

Report on the October 2014 Mineral Soil Sampling Test Program

North Abitibi Property
Larder Lake Mining Division
Hoblitzell Township, Ontario
49° 29' 26" N, 79° 55' 33" W
NTS 32E05 and 32E12



Tri Origin Exploration Ltd.
#18-125 Don Hillock Drive
Aurora, ON
L4G 0H8

Meghan Hewton, MSc.

January 19, 2015

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Introduction and Property Description

The North Abitibi property is located in Hoblitzell Township, Larder Lake Mining Division, approximately 20 km west of the Ontario/Québec border and 120 km northeast of Cochrane, ON (Figure 1). The property is accessible by the all-weather gravel “Tomlinson Road”, which departs north from the “Trans-Limit Road” at kilometer 89 as measured from Cochrane. The property consists of 16 unpatented, contiguous claims totaling 179 units and covering an area of 2,864 ha. All of the claims are held as 100% interest by Tri Origin Exploration Ltd. through an agreement with Vista Gold Corporation and are in good standing until at least January 27, 2016. Table 1 lists the claims and current ownership, and Figure 2 shows the geographic boundaries of each claim.

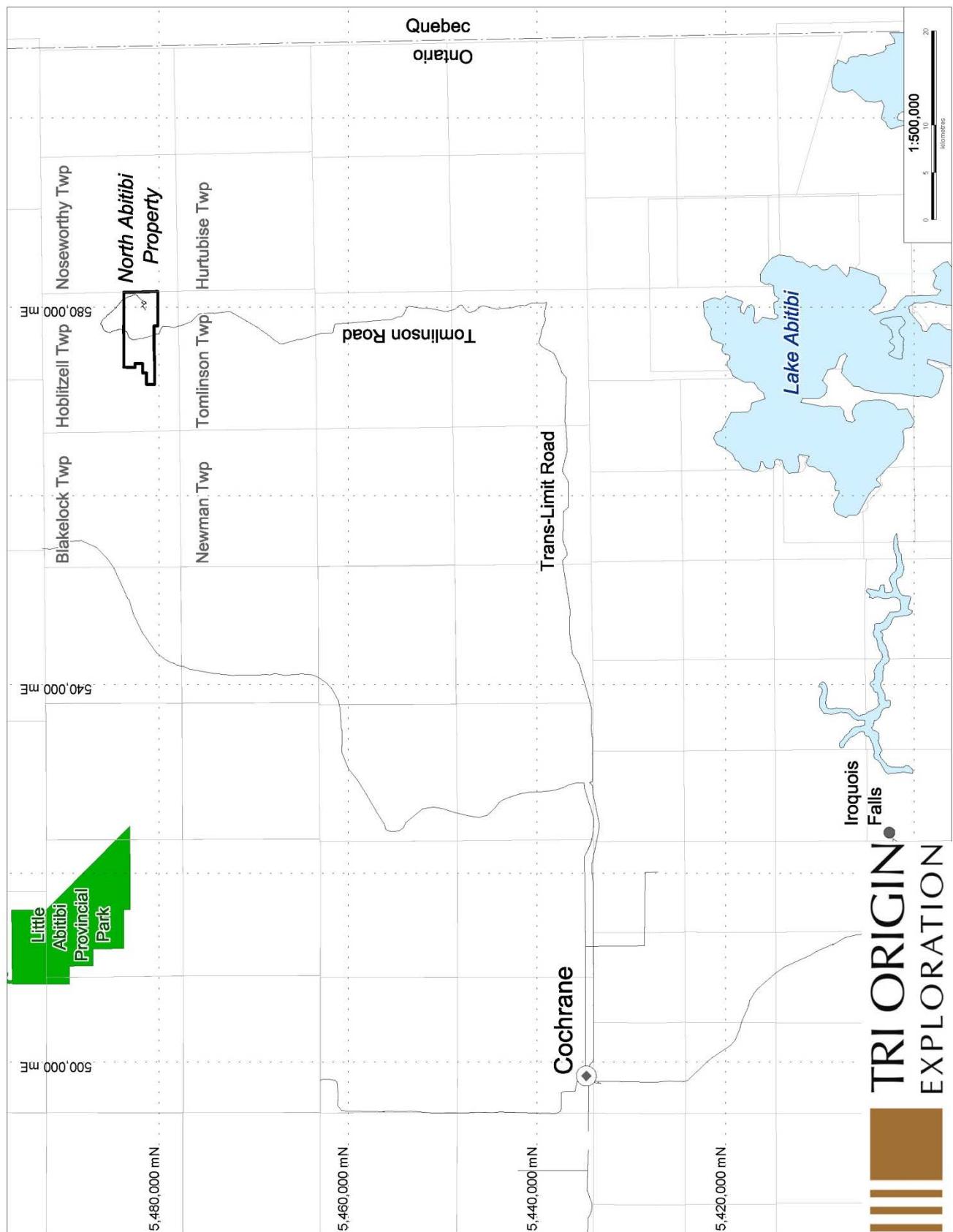


Figure 1. Location of the North Abitibi gold property, Larder Lake Mining Division.

Table 1. List of claims.

Claim Number	Recorded Holder	Due Date
4202440	Tri Origin Exploration (100%)	April 27, 2016
4202444	Tri Origin Exploration (100%)	April 27, 2016
4202445	Tri Origin Exploration (100%)	April 27, 2016
4202446	Tri Origin Exploration (100%)	April 27, 2016
4202448	Tri Origin Exploration (100%)	April 27, 2016
4202449	Tri Origin Exploration (100%)	April 27, 2016
4203555	Tri Origin Exploration (100%)	January 27, 2016
4203556	Tri Origin Exploration (100%)	January 27, 2016
4203557	Tri Origin Exploration (100%)	January 27, 2016
4203558	Tri Origin Exploration (100%)	January 27, 2016
4203559	Tri Origin Exploration (100%)	January 27, 2016
4203560	Tri Origin Exploration (100%)	January 27, 2016
4203561	Tri Origin Exploration (100%)	January 27, 2016
4209464	Tri Origin Exploration (100%)	April 27, 2016
4209468	Tri Origin Exploration (100%)	April 27, 2016
4209469	Tri Origin Exploration (100%)	April 27, 2016

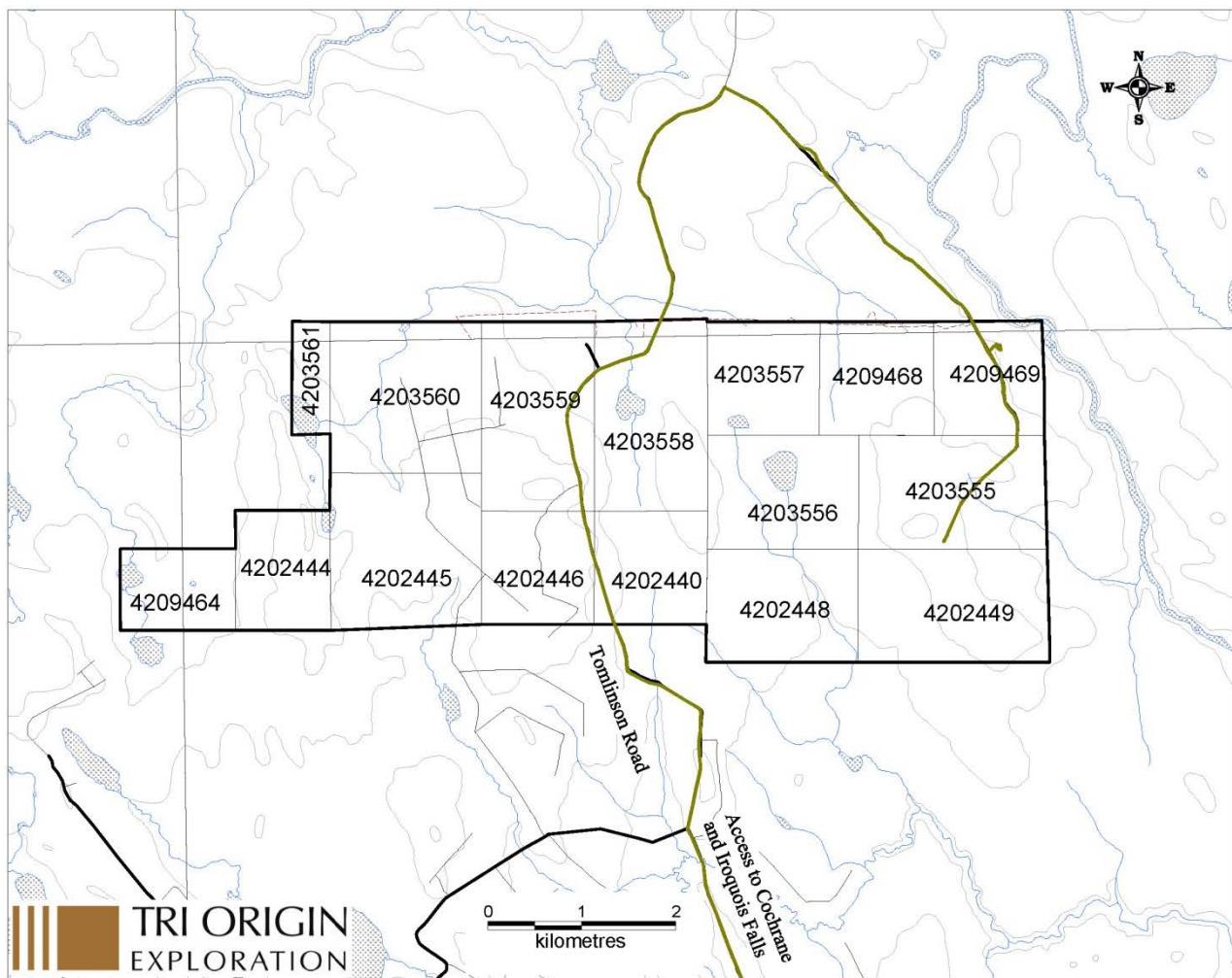


Figure 2. Claim boundaries at the North Abitibi property for claims held by Tri Origin Exploration.

In the summer of 2008, Tri Origin Exploration conducted a peat and mineral soil sampling survey over the North Abitibi gold property which produced little in the way of meaningful or interpretable results (Canam and Bartram 2008). It is likely that the water-logged nature of the peat horizon and surficial processes influence the geochemical signature of the peat to a much greater degree than does the underlying bedrock geology, and therefore bedrock geochemistry was not reflected in the peat geochemical survey results. The mineral soil underlying the peat may better reflect geochemical dispersion haloes from the bedrock than does the peat. A test mineral soil sampling survey over known gold-mineralized zones was therefore proposed in order to test efficacy, sampling protocol, and whether this is the appropriate sample material to help identify other mineralized zones through thick peat and deep overburden. Mineral soil samples were collected by Ore Galore Exploration Services contracted by Tri Origin Exploration between

October 3 and 5, 2014 over two mineralized zones (Road and Spade Lake zones) across two lines each. The sampling lines were entirely enclosed within claims 4203558 and 4203559. Final analytical results were received by Tri Origin Exploration on November 3, 2014.

Property Geology

Archean Geology

The North Abitibi region is underlain by volcanic, volcaniclastic, sedimentary, and intrusive rocks of the east-west trending Burntbush greenstone belt, a northwestern extension of the Archean Abitibi Subprovince. The Burntbush greenstone belt is 60 to 90 km wide north to south and extends for over 150 km eastward into Quebec as the Harricana-Turgeon greenstone belt, which hosts the Mattagami, Selbaie, Joutel, and Casa Berardi mining camps. See Jackson and Fyon (1991) for an overview of the geology of the western Abitibi Subprovince.

The geology of the property has been compiled from drill core logs, trench mapping, and geophysical interpretation, since bedrock outcrops are rare. The property is underlain by a mixed assemblage of east-west trending felsic, intermediate, and mafic volcanic, pyroclastic, and volcaniclastic rocks, with minor sedimentary rocks (greywacke, argillite, and banded magnetite-silica iron formation). Drill core logs and trench mapping indicate a moderate to steep northerly dip of the units. Evidence from drill core at the north end of the property near Spade Lake indicates bedding tops to the north, but no such evidence has been reported elsewhere on the property. These units are intruded by a coarse-grained to porphyritic granite to granodiorite known as the Spade Lake porphyry. The intrusions are likely comprised of discontinuous dykes, sills, or small plugs.

Gold mineralization is associated with pyritic quartz ± iron carbonate ± feldspar veins cutting dacitic to rhyodacitic and occasionally andesitic to basaltic volcanic rocks and pyritic schists. Mineralization occurs in at least two discrete east-west trending zones. The “Road zone”, located on the west side of Tomlinson Road was originally discovered and exposed by Newmont Exploration during their 1986 and 1987 diamond drilling and 1986 trench mapping programs. Diamond drilling in 2007 and 2008, as well as trenching in 2011, by Tri Origin Exploration expanded the surface and underground extents of mineralization at the Road zone. Gold mineralization at the Road zone has been exposed at the surface in trenches between 5,482,020 and 5,482,080 m N, and delineated as a steeply north-dipping, east-west trending zone. Assay results from drill core have returned values

up to 17.8 g/t Au, while grab samples from trenches have returned up to 43 g/t Au and 140 g/t Ag (Kendle 2012). On the northeast side of Spade Lake, the “Spade Lake zone” has been intersected by numerous diamond drillholes between 1988 and 2008, which have delineated a steeply north-dipping, east-west trending mineralized zone. Gold mineralization at the Spade Lake zone is predicted to project to the surface from drillhole data to the north of Spade Lake between 5,483,150 and 5,483,250 m N. Assays from diamond drill core have returned up to 12.6 g/t Au.

Quaternary Geology

Across the North Abitibi property, RC overburden drilling and stratigraphic logging by Newmont Exploration (Richard 1986) and Cogema Canada Ltd. (Learn 1988a, 1988b) recorded the overburden stratigraphy as generally quite thick (3 to over 25 m). Stratigraphically, the area comprises a basal unit of locally-derived melt-out or lodgement till identified as the Illinoian glacial stage Lower till, which is only locally developed and generally up to a couple of meters thick. Both the Lower till and bedrock are unconformably overlain by light grey, silty to locally sandy, locally- to distally-derived glacial and glaciolacustrine till known as the Matheson Formation. The Matheson Formation is overlain by medium grey, soft, fine, clayey Barlow-Ojibway Formation glaciolacustrine sediments deposited at the bottom of proglacial Lake Ojibway by long-distance transport, which is in turn overlain by light beige to brownish grey, clayey to sandy-clayey diamicton till with local sandy interbeds of the Wisconsinan-stage Cochrane Formation which is generally 2.3 to >10 m thick and consists of reworked sediments derived from the Barlow-Ojibway Formation. The overburden succession is generally capped by a peat layer which can be up to 4 m thick. For more information on the Quaternary stratigraphy of the North Abitibi area, see reverse circulation drilling reports by J. Learn for Cogema (Learn 1988a, 1988b) and J.A. Richard for Newmont Exploration (Richard 1986), as well as mapping by C. Gao (Gao 2013). Figure 3 presents a summary of reverse circulation overburden holes drilled by Newmont Exploration (1986) and Cogema Canada (1988a, 1988b), from which most of the information regarding Quaternary stratigraphy has been drawn, accompanied by government surficial mapping (Gao 2013) and the locations of trenches and diamond drill holes.

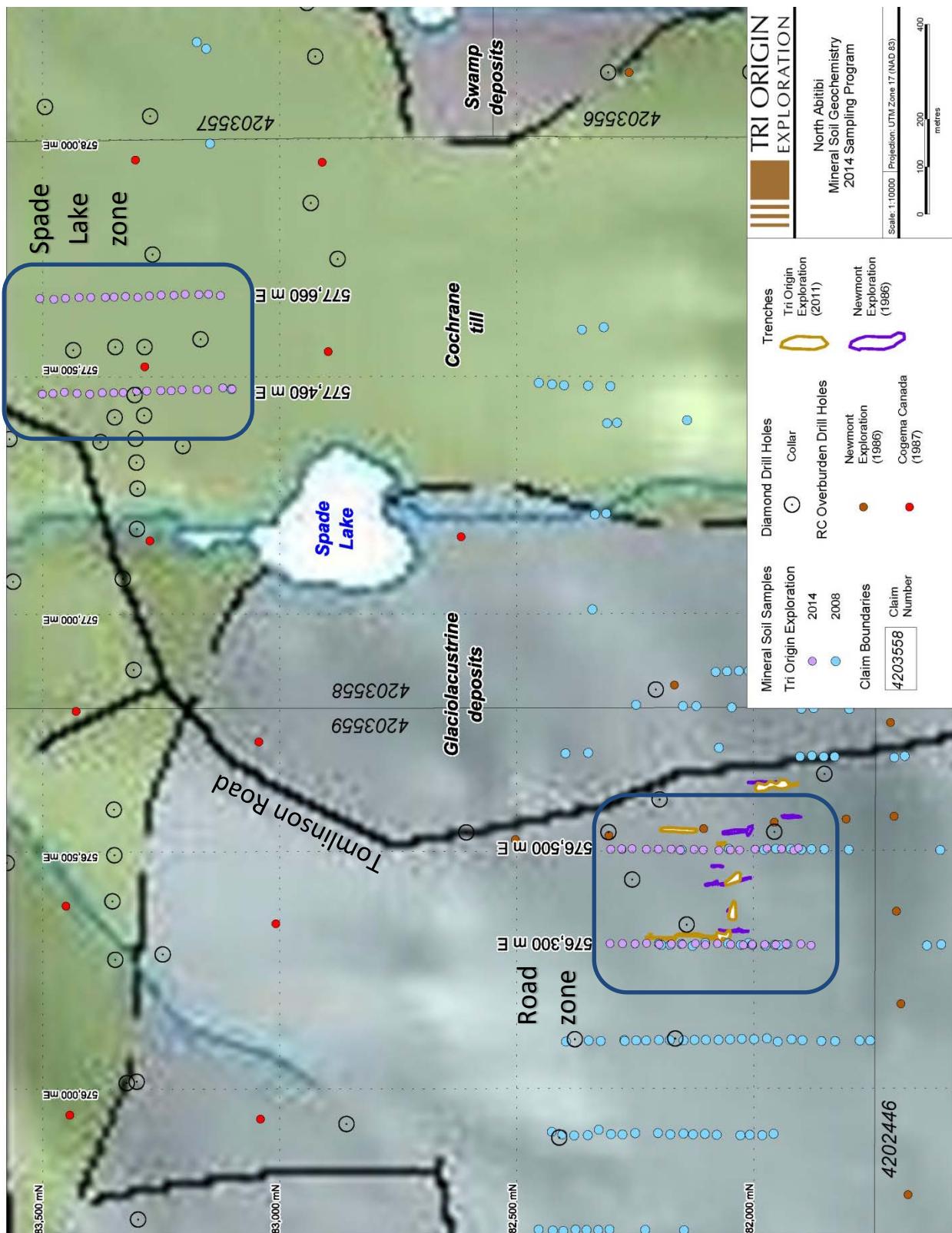


Figure 3. Amalgamation of overburden work completed between 1986 and 2014 over the Spade Lake and Road gold zones, along with Quaternary geology map by Gao (2013).

Mineral Soil Sampling Test Program

Sampling Method

Gold mineralization at the Road zone has been exposed at the surface in trenches between 5,482,020 and 5,482,080 m N. Meanwhile, gold mineralization at the Spade Lake zone is predicted to project to the surface just to the north of Spade Lake between 5,483,150 and 5,483,250 m N. The sampling lines over the Road and Spade Lake gold zones (Figure 3) were planned to cross over the surface projections of gold mineralization at each zone. The sampling lines therefore consist of two parallel lines oriented north-south and separated by 200 m (lines at 576,300 m E and 576,500 m E at the Road zone, and 577,460 m E and 577,660 m E at the Spade Lake zone). Samples were collected by Ore Galore Exploration Services contracted by Tri Origin Exploration between October 3 and 5, 2014. Sampling lines were 425 m long at the Road Zone and 400 m long at the Spade Lake zone. Samples were taken every 25 m; where human disturbance had occurred (ie. trail building, drilling, etc.) or the overlying peat was too thick for the auger to pass through (>2 m), samples were taken up to 15 m away in any direction from the target site where a sample could be collected. If a sample could not be collected at a particular site, the site was skipped.

Samples were collected using a hand-held steel auger. The auger was manually driven through the peat (if present) until the underlying inorganic/mineral soil was encountered. The sample was then collected from 25 to 35 cm below the top of the mineral soil horizon. Where there was no peat developed, the sample was taken 25 cm below the base of the soil's A horizon (if developed) or below the top of the mineral soil horizon. The sample was photographed, described, and placed in a brown soil sample bag. Large clasts, pebbles, and roots were removed from the sample by hand. Field duplicate samples were taken at every 25th site from a second hole beside the original hole.

Samples were air dried at room temperature and submitted to Activation Laboratories Ltd in Thunder Bay, ON. Samples were prepared by Activation Laboratories according to preparation code S1-DIS, so that samples were dried at 60°C and sieved to -80 mesh. Samples were then analysed by FA-AA (according to Activation Laboratories' analytical package code 1A2-Tbay Au – fire assay AA) and ICP-MS (analytical package code UT-1-Tbay aqua regia ICP-MS). Standards, lab duplicates, and blanks were inserted by Activation Laboratories. Final analytical results were received by Tri Origin Exploration on November 3, 2014.

Results

Sixty-six mineral soil samples (including two field duplicates) were collected. Forty of these samples were collected from two sampling lines over the Road zone, and 26 samples were collected from two lines over the Spade Lake zone. The original sampling plan had planned for 34 samples to be collected from the Spade Lake zone however, 8 samples could not be collected from the southern end of the eastern-most line (line 577,660 m E) due to a very thick peat horizon exceeding 2 m.

Samples from both zones were generally very clay-rich (28 samples from the Road zone and 25 samples from the Spade Lake zone were described as being comprised of 70% or more clay content; Figure 4), pebble-poor, and ranged in colour from various shades of grey, brownish-grey, and brown. Samples from the Road zone had greater variability in silt and sand content; several samples were quite sandy and well-drained, comprising 70 to 90% sand and silt. These samples tended to be from the western-most sample line (line 576,300 m E) closer to the trench area. Many of the samples from both zones were very moist to wet and contained little organic matter.

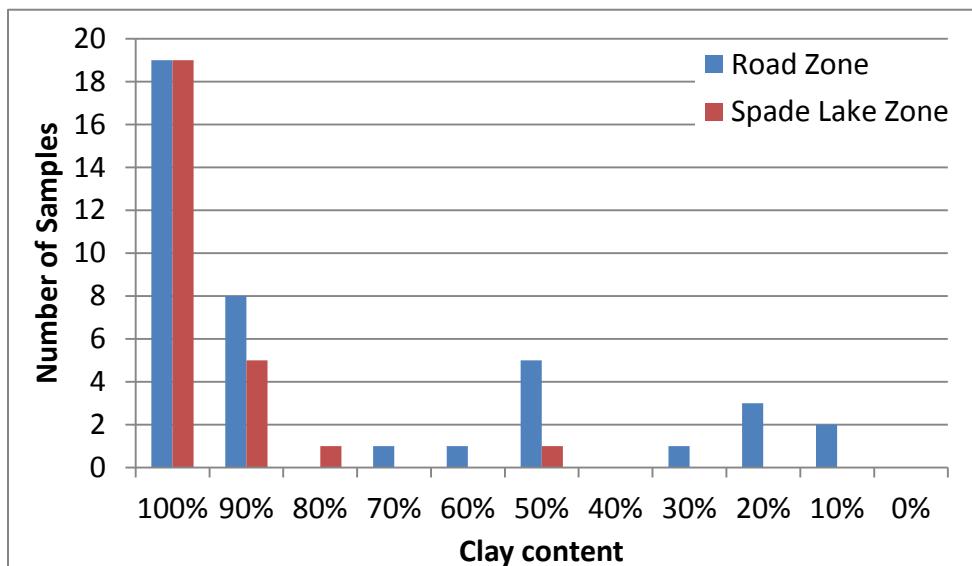


Figure 4. Clay content of samples collected from the Road and Spade Lake zones.

All samples were analysed by FA-AA and returned gold values below the detection limit (<5 ppb). As a result, aqua regia digest mass spectrometry (AR-MS) was used to analyse samples for gold concentration. AR-MS is a semi-quantitative analysis for gold, and caution must be taken when interpreting results. The aqua regia leach will dissolve free gold, gold-bearing tellurides, and

gold-bearing sulphide (provided the sample is low in sulphide), but only partially dissolves silicates and oxides (de Caritat et al. 2010), and so the technique does not provide a total gold concentration. Of the 66 soil samples that were analysed by AR-MS (Figure 5), only two samples returned gold concentration below detection (<0.5 ppb). Both of these samples were collected from the Road zone. The majority of the samples from the Road zone returned Au values less than 10 ppb, with the exception of three values from the northern half of the zone (10.2, 10.8, and 33.6 ppb). The majority of samples from the Spade Lake zone exceeded 10 ppb Au, with half (13 of 26) returning values of 25.0 to 27.3 ppb. These values are considered very low, but anomalous (“anomalous” values being greater than 2 standard deviations from the mean analytical result for the element of interest).

All other elements were analysed by AR-MS only. All samples from both zones were analysed for sulphur and returned values below detection limit (<1%). All samples from both zones returned very low silver concentrations (Figure 6), with no samples exceeding 183 ppb, and no samples were considered anomalous. Analytical results for copper and zinc did not exceed 49.1 ppm and 73.3 ppm, respectively. Results for iron were low and did not exceed 3.30%. Minor values for arsenic were returned from both zones (2.4 to 8.4 ppm). Results for the alkali elements potassium and sodium were also low, returning values below 0.54 % and 0.05%, respectively. Results for calcium and magnesium were quite variable, ranging from 0.24 to 9.73% Ca and 0.34 to 2.83% Mg.

Table 2 presents summary statistics of geochemical analyses from soil samples for selected elements. A certificate of analysis and analytical results from Activation Laboratories can be found in Appendix A. Geochemical survey maps of each element of interest can be found in Appendix B.

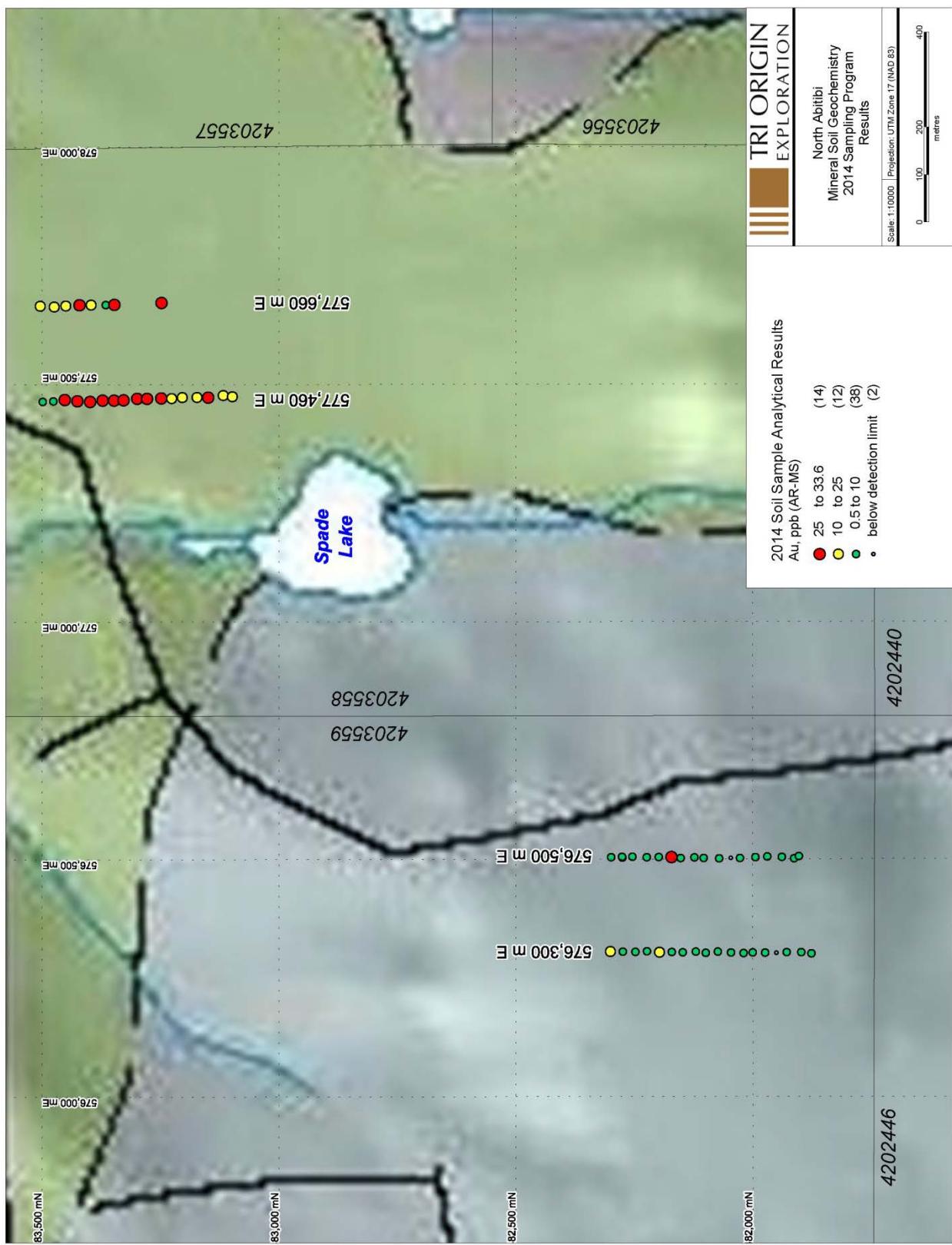


Figure 5. Results of mineral soil geochemical analyses for gold performed by AR-MS.

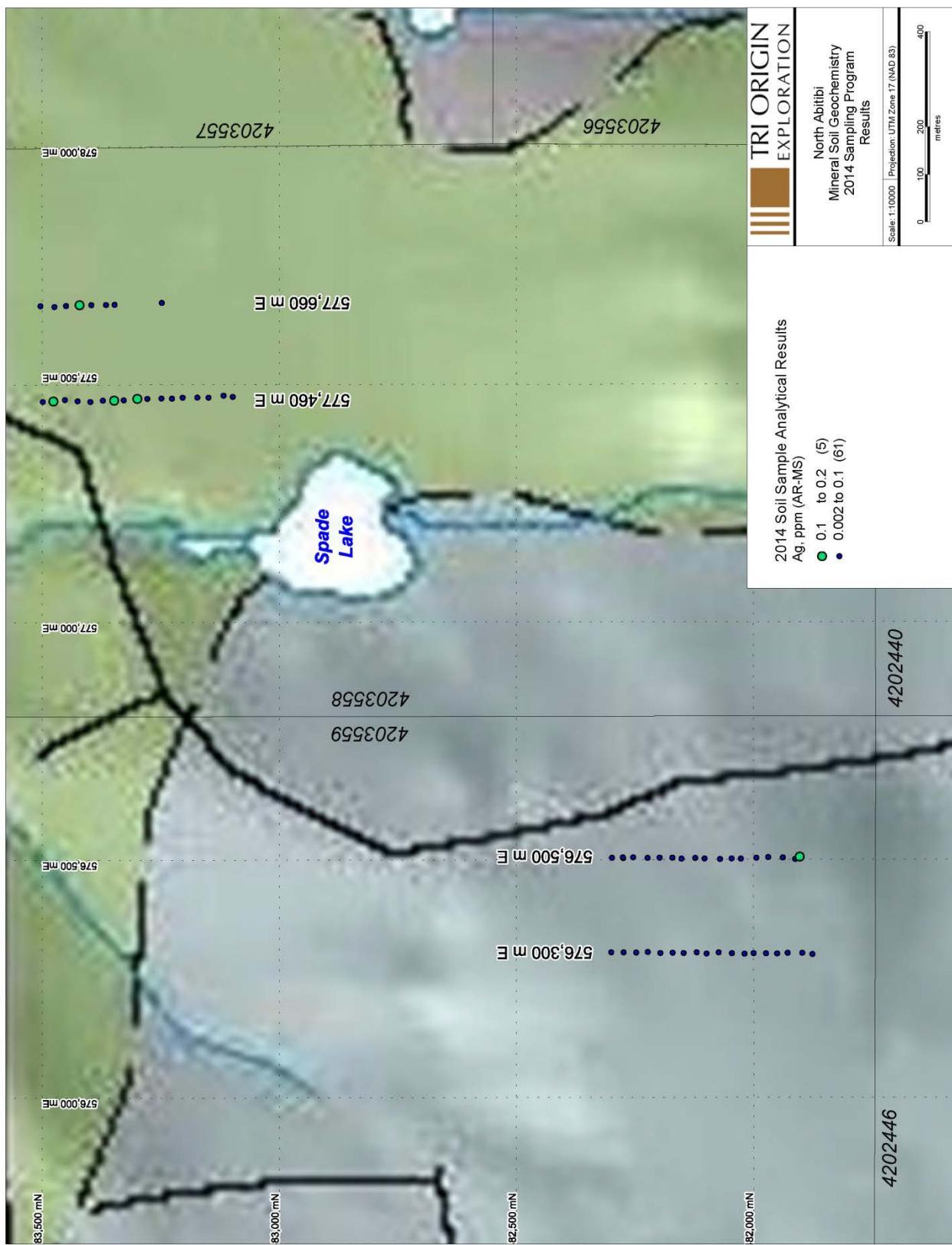


Figure 6. Results of mineral soil geochemical analyses for silver performed by AR-MS.

Table 2. Summary statistics of geochemical analytical results from mineral soil samples for selected elements.

Sample Area	Au (ppb)	Au (ppb)	Ag (ppm)	As (ppm)	Cu (ppm)	Mo (ppm)	Zn (ppm)	Fe (%)	K (%)	Na (%)	Ca (%)	Mg (%)	S (%)
	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
Detection Limit	5	0.5	0.002	0.1	0.01	0.01	0.1	0.01	0.01	0.001	0.01	0.01	1
Road Zone													
n = 40													
Average	-5	3.4	0.053	2.5	15.74	0.20	38.3	2.09	0.26	0.030	1.47	0.97	-1
Standard Deviation	0	5.4	0.026	1.3	8.14	0.26	8.3	0.41	0.07	0.007	1.63	0.54	0
Median	-5	2.2	0.047	2.2	13.90	0.15	38.6	2.05	0.26	0.032	0.71	0.81	-1
Maximum	-5	33.6	0.183	8.4	49.10	1.69	55.0	2.96	0.37	0.041	6.97	2.47	-1
Minimum	-5	-0.5	0.018	1.2	4.66	0.04	20.5	1.24	0.11	0.015	0.24	0.34	-1
Spade Lake Zone													
n = 26													
Average	-5	22.2	0.070	2.3	17.56	0.17	49.5	2.45	0.34	0.037	3.60	1.60	-1
Standard Deviation	0	7.3	0.035	0.9	4.51	0.15	10.9	0.46	0.08	0.007	2.63	0.65	0
Median	-5	24.8	0.064	2.1	16.60	0.12	51.5	2.47	0.32	0.038	3.41	1.62	-1
Maximum	-5	27.3	0.171	4.6	27.10	0.54	73.3	3.30	0.54	0.048	9.73	2.83	-1
Minimum	-5	1.2	0.028	0.8	10.70	-0.01	24.5	1.21	0.19	0.024	0.50	0.65	-1
All Samples													
n = 66													
Average	-5	10.8	0.059	2.4	16.46	0.19	42.8	2.23	0.29	0.033	2.31	1.22	-1
Standard Deviation	0	11.1	0.031	1.2	6.96	0.22	10.8	0.47	0.09	0.008	2.32	0.66	0
Median	-5	3.2	0.049	2.2	15.65	0.14	42.8	2.19	0.30	0.034	1.04	0.90	-1
Maximum	-5	33.6	0.183	8.4	49.10	1.69	73.3	3.30	0.54	0.048	9.73	2.83	-1
Minimum	-5	-0.5	0.018	0.8	4.66	-0.01	20.5	1.21	0.11	0.015	0.24	0.34	-1

Discussion and Conclusions

Despite gold mineralization at the Spade Lake zone being predicted to subcrop on the north side of Spade Lake between 5,483,150 and 5,483,250 m N, no samples from the Spade Lake zone showed distinct gold (or any other metal) enrichment. Results for gold analyses from mineral soil samples were instead consistent between all samples across the length of both sampling lines. Anomalous, though low, gold values determined by AR-MS (up to 27.3 ppb) demonstrated a weak association with other anomalous (though also low) values for other metals and alkali elements. In the sampling area around the Spade Lake zone, RC overburden drilling and stratigraphic logging by Cogema (Learn 1988a, 1988b) described the overburden stratigraphy as generally quite thick (9 to over 25 m). Stratigraphically, the area is comprised of several units of clay-dominant and locally silty to sandy till of glacial and glaciolacustrine origin which is generally distally-derived, but may be locally sourced in places. The uppermost unit is the light beige, clayey to sandy clayey, reworked Cochrane Formation till which is generally 2.3 to >10 m thick. This till was also mapped at surface by Gao (2013) as the Cochrane Formation. The overburden succession is capped by peat which exceeds 1 m in thickness. Most samples from the Spade Lake zone were described as very clay-rich, grey to beige or light brown, and were likely collected from the Cochrane till. Since the till is so clay-rich and soil geochemical analyses for metals and alkalis returned such low values, it is likely that the clay-rich beds of the Cochrane Formation and other underlying tills act as impermeable or semi-permeable layers to groundwater and metal mobility, and therefore prevent most (if not all) of the geochemical signature from the underlying bedrock and associated gold and sulphide mineralization from being transported to the surface by geochemical dispersion or groundwater mobility.

The overburden around the Road zone is generally not as thick as at the Spade Lake zone, but is variable in thickness (Richard 1986). Proximal meltout or lodgement till (likely the Lower till) is a couple of meters thick and only locally present, and is overlain by 1 to several meters of glaciofluvial sand and gravel, which is overlain by several meters of clayey diamicton with local sandy interbeds (the Cochrane till), and capped by 0 to 2 m of peat. Very few samples with anomalous gold, silver, or other metals were returned, indicating that the geochemical signature from the underlying bedrock and associated gold/sulphide mineralization is not being transported to the surface by geochemical dispersion or groundwater and metal mobility. Despite knowing the location of gold mineralization at the surface, and that it is comparatively close to the surface in the

trenching area, there was no obvious relationship between gold mineralization and mineral soil sample analytical results. Gold values determined by FA-AA were all below the detection limit, and gold values determined by AR-MS were consistently low; only one sample returned an anomalous value (33.6 ppb), but this sample was collected 120 m north of the known surface mineralization and is therefore not associated with Road zone gold mineralization. Similar to the Spade Lake zone, the clay-rich glacial and glaciolacustrine deposits may be acting as impermeable layers to groundwater and metal mobility, and therefore, metals are not reaching the uppermost layers of the overburden and soil profile.

A weak association between anomalous gold values (by AR-MS) and other metals and alkali elements in the soil may exist at the Spade Lake zone, determined from geochemical mapping (Appendix B), but no such association was readily visible at the Road zone, possibly because so few samples at the Road zone returned anomalous metal values. The results of this test survey demonstrate that this technique of mineral soil sampling from below the peat horizon is not effective for gold exploration at this particular property. It is therefore not recommended that this geochemical sampling technique be used for gold exploration in the region around the North Abitibi property.

References

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- Richard, J.A. 1986. For Newmont Exploration of Canada Ltd. 1986 Overburden Drilling Program: Golden Shield Property, Project 261, Hoblitzell and Noseworthy townships, Ontario. AFRI #32E12SE0032.

Statement of Qualifications

I, Meghan Hewton, of 17 Tindall Lane, Goodwood, Ontario, L0C 1A0, do hereby certify that:

1. I am employed as a geologist by Tri Origin Exploration Ltd.
2. I graduated with a Master's of Science (Geology) from Simon Fraser University in 2012, and a Bachelor of Science (Honours Environmental Geosciences) from the University of Western Ontario in 2010.
3. I have worked as a geologist for a total of three years.
4. I am responsible for the technical report titled "Report on the October 2014 Mineral Soil Sampling Test Program, North Abitibi Property".
5. My knowledge of the property as described herein was obtained by fieldwork and literature review.
6. I have no direct interest, nor do I expect to receive any interest in the mining claims that comprise the North Abitibi Property within the Hoblitzell Township in the Larder Lake Mining division.
7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
8. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 9th day of January, 2015.

MEGHAN HEWTON

Appendix A

Certificate of analysis and analytical results for mineral soil samples.

Quality Analysis ...



Innovative Technologies

Date Submitted: 07-Oct-14
Invoice No.: A14-07393
Invoice Date: 03-Nov-14
Your Reference: north abitibi

TRI Origin Exploration
125 Don Hillock Drive
Unit 18
Aurora Ont L4G 0H8
Canada

ATTN: Robert Valliant

CERTIFICATE OF ANALYSIS

66 Soil samples were submitted for analysis.

The following analytical package was requested:

Code 1A2-Tbay Au - Fire Assay AA (QOP Fire Assay Tbay)
Code UT-1-TBAY Aqua Regia ICP/MS

REPORT **A14-07393**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Assays are recommended for values >10,000 for Cu and Au. The Au from AR-MS is only semi-quantitative.
For accurate Au data, fire assay is recommended.

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:



Emmanuel Eseme , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com



Results

Analyte Symbol	Au	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga
Unit Symbol	ppb	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02
Method Code	FA-AA	AR-MS																					
3172001	< 5	0.131	< 1	0.025	29.6	0.5	5	0.022	0.57	1.72	0.21	0.14	0.47	3.8	39	41	220	1.88	7.8	21.9	6.77	37.5	7.82
3172002	< 5	0.110	< 1	0.042	24.7	0.5	6	0.021	0.55	1.51	0.21	0.10	0.53	3.9	36	39	210	1.81	6.9	20.4	6.33	30.6	5.80
3172003	< 5	0.099	< 1	0.042	14.0	0.4	1	0.019	0.34	0.93	0.11	0.08	0.35	2.6	27	27	189	1.24	5.1	13.1	4.66	24.6	3.84
3172004	< 5	0.123	< 1	0.054	25.1	0.6	9	0.032	0.93	1.66	0.25	0.10	1.18	5.1	39	45	281	2.04	8.2	25.0	15.3	36.3	6.05
3172005	< 5	0.109	< 1	0.052	24.1	0.7	16	0.034	2.47	1.29	0.26	0.09	6.97	4.3	36	39	305	1.80	7.7	24.1	19.4	29.8	4.71
3172006	< 5	0.112	< 1	0.021	19.7	0.6	3	0.015	0.42	1.62	0.18	0.10	0.24	3.1	34	35	172	1.64	6.8	18.5	8.65	31.0	6.86
3172007	< 5	0.130	< 1	0.037	23.8	0.5	4	0.021	0.54	1.77	0.19	0.09	0.34	4.0	40	41	244	2.01	8.8	22.9	11.4	31.7	6.48
3172008	< 5	0.120	< 1	0.052	23.0	0.6	7	0.032	0.86	1.59	0.27	0.10	1.03	5.1	39	45	325	2.03	8.8	24.6	49.1	34.0	5.82
3172009	< 5	0.143	< 1	0.053	32.7	1.0	12	0.036	0.86	2.28	0.34	0.13	0.58	7.0	49	64	346	2.64	11.3	35.9	29.1	44.5	8.20
3172010	< 5	0.117	< 1	0.051	19.0	0.7	3	0.025	0.51	1.40	0.17	0.09	0.43	3.9	34	37	249	1.67	7.5	20.7	12.5	27.4	5.15
3172011	< 5	0.124	< 1	0.050	28.7	0.5	6	0.024	0.64	1.86	0.26	0.11	0.41	4.2	41	46	301	2.11	10.1	26.9	12.5	35.7	7.06
3172012	< 5	0.142	< 1	0.042	36.9	0.6	8	0.022	0.68	2.52	0.25	0.15	0.32	4.6	51	55	223	2.96	10.7	30.9	13.5	48.0	9.66
3172013	< 5	0.116	< 1	0.042	27.8	0.6	5	0.023	0.57	2.03	0.21	0.13	0.33	3.9	40	45	225	2.13	9.3	25.5	13.0	33.6	6.98
3172014	< 5	0.121	< 1	0.047	25.2	0.6	14	0.031	0.61	1.83	0.22	0.11	0.42	4.4	40	45	280	2.06	8.9	24.9	13.3	31.6	6.16
3172015	< 5	0.115	< 1	0.027	23.3	0.5	3	0.017	0.44	1.65	0.18	0.11	0.30	3.2	37	37	158	1.81	6.6	18.3	8.29	27.0	7.32
3172016	< 5	0.105	< 1	0.052	14.2	0.4	1	0.020	0.40	1.03	0.13	0.07	0.39	2.9	28	30	256	1.33	5.7	15.3	5.98	20.5	3.97
3172017	< 5	0.120	< 1	0.036	25.6	0.5	7	0.020	0.51	1.88	0.20	0.10	0.33	3.5	39	42	245	2.03	8.8	23.7	16.9	39.2	6.67
3172018	< 5	0.138	< 1	0.062	31.2	0.8	13	0.040	1.76	1.90	0.34	0.11	3.31	5.9	47	54	359	2.41	10.1	31.2	26.5	42.7	6.82
3172019	< 5	0.106	< 1	0.056	18.8	0.5	8	0.032	2.00	1.10	0.23	0.08	4.49	4.0	33	37	267	1.64	6.4	19.6	18.5	26.9	4.20
3172020	< 5	0.135	< 1	0.057	34.6	0.9	12	0.039	0.86	2.03	0.37	0.12	0.74	5.8	47	57	451	2.59	11.2	31.8	22.1	44.8	7.39
3172021	< 5	0.125	< 1	0.050	32.3	0.8	10	0.033	1.33	1.78	0.31	0.11	1.85	5.3	43	50	220	2.00	9.6	27.7	21.0	45.2	6.51
3172022	< 5	0.126	< 1	0.046	30.2	0.8	11	0.037	1.79	1.63	0.29	0.11	3.26	5.1	43	48	310	2.08	9.6	27.0	21.8	45.9	5.93
3172023	< 5	0.132	< 1	0.046	32.2	0.7	9	0.033	0.79	1.90	0.29	0.12	0.71	5.0	45	52	397	2.39	11.0	28.8	12.8	43.1	7.18
3172024	< 5	0.139	< 1	0.061	33.1	0.8	11	0.039	0.80	1.86	0.37	0.12	0.66	5.8	46	53	617	2.51	11.4	29.5	14.3	42.8	7.10
3172025	< 5	0.138	< 1	0.060	31.9	0.8	12	0.038	1.49	1.71	0.35	0.11	2.12	5.5	45	51	304	2.33	10.0	29.1	16.6	46.4	6.60
3172026	< 5	0.139	< 1	0.067	34.0	0.7	11	0.035	0.82	1.82	0.35	0.12	0.77	5.6	46	53	399	2.82	11.4	27.2	10.9	50.4	7.03
3172027	< 5	0.128	< 1	0.058	29.7	0.6	11	0.036	1.81	1.63	0.34	0.10	3.67	5.2	41	48	250	2.10	9.4	28.1	18.6	43.8	6.16
3172028	< 5	0.091	< 1	0.057	21.1	0.5	7	0.026	1.41	1.17	0.22	0.09	3.30	3.6	32	37	176	1.48	6.7	19.8	12.8	55.0	4.44
3172029	< 5	0.110	< 1	0.055	23.8	0.6	11	0.036	1.96	1.34	0.30	0.09	4.81	4.4	36	46	358	1.94	8.0	25.9	18.8	35.6	4.90
3172030	< 5	0.114	< 1	0.052	24.7	0.6	5	0.028	0.63	1.51	0.22	0.09	0.64	4.3	39	44	278	2.00	8.3	23.8	9.29	51.1	6.05
3172031	< 5	0.128	< 1	0.059	32.7	0.8	10	0.037	1.16	1.77	0.31	0.11	1.45	5.5	44	51	281	2.32	9.1	28.1	15.2	41.6	6.44
3172032	< 5	0.143	< 1	0.055	34.9	0.9	12	0.038	0.84	1.93	0.34	0.12	0.71	6.1	49	56	276	2.53	9.9	30.2	22.8	42.4	7.30
3172033	< 5	0.131	< 1	0.063	31.3	0.7	11	0.032	0.79	1.74	0.30	0.12	0.85	5.1	46	51	400	2.35	9.9	26.4	11.5	45.5	6.44
3172034	< 5	0.121	< 1	0.051	26.0	0.5	6	0.028	0.62	1.43	0.23	0.09	0.62	4.2	37	42	310	1.95	8.0	22.7	7.84	36.2	5.52
3172035	< 5	0.134	< 1	0.051	31.5	0.8	10	0.037	0.77	1.86	0.29	0.11	0.68	5.7	45	52	341	2.38	9.7	28.7	19.6	38.5	7.04
3172036	< 5	0.115	< 1	0.060	26.9	0.6	13	0.041	1.92	1.55	0.31	0.10	5.11	4.8	41	47	337	2.10	8.9	27.6	20.6	38.7	5.54
3172037	< 5	0.120	< 1	0.046	24.9	0.7	7	0.031	1.09	1.52	0.23	0.10	2.11	4.4	39	42	248	1.90	7.8	23.3	13.3	37.7	5.94
3172038	< 5	0.132	< 1	0.055	33.5	0.9	10	0.035	0.89	2.21	0.31	0.13	0.86	6.1	47	55	318	2.55	10.4	31.1	15.2	42.4	7.43
3172039	< 5	0.095	< 1	0.041	15.1	0.3	< 1	0.018	0.39	1.00	0.12	0.08	0.45	2.9	27	29	236	1.30	4.9	13.7	5.93	23.4	3.81
3172040	< 5	0.132	< 1	0.063	46.7	1.1	13	0.034	0.90	2.46	0.34	0.15	0.88	7.2	55	61	481	2.82	11.0	35.9	27.0	50.3	8.51
3172041	< 5	0.147	< 1	0.062	37.0	0.9	15	0.046	1.64	1.90	0.43	0.14	3.76	6.3	50	57	692	2.71	12.1	34.0	18.0	53.5	7.00
3172042	< 5	0.150	< 1	0.067	44.7	1.0	14	0.046	1.13	2.16	0.43	0.14	1.50	6.9	52	62	351	2.86	11.4	34.1	22.7	54.8	8.36
3172043	< 5	0.132	< 1	0.061	36.1	0.7	11	0.040	0.90	1.89	0.37	0.13	1.05	5.8	46	54	774	2.62	11.7	31.7	19.0	52.9	7.25
3172044	< 5	0.147	< 1	0.033	43.6	0.7	9	0.038	0.85	1.97	0.31	0.13	0.76	5.9	48	55	382	2.63	11.0	31.3	11.3	61.4	7.54
3172045	< 5	0.112	< 1	0.049	24.2	0.5	12	0.039	2.53	1.26	0.28	0.09	8.90	4.6	37	41	373	1.88	8.1	26.2	15.7	35.5	4.78
3172046	< 5	0.107	< 1	0.032	43.2	0.9	6	0.025	0.65	2.13	0.26	0.13	0.97	5.1	46	52	337	2.46	11.0				

Analyst Symbol	Au	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga
Unit Symbol	ppb	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02
Method Code	FA-AA	AR-MS																					
3172050	< 5	0.126	< 1	0.042	33.6	0.7	11	0.029	1.60	1.69	0.30	0.12	3.66	5.1	44	47	296	2.53	9.9	28.7	14.8	53.4	6.31
3172051	< 5	0.133	< 1	0.054	32.0	0.7	14	0.040	2.33	1.71	0.37	0.13	6.00	5.7	46	50	301	2.36	10.7	32.1	22.6	47.1	6.32
3172052	< 5	0.156	< 1	0.058	41.7	0.9	16	0.047	1.97	2.26	0.50	0.16	4.06	6.9	57	64	347	3.06	14.0	40.2	27.1	59.0	8.48
3172053	< 5	0.121	< 1	0.051	27.9	0.6	12	0.039	2.35	1.48	0.30	0.10	7.54	5.0	41	45	328	2.09	8.8	28.2	16.7	38.4	5.53
3172054	< 5	0.134	< 1	0.049	31.8	0.8	10	0.032	1.38	1.88	0.30	0.13	2.98	5.5	46	51	311	2.44	9.8	29.4	16.1	45.7	7.31
3172055	< 5	0.155	< 1	0.052	38.5	1.0	12	0.031	0.88	2.43	0.35	0.15	0.72	6.4	55	63	376	2.93	11.9	34.7	16.5	54.6	9.55
3172056	< 5	0.159	< 1	0.051	35.1	0.8	8	0.034	0.86	2.12	0.33	0.13	0.72	5.8	51	57	384	2.68	11.8	32.6	14.4	60.1	8.60
3172057	< 5	0.149	< 1	0.040	30.8	0.6	7	0.030	0.75	1.93	0.26	0.12	0.50	5.0	48	53	309	2.47	10.8	30.7	13.1	49.7	7.86
3172058	< 5	0.141	< 1	0.046	24.4	0.5	4	0.030	0.65	1.51	0.22	0.10	0.56	4.9	42	45	328	2.11	8.9	24.9	10.7	37.4	6.27
3172059	< 5	0.158	< 1	0.039	38.6	0.8	12	0.037	1.25	2.18	0.37	0.16	2.47	6.2	54	61	362	2.74	12.3	34.8	17.8	55.4	9.10
3172060	< 5	0.129	< 1	0.054	29.1	0.6	12	0.039	2.27	1.55	0.32	0.11	6.83	5.3	43	47	369	2.25	9.9	29.8	17.4	42.6	5.89
3172061	< 5	0.126	< 1	0.051	29.4	0.5	9	0.030	1.78	1.51	0.27	0.11	5.00	5.1	39	45	311	2.03	8.9	27.0	14.3	43.2	5.81
3172062	< 5	0.128	< 1	0.054	28.6	0.7	13	0.035	2.48	1.42	0.29	0.11	5.41	5.0	41	45	270	1.97	9.0	27.9	17.1	39.4	5.40
3172063	< 5	0.158	< 1	0.058	49.1	1.0	19	0.045	1.88	2.50	0.54	0.17	2.53	7.5	60	69	360	3.30	15.4	43.7	26.8	73.3	9.47
3172064	< 5	0.098	< 1	0.052	16.1	0.4	5	0.024	1.51	0.87	0.19	0.09	3.15	3.1	27	27	179	1.21	5.7	16.6	11.2	24.5	3.46
3172065	< 5	0.135	< 1	0.054	32.4	0.6	13	0.048	1.88	1.70	0.40	0.13	4.88	5.3	46	51	331	2.38	10.4	32.6	20.6	50.1	6.23
3172069	< 5	0.115	< 1	0.049	24.0	0.6	10	0.036	2.83	1.20	0.27	0.09	9.73	4.5	36	39	330	1.80	7.9	25.0	14.5	34.1	4.53

Results

Analyte Symbol	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm									
Lower Limit	0.1	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS									
3172001	< 0.1	8.4	34.1	29.1	4.86	5.8	2.3	1.69	0.060	< 0.02	0.75	0.11	< 0.02	1.88	65.6	13.2	27.6	0.01	3.2	10.6	1.9	0.3	0.4
3172002	< 0.1	3.0	22.0	24.2	7.04	6.4	1.7	0.52	0.054	< 0.02	0.61	0.08	< 0.02	1.38	75.0	18.6	38.9	0.02	4.6	15.3	2.6	0.3	0.5
3172003	< 0.1	2.0	15.9	19.9	5.94	4.0	1.7	0.30	0.046	< 0.02	0.43	0.05	< 0.02	0.84	34.8	16.7	35.8	0.03	4.1	13.7	2.4	0.5	0.4
3172004	< 0.1	2.5	27.1	30.8	10.8	10.8	0.7	0.20	0.042	< 0.02	0.61	0.08	< 0.02	1.60	76.6	25.8	46.7	0.01	6.2	21.0	3.6	0.6	0.7
3172005	< 0.1	2.8	24.8	60.6	9.38	13.3	0.3	0.25	0.018	< 0.02	0.54	0.09	< 0.02	1.43	69.8	23.0	43.5	0.04	5.4	18.4	3.1	0.4	0.6
3172006	< 0.1	1.8	25.1	19.4	4.01	7.7	1.7	0.29	0.038	< 0.02	0.69	0.06	< 0.02	1.41	61.6	13.8	34.5	0.06	3.2	10.4	1.8	0.5	0.3
3172007	< 0.1	2.3	21.8	22.4	5.97	8.0	1.8	0.23	0.043	< 0.02	0.65	0.10	< 0.02	1.32	61.2	16.9	41.0	0.05	4.0	13.8	2.5	0.5	0.4
3172008	< 0.1	1.9	26.4	27.7	11.2	15.8	0.5	0.14	0.034	< 0.02	0.60	0.12	< 0.02	1.49	76.3	27.3	49.4	0.03	6.3	21.7	3.6	0.4	0.7
3172009	0.1	2.7	34.8	32.8	16.6	14.9	0.6	0.13	0.044	0.03	0.75	0.10	< 0.02	2.21	110	40.5	62.0	0.04	9.3	30.9	5.1	0.6	1.0
3172010	< 0.1	1.8	20.6	24.1	6.99	5.4	1.1	0.14	0.033	< 0.02	0.54	0.04	< 0.02	1.13	56.9	18.9	40.0	0.01	4.7	15.7	2.7	0.4	0.5
3172011	< 0.1	1.7	31.5	22.8	6.50	4.2	1.7	0.20	0.037	< 0.02	0.61	0.07	< 0.02	1.65	83.5	17.4	37.8	0.07	4.1	14.1	2.5	0.4	0.5
3172012	< 0.1	2.7	28.1	20.2	4.89	5.7	2.9	0.40	0.073	0.02	0.83	0.09	< 0.02	1.79	93.8	13.8	36.0	0.08	3.1	10.7	1.8	0.5	0.3
3172013	< 0.1	2.0	23.2	19.9	5.07	4.6	2.0	0.24	0.049	< 0.02	0.66	0.06	< 0.02	1.46	80.3	14.7	39.1	0.07	3.5	11.5	2.0	0.3	0.4
3172014	< 0.1	2.2	22.1	25.3	7.08	6.3	1.3	0.15	0.030	< 0.02	0.60	0.05	< 0.02	1.39	69.6	19.4	45.5	0.04	4.8	16.4	2.8	0.3	0.5
3172015	< 0.1	1.6	27.9	22.7	3.96	5.9	2.1	0.27	0.044	< 0.02	0.71	0.05	< 0.02	1.52	61.1	13.4	31.3	0.05	3.1	10.2	1.7	0.5	0.3
3172016	< 0.1	1.2	15.5	22.1	6.19	5.1	1.2	0.06	0.023	< 0.02	0.42	0.02	< 0.02	0.79	38.4	16.0	35.1	0.02	3.9	13.4	2.4	0.7	0.4
3172017	< 0.1	2.3	23.5	21.6	4.46	4.3	2.2	0.22	0.073	< 0.02	0.63	0.07	< 0.02	1.35	71.4	13.8	37.2	0.11	3.1	10.4	1.8	0.3	0.3
3172018	< 0.1	2.3	32.2	42.3	11.6	13.5	0.7	0.10	0.040	0.02	0.73	0.09	< 0.02	2.00	98.3	29.9	53.8	0.02	7.0	23.4	3.9	0.5	0.8
3172019	< 0.1	3.8	22.1	42.7	9.45	8.9	0.7	0.06	0.035	< 0.02	0.49	0.06	< 0.02	1.12	55.8	21.8	43.3	0.04	5.2	17.7	3.1	6.7	0.6
3172020	< 0.1	2.5	37.9	30.6	10.1	9.1	1.3	0.21	0.042	0.02	0.76	0.08	< 0.02	1.93	107	28.0	61.3	0.04	6.6	21.6	3.7	0.3	0.7
3172021	< 0.1	1.3	33.2	31.6	10.8	7.4	2.1	0.04	0.085	0.02	0.67	0.07	< 0.02	1.73	87.1	27.9	52.9	0.09	6.5	21.9	3.7	0.5	0.7
3172022	< 0.1	1.6	28.7	38.7	10.0	12.4	1.1	0.11	0.043	0.02	0.67	0.07	< 0.02	1.58	80.5	24.9	48.6	0.05	5.9	19.6	3.3	0.5	0.7
3172023	< 0.1	2.2	34.1	28.9	7.82	5.2	1.8	0.09	0.049	0.02	0.75	0.06	< 0.02	1.75	84.0	20.1	48.1	0.04	4.9	16.1	2.8	0.2	0.5
3172024	< 0.1	2.6	33.9	30.0	10.1	16.2	0.8	0.18	0.040	0.02	0.75	0.06	< 0.02	1.79	98.8	27.4	55.6	0.06	6.6	22.0	3.7	0.3	0.7
3172025	< 0.1	3.0	32.1	35.7	10.2	17.7	1.9	0.08	0.058	0.02	0.77	0.07	< 0.02	1.78	89.4	27.5	52.6	0.05	6.4	21.3	3.6	0.4	0.7
3172026	< 0.1	3.5	34.0	31.2	9.16	10.5	1.9	0.20	0.045	0.02	0.77	0.06	< 0.02	1.88	94.5	24.6	54.5	0.09	5.9	19.6	3.3	0.5	0.7
3172027	< 0.1	6.2	31.2	43.0	9.56	17.5	1.2	0.15	0.042	< 0.02	0.71	0.06	< 0.02	1.64	89.8	24.6	48.5	0.05	6.0	20.5	3.4	14.0	0.6
3172028	< 0.1	1.4	22.7	39.3	8.00	7.4	2.4	0.15	0.082	< 0.02	0.64	0.04	< 0.02	1.19	59.5	20.1	41.4	0.17	4.9	16.5	2.8	0.8	0.5
3172029	< 0.1	1.9	29.3	47.2	9.82	9.1	1.7	0.15	0.058	< 0.02	0.60	0.08	< 0.02	1.45	79.3	22.8	44.3	0.07	5.4	18.3	3.2	0.5	0.6
3172030	< 0.1	1.7	28.3	27.4	7.91	3.9	1.7	0.13	0.040	< 0.02	0.63	0.03	< 0.02	1.42	63.7	19.2	40.4	0.06	4.9	16.2	2.8	0.3	0.5
3172031	< 0.1	2.7	31.1	31.6	11.6	6.4	1.6	0.09	0.065	0.02	0.67	0.06	< 0.02	1.70	95.2	28.6	50.8	0.05	6.7	22.6	3.8	1.9	0.8
3172032	< 0.1	2.3	31.8	29.9	11.4	16.4	0.9	0.20	0.049	0.02	0.75	0.08	< 0.02	1.83	105	28.2	52.9	0.04	6.8	22.6	3.8	0.3	0.7
3172033	< 0.1	2.0	37.5	31.1	8.91	3.8	2.2	0.14	0.067	0.02	0.72	0.06	< 0.02	1.75	95.3	22.6	50.0	0.07	5.4	18.5	3.1	0.2	0.6
3172034	< 0.1	1.9	28.3	26.9	8.03	4.3	1.9	0.11	0.049	< 0.02	0.76	0.04	< 0.02	1.38	72.9	20.1	42.6	0.02	4.9	16.9	2.9	0.1	0.5
3172035	< 0.1	2.1	28.5	29.2	11.6	9.4	1.7	0.07	0.053	0.02	0.74	0.05	< 0.02	1.69	89.6	29.8	54.8	0.04	7.0	23.5	4.0	0.3	0.8
3172036	< 0.1	1.9	32.0	52.9	10.7	5.5	1.9	0.10	0.088	< 0.02	0.64	0.08	< 0.02	1.65	101	26.0	46.2	0.05	6.1	20.6	3.5	0.4	0.7
3172037	< 0.1	1.9	27.4	35.9	8.82	8.3	1.5	0.06	0.047	< 0.02	0.67	0.05	< 0.02	1.53	73.5	22.2	41.6	0.07	5.2	17.5	3.0	0.5	0.6
3172038	< 0.1	2.9	33.0	31.9	12.1	8.8	1.4	0.09	0.048	0.02	0.78	0.05	< 0.02	1.92	92.3	30.5	55.1	0.05	7.2	24.5	4.1	1.2	0.8
3172039	< 0.1	1.2	16.3	21.2	7.23	3.8	1.7	0.05	0.059	< 0.02	0.46	< 0.02	< 0.02	0.88	39.9	17.6	33.0	0.04	4.3	14.7	2.5	0.4	0.5
3172040	0.1	3.0	42.7	32.1	18.8	4.0	2.3	0.13	0.183	0.03	0.92	0.07	< 0.02	2.37	128	44.4	56.1	0.08	10.4	35.1	5.9	0.6	1.2
3172041	< 0.1	4.3	38.3	108	12.0	15.9	2.3	0.46	0.089	0.02	0.81	0.08	< 0.02	2.12	124	29.7	56.8	0.08	6.9	23.0	3.9	0.3	0.8
3172042	0.1	2.6	40.2	81.1	15.1	7.9	2.3	0.54	0.152	0.02	0.85	0.08	< 0.02	2.20	107	35.9	58.8	0.07	8.5	29.1	5.0	0.6	1.0
3172043	< 0.1	2.9	37.0	55.9	11.0	11.9	1.8	0.53	0.063	0.02	0.76	0.04	< 0.02	1.94	106	27.9	55.0	0.13	6.6	22.1	3.7	0.4	0.7
3172044	< 0.1	2.3	35.4	52.7	9.69	7.6	2.0	0.22	0.059	0.02	0.81	0.08	< 0.02	1.91	88.2	25.3	52.2	0.07	6.0	20.1	3		

Analyst Symbol	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm							
Lower Limit	0.1	0.1	0.1	0.5	0.01	0.1	0.1	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS							
3172050	< 0.1	3.9	30.6	48.2	9.97	10.6	2.0	0.22	0.171	< 0.02	0.70	0.05	< 0.02	1.73	84.9	25.2	49.3	0.07	5.9	19.8	3.3	0.2	0.7
3172051	< 0.1	1.6	35.0	65.1	10.9	20.5	1.7	0.02	0.070	0.02	0.70	0.09	< 0.02	1.89	99.4	28.4	53.0	0.10	6.5	22.3	3.8	0.3	0.7
3172052	< 0.1	2.2	46.8	55.7	12.4	23.8	1.0	0.06	0.049	0.03	0.88	0.12	< 0.02	2.53	132	32.3	61.3	0.11	7.7	25.9	4.3	0.3	0.8
3172053	< 0.1	1.9	27.2	72.3	9.72	16.2	0.9	0.04	0.046	< 0.02	0.62	0.06	< 0.02	1.60	84.3	24.5	46.5	0.04	5.7	19.6	3.3	< 0.1	0.7
3172054	< 0.1	2.0	36.4	43.6	10.1	9.3	1.5	0.05	0.050	0.02	0.75	0.05	< 0.02	1.98	91.1	25.9	49.5	0.04	6.2	21.0	3.5	< 0.1	0.7
3172055	< 0.1	1.6	46.4	32.2	10.2	9.3	2.2	0.09	0.066	0.02	0.99	0.04	< 0.02	2.54	112	27.6	53.5	0.04	6.5	21.8	3.6	< 0.1	0.7
3172056	< 0.1	3.1	43.2	33.0	8.56	8.3	2.3	0.04	0.064	0.02	0.83	0.06	< 0.02	2.15	95.8	23.2	46.2	0.03	5.4	18.1	3.0	3.2	0.6
3172057	< 0.1	2.3	31.7	28.8	6.44	9.1	1.8	0.12	0.035	0.02	0.78	0.05	< 0.02	1.74	71.5	17.3	38.3	0.05	4.1	13.7	2.4	< 0.1	0.5
3172058	< 0.1	1.7	26.8	31.1	8.50	8.4	1.3	0.05	0.028	< 0.02	0.66	0.03	< 0.02	1.42	57.5	20.8	43.0	0.04	5.2	17.5	3.0	< 0.1	0.6
3172059	< 0.1	1.9	42.9	43.5	8.73	13.5	1.8	0.10	0.041	0.03	0.88	0.07	< 0.02	2.36	98.4	23.4	51.7	0.08	5.6	18.8	3.1	< 0.1	0.6
3172060	< 0.1	1.9	30.8	68.4	10.3	9.6	0.8	0.08	0.036	0.02	0.63	0.06	< 0.02	1.70	89.3	26.5	50.1	0.03	6.1	20.5	3.5	< 0.1	0.7
3172061	< 0.1	2.5	27.6	64.5	9.91	19.1	2.5	0.10	0.073	0.02	0.66	0.05	< 0.02	1.77	84.4	25.3	48.0	0.05	6.0	20.1	3.4	< 0.1	0.7
3172062	< 0.1	1.2	28.0	62.7	10.3	20.7	1.9	0.14	0.106	< 0.02	0.63	0.06	< 0.02	1.55	80.9	26.1	50.3	0.08	6.3	21.2	3.6	< 0.1	0.7
3172063	< 0.1	1.9	50.1	52.4	12.7	28.4	1.5	0.18	0.081	0.03	0.93	0.11	< 0.02	2.75	139	32.8	62.1	0.09	7.9	26.6	4.3	< 0.1	0.8
3172064	< 0.1	1.1	17.7	41.5	7.81	16.3	1.4	0.10	0.045	< 0.02	0.45	0.05	< 0.02	0.94	46.7	19.8	39.3	0.03	4.8	16.1	2.7	0.2	0.5
3172065	< 0.1	2.0	38.1	59.8	9.23	26.4	1.5	0.31	0.063	0.02	0.68	0.08	< 0.02	2.07	109	24.4	46.7	0.07	5.8	19.4	3.2	< 0.1	0.6
3172069	< 0.1	0.8	23.7	79.7	9.19	5.3	0.7	< 0.01	0.030	< 0.02	0.50	0.05	< 0.02	1.32	65.1	23.4	44.9	0.04	5.4	18.2	3.0	< 0.1	0.6

Results

Analyte Symbol	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppb									
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS									
3172001	1.5	0.2	1.0	0.2	0.5	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	4.7	0.17	8.26	3.1	0.5	< 10
3172002	2.1	0.3	1.5	0.3	0.7	< 0.1	0.6	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.7	0.14	7.10	5.1	0.6	< 10
3172003	1.9	0.2	1.3	0.2	0.6	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.1	0.09	5.74	4.5	0.5	< 10
3172004	2.8	0.4	2.1	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.3	0.19	6.89	6.9	0.6	30
3172005	2.7	0.3	1.9	0.4	0.9	0.1	0.8	0.1	0.1	< 0.05	< 0.1	< 0.001	0.6	0.19	6.83	6.4	0.7	20
3172006	1.4	0.2	0.9	0.2	0.4	< 0.1	0.3	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.15	7.81	4.7	0.5	20
3172007	2.0	0.2	1.3	0.2	0.6	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.1	0.14	8.08	5.9	0.6	20
3172008	3.0	0.4	2.1	0.4	1.0	0.1	0.8	0.1	0.1	< 0.05	< 0.1	< 0.001	1.9	0.19	6.71	7.2	0.6	10
3172009	4.2	0.5	2.9	0.6	1.5	0.2	1.2	0.2	< 0.1	< 0.05	< 0.1	< 0.001	4.0	0.26	8.53	9.2	0.7	20
3172010	2.2	0.3	1.5	0.3	0.7	< 0.1	0.6	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.5	0.13	6.75	6.0	0.6	30
3172011	2.1	0.3	1.4	0.3	0.6	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.8	0.16	7.76	4.9	0.6	< 10
3172012	1.5	0.2	1.0	0.2	0.5	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.0	0.17	10.9	4.7	0.6	30
3172013	1.6	0.2	1.1	0.2	0.5	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.3	0.15	8.85	4.8	0.6	30
3172014	2.3	0.3	1.6	0.3	0.8	< 0.1	0.6	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.5	0.16	8.17	6.6	0.6	20
3172015	1.3	0.2	0.8	0.2	0.4	< 0.1	0.3	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.8	0.15	8.08	4.2	0.5	20
3172016	1.8	0.2	1.3	0.2	0.6	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.8	0.10	5.49	4.8	0.5	30
3172017	1.5	0.2	0.9	0.2	0.4	< 0.1	0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.8	0.13	8.15	4.5	0.5	40
3172018	3.2	0.4	2.3	0.4	1.1	0.2	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	10.2	0.24	8.58	8.5	0.7	30
3172019	2.6	0.3	1.8	0.3	0.9	0.1	0.7	0.1	< 0.1	< 0.05	< 0.1	< 0.001	5.1	0.15	5.94	5.9	0.6	20
3172020	3.2	0.4	2.1	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.0	0.21	9.62	8.8	0.8	20
3172021	3.0	0.4	2.1	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.4	0.19	8.70	6.9	0.7	40
3172022	2.8	0.4	2.0	0.4	0.9	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	10.8	0.19	8.10	6.5	0.6	30
3172023	2.3	0.3	1.6	0.3	0.8	0.1	0.6	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.0	0.17	9.48	6.3	0.6	< 10
3172024	3.0	0.4	2.1	0.4	1.0	0.1	0.8	0.1	0.1	< 0.05	< 0.1	< 0.001	2.2	0.20	8.56	8.3	0.7	10
3172025	3.1	0.4	2.0	0.4	1.0	0.1	0.8	0.1	0.2	< 0.05	< 0.1	< 0.001	2.2	0.20	8.49	7.4	0.8	30
3172026	2.8	0.4	1.9	0.4	0.9	0.1	0.7	0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.8	0.20	9.13	7.6	0.8	10
3172027	2.7	0.3	1.9	0.4	0.9	0.1	0.7	0.1	0.2	< 0.05	< 0.1	< 0.001	1.8	0.20	7.84	7.6	0.9	20
3172028	2.2	0.3	1.6	0.3	0.8	0.1	0.6	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.5	0.14	8.64	4.8	1.2	20
3172029	2.6	0.4	1.9	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	33.6	0.20	7.03	6.0	0.7	20
3172030	2.2	0.3	1.6	0.3	0.8	0.1	0.6	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.4	0.14	7.73	4.9	0.6	20
3172031	3.1	0.4	2.2	0.4	1.1	0.1	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.0	0.19	9.28	6.9	0.7	30
3172032	3.1	0.4	2.2	0.4	1.1	0.1	0.9	0.1	0.1	< 0.05	< 0.1	< 0.001	1.8	0.22	8.53	8.1	0.6	30
3172033	2.6	0.3	1.8	0.3	0.9	0.1	0.7	0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.9	0.17	9.32	6.2	0.9	20
3172034	2.3	0.3	1.6	0.3	0.8	0.1	0.6	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	0.13	7.13	5.2	0.8	10
3172035	3.3	0.4	2.3	0.4	1.1	0.2	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.4	0.21	8.25	7.5	0.7	10
3172036	2.8	0.4	2.0	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.5	0.21	7.15	6.1	0.9	40
3172037	2.6	0.3	1.7	0.3	0.8	0.1	0.7	0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.1	0.17	7.85	5.9	0.6	20
3172038	3.3	0.4	2.3	0.4	1.1	0.2	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	1.2	0.21	9.15	8.0	0.7	30
3172039	2.0	0.3	1.4	0.3	0.7	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.0	0.09	5.17	4.4	0.6	10
3172040	5.1	0.7	3.6	0.7	1.7	0.2	1.3	0.2	< 0.1	< 0.05	< 0.1	< 0.001	1.8	0.32	11.9	7.6	0.9	90
3172041	3.4	0.4	2.3	0.4	1.1	0.2	0.9	0.1	0.1	< 0.05	< 0.1	< 0.001	1.2	0.23	10.8	8.1	1.1	20
3172042	4.2	0.5	2.8	0.5	1.5	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	1.4	0.23	10.9	8.4	1.3	50
3172043	3.2	0.4	2.2	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	25.2	0.23	9.33	7.5	1.2	30
3172044	2.8	0.4	1.9	0.4	0.9	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	25.4	0.19	9.73	6.8	0.9	30
3172045	2.6	0.3	1.8	0.3	0.9	0.1	0.7	0.1	0.1	< 0.05	< 0.1	< 0.001	27.3	0.17	7.04	6.2	0.7	30
3172046	3.8	0.5	2.6	0.5	1.3	0.2	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	25.3	0.20	11.5	5.4	1.1	40
3172047	3.8	0.5	2.6	0.5	1.3	0.2	1.1	0.2	< 0.1	< 0.05	< 0.1	< 0.001	25.4	0.26	11.6	8.5	2.5	50
3172048	3.4	0.4	2.4	0.4	1.2	0.2	1.0	0.1	0.4	< 0.05	< 0.1	< 0.001	26.9	0.25	11.8	9.4	1.1	30
3172049	2.8	0.4	2.0	0.4	1.0	0.1	0.8	0.1	0.2	< 0.05	< 0.1	< 0.001	24.1	0.20	9.14	7.1	0.6	30

Analyte Symbol	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	pppm	ppb	ppm	ppm	ppm	ppm	ppm	ppb									
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	< 0.05	< 0.1	< 0.001	0.5	0.02	0.01	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS									
3172050	2.8	0.4	2.0	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	25.2	0.20	8.86	7.0	0.9	20
3172051	3.1	0.4	2.1	0.4	1.1	0.1	0.9	0.1	0.3	< 0.05	< 0.1	< 0.001	25.0	0.22	9.28	8.0	1.1	30
3172052	3.6	0.5	2.5	0.5	1.2	0.2	1.0	0.2	0.3	< 0.05	< 0.1	< 0.001	25.4	0.28	11.2	10.6	0.9	20
3172053	2.8	0.4	1.9	0.4	1.0	0.1	0.7	0.1	0.2	< 0.05	< 0.1	< 0.001	23.0	0.19	7.67	7.0	0.7	30
3172054	2.9	0.4	2.1	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	23.8	0.22	9.48	7.2	0.7	20
3172055	2.9	0.4	2.1	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	22.4	0.25	10.9	7.6	0.7	30
3172056	2.5	0.3	1.7	0.3	0.8	0.1	0.7	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	26.7	0.22	10.7	6.5	0.6	30
3172057	2.0	0.2	1.4	0.2	0.6	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	24.6	0.21	9.99	5.7	0.5	20
3172058	2.4	0.3	1.8	0.3	0.9	0.1	0.7	0.1	< 0.1	< 0.05	< 0.1	< 0.001	23.0	0.17	8.80	6.0	0.6	20
3172059	2.6	0.3	1.8	0.3	0.9	0.1	0.7	0.1	0.1	< 0.05	< 0.1	< 0.001	23.5	0.24	10.9	7.4	0.7	30
3172060	3.0	0.4	2.1	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	24.3	0.20	8.00	7.3	0.7	20
3172061	2.8	0.4	2.0	0.4	1.0	0.1	0.8	0.1	0.3	< 0.05	< 0.1	< 0.001	22.3	0.19	7.94	7.5	0.8	20
3172062	3.0	0.4	2.1	0.4	1.0	0.1	0.8	0.1	0.3	< 0.05	< 0.1	< 0.001	25.8	0.19	8.29	7.5	1.1	20
3172063	3.5	0.5	2.5	0.5	1.3	0.2	1.0	0.2	0.4	< 0.05	< 0.1	< 0.001	23.3	0.30	12.4	10.7	1.3	20
3172064	2.3	0.3	1.6	0.3	0.8	0.1	0.6	< 0.1	0.3	0.29	< 0.1	< 0.001	6.1	0.13	5.43	5.6	0.7	20
3172065	2.6	0.3	1.9	0.4	1.0	0.1	0.7	0.1	0.5	< 0.05	< 0.1	< 0.001	25.2	0.25	8.13	8.1	1.0	10
3172069	2.5	0.3	1.8	0.3	0.9	0.1	0.7	0.1	< 0.1	< 0.05	< 0.1	< 0.001	26.1	0.15	6.88	6.4	0.7	30

QC

Analyte Symbol	Au	Ti	S	P	Li	Be	B	Na	Mg	Al	K	Bi	Ca	Sc	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga
Unit Symbol	ppb	%	%	%	ppm	ppm	ppm	%	%	%	%	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	0.001	1	0.001	0.1	0.1	1	0.001	0.01	0.01	0.01	0.02	0.01	0.1	1	1	1	0.01	0.1	0.1	0.01	0.1	0.02
Method Code	FA-AA	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas		0.009	< 1	0.056	8.3	0.8	9	0.061	0.17	0.63	0.04	1400	0.96	1.0	76	9	852	25.2	8.5	43.7	1110	754	4.95
GXR-1 Cert		0.036	0.257	0.0650	8.20	1.22	15.0	0.0520	0.217	3.52	0.050	1380	0.960	1.58	80.0	12.0	852	23.6	8.20	41.0	1110	760	13.8
GXR-4 Meas		0.142	2	0.137	11.3	1.7	< 1	0.141	1.60	2.84	1.81	20.6	0.94	6.8	79	57	137	3.18	15.7	44.0	6490	76.2	12.3
GXR-4 Cert		0.29	1.77	0.120	11.1	1.90	4.50	0.564	1.66	7.20	4.01	19.0	1.01	7.70	87.0	64.0	155	3.09	14.6	42.0	6520	73.0	20.0
GXR-6 Meas		< 1	0.040	30.4	1.1	< 1	0.073	0.41	7.19	1.21	0.17	0.19	23.0	159	77	1010	5.64	14.2	25.5	72.1	128	15.1	
GXR-6 Cert		0.0160	0.0350	32.0	1.40	9.80	0.104	0.609	17.7	1.87	0.290	0.180	27.6	186	96.0	1010	5.58	13.8	27.0	66.0	118	35.0	
SAR-M (U.S.G.S.) Meas		0.060		0.075	15.8	1.2		0.025	0.36	1.18	0.32	1.78	0.31	3.2	35	90	4840	3.04	12.1	50.6	366	999	5.04
SAR-M (U.S.G.S.) Cert		0.38		0.07	27.4	2.20		1.140	0.50	6.30	2.94	1.94	0.61	7.83	67.2	79.7	5220	2.99	10.70	41.5		930.0	17
OxD108 Meas	458																						
OxD108 Cert	414.000																						
OxD108 Meas	449																						
OxD108 Cert	414.000																						
SF67 Meas	913																						
SF67 Cert	835.000																						
SF67 Meas	912																						
SF67 Cert	835.000																						
3172002 Orig		0.113	< 1	0.042	24.8	0.5	6	0.022	0.55	1.52	0.21	0.10	0.54	4.0	36	40	212	1.83	6.9	20.5	6.41	31.4	5.89
3172002 Dup		0.107	< 1	0.041	24.6	0.5	5	0.021	0.54	1.50	0.21	0.09	0.52	3.9	35	39	207	1.78	6.9	20.3	6.26	29.9	5.70
3172010 Orig	< 5																						
3172010 Dup	< 5																						
3172020 Orig	< 5																						
3172020 Dup	< 5																						
3172030 Orig	< 5																						
3172030 Dup	< 5																						
3172031 Orig		0.131	< 1	0.061	32.8	0.8	10	0.038	1.18	1.81	0.32	0.11	1.48	5.6	45	52	286	2.37	9.2	28.7	15.5	42.4	6.60
3172031 Dup		0.126	< 1	0.057	32.6	0.8	10	0.036	1.14	1.74	0.31	0.11	1.43	5.4	43	51	276	2.27	8.9	27.5	14.9	40.8	6.28
3172032 Orig		0.145	< 1	0.055	34.6	0.9	14	0.039	0.84	1.93	0.34	0.11	0.71	6.1	50	56	274	2.52	9.9	30.1	23.3	42.1	7.22
3172032 Dup		0.141	< 1	0.055	35.2	0.9	11	0.038	0.83	1.92	0.34	0.12	0.71	6.1	49	55	277	2.54	9.9	30.3	22.2	42.7	7.37
3172045 Orig	< 5																						
3172045 Dup	< 5																						
3172054 Orig		0.133	< 1	0.049	31.9	0.7	10	0.032	1.39	1.89	0.30	0.13	3.01	5.5	46	51	312	2.45	9.9	29.5	16.2	46.1	7.39
3172054 Dup		0.135	< 1	0.048	31.8	0.8	10	0.033	1.37	1.87	0.30	0.13	2.95	5.5	46	51	310	2.42	9.7	29.3	16.0	45.2	7.23
3172057 Orig	< 5																						
3172057 Dup	< 5																						
3172065 Orig	< 5																						
3172065 Dup	< 5																						
3172069 Orig		0.112	< 1	0.049	23.5	0.5	10	0.035	2.79	1.18	0.26	0.09	9.62	4.4	35	39	328	1.80	7.8	24.5	14.2	33.6	4.45
3172069 Dup		0.117	< 1	0.050	24.5	0.6	11	0.038	2.88	1.22	0.27	0.09	9.85	4.5	36	39	332	1.81	8.0	25.6	14.8	34.6	4.61
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 5																						
Method Blank	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	< 0.001	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	< 0.01	< 0.1	< 0.02
Method Blank	< 0.001	< 1	< 0.001	< 0.1	< 0.1	< 1	< 0.001	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	< 1	< 1	< 1	< 0.01	< 0.1	< 0.1	< 0.01	< 0.1	< 0.02	

QC

Analyte Symbol	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Te	Cs	Ba	La	Ce	Cd	Pr	Nd	Sm	Se	Eu
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.1	0.5	0.01	0.1	0.1	0.01	0.002	0.02	0.05	0.02	0.02	0.02	0.5	0.5	0.01	0.01	0.1	0.02	0.1	0.1	0.1
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	400	2.7	191	27.4	15.6	< 0.1	19.5	29.5	0.75	25.7	93.9	13.6	2.78	291	6.5	12.6	2.37		6.70	2.3	13.2	0.5	
GXR-1 Cert	427	14.0	275	32.0	38.0	0.800	18.0	31.0	0.770	54.0	122	13.0	3.00	750	7.50	17.0	3.30		18.0	2.70	16.6	0.690	
GXR-4 Meas	105	105	81.1	13.3	12.4	0.2	334	3.43	0.21	5.82	4.08	0.79	2.54	37.8	53.5	101	0.03		38.6	6.0	5.3	1.4	
GXR-4 Cert	98.0	160	221	14.0	186	10.0	310	4.00	0.270	5.60	4.80	0.970	2.80	1640	64.5	102	0.860		45.0	6.60	5.60	1.63	
GXR-6 Meas	228	71.9	37.3	7.46	15.4	< 0.1	1.81	0.222	0.06	1.03	2.38	< 0.02	3.78	1100	12.7	34.1	0.07		11.8	2.3	< 0.1	0.6	
GXR-6 Cert	330	90.0	35.0	14.0	110	7.50	2.40	1.30	0.260	1.70	3.60	0.0180	4.20	1300	13.9	36.0	1.00		13.0	2.67	0.940	0.760	
SAR-M (U.S.G.S.) Meas	39.3	29.0	32.3	21.5			3.2	14.1	5.23	1.08	1.64	4.67	0.67		195	48.9	100	5.40				0.3	
SAR-M (U.S.G.S.) Cert	38.8	146	151	28.00			29.9	13.1	3.64	1.08	2.76	6.0	0.96		801	57.4	122.0	5.27				0.39	
OxD108 Meas																							
OxD108 Cert																							
OxD108 Meas																							
OxD108 Cert																							
SF67 Meas																							
SF67 Cert																							
SF67 Meas																							
SF67 Cert																							
3172002 Orig	< 0.1	3.6	22.6	25.0	7.16	6.7	1.8	0.64	0.057	< 0.02	0.61	0.10	< 0.02	1.40	76.0	19.3	40.4	0.02	4.7	15.9	2.7	0.3	0.5
3172002 Dup	< 0.1	2.4	21.4	23.3	6.92	6.1	1.5	0.41	0.052	< 0.02	0.60	0.07	< 0.02	1.36	74.0	17.9	37.4	0.03	4.4	14.7	2.5	0.3	0.5
3172010 Orig																							
3172010 Dup																							
3172020 Orig																							
3172020 Dup																							
3172030 Orig																							
3172030 Dup																							
3172031 Orig	< 0.1	2.3	31.7	32.4	11.9	6.7	1.6	0.10	0.065	0.02	0.68	0.06	< 0.02	1.73	96.3	28.6	50.9	0.05	6.7	22.8	3.9	0.7	0.8
3172031 Dup	< 0.1	3.2	30.5	30.8	11.3	6.2	1.5	0.08	0.064	0.02	0.67	0.05	< 0.02	1.66	94.0	28.5	50.6	0.05	6.6	22.3	3.7	3.1	0.7
3172032 Orig	< 0.1	2.1	31.9	29.8	11.4	17.4	1.0	0.18	0.051	0.02	0.72	0.08	< 0.02	1.81	105	28.5	54.0	0.04	6.9	22.9	3.9	0.2	0.8
3172032 Dup	< 0.1	2.4	31.8	30.0	11.5	15.5	0.8	0.23	0.048	0.02	0.77	0.08	< 0.02	1.84	106	27.8	51.8	0.04	6.7	22.2	3.7	0.4	0.7
3172045 Orig																							
3172045 Dup																							
3172054 Orig	< 0.1	2.1	36.5	44.0	10.2	9.2	1.5	0.05	0.047	0.02	0.76	0.05	< 0.02	1.98	90.7	26.0	49.8	0.04	6.2	21.0	3.5	0.1	0.7
3172054 Dup	< 0.1	2.0	36.3	43.2	10.0	9.5	1.6	0.05	0.053	0.02	0.75	0.05	< 0.02	1.98	91.4	25.8	49.3	0.03	6.3	21.0	3.5	< 0.1	0.7
3172057 Orig																							
3172057 Dup																							
3172065 Orig																							
3172065 Dup																							
3172069 Orig	< 0.1	0.9	23.6	78.8	9.12	4.2	0.7	< 0.01	0.030	< 0.02	0.51	0.05	< 0.02	1.29	63.5	23.2	45.0	0.05	5.5	18.2	3.0	0.2	0.6
3172069 Dup	< 0.1	0.8	23.9	80.6	9.26	6.5	0.7	< 0.01	0.030	< 0.02	0.49	0.06	< 0.02	1.35	66.7	23.6	44.7	0.04	5.4	18.1	3.1	< 0.1	0.6
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank	< 0.1	< 0.1	< 0.1	< 0.5	< 0.01	< 0.1	< 0.1	< 0.01	< 0.002	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.5	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	< 0.1	< 0.1
Method Blank	< 0.1	< 0.1	< 0.1	< 0.5	< 0.01	< 0.1	< 0.1	< 0.01	< 0.002	< 0.02	< 0.05	< 0.02	< 0.02	< 0.02	< 0.5	< 0.5	< 0.01	< 0.01	< 0.1	< 0.02	< 0.1	< 0.1	< 0.1

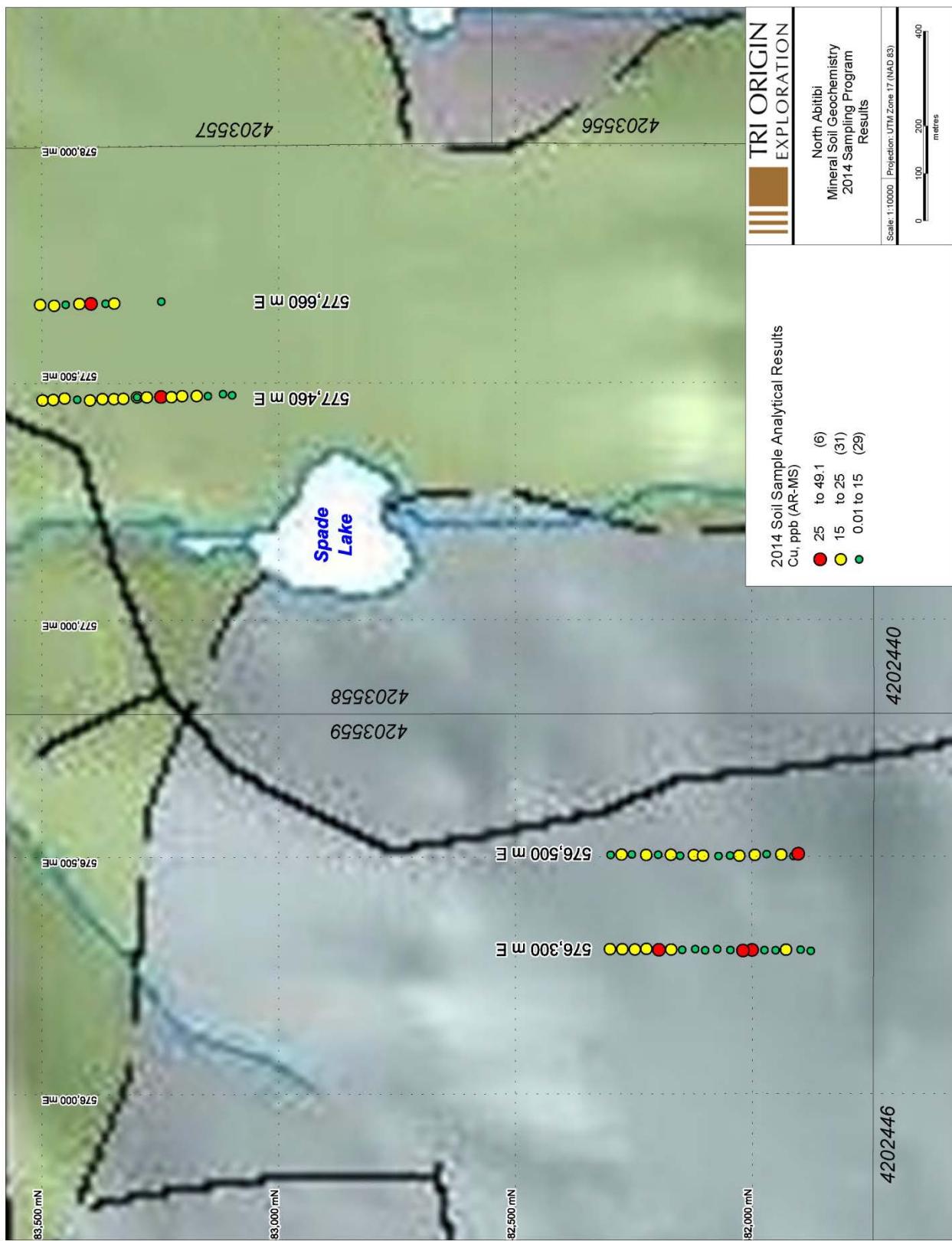
QC

Analyte Symbol	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Re	Au	Tl	Pb	Th	U	Hg
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppb
Lower Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.5	0.02	0.01	0.1	0.1	10
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
GXR-1 Meas	3.7	0.7	4.6			0.4	2.0	0.3	0.2	< 0.05	149		3100	0.42	730	2.3	30.4	3940
GXR-1 Cert	4.20	0.830	4.30			0.430	1.90	0.280	0.960	0.175	164		3300	0.390	730	2.44	34.9	3900
GXR-4 Meas	4.7	0.6	2.9			0.2	0.9	0.1	0.2	< 0.05	14.8		505	3.38	49.6	17.9	4.7	
GXR-4 Cert	5.25	0.360	2.60			0.210	1.60	0.170	6.30	0.790	30.8		470	3.20	52.0	22.5	6.20	
GXR-6 Meas	2.1	0.3	1.7			0.1	0.8	0.1	0.1	< 0.05	< 0.1			2.26	103	4.3	0.8	
GXR-6 Cert	2.97	0.415	2.80			0.0320	2.40	0.330	4.30	0.485	1.90			2.20	101	5.30	1.54	
SAR-M (U.S.G.S.) Meas											3.1			1.03	1020	11.8	2.0	
SAR-M (U.S.G.S.) Cert											9.78			2.7	982	17.2	3.57	
OxD108 Meas																		
OxD108 Cert																		
OxD108 Meas																		
OxD108 Cert																		
SF67 Meas																		
SF67 Cert																		
SF67 Meas																		
SF67 Cert																		
3172002 Orig	2.1	0.3	1.5	0.3	0.7	< 0.1	0.6	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.4	0.14	7.26	5.2	0.6	< 10
3172002 Dup	2.0	0.3	1.5	0.3	0.7	< 0.1	0.5	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.0	0.14	6.94	5.0	0.6	< 10
3172010 Orig																		
3172010 Dup																		
3172020 Orig																		
3172020 Dup																		
3172030 Orig																		
3172030 Dup																		
3172031 Orig	3.1	0.4	2.2	0.4	1.1	0.2	0.9	0.1	< 0.1	< 0.05	< 0.1	< 0.001	2.7	0.19	9.21	7.0	0.7	20
3172031 Dup	3.1	0.4	2.1	0.4	1.1	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	3.3	0.19	9.34	6.9	0.6	40
3172032 Orig	3.2	0.4	2.3	0.4	1.1	0.1	0.9	0.1	0.2	< 0.05	< 0.1	< 0.001	2.7	0.22	8.59	8.2	0.6	40
3172032 Dup	3.1	0.4	2.2	0.4	1.1	0.2	0.9	0.1	0.1	< 0.05	< 0.1	< 0.001	1.0	0.22	8.48	8.0	0.6	10
3172045 Orig																		
3172045 Dup																		
3172054 Orig	2.9	0.4	2.1	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	22.9	0.21	9.43	7.2	0.7	30
3172054 Dup	2.9	0.4	2.0	0.4	1.0	0.1	0.8	0.1	< 0.1	< 0.05	< 0.1	< 0.001	24.7	0.22	9.52	7.2	0.7	10
3172057 Orig																		
3172057 Dup																		
3172065 Orig																		
3172065 Dup																		
3172069 Orig	2.5	0.3	1.8	0.3	0.9	0.1	0.7	0.1	< 0.1	< 0.05	< 0.1	< 0.001	27.5	0.15	6.85	6.3	0.7	40
3172069 Dup	2.6	0.3	1.8	0.3	0.9	0.1	0.7	0.1	< 0.1	< 0.05	< 0.1	< 0.001	24.7	0.16	6.91	6.4	0.7	30
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank																		
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.01	< 0.1	< 0.1	< 10
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.001	< 0.5	< 0.02	< 0.01	< 0.1	< 0.1	< 10

Appendix B
Geochemical survey maps.

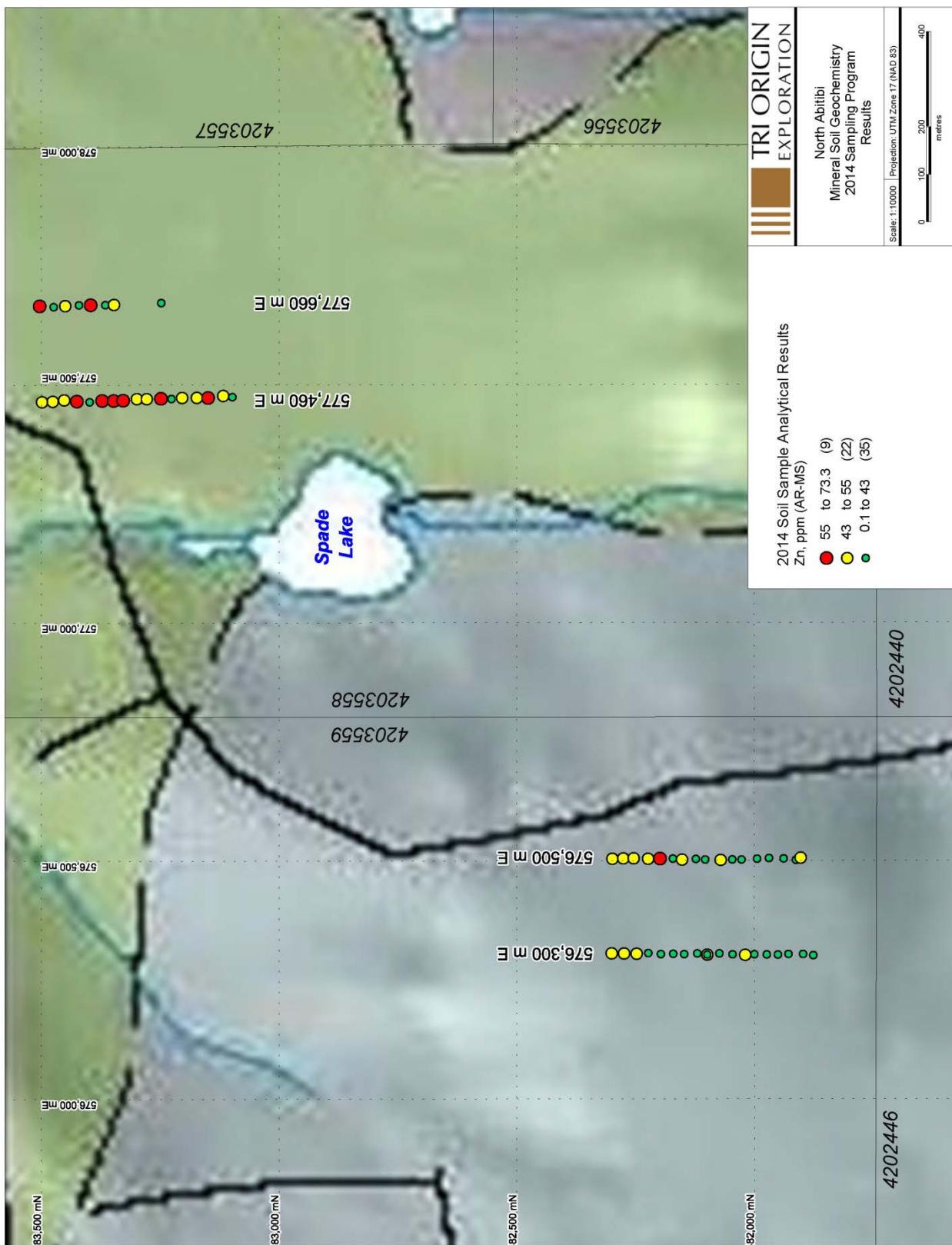
Appendix B1.

Mineral soil geochemical analyses for copper performed by AR-MS.



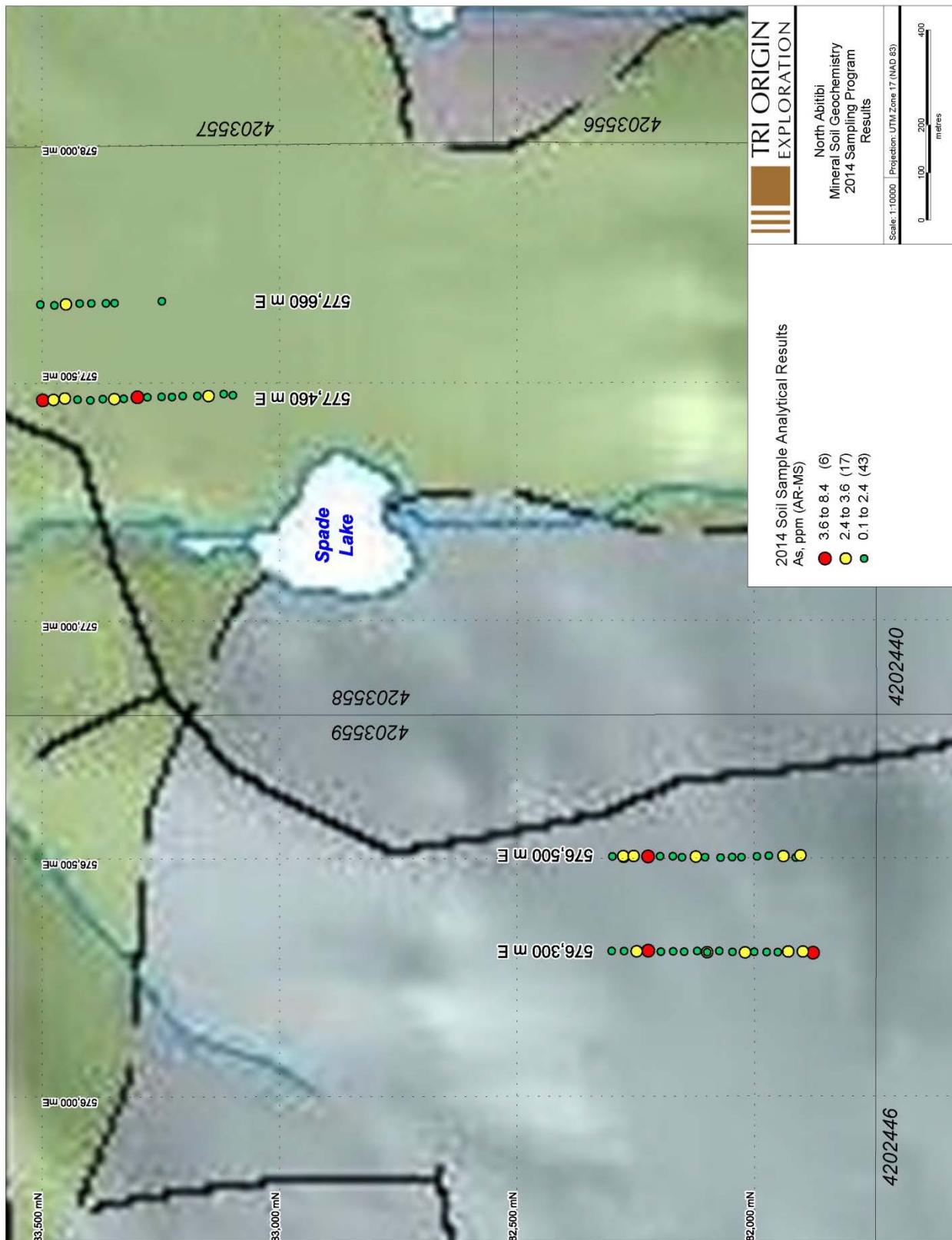
Appendix B2.

Mineral soil geochemical analyses for zinc performed by AR-MS.



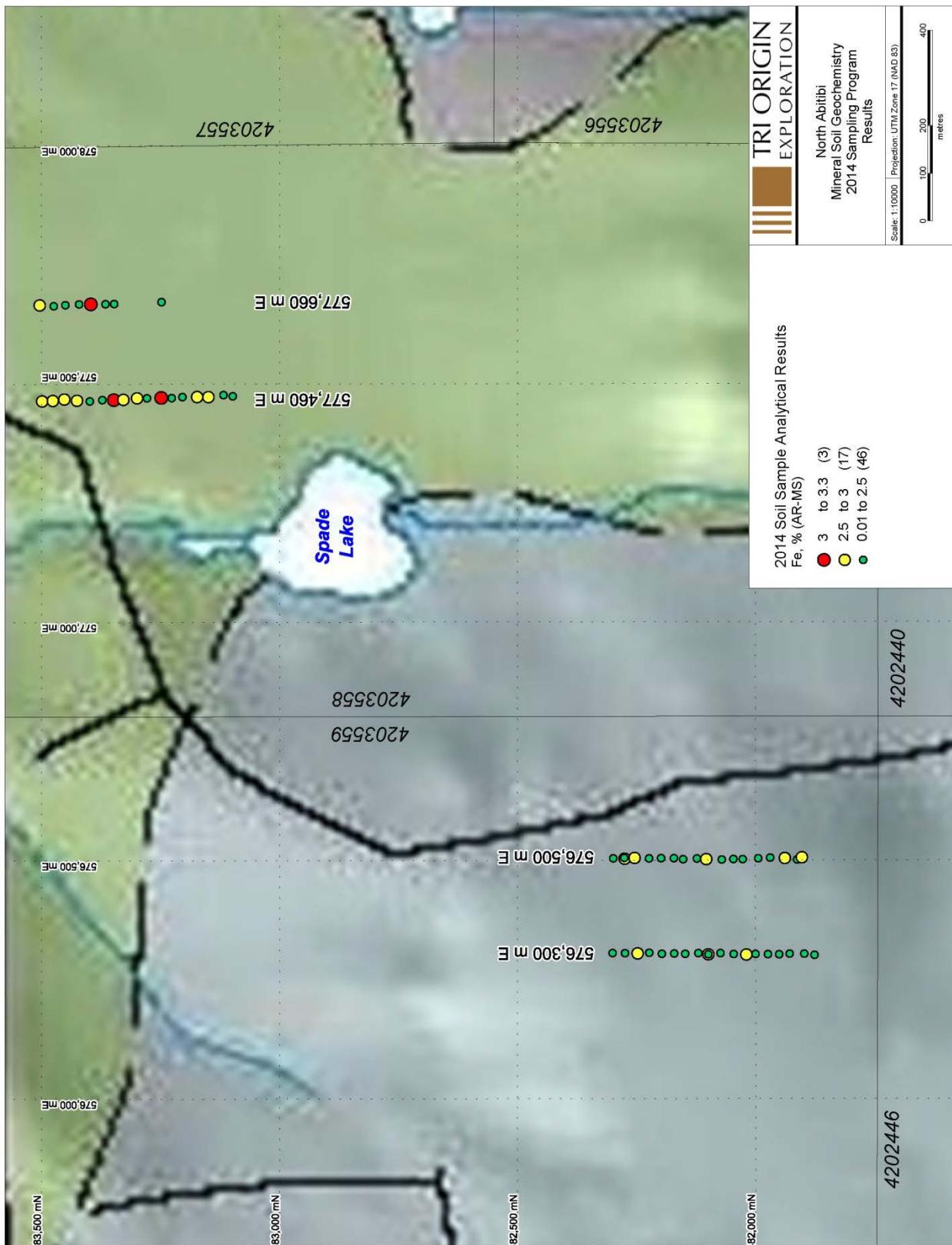
Appendix B3.

Mineral soil geochemical analyses for arsenic performed by AR-MS.



Appendix B4.

Mineral soil geochemical analyses for iron performed by AR-MS.



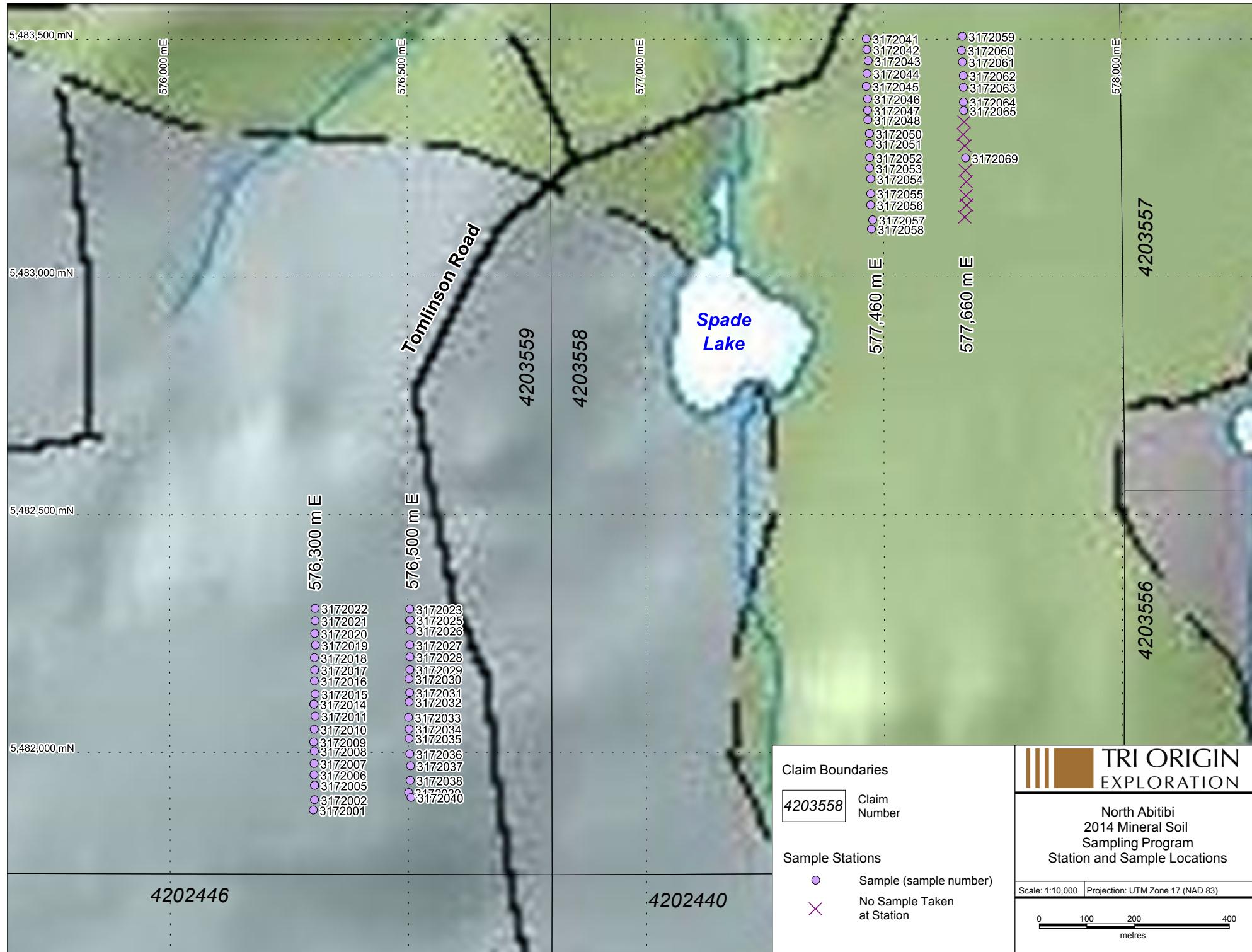
Appendix D. Sample Locations and Descriptions

Station Number	Sample Number	UTM Easting (NAD 83)	UTM Northing (NAD 83)	Altitude (m)	Description
3172001	3172001	576301	5481879	323	70% clay, 30% sand; brown-grey
3172002	3172002	576303	5481900	320	90% clay, 10% sand, grey-brown
3172003	3172003	576304	5481931	322	0-20 cm below peat; muddy, wet, light-grey, sand
3172004	3172004	576304	5481931	322	20-40 cm below peat; 90% clay, 10% sand, wet, light brown
3172005	3172005	576304	5481931	322	40-60 cm below peat; 90% clay, 10% sand, wet, light brown
3172006	3172006	576302	5481953	321	50/50, dry, sandy clay, light brown-grey
3172007	3172007	576303	5481977	319	60% grey clay, with 40% brown sand, grey brown
3172008	3172008	576303	5482003	320	light grey, muddy wet sand
3172009	3172009	576302	5482022	321	90% brown clay with 10% sand
3172010	3172010	576303	5482049	321	90% brown clay with 10% sand
3172011	3172011	576305	5482076	322	70% brown sand, with 30% brown clay
3172012	3172012	576302	5482102	321	0-20 cm below peat; 80% brown sand with 20% grey clay
3172013	3172013	576302	5482102	321	20-40 cm below peat; 80% brown sand with 20% grey clay
3172014	3172014	576302	5482102	321	40-60 cm below peat; 80% brown sand with 20% grey clay
3172015	3172015	576305	5482123	322	50/50 brown, clayish sand
3172016	3172016	576303	5482150	322	90% brown sand with 10% brown clay
3172017	3172017	576304	5482174	323	90% brown sand with 10% brown clay
3172018	3172018	576304	5482199	320	light brown wet clay
3172019	3172019	576306	5482226	320	light brown wet clay
3172020	3172020	576304	5482250	320	light brown wet clay, but more solid than last two samples
3172021	3172021	576305	5482277	319	light grey clay
3172022	3172022	576305	5482303	317	light grey clay
3172023	3172023	576504	5482301	311	light brownish grey, 90% clay, 10% sand
3172024	3172024	576503	5482278	311	grey clay, 90% clay, 10% brown sand
3172025	3172025	576505	5482278	312	duplicate of 3172024
3172026	3172026	576505	5482257	312	grey clay with small brown
3172027	3172027	576504	5482226	311	grey clay with small brown

Station Number	Sample Number	UTM Easting (NAD 83)	UTM Northing (NAD 83)	Altitude (m)	Description
3172028	3172028	576504	5482201	310	grey clay with small brown
3172029	3172029	576504	5482174	311	light brown with little grey clay
3172030	3172030	576502	5482155	311	light brown with little grey clay
3172031	3172031	576503	5482126	311	light brown with little grey clay
3172032	3172032	576502	5482106	313	light brown with little grey clay
3172033	3172033	576501	5482074	313	light brown with little grey clay
3172034	3172034	576502	5482049	314	light brown with little grey clay
3172035	3172035	576502	5482030	320	brown clay
3172036	3172036	576503	5481997	317	brownish-grey clay
3172037	3172037	576505	5481972	318	brownish-grey clay
3172038	3172038	576504	5481941	318	brownish-grey clay
3172039	3172039	576501	5481915	315	sandy brown clay
3172040	3172040	576506	5481905	314	brown clay
3172041	3172041	577464	5483501	348	brownish grey clay; no picket
3172042	3172042	577465	5483479	333	brownish grey clay; no picket
3172043	3172043	577468	5483455	307	Sandy-clay, brownish grey; tag with picket
3172044	3172044	577466	5483428	303	Brown clay; has picket, no writing
3172045	3172045	577464	5483401	302	90% grey clay with 10% sand; picket, no writing
3172046	3172046	577467	5483375	299	dark grey-brown clay; picket says 375 N
3172047	3172047	577467	5483350	298	dark grey-brown clay; no picket
3172048	3172048	577467	5483330	297	thick grey silty clay; picket 25N, 47W
3172049	3172049	577471	5483302	297	brownish-grey clay; picket, no writing
3172050	3172050	577471	5483302	297	duplicate of 3172049
3172051	3172051	577470	5483281	295	grey clay; picket, no writing
3172052	3172052	577471	5483251	296	grey clay; no picket
3172053	3172053	577471	5483229	296	light brown clay; no picket
3172054	3172054	577473	5483206	296	light brown clay; picket, no writing
3172055	3172055	577473	5483175	295	light grey clay; no picket
3172056	3172056	577473	5483152	296	light brown clay; no picket

Station Number	Sample Number	UTM Easting (NAD 83)	UTM Northing (NAD 83)	Altitude (m)	Description
3172057	3172057	577477	5483120	295	light brown, sandy clay; 90% clay, 10% sand
3172058	3172058	577474	5483101	294	light brown, sandy clay; 90% clay, 10% sand
3172059	3172059	577666	5483506	292	greyish brown clay; picket 45W 200N
3172060	3172060	577664	5483477	293	grey clay; picket, no writing
3172061	3172061	577666	5483452	292	grey clay; picket, no writing
3172062	3172062	577668	5483423	291	grey clay; picket, no writing
3172063	3172063	577668	5483399	292	grey clay; picket, no writing
3172064	3172064	577668	5483368	291	90% grey clay with 10% sand; is off about 10 m
3172065	3172065	577668	5483350	292	90% grey clay with 10% sand
3172066	--	577670	5483325	291	Peat too deep; No sample taken
3172067	--	577668	5483300	291	Peat too deep; no picket; organic; No sample taken
3172068	--	577670	5483275	291	Peat too deep; no picket; organic; No sample taken
3172069	3172069	577672	5483250	290	grey clay; no picket; bottom of auger
3172070	--	577672	5483223	291	Peat too deep; little grey clay at bottom; No sample taken
3172071	--	577674	5483200	292	Peat too deep; organic; No sample taken
3172072	--	577673	5483171	291	Peat too deep; organic; No sample taken
3172073	--	577674	5483150	291	Peat too deep; organic; No sample taken
3172074	--	577671	5483125	293	Peat too deep; organic; No sample taken

Note: "--" indicates no sample could be collected at this station.



Appendix C. Sample locations (including stations where samples could not be collected).