247

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Se µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
3: Analysis Approval Date	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13	05-Dec-13
4: Analysis Approval Time	14:50	14:50	14:50	14:50	14:50	14:50	14:50	14:50	14:50	13:07
5: CN-26 Res Cut A	0.26	< 0.5	32	370	0.03	0.72	32	14	28	< 0.05
6: CN-27 Res Cut A	0.26	< 0.5	8.8	160	0.03	1.1	10	11	16	< 0.05
7: CN-29 Res Cut A	0.43	< 0.5	11	12	< 0.02	1.1	< 1	6.5	6.2	< 0.05
8: CN-31 Res Cut A	0.56	1.2	14	150	0.04	1.4	32	9.4	37	< 0.05
9: CN-35 Res Cut A	0.44	< 0.5	8.8	24	< 0.02	1.0	4	8.1	17	< 0.05
10: CN-36 Res Cut A	0.12	< 0.5	12	4.7	< 0.02	0.73	10	3.7	7.0	< 0.05
11: CN-37 Res Cut A	0.09	< 0.5	2.5	52	< 0.02	0.69	14	5.4	7.2	< 0.05
12: CN-38 Res Cut A	2.03	< 0.5	7.9	11	< 0.02	0.54	10	6.7	41	< 0.05
13: CN-39 Res Cut A	0.27	< 0.5	8.3	31	< 0.02	0.83	11	5.6	7.7	< 0.05
14: CN-41 Res Cut A	0.27	< 0.5	17	360	< 0.02	0.95	36	13	25	< 0.05
15: CN-42 Res Cut A	1.03	< 0.5	9.2	120	< 0.02	1.0	20	10	22	< 0.05
16: CN-50 Res Cut A	0.14	< 0.5	11	52	< 0.02	1.1	9	15	10	< 0.05
17: CN-51 Res Cut A	0.22	< 0.5	6.7	9.8	< 0.02	0.81	11	5.2	7.4	< 0.05
18: CN-52 Res Cut A	0.21	< 0.5	8.4	530	0.04	0.55	17	7.9	21	< 0.05
19: CN-56 Res Cut A	1.80	0.5	9.6	33	< 0.02	1.0	6	6.9	16	< 0.05
20: CN-78 Res Cut A	0.11	1.4	8.7	570	0.03	0.42	22	7.2	21	< 0.05
21: CN-80 Res Cut A	0.18	< 0.5	9.2	170	< 0.02	1.1	11	36	13	< 0.05
22: CN-82 Res Cut A	0.14	< 0.5	17	630	< 0.02	0.77	31	12	29	< 0.05

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LR Report : **CA14003-DEC13**

Sample ID	Se µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
23: CN-84 Res Cut A	0.07	< 0.5	8.1	35	< 0.02	0.78	4	5.0	8.0	< 0.05
24: CN-86 Res Cut A	0.15	< 0.5	7.6	42	< 0.02	0.79	1	5.1	7.8	< 0.05
25: CN-91 Res Cut A	0.17	< 0.5	12	490	0.05	0.70	23	9.8	20	< 0.05
26: CN-93 Res Cut A	0.09	< 0.5	7.7	200	< 0.02	0.37	< 1	9.2	13	< 0.05
27: CN-96 Res Cut A	0.25	< 0.5	5.6	25	< 0.02	1.1	< 1	12	10	< 0.05
28: CN-97 Res Cut A	0.75	1.3	6.4	320	< 0.02	0.90	6	29	53	< 0.05
29: CN-101 Res Cut A	0.31	< 0.5	29	240	0.07	0.89	14	6.3	18	< 0.05
30: CN-102 Res Cut A	0.21	< 0.5	4.4	29	< 0.02	0.92	13	12	4.1	< 0.05
31: CN-103 Res Cut A	0.15	< 0.5	4.0	38	< 0.02	1.0	3	12	6.4	< 0.05
32: CN-104RG Res Cut A	0.58	1.2	40	850	0.13	0.39	71	10	36	< 0.05
33: CN-105 Res Cut A	0.26	< 0.5	4.9	130	< 0.02	0.60	16	9.4	17	< 0.05
34: CN-106 Res Cut A	0.42	0.5	7.9	250	< 0.02	0.79	22	9.5	17	< 0.05
35: CN-107RG Res Cut A	0.11	< 0.5	9.2	7.8	< 0.02	1.1	11	6.2	8.5	< 0.05
36: CN-111 Res Cut A	0.04	< 0.5	6.3	81	< 0.02	1.4	13	8.7	12	< 0.05
37: CN-112 Res Cut A	0.25	0.6	6.3	160	< 0.02	1.4	4	23	24	< 0.05
38: CN-113 Res Cut A	0.23	< 0.5	14	840	0.12	0.39	44	7.1	39	< 0.05
39: CN-114 Res Cut A	0.08	< 0.5	3.5	140	< 0.02	0.73	3	13	6.7	< 0.05
40: CN-115 Res Cut A	0.19	1.0	7.8	890	0.06	0.69	23	8.8	18	< 0.05
41: CN-116 Res Cut A	0.12	< 0.5	7.2	300	0.04	0.98	17	16	15	< 0.05
42: CN-117RG Res Cut A	0.19	< 0.5	5.9	230	< 0.02	0.65	9	10	11	< 0.05
43: CN-118 Res Cut A	0.16	< 0.5	16	77	< 0.02	0.87	13	8.9	18	< 0.05
44: CN-119 Res Cut A	0.10	< 0.5	11	65	< 0.02	1.3	7	12	12	< 0.05
45: CN-120 Res Cut A	0.74	1.7	9.8	260	0.02	0.97	19	12	47	< 0.05
46: CN-122 Res Cut A	0.11	0.7	7.4	870	0.07	0.46	25	13	29	< 0.05
47: CN-124 Res Cut A	0.22	< 0.5	15	240	< 0.02	1.3	15	19	11	< 0.05
48: CN-126 Res Cut A	0.11	< 0.5	7.5	9.5	< 0.02	1.00	10	5.7	17	< 0.05
49: CN-127 Res Cut A	0.14	< 0.5	4.1	60	< 0.02	0.45	9	7.1	12	< 0.05
50: CN-128 Res Cut A	0.50	2.0	8.8	380	0.05	0.91	20	21	26	< 0.05
51: CN-129 Res Cut A	0.56	< 0.5	18	720	0.12	0.38	34	8.7	29	< 0.05
52: CN-131 Res Cut A	0.17	< 0.5	7.7	36	< 0.02	1.4	11	11	13	< 0.05
53: CN-134RG Res Cut A	0.22	0.8	6.9	280	< 0.02	1.4	27	26	19	< 0.05
54: CN-138RG Res Cut A	0.28	< 0.5	11	110	< 0.02	0.97	< 1	30	7.7	< 0.05
55: CN-140RG Res Cut A	0.08	< 0.5	4.9	31	< 0.02	1.0	< 1	6.5	6.1	< 0.05
56: CN-141 Res Cut A	0.22	0.6	12	17	< 0.02	0.69	2	7.1	9.7	< 0.05
57: CN-143 Res Cut A	0.13	0.9	11	320	0.02	1.00	26	13	22	< 0.05

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LR Report : **CA14003-DEC13**

Sample ID	Se µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
58: CN-145 Res Cut A	2.69	2.3	9.1	720	0.09	1.4	27	12	28	< 0.05
59: CN-146 Res Cut A	0.10	< 0.5	5.5	19	< 0.02	1.2	12	12	7.8	< 0.05
60: CN-147RG Res Cut A	0.15	2.9	12	1100	< 0.02	0.49	10	13	17	< 0.05
61: CN-149 Res Cut A	0.29	0.7	3.3	67	< 0.02	0.40	11	4.8	12	< 0.05
62: CN-150 Res Cut A	0.12	1.3	28	700	0.11	0.87	28	11	29	< 0.05
63: CN-151RG Res Cut A	0.26	0.6	7.1	19	< 0.02	1.4	13	6.2	7.8	< 0.05
64: CN-153 Res Cut A	0.28	0.9	6.2	23	< 0.02	1.2	7	8.8	9.0	< 0.05
65: CN-154 Res Cut A	0.17	1.5	17	240	< 0.02	1.3	21	15	20	< 0.05
66: CN-155 Res Cut A	0.26	1.3	11	47	0.03	1.3	3	7.2	12	< 0.05
67: CN-158 Res Cut A	0.15	0.6	4.7	36	< 0.02	1.0	12	7.7	6.4	< 0.05
68: CN-159RG Res Cut A	0.14	1.3	4.4	210	< 0.02	1.6	< 1	22	9.2	< 0.05
69: CN-160 Res Cut A	0.40	1.0	14	920	0.08	0.27	75	5.6	62	< 0.05
70: CN-161 Res Cut A	0.18	1.0	2.3	100	< 0.02	0.87	4	13	13	< 0.05
71: CN-40 Res Cut A	0.39	0.7	21	84	0.03	1.3	16	12	34	< 0.05
72: CN-139 Res Cut A	0.17	0.9	8.8	220	< 0.02	1.3	4	37	6.8	< 0.05
73: CN181 Res Cut A	0.37	0.7	40	32	< 0.02	0.86	2	4.4	19	< 0.05
74: CN182 Res Cut A	1.02	0.6	16	120	< 0.02	1.1	14	10	15	< 0.05
75: CN183 Res Cut A	0.34	1.4	18	440	0.04	0.83	31	12	20	< 0.05
76: CN185 Res Cut A	0.27	0.8	12	220	< 0.02	0.88	18	14	15	< 0.05
77: CN186 Res Cut A	0.21	0.7	6.6	91	< 0.02	1.1	12	16	9.4	< 0.05
78: CN187 Res Cut A	0.78	0.9	6.0	20	< 0.02	1.2	12	9.5	76	< 0.05
79: CN188 Res Cut A	0.21	0.9	14	81	< 0.02	0.72	20	13	10	< 0.05
80: CN189 Res Cut A	1.30	0.5	1.9	72	< 0.02	0.96	9	9.7	22	< 0.05
81: CN190 Res Cut A	0.13	0.9	5.5	170	< 0.02	1.2	13	10	14	< 0.05
82: CN191 Res Cut A	0.13	1.4	9.5	870	0.15	0.27	60	9.2	29	< 0.05
83: CN192 Res Cut A	0.11	< 0.5	6.8	92	< 0.02	1.4	14	17	11	< 0.05
84: CN193 Res Cut A	1.54	1.1	8.7	24	< 0.02	0.86	11	4.6	18	< 0.05
85: CN195 Res Cut A	0.18	1.4	14	520	0.03	0.50	59	15	33	< 0.05
86: CN196 Res Cut A	0.09	0.6	4.2	140	< 0.02	0.71	3	9.1	9.8	< 0.05
87: CN197 Res Cut A	0.24	1.2	39	170	0.05	1.3	20	7.7	16	< 0.05
88: CN198 Res Cut A	0.09	0.7	11	220	< 0.02	0.50	33	14	17	< 0.05
89: CN199 Res Cut A	0.06	< 0.5	25	11	< 0.02	0.81	6	6.5	13	< 0.05
90: CN201 Res Cut A	0.07	0.5	5.1	41	< 0.02	0.61	13	7.5	9.9	< 0.05
91: CN203 Res Cut A	0.43	1.2	8.3	280	0.02	1.9	10	33	43	< 0.05
92: CN204 Res Cut A	0.21	1.1	19	190	< 0.02	0.86	22	14	19	< 0.05

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0000072007

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LR Report : **CA14003-DEC13**

Sample ID	Se µg/g	Sn µg/g	Sr µg/g	Ti µg/g	Tl µg/g	U µg/g	V µg/g	Y µg/g	Zn µg/g	Hg µg/g
93: CN205 Res Cut A	0.32	0.6	12	120	< 0.02	0.77	8	10.0	13	< 0.05
94: CN206 Res Cut A	0.18	< 0.5	8.6	74	< 0.02	1.1	< 1	19	13	< 0.05
95: CN194 Res Cut D	0.10	0.6	29	81	< 0.02	0.67	12	5.3	9.4	< 0.05
96: CN200R Res Cut D	0.74	1.1	29	350	0.14	1.2	34	31	63	< 0.05
97: CN202 Res Cut D	0.16	0.5	30	89	0.03	1.1	9	7.0	12	< 0.05

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

OnLine LIMS

000007207

WHOLE ROCK

Côté Gold Project
Geochemical Characterization Report
December 2013
Project #TC121522

SGS Canada Inc.
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Project : IAMGold Cote Lake

December-04-12

Knight Piesold Limited
Attn : Amber Blackwell

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165 ext. 241
Fax:

Date Rec. : 13 November 2012
LR Report: **CA10186-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
5: E10-036 ARD-1	10-Nov-12	75.5	13.1	0.97	0.48	2.21	5.22	0.85	0.19	0.02	0.01	0.01	< 0.01	1.77	100.4
6: E10-036 ARD-2	10-Nov-12	73.1	13.9	1.19	0.57	1.58	5.88	0.99	0.24	< 0.01	< 0.01	0.01	< 0.01	1.75	99.3
7: E10-036 ARD-3	10-Nov-12	71.7	15.1	0.61	0.18	3.83	4.19	1.46	0.87	< 0.01	0.02	0.02	< 0.01	2.43	100.4
8: E10-045 ARD-4	10-Nov-12	80.3	10.3	0.32	0.10	0.83	5.41	0.38	0.28	< 0.01	< 0.01	0.02	< 0.01	0.96	98.9
9: E11-066 ARD-5	10-Nov-12	75.2	11.7	2.92	1.26	1.15	5.56	0.29	0.34	0.24	0.01	0.02	< 0.01	1.43	100.1
10: E11-066 ARD-6	10-Nov-12	68.1	13.0	3.45	2.28	3.95	4.81	0.98	0.34	0.12	0.04	0.03	0.01	2.49	99.7
11: E11-082 ARD-7	10-Nov-12	76.8	12.2	1.14	0.32	1.53	4.38	1.65	0.25	0.01	< 0.01	0.02	< 0.01	1.82	100.1
12: E11-082 ARD-8	10-Nov-12	63.2	14.5	6.49	3.40	5.02	3.96	1.45	0.64	0.16	0.08	0.03	< 0.01	1.32	100.2
13: E11-082 ARD-9	10-Nov-12	66.5	15.7	3.72	1.52	3.16	4.77	1.75	0.39	0.14	0.05	0.01	0.01	2.46	100.2
14: E11-087 ARD-10	10-Nov-12	71.8	12.9	2.96	0.69	2.47	3.53	2.36	0.29	0.04	0.03	0.01	< 0.01	2.44	99.5
15: E11-087 ARD-11	10-Nov-12	74.3	12.4	2.87	0.81	1.79	4.11	1.34	0.32	0.04	0.03	0.02	< 0.01	1.58	99.6
16: E12-217 ARD-12	10-Nov-12	53.2	17.2	9.39	5.03	6.50	4.43	0.42	0.82	0.08	0.12	< 0.01	0.03	3.34	100.6
17: E11-096 ARD-13	10-Nov-12	64.2	14.6	5.08	2.38	4.71	4.90	0.36	0.54	0.08	0.07	0.02	0.01	3.04	100.0
18: E11-096 ARD-14	10-Nov-12	76.0	11.6	1.33	0.49	1.98	5.40	0.55	0.53	0.01	0.02	0.01	< 0.01	1.49	99.4
19: E11-096 ARD-15	10-Nov-12	51.2	13.0	14.5	5.14	7.46	3.77	1.46	1.25	0.15	0.25	< 0.01	0.06	1.80	100.1
20: E11-098 ARD-16	10-Nov-12	77.1	12.4	0.65	0.24	1.92	4.82	0.99	0.26	< 0.01	0.02	0.01	< 0.01	1.49	99.9
21: E11-098 ARD-17	10-Nov-12	65.3	11.9	7.09	3.81	3.16	3.51	1.58	0.45	0.27	0.06	0.01	< 0.01	2.53	99.6
22: E11-098 ARD-18	10-Nov-12	51.9	18.6	7.74	4.09	7.34	4.51	1.87	0.58	0.05	0.07	0.02	0.03	3.50	100.3

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Project : IAMGold Cote Lake

LR Report : CA10186-NOV12

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
23: E11-099 ARD-19	10-Nov-12	79.9	11.1	0.69	0.27	0.77	4.52	1.01	0.28	< 0.01	< 0.01	0.01	< 0.01	1.06	99.6
24: E11-099 ARD-20	10-Nov-12	71.0	11.8	3.44	1.99	2.85	4.82	0.39	0.21	< 0.01	0.03	0.01	< 0.01	3.06	99.6
25: E11-114 ARD-21	10-Nov-12	73.7	12.7	2.97	0.69	2.87	5.05	0.41	0.31	0.08	0.02	0.02	< 0.01	1.75	100.6
26: E11-114 ARD-22	10-Nov-12	58.0	15.1	7.08	4.36	5.10	4.02	0.96	1.02	0.04	0.06	0.02	0.02	4.59	100.4
27: E10-038 ARD-23	10-Nov-12	77.1	12.2	0.85	0.71	1.11	4.34	1.08	0.31	< 0.01	< 0.01	0.02	< 0.01	1.78	99.5
28: E11-062 ARD-24	10-Nov-12	73.2	12.8	1.79	0.74	2.04	5.95	0.56	0.25	0.05	0.01	0.01	< 0.01	2.22	99.6
29: E10-30 ARD-25	10-Nov-12	74.8	12.8	2.03	0.87	2.04	4.84	1.05	0.48	0.02	0.02	0.02	< 0.01	2.14	101.1
30: E10-028 ARD-26	10-Nov-12	75.6	12.2	2.04	0.95	1.97	5.23	0.48	0.28	0.01	0.01	0.02	< 0.01	1.67	100.4
31: E11-049 ARD-27	10-Nov-12	72.7	12.1	3.77	1.56	2.63	4.74	0.41	0.32	< 0.01	0.03	0.02	< 0.01	1.94	100.2
32: E11-049 ARD-28	10-Nov-12	76.0	11.5	2.49	0.60	2.01	0.19	3.86	0.17	0.01	< 0.01	0.01	< 0.01	3.31	100.2
33: E11-061 ARD-29	10-Nov-12	70.5	11.4	4.45	1.86	1.28	2.64	0.46	0.57	0.03	0.04	0.02	< 0.01	7.21	100.5
34: E12-206 ARD-30	10-Nov-12	48.6	20.0	7.97	4.56	6.17	3.96	1.60	0.75	0.10	0.06	< 0.01	0.02	5.38	99.2
35: E12-179 ARD-31	10-Nov-12	74.6	11.2	3.26	1.56	1.68	4.00	0.97	0.32	0.16	0.03	0.02	< 0.01	2.58	100.4
36: E11-048 ARD-32	10-Nov-12	77.5	12.2	1.48	0.53	1.26	5.10	0.90	0.30	0.04	0.01	0.02	< 0.01	1.72	101.0
37: E11-048 ARD-33	10-Nov-12	77.7	4.38	1.49	0.59	7.19	1.94	0.12	0.12	0.02	0.03	0.01	< 0.01	5.99	99.6
38: E11-075 ARD-34	10-Nov-12	70.6	13.8	2.42	0.83	3.22	5.67	0.78	0.39	0.08	0.03	< 0.01	< 0.01	2.45	100.2
39: E11-075 ARD-35	10-Nov-12	48.3	13.5	15.3	5.53	7.02	2.62	1.90	1.41	0.14	0.25	0.01	0.07	4.20	100.3
40: E11-071 ARD-36	10-Nov-12	62.7	12.1	5.95	3.50	4.64	3.40	0.95	0.61	0.18	0.05	0.03	0.01	5.15	99.3
41: E11-071 ARD-37	10-Nov-12	51.7	14.9	10.9	5.86	7.91	3.35	1.04	0.90	0.36	0.13	0.03	0.03	3.17	100.2
42: E11-078 ARD-38	10-Nov-12	81.2	9.93	1.86	0.96	0.25	4.64	0.36	0.26	< 0.01	< 0.01	0.01	< 0.01	0.96	100.4
43: E11-179 ARD-39	10-Nov-12	85.2	6.14	1.44	0.74	0.84	2.00	0.08	0.28	0.05	0.02	0.02	< 0.01	3.63	100.4
44: E11-120 ARD-40	10-Nov-12	74.9	12.1	3.28	0.52	1.58	4.32	1.25	0.26	0.04	0.01	0.01	< 0.01	2.07	100.3
45: E11-120 ARD-41	10-Nov-12	68.8	13.4	3.52	1.83	2.60	5.90	0.41	0.35	0.06	0.03	0.02	< 0.01	2.90	99.9
46: E11-120 ARD-42	10-Nov-12	44.9	12.2	10.9	5.81	10.7	0.48	1.72	0.68	0.06	0.14	0.03	0.04	12.7	100.3
47: E11-122 ARD-43	10-Nov-12	76.3	12.5	1.01	0.49	1.42	5.06	0.96	0.36	< 0.01	< 0.01	0.02	< 0.01	1.67	99.8
48: E11-122 ARD-44	10-Nov-12	69.6	13.8	2.16	1.39	2.85	3.31	2.03	0.89	< 0.01	0.02	0.01	< 0.01	3.81	99.8
49: E11-140 ARD-45	10-Nov-12	75.7	12.4	1.71	0.54	1.15	5.21	0.90	0.31	0.04	0.01	0.02	0.01	1.50	99.4
50: E11-145 ARD-46	10-Nov-12	70.5	13.8	3.81	1.33	3.25	4.09	1.48	0.46	0.06	0.03	0.02	< 0.01	1.08	99.9
51: E12-198 ARD-47	10-Nov-12	48.1	13.2	12.1	9.53	9.51	1.87	0.98	0.82	0.13	0.19	0.07	0.04	3.65	100.2
52: E11-129 ARD-48	10-Nov-12	76.8	11.8	1.44	0.55	1.76	4.25	1.12	0.32	0.03	0.01	0.02	< 0.01	2.11	100.2
53: E11-140 ARD-49	10-Nov-12	74.1	12.3	2.15	0.94	2.14	4.40	1.17	0.43	0.02	0.03	0.02	< 0.01	2.07	99.8

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Project : IAMGold Cote Lake
LR Report : **CA10186-NOV12**

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
54: E11-144 ARD-50	10-Nov-12	53.7	12.7	14.2	3.89	5.92	3.87	1.40	1.65	0.34	0.23	< 0.01	0.05	2.09	100.1
55: E11-141 ARD-51	10-Nov-12	54.7	12.5	9.68	2.46	8.11	3.94	0.29	1.56	0.66	0.17	0.01	< 0.01	5.68	99.8
56: E11-145 ARD-52	10-Nov-12	67.0	15.9	3.73	1.36	4.08	4.29	1.85	0.40	0.14	0.04	0.01	< 0.01	1.62	100.3
57: E12-200 ARD-53	10-Nov-12	44.9	13.7	12.1	7.34	8.79	2.12	0.11	0.79	0.06	0.15	0.04	0.05	10.9	101.1
58: E12-205 ARD-54	10-Nov-12	70.2	14.3	3.29	1.02	4.01	4.82	0.65	0.51	0.11	0.04	0.02	0.01	1.80	100.8
59: E12-294 ARD-55	10-Nov-12	45.2	16.2	16.5	11.9	0.85	1.80	0.21	0.95	0.08	0.14	0.04	0.05	6.91	100.8
60: E12-205 ARD-56	10-Nov-12	75.5	12.4	2.28	0.48	1.64	4.85	1.43	0.31	0.05	0.03	0.02	< 0.01	1.72	100.7
61: CL10-01 ARD-57	10-Nov-12	46.3	14.2	12.4	8.29	8.78	2.04	0.09	0.84	0.09	0.18	0.04	0.04	6.63	100.0
62: CL10-01 ARD-58	10-Nov-12	57.3	12.9	6.82	6.63	7.22	4.22	0.51	0.59	0.21	0.10	0.07	0.03	3.68	100.3
63: CL10-02A ARD-59	10-Nov-12	74.4	12.5	2.31	0.45	1.74	3.93	2.17	0.24	0.03	< 0.01	0.01	< 0.01	2.65	100.5
64: E12-213 ARD-60	10-Nov-12	74.8	12.1	3.72	0.30	1.28	4.24	2.77	0.29	0.04	0.02	0.01	< 0.01	1.56	101.1

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July-13-12

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Date Rec. : 10 July 2012
LR Report: **CA10220-JUL12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
5: E11-112-1 CL-Geochem	08-Jun-12	65.8	16.8	1.69	0.73	3.67	5.70	1.61	0.51	< 0.01	0.03	0.02	< 0.01	3.55	100.1
6: E11-112-2 CL-Geochem	08-Jun-12	60.3	14.1	7.39	4.25	4.95	3.07	1.76	0.70	0.04	0.06	0.03	0.02	3.50	100.1
7: E11-112-3 CL-Geochem	08-Jun-12	75.2	12.9	1.74	0.41	1.93	4.51	1.50	0.16	0.03	< 0.01	0.02	< 0.01	1.47	99.8
8: E11-112-4 CL-Geochem	08-Jun-12	71.1	12.6	2.33	1.40	4.22	3.83	1.02	0.48	0.02	0.02	0.01	< 0.01	3.70	100.7
9: E11-053-1 CL-Geochem	08-Jun-12	60.6	14.2	5.37	2.60	5.93	3.51	1.61	1.17	0.02	0.05	0.02	0.01	5.05	100.1
10: E11-053-2 CL-Geochem	08-Jun-12	56.5	12.7	7.80	5.48	7.50	4.04	1.13	0.84	0.19	0.10	0.03	0.02	3.85	100.1
11: E11-053-3 CL-Geochem	08-Jun-12	52.0	12.6	10.3	7.78	8.33	2.73	2.68	0.81	0.42	0.17	0.05	0.03	2.27	100.1
12: E11-052-1 CL-Geochem	08-Jun-12	72.9	12.8	2.18	0.90	2.44	5.75	0.47	0.31	0.05	< 0.01	< 0.01	< 0.01	2.61	100.4
13: E11-052-2 CL-Geochem	08-Jun-12	50.2	13.7	8.95	3.59	8.68	3.62	0.55	2.50	0.29	0.13	< 0.01	< 0.01	7.76	100.0
14: E11-052-3 CL-Geochem	08-Jun-12	71.6	11.6	2.65	1.30	3.56	3.63	1.35	0.42	0.08	0.03	0.01	0.01	3.30	99.6
15: E11-110-1 CL-Geochem	08-Jun-12	75.0	12.5	1.57	0.38	2.02	4.06	1.81	0.26	0.03	0.01	0.01	< 0.01	2.40	100.1
16: E11-110-2 CL-Geochem	08-Jun-12	51.0	15.5	12.7	5.24	8.64	2.91	0.73	1.51	0.20	0.15	0.02	0.05	2.35	101.0
17: E11-062-1 CL-Geochem	08-Jun-12	75.7	12.1	2.09	0.39	1.79	4.19	1.59	0.26	0.03	< 0.01	< 0.01	< 0.01	2.07	100.3
18: E11-062-2 CL-Geochem	08-Jun-12	51.5	16.6	8.91	3.59	7.23	3.76	1.50	1.16	0.07	0.07	0.01	0.04	6.31	100.8
19: E11-062-3 CL-Geochem	08-Jun-12	50.8	13.6	8.95	5.20	6.93	3.84	2.68	0.89	0.60	0.10	0.02	0.03	5.76	99.5
20: E11-062-4 CL-Geochem	08-Jun-12	73.7	13.1	2.61	0.61	2.44	4.35	1.31	0.33	0.06	0.02	0.08	< 0.01	1.62	100.2
21: E11-111-1 CL-Geochem	08-Jun-12	49.9	19.0	9.45	4.09	7.81	4.39	0.67	0.93	0.01	0.09	0.01	0.03	4.37	100.7
22: E11-100-1 CL-Geochem	08-Jun-12	77.3	11.3	1.52	0.20	1.82	3.08	1.77	0.36	< 0.01	< 0.01	0.02	< 0.01	1.86	99.3
23: E11-100-2 CL-Geochem	08-Jun-12	54.1	15.2	7.10	3.42	7.56	3.77	0.88	1.38	0.19	0.09	0.01	0.02	6.50	100.2
24: E11-100-3 CL-Geochem	08-Jun-12	61.0	15.1	6.27	3.21	5.59	3.77	1.22	0.60	0.09	0.07	0.01	0.02	3.18	100.2

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LR Report : **CA10220-JUL12**

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
25: E11-107-1 CL-Geochem	08-Jun-12	67.6	15.5	2.19	1.20	3.60	4.30	2.00	0.82	0.01	< 0.01	0.02	< 0.01	2.98	100.2
26: E11-107-2 CL-Geochem	08-Jun-12	69.7	13.5	3.80	2.03	2.22	4.77	0.97	0.59	0.02	0.03	0.01	0.01	2.52	100.2
27: Bulk Sample-1 CL-Geochem	08-Jun-12	77.4	12.3	1.39	0.49	0.72	4.98	0.89	0.30	0.04	< 0.01	0.02	< 0.01	1.46	100.0
28: Bulk Sample-2 CL-Geochem	08-Jun-12	79.4	11.8	0.83	0.25	0.52	5.17	0.69	0.32	0.02	< 0.01	0.02	< 0.01	1.10	100.0

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July-24-12

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Date Rec. : 10 July 2012
LR Report: **CA10221-JUL12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
5: E11-61-1 CL-Geochem	08-Jun-12	49.4	16.5	11.2	5.94	8.59	3.05	0.80	0.85	0.05	0.11	0.04	0.03	3.25	99.8
6: E11-61-2 CL-Geochem	08-Jun-12	58.8	14.2	7.57	4.44	5.15	3.00	1.80	0.71	0.04	0.06	0.03	0.02	3.38	99.2
7: E11-81-1 CL-Geochem	08-Jun-12	65.7	14.8	2.75	0.90	4.11	3.62	2.19	0.36	0.10	0.02	< 0.01	0.01	4.77	99.4
8: E11-81-2 CL-Geochem	08-Jun-12	74.4	12.2	2.93	0.57	1.10	4.48	1.30	0.28	0.04	< 0.01	0.03	< 0.01	1.64	99.0
9: E11-81-3 CL-Geochem	08-Jun-12	74.1	11.2	2.56	1.10	1.52	4.22	1.01	0.26	0.06	0.02	0.01	< 0.01	2.19	98.2
10: E11-81-4 CL-Geochem	08-Jun-12	73.9	12.1	2.56	0.42	1.53	4.57	1.47	0.29	0.04	< 0.01	0.02	< 0.01	1.86	98.7
11: E11-54-1 33.87-36.14 m CL-Geochem	08-Jun-12	68.0	12.3	4.29	2.35	3.87	4.41	0.34	0.75	0.02	0.04	0.03	< 0.01	3.52	100.0
12: E11-54-2 CL-Geochem	08-Jun-12	68.0	12.8	4.11	2.32	3.71	4.35	0.56	0.51	0.02	0.03	0.02	< 0.01	3.54	100.0
13: E11-54-3 CL-Geochem	08-Jun-12	76.1	12.5	1.04	0.39	1.39	5.26	0.82	0.27	0.02	< 0.01	0.02	< 0.01	1.41	99.2
14: E11-54-4 CL-Geochem	08-Jun-12	69.2	15.9	0.64	0.31	2.37	5.10	2.23	0.65	< 0.01	< 0.01	0.04	< 0.01	2.80	99.2
15: E11-59-1 CL-Geochem	08-Jun-12	74.3	12.1	2.46	0.47	1.15	4.15	2.64	0.23	0.02	< 0.01	0.02	< 0.01	1.28	98.8
16: E11-59-2 CL-Geochem	08-Jun-12	53.7	13.1	14.7	3.50	6.05	3.58	1.88	1.72	0.34	0.18	< 0.01	0.05	0.84	99.6
17: E11-95-1 CL-Geochem	08-Jun-12	55.0	13.7	10.5	3.65	7.54	3.72	0.58	1.58	0.51	0.18	0.01	0.02	2.42	99.4
18: E11-95-2 CL-Geochem	08-Jun-12	72.1	13.3	2.39	0.79	2.17	4.45	1.45	0.22	0.04	0.01	0.02	< 0.01	2.53	99.5
19: E11-97-1 CL-Geochem	08-Jun-12	61.8	15.7	6.51	3.09	5.77	3.48	1.09	0.59	0.09	0.09	0.02	0.01	1.64	99.8
20: E11-97-2 CL-Geochem	08-Jun-12	74.0	12.5	2.10	0.45	1.64	3.91	2.36	0.20	0.02	0.02	0.02	< 0.01	2.20	99.5
21: E11-138-1 CL-Geochem	08-Jun-12	77.6	11.0	0.79	0.10	2.90	2.63	1.64	0.23	< 0.01	< 0.01	0.03	< 0.01	3.17	100.2
22: E11-138-2 CL-Geochem	08-Jun-12	51.2	13.4	7.89	5.08	7.52	5.13	0.04	0.76	0.57	0.09	< 0.01	0.03	7.48	99.2
23: E11-138-3 CL-Geochem	08-Jun-12	60.9	10.3	5.26	5.39	6.21	2.75	0.36	0.47	0.18	0.07	0.06	0.02	6.71	98.6
24: E11-77-1 CL-Geochem	08-Jun-12	70.9	13.0	2.11	0.75	2.81	5.36	0.57	0.31	0.06	0.03	0.02	< 0.01	2.22	98.2
25: E11-77-2 CL-Geochem	08-Jun-12	65.2	13.5	4.09	1.92	4.62	5.49	0.44	0.56	0.08	0.05	0.03	0.01	4.37	100.3

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LR Report : **CA10221-JUL12**

Sample ID	Sample Date & Time	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI %	Sum %
26: E10-38-1 CL-Geochem	08-Jun-12	49.5	18.9	8.90	4.95	9.45	3.29	0.97	0.79	0.07	0.12	0.03	0.02	2.93	99.9
27: E10-38-2 CL-Geochem	08-Jun-12	47.4	13.4	11.7	8.23	10.0	2.50	0.90	0.83	0.19	0.16	0.05	0.04	3.76	99.2
28: E10-38-3 CL-Geochem	08-Jun-12	47.2	14.8	12.9	8.00	10.1	1.54	0.30	0.91	0.07	0.18	0.03	0.05	3.51	99.6
29: E11-91-1 CL-Geochem	08-Jun-12	73.1	12.5	2.69	1.04	2.69	4.92	0.65	0.33	0.10	0.02	0.02	< 0.01	1.26	99.4
30: E11-91-2 CL-Geochem	08-Jun-12	51.6	13.3	14.6	5.52	8.21	2.67	1.33	1.15	0.14	0.22	< 0.01	0.06	1.23	100.1
31: E11-91-3 CL-Geochem	08-Jun-12	75.9	12.4	1.04	0.42	1.79	5.20	0.80	0.38	0.01	< 0.01	0.04	< 0.01	2.25	100.2
32: E11-72-1 CL-Geochem	08-Jun-12	71.9	14.6	1.11	0.32	2.17	5.37	1.30	0.43	0.02	< 0.01	0.01	< 0.01	1.84	99.1
33: E10-31-1 CL-Geochem	08-Jun-12	73.1	12.5	3.02	0.48	2.34	4.99	0.64	0.33	0.07	< 0.01	0.02	< 0.01	1.80	99.4
34: E10-31-2 CL-Geochem	08-Jun-12	74.1	11.9	1.84	0.76	2.51	3.36	1.62	0.28	0.04	0.01	0.03	< 0.01	2.71	99.2
35: E10-31-3 CL-Geochem	08-Jun-12	58.4	12.6	6.13	4.08	5.41	4.84	0.29	0.61	0.36	0.06	0.04	0.02	5.87	98.7
36: E10-31-4 CL-Geochem	08-Jun-12	74.8	11.8	2.27	1.05	1.59	4.47	0.98	0.37	0.01	0.01	0.02	< 0.01	2.07	99.4
37: E10-23-1 CL-Geochem	08-Jun-12	75.6	11.9	1.24	0.39	2.58	4.40	0.96	0.26	0.02	< 0.01	0.02	< 0.01	2.62	100.0
38: E10-46-1 CL-Geochem	08-Jun-12	72.7	12.1	3.65	0.29	1.44	4.22	2.54	0.30	0.05	0.02	0.03	< 0.01	1.66	98.9
39: E10-46-2 CL-Geochem	08-Jun-12	61.4	18.3	1.01	0.21	4.43	10.0	0.39	0.38	0.05	< 0.01	< 0.01	< 0.01	3.44	99.6
40: E10-13-1 CL-Geochem	08-Jun-12	46.7	16.3	10.7	8.55	8.13	2.44	0.83	1.15	0.17	0.13	0.05	0.03	4.36	99.5
41: E10-13-2 CL-Geochem	08-Jun-12	47.7	14.2	9.15	6.37	7.51	4.05	0.61	0.98	0.56	0.06	0.03	0.04	8.11	99.3
42: E10-13-3 CL-Geochem	08-Jun-12	71.5	12.8	2.20	0.61	2.53	4.52	1.54	0.29	0.06	< 0.01	0.03	< 0.01	2.84	98.9
43: E10-13-4 CL-Geochem	08-Jun-12	71.9	10.7	3.36	1.67	2.53	4.01	0.56	0.30	< 0.01	0.02	0.01	< 0.01	3.02	98.2
44: CL10-3-1 CL-Geochem	08-Jun-12	65.2	11.9	7.24	0.99	2.59	0.75	3.30	0.41	0.03	0.01	0.02	< 0.01	3.70	96.1
45: E10-42-1 CL-Geochem	08-Jun-12	72.6	13.3	2.80	0.68	2.32	3.89	1.58	0.23	0.05	< 0.01	0.02	< 0.01	2.78	100.3
46: E10-42-2 CL-Geochem	08-Jun-12	67.9	13.2	5.15	1.45	2.89	3.76	1.65	0.40	0.08	0.04	0.03	0.01	2.04	98.5
47: E10-42-3 CL-Geochem	08-Jun-12	71.9	13.2	2.20	1.11	2.00	4.79	1.27	0.33	0.04	< 0.01	0.02	< 0.01	2.50	99.4
48: E11-66-1 CL-Geochem	08-Jun-12	67.1	11.7	4.77	2.00	2.66	3.57	0.36	0.68	0.15	0.08	0.01	0.02	7.56	100.6
49: E11-54-1 212.3-215.5m CL-Geochem	08-Jun-12	79.1	9.54	2.35	0.95	0.54	3.54	1.44	0.28	0.09	< 0.01	0.04	< 0.01	2.86	100.7
50: E11-51-1 CL-Geochem	08-Jun-12	70.2	12.3	3.68	1.92	2.81	4.53	0.62	0.43	0.02	0.04	0.01	< 0.01	2.58	99.2

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OnLine LIMS

SHAKE FLASK EXTRACTION

Côté Gold Project
Geochemical Characterization Report
December 2013
Project #TC121522

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SFE Leach (3:1 ratio L/S)

Project : IAMGold Cote Lake

December-04-12

Knight Piesold Limited
Attn : Steve Aiken

1650 Main Street West
North Bay, ON
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Date Rec. : 13 November 2012
LR Report: **CA10188-NOV12**
Reference: NB101-497/4 NB-49

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E10-036 ARD-1	6: E10-036 ARD-2	7: E10-036 ARD-3	8: E10-045 ARD-4	9: E11-066 ARD-5	10: E11-066 ARD-6	11: E11-082 ARD-7	12: E11-082 ARD-8	13: E11-082 ARD-9	14: E11-087 ARD-10	15: E11-087 ARD-11
Sample Date & Time			10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12
Sample weight [g]	29-Nov-12	09:43	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	29-Nov-12	09:43	750	750	750	750	750	750	750	750	750	750	750
Initial pH [units]	29-Nov-12	09:43	9.81	9.68	9.77	9.76	9.44	9.68	9.54	9.69	9.71	9.74	9.62
Final pH [units]	29-Nov-12	09:43	9.70	9.63	9.56	9.66	9.64	9.74	9.45	9.99	9.76	9.61	9.72
pH [no unit]	30-Nov-12	11:04	8.77	8.49	8.54	8.12	9.07	9.32	8.71	9.38	9.37	8.98	8.93
Alkalinity [mg/L as CaCO3]	30-Nov-12	11:04	40	39	43	38	37	39	35	49	40	42	42
Conductivity [µS/cm]	30-Nov-12	11:04	83	86	89	83	88	87	142	109	88	92	90
Chloride [mg/L]	03-Dec-12	16:00	3.4	2.3	2.4	2.6	2.9	2.5	2.6	2.0	< 2	< 2	2.1
Sulphate [mg/L]	03-Dec-12	13:23	< 2	< 2	< 2	< 2	< 2	< 2	24	< 2	< 2	< 2	< 2
Mercury [mg/L]	04-Dec-12	08:48	0.00002	0.00003	0.00002	0.00002	0.00003	0.00003	0.00002	0.00002	0.00003	0.00002	0.00003
Silver [mg/L]	30-Nov-12	14:42	0.00018	0.00013	0.00005	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	29-Nov-12	15:20	0.60	0.55	1.20	0.64	1.09	0.39	0.54	0.56	0.81	0.87	1.25
Arsenic [mg/L]	30-Nov-12	14:41	0.0028	0.0032	0.0024	0.0014	0.0042	0.0023	0.0022	0.0034	0.0009	0.0012	0.0026
Barium [mg/L]	30-Nov-12	14:41	0.00065	0.00021	0.00052	0.00090	0.00077	0.00085	0.00151	0.00272	0.00096	0.00105	0.00737
Boron [mg/L]	30-Nov-12	14:41	0.0988	0.0629	0.0827	0.0667	0.0676	0.0517	0.0526	0.0842	0.0733	0.0651	0.0833
Beryllium [mg/L]	30-Nov-12	14:41	< 0.00002	< 0.00002	< 0.00002	0.00003	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00002
Bismuth [mg/L]	30-Nov-12	14:41	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	29-Nov-12	15:20	3.90	4.75	4.49	4.22	3.51	4.24	7.94	2.60	3.61	4.66	4.05
Cadmium [mg/L]	30-Nov-12	14:41	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000013	< 0.000003	0.000003
Cobalt [mg/L]	30-Nov-12	14:41	0.000088	0.000098	0.000084	0.000107	0.000272	0.000107	0.000101	0.000172	0.000107	0.000117	0.000194
Chromium [mg/L]	30-Nov-12	14:41	< 0.0005	< 0.0005	0.0005	< 0.0005	< 0.0005	0.0006	< 0.0005	0.0017	< 0.0005	< 0.0005	0.0007
Copper [mg/L]	30-Nov-12	14:41	0.0012	0.0009	0.0007	0.0022	0.0009	0.0007	0.0005	< 0.0005	< 0.0005	0.0005	0.0008

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SFE Leach (3:1 ratio L/S)

Project : IAMGold Cote Lake

LR Report : **CA10188-NOV12**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E10-036 ARD-1	6: E10-036 ARD-2	7: E10-036 ARD-3	8: E10-045 ARD-4	9: E11-066 ARD-5	10: E11-066 ARD-6	11: E11-082 ARD-7	12: E11-082 ARD-8	13: E11-082 ARD-9	14: E11-087 ARD-10	15: E11-087 ARD-11
Iron [mg/L]	29-Nov-12	15:20	0.011	0.006	< 0.003	0.019	0.397	0.012	0.005	0.186	0.025	0.006	0.348
Potassium [mg/L]	29-Nov-12	15:20	1.11	1.28	3.11	0.757	0.296	2.77	8.20	9.29	2.60	6.89	2.45
Lithium [mg/L]	30-Nov-12	14:40	0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001
Magnesium [mg/L]	29-Nov-12	15:20	0.235	0.301	0.168	0.316	0.566	0.528	1.22	0.286	0.342	0.272	0.447
Manganese [mg/L]	30-Nov-12	14:40	0.00038	0.00026	0.00022	0.00106	0.00357	0.00030	0.00012	0.00323	0.00045	0.00015	0.00443
Molybdenum [mg/L]	30-Nov-12	14:40	0.00173	0.00180	0.00064	0.00095	0.00097	0.00052	0.00785	0.00054	0.00019	0.00146	0.00028
Sodium [mg/L]	29-Nov-12	15:20	14.2	13.7	13.8	14.7	16.1	13.1	14.0	15.7	14.7	10.8	15.3
Nickel [mg/L]	30-Nov-12	14:39	0.0001	0.0003	0.0001	0.0001	0.0003	0.0001	0.0002	0.0003	0.0001	0.0007	0.0003
Lead [mg/L]	30-Nov-12	14:39	< 0.00002	< 0.00002	< 0.00002	0.00003	0.00011	0.00003	0.00003	0.00006	< 0.00002	< 0.00002	0.00007
Silicon [mg/L]	29-Nov-12	15:19	5.71	5.44	3.86	8.46	6.24	4.45	3.70	6.30	4.51	3.77	5.99
Antimony [mg/L]	30-Nov-12	14:39	0.0008	0.0008	0.0010	0.0008	0.0009	0.0009	0.0010	0.0011	0.0006	0.0010	0.0008
Selenium [mg/L]	30-Nov-12	14:39	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	30-Nov-12	14:39	0.00003	0.00003	0.00007	0.00006	0.00009	0.00006	0.00002	< 0.00001	< 0.00001	< 0.00001	0.00004
Strontium [mg/L]	29-Nov-12	15:19	0.0131	0.0161	0.0076	0.0054	0.0092	0.0141	0.0208	0.0084	0.0117	0.0082	0.0069
Titanium [mg/L]	30-Nov-12	14:39	0.0010	0.0005	0.0012	0.0086	0.0270	0.0007	0.0006	0.0117	0.0018	0.0005	0.0241
Thallium [mg/L]	30-Nov-12	14:39	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	30-Nov-12	14:39	0.000337	0.000352	0.00156	0.000615	0.000391	0.000051	0.000531	0.000051	0.000074	0.00128	0.000433
Vanadium [mg/L]	30-Nov-12	14:39	0.00222	0.00223	0.00495	0.00079	0.00777	0.0105	0.00176	0.0163	0.00800	0.00496	0.00412
Zinc [mg/L]	30-Nov-12	14:39	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001

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SFE Leach (3:1 ratio L/S)

Project : IAMGold Cote Lake

December-04-12

Knight Piesold Limited
Attn : Steve Aiken

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Date Rec. : 13 November 2012
LR Report: **CA10188-NOV12**
Reference: NB101-497/4 NB-49

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	16: E12-217 ARD-12	17: E11-096 ARD-13	18: E11-096 ARD-14	19: E11-096 ARD-15	20: E11-098 ARD-16	21: E11-098 ARD-17	22: E11-098 ARD-18	23: E11-099 ARD-19	24: E11-099 ARD-20	25: E11-114 ARD-21	26: E11-114 ARD-22	27: E10-038 ARD-23	28: E11-062 ARD-24
Sample Date & Time	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750	750
Initial pH [units]	9.71	9.77	9.56	9.36	9.69	9.81	9.76	9.53	9.83	9.55	9.77	9.49	9.60
Final pH [units]	9.78	9.76	9.70	10.04	9.68	9.88	9.82	9.66	9.58	9.70	9.72	9.69	9.74
pH [no unit]	8.26	9.21	9.13	9.30	9.03	9.54	8.77	8.97	9.22	8.92	9.07	8.93	9.28
Alkalinity [mg/L as CaCO3]	35	39	41	45	39	51	42	46	37	40	42	47	37
Conductivity [µS/cm]	73	89	93	98	87	116	95	98	87	87	88	93	80
Chloride [mg/L]	< 2	< 2	2.5	2.2	3.3	2.2	< 2	2.4	2.7	3.1	< 2	2.2	2.5
Sulphate [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Mercury [mg/L]	0.00002	0.00003	0.00003	0.00003	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00003
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00051	0.00004	0.00004	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.69	0.66	0.69	1.10	1.13	0.64	0.82	1.39	0.52	0.74	0.67	1.42	0.49
Arsenic [mg/L]	0.0005	0.0007	0.0036	0.0014	0.0051	0.0020	0.0007	0.0013	0.0009	0.0021	0.0004	0.0014	0.0014
Barium [mg/L]	0.00030	0.00058	0.00100	0.00400	0.00372	0.00128	0.00065	0.00581	0.00036	0.00067	0.00066	0.00367	0.00031
Boron [mg/L]	0.0714	0.0458	0.0506	0.0626	0.0529	0.0530	0.0575	0.0784	0.0418	0.0533	0.0438	0.0676	0.0418
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00002	< 0.00002	< 0.00002	0.00007	< 0.00002	< 0.00002	< 0.00002	0.00008	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	0.00009	< 0.00001
Calcium [mg/L]	3.87	4.63	5.15	2.00	4.40	3.19	3.94	3.90	4.78	4.69	4.06	3.58	4.40
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	0.000006	0.000003	0.000030	< 0.000003	0.000005	0.000003	0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000075	0.000108	0.000120	0.000791	0.000116	0.000092	0.000094	0.000183	0.000070	0.000091	0.000084	0.000132	0.000090
Chromium [mg/L]	< 0.0005	< 0.0005	< 0.0005	0.0006	< 0.0005	< 0.0005	< 0.0005	0.0007	< 0.0005	< 0.0005	< 0.0005	0.0007	< 0.0005
Copper [mg/L]	0.0005	< 0.0005	0.0038	0.0013	0.0015	< 0.0005	< 0.0005	0.0020	< 0.0005	0.0011	< 0.0005	0.0013	0.0006

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SFE Leach (3:1 ratio L/S)

Project : IAMGold Cote Lake

LR Report : **CA10188-NOV12**

Analysis	16: E12-217 ARD-12	17: E11-096 ARD-13	18: E11-096 ARD-14	19: E11-096 ARD-15	20: E11-098 ARD-16	21: E11-098 ARD-17	22: E11-098 ARD-18	23: E11-099 ARD-19	24: E11-099 ARD-20	25: E11-114 ARD-21	26: E11-114 ARD-22	27: E10-038 ARD-23	28: E11-062 ARD-24
Iron [mg/L]	0.008	0.006	0.084	1.24	0.076	0.024	0.018	0.288	< 0.003	0.058	0.006	0.143	< 0.003
Potassium [mg/L]	0.617	1.45	0.773	0.772	1.48	11.0	5.47	2.03	0.627	0.664	5.63	1.87	0.502
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	0.002	< 0.001	0.001	< 0.001	0.002	< 0.001
Magnesium [mg/L]	0.454	0.442	0.454	0.511	0.282	0.256	0.359	0.394	0.738	0.329	0.433	0.396	0.416
Manganese [mg/L]	0.00016	0.00014	0.00080	0.0289	0.00172	0.00033	0.00023	0.00378	0.00007	0.00053	0.00012	0.00294	0.00014
Molybdenum [mg/L]	0.00011	0.00066	0.00149	0.00091	0.00070	0.114	0.00018	0.00148	0.00131	0.00033	0.00020	0.00038	0.00020
Sodium [mg/L]	12.4	13.3	14.9	20.9	15.7	15.4	14.2	17.3	13.4	14.6	12.0	16.9	13.0
Nickel [mg/L]	< 0.0001	0.0002	0.0002	0.0009	0.0002	< 0.0001	0.0001	0.0003	< 0.0001	< 0.0001	< 0.0001	0.0002	< 0.0001
Lead [mg/L]	< 0.00002	0.00002	0.00021	0.00061	0.00052	0.00005	0.00002	0.00025	0.00002	0.00009	0.00004	0.00020	0.00005
Silicon [mg/L]	3.44	4.07	5.45	7.92	7.19	4.14	3.64	6.59	2.65	4.70	2.74	6.21	5.46
Antimony [mg/L]	0.0005	0.0008	0.0008	0.0008	0.0008	0.0008	0.0006	0.0008	0.0007	0.0006	0.0006	0.0009	0.0006
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00006	0.00014	0.00018	0.00011	0.00002	< 0.00001	0.00001	0.00023	0.00005	0.00019	0.00008	0.00034	< 0.00001
Strontium [mg/L]	0.0102	0.0136	0.0099	0.0080	0.0063	0.0104	0.0141	0.0058	0.0126	0.0051	0.0069	0.0091	0.0063
Titanium [mg/L]	0.0003	0.0007	0.0081	0.0717	0.0139	0.0011	0.0008	0.0349	< 0.0001	0.0036	0.0006	0.0171	0.0001
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000016	0.000262	0.000158	0.000036	0.000411	0.000111	0.000006	0.000469	0.000022	0.000196	0.000015	0.000463	0.000149
Vanadium [mg/L]	0.0151	0.00910	0.00433	0.0510	0.00202	0.0127	0.0146	0.00156	0.00382	0.00538	0.00656	0.00200	0.00794
Zinc [mg/L]	< 0.001	< 0.001	< 0.001	0.003	0.001	< 0.001	< 0.001	0.002	< 0.001	0.003	0.002	0.001	< 0.001

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SFE Leach (3:1 ratio L/S)

Project : IAMGold Cote Lake

December-04-12

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Date Rec. : 13 November 2012
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CERTIFICATE OF ANALYSIS

Final Report

Analysis	29: E10-30 ARD-25	30: E10-028 ARD-26	31: E11-049 ARD-27	32: E11-049 ARD-28	33: E11-061 ARD-29	34: E12-206 ARD-30	35: E12-179 ARD-31	36: E11-048 ARD-32	37: E11-048 ARD-33	38: E11-075 ARD-34	39: E11-075 ARD-35	40: E11-071 ARD-36
Sample Date & Time	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Initial pH [units]	9.59	9.46	9.62	9.56	8.70	9.83	9.66	9.72	9.79	9.78	9.81	9.74
Final pH [units]	9.69	9.74	9.74	9.03	8.75	9.60	9.59	9.68	9.58	9.75	9.86	9.53
pH [no unit]	8.87	9.30	9.47	8.29	8.86	9.09	9.27	8.21	7.83	8.37	8.53	8.05
Alkalinity [mg/L as CaCO3]	44	38	41	47	62	43	38	42	34	41	47	41
Conductivity [µS/cm]	98	86	94	128	129	86	89	99	91	89	98	96
Chloride [mg/L]	2.3	2.9	3.4	< 2	2.0	< 2	2.1	2.8	5.8	2.8	< 2	< 2
Sulphate [mg/L]	< 2	< 2	< 2	6.5	< 2	< 2	< 2	2.1	< 2	< 2	< 2	2.1
Mercury [mg/L]	0.00004	0.00003	0.00003	0.00002	0.00003	0.00003	0.00003	< 0.00001	0.00001	0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	0.00003	< 0.00001	< 0.00001	< 0.00001	0.00046	0.00003	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	1.02	0.75	0.48	1.05	0.18	1.06	0.67	0.62	0.13	0.70	0.55	0.60
Arsenic [mg/L]	0.0051	0.0072	0.0143	0.0058	0.0257	0.0003	0.0122	0.0032	0.0012	0.0038	0.0014	0.0015
Barium [mg/L]	0.00162	0.00096	0.00054	0.00258	0.00133	0.00049	0.00047	0.00066	0.00049	0.00045	0.00045	0.00071
Boron [mg/L]	0.0552	0.0501	0.0520	0.0780	0.300	0.0559	0.0424	0.0524	0.0345	0.0488	0.0833	0.0516
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	4.89	4.77	4.38	7.79	8.24	3.92	5.28	4.53	6.56	3.92	2.60	5.45
Cadmium [mg/L]	< 0.000003	0.000004	< 0.000003	0.000004	0.000003	< 0.000003	0.000004	0.000007	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000208	0.000140	0.000106	0.000112	0.000181	0.000092	0.000160	0.000147	0.000161	0.000149	0.000175	0.000167
Chromium [mg/L]	0.0010	0.0005	< 0.0005	0.0005	0.0016	< 0.0005	< 0.0005	0.0006	< 0.0005	0.0006	0.0006	0.0006
Copper [mg/L]	0.0016	0.0008	< 0.0005	< 0.0005	0.0093	< 0.0005	< 0.0005	0.0013	0.0010	0.0006	< 0.0005	< 0.0005

OnLine LIMS

SGS Canada Inc.
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Phone: 705-652-2000 FAX: 705-652-6365

SFE Leach (3:1 ratio L/S)

Project : IAMGold Cote Lake

LR Report : **CA10188-NOV12**

Analysis	29: E10-30 ARD-25	30: E10-028 ARD-26	31: E11-049 ARD-27	32: E11-049 ARD-28	33: E11-061 ARD-29	34: E12-206 ARD-30	35: E12-179 ARD-31	36: E11-048 ARD-32	37: E11-048 ARD-33	38: E11-075 ARD-34	39: E11-075 ARD-35	40: E11-071 ARD-36
Iron [mg/L]	0.171	0.139	0.026	0.047	0.168	0.009	0.012	0.045	< 0.003	0.006	0.072	0.004
Potassium [mg/L]	1.75	0.745	1.12	15.1	0.728	3.22	2.15	1.54	1.67	1.50	2.14	2.83
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	0.001	0.004	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	0.453	0.578	0.441	0.457	0.942	0.445	0.670	0.381	0.534	0.380	0.360	0.770
Manganese [mg/L]	0.00191	0.00161	0.00037	0.00124	0.00421	0.00012	0.00019	0.00036	0.00011	0.00018	0.00116	0.00013
Molybdenum [mg/L]	0.00061	0.00044	0.00024	0.00142	0.00386	0.00019	0.00054	0.00078	0.0104	0.00069	0.00048	0.00026
Sodium [mg/L]	15.8	14.9	15.1	10.2	20.5	14.0	13.5	14.9	9.93	13.8	16.6	11.8
Nickel [mg/L]	0.0002	0.0002	0.0001	0.0002	0.0004	< 0.0001	0.0003	0.0002	0.0002	0.0001	0.0002	0.0001
Lead [mg/L]	0.00011	0.00006	0.00003	0.00014	0.00008	0.00006	0.00027	0.00007	< 0.00002	< 0.00002	0.00002	0.00003
Silicon [mg/L]	5.33	5.19	4.89	2.65	13.4	1.96	3.12	4.49	5.88	3.48	3.90	1.97
Antimony [mg/L]	0.0010	0.0009	0.0007	0.0011	0.0007	0.0005	0.0009	0.0009	0.0008	0.0010	0.0010	0.0006
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00009	0.00002	0.00001	0.00004	0.00003	< 0.00001	< 0.00001	0.00009	0.00004	0.00007	0.00004	0.00003
Strontium [mg/L]	0.0063	0.0086	0.0122	0.0069	0.0139	0.0126	0.0132	0.0115	0.0153	0.0108	0.0164	0.0191
Titanium [mg/L]	0.0177	0.0110	0.0009	0.0028	0.0023	0.0004	0.0003	0.0029	< 0.0001	0.0003	0.0028	0.0004
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000441	0.000185	0.000118	0.00155	0.000087	0.000008	0.000041	0.000596	0.000119	0.000117	0.000011	0.000010
Vanadium [mg/L]	0.00441	0.00673	0.00447	0.00211	0.00416	0.00512	0.00361	0.00291	0.00405	0.00966	0.0328	0.00392
Zinc [mg/L]	0.001	0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

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SFE Leach (3:1 ratio L/S)

Project : IAMGold Cote Lake

Knight Piesold Limited
Attn : Steve Aiken

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165 ext. 241
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December-04-12

Date Rec. : 13 November 2012
LR Report: **CA10188-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	41: E11-071 ARD-37	42: E11-078 ARD-38	43: E11-179 ARD-39	44: E11-120 ARD-40	45: E11-120 ARD-41	46: E11-120 ARD-42	47: E11-122 ARD-43	48: E11-122 ARD-44	49: E11-140 ARD-45	50: E11-145 ARD-46	51: E12-198 ARD-47	52: E11-129 ARD-48
Sample Date & Time	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Initial pH [units]	9.74	9.36	8.23	9.77	9.78	9.85	9.58	9.81	9.65	9.54	9.70	9.64
Final pH [units]	9.93	9.69	8.87	9.60	9.65	9.22	9.77	9.55	9.68	9.95	10.05	9.66
pH [no unit]	7.91	8.24	8.21	8.28	7.99	8.20	8.11	8.29	8.12	8.62	8.34	8.07
Alkalinity [mg/L as CaCO3]	36	41	65	45	41	56	46	46	39	47	37	40
Conductivity [µS/cm]	86	87	140	96	100	125	97	111	87	99	81	84
Chloride [mg/L]	< 2	< 2	< 2	< 2	5.5	4.1	3.5	4.4	3.2	< 2	< 2	< 2
Sulphate [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Mercury [mg/L]	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00001	< 0.00001	0.00008	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.42	0.71	0.54	1.06	0.36	0.49	1.11	0.95	0.72	1.63	0.15	0.90
Arsenic [mg/L]	0.0018	0.0022	0.0020	0.0009	0.0012	0.0008	0.0029	0.0020	0.0032	0.0072	0.0018	0.0032
Barium [mg/L]	0.00119	0.00115	0.00707	0.00224	0.00050	0.00130	0.00160	0.00059	0.00103	0.00796	0.00050	0.00048
Boron [mg/L]	0.0482	0.0529	0.257	0.0608	0.0450	0.0427	0.0637	0.0422	0.0493	0.0631	0.0632	0.0467
Beryllium [mg/L]	< 0.00002	< 0.00002	0.00003	0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	0.00010	0.00004	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	3.49	4.02	9.45	4.25	5.06	6.85	3.50	5.24	3.71	2.71	4.98	4.19
Cadmium [mg/L]	< 0.000003	< 0.000003	0.000035	0.000019	0.000022	0.000042	0.000005	< 0.000003	0.000005	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000155	0.000241	0.00187	0.000217	0.000183	0.000175	0.000199	0.000195	0.000207	0.000402	0.000207	0.000182
Chromium [mg/L]	< 0.0005	< 0.0005	0.0017	0.0006	< 0.0005	0.0007	0.0007	0.0005	< 0.0005	0.0011	0.0006	< 0.0005
Copper [mg/L]	< 0.0005	0.0031	0.0220	0.0022	0.0006	0.0005	0.0006	0.0005	0.0008	0.0006	< 0.0005	0.0006

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SFE Leach (3:1 ratio L/S)

Project : IAMGold Cote Lake

LR Report : **CA10188-NOV12**

Analysis	41: E11-071 ARD-37	42: E11-078 ARD-38	43: E11-179 ARD-39	44: E11-120 ARD-40	45: E11-120 ARD-41	46: E11-120 ARD-42	47: E11-122 ARD-43	48: E11-122 ARD-44	49: E11-140 ARD-45	50: E11-145 ARD-46	51: E12-198 ARD-47	52: E11-129 ARD-48
Iron [mg/L]	0.026	0.246	0.234	0.238	0.006	< 0.003	0.111	0.004	0.059	0.553	0.018	0.012
Potassium [mg/L]	4.59	0.549	0.965	2.77	0.442	9.92	1.45	6.22	1.10	5.38	1.77	1.96
Lithium [mg/L]	< 0.001	< 0.001	0.016	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	0.002	< 0.001	0.001
Magnesium [mg/L]	0.328	0.534	0.819	0.365	0.635	1.77	0.282	0.646	0.311	0.376	0.616	0.325
Manganese [mg/L]	0.00047	0.00192	0.0318	0.00144	0.00027	0.00035	0.00103	0.00014	0.00048	0.00533	0.00039	0.00021
Molybdenum [mg/L]	0.00023	0.00304	0.00104	0.00058	0.00042	0.00036	0.00218	0.00151	0.00051	0.00039	0.00007	0.00036
Sodium [mg/L]	12.6	14.3	21.8	15.2	15.0	9.47	16.7	13.1	14.1	14.7	9.94	13.2
Nickel [mg/L]	0.0002	0.0002	0.0014	0.0002	0.0002	0.0003	0.0002	0.0002	0.0002	0.0007	0.0002	0.0001
Lead [mg/L]	< 0.00002	0.00011	0.00025	0.00007	0.00002	0.00004	0.00007	0.00032	0.00004	0.00022	0.00003	0.00002
Silicon [mg/L]	4.32	6.60	15.6	3.91	4.31	1.37	6.36	2.66	4.56	7.45	6.96	3.65
Antimony [mg/L]	0.0006	0.0007	0.0006	0.0007	0.0006	0.0005	0.0007	0.0013	0.0009	0.0010	0.0006	0.0007
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00006	0.00005	0.00007	0.00013	0.00024	0.00007	0.00007	0.00004	0.00017	0.00010	0.00010	0.00012
Strontium [mg/L]	0.0134	0.0061	0.0264	0.0074	0.0164	0.0218	0.0047	0.0098	0.0059	0.0102	0.0220	0.0072
Titanium [mg/L]	0.0014	0.0127	0.0141	0.0091	0.0005	0.0002	0.0106	0.0004	0.0036	0.0391	0.0009	0.0012
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000008	0.000235	0.000205	0.000118	0.000153	0.000012	0.000331	0.000262	0.000428	0.000251	0.000008	0.000429
Vanadium [mg/L]	0.0184	0.00517	0.0125	0.00248	0.00606	0.00179	0.00213	0.00425	0.00203	0.00669	0.0218	0.00322
Zinc [mg/L]	< 0.001	0.001	0.001	< 0.001	< 0.001	0.003	0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001

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SFE Leach (3:1 ratio L/S)

Project : IAMGold Cote Lake

December-04-12

Knight Piesold Limited
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Date Rec. : 13 November 2012
LR Report: **CA10188-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	53: E11-140 ARD-49	54: E11-144 ARD-50	55: E11-141 ARD-51	56: E11-145 ARD-52	57: E12-200 ARD-53	58: E12-205 ARD-54	59: E12-294 ARD-55	60: E12-205 ARD-56	61: CL10-01 ARD-57	62: CL10-01 ARD-58	63: CL10-02A ARD-59	64: E12-213 ARD-60
Sample Date & Time	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Initial pH [units]	9.79	9.72	9.82	9.73	9.84	9.64	9.52	9.61	9.85	9.81	9.67	9.61
Final pH [units]	9.75	10.02	9.59	9.89	9.39	9.83	9.43	9.70	9.77	9.94	9.66	9.70
pH [no unit]	8.24	8.67	8.04	8.36	7.96	8.12	7.96	8.00	8.03	8.12	7.99	8.08
Alkalinity [mg/L as CaCO3]	41	55	40	49	39	39	40	39	34	42	44	43
Conductivity [µS/cm]	92	118	89	96	82	91	87	89	79	100	97	108
Chloride [mg/L]	2.2	3.9	3.3	< 2	< 2	5.0	2.6	3.1	2.5	3.0	2.5	6.7
Sulphate [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	4.6	< 2	< 2
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	0.00036	0.00024	0.00001	0.00005	0.00002	0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.74	0.56	0.91	2.21	0.63	1.29	0.54	1.37	0.36	0.21	1.17	1.35
Arsenic [mg/L]	0.0026	0.0021	0.0007	0.0012	0.0004	0.0076	0.0005	0.0031	0.0012	0.0015	0.0028	0.0028
Barium [mg/L]	0.00052	0.00371	0.00052	0.0168	0.00040	0.00218	0.00072	0.00489	0.00052	0.00244	0.00516	0.0128
Boron [mg/L]	0.0459	0.0814	0.0462	0.0873	0.0527	0.0812	0.0662	0.0509	0.0426	0.0555	0.0552	0.0594
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001
Calcium [mg/L]	4.06	2.13	4.96	3.34	6.33	4.26	4.75	4.15	4.77	4.49	4.55	3.80
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000016	< 0.000003
Cobalt [mg/L]	0.000204	0.000467	0.000192	0.000412	0.000204	0.000278	0.000201	0.000282	0.000221	0.000254	0.000306	0.000328
Chromium [mg/L]	< 0.0005	0.0006	< 0.0005	0.0008	< 0.0005	0.0005	0.0005	< 0.0005	< 0.0005	0.0011	0.0006	< 0.0005
Copper [mg/L]	0.0006	0.0007	< 0.0005	0.0006	0.0005	0.0006	< 0.0005	0.0007	0.0005	0.0006	0.0029	0.0008

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SFE Leach (3:1 ratio L/S)

Project : IAMGold Cote Lake

LR Report : **CA10188-NOV12**

Analysis	53: E11-140 ARD-49	54: E11-144 ARD-50	55: E11-141 ARD-51	56: E11-145 ARD-52	57: E12-200 ARD-53	58: E12-205 ARD-54	59: E12-294 ARD-55	60: E12-205 ARD-56	61: CL10-01 ARD-57	62: CL10-01 ARD-58	63: CL10-02A ARD-59	64: E12-213 ARD-60
Iron [mg/L]	0.016	0.714	< 0.003	0.584	< 0.003	0.288	0.004	0.304	0.008	0.025	0.233	0.431
Potassium [mg/L]	1.78	0.804	1.94	5.19	0.304	1.87	1.66	2.59	1.42	1.96	3.98	5.82
Lithium [mg/L]	< 0.001	0.001	< 0.001	0.002	< 0.001	0.001	< 0.001	0.002	< 0.001	< 0.001	0.001	0.002
Magnesium [mg/L]	0.424	0.440	0.557	0.449	0.882	0.435	0.681	0.305	0.603	0.532	0.311	0.214
Manganese [mg/L]	0.00024	0.0135	0.00013	0.00700	0.00011	0.00272	0.00016	0.00234	0.00021	0.00052	0.00160	0.00340
Molybdenum [mg/L]	0.00020	0.00044	0.00008	0.00004	0.00007	0.00009	0.00016	0.00140	0.00011	0.00004	0.00181	0.00030
Sodium [mg/L]	13.7	22.1	11.6	14.4	9.79	14.5	12.5	13.5	10.1	14.5	13.9	15.2
Nickel [mg/L]	0.0001	0.0003	0.0001	0.0003	0.0001	0.0003	0.0001	0.0002	0.0001	0.0002	0.0003	0.0002
Lead [mg/L]	0.00003	0.00039	< 0.00002	0.00009	0.00002	0.00008	0.00003	0.00016	< 0.00002	0.00002	0.00032	0.00016
Silicon [mg/L]	4.04	8.07	1.91	8.81	1.40	6.52	1.48	7.11	2.95	7.36	5.66	6.88
Antimony [mg/L]	0.0005	0.0011	0.0006	0.0008	0.0006	0.0006	0.0004	0.0009	0.0007	0.0007	0.0008	0.0008
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00010	0.00007	0.00004	0.00005	0.00010	0.00008	0.00010	0.00010	0.00036	0.00006	0.00007	0.00020
Strontium [mg/L]	0.0082	0.0077	0.0104	0.0146	0.0275	0.0128	0.0365	0.0086	0.0263	0.0255	0.0070	0.0124
Titanium [mg/L]	0.0013	0.0398	0.0004	0.0417	0.0003	0.0172	0.0004	0.0153	0.0004	0.0017	0.0118	0.0220
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000077	0.000030	0.000010	0.000109	0.000001	0.000066	< 0.000001	0.000305	0.000003	0.000009	0.00149	0.000898
Vanadium [mg/L]	0.00404	0.0475	0.00244	0.00875	0.00144	0.00426	0.00132	0.00200	0.0122	0.0236	0.00186	0.00117
Zinc [mg/L]	< 0.001	0.002	< 0.001	0.002	< 0.001	< 0.001	0.003	< 0.001	0.002	< 0.001	0.002	< 0.001

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SFE Leach (3:1 ratio L/S)

20-July-2012

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Date Rec. : 14 June 2012
LR Report: **CA11083-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	**3: Analysis Approval Date**	**4: Analysis Approval Time**	**5: E11-61-1 CL-Geochem**	**6: E11-61-2 CL-Geochem**	**7: E11-81-1 CL-Geochem**	**8: E11-81-2 CL-Geochem**	**9: E11-81-3 CL-Geochem**	**10: E11-81-4 CL-Geochem**	**11: E11-54-1 33.87-36.14 m CL-Geochem**	**12: E11-54-2 CL-Geochem**	**13: E11-54-3 CL-Geochem**	**14: E11-54-4 CL-Geochem**	**15: E11-59-1 CL-Geochem**
Sample Date & Time			08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	13-Jul-12	08:21	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	13-Jul-12	08:21	750	750	750	750	750	750	750	750	750	750	750
Initial pH [units]	13-Jul-12	08:21	9.7	9.7	9.8	9.7	9.8	9.8	9.6	9.7	9.8	9.8	9.7
Final pH [units]	13-Jul-12	08:21	9.69	9.57	9.44	9.22	9.38	9.49	9.42	9.49	9.56	9.57	9.57
pH [no unit]	19-Jul-12	11:26	7.71	7.97	7.94	8.10	8.42	8.70	7.52	7.49	8.62	8.67	8.58
Alkalinity [mg/L as CaCO3]	19-Jul-12	11:26	28	36	37	54	50	42	26	26	42	43	41
Conductivity [µS/cm]	19-Jul-12	11:26	82	109	87	141	122	122	98	69	106	99	113
Chloride [mg/L]	19-Jul-12	09:37	4.0	3.6	2.8	4.8	3.4	8.0	9.6	6.5	6.0	4.2	8.3
Sulphate [mg/L]	19-Jul-12	09:37	< 2	3.2	< 2	4.4	2.6	2.6	< 2	< 2	< 2	< 2	< 2
Mercury [mg/L]	17-Jul-12	08:36	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	18-Jul-12	12:36	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	17-Jul-12	13:24	0.72	0.72	1.18	0.39	0.30	0.69	0.50	0.46	0.42	0.62	0.57
Arsenic [mg/L]	18-Jul-12	12:36	0.0017	0.0010	0.0016	0.0012	0.0032	0.0087	0.0028	0.0015	0.0069	0.0028	0.0189
Barium [mg/L]	18-Jul-12	12:36	0.00147	0.00299	0.00060	0.00199	0.00078	0.00459	0.00055	0.00050	0.00084	0.00231	0.00375
Boron [mg/L]	18-Jul-12	12:36	0.0164	0.0126	0.0081	0.0961	0.0870	0.112	0.0127	0.0066	0.0924	0.120	0.114
Beryllium [mg/L]	18-Jul-12	12:36	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00002
Bismuth [mg/L]	18-Jul-12	12:36	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00007	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	17-Jul-12	13:23	5.30	5.08	5.35	8.15	6.74	5.85	8.00	6.59	5.21	3.62	4.79
Cadmium [mg/L]	18-Jul-12	12:36	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000006
Cobalt [mg/L]	18-Jul-12	12:36	0.000024	0.000024	0.000018	0.000040	0.000028	0.000057	0.000022	0.000015	0.000042	0.000047	0.000091

OnLine LIMS

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SFE Leach (3:1 ratio L/S)

LR Report : CA11083-JUN12

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-61-1 CL-Geochem	6: E11-61-2 CL-Geochem	7: E11-81-1 CL-Geochem	8: E11-81-2 CL-Geochem	9: E11-81-3 CL-Geochem	10: E11-81-4 CL-Geochem	11: E11-54-1 33.87-36.14 m CL-Geochem	12: E11-54-2 CL-Geochem	13: E11-54-3 CL-Geochem	14: E11-54-4 CL-Geochem	15: E11-59-1 CL-Geochem
Chromium [mg/L]	18-Jul-12	12:36	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0008	< 0.0005
Copper [mg/L]	18-Jul-12	12:36	0.0010	< 0.0005	< 0.0005	0.0006	0.0009	0.0046	0.0010	< 0.0005	0.0008	0.0019	0.0011
Iron [mg/L]	17-Jul-12	13:23	0.019	0.012	0.003	0.065	0.023	0.220	0.004	0.006	0.063	0.024	0.352
Potassium [mg/L]	17-Jul-12	13:23	7.27	13.9	8.13	6.52	4.59	5.63	1.43	1.72	1.77	5.92	4.69
Lithium [mg/L]	18-Jul-12	12:36	< 0.001	< 0.001	< 0.001	0.002	0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	17-Jul-12	13:23	0.578	0.638	0.558	1.58	1.62	0.349	1.16	0.836	0.350	0.177	0.528
Manganese [mg/L]	18-Jul-12	12:36	0.00033	0.00023	0.00065	0.00036	0.00017	0.00146	0.00041	0.00035	0.00068	0.00136	0.00456
Molybdenum [mg/L]	18-Jul-12	12:36	0.00007	0.00097	0.00136	0.00047	0.00036	0.00044	0.00027	0.00010	0.00155	0.00073	0.00056
Sodium [mg/L]	17-Jul-12	13:23	6.02	6.81	8.34	17.0	15.3	16.7	9.57	8.27	16.6	14.9	16.4
Nickel [mg/L]	18-Jul-12	12:36	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0001	0.0002	0.0001	0.0002
Lead [mg/L]	18-Jul-12	12:36	< 0.00002	< 0.00002	< 0.00002	0.00006	0.00003	0.00016	< 0.00002	< 0.00002	0.00007	0.00003	0.00016
Silicon [mg/L]	17-Jul-12	13:23	2.71	2.43	2.86	3.15	3.80	5.51	2.82	3.34	5.77	5.33	6.91
Antimony [mg/L]	18-Jul-12	12:36	0.0004	0.0007	0.0011	0.0013	0.0027	0.0010	0.0006	0.0004	0.0007	0.0005	0.0005
Selenium [mg/L]	18-Jul-12	12:36	< 0.001	< 0.001	< 0.001	< 0.001	0.002	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	18-Jul-12	12:36	< 0.00001	0.00003	< 0.00001	0.00003	< 0.00001	0.00007	0.00011	< 0.00001	0.00009	0.00005	0.00005
Strontium [mg/L]	17-Jul-12	13:23	0.0180	0.0324	0.0182	0.0172	0.0128	0.0166	0.0213	0.0165	0.0084	0.0041	0.0094
Titanium [mg/L]	18-Jul-12	12:36	0.0007	0.0007	0.0005	< 0.0001	0.0006	0.0022	0.0004	0.0003	0.0012	0.0028	0.0098
Thallium [mg/L]	18-Jul-12	12:36	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	18-Jul-12	12:36	0.000001	0.000043	0.000057	0.000958	0.000430	0.000592	0.000041	0.000043	0.00102	0.00150	0.00166
Vanadium [mg/L]	18-Jul-12	12:36	0.00834	0.00492	0.00309	0.00075	0.00356	0.00125	0.00329	0.00439	0.00212	0.00309	0.00249
Zinc [mg/L]	18-Jul-12	12:36	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	0.001

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SGS

SFE Leach (3:1 ratio L/S)

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Date Rec. : 14 June 2012
LR Report: **CA11083-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	**15: E11-59-1 CL-Geochem**	**16: E11-59-2 CL-Geochem**	**17: E11-95-1 CL-Geochem**	**18: E11-95-2 CL-Geochem**	**19: E11-97-1 CL-Geochem**	**20: E11-97-2 CL-Geochem**	**21: E11-138-1 CL-Geochem**	**22: E11-138-2 CL-Geochem**	**23: E11-138-3 CL-Geochem**	**24: E11-77-1 CL-Geochem**	**25: E11-77-2 CL-Geochem**	**26: E10-38-1 CL-Geochem**
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Initial pH [units]	9.7	10	9.6	9.8	9.7	9.8	9.7	9.6	9.6	9.7	9.8	9.6
Final pH [units]	9.57	10.07	9.67	9.49	9.81	9.59	9.33	9.36	9.32	9.55	9.57	9.60
pH [no unit]	8.58	9.34	7.84	7.92	8.99	8.57	8.04	7.63	7.55	8.40	7.82	8.08
Alkalinity [mg/L as CaCO3]	41	72	31	34	37	35	36	34	28	34	30	32
Conductivity [µS/cm]	113	157	82	86	86	104	94	83	94	117	79	86
Chloride [mg/L]	8.3	3.0	5.6	3.3	3.6	3.9	4.0	2.7	4.6	12	6.3	3.3
Sulphate [mg/L]	< 2	2.3	< 2	< 2	< 2	< 2	2.7	3.4	6.6	< 2	< 2	< 2
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.57	1.24	0.73	1.13	0.73	0.54	1.11	0.46	0.36	0.27	0.71	0.31
Arsenic [mg/L]	0.0189	0.0075	0.0019	0.0366	0.0061	0.0046	0.0026	0.0004	0.0016	0.0042	0.0009	0.0011
Barium [mg/L]	0.00375	0.00737	0.00066	0.00064	0.00341	0.00369	0.00055	0.0104	0.00209	0.00054	0.00033	0.00139
Boron [mg/L]	0.114	0.252	0.0256	0.0051	0.117	0.150	0.0112	0.0081	0.0075	0.105	0.0120	0.0859
Beryllium [mg/L]	0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	4.79	1.05	5.03	5.56	2.62	3.96	6.78	7.04	9.00	5.70	5.22	5.01
Cadmium [mg/L]	0.000006	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000091	0.001098	0.000031	0.000032	0.000216	0.000071	0.000805	0.000041	0.000024	0.000055	0.000017	0.000050

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LR Report : **CA11083-JUN12**

Analysis	15: E11-59-1 CL-Geochem	16: E11-59-2 CL-Geochem	17: E11-95-1 CL-Geochem	18: E11-95-2 CL-Geochem	19: E11-97-1 CL-Geochem	20: E11-97-2 CL-Geochem	21: E11-138-1 CL-Geochem	22: E11-138-2 CL-Geochem	23: E11-138-3 CL-Geochem	24: E11-77-1 CL-Geochem	25: E11-77-2 CL-Geochem	26: E10-38-1 CL-Geochem
Chromium [mg/L]	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Copper [mg/L]	0.0011	0.0011	< 0.0005	< 0.0005	< 0.0005	0.0008	0.0072	< 0.0005	< 0.0005	0.0064	< 0.0005	< 0.0005
Iron [mg/L]	0.352	1.75	0.018	0.006	0.361	0.181	< 0.003	< 0.003	< 0.003	0.022	< 0.003	0.065
Potassium [mg/L]	4.69	2.33	1.40	6.82	6.90	9.06	6.63	0.566	2.50	1.23	0.924	4.58
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	0.528	0.546	0.613	0.365	0.392	0.250	0.368	1.29	1.60	0.566	0.572	0.618
Manganese [mg/L]	0.00456	0.0144	0.00045	0.00043	0.00412	0.00274	0.00134	0.00041	0.00047	0.00036	0.00022	0.00097
Molybdenum [mg/L]	0.00056	0.00072	0.00055	0.00140	0.00026	0.00593	0.00280	0.00034	0.00062	0.00135	0.00021	0.00046
Sodium [mg/L]	16.4	34.7	11.5	8.92	13.1	15.9	9.18	8.76	6.04	17.2	10.4	11.0
Nickel [mg/L]	0.0002	0.0009	0.0001	0.0002	0.0006	0.0002	0.0002	0.0001	0.0002	0.0002	< 0.0001	0.0001
Lead [mg/L]	0.00016	0.00089	< 0.00002	0.00017	0.00010	0.00017	0.00005	< 0.00002	< 0.00002	0.00015	< 0.00002	0.00004
Silicon [mg/L]	6.91	8.57	3.69	3.19	5.52	6.46	3.58	2.05	2.11	5.48	3.69	3.38
Antimony [mg/L]	0.0005	0.0007	0.0004	0.0009	0.0011	0.0013	0.0005	0.0003	0.0005	0.0007	0.0003	0.0009
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00005	0.00005	0.00007	0.00002	0.00002	0.00006	< 0.00001	< 0.00001	0.00002	0.00039	< 0.00001	0.00009
Strontium [mg/L]	0.0094	0.0044	0.0230	0.0095	0.0050	0.0082	0.0138	0.0983	0.0905	0.0165	0.0188	0.0141
Titanium [mg/L]	0.0098	0.0513	0.0013	0.0004	0.0159	0.0056	0.0001	< 0.0001	< 0.0001	0.0009	0.0001	0.0018
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.00166	0.000142	0.000065	0.00141	0.000112	0.00456	0.00168	0.000040	0.000001	0.000430	0.000058	0.000025
Vanadium [mg/L]	0.00249	0.0617	0.0121	0.00307	0.0108	0.00291	0.00314	0.00482	0.00292	0.00624	0.00977	0.00872
Zinc [mg/L]	0.001	0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.004	< 0.001	< 0.001

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OnLine LIMS

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

SFE Leach (3:1 ratio L/S)

27-November-2013

Trelawney Mining and Exploration Inc.
Attn : Steve Norregaard

130 King St. W. Suite 2810
Toronto, ON
N5X 1A6, Canada

Phone: 416-363-8567
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Date Rec. : 14 June 2012
LR Report: **CA11083-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	27: E10-38-2 CL-Geochem	28: E10-38-3 CL-Geochem	29: E11-91-1 CL-Geochem	30: E11-91-2 CL-Geochem	31: E11-91-3 CL-Geochem	32: E11-72-1 CL-Geochem	33: E10-31-1 CL-Geochem	34: E10-31-2 CL-Geochem	35: E10-31-3 CL-Geochem	36: E10-31-4 CL-Geochem	37: E10-23-1 CL-Geochem	38: E10-46-1 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Initial pH [units]	9.7	9.6	9.7	9.6	9.7	9.8	9.7	9.7	9.8	9.8	9.8	9.8
Final pH [units]	9.65	9.57	9.45	9.62	9.55	9.52	9.45	9.42	9.49	9.48	9.50	9.50
pH [no unit]	7.82	8.43	7.93	9.06	9.34	8.85	7.74	7.89	7.67	8.08	7.82	9.25
Alkalinity [mg/L as CaCO3]	26	31	33	39	57	43	36	37	29	39	26	62
Conductivity [µS/cm]	78	76	110	99	145	104	122	106	78	107	88	163
Chloride [mg/L]	2.2	< 2	10	< 2	7.3	3.7	14	2.9	< 2	4.1	6.9	10
Sulphate [mg/L]	5.8	< 2	2.1	3.7	3.4	< 2	< 2	3.0	3.2	2.6	< 2	2.5
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.30	0.17	0.30	0.56	0.49	0.73	0.35	0.59	0.54	0.37	0.76	0.39
Arsenic [mg/L]	0.0006	0.0007	0.0085	0.0081	0.0058	0.0082	0.0035	0.0255	0.0016	0.0090	0.0056	0.0030
Barium [mg/L]	0.00100	0.00093	0.00117	0.00199	0.00058	0.00063	0.00089	0.00092	0.00242	0.00055	0.00041	0.00463
Boron [mg/L]	0.0191	0.0975	0.0928	0.147	0.106	0.107	0.0847	0.0969	0.0124	0.0731	0.0087	0.202
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	6.66	4.98	5.90	3.65	4.04	4.31	5.97	5.92	6.60	5.77	6.03	3.55
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000021	0.000041	0.000058	0.000292	0.000037	0.000025	0.000025	0.000059	0.000014	0.000033	0.000042	0.000091

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SFE Leach (3:1 ratio L/S)

LR Report : **CA11083-JUN12**

Analysis	27: E10-38-2 CL-Geochem	28: E10-38-3 CL-Geochem	29: E11-91-1 CL-Geochem	30: E11-91-2 CL-Geochem	31: E11-91-3 CL-Geochem	32: E11-72-1 CL-Geochem	33: E10-31-1 CL-Geochem	34: E10-31-2 CL-Geochem	35: E10-31-3 CL-Geochem	36: E10-31-4 CL-Geochem	37: E10-23-1 CL-Geochem	38: E10-46-1 CL-Geochem
Chromium [mg/L]	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0012	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0009
Copper [mg/L]	< 0.0005	< 0.0005	< 0.0005	0.0010	0.0007	0.0010	< 0.0005	0.0011	< 0.0005	0.0006	0.0008	0.0031
Iron [mg/L]	0.011	0.055	0.105	0.523	0.037	0.019	0.029	0.047	< 0.003	0.024	< 0.003	0.226
Potassium [mg/L]	3.19	0.907	1.39	4.26	2.57	3.70	1.77	8.70	0.856	3.41	4.18	5.63
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002
Magnesium [mg/L]	1.25	0.814	0.714	0.658	0.292	0.235	0.430	0.406	0.991	0.642	0.328	0.211
Manganese [mg/L]	0.00028	0.00073	0.00112	0.00609	0.00033	0.00033	0.00027	0.00056	0.00018	0.00021	0.00053	0.00246
Molybdenum [mg/L]	0.00017	0.00013	0.00327	0.00251	0.00134	0.00199	0.00061	0.00469	0.00148	0.00067	0.00684	0.00067
Sodium [mg/L]	5.19	10.1	15.7	15.4	26.7	16.9	17.4	12.4	8.43	14.7	10.2	29.3
Nickel [mg/L]	0.0001	0.0002	0.0002	0.0005	< 0.0001	0.0001	0.0001	0.0006	< 0.0001	0.0002	< 0.0001	< 0.0001
Lead [mg/L]	< 0.00002	< 0.00002	0.00013	0.00012	0.00008	0.00011	< 0.00002	0.00046	< 0.00002	0.00002	< 0.00002	0.00011
Silicon [mg/L]	5.02	3.92	6.28	5.56	5.85	4.67	4.29	3.65	2.47	4.32	4.55	6.10
Antimony [mg/L]	0.0006	0.0007	0.0006	0.0015	0.0009	0.0009	0.0007	0.0022	0.0006	0.0029	0.0007	0.0006
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00004	0.00007	0.00005	0.00004	0.00012	0.00009	0.00002	0.00006	< 0.00001	0.00005	< 0.00001	0.00010
Strontium [mg/L]	0.0311	0.0185	0.0162	0.0172	0.0087	0.0082	0.0180	0.0122	0.0430	0.0107	0.0091	0.0080
Titanium [mg/L]	0.0005	0.0009	0.0028	0.0215	0.0006	0.0008	0.0008	0.0005	0.0002	0.0008	< 0.0001	0.0067
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000002	0.000008	0.00110	0.000074	0.00146	0.00188	0.000407	0.000905	0.000015	0.000209	0.00154	0.000395
Vanadium [mg/L]	0.0160	0.0122	0.0102	0.0397	0.00234	0.00210	0.00189	0.00266	0.00609	0.00333	0.00229	0.00197
Zinc [mg/L]	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

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July-20-12

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Final Report

Analysis	**39: E10-46-2 CL-Geochem**	**40: E10-13-1 CL-Geochem**	**41: E10-13-2 CL-Geochem**	**42: E10-13-3 CL-Geochem**	**43: E10-13-4 CL-Geochem**	**44: CL10-3-1 CL-Geochem**	**45: E10-42-1 CL-Geochem**	**46: E10-42-2 CL-Geochem**	**47: E10-42-3 CL-Geochem**	**48: E11-66-1 CL-Geochem**	**49: E11-54-1 212.3-215.5m CL-Geochem**	**50: E11-51-1 CL-Geochem**
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	250	250	250	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750	750	750	750
Initial pH [units]	9.8	9.8	9.8	9.9	9.8	9.7	9.9	9.7	9.7	9.1	9.1	9.7
Final pH [units]	9.54	9.70	9.50	9.58	9.46	8.73	9.44	9.25	9.48	8.97	8.98	9.48
pH [no unit]	7.65	8.17	7.74	8.32	7.70	7.43	7.90	7.82	7.83	8.68	7.59	7.59
Alkalinity [mg/L as CaCO3]	28	33	31	25	34	16	39	32	35	65	43	26
Conductivity [µS/cm]	113	83	79	98	96	176	96	127	100	158	180	80
Chloride [mg/L]	12	< 2	< 2	3.9	6.8	2.7	2.0	2.6	6.3	6.3	3.0	6.5
Sulphate [mg/L]	3.4	< 2	< 2	< 2	< 2	18	< 2	6.7	2.3	< 2	< 2	< 2
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00008	< 0.00001	< 0.00001	< 0.00001	0.00002	0.00005	< 0.00001
Aluminum [mg/L]	0.61	0.19	0.55	0.51	0.54	0.59	1.08	0.37	0.83	0.15	0.14	0.51
Arsenic [mg/L]	0.0015	0.0022	0.0004	0.0019	0.0018	0.0017	0.0273	0.0035	0.0026	0.0047	0.0090	0.0031
Barium [mg/L]	0.00120	0.00087	0.00102	0.00080	0.00038	0.00149	0.00106	0.00227	0.00058	0.00240	0.00179	0.00073
Boron [mg/L]	0.0219	0.0858	0.0085	0.0800	0.0076	0.0146	0.0063	0.0871	0.0113	0.261	0.307	0.0149
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00002	< 0.00001
Calcium [mg/L]	7.89	3.64	6.20	4.29	6.85	17.9	6.16	7.34	6.43	12.4	8.31	6.16
Cadmium [mg/L]	0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000051	0.000024	0.000015	0.000031	0.000027	0.000040	0.000407	0.000023	0.000021	0.000062	0.000172	0.000016

OnLine LIMS

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SFE Leach (3:1 ratio L/S)

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Analysis	39: E10-46-2 CL-Geochem	40: E10-13-1 CL-Geochem	41: E10-13-2 CL-Geochem	42: E10-13-3 CL-Geochem	43: E10-13-4 CL-Geochem	44: CL10-3-1 CL-Geochem	45: E10-42-1 CL-Geochem	46: E10-42-2 CL-Geochem	47: E10-42-3 CL-Geochem	48: E11-66-1 CL-Geochem	49: E11-54-1 212.3-215.5m CL-Geochem	50: E11-51-1 CL-Geochem
Chromium [mg/L]	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Copper [mg/L]	0.0013	< 0.0005	< 0.0005	0.0006	< 0.0005	0.0021	0.0013	< 0.0005	0.0008	0.0028	0.0446	0.0009
Iron [mg/L]	< 0.003	0.022	< 0.003	0.049	0.007	< 0.003	0.005	0.027	0.006	0.089	0.102	0.012
Potassium [mg/L]	0.914	6.99	3.01	5.85	3.10	19.0	7.67	8.01	5.97	0.829	1.48	2.83
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	0.002	< 0.001
Magnesium [mg/L]	0.472	0.488	0.885	0.360	0.829	1.39	0.336	0.957	0.777	1.23	1.38	0.788
Manganese [mg/L]	0.00061	0.00031	0.00016	0.00052	0.00031	0.00152	0.00050	0.00030	0.00036	0.00361	0.00391	0.00044
Molybdenum [mg/L]	0.00127	0.00024	0.00016	0.00088	0.00191	0.00662	0.00259	0.00109	0.00315	0.00059	0.00037	0.00068
Sodium [mg/L]	14.2	9.62	7.15	14.0	9.91	2.89	8.20	14.2	10.4	21.2	14.9	9.46
Nickel [mg/L]	0.0002	0.0001	< 0.0001	0.0004	0.0002	0.0002	0.0104	0.0004	0.0002	0.0003	0.0002	< 0.0001
Lead [mg/L]	< 0.00002	0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002	0.00003	< 0.00002
Silicon [mg/L]	5.26	3.23	2.26	4.28	3.53	1.73	2.89	2.61	2.97	14.9	16.2	3.46
Antimony [mg/L]	0.0005	0.0012	0.0007	0.0012	0.0009	0.0014	0.0009	0.0011	0.0009	0.0004	0.0005	0.0006
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00003	0.00010	< 0.00001	0.00012	< 0.00001	< 0.00001	0.00007	< 0.00001	0.00007	0.00003	0.00002	0.00002
Strontium [mg/L]	0.0320	0.0075	0.0339	0.0110	0.0222	0.0341	0.0105	0.0191	0.0228	0.0267	0.0135	0.0141
Titanium [mg/L]	0.0002	0.0014	0.0001	0.0007	0.0001	0.0003	0.0001	0.0013	0.0003	0.0037	0.0024	0.0002
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.00619	0.000118	0.000019	0.000719	0.000294	0.000849	0.000919	0.000162	0.000189	0.000140	0.000172	0.000171
Vanadium [mg/L]	0.00521	0.00606	0.00656	0.00351	0.00403	0.00033	0.00241	0.00276	0.00432	0.00343	0.00660	0.00453
Zinc [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	0.002	< 0.001

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SFE Leach (3:1 ratio filter 0.45µ, 24hr)

29-June-2012

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CERTIFICATE OF ANALYSIS
Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-112-1 CL-Geochem	6: E11-112-2 CL-Geochem	7: E11-112-3 CL-Geochem	8: E11-112-4 CL-Geochem	9: E11-053-1 CL-Geochem	10: E11-053-2 CL-Geochem	11: E11-053-3 CL-Geochem
Sample Date & Time			08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	26-Jun-12	13:16	250	250	250	250	250	250	250
Volume D.I. Water [mL]	26-Jun-12	13:16	750	750	750	750	750	750	750
Initial pH [units]	26-Jun-12	13:16	9.67	9.68	9.73	9.77	9.86	9.76	9.75
Final pH [units]	26-Jun-12	13:16	9.46	9.72	9.70	9.53	9.61	9.88	10.06
pH [no unit]	27-Jun-12	11:38	8.75	9.02	9.13	8.44	8.68	9.26	9.52
Alkalinity [mg/L as CaCO3]	27-Jun-12	11:38	39	44	44	33	36	35	40
Conductivity [µS/cm]	27-Jun-12	11:38	89	109	103	84	92	96	92
Chloride [mg/L]	28-Jun-12	15:05	2.9	2.6	3.3	4.2	2.1	2.3	1.0
Sulphate [mg/L]	28-Jun-12	15:05	0.8	2.0	1.2	0.9	1.2	2.2	1.3
Mercury [mg/L]	29-Jun-12	09:57	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	29-Jun-12	15:44	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	29-Jun-12	10:11	1.21	0.46	0.82	0.70	1.08	0.43	0.47
Arsenic [mg/L]	29-Jun-12	15:44	0.0022	0.0012	0.0074	0.0017	0.0044	0.0063	0.0037
Barium [mg/L]	29-Jun-12	15:44	0.00024	0.00155	0.00808	0.00044	0.00055	0.00382	0.00480
Boron [mg/L]	29-Jun-12	15:44	0.0106	0.0398	0.0542	0.0114	0.0134	0.0210	0.0446
Beryllium [mg/L]	29-Jun-12	15:44	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	29-Jun-12	15:44	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	29-Jun-12	10:14	5.15	3.83	3.83	5.84	5.03	4.02	4.75
Cadmium [mg/L]	29-Jun-12	15:44	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	29-Jun-12	15:44	0.000044	0.000042	0.000072	0.000030	0.000033	0.000029	0.000234
Chromium [mg/L]	29-Jun-12	15:44	0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0025

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SFE Leach (3:1 ratio filter 0.45µ, 24hr)

LR Report : CA11089-JUN12

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-112-1 CL-Geochem	6: E11-112-2 CL-Geochem	7: E11-112-3 CL-Geochem	8: E11-112-4 CL-Geochem	9: E11-053-1 CL-Geochem	10: E11-053-2 CL-Geochem	11: E11-053-3 CL-Geochem
Copper [mg/L]	29-Jun-12	15:44	0.0007	0.0005	0.0015	< 0.0005	< 0.0005	0.0006	0.0010
Iron [mg/L]	29-Jun-12	10:14	< 0.003	0.025	0.166	< 0.003	0.003	0.014	0.506
Potassium [mg/L]	29-Jun-12	10:14	6.49	11.5	4.36	4.31	9.56	11.0	5.26
Lithium [mg/L]	29-Jun-12	15:44	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	29-Jun-12	10:14	0.371	0.401	0.258	0.881	0.471	0.400	0.900
Manganese [mg/L]	29-Jun-12	15:44	0.00075	0.00030	0.00190	0.00053	0.00029	0.00032	0.00769
Molybdenum [mg/L]	29-Jun-12	15:44	0.00146	0.00100	0.00398	0.00107	0.00061	0.00093	0.00012
Sodium [mg/L]	29-Jun-12	10:14	9.42	11.8	16.0	7.32	7.04	8.16	11.6
Nickel [mg/L]	29-Jun-12	15:44	< 0.0001	< 0.0001	0.0002	< 0.0001	< 0.0001	0.0002	0.0005
Lead [mg/L]	29-Jun-12	15:44	0.00002	< 0.00002	0.00086	0.00006	0.00006	< 0.00002	0.00006
Silicon [mg/L]	29-Jun-12	10:14	3.47	3.31	7.96	3.63	2.84	5.79	12.9
Antimony [mg/L]	29-Jun-12	15:44	0.0007	0.0008	0.0011	0.0009	0.0007	0.0009	0.0007
Selenium [mg/L]	29-Jun-12	15:44	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	29-Jun-12	15:44	0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001
Strontium [mg/L]	29-Jun-12	10:14	0.0079	0.0184	0.0133	0.0150	0.0176	0.0352	0.0270
Titanium [mg/L]	29-Jun-12	15:44	0.0003	0.0018	0.0086	0.0001	0.0004	0.0009	0.0198
Thallium [mg/L]	29-Jun-12	15:44	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	29-Jun-12	15:44	0.000644	0.000063	0.00208	0.000141	0.000257	0.000054	0.000044
Vanadium [mg/L]	29-Jun-12	15:44	0.00411	0.00733	0.00305	0.00306	0.00802	0.0225	0.0363
Zinc [mg/L]	29-Jun-12	15:44	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

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

SFE Leach (3:1 ratio filter 0.45µ, 24hr)

29-June-2012

Trelawney Mining and Exploration Inc.
Attn : Steve Norregaard

130 King St. W. Suite 2810
Toronto, ON
N5X 1A6, Canada

Phone: 416-363-8567
Fax:416-216-8535

Date Rec. : 14 June 2012
LR Report: **CA11089-JUN12**
Reference: PO# TRR 04509

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	12: E11-052-1 CL-Geochem	13: E11-052-2 CL-Geochem	14: E11-052-3 CL-Geochem	15: E11-110-1 CL-Geochem	16: E11-110-2 CL-Geochem	17: E11-062-1 CL-Geochem	18: E11-062-2 CL-Geochem	19: E11-062-3 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750
Initial pH [units]	9.79	9.73	9.78	9.78	9.68	9.79	9.81	9.82
Final pH [units]	9.61	9.26	9.54	9.64	9.77	9.60	9.55	9.86
pH [no unit]	8.61	7.98	8.22	8.85	9.24	9.01	8.33	9.00
Alkalinity [mg/L as CaCO3]	31	35	34	40	35	38	38	45
Conductivity [µS/cm]	98	94	95	103	92	108	90	116
Chloride [mg/L]	9.0	5.2	5.0	4.4	2.8	8.5	2.3	2.4
Sulphate [mg/L]	1.2	2.3	2.4	1.2	2.0	0.7	0.8	1.8
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.53	0.85	0.80	0.63	0.42	0.63	1.31	0.86
Arsenic [mg/L]	0.0047	0.0010	0.0031	0.0067	0.0048	0.0059	0.0050	0.0035
Barium [mg/L]	0.00040	0.00056	0.00109	0.00194	0.00087	0.00318	0.00094	0.0104
Boron [mg/L]	0.0083	0.0085	0.0102	0.0379	0.0612	0.0438	0.0102	0.0127
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	6.17	8.55	6.46	4.85	5.03	4.78	5.16	2.88
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000050	0.000026	0.000040	0.000028	0.000125	0.000042	0.000025	0.000034
Chromium [mg/L]	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

OnLine LIMS

0000065597

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SFE Leach (3:1 ratio filter 0.45µ, 24hr)

LR Report : **CA11089-JUN12**

Analysis	12: E11-052-1 CL-Geochem	13: E11-052-2 CL-Geochem	14: E11-052-3 CL-Geochem	15: E11-110-1 CL-Geochem	16: E11-110-2 CL-Geochem	17: E11-062-1 CL-Geochem	18: E11-062-2 CL-Geochem	19: E11-062-3 CL-Geochem
Copper [mg/L]	0.0009	< 0.0005	0.0019	0.0009	0.0008	0.0018	< 0.0005	0.0008
Iron [mg/L]	0.006	< 0.003	0.004	0.019	0.312	0.079	0.003	0.009
Potassium [mg/L]	1.22	2.33	7.77	6.61	1.29	6.64	9.66	21.2
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	0.624	1.21	0.670	0.241	0.712	0.236	0.500	0.275
Manganese [mg/L]	0.00048	0.00092	0.00093	0.00026	0.00308	0.00088	0.00025	0.00022
Molybdenum [mg/L]	0.00129	0.00151	0.00068	0.00399	0.00036	0.00051	0.00150	0.00249
Sodium [mg/L]	11.7	7.40	7.65	13.3	12.3	13.5	6.96	7.78
Nickel [mg/L]	0.0003	< 0.0001	< 0.0001	< 0.0001	0.0002	< 0.0001	< 0.0001	< 0.0001
Lead [mg/L]	0.00005	0.00004	0.00003	0.00006	< 0.00002	0.00018	< 0.00002	< 0.00002
Silicon [mg/L]	4.93	1.31	3.50	4.99	5.23	5.80	1.82	3.45
Antimony [mg/L]	0.0006	0.0009	0.0015	0.0011	0.0008	0.0008	0.0010	0.0011
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Strontium [mg/L]	0.0134	0.0240	0.0313	0.0165	0.0238	0.0141	0.0197	0.0264
Titanium [mg/L]	0.0005	0.0002	0.0004	0.0016	0.0120	0.0060	0.0003	0.0010
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000317	0.000020	0.000096	0.00110	0.000048	0.00152	0.000068	0.000054
Vanadium [mg/L]	0.0109	0.00081	0.00769	0.00258	0.0272	0.00317	0.00813	0.0251
Zinc [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Brian Graham B.Sc.
Project Specialist
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SFE Leach (3:1 ratio filter 0.45µ, 24hr)

29-June-2012

Trelawney Mining and Exploration Inc.
Attn : Steve Norregaard

130 King St. W. Suite 2810
Toronto, ON
N5X 1A6, Canada

Phone: 416-363-8567
Fax:416-216-8535

Date Rec. : 14 June 2012
LR Report: **CA11089-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	20: E11-062-4 CL-Geochem	21: E11-111-1 CL-Geochem	22: E11-100-1 CL-Geochem	23: E11-100-2 CL-Geochem	24: E11-100-3 CL-Geochem	25: E11-107-1 CL-Geochem	26: E11-107-2 CL-Geochem	27: Bulk Sample-1 CL-Geochem	28: Bulk Sample-2 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	250	250	250	250	250	250	250	250	250
Volume D.I. Water [mL]	750	750	750	750	750	750	750	750	750
Initial pH [units]	9.72	9.78	9.80	9.84	9.87	9.86	9.79	9.71	9.49
Final pH [units]	9.76	9.64	9.42	9.56	9.86	9.69	9.61	9.52	9.36
pH [no unit]	9.27	8.40	8.03	8.23	8.58	8.30	8.37	9.08	8.70
Alkalinity [mg/L as CaCO3]	41	34	34	34	36	36	31	46	39
Conductivity [µS/cm]	100	79	100	78	89	87	83	105	95
Chloride [mg/L]	3.7	1.2	5.9	2.3	2.5	2.0	5.2	3.9	5.0
Sulphate [mg/L]	0.8	0.3	2.1	0.9	0.5	0.7	0.6	0.8	0.8
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	1.03	1.12	0.86	1.04	0.99	1.25	0.58	1.48	1.64
Arsenic [mg/L]	0.0104	0.0003	0.0025	0.0008	0.0072	0.0005	0.0009	0.0061	0.0043
Barium [mg/L]	0.00720	0.00120	0.00055	0.00080	0.00257	0.00038	0.00042	0.00298	0.00284
Boron [mg/L]	0.0616	0.0105	0.0091	0.0094	0.0190	0.0080	0.0098	0.0621	0.0536
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00007
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00003	< 0.00001
Calcium [mg/L]	4.00	5.50	7.14	5.53	3.83	4.95	5.60	3.55	3.57
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000093	0.000027	0.000035	0.000019	0.000023	0.000014	0.000012	0.000163	0.000126
Chromium [mg/L]	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

OnLine LIMS

0000065601

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SFE Leach (3:1 ratio filter 0.45µ, 24hr)

LR Report : **CA11089-JUN12**

Analysis	20: E11-062-4 CL-Geochem	21: E11-111-1 CL-Geochem	22: E11-100-1 CL-Geochem	23: E11-100-2 CL-Geochem	24: E11-100-3 CL-Geochem	25: E11-107-1 CL-Geochem	26: E11-107-2 CL-Geochem	27: Bulk Sample-1 CL-Geochem	28: Bulk Sample-2 CL-Geochem
Copper [mg/L]	0.0016	< 0.0005	0.0005	0.0006	< 0.0005	< 0.0005	< 0.0005	0.0106	0.0111
Iron [mg/L]	0.268	0.010	0.004	< 0.003	0.019	0.006	0.012	0.363	0.242
Potassium [mg/L]	5.85	6.63	8.44	4.38	11.4	8.94	2.46	2.01	1.08
Lithium [mg/L]	0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	0.322	0.543	0.262	0.579	0.294	0.332	0.616	0.336	0.247
Manganese [mg/L]	0.00322	0.00031	0.00091	0.00031	0.00037	0.00039	0.00028	0.00966	0.00820
Molybdenum [mg/L]	0.00044	0.00014	0.00697	0.00198	0.00039	0.00061	0.00028	0.00873	0.00426
Sodium [mg/L]	13.8	6.35	7.82	7.52	7.38	7.20	8.68	17.4	16.1
Nickel [mg/L]	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001	0.0001
Lead [mg/L]	0.00022	< 0.00002	0.00015	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00020	0.00024
Silicon [mg/L]	7.04	1.94	3.90	2.22	3.85	3.90	3.75	8.08	8.34
Antimony [mg/L]	0.0010	0.0005	0.0006	0.0006	0.0012	0.0008	0.0006	0.0012	0.0007
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00005	< 0.00001
Strontium [mg/L]	0.0110	0.0222	0.0129	0.0148	0.0103	0.0058	0.0219	0.0037	0.0052
Titanium [mg/L]	0.0140	0.0006	0.0005	0.0004	0.0013	0.0010	0.0009	0.0120	0.0124
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.00133	0.000036	0.000772	0.000069	0.000039	0.00155	0.000193	0.000830	0.000336
Vanadium [mg/L]	0.00527	0.00558	0.00147	0.00598	0.0103	0.00546	0.00711	0.00289	0.00259
Zinc [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

OnLine LIMS

0000065601

SYNTHETIC PRECIPITATION LEACHING PROCEDURE

Côté Gold Project
Geochemical Characterization Report
December 2013
Project #TC121522

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

SPLP1312 Fluid #1

Project : IAMGold Cote Lake

December-06-12

Knight Piesold Limited
Attn : Steve Aiken

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165 ext. 241
Fax:

Date Rec. : 13 November 2012
LR Report: **CA10189-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E10-036 ARD-1	6: E10-036 ARD-2	7: E10-036 ARD-3	8: E10-045 ARD-4	9: E11-066 ARD-5	10: E11-066 ARD-6	11: E11-082 ARD-7	12: E11-082 ARD-8	13: E11-082 ARD-9	14: E11-087 ARD-10	15: E11-087 ARD-11
Sample Date & Time			10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12
Sample weight [g]	30-Nov-12	10:43	100	100	100	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	30-Nov-12	10:43	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	30-Nov-12	10:43	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	30-Nov-12	10:43	8.33	6.26	7.32	6.24	6.49	7.97	7.78	8.18	6.68	8.72	6.26
Final pH [units]	30-Nov-12	10:43	9.69	9.71	9.68	9.72	9.65	9.77	9.70	9.87	9.74	9.74	9.70
pH [no unit]	04-Dec-12	14:57	8.02	9.49	8.19	8.12	7.87	9.26	9.23	9.28	9.25	7.97	9.28
Alkalinity [mg/L as CaCO3]	04-Dec-12	14:57	30	31	33	35	32	31	31	31	33	34	31
Conductivity [µS/cm]	04-Dec-12	14:57	65	71	73	74	69	67	68	72	70	74	70
Chloride [mg/L]	05-Dec-12	15:15	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	05-Dec-12	15:15	2.9	3.1	3.0	3.2	3.2	2.8	3.0	3.0	3.0	3.0	3.1
Mercury [mg/L]	04-Dec-12	12:09	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	04-Dec-12	14:48	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	06-Dec-12	11:25	1.03	0.87	0.91	0.63	0.97	0.48	0.83	0.77	0.69	0.56	1.15
Arsenic [mg/L]	04-Dec-12	14:49	0.0005	0.0007	0.0010	0.0004	0.0012	0.0006	0.0008	0.0009	0.0003	0.0004	0.0007
Barium [mg/L]	04-Dec-12	14:49	0.00166	0.00101	0.00145	0.00074	0.00078	0.00097	0.00276	0.00431	0.00170	0.00120	0.00514
Boron [mg/L]	04-Dec-12	14:49	0.0458	0.0505	0.0527	0.0526	0.0504	0.0416	0.0453	0.0492	0.0496	0.0518	0.0350
Beryllium [mg/L]	04-Dec-12	14:49	< 0.00002	0.00002	< 0.00002	< 0.00002	0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00002
Bismuth [mg/L]	04-Dec-12	14:49	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	06-Dec-12	11:25	6.12	6.25	6.51	6.19	5.13	5.64	6.32	4.72	5.85	6.03	5.69
Cadmium [mg/L]	04-Dec-12	14:49	0.000004	0.000005	0.000005	0.000003	0.000009	< 0.000003	< 0.000003	0.000005	< 0.000003	0.000003	< 0.000003
Cobalt [mg/L]	04-Dec-12	14:49	< 0.000002	< 0.000002	< 0.000002	< 0.000002	0.000086	< 0.000002	< 0.000002	0.000099	< 0.000002	< 0.000002	0.000083
Chromium [mg/L]	04-Dec-12	14:49	< 0.0005	< 0.0005	0.0008	0.0006	0.0006	0.0007	< 0.0005	0.0018	0.0006	< 0.0005	0.0006

OnLine LIMS

SGS Canada Inc.
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SPLP1312 Fluid #1

Project : IAMGold Cote Lake

LR Report : **CA10189-NOV12**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E10-036 ARD-1	6: E10-036 ARD-2	7: E10-036 ARD-3	8: E10-045 ARD-4	9: E11-066 ARD-5	10: E11-066 ARD-6	11: E11-082 ARD-7	12: E11-082 ARD-8	13: E11-082 ARD-9	14: E11-087 ARD-10	15: E11-087 ARD-11
Copper [mg/L]	04-Dec-12	14:49	0.0013	0.0011	0.0011	0.0016	0.0011	0.0012	0.0010	0.0012	0.0010	0.0010	0.0012
Iron [mg/L]	06-Dec-12	11:26	0.090	0.113	0.029	0.023	0.253	0.050	0.098	0.258	0.042	0.037	0.328
Potassium [mg/L]	06-Dec-12	11:26	0.287	0.295	0.493	0.261	0.141	0.643	0.676	3.59	0.494	1.80	0.544
Lithium [mg/L]	04-Dec-12	14:49	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	06-Dec-12	11:26	0.208	0.191	0.134	0.199	0.357	0.386	0.180	0.487	0.260	0.184	0.293
Manganese [mg/L]	04-Dec-12	14:50	0.00190	0.00210	0.00154	0.00185	0.00248	0.00093	0.00143	0.00400	0.00071	0.00074	0.00501
Molybdenum [mg/L]	04-Dec-12	14:50	0.00034	0.00030	0.00029	0.00011	0.00025	0.00011	0.00052	0.00008	0.00003	0.00025	0.00006
Sodium [mg/L]	06-Dec-12	11:26	7.65	8.64	8.88	9.65	10.1	7.79	7.93	8.73	9.21	8.88	8.97
Nickel [mg/L]	04-Dec-12	14:50	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001
Lead [mg/L]	04-Dec-12	14:50	0.00014	0.00016	0.00012	0.00007	0.00034	0.00007	0.00013	0.00045	0.00009	0.00004	0.00009
Silicon [mg/L]	06-Dec-12	11:26	3.69	3.40	2.78	3.47	3.58	2.15	2.99	3.15	2.66	2.33	3.57
Antimony [mg/L]	04-Dec-12	14:50	0.0002	0.0002	0.0020	< 0.0002	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002	< 0.0002
Selenium [mg/L]	04-Dec-12	14:50	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	04-Dec-12	14:50	0.00008	0.00009	0.00009	0.00010	0.00006	0.00009	0.00006	0.00009	0.00004	0.00004	0.00006
Strontium [mg/L]	06-Dec-12	11:26	0.0117	0.0107	0.0077	0.0055	0.0088	0.0100	0.0084	0.0108	0.0111	0.0065	0.0064
Titanium [mg/L]	04-Dec-12	14:51	0.0046	0.0076	0.0050	0.0029	0.0161	0.0027	0.0033	0.0163	0.0026	0.0026	0.0235
Thallium [mg/L]	04-Dec-12	14:51	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	04-Dec-12	14:51	0.000072	0.000065	0.000253	0.000136	0.000086	0.000007	0.000131	0.000009	0.000008	0.000135	0.000071
Vanadium [mg/L]	04-Dec-12	14:51	0.00053	0.00049	0.00088	0.00018	0.00161	0.00163	0.00041	0.00295	0.00131	0.00088	0.00084
Zinc [mg/L]	04-Dec-12	14:51	0.002	0.001	< 0.001	< 0.001	0.004	0.002	0.016	0.001	0.009	0.003	0.013

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SPLP1312 Fluid #1

Project : IAMGold Cote Lake

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December-06-12

Date Rec. : 13 November 2012
LR Report: **CA10189-NOV12**
Reference: NB101-497/4 NB-49

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	16: E12-217 ARD-12	17: E11-096 ARD-13	18: E11-096 ARD-14	19: E11-096 ARD-15	20: E11-098 ARD-16	21: E11-098 ARD-17	22: E11-098 ARD-18	23: E11-099 ARD-19	24: E11-099 ARD-20	25: E11-114 ARD-21	26: E11-114 ARD-22	27: E10-038 ARD-23	28: E11-062 ARD-24
Sample Date & Time	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12
Sample weight [g]	100	100	100	100	100	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	8.34	9.37	6.50	5.00	6.56	9.00	6.84	5.80	8.92	5.69	8.76	5.14	6.24
Final pH [units]	9.76	9.75	9.70	9.82	9.67	9.83	9.79	9.67	9.67	9.67	9.74	9.64	9.71
pH [no unit]	9.27	8.41	7.98	7.90	9.24	9.32	8.61	7.87	8.00	9.11	8.00	7.84	9.27
Alkalinity [mg/L as CaCO3]	37	32	33	32	34	35	32	28	33	33	33	31	30
Conductivity [µS/cm]	74	72	71	66	72	75	75	60	70	71	71	64	70
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	3.0	3.1	3.0	3.1	3.3	2.7	2.9	2.5	3.0	2.8	2.8	2.8	2.9
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00025	0.00010	0.00004	0.00004	0.00002
Aluminum [mg/L]	0.96	0.54	1.21	1.16	1.09	0.65	0.74	1.74	0.54	0.82	0.56	1.45	0.50
Arsenic [mg/L]	0.0003	< 0.0002	0.0011	0.0004	0.0012	0.0009	0.0003	0.0003	0.0005	0.0006	0.0002	0.0004	0.0005
Barium [mg/L]	0.00060	0.00090	0.00208	0.00354	0.00297	0.00283	0.00123	0.00344	0.00042	0.00109	0.00075	0.00207	0.00052
Boron [mg/L]	0.0615	0.0391	0.0412	0.0516	0.0456	0.0520	0.0624	0.0542	0.0473	0.0446	0.0360	0.0423	0.0403
Beryllium [mg/L]	< 0.00002	< 0.00002	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00007	< 0.00002	< 0.00002	< 0.00002	0.00010	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	0.00003	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00004	< 0.00001
Calcium [mg/L]	5.82	6.19	6.31	4.25	5.84	5.29	6.04	5.64	6.55	6.41	6.45	5.83	6.24
Cadmium [mg/L]	< 0.000003	< 0.000003	0.000008	0.000008	0.000003	< 0.000003	< 0.000003	0.000011	0.000010	0.000007	< 0.000003	0.000009	< 0.000003
Cobalt [mg/L]	0.000258	< 0.000002	0.000100	0.000613	0.000019	0.000075	0.000030	0.000096	0.000102	0.000091	0.000077	0.000114	0.000095
Chromium [mg/L]	0.0013	< 0.0005	< 0.0005	0.0006	0.0005	< 0.0005	0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005

OnLine LIMS

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SPLP1312 Fluid #1

Project : IAMGold Cote Lake

LR Report : **CA10189-NOV12**

Analysis	16: E12-217 ARD-12	17: E11-096 ARD-13	18: E11-096 ARD-14	19: E11-096 ARD-15	20: E11-098 ARD-16	21: E11-098 ARD-17	22: E11-098 ARD-18	23: E11-099 ARD-19	24: E11-099 ARD-20	25: E11-114 ARD-21	26: E11-114 ARD-22	27: E10-038 ARD-23	28: E11-062 ARD-24
Copper [mg/L]	0.0028	0.0006	0.0145	0.0019	0.0016	0.0011	0.0017	0.0023	0.0012	0.0009	0.0006	0.0014	0.0042
Iron [mg/L]	0.854	0.014	0.400	1.25	0.069	0.251	0.191	0.612	0.050	0.088	0.006	0.226	0.075
Potassium [mg/L]	0.127	0.532	0.236	0.352	0.339	3.53	1.39	0.502	0.149	0.182	1.41	0.518	0.137
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001
Magnesium [mg/L]	0.831	0.309	0.336	0.703	0.184	0.461	0.491	0.463	0.461	0.209	0.450	0.368	0.226
Manganese [mg/L]	0.0114	0.00023	0.00548	0.0216	0.00209	0.00276	0.00218	0.00630	0.00056	0.00094	0.00008	0.00444	0.00154
Molybdenum [mg/L]	0.00003	0.00015	0.00027	0.00017	0.00014	0.0660	0.00046	0.00036	0.00019	0.00008	0.00005	0.00009	0.00005
Sodium [mg/L]	10.7	7.39	8.58	10.7	9.86	8.38	10.0	7.51	7.95	9.57	6.85	8.44	8.44
Nickel [mg/L]	0.0007	< 0.0001	< 0.0001	0.0006	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Lead [mg/L]	0.00007	0.00006	0.00076	0.00051	0.00043	0.00023	0.00007	0.00020	0.00004	0.00012	0.00004	0.00017	0.00004
Silicon [mg/L]	3.10	2.07	4.12	4.68	3.92	2.57	2.75	5.26	2.04	3.25	1.65	4.28	2.71
Antimony [mg/L]	0.0002	0.0002	0.0002	< 0.0002	< 0.0002	0.0003	0.0002	< 0.0002	0.0003	0.0003	0.0003	0.0002	0.0002
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00009	0.00004	0.00013	0.00005	0.00007	0.00015	0.00007	0.00013	0.00011	0.00010	0.00005	0.00006	0.00008
Strontium [mg/L]	0.0085	0.0096	0.0075	0.0122	0.0056	0.0105	0.0123	0.0060	0.0094	0.0051	0.0056	0.0094	0.0050
Titanium [mg/L]	0.0309	0.0008	0.0152	0.0589	0.0073	0.0123	0.0076	0.0076	0.0001	0.0034	0.0004	0.0046	0.0044
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000005	0.000015	0.000056	0.000013	0.000058	0.000020	0.000004	0.000126	0.000005	0.000033	0.000003	0.000117	0.000020
Vanadium [mg/L]	0.00524	0.00167	0.00119	0.00961	0.00042	0.00245	0.00268	0.00043	0.00083	0.00088	0.00122	0.00050	0.00133
Zinc [mg/L]	0.005	< 0.001	0.002	0.006	0.001	0.001	< 0.001	0.003	0.004	0.001	< 0.001	< 0.001	< 0.001

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SPLP1312 Fluid #1

Project : IAMGold Cote Lake

December-06-12

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Date Rec. : 13 November 2012
LR Report: **CA10189-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	**29: E10-30 ARD-25**	**30: E10-028 ARD-26**	**31: E11-049 ARD-27**	**32: E11-049 ARD-28**	**33: E11-061 ARD-29**	**34: E12-206 ARD-30**	**35: E12-179 ARD-31**	**36: E11-048 ARD-32**	**37: E11-048 ARD-33**	**38: E11-075 ARD-34**	**39: E11-075 ARD-35**	**40: E11-071 ARD-36**
Sample Date & Time	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12
Sample weight [g]	100	100	100	100	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	6.57	7.18	5.19	9.05	7.24	9.44	7.18	6.92	9.30	9.24	9.12	9.22
Final pH [units]	9.69	9.73	9.72	9.46	8.98	9.70	9.73	9.71	9.72	9.74	9.81	9.66
pH [no unit]	9.36	8.00	9.29	7.98	8.06	8.59	8.35	8.91	8.69	9.00	8.77	8.31
Alkalinity [mg/L as CaCO3]	32	32	31	34	36	28	31	34	32	34	35	38
Conductivity [µS/cm]	80	68	67	79	76	67	69	70	69	74	70	79
Chloride [mg/L]	3.4	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	2.9	2.7	2.6	3.8	3.2	2.6	2.9	2.5	2.7	2.6	2.7	2.8
Mercury [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00001
Silver [mg/L]	0.00002	0.00002	0.00002	0.00001	0.00008	< 0.00001	0.00005	0.00004	0.00002	0.00002	0.00003	0.00002
Aluminum [mg/L]	0.93	0.82	0.77	0.92	4.24	0.79	0.98	1.62	0.31	0.83	4.49	0.70
Arsenic [mg/L]	0.0013	0.0018	0.0031	0.0021	0.0076	< 0.0002	0.0022	0.0005	0.0003	0.0011	0.0003	0.0011
Barium [mg/L]	0.00138	0.00106	0.00132	0.00418	0.00523	0.00043	0.00099	0.00253	0.00032	0.00119	0.0128	0.00077
Boron [mg/L]	0.0511	0.0406	0.0433	0.0588	0.200	0.0452	0.0357	0.0335	0.0344	0.0395	0.0436	0.0453
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00042	< 0.00002	< 0.00002	0.00012	< 0.00002	< 0.00002	0.00003	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	0.00002	0.00003	< 0.00001	0.00001	0.00002	< 0.00001	< 0.00001	0.00001	< 0.00001
Calcium [mg/L]	6.69	6.23	6.15	6.93	4.52	6.03	6.32	6.92	7.06	6.30	8.08	6.89
Cadmium [mg/L]	0.000003	0.000008	0.000003	0.000011	0.000051	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000163	0.000106	0.000175	0.000138	0.00204	0.000079	0.000047	0.000139	0.000065	0.000057	0.00327	0.000073
Chromium [mg/L]	0.0007	0.0007	< 0.0005	0.0011	0.0115	< 0.0005	< 0.0005	0.0007	0.0005	0.0006	0.0056	0.0009

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SPLP1312 Fluid #1

Project : IAMGold Cote Lake

LR Report : **CA10189-NOV12**

Analysis	**29: E10-30 ARD-25**	**30: E10-028 ARD-26**	**31: E11-049 ARD-27**	**32: E11-049 ARD-28**	**33: E11-061 ARD-29**	**34: E12-206 ARD-30**	**35: E12-179 ARD-31**	**36: E11-048 ARD-32**	**37: E11-048 ARD-33**	**38: E11-075 ARD-34**	**39: E11-075 ARD-35**	**40: E11-071 ARD-36**
Copper [mg/L]	0.0012	0.0008	0.0007	0.0008	0.135	0.0008	0.0011	0.0063	0.0021	0.0006	0.0116	0.0008
Iron [mg/L]	0.114	0.158	0.211	0.113	5.13	0.058	0.475	0.819	0.057	0.196	6.89	0.069
Potassium [mg/L]	2.31	0.273	0.407	2.64	0.408	0.635	0.466	0.410	0.121	0.691	1.45	0.588
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003	< 0.001
Magnesium [mg/L]	0.252	0.378	0.338	0.249	1.73	0.462	0.524	0.491	0.241	0.317	3.29	0.474
Manganese [mg/L]	0.00156	0.00208	0.00274	0.00218	0.0708	0.00063	0.00533	0.00856	0.00127	0.00318	0.0889	0.00090
Molybdenum [mg/L]	0.00011	0.00009	0.00004	0.00029	0.00042	0.00002	0.00017	0.00012	0.00170	0.00007	0.00011	0.00007
Sodium [mg/L]	9.76	8.24	7.89	9.00	15.5	5.99	7.96	9.01	7.48	9.32	10.5	9.85
Nickel [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0026	< 0.0001	0.0003	0.0004	0.0001	0.0001	0.0039	0.0001
Lead [mg/L]	0.00015	0.00013	0.00006	0.00026	0.00015	0.00006	0.00054	0.00017	0.00006	0.00005	0.00016	0.00006
Silicon [mg/L]	3.54	3.03	3.14	2.60	17.1	1.79	3.05	4.32	2.16	2.67	10.6	1.78
Antimony [mg/L]	0.0002	0.0003	0.0002	0.0003	< 0.0002	< 0.0002	0.0003	0.0002	0.0002	0.0004	0.0003	< 0.0002
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00005	0.00006	0.00006	0.00006	0.00007	0.00005	0.00011	0.00018	0.00016	0.00015	0.00008	0.00006
Strontium [mg/L]	0.0060	0.0072	0.0084	0.0043	0.0088	0.0105	0.0087	0.0105	0.0085	0.0095	0.0373	0.0137
Titanium [mg/L]	0.0076	0.0118	0.0112	0.0044	0.0182	0.0029	0.0089	0.0277	0.0014	0.0125	0.179	0.0020
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000046	0.000040	0.000024	0.000300	0.000121	0.000001	0.000022	0.000214	0.000017	0.000023	0.000020	0.000005
Vanadium [mg/L]	0.00071	0.00126	0.00080	0.00061	0.00611	0.00170	0.00114	0.00106	0.00089	0.00208	0.0219	0.00153
Zinc [mg/L]	0.001	0.001	< 0.001	0.002	0.006	0.002	0.003	0.003	< 0.001	0.004	0.011	< 0.001

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

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SPLP1312 Fluid #1

Project : IAMGold Cote Lake

December-06-12

Knight Piesold Limited
Attn : Steve Aiken

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165 ext. 241
Fax:

Date Rec. : 13 November 2012
LR Report: **CA10189-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	41: E11-071 ARD-37	42: E11-078 ARD-38	43: E11-179 ARD-39	44: E11-120 ARD-40	45: E11-120 ARD-41	46: E11-120 ARD-42	47: E11-122 ARD-43	48: E11-122 ARD-44	49: E11-140 ARD-45	50: E11-145 ARD-46	51: E12-198 ARD-47	52: E11-129 ARD-48
Sample Date & Time	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12
Sample weight [g]	100	100	100	100	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	7.69	4.90	6.02	7.84	9.58	9.66	8.11	9.54	6.67	4.78	8.50	7.83
Final pH [units]	9.85	9.65	9.02	9.67	9.70	9.59	9.67	9.66	9.70	9.72	9.86	9.71
pH [no unit]	8.33	8.80	9.02	8.78	9.19	8.64	8.29	9.09	9.00	8.90	9.39	9.25
Alkalinity [mg/L as CaCO3]	34	33	30	29	35	38	31	37	31	35	33	31
Conductivity [µS/cm]	71	69	67	63	78	77	69	75	65	72	71	65
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	5.9
Sulphate [mg/L]	2.6	2.8	2.3	2.4	3.0	2.7	2.2	2.8	2.5	2.8	2.9	2.6
Mercury [mg/L]	0.00001	0.00001	0.00002	0.00001	0.00002	0.00002	0.00001	0.00001	0.00001	0.00002	0.00002	0.00001
Silver [mg/L]	0.00001	0.00001	0.00007	0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.70	1.30	0.76	1.61	0.63	0.75	1.46	0.91	1.37	1.30	1.13	0.84
Arsenic [mg/L]	0.0004	0.0002	0.0005	< 0.0002	< 0.0002	< 0.0002	0.0006	0.0006	0.0008	0.0015	0.0006	0.0009
Barium [mg/L]	0.00324	0.00135	0.00361	0.00445	0.00056	0.00061	0.00217	0.00085	0.00357	0.00757	0.00227	0.00171
Boron [mg/L]	0.0480	0.0486	0.138	0.0317	0.0430	0.0287	0.0402	0.0362	0.0382	0.0474	0.0343	0.0372
Beryllium [mg/L]	< 0.00002	0.00003	0.00012	0.00004	< 0.00002	< 0.00002	0.00008	< 0.00002	0.00003	< 0.00002	< 0.00002	0.00009
Bismuth [mg/L]	< 0.00001	0.00006	0.00004	0.00002	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	6.07	4.79	3.63	6.41	6.41	6.76	6.15	6.63	5.83	4.90	6.63	5.98
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000115	0.000135	0.000729	0.000313	0.000051	0.000036	0.000128	0.000090	0.000156	0.000250	0.000820	0.000111
Chromium [mg/L]	0.0011	0.0006	0.0019	< 0.0005	0.0006	0.0006	0.0006	0.0007	0.0006	0.0010	0.0080	0.0005

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SPLP1312 Fluid #1

Project : IAMGold Cote Lake

LR Report : **CA10189-NOV12**

Analysis	41: E11-071 ARD-37	42: E11-078 ARD-38	43: E11-179 ARD-39	44: E11-120 ARD-40	45: E11-120 ARD-41	46: E11-120 ARD-42	47: E11-122 ARD-43	48: E11-122 ARD-44	49: E11-140 ARD-45	50: E11-145 ARD-46	51: E12-198 ARD-47	52: E11-129 ARD-48
Copper [mg/L]	< 0.0005	0.0037	0.0197	0.0129	0.0006	< 0.0005	0.0005	0.0007	0.0010	0.0005	0.0019	< 0.0005
Iron [mg/L]	0.138	0.447	0.431	1.12	0.176	0.039	0.239	0.130	0.253	0.363	0.948	0.087
Potassium [mg/L]	1.55	0.207	0.443	0.767	0.203	1.46	0.412	0.981	0.330	2.20	0.364	0.444
Lithium [mg/L]	< 0.001	< 0.001	0.004	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001
Magnesium [mg/L]	0.478	0.469	0.452	0.402	0.521	0.806	0.268	0.462	0.234	0.312	1.25	0.206
Manganese [mg/L]	0.00227	0.00425	0.0262	0.00880	0.00189	0.00075	0.00358	0.00191	0.00276	0.00566	0.0186	0.00147
Molybdenum [mg/L]	0.00004	0.00068	0.00017	0.00009	0.00011	0.00008	0.00017	0.00027	0.00010	0.00010	0.00002	0.00008
Sodium [mg/L]	8.49	10.8	11.5	6.71	9.92	7.77	9.24	8.96	8.56	9.89	8.02	7.11
Nickel [mg/L]	0.0002	0.0002	0.0006	0.0001	0.0001	< 0.0001	0.0002	0.0002	0.0002	0.0005	0.0039	0.0001
Lead [mg/L]	0.00005	0.00014	0.00018	0.00015	0.00004	0.00004	0.00012	0.00006	0.00023	0.00017	0.00012	0.00011
Silicon [mg/L]	2.53	4.53	5.81	3.87	2.53	1.25	4.45	2.35	4.64	4.23	4.00	2.78
Antimony [mg/L]	< 0.0002	< 0.0002	0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0003	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00008	0.00007	0.00016	0.00018	0.00007	0.00005	0.00009	0.00006	0.00022	0.00024	0.00004	0.00009
Strontium [mg/L]	0.0138	0.0053	0.0087	0.0085	0.0136	0.0117	0.0058	0.0072	0.0059	0.0103	0.0162	0.0064
Titanium [mg/L]	0.0108	0.0109	0.0299	0.0134	0.0046	0.0004	0.0104	0.0014	0.0123	0.0289	0.0800	0.0046
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000004	0.000055	0.000047	0.000055	0.000028	0.000001	0.000103	0.000051	0.000119	0.000042	0.000008	0.000076
Vanadium [mg/L]	0.00389	0.00130	0.00462	0.00103	0.00150	0.00174	0.00062	0.00113	0.00052	0.00152	0.00751	0.00062
Zinc [mg/L]	< 0.001	0.001	0.002	0.003	< 0.001	0.002	0.002	< 0.001	0.001	0.002	0.002	< 0.001

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SPLP1312 Fluid #1

Project : IAMGold Cote Lake

December-06-12

Knight Piesold Limited
Attn : Steve Aiken

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North Bay, ON
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Phone: 705-476-2165 ext. 241
Fax:

Date Rec. : 13 November 2012
LR Report: **CA10189-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	53: E11-140 ARD-49	54: E11-144 ARD-50	55: E11-141 ARD-51	56: E11-145 ARD-52	57: E12-200 ARD-53	58: E12-205 ARD-54	59: E12-294 ARD-55	60: E12-205 ARD-56	61: CL10-01 ARD-57	62: CL10-01 ARD-58	63: CL10-02A ARD-59	64: E12-213 ARD-60
Sample Date & Time	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12	10-Nov-12
Sample weight [g]	100	100	100	100	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	6.25	6.56	9.60	6.35	9.68	7.00	6.96	6.68	9.40	9.16	8.00	6.81
Final pH [units]	9.75	9.84	9.72	9.76	9.65	9.72	9.64	9.70	9.76	9.84	9.68	9.64
pH [no unit]	9.09	8.84	8.85	8.65	8.73	8.08	8.30	8.39	9.38	9.05	8.88	8.87
Alkalinity [mg/L as CaCO3]	30	36	34	29	36	34	37	34	34	33	31	31
Conductivity [µS/cm]	67	78	72	66	77	75	77	71	74	73	68	71
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	2.5	3.0	3.0	2.9	2.6	2.7	3.2	2.9	3.0	3.1	2.9	2.4
Mercury [mg/L]	0.00001	0.00002	0.00001	0.00001	0.00001	0.00002	0.00001	0.00001	0.00001	0.00001	< 0.00001	< 0.00001
Silver [mg/L]	< 0.00001	0.00027	0.00007	0.00004	0.00003	0.00003	0.00002	0.00001	< 0.00001	< 0.00001	< 0.00001	0.00001
Aluminum [mg/L]	0.97	1.22	0.82	3.30	0.78	3.04	1.05	1.15	1.00	1.62	1.24	1.82
Arsenic [mg/L]	0.0009	0.0004	< 0.0002	< 0.0002	< 0.0002	0.0020	0.0002	0.0006	< 0.0002	0.0005	0.0009	0.0007
Barium [mg/L]	0.00207	0.00766	0.00083	0.0271	0.00039	0.00800	0.00065	0.00422	0.00074	0.00689	0.00636	0.0198
Boron [mg/L]	0.0425	0.0525	0.0328	0.0401	0.0384	0.0417	0.0431	0.0403	0.0462	0.0439	0.0617	0.0472
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002	0.00004	< 0.00002	< 0.00002	< 0.00002	0.00002	< 0.00002	0.00004
Bismuth [mg/L]	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00002	0.00002
Calcium [mg/L]	5.98	5.10	6.80	6.14	6.35	6.52	5.15	5.77	6.25	6.79	6.03	5.53
Cadmium [mg/L]	< 0.000003	0.000004	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000119	0.000759	0.000091	0.000760	0.000144	0.000442	0.000285	0.000042	0.000369	0.000726	0.000189	0.000427
Chromium [mg/L]	0.0007	0.0008	< 0.0005	0.0010	0.0014	0.0012	0.0025	0.0005	0.0033	0.0163	0.0006	0.0005

OnLine LIMS

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SPLP1312 Fluid #1

Project : IAMGold Cote Lake

LR Report : **CA10189-NOV12**

Analysis	53: E11-140 ARD-49	54: E11-144 ARD-50	55: E11-141 ARD-51	56: E11-145 ARD-52	57: E12-200 ARD-53	58: E12-205 ARD-54	59: E12-294 ARD-55	60: E12-205 ARD-56	61: CL10-01 ARD-57	62: CL10-01 ARD-58	63: CL10-02A ARD-59	64: E12-213 ARD-60
Copper [mg/L]	0.0009	0.0018	< 0.0005	0.0011	0.0007	0.0011	0.0006	0.0005	0.0015	0.0014	0.0042	0.0013
Iron [mg/L]	0.241	1.66	0.220	1.57	0.275	1.51	0.774	0.191	0.730	1.25	0.336	0.994
Potassium [mg/L]	0.683	0.431	0.370	2.20	0.112	0.819	0.498	0.648	0.109	0.440	0.915	2.24
Lithium [mg/L]	< 0.001	0.001	< 0.001	0.002	< 0.001	0.002	0.001	0.001	< 0.001	0.001	< 0.001	0.001
Magnesium [mg/L]	0.315	0.917	0.420	0.887	0.629	0.833	1.04	0.214	0.945	1.42	0.222	0.195
Manganese [mg/L]	0.00409	0.0341	0.00401	0.0260	0.00496	0.0172	0.00807	0.00201	0.0131	0.0214	0.00426	0.0102
Molybdenum [mg/L]	0.00004	0.00010	0.00003	0.00003	0.00002	0.00004	0.00006	0.00024	0.00001	0.00001	0.00036	0.00011
Sodium [mg/L]	8.23	12.4	8.31	8.20	10.3	10.9	11.2	9.84	8.99	9.39	8.49	8.96
Nickel [mg/L]	0.0002	0.0007	0.0001	0.0008	0.0006	0.0010	0.0010	0.0001	0.0014	0.0030	0.0002	0.0001
Lead [mg/L]	0.00008	0.00059	0.00003	0.00024	0.00005	0.00026	0.00009	0.00017	0.00006	0.00010	0.00046	0.00022
Silicon [mg/L]	3.26	5.61	1.89	7.49	1.44	7.39	1.91	3.96	2.62	5.25	4.10	5.86
Antimony [mg/L]	< 0.0002	0.0004	0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0003	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00016	0.00013	0.00009	0.00010	0.00007	0.00018	0.00014	0.00046	0.00020	0.00009	0.00022	0.00032
Strontium [mg/L]	0.0071	0.0153	0.0083	0.0234	0.0132	0.0141	0.0229	0.0068	0.0171	0.0226	0.0066	0.0108
Titanium [mg/L]	0.0185	0.0989	0.0119	0.120	0.0090	0.0825	0.0183	0.0086	0.0385	0.116	0.0109	0.0479
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000024	0.000020	0.000007	0.000061	0.000002	0.000052	0.000005	0.000045	0.000005	0.000022	0.000438	0.000307
Vanadium [mg/L]	0.00089	0.0112	0.00104	0.00416	0.00205	0.00256	0.00332	0.00063	0.00571	0.00797	0.00050	0.00038
Zinc [mg/L]	0.002	0.005	0.001	0.005	0.002	0.004	0.002	0.001	0.017	0.003	0.001	0.003

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SPLP1312

July-20-12

Trelawney Mining and Exploration Inc.
Attn : Steve Norregaard

130 King St. W. Suite 2810
Toronto, ON
N5X 1A6, Canada

Phone: 416-363-8567
Fax:416-216-8535

Date Rec. : 14 June 2012
LR Report: **CA11084-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-61-1 CL-Geochem	6: E11-61-2 CL-Geochem	7: E11-81-1 CL-Geochem	8: E11-81-2 CL-Geochem	9: E11-81-3 CL-Geochem	10: E11-81-4 CL-Geochem	11: E11-54-1 33.87-36.14 m CL-Geochem	12: E11-54-2 CL-Geochem	13: E11-54-3 CL-Geochem	14: E11-54-4 CL-Geochem
Sample Date & Time			08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	16-Jul-12	15:51	100	100	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	16-Jul-12	15:51	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	16-Jul-12	15:51	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	16-Jul-12	15:51	9.4	9.5	9.5	8.1	9.4	9.4	9.5	9.5	9.3	9.3
Final pH [units]	16-Jul-12	15:51	9.61	9.60	9.51	9.43	9.48	9.48	9.47	9.58	9.53	9.52
pH [no unit]	19-Jul-12	11:26	8.28	8.33	8.54	7.99	8.20	7.55	7.81	8.24	8.31	8.04
Alkalinity [mg/L as CaCO3]	19-Jul-12	11:26	28	30	31	32	30	22	29	30	29	30
Conductivity [µS/cm]	19-Jul-12	11:26	64	71	65	69	65	62	67	65	63	63
Chloride [mg/L]	18-Jul-12	16:36	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	18-Jul-12	16:36	2.6	2.9	2.7	3.3	3.0	3.0	2.9	2.8	3.0	2.8
Mercury [mg/L]	17-Jul-12	08:36	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	18-Jul-12	09:29	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00003	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	17-Jul-12	15:37	0.49	0.79	0.64	0.90	0.58	1.15	0.42	0.49	1.35	1.29
Arsenic [mg/L]	18-Jul-12	09:29	0.0008	0.0004	0.0005	0.0005	0.0010	0.0018	0.0013	0.0006	0.0013	0.0006
Barium [mg/L]	18-Jul-12	09:29	0.00673	0.00552	0.00123	0.00282	0.00087	0.00636	0.00100	0.00062	0.00243	0.00487
Boron [mg/L]	18-Jul-12	09:29	0.0778	0.0764	0.0708	0.101	0.0715	0.0813	0.0824	0.0832	0.0841	0.0885
Beryllium [mg/L]	18-Jul-12	09:29	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00002	< 0.00002	< 0.00002	0.00003	0.00002
Bismuth [mg/L]	18-Jul-12	09:29	< 0.00001	< 0.00001	< 0.00001	0.00001	0.00003	0.00006	0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	17-Jul-12	15:37	5.76	5.70	6.22	6.91	6.94	6.66	7.23	6.67	6.46	6.20
Cadmium [mg/L]	18-Jul-12	09:29	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000005	< 0.000003

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LR Report : **CA11084-JUN12**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-61-1 CL-Geochem	6: E11-61-2 CL-Geochem	7: E11-81-1 CL-Geochem	8: E11-81-2 CL-Geochem	9: E11-81-3 CL-Geochem	10: E11-81-4 CL-Geochem	11: E11-54-1 33.87-36.14 m CL-Geochem	12: E11-54-2 CL-Geochem	13: E11-54-3 CL-Geochem	14: E11-54-4 CL-Geochem
Cobalt [mg/L]	18-Jul-12	09:29	0.000215	0.000160	0.000030	0.000047	0.000026	0.000070	0.000018	0.000018	0.000051	0.000025
Chromium [mg/L]	18-Jul-12	09:29	< 0.0005	0.0011	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0008
Copper [mg/L]	18-Jul-12	09:28	0.0009	0.0012	0.0006	0.0030	0.0041	0.0105	0.0005	< 0.0005	0.0007	0.0012
Iron [mg/L]	17-Jul-12	15:37	0.022	0.317	0.021	0.198	0.094	0.261	0.030	0.037	0.129	0.051
Potassium [mg/L]	17-Jul-12	15:37	1.91	3.19	1.59	1.37	0.814	1.27	0.319	0.399	0.397	1.38
Lithium [mg/L]	18-Jul-12	09:28	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	17-Jul-12	15:37	0.488	0.613	0.328	0.638	0.752	0.230	0.460	0.445	0.224	0.181
Manganese [mg/L]	18-Jul-12	09:28	0.00046	0.00320	0.00096	0.00151	0.00113	0.00300	0.00051	0.00054	0.00213	0.00127
Molybdenum [mg/L]	18-Jul-12	09:28	0.00002	0.00018	0.00020	0.00005	0.00005	0.00007	0.00004	0.00001	0.00023	0.00008
Sodium [mg/L]	17-Jul-12	15:37	5.58	5.43	6.00	7.05	5.30	6.34	5.96	6.31	7.10	7.03
Nickel [mg/L]	18-Jul-12	09:28	0.0003	0.0004	0.0001	0.0002	0.0002	0.0002	0.0002	0.0001	0.0002	0.0001
Lead [mg/L]	18-Jul-12	09:28	0.00012	0.00012	0.00012	0.00035	0.00022	0.00029	0.00010	0.00011	0.00015	0.00011
Silicon [mg/L]	17-Jul-12	15:37	2.02	2.71	2.34	3.81	2.78	4.89	2.11	2.36	5.96	4.70
Antimony [mg/L]	18-Jul-12	09:28	0.0003	0.0004	0.0004	0.0004	0.0006	0.0003	0.0002	0.0002	0.0003	0.0003
Selenium [mg/L]	18-Jul-12	09:28	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	18-Jul-12	09:28	0.00007	0.00008	0.00028	0.00008	0.00007	0.00013	0.00004	0.00006	0.00009	0.00028
Strontium [mg/L]	17-Jul-12	15:36	0.0136	0.0189	0.0094	0.0101	0.0103	0.0120	0.0102	0.0095	0.0068	0.0052
Titanium [mg/L]	18-Jul-12	09:28	0.0010	0.0237	0.0006	0.0024	0.0011	0.0055	0.0037	0.0021	0.0057	0.0075
Thallium [mg/L]	18-Jul-12	09:28	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	18-Jul-12	09:28	0.000042	0.000042	0.000027	0.000104	0.000049	0.000143	0.000011	0.000015	0.000138	0.000298
Vanadium [mg/L]	18-Jul-12	09:28	0.00227	0.00222	0.00094	0.00029	0.00084	0.00033	0.00103	0.00125	0.00045	0.00060
Zinc [mg/L]	18-Jul-12	09:28	0.002	0.002	0.001	< 0.001	0.001	0.001	< 0.001	< 0.001	0.001	0.002

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Date Rec. : 14 June 2012
LR Report: **CA11084-JUN12**
Reference: PO# TRR 04509

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	15: E11-59-1 CL-Geochem	16: E11-59-2 CL-Geochem	17: E11-95-1 CL-Geochem	18: E11-95-2 CL-Geochem	19: E11-97-1 CL-Geochem	20: E11-97-2 CL-Geochem	21: E11-138-1 CL-Geochem	22: E11-138-2 CL-Geochem	23: E11-138-3 CL-Geochem	24: E11-77-1 CL-Geochem	25: E11-77-2 CL-Geochem	26: E10-38-1 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	100	100	100	100	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	7.5	7.3	9.2	9.4	5.2	8.7	9.4	9.4	9.4	9.5	9.4	6.4
Final pH [units]	9.49	9.62	9.62	9.50	9.49	9.47	9.47	9.59	9.53	9.52	9.54	9.63
pH [no unit]	7.79	8.51	8.06	8.01	7.69	7.80	7.80	7.78	7.67	8.14	7.71	7.95
Alkalinity [mg/L as CaCO3]	28	28	28	30	23	27	29	27	25	31	25	25
Conductivity [µS/cm]	60	62	64	63	48	61	62	59	60	70	61	63
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	2.7	3.2	3.0	2.9	2.8	2.6	2.9	3.0	3.4	3.2	3.0	2.8
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	1.23	1.49	0.54	0.73	1.29	1.44	0.84	0.51	0.33	1.28	0.55	0.79
Arsenic [mg/L]	0.0028	0.0006	0.0006	0.0059	0.0006	0.0007	0.0007	0.0003	0.0008	0.0010	0.0004	0.0003
Barium [mg/L]	0.00705	0.00957	0.00074	0.00226	0.00610	0.00751	0.00155	0.00248	0.00084	0.00295	0.00077	0.00490
Boron [mg/L]	0.106	0.0933	0.0677	0.0943	0.0823	0.0912	0.0870	0.0743	0.0683	0.0800	0.0688	0.0734
Beryllium [mg/L]	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002	< 0.00002
Bismuth [mg/L]	0.00003	0.00002	0.00001	< 0.00001	< 0.00001	< 0.00001	0.00003	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	5.92	3.96	6.14	6.76	4.04	5.83	7.41	6.79	6.84	7.23	6.79	5.94
Cadmium [mg/L]	0.000007	0.000008	< 0.000003	0.000003	< 0.000003	0.000007	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003

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LR Report : **CA11084-JUN12**

Analysis	15: E11-59-1 CL-Geochem	16: E11-59-2 CL-Geochem	17: E11-95-1 CL-Geochem	18: E11-95-2 CL-Geochem	19: E11-97-1 CL-Geochem	20: E11-97-2 CL-Geochem	21: E11-138-1 CL-Geochem	22: E11-138-2 CL-Geochem	23: E11-138-3 CL-Geochem	24: E11-77-1 CL-Geochem	25: E11-77-2 CL-Geochem	26: E10-38-1 CL-Geochem
Cobalt [mg/L]	0.000052	0.000709	0.000056	0.000037	0.000276	0.000059	0.000223	0.000019	0.000020	0.000105	0.000016	0.000125
Chromium [mg/L]	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0010	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0007
Copper [mg/L]	0.0009	0.0016	< 0.0005	0.0011	0.0007	0.0005	0.0054	< 0.0005	< 0.0005	0.0007	< 0.0005	0.0008
Iron [mg/L]	0.257	1.25	0.133	0.077	0.522	0.278	0.037	0.012	< 0.003	0.347	0.023	0.346
Potassium [mg/L]	1.08	1.44	0.327	0.825	1.82	1.74	0.871	0.102	0.315	0.376	0.159	1.06
Lithium [mg/L]	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	0.305	0.589	0.411	0.227	0.564	0.196	0.188	0.562	0.592	0.406	0.294	0.716
Manganese [mg/L]	0.00377	0.0129	0.00215	0.00078	0.00763	0.00571	0.00178	0.00024	0.00009	0.00514	0.00041	0.00492
Molybdenum [mg/L]	0.00008	0.00007	0.00007	0.00013	0.00003	0.00055	0.00026	< 0.00001	0.00007	0.00018	0.00001	0.00006
Sodium [mg/L]	6.62	9.43	6.54	6.70	5.34	6.58	6.09	5.00	4.55	8.89	6.21	6.10
Nickel [mg/L]	0.0001	0.0006	0.0002	0.0002	0.0007	0.0002	0.0001	0.0001	0.0001	0.0003	0.0001	0.0005
Lead [mg/L]	0.00019	0.00043	0.00012	0.00076	0.00049	0.00024	0.00018	0.00010	0.00006	0.00025	0.00009	0.00013
Silicon [mg/L]	5.79	5.72	2.49	3.05	4.52	5.97	3.73	1.97	1.65	5.19	2.29	3.17
Antimony [mg/L]	0.0004	0.0004	0.0003	0.0004	0.0003	0.0004	0.0003	< 0.0002	0.0003	0.0003	0.0002	0.0003
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00012	0.00005	0.00008	0.00015	0.00013	0.00008	0.00010	0.00015	0.00004	0.00023	0.00004	0.00017
Strontium [mg/L]	0.0069	0.0156	0.0109	0.0063	0.0060	0.0084	0.0076	0.0404	0.0328	0.0125	0.0091	0.0098
Titanium [mg/L]	0.0113	0.0738	0.0088	0.0011	0.0281	0.0140	0.0009	0.0002	< 0.0001	0.0218	0.0015	0.0201
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000229	0.000021	0.000007	0.000125	0.000028	0.000847	0.000282	0.000006	0.000007	0.000071	0.000008	0.000008
Vanadium [mg/L]	0.00041	0.00792	0.00226	0.00065	0.00220	0.00043	0.00041	0.00233	0.00137	0.00150	0.00149	0.00301
Zinc [mg/L]	0.002	0.003	0.001	0.004	0.002	0.001	0.001	0.001	< 0.001	0.002	< 0.001	0.002

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SPLP1312

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LR Report: **CA11084-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	27: E10-38-2 CL-Geochem	28: E10-38-3 CL-Geochem	29: E11-91-1 CL-Geochem	30: E11-91-2 CL-Geochem	31: E11-91-3 CL-Geochem	32: E11-72-1 CL-Geochem	33: E10-31-1 CL-Geochem	34: E10-31-2 CL-Geochem	35: E10-31-3 CL-Geochem	36: E10-31-4 CL-Geochem	37: E10-23-1 CL-Geochem	38: E10-46-1 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	100	100	100	100	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	9.4	7.5	7.8	6.2	9.4	7.6	9.1	9.2	9.4	8.8	9.4	9.2
Final pH [units]	9.67	9.62	9.43	9.52	9.48	9.37	9.41	9.34	9.50	9.48	9.47	9.42
pH [no unit]	8.64	7.94	8.93	8.82	8.57	8.44	8.96	8.88	9.10	8.17	7.77	9.10
Alkalinity [mg/L as CaCO3]	29	21	26	21	28	26	26	31	28	27	22	30
Conductivity [µS/cm]	67	47	63	51	66	60	62	67	64	65	63	70
Chloride [mg/L]	< 2	< 2	2.2	< 2	< 2	< 2	2.5	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	3.5	2.4	3.0	2.8	2.9	2.7	2.8	3.1	3.3	3.0	2.9	2.9
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	1.24	0.44	0.73	1.16	0.72	1.50	0.95	1.26	0.56	0.97	0.41	0.85
Arsenic [mg/L]	0.0003	< 0.0002	0.0012	0.0008	0.0010	0.0011	0.0006	0.0027	0.0005	0.0007	0.0012	0.0004
Barium [mg/L]	0.00346	0.00091	0.00495	0.00640	0.00111	0.00281	0.00229	0.00410	0.00095	0.00147	0.00078	0.00795
Boron [mg/L]	0.0787	0.0697	0.0833	0.0828	0.0660	0.0832	0.0670	0.0808	0.0602	0.0661	0.0697	0.0707
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00003	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	6.98	6.14	6.11	4.65	6.36	6.49	7.24	6.97	7.13	7.10	6.71	6.06
Cadmium [mg/L]	0.000003	< 0.000003	< 0.000003	0.000004	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000019	0.000027	< 0.000003	0.000003

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LR Report : **CA11084-JUN12**

Analysis	**27: E10-38-2 CL-Geochem**	**28: E10-38-3 CL-Geochem**	**29: E11-91-1 CL-Geochem**	**30: E11-91-2 CL-Geochem**	**31: E11-91-3 CL-Geochem**	**32: E11-72-1 CL-Geochem**	**33: E10-31-1 CL-Geochem**	**34: E10-31-2 CL-Geochem**	**35: E10-31-3 CL-Geochem**	**36: E10-31-4 CL-Geochem**	**37: E10-23-1 CL-Geochem**	**38: E10-46-1 CL-Geochem**
Cobalt [mg/L]	0.000631	0.000068	0.000079	0.000402	0.000029	0.000037	0.000074	0.000076	0.000054	0.000062	0.000028	0.000104
Chromium [mg/L]	0.0054	< 0.0005	0.0008	< 0.0005	< 0.0005	0.0005	0.0005	< 0.0005	0.0009	< 0.0005	< 0.0005	< 0.0005
Copper [mg/L]	0.0022	< 0.0005	0.0008	0.0025	0.0005	0.0007	0.0009	0.0017	< 0.0005	0.0013	0.0006	0.0017
Iron [mg/L]	1.21	0.095	0.213	0.778	0.044	0.101	0.314	0.225	0.107	0.232	0.011	0.205
Potassium [mg/L]	0.556	0.168	0.325	1.24	0.429	0.642	0.358	1.21	0.169	0.515	0.480	1.60
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	1.37	0.706	0.396	0.692	0.185	0.165	0.253	0.283	0.588	0.351	0.168	0.165
Manganese [mg/L]	0.0168	0.00600	0.00388	0.0125	0.00071	0.00261	0.00356	0.00346	0.00162	0.00301	0.00026	0.00306
Molybdenum [mg/L]	0.00002	0.00003	0.00053	0.00025	0.00015	0.00020	0.00008	0.00044	0.00020	0.00007	0.00090	0.00004
Sodium [mg/L]	6.82	3.39	7.54	5.78	7.86	6.92	6.80	7.99	7.00	7.31	6.76	8.76
Nickel [mg/L]	0.0016	0.0002	0.0002	0.0007	0.0001	0.0001	0.0002	0.0003	0.0002	0.0002	< 0.0001	< 0.0001
Lead [mg/L]	0.00009	0.00015	0.00032	0.00034	0.00018	0.00040	0.00021	0.00113	0.00013	0.00022	0.00013	0.00021
Silicon [mg/L]	5.40	2.61	3.55	4.10	3.16	4.97	3.58	4.09	1.70	3.67	2.07	3.68
Antimony [mg/L]	0.0003	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.0006	0.0004	0.0004	0.0003	0.0003
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00004	0.00006	0.00025	0.00049	0.00007	0.00012	0.00025	0.00016	0.00007	0.00008	0.00006	0.00008
Strontium [mg/L]	0.0133	0.0101	0.0113	0.0148	0.0080	0.0078	0.0123	0.0095	0.0210	0.0069	0.0052	0.0092
Titanium [mg/L]	0.0818	0.0038	0.0103	0.0464	0.0031	0.0099	0.0101	0.0086	0.0057	0.0066	0.0003	0.0106
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000018	0.000001	0.000089	0.000008	0.000075	0.000240	0.000046	0.000163	0.000004	0.000030	0.000072	0.000097
Vanadium [mg/L]	0.00711	0.00375	0.00175	0.00727	0.00036	0.00040	0.00047	0.00064	0.00221	0.00071	0.00032	0.00034
Zinc [mg/L]	0.002	< 0.001	0.001	0.003	< 0.001	0.002	0.002	0.002	< 0.001	0.001	< 0.001	0.001

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July-20-12

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Date Rec. : 14 June 2012
LR Report: **CA11084-JUN12**
Reference: PO# TRR 04509

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	**39: E10-46-2 CL-Geochem**	**40: E10-13-1 CL-Geochem**	**41: E10-13-2 CL-Geochem**	**42: E10-13-3 CL-Geochem**	**43: E10-13-4 CL-Geochem**	**44: CL10-3-1 CL-Geochem**	**45: E10-42-1 CL-Geochem**	**46: E10-42-2 CL-Geochem**	**47: E10-42-3 CL-Geochem**	**48: E11-66-1 CL-Geochem**	**49: E11-54-1 212.3-215.5m CL-Geochem**	**50: E11-51-1 CL-Geochem**
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	100	100	100	100	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	9.5	7.8	9.4	9.3	9.4	9.3	9.0	9.1	9.4	8.7	6.2	9.0
Final pH [units]	9.48	9.63	9.44	9.48	9.41	9.08	9.37	9.31	9.44	9.29	9.14	9.42
pH [no unit]	8.63	8.53	8.78	8.47	7.94	8.16	8.91	8.14	8.64	8.82	8.07	7.88
Alkalinity [mg/L as CaCO3]	26	25	28	27	25	34	32	27	33	35	23	18
Conductivity [µS/cm]	66	57	65	62	60	85	68	66	73	79	57	60
Chloride [mg/L]	2.1	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	3.0	2.6	2.8	2.8	3.0	4.8	3.1	3.6	3.5	3.1	3.0	2.8
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00011	0.00006	< 0.00001
Aluminum [mg/L]	0.59	0.53	0.41	0.61	0.52	0.47	0.52	0.72	1.10	0.55	0.59	0.42
Arsenic [mg/L]	0.0004	0.0005	< 0.0002	0.0003	0.0004	0.0018	0.0066	0.0015	0.0006	0.0013	0.0021	0.0004
Barium [mg/L]	0.00096	0.00122	0.00067	0.00205	0.00062	0.00104	0.00113	0.00371	0.00204	0.00152	0.00232	0.00061
Boron [mg/L]	0.0654	0.0555	0.0708	0.0806	0.0593	0.0631	0.0736	0.0861	0.0757	0.139	0.112	0.0622
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00003	0.00003	0.00007	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00002	< 0.00001
Calcium [mg/L]	7.39	5.97	6.49	6.44	6.85	10.1	7.07	6.76	6.95	6.50	3.97	6.29
Cadmium [mg/L]	0.000004	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000006	0.000010	0.000026	< 0.000003

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SPLP1312

LR Report : **CA11084-JUN12**

Analysis	**39: E10-46-2 CL-Geochem**	**40: E10-13-1 CL-Geochem**	**41: E10-13-2 CL-Geochem**	**42: E10-13-3 CL-Geochem**	**43: E10-13-4 CL-Geochem**	**44: CL10-3-1 CL-Geochem**	**45: E10-42-1 CL-Geochem**	**46: E10-42-2 CL-Geochem**	**47: E10-42-3 CL-Geochem**	**48: E11-66-1 CL-Geochem**	**49: E11-54-1 212.3-215.5m CL-Geochem**	**50: E11-51-1 CL-Geochem**
Cobalt [mg/L]	0.000043	0.000069	0.000020	0.000030	0.000033	0.000036	0.000123	0.000064	0.000067	0.000183	0.000398	0.000016
Chromium [mg/L]	< 0.0005	0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0005	0.0022	0.0010	0.0009	< 0.0005
Copper [mg/L]	0.0543	0.0010	< 0.0005	0.0005	0.0005	0.0024	0.0007	0.0016	0.0027	0.0054	0.0347	< 0.0005
Iron [mg/L]	0.048	0.101	0.008	0.056	0.105	0.050	0.018	0.131	0.450	0.536	0.502	0.008
Potassium [mg/L]	0.161	1.61	0.431	0.710	0.354	2.19	0.787	1.50	0.721	0.410	0.541	0.471
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	0.190	0.679	0.520	0.241	0.398	0.320	0.187	0.398	0.542	0.691	0.719	0.338
Manganese [mg/L]	0.00107	0.00141	0.00013	0.00058	0.00131	0.00047	0.00016	0.00136	0.00383	0.0140	0.00729	0.00014
Molybdenum [mg/L]	0.00018	0.00003	0.00003	0.00009	0.00037	0.00070	0.00022	0.00013	0.00039	0.00007	0.00005	0.00004
Sodium [mg/L]	7.74	5.10	7.11	6.95	6.04	6.90	7.85	7.40	9.21	10.7	8.10	5.99
Nickel [mg/L]	0.0001	0.0004	< 0.0001	< 0.0001	0.0001	0.0001	0.0018	0.0003	0.0004	0.0003	0.0003	< 0.0001
Lead [mg/L]	0.00293	0.00060	0.00009	0.00012	0.00016	0.00018	0.00013	0.00014	0.00017	0.00012	0.00027	0.00012
Silicon [mg/L]	2.88	1.95	1.53	2.73	2.12	1.65	2.20	2.72	3.22	6.40	5.18	1.87
Antimony [mg/L]	0.0003	0.0003	0.0004	0.0004	0.0003	0.0005	0.0003	0.0004	0.0004	0.0002	0.0003	0.0003
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00039	0.00015	0.00006	0.00008	0.00006	0.00012	0.00005	0.00028	0.00018	0.00009	0.00013	0.00007
Strontium [mg/L]	0.0130	0.0072	0.0189	0.0095	0.0103	0.0109	0.0066	0.0092	0.0108	0.0128	0.0061	0.0058
Titanium [mg/L]	0.0055	0.0067	0.0005	0.0035	0.0027	0.0011	0.0005	0.0083	0.0066	0.0092	0.0135	0.0003
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.001888	0.000009	0.000002	0.000046	0.000028	0.000106	0.000062	0.000021	0.000038	0.000036	0.000071	0.000003
Vanadium [mg/L]	0.00072	0.00177	0.00250	0.00056	0.00085	0.00025	0.00047	0.00128	0.00129	0.00234	0.00280	0.00068
Zinc [mg/L]	0.033	0.002	< 0.001	0.001	< 0.001	0.001	< 0.001	0.001	0.001	< 0.001	0.003	< 0.001

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SPLP1312 fluid #1

June-29-12

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Date Rec. : 14 June 2012
LR Report: **CA11090-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-112-1 CL-Geochem	6: E11-112-2 CL-Geochem	7: E11-112-3 CL-Geochem	8: E11-112-4 CL-Geochem	9: E11-053-1 CL-Geochem	10: E11-053-2 CL-Geochem	11: E11-053-3 CL-Geochem	12: E11-052-1 CL-Geochem
Sample Date & Time			08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	26-Jun-12	13:14	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	26-Jun-12	13:14	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	26-Jun-12	13:14	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	26-Jun-12	13:14	9.36	9.39	8.54	9.20	9.46	9.34	5.92	9.42
Final pH [units]	26-Jun-12	13:14	9.48	9.60	9.48	9.52	9.56	9.68	9.72	9.51
pH [no unit]	29-Jun-12	10:57	9.03	9.06	9.13	8.98	9.14	9.16	9.22	8.95
Alkalinity [mg/L as CaCO3]	29-Jun-12	10:56	30	29	25	28	28	28	26	26
Conductivity [µS/cm]	29-Jun-12	10:56	66	66	61	63	70	67	60	63
Chloride [mg/L]	27-Jun-12	15:54	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	27-Jun-12	15:54	2.7	2.6	2.8	2.6	2.8	2.7	2.6	2.7
Mercury [mg/L]	29-Jun-12	09:58	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	29-Jun-12	10:51	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	28-Jun-12	09:43	0.72	1.55	1.34	0.76	0.60	0.39	0.85	0.50
Arsenic [mg/L]	29-Jun-12	10:52	0.0005	0.0003	0.0010	0.0010	0.0012	0.0012	0.0008	0.0014
Barium [mg/L]	29-Jun-12	10:52	0.00077	0.00565	0.0127	0.00097	0.00069	0.00287	0.00794	0.00058
Boron [mg/L]	29-Jun-12	10:52	0.102	0.0930	0.100	0.102	0.0747	0.0754	0.0821	0.0714
Beryllium [mg/L]	29-Jun-12	10:52	< 0.00002	0.00002	0.00002	< 0.00002	< 0.00002	< 0.00002	0.00003	0.00003
Bismuth [mg/L]	29-Jun-12	10:52	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	28-Jun-12	09:43	6.60	6.34	5.94	7.07	6.71	5.46	5.10	7.13
Cadmium [mg/L]	29-Jun-12	10:52	0.000028	0.000006	0.000012	0.000005	0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	29-Jun-12	10:52	0.000018	0.000300	0.000042	0.000033	< 0.000002	0.000010	0.000309	< 0.000002
Chromium [mg/L]	29-Jun-12	10:52	< 0.0005	0.0034	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0029	< 0.0005

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SPLP1312 fluid #1

LR Report : **CA11090-JUN12**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-112-1 CL-Geochem	6: E11-112-2 CL-Geochem	7: E11-112-3 CL-Geochem	8: E11-112-4 CL-Geochem	9: E11-053-1 CL-Geochem	10: E11-053-2 CL-Geochem	11: E11-053-3 CL-Geochem	12: E11-052-1 CL-Geochem
Copper [mg/L]	29-Jun-12	10:52	< 0.0005	0.0015	0.0014	0.0026	0.0007	0.0012	0.0008	< 0.0005
Iron [mg/L]	28-Jun-12	09:44	0.037	1.10	0.250	0.192	0.010	0.066	0.605	0.056
Potassium [mg/L]	28-Jun-12	09:44	0.889	3.22	1.68	0.591	2.25	3.00	1.28	0.220
Lithium [mg/L]	29-Jun-12	10:52	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	28-Jun-12	09:44	0.265	1.03	0.226	0.426	0.345	0.428	0.946	0.307
Manganese [mg/L]	29-Jun-12	10:53	0.00079	0.0113	0.00470	0.00302	0.00030	0.00101	0.0112	0.00081
Molybdenum [mg/L]	29-Jun-12	10:53	0.00017	0.00009	0.00046	0.00009	0.00006	0.00009	< 0.00001	0.00019
Sodium [mg/L]	28-Jun-12	09:44	6.47	5.16	6.37	6.05	6.23	6.13	6.38	5.68
Nickel [mg/L]	29-Jun-12	10:53	0.0010	0.0011	0.0005	0.0026	0.0013	0.0004	0.0008	0.0003
Lead [mg/L]	29-Jun-12	10:53	0.00023	0.00042	0.00087	0.00260	0.00085	0.00054	0.00043	0.00021
Silicon [mg/L]	28-Jun-12	09:45	2.83	4.52	5.72	3.11	2.01	2.47	5.22	2.57
Antimony [mg/L]	29-Jun-12	10:53	0.0006	0.0005	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003
Selenium [mg/L]	29-Jun-12	10:53	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	29-Jun-12	10:53	0.00001	0.00006	< 0.00001	0.00020	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Strontium [mg/L]	28-Jun-12	09:46	0.0056	0.0162	0.0140	0.0075	0.0107	0.0238	0.0189	0.0076
Titanium [mg/L]	28-Jun-12	09:46	0.0027	0.0670	0.0165	0.0041	0.0009	0.0049	0.0354	0.0024
Thallium [mg/L]	29-Jun-12	10:53	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	29-Jun-12	10:53	0.000062	0.000034	0.000269	0.000021	0.000018	0.000003	0.000016	0.000025
Vanadium [mg/L]	29-Jun-12	10:53	0.00089	0.00344	0.00071	0.00070	0.00170	0.00306	0.00574	0.00169
Zinc [mg/L]	29-Jun-12	10:53	< 0.001	0.002	0.003	0.001	< 0.001	< 0.001	0.002	< 0.001

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29-June-2012

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	13: E11-052-2 CL-Geochem	14: E11-052-3 CL-Geochem	15: E11-110-1 CL-Geochem	16: E11-110-2 CL-Geochem	17: E11-062-1 CL-Geochem	18: E11-062-2 CL-Geochem	19: E11-062-3 CL-Geochem	20: E11-062-4 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	9.50	9.36	9.16	6.02	8.82	9.48	9.52	7.74
Final pH [units]	9.48	9.54	9.49	9.59	9.52	9.56	9.66	9.51
pH [no unit]	9.03	9.05	7.95	9.15	8.96	9.17	9.35	9.27
Alkalinity [mg/L as CaCO3]	30	29	31	25	29	28	32	30
Conductivity [µS/cm]	66	71	70	58	71	63	74	70
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	3.0	2.8	2.8	2.8	2.9	2.6	3.0	3.0
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.74	0.60	1.00	1.22	1.26	0.74	0.54	1.16
Arsenic [mg/L]	0.0007	0.0010	0.0012	0.0006	0.0013	0.0014	0.0007	0.0013
Barium [mg/L]	0.00056	0.00134	0.00628	0.00200	0.00741	0.00093	0.00609	0.00965
Boron [mg/L]	0.0617	0.0721	0.0852	0.0958	0.114	0.0851	0.0866	0.123
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002	< 0.00002	0.00003
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	7.98	6.70	6.62	5.53	6.20	6.49	5.39	5.59
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000004	< 0.000003
Cobalt [mg/L]	0.000002	0.000007	< 0.000002	0.000358	0.000034	< 0.000002	< 0.000002	0.000059

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Analysis	13: E11-052-2 CL-Geochem	14: E11-052-3 CL-Geochem	15: E11-110-1 CL-Geochem	16: E11-110-2 CL-Geochem	17: E11-062-1 CL-Geochem	18: E11-062-2 CL-Geochem	19: E11-062-3 CL-Geochem	20: E11-062-4 CL-Geochem
Chromium [mg/L]	< 0.0005	< 0.0005	< 0.0005	0.0012	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Copper [mg/L]	0.0010	0.0015	0.0007	0.0011	0.0019	< 0.0005	< 0.0005	0.0009
Iron [mg/L]	0.095	0.089	0.122	1.01	0.214	0.066	0.052	0.204
Potassium [mg/L]	0.310	0.781	1.30	0.365	1.29	2.07	5.20	1.74
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	0.520	0.308	0.179	0.895	0.178	0.392	0.436	0.215
Manganese [mg/L]	0.00148	0.00182	0.00243	0.0111	0.00363	0.00071	0.00077	0.00433
Molybdenum [mg/L]	0.00021	0.00009	0.00013	0.00001	0.00004	0.00017	0.00033	0.00004
Sodium [mg/L]	5.78	6.37	7.43	6.13	8.01	4.60	6.13	8.65
Nickel [mg/L]	0.0004	0.0002	0.0002	0.0016	0.0002	0.0002	0.0002	0.0010
Lead [mg/L]	0.00028	0.00015	0.00027	0.00015	0.00031	0.00014	0.00049	0.00029
Silicon [mg/L]	1.68	2.49	3.98	4.62	5.57	1.93	2.19	5.06
Antimony [mg/L]	0.0003	0.0002	0.0004	0.0003	0.0003	0.0003	0.0004	0.0003
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	< 0.00001	< 0.00001	< 0.00001	0.00003	0.00002	< 0.00001	< 0.00001	< 0.00001
Strontium [mg/L]	0.0106	0.0129	0.0144	0.0145	0.0096	0.0114	0.0251	0.0080
Titanium [mg/L]	0.0050	0.0073	0.0071	0.0438	0.0168	0.0037	0.0050	0.0137
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000006	0.000014	0.000191	0.000007	0.000252	0.000005	0.000008	0.000142
Vanadium [mg/L]	0.00069	0.00128	0.00049	0.00613	0.00056	0.00263	0.00421	0.00081
Zinc [mg/L]	0.001	< 0.001	< 0.001	0.002	0.001	< 0.001	< 0.001	0.001

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

OnLine LIMS

0000065617

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

SPLP1312 fluid #1

June-29-12

Trelawney Mining and Exploration Inc.
Attn : Steve Norregaard

130 King St. W. Suite 2810
Toronto, ON
N5X 1A6, Canada

Phone: 416-363-8567
Fax:416-216-8535

Date Rec. : 14 June 2012
LR Report: **CA11090-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	21: E11-111-1 CL-Geochem	22: E11-100-1 CL-Geochem	23: E11-100-2 CL-Geochem	24: E11-100-3 CL-Geochem	25: E11-107-1 CL-Geochem	26: E11-107-2 CL-Geochem	27: Bulk Sample-1 CL-Geochem	28: Bulk Sample-2 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	100	100	100	100	100	100	100	100
Ext Fluid [#1 or #2]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ext Volume [mL]	2000	2000	2000	2000	2000	2000	2000	2000
Initial pH [units]	9.46	9.37	9.48	9.43	9.31	9.42	8.86	5.18
Final pH [units]	9.53	9.43	9.56	9.62	9.53	9.56	9.31	9.00
pH [no unit]	9.27	9.04	9.17	8.36	9.18	9.28	9.20	8.79
Alkalinity [mg/L as CaCO3]	31	30	28	28	28	28	29	23
Conductivity [µS/cm]	72	71	64	64	63	65	63	54
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	2.7	2.9	3.0	2.4	2.5	2.6	2.8	2.9
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.65	0.59	0.67	0.53	0.84	0.48	0.95	1.32
Arsenic [mg/L]	< 0.0002	0.0007	0.0003	0.0012	0.0003	0.0002	0.0010	0.0009
Barium [mg/L]	0.00136	0.00122	0.00062	0.00274	0.00124	0.00071	0.00204	0.00257
Boron [mg/L]	0.0288	0.0325	0.0229	0.0347	0.0313	0.0298	0.0317	0.0377
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00002	0.00004
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	7.51	7.58	7.19	6.12	7.37	6.94	6.31	4.29
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	0.000009	< 0.000003	< 0.000003
Cobalt [mg/L]	< 0.000002	< 0.000002	< 0.000002	0.000007	< 0.000002	< 0.000002	0.000039	0.000043

OnLine LIMS

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SPLP1312 fluid #1

LR Report : CA11090-JUN12

Analysis	21: E11-111-1 CL-Geochem	22: E11-100-1 CL-Geochem	23: E11-100-2 CL-Geochem	24: E11-100-3 CL-Geochem	25: E11-107-1 CL-Geochem	26: E11-107-2 CL-Geochem	27: Bulk Sample-1 CL-Geochem	28: Bulk Sample-2 CL-Geochem
Chromium [mg/L]	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Copper [mg/L]	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0008	< 0.0005	0.0033	0.0040
Iron [mg/L]	0.019	0.028	0.005	0.049	0.054	0.048	0.121	0.126
Potassium [mg/L]	1.53	0.934	0.836	2.41	1.47	0.389	0.465	0.329
Lithium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	0.504	0.166	0.416	0.385	0.250	0.379	0.202	0.159
Manganese [mg/L]	0.00028	0.00066	0.00017	0.00078	0.00089	0.00071	0.00312	0.00486
Molybdenum [mg/L]	0.00001	0.00060	0.00021	0.00003	0.00006	0.00003	0.00130	0.00057
Sodium [mg/L]	5.77	6.41	4.71	5.12	4.93	5.34	6.51	7.22
Nickel [mg/L]	0.0003	0.0006	0.0003	0.0004	0.0009	0.0008	0.0003	0.0002
Lead [mg/L]	0.00016	0.00042	0.00023	0.00015	0.00025	0.00020	0.00035	0.00030
Silicon [mg/L]	1.45	2.51	1.53	1.95	2.81	1.94	3.67	5.08
Antimony [mg/L]	0.0003	0.0003	0.0002	0.0003	0.0003	0.0002	0.0003	0.0002
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	< 0.00001	< 0.00001	< 0.00001	0.00017	0.00144	0.00002	0.00005	0.00003
Strontium [mg/L]	0.0133	0.0074	0.0096	0.0070	0.0051	0.0126	0.0043	0.0050
Titanium [mg/L]	0.0011	0.0029	0.0003	0.0034	0.0063	0.0037	0.0061	0.0083
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000002	0.000096	0.000008	0.000003	0.000182	0.000012	0.000154	0.000085
Vanadium [mg/L]	0.00154	0.00032	0.00154	0.00146	0.00082	0.00125	0.00052	0.00043
Zinc [mg/L]	< 0.001	0.001	< 0.001	0.001	< 0.001	0.001	0.001	0.002

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NET ACID GENERATION LEACHATE

SGS Canada Inc.
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NAG Test with Analyses

Project : IAMGold Cote Lake

Friday, December 21, 2012

Knight Piesold Limited
Attn : Steve Aiken

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165 ext. 241
Fax:

Date Rec. : 13 November 2012
LR Report: **CA10184-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Sample weight g	Vol H2O2 mL	pH units	Conductivity µS/cm	Alkalinity mg/L as CaCO3	Cl mg/L	SO4 mg/L	Hg mg/L	Ag mg/L	Al mg/L	As mg/L	Ba mg/L
3: Analysis Approval Date		14-Dec-12	14-Dec-12	18-Dec-12	18-Dec-12	18-Dec-12	20-Dec-12	20-Dec-12	19-Dec-12	18-Dec-12	17-Dec-12	18-Dec-12	18-Dec-12
4: Analysis Approval Time		09:38	09:38	14:44	14:44	14:44	15:26	15:23	10:01	07:54	15:47	07:54	07:54
5: E10-036 ARD-1	10-Nov-12	2.50	250	9.93	161	89	< 2	6.2	< 0.00001	< 0.00001	3.21	< 0.0002	0.00079
6: E10-036 ARD-2	10-Nov-12	2.51	250	9.32	180	96	< 2	7.0	0.00001	< 0.00001	2.28	0.0010	0.00025
7: E10-036 ARD-3	10-Nov-12	2.50	250	10.7	242	102	< 2	14	< 0.00001	< 0.00001	6.54	< 0.0002	0.00089
8: E10-045 ARD-4	10-Nov-12	2.52	250	9.15	210	114	< 2	8.5	< 0.00001	< 0.00001	1.86	0.0016	0.00025
9: E11-066 ARD-5	10-Nov-12	2.53	250	8.10	184	69	< 2	27	< 0.00001	0.00004	1.16	0.0022	0.00028
10: E11-066 ARD-6	10-Nov-12	2.51	250	10.4	222	90	< 2	16	0.00003	< 0.00001	3.36	< 0.0002	0.0323
11: E11-082 ARD-7	10-Nov-12	2.50	250	10.4	195	106	< 2	2.6	< 0.00001	< 0.00001	3.61	0.0002	0.00270
12: E11-082 ARD-8	10-Nov-12	2.50	250	8.25	164	66	< 2	13	< 0.00001	< 0.00001	1.30	0.0013	0.0281
13: E11-082 ARD-9	10-Nov-12	2.53	250	9.60	171	105	< 2	3.2	0.00003	< 0.00001	2.78	< 0.0002	0.00196
14: E11-087 ARD-10	10-Nov-12	2.50	250	10.3	200	93	< 2	13	< 0.00001	0.00001	4.01	< 0.0002	0.00495
15: E11-087 ARD-11	10-Nov-12	2.51	250	8.78	209	111	< 2	8.4	< 0.00001	0.00001	1.47	0.0029	0.00196
16: E12-217 ARD-12	10-Nov-12	2.51	250	10.3	178	89	< 2	5.6	< 0.00001	< 0.00001	2.74	< 0.0002	0.00129
17: E11-096 ARD-13	10-Nov-12	2.51	250	10.6	214	99	< 2	< 2	0.00001	< 0.00001	3.53	< 0.0002	0.0194
18: E11-096 ARD-14	10-Nov-12	2.51	250	10.4	230	102	< 2	27	< 0.00001	< 0.00001	2.69	< 0.0002	0.00312
19: E11-096 ARD-15	10-Nov-12	2.52	250	7.57	74	13	< 2	18	< 0.00001	< 0.00001	0.30	0.0018	0.00058
20: E11-098 ARD-16	10-Nov-12	2.51	250	10.2	176	91	< 2	6.1	< 0.00001	< 0.00001	3.84	0.0012	0.00114
21: E11-098 ARD-17	10-Nov-12	2.50	250	10.1	166	65	< 2	11	0.00001	< 0.00001	2.42	< 0.0002	0.00850
22: E11-098 ARD-18	10-Nov-12	2.50	250	9.98	157	74	< 2	12	< 0.00001	< 0.00001	3.75	< 0.0002	0.00584
23: E11-099 ARD-19	10-Nov-12	2.51	250	8.50	163	116	< 2	6.5	< 0.00001	< 0.00001	1.40	0.0016	0.00025
24: E11-099 ARD-20	10-Nov-12	2.52	250	10.3	213	100	< 2	16	0.00003	< 0.00001	2.85	< 0.0002	0.00140
25: E11-114 ARD-21	10-Nov-12	2.50	250	9.08	198	112	2.2	4.7	< 0.00001	< 0.00001	1.61	0.0024	0.00068

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NAG Test with Analyses

Project : IAMGold Cote Lake

LR Report : **CA10184-NOV12**

Sample ID	Sample Date & Time	Sample weight g	Vol H2O2 mL	pH units	Conductivity µS/cm	Alkalinity mg/L as CaCO3	Cl mg/L	SO4 mg/L	Hg mg/L	Ag mg/L	Al mg/L	As mg/L	Ba mg/L
26: E11-114 ARD-22	10-Nov-12	2.51	250	10.6	234	113	< 2	3.8	< 0.00001	< 0.00001	2.77	< 0.0002	0.00757
27: E10-038 ARD-23	10-Nov-12	2.51	250	8.25	252	146	< 2	2.6	< 0.00001	0.00001	1.12	0.0011	0.00015
28: E11-062 ARD-24	10-Nov-12	2.53	250	10.2	179	86	< 2	9.5	0.00004	< 0.00001	4.10	< 0.0002	0.00137
29: E10-30 ARD-25	10-Nov-12	2.50	250	9.97	130	57	< 2	9.8	0.00001	< 0.00001	3.00	0.0010	0.00090
30: E10-028 ARD-26	10-Nov-12	2.52	250	8.58	232	132	< 2	< 2	< 0.00001	< 0.00001	1.39	0.0072	0.00098
31: E11-049 ARD-27	10-Nov-12	2.50	250	8.92	190	109	< 2	2.2	0.00003	< 0.00001	1.32	0.0078	0.00923
32: E11-049 ARD-28	10-Nov-12	2.51	250	9.88	393	82	< 2	130	< 0.00001	< 0.00001	1.66	0.0015	0.00229
33: E11-061 ARD-29	10-Nov-12	2.53	250	7.37	28	10	< 2	< 2	0.00001	< 0.00001	0.08	0.0095	0.00089
34: E12-206 ARD-30	10-Nov-12	2.53	250	10.6	190	86	< 2	< 2	0.00001	< 0.00001	4.78	< 0.0002	0.00296
35: E12-179 ARD-31	10-Nov-12	2.49	250	10.0	182	88	< 2	14	< 0.00001	< 0.00001	3.63	0.0006	0.00098
36: E11-048 ARD-32	10-Nov-12	2.50	250	9.76	158	66	< 2	17	0.00001	< 0.00001	3.13	0.0004	0.00086
37: E11-048 ARD-33	10-Nov-12	2.50	250	10.2	197	75	2.1	20	< 0.00001	< 0.00001	2.55	< 0.0002	0.00100
38: E11-075 ARD-34	10-Nov-12	2.50	250	9.69	117	60	< 2	< 2	< 0.00001	< 0.00001	3.60	< 0.0002	0.00141
39: E11-075 ARD-35	10-Nov-12	2.50	250	7.55	339	16	< 2	20	< 0.00001	< 0.00001	2.92	0.0004	0.00087
40: E11-071 ARD-36	10-Nov-12	2.50	250	10.6	238	80	< 2	26	< 0.00001	< 0.00001	4.22	0.0002	0.00219
41: E11-071 ARD-37	10-Nov-12	2.50	250	9.96	181	78	< 2	9.8	< 0.00001	< 0.00001	1.97	0.0008	0.0182
42: E11-078 ARD-38	10-Nov-12	2.50	250	7.37	81	17	< 2	15	< 0.00001	< 0.00001	0.48	0.0015	0.00032
43: E11-179 ARD-39	10-Nov-12	2.50	250	7.52	57	35	< 2	< 2	< 0.00001	0.00002	0.06	0.0009	0.00492
44: E11-120 ARD-40	10-Nov-12	2.50	250	9.53	132	42	< 2	19	0.00001	< 0.00001	3.94	< 0.0002	0.00109
45: E11-120 ARD-41	10-Nov-12	2.50	250	10.2	201	80	3.6	18	< 0.00001	< 0.00001	3.40	< 0.0002	0.00141
46: E11-120 ARD-42	10-Nov-12	2.50	250	10.9	280	96	< 2	4.0	< 0.00001	< 0.00001	2.47	< 0.0002	0.00196
47: E11-122 ARD-43	10-Nov-12	2.50	250	8.17	283	157	2.9	10	< 0.00001	< 0.00001	1.34	0.0038	0.00023
48: E11-122 ARD-44	10-Nov-12	2.50	250	9.98	157	68	< 2	13	0.00002	< 0.00001	3.77	< 0.0002	0.00036
49: E11-140 ARD-45	10-Nov-12	2.50	250	8.26	252	115	2.0	21	< 0.00001	< 0.00001	1.36	0.0044	0.00058
50: E11-145 ARD-46	10-Nov-12	2.50	250	7.55	126	60	2.1	3.5	< 0.00001	< 0.00001	0.54	0.0051	0.0177
51: E12-198 ARD-47	10-Nov-12	2.50	250	9.74	145	58	< 2	15	0.00002	< 0.00001	1.67	0.0003	0.00227
52: E11-129 ARD-48	10-Nov-12	2.50	250	9.83	133	52	< 2	9.6	< 0.00001	< 0.00001	3.74	0.0002	0.00037
53: E11-140 ARD-49	10-Nov-12	2.50	250	9.99	141	67	< 2	3.7	< 0.00001	< 0.00001	3.85	< 0.0002	0.00168
54: E11-144 ARD-50	10-Nov-12	2.50	250	8.30	186	68	< 2	26	< 0.00001	< 0.00001	1.07	0.0040	0.00099
55: E11-141 ARD-51	10-Nov-12	2.50	250	11.0	281	105	< 2	4.7	< 0.00001	< 0.00001	4.28	< 0.0002	0.00178
56: E11-145 ARD-52	10-Nov-12	2.50	250	8.16	231	124	< 2	2.3	< 0.00001	< 0.00001	1.82	0.0004	0.0127
57: E12-200 ARD-53	10-Nov-12	2.50	250	10.9	257	86	< 2	9.7	< 0.00001	0.00001	2.74	< 0.0002	0.00077
58: E12-205 ARD-54	10-Nov-12	2.50	250	7.89	233	127	2.4	< 2	< 0.00001	< 0.00001	1.26	0.0110	0.00681
59: E12-294 ARD-55	10-Nov-12	2.50	250	7.44	142	17	< 2	42	0.00002	< 0.00001	0.26	0.0011	0.00351
60: E12-205 ARD-56	10-Nov-12	2.50	250	7.96	235	116	< 2	16	< 0.00001	< 0.00001	1.15	0.0024	0.00090
61: CL10-01 ARD-57	10-Nov-12	2.50	250	10.5	180	58	< 2	11	0.00001	< 0.00001	2.20	< 0.0002	0.00130
62: CL10-01 ARD-58	10-Nov-12	2.50	250	9.19	140	66	< 2	5.6	< 0.00001	< 0.00001	2.33	< 0.0002	0.0642
63: CL10-02A ARD-59	10-Nov-12	2.50	250	10.0	145	57	< 2	15	< 0.00001	< 0.00001	3.96	< 0.0002	0.00242
64: E12-213 ARD-60	10-Nov-12	2.50	250	7.91	231	52	2.8	55	< 0.00001	< 0.00001	1.57	0.0026	0.00335

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NAG Test with Analyses

Project : IAMGold Cote Lake

Knight Piesold Limited
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Phone: 705-476-2165 ext. 241
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Friday, December 21, 2012

Date Rec. : 13 November 2012
LR Report: **CA10184-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Be mg/L	Bi mg/L	Ca mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L	K mg/L	Li mg/L	Mg mg/L	Mn mg/L	Mo mg/L
3: Analysis Approval Date	18-Dec-12	18-Dec-12	17-Dec-12	18-Dec-12	18-Dec-12	18-Dec-12	18-Dec-12	17-Dec-12	17-Dec-12	18-Dec-12	17-Dec-12	18-Dec-12	18-Dec-12
4: Analysis Approval Time	07:55	07:55	15:47	07:55	07:55	07:55	07:55	15:48	15:48	07:55	15:48	07:55	07:55
5: E10-036 ARD-1	< 0.00002	< 0.00001	44.6	< 0.000003	0.000079	0.0308	< 0.0005	< 0.003	1.89	0.002	0.010	0.0130	0.00192
6: E10-036 ARD-2	< 0.00002	< 0.00001	51.9	< 0.000003	0.000036	0.0258	< 0.0005	< 0.003	2.00	0.001	0.046	0.0191	0.00286
7: E10-036 ARD-3	< 0.00002	< 0.00001	64.7	< 0.000003	0.000021	0.0309	0.0007	< 0.003	4.00	0.002	0.006	0.00049	0.00311
8: E10-045 ARD-4	< 0.00002	< 0.00001	42.9	0.000004	0.000027	0.0415	0.0010	0.007	0.954	< 0.001	0.076	0.0261	0.0126
9: E11-066 ARD-5	< 0.00002	< 0.00001	31.6	0.000004	0.000032	0.0331	0.0011	0.004	0.853	0.002	0.981	0.00246	0.0145
10: E11-066 ARD-6	< 0.00002	< 0.00001	51.3	0.000006	0.000036	0.0353	< 0.0005	< 0.003	15.3	< 0.001	0.002	0.00031	0.00385
11: E11-082 ARD-7	< 0.00002	< 0.00001	53.1	< 0.000003	0.000013	0.0251	< 0.0005	< 0.003	3.23	0.001	0.003	0.00017	0.00291
12: E11-082 ARD-8	< 0.00002	< 0.00001	17.6	< 0.000003	0.000013	0.0280	0.0009	0.006	22.8	0.010	0.056	0.00267	0.00236
13: E11-082 ARD-9	< 0.00002	< 0.00001	38.5	< 0.000003	0.000009	0.0199	< 0.0005	0.034	3.60	0.001	0.020	0.0231	0.00042
14: E11-087 ARD-10	< 0.00002	< 0.00001	43.8	< 0.000003	< 0.000002	0.0105	< 0.0005	< 0.003	11.2	0.001	0.001	0.00009	0.00633
15: E11-087 ARD-11	< 0.00002	< 0.00001	42.9	< 0.000003	0.000027	0.0288	0.0011	< 0.003	3.52	0.002	0.173	0.0153	0.00421
16: E12-217 ARD-12	< 0.00002	< 0.00001	44.9	< 0.000003	0.000015	0.0196	< 0.0005	< 0.003	2.22	< 0.001	0.003	0.00015	0.00298
17: E11-096 ARD-13	< 0.00002	< 0.00001	50.8	< 0.000003	0.000032	0.0179	0.0007	< 0.003	10.1	< 0.001	0.002	0.00007	0.00174
18: E11-096 ARD-14	< 0.00002	< 0.00001	60.4	< 0.000003	0.000030	0.0301	0.0012	< 0.003	1.09	< 0.001	0.004	0.00011	0.00351
19: E11-096 ARD-15	< 0.00002	< 0.00001	5.51	0.000008	0.000032	0.0079	0.0006	0.019	2.64	0.001	1.87	0.00278	0.00285
20: E11-098 ARD-16	< 0.00002	< 0.00001	46.6	< 0.000003	0.000030	0.0339	< 0.0005	< 0.003	2.31	0.004	0.003	0.00020	0.00290
21: E11-098 ARD-17	< 0.00002	< 0.00001	42.6	0.000095	0.000011	0.0193	< 0.0005	< 0.003	26.2	< 0.001	0.001	0.00006	0.208
22: E11-098 ARD-18	< 0.00002	< 0.00001	52.6	0.000008	0.000029	0.0196	0.0007	< 0.003	9.36	0.001	0.003	0.00006	0.0231
23: E11-099 ARD-19	< 0.00002	< 0.00001	41.9	< 0.000003	0.000027	0.0315	0.0023	< 0.003	1.90	< 0.001	0.281	0.0262	0.00661
24: E11-099 ARD-20	< 0.00002	< 0.00001	59.2	< 0.000003	0.000030	0.0236	0.0011	< 0.003	1.03	< 0.001	0.002	0.00020	0.00348
25: E11-114 ARD-21	< 0.00002	< 0.00001	46.9	< 0.000003	0.000031	0.0416	< 0.0005	< 0.003	1.38	0.007	0.068	0.0140	0.00187

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NAG Test with Analyses

Project : IAMGold Cote Lake

LR Report : **CA10184-NOV12**

Sample ID	Be mg/L	Bi mg/L	Ca mg/L	Cd mg/L	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L	K mg/L	Li mg/L	Mg mg/L	Mn mg/L	Mo mg/L
26: E11-114 ARD-22	< 0.00002	< 0.00001	61.3	< 0.000003	0.000035	0.0227	< 0.0005	< 0.003	13.2	< 0.001	0.002	0.00019	0.00227
27: E10-038 ARD-23	< 0.00002	< 0.00001	52.7	< 0.000003	0.000037	0.0296	0.0015	< 0.003	2.16	0.001	0.707	0.0466	0.00267
28: E11-062 ARD-24	< 0.00002	< 0.00001	47.3	< 0.000003	0.000015	0.0363	< 0.0005	< 0.003	2.33	0.002	0.003	0.00024	0.00160
29: E10-30 ARD-25	< 0.00002	< 0.00001	55.7	< 0.000003	0.000044	0.0319	< 0.0005	< 0.003	1.87	0.001	0.003	0.00011	0.00174
30: E10-028 ARD-26	< 0.00002	< 0.00001	48.1	< 0.000003	0.000038	0.0399	0.0014	< 0.003	1.19	0.001	0.386	0.0364	0.00118
31: E11-049 ARD-27	< 0.00002	< 0.00001	38.9	< 0.000003	0.000036	0.0355	0.0009	0.003	8.22	0.003	0.013	0.00746	0.00147
32: E11-049 ARD-28	< 0.00002	< 0.00001	90.4	0.000007	0.000073	0.0233	< 0.0005	< 0.003	4.13	0.001	0.003	0.00016	0.0386
33: E11-061 ARD-29	< 0.00002	< 0.00001	2.31	< 0.000003	0.000014	0.0282	0.0006	0.019	0.674	0.002	0.073	0.00067	0.00115
34: E12-206 ARD-30	< 0.00002	< 0.00001	63.1	< 0.000003	0.000038	0.0089	< 0.0005	< 0.003	5.32	< 0.001	0.002	0.00005	0.00148
35: E12-179 ARD-31	< 0.00002	< 0.00001	58.1	< 0.000003	0.000042	0.0280	< 0.0005	< 0.003	4.47	0.001	0.004	0.00029	0.00187
36: E11-048 ARD-32	< 0.00002	< 0.00001	41.0	< 0.000003	0.000038	0.0363	< 0.0005	0.023	2.18	0.001	0.003	0.00010	0.00131
37: E11-048 ARD-33	< 0.00002	< 0.00001	60.6	< 0.000003	0.000035	0.0334	< 0.0005	< 0.003	1.06	0.002	0.003	0.00005	0.0282
38: E11-075 ARD-34	< 0.00002	< 0.00001	31.3	< 0.000003	0.000023	0.0308	< 0.0005	< 0.003	4.25	0.002	0.006	0.00440	0.00232
39: E11-075 ARD-35	< 0.00002	< 0.00001	51.0	< 0.000003	0.000033	0.0152	< 0.0005	< 0.003	4.75	< 0.001	0.002	0.00007	0.00268
40: E11-071 ARD-36	< 0.00002	< 0.00001	70.3	< 0.000003	0.000057	0.0210	< 0.0005	0.004	2.89	< 0.001	0.002	0.00020	0.00262
41: E11-071 ARD-37	< 0.00002	< 0.00001	40.1	< 0.000003	0.000028	0.0272	< 0.0005	< 0.003	17.1	< 0.001	0.002	0.00008	0.00520
42: E11-078 ARD-38	< 0.00002	< 0.00001	9.20	< 0.000003	0.000031	0.0295	0.0020	0.009	1.42	< 0.001	1.01	0.00099	0.0324
43: E11-179 ARD-39	< 0.00002	< 0.00001	10.8	< 0.000003	0.000047	0.0381	0.0012	< 0.003	0.936	0.002	0.664	0.0408	0.00320
44: E11-120 ARD-40	< 0.00002	< 0.00001	48.9	< 0.000003	0.000045	0.0144	< 0.0005	< 0.003	4.01	0.001	0.003	0.00034	0.00381
45: E11-120 ARD-41	< 0.00002	< 0.00001	51.9	< 0.000003	0.000034	0.0283	< 0.0005	< 0.003	3.48	< 0.001	0.002	0.00019	0.00188
46: E11-120 ARD-42	< 0.00002	< 0.00001	76.9	< 0.000003	0.000050	0.0205	< 0.0005	0.003	3.00	< 0.001	0.002	0.00020	0.0304
47: E11-122 ARD-43	< 0.00002	< 0.00001	63.8	< 0.000003	0.000065	0.0354	0.0022	< 0.003	1.96	0.001	0.617	0.0511	0.00329
48: E11-122 ARD-44	< 0.00002	< 0.00001	52.5	< 0.000003	0.000057	0.0179	< 0.0005	< 0.003	4.38	< 0.001	0.002	0.00046	0.02399
49: E11-140 ARD-45	< 0.00002	< 0.00001	51.3	< 0.000003	0.000038	0.0372	0.0019	< 0.003	2.14	0.001	0.215	0.00465	0.00256
50: E11-145 ARD-46	< 0.00002	< 0.00001	11.9	< 0.000003	0.000030	0.0228	0.0005	0.009	16.9	0.007	0.700	0.00543	0.00249
51: E12-198 ARD-47	< 0.00002	< 0.00001	44.6	< 0.000003	0.000034	0.0559	< 0.0005	< 0.003	2.37	< 0.001	0.004	0.00011	0.00130
52: E11-129 ARD-48	< 0.00002	< 0.00001	46.1	< 0.000003	0.000043	0.0348	< 0.0005	< 0.003	2.83	0.001	0.002	0.00008	0.00314
53: E11-140 ARD-49	< 0.00002	< 0.00001	39.8	< 0.000003	0.000045	0.0276	< 0.0005	< 0.003	6.86	0.002	0.002	0.00015	0.00157
54: E11-144 ARD-50	< 0.00002	< 0.00001	31.6	< 0.000003	0.000036	0.0114	< 0.0005	0.004	2.75	0.001	0.009	0.00015	0.00371
55: E11-141 ARD-51	< 0.00002	< 0.00001	56.5	< 0.000003	0.000053	0.0075	0.0005	0.006	2.20	< 0.001	0.002	0.00030	0.00199
56: E11-145 ARD-52	< 0.00002	< 0.00001	41.4	< 0.000003	0.000045	0.0159	0.0009	< 0.003	19.7	0.006	0.019	0.00669	0.00044
57: E12-200 ARD-53	< 0.00002	< 0.00001	80.2	< 0.000003	0.000070	0.0180	< 0.0005	< 0.003	0.660	< 0.001	0.003	0.00017	0.00147
58: E12-205 ARD-54	< 0.00002	< 0.00001	53.3	< 0.000003	0.000051	0.0430	0.0005	< 0.003	5.92	0.004	0.287	0.0198	0.00146
59: E12-294 ARD-55	< 0.00002	< 0.00001	20.8	< 0.000003	0.000054	0.0332	< 0.0005	0.004	2.84	< 0.001	0.230	0.00027	0.00120
60: E12-205 ARD-56	< 0.00002	< 0.00001	46.1	< 0.000003	0.000047	0.0375	0.0014	< 0.003	3.10	0.003	0.409	0.00898	0.00208
61: CL10-01 ARD-57	< 0.00002	< 0.00001	65.0	< 0.000003	0.000080	0.0289	0.0008	0.004	0.840	< 0.001	0.002	0.00025	0.00193
62: CL10-01 ARD-58	< 0.00002	< 0.00001	42.4	< 0.000003	0.000046	0.0807	< 0.0005	< 0.003	12.3	< 0.001	0.002	0.00009	0.00040
63: CL10-02A ARD-59	< 0.00002	< 0.00001	40.8	< 0.000003	0.000044	0.0185	< 0.0005	< 0.003	4.82	0.002	0.002	0.00011	0.00526
64: E12-213 ARD-60	< 0.00002	< 0.00001	40.6	< 0.000003	0.000049	0.0479	< 0.0005	0.004	7.04	0.004	0.042	0.00030	0.00219

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Project Specialist
Environmental Services, Analytical

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NAG Test with Analyses

Project : IAMGold Cote Lake

Friday, December 21, 2012

Knight Piesold Limited
Attn : Steve Aiken

1650 Main Street West
North Bay, ON
P1B 8G5,

Phone: 705-476-2165 ext. 241
Fax:

Date Rec. : 13 November 2012
LR Report: **CA10184-NOV12**
Reference: NB101-497/4 NB-49

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Ni mg/L	Pb mg/L	S mg/L	Sb mg/L	Se mg/L	Sn mg/L	Sr mg/L	Sr mg/L	Ti mg/L	Tl mg/L	U mg/L	V mg/L	Y mg/L	Zn mg/L
3: Analysis Approval Date	18-Dec-12	18-Dec-12	17-Dec-12	18-Dec-12	18-Dec-12	18-Dec-12	18-Dec-12	17-Dec-12	18-Dec-12	18-Dec-12	18-Dec-12	18-Dec-12	18-Dec-12	18-Dec-12
4: Analysis Approval Time	07:55	07:55	15:48	07:55	07:55	07:55	07:55	15:48	07:55	07:55	07:56	07:56	07:56	07:56
5: E10-036 ARD-1	0.0003	< 0.00002	3.15	0.0008	< 0.001	0.00018	0.0393	0.0410	0.0001	< 0.00002	0.000014	0.00075	< 0.000001	< 0.001
6: E10-036 ARD-2	0.0004	0.00003	3.47	0.0007	< 0.001	0.00016	0.0227	0.0237	0.0005	< 0.00002	0.000031	0.00181	0.000001	0.003
7: E10-036 ARD-3	0.0004	0.00004	6.36	0.0010	< 0.001	0.00018	0.0427	0.0502	< 0.0001	< 0.00002	0.000010	0.00078	< 0.000001	0.003
8: E10-045 ARD-4	0.0003	< 0.00002	3.75	0.0006	< 0.001	0.00039	0.0178	0.0185	0.0008	< 0.00002	0.000077	< 0.00003	0.000002	< 0.001
9: E11-066 ARD-5	0.0002	< 0.00002	10.1	0.0007	0.003	0.00021	0.0199	0.0216	0.0026	< 0.00002	0.000170	0.00797	0.000003	0.016
10: E11-066 ARD-6	0.0003	0.00002	6.66	0.0010	0.001	0.00010	0.0656	0.0688	0.0002	0.00003	0.000006	0.0128	0.000001	< 0.001
11: E11-082 ARD-7	0.0003	0.00003	1.96	0.0008	< 0.001	0.00015	0.0469	0.0534	< 0.0001	< 0.00002	0.000007	0.00083	< 0.000001	< 0.001
12: E11-082 ARD-8	0.0001	0.00002	5.27	0.0008	< 0.001	0.00026	0.0156	0.0169	0.0037	0.00005	0.000022	0.0197	< 0.000001	0.021
13: E11-082 ARD-9	0.0002	0.00002	1.93	0.0005	< 0.001	0.00027	0.0474	0.0517	0.0005	< 0.00002	0.000010	0.00861	< 0.000001	0.009
14: E11-087 ARD-10	0.0003	< 0.00002	5.18	0.0010	< 0.001	0.00016	0.0303	0.0324	0.0002	0.00003	0.000005	0.00250	< 0.000001	< 0.001
15: E11-087 ARD-11	0.0003	< 0.00002	3.88	0.0005	< 0.001	0.00017	0.0231	0.0245	0.0028	< 0.00002	0.000197	0.00485	0.000003	< 0.001
16: E12-217 ARD-12	0.0003	< 0.00002	2.85	0.0006	< 0.001	0.00019	0.0251	0.0264	< 0.0001	< 0.00002	< 0.000001	0.0313	< 0.000001	< 0.001
17: E11-096 ARD-13	0.0003	0.00003	1.50	0.0008	< 0.001	0.00021	0.0329	0.0336	< 0.0001	0.00004	0.000002	0.0144	< 0.000001	0.003
18: E11-096 ARD-14	0.0004	0.00021	10.3	0.0008	0.007	0.00018	0.0394	0.0411	0.0001	< 0.00002	< 0.000001	0.00077	< 0.000001	< 0.001
19: E11-096 ARD-15	< 0.0001	0.00008	6.47	0.0009	0.002	0.00031	0.0209	0.0224	0.0126	< 0.00002	0.000041	0.0497	0.000003	0.004
20: E11-098 ARD-16	0.0003	0.00004	2.99	0.0012	0.001	0.00041	0.0311	0.0336	0.0001	< 0.00002	0.000007	0.00040	< 0.000001	0.001
21: E11-098 ARD-17	0.0002	0.00003	4.56	0.0008	< 0.001	0.00010	0.0188	0.0206	< 0.0001	0.00004	< 0.000001	0.0281	< 0.000001	0.002
22: E11-098 ARD-18	0.0003	0.00004	5.17	0.0008	< 0.001	0.00017	0.0507	0.0553	< 0.0001	0.00004	< 0.000001	0.0157	< 0.000001	< 0.001
23: E11-099 ARD-19	0.0003	< 0.00002	2.97	0.0004	< 0.001	0.00045	0.0174	0.0181	0.0023	< 0.00002	0.000183	0.00014	< 0.000001	< 0.001
24: E11-099 ARD-20	0.0004	0.00006	6.41	0.0008	0.002	0.00045	0.0633	0.0671	< 0.0001	< 0.00002	0.000002	0.00253	< 0.000001	< 0.001
25: E11-114 ARD-21	0.0003	< 0.00002	2.41	0.0088	< 0.001	0.00017	0.0300	0.0320	0.0004	< 0.00002	0.000054	0.00465	0.000002	< 0.001

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NAG Test with Analyses

Project : IAMGold Cote Lake

LR Report : **CA10184-NOV12**

Sample ID	Ni mg/L	Pb mg/L	S mg/L	Sb mg/L	Se mg/L	Sn mg/L	Sr mg/L	Sr mg/L	Ti mg/L	Tl mg/L	U mg/L	V mg/L	Y mg/L	Zn mg/L
26: E11-114 ARD-22	0.0004	< 0.00002	2.37	0.0009	< 0.001	0.00020	0.0372	0.0409	< 0.0001	0.00006	0.000002	0.00778	< 0.000001	< 0.001
27: E10-038 ARD-23	0.0004	< 0.00002	1.71	0.0005	< 0.001	0.00054	0.0314	0.0332	0.0018	< 0.00002	0.000310	0.00087	0.000002	< 0.001
28: E11-062 ARD-24	0.0003	< 0.00002	4.15	0.0009	< 0.001	0.00016	0.0306	0.0327	< 0.0001	< 0.00002	0.000005	0.00510	< 0.000001	< 0.001
29: E10-30 ARD-25	0.0003	< 0.00002	4.50	0.0008	< 0.001	0.00026	0.0275	0.0289	< 0.0001	0.00012	0.000005	0.00241	< 0.000001	< 0.001
30: E10-028 ARD-26	0.0003	< 0.00002	1.38	0.0011	< 0.001	0.00063	0.0280	0.0299	0.0017	< 0.00002	0.000144	0.00219	0.000001	< 0.001
31: E11-049 ARD-27	0.0003	0.00002	1.45	0.0005	< 0.001	0.00029	0.0260	0.0261	0.0011	0.00006	0.000046	0.00762	0.000006	0.001
32: E11-049 ARD-28	0.0006	< 0.00002	45.5	0.0010	0.001	0.00140	0.101	0.107	0.0005	0.00004	0.000004	0.00048	< 0.000001	< 0.001
33: E11-061 ARD-29	< 0.0001	< 0.00002	0.23	0.0010	< 0.001	0.00016	0.00470	0.0045	0.0004	< 0.00002	< 0.000001	0.0148	0.000016	0.002
34: E12-206 ARD-30	0.0004	< 0.00002	1.60	0.0006	< 0.001	0.00015	0.0564	0.0602	< 0.0001	0.00002	< 0.000001	0.00841	< 0.000001	< 0.001
35: E12-179 ARD-31	0.0003	0.00008	6.98	0.0010	< 0.001	0.00033	0.0345	0.0425	0.0001	< 0.00002	0.000003	0.00554	< 0.000001	< 0.001
36: E11-048 ARD-32	0.0003	< 0.00002	6.31	0.0007	0.001	0.00024	0.0268	0.0261	0.0001	< 0.00002	0.000034	0.00130	< 0.000001	< 0.001
37: E11-048 ARD-33	< 0.0001	< 0.00002	8.50	0.0006	0.001	< 0.00001	0.0429	0.0491	< 0.0001	< 0.00002	< 0.000001	0.00096	< 0.000001	< 0.001
38: E11-075 ARD-34	< 0.0001	< 0.00002	1.18	0.0004	< 0.001	0.00014	0.0269	0.0293	0.0004	< 0.00002	0.000023	0.0108	0.000001	< 0.001
39: E11-075 ARD-35	< 0.0001	< 0.00002	8.03	0.0007	0.002	0.00002	0.0556	0.0627	< 0.0001	< 0.00002	< 0.000001	0.0304	< 0.000001	< 0.001
40: E11-071 ARD-36	< 0.0001	< 0.00002	11.2	0.0005	0.002	0.00017	0.109	0.124	< 0.0001	< 0.00002	< 0.000001	0.00476	< 0.000001	< 0.001
41: E11-071 ARD-37	< 0.0001	< 0.00002	4.34	0.0005	< 0.001	< 0.00001	0.0264	0.0272	0.0002	< 0.00002	< 0.000001	0.0275	< 0.000001	< 0.001
42: E11-078 ARD-38	0.0001	< 0.00002	5.79	0.0005	0.002	0.00016	0.00880	0.0090	0.0038	< 0.00002	0.000059	0.00506	0.000007	< 0.001
43: E11-179 ARD-39	0.0001	< 0.00002	0.41	0.0005	< 0.001	0.00013	0.0294	0.0303	0.0211	< 0.00002	0.000330	0.00781	0.000007	< 0.001
44: E11-120 ARD-40	< 0.0001	< 0.00002	8.05	0.0006	0.002	0.00005	0.0425	0.0470	0.0004	< 0.00002	0.000002	0.00111	< 0.000001	< 0.001
45: E11-120 ARD-41	< 0.0001	< 0.00002	8.02	0.0005	0.002	0.00010	0.0340	0.0384	0.0001	< 0.00002	0.000004	0.00636	< 0.000001	< 0.001
46: E11-120 ARD-42	< 0.0001	< 0.00002	3.07	0.0005	< 0.001	0.00017	0.0930	0.109	< 0.0001	0.00004	< 0.000001	0.00307	< 0.000001	< 0.001
47: E11-122 ARD-43	0.0001	< 0.00002	4.96	0.0005	< 0.001	0.00040	0.0245	0.0253	0.0038	< 0.00002	0.000372	0.00154	0.000004	< 0.001
48: E11-122 ARD-44	< 0.0001	< 0.00002	5.47	0.0008	< 0.001	0.00016	0.0385	0.0389	< 0.0001	< 0.00002	0.000005	0.00228	< 0.000001	< 0.001
49: E11-140 ARD-45	< 0.0001	< 0.00002	8.79	0.0007	0.001	0.00008	0.0216	0.0231	0.0027	< 0.00002	0.000303	0.00137	0.000004	< 0.001
50: E11-145 ARD-46	< 0.0001	< 0.00002	1.27	0.0005	< 0.001	0.00013	0.0159	0.0160	0.0147	0.00005	0.000420	0.0160	0.000001	< 0.001
51: E12-198 ARD-47	< 0.0001	< 0.00002	6.00	0.0005	< 0.001	0.00007	0.0358	0.0357	0.0003	< 0.00002	0.000004	0.0274	< 0.000001	< 0.001
52: E11-129 ARD-48	< 0.0001	< 0.00002	4.50	0.0006	< 0.001	0.00014	0.0234	0.0246	< 0.0001	< 0.00002	0.000007	0.00160	< 0.000001	< 0.001
53: E11-140 ARD-49	< 0.0001	< 0.00002	2.17	0.0005	< 0.001	0.00007	0.0279	0.0304	0.0001	< 0.00002	0.000004	0.00555	< 0.000001	< 0.001
54: E11-144 ARD-50	< 0.0001	< 0.00002	9.57	0.0007	0.002	< 0.00001	0.0345	0.0370	0.0004	< 0.00002	0.000008	0.0759	< 0.000001	< 0.001
55: E11-141 ARD-51	< 0.0001	< 0.00002	2.75	0.0005	< 0.001	0.00019	0.0391	0.0395	< 0.0001	< 0.00002	< 0.000001	0.00299	< 0.000001	< 0.001
56: E11-145 ARD-52	< 0.0001	< 0.00002	1.77	0.0003	< 0.001	0.00009	0.0309	0.0357	0.0026	0.00003	0.000081	0.0157	< 0.000001	< 0.001
57: E12-200 ARD-53	< 0.0001	< 0.00002	5.10	0.0005	< 0.001	0.00040	0.0687	0.0782	< 0.0001	< 0.00002	< 0.000001	0.00423	< 0.000001	< 0.001
58: E12-205 ARD-54	< 0.0001	< 0.00002	1.29	0.0005	< 0.001	0.00011	0.0330	0.0378	0.0036	0.00003	0.000106	0.00595	< 0.000001	< 0.001
59: E12-294 ARD-55	< 0.0001	< 0.00002	14.6	0.0003	0.004	0.00001	0.0206	0.0206	0.0003	< 0.00002	< 0.000001	0.0413	0.000001	< 0.001
60: E12-205 ARD-56	< 0.0001	< 0.00002	6.36	0.0005	< 0.001	0.00014	0.0215	0.0212	0.0021	< 0.00002	0.000241	0.00283	0.000004	< 0.001
61: CL10-01 ARD-57	< 0.0001	0.00003	5.36	0.0004	0.001	0.00029	0.0403	0.0428	< 0.0001	< 0.00002	< 0.000001	0.0126	< 0.000001	< 0.001
62: CL10-01 ARD-58	< 0.0001	< 0.00002	2.86	0.0004	< 0.001	0.00012	0.0776	0.0842	< 0.0001	< 0.00002	< 0.000001	0.0273	< 0.000001	< 0.001
63: CL10-02A ARD-59	< 0.0001	< 0.00002	6.16	0.0006	0.002	0.00014	0.0413	0.0448	< 0.0001	< 0.00002	0.000008	0.00141	< 0.000001	< 0.001
64: E12-213 ARD-60	< 0.0001	< 0.00002	20.4	0.0003	< 0.001	0.00009	0.0296	0.0327	0.0012	< 0.00002	0.000235	0.00081	0.000003	< 0.001

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August-01-12

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Date Rec. : 14 June 2012
LR Report: **CA11082-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-61-1 CL-Geochem	6: E11-61-2 CL-Geochem	7: E11-81-1 CL-Geochem	8: E11-81-2 CL-Geochem	9: E11-81-3 CL-Geochem	10: E11-81-4 CL-Geochem	11: E11-54-1 33.87-36.14 m CL-Geochem	12: E11-54-2 CL-Geochem	13: E11-54-3 CL-Geochem
Sample Date & Time			08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	13-Jul-12	15:17	2.5	2.5	2.5	2.5	2.6	2.5	2.5	2.5	2.5
Vol H2O2 [mL]	13-Jul-12	15:17	250	250	250	250	250	250	250	250	250
Final pH [units]	13-Jul-12	15:17	11.15	11.42	11.76	9.76	10.57	11.19	11.54	11.52	9.44
pH [no unit]	01-Aug-12	09:09	9.94	10.2	10.6	7.70	7.96	9.90	8.28	10.6	8.82
Conductivity [µS/cm]	01-Aug-12	09:09	186	213	214	286	221	253	119	165	249
Alkalinity [mg/L as CaCO3]	01-Aug-12	09:09	85	71	97	28	40	90	45	52	122
Chloride [mg/L]	20-Jul-12	14:48	< 2	< 2	< 2	< 2	< 2	< 2	<2	< 2	< 2
Sulphate [mg/L]	23-Jul-12	14:26	7.1	23	7.0	94	51	38	5.2	3.7	7.0
Mercury [mg/L]	17-Jul-12	12:30	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	19-Jul-12	14:52	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	19-Jul-12	13:13	2.09	1.58	6.27	0.30	0.42	2.56	3.90	4.10	0.88
Arsenic [mg/L]	19-Jul-12	14:52	0.0004	< 0.0002	< 0.0002	0.0014	0.0016	0.0005	0.0005	0.0002	0.0039
Barium [mg/L]	19-Jul-12	14:52	0.00922	0.00699	0.00084	0.00172	0.00100	0.00277	0.00134	0.00115	0.00605
Beryllium [mg/L]	19-Jul-12	14:51	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	19-Jul-12	14:51	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	19-Jul-12	13:13	29.3	42.8	44.1	44.2	45.3	51.3	45.6	41.0	49.4
Cadmium [mg/L]	19-Jul-12	14:51	< 0.000003	< 0.000003	0.000006	< 0.000003	0.000005	< 0.000003	0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	19-Jul-12	14:51	0.000019	0.000025	0.000025	0.000028	0.000035	0.000030	0.000027	0.000068	0.000045
Chromium [mg/L]	19-Jul-12	14:51	0.0232	0.0207	0.0165	0.0516	0.0426	0.0326	0.0440	0.0387	0.0866
Copper [mg/L]	19-Jul-12	14:51	< 0.0005	0.0009	0.0015	0.0009	0.0007	0.0011	0.0010	0.0010	0.0027

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NAG Test with Analyses

LR Report : **CA11082-JUN12**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-61-1 CL-Geochem	6: E11-61-2 CL-Geochem	7: E11-81-1 CL-Geochem	8: E11-81-2 CL-Geochem	9: E11-81-3 CL-Geochem	10: E11-81-4 CL-Geochem	11: E11-54-1 33.87-36.14 m CL-Geochem	12: E11-54-2 CL-Geochem	13: E11-54-3 CL-Geochem
Iron [mg/L]	19-Jul-12	13:13	0.003	0.010	0.011	0.007	0.004	< 0.003	< 0.003	0.004	< 0.003
Potassium [mg/L]	19-Jul-12	13:13	16.6	20.1	6.98	4.05	2.70	4.77	2.10	3.52	1.34
Lithium [mg/L]	19-Jul-12	14:51	< 0.001	< 0.001	< 0.001	0.002	0.002	0.001	< 0.001	< 0.001	< 0.001
Magnesium [mg/L]	19-Jul-12	13:13	0.007	< 0.001	0.002	0.090	0.006	0.002	0.002	0.002	0.117
Manganese [mg/L]	19-Jul-12	14:51	0.00036	0.00008	0.00077	0.00016	0.00007	0.00004	0.00015	0.00021	0.0177
Molybdenum [mg/L]	19-Jul-12	14:51	0.00155	0.0101	0.00144	0.00203	0.0163	0.00332	0.00264	0.00260	0.00385
Nickel [mg/L]	19-Jul-12	14:51	0.0003	0.0004	0.0005	0.0004	0.0005	0.0005	0.0004	0.0004	0.0005
Lead [mg/L]	19-Jul-12	14:51	0.00007	< 0.00002	0.00005	0.00002	< 0.00002	0.00004	0.00008	0.00009	< 0.00002
Sulfur [mg/L]	19-Jul-12	13:13	3.25	9.28	3.43	33.5	19.4	14.4	2.77	2.18	3.48
Antimony [mg/L]	19-Jul-12	14:51	0.0005	0.0005	0.0006	0.0010	0.0009	0.0008	0.0007	0.0007	0.0006
Selenium [mg/L]	19-Jul-12	14:51	< 0.001	0.002	< 0.001	0.010	0.007	0.006	< 0.001	< 0.001	< 0.001
Tin [mg/L]	19-Jul-12	14:51	0.00010	0.00007	0.00055	0.00008	0.00020	0.00022	0.00067	0.00069	0.00021
Strontium [mg/L]	19-Jul-12	14:51	0.0208	0.0340	0.0532	0.0513	0.0706	0.0749	0.0422	0.0561	0.0266
Titanium [mg/L]	19-Jul-12	14:50	0.0003	0.0001	< 0.0001	0.0005	0.0003	0.0002	< 0.0001	< 0.0001	0.0011
Thallium [mg/L]	19-Jul-12	14:50	< 0.00002	0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	19-Jul-12	14:50	0.000009	0.000016	0.000036	0.000085	0.000111	0.000017	0.000061	0.000007	0.000220
Vanadium [mg/L]	19-Jul-12	14:50	0.0232	0.0131	0.00199	< 0.00003	0.00171	0.00420	0.00554	0.00466	< 0.00003
Yttrium [mg/L]	19-Jul-12	14:50	0.000003	0.000001	0.000001	0.000003	0.000002	0.000003	0.000001	0.000001	0.000009
Zinc [mg/L]	19-Jul-12	14:50	< 0.001	< 0.001	0.001	< 0.001	< 0.001	0.002	0.001	0.001	< 0.001

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NAG Test with Analyses

01-August-2012

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Date Rec. : 14 June 2012
LR Report: **CA11082-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	13: E11-54-3 CL-Geochem	14: E11-54-4 CL-Geochem	15: E11-59-1 CL-Geochem	16: E11-59-2 CL-Geochem	17: E11-95-1 CL-Geochem	18: E11-95-2 CL-Geochem	19: E11-97-1 CL-Geochem	20: E11-97-2 CL-Geochem	21: E11-138-1 CL-Geochem	22: E11-138-2 CL-Geochem	23: E11-138-3 CL-Geochem	24: E11-77-1 CL-Geochem	25: E11-77-2 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.6	2.6	2.6	2.6
Vol H2O2 [mL]	250	250	250	250	250	250	250	250	250	250	250	250	250
Final pH [units]	9.44	11.48	8.44	7.82	11.48	11.36	7.64	11.06	10.99	11.31	11.16	9.49	11.06
pH [no unit]	8.82	10.2	7.91	7.02	7.98	10.2	7.47	9.99	9.54	10.2	9.86	9.09	9.86
Conductivity [µS/cm]	249	185	183	135	125	139	97	174	176	177	240	262	148
Alkalinity [mg/L as CaCO3]	122	92	90	9	39	34	53	81	79	86	61	136	75
Chloride [mg/L]	< 2	< 2	2.6	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	5.7	< 2
Sulphate [mg/L]	7.0	3.6	4.3	39	13	18	< 2	3.8	17	12	54	5.5	5.8
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.88	3.40	0.78	0.14	2.60	3.72	0.27	3.82	4.25	3.69	3.64	0.46	4.62
Arsenic [mg/L]	0.0039	0.0005	0.0085	0.0028	0.0003	0.0005	0.0076	0.0004	0.0007	< 0.0002	0.0003	0.0016	< 0.0002
Barium [mg/L]	0.00605	0.00312	0.00255	0.00650	0.00118	0.00125	0.0260	0.00222	0.00057	0.0242	0.00465	0.00296	0.00282
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	49.4	46.8	32.1	11.8	53.7	39.4	10.5	49.3	39.9	56.0	61.0	52.8	40.5
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000045	0.000027	0.000042	0.000058	0.000029	0.000021	0.000030	0.000023	0.000018	0.000030	0.000024	0.000028	0.000021
Chromium [mg/L]	0.0866	0.0640	0.107	0.0191	0.0329	0.0396	0.0335	0.0299	0.0479	0.0131	0.0799	0.0907	0.0405
Copper [mg/L]	0.0027	0.0007	0.0035	0.0008	0.0005	0.0009	0.0009	0.0009	0.0010	0.0012	0.0022	0.0006	0.0009

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NAG Test with Analyses

LR Report : **CA11082-JUN12**

Analysis	13: E11-54-3 CL-Geochem	14: E11-54-4 CL-Geochem	15: E11-59-1 CL-Geochem	16: E11-59-2 CL-Geochem	17: E11-95-1 CL-Geochem	18: E11-95-2 CL-Geochem	19: E11-97-1 CL-Geochem	20: E11-97-2 CL-Geochem	21: E11-138-1 CL-Geochem	22: E11-138-2 CL-Geochem	23: E11-138-3 CL-Geochem	24: E11-77-1 CL-Geochem	25: E11-77-2 CL-Geochem
Iron [mg/L]	< 0.003	< 0.003	0.008	0.048	< 0.003	< 0.003	0.011	< 0.003	< 0.003	0.015	0.008	< 0.003	0.004
Potassium [mg/L]	1.34	4.13	4.34	6.48	2.15	3.63	13.9	8.99	4.59	0.886	2.32	5.31	2.06
Lithium [mg/L]	< 0.001	< 0.001	0.002	0.003	< 0.001	0.001	0.003	0.002	0.001	< 0.001	< 0.001	0.002	< 0.001
Magnesium [mg/L]	0.117	0.002	0.590	0.786	0.002	0.003	1.04	0.002	0.002	0.002	0.003	0.082	0.002
Manganese [mg/L]	0.0177	0.00017	0.0116	0.00109	0.00004	0.00013	0.00353	0.00007	0.00079	0.00087	0.00034	0.00575	0.00022
Molybdenum [mg/L]	0.00385	0.00328	0.00375	0.00402	0.00556	0.00344	0.00595	0.0111	0.0360	0.00165	0.00395	0.00337	0.00129
Nickel [mg/L]	0.0005	0.0004	0.0004	0.0002	0.0005	0.0004	0.0001	0.0002	0.0002	0.0003	0.0003	0.0005	0.0002
Lead [mg/L]	< 0.00002	0.00005	< 0.00002	0.00007	0.00002	0.00012	0.00003	0.00004	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00002
Sulfur [mg/L]	3.48	2.20	2.07	13.6	5.63	7.01	0.42	1.25	5.72	4.13	18.2	1.78	1.92
Antimony [mg/L]	0.0006	0.0006	0.0006	0.0006	0.0003	0.0004	0.0007	0.0005	0.0003	< 0.0002	0.0003	0.0002	0.0002
Selenium [mg/L]	< 0.001	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.004	< 0.001	< 0.001
Tin [mg/L]	0.00021	0.00048	0.00038	0.00023	0.00033	0.00043	0.00027	0.00034	0.00036	0.00052	0.00039	0.00009	0.00022
Strontium [mg/L]	0.0266	0.0187	0.0216	0.0311	0.0328	0.0443	0.0103	0.0520	0.0573	0.280	0.252	0.0342	0.0364
Titanium [mg/L]	0.0011	< 0.0001	0.0039	0.0109	0.0001	0.0001	0.0093	< 0.0001	< 0.0001	< 0.0001	0.0001	0.0018	< 0.0001
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00004	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000220	0.000030	0.00106	0.000049	0.000018	0.000014	0.000181	0.000039	0.000008	0.000001	< 0.000001	0.000085	0.000001
Vanadium [mg/L]	< 0.00003	0.00103	< 0.00003	0.0522	0.0138	0.00161	0.0149	0.00269	0.00062	0.00733	0.00386	0.00755	0.00832
Yttrium [mg/L]	0.000009	0.000001	0.000015	0.000008	0.000001	< 0.000001	0.000003	0.000002	< 0.000001	< 0.000001	< 0.000001	0.000004	< 0.000001
Zinc [mg/L]	< 0.001	0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001

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NAG Test with Analyses

August-01-12

Trelawney Mining and Exploration Inc.
Attn : Steve Norregaard

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Date Rec. : 14 June 2012
LR Report: **CA11082-JUN12**
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CERTIFICATE OF ANALYSIS

Final Report

Analysis	**26: E10-38-1 CL-Geochem**	**27: E10-38-2 CL-Geochem**	**28: E10-38-3 CL-Geochem**	**29: E11-91-1 CL-Geochem**	**30: E11-91-2 CL-Geochem**	**31: E11-91-3 CL-Geochem**	**32: E11-72-1 CL-Geochem**	**33: E10-31-1 CL-Geochem**	**34: E10-31-2 CL-Geochem**	**35: E10-31-3 CL-Geochem**	**36: E10-31-4 CL-Geochem**	**37: E10-23-1 CL-Geochem**
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.6	2.6	2.5
Vol H2O2 [mL]	250	250	250	250	250	250	250	250	250	250	250	250
Final pH [units]	8.34	11.07	9.96	7.90	6.87	10.98	11.03	10.34	10.99	11.28	10.71	10.94
pH [no unit]	7.70	9.98	8.42	7.33	6.93	10.1	9.94	8.31	9.56	9.26	7.98	8.85
Conductivity [µS/cm]	138	188	156	150	117	154	161	147	145	133	150	118
Alkalinity [mg/L as CaCO3]	69	58	55	40	6	82	64	71	48	56	52	47
Chloride [mg/L]	< 2	3.7	< 2	3.1	< 2	< 2	< 2	2.7	< 2	< 2	< 2	< 2
Sulphate [mg/L]	< 2	29	23	33	41	4.3	20	4.0	26	13	26	9.9
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	0.32	2.06	0.39	0.61	0.03	2.79	3.02	2.00	4.02	4.40	2.20	3.64
Arsenic [mg/L]	0.0021	0.0003	0.0024	0.0043	0.0013	0.0007	0.0012	0.0006	0.0006	0.0002	0.0006	0.0004
Barium [mg/L]	0.0158	0.0288	0.00465	0.00097	0.00559	0.00404	0.00146	0.00232	0.00042	0.00544	0.00046	0.00046
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	20.3	53.3	27.9	24.8	7.98	43.8	52.6	26.5	42.9	55.3	43.8	37.2
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000025	0.000030	0.000026	0.000034	0.000460	0.000045	0.000029	0.000016	0.000028	0.000150	0.000097	0.000057
Chromium [mg/L]	0.0364	0.0605	0.0548	0.0989	0.0145	0.0979	0.0605	0.120	0.0344	0.0393	0.0448	0.0763
Copper [mg/L]	0.0005	0.0006	0.0006	0.0019	0.0009	0.0006	0.0007	< 0.0005	0.0005	0.0008	< 0.0005	0.0005

OnLine LIMS

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NAG Test with Analyses

LR Report : CA11082-JUN12

Analysis	26: E10-38-1 CL-Geochem	27: E10-38-2 CL-Geochem	28: E10-38-3 CL-Geochem	29: E11-91-1 CL-Geochem	30: E11-91-2 CL-Geochem	31: E11-91-3 CL-Geochem	32: E11-72-1 CL-Geochem	33: E10-31-1 CL-Geochem	34: E10-31-2 CL-Geochem	35: E10-31-3 CL-Geochem	36: E10-31-4 CL-Geochem	37: E10-23-1 CL-Geochem
Iron [mg/L]	0.015	< 0.003	0.009	0.006	0.018	< 0.003	< 0.003	< 0.003	< 0.003	0.010	< 0.003	< 0.003
Potassium [mg/L]	13.0	7.19	1.05	1.49	5.41	2.14	2.47	2.36	5.32	1.62	2.84	2.97
Lithium [mg/L]	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	0.001	0.001	< 0.001	0.001	0.002
Magnesium [mg/L]	0.184	0.004	0.024	0.955	3.64	0.005	0.002	0.007	0.004	0.003	0.004	0.004
Manganese [mg/L]	0.00123	0.00027	0.00028	0.00207	0.0104	0.00070	0.00012	0.00103	0.00016	0.00218	0.00088	0.00030
Molybdenum [mg/L]	0.00855	0.00287	0.00171	0.00715	0.00251	0.00314	0.00606	0.0113	0.0101	0.00476	0.00417	0.00563
Nickel [mg/L]	0.0002	0.0003	0.0002	0.0002	0.0002	0.0002	0.0003	0.0015	0.0006	0.0199	0.0098	0.0026
Lead [mg/L]	< 0.00002	< 0.00002	0.00003	0.00002	0.00003	0.00002	0.00004	< 0.00002	< 0.00002	0.00003	0.00003	< 0.00002
Sulfur [mg/L]	0.56	10.1	7.69	10.7	13.3	1.43	7.00	2.09	10.2	5.97	10.1	4.25
Antimony [mg/L]	0.0003	0.0004	0.0003	0.0003	0.0006	0.0005	0.0005	0.0005	0.0007	0.0004	0.0007	0.0005
Selenium [mg/L]	< 0.001	0.003	0.003	< 0.001	0.003	< 0.001	< 0.001	< 0.001	0.002	0.001	0.002	0.001
Tin [mg/L]	0.00011	0.00020	0.00011	0.00020	0.00021	0.00030	0.00024	0.00021	0.00015	0.00029	0.00016	0.00018
Strontium [mg/L]	0.0233	0.0476	0.0226	0.0263	0.0261	0.0311	0.0360	0.0610	0.0572	0.140	0.0308	0.0230
Titanium [mg/L]	0.0048	< 0.0001	0.0007	0.0048	0.0093	< 0.0001	< 0.0001	0.0007	0.0002	0.0001	0.0005	0.0003
Thallium [mg/L]	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000028	0.000002	0.000016	0.000549	0.000022	0.000031	0.000007	0.000081	0.000002	< 0.000001	0.000007	0.000008
Vanadium [mg/L]	0.0246	0.0165	0.0349	0.00754	0.0821	0.00188	0.00048	0.00265	0.00156	0.00944	0.00324	0.00154
Yttrium [mg/L]	0.000006	0.000003	0.000005	0.000015	0.000018	0.000005	0.000010	0.000003	< 0.000001	0.000001	0.000002	< 0.000001
Zinc [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001

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NAG Test with Analyses

August-01-12

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Date Rec. : 14 June 2012
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CERTIFICATE OF ANALYSIS

Final Report

Analysis	38: E10-46-1 CL-Geochem	39: E10-46-2 CL-Geochem	40: E10-13-1 CL-Geochem	41: E10-13-2 CL-Geochem	42: E10-13-3 CL-Geochem	43: E10-13-4 CL-Geochem	44: CL10-3-1 CL-Geochem	45: E10-42-1 CL-Geochem	46: E10-42-2 CL-Geochem	47: E10-42-3 CL-Geochem	48: E11-66-1 CL-Geochem	49: E11-54-1 212.3-215.5m CL-Geochem	50: E11-51-1 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	2.6	2.6	2.6	2.6	2.5	2.6	2.5	2.6	2.5	2.6	2.5	2.6	2.5
Vol H2O2 [mL]	250	250	250	250	250	250	250	250	250	250	250	250	250
Final pH [units]	10.93	11.18	10.60	11.36	11.06	11.03	8.67	11.05	10.45	10.80	10.36	7.26	10.97
pH [no unit]	9.11	10.4	9.71	10.8	10.3	9.07	6.99	9.04	9.22	8.56	8.98	7.33	8.72
Conductivity [µS/cm]	120	179	159	198	148	146	687	117	233	171	128	57	113
Alkalinity [mg/L as CaCO3]	55	118	80	79	53	49	11	52	63	64	65	14	41
Chloride [mg/L]	4.5	< 2	< 2	< 2	< 2	5.0	2.5	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	< 2	18	4.8	5.9	13	17	330	11	70	22	< 2	8.8	13
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00011	< 0.00001	< 0.00001	< 0.00001	0.00001	0.00001	< 0.00001
Aluminum [mg/L]	3.35	5.63	0.89	3.27	4.26	4.10	0.53	4.49	1.95	2.68	0.30	0.07	2.95
Arsenic [mg/L]	0.0007	0.0003	0.0032	0.0003	0.0002	0.0004	0.0038	0.0020	0.0032	0.0003	0.0009	0.0021	< 0.0002
Barium [mg/L]	0.00194	0.00150	0.00599	0.00174	0.00108	0.00046	0.00122	0.00153	0.00306	0.00846	0.00172	0.00159	0.00295
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	44.0	40.2	28.6	56.5	38.7	37.4	138	34.9	53.6	27.5	26.0	5.85	43.7
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000056	0.000058	0.000073	0.000072	0.000054	0.000050	0.000126	0.000075	0.000080	0.000068	0.000068	0.000154	0.000082
Chromium [mg/L]	0.103	0.0360	0.0612	0.0206	0.0491	0.0356	< 0.0005	0.0373	0.0289	0.0596	0.0160	0.0377	0.0513
Copper [mg/L]	< 0.0005	0.0005	0.0005	< 0.0005	0.0007	0.0006	0.0011	< 0.0005	0.0010	< 0.0005	0.0006	0.0016	< 0.0005

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NAG Test with Analyses

LR Report : CA11082-JUN12

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Iron [mg/L]	< 0.003	0.003	0.006	0.012	< 0.003	0.011	< 0.003	< 0.003	< 0.003	0.004	< 0.003	0.018	< 0.003
Potassium [mg/L]	9.88	1.55	17.1	1.60	4.59	6.15	9.32	5.28	9.04	3.21	1.10	1.44	6.28
Lithium [mg/L]	0.002	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003	0.001	0.002	0.001	< 0.001	0.001	< 0.001
Magnesium [mg/L]	0.002	0.004	0.007	0.002	0.003	0.002	0.124	0.004	0.003	0.003	0.002	0.916	0.001
Manganese [mg/L]	0.00010	0.00030	0.00014	0.00040	0.00011	0.00014	0.00083	0.00003	0.00002	0.00013	0.00009	0.00778	0.00012
Molybdenum [mg/L]	0.00246	0.00409	0.00273	0.00127	0.00110	0.00908	0.00522	0.00186	0.00931	0.00913	0.00124	0.00207	0.00228
Nickel [mg/L]	0.0007	0.0009	0.0008	0.0009	0.0006	0.0006	0.0012	0.0005	0.0006	0.0005	0.0005	0.0009	0.0002
Lead [mg/L]	< 0.00002	< 0.00002	0.00007	< 0.00002	0.00004	< 0.00002	< 0.00002	< 0.00002	0.00006	< 0.00002	0.00002	0.00002	< 0.00002
Sulfur [mg/L]	0.98	7.16	2.36	3.25	5.52	6.98	117	4.73	25.8	8.31	0.81	3.14	5.44
Antimony [mg/L]	0.0005	0.0004	0.0005	0.0004	0.0005	0.0005	0.0008	0.0006	0.0006	0.0003	< 0.0002	0.0004	0.0004
Selenium [mg/L]	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.027	< 0.001	0.003	0.002	< 0.001	< 0.001	0.001
Tin [mg/L]	0.00012	0.00024	0.00017	0.00036	0.00026	0.00024	0.00002	0.00008	0.00021	0.00020	0.00019	0.00018	0.00014
Strontium [mg/L]	0.0332	0.0291	0.0164	0.129	0.0708	0.0317	0.157	0.0520	0.0348	0.175	0.0320	0.0106	0.0297
Titanium [mg/L]	0.0006	0.0002	0.0008	0.0001	0.0003	0.0002	0.0001	0.0002	0.0006	0.0002	0.0007	0.0150	0.0007
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00004	< 0.00002	< 0.00002	< 0.00002	0.00003
Uranium [mg/L]	0.000009	0.000007	0.000004	< 0.000001	0.000002	0.000003	0.000021	0.000005	0.000010	0.000002	0.000014	0.000733	0.000020
Vanadium [mg/L]	0.00233	0.00096	0.0301	0.00618	0.00219	0.00429	0.00029	0.00290	0.00873	0.00240	0.00879	0.00579	0.00777
Yttrium [mg/L]	0.000002	< 0.000001	0.000001	< 0.000001	0.000001	< 0.000001	0.000004	< 0.000001	0.000001	< 0.000001	0.000004	0.000017	0.000001
Zinc [mg/L]	< 0.001	< 0.001	0.002	< 0.001	0.002	< 0.001	< 0.001	< 0.001	0.001	< 0.001	0.002	< 0.001	< 0.001

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June-29-12

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-112-1 CL-Geochem	6: E11-112-2 CL-Geochem	7: E11-112-3 CL-Geochem	8: E11-112-4 CL-Geochem	9: E11-053-1 CL-Geochem	10: E11-053-2 CL-Geochem	11: E11-053-3 CL-Geochem	12: E11-052-1 CL-Geochem
Sample Date & Time			08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	28-Jun-12	11:20	2.50	2.49	2.51	2.49	2.50	2.50	2.50	2.49
Vol H2O2 [mL]	28-Jun-12	11:20	250	250	250	250	250	250	250	250
Final pH [units]	28-Jun-12	11:20	11.46	11.36	10.49	11.53	11.74	11.53	5.30	11.48
pH [no unit]	29-Jun-12	11:15	10.9	10.6	9.79	10.8	11.2	10.8	5.48	10.8
Conductivity [µS/cm]	29-Jun-12	11:15	244	285	186	255	427	314	219	235
Alkalinity [mg/L as CaCO3]	29-Jun-12	11:15	95	95	83	92	118	86	< 2	83
Chloride [mg/L]	27-Jun-12	09:49	< 2	< 2	3.2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	27-Jun-12	09:49	11	34	11	7.8	21	28	90	8.8
Mercury [mg/L]	29-Jun-12	09:57	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	29-Jun-12	15:42	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00002	< 0.00001
Aluminum [mg/L]	29-Jun-12	10:10	4.21	1.58	1.98	3.20	3.92	2.16	0.15	3.28
Arsenic [mg/L]	29-Jun-12	15:42	< 0.0002	< 0.0002	0.0014	0.0003	0.0003	0.0002	< 0.0002	0.0003
Barium [mg/L]	29-Jun-12	15:42	0.00046	0.00652	0.00526	0.00128	0.00437	0.0171	0.0542	0.00109
Beryllium [mg/L]	29-Jun-12	15:42	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00009	< 0.00002
Bismuth [mg/L]	29-Jun-12	15:42	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	29-Jun-12	10:10	49.4	48.2	35.8	51.4	65.9	46.3	22.8	49.9
Cadmium [mg/L]	29-Jun-12	15:43	0.000037	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	29-Jun-12	15:43	0.000421	0.000175	0.000102	0.000070	0.000077	0.000060	0.0749	0.000617
Chromium [mg/L]	29-Jun-12	15:43	0.0233	0.0235	0.0593	0.0358	0.0169	0.0242	0.0548	0.0714
Copper [mg/L]	29-Jun-12	15:43	0.0095	0.0019	0.0022	0.0010	0.0010	0.0009	0.0726	0.0007
Iron [mg/L]	29-Jun-12	10:11	< 0.003	< 0.003	0.004	< 0.003	0.006	< 0.003	< 0.003	< 0.003

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NAG Test with Analyses

LR Report : CA11088-JUN12

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: E11-112-1 CL-Geochem	6: E11-112-2 CL-Geochem	7: E11-112-3 CL-Geochem	8: E11-112-4 CL-Geochem	9: E11-053-1 CL-Geochem	10: E11-053-2 CL-Geochem	11: E11-053-3 CL-Geochem	12: E11-052-1 CL-Geochem
Potassium [mg/L]	29-Jun-12	10:11	3.73	19.6	8.76	4.12	17.6	30.9	7.08	2.04
Lithium [mg/L]	29-Jun-12	15:43	0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	0.005	0.001
Magnesium [mg/L]	29-Jun-12	10:11	0.004	0.001	0.003	0.004	0.002	0.001	5.80	0.004
Manganese [mg/L]	29-Jun-12	15:43	0.00703	0.00250	0.00133	0.00053	0.00033	0.00009	0.235	0.00210
Molybdenum [mg/L]	29-Jun-12	15:43	0.08496	0.01080	0.00506	0.00248	0.00352	0.00275	0.00021	0.00274
Nickel [mg/L]	29-Jun-12	15:43	0.0005	0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001	0.0248	< 0.0001
Lead [mg/L]	29-Jun-12	15:43	0.00002	< 0.00002	0.00004	0.00004	0.00017	< 0.00002	< 0.00002	< 0.00002
Sulfur [mg/L]	29-Jun-12	10:11	5.35	13.2	5.06	3.90	8.86	11.0	31.3	4.40
Antimony [mg/L]	29-Jun-12	15:43	0.0004	0.0003	0.0004	0.0004	0.0004	0.0004	0.0002	0.0005
Selenium [mg/L]	29-Jun-12	15:43	< 0.001	0.002	0.001	< 0.001	0.002	0.001	0.004	< 0.001
Tin [mg/L]	29-Jun-12	15:43	0.00022	0.00012	0.00027	0.00028	0.00019	0.00010	0.00012	0.00016
Strontium [mg/L]	29-Jun-12	15:43	0.0371	0.0352	0.0338	0.0436	0.0376	0.0585	0.0494	0.0263
Titanium [mg/L]	29-Jun-12	15:43	< 0.0001	0.0002	0.0007	< 0.0001	0.0001	0.0002	0.0009	< 0.0001
Thallium [mg/L]	29-Jun-12	15:43	0.00002	0.00003	< 0.00002	0.00002	0.00010	0.00009	0.00003	< 0.00002
Uranium [mg/L]	29-Jun-12	15:43	0.000318	0.000079	0.000228	0.000016	0.000007	0.000004	0.000006	0.000006
Vanadium [mg/L]	29-Jun-12	15:43	0.00153	0.0121	0.00442	0.00302	0.00603	0.0181	0.0295	0.00503
Yttrium [mg/L]	29-Jun-12	15:43	0.000121	0.000045	0.000023	0.000004	0.000002	0.000001	0.000276	0.000002
Zinc [mg/L]	29-Jun-12	15:43	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.007	< 0.001

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NAG Test with Analyses

29-June-2012

Trelawney Mining and Exploration Inc.
Attn : Steve Norregaard

130 King St. W. Suite 2810
Toronto, ON
N5X 1A6, Canada

Phone: 416-363-8567
Fax:416-216-8535

Date Rec. : 14 June 2012
LR Report: **CA11088-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	**13: E11-052-2 CL-Geochem**	**14: E11-052-3 CL-Geochem**	**15: E11-110-1 CL-Geochem**	**16: E11-110-2 CL-Geochem**	**17: E11-062-1 CL-Geochem**	**18: E11-062-2 CL-Geochem**	**19: E11-062-3 CL-Geochem**	**20: E11-062-4 CL-Geochem**
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	2.50	2.49	2.49	2.50	2.49	2.47	2.49	2.49
Vol H2O2 [mL]	250	250	250	250	250	250	250	250
Final pH [units]	11.74	11.45	11.29	7.89	11.20	11.60	11.58	10.56
pH [no unit]	11.2	10.7	10.5	7.39	10.1	10.7	10.5	9.68
Conductivity [µS/cm]	426	270	173	115	181	279	242	164
Alkalinity [mg/L as CaCO3]	135	80	73	15	103	141	103	90
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate [mg/L]	31	35	6.9	31	9.4	8.5	18	6.5
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	3.92	2.74	2.70	0.14	3.16	4.25	2.60	2.00
Arsenic [mg/L]	0.0003	< 0.0002	0.0003	0.0126	0.0005	< 0.0002	< 0.0002	0.0022
Barium [mg/L]	0.00185	0.00166	0.00184	0.00058	0.00639	0.00459	0.0123	0.00435
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	78.0	57.6	40.3	16.5	50.5	64.9	49.7	33.9
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000247	0.000121	0.000078	0.000122	0.000044	0.000050	0.000037	0.000034
Chromium [mg/L]	0.0073	0.0304	0.0696	0.0258	0.0737	0.0117	0.0123	0.0512
Copper [mg/L]	0.0019	0.0014	0.0005	0.0006	0.0007	0.0013	0.0007	< 0.0005
Iron [mg/L]	0.008	< 0.003	< 0.003	0.025	< 0.003	0.013	0.004	< 0.003
Potassium [mg/L]	2.22	3.55	3.95	1.42	4.04	17.2	26.7	9.25

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NAG Test with Analyses

LR Report : **CA11088-JUN12**

Analysis	13: E11-052-2 CL-Geochem	14: E11-052-3 CL-Geochem	15: E11-110-1 CL-Geochem	16: E11-110-2 CL-Geochem	17: E11-062-1 CL-Geochem	18: E11-062-2 CL-Geochem	19: E11-062-3 CL-Geochem	20: E11-062-4 CL-Geochem
Lithium [mg/L]	< 0.001	< 0.001	0.001	0.002	0.002	< 0.001	< 0.001	0.002
Magnesium [mg/L]	0.003	0.003	0.002	0.853	0.003	0.002	0.002	0.002
Manganese [mg/L]	0.00088	0.00025	0.00013	0.00058	0.00016	0.00046	0.00015	0.00016
Molybdenum [mg/L]	0.00414	0.00350	0.00237	0.00329	0.00443	0.00210	0.00094	0.00271
Nickel [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001	< 0.0001	< 0.0001	0.0001
Lead [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00002	< 0.00002	0.00003	0.00003
Sulfur [mg/L]	12.7	13.8	3.37	11.5	4.27	4.39	7.28	3.09
Antimony [mg/L]	0.0004	0.0003	0.0004	0.0003	0.0004	0.0004	0.0005	0.0005
Selenium [mg/L]	0.004	0.001	< 0.001	0.002	0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00023	0.00015	0.00029	0.00014	0.00022	0.00026	0.00015	0.00008
Strontium [mg/L]	0.0506	0.102	0.109	0.0242	0.0508	0.0635	0.0943	0.0375
Titanium [mg/L]	0.0002	0.0002	< 0.0001	0.0024	0.0001	< 0.0001	< 0.0001	0.0004
Thallium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00010	0.00008	< 0.00002
Uranium [mg/L]	0.000002	0.000002	0.000007	0.000007	0.000048	0.000006	0.000003	0.000121
Vanadium [mg/L]	0.00094	0.00317	0.00127	0.0284	0.00246	0.0127	0.0191	0.00669
Yttrium [mg/L]	< 0.000001	0.000001	< 0.000001	0.000008	0.000003	0.000001	< 0.000001	0.000003
Zinc [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

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June-29-12

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Date Rec. : 14 June 2012
LR Report: **CA11088-JUN12**
Reference: PO# TRR 04509

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	21: E11-111-1 CL-Geochem	22: E11-100-1 CL-Geochem	23: E11-100-2 CL-Geochem	24: E11-100-3 CL-Geochem	25: E11-107-1 CL-Geochem	26: E11-107-2 CL-Geochem	27: Bulk Sample-1 CL-Geochem	28: Bulk Sample-2 CL-Geochem
Sample Date & Time	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12	08-Jun-12
Sample weight [g]	2.51	2.51	2.50	2.49	2.50	2.55	2.47	2.49
Vol H2O2 [mL]	250	250	250	250	250	250	250	250
Final pH [units]	11.42	11.02	11.66	11.30	11.28	9.01	10.23	7.72
pH [no unit]	10.5	9.88	11.2	10.5	10.5	8.53	9.16	7.38
Conductivity [µS/cm]	204	271	388	182	189	268	138	68
Alkalinity [mg/L as CaCO3]	102	80	145	90	85	151	66	31
Chloride [mg/L]	< 2	< 2	< 2	< 2	< 2	1.7	< 2	< 2
Sulphate [mg/L]	5.6	80	7.4	< 2	9.1	3.9	8.3	3.9
Mercury [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Silver [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Aluminum [mg/L]	3.15	2.22	3.88	2.01	2.14	0.58	1.42	0.26
Arsenic [mg/L]	0.0003	0.0007	< 0.0002	0.0005	< 0.0002	0.0010	0.0057	0.0046
Barium [mg/L]	0.00431	0.00044	0.00334	0.00586	0.00128	0.00075	0.00016	0.00020
Beryllium [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Bismuth [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium [mg/L]	49.5	67.0	66.7	33.2	40.2	63.9	27.1	11.5
Cadmium [mg/L]	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003
Cobalt [mg/L]	0.000059	0.000055	0.000054	0.000038	0.000040	0.000061	0.000037	0.000236
Chromium [mg/L]	0.0179	0.0588	0.0174	0.0305	0.0345	0.0515	0.0550	0.0852
Copper [mg/L]	0.0007	< 0.0005	0.0009	< 0.0005	0.0007	0.0011	< 0.0005	0.0025
Iron [mg/L]	< 0.003	< 0.003	0.007	0.006	< 0.003	< 0.003	< 0.003	< 0.003

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NAG Test with Analyses

LR Report : CA11088-JUN12

Analysis	21: E11-111-1 CL-Geochem	22: E11-100-1 CL-Geochem	23: E11-100-2 CL-Geochem	24: E11-100-3 CL-Geochem	25: E11-107-1 CL-Geochem	26: E11-107-2 CL-Geochem	27: Bulk Sample-1 CL-Geochem	28: Bulk Sample-2 CL-Geochem
Potassium [mg/L]	13.4	3.30	8.39	20.1	12.7	2.21	1.73	1.16
Lithium [mg/L]	< 0.001	0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001
Magnesium [mg/L]	0.002	0.002	0.002	< 0.001	< 0.001	0.318	0.004	0.235
Manganese [mg/L]	0.00068	0.00003	0.00043	0.00008	0.00015	0.0107	0.00017	0.0171
Molybdenum [mg/L]	0.00275	0.00508	0.00345	0.00479	0.00858	0.00217	0.00359	0.0114
Nickel [mg/L]	0.0002	0.0001	< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002
Lead [mg/L]	< 0.00002	0.00004	0.00003	< 0.00002	< 0.00002	< 0.00002	0.00003	0.00003
Sulfur [mg/L]	2.90	28.4	3.90	1.22	4.09	2.64	3.51	1.64
Antimony [mg/L]	0.0005	0.0004	0.0004	0.0005	0.0004	0.0003	0.0009	0.0005
Selenium [mg/L]	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Tin [mg/L]	0.00020	0.00009	0.00034	0.00014	0.00019	0.00017	0.00021	0.00018
Strontium [mg/L]	0.0561	0.0597	0.0855	0.0335	0.0448	0.0409	0.0133	0.0125
Titanium [mg/L]	< 0.0001	0.0004	< 0.0001	< 0.0001	< 0.0001	0.0036	0.0005	0.0032
Thallium [mg/L]	0.00005	< 0.00002	< 0.00002	< 0.00002	0.00004	< 0.00002	< 0.00002	< 0.00002
Uranium [mg/L]	0.000003	0.000009	0.000002	0.000002	0.000008	0.000256	0.000160	0.000415
Vanadium [mg/L]	0.0133	0.00214	0.00650	0.0159	0.00562	0.01018	0.00281	0.00321
Yttrium [mg/L]	< 0.000001	0.000001	< 0.000001	< 0.000001	0.000001	0.000005	0.000009	0.000010
Zinc [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

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OnLine LIMS

RIETVELD XRD

Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for:	*Environmental -Analytical*
Project Number/ LIMS No.	*Custom XRD/MI4522-JUN12*
Reporting Date:	*July 26, 2012*

Instrument:	BRUKER AXS D8 Advance Diffractometer
Test Conditions:	Co radiation, 40 kV, 35 mA Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°
Interpretations :	PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.
Detection Limit :	0.5-2%. Strongly dependent on crystallinity.

Contents:

Bernie C. Yeung, B. Sc.
Mineralogist

Huyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

Method Summary

Mineral Identification and Interpretation:

Mineral identification and interpretation involve matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Minerals or compounds identification and quantitative analysis results should be accompanied by supporting chemical assay data or other tests.

Rietveld Method Quantitative Analysis:

Whole-pattern Rietveld Method Quantitative Analysis is performed by using Topas 4.1 (Bruker AXS), a graphics based profile analysis program built around a general non-linear least squares fitting system, to determine the amount of different phases in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental factors and specimen. Unlike other peak intensity-based methods, the Rietveld method uses a least square approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample(s). Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E11-61-1 CL-Geochem Jun4522-1 (wt %)	E11-61-2 CL-Geochem Jun4522-2 (wt %)	E11-81-1 CL-Geochem Jun4522-3 (wt %)	E11-81-2 CL-Geochem Jun4522-4 (wt %)	E11-81-3 CL-Geochem Jun4522-5 (wt %)	E11-81-4 CL-Geochem Jun4522-6 (wt %)	E11-54-1 33.87-36.14 m CL-Geochem Jun4522-7 (wt %)	E11-54-2 CL-Geochem Jun4522-8 (wt %)
Quartz	22.4	56.0	58.4	65.7	71.5	66.9	63.7	64.0
Albite	32.0	22.8	22.2	23.5	21.0	24.7	25.8	25.3
Actinolite	11.8	-	-	-	-	-	-	-
Clinozoisite	13.9	-	-	-	-	-	-	-
Biotite	3.8	8.2	-	-	-	-	-	-
Microcline	1.8	1.3	-	-	-	-	0.7	0.5
Calcite	2.4	3.7	4.5	0.9	0.6	2.2	2.8	2.3
Chlorite	11.8	6.9	0.8	0.3	0.2	0.1	4.1	4.1
Ankerite	-	1.1		1.7	1.9		0.1	-
Muscovite	-	-	14.1	7.9	4.8	6.1	2.6	3.9
Pyrite	-	-	-	-	0.0	0.0	0.1	-
Diopside	-	-	-	-	-	-	-	-
Ilmenite	-	-	-	-	-	-	-	-
Stilpnomelane	-	-	-	-	-	-	-	-
Magnesiohornblende	-	-	-	-	-	-	-	-
Hematite	-	-	-	-	-	-	-	-
Dolomite	-	-	-	-	-	-	-	-
Magnetite	-	-	-	-	-	-	-	-
Montmorillonite	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E11-54-3 CL-Geochem Jun4522-9 (wt %)	E11-54-4 CL-Geochem Jun4522-10 (wt %)	E11-59-1 CL-Geochem Jun4522-11 (wt %)	E11-59-2 CL-Geochem Jun4522-12 (wt %)	E11-95-1 CL-Geochem Jun4522-13 (wt %)	E11-95-2 CL-Geochem Jun4522-14 (wt %)	E11-97-1 CL-Geochem Jun4522-15 (wt %)	E11-97-2 CL-Geochem Jun4522-16 (wt %)
Quartz	66.3	56.2	66.7	30.8	40.5	68.1	56.6	65.4
Albite	26.3	29.0	24.7	37.8	31.9	21.6	22.2	21.1
Actinolite	-	-	-	1.0	-	-	-	-
Clinozoisite	-	-	-	-	7.0	-	8.2	-
Biotite	-	-	-	-	1.5	-	3.0	1.4
Microcline	0.6	1.1	2.1	3.1	1.1	0.7	0.8	1.8
Calcite	1.5	2.7	0.9	0.2	3.8	2.4	0.2	1.7
Chlorite	0.6	0.1	0.2	1.7	1.4	0.5	3.1	0.3
Ankerite	-	-	0.2	0.0	-	-	-	-
Muscovite	4.7	10.8	5.3	7.8	-	6.8	3.4	8.3
Pyrite	-	-	0.0	0.1	-	-	-	-
Diopside	-	-	-	14.6	-	-	-	-
Ilmenite	-	-	-	1.6	-	-	-	-
Stilpnomelane	-	-	-	1.3	0.2	-	-	-
Magnesiohornblende	-	-	-	-	12.6	-	2.6	-
Hematite	-	-	-	-	-	-	-	-
Dolomite	-	-	-	-	-	-	-	-
Magnetite	-	-	-	-	-	-	-	-
Montmorillonite	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E11-138-1 CL-Geochem Jun4522-17 (wt %)	E11-138-2 CL-Geochem Jun4522-18 (wt %)	E11-138-3 CL-Geochem Jun4522-19 (wt %)	E11-77-1 CL-Geochem Jun4522-20 (wt %)	E11-77-2 CL-Geochem Jun4522-21 (wt %)	E10-38-1 CL-Geochem Jun4522-22 (wt %)	E10-38-2 CL-Geochem Jun4522-23 (wt %)	E10-38-3 CL-Geochem Jun4522-24 (wt %)
Quartz	78.7	32.0	65.0	63.9	52.8	18.7	14.3	29.8
Albite	10.0	40.6	18.1	27.7	33.9	33.6	28.1	15.8
Actinolite	-	-	0.0	0.2	-	10.5	32.9	21.0
Clinozoisite	-	-	-	-	-	19.1	8.5	19.2
Biotite	0.3	-	-	1.0	1.9	2.8	-	-
Microcline	0.9	0.8	0.7	0.7	0.6	1.8	2.1	1.5
Calcite	3.4	12.8	6.8	1.3	4.1	0.3	2.3	-
Chlorite	0.1	12.5	6.1	1.5	4.1	8.6	11.9	12.7
Ankerite	-	-	-	0.1	-	-	-	-
Muscovite	6.7	-	3.1	3.3	2.6	4.6	-	-
Pyrite	-	0.1	0.2	-	-	-	-	-
Diopside	-	-	-	-	-	-	-	-
Ilmenite	-	-	-	-	-	-	-	-
Stilpnomelane	-	-	-	-	-	-	-	-
Magnesiohornblende	-	-	-	-	-	-	-	-
Hematite	-	1.1			-	-	-	-
Dolomite	-	-	-	0.3	-	-	-	-
Magnetite	-	-	-	-	-	-	-	-
Montmorillonite	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E11-91-1 CL-Geochem Jun4522-25 (wt %)	E11-91-2 CL-Geochem Jun4522-26 (wt %)	E11-91-3 CL-Geochem Jun4522-27 (wt %)	E11-72-1 CL-Geochem Jun4522-28 (wt %)	E10-31-1 CL-Geochem Jun4522-29 (wt %)	E10-31-2 CL-Geochem Jun4522-30 (wt %)	E10-31-3 CL-Geochem Jun4522-31 (wt %)	E10-31-4 CL-Geochem Jun4522-32 (wt %)
Quartz	66.1	23.3	67.3	60.1	64.5	72.9	50.2	66.3
Albite	27.0	41.3	25.1	28.8	27.7	16.0	34.8	24.7
Actinolite	1.2	2.2	0.1	-	-	-	-	-
Clinozoisite	-	-	-	-	-	-	-	-
Biotite	1.2	2.9	0.9	0.8	1.3	0.6	-	1.3
Microcline	1.0	1.1	1.0	1.3	0.8	0.9	0.8	1.2
Calcite	0.2	-	0.9	0.9	0.7	1.1	3.4	1.0
Chlorite	0.9	4.0	0.2	0.4	1.2	0.7	5.8	1.4
Ankerite	0.3	0.5	-	-	0.3	-	-	-
Muscovite	2.0	6.2	4.4	7.6	3.4	7.7	4.9	4.1
Pyrite	0.0	-	-	-	-	-	0.0	-
Diopside	-	18.6	-	-	-	-	-	-
Ilmenite	-	-	-	-	-	-	-	-
Stilpnomelane	-	-	-	-	-	-	-	-
Magnesiohornblende	-	-	-	-	-	-	-	-
Hematite	-	-	-	-	-	-	-	-
Dolomite	-	-	-	-	-	-	-	-
Magnetite	-	-	-	-	-	-	-	-
Montmorillonite	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E10-23-1 CL-Geochem Jun4522-33 (wt %)	E10-46-1 CL-Geochem Jun4522-34 (wt %)	E10-46-2 CL-Geochem Jun4522-35 (wt %)	E10-13-1 CL-Geochem Jun4522-36 (wt %)	E10-13-2 CL-Geochem Jun4522-37 (wt %)	E10-13-3 CL-Geochem Jun4522-38 (wt %)	E10-13-4 CL-Geochem Jun4522-39 (wt %)	CL10-3-1 CL-Geochem Jun4522-40 (wt %)
Quartz	71.1	66.6	0.0	13.4	17.8	43.0	50.4	52.8
Albite	20.4	23.6	94.9	37.6	50.0	47.1	43.6	7.7
Actinolite	-	-	-	-	-	-	-	-
Clinozoisite	-	-	-	13.3	-	-	-	-
Biotite	0.9	2.4	0.7	1.1	0.3	0.4	0.8	21.3
Microcline	0.8	2.0	0.2	0.0	0.0	0.0	0.0	0.0
Calcite	1.3	0.7	2.9	1.6	7.7	1.1	1.0	2.8
Chlorite	0.6	0.4	0.2	17.9	16.5	0.1	0.1	0.1
Ankerite	-	-	-	-	-	-	-	-
Muscovite	4.8	4.3	1.1	3.6	6.2	8.2	4.0	13.9
Pyrite	-	0.1	0.0	-	-	0.0	-	1.4
Diopside	-	-	-	-	-	-	-	-
Ilmenite	-	-	-	-	-	-	-	-
Stilpnomelane	-	-	-	-	-	-	-	-
Magnesiohornblende	-	-	-	11.6	-	-	-	-
Hematite	-	-	-	0.0	0.4	-	-	-
Dolomite	-	-	-	-	-	-	-	-
Magnetite	-	-	-	-	1.1	-	-	-
Montmorillonite	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

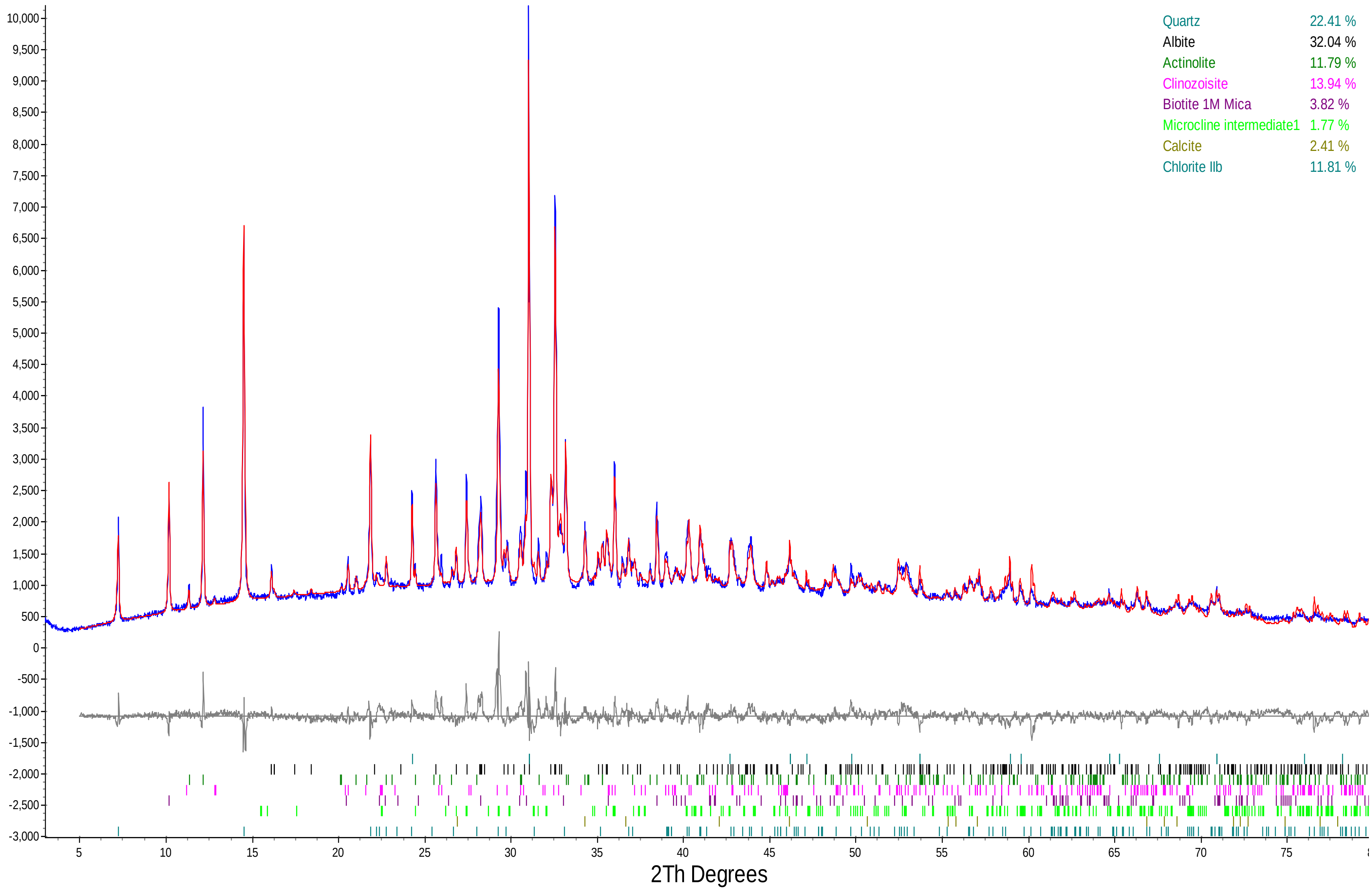
Mineral/Compound	E10-42-1 CL-Geochem Jun4522-41 (wt %)	E10-42-2 CL-Geochem Jun4522-42 (wt %)	E10-42-3 CL-Geochem Jun4522-43 (wt %)	E11-66-1 CL-Geochem Jun4522-44 (wt %)	E11-54-1 212.3-215.5m CL-Geochem Jun4522-45 (wt %)	E11-51-1 CL-Geochem Jun4522-46 (wt %)
Quartz	42.1	44.1	39.5	37.7	51.0	41.9
Albite	39.2	44.0	51.7	46.4	41.7	47.7
Actinolite	-	-	-	-	-	-
Clinozoisite	-	-	-	-	-	-
Biotite	7.1	2.5	0.5	0.3	0.6	0.4
Microcline	0.0	2.8	0.5	0.9	3.1	0.2
Calcite	2.4	1.2	1.5	1.7	0.2	2.2
Chlorite	0.1	0.4	0.2	3.9	0.1	4.7
Ankerite	-	0.3	-	-	-	0.1
Muscovite	9.0	4.9	6.1	6.1	2.4	2.8
Pyrite	-	-	0.0	0.0	-	-
Diopside	-	-	-	-	-	-
Ilmenite	-	-	-	-	-	-
Stilpnomelane	-	-	-	-	-	-
Magnesiohornblende	-	-	-	-	-	-
Hematite	-	-	-	-	-	-
Dolomite	-	-	-	-	-	-
Magnetite	-	-	-	-	-	-
Montmorillonite	-	-	-	3.0	0.8	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Mineral/Compound	Formula
Quartz	SiO_2
Albite	$NaAlSi_3O_8$
Actinolite	$Ca_2(Mg,Fe)_5Si_8O_{22}(OH)_2$
Clinozoisite	$Ca_2Al_3O(SiO_4)Si_2O_7(OH)$
Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$
Microcline	$KAlSi_3O_8$
Calcite	$CaCO_3$
Chlorite	$(Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$
Ankerite	$CaFe(CO_3)_2$
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$
Pyrite	FeS_2
Diopside	$CaMgSi_2O_6$
Ilmenite	$FeTiO_3$
Stilpnomelane	$KFe^{2+}{}_{4.3}Mg_{1.4}Fe^{3+}{}_{2.3}Si_{10}Al_2O_{24}(OH)_3 \cdot 2(H_2O)$
Amphibole	$(Na,K)Ca_2(Fe,Mg)_5(Al,Si)_8O_{22}(OH)_2$
Hematite	Fe_2O_3
Dolomite	$CaMg(CO_3)_2$
Magnetite	Fe_3O_4
Montmorillonite	$(Al,Mg)_8(Si_4O_{10})_3(OH)_{10}*12H_2O$

E11-61-1 CL-Geochem



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
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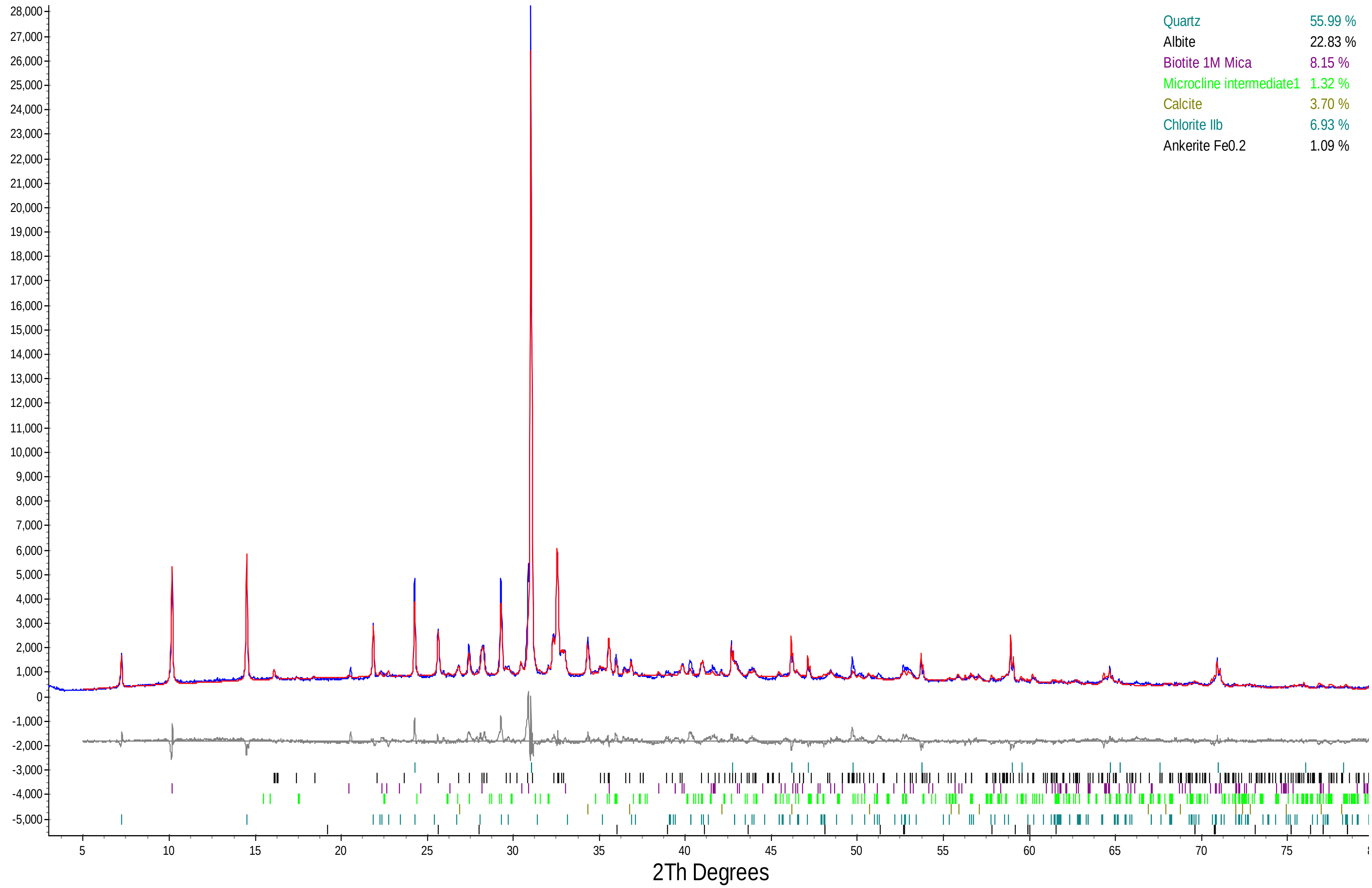
E11-61-2 CL-Geochem



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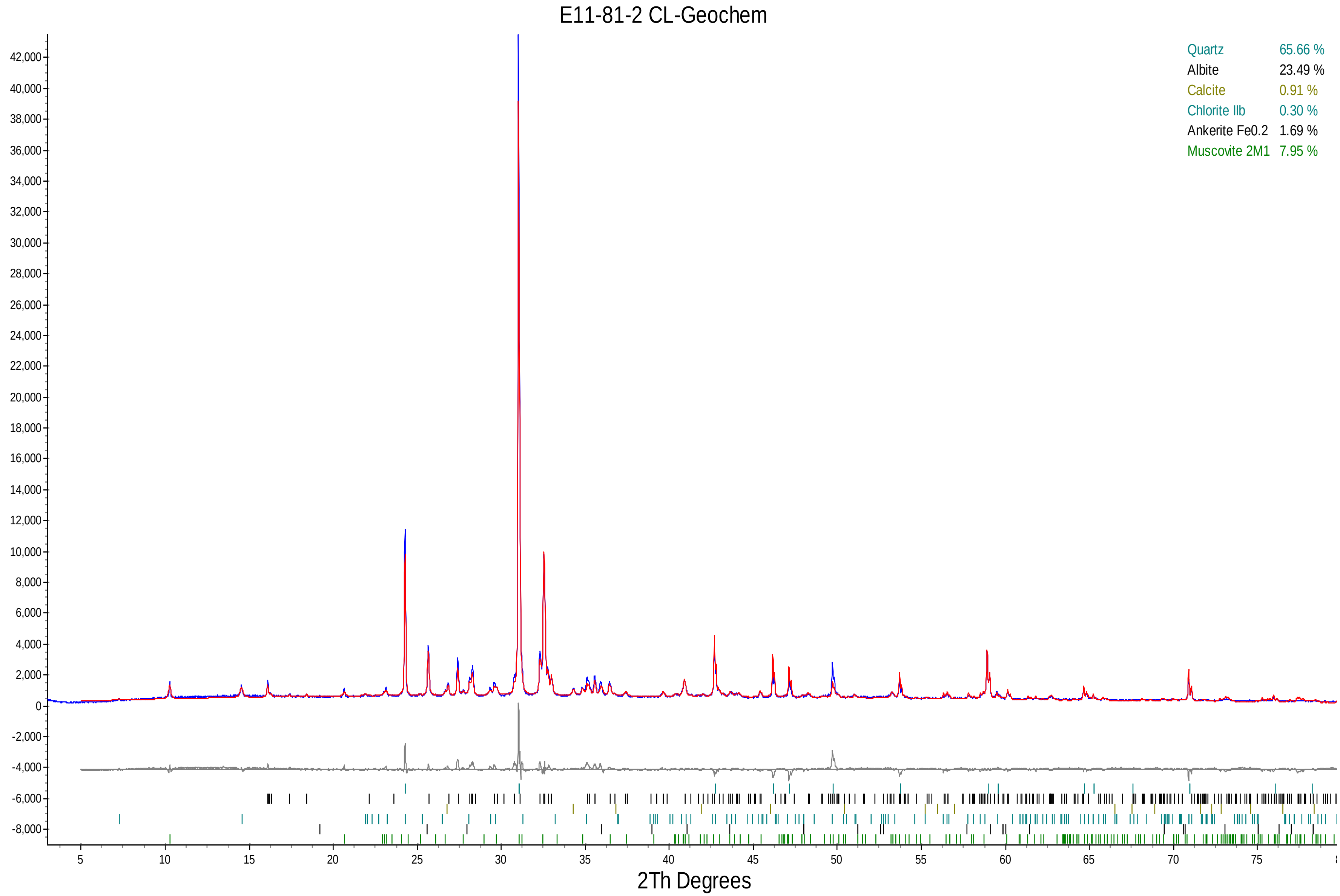

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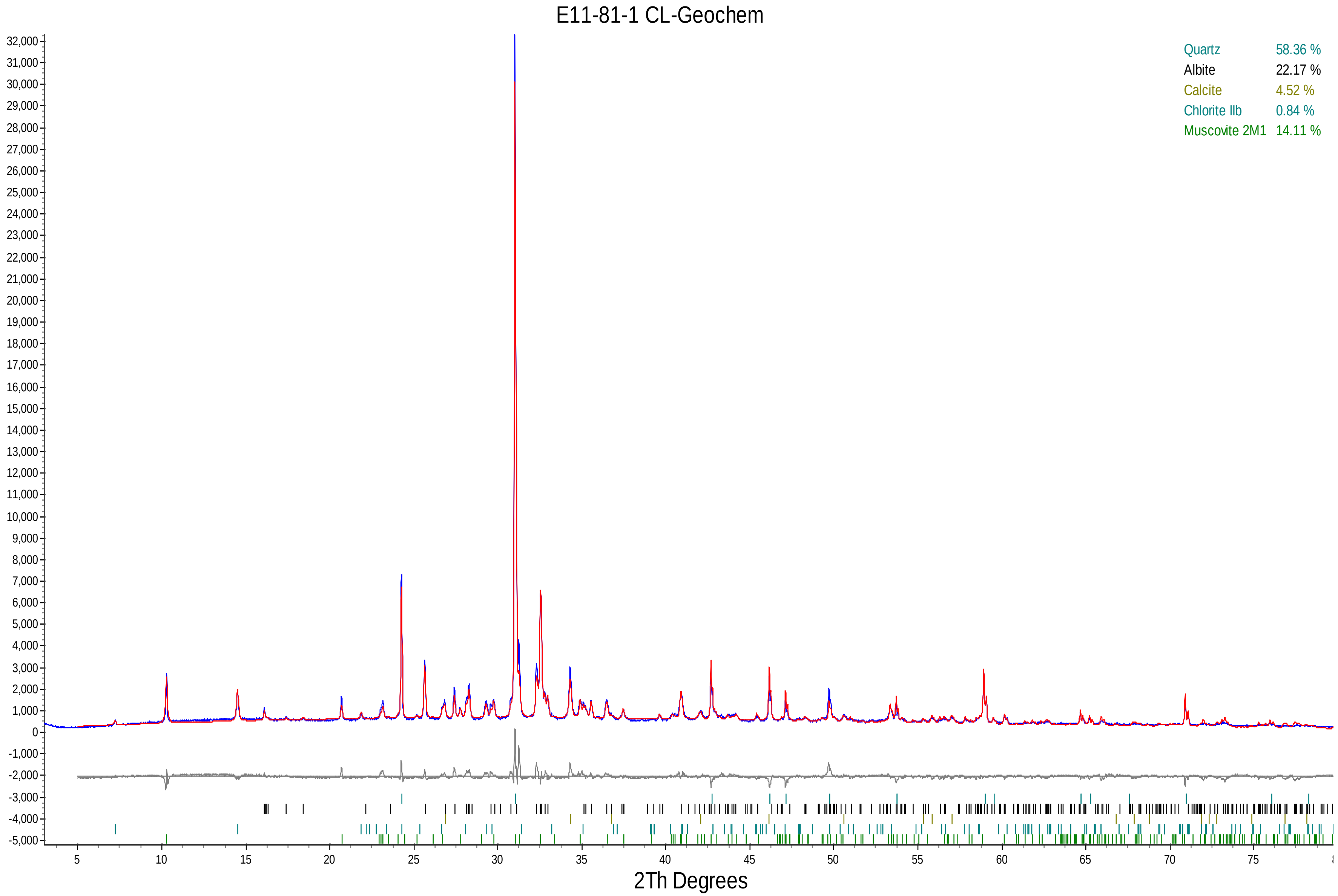

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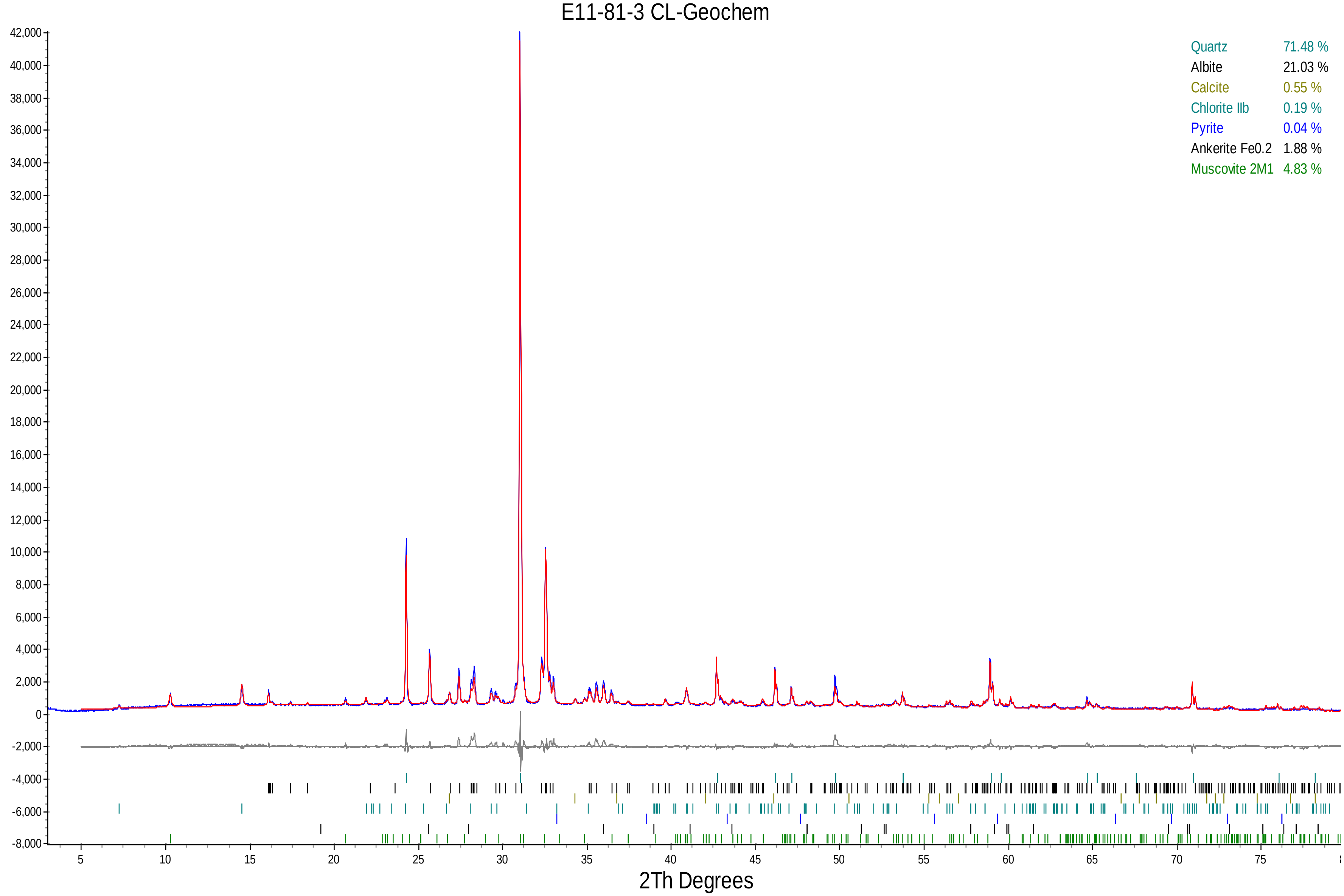

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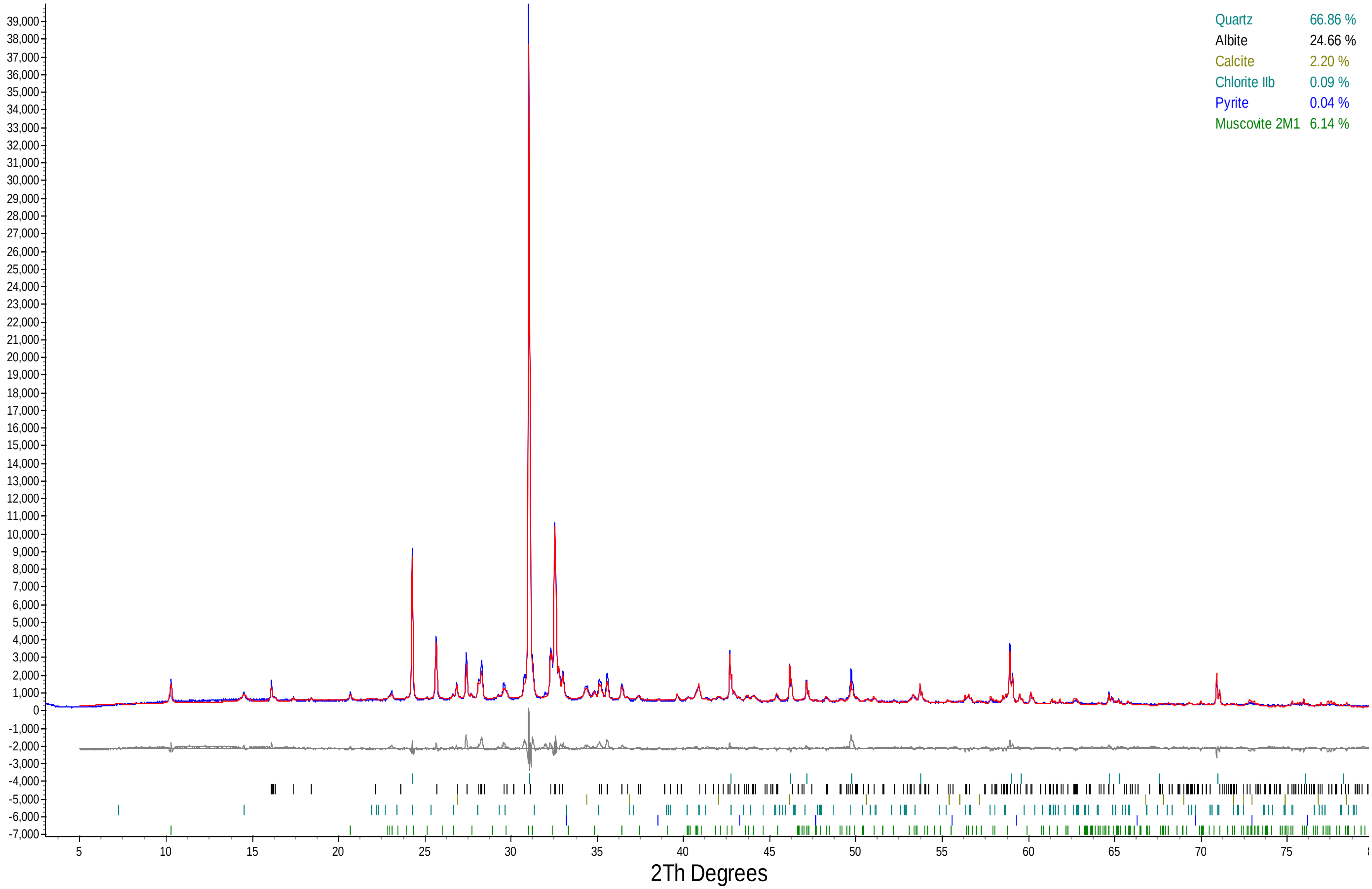
E11-81-4 CL-Geochem



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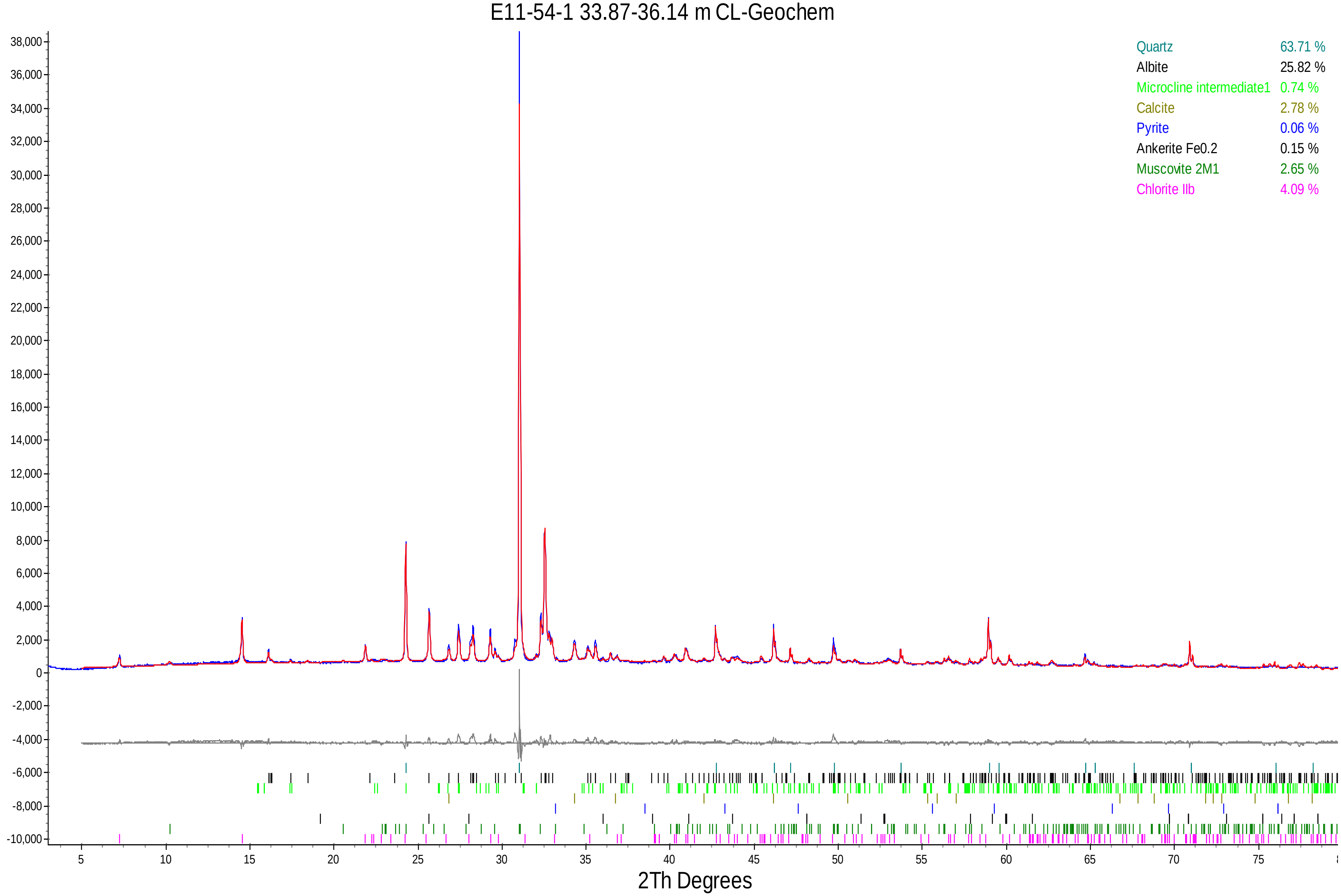

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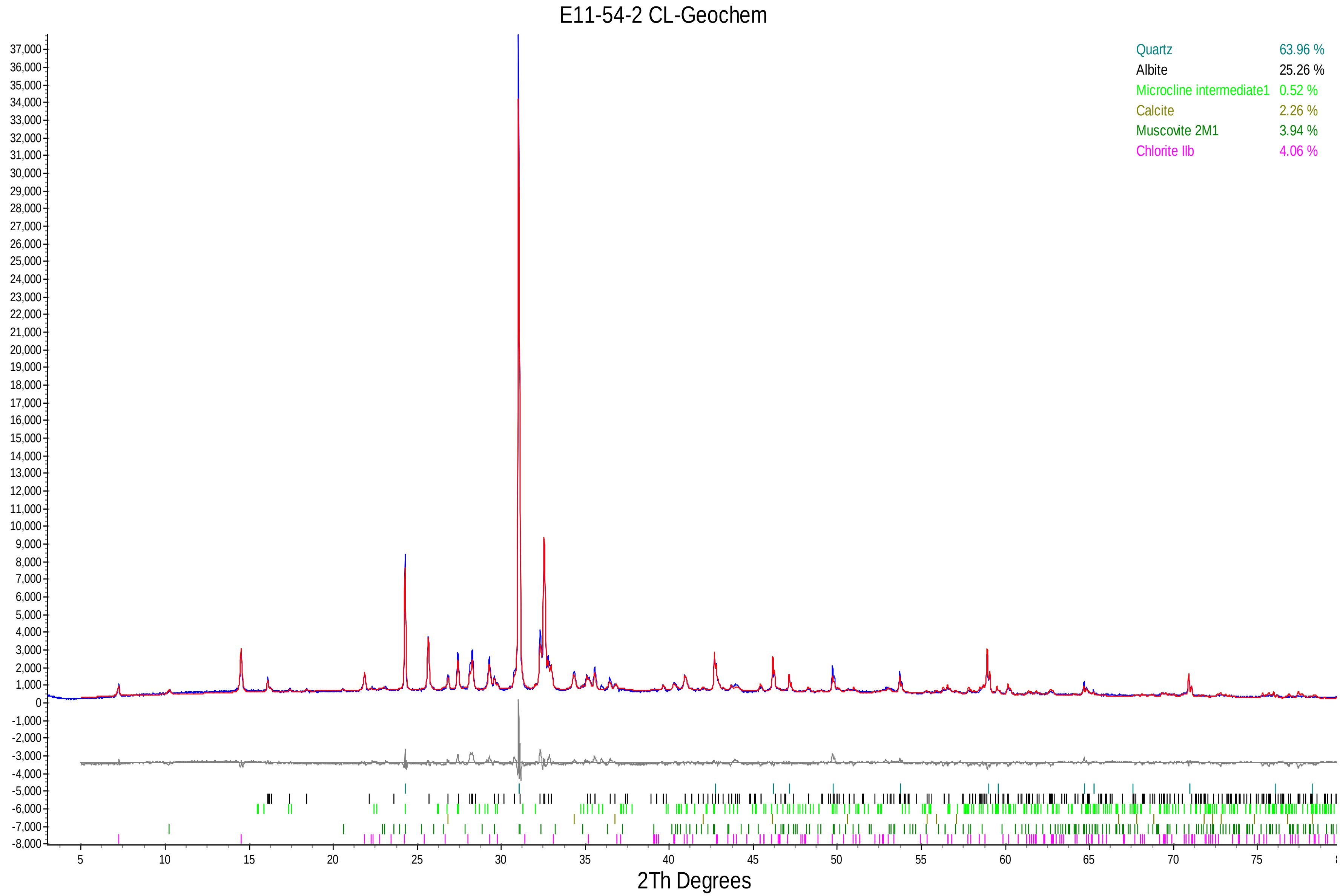

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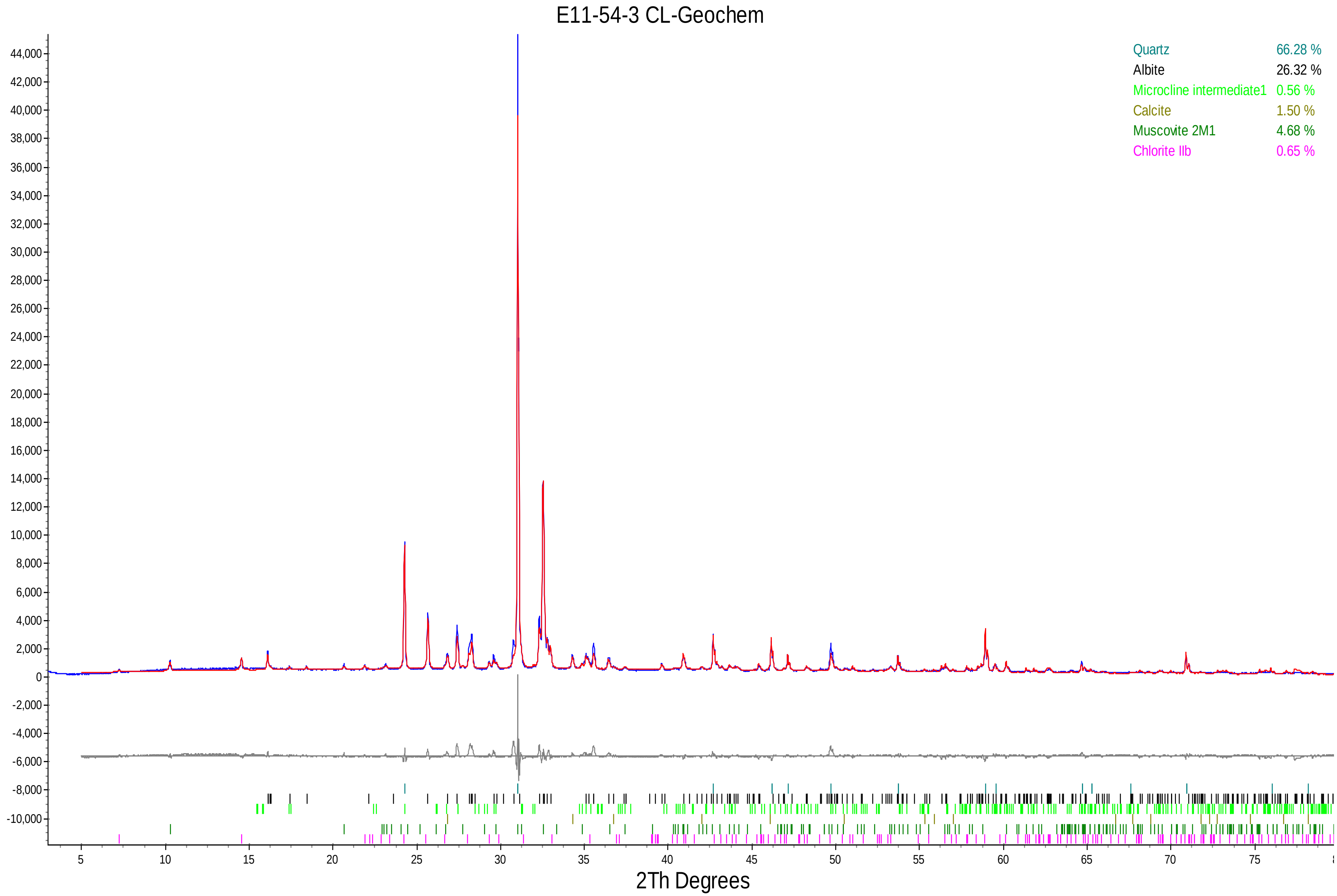

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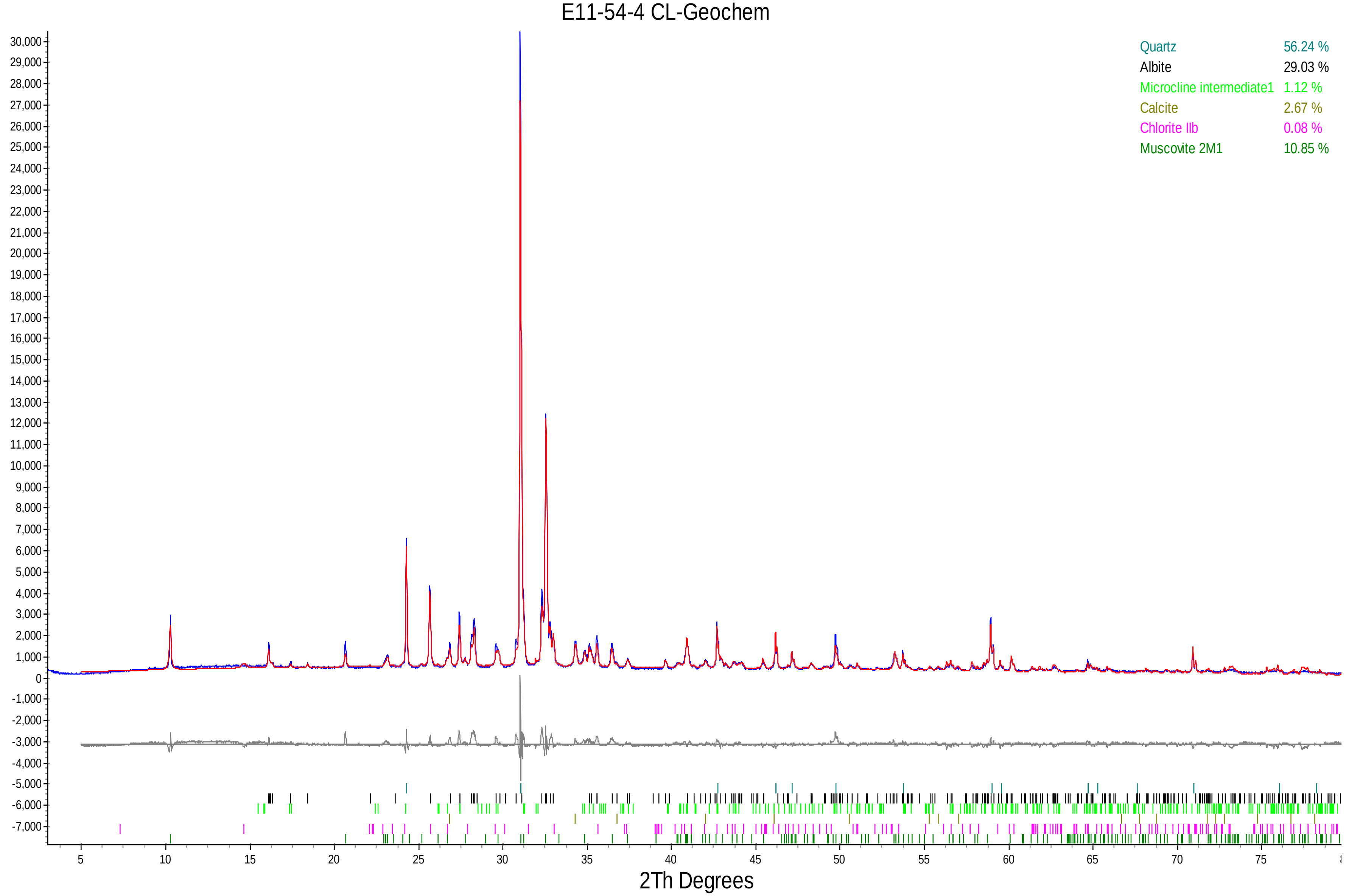

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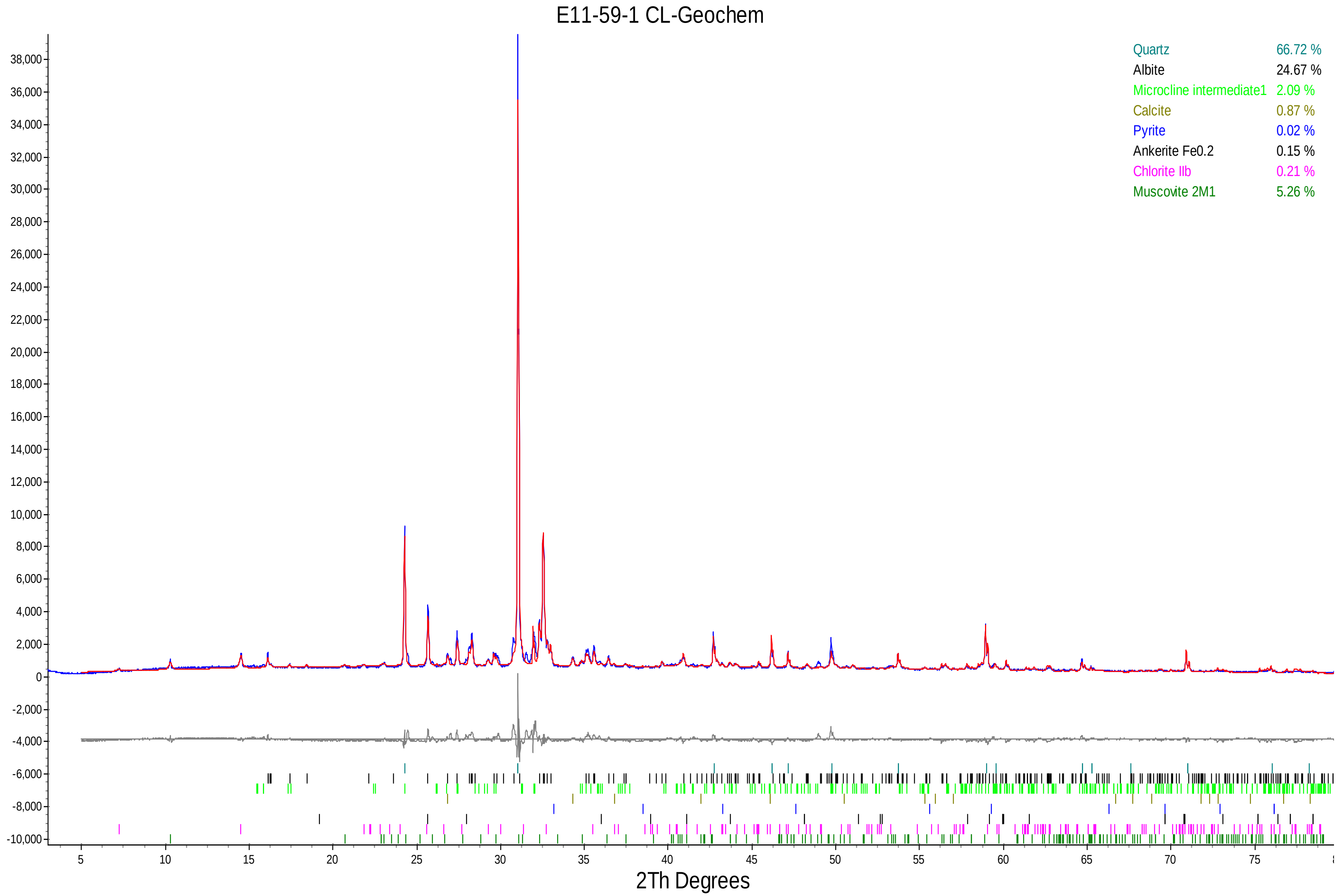

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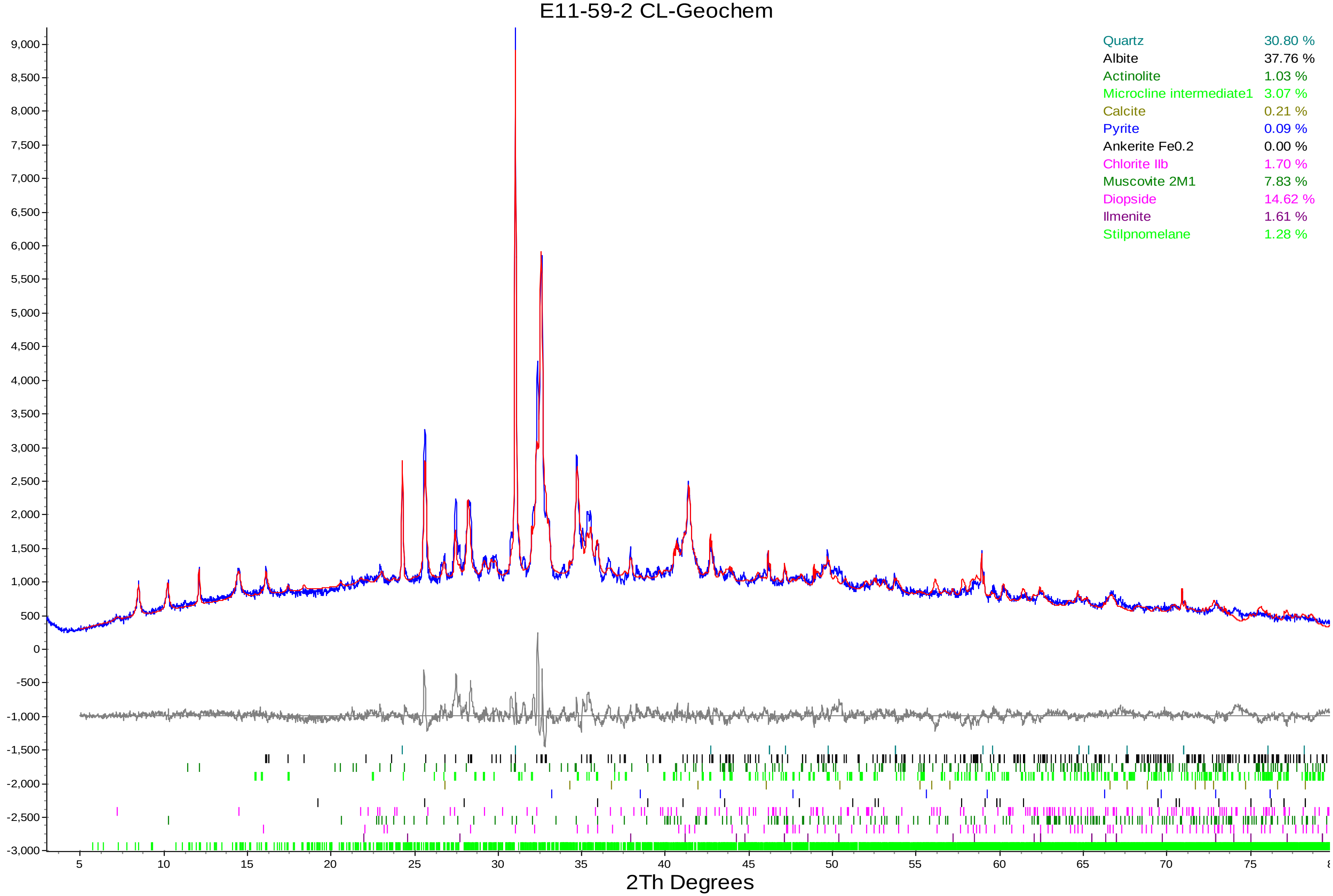

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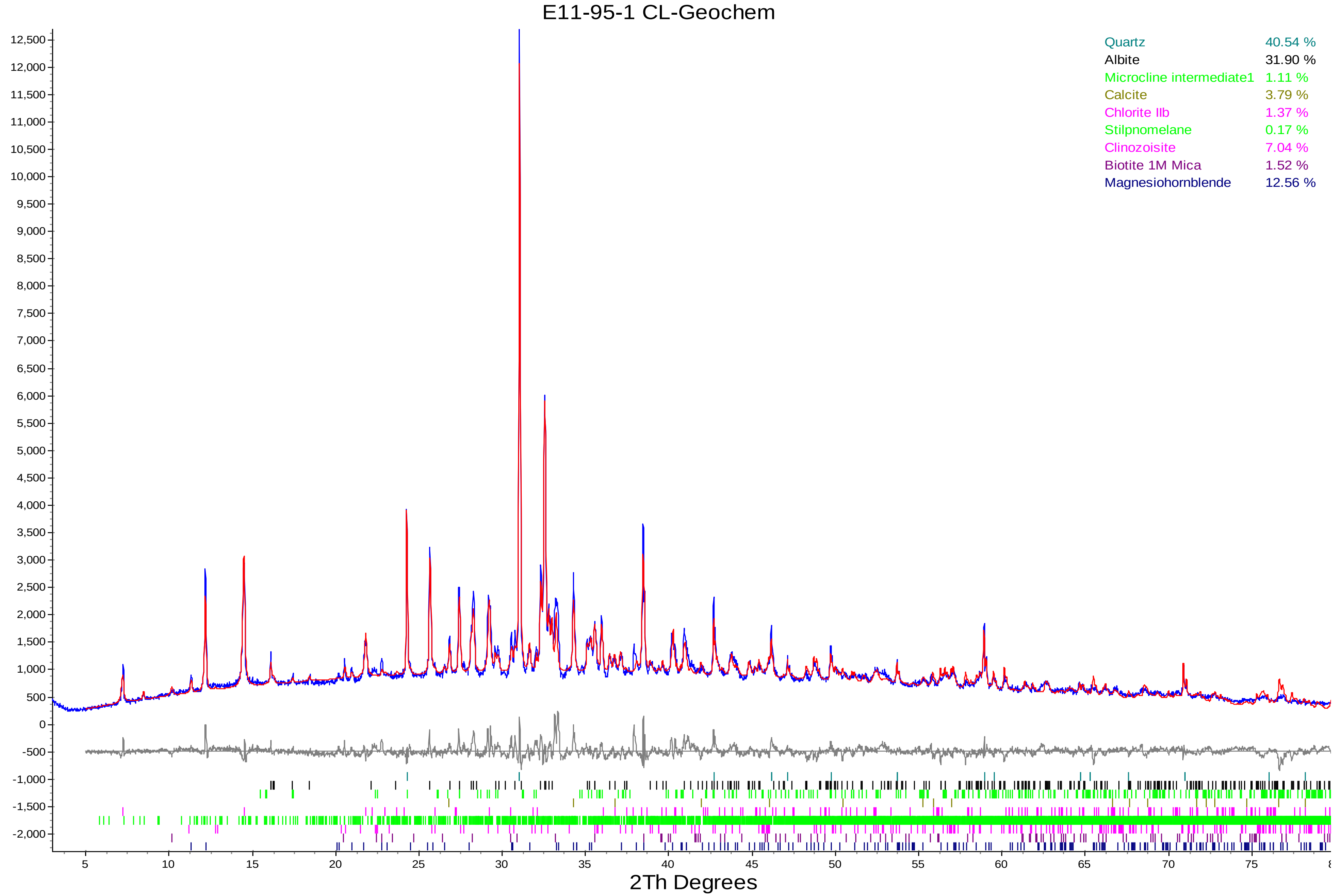

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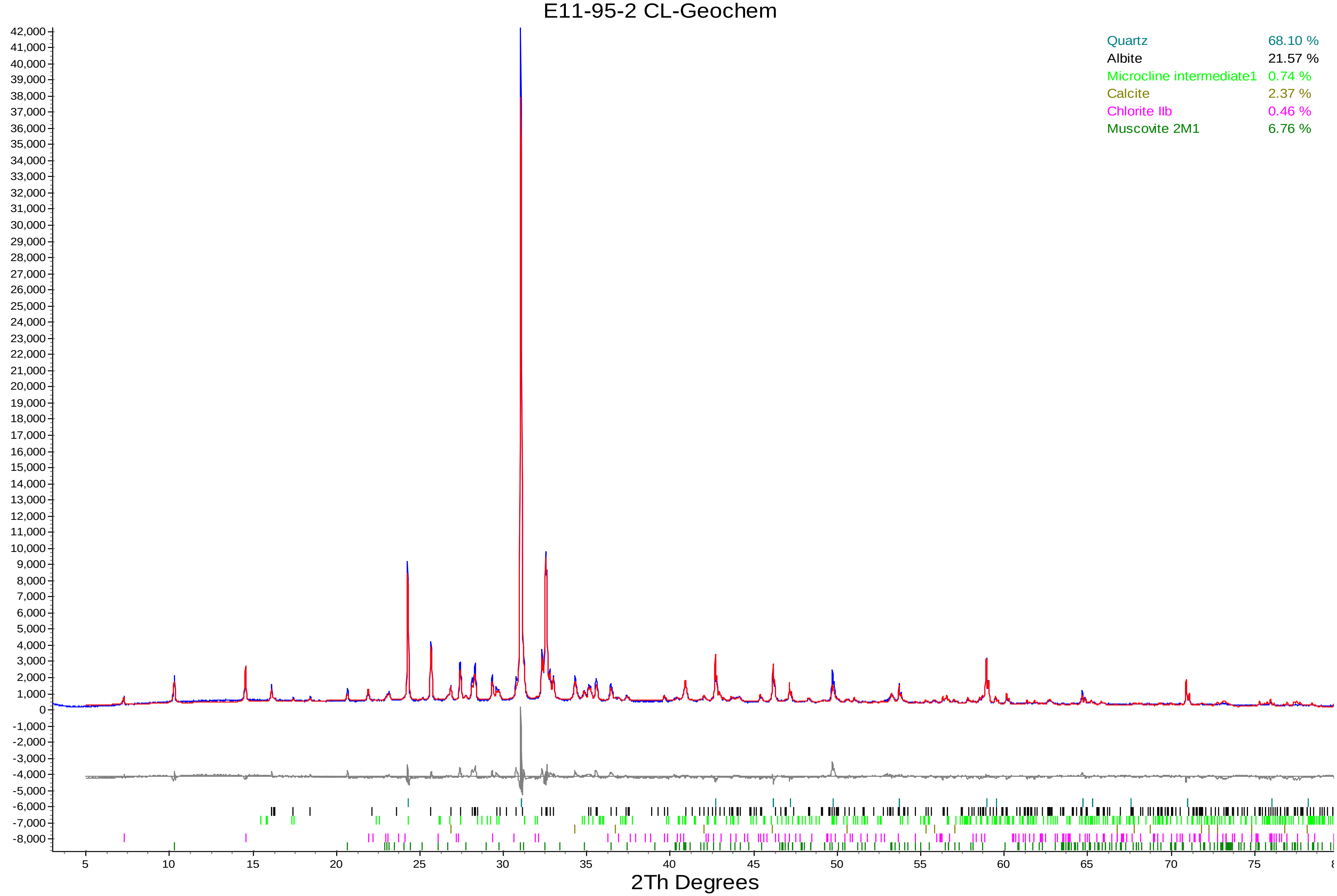

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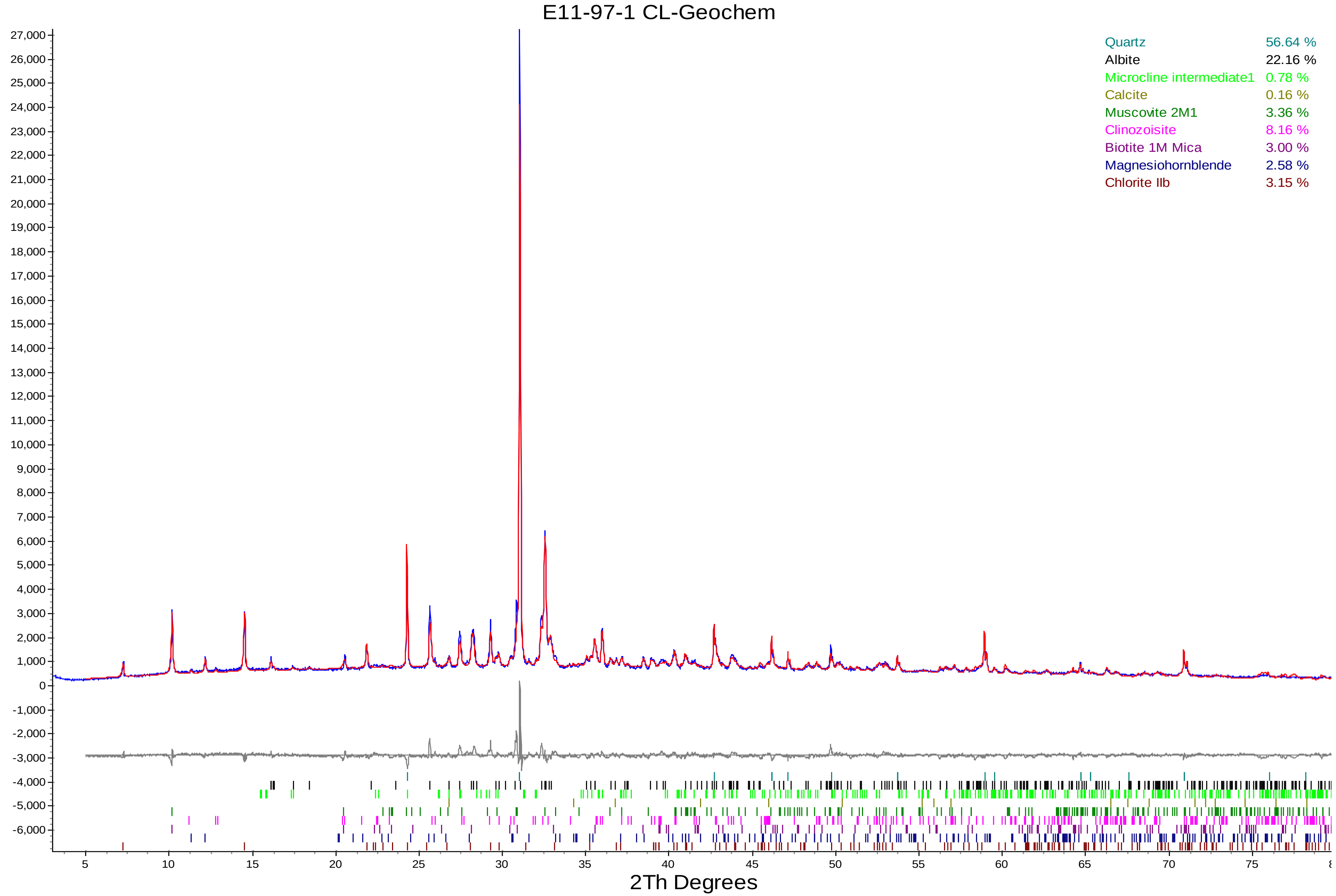

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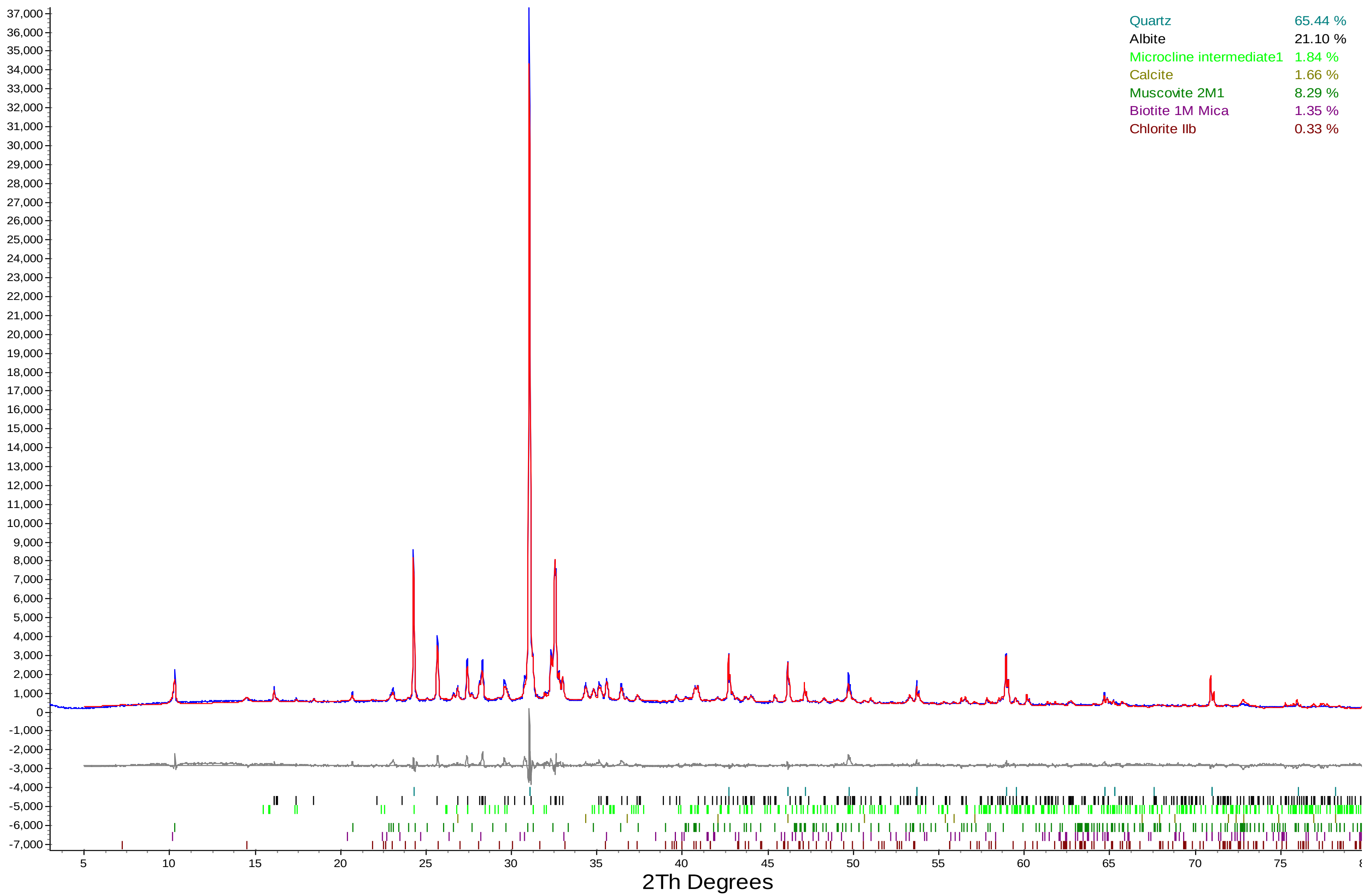
E11-97-2 CL-Geochem



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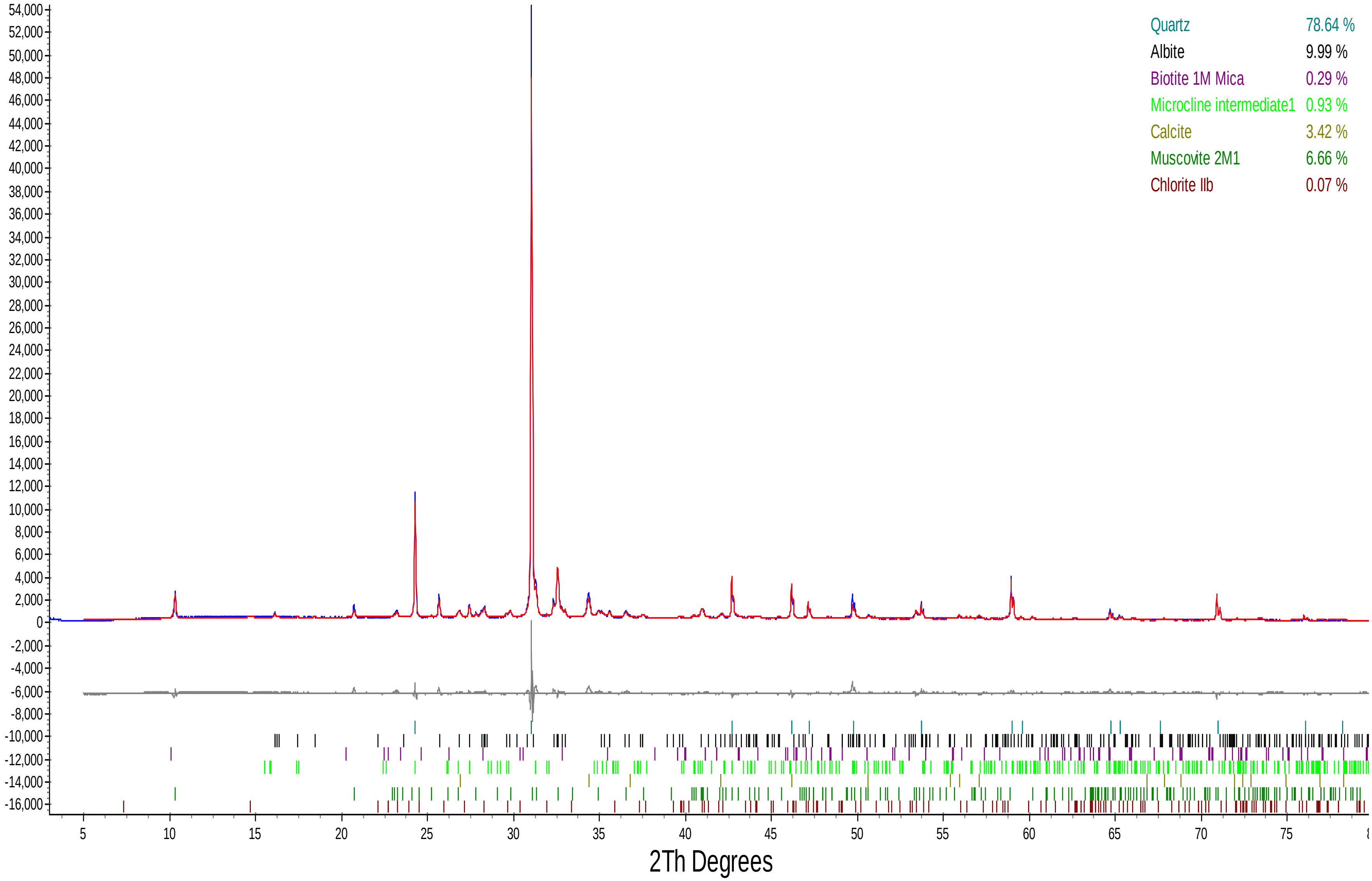
E11-138-1 CL-Geochem



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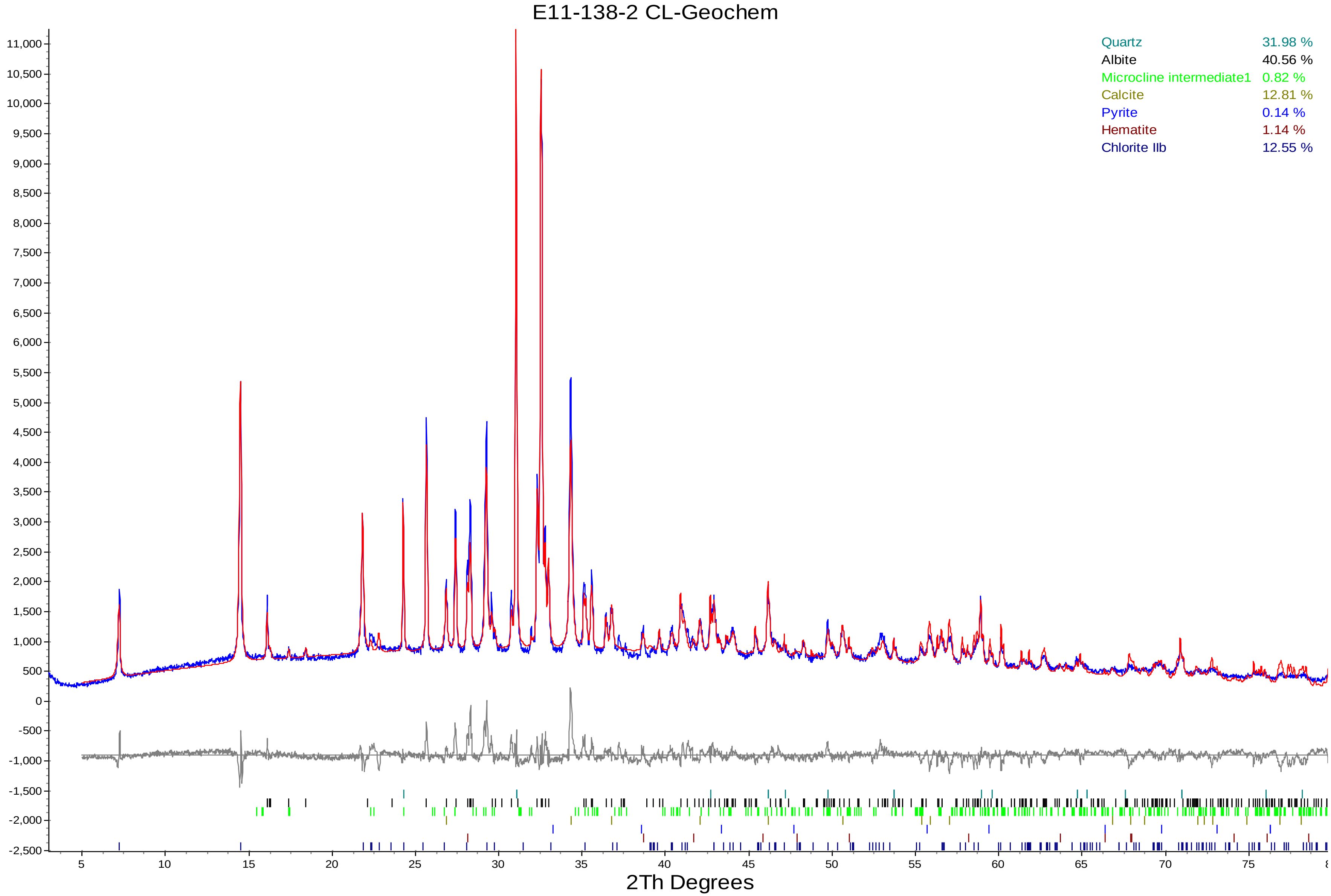

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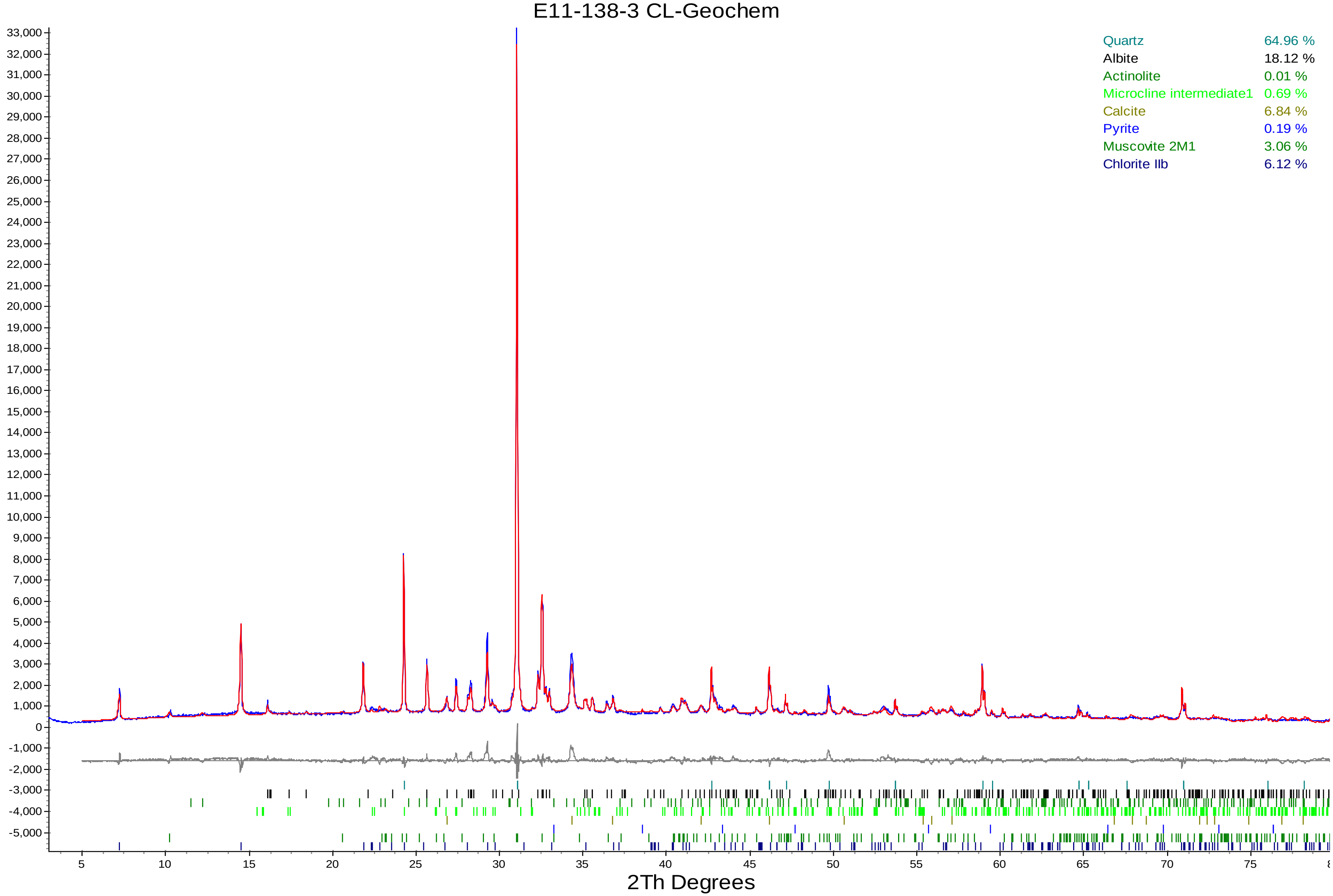

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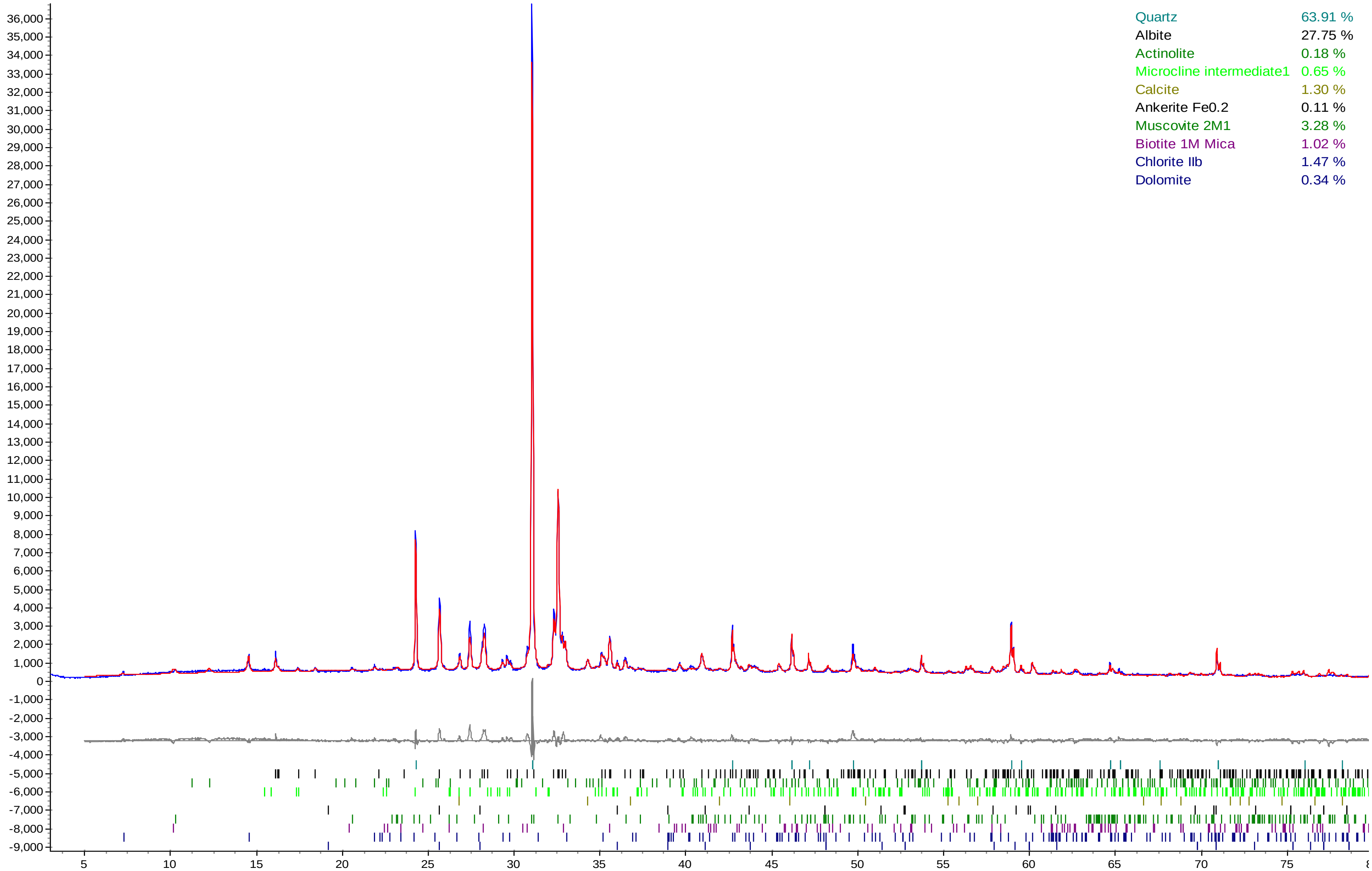
E11-77-1 CL-Geochem



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0. Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
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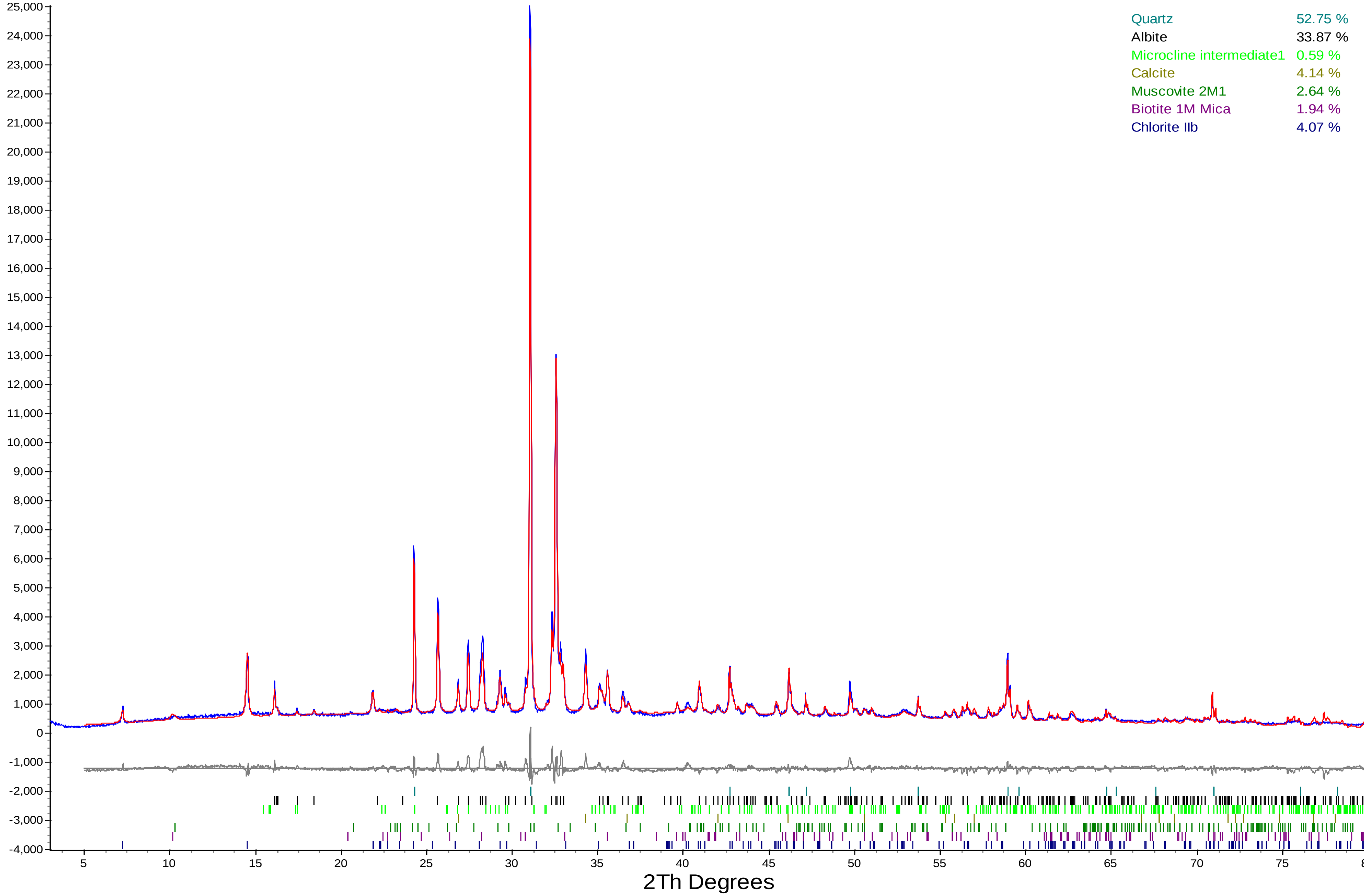
E11-77-2 CL-Geochem



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
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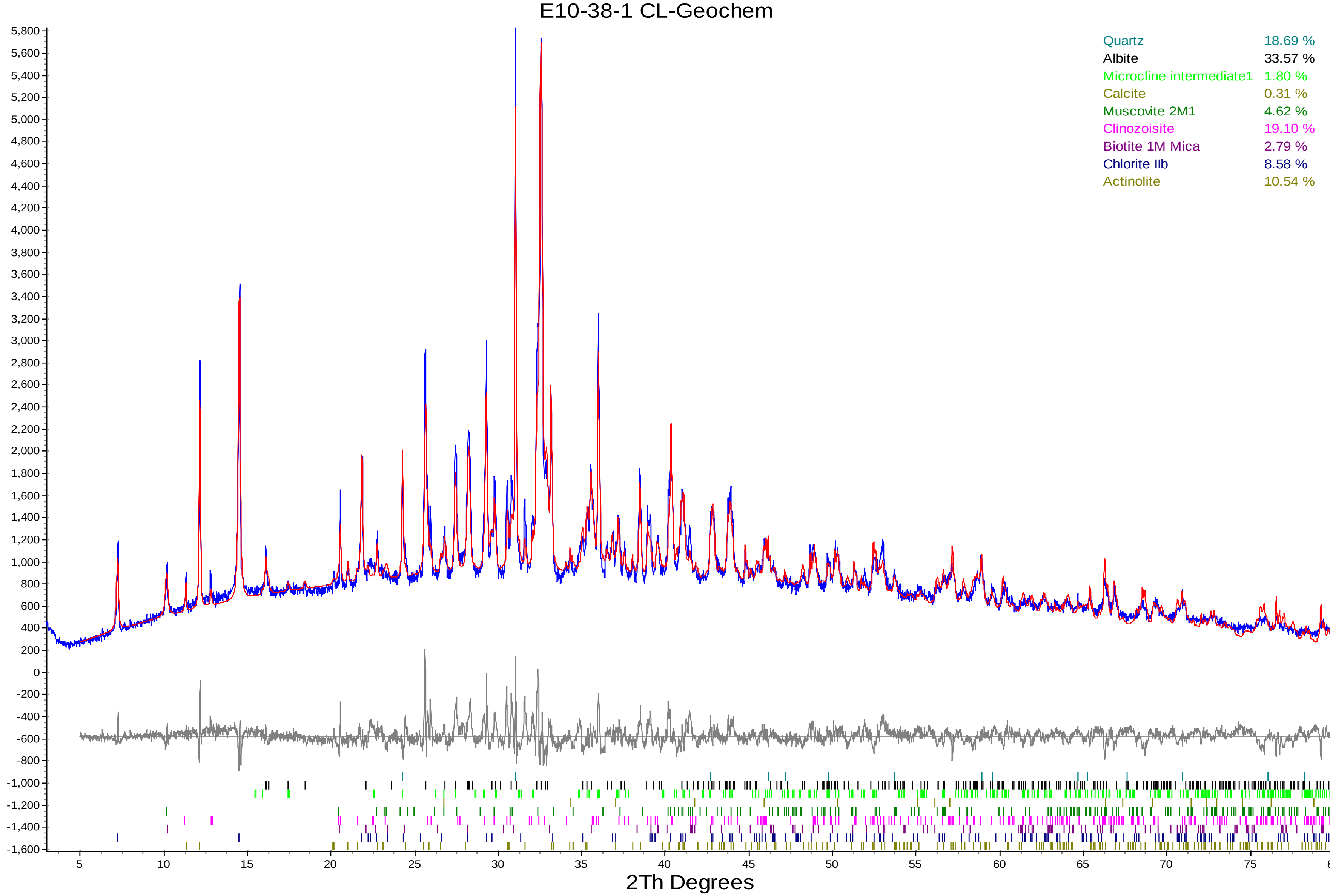
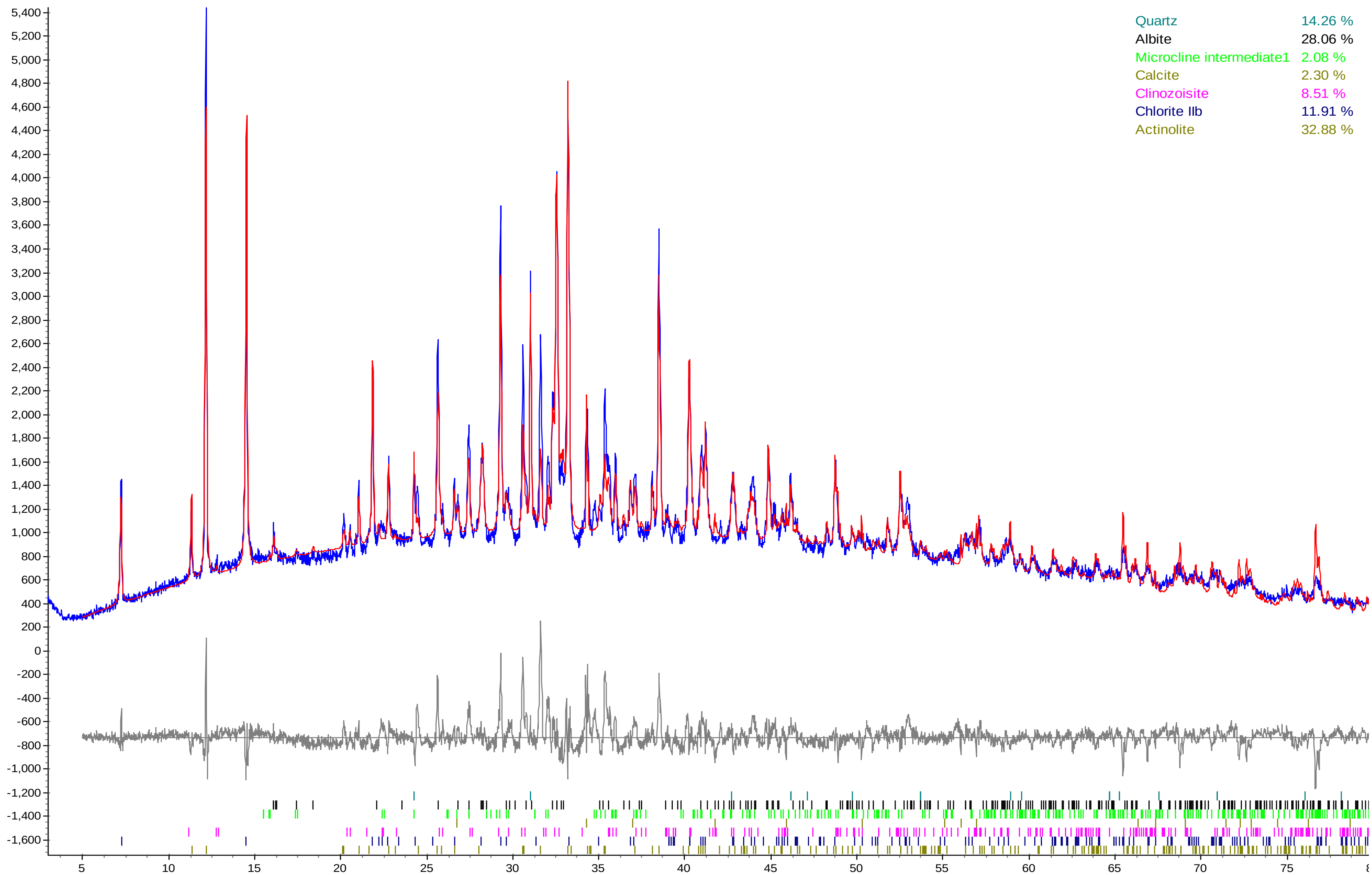

E10-38-1 CL-Geochem
Quartz 18.69 %
Albite 33.57 %
Microcline intermediate1 1.80 %
Calcite 0.31 %
Muscovite 2M1 4.62 %
Clinozoisite 19.10 %
Biotite 1M Mica 2.79 %
Chlorite IIb 8.58 %
Actinolite 10.54 %
2Th Degrees

Environmental -Analytical
Custom XRD/MI4522-JUN12
07/26/2012

E10-38-2 CL-Geochem



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4522-JUN12
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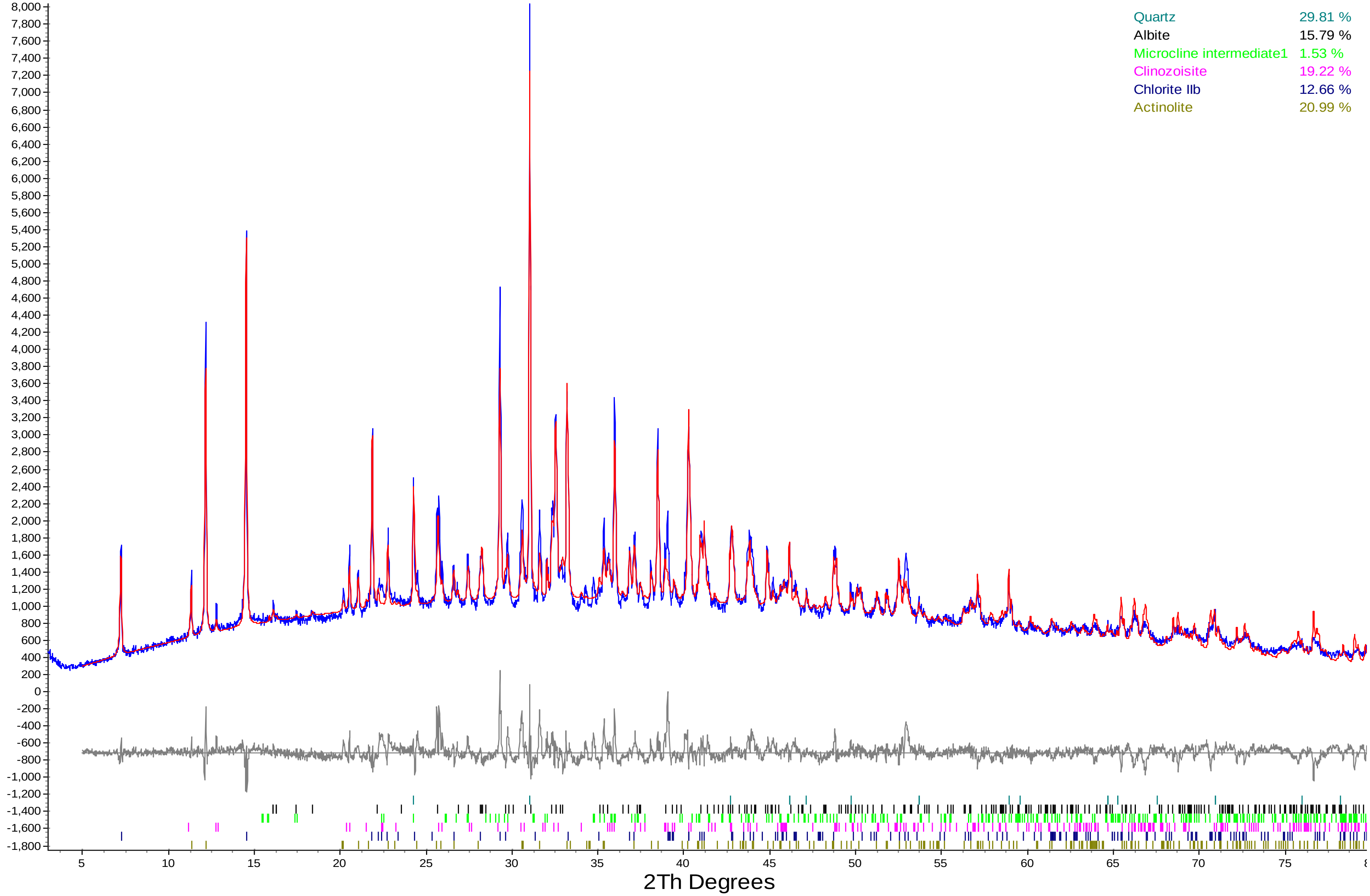
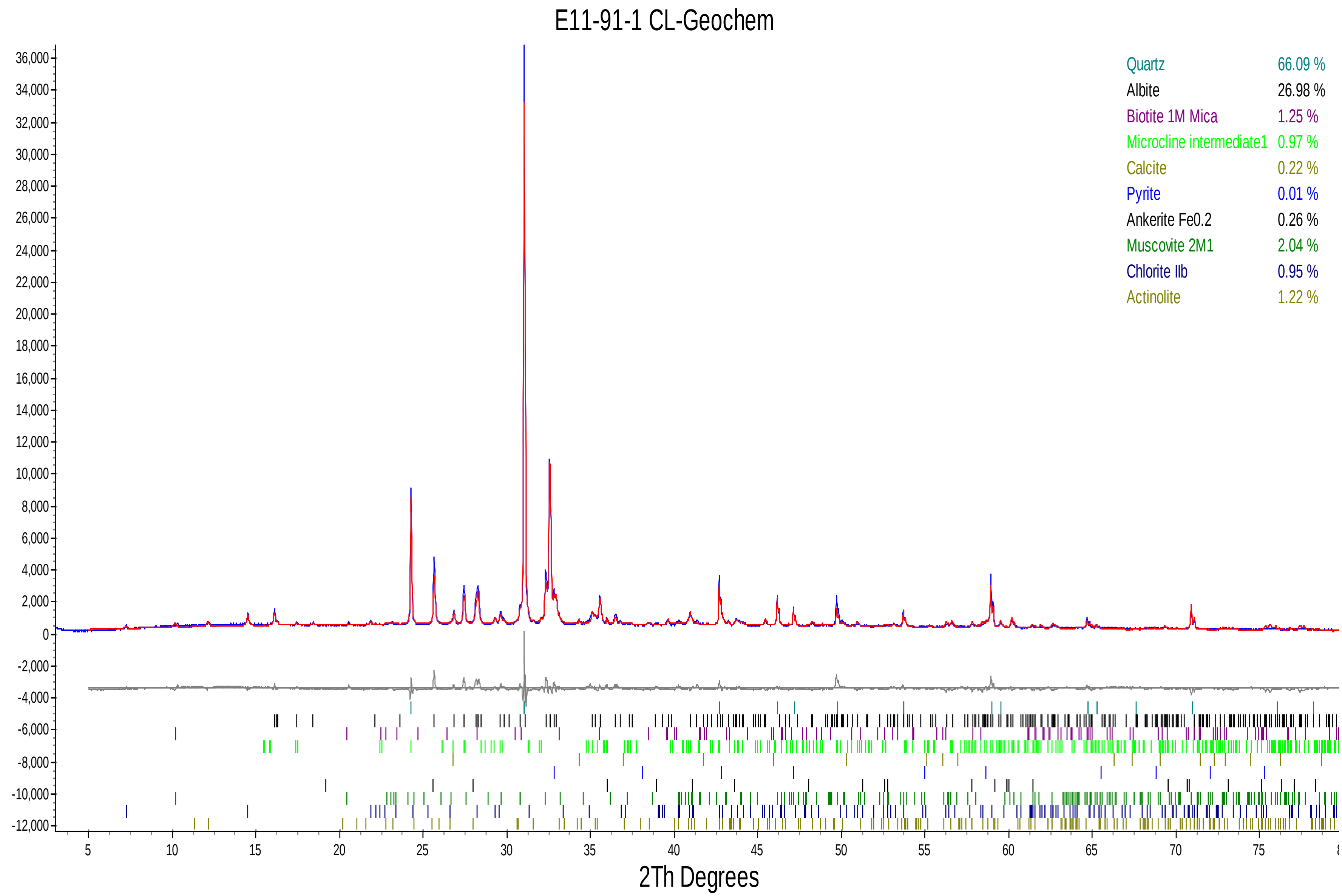
E10-38-3 CL-Geochem



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.


E11-91-1 CL-Geochem
Quartz 66.09 %
Albite 26.98 %
Biotite 1M Mica 1.25 %
Microcline intermediate1 0.97 %
Calcite 0.22 %
Pyrite 0.01 %
Ankerite Fe0.2 0.26 %
Muscovite 2M1 2.04 %
Chlorite IIb 0.95 %
Actinolite 1.22 %
2Th Degrees

Environmental -Analytical
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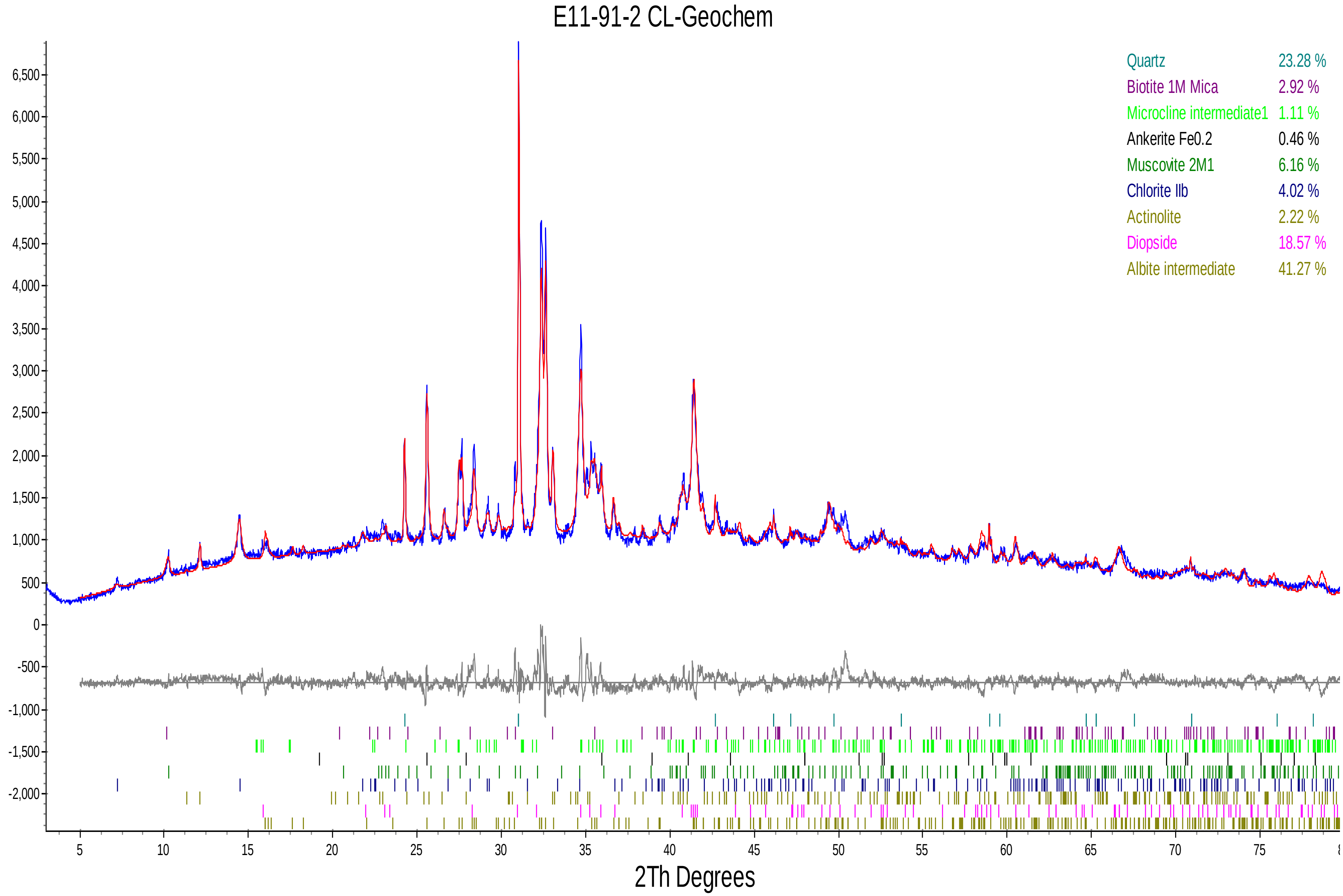

The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
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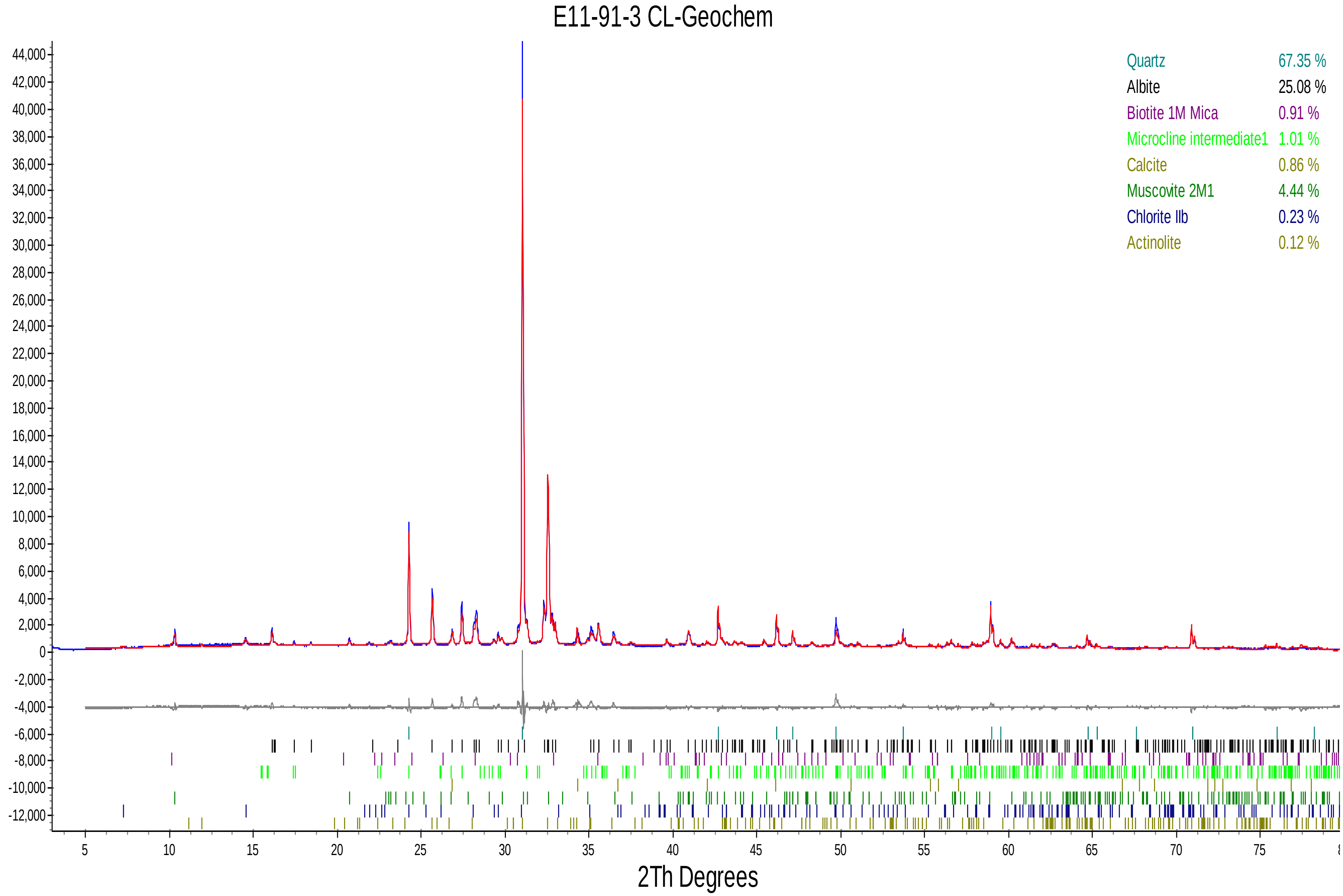
07/26/2012



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4522-JUN12
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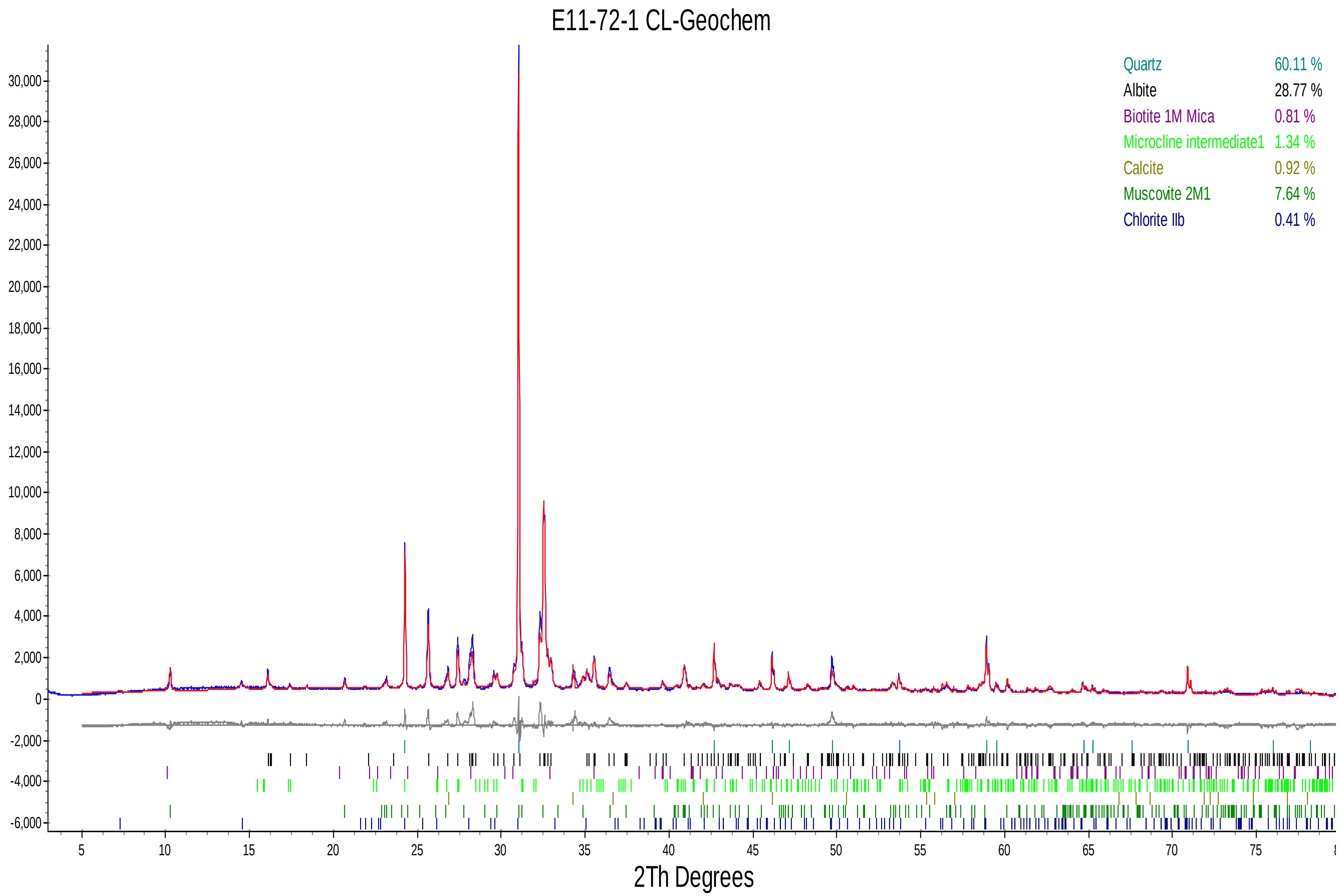
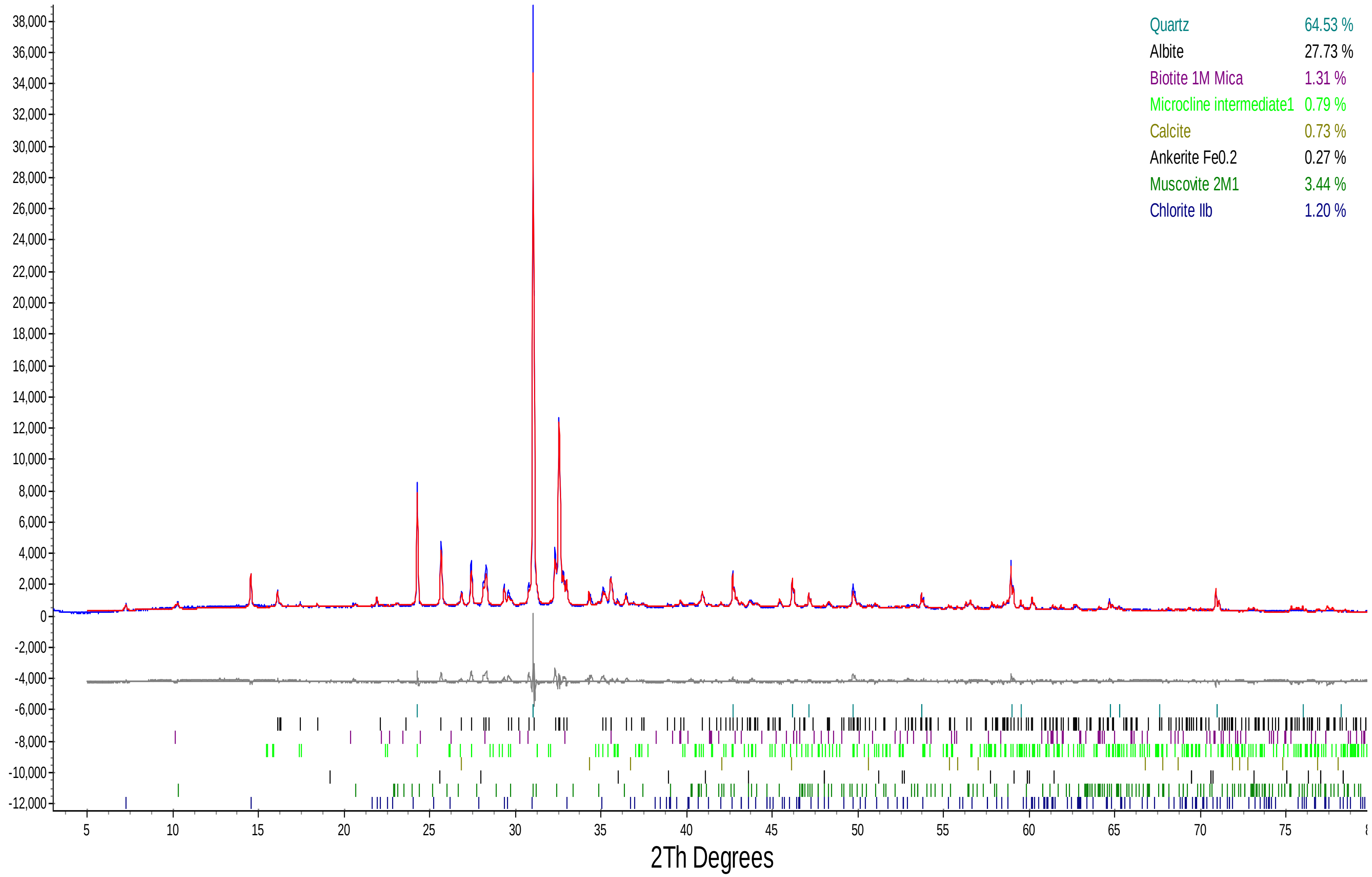
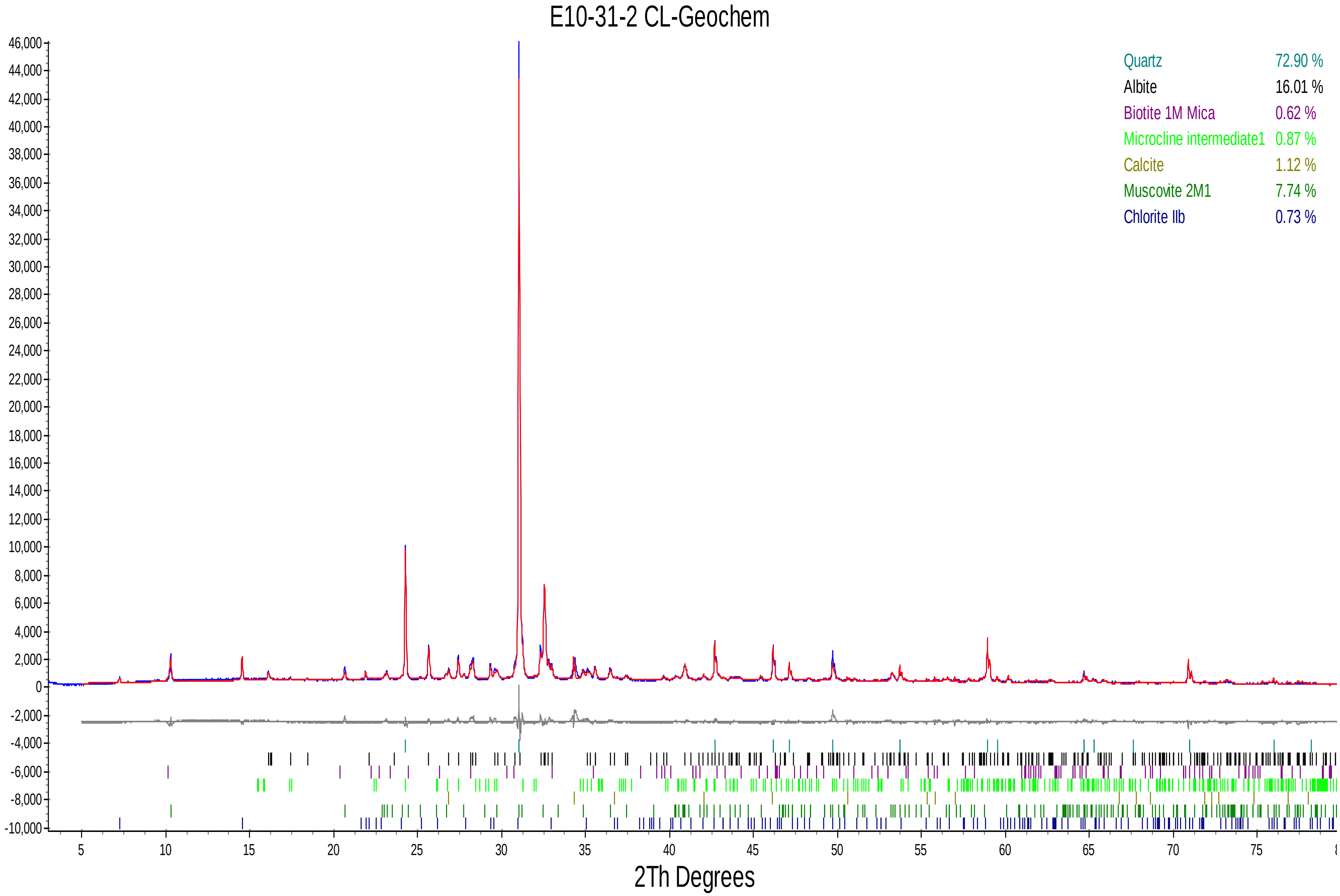


The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

E10-31-1 CL-Geochem

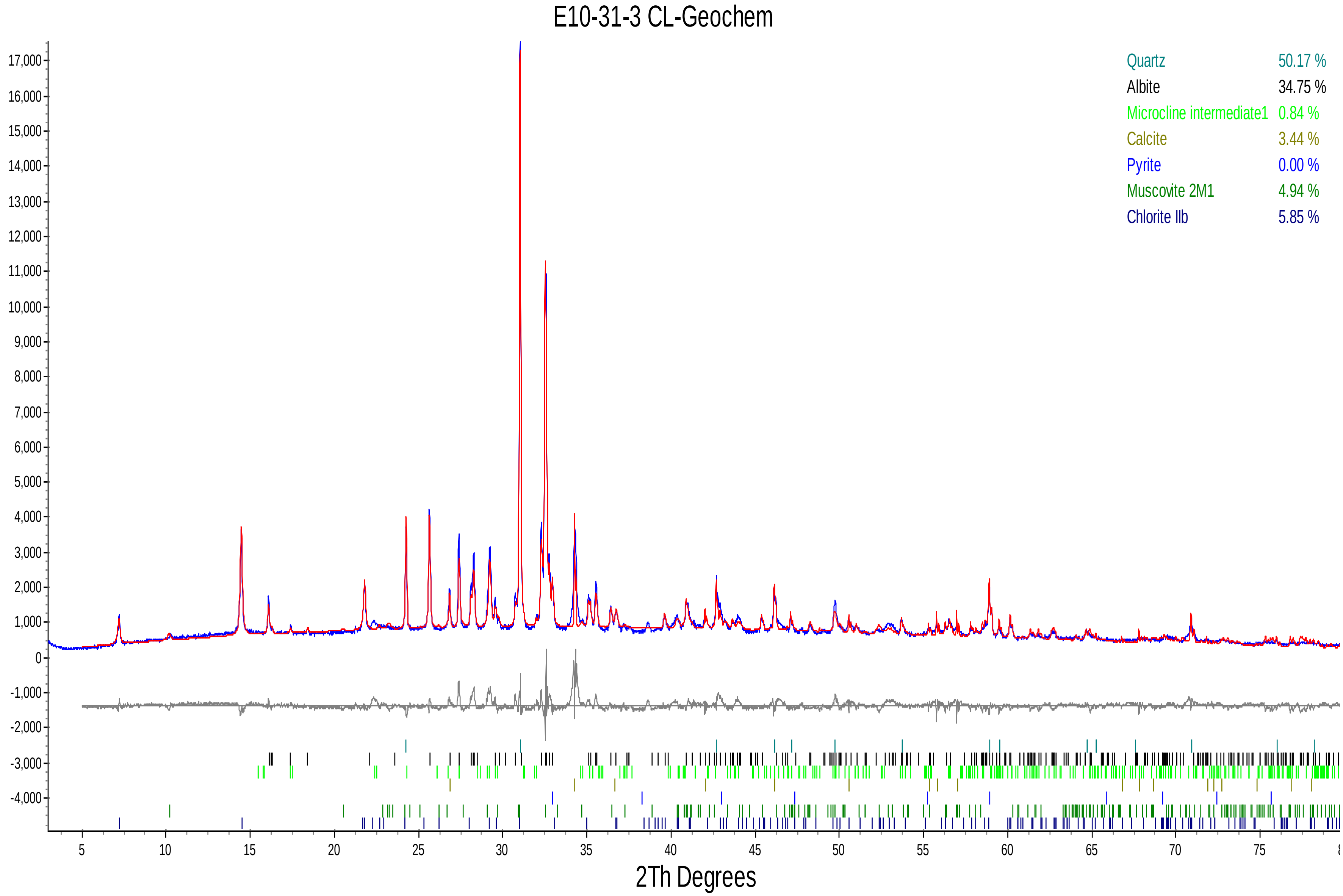


Environmental -Analytical
Custom XRD/MI4522-JUN12
07/26/2012



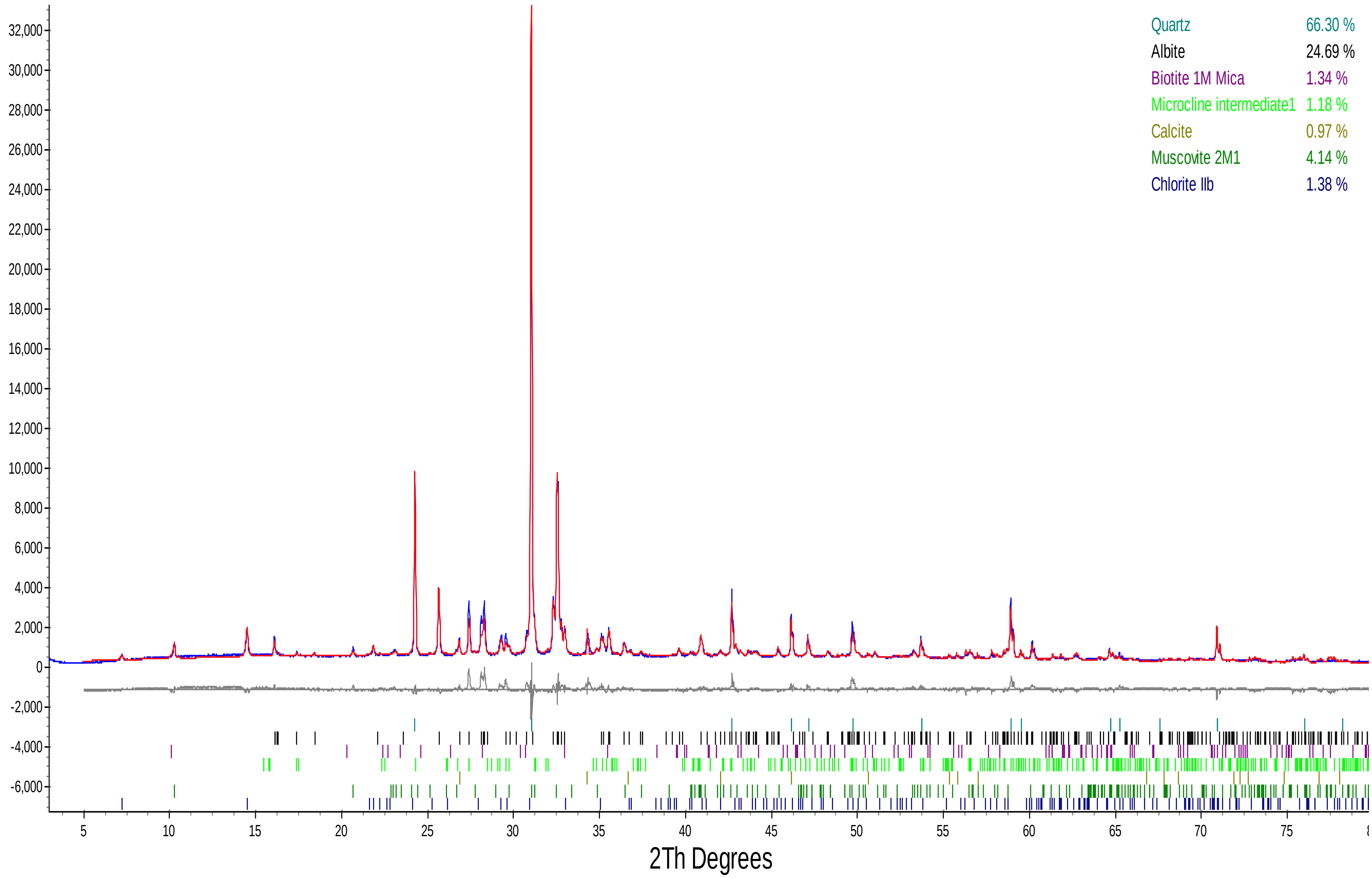
The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4522-JUN12
07/26/2012



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

E10-31-4 CL-Geochem



Environmental -Analytical
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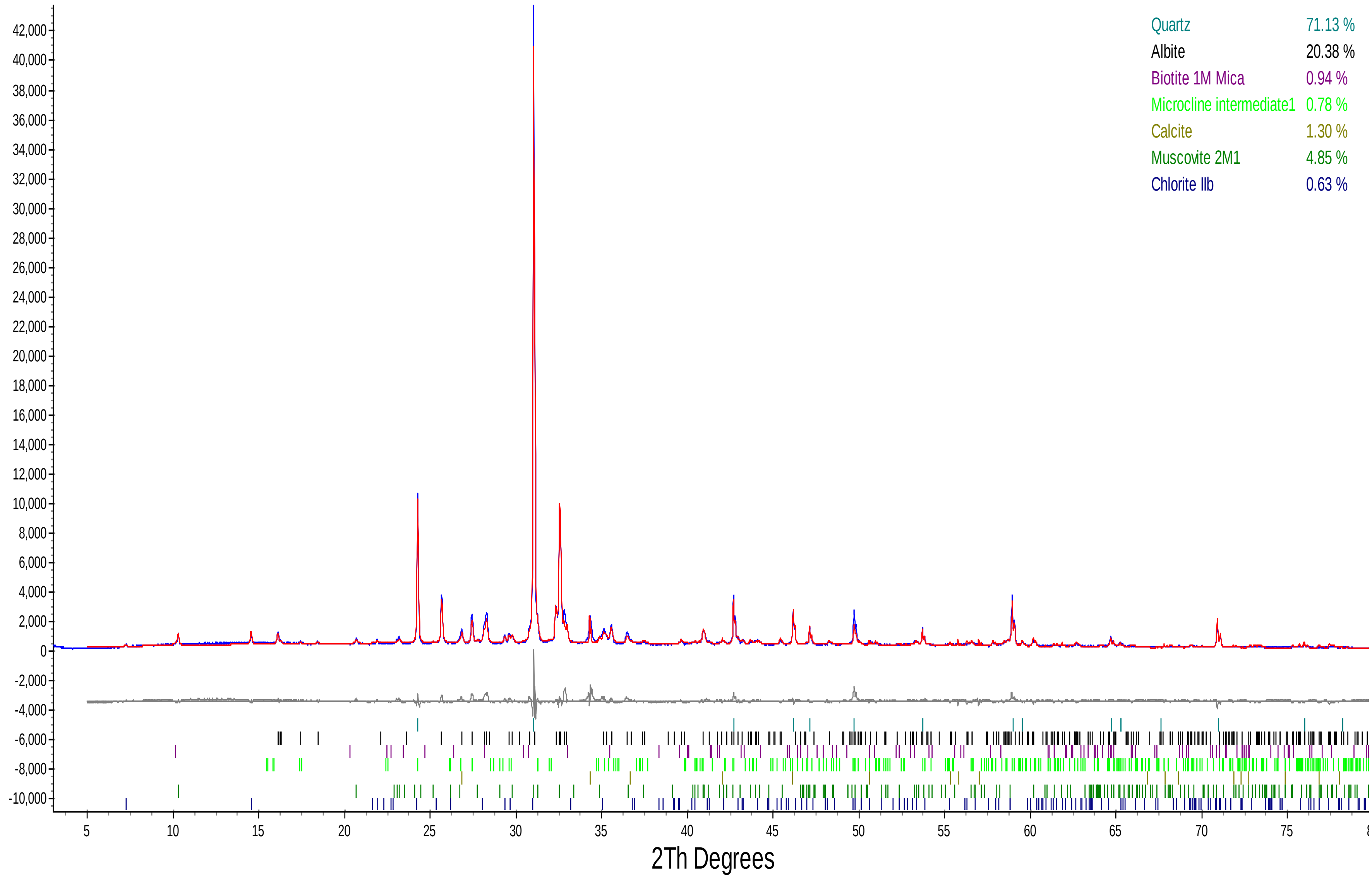
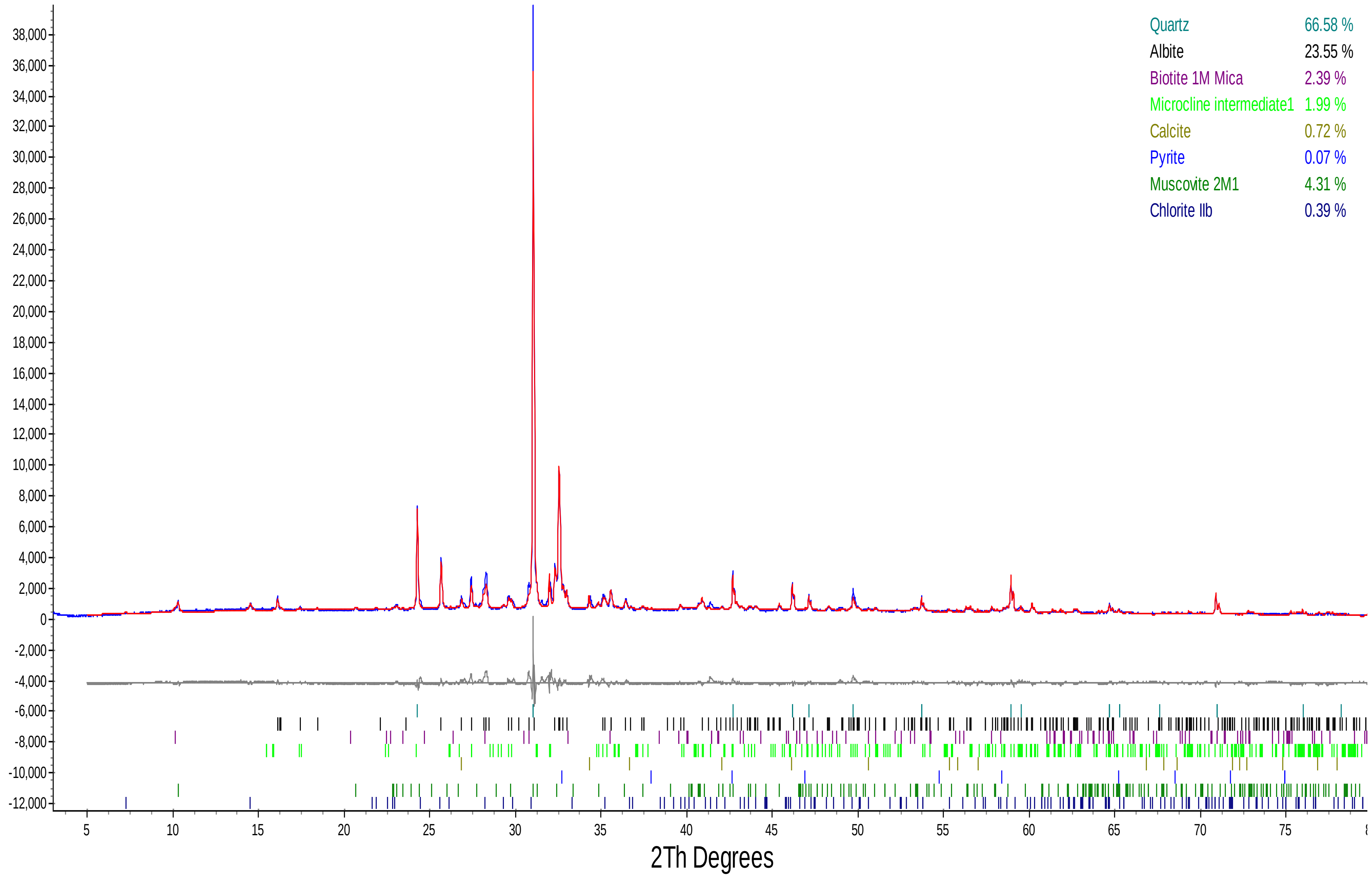
07/26/2012

E10-23-1 CL-Geochem

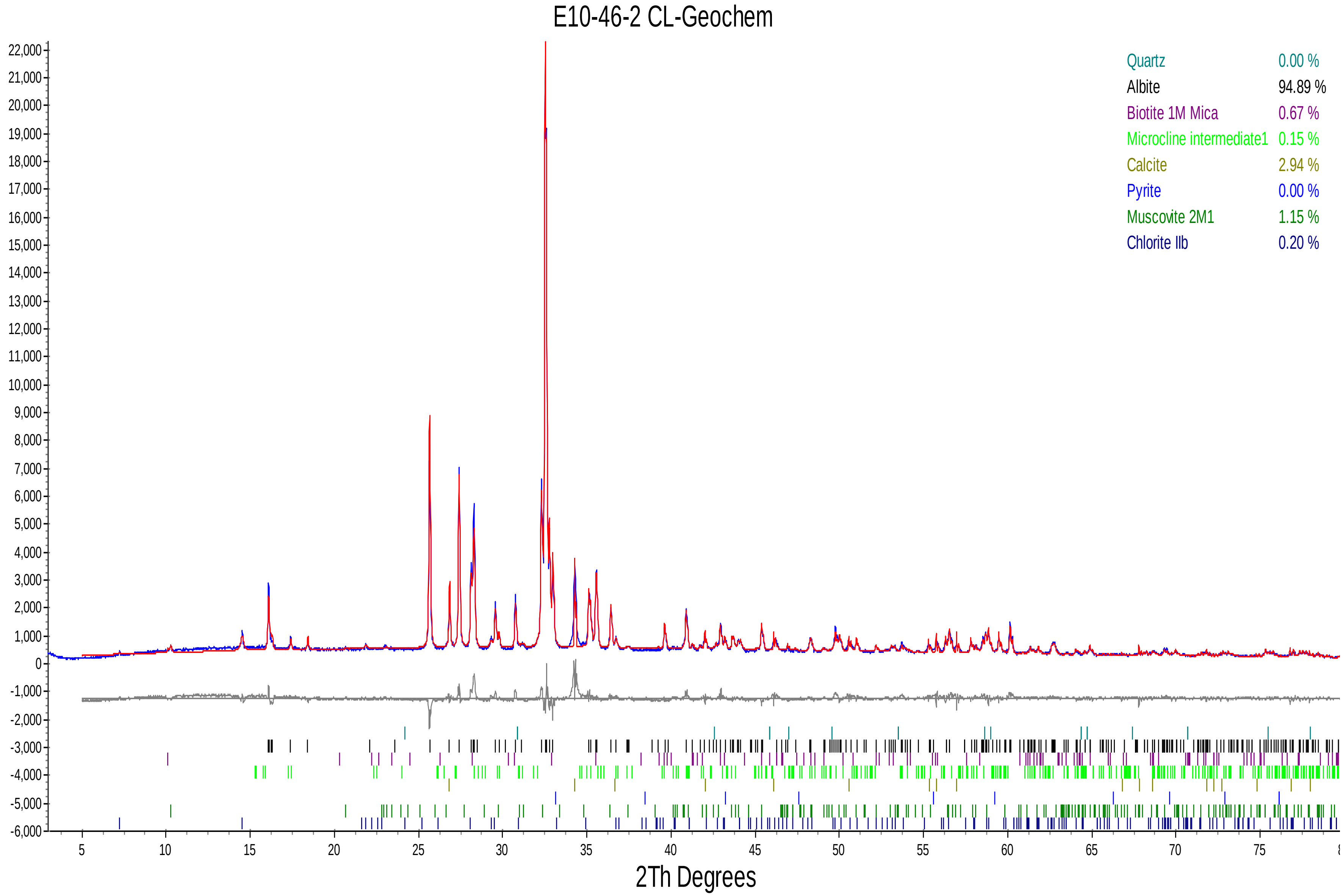


The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

E10-46-1 CL-Geochem

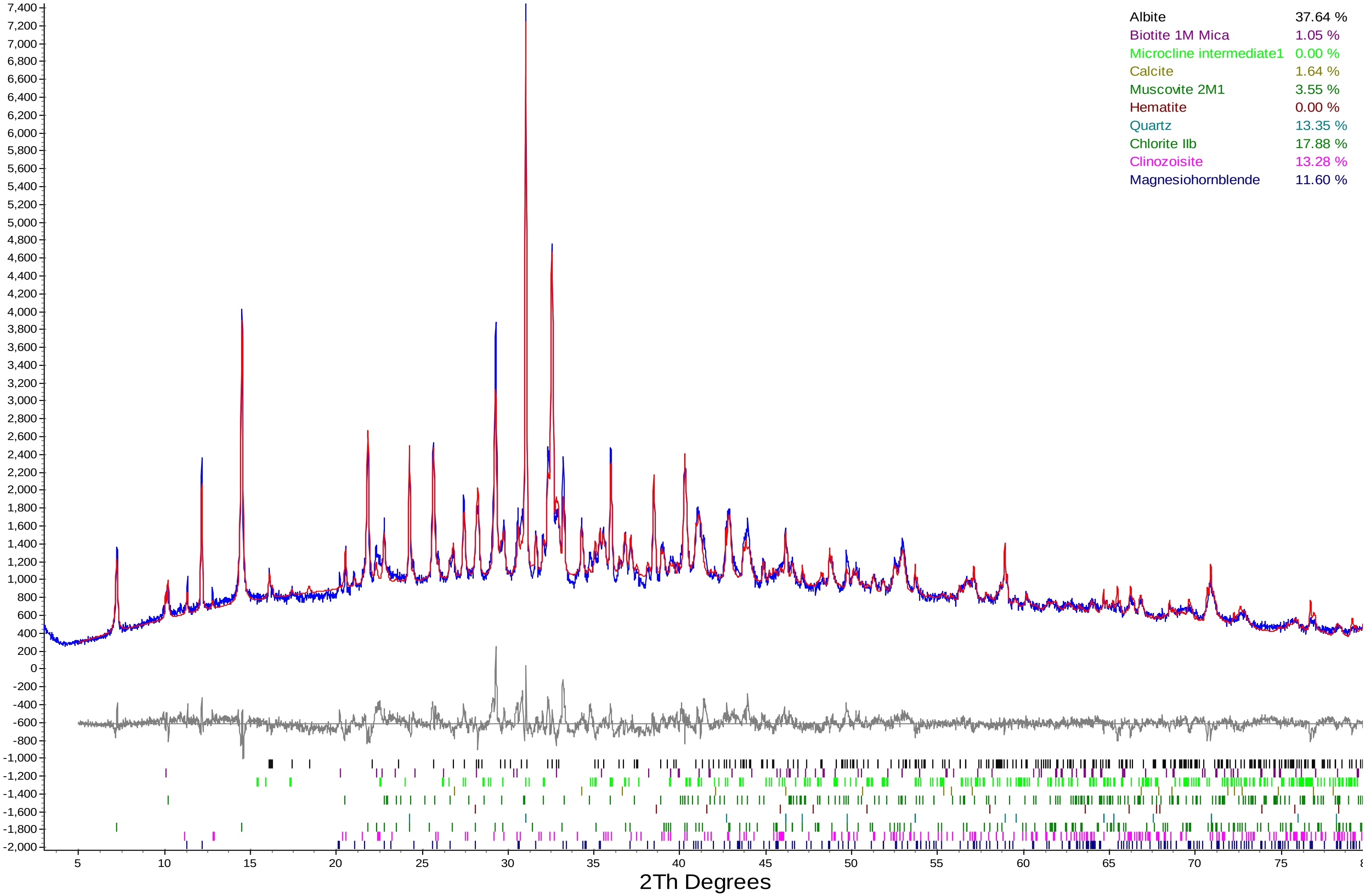


Environmental -Analytical
Custom XRD/MI4522-JUN12
07/26/2012



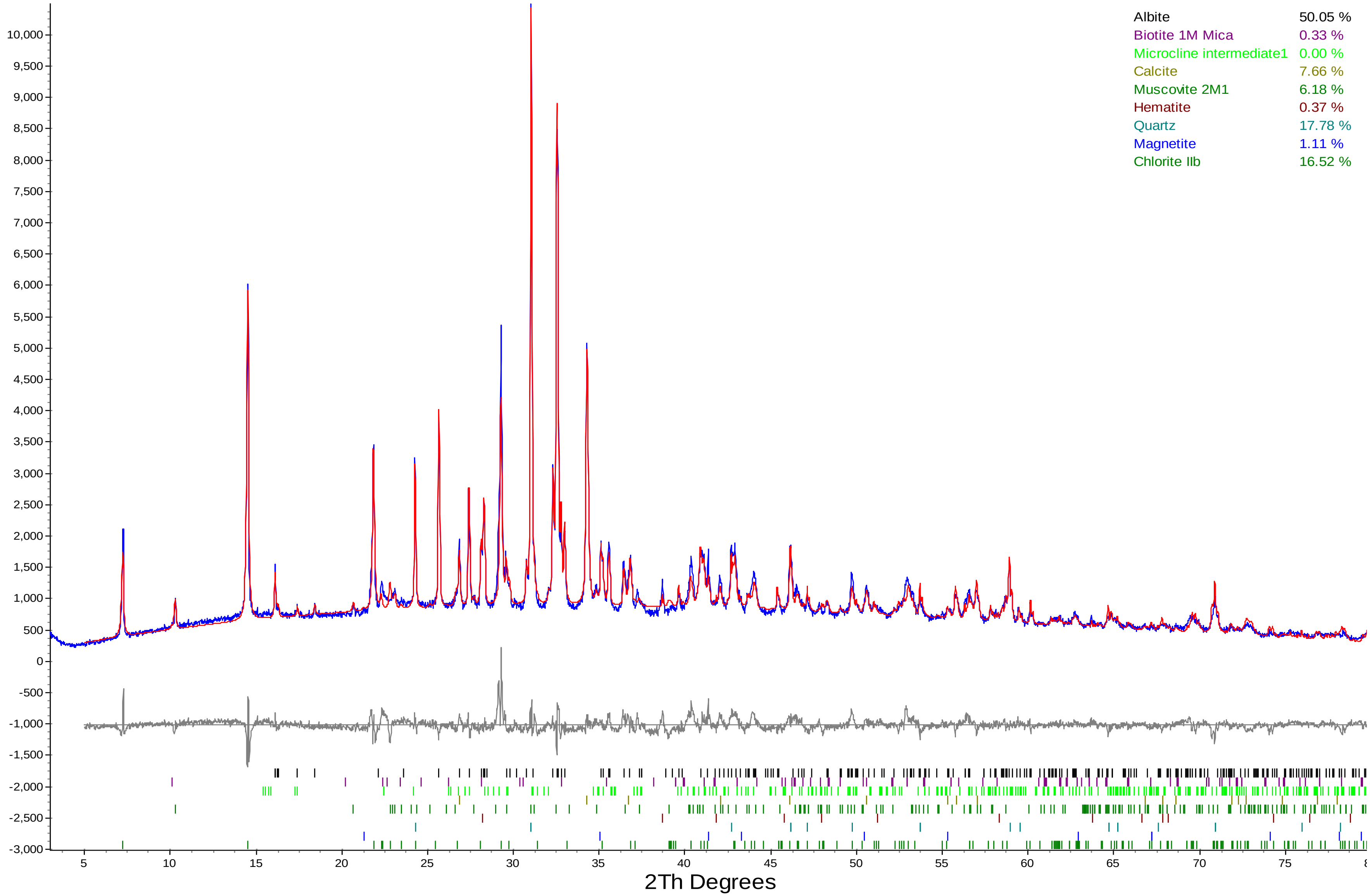
The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

E10-13-1 CL-Geochem



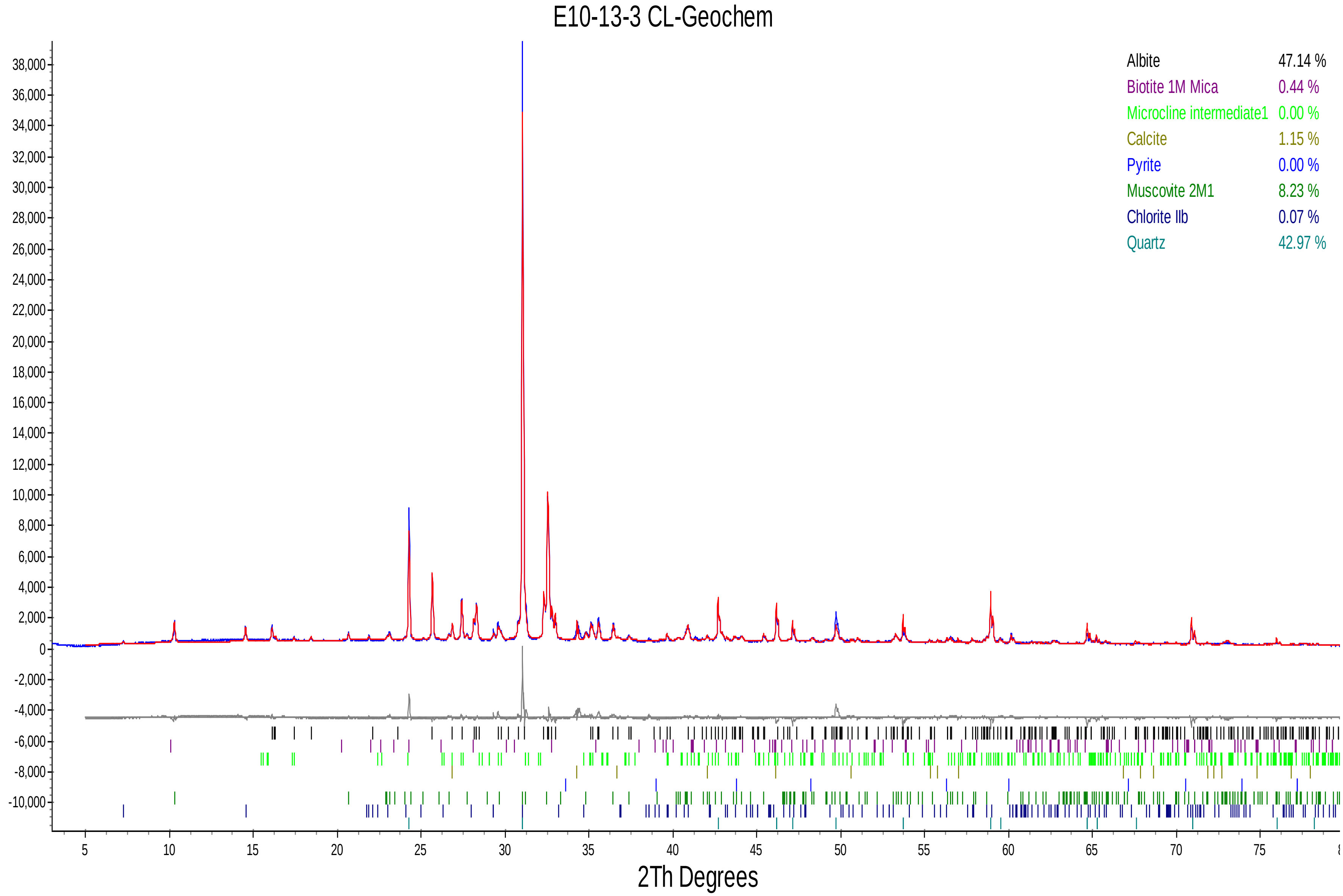
Environmental -Analytical
Custom XRD/MI4522-JUN12
07/26/2012

E10-13-2 CL-Geochem



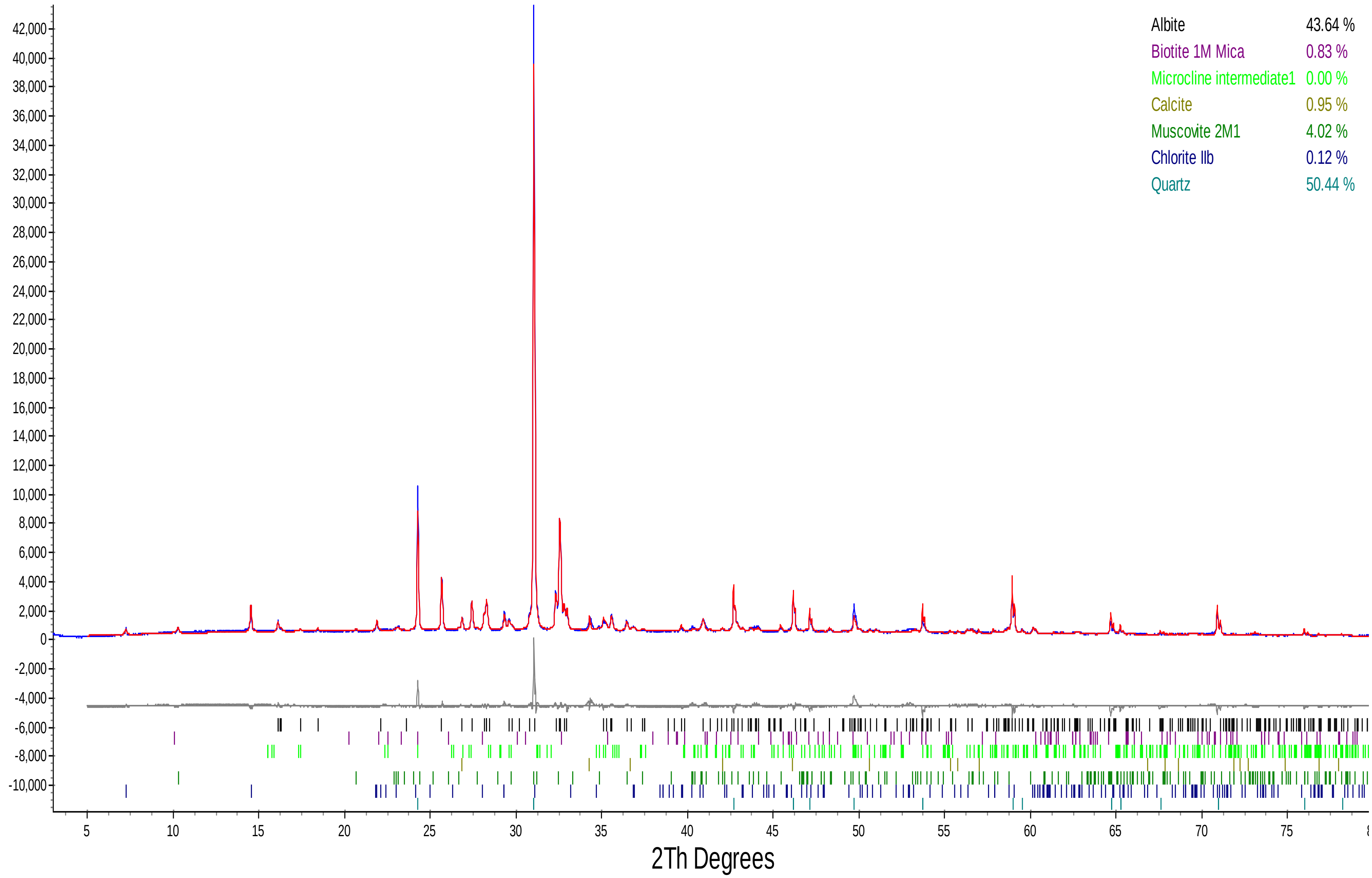
The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4522-JUN12
07/26/2012



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

E10-13-4 CL-Geochem



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0. Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

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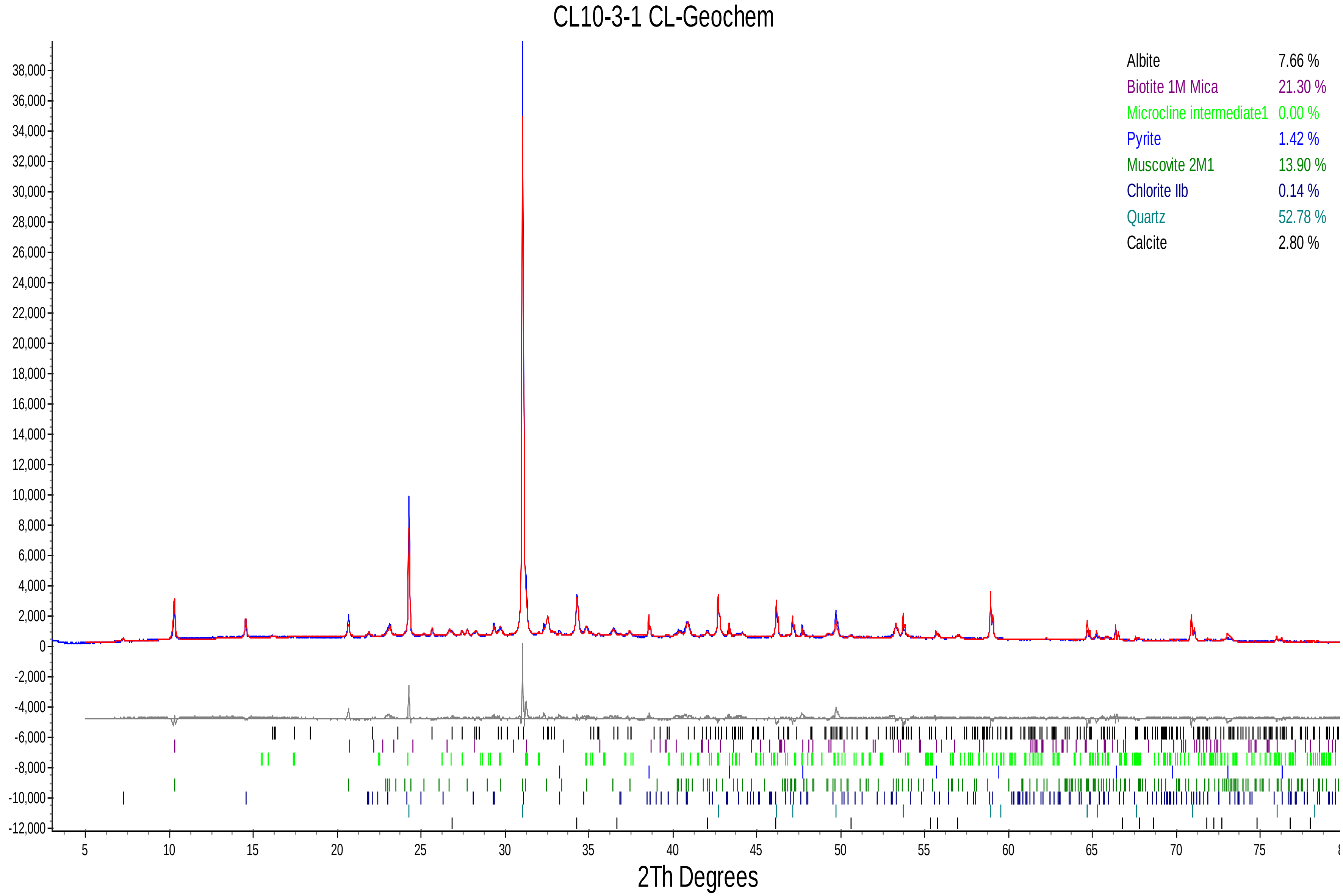

The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0. Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4522-JUN12
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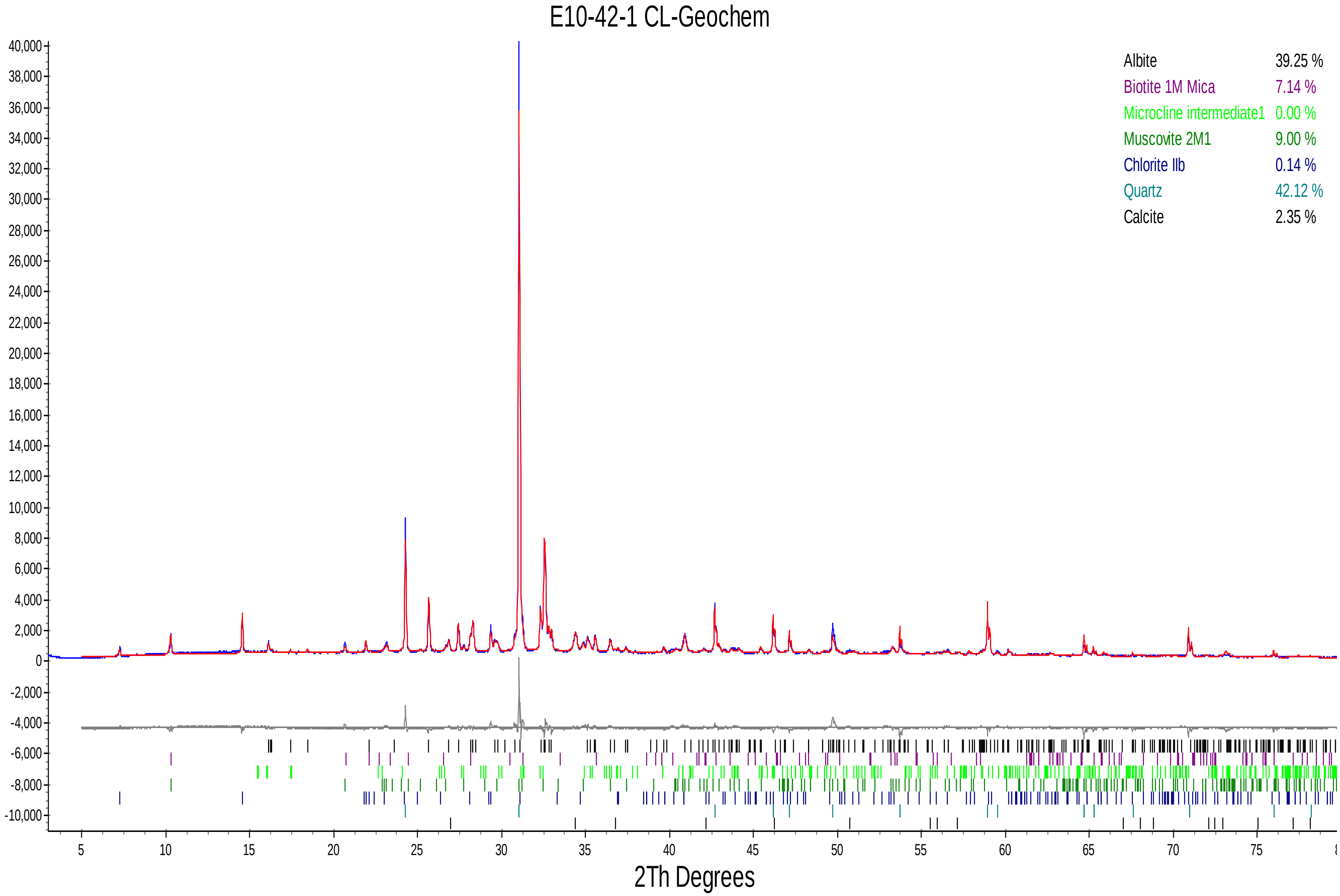

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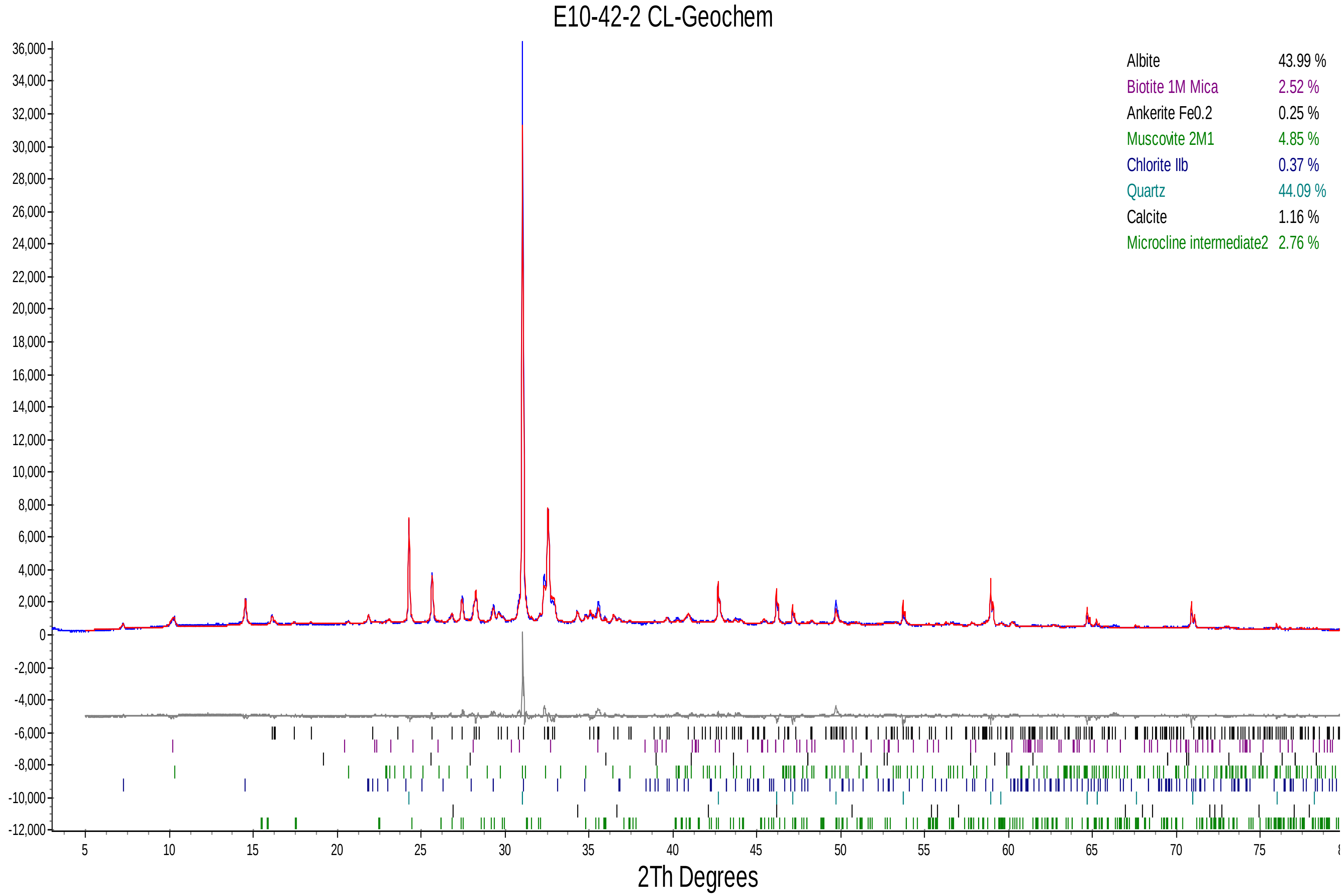
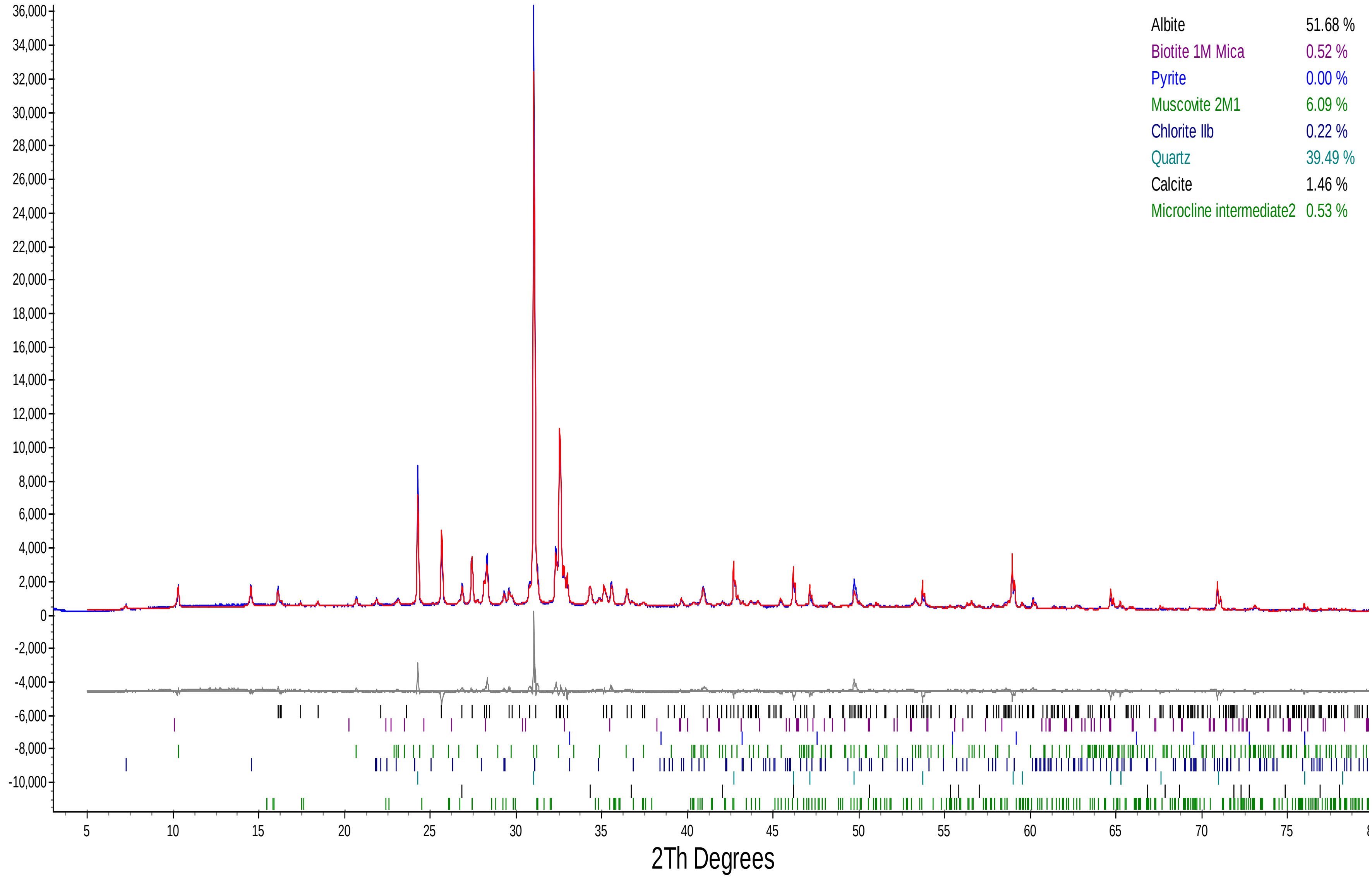

E10-42-2 CL-Geochem
Albite 43.99 %
Biotite 1M Mica 2.52 %
Ankerite Fe0.2 0.25 %
Muscovite 2M1 4.85 %
Chlorite IIb 0.37 %
Quartz 44.09 %
Calcite 1.16 %
Microcline intermediate2 2.76 %
36,000
34,000
32,000
30,000
28,000
26,000
24,000
22,000
20,000
18,000
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
-2,000
-4,000
-6,000
-8,000
-10,000
-12,000
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
2Th Degrees

Environmental -Analytical
Custom XRD/MI4522-JUN12
07/26/2012

E10-42-3 CL-Geochem



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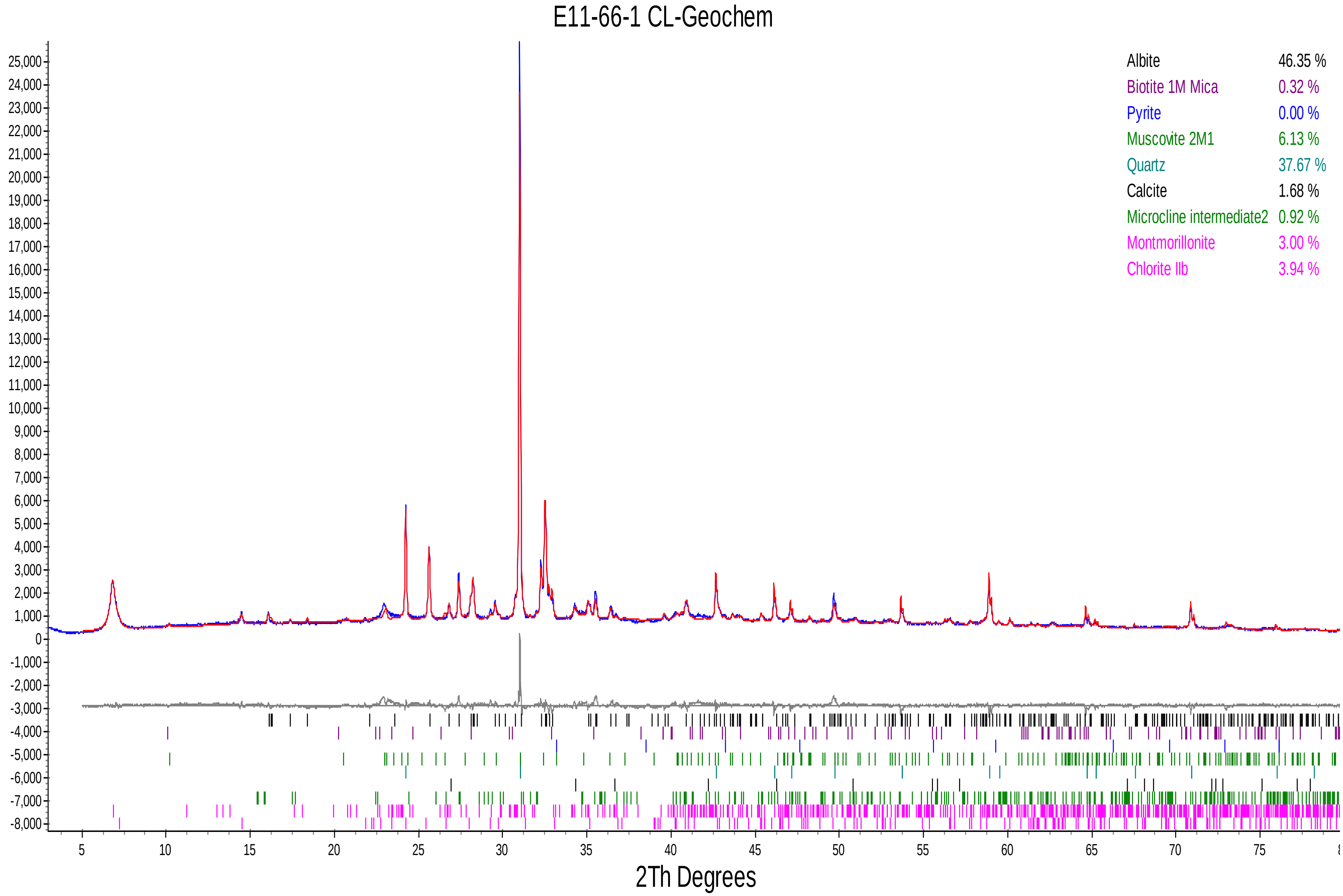

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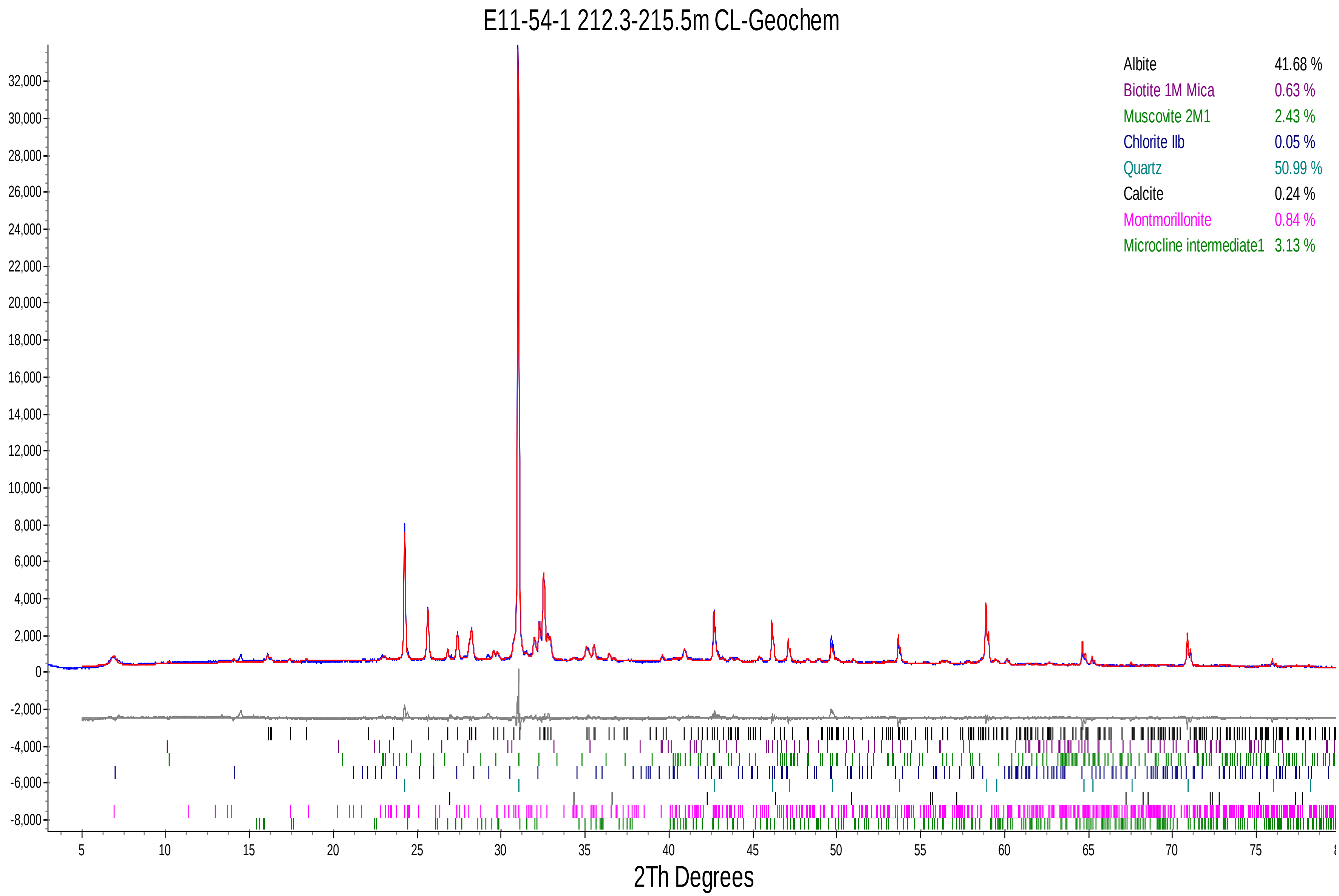

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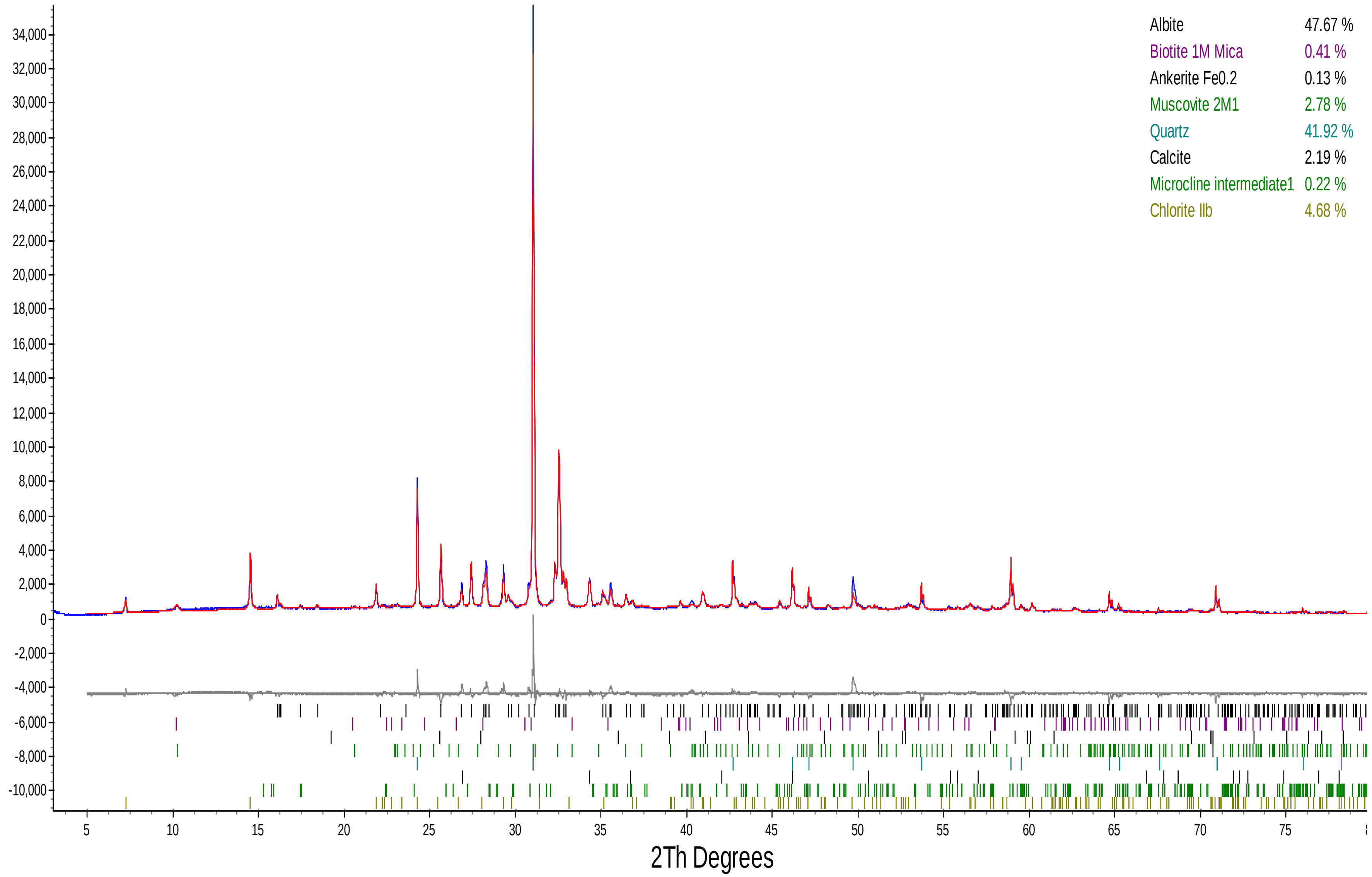
E11-51-1 CL-Geochem



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Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for:	*Environmental -Analytical*
Project Number/ LIMS No.	*Custom XRD/MI4501-DEC12*
Reporting Date:	*January 31, 2013*

Instrument:	BRUKER AXS D8 Advance Diffractometer
Test Conditions:	Co radiation, 40 kV, 35 mA Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°
Interpretations :	PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.
Detection Limit :	0.5-2%. Strongly dependent on crystallinity.

Contents:

Bernie C. Yeung, B. Sc.
Mineralogist

Huyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

Method Summary

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

SGS Minerals
a division of SGS Canada Inc.
P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0
Tel: (705) 652-2000 Fax: (705) 652-6365 www.sgs.com www.sgs.com/met
Member of the SGS Group (SGS SA)

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E10-036 ARD-1 DEC4501-01 (wt %)	E10-036 ARD-2 DEC4501-02 (wt %)	E10-036 ARD-3 DEC4501-03 (wt %)	E10-045 ARD-4 DEC4501-04 (wt %)	E11-066 ARD-5 DEC4501-05 (wt %)	E11-066 ARD-6 DEC4501-06 (wt %)	E11-082 ARD-7 DEC4501-07 (wt %)	E11-082 ARD-8 DEC4501-08 (wt %)	E11-082 ARD-9 DEC4501-09 (wt %)	E11-087 ARD-10 DEC4501-10 (wt %)
Quartz	40.3	32.8	34.4	40.2	37.7	27.3	40.6	24.2	27.6	41.1
Albite	50.6	58.0	30.4	55.8	58.7	57.1	46.5	53.9	56.3	42.5
Muscovite 2M1	4.8	5.0	9.2	1.9	1.9	1.6	9.5	2.3	9.9	12.5
Chlorite IIb	2.1	2.3	-	0.4	0.9	4.4	0.7	2.9	2.9	0.8
Calcite	2.2	1.9	2.8	1.8	0.8	4.0	2.3	1.7	1.9	3.2
Talc	-	-	0.6	-	-	-	0.4	-	-	-
Albite intermediate	-	-	22.6	-	-	-	-	-	-	-
Magnesiohornblende	-	-	-	-	-	4.5	-	6.6	-	-
Dolomite	-	-	-	-	-	1.1	-	-	1.0	-
Microcline maximum	-	-	-	-	-	-	-	1.5	-	-
Biotite 1M Mica	-	-	-	-	-	-	-	6.9	-	-
Ankerite Fe0.2	-	-	-	-	-	-	-	0.2	-	-
Rutile	-	-	-	-	-	-	-	-	0.4	-
Epidote	-	-	-	-	-	-	-	-	-	-
Microcline intermediate1	-	-	-	-	-	-	-	-	-	-
Diopside	-	-	-	-	-	-	-	-	-	-
Microcline intermediate2	-	-	-	-	-	-	-	-	-	-
Magnetite	-	-	-	-	-	-	-	-	-	-
Enstatite	-	-	-	-	-	-	-	-	-	-
Monticellite	-	-	-	-	-	-	-	-	-	-
Norbergite	-	-	-	-	-	-	-	-	-	-
Stilpnomelane	-	-	-	-	-	-	-	-	-	-
Pyrite	-	-	-	-	-	-	-	-	-	-
Nontronite	-	-	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E11-087 ARD-11 DEC4501-11 (wt %)	E12-217 ARD-12 DEC4501-12 (wt %)	E11-096 ARD-13 DEC4501-13 (wt %)	E11-096 ARD-14 DEC4501-14 (wt %)	E11-096 ARD-15 DEC4501-15 (wt %)	E11-098 ARD-16 DEC4501-16 (wt %)	E11-098 ARD-17 DEC4501-17 (wt %)	E11-098 ARD-18 DEC4501-18 (wt %)	E11-099 ARD-19 DEC4501-19 (wt %)	E11-099 ARD-20 DEC4501-20 (wt %)
Quartz	40.6	12.5	26.6	38.0	1.1	39.1	44.3	5.2	47.4	39.8
Albite	47.5	54.2	57.8	55.8	46.3	52.8	39.0	57.8	45.3	51.4
Muscovite 2M1	8.5	1.7	2.7	3.3	4.9	6.1	0.1	5.5	6.1	2.9
Chlorite IIb	1.8	10.6	8.2	0.8	7.0	0.7	4.4	7.3	0.4	2.8
Calcite	0.6	2.5	3.8	2.0	-	1.3	3.8	3.4	1.0	3.1
Talc	-	-	-	-	-	-	-	-	-	-
Albite intermediate	-	-	-	-	-	-	-	-	-	-
Magnesiohornblende	-	8.4	-	-	5.4	-	4.4	8.2	-	-
Dolomite	0.9	-	0.9	-	-	-	-	-	-	-
Microcline maximum	-	-	-	-	-	-	-	-	-	-
Biotite 1M Mica	-	-	-	-	-	-	4.0	-	-	-
Ankerite Fe0.2	-	-	-	-	-	-	-	-	-	-
Rutile	-	-	-	-	-	-	-	-	-	-
Epidote	-	9.5	-	-	-	-	-	9.4	-	-
Microcline intermediate1	-	0.6	-	-	-	-	-	3.2	-	-
Diopside	-	-	-	-	18.0	-	-	-	-	-
Microcline intermediate2	-	-	-	-	5.8	-	-	-	-	-
Magnetite	-	-	-	-	1.8	-	-	-	-	-
Enstatite	-	-	-	-	4.2	-	-	-	-	-
Monticellite	-	-	-	-	2.7	-	-	-	-	-
Norbergite	-	-	-	-	1.6	-	-	-	-	-
Stilpnomelane	-	-	-	-	1.2	-	-	-	-	-
Pyrite	-	-	-	-	-	-	-	-	-	-
Nontronite	-	-	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E11-114 ARD-21 DEC4501-21 (wt %)	E11-114 ARD-22 DEC4501-22 (wt %)	E10-038 ARD-23 DEC4501-23 (wt %)	E11-062 ARD-24 DEC4501-24 (wt %)	E10-30 ARD-25 DEC4501-25 (wt %)	E10-028 ARD-26 DEC4501-26 (wt %)	E11-049 ARD-27 DEC4501-27 (wt %)	E11-049 ARD-28 DEC4501-28 (wt %)	E11-061 ARD-29 DEC4501-29 (wt %)	E12-206 ARD-30 DEC4501-30 (wt %)
Quartz	38.2	25.7	46.1	34.0	42.5	41.4	37.4	66.1	40.4	11.2
Albite	55.0	54.2	45.4	60.0	48.6	53.8	58.3	-	44.6	51.3
Muscovite 2M1	3.2	2.6	6.9	2.3	6.1	2.3	1.3	29.0	8.2	6.6
Chlorite IIb	1.0	8.4	0.7	1.0	1.4	0.7	2.2	1.3	-	15.0
Calcite	1.1	5.1	0.9	2.7	1.4	1.1	0.6	3.4	-	4.6
Talc	-	-	-	-	-	-	-	-	-	-
Albite intermediate	-	-	-	-	-	-	-	-	-	-
Magnesiohornblende	-	1.4	-	-	-	-	-	-	-	-
Dolomite	1.6	0.0	-	-	-	0.8	0.2	-	-	-
Microcline maximum	-	-	-	-	-	-	-	-	-	-
Biotite 1M Mica	-	2.5	-	-	-	-	-	-	-	-
Ankerite Fe0.2	-	-	-	-	-	-	-	-	-	-
Rutile	-	-	-	-	-	-	-	-	-	-
Epidote	-	-	-	-	-	-	-	-	-	9.3
Microcline intermediate1	-	-	-	-	-	-	-	-	-	1.9
Diopside	-	-	-	-	-	-	-	-	-	-
Microcline intermediate2	-	-	-	-	-	-	-	-	-	-
Magnetite	-	-	-	-	-	-	-	-	-	-
Enstatite	-	-	-	-	-	-	-	-	-	-
Monticellite	-	-	-	-	-	-	-	-	-	-
Norbergite	-	-	-	-	-	-	-	-	-	-
Stilpnomelane	-	-	-	-	-	-	-	-	-	-
Pyrite	-	-	-	-	-	-	-	0.2	-	-
Nontronite	-	-	-	-	-	-	-	-	6.8	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E12-179 ARD-31 DEC4501-31 (wt %)	E11-048 ARD-32 DEC4501-32 (wt %)	E11-048 ARD-33 DEC4501-33 (wt %)	E11-075 ARD-34 DEC4501-34 (wt %)	E11-075 ARD-35 DEC4501-35 (wt %)	E11-071 ARD-36 DEC4501-36 (wt %)	E11-071 ARD-37 DEC4501-37 (wt %)	E11-078 ARD-38 DEC4501-38 (wt %)	E11-179 ARD-39 DEC4501-39 (wt %)	E11-120 ARD-40 DEC4501-40 (wt %)
Quartz	42.0	39.7	64.3	27.6	5.1	43.2	12.3	47.0	65.9	40.0
Albite	49.1	52.9	24.6	65.7	32.7	41.2	54.3	48.5	29.2	49.5
Muscovite 2M1	5.8	5.6	-	2.9	8.3	5.6	1.0	2.0	-	7.1
Chlorite IIb	1.9	0.8	1.6	1.5	9.2	6.4	8.5	2.3	-	2.0
Calcite	1.2	1.1	9.6	2.1	5.7	3.6	1.4	0.3	-	1.4
Talc	-	-	-	-	-	-	-	-	-	-
Albite intermediate	-	-	-	-	-	-	-	-	-	-
Magnesiohornblende	-	-	-	-	4.5	-	10.5	-	-	-
Dolomite	-	-	-	0.1	-	-	-	-	-	-
Microcline maximum	-	-	-	-	-	-	-	-	-	-
Biotite 1M Mica	-	-	-	-	-	-	-	-	-	-
Ankerite Fe0.2	-	-	-	-	-	-	-	-	-	-
Rutile	-	-	-	-	-	-	-	-	-	-
Epidote	-	-	-	-	-	-	11.1	-	-	-
Microcline intermediate1	-	-	-	-	-	-	0.3	-	-	-
Diopside	-	-	-	-	12.7	-	-	-	-	-
Microcline intermediate2	-	-	-	-	6.6	-	-	-	-	-
Magnetite	-	-	-	-	3.3	-	0.7	-	-	-
Enstatite	-	-	-	-	6.2	-	-	-	-	-
Monticellite	-	-	-	-	3.0	-	-	-	-	-
Norbergite	-	-	-	-	2.3	-	-	-	-	-
Stilpnomelane	-	-	-	-	0.4	-	-	-	-	-
Pyrite	-	-	-	-	-	-	-	-	-	-
Nontronite	-	-	-	-	-	-	-	-	4.9	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E11-120 ARD-41 DEC4501-41 (wt %)	E11-120 ARD-42 DEC4501-42 (wt %)	E11-122 ARD-43 DEC4501-43 (wt %)	E11-122 ARD-44 DEC4501-44 (wt %)	E11-140 ARD-45 DEC4501-45 (wt %)	E11-145 ARD-46 DEC4501-46 (wt %)	E12-198 ARD-47 DEC4501-47 (wt %)	E11-129 ARD-48 DEC4501-48 (wt %)	E11-140 ARD-49 DEC4501-49 (wt %)	E11-144 ARD-50 DEC4501-50 (wt %)
Quartz	26.6	37.7	40.2	42.4	35.6	38.9	7.5	46.8	35.6	4.4
Albite	62.6	10.0	51.5	37.8	57.3	50.1	27.0	42.4	54.4	45.5
Muscovite 2M1	2.2	9.4	6.5	12.7	4.7	2.8	-	7.2	6.5	4.2
Chlorite IIb	5.8	22.4	0.7	3.6	1.4	1.7	15.1	1.7	2.1	7.3
Calcite	2.7	20.5	1.1	3.4	0.9	1.2	2.1	2.0	1.5	1.0
Talc	-	-	-	-	-	-	-	-	-	-
Albite intermediate	-	-	-	-	-	-	-	-	-	-
Magnesiohornblende	-	-	-	-	-	-	30.8	-	-	6.2
Dolomite	-	0.1	-	0.2	-	0.1	0.0	-	-	-
Microcline maximum	-	-	-	-	-	1.3	-	-	-	-
Biotite 1M Mica	-	-	-	-	-	3.8	-	-	-	-
Ankerite Fe0.2	-	-	-	-	-	-	-	-	-	-
Rutile	-	-	-	-	-	-	-	-	-	-
Epidote	-	-	-	-	-	-	11.4	-	-	-
Microcline intermediate1	-	-	-	-	-	-	6.1	-	-	-
Diopside	-	-	-	-	-	-	-	-	-	11.5
Microcline intermediate2	-	-	-	-	-	-	-	-	-	6.4
Magnetite	-	-	-	-	-	-	-	-	-	3.3
Enstatite	-	-	-	-	-	-	-	-	-	5.7
Monticellite	-	-	-	-	-	-	-	-	-	2.2
Norbergite	-	-	-	-	-	-	-	-	-	1.1
Stilpnomelane	-	-	-	-	-	-	-	-	-	1.3
Pyrite	-	-	-	-	-	-	-	-	-	-
Nontronite	-	-	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	E11-141 ARD-51 DEC4501-51 (wt %)	E11-145 ARD-52 DEC4501-52 (wt %)	E12-200 ARD-53 DEC4501-53 (wt %)	E12-205 ARD-54 DEC4501-54 (wt %)	E12-294 ARD-55 DEC4501-55 (wt %)	E12-205 ARD-56 DEC4501-56 (wt %)	CL10-01 ARD-57 DEC4501-57 (wt %)	CL10-01 ARD-58 DEC4501-58 (wt %)	CL10-02A ARD-59 DEC4501-59 (wt %)	E12-213 ARD-60 DEC4501-60 (wt %)
Quartz	26.2	28.5	32.8	32.3	31.8	38.0	24.8	16.2	39.7	34.1
Albite	45.2	34.5	28.0	57.0	24.5	56.5	28.6	53.3	46.5	53.4
Muscovite 2M1	-	3.3	-	1.3	-	3.0	-	0.1	10.2	2.8
Chlorite IIb	9.4	2.0	27.0	2.2	41.2	1.2	23.8	6.2	1.0	1.4
Calcite	7.5	1.1	10.4	1.0	0.0	1.2	0.0	0.0	1.6	0.7
Talc	-	-	-	-	-	-	-	-	-	-
Albite intermediate	-	26.7	-	-	-	-	-	-	-	-
Magnesiohornblende	4.1	-	-	3.4	-	-	9.5	16.3	-	-
Dolomite	-	0.1	-	0.1	-	-	-	-	-	0.0
Microcline maximum	-	1.1	-	-	-	-	-	-	0.9	7.6
Biotite 1M Mica	-	2.7	-	1.3	-	-	-	-	-	-
Ankerite Fe0.2	-	-	-	-	-	-	-	-	-	-
Rutile	-	-	-	0.0	-	-	-	-	-	-
Epidote	7.0	-	-	-	-	-	11.3	6.4	-	-
Microcline intermediate1	0.6	-	1.8	0.5	2.5	-	2.1	1.5	-	-
Diopside	-	-	-	-	-	-	-	-	-	-
Microcline intermediate2	-	-	-	-	-	-	-	-	-	-
Magnetite	-	-	-	0.8	-	-	-	-	-	-
Enstatite	-	-	-	-	-	-	-	-	-	-
Monticellite	-	-	-	-	-	-	-	-	-	-
Norbergite	-	-	-	-	-	-	-	-	-	-
Stilpnomelane	-	-	-	-	-	-	-	-	-	-
Pyrite	-	-	-	-	-	-	-	-	-	-
Nontronite	-	-	-	-	-	-	-	-	-	-
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identifed by the analyst and not included in the refinement calculation for the sample.

Mineral/Compound	Formula
Albite	$NaAlSi_3O_8$
Amphibole	$(Na,K)Ca_2(Fe,Mg)_5(Al,Si)_8O_{22}(OH)_2$
Ankerite	$CaFe(CO_3)_2$
Biotite	$K(Mg,Fe)_3(AlSi_3O_{10})(OH)_2$
Calcite	$CaCO_3$
Chlorite	$(Fe,(Mg,Mn)_5,Al)(Si_3Al)O_{10}(OH)_8$
Diopside	$CaMgSi_2O_6$
Dolomite	$CaMg(CO_3)_2$
Enstatite	$MgSiO_3$
Epidote	$Ca_2(Al,Fe)Al_2O(SiO_4)(Si_2O_7)(OH)$
Magnetite	Fe_3O_4
Microcline	$KAlSi_3O_8$
Monticellite	$CaMgSiO_4$
Muscovite	$KAl_2(AlSi_3O_{10})(OH)_2$
Nontronite	$Fe_2(Al,Si)_4O_{10}(OH)_2Na_{0.3}(H_2O)_4$
Norbergite	$Mg_3(SiO_4)(F,OH)_2$
Pyrite	FeS_2
Quartz	SiO_2
Rutile	TiO_2
Stilpnomelane	$K_5(Fe,Mn)_{48}(Si_{63}Al_9)O_{168}(OH)_{48}\cdot 12H_2O$
Talc	$Mg_3Si_4O_{10}(OH)_2$

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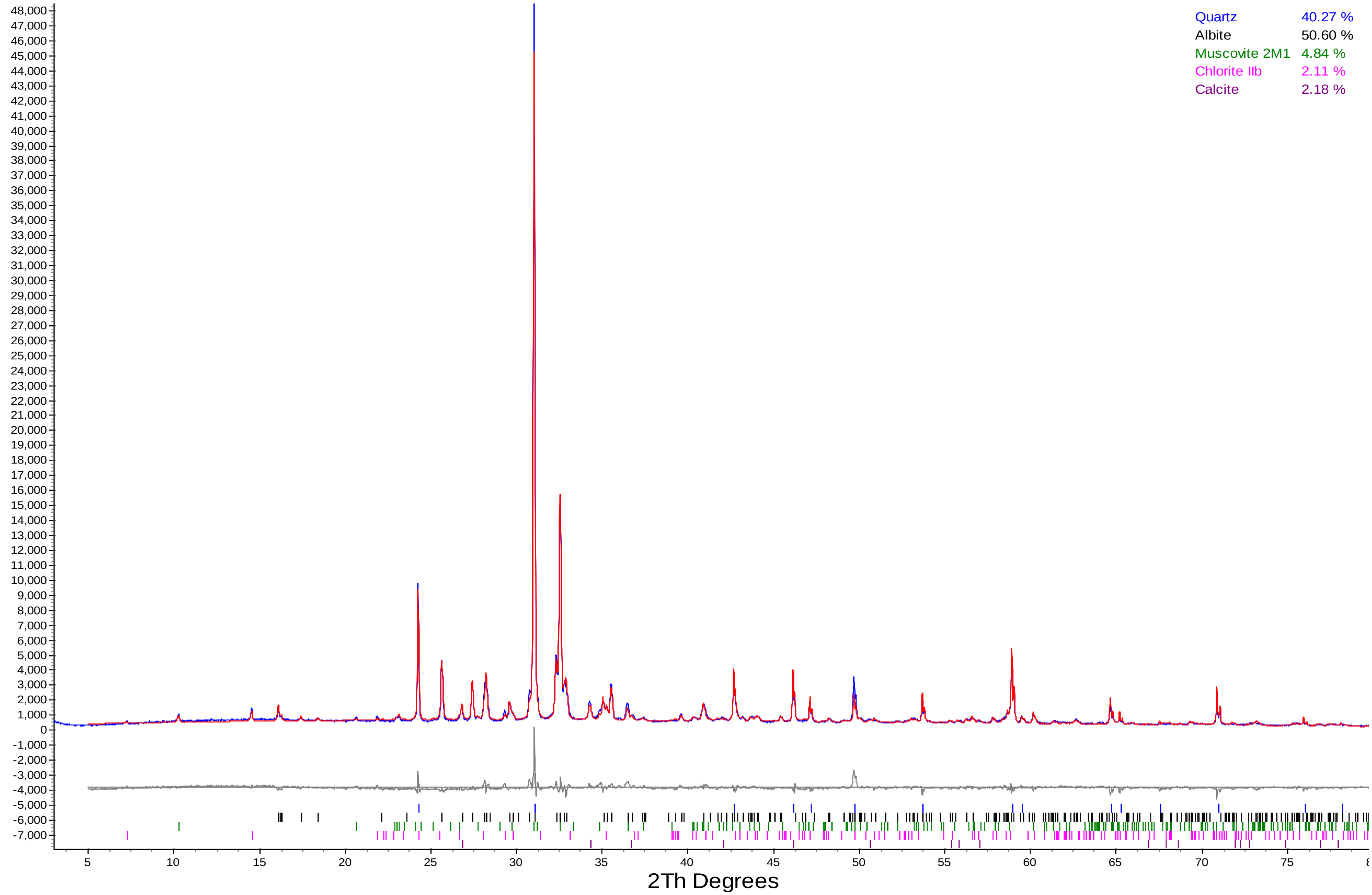

The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

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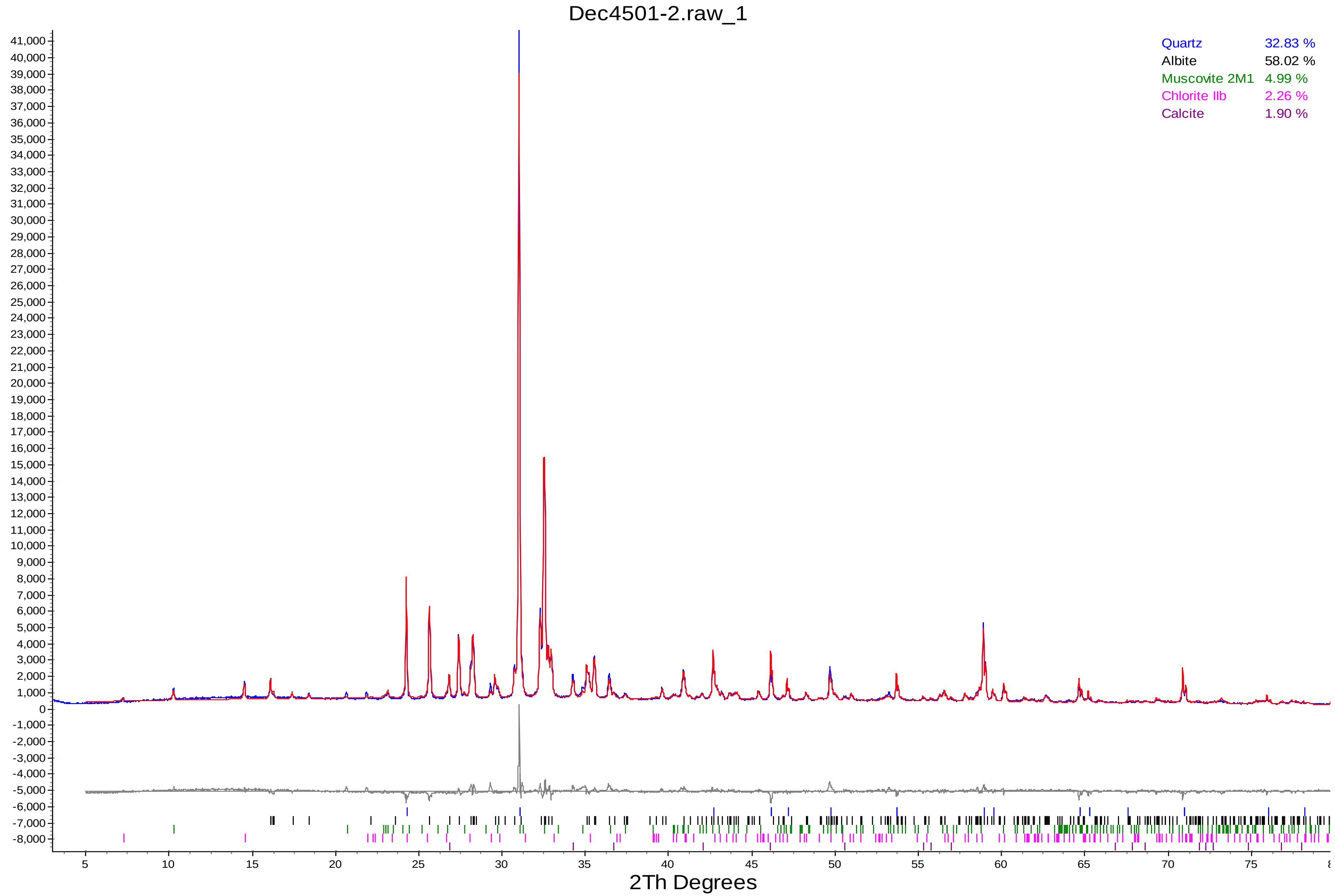

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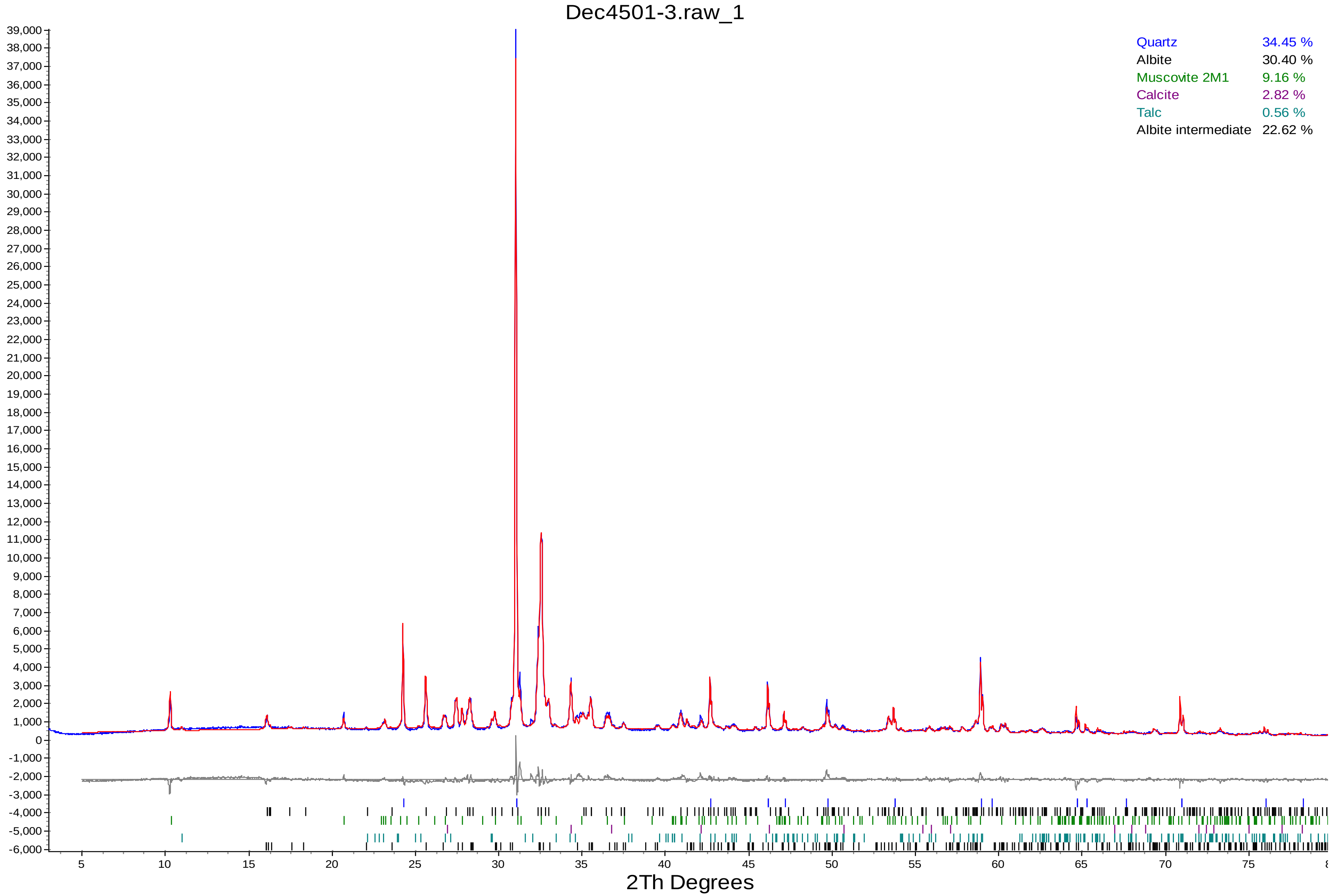

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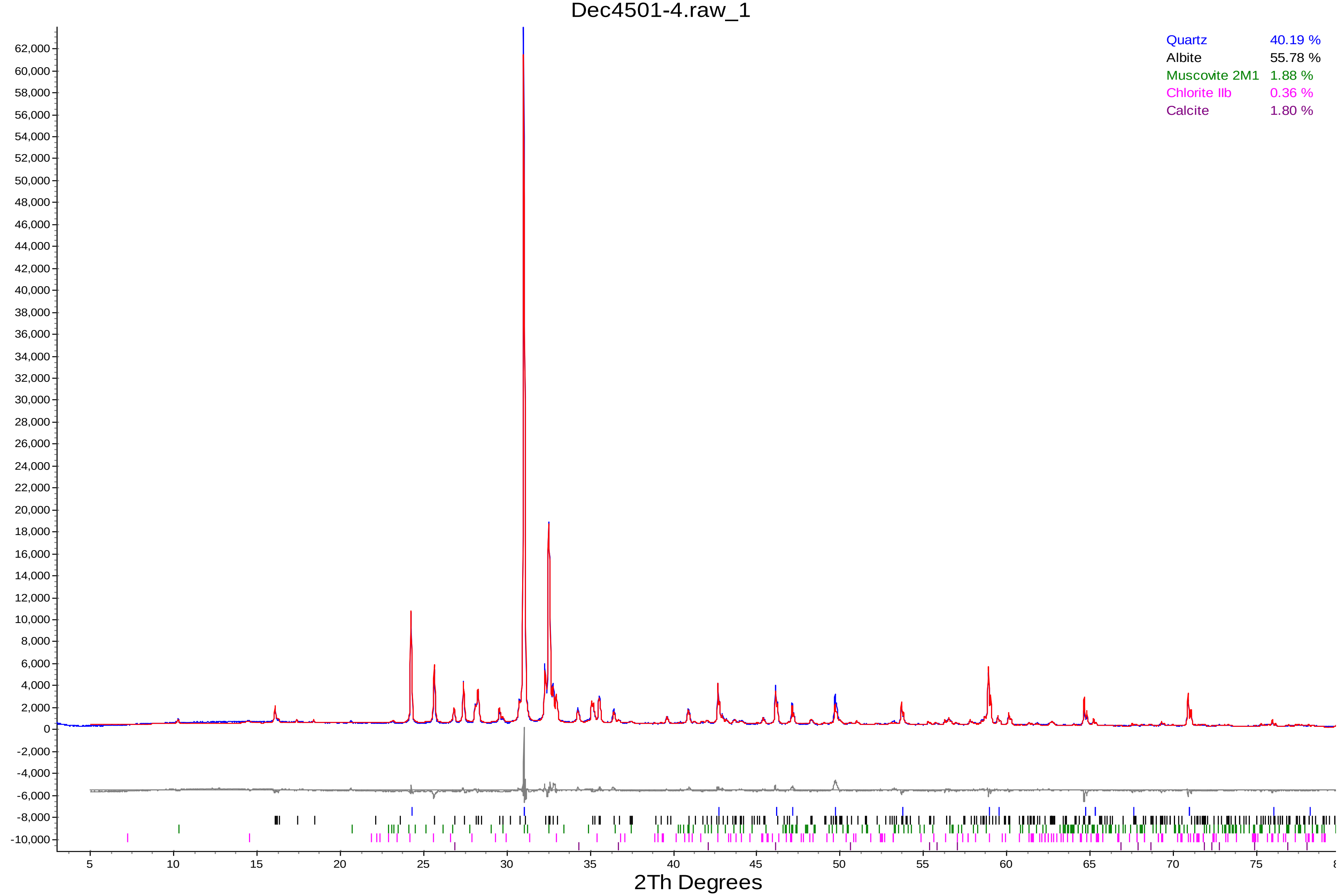

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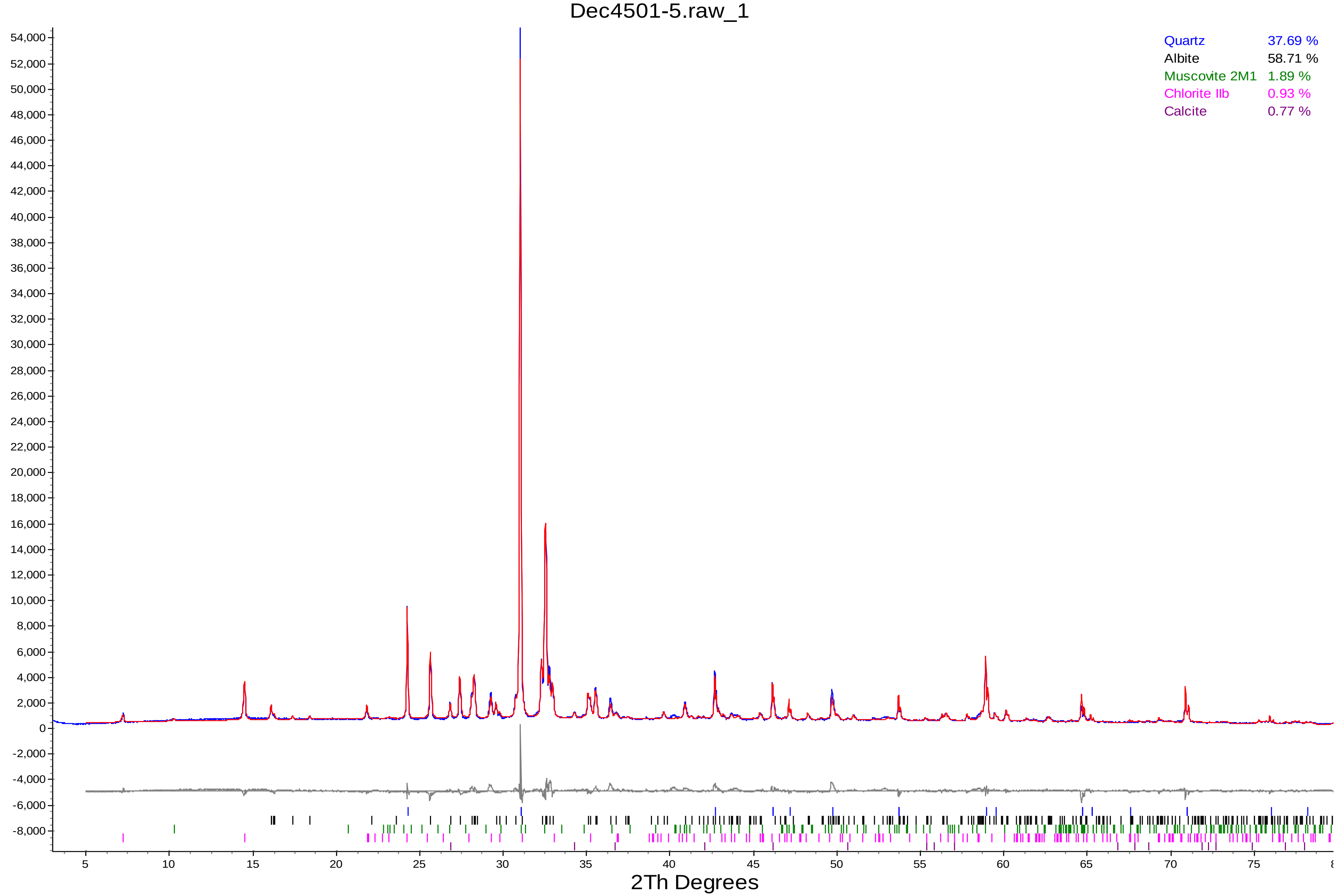

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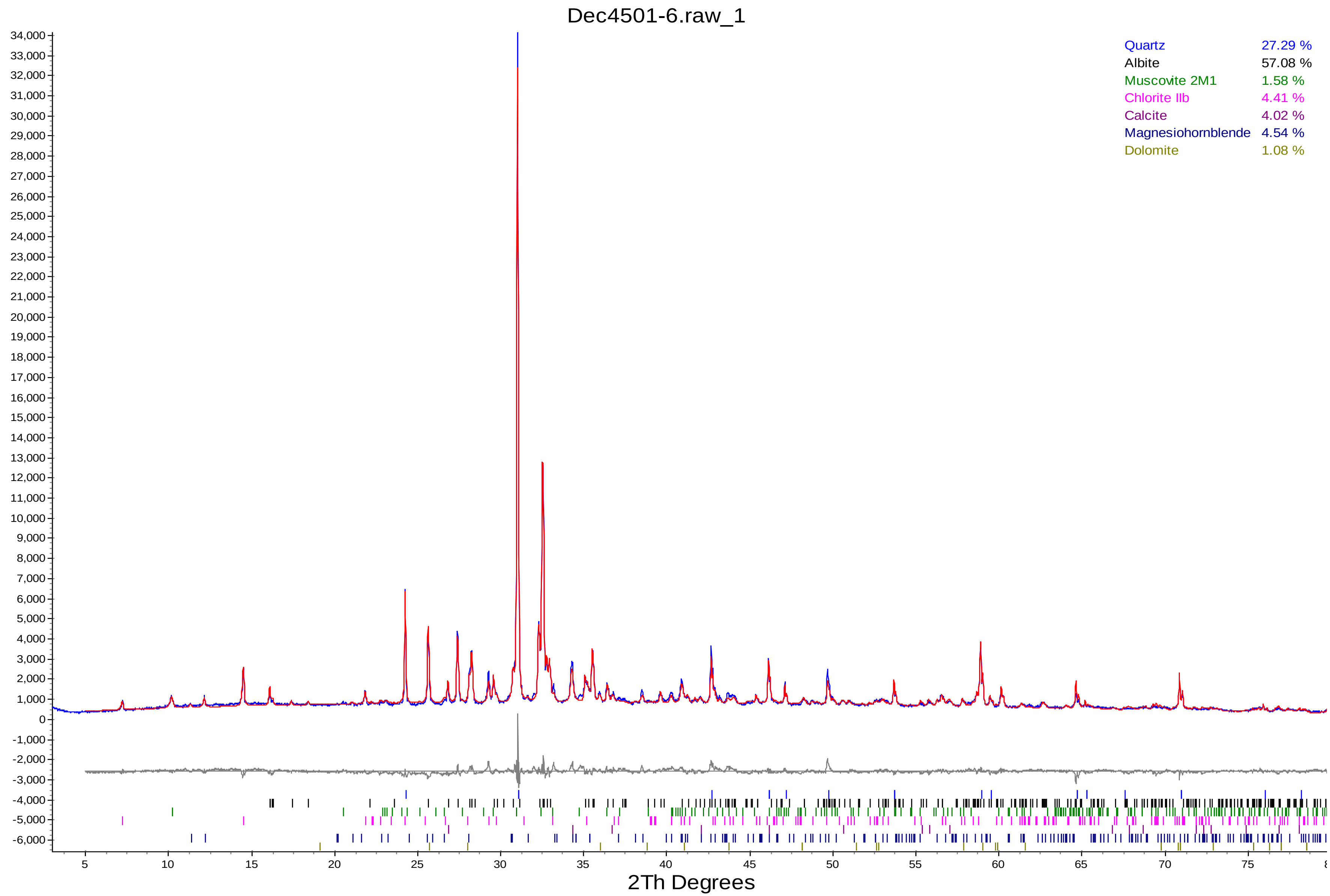
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Quartz 27.29 %
Albite 57.08 %
Muscovite 2M1 1.58 %
Chlorite IIb 4.41 %
Calcite 4.02 %
Magnesiohornblende 4.54 %
Dolomite 1.08 %
2Th Degrees

Environmental -Analytical
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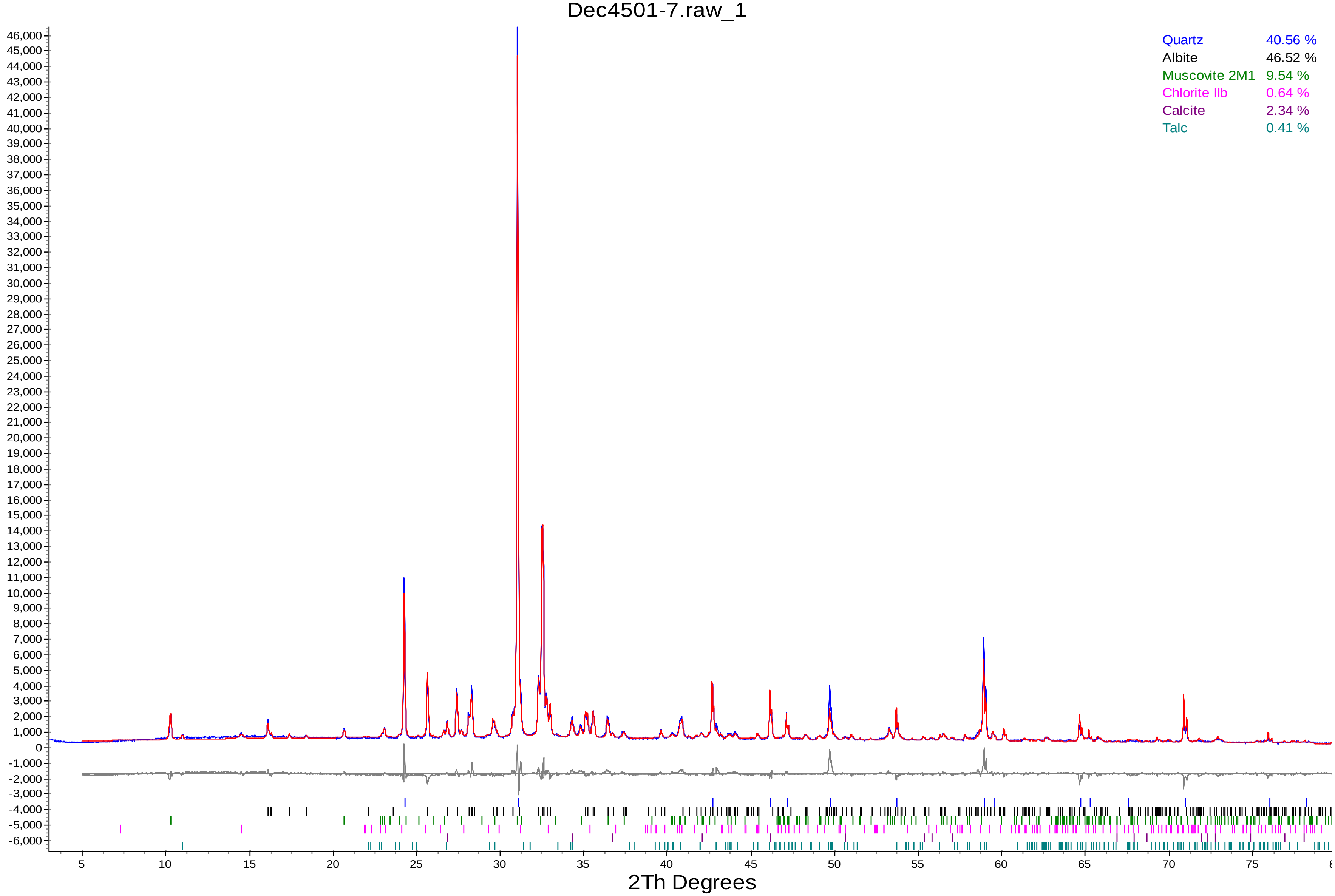

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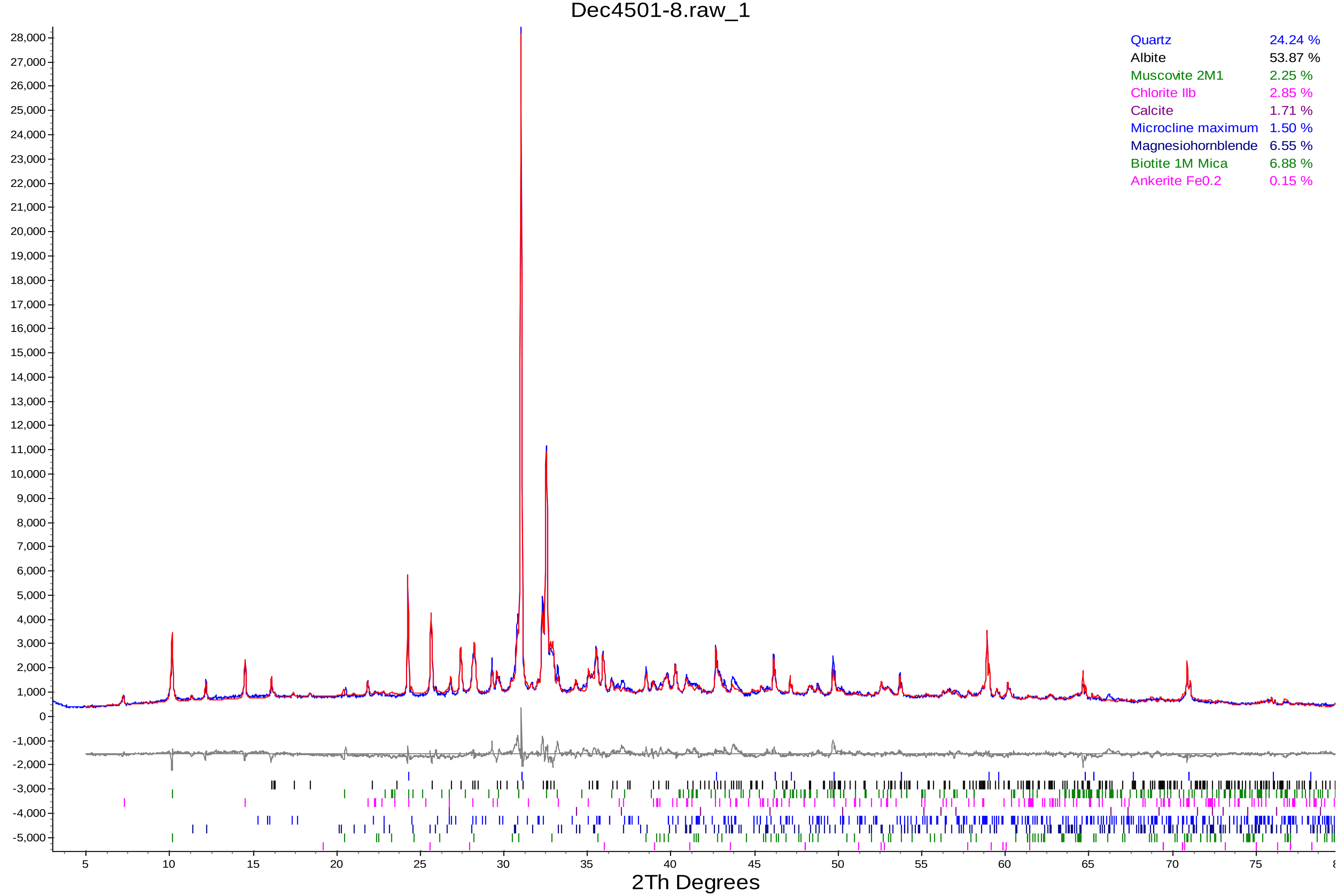

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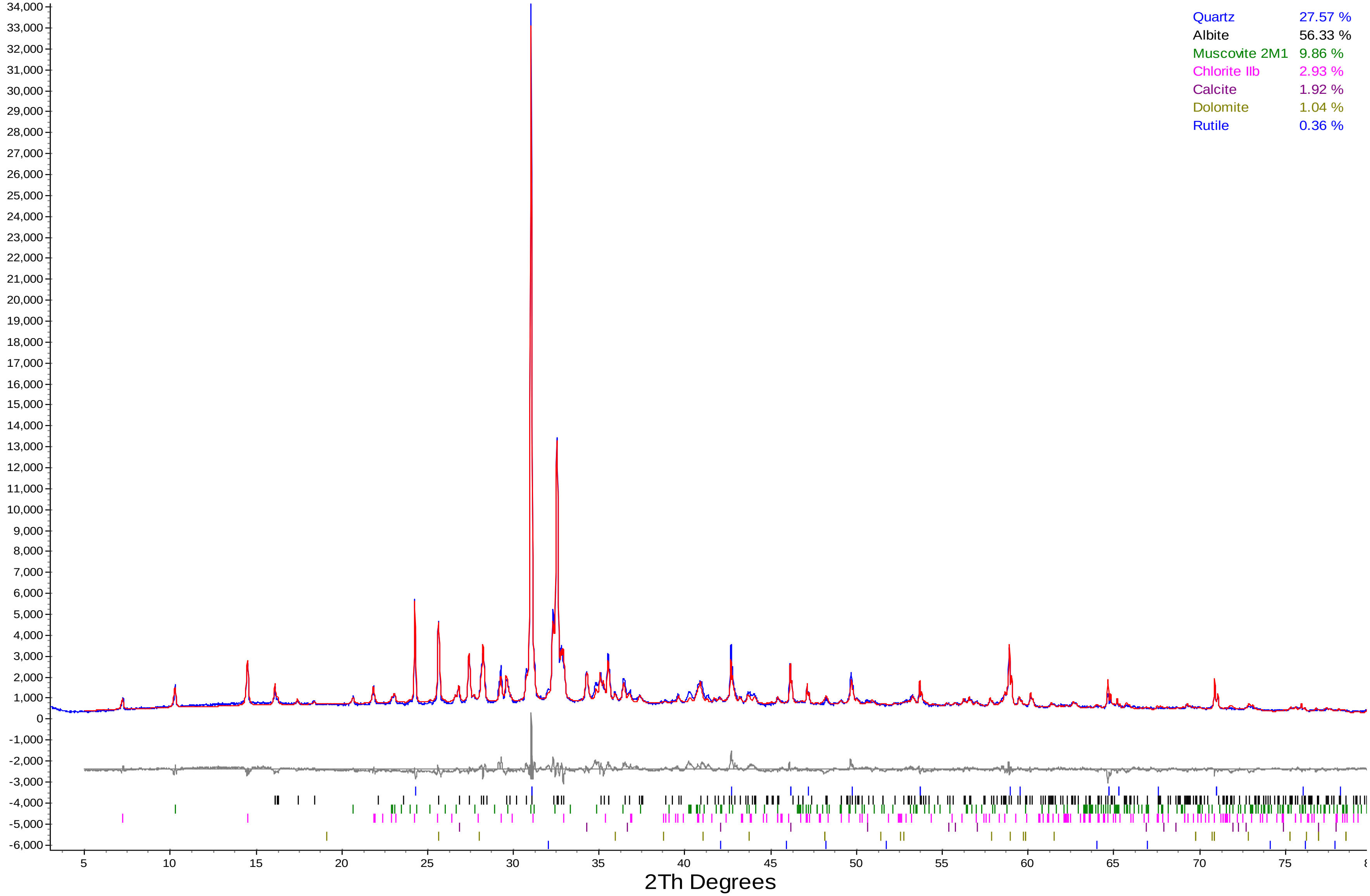

The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
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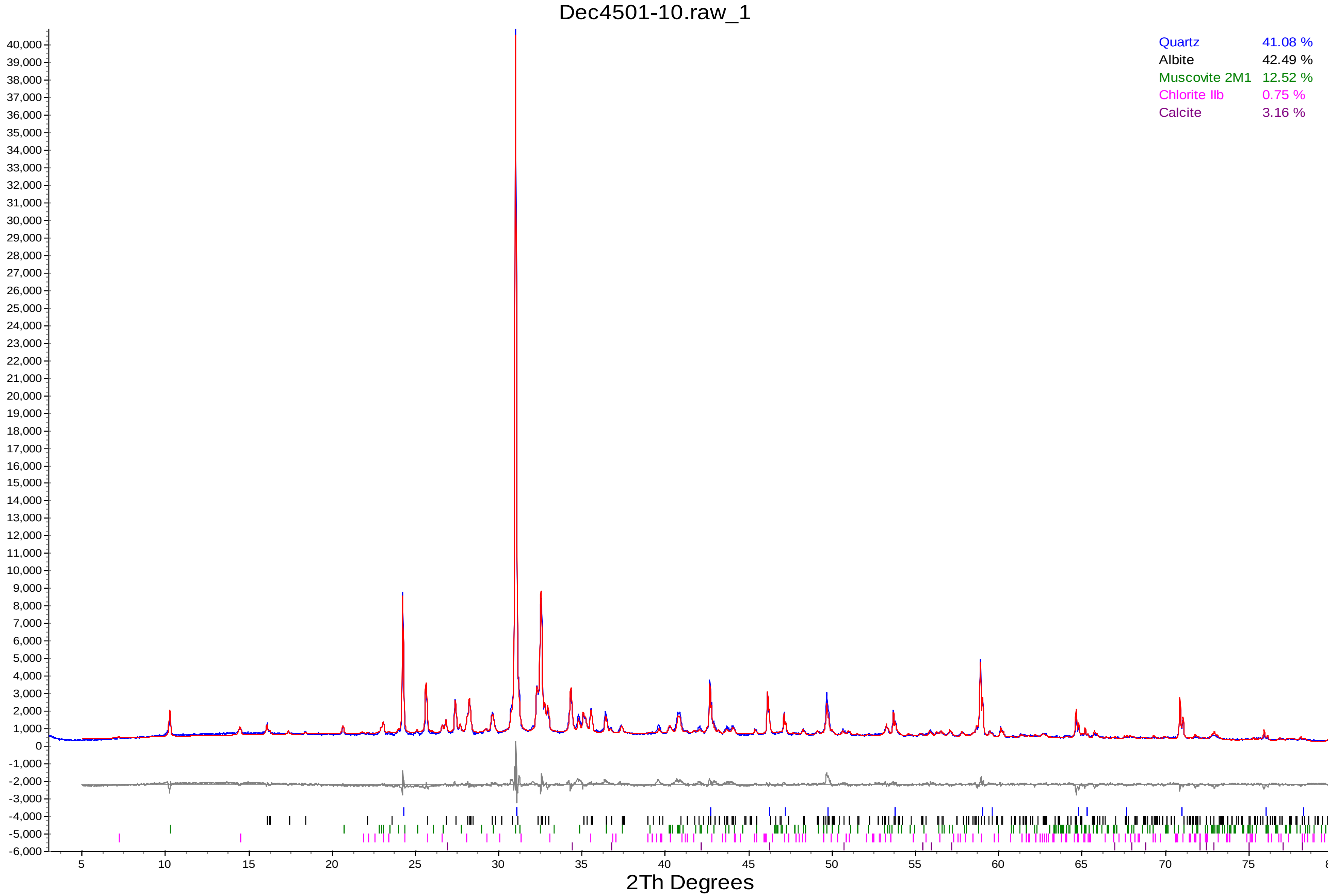

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Environmental -Analytical
Custom XRD/MI4501-DEC12
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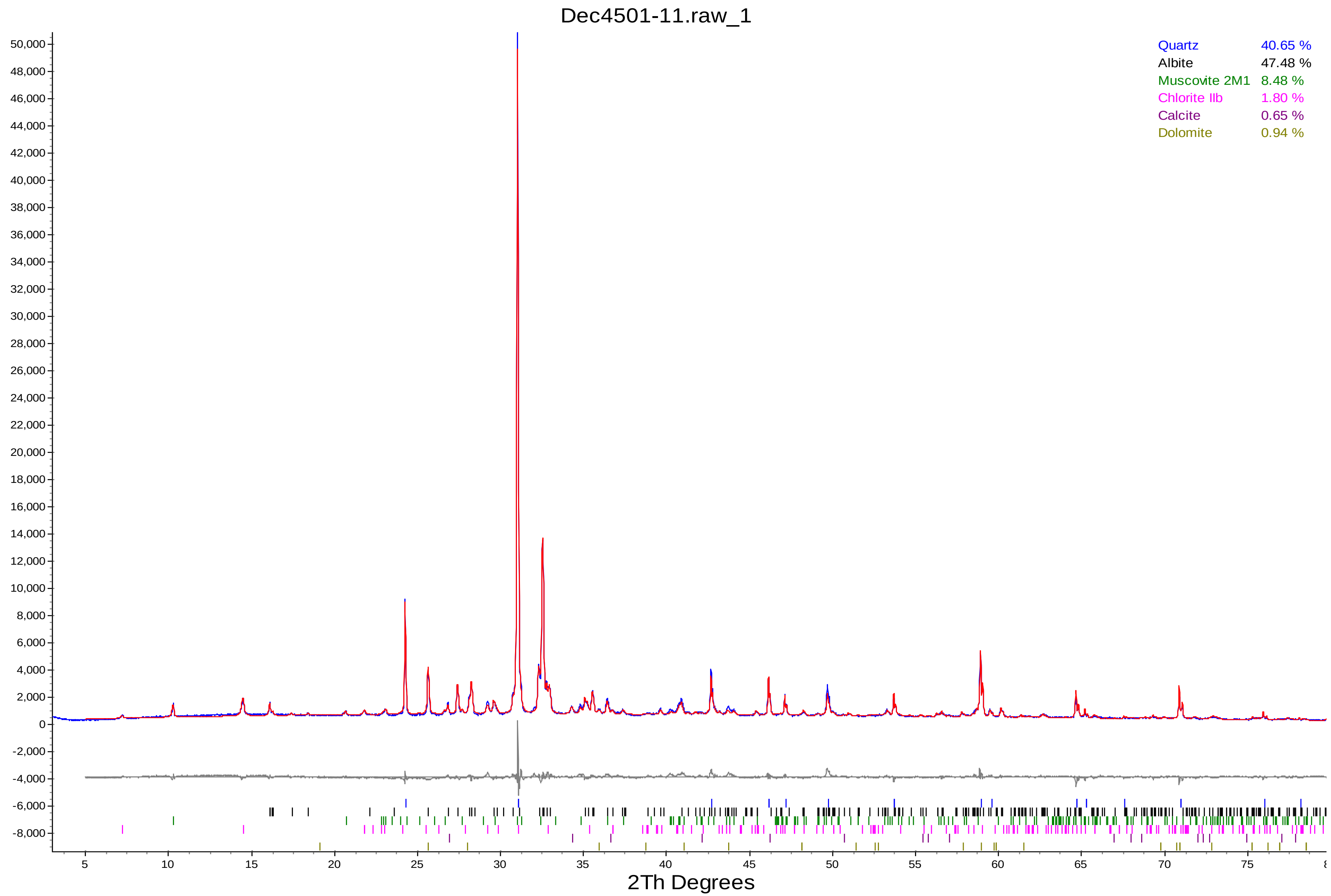

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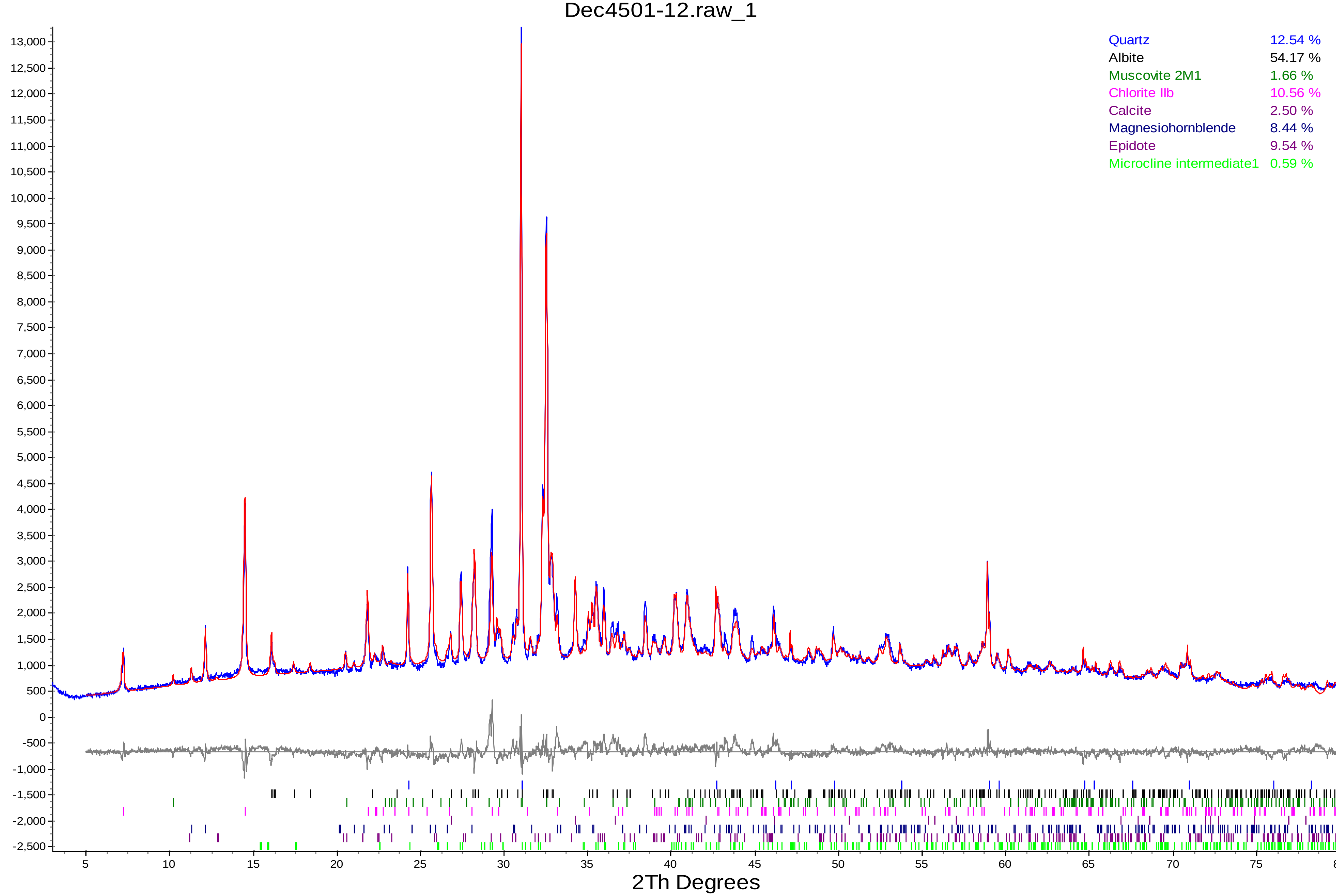
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



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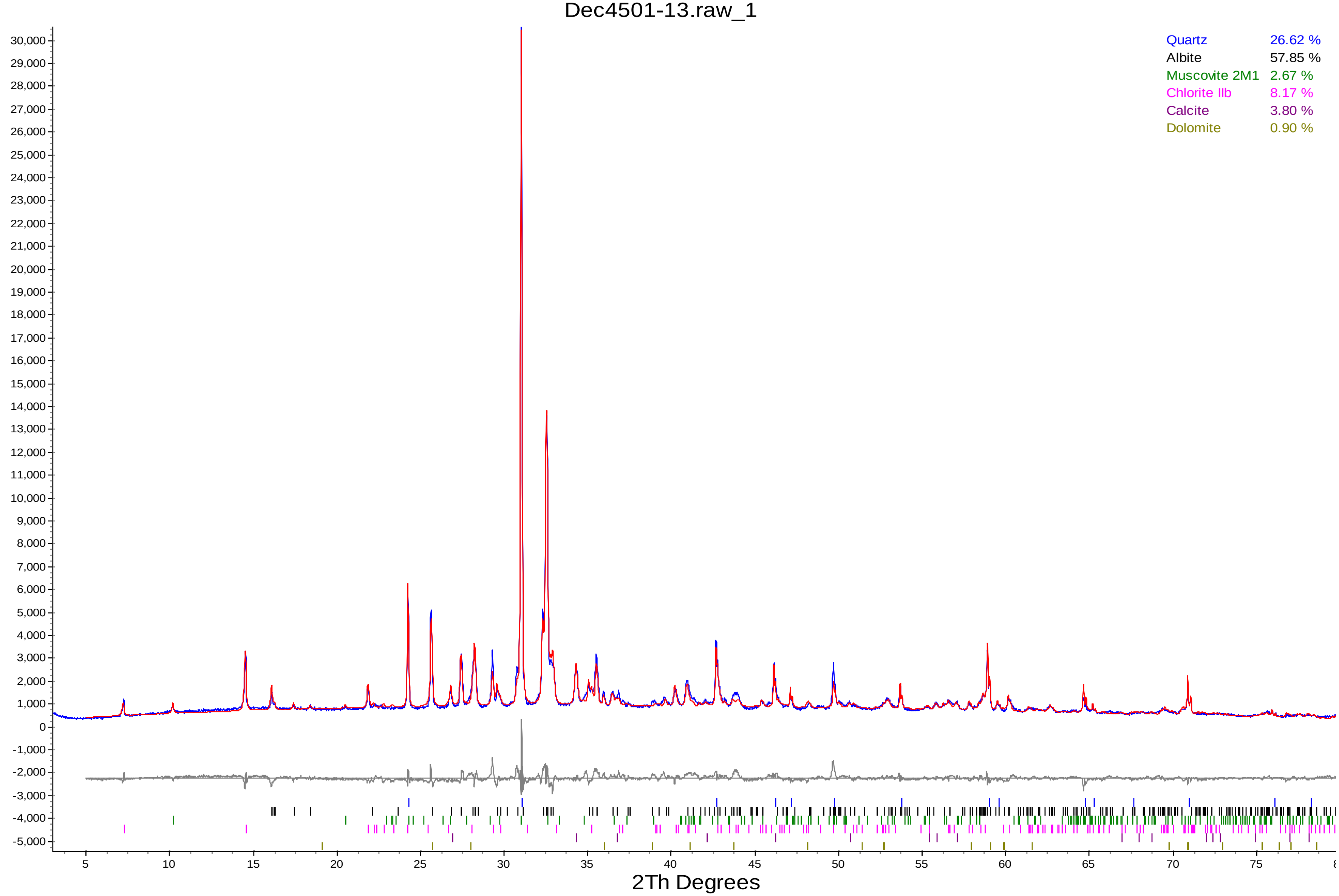
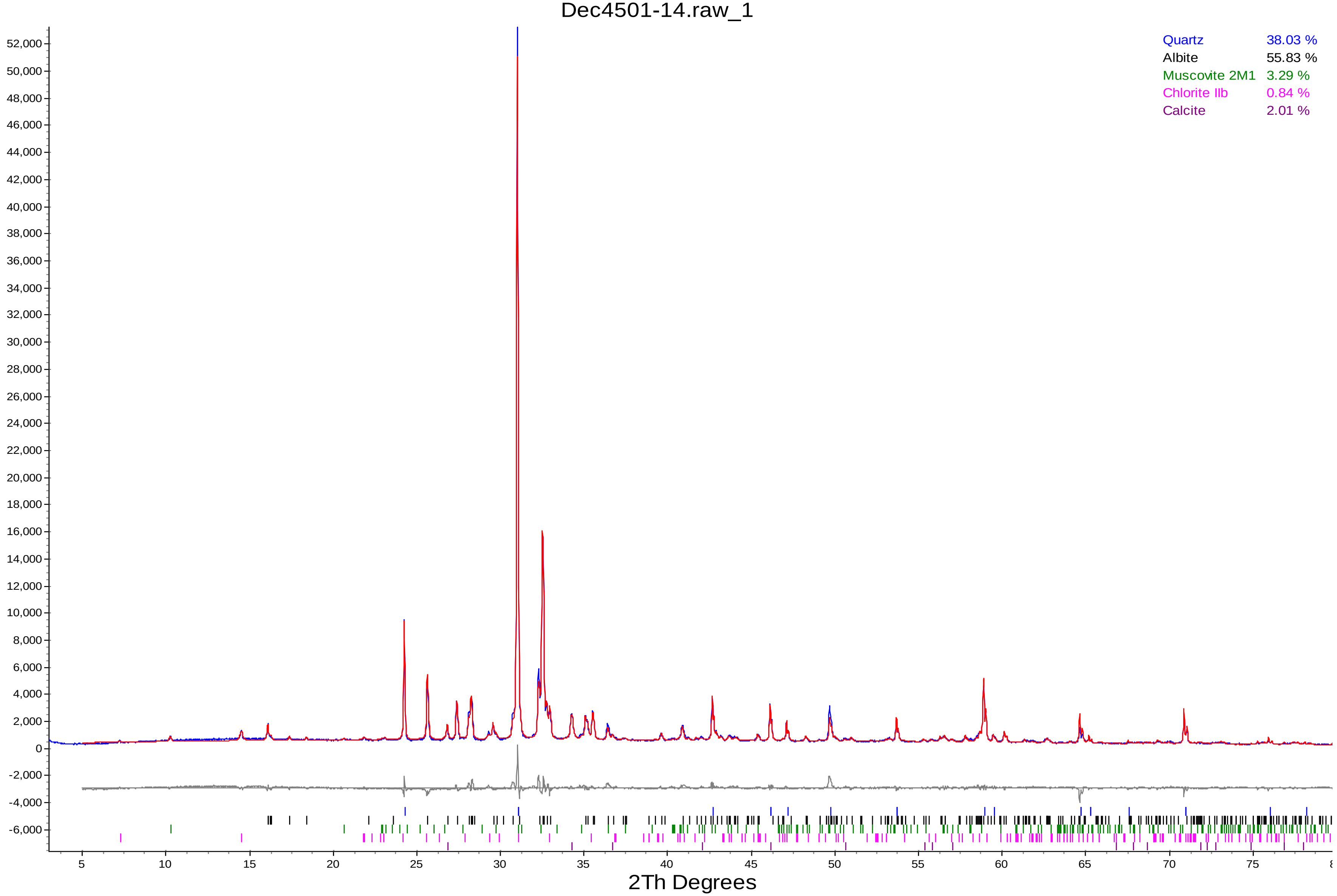
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.



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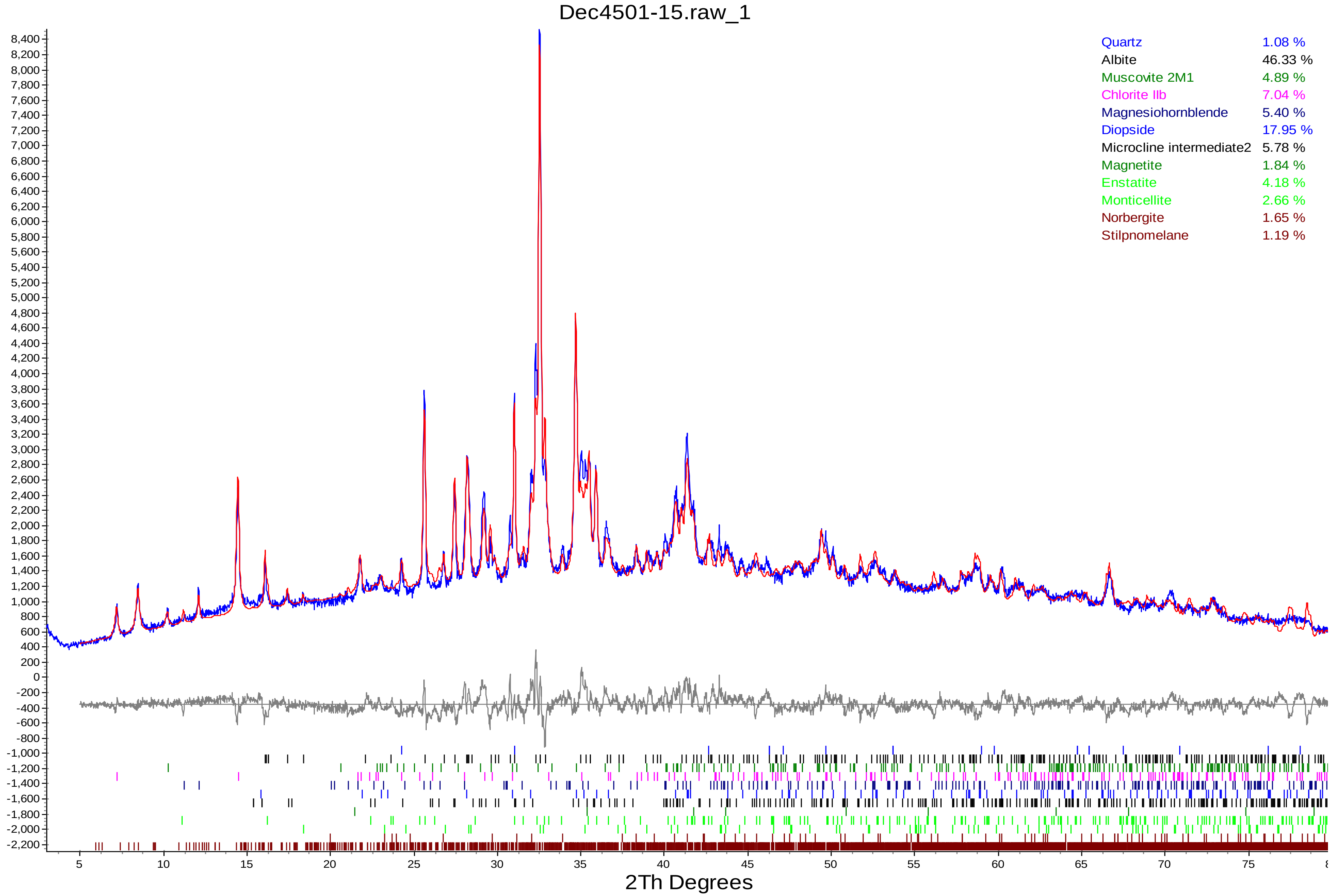

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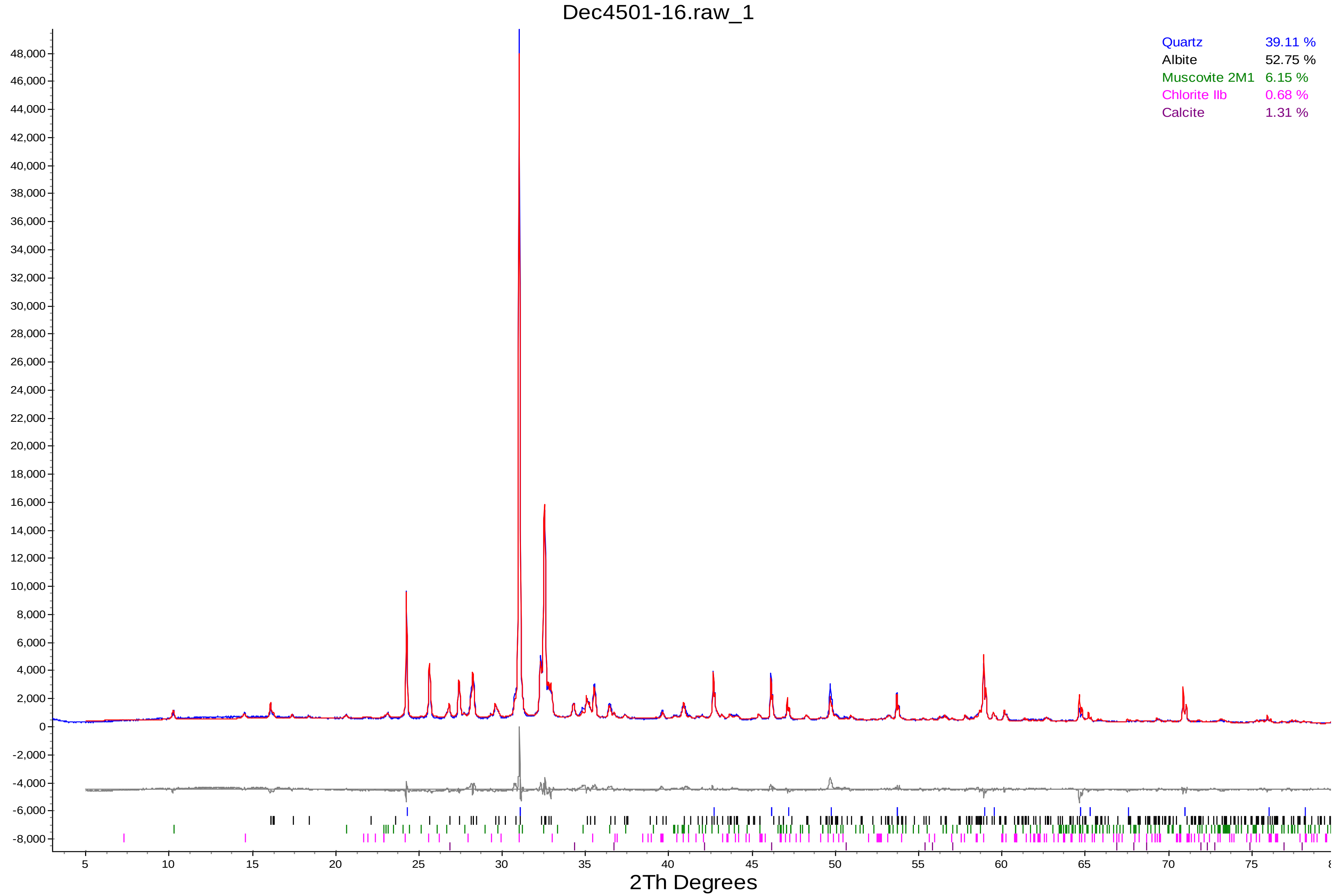
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
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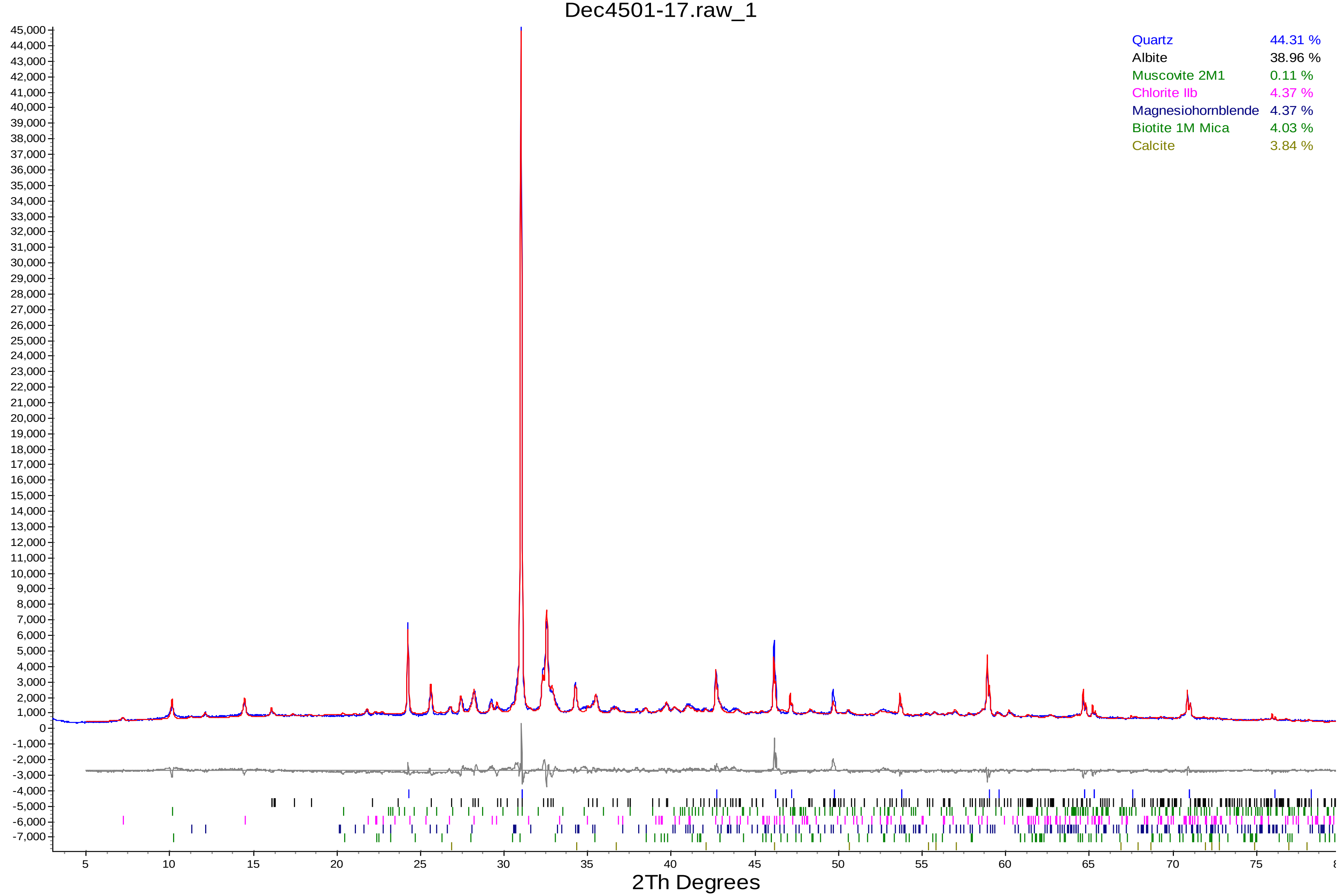
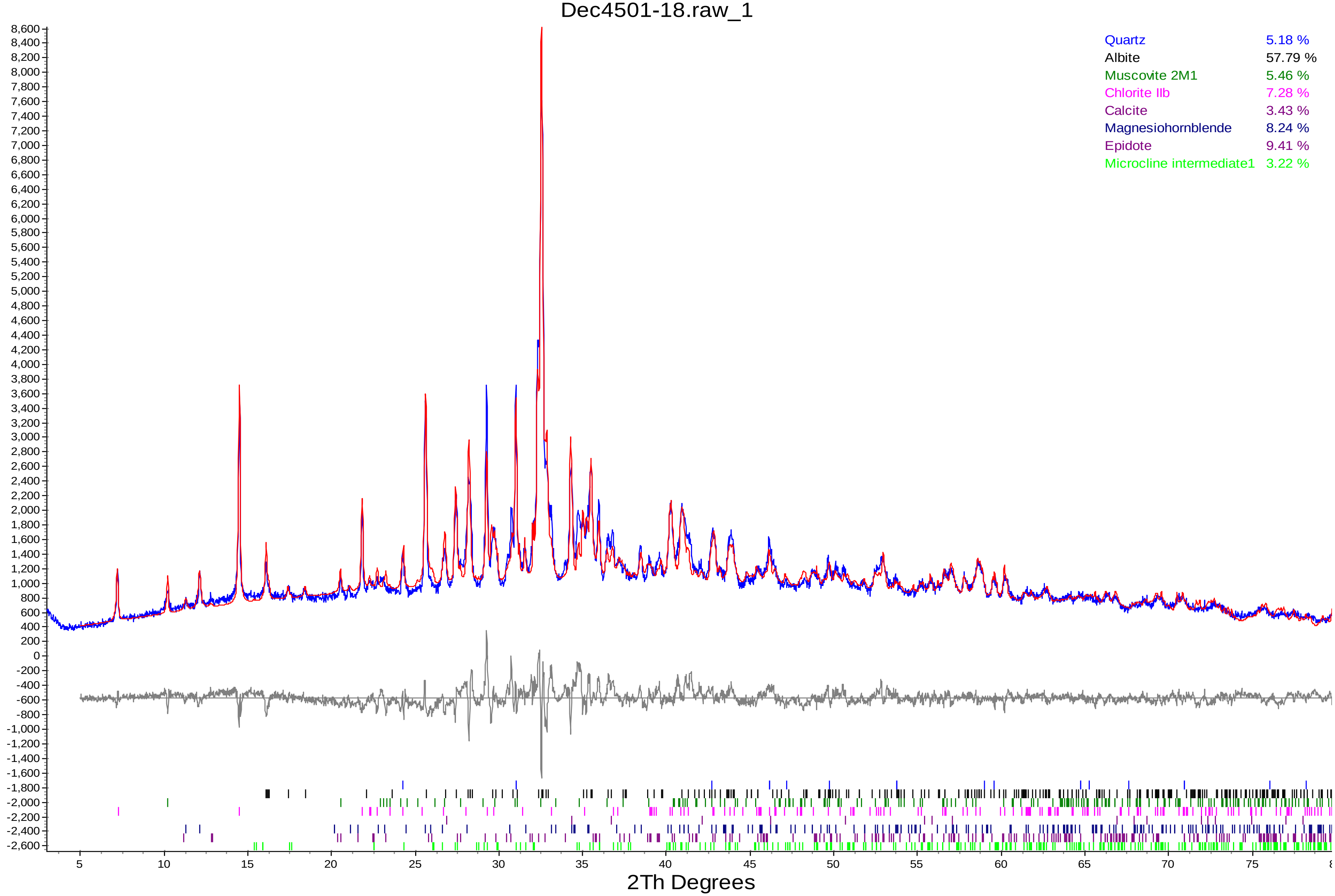
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



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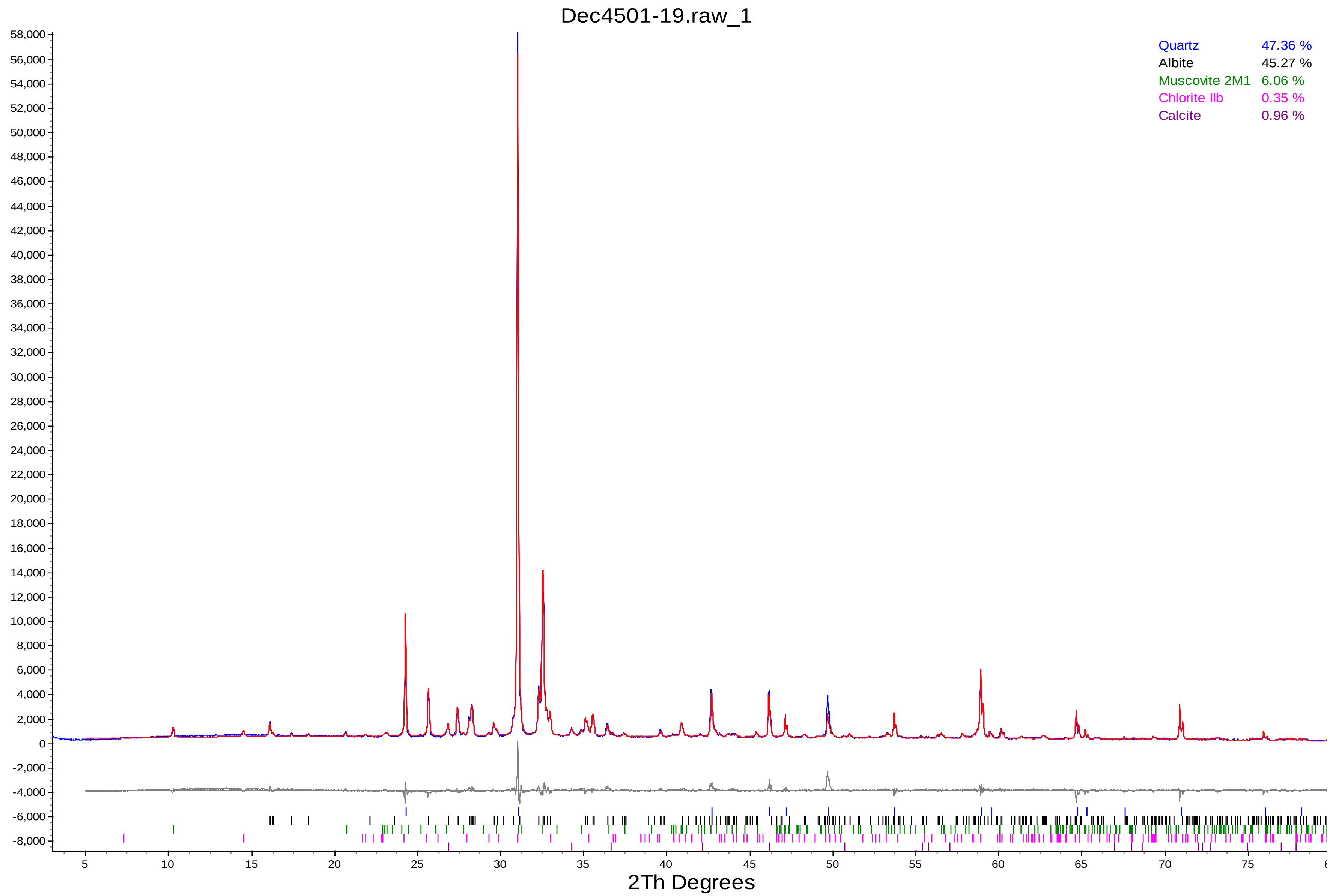
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
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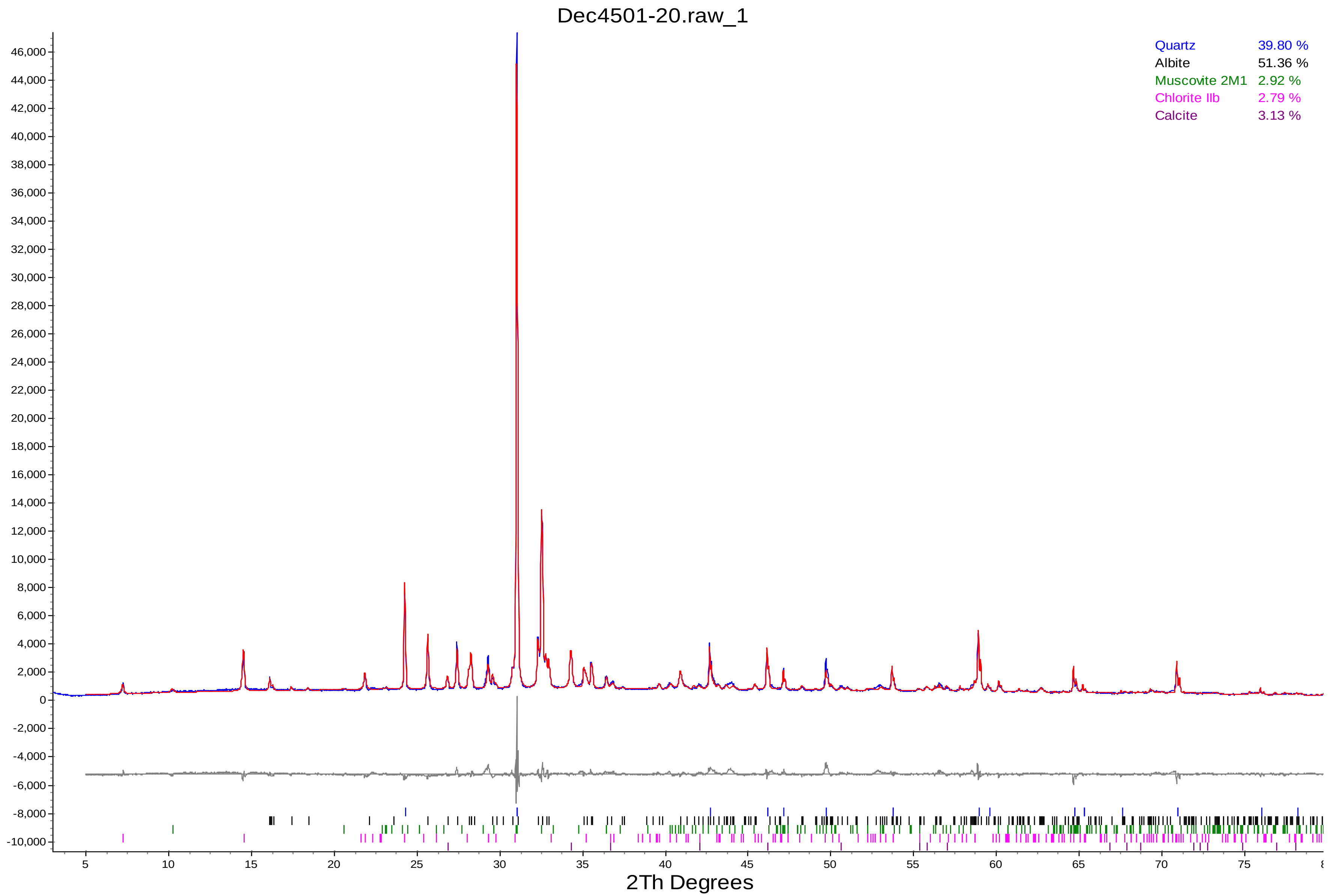
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



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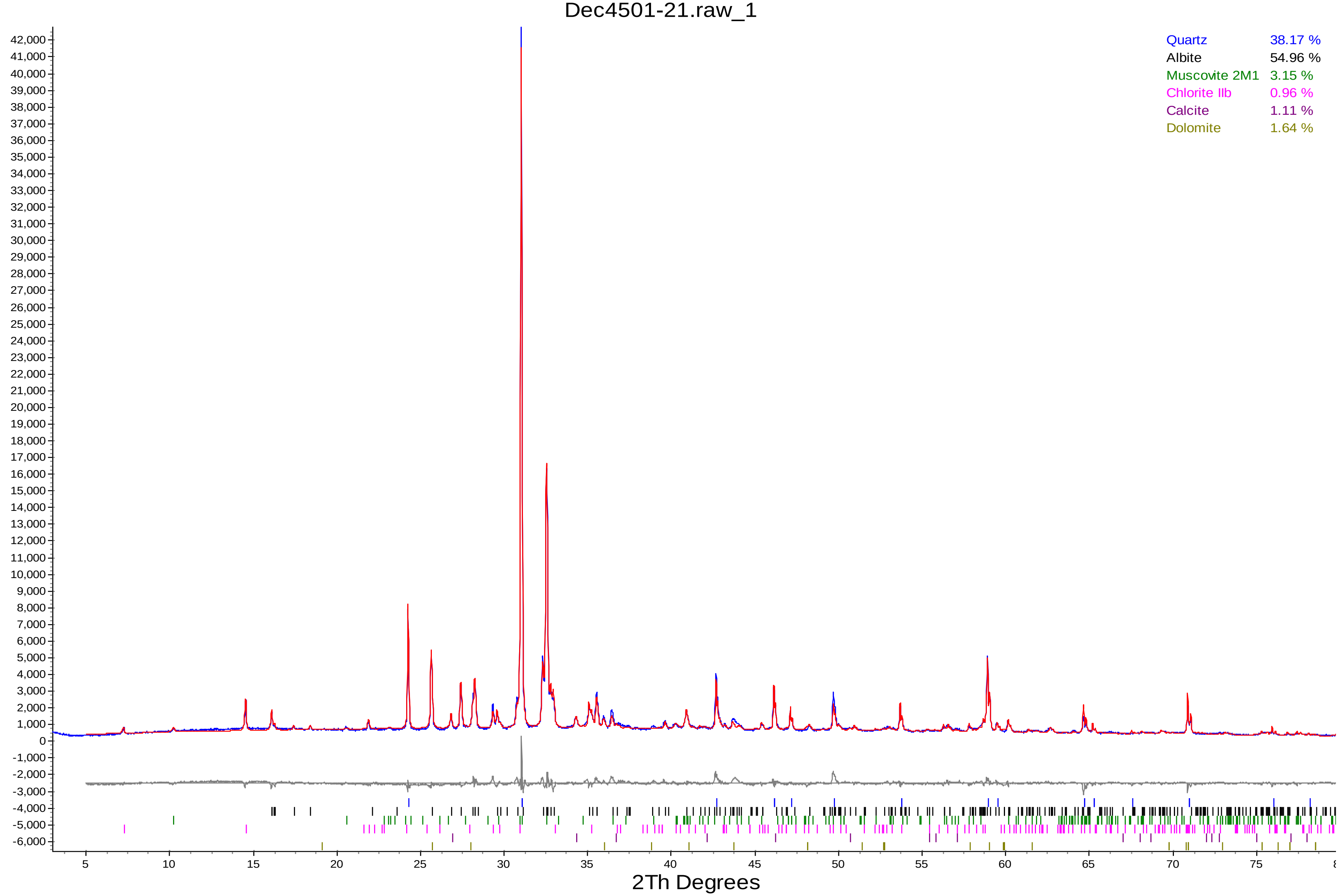
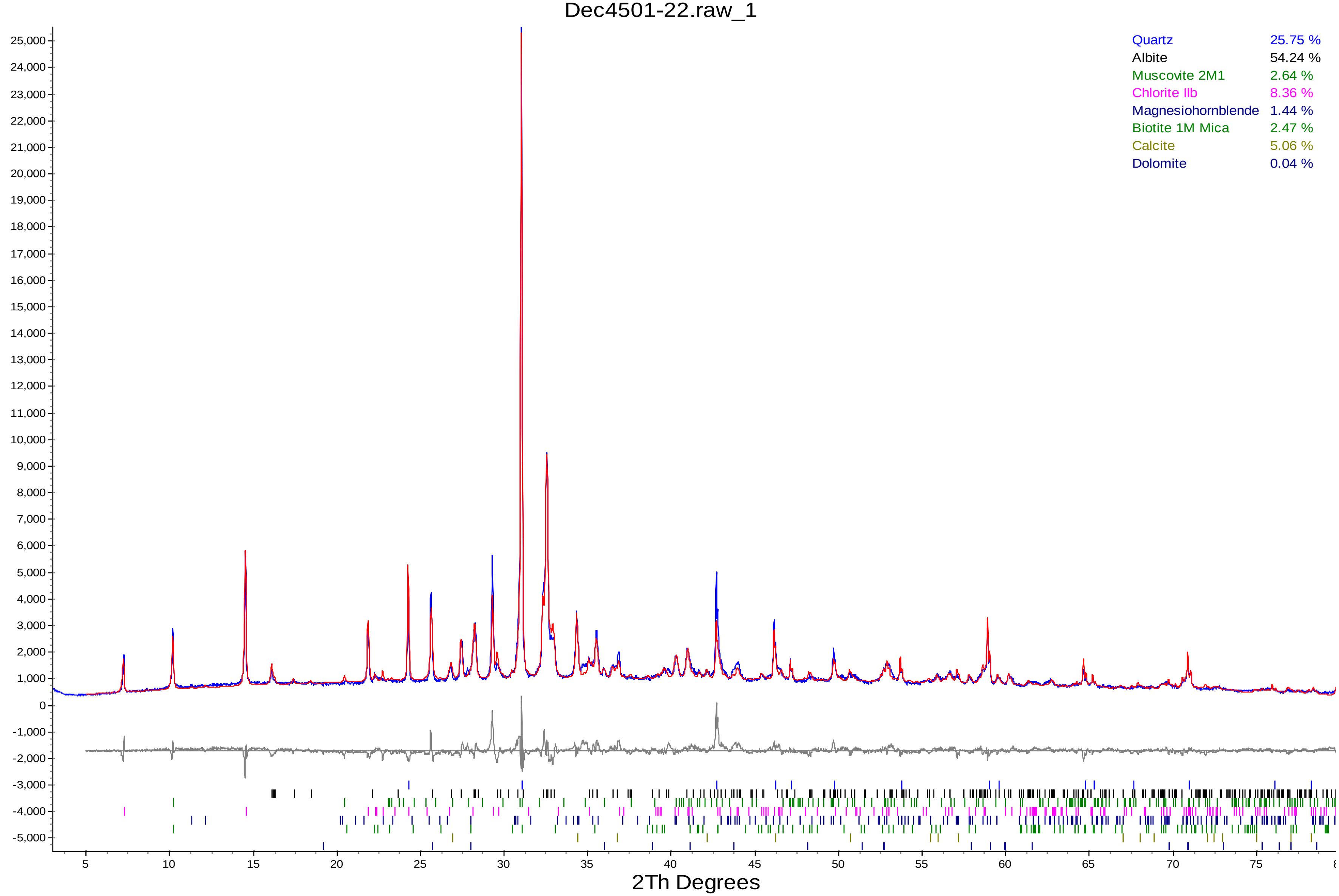
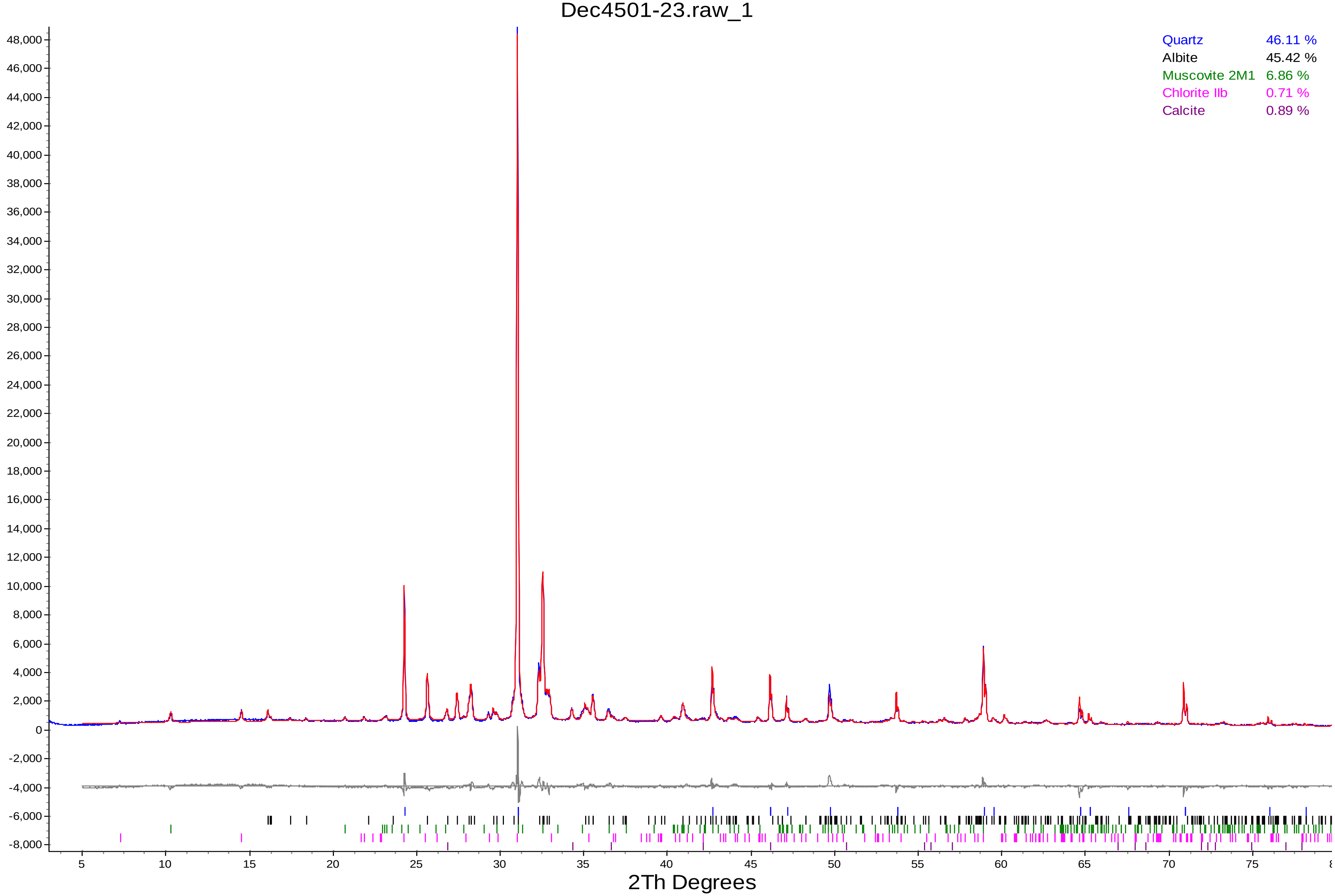
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.


Dec4501-21.raw_1
Quartz 38.17 %
Albite 54.96 %
Muscovite 2M1 3.15 %
Chlorite IIb 0.96 %
Calcite 1.11 %
Dolomite 1.64 %
2Th Degrees

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

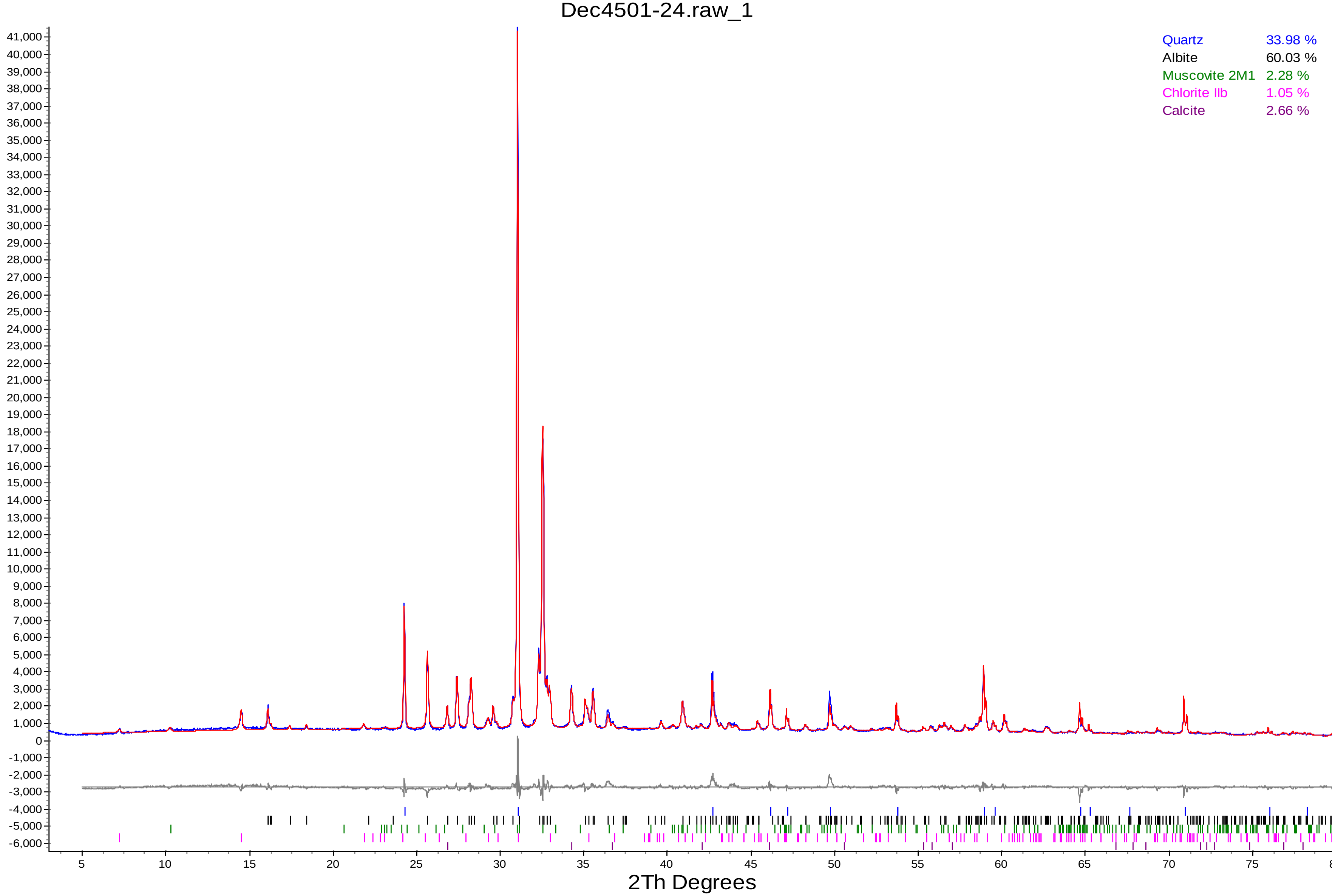


The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.



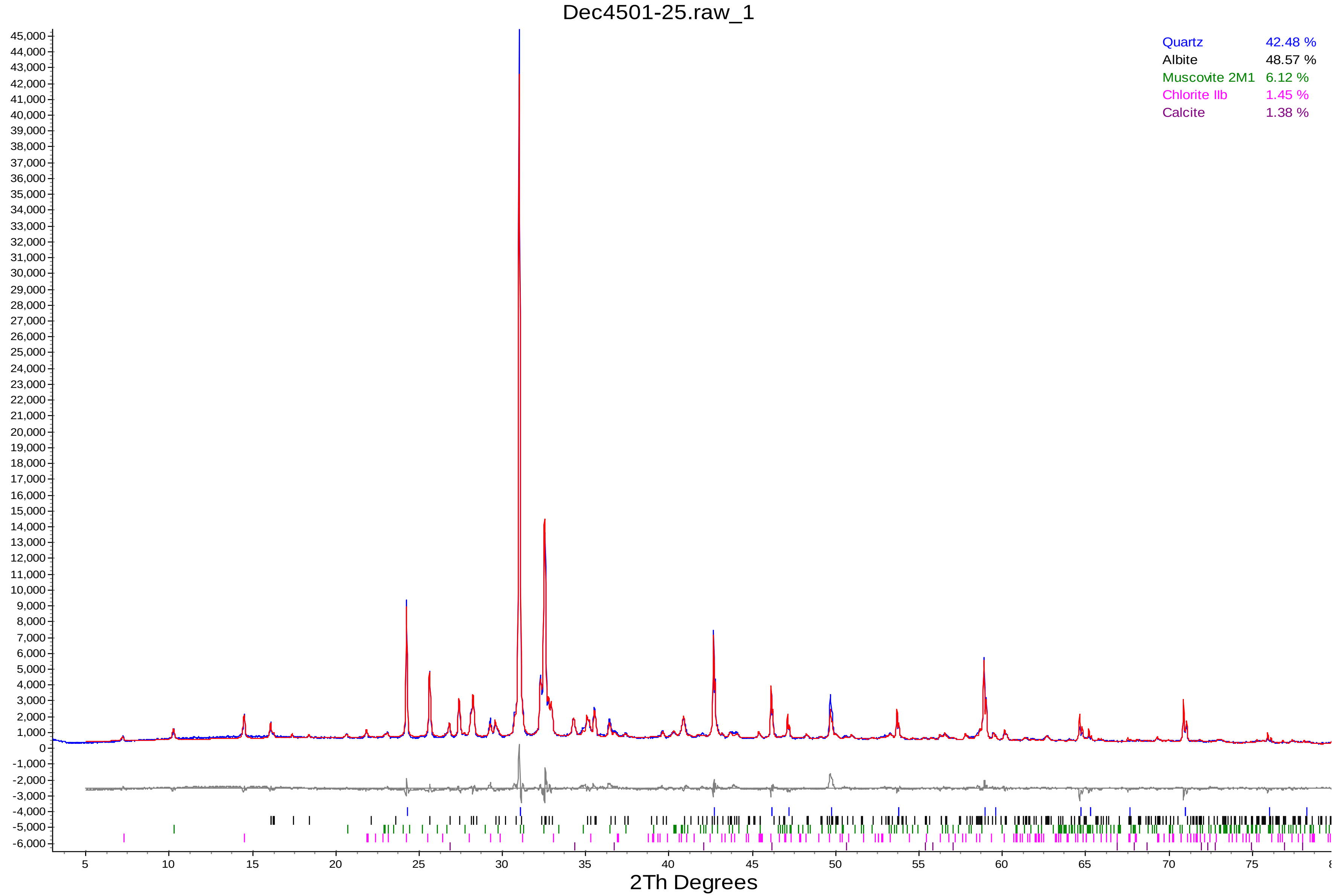
The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



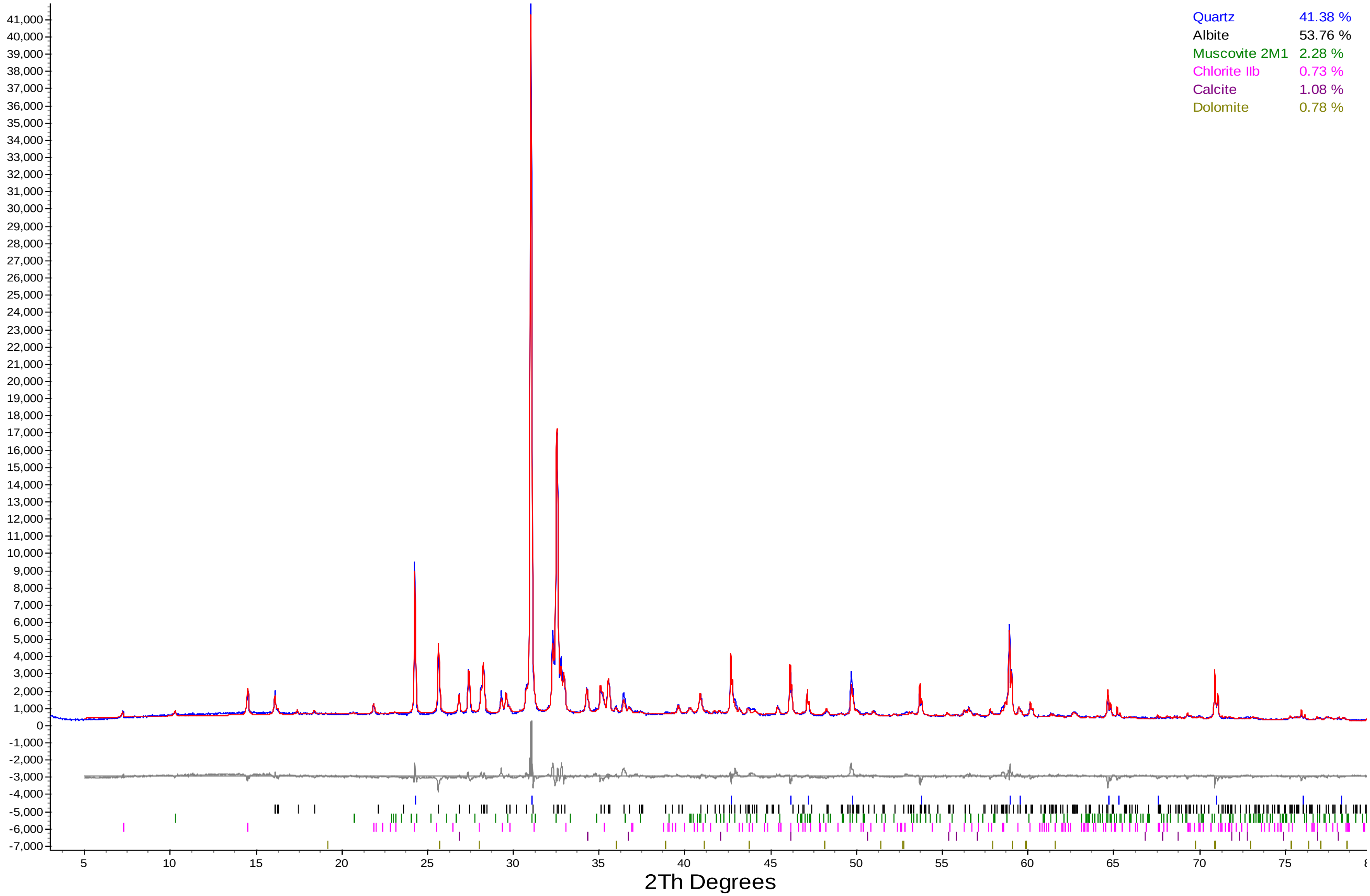
The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

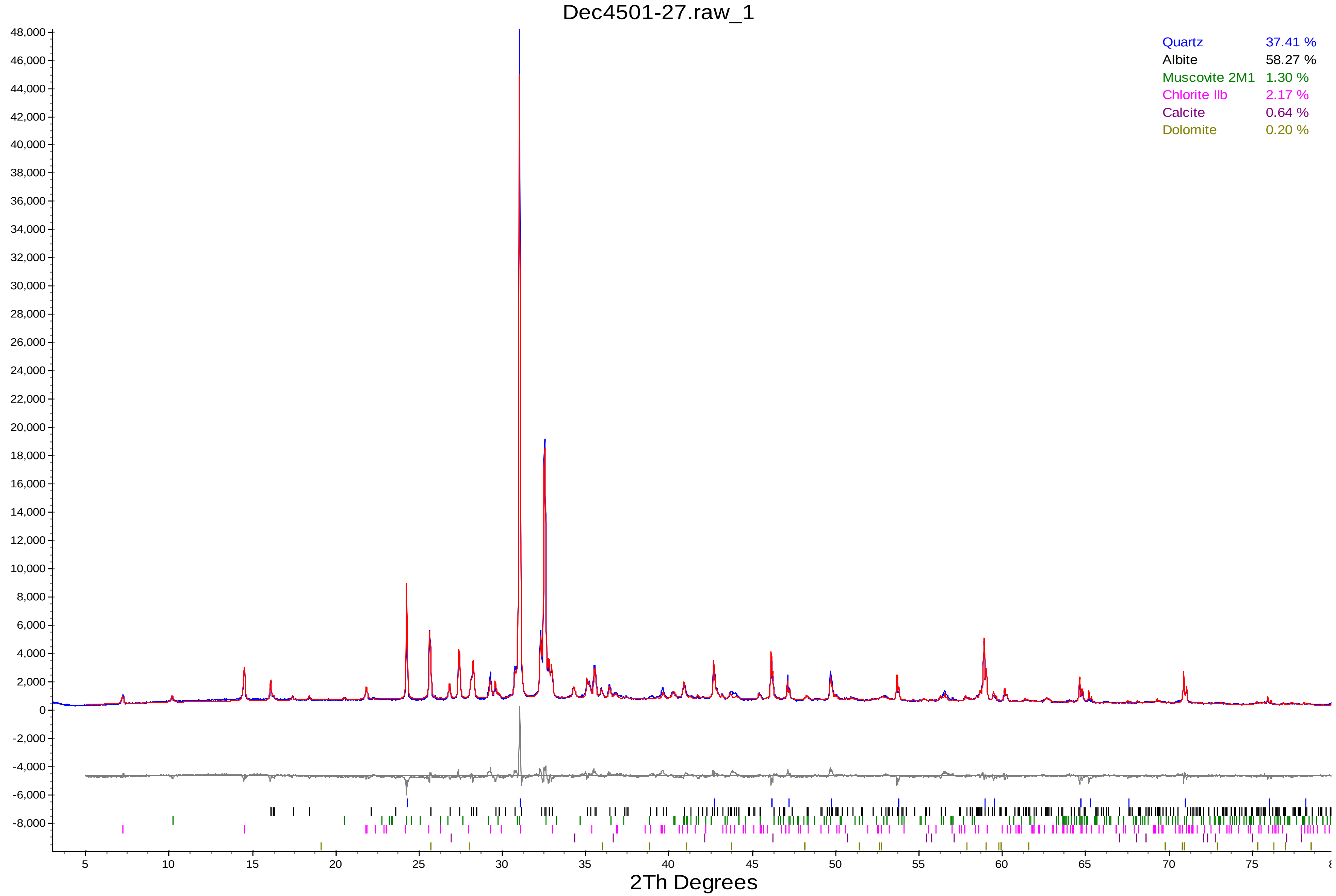


The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Dec4501-26.raw_1

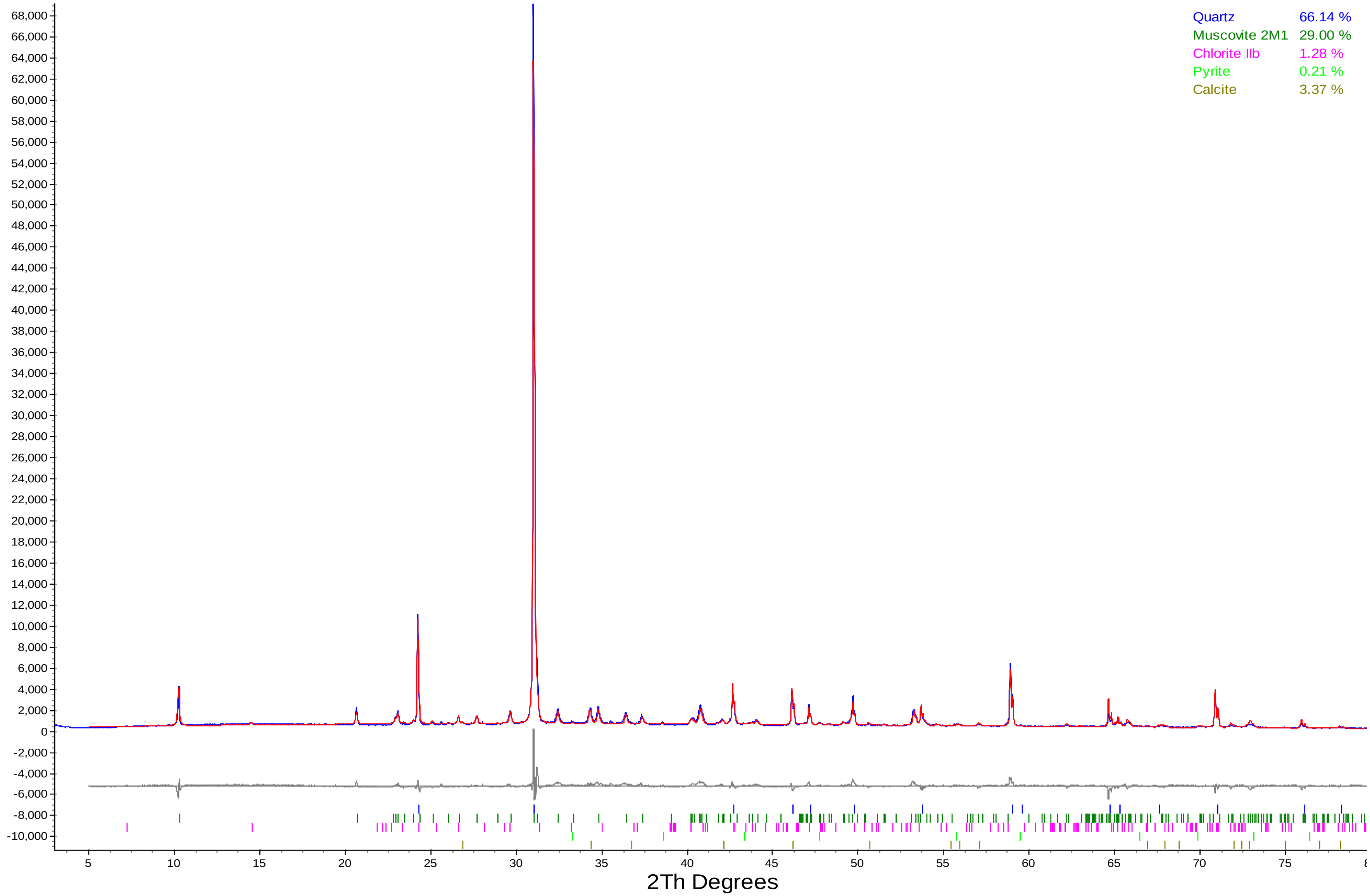


Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0. Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

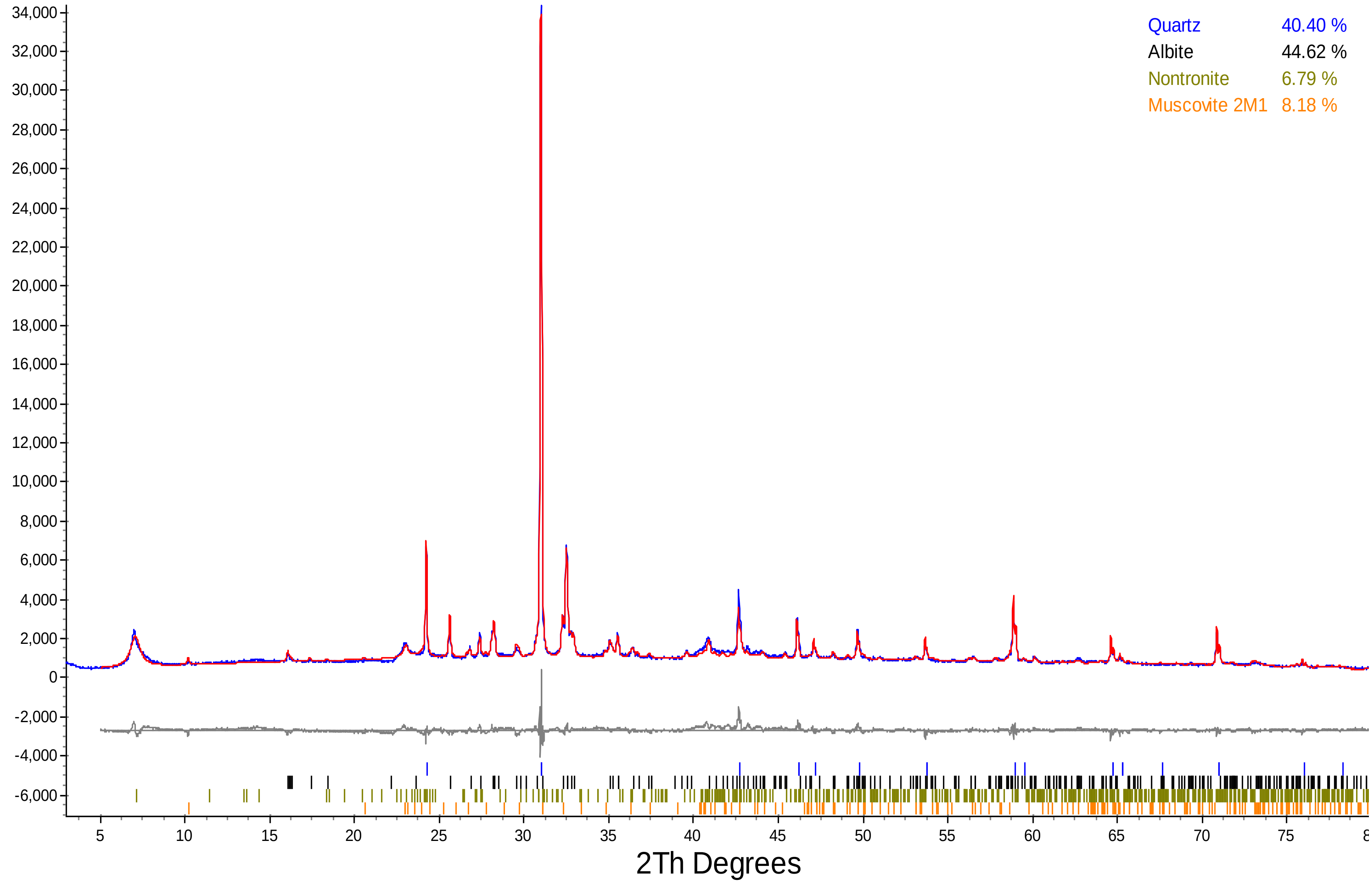
Dec4501-28.raw_1



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

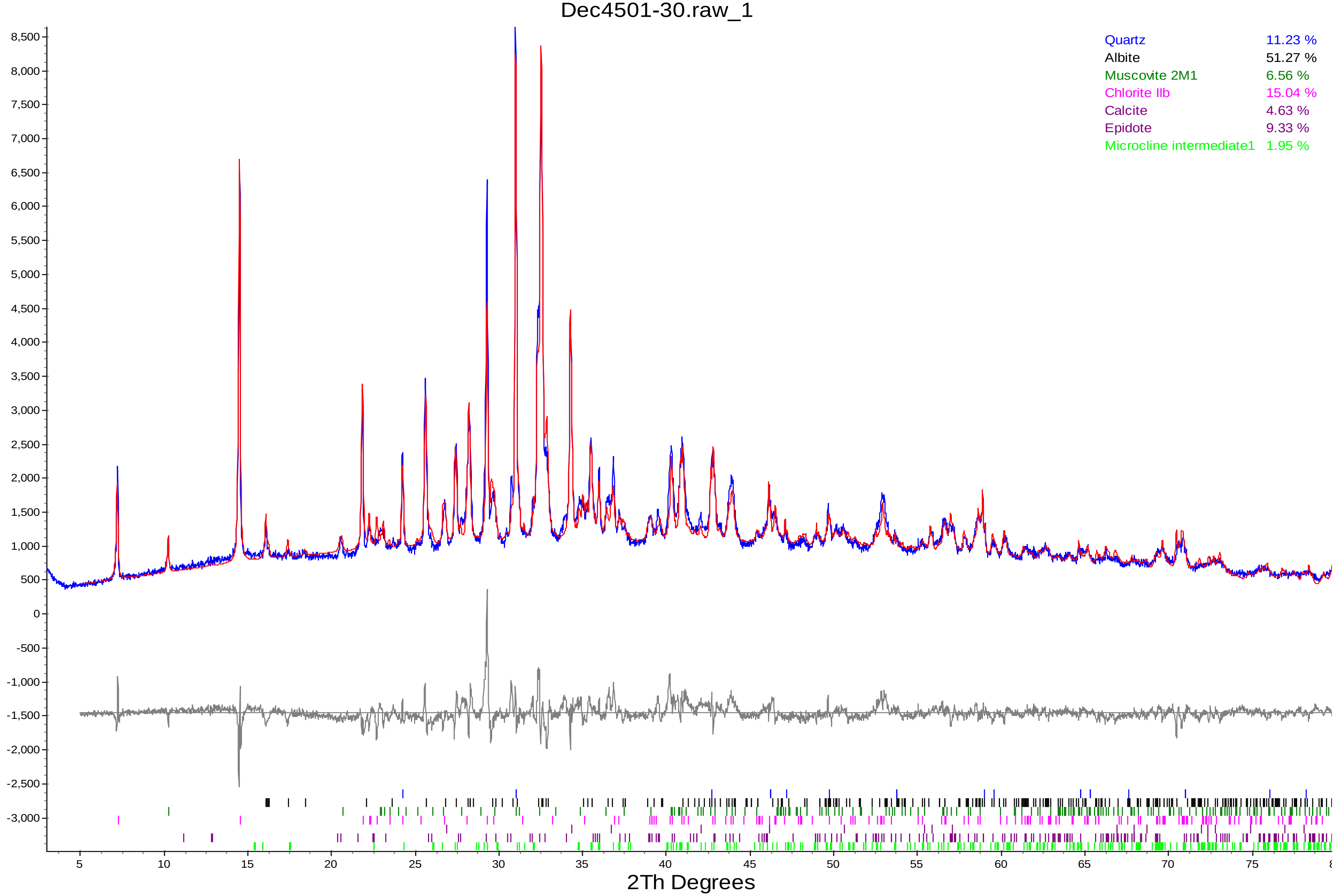
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

Dec4501-29.raw_1



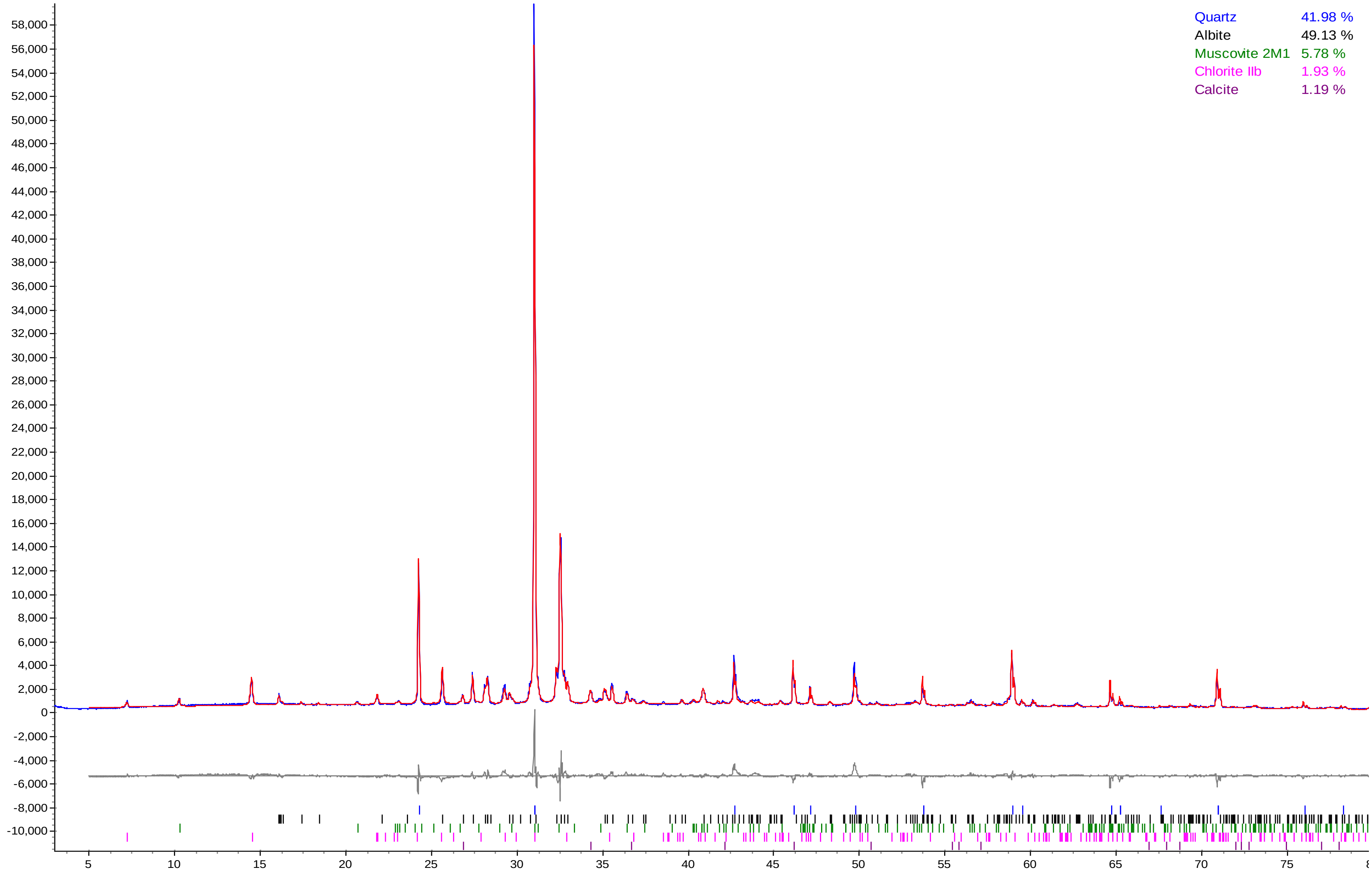
The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

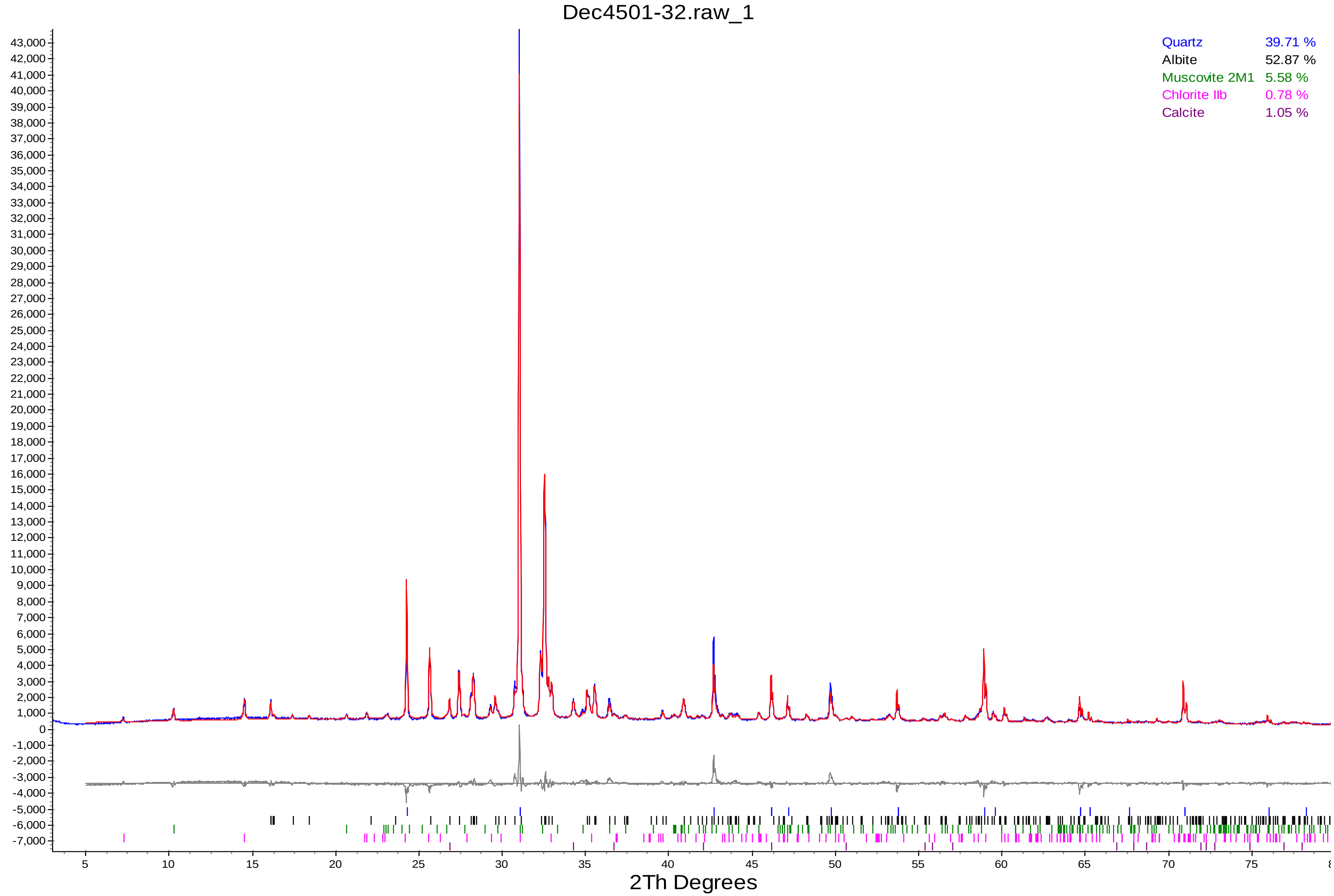


The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Dec4501-31.raw_1

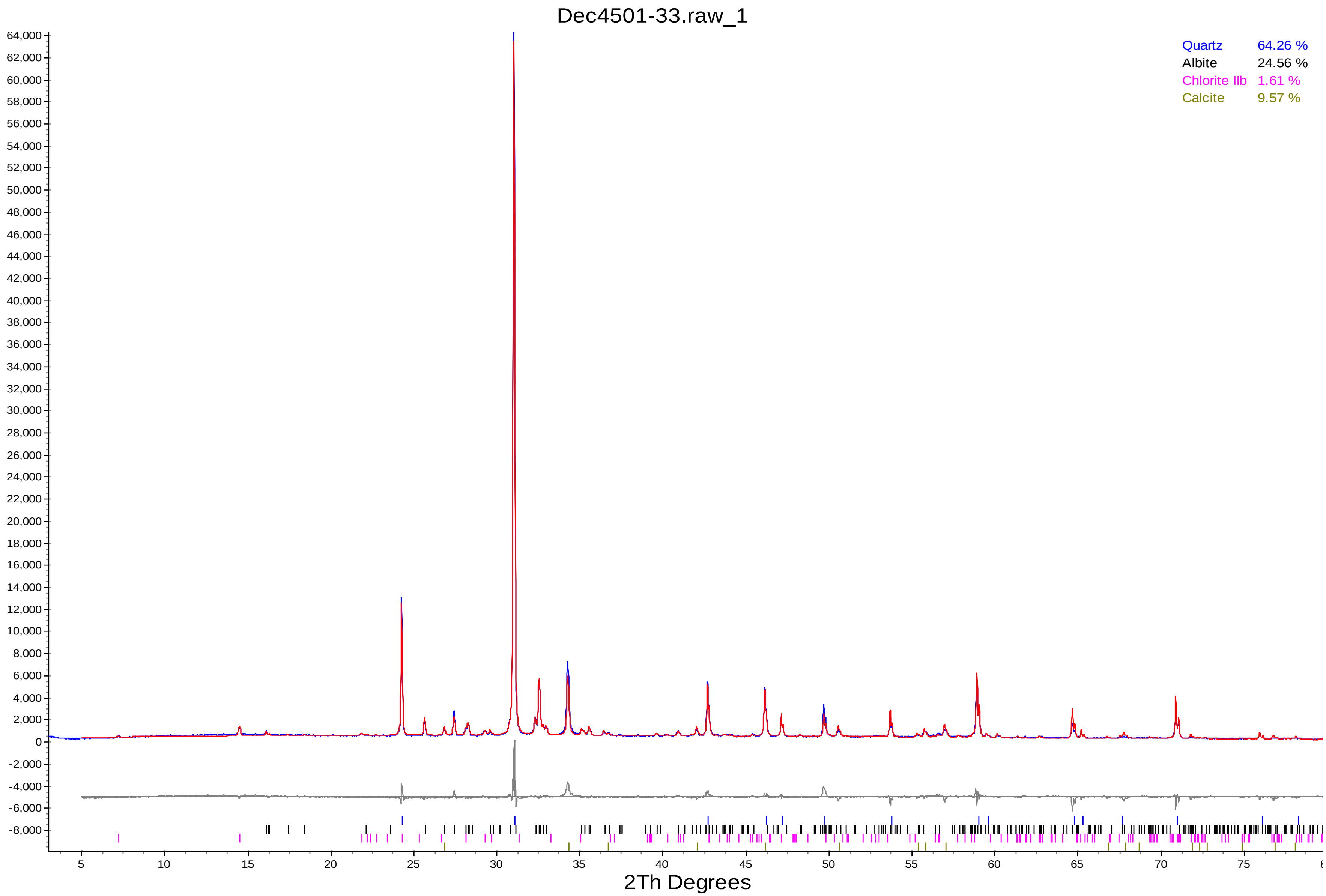


Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

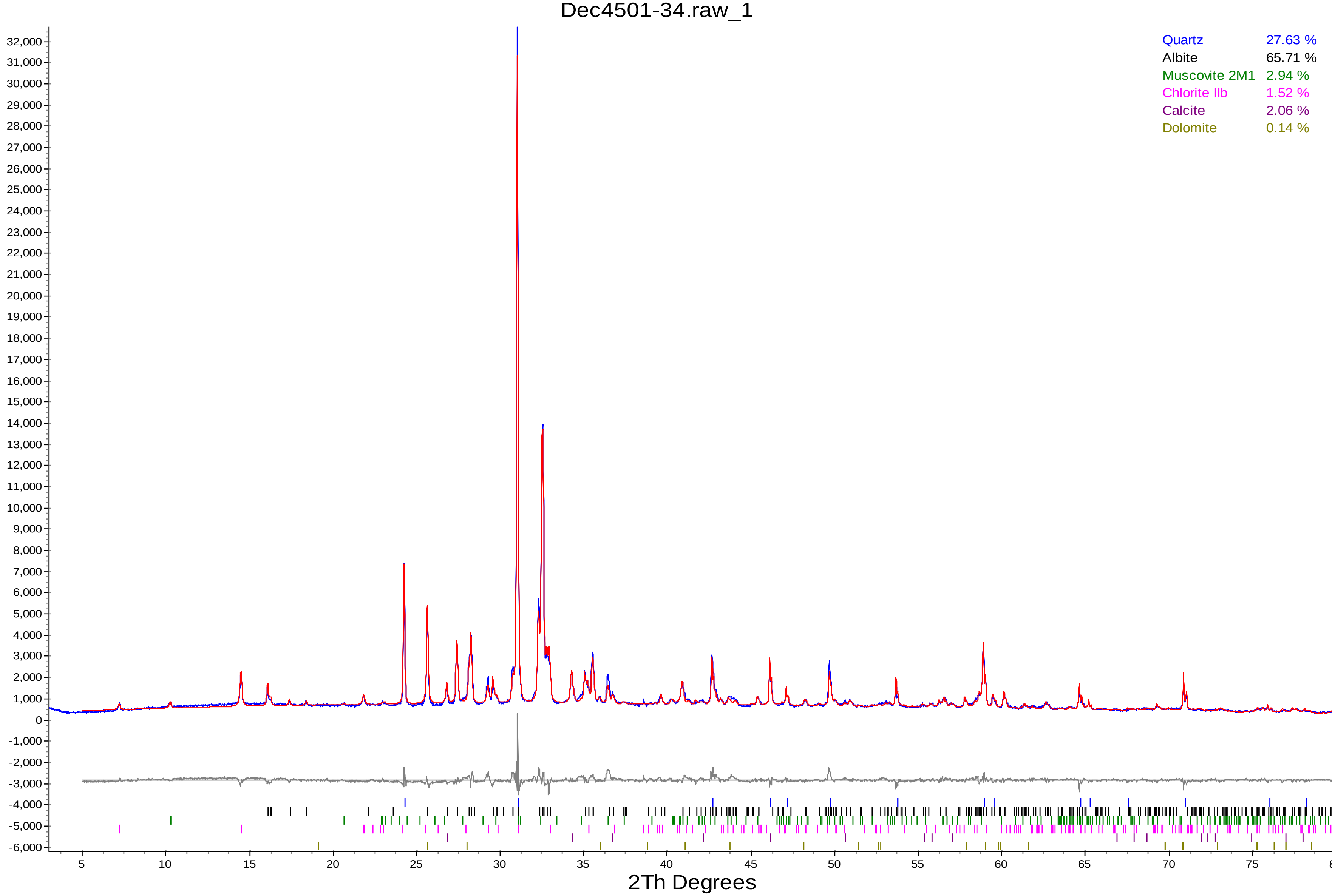


The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

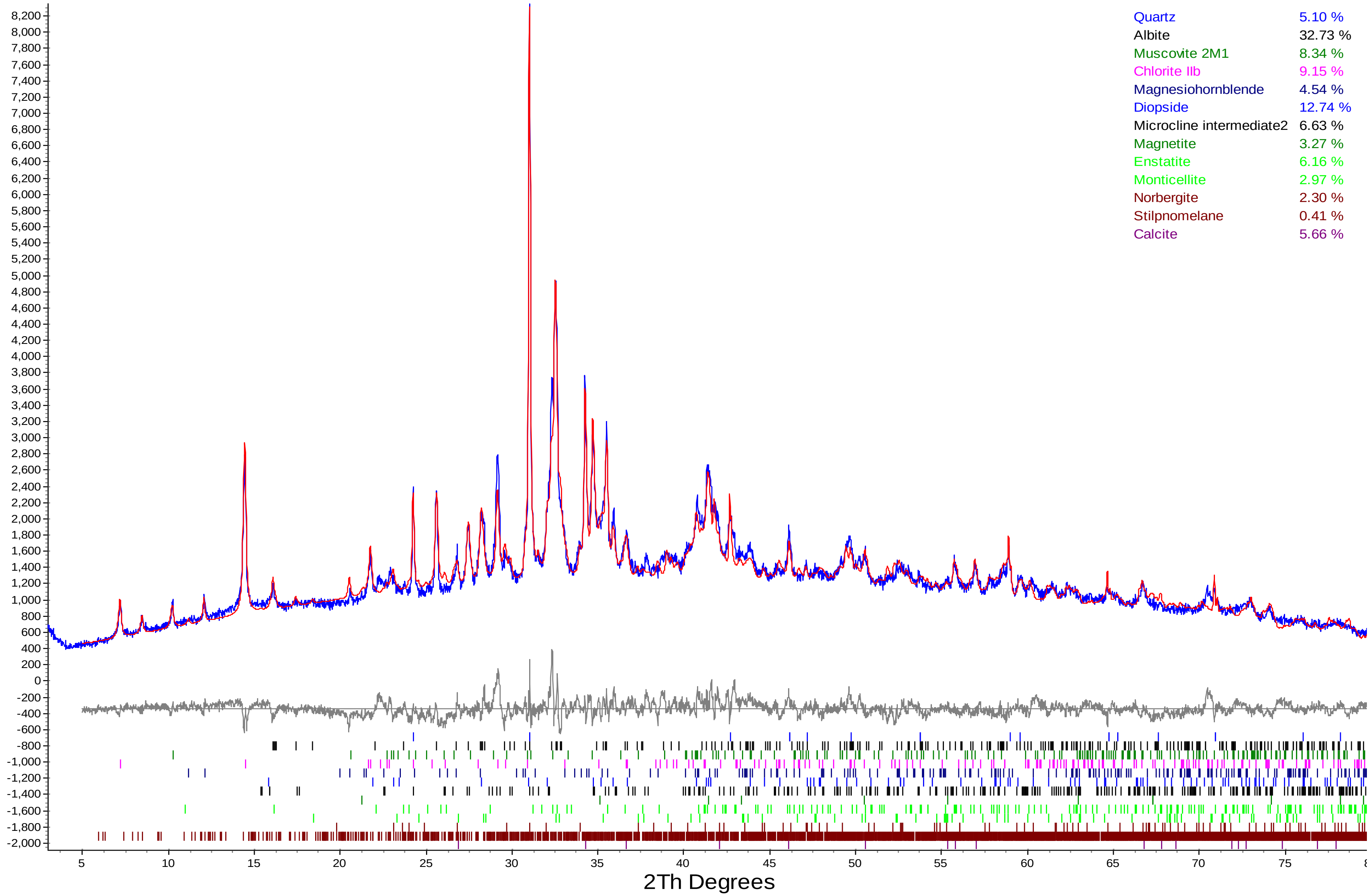


The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

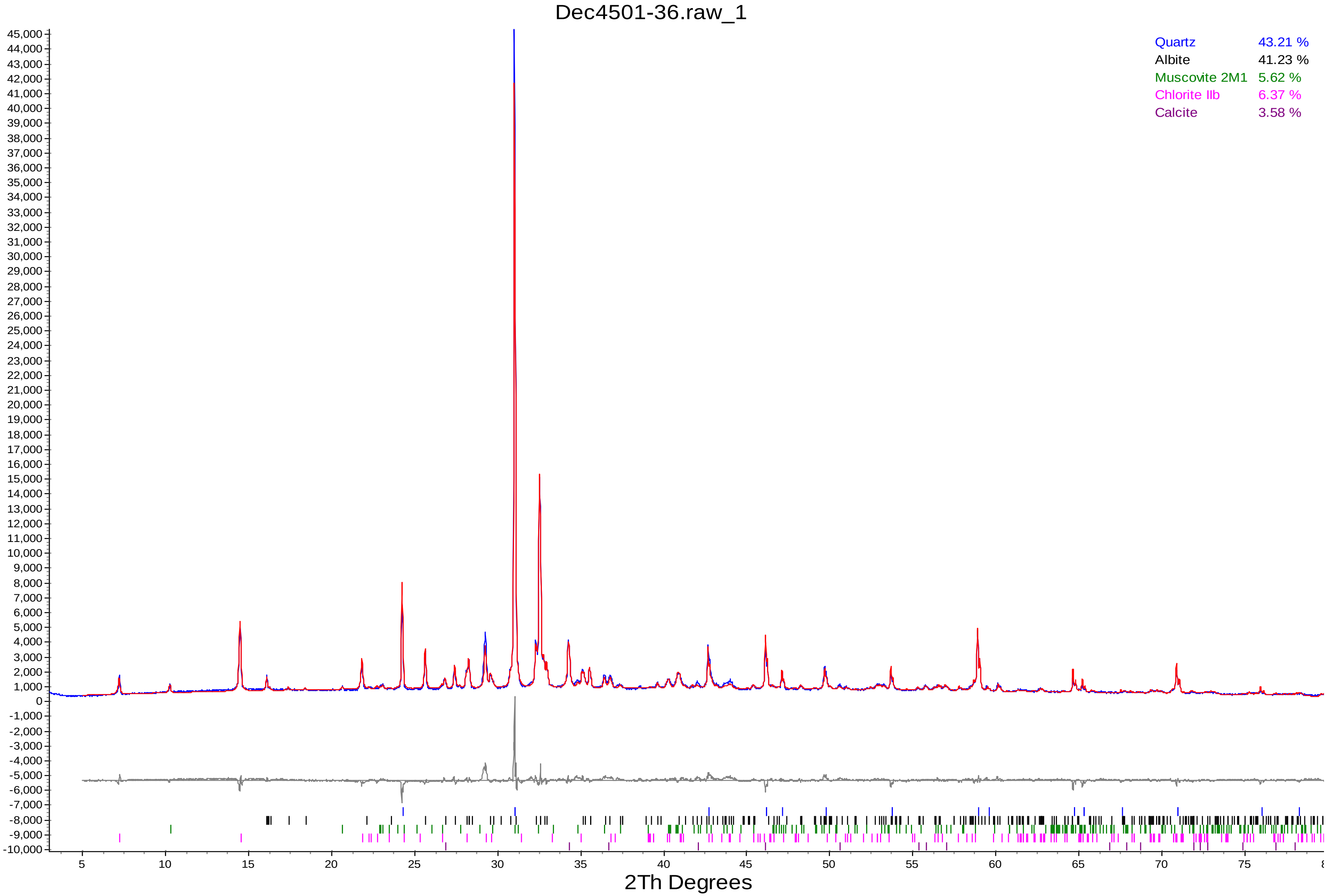

Dec4501-34.raw_1
Quartz 27.63 %
Albite 65.71 %
Muscovite 2M1 2.94 %
Chlorite IIb 1.52 %
Calcite 2.06 %
Dolomite 0.14 %
2Th Degrees

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

Dec4501-35.raw_1

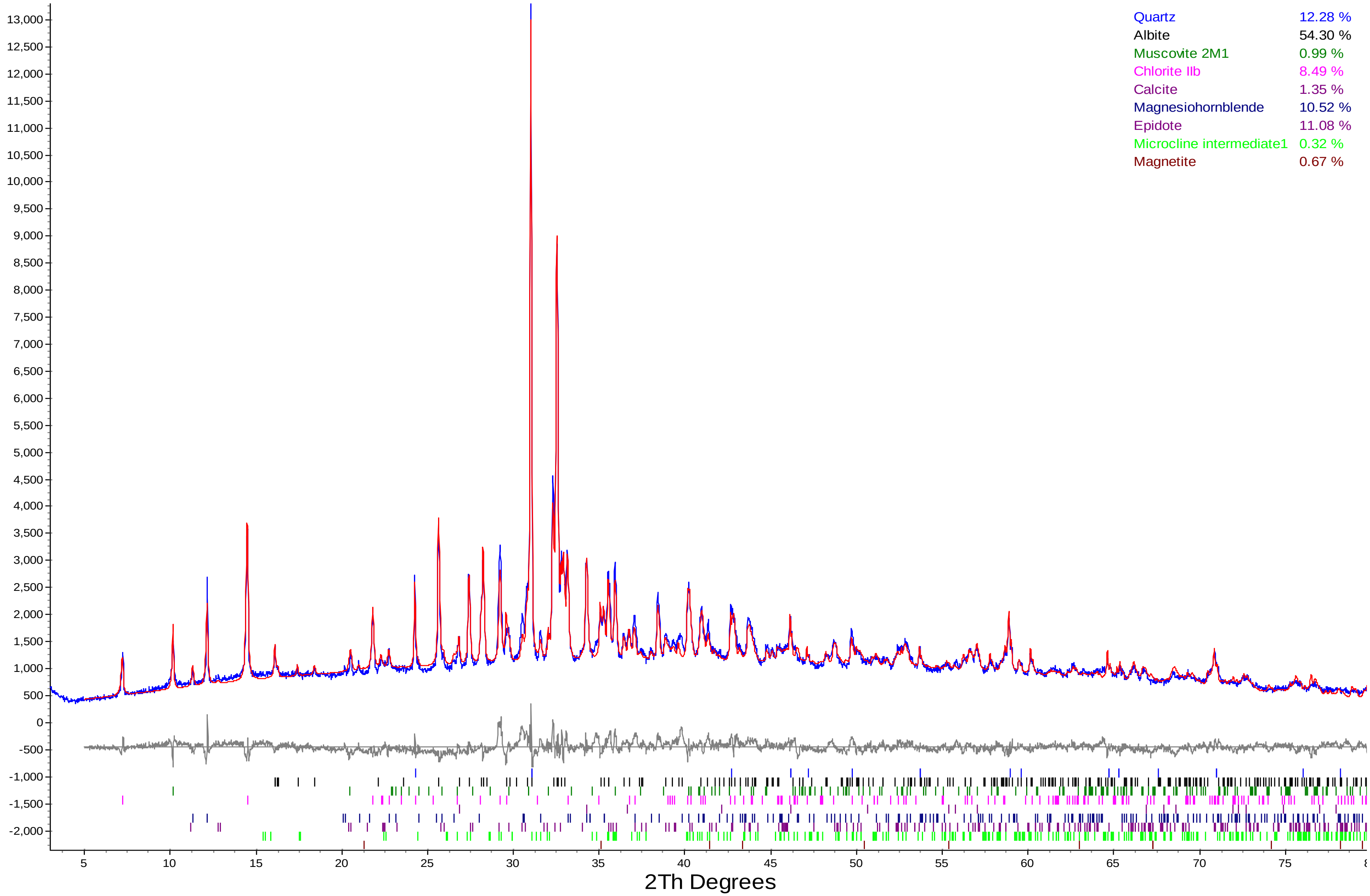


The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0. Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.


Dec4501-36.raw_1
Quartz 43.21 %
Albite 41.23 %
Muscovite 2M1 5.62 %
Chlorite IIb 6.37 %
Calcite 3.58 %
2Th Degrees

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

Dec4501-37.raw_1



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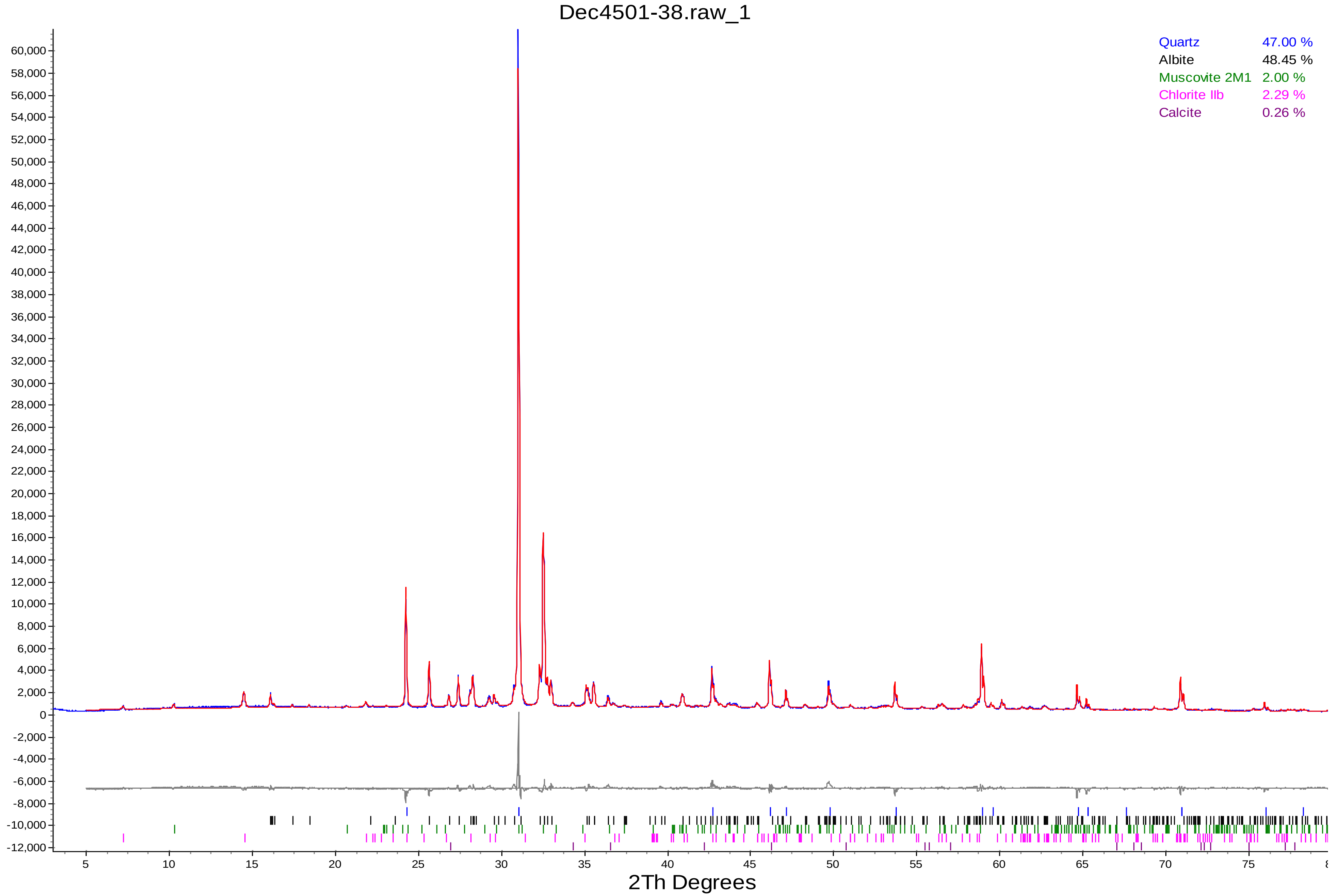
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



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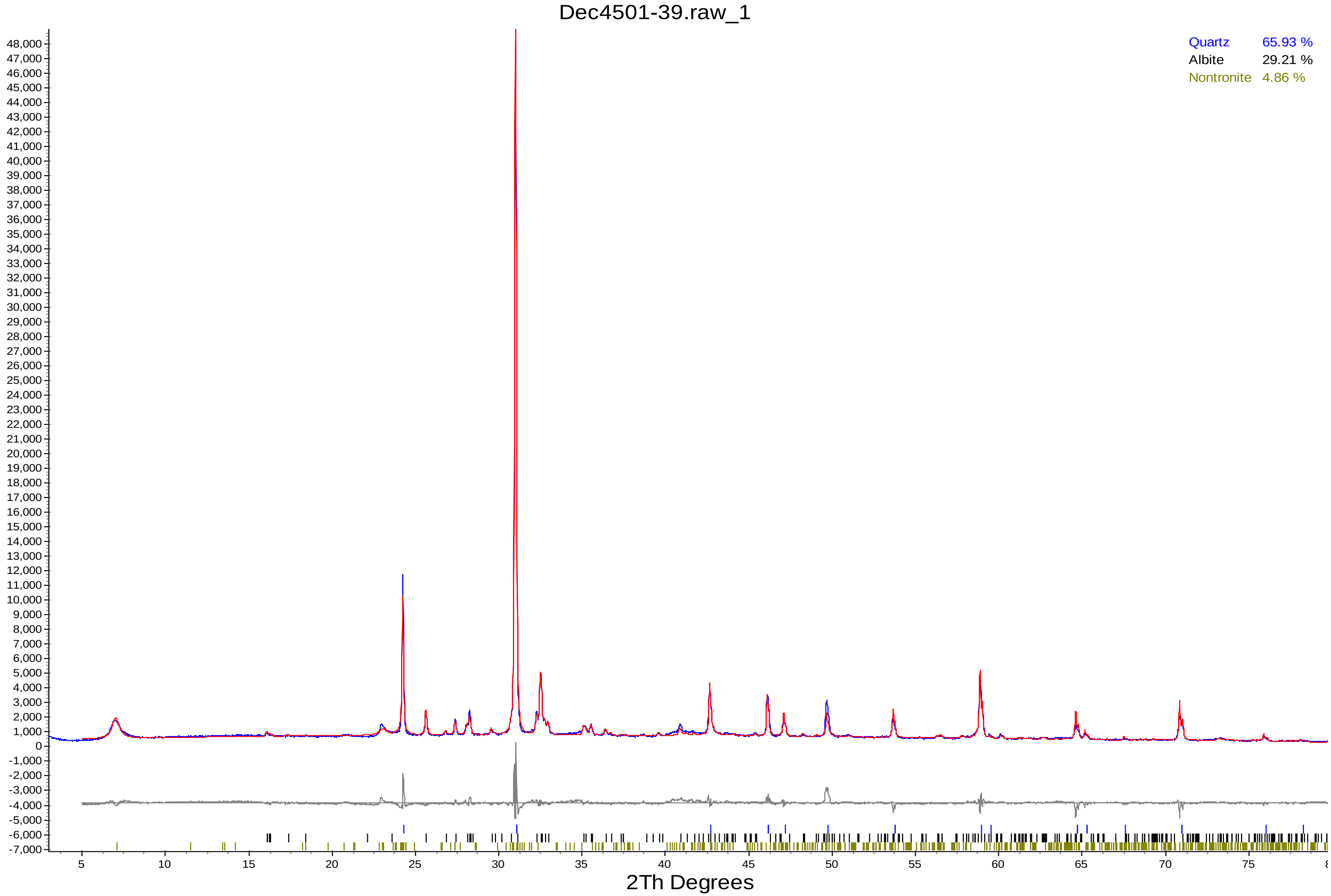
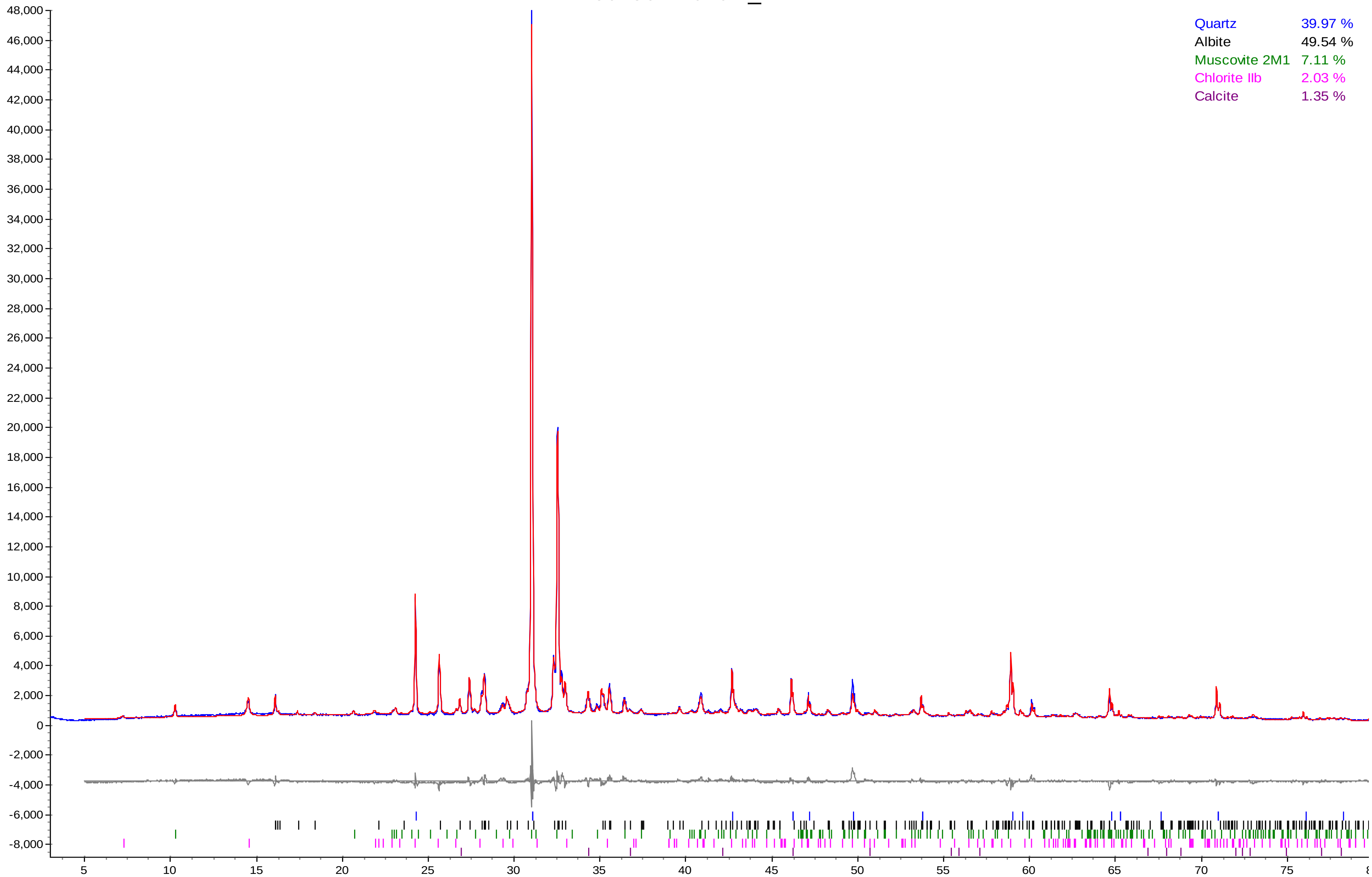
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



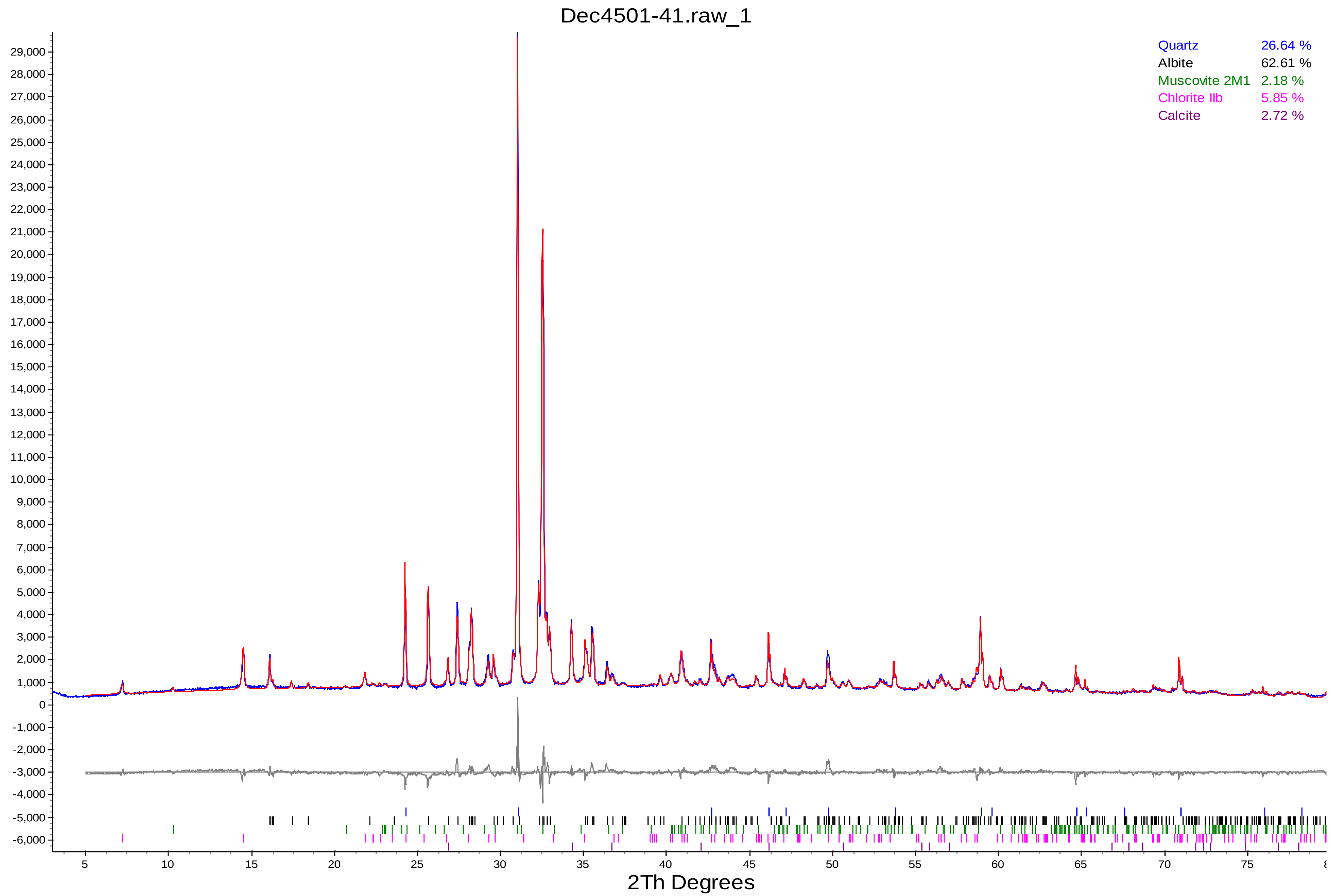
The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0. Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Dec4501-40.raw_1



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

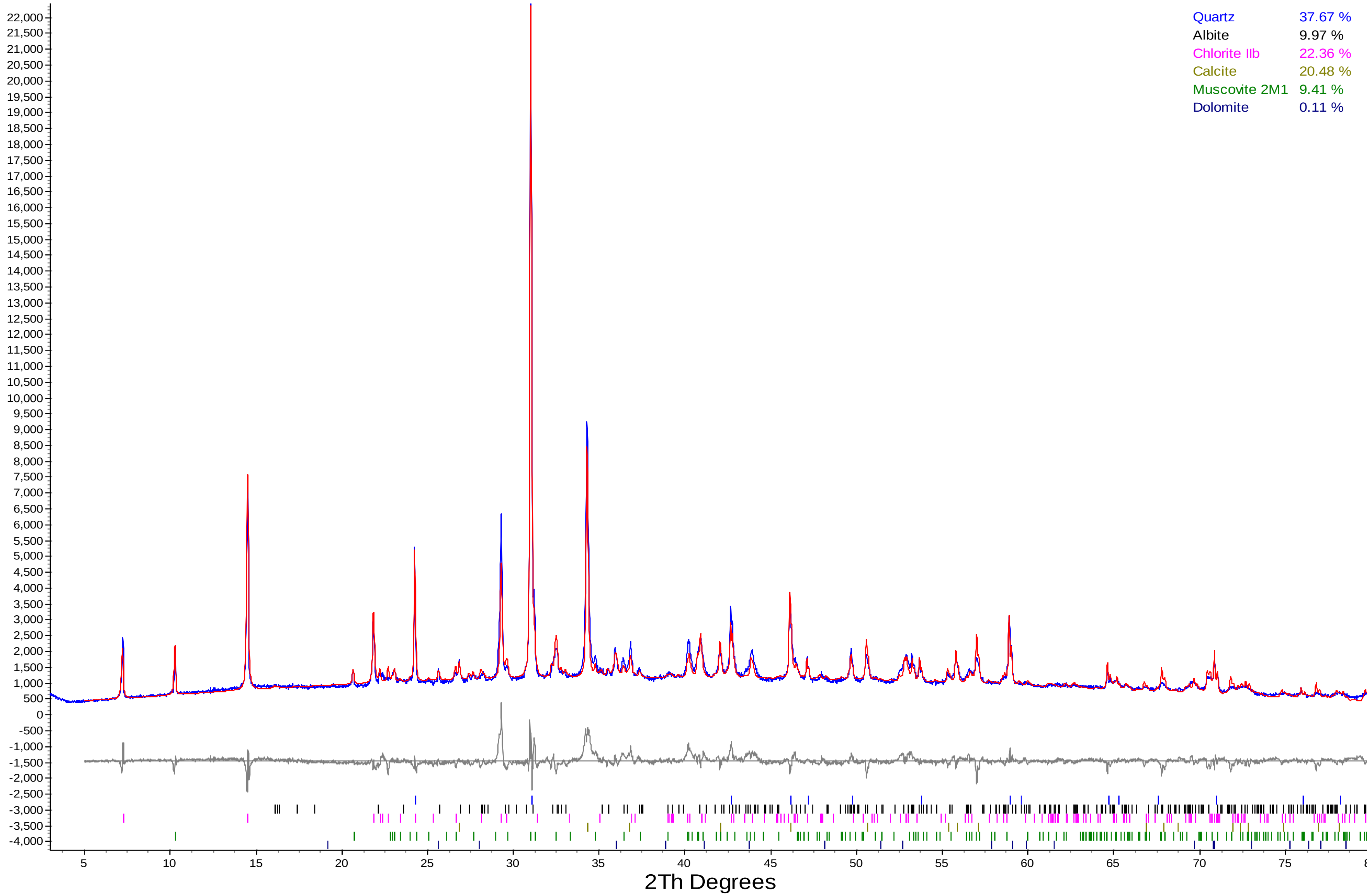
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

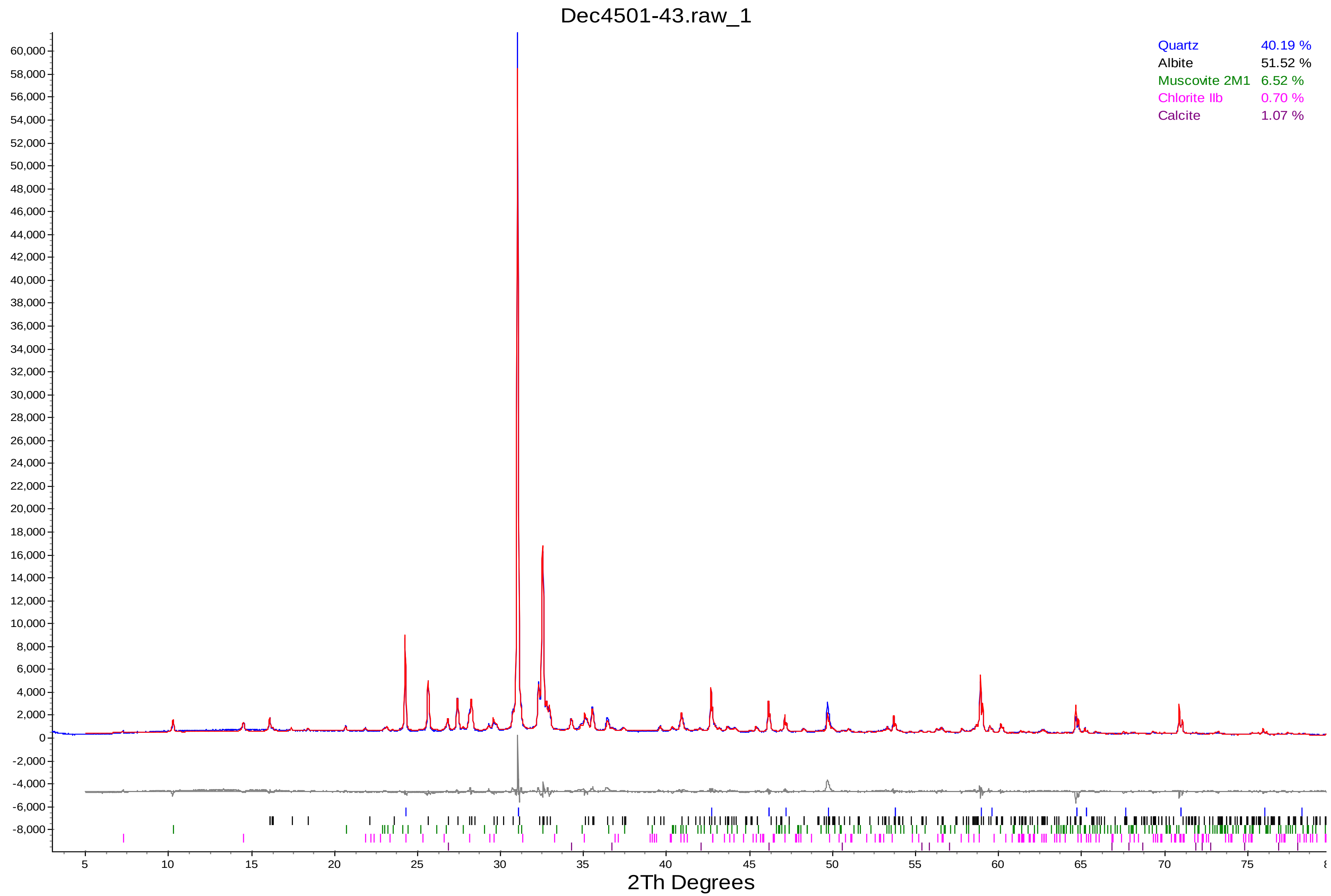
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

Dec4501-42.raw_1



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



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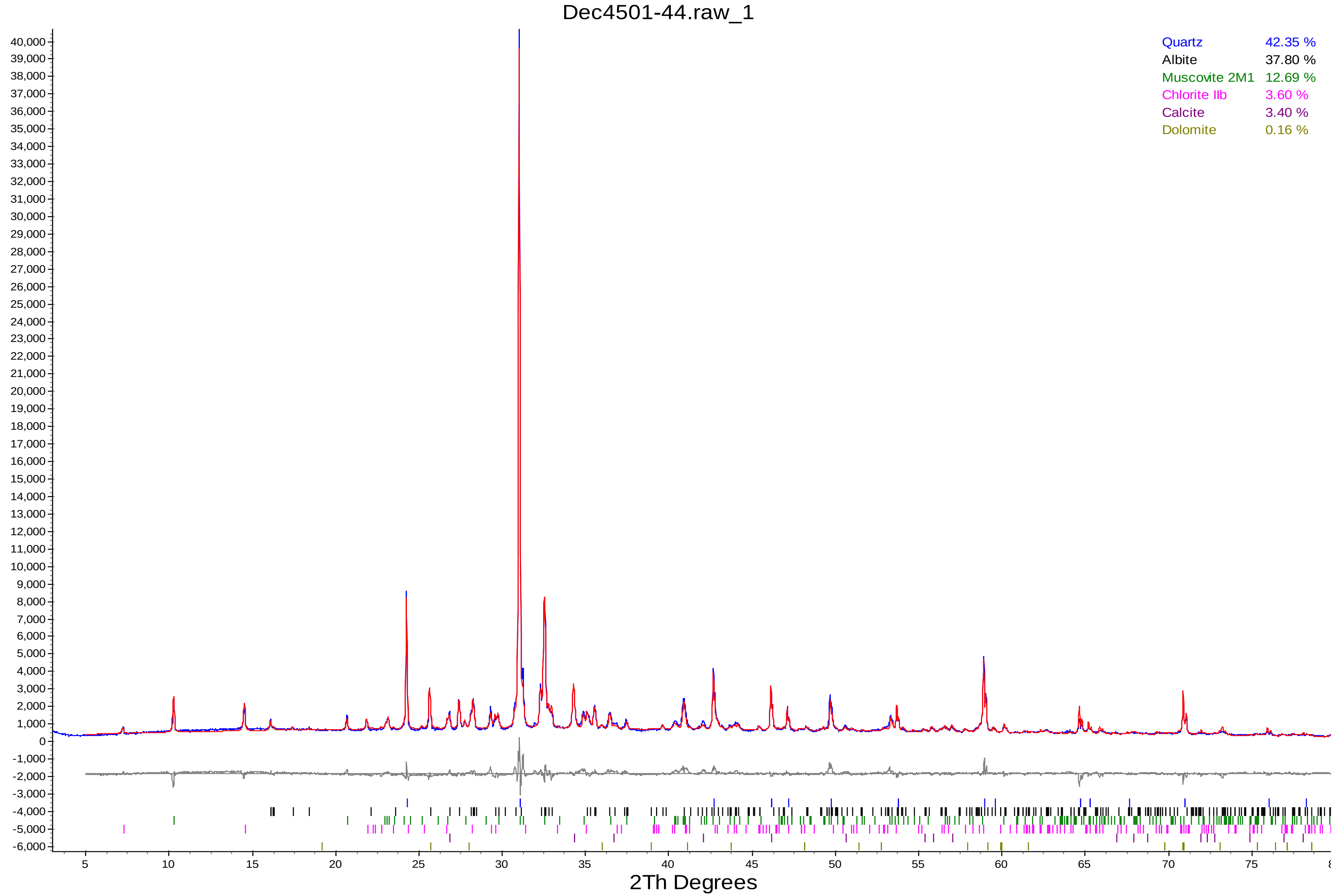
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



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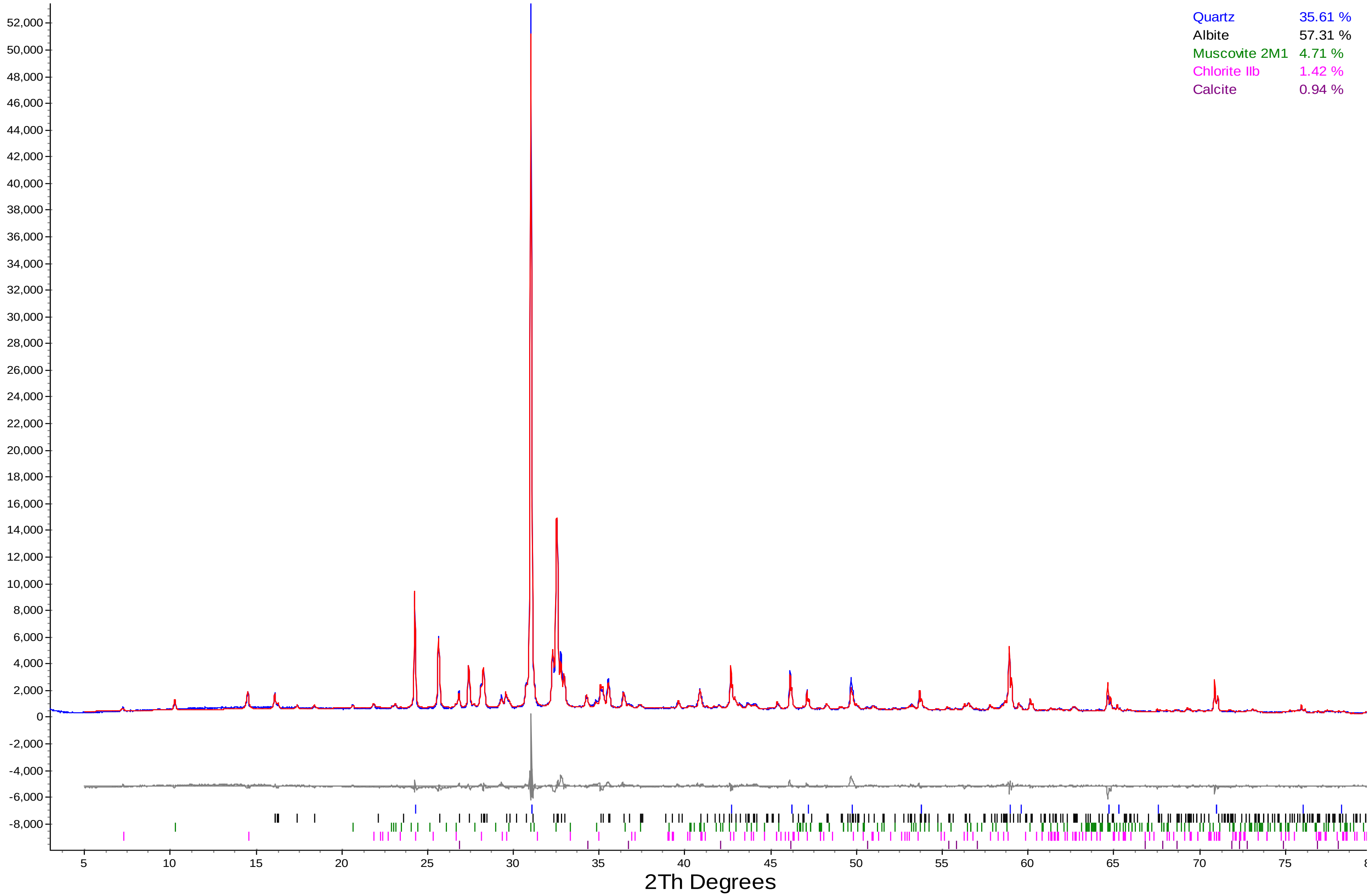
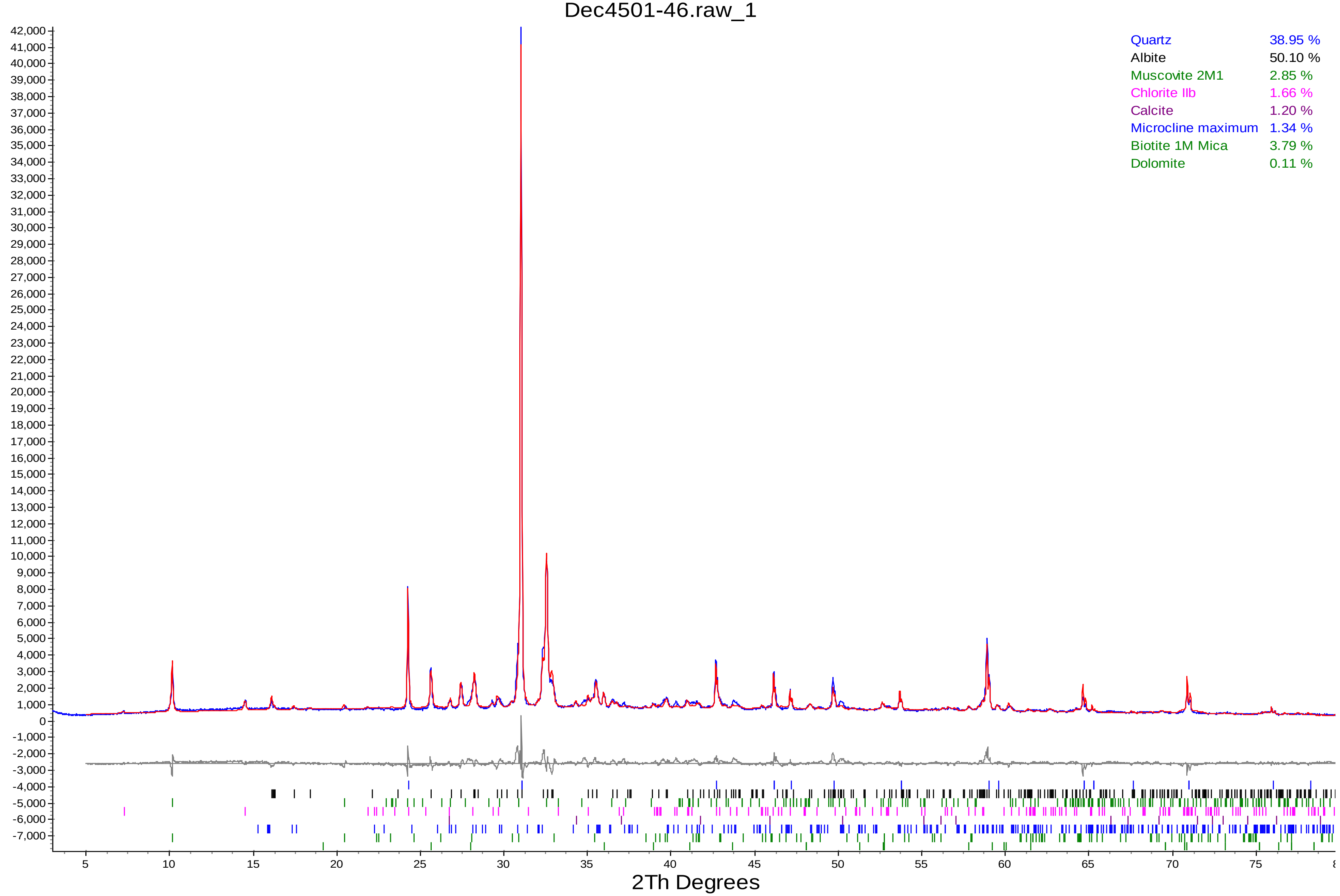
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

Dec4501-45.raw_1



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

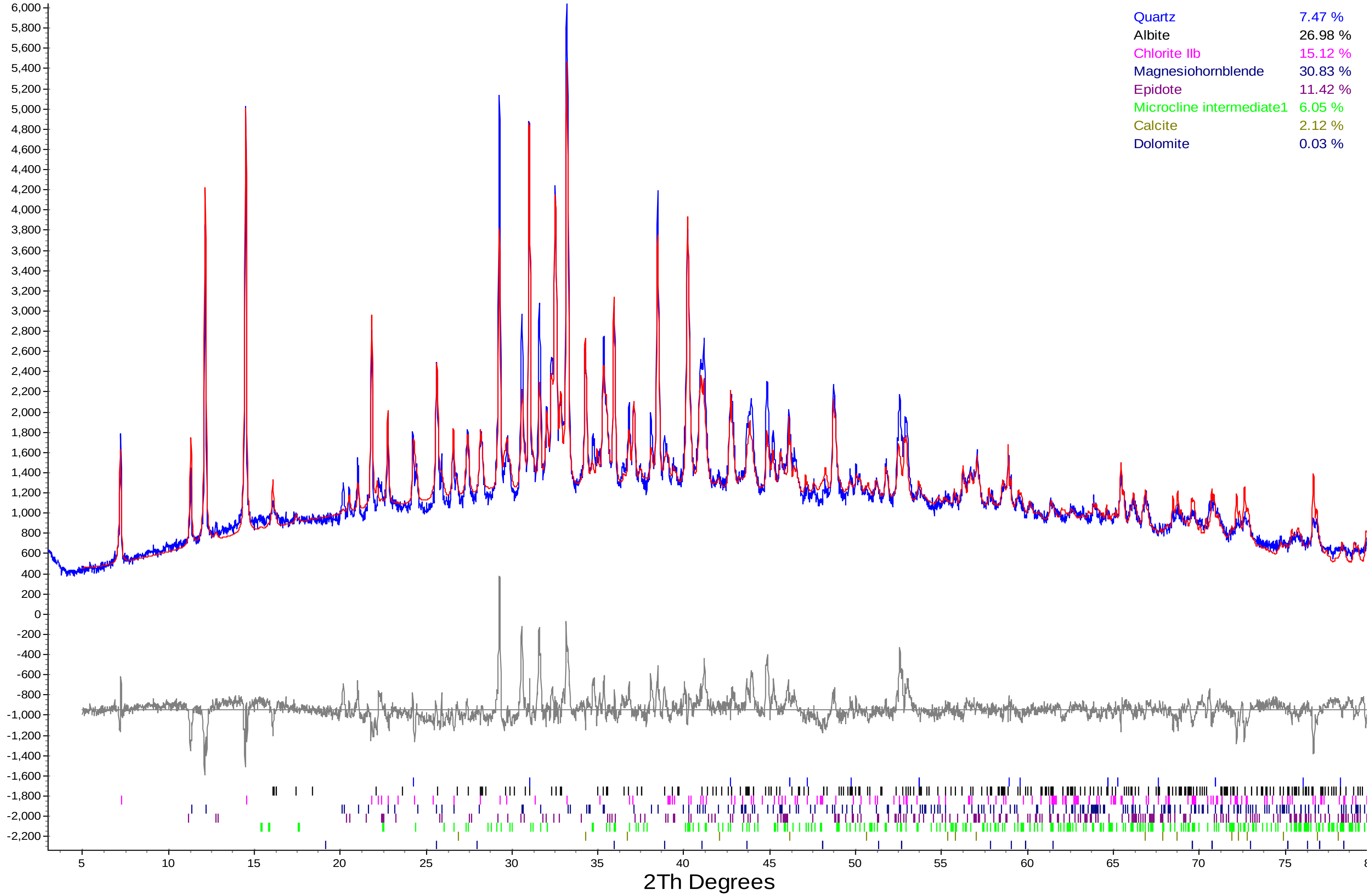
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



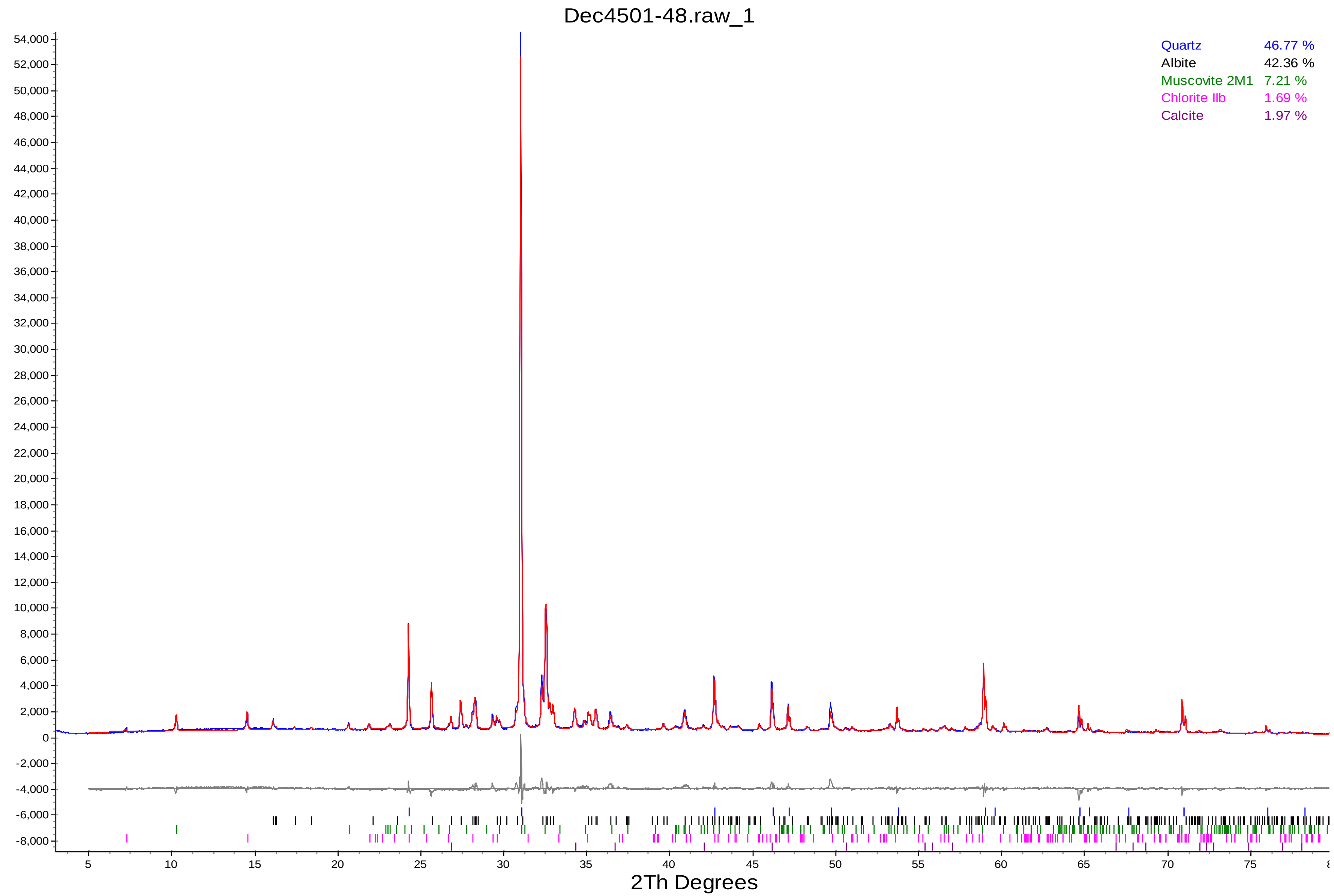
The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0. Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

Dec4501-47.raw_1

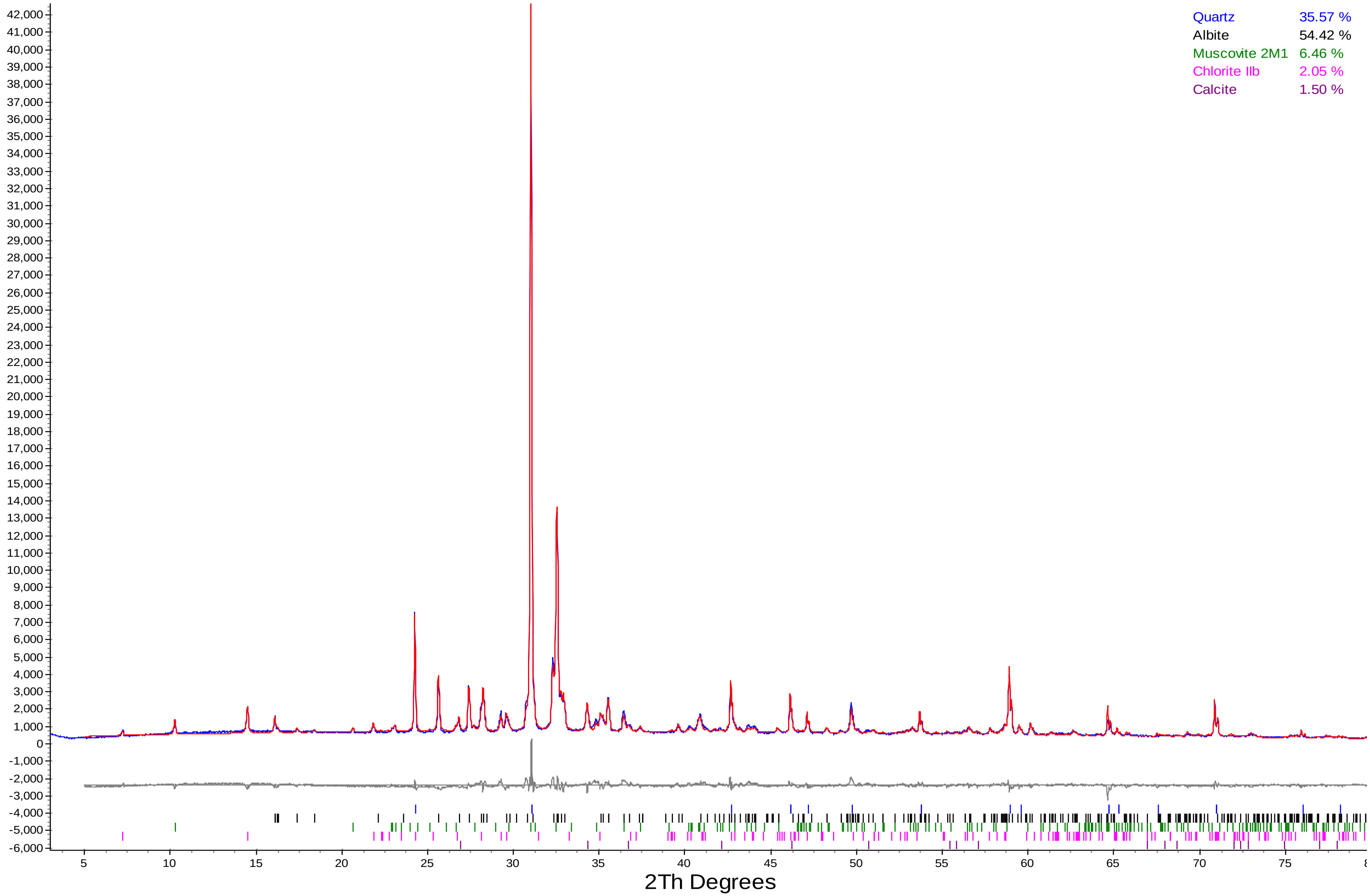


Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



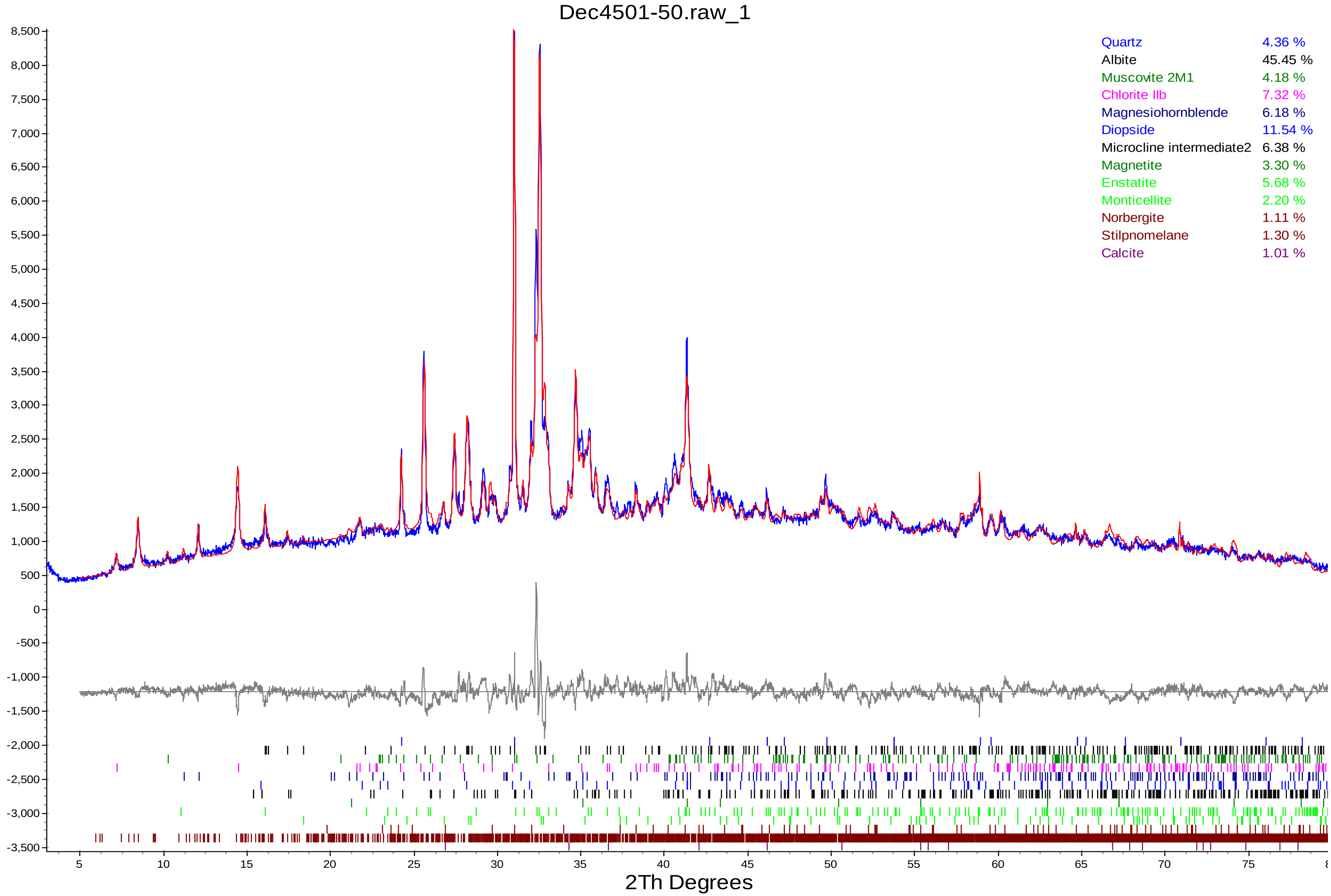
The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0. Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Dec4501-49.raw_1



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



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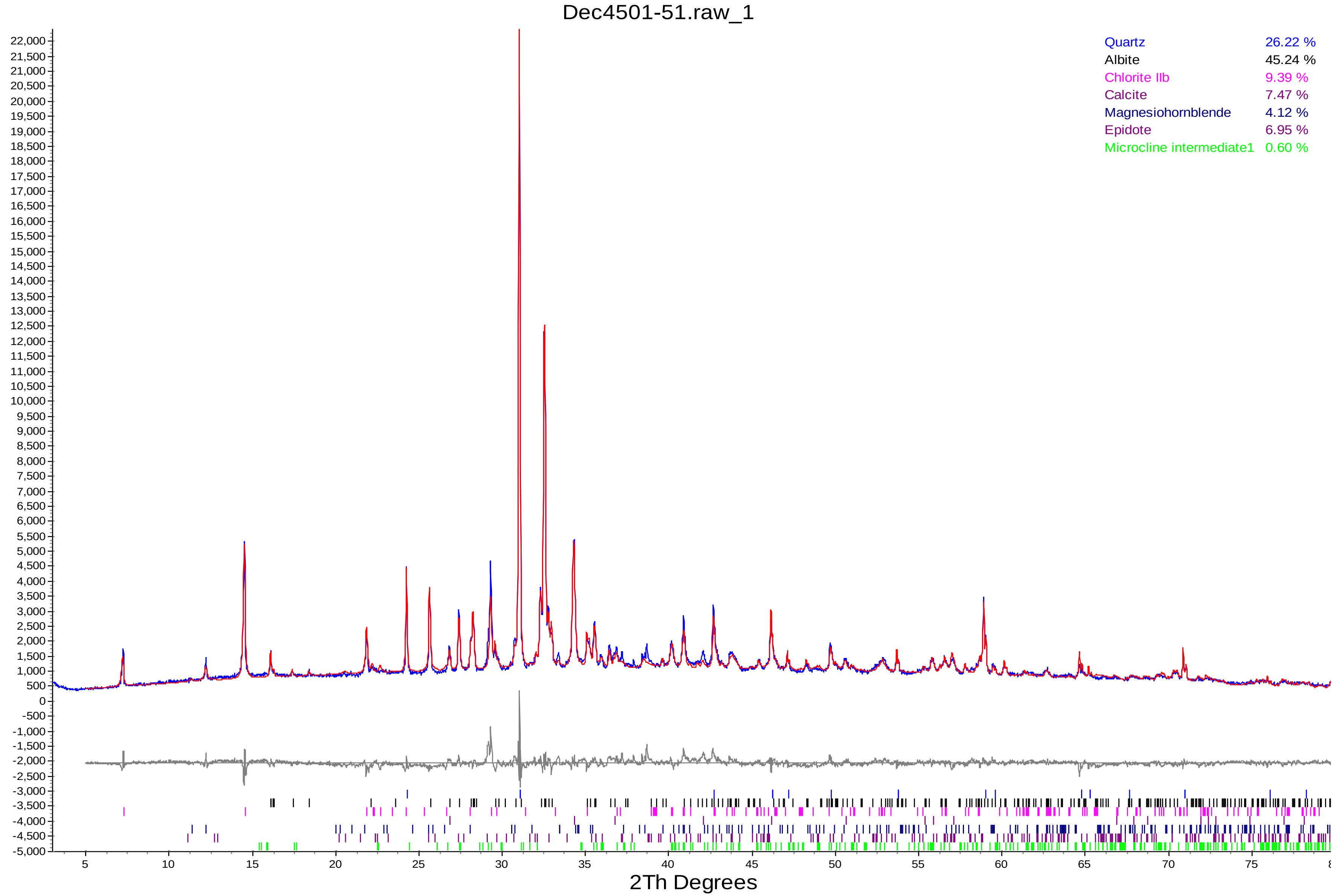
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



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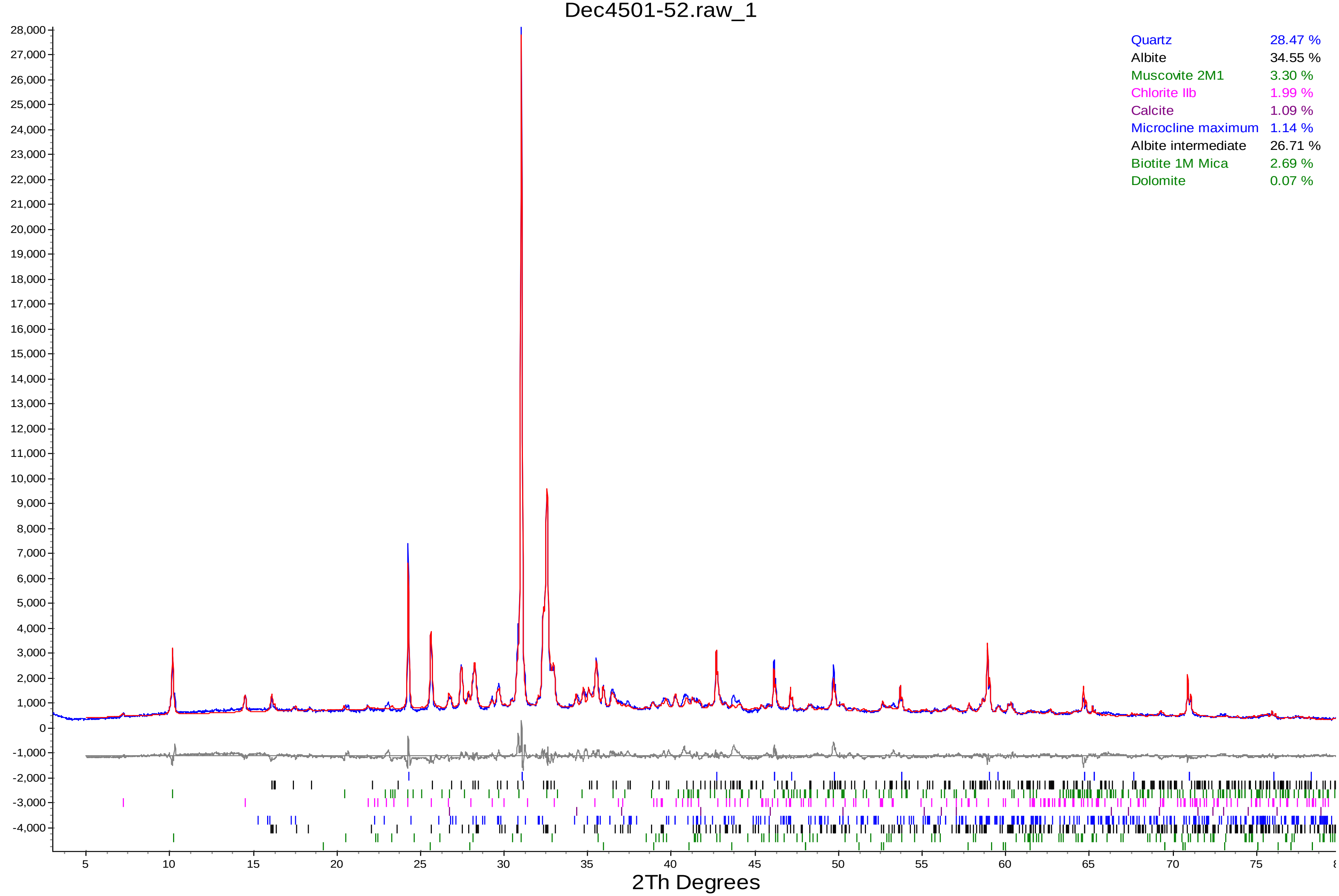
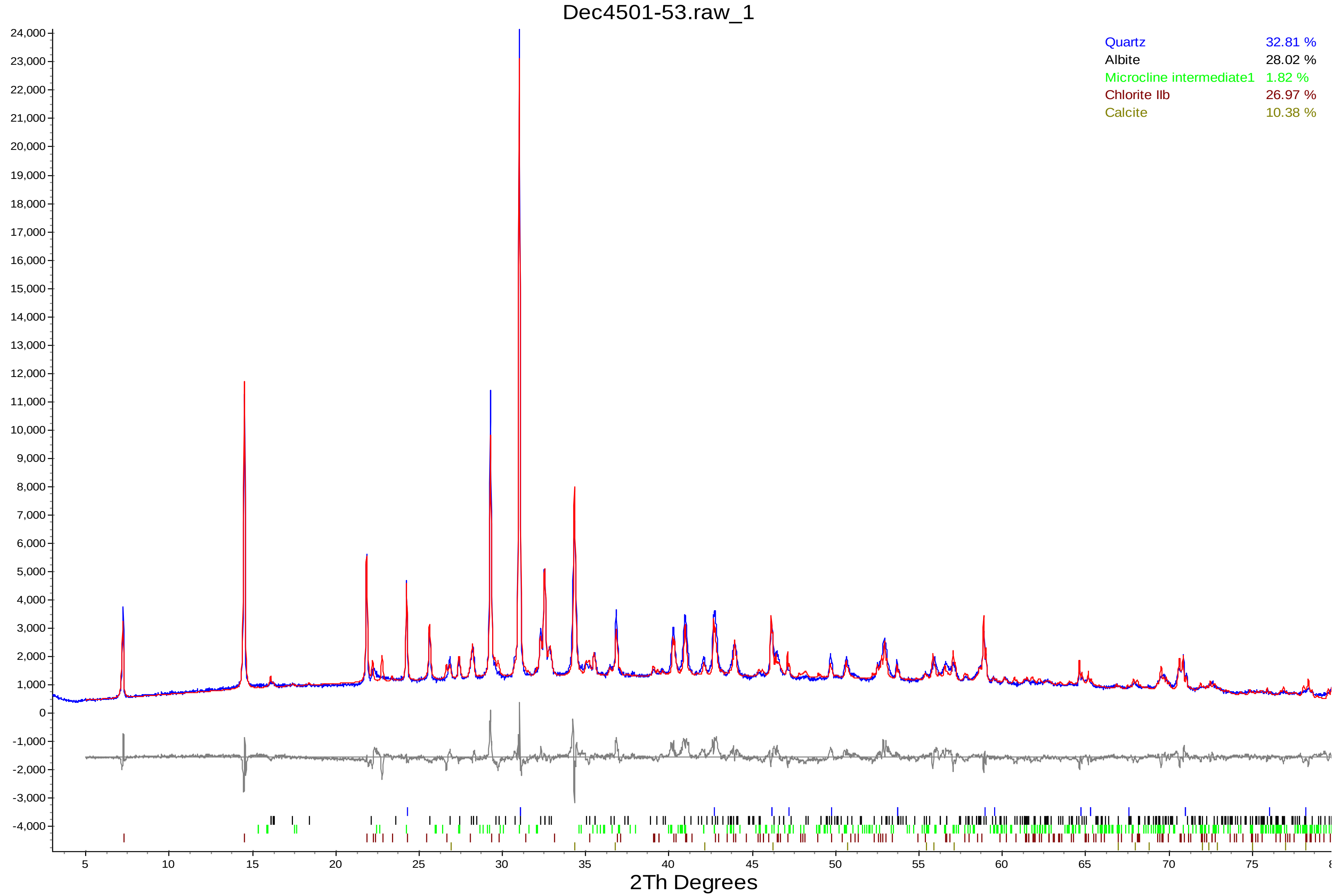

Dec4501-52.raw_1
Quartz 28.47 %
Albite 34.55 %
Muscovite 2M1 3.30 %
Chlorite IIb 1.99 %
Calcite 1.09 %
Microcline maximum 1.14 %
Albite intermediate 26.71 %
Biotite 1M Mica 2.69 %
Dolomite 0.07 %
2Th Degrees

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



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Environmental -Analytical
Custom XRD/MI4501-DEC12
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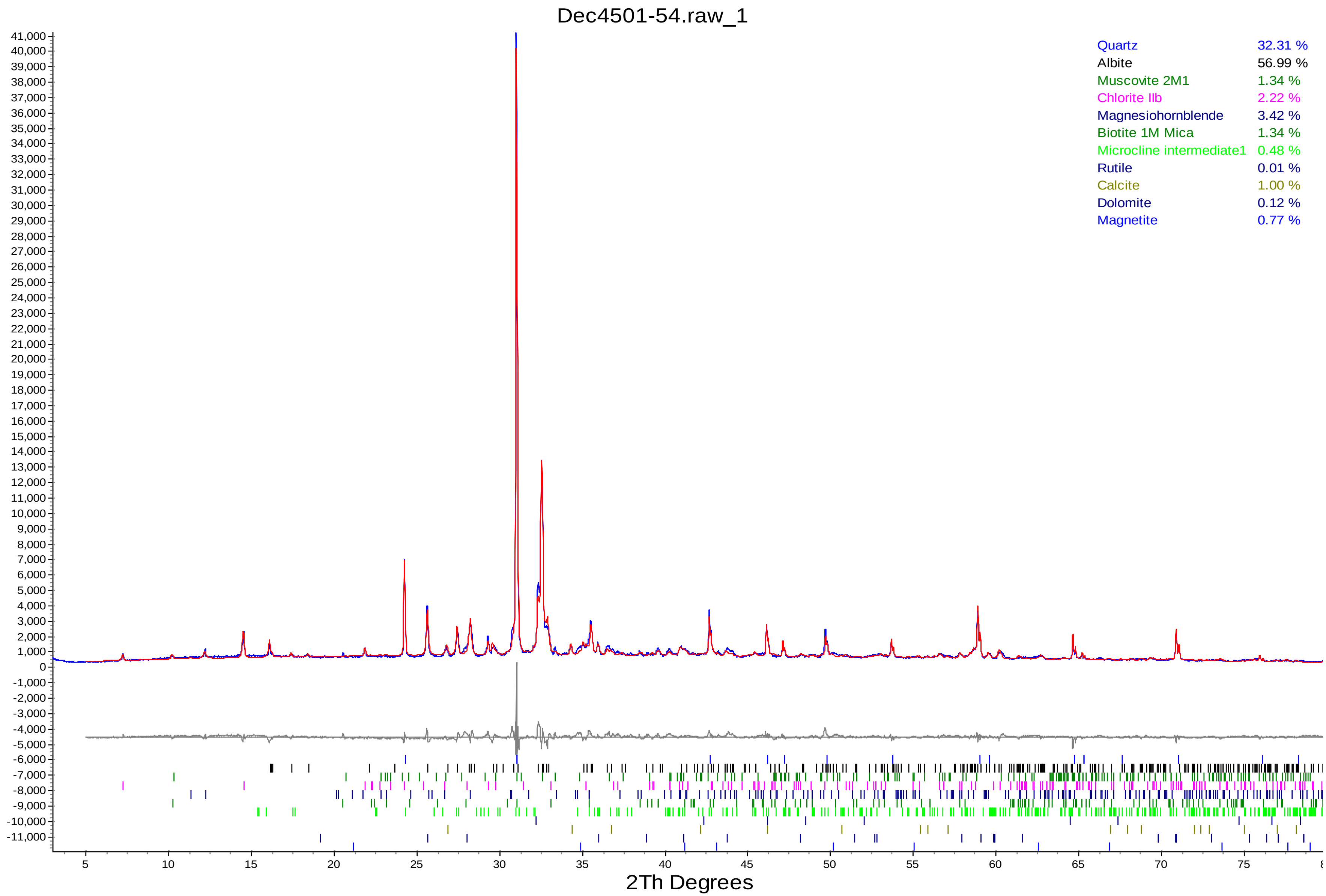

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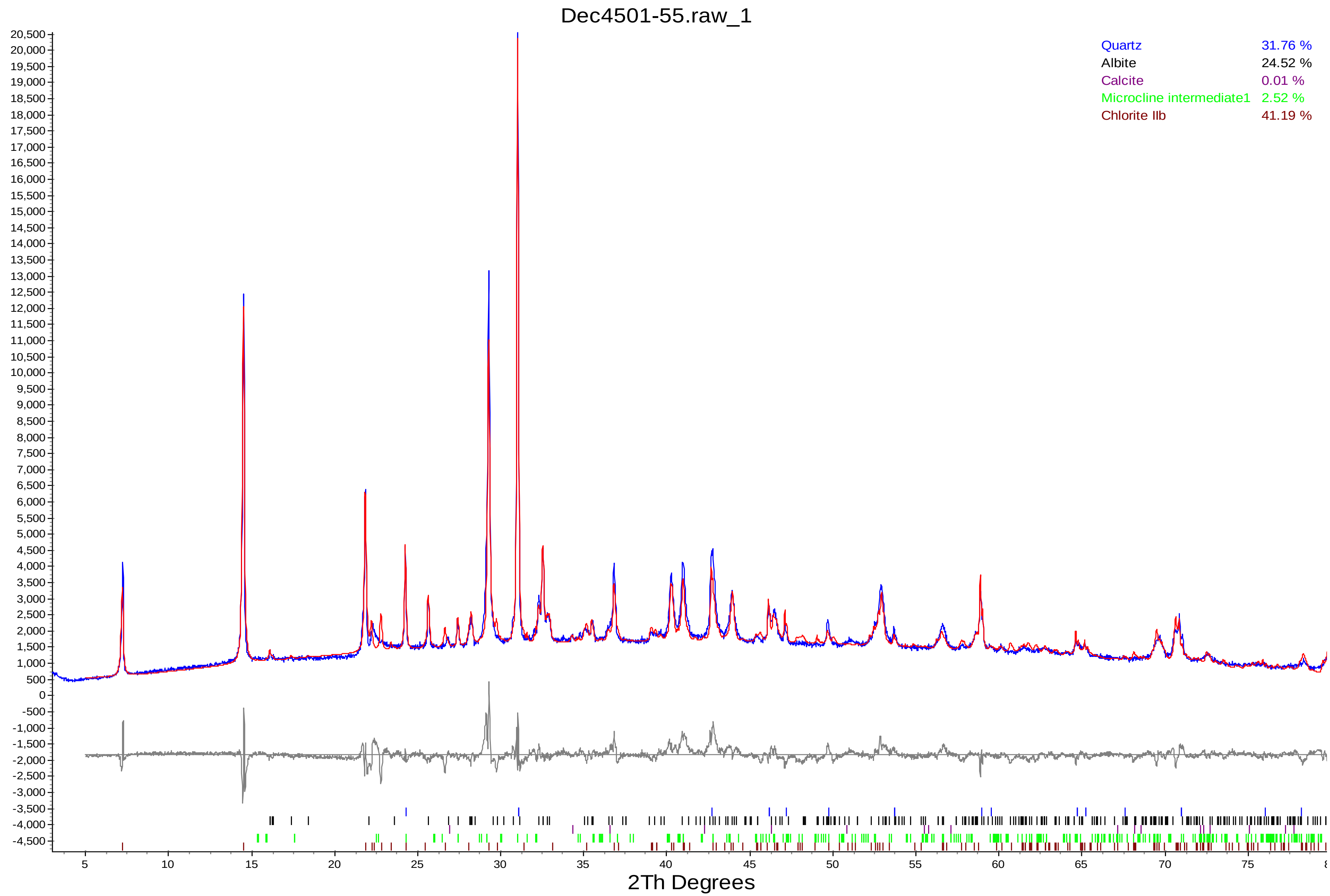
Custom XRD/MI4501-DEC12
01/31/2013



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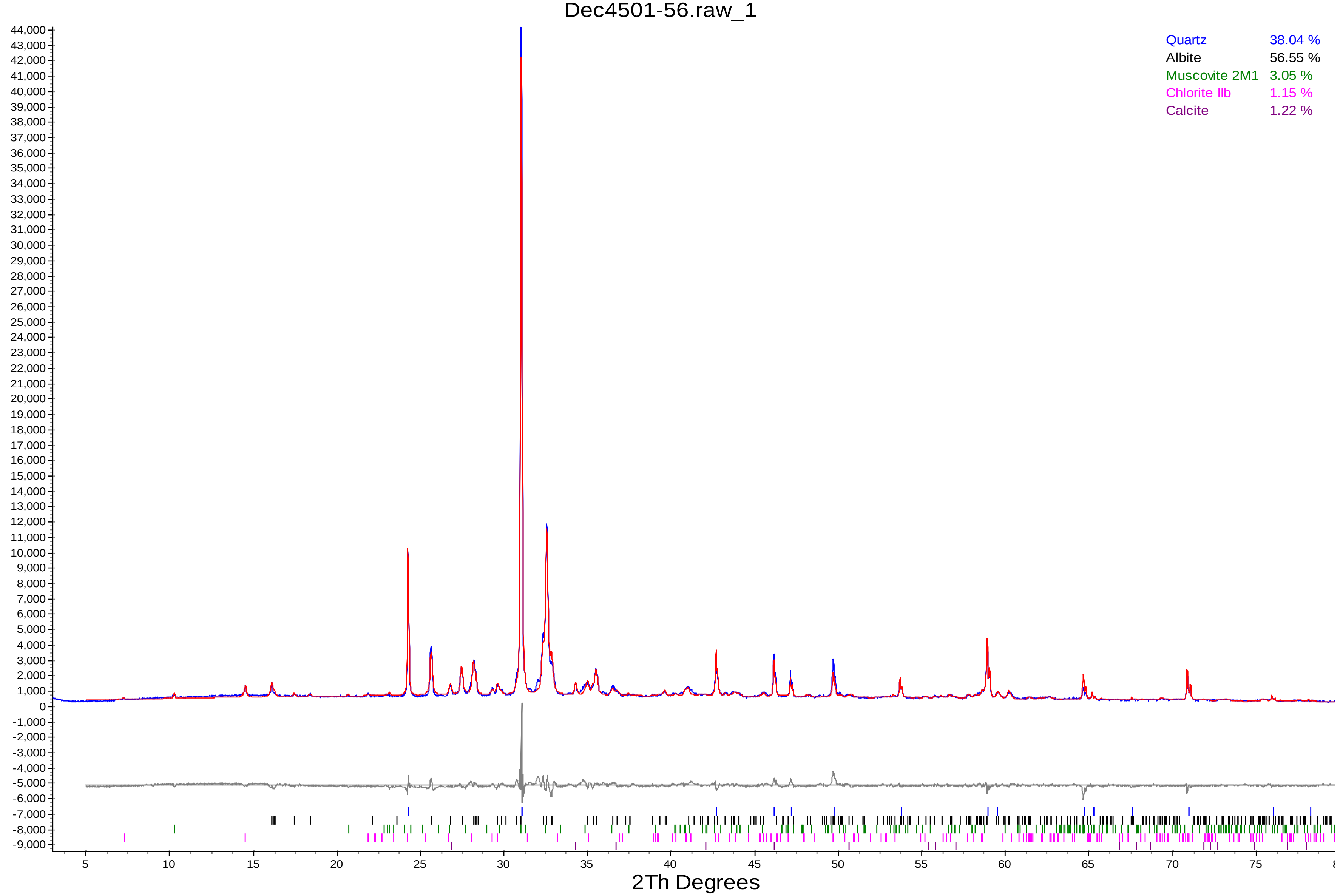
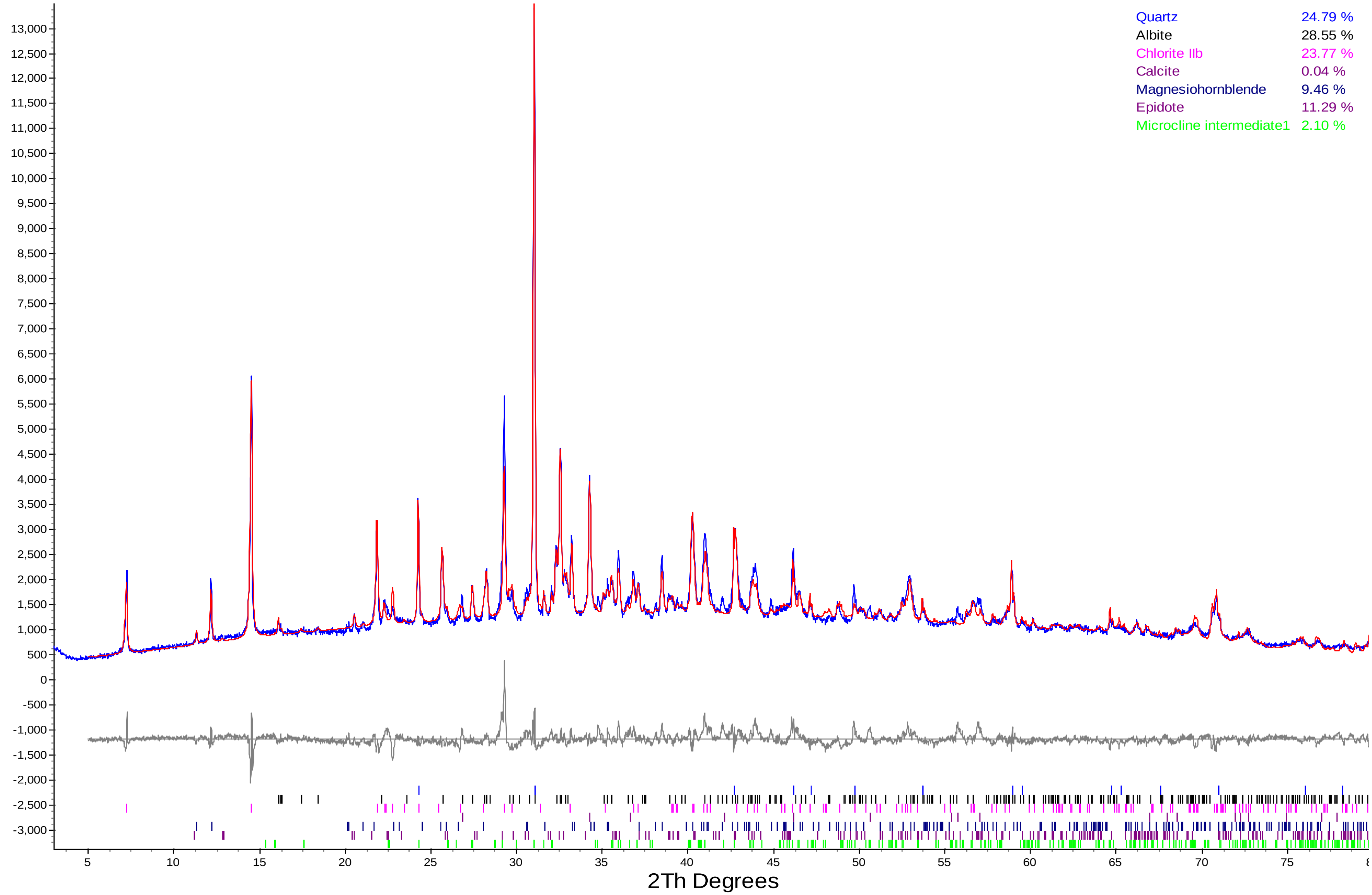
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

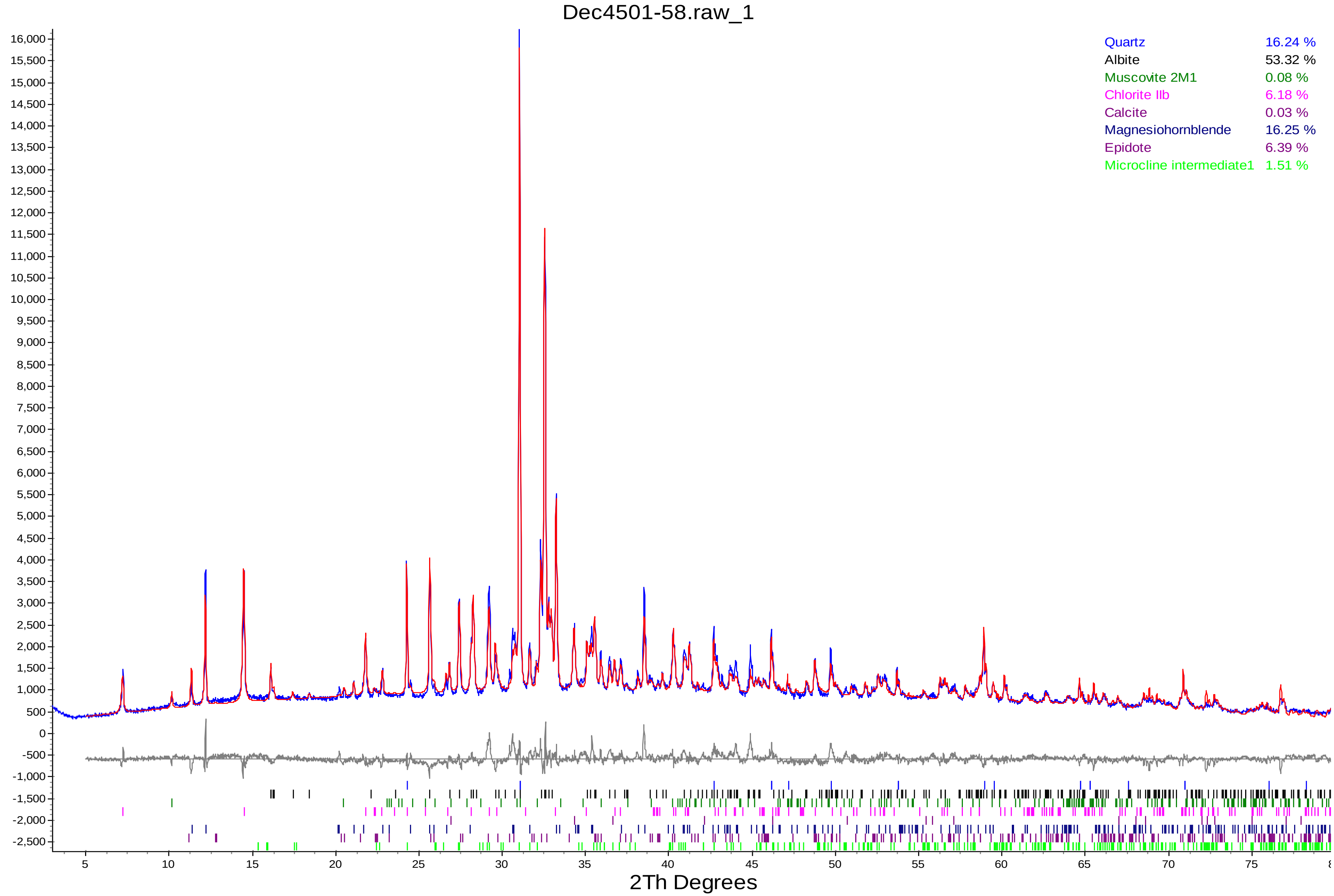
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013

Dec4501-57.raw_1



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



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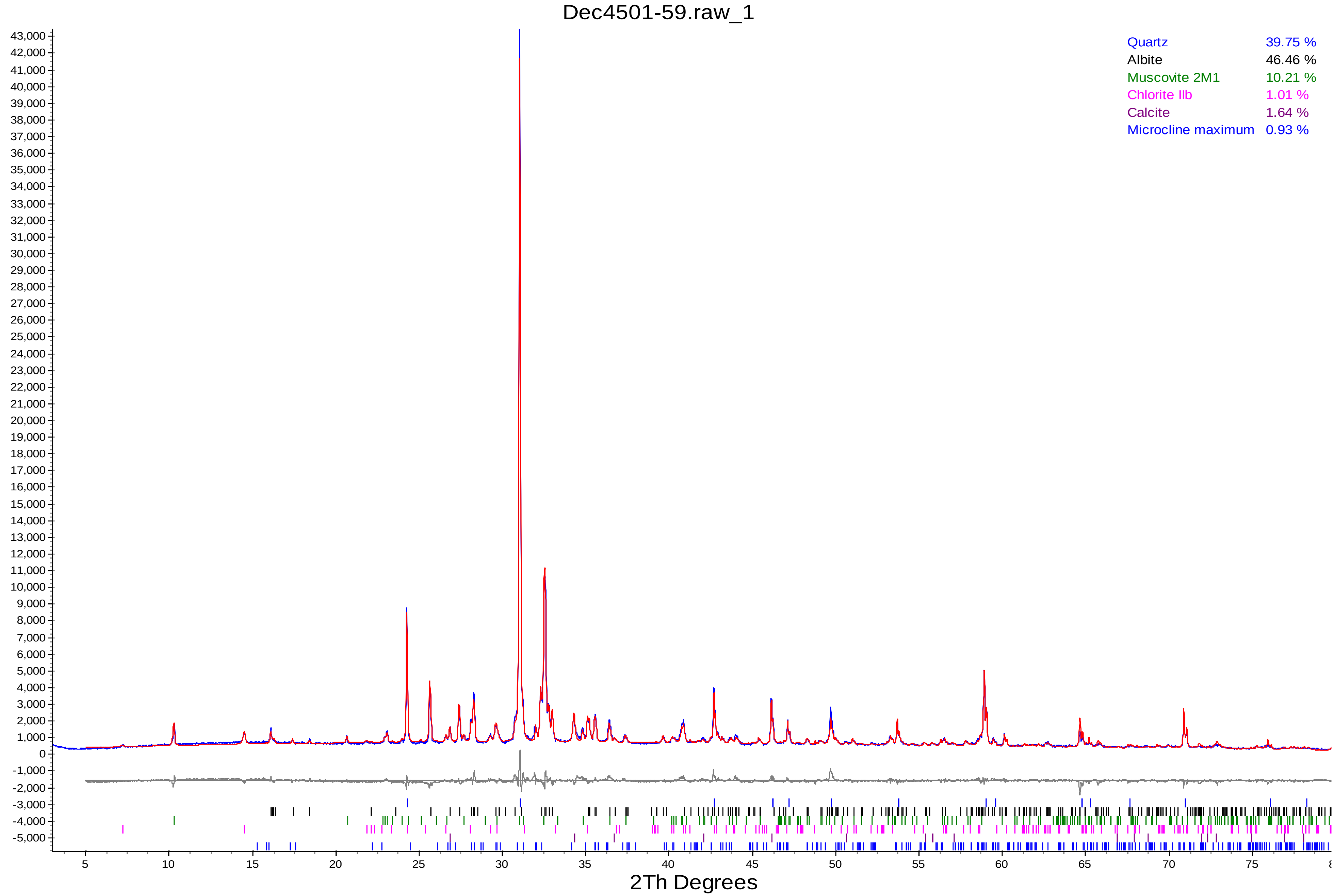
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0.
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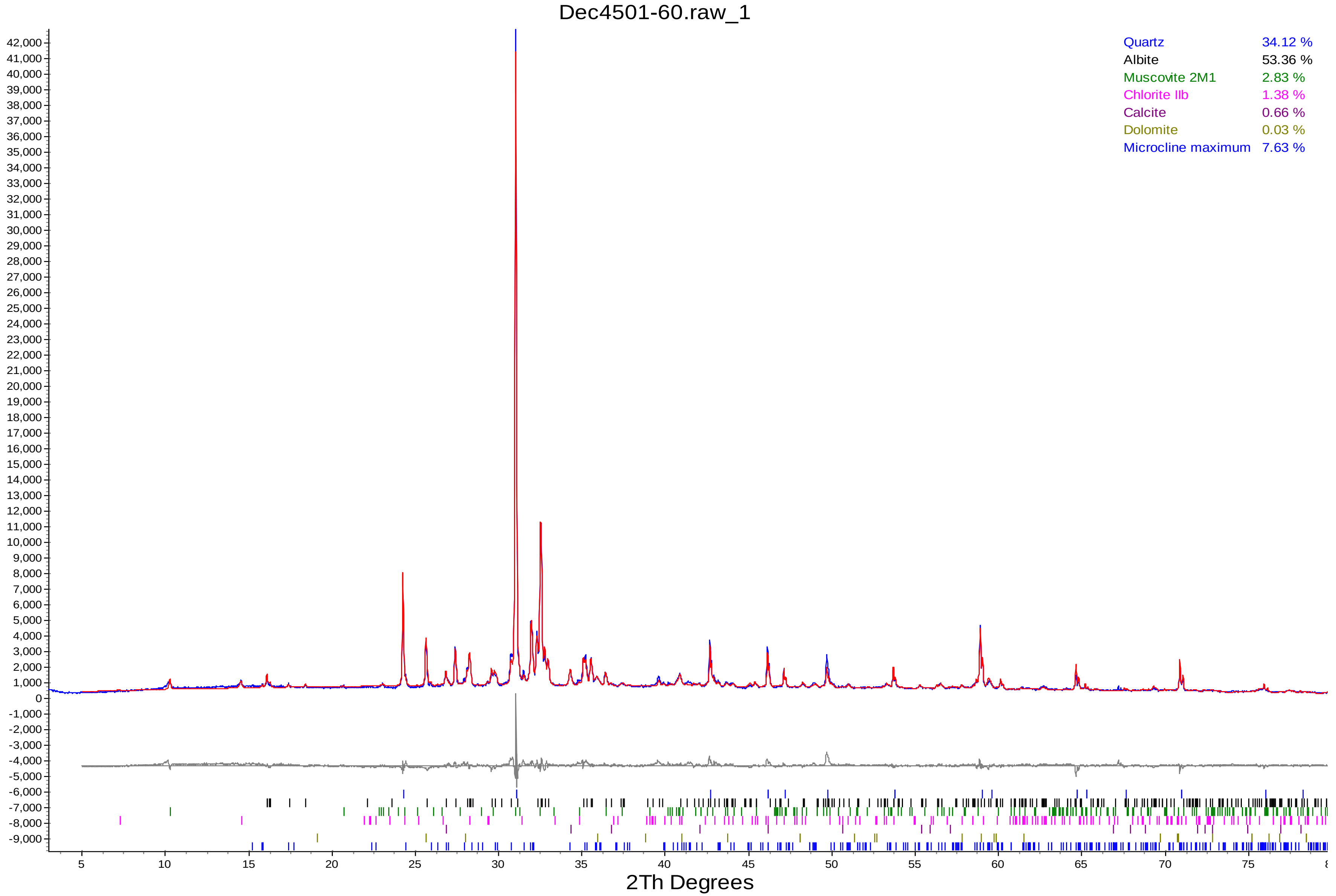
Environmental -Analytical
Custom XRD/MI4501-DEC12
01/31/2013



The Qualitative XRD method (METH # 8-8-1) used by SGS Minerals Services, P.O. Box 4300, 185 Concession Street, Lakefield, Ontario, Canada K0L 2H0. Tel: (705) 652-2000 Fax: (705) 652-6365 Mini-method available upon request.

HUMIDITY CELLS

Côté Gold Project
Geochemical Characterization Report
December 2013
Project #TC121522

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-1
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22-Jan-13	29-Jan-13	05-Feb-13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	818	982	996	995	989	991	987	990	974	988	1000	990	987
pH	units	7.67	7.84	7.73	7.62	7.5	7.31	7.15	7.45	7.25	7.46	7.51	7.21	7.19
Conductivity	µS/cm	69	47	44	38	40	37	35	26	< 2	40	26	27	26
Alkalinity	mg/L as $CaCO_3$	17	25	17	14	22	13	13	13	< 2	32	10	11	11
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	5	< 2	< 2	< 2	< 2
Sulphate	mg/L	1	0.9	0.7	0.4	0.4	0.3	0.3	0.2	0.3	0.4	0.3	0.3	0.3
Chloride	mg/L	7	1.8	0.4	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	0.00014	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.15	0.08	0.08	0.08	0.09	0.08	---	---	---	---	0.09	---	---
Arsenic	mg/L	0.0035	0.0019	0.0021	0.002	0.0018	0.0016	---	---	---	---	0.0014	---	---
Barium	mg/L	0.00131	0.00541	0.00131	0.00119	0.00222	0.00132	---	---	---	---	0.00165	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0203	0.0249	0.0066	0.0042	0.0059	0.0026	---	---	---	---	0.0011	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	4.43	5.3	5.93	4.81	5.19	4.45	---	---	---	---	4.21	---	---
Cadmium	mg/L	0.000004	< 0.000003	0.000013	< 0.000003	< 0.000003	0.000004	---	---	---	---	< 0.000003	---	---
Cobalt	mg/L	0.000071	0.000093	0.000026	0.000073	0.000011	0.0002	---	---	---	---	0.000087	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0011	0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Iron	mg/L	0.006	< 0.003	< 0.003	0.005	0.005	0.023	---	---	---	---	< 0.003	---	---
Potassium	mg/L	2.37	1.57	1.45	1.17	1.13	1.1	---	---	---	---	0.832	---	---
Lithium	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.212	0.319	0.316	0.204	0.215	0.188	---	---	---	---	0.111	---	---
Manganese	mg/L	0.00386	0.00524	0.00764	0.00574	0.00591	0.00524	---	---	---	---	0.00489	---	---
Molybdenum	mg/L	0.00239	0.00416	0.00291	0.00091	0.00054	0.00043	---	---	---	---	0.00021	---	---
Sodium	mg/L	4.33	2.52	1.5	0.65	0.52	0.35	---	---	---	---	0.17	---	---
Nickel	mg/L	0.0002	< 0.0001	0.0001	< 0.0001	< 0.0001	0.0002	---	---	---	---	< 0.0001	---	---
Phosphorus	mg/L	< 0.009	< 0.009	< 0.009	0.009	0.013	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.0001	0.00014	0.00004	0.00002	< 0.00002	0.00003	---	---	---	---	0.00002	---	---
Antimony	mg/L	0.0007	0.0009	0.001	0.0005	0.0004	0.0004	---	---	---	---	0.0002	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	1.06	0.57	0.75	0.58	0.61	0.6	---	---	---	---	0.5	---	---
Tin	mg/L	0.00293	0.00243	0.00177	0.00085	0.00069	0.00048	---	---	---	---	0.00024	---	---
Strontium	mg/L	0.0173	0.0188	0.0192	0.0128	0.0141	0.0133	---	---	---	---	0.0086	---	---
Titanium	mg/L	0.0004	0.0001	0.0001	0.0001	< 0.0001	0.0002	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	0.000011	0.00005	< 0.000004	< 0.000004	< 0.000004	0.000038	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.00046	0.00737	0.00783	0.00573	0.00506	0.00414	---	---	---	---	0.00192	---	---
Vanadium	mg/L	0.00091	0.00052	0.00064	0.00048	0.00056	0.00038	---	---	---	---	0.00033	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000138	0.000153	0.000062	0.000048	0.000029	0.000043	---	---	---	---	0.000016	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-1
Weight:	1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19-Mar-13	26-Mar-13	02-Apr-13	09-Apr-13	16-Apr-13	23-Apr-13	30-Apr-13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	998	989	983	992	986	995	980	980	988	998	963	985	999
pH	units	7.22	7.37	7.04	7.3	7.38	7.71	7.48	7.53	7.34	7.5	7.61	7.32	7.23
Conductivity	µS/cm	24	27	28	25	26	35	27	24	25	28	94	27	24
Alkalinity	mg/L as $CaCO_3$	10	11	11	11	11	14	11	10	11	11	12	11	11
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.3	0.3	0.3	0.5	0.2	0.3	< 0.2	0.2	0.3	0.3	0.2	0.2	< 0.2
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.07	---	---	---	---	0.06	---	---	---	---	0.06
Arsenic	mg/L	---	---	0.0009	---	---	---	---	0.0008	---	---	---	---	0.0007
Barium	mg/L	---	---	0.00153	---	---	---	---	0.00153	---	---	---	---	0.00168
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0022	---	---	---	---	0.0009	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	4.13	---	---	---	---	4.2	---	---	---	---	4.12
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.000098	---	---	---	---	0.000022	---	---	---	---	0.000004
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.695	---	---	---	---	0.663	---	---	---	---	0.623
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.076	---	---	---	---	0.052	---	---	---	---	0.049
Manganese	mg/L	---	---	0.00488	---	---	---	---	0.00566	---	---	---	---	0.00555
Molybdenum	mg/L	---	---	0.00015	---	---	---	---	0.00009	---	---	---	---	0.00014
Sodium	mg/L	---	---	0.12	---	---	---	---	0.08	---	---	---	---	0.09
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	< 0.009
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	0.00003
Antimony	mg/L	---	---	< 0.0002	---	---	---	---	< 0.0002	---	---	---	---	0.0002
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.45	---	---	---	---	0.39	---	---	---	---	0.39
Tin	mg/L	---	---	0.00027	---	---	---	---	0.0002	---	---	---	---	0.00022
Strontium	mg/L	---	---	0.0069	---	---	---	---	0.0059	---	---	---	---	0.0051
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.00173	---	---	---	---	0.00111	---	---	---	---	0.00116
Vanadium	mg/L	---	---	0.00025	---	---	---	---	0.00019	---	---	---	---	0.00017
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000014	---	---	---	---	0.000015	---	---	---	---	0.000012
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-1
Weight:	1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	992	992	999	988	1011	995	965	991	1001
pH	units	7.18	7.38	7.5	7.66	7.4	7.46	7.5	7.33	7.52
Conductivity	µS/cm	25	27	22	22	24	22	23	21	22
Alkalinity	mg/L as $CaCO_3$	10	11	10	10	11	11	10	10	11
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.5	< 0.2	< 0.2	< 0.2	< 0.2	0.2	1.2	< 0.2	0.2
Chloride	mg/L	---	---	---	---	< 0.2	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.06	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0006	---	---	---	---
Barium	mg/L	---	---	---	---	0.00167	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0007	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	3.98	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000064	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.664	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.051	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00614	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00008	---	---	---	---
Sodium	mg/L	---	---	---	---	0.08	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	0.078	---	---	---	---
Lead	mg/L	---	---	---	---	0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.35	---	---	---	---
Tin	mg/L	---	---	---	---	0.00022	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0045	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000938	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00014	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000006	---	---	---	---
Zinc	mg/L	---	---	---	---	0.003	---	---	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-2
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	794	992	996	993	991	986	988	987	976	984	984	989	988
pH	units	7.94	7.91	8.17	7.53	7.47	7.59	7.63	7.58	7.37	7.53	7.62	7.45	7.6
Conductivity	µS/cm	95	64	52	46	45	41	39	31	10	40	33	33	48
Alkalinity	mg/L as $CaCO_3$	22	27	24	17	20	15	15	17	< 2	14	15	14	7
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	26	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.7	3.4	2.5	1.5	1.2	0.9	0.8	1	0.6	0.5	0.7	0.6	0.7
Chloride	mg/L	12	3.7	1.0	0.3	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	0.00011	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.08	0.05	0.05	0.05	0.06	0.06	---	---	---	---	0.05	---	---
Arsenic	mg/L	0.0028	0.0013	0.0011	0.0011	0.001	0.0009	---	---	---	---	0.0009	---	---
Barium	mg/L	0.00103	0.00107	0.00084	0.00061	0.00121	0.00057	---	---	---	---	0.00049	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0186	0.0201	0.0104	0.0068	0.006	0.0036	---	---	---	---	0.0014	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	5.75	6.57	6.53	5.66	5.73	4.93	---	---	---	---	5.65	---	---
Cadmium	mg/L	< 0.000003	< 0.000003	0.000003	< 0.000003	< 0.000003	0.000006	---	---	---	---	< 0.000003	---	---
Cobalt	mg/L	0.000042	0.000074	0.000019	0.000044	0.000009	0.000035	---	---	---	---	0.000078	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0007	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0015	0.0009	0.0007	0.0009	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Iron	mg/L	0.004	< 0.003	< 0.003	0.005	0.004	0.014	---	---	---	---	< 0.003	---	---
Potassium	mg/L	1.75	0.942	0.652	0.487	0.406	0.374	---	---	---	---	0.252	---	---
Lithium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.46	0.667	0.612	0.449	0.443	0.405	---	---	---	---	0.288	---	---
Manganese	mg/L	0.00498	0.00675	0.00674	0.00546	0.0054	0.00534	---	---	---	---	0.00678	---	---
Molybdenum	mg/L	0.0016	0.00447	0.00392	0.00202	0.0013	0.00099	---	---	---	---	0.00038	---	---
Sodium	mg/L	7.41	4.25	2.14	1.17	0.9	0.65	---	---	---	---	0.3	---	---
Nickel	mg/L	0.0002	< 0.0001	0.0001	< 0.0001	< 0.0001	0.0001	---	---	---	---	< 0.0001	---	---
Phosphorus	mg/L	< 0.009	< 0.009	< 0.009	< 0.009	0.016	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.00009	0.00021	0.00006	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Antimony	mg/L	0.0006	0.0007	0.0006	0.0005	0.0005	0.0005	---	---	---	---	0.0002	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	0.94	0.61	0.73	0.62	0.62	0.62	---	---	---	---	0.56	---	---
Tin	mg/L	0.0056	0.00284	0.00196	0.00111	0.00096	0.00072	---	---	---	---	0.00029	---	---
Strontium	mg/L	0.028	0.0298	0.0258	0.0188	0.0185	0.018	---	---	---	---	0.0123	---	---
Titanium	mg/L	0.0006	0.0002	0.0002	0.0002	0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	< 0.000004	0.000033	< 0.000004	< 0.000004	< 0.000004	0.000015	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000102	0.00133	0.00183	0.00158	0.00163	0.00143	---	---	---	---	0.00103	---	---
Vanadium	mg/L	0.00077	0.00063	0.0008	0.00057	0.00073	0.0005	---	---	---	---	0.00043	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000044	0.000123	0.000054	0.000046	0.000027	0.00003	---	---	---	---	0.00002	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-2
Weight:	1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	988	984	991	995	984	998	972	978	984	996	980	990	995
pH	units	7.41	7.33	7	7.36	7.35	7.41	7.44	7.42	7.38	7.56	7.41	7.28	7.1
Conductivity	µS/cm	30	32	33	31	31	33	29	29	30	33	33	32	30
Alkalinity	mg/L as $CaCO_3$	14	12	12	14	17	13	13	11	12	12	12	11	12
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.7	0.6	0.7	1	0.7	0.9	0.6	0.8	0.8	1.1	1.1	1.2	1.0
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.05	---	---	---	---	0.05	---	---	---	---	0.04
Arsenic	mg/L	---	---	0.0006	---	---	---	---	0.0006	---	---	---	---	0.0006
Barium	mg/L	---	---	0.00041	---	---	---	---	0.00034	---	---	---	---	0.00055
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0025	---	---	---	---	0.001	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	5.19	---	---	---	---	4.85	---	---	---	---	5.05
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.0001	---	---	---	---	0.000014	---	---	---	---	0.000009
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.199	---	---	---	---	0.167	---	---	---	---	0.154
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.219	---	---	---	---	0.178	---	---	---	---	0.157
Manganese	mg/L	---	---	0.00549	---	---	---	---	0.00599	---	---	---	---	0.00607
Molybdenum	mg/L	---	---	0.00024	---	---	---	---	0.00021	---	---	---	---	0.00034
Sodium	mg/L	---	---	0.21	---	---	---	---	0.14	---	---	---	---	0.13
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	< 0.009
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Antimony	mg/L	---	---	0.0002	---	---	---	---	< 0.0002	---	---	---	---	0.0003
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.5	---	---	---	---	0.41	---	---	---	---	0.42
Tin	mg/L	---	---	0.00045	---	---	---	---	0.00027	---	---	---	---	0.00033
Strontium	mg/L	---	---	0.0096	---	---	---	---	0.0081	---	---	---	---	0.0074
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.00077	---	---	---	---	0.000501	---	---	---	---	0.000407
Vanadium	mg/L	---	---	0.00036	---	---	---	---	0.00028	---	---	---	---	0.00032
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000013	---	---	---	---	0.000011	---	---	---	---	0.000011
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4 IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-2
Weight: 1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	984	990	996	1014	1002	1006	983	1002	1000
pH	units	7.24	7.4	7.53	7.57	7.41	7.44	7.55	7.45	7.46
Conductivity	µS/cm	28	31	29	29	186	26	29	30	28
Alkalinity	mg/L as $CaCO_3$	11	13	12	13	4	11	12	11	11
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.1	0.9	0.9	0.7	0.6	0.5	0.7	0.5	0.5
Chloride	mg/L	---	---	---	---	0.5	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.04	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0006	---	---	---	---
Barium	mg/L	---	---	---	---	0.0003	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0008	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	5.26	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000062	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.148	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.139	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00567	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00024	---	---	---	---
Sodium	mg/L	---	---	---	---	0.11	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	0.013	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.42	---	---	---	---
Tin	mg/L	---	---	---	---	0.00023	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0071	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000313	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00021	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000007	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-3
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	825	981	990	984	989	993	987	984	973	974	980	984	991
pH	units	7.74	7.92	7.82	7.68	7.38	7.15	7.14	7.45	7.38	7.23	7.46	7.23	7.46
Conductivity	µS/cm	111	59	49	41	40	36	35	27	39	34	29	34	28
Alkalinity	mg/L as $CaCO_3$	21	23	20	17	16	16	14	16	18	12	12	12	14
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.2	1.7	0.8	0.4	0.4	0.3	0.3	0.2	0.3	0.2	0.6	0.4	0.3
Chloride	mg/L	17	3.7	0.7	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	0.00006	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.1	0.04	0.07	0.05	0.08	0.06	---	---	---	---	0.07	---	---
Arsenic	mg/L	0.0033	0.0026	0.0025	0.0021	0.0018	0.0014	---	---	---	---	0.0011	---	---
Barium	mg/L	0.00146	0.0014	0.001	0.00068	0.00094	0.00062	---	---	---	---	0.00078	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0141	0.013	0.0058	0.0039	0.0031	0.002	---	---	---	---	0.0008	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	6.33	5.85	5.84	5.03	5.3	4.48	---	---	---	---	4.8	---	---
Cadmium	mg/L	0.000005	< 0.000003	< 0.000003	0.000003	< 0.000003	0.000004	---	---	---	---	0.000008	---	---
Cobalt	mg/L	0.000097	0.000091	0.000022	0.000042	0.00001	0.000084	---	---	---	---	0.000134	---	---
Chromium	mg/L	< 0.0005	< 0.0005	0.0006	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0027	0.0014	0.0013	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Iron	mg/L	0.005	< 0.003	< 0.003	< 0.003	0.004	0.008	---	---	---	---	< 0.003	---	---
Potassium	mg/L	2.94	1.28	0.927	0.736	0.702	0.615	---	---	---	---	0.512	---	---
Lithium	mg/L	0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.547	0.567	0.453	0.325	0.344	0.286	---	---	---	---	0.257	---	---
Manganese	mg/L	0.00651	0.00804	0.00611	0.00496	0.00424	0.00492	---	---	---	---	0.00543	---	---
Molybdenum	mg/L	0.00143	0.00388	0.00258	0.00109	0.0018	0.00047	---	---	---	---	0.00025	---	---
Sodium	mg/L	9.82	3.89	1.77	0.86	0.72	0.44	---	---	---	---	0.21	---	---
Nickel	mg/L	0.0003	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Phosphorus	mg/L	0.01	< 0.009	0.064	< 0.009	0.009	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.00009	0.00008	0.00003	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Antimony	mg/L	0.0008	0.0012	0.0009	0.0007	0.0006	0.0005	---	---	---	---	0.0003	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	1.47	0.77	0.89	0.71	0.76	0.66	---	---	---	---	0.61	---	---
Tin	mg/L	0.0035	0.00283	0.00199	0.00112	0.00093	0.00062	---	---	---	---	0.00021	---	---
Strontium	mg/L	0.0413	0.0345	0.0306	0.0226	0.0243	0.0222	---	---	---	---	0.0176	---	---
Titanium	mg/L	0.0004	< 0.0001	0.0003	0.0001	< 0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	0.000059	0.00004	< 0.000004	0.000005	< 0.000004	0.000007	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.001011	0.0093	0.00703	0.00429	0.00357	0.00238	---	---	---	---	0.0013	---	---
Vanadium	mg/L	0.00075	0.00049	0.00075	0.00037	0.00037	0.00025	---	---	---	---	0.00018	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000378	0.000269	0.00012	0.000087	0.000065	0.000053	---	---	---	---	0.000027	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-3
Weight:	1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	979	979	981	981	980	865	972	986	989	988	975	988	982
pH	units	7.29	7.33	7.7	7.3	7.28	7.49	7.46	7.48	7.47	7.54	7.45	7.22	7.17
Conductivity	µS/cm	29	27	26	26	26	30	28	26	28	30	28	27	25
Alkalinity	mg/L as $CaCO_3$	11	13	13	12	13	17	23	12	12	13	11	14	11
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.9	0.2	< 0.2
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.05	---	---	---	---	0.06	---	---	---	---	0.04
Arsenic	mg/L	---	---	0.0007	---	---	---	---	0.0007	---	---	---	---	0.0006
Barium	mg/L	---	---	0.0005	---	---	---	---	0.00053	---	---	---	---	0.00056
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0019	---	---	---	---	0.0009	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	4.3	---	---	---	---	4.52	---	---	---	---	4.33
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.00009	---	---	---	---	0.000009	---	---	---	---	0.000005
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.405	---	---	---	---	0.389	---	---	---	---	0.345
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.136	---	---	---	---	0.102	---	---	---	---	0.084
Manganese	mg/L	---	---	0.00207	---	---	---	---	0.00218	---	---	---	---	0.00251
Molybdenum	mg/L	---	---	0.00022	---	---	---	---	0.00035	---	---	---	---	0.00014
Sodium	mg/L	---	---	0.14	---	---	---	---	0.11	---	---	---	---	0.09
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	< 0.009
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Antimony	mg/L	---	---	0.0002	---	---	---	---	< 0.0002	---	---	---	---	0.0003
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.51	---	---	---	---	0.44	---	---	---	---	0.46
Tin	mg/L	---	---	0.00032	---	---	---	---	0.0002	---	---	---	---	0.00018
Strontium	mg/L	---	---	0.0131	---	---	---	---	0.0118	---	---	---	---	0.0099
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	0.00003	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.00115	---	---	---	---	0.000762	---	---	---	---	0.000721
Vanadium	mg/L	---	---	0.00016	---	---	---	---	0.00015	---	---	---	---	0.00011
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000019	---	---	---	---	0.000018	---	---	---	---	0.000017
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-3
Weight:	1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	983	989	992	993	1007	1004	1007	997	988
pH	units	7.39	7.42	7.6	7.66	7.49	7.41	7.54	7.34	7.51
Conductivity	µS/cm	23	27	26	24	27	22	24	22	25
Alkalinity	mg/L as $CaCO_3$	9	11	12	11	12	11	11	11	12
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.2	< 0.2	< 0.2	< 0.2	0.2	< 0.2	0.3	< 0.2	< 0.2
Chloride	mg/L	---	---	---	---	< 0.2	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.05	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0006	---	---	---	---
Barium	mg/L	---	---	---	---	0.00064	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0007	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	4.74	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000071	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.362	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.079	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00304	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00011	---	---	---	---
Sodium	mg/L	---	---	---	---	0.08	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	< 0.009	---	---	---	---
Lead	mg/L	---	---	---	---	0.00003	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.46	---	---	---	---
Tin	mg/L	---	---	---	---	0.00015	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0099	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.00063	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.0001	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000013	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-4
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	824	986	983	988	990	987	980	994	984	984	985	989	982
pH	units	7.76	7.87	7.76	7.51	7.52	7.62	7.62	7.51	7.36	7.25	7.43	7.39	7.47
Conductivity	µS/cm	74	47	43	35	38	34	33	33	35	28	28	28	27
Alkalinity	mg/L as $CaCO_3$	25	26	17	15	15	13	12	13	16	14	11	12	14
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1	0.9	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.5	0.4	0.2	< 0.2
Chloride	mg/L	6	1	< 0.2	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	0.00003	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.16	0.06	0.07	0.04	0.08	0.05	---	---	---	---	0.09	---	---
Arsenic	mg/L	0.003	0.0023	0.0017	0.0014	0.0013	0.0011	---	---	---	---	0.0008	---	---
Barium	mg/L	0.00173	0.00198	0.00164	0.00148	0.00153	0.00123	---	---	---	---	0.00124	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0094	0.0089	0.0031	0.0024	0.0019	0.0015	---	---	---	---	0.0007	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	5.32	4.88	5.58	5.22	4.99	4.49	---	---	---	---	4.81	---	---
Cadmium	mg/L	0.000039	0.000027	0.000004	0.000004	< 0.000003	0.000003	---	---	---	---	0.000007	---	---
Cobalt	mg/L	0.00034	0.000213	0.000038	0.000038	0.000012	0.000016	---	---	---	---	0.000106	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0037	0.0028	0.001	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	0.0006	---	---
Iron	mg/L	0.011	< 0.003	< 0.003	< 0.003	0.006	0.005	---	---	---	---	< 0.003	---	---
Potassium	mg/L	2.64	1.09	0.835	0.647	0.487	0.424	---	---	---	---	0.22	---	---
Lithium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.247	0.27	0.266	0.216	0.206	0.194	---	---	---	---	0.157	---	---
Manganese	mg/L	0.00498	0.00747	0.00537	0.00514	0.00541	0.0051	---	---	---	---	0.00613	---	---
Molybdenum	mg/L	0.00091	0.00173	0.00084	0.00036	0.00088	0.0002	---	---	---	---	0.00009	---	---
Sodium	mg/L	5.22	2.35	0.96	0.5	0.36	0.26	---	---	---	---	0.13	---	---
Nickel	mg/L	0.0004	0.0003	< 0.0001	< 0.0001	< 0.0001	0.0002	---	---	---	---	< 0.0001	---	---
Phosphorus	mg/L	< 0.009	< 0.009	0.035	< 0.009	0.01	< 0.009	---	---	---	---	0.01	---	---
Lead	mg/L	0.00007	0.00012	0.00003	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	0.00007	---	---
Antimony	mg/L	0.0006	0.0007	0.0005	0.0004	0.0004	0.0003	---	---	---	---	< 0.0002	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	1.35	0.65	0.75	0.67	0.61	0.63	---	---	---	---	0.53	---	---
Tin	mg/L	0.00236	0.00158	0.00101	0.00059	0.0005	0.00037	---	---	---	---	0.00014	---	---
Strontium	mg/L	0.0198	0.0189	0.0186	0.0149	0.0145	0.0145	---	---	---	---	0.0105	---	---
Titanium	mg/L	0.0008	0.0003	0.0003	0.0001	0.0002	0.0002	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	0.000014	0.000022	< 0.000004	< 0.000004	< 0.000004	0.000005	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000563	0.00528	0.00446	0.00308	0.00235	0.00194	---	---	---	---	0.000972	---	---
Vanadium	mg/L	0.00124	0.00076	0.00087	0.00058	0.00065	0.00046	---	---	---	---	0.00035	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000394	0.000346	0.000106	0.000071	0.000048	0.000044	---	---	---	---	0.00002	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-4
Weight:	1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	1000	982	991	991	987	983	973	991	988	997	982	992	986
pH	units	7.4	7.42	7.92	7.28	7.3	7.63	7.39	7.27	7.35	7.59	7.51	7.32	7.21
Conductivity	µS/cm	26	26	29	25	26	34	28	26	26	29	28	30	28
Alkalinity	mg/L as $CaCO_3$	12	12	11	12	13	15	12	10	11	12	11	10	12
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	< 0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.6	0.4	0.6	0.5	0.5	0.3
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	0.6
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.05	---	---	---	---	0.07	---	---	---	---	0.05
Arsenic	mg/L	---	---	0.0005	---	---	---	---	0.0004	---	---	---	---	0.0004
Barium	mg/L	---	---	0.00082	---	---	---	---	0.00074	---	---	---	---	0.00082
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0016	---	---	---	---	0.0008	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	4.56	---	---	---	---	4.58	---	---	---	---	4.65
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.000102	---	---	---	---	0.000011	---	---	---	---	< 0.000002
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.152	---	---	---	---	0.123	---	---	---	---	0.102
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.092	---	---	---	---	0.07	---	---	---	---	0.066
Manganese	mg/L	---	---	0.00508	---	---	---	---	0.00613	---	---	---	---	0.00681
Molybdenum	mg/L	---	---	0.00006	---	---	---	---	0.00015	---	---	---	---	0.00017
Sodium	mg/L	---	---	0.1	---	---	---	---	0.08	---	---	---	---	0.07
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	0.0002	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	< 0.009
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Antimony	mg/L	---	---	< 0.0002	---	---	---	---	< 0.0002	---	---	---	---	0.0003
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.47	---	---	---	---	0.42	---	---	---	---	0.42
Tin	mg/L	---	---	0.00019	---	---	---	---	0.00014	---	---	---	---	0.00016
Strontium	mg/L	---	---	0.0081	---	---	---	---	0.008	---	---	---	---	0.0068
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.00076	---	---	---	---	0.000528	---	---	---	---	0.000458
Vanadium	mg/L	---	---	0.00028	---	---	---	---	0.0002	---	---	---	---	0.00018
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000014	---	---	---	---	0.000017	---	---	---	---	0.000013
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-4
Weight:	1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	988	989	1004	1014	1005	996	978	1003	992
pH	units	7.38	7.49	7.53	7.5	7.52	7.41	7.55	7.47	7.54
Conductivity	µS/cm	24	28	27	28	27	23	25	24	25
Alkalinity	mg/L as $CaCO_3$	10	11	11	11	11	11	11	11	12
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.3	0.3	0.2	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chloride	mg/L	---	---	---	---	0.3	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.05	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0003	---	---	---	---
Barium	mg/L	---	---	---	---	0.00071	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0005	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	4.93	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000067	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.092	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.06	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00722	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00008	---	---	---	---
Sodium	mg/L	---	---	---	---	0.06	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	< 0.009	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.41	---	---	---	---
Tin	mg/L	---	---	---	---	0.00012	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0068	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000352	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00014	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.00001	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-5
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	830	987	989	987	989	992	989	992	988	992	994	986	983
pH	units	8.16	7.91	7.53	7.68	7.32	7.52	7.55	7.51	7.35	7.48	7.42	7.31	7.43
Conductivity	µS/cm	86	70	62	51	50	46	44	33	46	44	35	38	31
Alkalinity	mg/L as $CaCO_3$	29	26	17	15	14	14	14	12	12	15	13	13	14
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	4.6	7	6.4	4	3.8	3.3	3.2	3.2	3.1	2.6	3	3.2	3.1
Chloride	mg/L	5	1.8	0.5	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	0.00015	< 0.00001	< 0.00001	< 0.00001	0.00001	---	---	---	---	0.00002	---	---
Aluminum	mg/L	0.21	0.07	0.05	0.07	0.07	0.06	---	---	---	---	0.07	---	---
Arsenic	mg/L	0.004	0.0018	0.0013	0.0012	0.001	0.001	---	---	---	---	0.0006	---	---
Barium	mg/L	0.00163	0.00224	0.00211	0.00187	0.00188	0.00202	---	---	---	---	0.00205	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0172	0.0186	0.0106	0.0071	0.0054	0.0037	---	---	---	---	0.0016	---	---
Bismuth	mg/L	0.00002	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	4.97	5.89	6.12	5.58	5.58	4.94	---	---	---	---	5.36	---	---
Cadmium	mg/L	< 0.000003	0.00001	0.000007	0.000004	< 0.000003	< 0.000003	---	---	---	---	0.000003	---	---
Cobalt	mg/L	0.000138	0.000126	0.000077	0.000087	0.000484	0.000063	---	---	---	---	0.000108	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0008	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0039	0.0024	0.0013	< 0.0005	0.0011	0.0008	---	---	---	---	0.001	---	---
Iron	mg/L	0.018	< 0.003	< 0.003	< 0.003	0.006	0.007	---	---	---	---	< 0.003	---	---
Potassium	mg/L	5.44	3.49	2.99	2.58	2.11	2.03	---	---	---	---	1.41	---	---
Lithium	mg/L	< 0.001	0.001	0.001	0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.294	0.481	0.451	0.355	0.357	0.336	---	---	---	---	0.219	---	---
Manganese	mg/L	0.0053	0.00859	0.0109	0.00966	0.0106	0.0103	---	---	---	---	0.0116	---	---
Molybdenum	mg/L	0.0142	0.0248	0.0179	0.0101	0.00871	0.00715	---	---	---	---	0.0055	---	---
Sodium	mg/L	5.25	3.59	1.72	0.96	0.71	0.49	---	---	---	---	0.21	---	---
Nickel	mg/L	0.0004	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001	---	---	---	---	< 0.0001	---	---
Phosphorus	mg/L	< 0.009	< 0.009	0.039	< 0.009	< 0.009	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.00009	0.00009	0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	0.00002	---	---
Antimony	mg/L	0.0013	0.0012	0.001	0.0008	0.0007	0.0006	---	---	---	---	0.0003	---	---
Selenium	mg/L	0.003	0.003	0.002	0.002	0.002	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	1.06	0.53	0.58	0.55	0.54	0.56	---	---	---	---	0.5	---	---
Tin	mg/L	0.00288	0.00191	0.00129	0.00072	0.00061	0.00044	---	---	---	---	0.00022	---	---
Strontium	mg/L	0.0163	0.0205	0.0189	0.0144	0.0145	0.0142	---	---	---	---	0.0096	---	---
Titanium	mg/L	0.0016	0.0001	0.0002	0.0001	0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	0.000008	0.000023	< 0.000004	< 0.000004	< 0.000004	< 0.000004	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000514	0.00353	0.00348	0.0026	0.00236	0.00186	---	---	---	---	0.000973	---	---
Vanadium	mg/L	0.00111	0.00051	0.00069	0.00034	0.00049	0.00024	---	---	---	---	0.00018	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000202	0.00014	0.000052	0.000038	0.000036	0.000029	---	---	---	---	0.000013	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	0.004	0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-5
Weight:	1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	992	985	984	994	982	982	978	984	987	989	965	983	980
pH	units	7.34	7.38	7.04	7.3	7.45	7.48	7.35	7.23	7.34	7.22	7.45	7.24	7.14
Conductivity	µS/cm	35	38	38	35	37	40	30	29	31	34	30	32	31
Alkalinity	mg/L as $CaCO_3$	12	8	12	13	12	13	11	9	11	11	11	10	10
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	3	2.9	3	2.8	3.1	2.9	1.9	2.4	2.4	2.7	2.4	2.4	2.2
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	0.4
Mercury	mg/L	---	---	0.00003	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.06	---	---	---	---	0.04	---	---	---	---	0.05
Arsenic	mg/L	---	---	0.0006	---	---	---	---	0.0004	---	---	---	---	0.0004
Barium	mg/L	---	---	0.0024	---	---	---	---	0.00208	---	---	---	---	0.00245
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0023	---	---	---	---	0.0012	---	---	---	---	0.0003
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	5.1	---	---	---	---	4.7	---	---	---	---	4.58
Cadmium	mg/L	---	---	0.000003	---	---	---	---	< 0.000003	---	---	---	---	0.000005
Cobalt	mg/L	---	---	0.000151	---	---	---	---	0.000033	---	---	---	---	0.000033
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	0.0009	---	---	---	---	0.0009	---	---	---	---	0.0009
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	1.27	---	---	---	---	1.15	---	---	---	---	1.03
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.168	---	---	---	---	0.106	---	---	---	---	0.091
Manganese	mg/L	---	---	0.0099	---	---	---	---	0.00973	---	---	---	---	0.00864
Molybdenum	mg/L	---	---	0.00584	---	---	---	---	0.00501	---	---	---	---	0.00654
Sodium	mg/L	---	---	0.16	---	---	---	---	0.11	---	---	---	---	0.1
Nickel	mg/L	---	---	0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	< 0.009
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Antimony	mg/L	---	---	0.0003	---	---	---	---	0.0002	---	---	---	---	0.0003
Selenium	mg/L	---	---	0.002	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.5	---	---	---	---	0.4	---	---	---	---	0.4
Tin	mg/L	---	---	0.00032	---	---	---	---	0.00022	---	---	---	---	0.00024
Strontium	mg/L	---	---	0.008	---	---	---	---	0.0062	---	---	---	---	0.0053
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.000842	---	---	---	---	0.000426	---	---	---	---	0.000495
Vanadium	mg/L	---	---	0.00021	---	---	---	---	0.00017	---	---	---	---	0.00027
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000011	---	---	---	---	0.000007	---	---	---	---	0.000008
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-5
Weight:	1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	984	987	997	995	1010	1004	1009	1003	1001
pH	units	7.38	7.37	7.38	7.56	7.2	7.36	7.43	7.36	7.4
Conductivity	µS/cm	32	32	31	30	34	28	31	32	28
Alkalinity	mg/L as $CaCO_3$	11	10	9	11	9	11	10	10	10
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	5	< 2	< 2	< 2
Sulphate	mg/L	2.6	2.3	2.6	2.4	2.1	2.1	2.3	2.2	2.2
Chloride	mg/L	---	---	---	---	0.4	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.04	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0004	---	---	---	---
Barium	mg/L	---	---	---	---	0.00264	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0008	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	4.86	---	---	---	---
Cadmium	mg/L	---	---	---	---	0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000095	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	0.0009	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	1.09	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.085	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00852	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00575	---	---	---	---
Sodium	mg/L	---	---	---	---	0.09	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	< 0.009	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.43	---	---	---	---
Tin	mg/L	---	---	---	---	0.0003	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0052	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.00038	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00011	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000005	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-6
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	830	979	996	991	990	980	982	992	995	987	990	992	990
pH	units	8.48	7.96	8.12	7.86	7.6	7.56	7.6	7.64	7.39	7.56	7.51	7.46	7.49
Conductivity	µS/cm	84	54	43	40	42	40	37	30	41	43	32	33	31
Alkalinity	mg/L as $CaCO_3$	26	25	17	16	18	15	14	22	15	16	14	14	13
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.8	2.2	1.2	0.7	0.8	0.7	0.6	0.6	0.5	0.6	0.6	0.6	0.6
Chloride	mg/L	12	1.9	0.3	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	0.00002	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.1	0.05	0.07	0.09	0.08	0.07	---	---	---	---	0.08	---	---
Arsenic	mg/L	0.0031	0.003	0.0037	0.0032	0.0029	0.0028	---	---	---	---	0.002	---	---
Barium	mg/L	0.00159	0.00143	0.00109	0.00088	0.00088	0.0008	---	---	---	---	0.00087	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0299	0.025	0.0083	0.0041	0.0026	0.002	---	---	---	---	0.0009	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	6.4	6.19	5.66	5.33	5.84	5.2	---	---	---	---	6.14	---	---
Cadmium	mg/L	< 0.000003	0.000009	0.000006	0.000003	< 0.000003	< 0.000003	---	---	---	---	0.000003	---	---
Cobalt	mg/L	0.000314	0.000151	0.000061	0.000067	0.000034	0.000053	---	---	---	---	0.000108	---	---
Chromium	mg/L	0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0085	0.0044	0.0023	< 0.0005	0.001	0.0007	---	---	---	---	0.0007	---	---
Iron	mg/L	0.008	< 0.003	< 0.003	< 0.003	0.005	0.005	---	---	---	---	< 0.003	---	---
Potassium	mg/L	1.58	0.658	0.419	0.303	0.272	0.233	---	---	---	---	0.145	---	---
Lithium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.373	0.415	0.319	0.241	0.257	0.222	---	---	---	---	0.139	---	---
Manganese	mg/L	0.00567	0.00549	0.00448	0.00422	0.00423	0.00507	---	---	---	---	0.00683	---	---
Molybdenum	mg/L	0.00644	0.0107	0.00506	0.00228	0.00213	0.00138	---	---	---	---	0.00072	---	---
Sodium	mg/L	7.77	2.94	1.02	0.5	0.49	0.3	---	---	---	---	0.16	---	---
Nickel	mg/L	0.0009	0.0006	0.0004	0.0002	< 0.0001	0.0003	---	---	---	---	< 0.0001	---	---
Phosphorus	mg/L	< 0.009	< 0.009	0.034	< 0.009	0.022	< 0.009	---	---	---	---	0.01	---	---
Lead	mg/L	0.00014	0.00006	0.00003	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Antimony	mg/L	0.001	0.0014	0.001	0.0008	0.0007	0.0006	---	---	---	---	0.0003	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	1.16	0.68	0.69	0.63	0.65	0.62	---	---	---	---	0.57	---	---
Tin	mg/L	0.00269	0.00191	0.00137	0.00073	0.00059	0.00048	---	---	---	---	0.0002	---	---
Strontium	mg/L	0.0358	0.0297	0.0224	0.0173	0.0187	0.018	---	---	---	---	0.0124	---	---
Titanium	mg/L	0.0003	0.0001	0.0002	< 0.0001	0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	0.000061	0.000039	< 0.000004	0.000008	< 0.000004	0.000008	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000817	0.00722	0.00604	0.00388	0.00314	0.00239	---	---	---	---	0.00123	---	---
Vanadium	mg/L	0.00092	0.00065	0.00065	0.00051	0.0005	0.00041	---	---	---	---	0.00028	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.00116	0.000701	0.000278	0.000188	0.000139	0.000119	---	---	---	---	0.000063	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-6
Weight:	1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	987	986	990	988	985	991	985	990	983	985	976	996	986
pH	units	7.43	7.46	7.89	7.36	7.16	7.51	7.45	7.48	7.44	7.52	7.53	7.27	7.18
Conductivity	µS/cm	31	30	33	29	30	30	26	26	28	29	28	28	26
Alkalinity	mg/L as $CaCO_3$	13	13	12	13	14	14	11	12	11	12	20	11	12
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	20	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.6	0.6	0.6	2.3	0.6	0.6	0.4	0.5	0.5	0.6	0.5	0.5	0.4
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.06	---	---	---	---	0.06	---	---	---	---	0.04
Arsenic	mg/L	---	---	0.0013	---	---	---	---	0.0011	---	---	---	---	0.001
Barium	mg/L	---	---	0.00108	---	---	---	---	0.00052	---	---	---	---	0.0005
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0016	---	---	---	---	0.0008	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	5.24	---	---	---	---	4.79	---	---	---	---	4.56
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.000119	---	---	---	---	0.000016	---	---	---	---	0.000018
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.105	---	---	---	---	0.08	---	---	---	---	0.072
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.084	---	---	---	---	0.057	---	---	---	---	0.05
Manganese	mg/L	---	---	0.00579	---	---	---	---	0.00561	---	---	---	---	0.00591
Molybdenum	mg/L	---	---	0.00045	---	---	---	---	0.00048	---	---	---	---	0.00049
Sodium	mg/L	---	---	0.11	---	---	---	---	0.09	---	---	---	---	0.08
Nickel	mg/L	---	---	0.0002	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	< 0.009
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Antimony	mg/L	---	---	0.0002	---	---	---	---	0.0002	---	---	---	---	0.0003
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.48	---	---	---	---	0.39	---	---	---	---	0.38
Tin	mg/L	---	---	0.00026	---	---	---	---	0.00025	---	---	---	---	0.00019
Strontium	mg/L	---	---	0.0087	---	---	---	---	0.0072	---	---	---	---	0.0055
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.00093	---	---	---	---	0.000624	---	---	---	---	0.000571
Vanadium	mg/L	---	---	0.00024	---	---	---	---	0.00018	---	---	---	---	0.00014
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000042	---	---	---	---	0.000033	---	---	---	---	0.000029
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-6
Weight:	1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	982	988	1000	1005	1002	1000	1010	1008	1000
pH	units	7.42	7.46	7.64	7.62	7.51	7.42	7.58	7.53	7.56
Conductivity	µS/cm	25	27	25	26	26	24	26	28	25
Alkalinity	mg/L as $CaCO_3$	11	11	11	12	11	11	12	11	12
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5
Chloride	mg/L	---	---	---	---	< 0.2	---	---	---	---
Mercury	mg/L	---	---	---	---	0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.05	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0009	---	---	---	---
Barium	mg/L	---	---	---	---	0.00045	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0005	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	4.8	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000085	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.07	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.062	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00666	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00025	---	---	---	---
Sodium	mg/L	---	---	---	---	0.07	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	< 0.009	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0004	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.38	---	---	---	---
Tin	mg/L	---	---	---	---	0.00015	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0051	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000465	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00012	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000022	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-7
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	844	983	990	986	987	985	983	980	975	975	981	985	982
pH	units	8.03	8.3	7.67	7.47	7.42	7.64	7.76	7.42	7.36	7.37	7.51	7.37	7.51
Conductivity	µS/cm	98	64	51	41	42	39	37	29	40	31	30	32	33
Alkalinity	mg/L as $CaCO_3$	21	24	20	16	15	15	14	12	18	12	13	14	15
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	3.8	4.2	2.4	1.2	1.1	0.9	0.8	0.8	0.7	0.6	0.7	0.6	0.7
Chloride	mg/L	11	2.2	0.4	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	0.00004	< 0.00001	0.00002	0.00004	< 0.00001	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.08	0.05	0.05	0.07	0.07	0.07	---	---	---	---	0.08	---	---
Arsenic	mg/L	0.0036	0.0035	0.0037	0.003	0.0029	0.0024	---	---	---	---	0.0019	---	---
Barium	mg/L	0.00111	0.00089	0.00073	0.00066	0.00064	0.00063	---	---	---	---	0.00069	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0107	0.0111	0.0046	0.002	0.0017	0.0016	---	---	---	---	0.0008	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	7.56	6.83	6.51	5.6	5.54	4.97	---	---	---	---	5.23	---	---
Cadmium	mg/L	< 0.000003	0.000006	0.000005	0.000003	< 0.000003	< 0.000003	---	---	---	---	< 0.000003	---	---
Cobalt	mg/L	0.00022	0.000199	0.000079	0.000116	0.000046	0.000041	---	---	---	---	0.000118	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0014	0.0009	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Iron	mg/L	0.006	< 0.003	< 0.003	< 0.003	0.004	< 0.003	---	---	---	---	< 0.003	---	---
Potassium	mg/L	2.51	1.16	0.962	0.793	0.718	0.716	---	---	---	---	0.554	---	---
Lithium	mg/L	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.514	0.535	0.441	0.304	0.29	0.268	---	---	---	---	0.184	---	---
Manganese	mg/L	0.00481	0.00523	0.00543	0.00497	0.0053	0.00523	---	---	---	---	0.00603	---	---
Molybdenum	mg/L	0.00155	0.00413	0.00303	0.00118	0.00111	0.00089	---	---	---	---	0.00039	---	---
Sodium	mg/L	7.11	2.83	1.1	0.51	0.4	0.28	---	---	---	---	0.14	---	---
Nickel	mg/L	0.0004	< 0.0001	0.0002	< 0.0001	< 0.0001	0.0001	---	---	---	---	< 0.0001	---	---
Phosphorus	mg/L	< 0.009	< 0.009	0.022	< 0.009	0.012	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.0001	0.00024	0.00005	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Antimony	mg/L	0.0007	0.0008	0.0006	0.0005	0.0005	0.0004	---	---	---	---	0.0002	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	1.23	0.69	0.76	0.62	0.59	0.6	---	---	---	---	0.49	---	---
Tin	mg/L	0.00273	0.00225	0.00151	0.00089	0.0007	0.0005	---	---	---	---	0.00023	---	---
Strontium	mg/L	0.0377	0.0311	0.0258	0.0186	0.0183	0.0184	---	---	---	---	0.0129	---	---
Titanium	mg/L	0.0003	0.0001	0.0003	0.0001	< 0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	0.000006	0.000019	< 0.000004	0.000019	< 0.000004	< 0.000004	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000372	0.00363	0.0036	0.00247	0.00218	0.00195	---	---	---	---	0.00112	---	---
Vanadium	mg/L	0.00094	0.00064	0.00081	0.00056	0.00051	0.00045	---	---	---	---	0.00037	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000286	0.000384	0.00014	0.000091	0.000074	0.000068	---	---	---	---	0.000032	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-7
Weight:	1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	986	982	990	986	985	979	974	989	991	990	975	986	988
pH	units	7.49	6.52	8.1	7.42	7.42	7.35	7.43	7.42	7.12	7.54	7.57	7.38	7.22
Conductivity	µS/cm	29	33	32	28	28	28	27	25	26	28	25	28	25
Alkalinity	mg/L as $CaCO_3$	13	24	13	12	12	10	15	11	9	11	11	11	11
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.6	0.8	0.8	0.6	0.6	0.6	0.4	0.5	0.5	0.7	0.5	0.5	0.5
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.08	---	---	---	---	0.06	---	---	---	---	0.07
Arsenic	mg/L	---	---	0.0012	---	---	---	---	0.001	---	---	---	---	0.0009
Barium	mg/L	---	---	0.00057	---	---	---	---	0.00057	---	---	---	---	0.00061
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0016	---	---	---	---	0.0008	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	4.84	---	---	---	---	4.22	---	---	---	---	4.71
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.000199	---	---	---	---	0.000023	---	---	---	---	0.000027
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.46	---	---	---	---	0.432	---	---	---	---	0.401
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.119	---	---	---	---	0.084	---	---	---	---	0.083
Manganese	mg/L	---	---	0.00544	---	---	---	---	0.00561	---	---	---	---	0.0054
Molybdenum	mg/L	---	---	0.00022	---	---	---	---	0.00019	---	---	---	---	0.00015
Sodium	mg/L	---	---	0.1	---	---	---	---	0.08	---	---	---	---	0.08
Nickel	mg/L	---	---	0.0013	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	0.011	---	---	---	---	< 0.009
Lead	mg/L	---	---	< 0.00002	---	---	---	---	0.00005	---	---	---	---	0.00003
Antimony	mg/L	---	---	0.0002	---	---	---	---	< 0.0002	---	---	---	---	0.0002
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.43	---	---	---	---	0.35	---	---	---	---	0.35
Tin	mg/L	---	---	0.00039	---	---	---	---	0.00027	---	---	---	---	0.00026
Strontium	mg/L	---	---	0.0094	---	---	---	---	0.0075	---	---	---	---	0.0075
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.00085	---	---	---	---	0.000554	---	---	---	---	0.000515
Vanadium	mg/L	---	---	0.00031	---	---	---	---	0.00022	---	---	---	---	0.0002
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000025	---	---	---	---	0.000024	---	---	---	---	0.000021
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-7
Weight:	1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	984	990	990	1003	1000	987	1006	994	990
pH	units	7.23	7.46	7.55	7.49	7.39	7.38	7.55	7.5	7.5
Conductivity	µS/cm	27	28	23	24	24	22	23	29	23
Alkalinity	mg/L as $CaCO_3$	10	11	10	10	10	10	10	10	10
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Chloride	mg/L	---	---	---	---	< 0.2	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.06	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0009	---	---	---	---
Barium	mg/L	---	---	---	---	0.00057	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0006	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	4.28	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000097	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.392	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.107	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00521	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.0001	---	---	---	---
Sodium	mg/L	---	---	---	---	0.06	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	0.014	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.35	---	---	---	---
Tin	mg/L	---	---	---	---	0.00033	---	---	---	---
Strontium	mg/L	---	---	---	---	0.006	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000422	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00018	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000016	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-8
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	827	987	996	986	993	983	983	989	656	982	995	988	990
pH	units	8.10	8.3	8.56	8.69	7.7	7.61	7.7	7.64	7.46	7.72	7.58	7.58	7.5
Conductivity	µS/cm	107	66	57	48	45	41	40	31	36	40	34	34	32
Alkalinity	mg/L as $CaCO_3$	27	24	24	22	16	17	15	17	19	15	14	15	14
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1	1.2	1	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.3
Chloride	mg/L	15	5.2	1.4	0.4	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	< 0.00001	0.00011	< 0.00001	0.00002	0.00004	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.1	0.05	0.05	0.08	0.07	0.05	---	---	---	---	0.06	---	---
Arsenic	mg/L	0.0016	0.0024	0.003	0.004	0.0031	0.0031	---	---	---	---	0.0024	---	---
Barium	mg/L	0.00293	0.002	0.00144	0.00115	0.00124	0.00119	---	---	---	---	0.00126	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0158	0.0179	0.0088	0.0046	0.0038	0.0025	---	---	---	---	0.0012	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	7.13	6.15	5.97	7.1	6.07	5.25	---	---	---	---	5.8	---	---
Cadmium	mg/L	< 0.000003	0.00001	< 0.000003	< 0.000003	< 0.000003	0.000006	---	---	---	---	0.000019	---	---
Cobalt	mg/L	0.000126	0.000112	0.000053	0.000101	0.000026	0.000025	---	---	---	---	0.00004	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0008	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0011	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Iron	mg/L	< 0.003	< 0.003	< 0.003	< 0.003	0.004	< 0.003	---	---	---	---	< 0.003	---	---
Potassium	mg/L	1.2	0.526	0.392	0.372	0.285	0.262	---	---	---	---	0.209	---	---
Lithium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.467	0.526	0.466	0.439	0.381	0.35	---	---	---	---	0.237	---	---
Manganese	mg/L	0.00387	0.00551	0.00617	0.00609	0.00623	0.0059	---	---	---	---	0.00678	---	---
Molybdenum	mg/L	0.0172	0.0325	0.0227	0.0144	0.0153	0.0158	---	---	---	---	0.0201	---	---
Sodium	mg/L	9.49	5.14	2.07	1.27	0.83	0.57	---	---	---	---	0.24	---	---
Nickel	mg/L	0.0003	0.0003	0.0002	< 0.0001	< 0.0001	0.0001	---	---	---	---	0.0002	---	---
Phosphorus	mg/L	< 0.009	< 0.009	< 0.009	< 0.009	0.016	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.00007	0.00022	0.00008	0.00003	0.00002	< 0.00002	---	---	---	---	0.00004	---	---
Antimony	mg/L	0.0006	0.0008	0.0007	0.0005	0.0006	0.0006	---	---	---	---	0.0002	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	0.92	0.62	0.65	0.76	0.61	0.61	---	---	---	---	0.52	---	---
Tin	mg/L	0.00213	0.00176	0.0011	0.00065	0.0006	0.00044	---	---	---	---	0.00022	---	---
Strontium	mg/L	0.0444	0.0362	0.0309	0.0289	0.0249	0.0237	---	---	---	---	0.0158	---	---
Titanium	mg/L	0.0001	< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	< 0.000004	0.000013	< 0.000004	0.000019	< 0.000004	< 0.000004	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000093	0.000857	0.0014	0.00152	0.00187	0.00174	---	---	---	---	0.00129	---	---
Vanadium	mg/L	0.001	0.00123	0.00142	0.0012	0.00141	0.0011	---	---	---	---	0.0009	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000156	0.000168	0.000119	0.000113	0.000109	0.000091	---	---	---	---	0.000067	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-8
Weight:	1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	990	982	988	987	982	987	968	988	982	990	975	991	990
pH	units	7.69	7.44	8.84	7.38	7.31	7.32	7.52	7.58	7.37	7.68	7.53	7.59	7.23
Conductivity	µS/cm	34	32	32	30	30	33	29	30	30	33	32	32	29
Alkalinity	mg/L as $CaCO_3$	17	14	14	14	17	13	13	13	12	13	13	13	12
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.3	0.3	0.3	0.3	0.3	0.3	< 0.2	0.5	0.2	0.3	0.3	0.3	0.3
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.06	---	---	---	---	0.08	---	---	---	---	0.08
Arsenic	mg/L	---	---	0.0019	---	---	---	---	0.0019	---	---	---	---	0.0015
Barium	mg/L	---	---	0.0009	---	---	---	---	0.00095	---	---	---	---	0.00085
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0017	---	---	---	---	0.0017	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	5.52	---	---	---	---	5.34	---	---	---	---	5.72
Cadmium	mg/L	---	---	0.000004	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.000129	---	---	---	---	0.000023	---	---	---	---	0.000034
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.168	---	---	---	---	0.163	---	---	---	---	0.143
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.174	---	---	---	---	0.14	---	---	---	---	0.127
Manganese	mg/L	---	---	0.00584	---	---	---	---	0.0052	---	---	---	---	0.00476
Molybdenum	mg/L	---	---	0.0268	---	---	---	---	0.0298	---	---	---	---	0.0331
Sodium	mg/L	---	---	0.16	---	---	---	---	0.13	---	---	---	---	0.11
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	0.014
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Antimony	mg/L	---	---	< 0.0002	---	---	---	---	0.0002	---	---	---	---	0.0002
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.45	---	---	---	---	0.43	---	---	---	---	0.42
Tin	mg/L	---	---	0.00026	---	---	---	---	0.00024	---	---	---	---	0.00053
Strontium	mg/L	---	---	0.0119	---	---	---	---	0.0101	---	---	---	---	0.0091
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.00116	---	---	---	---	0.000792	---	---	---	---	0.000624
Vanadium	mg/L	---	---	0.00073	---	---	---	---	0.00069	---	---	---	---	0.00056
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.00008	---	---	---	---	0.000043	---	---	---	---	0.000036
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4 IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-8
Weight: 1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	990	987	1004	1012	1005	999	1009	1000	996
pH	units	7.59	7.51	7.8	7.56	7.49	7.65	7.6	7.57	7.63
Conductivity	µS/cm	27	32	28	30	30	27	30	27	28
Alkalinity	mg/L as $CaCO_3$	12	12	13	12	< 2	14	13	14	13
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	< 0.2	0.2	0.2	0.3	0.3	0.2	0.7	0.2	0.3
Chloride	mg/L	---	---	---	---	< 0.2	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.05	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0014	---	---	---	---
Barium	mg/L	---	---	---	---	0.00079	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0006	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	5.29	---	---	---	---
Cadmium	mg/L	---	---	---	---	0.00001	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000089	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.143	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.103	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00515	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.0371	---	---	---	---
Sodium	mg/L	---	---	---	---	0.08	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	< 0.009	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.41	---	---	---	---
Tin	mg/L	---	---	---	---	0.00045	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0074	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000537	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00048	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.00003	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4 IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-9
Weight: 1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	802	985	998	990	993	994	992	990	986	980	993	994	992
pH	units	8.24	8.29	8.48	7.76	7.48	7.21	7.18	7.64	7.41	7.39	7.05	7.2	7.41
Conductivity	µS/cm	70	51	46	42	44	40	37	29	39	30	32	32	36
Alkalinity	mg/L as $CaCO_3$	23	24	22	16	17	16	13	13	14	14	15	14	11
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.7	1.1	0.8	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.4	0.3	0.3
Chloride	mg/L	5	1.6	0.3	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	< 0.00001	0.00005	< 0.00001	0.00001	0.00003	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.18	0.06	0.05	0.06	0.07	0.05	---	---	---	---	0.07	---	---
Arsenic	mg/L	0.0023	0.0026	0.0035	0.0038	0.0039	0.0042	---	---	---	---	0.005	---	---
Barium	mg/L	0.00086	0.00098	0.00083	0.00085	0.00091	0.00095	---	---	---	---	0.00102	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.025	0.03	0.0174	0.0098	0.0073	0.0051	---	---	---	---	0.0022	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	5.22	4.6	4.63	4.29	5.63	4.37	---	---	---	---	4.85	---	---
Cadmium	mg/L	0.000174	< 0.000003	< 0.000003	0.000003	< 0.000003	< 0.000003	---	---	---	---	0.000003	---	---
Cobalt	mg/L	0.00004	0.000038	0.000025	0.00009	0.000019	0.00002	---	---	---	---	0.000066	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0013	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Iron	mg/L	0.004	< 0.003	< 0.003	< 0.003	0.004	< 0.003	---	---	---	---	< 0.003	---	---
Potassium	mg/L	2.19	1.25	1.15	1.08	1.2	1.08	---	---	---	---	0.868	---	---
Lithium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.397	0.611	0.614	0.514	0.659	0.556	---	---	---	---	0.406	---	---
Manganese	mg/L	0.00188	0.00338	0.00407	0.00327	0.00354	0.00327	---	---	---	---	0.00324	---	---
Molybdenum	mg/L	0.00078	0.00113	0.00106	0.00067	0.00069	0.00041	---	---	---	---	0.00042	---	---
Sodium	mg/L	5.51	3.42	1.6	0.86	0.78	0.49	---	---	---	---	0.21	---	---
Nickel	mg/L	0.0003	0.0001	0.0002	0.0002	0.0001	0.0002	---	---	---	---	0.0002	---	---
Phosphorus	mg/L	< 0.009	< 0.009	0.032	< 0.009	0.021	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.00012	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Antimony	mg/L	0.0007	0.0007	0.0006	0.0005	0.0005	0.0005	---	---	---	---	0.0002	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	0.91	0.53	0.58	0.53	0.66	0.57	---	---	---	---	0.51	---	---
Tin	mg/L	0.00291	0.00101	0.00048	0.00028	0.0003	0.00025	---	---	---	---	0.00006	---	---
Strontium	mg/L	0.0304	0.0298	0.0281	0.0232	0.0299	0.0258	---	---	---	---	0.0185	---	---
Titanium	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	< 0.000004	0.000004	< 0.000004	0.000014	< 0.000004	< 0.000004	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000007	0.000041	0.00011	0.00014	0.000148	0.00011	---	---	---	---	0.000128	---	---
Vanadium	mg/L	0.00295	0.00245	0.00284	0.00255	0.00244	0.00218	---	---	---	---	0.00193	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000008	0.000015	0.000015	0.000013	0.000006	0.000009	---	---	---	---	0.000005	---	---
Zinc	mg/L	0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4
IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-9
Weight: 1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	992	986	993	991	983	994	974	992	985	992	971	992	994
pH	units	7.46	6.46	8.33	7.46	7.45	7.1	7.51	7.49	7.44	7.65	7.56	7.37	7.25
Conductivity	µS/cm	30	32	32	32	30	37	29	27	30	33	29	30	29
Alkalinity	mg/L as $CaCO_3$	14	26	12	16	13	11	13	12	13	12	11	13	13
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.3	0.3	0.3	0.4	0.2	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chloride	mg/L	---	---	0.2	---	---	---	---	0.2	---	---	---	---	0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.07	---	---	---	---	0.08	---	---	---	---	0.09
Arsenic	mg/L	---	---	0.0051	---	---	---	---	0.0052	---	---	---	---	0.0057
Barium	mg/L	---	---	0.00096	---	---	---	---	0.00103	---	---	---	---	0.00111
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0024	---	---	---	---	0.0014	---	---	---	---	0.0005
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	4.6	---	---	---	---	4.36	---	---	---	---	5.05
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.000108	---	---	---	---	0.000014	---	---	---	---	0.000028
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.799	---	---	---	---	0.773	---	---	---	---	0.727
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.301	---	---	---	---	0.23	---	---	---	---	0.229
Manganese	mg/L	---	---	0.00213	---	---	---	---	0.00234	---	---	---	---	0.00238
Molybdenum	mg/L	---	---	0.00042	---	---	---	---	0.00068	---	---	---	---	0.00202
Sodium	mg/L	---	---	0.15	---	---	---	---	0.11	---	---	---	---	0.11
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	0.009
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	0.00003
Antimony	mg/L	---	---	< 0.0002	---	---	---	---	< 0.0002	---	---	---	---	0.0003
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.45	---	---	---	---	0.38	---	---	---	---	0.4
Tin	mg/L	---	---	0.00014	---	---	---	---	0.00009	---	---	---	---	0.00011
Strontium	mg/L	---	---	0.0142	---	---	---	---	0.0116	---	---	---	---	0.0114
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.000128	---	---	---	---	0.00007	---	---	---	---	0.000083
Vanadium	mg/L	---	---	0.00145	---	---	---	---	0.00119	---	---	---	---	0.00119
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000005	---	---	---	---	0.000003	---	---	---	---	0.000005
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-9
Weight:	1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	985	991	999	1028	994	991	1009	997	998
pH	units	7.49	7.52	7.76	7.57	7.56	7.39	7.62	7.56	7.64
Conductivity	µS/cm	29	30	27	30	28	25	28	30	27
Alkalinity	mg/L as $CaCO_3$	13	12	12	15	11	12	12	12	13
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.3	< 0.2	< 0.2	< 0.2	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chloride	mg/L	---	---	---	---	0.3	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.07	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0056	---	---	---	---
Barium	mg/L	---	---	---	---	0.0011	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.001	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	4.46	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000104	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.692	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.185	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00231	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00054	---	---	---	---
Sodium	mg/L	---	---	---	---	0.08	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	< 0.009	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.39	---	---	---	---
Tin	mg/L	---	---	---	---	0.00008	---	---	---	---
Strontium	mg/L	---	---	---	---	0.009	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000059	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00108	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000003	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-10
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	831	990	1006	984	999	988	991	994	849	991	991	987	987
pH	units	7.93	8.39	8.21	7.81	7.51	7.27	7.45	7.64	7.34	7.82	7.72	7.59	7.64
Conductivity	µS/cm	99	54	46	42	45	40	38	29	33	36	35	33	32
Alkalinity	mg/L as $CaCO_3$	23	31	23	17	16	16	14	16	17	15	14	13	15
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.4	1.7	1	0.5	0.5	0.4	0.4	0.3	0.2	0.3	1.1	0.3	0.3
Chloride	mg/L	7	1.2	0.2	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	0.00002	< 0.00001	0.00003	< 0.00001	< 0.00001	0.00002	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.22	0.09	0.08	0.11	0.09	0.08	---	---	---	---	0.1	---	---
Arsenic	mg/L	0.0018	0.0013	0.0015	0.0014	0.0014	0.0014	---	---	---	---	0.0012	---	---
Barium	mg/L	0.00093	0.00087	0.00083	0.00096	0.00077	0.00079	---	---	---	---	0.00098	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0175	0.0171	0.0087	0.0045	0.0034	0.0023	---	---	---	---	0.0011	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	5.57	5.48	5.83	5.48	5.62	4.93	---	---	---	---	5.52	---	---
Cadmium	mg/L	< 0.000003	0.000005	< 0.000003	< 0.000003	< 0.000003	0.000003	---	---	---	---	0.000009	---	---
Cobalt	mg/L	0.000086	0.00006	0.000034	0.0001	0.000019	0.000019	---	---	---	---	0.000138	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0016	0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Iron	mg/L	0.004	< 0.003	< 0.003	< 0.003	0.006	< 0.003	---	---	---	---	< 0.003	---	---
Potassium	mg/L	3.48	1.8	1.63	1.46	1.24	1.18	---	---	---	---	0.911	---	---
Lithium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.282	0.365	0.384	0.328	0.33	0.319	---	---	---	---	0.338	---	---
Manganese	mg/L	0.00257	0.00499	0.00598	0.0057	0.00644	0.0058	---	---	---	---	0.00724	---	---
Molybdenum	mg/L	0.00572	0.0082	0.00344	0.00133	0.00117	0.00078	---	---	---	---	0.00047	---	---
Sodium	mg/L	6.96	3.18	1.41	0.68	0.5	0.34	---	---	---	---	0.16	---	---
Nickel	mg/L	0.0003	< 0.0001	0.0001	< 0.0001	< 0.0001	0.0001	---	---	---	---	< 0.0001	---	---
Phosphorus	mg/L	< 0.009	< 0.009	0.044	< 0.009	0.009	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.00004	0.00005	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Antimony	mg/L	0.0007	0.001	0.0009	0.0007	0.0007	0.0006	---	---	---	---	0.0002	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	0.93	0.51	0.59	0.56	0.53	0.53	---	---	---	---	0.52	---	---
Tin	mg/L	0.00159	0.00062	0.00036	0.00018	0.00021	0.00014	---	---	---	---	0.00002	---	---
Strontium	mg/L	0.0258	0.0247	0.0244	0.02	0.0202	0.0204	---	---	---	---	0.0166	---	---
Titanium	mg/L	0.0005	0.0002	0.0002	< 0.0001	< 0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	< 0.000004	0.000005	< 0.000004	0.000015	< 0.000004	< 0.000004	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000185	0.00146	0.00204	0.00199	0.00235	0.00219	---	---	---	---	0.0019	---	---
Vanadium	mg/L	0.00218	0.00147	0.00155	0.00144	0.00139	0.00119	---	---	---	---	0.00109	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000073	0.000083	0.000058	0.000053	0.000047	0.00004	---	---	---	---	0.000028	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4
IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-10
Weight: 1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	995	992	987	991	981	992	976	995	991	995	976	994	994
pH	units	7.51	7.43	8.47	7.46	7.56	7.53	7.52	7.41	7.59	7.66	7.6	7.43	7.36
Conductivity	µS/cm	32	35	33	31	32	32	29	27	32	32	31	32	29
Alkalinity	mg/L as $CaCO_3$	14	8	12	14	14	13	12	11	12	12	12	13	12
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.3	0.3	0.3	0.3	0.4	0.3	< 0.2	0.2	0.6	0.3	0.4	0.3	< 0.2
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.09	---	---	---	---	0.07	---	---	---	---	0.1
Arsenic	mg/L	---	---	0.001	---	---	---	---	0.001	---	---	---	---	0.0009
Barium	mg/L	---	---	0.00082	---	---	---	---	0.00084	---	---	---	---	0.00091
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0016	---	---	---	---	0.0009	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	5.19	---	---	---	---	4.74	---	---	---	---	5.73
Cadmium	mg/L	---	---	0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.000103	---	---	---	---	0.000013	---	---	---	---	0.000008
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.782	---	---	---	---	0.699	---	---	---	---	0.708
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.174	---	---	---	---	0.122	---	---	---	---	0.126
Manganese	mg/L	---	---	0.00469	---	---	---	---	0.00553	---	---	---	---	0.00539
Molybdenum	mg/L	---	---	0.00035	---	---	---	---	0.00044	---	---	---	---	0.00053
Sodium	mg/L	---	---	0.12	---	---	---	---	0.08	---	---	---	---	0.09
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	0.0004	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	0.015
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Antimony	mg/L	---	---	0.0002	---	---	---	---	< 0.0002	---	---	---	---	0.0003
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.46	---	---	---	---	0.36	---	---	---	---	0.4
Tin	mg/L	---	---	0.00009	---	---	---	---	0.00011	---	---	---	---	0.00012
Strontium	mg/L	---	---	0.0114	---	---	---	---	0.0084	---	---	---	---	0.0088
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.00152	---	---	---	---	0.000904	---	---	---	---	0.000729
Vanadium	mg/L	---	---	0.00077	---	---	---	---	0.0006	---	---	---	---	0.00058
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000024	---	---	---	---	0.000018	---	---	---	---	0.000017
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4 IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-10
Weight: 1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	984	998	1003	1009	1002	997	1010	1007	997
pH	units	7.5	7.55	7.77	7.66	7.44	7.57	7.55	7.59	7.61
Conductivity	µS/cm	29	32	27	29	31	32	30	32	27
Alkalinity	mg/L as $CaCO_3$	12	12	12	12	10	12	12	12	12
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.8	0.2	< 0.2
Chloride	mg/L	---	---	---	---	0.2	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.06	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0009	---	---	---	---
Barium	mg/L	---	---	---	---	0.00098	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0005	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	5.05	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000089	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.692	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.105	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00604	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00023	---	---	---	---
Sodium	mg/L	---	---	---	---	0.07	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	0.009	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.37	---	---	---	---
Tin	mg/L	---	---	---	---	0.00006	---	---	---	---
Strontium	mg/L	---	---	---	---	0.007	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.00064	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00047	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000023	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4 IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-11
Weight: 1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	808	987	1002	982	994	992	986	989	989	993	996	991	980
pH	units	7.80	8.24	7.55	7.76	7.51	7.49	7.43	7.56	7.34	7.82	7.5	7.48	7.5
Conductivity	µS/cm	87	66	54	47	48	42	40	31	40	36	200	44	35
Alkalinity	mg/L as $CaCO_3$	24	26	17	16	17	16	13	15	26	6	14	12	13
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.7	4.6	4.3	2.4	2	1.6	1.3	1.3	1.1	0.9	76	5.2	1.8
Chloride	mg/L	7	2.7	0.9	0.3	< 0.2	< 0.2	---	---	---	---	0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	0.00001	---	---
Silver	mg/L	< 0.00001	< 0.00001	0.00004	< 0.00001	0.00001	0.00002	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.18	0.07	0.06	0.06	0.08	0.07	---	---	---	---	0.1	---	---
Arsenic	mg/L	0.0043	0.0027	0.0026	0.0028	0.0024	0.0022	---	---	---	---	0.0016	---	---
Barium	mg/L	0.00221	0.00325	0.00321	0.003	0.00387	0.00322	---	---	---	---	0.0228	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0207	0.0244	0.016	0.009	0.0077	0.0053	---	---	---	---	0.0032	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	5.09	5.78	5.29	4.89	5.51	4.56	---	---	---	---	22.4	---	---
Cadmium	mg/L	< 0.000003	< 0.000003	0.000004	0.000003	< 0.000003	0.000003	---	---	---	---	0.000018	---	---
Cobalt	mg/L	0.000044	0.000052	0.000025	0.000093	0.000023	0.000018	---	---	---	---	0.000161	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	0.001	---	---
Iron	mg/L	0.006	< 0.003	< 0.003	< 0.003	0.004	< 0.003	---	---	---	---	< 0.003	---	---
Potassium	mg/L	4.58	2.47	2.08	1.9	1.75	1.65	---	---	---	---	2.85	---	---
Lithium	mg/L	< 0.001	0.001	0.001	0.001	0.001	< 0.001	---	---	---	---	0.013	---	---
Magnesium	mg/L	0.366	0.724	0.659	0.546	0.602	0.543	---	---	---	---	7.57	---	---
Manganese	mg/L	0.00479	0.0112	0.0127	0.0101	0.0115	0.0106	---	---	---	---	0.0642	---	---
Molybdenum	mg/L	0.00244	0.00263	0.00186	0.0009	0.00072	0.00047	---	---	---	---	0.00031	---	---
Sodium	mg/L	6.39	4.16	2.05	1.12	0.9	0.6	---	---	---	---	0.45	---	---
Nickel	mg/L	0.0002	< 0.0001	0.0001	< 0.0001	< 0.0001	0.0001	---	---	---	---	0.0003	---	---
Phosphorus	mg/L	< 0.009	< 0.009	< 0.009	< 0.009	0.011	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.00013	0.00009	0.00004	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	0.00004	---	---
Antimony	mg/L	0.001	0.001	0.0009	0.0007	0.0008	0.0006	---	---	---	---	0.0004	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	0.64	0.42	0.43	0.42	0.46	0.46	---	---	---	---	0.53	---	---
Tin	mg/L	0.00477	0.00246	0.00139	0.00087	0.00084	0.00061	---	---	---	---	0.00025	---	---
Strontium	mg/L	0.0235	0.0278	0.0235	0.0189	0.021	0.02	---	---	---	---	0.131	---	---
Titanium	mg/L	0.0003	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	---	---	---	---	0.0002	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	< 0.000004	0.000005	< 0.000004	0.000013	< 0.000004	< 0.000004	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000043	0.000225	0.000353	0.000237	0.000297	0.000255	---	---	---	---	0.00414	---	---
Vanadium	mg/L	0.00083	0.00054	0.00068	0.00054	0.00064	0.00047	---	---	---	---	0.00048	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000014	0.000021	0.000013	0.00001	0.000004	0.000007	---	---	---	---	0.000011	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4
IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-11
Weight: 1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	995	992	991	992	988	994	978	986	982	998	978	999	997
pH	units	7.28	7.33	7.88	7.3	7.3	7.34	7.37	7.41	7.22	7.53	7.43	7.03	7.09
Conductivity	µS/cm	31	32	33	30	32	37	32	27	29	31	30	30	27
Alkalinity	mg/L as $CaCO_3$	12	13	14	13	22	11	16	10	11	11	11	16	10
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.3	1.4	1.2	3	0.9	3.3	0.7	0.8	0.8	0.9	1.1	0.9	0.8
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.07	---	---	---	---	0.05	---	---	---	---	0.07
Arsenic	mg/L	---	---	0.0015	---	---	---	---	0.0015	---	---	---	---	0.0014
Barium	mg/L	---	---	0.00311	---	---	---	---	0.00362	---	---	---	---	0.00374
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0026	---	---	---	---	0.0014	---	---	---	---	0.0005
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	4.53	---	---	---	---	4.01	---	---	---	---	4.73
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	0.000003
Cobalt	mg/L	---	---	0.000121	---	---	---	---	0.000014	---	---	---	---	0.000012
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	1.16	---	---	---	---	1.06	---	---	---	---	1.04
Lithium	mg/L	---	---	0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.505	---	---	---	---	0.313	---	---	---	---	0.287
Manganese	mg/L	---	---	0.00917	---	---	---	---	0.00958	---	---	---	---	0.00922
Molybdenum	mg/L	---	---	0.0002	---	---	---	---	0.00023	---	---	---	---	0.00024
Sodium	mg/L	---	---	0.15	---	---	---	---	0.11	---	---	---	---	0.11
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	0.014
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Antimony	mg/L	---	---	0.0002	---	---	---	---	0.0002	---	---	---	---	0.0003
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.4	---	---	---	---	0.33	---	---	---	---	0.37
Tin	mg/L	---	---	0.00033	---	---	---	---	0.00025	---	---	---	---	0.00026
Strontium	mg/L	---	---	0.0147	---	---	---	---	0.0115	---	---	---	---	0.012
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.000328	---	---	---	---	0.000317	---	---	---	---	0.000363
Vanadium	mg/L	---	---	0.00041	---	---	---	---	0.00037	---	---	---	---	0.00033
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000003	---	---	---	---	0.000002	---	---	---	---	0.000003
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-11
Weight:	1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	981	986	998	1004	1003	1006	1005	1005	998
pH	units	7.35	7.36	7.44	7.61	7.34	7.46	7.52	7.44	7.42
Conductivity	µS/cm	26	30	27	27	29	24	28	30	26
Alkalinity	mg/L as $CaCO_3$	11	11	11	12	10	12	11	11	11
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.8	0.7	0.8	0.7	0.6	0.8	0.7	0.7	0.7
Chloride	mg/L	---	---	---	---	< 0.2	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.05	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0015	---	---	---	---
Barium	mg/L	---	---	---	---	0.0038	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0008	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	4.26	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000095	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	0.0036	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.982	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.21	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00913	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00011	---	---	---	---
Sodium	mg/L	---	---	---	---	0.08	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	0.013	---	---	---	---
Lead	mg/L	---	---	---	---	0.0001	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.35	---	---	---	---
Tin	mg/L	---	---	---	---	0.00042	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0098	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000286	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00029	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000001	---	---	---	---
Zinc	mg/L	---	---	---	---	0.002	---	---	---	---

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4
IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-12
Weight: 1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	829	977	993	568	981	998	989	983	988	993	988	992	991
pH	units	7.95	8.01	7.78	8.01	7.53	7.55	7.5	7.61	7.35	7.42	7.44	7.41	7.64
Conductivity	µS/cm	88	52	50	35	39	38	36	29	39	33	29	29	31
Alkalinity	mg/L as $CaCO_3$	22	21	17	14	15	16	14	13	14	13	12	12	13
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.7	2	1.8	0.4	1	0.8	0.8	0.7	0.7	0.6	0.9	0.7	0.7
Chloride	mg/L	10	2.8	0.7	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	< 0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.08	0.03	0.06	0.12	0.05	0.04	---	---	---	---	0.07	---	---
Arsenic	mg/L	0.0022	0.0018	0.0017	0.0015	0.0013	0.001	---	---	---	---	0.0007	---	---
Barium	mg/L	0.00088	0.00076	0.00058	0.00029	0.00041	0.00053	---	---	---	---	0.00044	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0116	0.0116	0.0061	0.0012	0.0021	0.0014	---	---	---	---	0.0006	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	5.91	5.42	5.92	5.11	4.85	4.91	---	---	---	---	4.92	---	---
Cadmium	mg/L	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	---	---	---	---	< 0.000003	---	---
Cobalt	mg/L	0.000064	0.000051	0.000023	0.000301	0.000027	0.000019	---	---	---	---	0.000057	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0024	0.001	0.0007	< 0.0005	0.0006	< 0.0005	---	---	---	---	< 0.0005	---	---
Iron	mg/L	0.004	< 0.003	< 0.003	0.003	0.007	< 0.003	---	---	---	---	< 0.003	---	---
Potassium	mg/L	2.12	0.918	0.726	0.409	0.358	0.343	---	---	---	---	0.178	---	---
Lithium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.449	0.516	0.528	0.313	0.354	0.375	---	---	---	---	0.264	---	---
Manganese	mg/L	0.00549	0.00699	0.00772	0.00502	0.00765	0.00733	---	---	---	---	0.00859	---	---
Molybdenum	mg/L	0.00544	0.00853	0.00519	0.00101	0.00185	0.00151	---	---	---	---	0.00108	---	---
Sodium	mg/L	6.6	3.2	1.5	0.39	0.4	0.32	---	---	---	---	0.14	---	---
Nickel	mg/L	0.0004	< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Phosphorus	mg/L	< 0.009	< 0.009	0.028	< 0.009	0.014	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.00007	0.00004	0.00003	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Antimony	mg/L	0.0008	0.0011	0.001	0.0004	0.0007	0.0005	---	---	---	---	0.0002	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	1.05	0.52	0.59	0.51	0.47	0.5	---	---	---	---	0.43	---	---
Tin	mg/L	0.00227	0.00112	0.00062	0.00026	0.00034	0.00027	---	---	---	---	0.00005	---	---
Strontium	mg/L	0.0307	0.0258	0.0247	0.0153	0.0161	0.0183	---	---	---	---	0.0117	---	---
Titanium	mg/L	0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	< 0.000004	0.000005	< 0.000004	0.000008	< 0.000004	< 0.000004	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000325	0.00223	0.00243	0.00104	0.0018	0.00169	---	---	---	---	0.00109	---	---
Vanadium	mg/L	0.00045	0.0003	0.00032	0.00027	0.00025	0.00017	---	---	---	---	0.00015	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000234	0.000129	0.000078	0.000055	0.000044	0.000045	---	---	---	---	0.000025	---	---
Zinc	mg/L	0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4 IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-12
Weight: 1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	994	986	990	990	984	987	979	982	989	994	972	994	991
pH	units	7.33	6.45	7.02	7.52	7.24	7.57	7.62	7.41	7.27	7.37	7.59	7.25	7.22
Conductivity	µS/cm	27	30	29	30	28	30	25	25	26	28	25	27	25
Alkalinity	mg/L as $CaCO_3$	10	25	11	14	15	12	11	11	10	10	11	12	10
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.2	0.7	0.6	1	0.7	0.7	0.5	0.6	0.5	0.7	0.6	0.6	0.5
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.06	---	---	---	---	0.05	---	---	---	---	0.06
Arsenic	mg/L	---	---	0.0005	---	---	---	---	0.0005	---	---	---	---	0.0004
Barium	mg/L	---	---	0.00024	---	---	---	---	0.00027	---	---	---	---	0.00024
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0012	---	---	---	---	0.0006	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	4.76	---	---	---	---	4.34	---	---	---	---	4.8
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.000114	---	---	---	---	0.000013	---	---	---	---	0.000011
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	0.001	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.123	---	---	---	---	0.097	---	---	---	---	0.085
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.18	---	---	---	---	0.144	---	---	---	---	0.147
Manganese	mg/L	---	---	0.00768	---	---	---	---	0.00945	---	---	---	---	0.00886
Molybdenum	mg/L	---	---	0.00098	---	---	---	---	0.00133	---	---	---	---	0.00114
Sodium	mg/L	---	---	0.09	---	---	---	---	0.08	---	---	---	---	0.08
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	0.0002	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	0.019
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Antimony	mg/L	---	---	0.0002	---	---	---	---	< 0.0002	---	---	---	---	0.0003
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.38	---	---	---	---	0.33	---	---	---	---	0.33
Tin	mg/L	---	---	0.00011	---	---	---	---	0.0001	---	---	---	---	0.0001
Strontium	mg/L	---	---	0.0088	---	---	---	---	0.0071	---	---	---	---	0.0069
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.000809	---	---	---	---	0.000579	---	---	---	---	0.000499
Vanadium	mg/L	---	---	0.00013	---	---	---	---	0.00014	---	---	---	---	0.00009
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000019	---	---	---	---	0.000017	---	---	---	---	0.000016
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-12
Weight:	1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	982	994	1002	1008	1005	1002	1004	999	999
pH	units	7.28	7.39	7.48	7.62	7.37	7.43	7.52	7.37	7.61
Conductivity	µS/cm	24	27	23	24	26	22	25	29	24
Alkalinity	mg/L as $CaCO_3$	10	10	10	11	9	10	10	10	11
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.6	0.6	0.6	0.6	0.5	0.5	1.6	0.5	0.5
Chloride	mg/L	---	---	---	---	< 0.2	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.03	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0004	---	---	---	---
Barium	mg/L	---	---	---	---	0.00021	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0003	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	4.37	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000099	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.08	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.126	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00956	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00103	---	---	---	---
Sodium	mg/L	---	---	---	---	0.06	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	0.016	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.33	---	---	---	---
Tin	mg/L	---	---	---	---	0.00008	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0057	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000412	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00008	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000011	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-13
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	812	992	987	990	992	991	988	989	982	987	990	987	983
pH	units	8.06	8.25	8.12	7.99	7.49	7.26	7.46	7.66	7.41	7.33	7.47	7.48	7.51
Conductivity	µS/cm	73	52	50	43	45	42	39	29	43	32	34	35	35
Alkalinity	mg/L as $CaCO_3$	24	27	21	22	22	17	16	14	18	16	13	15	14
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.4	1.7	1.4	0.7	0.6	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.4
Chloride	mg/L	4	0.9	< 0.2	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Silver	mg/L	< 0.00001	< 0.00001	0.00002	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.2	0.07	0.06	0.12	0.09	0.07	---	---	---	---	0.09	---	---
Arsenic	mg/L	0.002	0.0012	0.0013	0.0013	0.0013	0.0012	---	---	---	---	0.0009	---	---
Barium	mg/L	0.00123	0.00141	0.00128	0.00122	0.00134	0.00127	---	---	---	---	0.00156	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.02	0.0218	0.0109	0.0055	0.0046	0.0031	---	---	---	---	0.0016	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	5.56	6.18	5.58	7.03	6.34	5.26	---	---	---	---	5.57	---	---
Cadmium	mg/L	< 0.000003	< 0.000003	< 0.000003	0.000004	< 0.000003	0.000005	---	---	---	---	< 0.000003	---	---
Cobalt	mg/L	0.000038	0.000047	0.000018	0.000084	0.000015	0.000016	---	---	---	---	0.000036	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.001	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	0.0009	---	---
Iron	mg/L	0.008	0.005	< 0.003	0.005	0.005	< 0.003	---	---	---	---	< 0.003	---	---
Potassium	mg/L	2.96	1.64	1.55	1.5	1.24	1.14	---	---	---	---	0.877	---	---
Lithium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.369	0.551	0.474	0.503	0.448	0.381	---	---	---	---	0.247	---	---
Manganese	mg/L	0.00264	0.00641	0.0076	0.00677	0.00721	0.00677	---	---	---	---	0.00743	---	---
Molybdenum	mg/L	0.00088	0.0012	0.00079	0.0003	0.00035	0.00021	---	---	---	---	0.00015	---	---
Sodium	mg/L	4.23	2.26	0.83	0.53	0.37	0.23	---	---	---	---	0.12	---	---
Nickel	mg/L	0.0003	< 0.0001	0.0001	< 0.0001	< 0.0001	0.0001	---	---	---	---	0.0001	---	---
Phosphorus	mg/L	0.009	< 0.009	< 0.009	< 0.009	0.016	0.01	---	---	---	---	0.011	---	---
Lead	mg/L	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	0.00004	---	---
Antimony	mg/L	0.0008	0.0008	0.0007	0.0006	0.0006	0.0004	---	---	---	---	0.0002	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	1.02	0.62	0.76	0.73	0.63	0.57	---	---	---	---	0.49	---	---
Tin	mg/L	0.00264	0.001	0.00053	0.00024	0.00025	0.00016	---	---	---	---	0.00003	---	---
Strontium	mg/L	0.0311	0.0371	0.0307	0.0323	0.029	0.0258	---	---	---	---	0.017	---	---
Titanium	mg/L	0.0006	0.0003	0.0003	0.0001	< 0.0001	0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	< 0.000004	0.000007	< 0.000004	0.000009	< 0.000004	< 0.000004	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.00024	0.00212	0.00239	0.00205	0.00212	0.00178	---	---	---	---	0.00128	---	---
Vanadium	mg/L	0.00356	0.00236	0.0023	0.00207	0.00209	0.00171	---	---	---	---	0.00147	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000131	0.000093	0.000055	0.000042	0.000031	0.000027	---	---	---	---	0.000015	---	---
Zinc	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4
IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-13
Weight: 1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	992	986	987	989	986	966	977	984	985	995	975	987	989
pH	units	7.35	7.45	8.05	7.34	7.59	7.53	7.58	7.47	7.27	7.49	7.45	7.23	7.19
Conductivity	µS/cm	32	32	34	30	34	33	29	27	28	32	27	30	27
Alkalinity	mg/L as $CaCO_3$	14	15	11	13	14	13	12	12	12	12	12	17	12
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.4	0.3	0.4	0.3	0.3	0.4	0.2	0.4	0.3	0.4	0.3	0.3	0.3
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.07	---	---	---	---	0.07	---	---	---	---	0.08
Arsenic	mg/L	---	---	0.0008	---	---	---	---	0.0007	---	---	---	---	0.0005
Barium	mg/L	---	---	0.0014	---	---	---	---	0.00137	---	---	---	---	0.00145
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0018	---	---	---	---	0.0008	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	5.35	---	---	---	---	4.62	---	---	---	---	5.18
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.000122	---	---	---	---	0.000046	---	---	---	---	0.000008
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	0.0006	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.741	---	---	---	---	0.673	---	---	---	---	0.612
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.186	---	---	---	---	0.134	---	---	---	---	0.133
Manganese	mg/L	---	---	0.00621	---	---	---	---	0.00662	---	---	---	---	0.00601
Molybdenum	mg/L	---	---	0.00008	---	---	---	---	0.0001	---	---	---	---	0.00013
Sodium	mg/L	---	---	0.08	---	---	---	---	0.06	---	---	---	---	0.07
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	< 0.009	---	---	---	---	0.015
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Antimony	mg/L	---	---	< 0.0002	---	---	---	---	< 0.0002	---	---	---	---	0.0002
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.44	---	---	---	---	0.36	---	---	---	---	0.35
Tin	mg/L	---	---	0.00011	---	---	---	---	0.00015	---	---	---	---	0.00009
Strontium	mg/L	---	---	0.0132	---	---	---	---	0.01	---	---	---	---	0.0093
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.00106	---	---	---	---	0.000649	---	---	---	---	0.000538
Vanadium	mg/L	---	---	0.00105	---	---	---	---	0.00075	---	---	---	---	0.00071
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000012	---	---	---	---	0.00001	---	---	---	---	0.000009
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-13
Weight:	1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	991	993	1004	995	1011	1006	1012	1004	1007
pH	units	7.52	7.44	7.69	7.61	7.53	7.53	7.63	7.51	7.68
Conductivity	µS/cm	28	30	26	25	29	25	28	31	28
Alkalinity	mg/L as $CaCO_3$	13	12	11	11	11	12	12	11	13
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.4	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3
Chloride	mg/L	---	---	---	---	< 0.2	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.05	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0005	---	---	---	---
Barium	mg/L	---	---	---	---	0.00159	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0005	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	4.83	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.000087	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.614	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.114	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00634	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00007	---	---	---	---
Sodium	mg/L	---	---	---	---	0.05	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	0.014	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0003	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.34	---	---	---	---
Tin	mg/L	---	---	---	---	0.00015	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0079	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000479	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00062	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.000007	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-14
Weight:	1 kg

Analyte	Unit	Wk#0	Wk#1	Wk#2	Wk#3	Wk#4	Wk#5	Wk#6	Wk#7	Wk#8	Wk# 9	Wk#10	Wk#11	Wk#12
		CA11163-DEC12	CA11166-DEC12	CA11188-DEC12	CA10039-JAN13	CA10083-JAN13	CA10127-JAN13	CA10241-JAN13	CA10016-FEB13	CA10059-FEB13	CA10111-FEB13	CA10170-FEB13	CA10017-MAR13	CA10066-MAR13
		18/Dec/12	24/Dec/12	31/Dec/12	8/Jan/13	15/Jan/13	22/Jan/13	29/Jan/13	5/Feb/13	12/Feb/13	19/Feb/13	26/Feb/13	5/Mar/13	12/Mar/13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	770	946	976	946	954	983	964	978	957	974	970	987	984
pH	units	7.99	8.5	7.49	7.77	7.59	7.35	7.38	7.63	7.35	7.46	7.47	7.67	7.8
Conductivity	µS/cm	80	47	43	38	38	35	31	26	35	33	27	30	29
Alkalinity	mg/L as $CaCO_3$	26	23	16	15	15	16	11	14	15	12	12	12	14
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	1.5	1.1	0.8	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4
Chloride	mg/L	7	1.4	0.2	< 0.2	< 0.2	< 0.2	---	---	---	---	< 0.2	---	---
Mercury	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	0.00001	---	---
Silver	mg/L	< 0.00001	< 0.00001	0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Aluminum	mg/L	0.14	0.06	0.08	0.1	0.07	0.06	---	---	---	---	0.08	---	---
Arsenic	mg/L	0.0029	0.0029	0.0034	0.0033	0.003	0.003	---	---	---	---	0.0029	---	---
Barium	mg/L	0.00189	0.00199	0.00173	0.0016	0.00165	0.00151	---	---	---	---	0.00179	---	---
Beryllium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Boron	mg/L	0.0109	0.0098	0.004	0.002	0.0017	0.0011	---	---	---	---	0.0006	---	---
Bismuth	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	---	---	---	---	< 0.00001	---	---
Calcium	mg/L	5.97	4.9	4.31	5.46	5.5	4.76	---	---	---	---	4.69	---	---
Cadmium	mg/L	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	< 0.000003	---	---	---	---	< 0.000003	---	---
Cobalt	mg/L	0.000083	0.000068	0.000033	0.000141	0.000033	0.000021	---	---	---	---	0.000028	---	---
Chromium	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	< 0.0005	---	---
Copper	mg/L	0.0019	0.0011	0.0006	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	0.0006	---	---
Iron	mg/L	0.006	< 0.003	< 0.003	0.003	0.005	0.003	---	---	---	---	< 0.003	---	---
Potassium	mg/L	2.09	0.814	0.694	0.618	0.509	0.446	---	---	---	---	0.312	---	---
Lithium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Magnesium	mg/L	0.453	0.435	0.361	0.365	0.348	0.299	---	---	---	---	0.175	---	---
Manganese	mg/L	0.00329	0.00558	0.00527	0.00508	0.00585	0.00629	---	---	---	---	0.0057	---	---
Molybdenum	mg/L	0.00084	0.00206	0.00129	0.00051	0.00042	0.00029	---	---	---	---	0.00012	---	---
Sodium	mg/L	5.14	2.23	0.87	0.57	0.41	0.28	---	---	---	---	0.13	---	---
Nickel	mg/L	0.0003	< 0.0001	0.0001	< 0.0001	< 0.0001	0.0001	---	---	---	---	0.0002	---	---
Phosphorus	mg/L	0.009	< 0.009	< 0.009	< 0.009	0.024	< 0.009	---	---	---	---	< 0.009	---	---
Lead	mg/L	0.00008	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	0.00002	---	---
Antimony	mg/L	0.0006	0.0005	0.0005	0.0004	0.0004	0.0003	---	---	---	---	< 0.0002	---	---
Selenium	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	< 0.001	---	---
Silicon	mg/L	1.1	0.48	0.63	0.57	0.53	0.5	---	---	---	---	0.43	---	---
Tin	mg/L	0.00123	0.00043	0.00031	0.00015	0.00015	0.00011	---	---	---	---	0.00002	---	---
Strontium	mg/L	0.0224	0.0156	0.0124	0.013	0.013	0.012	---	---	---	---	0.0082	---	---
Titanium	mg/L	0.0004	< 0.0001	0.0001	0.0001	< 0.0001	< 0.0001	---	---	---	---	< 0.0001	---	---
Thallium	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	---	---	---	---	< 0.00002	---	---
Thorium	mg/L	< 0.000004	0.000008	< 0.000004	0.00001	< 0.000004	< 0.000004	---	---	---	---	< 0.000004	---	---
Uranium	mg/L	0.000285	0.00281	0.00297	0.00247	0.00242	0.00229	---	---	---	---	0.00127	---	---
Vanadium	mg/L	0.00103	0.00068	0.00068	0.00061	0.00055	0.00044	---	---	---	---	0.00036	---	---
Tungsten	mg/L	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	---	---	---	---	< 0.01	---	---
Yttrium	mg/L	0.000187	0.000172	0.000095	0.000082	0.000067	0.000063	---	---	---	---	0.000039	---	---
Zinc	mg/L	0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	< 0.002	---	---

Humidity Cell Results

Customer:	Trelawney Mining
Contact:	Dave Brown
Project:	NB101-497/4 IAMGold Cote Lake
SGS Contact:	Brian Graham
Humidity Cell:	CG-HC-14
Weight:	1 kg

Analyte	Unit	Wk#13	Wk#14	Wk#15	Wk#16	Wk#17	Wk#18	Wk#19	Wk#20	Wk#21	Wk#22	Wk#23	Wk#24	Wk#25
		CA10169-MAR13	CA10257-MAR13	CA10017-APR13	CA10061-APR13	CA10132-APR13	CA10177-APR13	CA10221-APR13	CA10038-MAY13	CA10089-MAY13	CA10131-MAY13	CA10175-MAY13	CA10017-JUN13	CA10061-JUN13
		19/Mar/13	26/Mar/13	2/Apr/13	9/Apr/13	16/Apr/13	23/Apr/13	30/Apr/13	07-May-13	14-May-13	21-May-13	28-May-13	04-Jun-13	11-Jun-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	993	988	976	985	984	986	979	978	996	995	968	992	988
pH	units	7.45	6.55	8.63	7.57	7.30	7.31	7.35	7.44	7.52	7.68	7.58	7.21	7.00
Conductivity	µS/cm	28	30	28	28	31	31	26	30	27	28	27	28	26
Alkalinity	mg/L as $CaCO_3$	12	18	14	13	12	20	10	10	10	11	11	10	10
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.6	0.4	0.4	0.4	0.4	0.4	0.3	0.5	0.3	0.4	0.4	0.4	0.3
Chloride	mg/L	---	---	< 0.2	---	---	---	---	< 0.2	---	---	---	---	< 0.2
Mercury	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Silver	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Aluminum	mg/L	---	---	0.06	---	---	---	---	0.06	---	---	---	---	0.08
Arsenic	mg/L	---	---	0.0025	---	---	---	---	0.0024	---	---	---	---	0.0025
Barium	mg/L	---	---	0.00118	---	---	---	---	0.00115	---	---	---	---	0.0012
Beryllium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Boron	mg/L	---	---	0.0011	---	---	---	---	0.0004	---	---	---	---	< 0.0002
Bismuth	mg/L	---	---	< 0.00001	---	---	---	---	< 0.00001	---	---	---	---	< 0.00001
Calcium	mg/L	---	---	4.79	---	---	---	---	4.55	---	---	---	---	5.15
Cadmium	mg/L	---	---	< 0.000003	---	---	---	---	< 0.000003	---	---	---	---	< 0.000003
Cobalt	mg/L	---	---	0.000128	---	---	---	---	0.000074	---	---	---	---	0.000019
Chromium	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Copper	mg/L	---	---	< 0.0005	---	---	---	---	< 0.0005	---	---	---	---	< 0.0005
Iron	mg/L	---	---	< 0.003	---	---	---	---	< 0.003	---	---	---	---	< 0.003
Potassium	mg/L	---	---	0.266	---	---	---	---	0.249	---	---	---	---	0.241
Lithium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Magnesium	mg/L	---	---	0.126	---	---	---	---	0.094	---	---	---	---	0.083
Manganese	mg/L	---	---	0.00562	---	---	---	---	0.00655	---	---	---	---	0.0062
Molybdenum	mg/L	---	---	0.0001	---	---	---	---	0.00009	---	---	---	---	0.00013
Sodium	mg/L	---	---	0.1	---	---	---	---	0.08	---	---	---	---	0.08
Nickel	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Phosphorus	mg/L	---	---	< 0.009	---	---	---	---	0.011	---	---	---	---	0.015
Lead	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	0.00003
Antimony	mg/L	---	---	< 0.0002	---	---	---	---	< 0.0002	---	---	---	---	0.0003
Selenium	mg/L	---	---	< 0.001	---	---	---	---	< 0.001	---	---	---	---	< 0.001
Silicon	mg/L	---	---	0.4	---	---	---	---	0.35	---	---	---	---	0.36
Tin	mg/L	---	---	0.00006	---	---	---	---	0.00009	---	---	---	---	0.00009
Strontium	mg/L	---	---	0.0066	---	---	---	---	0.0056	---	---	---	---	0.0056
Titanium	mg/L	---	---	< 0.0001	---	---	---	---	< 0.0001	---	---	---	---	< 0.0001
Thallium	mg/L	---	---	< 0.00002	---	---	---	---	< 0.00002	---	---	---	---	< 0.00002
Thorium	mg/L	---	---	< 0.000004	---	---	---	---	< 0.000004	---	---	---	---	< 0.000004
Uranium	mg/L	---	---	0.00101	---	---	---	---	0.000601	---	---	---	---	0.000534
Vanadium	mg/L	---	---	0.00029	---	---	---	---	0.00023	---	---	---	---	0.00027
Tungsten	mg/L	---	---	< 0.01	---	---	---	---	< 0.01	---	---	---	---	< 0.01
Yttrium	mg/L	---	---	0.000034	---	---	---	---	0.000031	---	---	---	---	0.000028
Zinc	mg/L	---	---	< 0.002	---	---	---	---	< 0.002	---	---	---	---	< 0.002

Humidity Cell Results
Customer: Trelawney Mining
Contact: Dave Brown
Project: NB101-497/4
IAMGold Cote Lake
SGS Contact: Brian Graham
Humidity Cell: CG-HC-14
Weight: 1 kg

Analyte	Unit	Wk#26	Wk#27	Wk#28	Wk#29	Wk#30	Wk#31	Wk#32	Wk#33	Wk#34
		CA10105-JUN13	CA10155-JUN13	CA10015-JUL13	CA10056-JUL13	CA10097-JUL13	CA10136-JUL13	CA10176-JUL13	CA10013-AUG13	CA10054-AUG13
		18-Jun-13	25-Jun-13	02-Jul-13	09-Jul-13	16-Jul-13	23-Jul-13	30-Jul-13	06-Aug-13	13-Aug-13
Leachate Volume Added (mL)	mL	1000	1000	1000	1000	1000	1000	1000	1000	1000
Leachate Volume Recovered (mL)	mL	981	989	1025	1011	999	995	1010	999	1004
pH	units	7.19	7.47	7.64	7.51	7.43	7.53	7.57	7.5	7.54
Conductivity	µS/cm	25	29	26	27	26	23	26	25	24
Alkalinity	mg/L as $CaCO_3$	9	11	11	11	10	11	12	11	11
Acidity	mg/L as $CaCO_3$	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Sulphate	mg/L	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.3	0.3
Chloride	mg/L	---	---	---	---	< 0.2	---	---	---	---
Mercury	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Silver	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Aluminum	mg/L	---	---	---	---	0.06	---	---	---	---
Arsenic	mg/L	---	---	---	---	0.0024	---	---	---	---
Barium	mg/L	---	---	---	---	0.00114	---	---	---	---
Beryllium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Boron	mg/L	---	---	---	---	0.0003	---	---	---	---
Bismuth	mg/L	---	---	---	---	< 0.00001	---	---	---	---
Calcium	mg/L	---	---	---	---	4.63	---	---	---	---
Cadmium	mg/L	---	---	---	---	< 0.000003	---	---	---	---
Cobalt	mg/L	---	---	---	---	0.00011	---	---	---	---
Chromium	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Copper	mg/L	---	---	---	---	< 0.0005	---	---	---	---
Iron	mg/L	---	---	---	---	< 0.003	---	---	---	---
Potassium	mg/L	---	---	---	---	0.24	---	---	---	---
Lithium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Magnesium	mg/L	---	---	---	---	0.064	---	---	---	---
Manganese	mg/L	---	---	---	---	0.00656	---	---	---	---
Molybdenum	mg/L	---	---	---	---	0.00007	---	---	---	---
Sodium	mg/L	---	---	---	---	0.06	---	---	---	---
Nickel	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Phosphorus	mg/L	---	---	---	---	0.009	---	---	---	---
Lead	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Antimony	mg/L	---	---	---	---	0.0002	---	---	---	---
Selenium	mg/L	---	---	---	---	< 0.001	---	---	---	---
Silicon	mg/L	---	---	---	---	0.35	---	---	---	---
Tin	mg/L	---	---	---	---	0.00006	---	---	---	---
Strontium	mg/L	---	---	---	---	0.0047	---	---	---	---
Titanium	mg/L	---	---	---	---	< 0.0001	---	---	---	---
Thallium	mg/L	---	---	---	---	< 0.00002	---	---	---	---
Thorium	mg/L	---	---	---	---	< 0.000004	---	---	---	---
Uranium	mg/L	---	---	---	---	0.000429	---	---	---	---
Vanadium	mg/L	---	---	---	---	0.00018	---	---	---	---
Tungsten	mg/L	---	---	---	---	< 0.01	---	---	---	---
Yttrium	mg/L	---	---	---	---	0.00002	---	---	---	---
Zinc	mg/L	---	---	---	---	< 0.002	---	---	---	---

FIELD CELLS

Côté Gold Project
Geochemical Characterization Report
December 2013
Project #TC121522

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

26-September-2013

Trelawney Mining and Exploration Inc.
Attn : Dave Brown

3 Mesomikenda Lake Rd Box 100, Gogama
Canada, P0M 1W0
Phone: 705-269-0010 x110, Fax:705-269-8212

Date Rec. : 03 September 2013
LR Report: **CA13015-SEP13**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	**3: Analysis Approval Date**	**4: Analysis Approval Time**	**6: #1**	**7: #2**	**8: #3**	**9: #4**
Sample Date & Time			26-Aug-13 09:30	26-Aug-13 09:30	26-Aug-13 09:30	26-Aug-13 09:30
Temperature Upon Receipt [°C]	---	---	23.0	23.0	23.0	23.0
Total Suspended Solids [mg/L]	10-Sep-13	08:19	3	4	3	3
pH [no unit]	10-Sep-13	08:33	7.61	7.52	7.54	7.61
Conductivity [µS/cm]	10-Sep-13	09:28	66	48	52	60
Alkalinity [mg/L as CaCO3]	10-Sep-13	09:28	40	26	30	36
Acidity [mg/L as CaCO3]	10-Sep-13	09:28	< 2	< 2	< 2	< 2
Total Dissolved Solids [mg/L]	10-Sep-13	08:33	57	57	46	80
Dissolved Organic Carbon [mg/L]	06-Sep-13	13:20	2.6	2.4	2.1	2.6
Chloride [mg/L]	06-Sep-13	15:39	1.2	0.6	1.1	0.6
Sulphate [mg/L]	06-Sep-13	15:39	6.4	4.7	4.6	5.0
Nitrite (as N) [mg/L]	05-Sep-13	20:29	< 0.03	< 0.03	0.10	< 0.03
Nitrate (as N) [mg/L]	05-Sep-13	20:29	0.06	< 0.06	0.07	0.18
Nitrate + Nitrite (as N) [mg/L]	05-Sep-13	20:29	0.06	< 0.06	0.17	0.18
Ammonia+Ammonium (N) [mg/L]	09-Sep-13	15:46	< 0.1	< 0.1	< 0.1	0.4
Fluoride [mg/L]	09-Sep-13	11:32	< 0.06	0.08	0.10	0.09
Mercury (total) [mg/L]	09-Sep-13	13:45	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Mercury (dissolved) [mg/L]	09-Sep-13	13:45	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Hardness [mg/L as CaCO3]	23-Sep-13	12:04	43.4	30.3	31.0	41.1
Hardness (dissolved) [mg/L as CaCO3]	23-Sep-13	12:04	40.5	29.3	29.6	37.8

SGS Canada Inc.
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Lakefield - Ontario - KOL 2HO
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Analysis	3: Analysis Approval Date	4: Analysis Approval Time	6: #1	7: #2	8: #3	9: #4
Silver (total) [mg/L]	10-Sep-13	15:59	0.00006	0.00008	0.00009	0.00004
Silver (dissolved) [mg/L]	10-Sep-13	15:59	0.00003	0.00004	0.00004	0.00002
Aluminum (total) [mg/L]	17-Sep-13	10:14	0.08	0.06	0.07	0.06
Aluminum (dissolved) [mg/L]	17-Sep-13	10:14	0.03	0.03	0.02	0.04
Arsenic (total) [mg/L]	10-Sep-13	15:59	0.0063	0.0070	0.0050	0.0063
Arsenic (dissolved) [mg/L]	10-Sep-13	15:59	0.0060	0.0069	0.0050	0.0062
Barium (total) [mg/L]	10-Sep-13	15:59	0.00716	0.00640	0.00798	0.00690
Barium (dissolved) [mg/L]	10-Sep-13	15:59	0.00675	0.00552	0.00758	0.00654
Beryllium (total) [mg/L]	10-Sep-13	16:00	0.00003	< 0.00002	< 0.00002	< 0.00002
Beryllium (dissolved) [mg/L]	10-Sep-13	16:00	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Boron (total) [mg/L]	10-Sep-13	16:00	0.0186	0.0176	0.0208	0.0230
Boron (dissolved) [mg/L]	10-Sep-13	16:00	0.0176	0.0178	0.0213	0.0227
Bismuth (total) [mg/L]	10-Sep-13	16:00	0.00001	0.00003	< 0.00001	< 0.00001
Bismuth (dissolved) [mg/L]	10-Sep-13	16:00	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (total) [mg/L]	23-Sep-13	12:04	16.0	11.2	11.1	15.0
Calcium (dissolved) [mg/L]	23-Sep-13	12:04	15.0	10.9	10.7	13.8
Cadmium (total) [mg/L]	10-Sep-13	16:00	0.000053	0.000056	0.000038	0.000046
Cadmium (dissolved) [mg/L]	10-Sep-13	16:00	0.000029	0.000023	0.000025	0.000033
Cobalt (total) [mg/L]	10-Sep-13	16:00	0.000543	0.000666	0.000357	0.000395
Cobalt (dissolved) [mg/L]	10-Sep-13	16:00	0.000243	0.000330	0.000144	0.000149
Chromium (total) [mg/L]	10-Sep-13	16:00	0.0005	0.0006	< 0.0005	0.0007
Chromium (dissolved) [mg/L]	10-Sep-13	16:00	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Copper (total) [mg/L]	10-Sep-13	16:01	0.0092	0.0127	0.0138	0.0084
Copper (dissolved) [mg/L]	10-Sep-13	16:01	0.0075	0.0109	0.0102	0.0069
Iron (total) [mg/L]	23-Sep-13	12:05	0.043	0.022	0.046	0.024
Iron (dissolved) [mg/L]	23-Sep-13	12:05	0.010	0.003	0.007	< 0.003
Potassium (total) [mg/L]	23-Sep-13	12:05	1.35	1.01	1.10	1.29
Potassium (dissolved) [mg/L]	23-Sep-13	12:05	1.27	0.968	1.05	1.19
Lithium (total) [mg/L]	10-Sep-13	16:01	0.002	0.002	0.002	0.002
Lithium (dissolved) [mg/L]	10-Sep-13	16:01	0.002	0.001	0.002	0.002
Magnesium (total) [mg/L]	23-Sep-13	12:05	0.823	0.551	0.781	0.896
Magnesium (dissolved) [mg/L]	23-Sep-13	12:05	0.757	0.529	0.732	0.817
Manganese (total) [mg/L]	10-Sep-13	16:01	0.00354	0.00304	0.00509	0.00244
Manganese (dissolved) [mg/L]	10-Sep-13	16:01	0.00071	0.00022	0.00047	0.00016

SGS Canada Inc.
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Lakefield - Ontario - KOL 2HO
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LR Report : **CA13015-SEP13**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	6: #1	7: #2	8: #3	9: #4
Molybdenum (total) [mg/L]	10-Sep-13	16:01	0.0110	0.00562	0.00620	0.00937
Molybdenum (dissolved) [mg/L]	10-Sep-13	16:01	0.0105	0.00554	0.00613	0.00912
Sodium (total) [mg/L]	23-Sep-13	12:05	2.61	1.34	2.15	1.22
Sodium (dissolved) [mg/L]	23-Sep-13	12:05	2.45	1.32	2.05	1.13
Nickel (total) [mg/L]	10-Sep-13	16:01	0.0012	0.0015	0.0006	0.0005
Nickel (dissolved) [mg/L]	10-Sep-13	16:01	0.0013	0.0014	0.0006	0.0006
Phosphorus (total) [mg/L]	23-Sep-13	12:05	0.013	0.013	0.017	0.016
Phosphorus (dissolved) [mg/L]	23-Sep-13	12:05	< 0.009	< 0.009	< 0.009	< 0.009
Lead (total) [mg/L]	12-Sep-13	08:13	0.00067	0.00061	0.00031	0.00036
Lead (dissolved) [mg/L]	12-Sep-13	08:13	0.00008	0.00009	0.00005	0.00003
Antimony (total) [mg/L]	12-Sep-13	08:13	0.0011	0.0010	0.0006	0.0010
Antimony (dissolved) [mg/L]	12-Sep-13	08:13	0.0006	0.0005	0.0005	0.0009
Selenium (total) [mg/L]	12-Sep-13	08:13	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (dissolved) [mg/L]	12-Sep-13	08:13	< 0.001	< 0.001	< 0.001	< 0.001
Silicon (total) [mg/L]	23-Sep-13	12:05	1.27	0.71	0.88	0.75
Silicon (dissolved) [mg/L]	23-Sep-13	12:05	1.09	0.65	0.74	0.68
Tin (total) [mg/L]	12-Sep-13	08:16	0.00080	0.00081	0.00028	0.00017
Tin (dissolved) [mg/L]	12-Sep-13	08:16	0.00073	0.00075	0.00018	0.00010
Strontium (total) [mg/L]	17-Sep-13	10:15	0.0806	0.0492	0.0501	0.0574
Strontium (dissolved) [mg/L]	17-Sep-13	10:15	0.0777	0.0483	0.0496	0.0551
Titanium (total) [mg/L]	12-Sep-13	08:16	0.0008	0.0006	0.0010	0.0005
Titanium (dissolved) [mg/L]	12-Sep-13	08:16	0.0004	< 0.0001	< 0.0001	< 0.0001
Thallium (total) [mg/L]	12-Sep-13	08:16	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Thallium (dissolved) [mg/L]	12-Sep-13	08:16	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Uranium (total) [mg/L]	12-Sep-13	08:16	0.0162	0.0113	0.00613	0.0122
Uranium (dissolved) [mg/L]	12-Sep-13	08:16	0.0152	0.0101	0.00531	0.0113
Vanadium (total) [mg/L]	12-Sep-13	08:16	0.00111	0.00091	0.00159	0.00159
Vanadium (dissolved) [mg/L]	12-Sep-13	08:16	0.00095	0.00071	0.00125	0.00148
Zinc (total) [mg/L]	17-Sep-13	10:15	0.004	0.009	0.003	0.005
Zinc (dissolved) [mg/L]	17-Sep-13	10:15	0.004	0.009	0.005	0.005

OnLine LIMS

0000026092

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

LR Report : **CA13015-SEP13**

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical

OnLine LIMS

0000026092

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26-September-2013

Trelawney Mining and Exploration Inc.
Attn : Dave Brown

3 Mesomikenda Lake Rd Box 100, Gogama
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Phone: 705-269-0010 x110, Fax:705-269-8212

Date Rec. : 03 September 2013
LR Report: **CA13015-SEP13**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	10: #5	11: #6	12: #7	13: Duplicate	14: Field Blank
Sample Date & Time	26-Aug-13 09:30	26-Aug-13 09:30	26-Aug-13 09:30	26-Aug-13 09:30	26-Aug-13 09:30
Temperature Upon Receipt [°C]	23.0	23.0	23.0	23.0	23.0
Total Suspended Solids [mg/L]	< 2	< 2	4	< 2	< 2
pH [no unit]	7.69	7.37	6.07	7.52	6.15
Conductivity [µS/cm]	66	79	7	60	< 2
Alkalinity [mg/L as CaCO3]	41	32	< 2	33	< 2
Acidity [mg/L as CaCO3]	< 2	< 2	2	< 2	< 2
Total Dissolved Solids [mg/L]	74	60	< 30	66	< 30
Dissolved Organic Carbon [mg/L]	2.6	< 1	< 1	2.0	< 1
Chloride [mg/L]	0.9	1.0	< 0.2	0.6	< 0.2
Sulphate [mg/L]	5.7	1.9	0.3	6.7	< 0.2
Nitrite (as N) [mg/L]	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Nitrate (as N) [mg/L]	0.16	0.10	< 0.06	0.21	< 0.06
Nitrate + Nitrite (as N) [mg/L]	0.16	0.10	< 0.06	0.21	< 0.06
Ammonia+Ammonium (N) [mg/L]	0.1	0.3	0.5	0.5	< 0.1
Fluoride [mg/L]	0.12	0.17	< 0.06	0.11	< 0.06
Mercury (total) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Mercury (dissolved) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Hardness [mg/L as CaCO3]	45.6	34.8	0.91	40.0	< 0.05
Hardness (dissolved) [mg/L as CaCO3]	42.7	34.0	0.63	39.1	< 0.05

OnLine LIMS

0000026095

Test method information available upon request. “Temperature Upon Receipt” is representative of the whole shipment and may not reflect the temperature of individual samples.

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

LR Report : **CA13015-SEP13**

Analysis	**10: #5**	**11: #6**	**12: #7**	**13: Duplicate**	**14: Field Blank**
Silver (total) [mg/L]	0.00009	0.00005	< 0.00001	0.00004	< 0.00001
Silver (dissolved) [mg/L]	0.00004	0.00002	< 0.00001	0.00002	< 0.00001
Aluminum (total) [mg/L]	0.08	0.07	0.02	0.07	0.01
Aluminum (dissolved) [mg/L]	0.04	0.04	< 0.01	0.04	0.01
Arsenic (total) [mg/L]	0.0053	0.0019	0.0003	0.0066	< 0.0002
Arsenic (dissolved) [mg/L]	0.0051	0.0021	0.0002	0.0062	< 0.0002
Barium (total) [mg/L]	0.0110	0.00853	0.00108	0.00709	< 0.00001
Barium (dissolved) [mg/L]	0.0102	0.00866	0.00040	0.00648	< 0.00001
Beryllium (total) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Beryllium (dissolved) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Boron (total) [mg/L]	0.0205	0.0210	0.0024	0.0242	< 0.0002
Boron (dissolved) [mg/L]	0.0200	0.0212	0.0023	0.0230	< 0.0002
Bismuth (total) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Bismuth (dissolved) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (total) [mg/L]	16.9	13.2	0.31	14.6	< 0.02
Calcium (dissolved) [mg/L]	15.8	12.9	0.21	14.3	< 0.02
Cadmium (total) [mg/L]	0.000139	0.000095	0.000124	0.000050	< 0.000003
Cadmium (dissolved) [mg/L]	0.000102	0.000080	0.000101	0.000035	< 0.000003
Cobalt (total) [mg/L]	0.00127	0.000486	0.000120	0.000419	0.000003
Cobalt (dissolved) [mg/L]	0.000724	0.000287	0.000113	0.000189	0.000003
Chromium (total) [mg/L]	0.0009	0.0005	< 0.0005	0.0007	< 0.0005
Chromium (dissolved) [mg/L]	0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Copper (total) [mg/L]	0.0131	0.0040	0.0012	0.0090	< 0.0005
Copper (dissolved) [mg/L]	0.0107	0.0036	0.0007	0.0101	< 0.0005
Iron (total) [mg/L]	0.048	0.055	0.009	0.026	< 0.003
Iron (dissolved) [mg/L]	0.006	0.004	< 0.003	0.004	< 0.003
Potassium (total) [mg/L]	0.825	0.806	0.089	1.26	< 0.006
Potassium (dissolved) [mg/L]	0.774	0.799	0.073	1.24	< 0.006
Lithium (total) [mg/L]	0.003	0.002	< 0.001	0.002	< 0.001
Lithium (dissolved) [mg/L]	0.003	0.002	< 0.001	0.002	< 0.001
Magnesium (total) [mg/L]	0.832	0.435	0.034	0.867	< 0.001
Magnesium (dissolved) [mg/L]	0.767	0.417	0.026	0.844	< 0.001
Manganese (total) [mg/L]	0.00687	0.00338	0.00479	0.00262	< 0.00001
Manganese (dissolved) [mg/L]	0.00042	0.00044	0.00374	0.00053	< 0.00001

OnLine LIMS

0000026095

SGS Canada Inc.
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Analysis	10: #5	11: #6	12: #7	13: Duplicate	14: Field Blank
Molybdenum (total) [mg/L]	0.00400	0.00101	0.00003	0.00972	< 0.00001
Molybdenum (dissolved) [mg/L]	0.00380	0.00101	0.00003	0.00917	< 0.00001
Sodium (total) [mg/L]	2.06	1.84	0.05	1.19	< 0.01
Sodium (dissolved) [mg/L]	1.96	1.81	0.06	1.19	0.02
Nickel (total) [mg/L]	0.0019	0.0012	0.0004	0.0006	0.0001
Nickel (dissolved) [mg/L]	0.0019	0.0013	0.0005	0.0006	0.0001
Phosphorus (total) [mg/L]	0.016	0.010	0.031	0.014	< 0.009
Phosphorus (dissolved) [mg/L]	< 0.009	< 0.009	0.011	< 0.009	< 0.009
Lead (total) [mg/L]	0.00054	0.00026	0.00036	0.00033	< 0.00002
Lead (dissolved) [mg/L]	0.00011	< 0.00002	0.00006	0.00007	< 0.00002
Antimony (total) [mg/L]	0.0008	0.0005	0.0085	< 0.0002	0.0004
Antimony (dissolved) [mg/L]	0.0006	< 0.0002	0.0087	0.0009	0.0008
Selenium (total) [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (dissolved) [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Silicon (total) [mg/L]	0.80	0.57	0.02	0.73	< 0.01
Silicon (dissolved) [mg/L]	0.72	0.53	0.03	0.69	0.01
Tin (total) [mg/L]	0.00025	0.00008	0.00030	0.00021	0.00906
Tin (dissolved) [mg/L]	0.00017	0.00008	0.00024	0.00010	0.00222
Strontium (total) [mg/L]	0.0830	0.0533	0.0009	0.0594	< 0.0001
Strontium (dissolved) [mg/L]	0.0795	0.0544	0.0008	0.0549	< 0.0001
Titanium (total) [mg/L]	0.0006	0.0006	0.0002	0.0006	< 0.0001
Titanium (dissolved) [mg/L]	< 0.0001	< 0.0001	0.0001	< 0.0001	< 0.0001
Thallium (total) [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Thallium (dissolved) [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Uranium (total) [mg/L]	0.0120	0.00303	0.000037	0.0127	< 0.000001
Uranium (dissolved) [mg/L]	0.0115	0.00292	0.000038	0.0112	< 0.000001
Vanadium (total) [mg/L]	0.00130	0.00141	0.00020	0.00169	0.00013
Vanadium (dissolved) [mg/L]	0.00120	0.00130	0.00010	0.00148	< 0.00003
Zinc (total) [mg/L]	0.008	0.004	0.025	0.014	< 0.002
Zinc (dissolved) [mg/L]	0.009	0.005	0.031	0.014	< 0.002

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LR Report : **CA13015-SEP13**

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OnLine LIMS

0000026095

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03-October-2013

Trelawney Mining and Exploration Inc.
Attn : Dave Brown

3 Mesomikenda Lake Rd Box 100, Gogama
Canada, P0M 1W0
Phone: 705-269-0010 x110, Fax:705-269-8212

Date Rec. : 16 September 2013
LR Report: **CA13385-SEP13**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	6: #1	7: #2	8: #3	9: #4
Sample Date & Time			11-Sep-13 10:00	11-Sep-13 10:00	11-Sep-13 10:00	11-Sep-13 10:00
Temperature Upon Receipt [°C]	---	---	16.0	16.0	16.0	16.0
Total Suspended Solids [mg/L]	18-Sep-13	11:38	9	3	9	8
pH [no unit]	20-Sep-13	11:35	7.52	7.49	7.40	7.69
Conductivity [µS/cm]	20-Sep-13	11:35	85	76	105	125
Alkalinity [mg/L as CaCO3]	20-Sep-13	11:35	36	32	40	50
Acidity [mg/L as CaCO3]	20-Sep-13	11:35	< 2	< 2	< 2	< 2
Total Dissolved Solids [mg/L]	19-Sep-13	13:44	54	< 30	80	91
Dissolved Organic Carbon [mg/L]	17-Sep-13	08:30	6.0	4.3	5.2	5.8
Chloride [mg/L]	17-Sep-13	16:31	1.7	0.7	1.8	1.2
Sulphate [mg/L]	18-Sep-13	17:37	9.5	5.8	7.5	10
Nitrite (as N) [mg/L]	23-Sep-13	12:23	< 0.03	0.07	0.23	0.11
Nitrate (as N) [mg/L]	17-Sep-13	14:16	< 0.06	0.14	0.23	0.23
Nitrate + Nitrite (as N) [mg/L]	17-Sep-13	14:16	< 0.06	0.21	0.46	0.34
Ammonia+Ammonium (N) [mg/L]	17-Sep-13	07:37	< 0.1	< 0.1	< 0.1	0.3
Fluoride [mg/L]	18-Sep-13	10:58	0.08	0.11	0.14	0.18
Mercury (total) [mg/L]	20-Sep-13	09:08	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Mercury (dissolved) [mg/L]	20-Sep-13	09:08	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Hardness [mg/L as CaCO3]	19-Sep-13	13:03	38.0	32.8	42.7	57.0
Hardness (dissolved) [mg/L as CaCO3]	19-Sep-13	13:03	45.6	32.1	41.4	54.5

OnLine LIMS

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SGS Canada Inc.
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LR Report : **CA13385-SEP13**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	6: #1	7: #2	8: #3	9: #4
Silver (total) [mg/L]	19-Sep-13	12:35	0.00011	0.00012	0.00015	0.00006
Silver (dissolved) [mg/L]	19-Sep-13	12:35	0.00004	0.00006	0.00007	0.00004
Aluminum (total) [mg/L]	19-Sep-13	13:02	0.23	0.06	0.07	0.06
Aluminum (dissolved) [mg/L]	19-Sep-13	13:02	0.03	0.04	0.03	0.04
Arsenic (total) [mg/L]	19-Sep-13	12:35	0.0064	0.0090	0.0083	0.0095
Arsenic (dissolved) [mg/L]	19-Sep-13	12:35	0.0080	0.0087	0.0082	0.0097
Barium (total) [mg/L]	19-Sep-13	12:35	0.00787	0.00804	0.0149	0.0142
Barium (dissolved) [mg/L]	19-Sep-13	12:35	0.00744	0.00749	0.0141	0.0138
Beryllium (total) [mg/L]	19-Sep-13	12:35	0.00007	< 0.00002	< 0.00002	< 0.00002
Beryllium (dissolved) [mg/L]	19-Sep-13	12:35	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Boron (total) [mg/L]	19-Sep-13	12:35	0.0309	0.0239	0.0384	0.0471
Boron (dissolved) [mg/L]	19-Sep-13	12:35	0.0284	0.0235	0.0365	0.0462
Bismuth (total) [mg/L]	19-Sep-13	12:35	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Bismuth (dissolved) [mg/L]	19-Sep-13	12:35	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (total) [mg/L]	19-Sep-13	13:03	13.7	12.0	15.1	20.5
Calcium (dissolved) [mg/L]	19-Sep-13	13:03	16.8	11.8	14.7	19.6
Cadmium (total) [mg/L]	19-Sep-13	12:36	0.000028	0.000037	0.000033	0.000080
Cadmium (dissolved) [mg/L]	19-Sep-13	12:36	0.000079	0.000033	0.000027	0.000075
Cobalt (total) [mg/L]	19-Sep-13	12:36	0.00140	0.000771	0.000415	0.000630
Cobalt (dissolved) [mg/L]	19-Sep-13	12:36	0.000364	0.000487	0.000261	0.000489
Chromium (total) [mg/L]	19-Sep-13	12:36	0.0007	0.0006	< 0.0005	0.0007
Chromium (dissolved) [mg/L]	19-Sep-13	12:36	< 0.0005	0.0005	< 0.0005	0.0006
Copper (total) [mg/L]	19-Sep-13	12:36	0.0233	0.0146	0.0181	0.0125
Copper (dissolved) [mg/L]	19-Sep-13	12:36	0.0111	0.0127	0.0145	0.0113
Iron (total) [mg/L]	19-Sep-13	13:04	0.261	0.054	0.091	0.064
Iron (dissolved) [mg/L]	19-Sep-13	13:04	0.037	0.029	0.035	0.043
Potassium (total) [mg/L]	19-Sep-13	13:04	1.52	1.16	1.54	1.71
Potassium (dissolved) [mg/L]	19-Sep-13	13:04	1.71	1.17	1.50	1.67
Lithium (total) [mg/L]	19-Sep-13	12:36	0.002	0.002	0.003	0.003
Lithium (dissolved) [mg/L]	19-Sep-13	12:36	0.002	0.002	0.003	0.003
Magnesium (total) [mg/L]	19-Sep-13	13:04	0.916	0.669	1.19	1.40
Magnesium (dissolved) [mg/L]	19-Sep-13	13:04	0.913	0.639	1.12	1.34
Manganese (total) [mg/L]	19-Sep-13	12:36	0.0120	0.00278	0.00314	0.00114
Manganese (dissolved) [mg/L]	19-Sep-13	12:36	0.00036	0.00062	0.00078	0.00020

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LR Report : **CA13385-SEP13**

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	6: #1	7: #2	8: #3	9: #4
Molybdenum (total) [mg/L]	19-Sep-13	12:36	0.00981	0.00679	0.0112	0.0172
Molybdenum (dissolved) [mg/L]	19-Sep-13	12:36	0.0141	0.00666	0.0109	0.0169
Sodium (total) [mg/L]	19-Sep-13	13:04	3.15	1.81	3.48	2.27
Sodium (dissolved) [mg/L]	19-Sep-13	13:04	3.56	1.75	3.36	2.18
Nickel (total) [mg/L]	19-Sep-13	12:36	0.0010	0.0017	0.0010	0.0009
Nickel (dissolved) [mg/L]	19-Sep-13	12:36	0.0013	0.0016	0.0009	0.0009
Phosphorus (total) [mg/L]	19-Sep-13	13:04	0.024	0.013	0.019	0.014
Phosphorus (dissolved) [mg/L]	19-Sep-13	13:04	< 0.009	< 0.009	< 0.009	< 0.009
Lead (total) [mg/L]	19-Sep-13	12:36	0.00081	0.00029	0.00021	0.00009
Lead (dissolved) [mg/L]	19-Sep-13	12:36	0.00005	0.00014	0.00003	0.00005
Antimony (total) [mg/L]	19-Sep-13	12:36	0.0007	0.0011	0.0010	0.0018
Antimony (dissolved) [mg/L]	19-Sep-13	12:36	0.0004	0.0004	0.0002	0.0013
Selenium (total) [mg/L]	19-Sep-13	12:36	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (dissolved) [mg/L]	19-Sep-13	12:36	< 0.001	< 0.001	< 0.001	0.001
Silicon (total) [mg/L]	01-Oct-13	12:30	1.58	0.99	1.53	1.47
Silicon (dissolved) [mg/L]	01-Oct-13	12:30	1.58	0.91	1.39	1.39
Tin (total) [mg/L]	19-Sep-13	12:36	0.00037	0.00083	0.00062	0.00064
Tin (dissolved) [mg/L]	19-Sep-13	12:36	0.00354	0.00071	0.00051	0.00055
Strontium (total) [mg/L]	19-Sep-13	13:04	0.0800	0.0638	0.0804	0.0894
Strontium (dissolved) [mg/L]	19-Sep-13	13:04	0.0981	0.0597	0.0761	0.0865
Titanium (total) [mg/L]	19-Sep-13	12:37	0.0036	0.0006	0.0015	0.0005
Titanium (dissolved) [mg/L]	19-Sep-13	12:37	< 0.0001	< 0.0001	0.0001	< 0.0001
Thallium (total) [mg/L]	19-Sep-13	12:37	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Thallium (dissolved) [mg/L]	19-Sep-13	12:37	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Uranium (total) [mg/L]	19-Sep-13	12:37	0.0129	0.0128	0.00945	0.0236
Uranium (dissolved) [mg/L]	19-Sep-13	12:37	0.0202	0.0116	0.00868	0.0231
Vanadium (total) [mg/L]	19-Sep-13	12:37	0.00139	0.00105	0.00225	0.00236
Vanadium (dissolved) [mg/L]	19-Sep-13	12:37	0.00127	0.00089	0.00180	0.00215
Zinc (total) [mg/L]	19-Sep-13	13:04	0.011	0.006	0.006	0.011
Zinc (dissolved) [mg/L]	19-Sep-13	13:04	0.009	0.005	0.005	0.011

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LR Report : **CA13385-SEP13**

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OnLine LIMS

0000030445

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03-October-2013

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Date Rec. : 16 September 2013
LR Report: **CA13385-SEP13**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	10: #5	11: #6	12: #7	13: Duplicate	14: Field Blank
Sample Date & Time	11-Sep-13 10:00	11-Sep-13 10:00	11-Sep-13 10:00	11-Sep-13 10:00	11-Sep-13 10:00
Temperature Upon Receipt [°C]	16.0	16.0	16.0	16.0	16.0
Total Suspended Solids [mg/L]	9	14	3	3	< 2
pH [no unit]	7.54	7.49	6.37	7.41	5.81
Conductivity [µS/cm]	115	97	4	74	< 2
Alkalinity [mg/L as CaCO3]	49	43	236	31	< 2
Acidity [mg/L as CaCO3]	< 2	< 2	< 2	< 2	< 2
Total Dissolved Solids [mg/L]	74	46	< 30	< 30	< 30
Dissolved Organic Carbon [mg/L]	5.5	4.1	2.7	5.0	< 1
Chloride [mg/L]	1.3	1.6	< 0.2	0.7	< 0.2
Sulphate [mg/L]	9.3	3.6	0.5	5.8	< 0.2
Nitrite (as N) [mg/L]	0.07	< 0.03	< 0.03	0.06	< 0.03
Nitrate (as N) [mg/L]	0.18	0.14	< 0.06	0.14	< 0.06
Nitrate + Nitrite (as N) [mg/L]	0.25	0.14	< 0.06	0.20	< 0.06
Ammonia+Ammonium (N) [mg/L]	0.5	0.2	< 0.1	0.1	0.2
Fluoride [mg/L]	0.19	0.32	< 0.06	0.11	< 0.06
Mercury (total) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Mercury (dissolved) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Hardness [mg/L as CaCO3]	49.4	39.7	1.50	31.4	0.18
Hardness (dissolved) [mg/L as CaCO3]	49.2	37.2	1.27	30.6	< 0.05

OnLine LIMS

0000030449

SGS Canada Inc.
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Analysis	10: #5	11: #6	12: #7	13: Duplicate	14: Field Blank
Silver (total) [mg/L]	0.00010	0.00008	< 0.00001	0.00011	< 0.00001
Silver (dissolved) [mg/L]	0.00006	0.00003	< 0.00001	0.00006	< 0.00001
Aluminum (total) [mg/L]	0.08	0.14	0.01	0.06	< 0.01
Aluminum (dissolved) [mg/L]	0.06	0.06	< 0.01	0.04	< 0.01
Arsenic (total) [mg/L]	0.0064	0.0030	< 0.0002	0.0084	< 0.0002
Arsenic (dissolved) [mg/L]	0.0065	0.0028	< 0.0002	0.0085	< 0.0002
Barium (total) [mg/L]	0.0149	0.0172	0.00040	0.00764	0.00002
Barium (dissolved) [mg/L]	0.0145	0.0157	0.00027	0.00719	0.00003
Beryllium (total) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Beryllium (dissolved) [mg/L]	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Boron (total) [mg/L]	0.0304	0.0404	0.0030	0.0226	< 0.0002
Boron (dissolved) [mg/L]	0.0309	0.0377	0.0028	0.0223	< 0.0002
Bismuth (total) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Bismuth (dissolved) [mg/L]	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (total) [mg/L]	18.1	14.9	0.51	11.5	0.07
Calcium (dissolved) [mg/L]	18.0	14.0	0.44	11.3	< 0.02
Cadmium (total) [mg/L]	0.000135	0.000157	0.000037	0.000030	< 0.000003
Cadmium (dissolved) [mg/L]	0.000125	0.000127	0.000030	0.000031	< 0.000003
Cobalt (total) [mg/L]	0.00116	0.000955	0.000022	0.000703	< 0.000002
Cobalt (dissolved) [mg/L]	0.000898	0.000535	0.000086	0.000473	< 0.000002
Chromium (total) [mg/L]	0.0006	< 0.0005	< 0.0005	0.0005	0.0013
Chromium (dissolved) [mg/L]	0.0006	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Copper (total) [mg/L]	0.0155	0.0083	0.0012	0.0137	< 0.0005
Copper (dissolved) [mg/L]	0.0139	0.0062	0.0009	0.0125	< 0.0005
Iron (total) [mg/L]	0.070	0.148	0.014	0.047	< 0.003
Iron (dissolved) [mg/L]	0.039	0.029	< 0.003	0.025	< 0.003
Potassium (total) [mg/L]	1.10	1.18	0.086	1.11	0.008
Potassium (dissolved) [mg/L]	1.11	1.11	0.069	1.10	< 0.006
Lithium (total) [mg/L]	0.004	0.003	< 0.001	0.002	< 0.001
Lithium (dissolved) [mg/L]	0.004	0.003	< 0.001	0.002	< 0.001
Magnesium (total) [mg/L]	1.04	0.640	0.055	0.644	0.004
Magnesium (dissolved) [mg/L]	1.01	0.554	0.043	0.608	< 0.001
Manganese (total) [mg/L]	0.00271	0.00377	0.00118	0.00248	0.00002
Manganese (dissolved) [mg/L]	0.00031	0.00024	0.00072	0.00063	< 0.00001

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Analysis	10: #5	11: #6	12: #7	13: Duplicate	14: Field Blank
Molybdenum (total) [mg/L]	0.00614	0.00189	0.00003	0.00642	< 0.00001
Molybdenum (dissolved) [mg/L]	0.00612	0.00181	0.00003	0.00637	< 0.00001
Sodium (total) [mg/L]	3.18	3.49	0.08	1.70	0.02
Sodium (dissolved) [mg/L]	3.17	3.28	0.09	1.65	0.03
Nickel (total) [mg/L]	0.0024	0.0020	0.0002	0.0017	< 0.0001
Nickel (dissolved) [mg/L]	0.0024	0.0018	0.0002	0.0016	< 0.0001
Phosphorus (total) [mg/L]	0.020	0.025	0.021	0.023	< 0.009
Phosphorus (dissolved) [mg/L]	< 0.009	< 0.009	< 0.009	< 0.009	< 0.009
Lead (total) [mg/L]	0.00029	0.00015	0.00009	0.00028	0.00003
Lead (dissolved) [mg/L]	0.00020	0.00003	0.00003	0.00013	< 0.00002
Antimony (total) [mg/L]	0.0016	0.0008	0.0141	0.0011	0.0004
Antimony (dissolved) [mg/L]	0.0009	< 0.0002	0.0134	0.0005	< 0.0002
Selenium (total) [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (dissolved) [mg/L]	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Silicon (total) [mg/L]	1.26	1.13	0.02	0.97	< 0.01
Silicon (dissolved) [mg/L]	1.20	0.94	< 0.01	0.90	< 0.01
Tin (total) [mg/L]	0.00017	0.00106	0.00033	0.00080	0.00010
Tin (dissolved) [mg/L]	0.00008	0.00086	0.00015	0.00069	< 0.00001
Strontium (total) [mg/L]	0.106	0.0745	0.0010	0.0589	0.0003
Strontium (dissolved) [mg/L]	0.104	0.0712	0.0009	0.0579	< 0.0001
Titanium (total) [mg/L]	0.0005	0.0030	0.0003	0.0006	< 0.0001
Titanium (dissolved) [mg/L]	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Thallium (total) [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Thallium (dissolved) [mg/L]	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Uranium (total) [mg/L]	0.0160	0.00432	0.000050	0.0121	< 0.000001
Uranium (dissolved) [mg/L]	0.0156	0.00397	0.000049	0.0110	< 0.000001
Vanadium (total) [mg/L]	0.00162	0.00217	0.00014	0.00102	0.00004
Vanadium (dissolved) [mg/L]	0.00159	0.00176	0.00003	0.00089	< 0.00003
Zinc (total) [mg/L]	0.015	0.013	0.029	0.006	< 0.002
Zinc (dissolved) [mg/L]	0.014	0.009	0.023	0.007	< 0.002

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14-November-2013

Trelawney Mining and Exploration Inc.
Attn : Dave Brown

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Canada, P0M 1W0
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Date Rec. : 05 November 2013
LR Report: **CA15087-NOV13**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	6: #1	7: #2	8: #3	9: #4	10: #5	11: #6	12: #7	13: Duplicate	14: Field Blank
Sample Date & Time			30-Oct-13 10:00	30-Oct-13 10:00	30-Oct-13 10:00	30-Oct-13 10:00	30-Oct-13 10:00	30-Oct-13 10:00	30-Oct-13 10:00	30-Oct-13 10:00	30-Oct-13 10:00
Temperature Upon Receipt [°C]	---	---	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Total Suspended Solids [mg/L]	06-Nov-13	13:46	5	< 2	< 2	3	2	< 2	8	6	2
pH [no unit]	12-Nov-13	08:34	7.83	7.69	7.77	7.82	7.79	7.78	6.27	7.80	5.86
Conductivity [µS/cm]	12-Nov-13	08:34	142	123	117	163	133	118	7	139	2
Alkalinity [mg/L as CaCO3]	12-Nov-13	08:34	52	43	41	60	49	44	< 2	52	< 2
Acidity [mg/L as CaCO3]	12-Nov-13	08:34	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Total Dissolved Solids [mg/L]	08-Nov-13	21:37	149	86	134	140	94	111	34	111	46
Dissolved Organic Carbon [mg/L]	06-Nov-13	14:03	4.3	5.0	3.4	5.0	4.4	2.1	1.8	4.1	< 1
Chloride [mg/L]	13-Nov-13	16:54	1.4	1.2	1.8	1.7	1.2	1.8	< 0.2	1.4	< 0.2
Sulphate [mg/L]	13-Nov-13	16:57	12	10	9.5	15	9.9	4.4	0.7	12	< 0.2
Nitrite (as N) [mg/L]	07-Nov-13	15:18	0.06	0.07	0.10	0.13	0.09	0.03	< 0.03	0.06	< 0.03
Nitrate (as N) [mg/L]	07-Nov-13	15:18	0.20	0.23	0.23	0.30	0.24	0.21	< 0.06	0.20	< 0.06
Nitrate + Nitrite (as N) [mg/L]	07-Nov-13	15:18	0.26	0.30	0.32	0.43	0.33	0.24	< 0.06	0.26	< 0.06
Ammonia+Ammonium (N) [mg/L]	06-Nov-13	15:35	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.4	0.2	< 0.1
Fluoride [mg/L]	08-Nov-13	11:49	0.12	0.15	0.14	0.20	0.21	0.36	< 0.06	0.12	< 0.06
Mercury (total) [mg/L]	11-Nov-13	08:54	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Mercury (dissolved) [mg/L]	11-Nov-13	08:54	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Hardness [mg/L as CaCO3]	08-Nov-13	10:04	58.7	51.7	45.5	72.6	54.4	46.2	2.05	57.6	0.08
Hardness (dissolved) [mg/L as CaCO3]	08-Nov-13	10:04	55.9	53.3	44.2	69.8	55.3	45.6	2.02	56.0	0.10
Silver (total) [mg/L]	11-Nov-13	09:20	0.00007	0.00007	0.00007	0.00003	0.00008	0.00003	< 0.00001	0.00006	< 0.00001
Silver (dissolved) [mg/L]	11-Nov-13	09:20	0.00002	0.00004	0.00004	0.00003	0.00003	0.00002	< 0.00001	0.00002	< 0.00001
Aluminum (total) [mg/L]	08-Nov-13	10:04	0.18	0.07	0.07	0.07	0.09	0.07	0.03	0.16	0.02
Aluminum (dissolved) [mg/L]	08-Nov-13	10:04	0.04	0.06	0.05	0.04	0.05	0.05	0.03	0.04	< 0.01

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Analysis	3: Analysis Approval Date	4: Analysis Approval Time	6: #1	7: #2	8: #3	9: #4	10: #5	11: #6	12: #7	13: Duplicate	14: Field Blank
Arsenic (total) [mg/L]	11-Nov-13	09:20	0.0080	0.0098	0.0068	0.0086	0.0050	0.0028	0.0003	0.0073	< 0.0002
Arsenic (dissolved) [mg/L]	11-Nov-13	09:20	0.0072	0.0095	0.0066	0.0082	0.0056	0.0029	0.0003	0.0073	< 0.0002
Barium (total) [mg/L]	11-Nov-13	09:20	0.00791	0.00957	0.0110	0.00993	0.0101	0.0112	0.00073	0.00761	0.00004
Barium (dissolved) [mg/L]	11-Nov-13	09:20	0.00677	0.00899	0.0107	0.00979	0.0109	0.0114	0.00042	0.00666	0.00002
Beryllium (total) [mg/L]	11-Nov-13	09:20	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002
Beryllium (dissolved) [mg/L]	11-Nov-13	09:20	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Boron (total) [mg/L]	11-Nov-13	09:20	0.0226	0.0247	0.0277	0.0386	0.0217	0.0325	0.0010	0.0205	< 0.0002
Boron (dissolved) [mg/L]	11-Nov-13	09:20	0.0203	0.0224	0.0271	0.0376	0.0247	0.0331	0.0016	0.0198	< 0.0002
Bismuth (total) [mg/L]	11-Nov-13	09:20	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.00002	< 0.00001	< 0.00001
Bismuth (dissolved) [mg/L]	11-Nov-13	09:20	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Calcium (total) [mg/L]	08-Nov-13	10:04	21.5	19.0	16.3	26.1	19.8	17.4	0.67	21.1	0.03
Calcium (dissolved) [mg/L]	08-Nov-13	10:04	20.5	19.6	15.8	25.1	20.1	17.1	0.67	20.6	0.04
Cadmium (total) [mg/L]	11-Nov-13	09:21	0.000040	0.000059	0.000024	0.000039	0.000081	0.000029	0.000052	0.000036	0.000004
Cadmium (dissolved) [mg/L]	11-Nov-13	09:21	0.000028	0.000047	0.000016	0.000040	0.000058	0.000028	0.000057	0.000030	< 0.000003
Cobalt (total) [mg/L]	11-Nov-13	09:32	0.000767	0.000684	0.000243	0.000569	0.000966	0.000584	0.000015	0.000708	< 0.000002
Cobalt (dissolved) [mg/L]	11-Nov-13	09:32	0.000347	0.000562	0.000189	0.000429	0.000723	0.000558	0.000007	0.000331	< 0.000002
Chromium (total) [mg/L]	11-Nov-13	09:32	0.0005	0.0005	< 0.0005	0.0007	0.0008	< 0.0005	< 0.0005	< 0.0005	< 0.0005
Chromium (dissolved) [mg/L]	11-Nov-13	09:32	0.0008	0.0012	< 0.0005	0.0008	0.0014	< 0.0005	< 0.0005	0.0006	< 0.0005
Copper (total) [mg/L]	11-Nov-13	09:32	0.0121	0.0166	0.0131	0.0115	0.0134	0.0056	0.0020	0.0109	< 0.0005
Copper (dissolved) [mg/L]	11-Nov-13	09:32	0.0096	0.0150	0.0118	0.0104	0.0131	0.0053	0.0016	0.0095	< 0.0005
Iron (total) [mg/L]	08-Nov-13	10:05	0.120	0.013	0.018	0.019	0.068	0.009	0.013	0.105	< 0.003
Iron (dissolved) [mg/L]	08-Nov-13	10:05	0.014	0.014	0.008	0.007	< 0.003	0.006	0.005	0.013	0.006
Potassium (total) [mg/L]	08-Nov-13	10:06	1.58	1.50	1.53	1.75	1.03	1.04	0.158	1.55	0.009
Potassium (dissolved) [mg/L]	08-Nov-13	10:06	1.50	1.54	1.49	1.69	1.05	1.05	0.157	1.51	0.022
Lithium (total) [mg/L]	11-Nov-13	09:32	0.002	0.002	0.002	0.002	0.003	0.003	< 0.001	0.002	< 0.001
Lithium (dissolved) [mg/L]	11-Nov-13	09:32	0.002	0.002	0.002	0.002	0.004	0.002	< 0.001	0.002	< 0.001
Magnesium (total) [mg/L]	08-Nov-13	10:06	1.22	1.02	1.17	1.81	1.23	0.676	0.089	1.19	< 0.001
Magnesium (dissolved) [mg/L]	08-Nov-13	10:06	1.12	1.05	1.12	1.72	1.22	0.669	0.084	1.12	0.002
Manganese (total) [mg/L]	12-Nov-13	15:01	0.00496	0.00178	0.00252	0.00137	0.00312	0.00094	0.00180	0.00454	< 0.00001
Manganese (dissolved) [mg/L]	12-Nov-13	15:01	0.00160	0.00121	0.00149	0.00047	0.00048	0.00059	0.0113	0.00136	0.00016
Molybdenum (total) [mg/L]	11-Nov-13	09:39	0.0151	0.00911	0.0109	0.0201	0.00520	0.00197	0.00003	0.0141	0.00004
Molybdenum (dissolved) [mg/L]	11-Nov-13	09:39	0.0137	0.00879	0.0106	0.0194	0.00578	0.00201	0.00006	0.0138	0.00002
Sodium (total) [mg/L]	08-Nov-13	10:06	3.95	2.40	3.44	3.03	3.13	3.30	0.11	3.84	0.04
Sodium (dissolved) [mg/L]	08-Nov-13	10:06	3.71	2.43	3.31	2.90	3.19	3.33	0.12	3.76	0.06
Nickel (total) [mg/L]	11-Nov-13	09:39	0.0010	0.0018	0.0008	0.0008	0.0019	0.0017	0.0003	0.0009	< 0.0001
Nickel (dissolved) [mg/L]	11-Nov-13	09:39	0.0008	0.0019	0.0007	0.0008	0.0020	0.0016	0.0002	0.0008	< 0.0001
Phosphorus (total) [mg/L]	08-Nov-13	10:06	0.011	< 0.009	0.011	0.013	0.011	0.012	0.039	0.010	< 0.009
Phosphorus (dissolved) [mg/L]	08-Nov-13	10:06	< 0.009	< 0.009	0.012	0.009	< 0.009	0.010	0.024	< 0.009	< 0.009
Lead (total) [mg/L]	11-Nov-13	09:39	0.00035	0.00039	0.00006	0.00006	0.00029	0.00007	0.00004	0.00031	0.00003

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Analysis	**3: Analysis Approval Date**	**4: Analysis Approval Time**	**6: #1**	**7: #2**	**8: #3**	**9: #4**	**10: #5**	**11: #6**	**12: #7**	**13: Duplicate**	**14: Field Blank**
Lead (dissolved) [mg/L]	11-Nov-13	09:39	0.00010	0.00032	0.00005	0.00003	0.00014	0.00008	0.00003	0.00011	< 0.00002
Antimony (total) [mg/L]	11-Nov-13	09:40	0.0010	0.0013	0.0008	0.0016	0.0011	0.0006	0.0165	0.0011	0.0002
Antimony (dissolved) [mg/L]	11-Nov-13	09:40	< 0.0002	< 0.0002	< 0.0002	0.0005	< 0.0002	< 0.0002	0.0158	< 0.0002	< 0.0002
Selenium (total) [mg/L]	11-Nov-13	09:40	0.001	0.001	< 0.001	0.002	0.001	< 0.001	< 0.001	< 0.001	< 0.001
Selenium (dissolved) [mg/L]	11-Nov-13	09:40	0.001	0.001	< 0.001	0.002	0.002	< 0.001	< 0.001	0.001	< 0.001
Silicon (total) [mg/L]	08-Nov-13	10:07	1.94	1.29	1.35	1.45	1.16	0.92	0.04	1.87	< 0.01
Silicon (dissolved) [mg/L]	08-Nov-13	10:07	1.61	1.42	1.28	1.36	1.13	0.89	0.02	1.60	< 0.01
Tin (total) [mg/L]	11-Nov-13	09:40	0.00063	0.00076	0.00036	0.00028	0.00009	0.00030	0.00027	0.00054	0.0267
Tin (dissolved) [mg/L]	11-Nov-13	09:40	0.00036	0.00060	0.00022	0.00011	< 0.00001	0.00010	0.00016	0.00039	0.0257
Strontium (total) [mg/L]	08-Nov-13	10:43	0.112	0.0866	0.0771	0.0996	0.105	0.0777	0.0010	0.110	0.0001
Strontium (dissolved) [mg/L]	08-Nov-13	10:43	0.107	0.0898	0.0749	0.0953	0.107	0.0760	0.0009	0.107	0.0001
Titanium (total) [mg/L]	11-Nov-13	09:40	0.0019	0.0003	0.0004	0.0004	0.0010	0.0003	0.0003	0.0018	0.0002
Titanium (dissolved) [mg/L]	11-Nov-13	09:40	0.0003	0.0001	0.0003	0.0002	< 0.0001	0.0002	0.0002	0.0002	< 0.0001
Thallium (total) [mg/L]	11-Nov-13	09:40	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Thallium (dissolved) [mg/L]	11-Nov-13	09:40	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Uranium (total) [mg/L]	11-Nov-13	09:40	0.0369	0.0363	0.0153	0.0573	0.0243	0.00721	0.000050	0.0355	0.000001
Uranium (dissolved) [mg/L]	11-Nov-13	09:40	0.0337	0.0340	0.0149	0.0548	0.0266	0.00726	0.000059	0.0339	< 0.000001
Vanadium (total) [mg/L]	11-Nov-13	09:41	0.00113	0.00087	0.00160	0.00163	0.00124	0.00154	0.00013	0.00102	0.00016
Vanadium (dissolved) [mg/L]	11-Nov-13	09:41	0.00083	0.00075	0.00149	0.00151	0.00119	0.00145	< 0.00003	0.00081	0.00004
Zinc (total) [mg/L]	08-Nov-13	10:43	0.007	0.009	0.005	0.008	0.009	0.004	0.033	0.007	0.003
Zinc (dissolved) [mg/L]	08-Nov-13	10:43	0.005	0.011	0.005	0.009	0.008	0.006	0.034	0.007	0.004

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