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**Kiska Metals Corporation** 

# 2015 GEOLOGICAL AND GEOCHEMICAL REPORT ON THE MIDLOTHIAN PROJECT

Located in Midlothian Township, Larder Lake Mining Division, Ontario NTS 41P/14 and 41P/15 47° 53' North Latitude; 80° 59' West Longitude

-Prepared for-

#### KISKA METALS CORP.

Suite 575, 510 Burrard Street Vancouver, BC, Canada V6C 3A8

-Prepared by-

Ron Voordouw

EQUITY EXPLORATION CONSULTANTS LTD. Suite 1510, 250 Howe Street Vancouver, BC, Canada

V6C 3R8

November, 2015



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#### 1.0 SUMMARY

The Midlothian Property comprises a contiguous group of 11 Mining Claims in the Larder Lake Mining Division, Ontario, that are 100% owned by Rimfire Minerals Corporation, a wholly-owned subsidiary of Kiska Metals Corporation. The Property is located within the prolific gold-producing Abitibi Subprovince, about 70 km to the south-southeast of the city of Timmins, Ontario, and is road-accessible from Highway 566 through a 25 km network of forestry and mining roads. The western half of the Property is underlain by Archean rocks of the Timiskaming and Lower Tisdale assemblages and the eastern half by Proterozoic Gowganda Formation. Historical work on the Property has demonstrated some potential for orogenic gold, magmatic nickel and VMS mineralization. The past-producing United Asbestos Mine, which produced 25 Kt of fiber from 1975-1977, lies near the centre of the Property.

The 2015 work program included the collection of 311 soil samples, 34 rock samples and 37 samples for quality assurance and quality control (QAQC). Analysis of QAQC data shows no contamination and generally good reproducibility between field duplicates. Comparison between "blank" and soil sample analyses indicates that a response ratio of  $\geq$ 10 is an adequate threshold to characterize "anomalous" values for most elements.

Five types of soil were identified on the Property and these belong to two end-members; brown silt and grey clayey silt. Although there are some notable geochemical differences between the different soil types the underlying bedrock appears to exert an even stronger control. Soils overlying intermediate metavolcanic ("meta-dacite") and mafic-ultramafic intrusive rocks are generally enriched in Ba-Cr-Mg-Ni whereas soils overlying metasedimentary rocks have somewhat higher Al-As-Ga-Sb-Sc-Ti. The strength of these associations is reflected in the positive correlation (r,  $\rho$ ) for many of these elements.

MMI data was used to define 22 multi-sample and point anomalies that have enrichment consistent with orogenic gold, magmatic Ni-Cu-PGE and/or other types of mineralization in the area, seven of which were selected as being particularly prospective. These are shown in the table below.

Anomaly	Anomaly Elements Comments			
Lloyd West Au & Ni	Au, Cu, Ni	Large anomaly over Archean bedrock, near Bjorkmann Vein		
Lakoma East	Lakoma East Au, As, Cu, Mo, Pb, Zb, W, Zn Strong multi-element anomaly over LLCDZ sp			
Felsic Volc As-Fe	As, Fe, Au, Bi, W	Over felsic volcanic		
Pt 2615289 Ni	Ni, Cr	Very high single Ni value (21300 ppb)		
Pt 2615224 Ni	Ni, Cr	On margin of mafic-ultramafic intrusion		
Pt 2615567 Gold	Au, As, Sb	Strong multi-element point anomaly		

The geological prospecting program suggests that structures trending north-northwest may be prospective, as this appears to be the orientation of the visible gold-bearing Bjorkman Vein. An outcrop of strongly deformed ultramafic rock supports an interpretation of east-west structures cutting across the Property. The rock sampling program returned only one sample with more than detectable gold, comprising a very hard carbonate-altered ultramafic boulder with 0.29 g/t Au. Timiskaming rocks appear to show high background values of As-Cr-Ni-Sb that could be generating false "hydrothermal" anomalies in overlying soils.

Future work should focus on following-up the most significant soil anomalies identified in the 2015 work program through a combination of geological prospecting, additional soil sampling and ground-based geophysics IP/Res surveying.



#### 2.0 INTRODUCTION

The Midlothian Property ("Midlothian" or the "Property") comprises a contiguous group of eleven Mining Claims in the Larder Lake Mining Division, eastern Ontario, that are 100% owned by Rimfire Minerals Corporation ("Rimfire"), a subsidiary of Kiska Metals Corporation ("Kiska"). The Property is located within the prolific gold-producing Abitibi Subprovince of the Canadian Shield, 70 km to the south-southeast of the city of Timmins, Ontario, and 75 km to the west-southwest of the town of Kirkland Lake, Ontario (Figure 1).

In the summer of 2015, Equity Exploration Consultants Ltd ("Equity") conducted mobile metal ion (MMI) soil sampling, rock sampling and geological prospecting on the Midlothian Property on behalf of Kiska. MMI sampling was selected due to the widespread till cover on the Property, which limits thorough bedrock prospecting and complicates more traditional B-horizon soil sampling techniques. A total of 345 samples were collected for MMI analysis along with 37 rock samples for fire assay and ICPMS. MMI analyses were done by SGS laboratories in Burnaby, British Columbia, whereas the rocks were analyzed by SGS in Sudbury, Ontario. Field work was done out of the Argyle Lake Lodge, which is located 19 km north-northeast of the Property. The Property was accessed by truck over the Wilson Lumber Road, which transects the northern part of the Midlothian claim block. The southern part of the Property was accessed on foot or by canoe from the Wilson Lumber Road.

Previous work has shown potential for orogenic gold (Bjorkman, 2014) magmatic-hosted nickel/copper/PGE (Kleinboeck, 2009) and volcanogenic massive sulphide (Hogg, 1974) mineralization within the Archean rocks on the Property. The 2015 work program aimed to expand on this work by sampling over covered Archean bedrock and structures with gold and nickel potential, including splays off the gold-endowed Larder Lake-Cadillac Deformation Zone (LLCDZ) that may extend underneath Proterozoic cover rocks on the Property.

The information, conclusions and recommendations provided in this report are based on results from the 2015 surface sampling and prospecting program, data supplied to Equity by Kiska, published and unpublished geological reports on the area and discussions with representatives from Kiska who have experience working on the Property. A list of references is provided in Appendix A.

The report summarizes results of the 2015 exploration program and provides for filing of exploration expenditure assessment credits to the claims tested.

### 3.0 RELIANCE ON OTHER EXPERTS

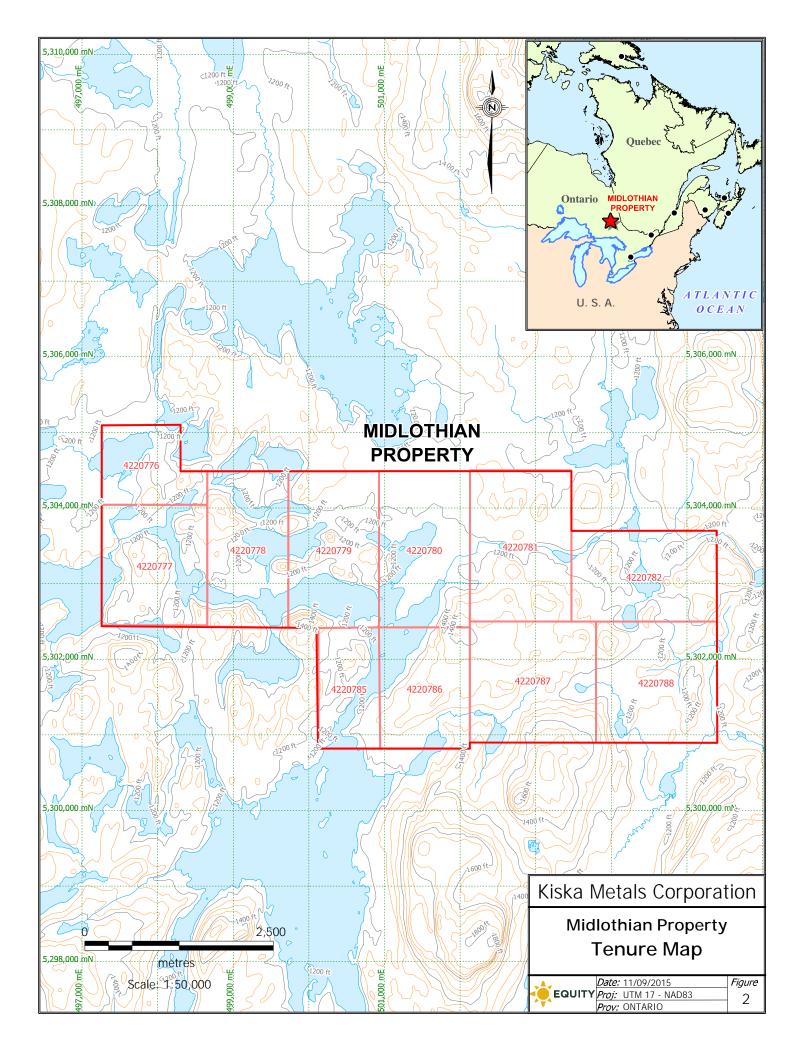
The author has not relied on a report, opinion, or statement of an expert for information concerning legal, environmental, political or other issues.

#### 4.0 PROPERTY DESCRIPTION AND LOCATION

The Midlothian Property comprises 11 contiguous Mining claims for a total of 152 claim units (Figure 2), covering a total of 23.98 km<sup>2</sup> in the Midlothian Township, Larder Lake Mining Division, of eastern Ontario on NTS map sheets 41P/14 and 41P/15 (Figure 2). A complete list of claims is presented in Appendix B. The approximate center of the Property is located near coordinates 47° 53' North latitude and 80° 59' West longitude (NAD-83 UTM Zone 17N: 5303300N, 501000E), approximately 70 km to the south-southeast of the city of Timmins, Ontario, and 75 km to the west-southwest of the town of Kirkland Lake (see Figure 1).







Although the area covered by the Midlothian Property has been explored and mined in the past, the area was unstaked when Laurion Mineral Exploration Inc ("Laurion") and Geoinformatics Exploration Inc ("Geoinformatics") assembled the 11 Mining claims comprising the Property in 2007. The Midlothian Property was originally owned 51% by Laurion and 49% by Geoinformatics, with the Geoinformatics stake passing to Rimfire in two transactions conducted in 2011 and 2013. In July 2014, Laurion transferred its 51% ownership stake to Rimfire in exchange for a Net Smelter Royalty (NSR) of 2.5% for precious metals and 1.5% with respect to all other metals derived from the Midlothian Project, in addition to a cash payment of \$25000 and forfeiture of 500000 common shares that Kiska held in Laurion (Laurion Mineral Exploration Inc, 2014). All 11 Midlothian claims are currently registered in Rimfire's name, which is a wholly-owned subsidiary of Kiska.

The past-producing United Asbestos Mine lies near the center of the Property and produced an estimated 25 Kt of fiber from 1.5 Mt of ore between October 1975 and March 1977 (Kretschmar and Kretschmar, 1982). Piles of waste rock remain on the Property but most of the mining infrastructure has been removed, except for the Asbestos Road that provides vehicle access to the Property.

Infrastructure on the Property includes the Asbestos Road and a network of smaller roads and trails that connects to it and provides easy access to the northern half of the Property.

To the author's best knowledge, there are no outstanding environmental liabilities on the Property.

No work permits were acquired for the 2015 exploration program, since the work consisted entirely of surface sampling (soils, rocks) and geological prospecting.

## 5.0 ACCESSIBILITY, LOCAL RESOURCES, INFRASTRUCTURE, CLIMATE, PHYSIOGRAPHY

The Midlothian Property can be accessed from Highway 566 by following the north-south Wilson Lumber Road for 15 km to its T-junction with the east-west Asbestos Road, then following the Asbestos Road to the west for 4 km. The near-center of the Property can be reached by continuing along the Asbestos Road for another 4 km, into the heart of the past-producing United Asbestos Mine. In the winter time, the same route is presumably traversable by snowmobile. More remote parts of the Property can be reached on foot or through a combination of canoeing and walking.

From the junction of the Wilson Lumber Road and Highway 566, the city of Timmins (population 43165) is 90 km driving distance to the northwest whereas the town of Kirkland Lake (population 8493) is an 80 km drive to the east. The closest regional airport is at Timmins, which has several daily commercial flights to Toronto. Both Timmins and Kirkland Lake are long-standing mining towns that are an excellent source of supplies, personnel and support.

The 2015 field program was conducted out of the Argyle Lake Lodge, which lies just off Highway 566 and a 25 km drive from the Midlothian Property. This lodge provides self-catering cabins and canoe rentals. Additional accommodation is available in the nearby town of Matachewan (rental housing) and in the Eagle Lake Lodge, which lie 45 and 80 km from the Property, respectively. It is also possible to establish a road-accessible exploration camp on the Property itself.

The region experiences a typical continental-style climate with cold winters and warm summers. Snow accumulation begins in November and generally remains until early May. Environment Canada climate normals for 1981-2010 from the nearest weather station in Timmins indicate that the daily average temperature ranges from a low -16.8 °C in January to a high of 17.5 °C in July. The coldest months are November to March, during which temperatures can drop as low as -45.6 °C. Peak average rain accumulation is in July (90.9 mm) and peak snow fall is in December (65.2 cm). Average and median snow depths are deepest in February at 64 cm. Drilling can be conducted year-round.

Physiography of the Property consists of rolling hills, lakes and intermittent flat areas. Elevation ranges from 350-450 m above sea level (asl), occurring in the eastern and southeastern part of the Property respectively. Lloyd Lake is the largest water body on the Property. Hills and lowlands are mostly covered by a forest of mixed spruce, pine and deciduous trees, with some bedrock exposures at higher elevations and swamp at lower levels.



#### 6.0 HISTORY

#### 6.1 Historical work

Historical work began in the early 1900s with the first filed records appearing in 1950. An early phase of exploration involved sporadic work until 1950 followed by an intense exploration campaign to define the United Asbestos Deposit from 1950-1954. This was followed by 14 years of relatively little exploration work and then by the most active period of exploration in the area from 1968-1977, which includes 1.5 years of asbestos production from 1975-1977. Little work has been done since the late 1970s. The more notable programs are summarized below and in Table 1.

The United Asbestos Deposit was outlined through drill programs done by **Canadian Johns-Manville Co** ("CJM") in 1950, **Dominion Gulf Co** ("Dominion") in 1953 and **Canadian Exploration** in 1954 (Kretschmar and Kretschmar, 1982), which totalled at least 25 holes for 4400 m. Dominion also conducted groundwork around CJM's asbestos discovery with the aim of finding a similar asbestos occurrence (Dominion Gulf Co, 1956).

In 1963, **Stairs Exploration and Mining Corp** ("Stairs") commissioned 610 line-km airborne magnetic survey that included much of what is now Midlothian Property. Results of the survey helped define the extent of the Archean ultramafic rocks around Lloyd Lake and confirmed that these rocks extend underneath Proterozoic sedimentary rocks to the east (Rattew, 1963). Nine EM conductors were also identified, three of which (EM conductors 1, 2, 3/3a) occur entirely within the property boundary.

The most active period of mineral exploration in the area began with an airborne magnetic and electromagnetic (EM) survey commissioned by **Timiskaming Nickel Ltd** (Lockwood Survey Co Ltd, 1968) and CJM (Evelegh, 1969). Both surveys indentified magnetic and EM anomalies possibly related to serpentinized ultramafic bodies and sulphide accumulations, respectively, and recommended ground-based follow-up work. **Denison Mines Ltd** conducted geological mapping, ground-based geophysics and soil sampling in 1970 (Clayton, 1971a) that was followed up the next year with 195 m of diamond drilling in two holes (Clayton, 1971b). The first of these holes hit layers of 2.6 m and 0.3 m thick semi-massive to massive pyrite in addition to two 5-12 m wide intervals of graphitic mudstone (Clayton, 1971b). The second hole hit 30 m of altered ultramafic immediately below overburden (Clayton, 1971b).

From 1971 to 1973, **United Asbestos Inc** ("United") was reported to have drilled just over 8800 m in 74 drill holes to define the principal ore zones within the United Asbestos Deposit (Kretschmar and Kretschmar, 1982). This program led to a decision to construct a mill complex capable of processing between 1.1-1.3 Mt per annum, at a cost of \$60M, after which production began in October 1975 (Kretschmar and Kretschmar, 1982). Production lasted just 1.5 years, to March 1977, when the mine was closed due to "combined political and economic factors" (page 72 in Kretschmar and Kretschmar, 1982).

Other operators active in the area between 1971-1976 include Mr John D. Hogan ("Hogan"), Stump Mines Ltd ("Stump"), Allied Mining Corp Ltd ("Allied"), International Trust Co. ("International Trust"), Hanna Mining Ltd ("Hanna") and Northim Mines Ltd ("Northim"). Hogan drilled three holes for 360 m that intersected intervals of serpentinized dunite stretching from 12-145 m (Hogan, 1971a; Hogan, 1971b). Stump commissioned a geological mapping and compilation program as well as an induced polarization/resistivity ("IP") survey that identified chargeability anomalies on every IP line and suggested some potential for VMS and magmatic nickel deposits (Hutchinson et al., 1971). In 1972, Allied drilled seven holes for 1250 m but reported the results of just one, which intersected only rhyolite from top to bottom (Allied Mining Corp Ltd. 1972). In the same year, International Trust drilled four holes for 550 m that were all aimed at ultramafic rocks (Hagan, 1972), presumably with the intent of discovering additional asbestos mineralization. International Trust then filed a compilation study, mostly based on data collected by United, and drilled an additional three holes, for 440 m, the next year. These holes each intersected ultramafic rocks underneath Gowganda Formation, but failed to returned significant intersections of either magmatic sulphide or asbestos (International Trust Co, 1976). Hanna conducted ground-based magnetic and EM surveys in 1973 and reported three EM anomalies and a magnetic anomaly possibly related to an ultramafic body (Hogg, 1973). This work was followed up with drilling of six holes for 540 m in 1974 (Hogg, 1974), three of which occur on the Midlothian Property. One of these holes (74-4), which occurs near the western margin of the Property,

intersected 84 m of 10-80% pyrite and was stopped in mineralization, but returned only negligible gold and base metal values (Hogg, 1974). The other five holes intersected pyrite-graphite argillite layers that appeared to adequately explain the EM anomalies. **Northim** drilled two holes for 305 m on the Property in 1975 (Darke, 1975) with both holes testing EM conductors and intersecting layers of graphitic argillite ± pyrrhotite ± pyrite.

Since 1977, only sporadic work has been done within the current boundaries of the Midlothian Property. In 1997, **Mr Dale Pyke** commissioned a geological mapping and sampling program on a claim block that included the United Asbestos Mine, and concluded that there was a possibility the Larder Lake-Cadillac Deformation Zone (LLCDZ) extended onto the Property.

Ten years later, in 2007, **Laurion** and **Geoinformatics** staked the Midlothian Property and conducted a 374 line-km airborne VTEM survey, with a preliminary interpretation showing a large strong EM and magnetic anomaly that could be related to sulphide mineralization (Legault et al., 2008). This survey was followed up with a three hole, 1087 m, diamond drill program that tested for base metal mineralization association with the ultramafic-mafic intrusions, returning a best intercept of 0.26% Ni and 0.22% Cr over 348.8 m (Kleinboeck, 2009). Six years later, Laurion commissioned a prospecting program that resulted in the discovery of the Bjorkman Vein (or Zone in Bjorkman, 2014), a quartz vein with visible gold that returned chip samples of 2060 g/t Au over 0.8 m and 4810 g/t Au over 0.3 m (Bjorkman, 2014).

Company	Year	Type of Work	Reference
Canadian Johns-Manville Co	1950	Drilling (17 holes, 2900 m)	Kretschmar and Kretschmar (1982)
Dominion Gulf	1953-1956	Drilling (unknown); geological mapping; ground magnetics	Dominion Gulf Co (1956); Kretschmar and Kretschmar (1982)
Canadian Exploration	1954	Drilling (17 holes, 1525 m)	Kretschmar and Kretschmar (1982)
Stairs Exploration and Mining Corp	1963	Airborne EM and magnetics (610 km)	Rattew (1963)
Timiskaming Nickel Ltd	1968	Airborne EM and magnetics	Lockwood Survey Co Ltd (1968)
Canadian John Manville Co	1969	Airborne EM and mag (48 km)	Evelegh (1969)
Denison Mines Ltd	1970	Prospecting, ground-based EM and magnetics, soil sampling	Clayton (1971a)
	1971	Drilling (2 holes, 195 m)	Clayton (1971b)
United Achastas Inc	1971-1973	Drilling (74 holes, 8840 m)	Krotschmar and Krotschmar (1092
United Asbestos Inc	1975-1977	Mining (25 Kt of asbestos fiber)	Kretschmar and Kretschmar (1982
John D Hogan	1971	Drilling (3 holes, 360 m)	Hogan 1971a, 1971b
Stump Mines Ltd	1971	Geological mapping, IP/Res (20 km)	Hutchinson et al (1971)
Allied Mining Corp Ltd	1972	Drilling (7 holes, 1250 m)	Allied Mining Corp Ltd (1972)
	1972	Drilling (4 holes, 553 m)	Hagan (1972)
International Trust Co	1975	Geological compilation	Hagan (1975)
	1976	Drilling (3 holes, 442 m)	International Trust Co (1976)
Hanna Mining Co	1973	Ground magnetics and EM; prospecting	Hogg (1973)
-	1974	Drilling (3 holes, 330 m)	Hogg (1974)
Northim Mines Inc	1975	Drilling (2 holes, 195 m)	Darke (1975)
Mr Dale Pyke	1997	Geological mapping, sampling	Pyke (1997)
	2008	Airborne VTEM (374 km)	Legault et al (2008)
Laurion Mineral Exploration Inc	2008	Drilling (3 holes, 1087 m)	Kleinboeck (2009)
IIIC	2014	Prospecting	Bjorkman (2014)

Table 1: Summary of historical work done within the current extent of the Midlothian Property

#### 6.2 2015 work program

The 2015 work program on the Midlothian Property was carried out by Equity on behalf of Kiska. Work involved seven field days with a four person field crew for a total of 28 personnel-days in the field. Twenty-four of these personnel days were spent on soil sampling and four days were spent prospecting.

The MMI soil sampling grid was designed prior to field work and featured 12 lines, with lengths ranging from 0.75 to 2.70 km and with sample spacing of 50 m (Table 2). A total of 16.80 line-km were covered and 311 samples were collected in addition to 34 QAQC samples (blanks, duplicates) for a total of 345 MMI samples. At each proposed sampling site, an attempt was made to dig a pit extending a minimum of 25 cm below the interface between the A- and B-horizons. The overall sampling success rate was 88% with most sampling failures related to flooded and/or swampy ground, as well as disturbed ground and bedrock. Samples were taken with a U-dig-it hand shovel from a 15 cm interval starting 10 cm below the A-B interface, after which the samples were photographed and placed into a Ziploc bag along with a sample tag. They were then sent to SGS labs in Burnaby, BC, for mobile metal ion analysis under analytical code GE\_MMI\_M.

Geological prospecting focussed on the Archean rocks and the northern margin of the Proterozoic cover rocks. A total of 34 samples were collected in the 4 days of geological prospecting work, with an additional three standards inserted to bring the total samples submitted to 37. All rock samples were placed in poly-ethylene bags, along with a sample tag, and sent to SGS labs in Sudbury, Ontario, for four-acid digestion and analysis by fire assay (Au only), ICP-AES and ICP-MS (analytical codes GE\_FAA313, GE\_IC40A, GE\_IC40M). Daily logs of prospecting activities are located in Appendix F.

Line Name	Segment	Length (km)	# Sites	# Samples	Success Rate	Comments
28,0004	North	1.45	30	30	100.0%	
28+00W	South	0.30	7	7	100.0%	
24+00W	North	1.55	32	24	75.0%	Northern part flooded
24+00	South	0.3	7	7	100.0%	
10+00W	North	1.4	29	21	72.4%	Passes over mine
10+0000	South	1.3	27	23	85.2%	Some swampy ground
4+00W	North	0.8	17	16	94.1%	
4+0000	South	0.45	10	10	100.0%	
0+00W		0.75	16	14	87.5%	Some swampy ground
4+00E		1.15	24	24	100.0%	
8+00E		1.45	30	27	90.0%	Some swampy ground
14+00E		1.4	29	22	75.9%	Some swampy ground
20+00E	North	1.05	22	20	90.9%	
20+00E	South	0.4	9	9	100.0%	
26+00E		1.1	23	21	91.3%	
22,005	North	0.25	6	1	16.7%	Flooded ground
32+00E	South	0.65	14	14	100.0%	
36+00E		1.05	22	21	95.5%	
Total		16.80	354	311	87.9%	

Table 2: Summary of MMI sampling for the 2015 work program

EQUIT

# 7.0 REGIONAL GEOLOGY AND MINERALIZATION

## 7.1 Regional Geology

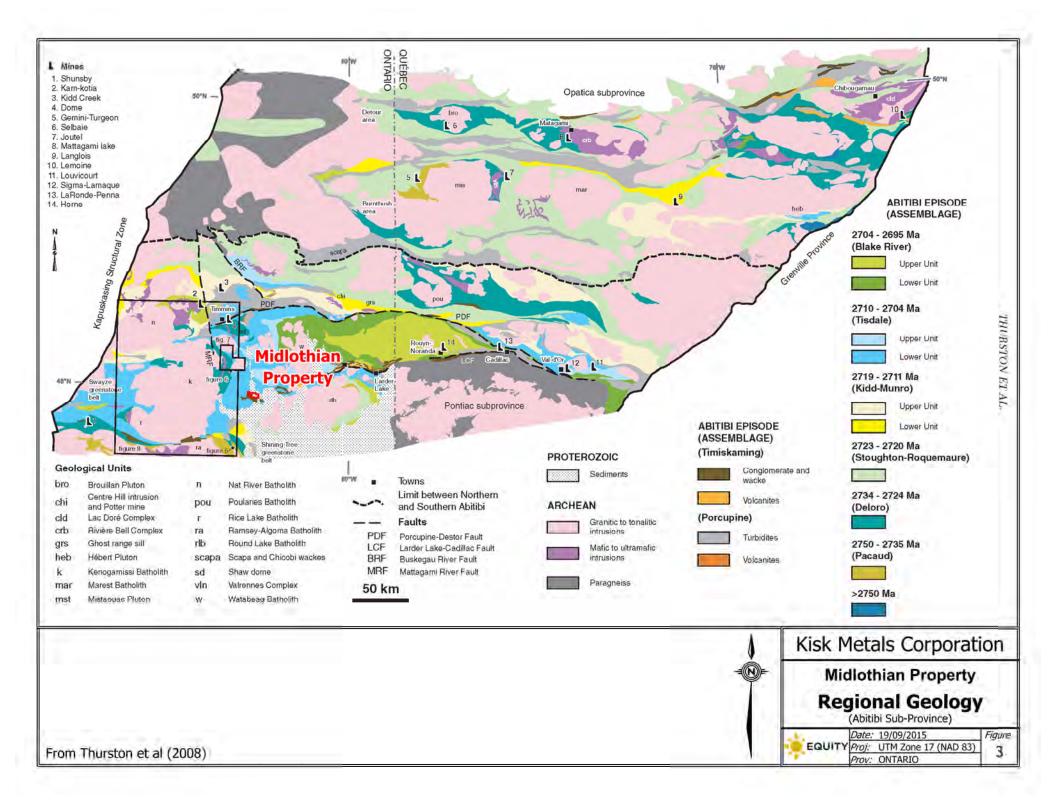
The Midlothian Property lies in the southwestern portion of the Abitibi Subprovince, which is a component of the Archean Superior Province of the Canadian Shield (Figure 3). Mapping by the Canadian and Ontario geological surveys shows that the project area is underlain by the Timiskaming and Lower Tisdale assemblages of Thurston et al (2008), as well as the Proterozoic Gowganda Formation.

The Abitibi Subprovince is composed of east-trending synclines of largely volcanic rocks and intervening domes cored by synvolcanic and/or syntectonic plutonic rocks (gabbro-diorite, tonalite, and granite) alternating with east-trending bands of turbiditic wacke. Thurston et al (2008) divided the Abitibi Subprovince into seven discrete volcanic assemblages and two later sedimentary-dominated assemblages (Table 3). Most of the volcanic and sedimentary strata dip steeply and are generally separated by abrupt, east-trending faults with variable dip. Some of these faults, such as the Porcupine-Destor fault, display evidence for overprinting deformation events that include early thrusting followed by later strike-slip and extension events. Two ages of unconformable successor basins occur: early, widely distributed "Porcupine-style" basins of fine-grained clastic rocks, followed by "Timiskaming-style" basins of coarser clastic and minor volcanic rocks that are largely proximal to major strike-slip faults (e.g. Porcupine-Destor, Larder-Cadillac, Sunday Lake). In addition, the Abitibi Subprovince is cut by numerous late-tectonic plutons ranging in composition from syenite and gabbro to granite with lesser dikes of lamprophyre and carbonatite (Thurston et al., 2008).

		•	
Assemblage	Age (Ma)	Thickness (km)	Dominant Rock Types
Timiskaming	2677-2670	<3	Polymictic conglomerate and sandstone in subaerial alluvial fan, fluvial and deltaic settings; local alkaline volcanic rocks
Porcupine	2690-2685	<3	Local calc-alkaline felsic pyroclastic rocks overlain by turbiditic argillite to wacke
Blake River	2704-2695	~11-17	Minor clastic metasediments and high Mg and Fe tholeiites overlain by mafic to felsic tholeiitic to calc-alkaline volcanic units with volcaniclastic components
Tisdale	2710-2704	~10-15	Mafic volcanic rocks with localized ultramafic and intermediate to felsic volcanic rocks and iron formation; overlain by intermediate to felsic, calc-alkaline, amygdaloidal flows, heterolithic debris flows and volcaniclastic units
Kidd-Munro	2719-2711	~10	Intermediate to felsic calc-alkaline volcanic rocks, overlain by mafic volcanic rocks with local ultramafic and felsic volcanic rocks and graphitic metasedimentary rocks
Stoughton- Roquemare	2723-2720	<12	Tholeiitic basalts with komatiites and local felsic volcanic rocks
Deloro	2734-2724	~5	Mafic to felsic calc-alkaline volcanic rocks with local tholeiitic mafic volcanic rocks, capped by iron formation
Pacaud	2750-2735	~5	Ultramafic, mafic and felsic volcanic rocks, with minor iron formation
Pre-2750 Ma	>2750	~5	Intermediate to felsic, calc-alkaline pyroclastic rocks capped by iron formation

**Table 3:** Summary of lithostratigraphic assemblages in the Abitibi Subprovince





The Midlothian Property is proximal to the westward extension of the Larder Lake-Cadillac Deformation Zone (LLCDZ), which likely passes ~5-10 km southeast of the Property. However, previous work has suggested that there may be splays off the LLCDZ that extend onto the Midlothian Property (e.g. Pyke, 1997). The LLCDZ is associated with significant gold deposits in the Cadillac, Rouyn-Noranda, Kirkland Lake and Larder Lake areas.

## 7.2 Regional Mineralization

The Abitibi Subprovince between the town of Kirkland Lake and the city of Timmins is host to several world-class gold and VMS deposits, as well as smaller nickel and asbestos deposits. This part of the Abitibi is particularly well-known for its gold deposits, with nearby mines including Alamos Gold's Young-Davidson Mine in Matachewan, Kirkland Lake Gold's Macassa Mine Complex near the town of Kirkland Lake, and Goldcorp's Porcupine Operation in Timmins. Most of the deposits are grouped into the "orogenic" group of gold deposits (Groves et al., 1998) although recent work suggests some of these deposits may better fit into the intrusion-related model (Helt et al., 2014). Mineralization at Young-Davidson, which includes 3.8 Moz of proven and probable reserves at an average grade of 2.63 g/t Au, occurs within a guartz vein stockwork that is hosted within a pyrite- and potassic-altered syenite (Alamos Gold, 2015). Mineralization at the Macassa Mine Complex include at least three separate deposits containing a combined 2 Moz of measured and indicated resources at an average grade of 13.7 g/t Au. Two of these deposits are hosted within structurallycontrolled guartz veins with minor pyrite ± molybdenite ± telluride whereas the third occurs within a series of moderately dipping, finely disseminated pyrite ± visible gold ± telluride zones hosted by moderately dipping units of alkaline tuff and syenite porphyry (Kirkland Lake Gold, 2015). Goldcorp's Porcupine Operation includes the underground Hoyle and Dome mines, as well as the Hollinger open pit operation. Most of the gold from the Dome Mine has been produced from quartz veins hosted within mafic metavolcanic, metasedimentary or porphyritic intrusive rocks (Pressacco, 1999).

Several world-class volcanogenic massive sulphide (VMS) deposits also occur within the Abitibi Subprovince, including the Noranda and Matagami districts. Nearby VMS deposits include Kidd Creek (118 Mt at 2.20% Cu, 7.25% Zn, 147 g/t Ag), which is one of the largest such VMS systems in the world, in addition to several smaller deposits located near the municipalities of Timmins (e.g. Kam Kotia, Jameland), Sultan (Shunsby) and Benny (Stralak), Ontario. All of these deposits are bimodal-mafic in the classification scheme of Franklin et al (2005), implying they are Cu-Zn  $\pm$  Au rich deposits that are associated with felsic rocks in a mafic-dominated setting.

The Timmins area is also host to several magmatic Ni deposits, including the Langmuir, Texmont, Alexo and Redstone deposits. Other nickel deposits in the area occur further to the northeast, near Amos, Quebec, and include the Marbridge and Dumont deposits. All of these classify as Class 2 deposits of Barnes and Lightfoot (2005), which are further sub-divided into those associated with komatiites (Type 2-I) and those associated with intrusive ultramafic (Type 2-II). The Langmuir deposits are an example of a Class 2 Type I deposit comprising a series of ore bodies localized in palaeo-troughs that likely resulted from the in-situ contamination of komatiite flows by sulphide-bearing host rocks (Green and Naldrett, 1981). The Dumont deposit is hosted with serpentinized dunite and would classify as a Class 2 Type II deposit, although the nickel mineralization itself appears to have been more the result of post-emplacement alteration than magmatic processes (Sciortino et al., 2015).

Several economic talc, magnesite and asbestos deposits also occur in the area, including the pastproducing United Asbestos Deposit that occurs within the current Property boundary. Other such deposits in the Timmins-Kirkland Lake area include the Canadian and Allerston talc-magnesite deposits, as well as the Daffodil, Slade-Forbes, Hoffman, Garrison and Munro asbestos deposits (Kretschmar and Kretschmar, 1982). All of these deposits formed through hydrothermal alteration of ultramafic rocks.



# 8.0 PROPERTY GEOLOGY AND MINERALIZATION

## 8.1 Property Geology

The most recent bedrock map published by the Ontario Geological Survey (Préfontaine and Robichaud, 2013) shows that the Midlothian Property is underlain by Archean bedrock in the northwest half and Proterozoic rocks in the southeast (Figure 4). Archean units comprise part of the 2670-2677 Ma Timiskaming and 2704-2710 Ma Tisdale assemblages of Thurston et al (2008), with the former including the Clastic Metasedimentary unit of Préfontaine and Robichaud (2013) and the latter comprising the Ultramafic Metavolcanic, Intermediate to Felsic Metavolcanic and Felsic Metavolcanic units. The Tisdale Assemblage is cut by Archean ultramafic and mafic intrusive bodies that correspond to map units 7 and 8 of Préfontaine and Robichaud (2013). Proterozoic units include gabbros of the 2454 Ma Matachewan Dike Swarm as well as the c. 2300 Ma Gowganda Formation. Each of these units is described in more detail below.

Ultramafic metavolcanic rocks of the Tisdale Assemblage (Unit 1) occur only in the northern part of the Property, just to the east of Mitre Lake. These rocks consists mostly of massive flows with localized spinifex texture grading upwards into flow-top breccias (Préfontaine, 2011). Most of these rocks are strongly altered to magnesite, ankerite and green mica.

Intermediate to felsic metavolcanic rocks of the Tisdale Assemblage (Unit 3), here also referred to as "meta-dacite", are the dominant metavolcanic package on the Property, and consist mostly of breccias, tuffs, agglomerates and flows that are locally interleaved with lenses of graphitic slate (Bright, 1970). Clasts hosted within the breccia and agglomerate sub-units range from angular to rounded, are generally more felsic than the matrix and can measure up to three feet in length. Several different interpretations have been forwarded for the origin of the brecciated rocks, including terrestrial volcanism (Bright, 1970), intrusion into unconsolidated sediments (Préfontaine and Magnus, 2010) and hydrothermal alteration (Préfontaine, 2011).

Tisdale felsic metavolcanic rocks (Unit 4) occur in the northeastern corner of the Property and in at least one shoreline outcrop along Lloyd Lake as well. Rock types consist of interstratified rhyolite flows, breccias and silica tuff-breccias, as well as rhyodacitic to dacitic flows, breccias and tuff further north (Bright, 1970). In several localities, these volcanic rocks are interlayered with lenses of pyrite- and/or marcasite-bearing graphitic tuff and slate.

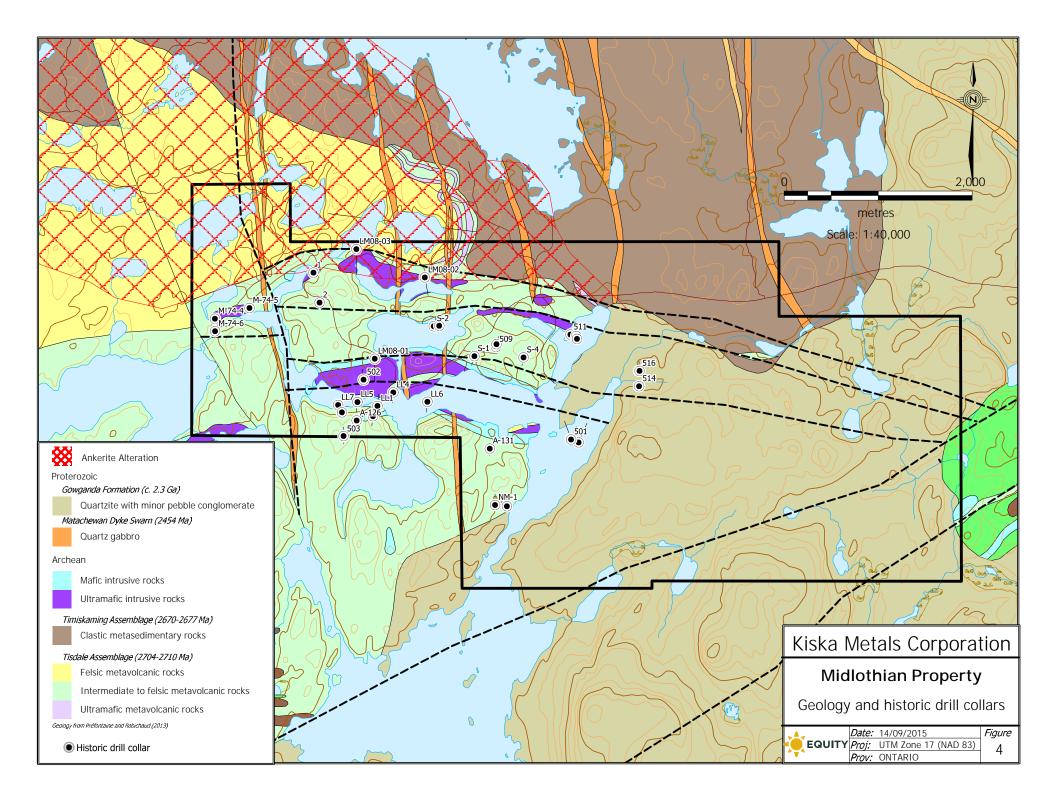
The clastic metasedimentary rocks (Unit 6) of the 2670-2677 Ma Timiskaming Assemblage consist of matrix-supported pebble to boulder conglomerate that is interbedded with subordinate greywacke, arkose and slaty argillite (Bright, 1970). Clasts consist mostly of felsic metavolcanic but also include mafic volcanic, ultramafic volcanic, argillite, feldspar porphyry and granitoids, some of which are mineralized (Préfontaine, 2011).

The Tisdale Assemblage is cut by concordant ultramafic (Unit 7) and mafic (Unit 8) intrusions, with the latter typically rimming and grading into the former (Préfontaine, 2011). Ultramafic rocks include pyroxenite, peridotite and dunite that are typically at least partly altered to serpentine and, more rarely, talc whereas mafic rocks consist mostly of gabbro and olivine gabbro. The large sill that hosts the United Asbestos Deposit, along the western arm of Lloyd Lake, comprises a peridotite-dunite center with a pyroxenite-gabbro marginal phase (Bright, 1970). Contacts with metavolcanic host rocks are generally sharp.

Quartz gabbro of the Matachewan Dyke Swarm (Unit 11) is abundant in the area and tends to inhabit mostly north-south trending faults and fractures (Bright, 1970; Préfontaine, 2011). These dykes weather reddish-brown and range from medium to coarse-grained, typically comprising oval to spherical plagioclase phenocrysts and ophitic augite.

The youngest bedrock unit in the area consists of the c. 2.3 Ga Gowganda Formation (Unit 12), which comprises the lower-most division of the Cobalt Group (Bright, 1970). The Gowganda Formation consists of interbedded greywacke, conglomerate, quartzite, argillite and some arkose. A basal conglomerate unit consists largely of rounded granite boulders, with an average diameter of ~30 cm, in a matrix of granite- and greenstone-derived material.





## 8.2 **Property Mineralization**

The Midlothian Property is prospective for several deposit types that include orogenic gold, magmatic Ni-Cu-PGE and VMS, as well as the alteration products of ultramafic rocks (asbestos, talc, magnesite). The past-producing United Asbestos Mine occurs within the central part of the Property. The more prominently mineralized zones on the Property are summarized below and in Table 4.

The United Asbestos Deposit was discovered and delineated between 1950-1954 by Canadian Johns-Manville Co, Dominion Gulf Co and Canadian Exploration, and then further defined by United Asbestos Inc through a resource-definition drill program from 1971-1973. The deposit consists of two zones, the so-called North and South zones, occurring near the center of a 900 m thick ultramafic sill. The chrysotile asbestos within each zone is hosted in a network of narrow interlocking stringers (Kretschmar and Kretschmar, 1982). Estimates of the remaining resource include 24.72 Mt grading 4.70% 5R  $\pm$  6D fiber for the North Zone, with an additional 125 Mt of material of undefined grade occurring in the South Zone (Kretschmar and Kretschmar, 1982).

The gold-bearing Bjorkman Vein was discovered within the United open pit by Laurion in 2013, and consists of a visible gold-bearing quartz vein inhabiting the contact zone between mafic and ultramafic intrusive rocks (Bjorkman, 2014). Best results from chip sampling include 2060 g/t over 0.8 m, 4810 g/t over 0.3 m and 90 g/t over 0.75 m. This vein is also enriched in copper and the visible gold is an abnormal green colour, suggesting the copper may occur as solid solution within native gold. Additional prospecting and geological mapping were unable to trace this vein beyond the edge of the open pit (Bjorkman, 2014).

Ultramafic Ni-Cu-PGE mineralization is mostly known through the work done by Laurion (Kleinboeck, 2009). Their 2008 drill program returned a best intercept of 0.26% Ni and 0.22% Cr over 348.8 m (Kleinboeck, 2009), with thin section and CIPW norm calculations used to suggest that the nickel was mostly hosted in olivine and trace fine-grained pentlandite. The only observed sulphides, however, were pyrrhotite veinlets with trace intergrown chalcopyrite (Kleinboeck, 2009).

Early exploration also focussed on the VMS potential of the area, with several projects following up airborne and ground-based EM work with diamond drilling (Darke, 1975; Hogg, 1973; Hogg, 1974). Most of this work showed the EM anomalies are related to layers of graphitic argillite ± pyrite ± pyrrhotite. One hole drilled near the western edge of the Property, however, intersected 84 m of 10-80% pyrite and was stopped in mineralization (Hogg, 1974).

Commodity	Name	Name Status Deposit Type Comments		Comments	Reference	
	United North	Past producer	Altered	25 Kt produced (1975-77)	Kretschmar and	
Asbestos	United South	Developed prospect	ultramafic	125 Mt at undefined grade	Kretschmar (1982)	
Gold	Bjorkman Vein	Showing	Orogenic gold	VG-bearing quartz vein	Bjorkman (2014)	
Nickel	"Lloyd Lake" Ni-Cr	Showing	Magmatic Ni-Cr	348.8 m @ 0.26% Ni, 0.22% Cr	Kleinboeck (2009)	
Paga motolo	"Lloyd NW"	Showing	VMS?	0.3-2.6 m layers of semi- massive pyrite	Clayton (1971b)	
Base metals	"Lloyd West"	Showing	VIVIS ?	At least 84 m of 10-80% pyrite	Hogg (1974)	

**Table 4:** Summary of deposits, prospects and showings on the Midlothian Property





## 9.0 SURFICIAL AND BEDROCK GEOLOGY

For the 2015 work program, soil descriptions and photographs were taken at all MMI sampling sites and were used to make a surficial geological map for the northern part of the Property (Figure 5). Geological prospecting was done with the aim of identifying prospective structures and alteration, rather than just mineralization. Results are described below.

## 9.1 Surficial Mapping

The province-scale Quaternary geological map (Ontario Geological Survey, 1997) suggests a predominance of bedrock over surficial deposits on the Midlothian Property. Although this is probably true on a province-wide scale, the 2015 program found that most of the Property is covered in till (Figure 6A) with, at best,  $\leq 5\%$  of the terrestrial surface comprising outcrop. The drill hole database indicates that mean and median overburden depths on the Property are 5.3 m and 4.9 m, respectively, within a range of 0.6-11.9 m.

Soils collected on the Midlothian Property can be subdivided into five main types based on their colour, organic content and/or silt to clay ratio (Figure 6B-6H). In order of relative abundance, these soils include: (1) brown silt, (2) rusty brown silt, (3) grey-brown silt ± clay, (4) grey clayey silt ± clay and (5) dark brown silt (Table 5). The distribution of "browner" (brown, rusty brown, dark brown) and "greyer" (grey, grey-brown) soils is shown on Figure 5, which appears to show a fairly expansive area of greyer soils in the western part that are associated with elevated exposures of metavolcanic and ultramafic-mafic intrusive rocks. The central and eastern parts of the survey area are covered mostly by browner soils that are underlain by the Timiskaming and Gowganda metasedimentary units. Narrow east-northeast trending bands of greyer soil cut through the brown soils, and were possibly washed down higher elevations. Each of the five main soil types is described in more detail below.

Brown silt comprises 44% of all the samples that were taken (Figure 6B). Relative to the other soil types it is dry and devoid of both clay and organics. It also contains sub-rounded to rounded pebble to boulder-sized clasts of various rock types (Figure 6C), consistent with the interpretation that it is a till. Brown silt is equally developed over all major bedrock units on the Property and tends to be somewhat more abundant at higher to moderate elevations.

The rusty brown, grey-brown and grey soils types are about equally abundant, comprising between 15-20% of the collected samples. Rusty brown silt is gradational with brown silt and is similarly dry as well as clay- and organic-poor (Figure 6D). It appears to be somewhat preferentially developed over Unit 6 (Timiskaming metasedimentary rocks) in the northern part of the Property, and so contains a higher proportion of locally-derived Timiskaming clasts relative to the brown silt unit.

Grey-brown (Figure 6E) and grey (Figure 6F, 6G) silts are somewhat wetter and more clay-rich than the brown and rusty brown silts, with 30% of grey-brown and grey soils described as moist or wet and 20-25% of them described as clay-bearing. They grey clayey silt unit appears to be preferentially developed over units 4, 7, and 8 (meta-dacite, mafic-ultramafic intrusions) and within the lower-lying wet areas over top of Gowganda Formation. These relations suggest that grey clayey silt is derived from bedrock weathering whereas the grey-brown soils are then mixtures of bedrock-derived sediment and till.

Coll Turne		Soil	Charact	eristics	Underlying Bedrock						Dhuciegraphu
Soil Type	Ν	Dry	Clay?	Orgnc?	Gowg	Timisk	UM	М	Meta-dac	Other	Physiography
Brown silt	138	96%	0%	0%	33%	26%	4%	1%	32%	4%	High to moderate
Rusty brown silt	62	97%	0%	0%	39%	39%	2%	3%	16%	2%	elevation
Grey-brown silt	57	68%	18%	7%	40%	26%	2%	2%	25%	5%	Lower elevations,
Grey clayey silt	46	72%	26%	4%	2%	15%	13%	11%	54%	4%	stream valleys
Dark brown silt	8	50%	13%	25%	38%	13%	13%	0%	38%	0%	Thick organic

#### Table 5: Features of the five main soil types

Abbreviations for soil characteristics: Orgnc = Organics

Abbreviations for underlying bedrock: Gowg = Gowganda, Timisk = Timiskaming, UM = ultramafic, M = mafic, dac = dacite



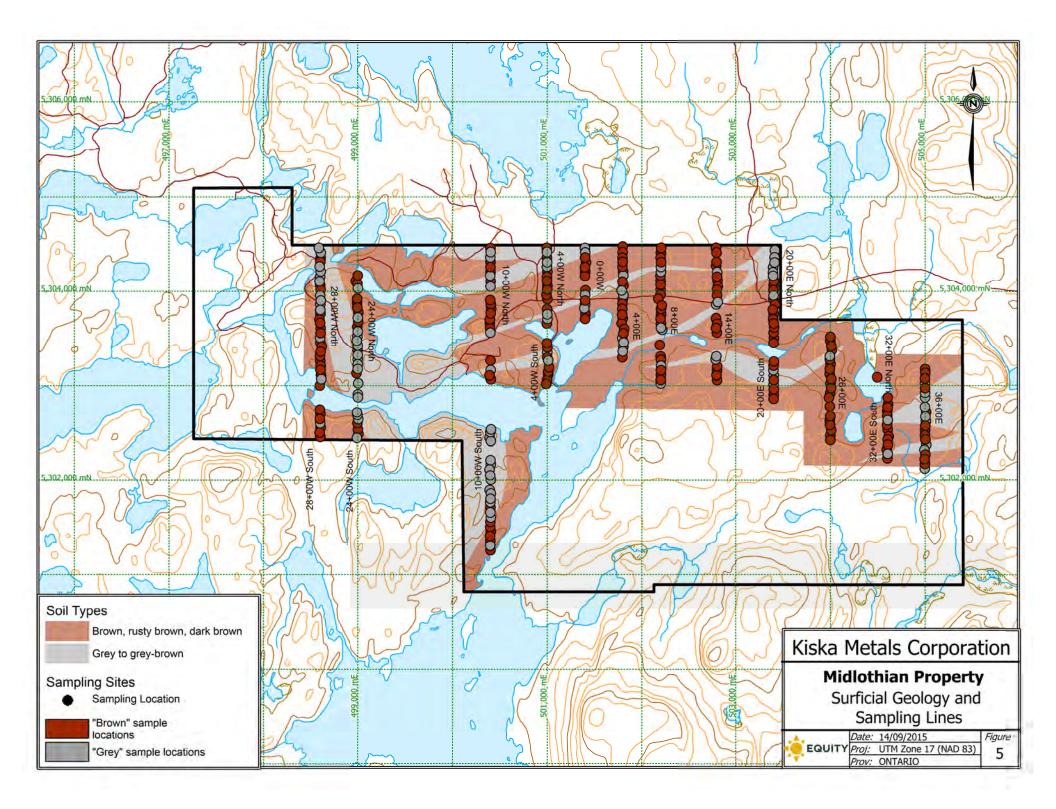




Figure 6: Field photos from the Midlothian Property showing (A) typical soil-sampling environment, (B) pit of brown silt, (C) mechanically aggregated pebbles and cobbles in a gravel pit, (D) rusty brown silt, (E) grey-brown silt, (F) pit of grey clayey silt, (G) grey clayey silt and (H) dark brown organic-rich soil.



The least abundant soil type is dark brown silt (Figure 6H), of which only eight samples were taken (2.5% of all samples). Dark brown silt is moist and wet relative to other soil types and also contains a higher proportion of organic material, which is the most likely source of the darker brown colour. These soils are interpreted as organic-rich tills.

# 9.2 Geological Prospecting

Four days of geological prospecting were undertaken with the aim of identifying structures, alteration zones and additional mineralization (Figure 7 in Appendix I). A total of 34 samples were collected and submitted along with three analytical standards, for a total of 37 (Table 6). Outcrops are generally sparse, low and rounded (Figure 8A). The highlights of this program include the determination of an orientation for the Bjorkman Vein, documenting outcrop evidence for at least one structural splay off the LLCDZ and discovery of a very hard silicified ultramafic boulder, with weakly anomalous gold, at the edge of the United open pit.

The Bjorkman Vein is a visible gold-bearing quartz vein that was discovered in 2013 (Bjorkman, 2014) and is hosted in highly magnetic ultramafic-mafic rocks, making it difficult to determine its orientation. Rather than using a compass, the 2015 program used landmarks and topographic maps to approximate an orientation of 165°/65° E for this Vein. The same method was used to estimate that a chrysotile-rich shear zone, located 80 m east-southeast of the Bjorkman Vein, has a broadly similar orientation at 180°/65° E.

A traverse was conducted along shoreline outcrops located 150 m north of the Bjorkman Vein, with the hopes of finding a corridor of veins and/or an altered structure that could point to larger-scale mineralization. Two 50-60 cm wide zones of 2-3% quartz + carbonate veins (Figure 8B) occur along trends of 135°-160° relative to the Bjorkman Vein, suggesting they may comprise part of the same fluid corridor. Besides these narrow zones, however, no larger-scale structural or alteration systems were found.

A flat outcrop of strongly sheared ultramafic rock occurs along the Asbestos Road at UTM coordinate 498571 m east and 5304178 m north. This outcrop consists of rounded greenish-grey meta-dacite blocks, up to 40 cm in diameter, hosted within a darker and strongly foliated ultramafic matrix striking 086° (Figure 8C). Foliation wraps around the volcanic block, suggesting it was rotated under shear stress. The orientation of this deformation fabric is parallel to LLCDZ splays that are interpreted to track 200 m north and 400 m south of this outcrop.

Rock Type	Unit	Ν	Mineralization	Alteration	Veining	Comments
Qtz-ank vein	Gowganda	2	-	-	100% qtz-cb	Hosted in Unit 12
Quartzite	(Unit 12)	2	0.1-0.5% py	± cb	-	
Gabbro	Matachewan (Unit 11)	1	1% py	-	-	
Ultramafic	Ultramafic	2	0.1% py	srp	5% qtz-cb	Trace of Bjorkman Vein?
Ultramanc	(Unit 7)	1	0.5% mag	srp, ctl, mgs	1% mag	Trace of Bjorkman Vein?
Ultramafic	Unit 1 or 7?	1	0.5% mag	qtz, fuc, ep	-	Boulder
Conglomerate	Timiskaming (Unit 6)	14	0.1-1% py	± cb, hem	± 1-5% qtz-cb	
	<b>T</b>	5	0.1-1% py	qtz, chl, hem	<1% qtz-cb	
Meta-dacite, agglomerate	Tisdale (Unit 3)	3	0.1-0.5% py	cb, hem	5-10% qtz-cb	
aggiornerate		3	0.1% py	qtz, cb	qtz-cb flooding	Felsic-dacite contact
Standards	n/a	3	n/a	n/a	n/a	
Total		37				

#### Table 6: Summary of rock samples





Figure 8: Field photos from the Midlothian Property showing (A) typical outcrop, (B) qtz-cb veins in ultramafic, (C) sheared ultramafic, (D) qtz-cb vein in Gowganda quartzite, (E) light greenish-grey boulder, (F) qtz-cb veins in intermediate volcanic, (H) narrow shear zone in Timiskaming rocks, and (H) agglomerate subcrop.



Another traverse was conducted near the contact zone between the felsic (Unit 4) and meta-dacite (Unit 3) units of Préfontaine and Robichaud (2013), since previous prospecting had returned some weakly anomalous gold values from this area. The 2015 traverse headed slightly further off the road and located several outcrops of meta-dacite with 10-20% quartz + carbonate veins, suggesting this contact zone was a locus for hydrothermal activity.

The largest quartz + ankerite vein was found within what appears to be a subcrop of Gowganda Formation, although the OGS map (Préfontaine and Robichaud, 2013) suggests this area is underlain by Timiskaming and minor Tisdale assemblages. Regardless, the vein is up to 10 cm wide and consists of 80-85% quartz and 15-20% ankerite; with no visible sulphide minerals (Figure 8D). The larger vein is flanked by several smaller veins that are 0.5-2 cm wide, with the overall orientation of all veins ranging from 190°-200°/55°-85° W.

A very hard, light greenish-grey, boulder about 40 cm in size (Figure 8E) was found at the edge of the United Asbestos Mine, near the shoreline of Lloyd Lake. Given the hardness and colour, the boulder was interpreted as strongly fuchsite-, silica- and epidote-altered ultramafic with 0.5% magnetite. No sulphide was noted and there were no other boulders of similar composition nearby.

More general traverses through the meta-dacite and Timiskaming metasedimentary units identified only a few features of interest. This includes a 20 cm quartz + carbonate vein network trending 178°/76° W within meta-dacite north of the United Mine (Figure 8F), a possible contact between Timiskaming and Gowganda sedimentary rocks that lies 300-400 m north of where it is mapped by the Ontario Geological Survey, 2-3 cm wide shear zone trending 065° (Figure 8G), and distinctive subcrops of volcanic agglomerate (Figure 8H).

## **10.0 GEOCHEMISTRY**

This section summarizes the results of the 311 soil samples analyzed by MMI methods and 34 rock samples analysed by fire assay and ICP, all of which were taken as part of the 2015 Midlothian work program. The location of these samples is shown on Figure 7 (Appendix I). Results for the 37 QAQC samples (34 soils, 3 rocks) are discussed in Appendix H.

## 10.1 Soil Geochemistry

The following sections discuss the soil chemistry for a selected group of elements in terms of their relation to soil type and underlying bedrock, inter-element Pearson and rank correlations, background values and response ratios, and the anomalous areas that they form. Elements that are left out of the sections below include the rare earths (La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Er, Yb) and those usually not used as pathfinders for the deposit types of interest (e.g. Th, U, Cs, In, Li, Nb, Sn, Ta, Tl, Y).

## 10.1.1 Relation of major elements to surficial and bedrock units

Brown and rusty brown silts were found to contain relatively high concentrations of AI and P (Figure 9A-9D), with median concentrations of 241 ppm and 261 ppm respectively in comparison to 55 ppm and 204 ppm for grey and grey-brown soils (Table 6). Concentrations of P are also relatively high, within medians of 2.0 and 2.3 ppm in the brown and rusty brown soils in comparison to 0.6 ppm for grey. There are no statistically significant geochemical differences between the brown and rusty brown silts, further suggesting that they are likely the same soil type with, perhaps, slightly different Fe contents.

Grey soils are characterized by high concentrations of Mg, Ca and Sr relative to browner soils (Figures 9E-9H). In fact, the median concentration of Mg in grey soils (138 ppm) is higher than the maximum concentration of Mg in rusty brown silts, which is just 20 ppm. These results point to a fundamental difference between greyer and browner soils. Grey-brown soils contain a median concentration of 12 ppm Mg and 43 ppm Ca, which is in between the grey and brown end-members and thereby somewhat consistent with an interpretation that grey-brown soils are mixtures of grey and brown soil.



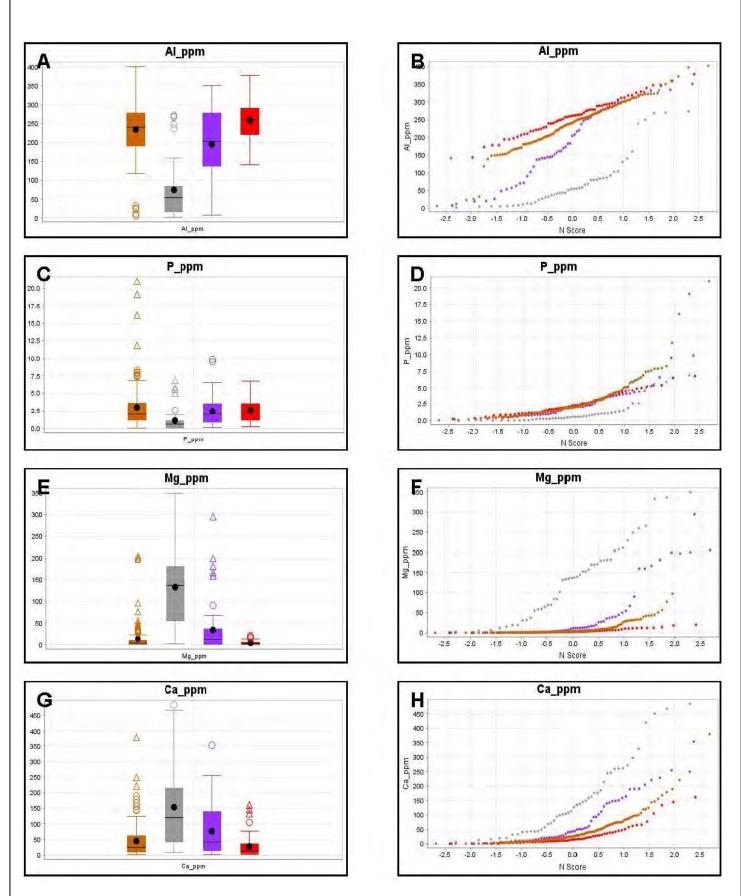


Figure 9: Box-and-whisker (A, C, E, G) and probability plots (B, D, F, H) for MMI samples grouped by soil type, showing (A, B) aluminium, (C, D) phosphorous, (E, F) magnesium and (G, H) calcium. Brown = brown soils, grey = grey soils, purple = grey-brown soils, red = rusty brown soils.



When plotted against underlying bedrock lithology, those soils overlying ultramafic and mafic intrusive units, and to a lesser extent the meta-dacite, tend to have higher Mg  $\pm$  Ca, Sr and Ba (Figures 10A-10D). Soils overlying either one of the sedimentary units tend to have higher Al, Cs, Ga and possibly Ti (Figure 10E-10G). Concentrations of P are sub-equal in soils that overlie the meta-sedimentary and -dacitic rocks, and significantly lower within those overlying ultramafic and mafic intrusions (Figure 10H).

Two samples taken over top of felsic volcanic rock contain anomalously high median abundances of Fe (340 ppm) and Mn (8150 ppb) coupled with low concentrations of Mg (4.3 ppm) and P (1.3 ppm).

## **10.1.2 Precious metals, base metals and their path-finders**

Gold-in-soil values are very low across the Property and, in fact, show significant overlap with the silica sand material that was used as "blank" (Appendix H). Values range from <0.1 ppb to 1.3 ppb and average just over 0.1 ppb for the entire dataset. The 75<sup>th</sup> percentile value is at the detection limit, whereas the 80<sup>th</sup> is equal to 0.2 ppb Au and the 95<sup>th</sup> percentile is 0.4 ppb. By comparison, the 17 samples of silica sand used as "blank" returned eight samples with 0.1-0.3 ppb Au and nine <dl. Grey and grey-brown soils have median values of 0.2 ppb and 0.1 ppb Au respectively, in comparison to <dl (i.e. <0.1 ppb) for brown, rusty brown and dark brown soils (Figure 11A). Fifteen of the 16 highest Au values occur within grey and grey-brown soils. Gold-in-soil also correlates with underlying bedrock, with those covering ultramafic rocks containing an average of 0.4 ppb Au in comparison to average of 0.2 ppb for meta-dacite and 0.1 ppb for all other units (Figure 11B).

Median Ni concentrations are significantly higher in the grey soils (2175 ppb) than the four other soil types (<840 ppb) (Figure 11C), consistent with its enrichment in Mg as well. Nickel concentrations are also anomalously elevated in soils that overlie mafic-ultramafic intrusive and meta-dacite (medians 1190-3410 ppb), and low in those soils overlying the sedimentary units (<440 ppb) (Figure 11D).

Median Cu abundances range between 285-365 ppb for four of the five main soil types but is markedly higher 660 ppb within dark brown soils, possibly because it is fixed by organic matter. However, 20 of the 23 samples that returned more than 1000 ppb Cu occur within grey or grey-brown soils (Figure 11E) with the remaining three found in dark brown (N = 2) and brown (N = 1) silts. There seems to be little correlation between Cu content and bedrock (Figure 11F), although the two samples taken over felsic metavolcanic show anomalously high concentrations (580-900 ppb Cu). Extremely high values of >5000 ppb Cu occur over Gowganda (N = 2) and mafic intrusive (N = 1) bedrock.

Silver appears to be preferentially concentrated into brown and rusty brown soils, which both have median concentrations of 7.9 ppb Ag in comparison to 3.7 ppb and 5.0 ppb for grey and grey-brown soils respectively (Figure 11G). Median concentrations in dark brown soils are even lower (2.0 ppb). These associations are also broadly reflected in the underlying bedrock, with soil developed over meta-sedimentary and -dacitic rocks containing higher median Ag (6.3-7.9 ppb) than that developed over mafic to ultramafic intrusives (1.8-3.3 ppb) (Figure 11H).

Median Pb concentrations are significantly higher in brown and rusty brown silts (222-240 ppb) relative to grey and grey-brown samples (78-157 ppb). However, grey-brown soils also contain the highest three recorded values, including an anomalously high 5250 ppb, so that the mean values among the different soil types are fairly similar (Figure 11I). There appears to be no correlation between Pb content and underlying bedrock (Figure 11J). The three values over 1000 ppb are associated with Gowganda (N = 2) and meta-dacitic (N = 1) bedrock, with one of the samples overlying Gowganda bedrock also showing extremely high Cu values (6960 ppb Cu).

Zinc concentrations appear to be somewhat higher in the brown and rusty brown soils (medians of 225, 280 ppb respectively) than the grey clayey silt (80 ppb), with grey-brown soils falling somewhat in between (200 ppb) (Figure 11K). The brown and rusty soils also contain the eight highest values (2730-9130 ppb).Relative to bedrock, Zn concentrations appear to be somewhat elevated in soils that overlie Gowganda and meta-dacitic rocks (medians of 310 and 225 ppb respectively) relative to the Timiskaming and maficultramafic rocks (≤150 ppb). However, only the soils overlying mafic-ultramafic rocks lack values exceeding 1000 ppb whereas that covering Timiskaming has 10 samples (Figure 11L).



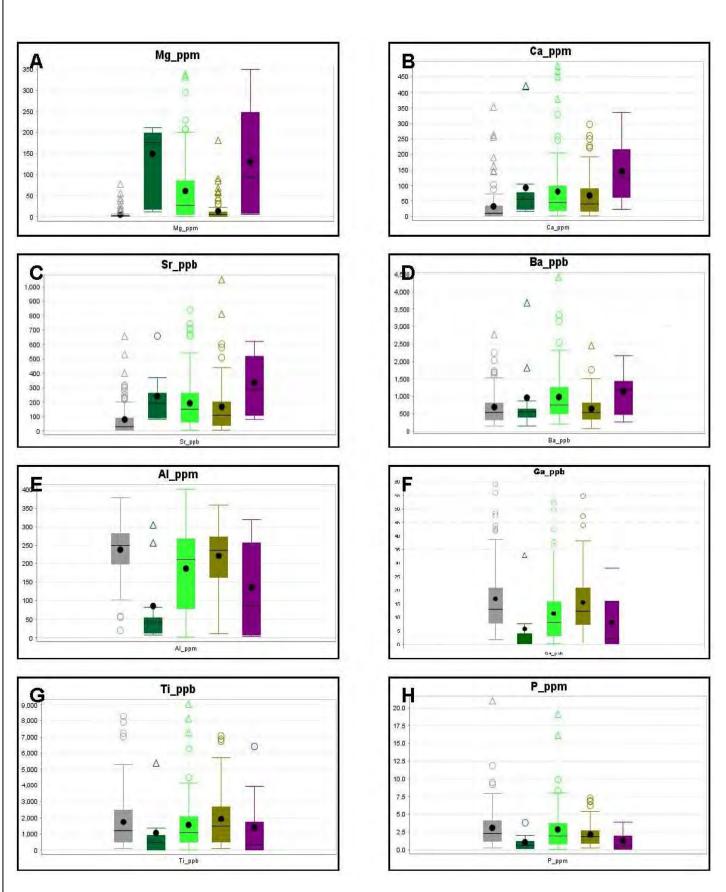


Figure 10: Box-and-whisker plots for MMI samples grouped by underlying bedrock, showing (A) Mg, (B) Ca, (C) strontium, (D) barium, (E) aluminium, (F) gallium, (G) Ti and (H) phosphorous. Grey = Gowganda, dark green = mafic intrusive, light green = intermediate metavolcanic, brown = Timiskaming, purple = ultramafic intrusive.



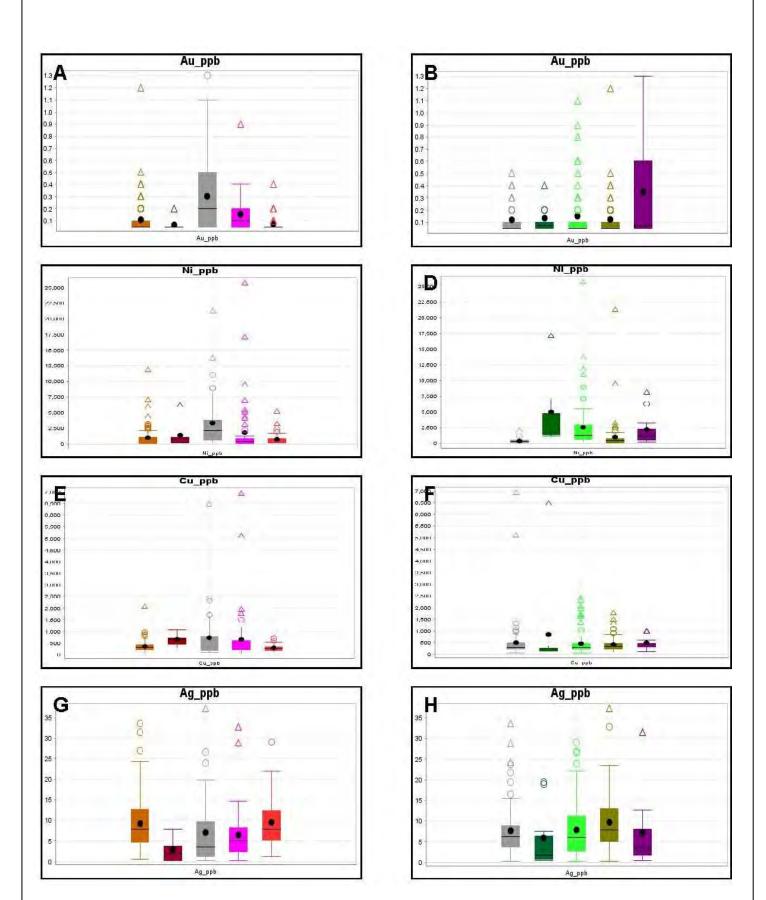


Figure 11: Box-and-whisker plots for MMI samples grouped by soil type (A, C, E, G) and underlying bedrock (B, D, F, H)), showing (A, B) gold, (C, D) nickel, (E, F) copper and (G, H) silver. Colour codes for soil type and bedrock are the same as Figures 9 and 10.



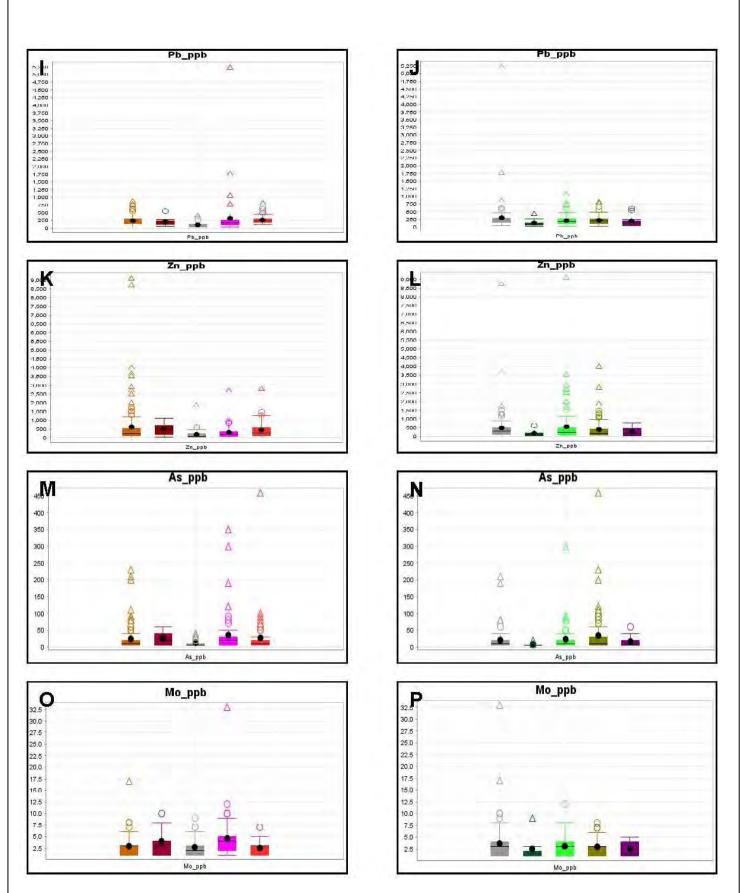


Figure 11 cont.: Box-and-whisker plots for MMI samples grouped by soil type (I, K, M, O) and underlying bedrock (J, L, N, P)), showing (I, J) lead, (K, L) zinc, (M, N) arsenic and (O, P) molybdenum. Colour codes for soil type and bedrock are the same as Figures 9 and 10.



Tellurium is associated with several orogenic gold deposits in the Kirkland Lake-Timmins area and is therefore an important path-finder for gold. Unfortunately, 305 of the 311 soil samples (98%) returned less than detection (10 ppb) for this element. Out of the six samples not below detection, four returned values at the detection limit and the remaining two returned 20 ppb Te. Five of these six samples occur in grey-brown soil overlying mafic metavolcanic.

The majority of bismuth analyses (72%) also lie at or near the detection limit (dI) of 0.5 ppb. Median concentrations are uniformly at or below the dI for all types of soil and most types of underlying bedrock. The only exception is the two samples taken over felsic metavolcanic, which returned a median of 0.9 ppb Bi.

Mercury contents are also mostly below or at detection, with 278 of the 311 samples (89%) returning ≤1 ppb Hg. Concentrations are uniformly low across all types of soil and underlying bedrock.

Arsenic contents are also generally low, with 56% of samples at or below the detection limit of 10 ppb and 74% returning  $\leq$ 20 ppb. Most soil types show broadly similar median and maximum concentrations with the exception of grey soils, which has the lowest median (<dl) and no values exceeding 40 ppb As (Figure 11M). Median As concentrations also appear to be slightly higher in soils overlying metasedimentary rocks (Figure 11N, Table 7). The four samples taken over felsic (N = 2) and ultramafic (N = 2) metavolcanic show anomalously high medians of 190 ppb and 35 ppb respectively.

Mo contents are generally low, with 43% of samples coming in at or below detection (2 ppb) and 81% of the samples returning  $\leq$ 4 ppb. Median contents within the five different soil types range from 2-4 ppb Mo, with grey soils showing the lowest (Figure 11O). Underlying bedrock control appears minimal (Figure 11P) although the two samples taken from soils overlying felsic volcanic contain 6 and 7 ppb Mo (Table 6), which fall within the 90<sup>th</sup> to 95<sup>th</sup> percentiles.

Antimony contents are also universally low, with 54% lying at or below the detection limit of 0.5 ppb and 83% of samples returning  $\leq$ 1 ppb Sb. Median contents across the different soil types and underlying bedrock are mostly  $\leq$ 0.6 ppb, with somewhat higher values in soils overlying metasedimentary units. The four samples that overlie felsic and ultramafic metavolcanic rocks returned median values of 0.7-0.8 ppb.

About half of the samples have Tungsten contents lying above the detection limit of 0.5 ppb. Median contents across the different soil types and underlying bedrocks mostly range from 0.5-0.9 ppb W, with the exception of dark brown soil (0.4 ppb) and soils overlying Felsic metavolcanic (1.3 ppb).

Only two of the 311 soil samples have Pt concentrations at or above detection (0.1 ppb), with both samples returning values of 0.1 ppb. Similarly, there is only one of 311 samples that contains Pd at or above the detection limit (1 ppb), with this one contain sample returning 1 ppb. This one sample is not one of the two samples that contain 0.1 ppb Pt.

Chromium contents are elevated in soils that overlie mafic-ultramafic intrusive and meta-dacitic rocks (200-700 ppb) and are lower within those overlying metasedimentary units (100 ppb). The difference is less marked for the soil types, with the median Cr content of grey soils (400 ppb) about twice that of all other soil types (Table 7).

Median Co concentrations are broadly similar for the five different soil types, ranging from 90-104 ppb (Table 6). More notable differences in median values appear to be related to underlying bedrock composition, with soils overlying sedimentary rocks having lower median Co (79-93 ppb) than those overlying meta-dacite and mafic intrusive units (110-176 ppb). However, this trend is bucked by the low median Co content of ultramafic intrusive (90 ppb) and the high outlying values that occur within both sedimentary units, including the highest single value of 1210 ppb Co from over Gowganda bedrock.

Scandium contents are fairly consistent across the brown, rusty brown and grey-brown soil types (medians of 38-44 ppb) and somewhat lower in grey and dark brown soils (25-31 ppb). Relative to underlying bedrock, Sc contents are somewhat lower in soils overlying the mafic-ultramafic intrusive and metavolcanic rocks (21-35 ppb) relative to those overlying metasedimentary units (>40 ppb), with many of the highest values occurring above the metasedimentary rocks as well.



Group	Count	Ag (mah)	Al	As (mate)	Au (mah)	Ba (mah)	Ca	Co	Cr	Cu	Fe	Ga
		(ppb)	(ppm)	(ppb)	(ppb)	(ppb)	(ppm)	(ppb)	(ppb)	(ppb)	(ppm)	(ppb)
All data	311	6.9	231	10	0.1	600	32	94	200	310	74	10.8
Soil colour	1	[	[	[	[	1	[	1	1			1
Brown	138	7.9	241	10	0.1	595	26	90	200	320	68	11.1
Dark brown	8	2.0	232	20	0.1	475	30	96	200	660	152	17.5
Grey	46	3.7	55	5	0.2	665	120	102	400	365	36	2.25
Grey brown	57	5.0	204	20	0.1	650	43	98	200	290	98	16
Rusty brown	62	7.9	261	10	0.1	625	15	104	200	285	76	11.8
Underlying bedr	ock											
Gowganda	97	6.3	251	10	0.1	540	11	79	100	300	76	13.1
Mat dyke	9	10.9	249	5	0.1	450	19	53	50	260	54	11.6
Timiskaming	83	7.9	237	10	0.1	540	40	93	100	340	77	12.4
Mafic intrusive	10	1.8	42	5	0.1	550	56	176	700	210	37	2.35
UM intrusive	12	3.3	86	5	0.1	1195	124	90	200	410	40	2.15
Meta-dacite	96	6.1	211	10	0.1	750	44	110	300	290	70	8.05
Felsic metavol	2	7.6	163	190	0.3	710	115	183	150	740	340	9.7
UM metavol	2	8.7	201	35	0.1	805	152	84	225	210	64	22.5
		Mg	Мо	Ni	Р	Pb	Rb	Sb	Sc	Ti	W	Zn
Group	Count	(ppm)	(ppb)	(ppb)	(ppm)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
All data	311	5.1	3	524	1.9	189	75	0.5	39	1150	0.6	210
Soil colour						1		1				1
Brown	138	3.8	3	476	2.1	223	90	0.6	41	1095	0.5	225
Dark brown	8	8.9	3	839	4.6	175	54	0.5	31	1210	0.4	460
Grey	46	137.5	2	2175	0.6	78	50	0.3	25	450	0.6	80
Grey brown	57	11.6	4	394	2.0	157	75	0.6	44	1790	0.9	200
Rusty brown	62	2.2	3	463	2.3	241	78	0.3	38	1250	0.6	280
Underlying bedr												
Gowganda	1		1					0.5	41	1200	0.5	310
	97	1.5	3	292	2.3	228	86	0.5	41		0.1	
	97 9	1.5 2.3	3	292 333	2.3 1.5	228 192	86 87	0.5 0.3				
Mat dyke	9	2.3	1	333	1.5	192	87	0.3	47	910	0.3	240
Mat dyke Timiskaming	9 83	2.3 5.0	1 3	333 432	1.5 1.8	192 203	87 76	0.3 0.6	47 42	910 1460	0.3 0.6	240 150
Mat dyke Timiskaming Mafic intrusive	9 83 10	2.3 5.0 176.5	1 3 2	333 432 3410	1.5 1.8 0.6	192 203 74	87 76 34	0.3 0.6 0.3	47 42 21	910 1460 455	0.3 0.6 0.7	240 150 120
Mat dyke Timiskaming Mafic intrusive UM intrusive	9 83 10 12	2.3 5.0 176.5 93.6	1 3 2 2	333 432 3410 1190	1.5 1.8 0.6 0.5	192 203 74 135	87 76 34 49	0.3 0.6 0.3 0.3	47 42 21 35	910 1460 455 355	0.3 0.6 0.7 0.8	240 150 120 150
Mat dyke Timiskaming Mafic intrusive UM intrusive Meta-dacite	9 83 10 12 96	2.3 5.0 176.5 93.6 27.5	1 3 2 2 3	333 432 3410 1190 1345	1.5 1.8 0.6 0.5 1.9	192 203 74 135 174	87 76 34 49 74	0.3 0.6 0.3 0.3 0.3	47 42 21 35 33	910 1460 455 355 1050	0.3 0.6 0.7 0.8 0.6	240 150 120 150 225
Mat dyke Timiskaming Mafic intrusive UM intrusive	9 83 10 12	2.3 5.0 176.5 93.6	1 3 2 2	333 432 3410 1190	1.5 1.8 0.6 0.5	192 203 74 135	87 76 34 49	0.3 0.6 0.3 0.3	47 42 21 35	910 1460 455 355	0.3 0.6 0.7 0.8	240 150 120 150

 Table 7: Median concentrations of selected elements within all samples and sample subsets

Abbreviations: Mat = Matachewan, UM = ultramafic, dac = dacite, metavol = metavolcanic

Median barium contents range from 595-665 ppb across the brown, rusty brown, grey brown and grey soils, but contain a somewhat lower median abundance of 475 ppb within dark brown soils. Underlying bedrock composition appears to have some control, with median concentrations above sedimentary units relatively low (540 ppb) and those above metavolcanic units somewhat higher (710-805 ppb). The highest median contents are found above ultramafic intrusive rocks (1195 ppb).



#### 10.1.3 Inter-element correlations

Correlation coefficients were calculated for 27 selected elements across all 311 samples as well as for sub-sets of soil type and underlying bedrock. Mafic and ultramafic bedrock was dropped from the analysis because the sample set is too small, resulting in a large number of correlations. The "positive" or "negative correlations" described below have Pearson's (*r*) or rank ( $\rho$ ) correlation coefficients that are >0.55 or <-0.55.

Gold does not generally correlate with any other elements (Table 8), with the only exceptions comprising a positive Pearson correlation with Sb within soils overlying Gowganda bedrock and negative Pearson and rank correlations with aluminium in soils over top of metavolcanic. The lack of correlation is likely due to its generally low abundance.

Nickel shows a positive *r* and  $\rho$  with Mg across all samples and in nine of 10 sub-sets, as well as a positive rank correlation with Cr (Table 8). These correlations likely reflect a mafic-ultramatic association. Positive correlation of Ni and Co occurs above metavolcanic (*r* and  $\rho$ ) and Timiskaming ( $\rho$ ) bedrock whereas positive correlation with Ca and Sr occurs in brown soils ( $\rho$ ) and above Gowganda bedrock ( $\rho$ ). Nickel also shows a positive rank correlation with Co-Mn-Sb in soils overlying Timiskaming sedimentary rocks, which is consistent with the moderate to high concentrations of all these elements within this unit (see Section 10.2).

Copper shows a positive *r* with Ca and Mo across all samples (Table 8), although the rank correlation coefficients range from just 0.29-0.38. Positive Pearson correlation of Ca and Mo also occurs in the grey soil and the Gowganda subsets, whereas Ca and Sr show a positive correlation with Cu in soils overlying metavolcanic. The origin of the positive correlation between Cu-Mo and Cu-Ca  $\pm$  Sr is speculative but could be from Cu-bearing minerals associated with molybdenite and carbonate. Soils overlying Gowganda rocks show a positive *r* between Cu and Mg whereas those overlying Timiskaming rocks show Cu correlated with Sc ( $\rho$ ), both of which could reflect an ultramafic to mafic association.

	All	Soil t	ypes	Underlying bedrock					
Element Sample		Brown	Grey	Gowganda	Timiskaming	Meta-dacite			
Ag	-	-	-	-	-	-			
Au	-	-	-	± Sb	-	(AI)			
As	Fe, Sb	Fe, Sb, Zr ± Co, Cr, Ti	Sb ± Fe	± Fe, Zr, Cr	Fe, Sb, Cr ± Co, W, Zr	Sb ± Fe, P, Zr, Sb, Ti, Sc			
Ва	-	± Cr, Fe, P, Ti, Zr	-	Cr ± Mg, W, Zr	-	-			
Со	± Cr, Mn	Cr ± As, Fe	± Mn	Mn	± Cr, Ni + 6 others	Ni ± Mn, Cr			
Cr	± Co	Co ± Ni, Ti + 7 others	± Ni	Ba, Fe, Ti ± Ni, As, P, Zr	As, Fe, P, Ti, Sc, Zr ± Co, Sb	± Co, Ni			
Cu	± Ca, Mo	-	± Ca, Mo	± Ca, Mo, Mg	± Sc	± Ca, Sr			
Мо	± Cu, Zr	Zr, Ti ± Mn, Sb	± Cu	± Cu, Zr, Ca	Ti, Zr	-			
Ni	Mg ± Cr	Mg ± Ca, Cr, Sr	Mg ± Cr, (Ga)	Mg ± Ca, Cr, Sr	± Mg, Co, Mn, Sb	Mg, Co±Cr			
Pb	-	-	± Al	-	±Al	± Al + 6 others			
Sb	As	As ± Cr, Mn, Sc, Zr	± As	-	As ± 7 others	As ± Zr			
Sc	Zr	Zr ± M, Mo, Sb	Zr	± Zr	Zr, Cr ± Cu, Sb	Zr ± 5 others			
W	± Ti, Zr	Zr, Ti ± Fe, Mo, W	Zr	Fe, Ti, Zr ± As, Ba, Mo, Cr, W	Mo, Ti, W, Zr	± Ti, Zr			
Zn	± Cd, P	± Cd, P	± Cd, P	± Cd	± Cd, P, Co	± Cd, P, K			

**Table 8:** Summary of Pearson (r) and rank ( $\rho$ ) correlation coefficients all samples and sample subsets

\*elements listed before ± sign show |r| and  $|\rho| > 0.55$ ; elements listed after ± sign have only one of |r| or  $|\rho| > 0.55$ . \*\*elements listed in parentheses (e.g. (AI)) show negative correlation; those listed with no parentheses show positive correlation



Silver does not correlate with any of the selected elements (Table 8).

Lead is also generally lacking in correlations with other elements, although it does show positive correlation with Al in grey soils ( $\rho$ ) as well as those soils overlying Timiskaming (r) and meta-dacitic ( $\rho$ ) bedrock (Table 8). The correlation between Pb and Al could reflect their presence in clays. Lead also shows positive correlation with K (r), Ga, P, Ti, Sc and Zr ( $\rho$ ), some of which could also be related to increased clay content.

Zinc shows a positive  $\rho$  with Cd and phosphorous across all samples whereas *r* is also somewhat elevated, measuring 0.45 for Zn-Cd and 0.34 for Zn-P. Positive  $\rho$  for Zn-Cd also occur in every single subset whereas *r* <0.55 but still reasonably high, ranging from 0.46-0.54. The positive correlation between Zn and P also occurs across most sub-sets, including brown ( $\rho$ ) and grey (*r*) soils as well as soils overlying Timiskaming and metavolcanic bedrock ( $\rho$ ). Zn and Cd are positively correlated in many geological environments whereas the Zn-P correlation is more unusual. Zinc also shows a positive correlation with Co ( $\rho$ ) above the Timiskaming bedrock and with K ( $\rho$ ) above meta-dacite.

Arsenic is among the most strongly correlated of the elements in this data set, showing positive Pearson and rank correlation with Fe and Sb across all samples and most of the subsets. This association could have a hydrothermal origin since all three of these elements are mobile in such solutions. Positive correlations are also shown between As and Zr in brown soils (*r* and  $\rho$ ) as well as over top of Gowganda (*r*), Timiskaming (*r*) and metavolcanic ( $\rho$ ) bedrock. Chromium shows positive correlation with As in brown soils ( $\rho$ ) and above Gowganda ( $\rho$ ) and Timiskaming (*r* and  $\rho$ ) bedrock. The As-Cr correlation is consistent with lithogeochemical results (Section 10.2) whereas the As-Zr is more difficult to explain.

Molybdenum shows a positive *r* with Cu across all samples ( $\rho = 0.38$ ) and a positive  $\rho$  with Zr (*r* = 0.49), possibly reflecting a "granitic" type Cu-Mo association within either the underlying bedrock or granitoid boulders hosted in the till. Positive correlation with Ti occurs in brown soil (*r* and  $\rho$ ) and those soils overlying Timiskaming bedrock (also *r* and  $\rho$ ).

Tungsten shows positive *r* with Ti and Zr across all samples and across seven of the 10 sub-sets as well, with an additional two subs-sets showing just correlation between W-Zr (Table 8). The correlation between W-Zr could be a "granitoid" signal whereas the origin of the W-Ti correlation is unclear. Additional correlation is shown between W-Mo in brown soils (*r*) and above metasedimentary rocks ( $\rho$  and/or *r*).

Antimony shows positive *r* and  $\rho$  with arsenic across all samples and in seven of the 10 subsets, possibly reflecting their high concentrations in metasedimentary bedrock (Section 10.2) or some sort of hydrothermal concentration. Positive correlation also occurs with Mn in brown silts ( $\rho$ ) and within soils overlying Gowganda ( $\rho$ ) and Timiskaming ( $\rho$ ) bedrock, which is also consistent with lithogeochemistry (Section 10.2). Also consistent with lithogeochemistry are the positive  $\rho$  for Sb-Cr and Sb-Sc over Timiskaming bedrock and, presumably in brown soils. Positive rank correlation for Sb-Zr in brown silts, as well as over Timiskaming and metavolcanic bedrock, however, is inconsistent with lithogeochemistry and hydrothermal processes, with the latter typically not concentrating Zr.

Across all 311 samples, cobalt shows a positive *r* with Mn ( $\rho = 0.50$ ) and a positive  $\rho$  with Cr (*r* = 0.51), with these elements each showing positive correlation in four of 10 subsets as well. The close association of these three elements relates closely to the lithogeochemistry of underlying bedrock (Section 10.2). Co also shows positive correlation with Ni ( $\rho$ ), As (*r*) and Fe (*r*) in soils overlying Timiskaming bedrock (and brown soils), which is clearly consistent with lithogeochemical data. A positive correlation between Ni and Co (*r* and  $\rho$ ) over metavolcanic bedrock is more suggestive of a mafic-ultramafic source.

Chromium shows a positive  $\rho$  with Co across all samples (r = 0.51) and four of the 10 subsets, in addition to numerous positive correlations in soils overlying the metasedimentary units (As, Fe, Ni, P, Ti, Zr) and brown soils too. Rank correlations in the brown soil subset are particularly numerous, with Cr showing positive  $\rho$  with As, Ba, Co, Fe, Mg, Ni, P, Ti, Sb and Zr. Other subsets showing  $\geq$ 4 elements that are positively correlated to Cr include those soils overlying Gowganda (Ba, Fe, Ti ± As, Ni, P, Zr) and Timiskaming (As, Fe, P, Ti, Sc, Zr ± Co, Sb) bedrock. Many of these correlations are consistent with the lithogeochemistry of the two metasedimentary units, which have moderate to high concentrations of As, Cr, Co, Fe, Ni, P, Ti, Sb and Sc. The origin of Zr-enrichment, however, is less obvious.



Scandium shows a positive *r* and  $\rho$  with Zr across all samples and in 11 of 12 subsets, comprising one of the most consistent correlations in the data set. A possible geological source for correlated Sc-Zr is granite boulders hosted within the till. Sc also shows positive *r* and  $\rho$  with Cr in soils overlying Timiskaming bedrock, which is consistent with lithogeochemistry (see Section 10.2).

Barium generally lacks correlation with other elements, with positive associations limited to three subsets with Cr and two subsets with Zr. Positive correlations between Ba and Cr/Zr occur in brown silts (*r*) and in soils overlying Gowganda bedrock (*r* and  $\rho$ ). These correlations may reflect surficial rather than geological processes since Cr and Zr, especially, tend to occur in different geological environments. The Ba-Zr association, however, could be related to granitoid rocks.

## 10.1.4 Response ratios

Response ratios are calculated by dividing the analytical result for each element by a background value specific to that element. The background values can be estimated in at least two different ways by, for example, simply choosing a percentile value as the background or using the first significant inflexion point on a probability plot. Here we use the  $30^{th}$  percentile to calculate background across all samples ("universal") and within several subsets of  $\geq 20$  samples that are split by soil type and underlying bedrock (Table 9). Ratios of  $\geq 10$  are considered to be anomalous.

Table 9 shows that some of the background values are fairly consistent across the sub-sets (e.g. As, Au, Ba, Co, Cu, Sb) whereas others are less so (e.g. Ag, Cr, Mo, Ni, Pb, Zn). The threshold for separating consistent from variable background values was taken by calculating the percent difference with the universal background value and then averaging these differences for the "soil type" and "underlying background" sub-groups. Sub-groups with an average percent difference of  $\geq$ 25% for their constituent background values were levelled with the background value unique to each soil type, underlying bedrock or both (i.e. see "Levelled?" column in Table 9).

Response ratios for gold are generally low, with 86% of those showing response ratios of  $\leq$ 4. Only 17 samples (5%) have response ratios  $\geq$ 10, with 13 of these occurring in grey soil overlying meta-dacitic or mafic-ultramafic bedrock. These 17 samples define four multi-sample anomalies and two point anomalies that are shown in Figure 12A.

Element	All	Soil type				Underlying bedrock					
	samples	Brown	Grey	Gr brown	Ru brown	Gowg	Meta-dac	Timisk	UM-M	Levelled?	
Ag (ppb)	4.5	5.3	1.9	3.4	6.5	4.5	3.7	5.8	1.7	Soil & bedrock	
As (ppb)	5	5	5	5	5	5	5	5	5	No	
Au (ppb)	0.05	0.05	0.08	0.05	0.05	0.05	0.05	0.05	0.05	No	
Ba (ppb)	450	450	510	488	390	388	540	370	519	No	
Co (ppb)	59	59	50	54	73	55	76	58	82	No	
Cr (ppb)	100	100	75	100	50	50	200	100	190	Bedrock only	
Cu (ppb)	240	240	235	240	220	230	240	256	210	No	
Mo (ppb)	2	2	1	3	1	2	2	2	1	Soil only	
Ni (ppb)	303	305	939	220	280	194	799	267	1039	Soil & bedrock	
Pb (ppb)	133	152	53	98	191	159	119	137	69	Soil only	
Sb (ppb)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	No	
W (ppb)	0.25	0.25	0.25	0.58	0.25	0.25	0.25	0.25	0.25	No	
Zn (ppb)	110	120	50	80	150	156	120	80	59	Soil & bedrock	
Abbrowietien	Abbreviations for acil types Or - gray, Dy - mate										

## **Table 9:** 30<sup>th</sup> percentile values for all samples and sample subsets

Abbreviations for soil type: Gr = grey, Ru = rusty

Abbreviations for underlying bedrock: Gowg = Gowganda, dac = dacite, Timisk = Timiskaming, UM-M = ultramafic-mafic



Nickel concentrations in grey clayey soils, as well as soils overlying meta-dacitic and mafic-ultramafic rocks, have 30<sup>th</sup> percentile values of 939, 799 and 1039 ppb respectively, in comparison to 194-305 ppb for all other subgroups. The data was therefore levelled in order to prevent the Ni anomaly map from simply reflecting the soil type and/or underlying bedrock composition. The resultant bedrock-levelled Ni anomalies occur across the meta-dacite to Timiskaming and Timiskaming-Gowganda contact zones (Figure 12B). There are also a few point anomalies of extremely high values within the meta-dacitic and mafic-ultramafic units. Levelling by soil type yields more Ni anomalies overlying meta-dacitic and ultramafic-mafic bedrock.

Copper response ratios are generally low, with just four of the 311 samples returning a response ratio (RR)  $\geq$ 10. Two of these samples occur just west of the United open pit, near four other samples that have response ratios of 7-10 (Figure 12C).

Universal response ratios for silver are <10 whereas levelling by soil type and underlying bedrock yields seven ratios  $\geq$ 10. Five of these samples occur along and just north of the largest mafic-ultramafic intrusion on the Property whereas the two other samples occur around the contact between Timiskaming and meta-dacitic rocks (Figure 12D). The latter two samples are associated with a number of other samples that have response ratios of 4-10.

The range of Pb response ratios is somewhat similar to Ag, with just two of the universal response ratios exceeding 10 and just three of those levelled by soil type. Each of these elevated ratios forms a point anomaly that, in this case, is nowhere near the others (Figure 12E).

Zinc concentrations were levelled by soil type and bedrock to limit the predominance of anomalies in brown soils and in those soils that overlie Gowganda and meta-dacitic bedrock. The levelled anomalies still predominate over these bedrock units but extend over Timiskaming bedrock as well (Figure 12F).

Arsenic response ratios include 39 samples that have values ≥10. These samples define fairly broad areas of As-enrichment over the contacts between the Gowganda and Timiskaming metasedimentary units as well as Timiskaming and meta-dacitic rocks (Figure 12G). A smaller anomaly in the north part of the Property trends northwest, across the meta-dacite and into felsic metavolcanic.

Molybdenum values are generally low, ranging from <2 pp to a maximum of 33 ppb, and returned only one sample with a response ratio ≥10, even in the levelled data. This one anomalous sample occurs on the eastern-most line (Figure 12H) and in association with several other high response ratios (Au, Cu, Pb, Zn, As, Co, Cr, Sb) on the so-called Lakoma East Gold anomaly (see Section 10.1.5).

Tungsten concentrations also show a narrow range, from <0.5 ppb to 5 ppb, and returned just three samples with a response ratio  $\geq$ 10. All three of these samples occur over the Gowganda metasedimentary rocks and the highest single value occurs within the Lakoma East anomaly.

Antimony response ratios that are  $\geq 10$  (N = 16) can be strung together into two anomalies that show a strong spatial association with the As-enrichment along the Timiskaming-Gowganda and Timiskaming to meta-dacite contact zones (Figure 12I). This spatial association is consistent with the strong correlation of As-Sb and the general enrichment of Sb within the two metasedimentary units (see Section 10.2).

Even though 100% of cobalt analyses are above the detection limit the range in values is relatively narrow (mostly <10 to 700 ppb) so that there are just seven samples with response ratios  $\geq$ 10 times the background value of 59 ppb. Five of these samples cluster together in two anomalies over meta-dacitic and Timiskaming metasedimentary rock, whereas the other two form point anomalies over meta-dacitic and Gowganda bedrock (Figure 12J).

The 30<sup>th</sup> percentile for Cr is 200 ppb for soils overlying meta-dacite and mafic-ultramafic intrusive, compared to half that for soils overlying the two metasedimentary units. Hence, Cr contents were levelled in order to account for what appears to be a strong bedrock control. This levelling minimizes the broad Cr anomalies over the igneous rocks to just a few point anomalies and produces two long and narrow anomalous Cr zones over the Gowganda Formation (Figure 12K).

Barium values also show a remarkably narrow range (100-4000 ppb), with all samples above detection but with no samples exceeding response ratios of 10 (Figure 12L).



## 10.1.5 Multi-element and selected point anomalies

This section describes all of the MMI anomalies defined by the 2015 work program and classifies them in terms of their prospectivity for orogenic gold, magmatic Ni-Cu-PGE and "other" mineralization (Figure 13). Within each subgroup, the anomalies are broadly organized by their "prospectivity", comprising a somewhat subjective combination of multi-element enrichment, size and relation to underlying bedrock units. The mean response ratios for selected elements within each of these anomalies are summarized in Table 10.

## Gold anomalies

The 2015 program identified four multi-sample anomalies and two point anomalies that are prospective for orogenic gold mineralization. The largest of these is the "**Lloyd West Gold**" anomaly, which trends at 155° across meta-dacitic and ultramafic-mafic intrusive bedrock. The core of this anomaly consists of coincident Au-Ag-Cu-Ni-Zn enrichment whereas the northern and southern ends are enriched in Au-Ni  $\pm$  Cr. This anomaly measures 1.6 km along its long axis and ranges from 150-650 m in width, and also contains by far the most samples of the anomalies defined by the 2015 work (Table 10).

"Lakoma East Gold" is perhaps the most intriguing anomaly, occurring on the eastern-most sampling line and overlying what is regionally mapped as Gowganda Formation. This anomaly consists of four samples (Figure 13) with an average response ratio of nine for As-Cu-Mo-Pb-W-Zn (Table 10). Furthermore, gold-enrichment appears to extend directly west across two more sampling lines, forming a single-element gold anomaly that is 1.2 km long and 100 m wide (see Figure 12A).

The "Lloyd South Gold-Tellurium" anomaly consists of six consecutive samples on line 10+00W, with the northern-most two samples enriched in gold and the southern three in tellurium. The Au-Te association is a feature of several economic gold deposits in the area. Soil in this area also features prominent Ni-Co-Cr enrichment (Table 10).

"Lloyd North Gold" is a relatively large east-west trending anomaly, enclosing 14 samples and measuring 2.0 km in length and 150-200 m wide (Figure 13). Its core is enriched in Au-Ag-As-Zn-Sb and the flanks have anomalous Au  $\pm$  Ag. It appears to be centred on a "triple junction" between the Timiskaming, Gowganda and meta-dacite units. A weakness of this anomaly, however, is that each element is enriched along a different trend that just happens to intersect in the core.

**Point anomaly 2615567** lies at the very northern end of line 26+00E over top of Gowganda bedrock. This single sample shows an average response ratio of 16 for Au-As-Sb (Table 10). The last of the "orogenic gold" anomalies is **point anomaly 2615314**, which lies at the northern end of line 0+00W and just 15 m south of the property boundary. This point anomaly contains 0.5 ppb Au (response ratio = 10) but lacks enrichment in other pathfinders.

#### **Ni-Cu-PGE anomalies**

Six multi-sample and six point anomalies were identified that could be prospective for magmatic Ni-Cu-PGE mineralization. The most prospective of the multi-sample anomalies is the "Lloyd West Nickel" anomaly, which is broadly coincident with the highly prospective Lloyd West Gold anomaly. Lloyd West Nickel is the only anomaly that shows coincident Ni and Cu enrichment, and also contains elevated gold. It lies above the northwestern margin of the largest mafic-ultramafic intrusive body on the Property and just west of the Laurion drill hole that intersected 0.26% Ni and 0.22% Cr over 348.8 m.

The next most prospective anomaly is "**Lloyd South Nickel**", which is broadly coincident with the Au-Te anomaly of the same name. The Ni anomaly is developed over six consecutive samples towards the southern end of line 10+00W and shows coincident enrichment in Ni, Co and Cr. Response ratios average 30 for Ni, 7 for Co and 9 for Cr (Table 10), and is the only anomaly to show coincident highs in these elements.

The "Lloyd NW Arm Nickel" anomaly also shows significant overlap with the large Lloyd West Gold anomaly. This Ni anomaly trends roughly 120°-300° and is developed over meta-dacitic bedrock, more-or-less equidistant from ultramafic-mafic intrusions in all directions (Figure 13). The anomaly encloses five samples that show coincident enrichment in Ni and Cr, with average response ratios of 17 and 6 respectively (Table 10).



Та	ible 10: Cha	aracterist	ics and m	ean re	espon	se rati	os of	geoch	nemica	al anom	alies				
Anomaly Name	Samples	Size	Trend				r	Mea	n resp	onse ra	atio				
Anomaly Name	Jampies	(km2)	Trend	Ag	As	Au	Со	Cr	Си	Мо	Ni	Pb	Sb	W	Zn
	1	r	(	Gold a	noma	lies	n				n	n	r	I	n
Lloyd West Gold	27	0.607	155	2	2	7	2	5	4	1	11	1	1	3	2
Lakoma East Gold	4	0.070	070	1	16	7	3	3	15	7	2	6	5	8	6
Lloyd South Gold-Te	6	0.036	n/a	1	1	7	6	7	1	1	30	1	1	2	2
Lloyd North Gold	14	0.325	090	3	8	6	3	2	2	2	5	2	6	2	3
Pt 2615567 Gold	1	0.004	n/a	3	16	10	3	3	2	2	2	1	21	4	4
Pt 2615314 Gold	1	0.004	n/a	1	4	10	1	2	2	1	1	0	2	4	0
			Ni-	Cu-PG	E ano	malie	s								
Lloyd West Nickel	7	0.102	83.40	2	1	7	2	4	8	1	17	0	2	3	1
Lloyd South Nickel	6	0.038	n/a	1	1	3	7	9	1	2	30	1	2	3	4
Lloyd NW Arm Nickel	5	0.093	117.40	1	4	2	2	6	2	1	17	2	1	3	2
Trap Nickel	3	0.014	n/a	1	14	2	4	11	2	2	9	2	4	2	4
Lloyd North Nickel	8	0.180	72.50	2	18	5	5	4	3	2	16	1	15	3	4
Larry Nickel	3	0.038	129.30	2	6	2	3	5	3	1	6	3	4	3	3
Pt 2615289	1	0.032	138.00	0	1	1	2	6	1	1	70	0	1	3	1
Pt 2615387	1	0.003	n/a	2	4	1	3	13	2	1	36	1	1	2	2
Pt 2615224	1	0.002	n/a	1	1	1	2	6	1	1	23	0	1	1	1
Pt 2615481	1	0.004	n/a	2	6	1	7	17	2	2	7	2	4	8	6
Pt 2615311	1	0.002	n/a	0	14	1	4	2	5	1	32	1	20	1	5
Pt 2615233	1	0.002	n/a	2	6	4	0	3	1	3	10	3	3	4	4
			C	Other a	anom	alies									
Felsic Volcanic As-Fe	2	0.007	n/a	2	38	5	3	2	3	3	1	1	3	5	1
Marshall NW Zn-Te-Bi	4	0.026	n/a	1	4	1	4	5	1	1	6	4	2	2	12
Lloyd North Pb-Zn	7	0.087	n/a	2	2	1	1	1	1	2	1	7	3	2	15
Trap SW Zn	6	0.094	130	1	5	1	4	4	2	1	8	2	1	2	12

The "Trap Nickel" anomaly consists of three samples at the western end of Trap Lake, developed on a contact between an ultramafic-mafic intrusion and host meta-dacite (Figure 13). Ni contents within this anomaly are on the low end whereas the Cr and As concentrations are high (Table 10). The elemental association is somewhat suspicious, however, since magmatic processes would likely fractionate As away from Ni and Cr.

The "Lloyd North Nickel" anomaly is the largest of the multi-sample nickel anomalies and is broadly coincident with the Lloyd North Gold anomaly (Figure 13). It is west of southwest trending, 1.5 km long and an average of 100 m wide. Multi-element enrichment includes Ni-As-Sb with an average response ratio of 16 (table 10). This elemental association is atypical of magmatic enrichment. "Larry Nickel" is another low priority multi-sample anomaly and is interpreted to trend southwest along Larry Lake (Figure 13). This anomaly is defined by three samples that have average response ratios for six for both Ni and As (Table 10), which is weak relative to the other anomalies and also atypical of magmatic enrichment.

Point anomalies 2615289, 2615387 and 2615224 have Ni response ratios (RR) ranging from 23-70, as well as elevated Cr (RR = 6-13). Sample 2615289 (21300 ppb Ni) occurs above Timiskaming bedrock and along the same northwest trend as the Larry Ni anomaly. Samples 2615387 and 2615224 occur above metadacite and mafic-ultramafic intrusion respectively (Figure 13), and contain 11000 ppb and 9560 ppb Ni.



Point anomaly **2615481** contains elevated abundances of Ni-Cr-Co-As-Zn and occurs in soils overlying the Gowganda Formation (Figure 13), which is naturally enriched in all of these elements (see Section 10.2). The last of the "magmatic Ni-Cu-PGE" anomalies are samples **2615311** and **2615233**, which both shown enrichment in Ni-As as well as Sb in 2615311 (Table 10). Sample 2615311 occurs above Timiskaming bedrock, which also contains elevated Ni-As-Sb (see Section 10.2), whereas 2615233 overlies meta-dacite.

#### Other anomalies

There are also four multi-sample anomalies that may be related to "other" forms of mineralization. The most notable of these is the "**Felsic As-Fe**" anomaly, which is formed by the only two samples that were taken over top of felsic metavolcanic unit (Figure 13). This anomaly contains exceptionally high As with an average response ratio of 38 (Table 10) in addition to highly anomalous Fe and weakly anomalous Au-Bi-Cu-Mo. None of these elements are particularly characteristics of felsic metavolcanic in general, except for Mo perhaps, and may therefore reflect an underlying hydrothermal enrichment.

The "Marshall NW Zn-Te-Bi" anomaly is a multi-sample anomaly enclosing four samples that lies along the southwestern margin of the Property (Figure 13). It occurs within soils overlying meta-dacite and consists of coincident Zn-Bi-Te enrichment, in addition to weakly anomalous As-Co-Cr-Ni (Table 10). The Zn-Bi-Te-As suite could be reflective of hydrothermal enrichment. The "Lloyd North Pb-Zn" anomaly occurs above Gowganda bedrock (Figure 13) and consists of broadly coincident Zn and Pb anomalies, with average response ratios of 15 and 7 respectively, in addition to weakly anomalous Bi-Sb (Table 10). Lastly, the "Trap SW Zinc" anomaly occurs to the southwest of Trap Lake, in between the Trap and Lloyd NW Arm nickel anomalies (Figure 13). The Zn anomaly encloses six samples with an average response ratio of 12 for Zn and eight for Ni, and also shows weakly anomalous As-Co-Cr (Table 10).

#### 10.2 Rock Geochemistry

A total of 37 samples were submitted for geochemical analysis. The geological characteristics of these samples were summarized previously in Table 6. This section summarizes the geochemistry for each of the ten geological groupings.

A total of 11 samples of Tisdale meta-dacite were collected, five of which lack veining/alteration, three of which contain 5-10% quartz + carbonate veins and three of which are flooded with quartz and carbonate. Geochemical analyses, however, returned no anomalous precious or base metal values for any of these 11 samples, with Ag ranging from 0.01-0.25 ppm, Cu from 11-98 ppm and 10/11 samples containing <dl for Au. The more strongly veined and altered samples tend only towards higher As, Ca and Na abundances than the less altered samples (Table 11) whereas concentrations of most pathfinders tend to be lower (e.g. Co, Cr, Cu, Fe, Mo, Ni, S, Sb, Zn). This suggests that quartz + carbonate veins and floods consist almost entirely of just quartz, carbonate and, possibly, albite, and actually dilute the original metal contents of the host rocks rather than enriching it.

Rock type	Ν	Ag	As	Au (ppb)	Со	Cr	Cu	Мо	Ni	Pb	Sb	Zn
Qtz-cb vein in Gowganda	2	0.01	4	<5	13.6	55	1.6	1.65	41.8	1.3	0.49	36
Gowganda	2	0.05	9	<5	43.3	394	73.4	0.51	333.0	2.3	1.24	111
Matachewan gabbro	1	0.11	2	<5	52.7	64	147.0	0.69	68.6	5.3	0.1	135
Timiskaming	14	0.07	18	<5	44.5	509	74.5	0.53	391.9	2.8	1.93	107
Ultramafic	3	0.08	1	<5	66.8	1250	65.7	0.83	894.3	1.7	0.14	37
Altered UM boulder	1	0.09	264	292	41.7	67	24.3	1.15	216.0	<0.5	1.57	60
Qtz-cb alt meta-dacite	3	0.10	5	<5	6.0	1	30.3	0.32	1.7	1.9	0.09	41
Meta-dacite + 5-10% vns	3	0.05	3	<5	16.3	45	38.7	1.06	46.9	3.0	0.09	72
Meta-dacite	5	0.07	2	9	34.2	235	66.8	1.30	153.4	2.1	0.28	98

 Table 11: Mean abundances of select elements from rock samples (in ppm unless noted)

Abbreviations: alt = altered, cb = carbonate, Qtz = quartz, vn = vein, w = with



Fourteen samples were collected from the Timiskaming metasedimentary unit. Geochemical analyses returned no anomalous precious or base metal values for any of these samples, with Ag ranging from 0.03-0.15 ppm, Cu from 53-80 ppm and 13/14 samples containing <dl for Au (Table 11). These assays did lend some insight into the geochemistry of typical pathfinders however, with Timiskaming rocks showing high background values of As-Cr-Ni-Sb that could be generating false "hydrothermal" anomalies in overlying soils.

Four samples of ultramafic rocks were collected, three of which were taken from outcrop and one from a boulder. The three outcrop samples were taken during an attempt to trace structures that could be related to the Bjorkman Vein. None of these samples contain anomalous precious or base metal values (Table 11). Comparison to meta-dacitic rocks indicates a lack in all elements that could indicate a significant hydrothermal system.

Perhaps the most interesting sample taken in the 2015 work program is a boulder of light greenishgrey, very hard, fine-grained ultramafic; possibly comprise a strongly altered komatiite. This boulder exhibits several of the same geochemical characteristics as the three ultramafic samples taken from outcrop including low Al, Ga, Na, K, Rb, Sr, Ti and Zr - but also shows some important differences, including a program-high 0.29 g/t Au in addition to elevated As, Ca (21.1%), Mn and Ab. Chromium contents are very low so it is unlikely that the field identification of fuchsite was correct, unless this mineral is not dissolved in a fouracid digestion.

Two samples of the Gowganda pebbly quartzite were also collected, with assays returning uniformly low precious and base metal contents. The abundances of major and trace elements are fairly similar to the Timiskaming samples, however, suggesting that all soils taken over top the metasedimentary units have the possibility of being enriched in As-Cr-Ni-Sb.

The last two samples described here were taken from a quartz + ankerite vein that cut a subcrop of Gowganda Formation just south of Larry Lake. Assay results returned only very low precious or base metal values. Relative to the host Gowganda rocks, the quartz + carbonate vein is depleted in all elements except Ba, K, Mo, Rb and Zr.

#### **11.0 CONCLUSIONS AND RECOMMENDATIONS**

The 2015 MMI soil sampling program was used to define 22 geochemical anomalies, seven of which are considered prospective for follow-up work (Table 12). The area of overlap between the **Lloyd West gold** and **Lloyd West nickel** anomalies is considered among the most prospective areas. The soils in this area are enriched in Ni-Cu-Au and overlie a large mafic-ultramafic intrusion emplaced into meta-dacitic host rocks. The centre of this anomaly lies just 200 m west of the Laurion drill hole that returned 0.26% Ni and 0.22% Cr over 348.8 m and 700 m west of the Bjorkman Vein. Structural interpretation suggests that this anomaly could lie across two east-west splays off the LLCDZ and near their intersection within a significant north-south trending structure.

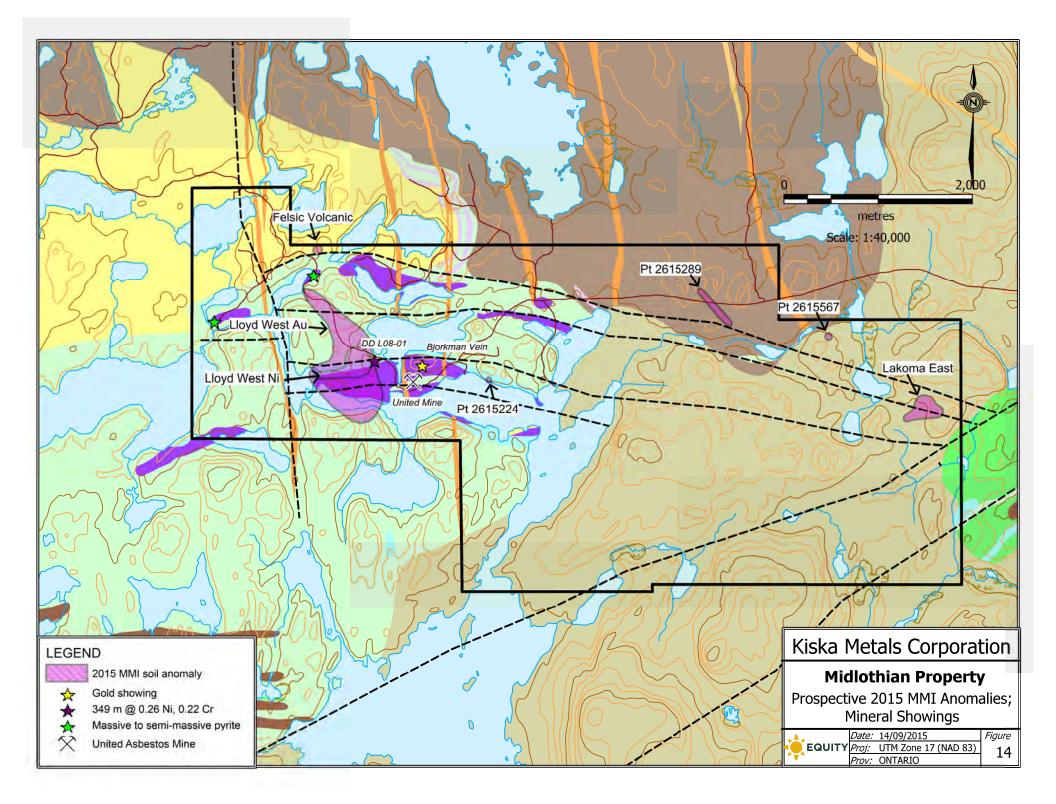
Another prospective area is the **Lakoma East** anomaly, which is a strong multi-element anomaly overlying the trace of an LLCDZ splay and Gowganda bedrock in the eastern part of the Property. Even when the lithogeochemical enrichments of Gowganda bedrock are removed (i.e. As, Sb), Lakoma East still comprises a prominent Au-Cu-Mo-Pb-W anomaly that cannot be solely explained by bedrock composition. A possible explanation is that this poorly exposed area is, in fact, underlain by Archean rocks.

The **Felsic Metavolcanic As-Fe** anomaly should also be followed up. The multi-element enrichment of this small anomaly is markedly distinct from typical felsic volcanic chemistry, and suggests significant (hydrothermal?) enrichment in As-Fe ± Au-Bi-Cu-Mo. The geological setting is prospective for VMS mineralization and the elemental association could be interpreted as consistent with VMS.

Several Point anomalies are also worth following up (Table 13). The most prominent of these are samples **2615289** and **2615224**, the former containing an exceptionally high 21300 ppb Ni and the latter containing high Ni and weak Cr over top of a mafic-ultramafic intrusion. Point anomaly **2615567** is marked by high concentrations of Au-As-Sb, although the strength of this anomaly is somewhat tempered by its occurrence over metasedimentary bedrock with high background abundances of As-Sb.

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Name	Туре	Elements	Comments
Lloyd W Au + Lloyd W Ni	Multi-sample	Au, Cu, Ni	Large anomaly near edge of ultramafic intrusion, Bjorkmann Vein
Lakoma East	Multi-sample	Au, As, Cu, Mo, Pb, Zb, W, Zn	Strong multi-element anomaly over LLCDZ splay
Felsic Volcanic	Multi-sample	As, Fe, Au, Bi, W	Over felsic volcanic
2615289	Point	Ni, Cr	Very high single Ni value (21300 ppb)
2615224	Point	Ni, Cr	On margin of mafic-ultramafic intrusion
2615567	Point	Au, As, Sb	Strong multi-element point anomaly

Results from the geological prospecting program suggest that north-northwest trending structures (140°-170°) could be prospective and found some evidence for the interpreted east-west splays off the LLCDZ. Results from the sampling program were mostly negative, however, with all samples containing quartz + carbonate veining and alteration actually returning lower precious and base metal values than those that didn't. The positive assay result came from a boulder of strongly (carbonate?) altered ultramafic that returned 0.29 g/t Au.

Future work should focus on following up the soil anomalies in Table 12. Recommended follow-up work for the multi-sample anomalies includes ground-based IP/Res surveying and additional geological prospecting. The point anomalies should be examined through geological prospecting and, possibly, collection of a few more soil samples in the immediate area.

Respectfully submitted,

Ron Voordouw EQUITY EXPLORATION CONSULTANTS LTD. Vancouver, British Columbia September 20, 2015



**Appendix A: References** 



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Appendix B: Claim Data



Project	NTS Map Sheet	Title Number	Title Type	Township/ Area	Registration Date	Expiry Date	Title Holder	Area (ha)	No Units
Midlothian	41 P14	4220776	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	129.2	10
Midlothian	41 P14	4220777	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	222.0	15
Midlothian	41 P14	4220778	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	190.7	15
Midlothian	41 P14/15	4220779	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	229.9	15
Midlothian	41 P15	4220780	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	219.3	15
Midlothian	41 P15	4220781	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	246.7	15
Midlothian	41 P15	4220782	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	247.1	15
Midlothian	41 P15	4220785	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	267.4	8
Midlothian	41 P15	4220786	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	125.4	12
Midlothian	41 P15	4220787	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	265.9	16
Midlothian	41 P15	4220788	Mining	Midlothian (G-3684)	July 9, 2007	July 8, 2016	Rimfire Minerals Corporation (100%)	254.8	16
								2398.4	152.0

Appendix C: Statement of Expenditures



#### STATEMENT OF EXPENDITURES

Midlothian Project July to August 2015

#### **PROFESSIONAL FEES AND WAGES:**

Laurent Janssen, S	Senior Sampler		
Christing Vandantil	11.00 days @ \$325/day	\$ 3,575.00	
Chinstina vanuentii	laart, Exploration Assistant 10.00 days @ \$400/day	4,000.00	
Ron Voordouw, P.0		40.457.00	
Tyler Woyiwada, S	14.51 days @ \$700/day enior Sampler	10,157.00	
	10.00 days @ \$325/day	3,250.00	
Agata Zurek, GIS	6.00 hours @ \$75/hour	450.00	
Clerical	-		- / - /
	5.13 hours @ \$75/hour	 385.00	\$ 21,817.00
EQUIPMENT RENTALS:			
Field Computers	18.00 days @ \$40/day		720.00
	10.00 days @ \$40/day		720.00
EXPENSES:			
Chemical Analyses Materials and Supp		\$ 13,662.00 669.73	
Plot Charges	JIES .	44.44	
Camp Food		1,002.34	
Meals		340.25	
Accommodation		1,835.00	
Taxis and Airporter	S	170.24	
Parking		121.77	
Truck Rental (Non- Automotive Fuel	Equity)	605.68 241.97	
Busfare		78.43	
Airfare		3,180.42	
Freight		104.68	
Radio Rental (Non-	Equity)	108.00	
Expediting		391.24	
Report (estimated)		 5,000.00	27,556.19
SUB-TOTAL:			\$ 50,093.19
PROJECT SUPERVISION C	HARGES:		 6,011.18
TOTAL:			\$ 56,104.37

Appendix D: Soil Sample Descriptions



Sample ID	UTM Easting	UTM Northing	QAQC	Primary Sample	Site Drainage	Sample Moisture	Horizon Sampled	Charcoal Present?	Sample Colour	Depth to Water (cm)	Depth to Sample (cm)	Substrate Type	Contamination	Vegetation	Date	Comments	Sampler	Photo
2615201	500400	5303562			Dry	Dry	В	No	Grey brown	N/A	30	Silt	Possible	Forest	25/06/2015		TW/CV	Yes
2615202	500397	5303614			Dry	Dry	В	No	Brown	N/A	30	Silt	Possible	Forest	25/06/2015		TW/CV	Yes
2615203	500395	5303663			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615204	500394	5303704			Dry	Moist	В	No	Dark brown	N/A	45	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615205	500403	5303768			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615206	500408	5303812			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615207	500405	5303863			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615208	500398	5303906			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615209	500402	5304052			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615210	500402	5304052	FD	2165209	Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615211	500403	5304108			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615212	500398	5304167			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615213 2615214	500402 500401	5304207 5304258			Dry Dry	Dry	B	No No	Brown Rusty brown	N/A N/A	35 30	Silt Silt	None None	Forest	25/06/2015 25/06/2015		TW/CV TW/CV	Yes Yes
2615214	500401	5304258			Dry	Dry Dry	В	NO	Brown	N/A N/A	30	Silt	None	Forest Forest	25/06/2015		TW/CV	Yes
2615215	500402	5304313			Dry	Moist	B	No	Grey	N/A N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615217	500333	5304300			Dry	Dry	B	No	Grey brown	N/A N/A	40	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615218	500403	5304415			Dry	Dry	B	No	Brown	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615219	500401	5303264			Dry	Dry	B	No	Brown	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615220	500401	5505204	Blank		Diy	Diy	U	NO	biowii	1,7,7	50	5110	Hone	TOTEST	25/06/2015		TW/CV	N/A
2615220	500991	5303018	Bidint		Dry	Drv	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615222	500403	5303163			Dry	Moist	B	No	Grey	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615223	500391	5303108			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615224	500404	5303067			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	25/06/2015		TW/CV	Yes
2615225	500999	5303059			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615226	501011	5303115			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615227	501011	5303147			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615228	501020	5303192			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615229	501010	5303264			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615230	501010	5303264	FD	2165229	Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615231	501001	5303296			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615232	501001	5303353			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615233	501002	5303404			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615234	500997	5303449			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615235	500996	5303659			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615236	501003	5303708			Dry	Dry	В	No	Grey	N/A	30	Silt	Possible	Forest	26/06/2015		TW/CV	Yes
2615237	501001	5303758			Dry	Dry	В	No	Grey	N/A	30	Silt	Possible	Forest	26/06/2015	Old River bed? Not natural?	TW/CV	Yes
2615238	500999	5303810			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015	Old River bed? Not natural?	TW/CV	Yes
2615239	501798	5304473			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615240			Blank												26/06/2015		TW/CV	N/A
2615241	501796	5304414			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615242	501795	5304356			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615243	501796	5304314			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615244	501794	5304262			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615245	501802	5304210			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615246	501803	5304169			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615247	501795	5304103			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615248	501805	5304060			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615249	501786	5304008			Dry	Moist	В	No	Grey brown	N/A	40	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615250	501786	5304008	FD	2165249	Dry	Moist	В	No	Grey brown	N/A	40	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615251	501804	5303957			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615252	501798	5303914			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615253	501794	5303867		L	Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes

Sample ID	UTM Easting	UTM Northing	QAQC	Primary Sample	Site Drainage	Sample Moisture	Horizon Sampled	Charcoal Present?	Sample Colour	Depth to Water (cm)	Depth to Sample (cm)	Substrate Type	Contamination	Vegetation	Date	Comments	Sampler	Photo
2615254	501793	5303813			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615255	501791	5303752			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615256	501798	5303715			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615257	501786	5303663			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615258	501813	5303604			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	26/06/2015		TW/CV	Yes
2615259	501805	5303555			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615260			Blank												27/06/2015		TW/CV	N/A
2615261	501793	5303507			Dry	Dry	В	No	Grey brown	N/A	40	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615262	501807	5303457			Dry	Dry	В	No	Grey brown	N/A	35	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615263	501805	5303409			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615264	501798	5303361			Dry	Dry	В	No	Grey brown	N/A	35	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615265	501792	5303298			Moist	Moist	В	No	Brown	N/A	40	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615266	502792	5304459			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615267	502796	5304410			Dry	Dry	В	No	Rusty brown	N/A	40	Silt	Possible	Forest	27/06/2015		TW/CV	Yes
2615268	502797	5304313			Dry	Dry	В	No	Dark brown	N/A	30	Silt	Possible	Forest	27/06/2015		TW/CV	Yes
2615269	502794	5304271		2645260	Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615270	502794	5304271	FD	2615269	Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615271	502803	5304206			Dry	Dry	В	No	Grey brown	N/A	35	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615272	502802	5304155			Dry	Dry	В	No	Rusty brown	N/A	40 30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615273	502806 502810	5304112			Dry	Dry	B	No	Brown	N/A		Silt	None	Forest	27/06/2015		TW/CV	Yes
2615274 2615275	502810	5304054 5304017			Dry	Dry	B	No No	Brown	N/A N/A	35 35	Silt Silt	None	Forest	27/06/2015 27/06/2015		TW/CV TW/CV	Yes Yes
2615275	502801	5303955			Dry Dry	Dry Dry	B	No	Brown Brown	N/A N/A	30	Silt	None None	Forest Forest	27/06/2015		TW/CV	Yes
2615276	502802	5303884			Dry	Dry	В	No	Grey brown	N/A N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615277	502803	5303059			Dry	Dry	B	No	Brown	N/A N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615279	502803	5303108			Dry	Dry	B	No	Brown	N/A N/A	35	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615280	502757	5505100	Blank		Diy	Biy		110	DIOWIN	14/7		5.11	None	Torest	27/06/2015		TW/CV	N/A
2615281	502802	5303158	Bidint		Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615282	502804	5303202			Dry	Dry	B	No	Brown	N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615283	502788	5303274			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615284	502795	5303308			Dry	Dry	B	No	Grey brown	N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615285	502800	5303562			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615286	502791	5303611			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615287	502804	5303657			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	27/06/2015		TW/CV	Yes
2615288	502792	5303714			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	Possible	Forest	27/06/2015		TW/CV	Yes
2615289	502794	5303858			Dry	Dry	В	No	Grey	N/A	30	Silt	Possible	Forest	27/06/2015		TW/CV	Yes
2615290	502794	5303858	FD	2615289	Dry	Dry	В	No	Grey	N/A	30	Silt	Possible	Forest	27/06/2015		TW/CV	Yes
2615291	499000	5303423			Moist	Moist	В	No	Grey	N/A	30	Slity clay	None	Forest	28/06/2015		TW/CV	Yes
2615292	498990	5303477			Dry	Dry	В	No	Grey	N/A	35	Slity clay	None	Forest	28/06/2015		TW/CV	Yes
2615293	498997	5303523			Dry	Moist	В	No	Grey	N/A	40	Slity clay	None	Forest	28/06/2015		TW/CV	Yes
2615294	498999	5303577			Dry	Moist	В	No	Grey brown	N/A	40	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615295	498995	5303626			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615296	499004	5303681			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615297	498999	5303721			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615298	499007	5303776			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615299	498995	5303826			Dry	Dry	В	No	Dark brown	N/A	35	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615300			Blank												28/06/2015		TW/CV	N/A
2615301	501002	5303917			Dry	Dry	В	No	Brown	N/A	35	Silt	None but 10m from the road	Forest	25/06/2015		IJ	Yes
2615302	500992	5303960			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	25/06/2015		IJ	Yes
2615303	501001	5304020			Poor	Wet	A and B	Yes	Dark brown	30	35	Silt + organics	None	Forest	25/06/2015		IJ	Yes
2615304	501002	5304058			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	25/06/2015		IJ	Yes
2615305	500998	5304109			Dry	Dry	В	No	Rusty brown	N/A	40	Silt	None	Forest	25/06/2015		IJ	Yes
2615306	500998	5304156			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	25/06/2015		IJ	Yes

Sample ID	UTM Easting	UTM Northing	QAQC	Primary Sample	Site Drainage	Sample Moisture	Horizon Sampled	Charcoal Present?	Sample Colour	Depth to Water (cm)	Depth to Sample (cm)	Substrate Type	Contamination	Vegetation	Date	Comments	Sampler	Photo
2615307	501003	5304211			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	25/06/2015		IJ	Yes
2615308	500998	5304260			Dry	Moist	В	No	Grey brown	N/A	40	Silt	None	Forest	25/06/2015		IJ	Yes
2615309	500999	5304309			Dry	Dry	В	No	Grey brown	N/A	40	Silt	None	Forest	25/06/2015		IJ	Yes
2615310	500999	5304309	FD	2615309	Dry	Dry	В	No	Grey brown	N/A	40	Silt	None	Forest	25/06/2015		IJ	Yes
2615311	500997	5304415			Dry	Dry	A and B	No	Grey brown	N/A	30	Silt	None but 10m from the road	Forest	25/06/2015		IJ	Yes
2615312	500998	5304360			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	25/06/2015		IJ	Yes
2615313	500996	5304459			Dry	Dry	В	No	Brown	N/A	45	Silt	None	Forest	25/06/2015	+ - 10m on the GPS	IJ	Yes
2615314	501398	5304458			Moist	Moist	В	No	Grey	N/A	35	Silt	None	Forest	26/06/2015		IJ	Yes
2615315	501401	5304410			Dry	Dry	В	No	Grey brown	N/A	35	Slity clay	None	Forest	26/06/2015		IJ	Yes
2615316	501400	5304360			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	26/06/2015		IJ	Yes
2615317	501411	5304308			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	26/06/2015		IJ	Yes
2615318	501399	5304257			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	26/06/2015		IJ	Yes
2615319	501401	5304211			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	26/06/2015		IJ	Yes
2615320			Blank												26/06/2015		IJ	N/A
2615321	501398	5304163			Poor	Wet	В	No	Brown	35	45	Silt	None	Forest	26/06/2015		IJ	Yes
2615322	501404	5304011			Dry	Dry	В	No	Brown	N/A	50	Silt	None	Forest	26/06/2015		IJ	Yes
2615323	501400	5303962			Dry	Dry	A and B	No	Grey brown	N/A	35	Silt	None	Forest	26/06/2015		IJ	Yes
2615324	501400	5303901			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	Possible	Forest	26/06/2015		IJ	Yes
2615325	501400	5303861			Moist	Moist	В	No	Grey	N/A	40	Silt	None	Forest	26/06/2015		IJ	Yes
2615326	501391	5303819			Moist	Moist	В	No	Grey brown	N/A	30	Silt	None	Forest	26/06/2015		IJ	Yes
2615327	501404	5303760			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	26/06/2015		IJ	Yes
2615328	501400	5303709			Dry	Dry	В	No	Rusty brown	N/A	45	Silt	None	Forest	26/06/2015		IJ	Yes
2615329	502198	5303964			Dry	Dry	В	No	Brown	N/A	30	Silt	Possible	Forest	26/06/2015		IJ	Yes
2615330	502198	5303964	FD	2615329	Dry	Dry	В	No	Brown	N/A	30	Silt	Possible	Forest	26/06/2015		IJ	Yes
2615331	502198	5304013			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	26/06/2015		IJ	Yes
2615332	502197	5304070			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	26/06/2015		IJ	Yes
2615333	502198	5304112			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	26/06/2015		IJ	Yes
2615334	502196	5304166			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	26/06/2015		IJ	Yes
2615335	502200	5304206			Dry	Dry	В	No	Grey	N/A	40	Silt	None	Forest	27/06/2015		IJ	Yes
2615336	502201	5304259			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	27/06/2015		IJ	Yes
2615337	502202	5304309			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	27/06/2015		IJ	Yes
2615338	502197	5304359			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	27/06/2015		IJ	Yes
2615339	502201	5304409			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	27/06/2015		IJ	Yes
2615340			Blank												27/06/2015		IJ	N/A
2615341	502205	5304460			Dry	Dry	В	No	Rusty brown	N/A	40	Silt	None	Forest	27/06/2015		IJ	Yes
2615342	502199	5303022			Dry	Moist	В	No	Grey	N/A	35	Slity clay	None	Forest	27/06/2015		IJ	Yes
2615343	502199	5303060			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	27/06/2015		IJ	Yes
2615344	502200	5303112		ļ	Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	27/06/2015		IJ	Yes
2615345	502200	5303162		ļ	Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	27/06/2015		IJ	Yes
2615346	502202	5303209		ļ	Dry	Dry	B	No	Grey brown	N/A	35	Silt	None	Forest	27/06/2015		IJ	Yes
2615347	502201	5303271		<u> </u>	Dry	Dry	A and B	No	Dark brown	N/A	35	Silt	None	Forest	27/06/2015		IJ	Yes
2615348	502198	5303309		ļ	Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	27/06/2015		IJ	Yes
2615349	502189	5303430		26452.55	Dry	Moist	В	No	Rusty brown	N/A	45	Silt	None	Forest	27/06/2015		IJ	Yes
2615350	502189	5303430	FD	2615349	Dry	Moist	В	No	Rusty brown	N/A	45	Silt	None	Forest	27/06/2015			Yes
2615351	498993	5303878		<u> </u>	Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615352	498993	5303919		<u> </u>	Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615353	499002	5304031		<u> </u>	Dry	Dry	В	No	Grey brown	N/A	50	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615354	498996	5304081		<u> </u>	Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615355	498977	5304107		<u> </u>	Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615356	499000	5304169		<u> </u>	Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615357	498585	5304460		<u> </u>	Moist	Moist	В	No	Grey brown	N/A	30	Slity clay	None	Forest	28/06/2015		TW/CV	Yes
2615358	498605	5304410		ļ	Moist	Moist	В	No	Grey brown	N/A	40	Slity clay	None	Forest	28/06/2015		TW/CV	Yes
2615359	498603	5304355	DL 1	ļ	Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615360	l		Blank	L	l	I	L	I			l	I		L	28/06/2015		TW/CV	N/A

Sample ID	UTM Easting	UTM Northing	QAQC	Primary Sample	Site Drainage	Sample Moisture	Horizon Sampled	Charcoal Present?	Sample Colour	Depth to Water (cm)	Depth to Sample (cm)	Substrate Type	Contamination	Vegetation	Date	Comments	Sampler	Photo
2615361	498600	5304316		Sumple	Dry	Dry	B	No	Brown	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615362	498594	5304264			Dry	Dry	В	No	Grey brown	N/A	30	Slity clay	Possibly	Forest	28/06/2015		TW/CV	Yes
2615363	498603	5304211			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615364	498598	5304155			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615365	498591	5304106			Dry	Dry	В	No	Grey	N/A	30	Slity clay	None	Forest	28/06/2015		TW/CV	Yes
2615366	498598	5304063			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615367	498603	5304016			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615368	498599	5303954			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615369	498605	5303902			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615370	498605	5303902	FD	2615369	Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615371	498600	5303861			Dry	Moist	В	No	Grey	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615372	498601	5303802			Dry	Moist	В	No	Grey	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615373	498602	5303764			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615374	498591	5303703			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615375	498598	5303666			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	28/06/2015		TW/CV	Yes
2615376 2615377	500406 500399	5302535 5302507			Dry	Dry	B	No	Grey	N/A N/A	30 30	Silt Silt	None	Forest	29/06/2015 29/06/2015		TW TW	Yes Yes
2615377	500399	5302507			Dry Dry	Dry	В	No No	Grey	N/A N/A	30	Silt	None None	Forest	29/06/2015		TW	Yes
2615378	500391	5302448			Dry	Dry Dry	В	NO	Grey Grey	N/A N/A	30	Silt	None	Forest Forest	29/06/2015		TW	Yes
2615379	500405	5502414	Blank		DIY	Diy	D	NU	Grey	N/A	50	311	NOTE	FUIESL	29/06/2015		TW	N/A
2615381	500401	5302213	DIalik		Dry	Drv	В	No	Grey	N/A	30	Silt	None	Forest	29/06/2015		TW	Yes
2615382	500401	5302215			Dry	Moist	B	No	Grey	N/A	30	Silt	None	Forest	29/06/2015		TW	Yes
2615383	500391	5302171			Dry	Dry	B	No	Grey	N/A	30	Silt	None	Forest	29/06/2015		TW	Yes
2615384	500404	5302005			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	29/06/2015	Out of sequence	TW	Yes
2615385	500398	5302052			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	29/06/2015	Out of sequence	TW	Yes
2615386	500393	5301897			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	29/06/2015	•	TW	Yes
2615387	498991	5302447			Dry	Dry	В	No	Grey	N/A	35	Silt	None	Forest	29/06/2015		TW	Yes
2615388	499006	5302490			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	29/06/2015		TW	Yes
2615389	499002	5302537			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	29/06/2015		TW	Yes
2615390	499002	5302537	FD	2615389	Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	29/06/2015		TW	Yes
2615391	498997	5302601			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	29/06/2015		TW	Yes
2615392	499004	5302643			Dry	Dry	В	No	Grey	N/A	30	Silt	None	Forest	29/06/2015		TW	Yes
2615393	498996	5302688			Dry	Dry	В	No	Grey	N/A	35	Silt	None	Forest	29/06/2015		TW	Yes
2615394	498992	5302716			Dry	Dry	В	No	Grey brown	N/A	40	Silt	None	Forest	29/06/2015		TW	Yes
2615395	503999	5302423			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615396	503999	5302472			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615397	504008	5302527			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615398	503996 503994	5302582			Dry	Dry	B	No	Rusty brown	N/A	30 30	Silt Silt	None	Forest	30/06/2015		TW/CV	Yes
2615399	503994	5302626	Blank		Dry	Dry	В	No	Brown	N/A	30	SIIL	None	Forest	30/06/2015		TW/CV TW/CV	Yes N/A
2615400 2615401	505001	5302574	DIGIIK		Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	30/06/2015 01/07/2015		LJ/RV	N/A Yes
2615401	505001	5302574			Dry	Dry	В	NO	Brown	N/A N/A	30	Silt	None	Forest	01/07/2015		LJ/RV LJ/RV	Yes
2615402	504997	5302525			Dry	Dry	B	No	Rusty brown	N/A	35	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615404	505002	5302475			Dry	Dry	B	No	Rusty brown	N/A	35	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615405	505011	5302376			Dry	Moist	B	No	Grey brown	N/A	35	Slity clay	None	Forest	01/07/2015		LJ/RV	Yes
2615406	504992	5302322			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615407	505003	5302322			Dry	Dry	B	No	Rusty brown	N/A	35	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615408	504994	5302225			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615409	504997	5302176			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615410	504997	5302176	FD	2615409	Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615411	504996	5302126			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615451	502214	5303593			Dry	Moist	В	No	Grey brown	N/A	35	Slity clay	None	Forest	27/06/2015		IJ	Yes
2615452	502200	5303615			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	27/06/2015		IJ	Yes
2615453	502200	5303659			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	27/06/2015		IJ	Yes
2615454	502197	5303712			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	27/06/2015		IJ	Yes

Sample ID	UTM Easting	UTM Northing	QAQC	Primary Sample	Site Drainage	Sample Moisture	Horizon Sampled	Charcoal Present?	Sample Colour	Depth to Water (cm)	Depth to Sample (cm)	Substrate Type	Contamination	Vegetation	Date	Comments	Sampler	Photo
2615455	502202	5303759			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	27/06/2015		IJ	Yes
2615456	498998	5303374			Dry	Dry	В	No	Brown	N/A	35	Silt	Possible	Forest	27/06/2015	Near the road	IJ	No
2615457	498999	5303323			Poor	Moist	В	No	Grey	45	50	Slity clay	None	Forest	27/06/2015		IJ	No
2615458	498999	5303274			Dry	Dry	В	No	Grey	N/A	45	Slity clay	None	Forest	27/06/2015		IJ	No
2615459	498999	5303224			Dry	Dry	В	No	Grey	N/A	45	Slity clay	None	Forest	28/06/2015		IJ	No
2615460			Blank												28/06/2015		IJ	N/A
2615461	499000	5303175			Dry	Dry	В	No	Grey brown	N/A	30	Silt	Possible	Forest	28/06/2015	Near the mine site	IJ	No
2615462	498987	5303130			Dry	Moist	В	No	Dark brown	N/A	55	Clay	Possible	Forest	28/06/2015	Near mine site, moved west	IJ	No
2615463	499004	5303025			Dry	Dry	В	No	Grey	N/A	55	Slity clay	None	Forest	28/06/2015	Near mine site, moved east	IJ	No
2615464	499002	5302910			Dry	Dry	В	No	Grey	N/A	35	Slity clay	Possible	Forest	28/06/2015	Near mine site, moved south	IJ	No
2615465	499001	5302877			Dry	Dry	В	No	Grey	N/A	45	Slity clay	None	Forest	28/06/2015		IJ	No
2615466	498595	5303001			Dry	Dry	B	No	Brown	N/A	35	Silt	None	Forest	28/06/2015		IJ	No
2615467	498610	5303069			Dry	Dry	B	No	Grey	N/A	35 45	Silt Silt	None	Forest	28/06/2015		IJ	No
2615468	498607	5303109			Dry	Dry	B	No	Brown	N/A	45 35	Silt	None	Forest	28/06/2015		L) L)	No
2615469 2615470	498602 498602	5303165	FD	2615469	Dry	Dry	B	No	Rusty brown	N/A N/A	35	Silt	None None	Forest Forest	28/06/2015 28/06/2015			No No
2615470	498602	5303165 5303208	FD	2015409	Dry Dry	Dry Dry	B	No No	Rusty brown Rusty brown	N/A N/A	35	Silt	None	Forest	28/06/2015		U U	NO
2615471	498600	5303208			Dry	Dry	B	No	Rusty brown	N/A N/A	45	Silt	None	Forest	28/06/2015		L L	No
2615472	498597	5303259			Dry	Dry	В	No	Rusty brown	N/A N/A	35	Silt	None	Forest	28/06/2015		U U	No
2615473	498604	5303310			Dry	Dry	B	No	Rusty brown	N/A N/A	30	Silt	None	Forest	28/06/2015		IJ	No
2615475	498615	5303414			Dry	Dry	B	No	Rusty brown	N/A	30	Silt	None	Forest	28/06/2015		L L	No
2615476	498602	5303455			Dry	Dry	B	No	Brown	N/A	30	Silt	None	Forest	28/06/2015		IJ	No
2615477	498599	5303508			Dry	Moist	B	No	Grey	N/A	45	Slity clay	None	Forest	28/06/2015		Ц	No
2615478	498604	5303558			Dry	Dry	B	No	Rusty brown	N/A	35	Silt	None	Forest	28/06/2015		IJ	No
2615479	498604	5303610			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	28/06/2015		L)	No
2615480			Blank		,	· ·				,					28/06/2015		IJ	N/A
2615481	500401	5301259	-		Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615482	500398	5301308			Dry	Dry	В	No	Grey brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615483	500399	5301361			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615484	500396	5301411			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615485	500404	5301461			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615486	500398	5301507			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615487	500399	5301561			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615488	500404	5301607			Dry	Dry	В	No	Grey brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615489	500399	5301660			Dry	Dry	В	No	Grey brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615490	500399	5301660	FD	2615489	Dry	Dry	В	No	Grey brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615491	500401	5301711			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615492	500399	5301764			Dry	Dry	В	No	Grey brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615493	500401	5301804			Moist	Moist	В	No	Grey brown	N/A	50	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615494	500405	5301859			Moist	Moist	В	No	Grey brown	N/A	45	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615495	498601	5302456			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615496	498594	5302501			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615497	498603	5302554			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615498	498598	5302600			Dry	Dry	В	No	Grey brown	N/A	40	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615499	498595	5302645			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615500			Blank											<u> </u>	29/06/2015		LJ/RV	N/A
2615501	498601	5302701			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	29/06/2015		LJ/RV	Yes
2615502	498595	5302745			Dry	Moist	В	No	Brown	N/A	40	Silt	None	Forest	29/06/2015	Base of a cliff	LJ/RV	Yes
2615503	503399	5302860			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	29/06/2015		IJ	Yes
2615504	503401	5302908			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	29/06/2015		IJ	Yes
2615505	503401	5302962			Dry	Dry	В	No	Rusty brown	N/A	40	Silt	None	Forest	29/06/2015		IJ	Yes
2615506	503399	5303011			Dry	Dry	В	No	Grey brown	N/A	35	Silt	None	Forest	29/06/2015	L	IJ	Yes

Sample ID	UTM Easting	UTM Northing	QAQC	Primary Sample	Site Drainage	Sample Moisture	Horizon Sampled	Charcoal Present?	Sample Colour	Depth to Water (cm)	Depth to Sample (cm)	Substrate Type	Contamination	Vegetation	Date	Comments	Sampler	Photo
2615507	503401	5303059			Dry	Dry	В	No	Rusty brown	N/A	40	Silt	None	Forest	29/06/2015		IJ	Yes
2615508	503401	5303107			Dry	Moist	В	No	Grey brown	N/A	45	Silt	None	Forest	29/06/2015		IJ	Yes
2615509	503398	5303162			Dry	Moist	В	No	Grey brown	N/A	40	Silt	None	Forest	29/06/2015		IJ	Yes
2615510	503398	5303162	FD	2615509	Dry	Moist	В	No	Grey brown	N/A	40	Silt	None	Forest	29/06/2015		IJ	Yes
2615511	503399	5303208			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	29/06/2015		IJ	Yes
2615512	503402	5303255			Dry	Dry	В	No	Rusty brown	N/A	45	Silt	None	Forest	29/06/2015		IJ	Yes
2615513	503400	5303451			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	29/06/2015		IJ	Yes
2615514	503403	5303504			Dry	Dry	В	No	Rusty brown	N/A	40	Silt	None	Forest	29/06/2015		IJ	Yes
2615515	503400	5303562			Dry	Dry	В	No	Rusty brown	N/A	40	Silt	None	Forest	29/06/2015		IJ	Yes
2615516	503404	5303619			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	29/06/2015	Moved South because of swamp	IJ	Yes
2615517	503401	5303660			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	29/06/2015		IJ	Yes
2615518	503395	5303709			Dry	Moist	В	No	Rusty brown	N/A	35	Silt	None	Forest	29/06/2015		IJ	Yes
2615519	504999	5303173			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615520			Blank												01/07/2015		LJ/RV	N/A
2615521	505001	5303134			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615522	504998	5303023			Moist	Moist	В	No	Grey brown	N/A	35	Slity clay	None	Forest	01/07/2015		LJ/RV	Yes
2615523	504999	5302974			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615524	504999	5302925			Moist	Moist	В	No	Grey brown	N/A	35	Slity clay	None	Forest	01/07/2015		LJ/RV	Yes
2615525	504999	5302875			Poor	Wet	В	No	Grey brown	40	45	Slity clay	None	Forest	01/07/2015		LJ/RV	Yes
2615526	504998	5302774			Poor	Moist	В	No	Grey brown	55	60	Slity clay	None	Forest	01/07/2015		LJ/RV	Yes
2615527	505011	5302720			Moist	Moist	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615528	505002	5302671			Poor	Moist	B	No	Grey brown	35	40	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615529	505008	5302621	FD	2645520	Dry	Dry	A and B	No	Grey brown	N/A	40	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615530 2615531	505008 503413	5302621 5304434	FD	2615529	Dry Dry	Dry	A and B A and B	No No	Grey brown Grey brown	N/A N/A	40 30	Silt Silt	None None	Forest Swamp	01/07/2015 30/06/2015		LJ/RV RV	Yes Yes
2615532	503413	5304434			Poor	Dry Wet	B	No	Grey brown	30	50	Silt	None	Swamp	30/06/2015		RV	Yes
2615533	503410	5304302			Dry	Dry	B	No	Grey brown	N/A	40	Silt	None	Forest	30/06/2015		RV	Yes
2615534	503394	5304307			Dry	Dry	A and B	No	Grey	N/A N/A	35	Silt	None	Forest	30/06/2015		RV	Yes
2615535	503393	5304202			Dry	Dry	B	No	Grey	N/A	40	Silt	None	Forest	30/06/2015		RV	Yes
2615536	503394	5304165			Dry	Dry	B	No	Grey brown	N/A	30	Silt	None	Forest	30/06/2015		RV	Yes
2615537	503402	5304100			Dry	Dry	B	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		RV	Yes
2615538	503400	5304060			Dry	Dry	B	No	Brown	N/A	40	Silt	None	Forest	30/06/2015		RV	Yes
2615539	503397	5304013			Dry	Dry	B	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		RV	Yes
2615540			Blank		,	,	_								30/06/2015		RV	N/A
2615541	503399	5303953			Dry	Moist	A and B	No	Grey	N/A	35	Silt	None	Forest	30/06/2015	Mostly B- with minor A- horizon	RV	Yes
2615542	503397	5303913			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		RV	No
2615543	502211	5303849			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	30/06/2015		RV	No
2615544	502202	5303812			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	30/06/2015		RV	No
2615545	502173	5303919			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	30/06/2015		RV	No
2615546	503416	5303859			Dry	Dry	В	No	Rusty brown	N/A	50	Silt	None	Forest	30/06/2015		RV	No
2615547	503391	5303804			Dry	Dry	В	No	Rusty brown	N/A	40	Silt	None	Forest	30/06/2015		RV	No
2615548	503399	5303760			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	30/06/2015		RV	Yes
2615549	504998	5303075			Dry	Dry	В	No	Rusty brown	N/A	40	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615550	504998	5303075	FD	2615549	Dry	Dry	В	No	Rusty brown	N/A	40	Silt	None	Forest	01/07/2015		LJ/RV	Yes
2615551	503999	5302676			Dry	Dry	В	No	Rusty brown	N/A	40	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615552	503993	5302781			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615553	503984	5302874			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615554	503997	5302919			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615555	504007	5302973			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615556	504001	5303022			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615557	504008	5303069			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615558	503991	5303123			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615559	503994	5303174			Dry	Dry	В	No	Rusty brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes

Committee ID	UTM	UTM		Primary	Site	Sample	Horizon	Charcoal	Comple Colom	Depth to	Depth to	Substrate	<b>6</b>	Manakatian	Dette	<b>6</b>	Commuter	Dhata
Sample ID	Easting	Northing	QAQC	Sample	Drainage	Moisture	Sampled	Present?	Sample Colour	Water (cm)	Sample (cm)	Туре	Contamination	Vegetation	Date	Comments	Sampler	Photo
2615560			Blank												30/06/2015		TW/CV	N/A
2615561	504001	5303226			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615562	503994	5303274			Dry	Dry	В	No	Brown	N/A	40	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615563	503993	5303310			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615564	504013	5303375			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615565	504008	5303418			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615566	503999	5303475			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615567	503998	5303518			Dry	Dry	В	No	Brown	N/A	35	Silt	None	Forest	30/06/2015		TW/CV	Yes
2615568	504604	5302875			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615569	504608	5302803			Dry	Moist	В	No	Dark brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615570	504608	5302803	FD	2615569	Dry	Dry	В	No	Dark brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615571	504603	5302769			Dry	Dry	В	No	Rusty brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615572	504599	5302730			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615573	504600	5302679			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615574	504605	5302634			Dry	Dry	В	No	Grey brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615575	504598	5302582			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615576	504605	5302534			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615577	504614	5302462			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615578	504605	5302429			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615579	504607	5302374			Dry	Dry	В	No	Dark brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615580			Blank												01/07/2015		TW/CV	N/A
2615581	504595	5302327			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615582	504604	5302282			Dry	Dry	В	No	Grey brown	N/A	35	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615583	504601	5302233			Dry	Dry	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes
2615584	504493	5303089			Dry	Moist	В	No	Brown	N/A	30	Silt	None	Forest	01/07/2015		TW/CV	Yes

Appendix E: Certificates of Analysis for Soil Samples



#### Certificate of Analysis Work Order : VC151536 [Report File No.: 0000012032]

Date: July 30, 2015

#### To: RON VOORDOUW EQUITY EXPLORATION CONSULTANTS LTD 200-900 WEST HASTINGS ST VANCOUVER BC V6C 1E5

P.O. No.: KSK-15-13\_01/2615201-2615284 Project No.: -Samples: 84 Received: Jul 9, 2015 Pages: Page 1 to 22 (Inclusive of Cover Sheet)

#### Methods Summary

No. Of Samples	Method Code
84	G_LOG02
84	GE_MMI_M

<u>Description</u> Pre-preparation processing, sorting, logging, boxing Mobile Metal ION standard package/ICP-MS

Storage: Pulp & Reject

REJECT STORAGE

STORE FOR 30 DAYS

Certified By Cam Chiang

Assistant Operations Manager

SGS Minerals Services Geochemistry Vancouver conforms to the requirements of ISO/IEC 17025 for specific tests as listed on their scope of accreditation which can be found at http://www.scc.ca/en/search/palcan/sgs

 Report Footer:
 L.N.R. = Listed not received n.a.
 I.S. = Insufficient Sample not received n.a.

 \*INF
 = Composition of this sample makes detection impossible by this method

 M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

 Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted

 Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

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Report File No.: 0000012032

	Element Method	Ag GE_MMI_M	AI GE_MMI_M	As GE_MMI_M	Au GE_MMI_M	Ba GE_MMI_M	Bi GE_MMI_M	Ca GE_MMI_M	Cd GE_MMI_M
	Det.Lim.	0.5		10 10	0.1	0L_10101_101 10	0.5	2	
	Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
2615201		10.4	71	20	0.3	490	<0.5	151	16
2615202		2.8	6	<10	0.3	250	<0.5	61	1
2615203		10.1	256	<10	0.2	380	<0.5	15	14
2615204		7.9	193	10	<0.1	500	<0.5	93	28
2615205		12.6	258	20	<0.1	790	<0.5	62	15
2615206		6.8	288	50	<0.1	1390	1.6	75	10
2615207		5.2	302	<10	<0.1	460	<0.5	11	8
2615208		2.4	325	50	<0.1	1550	1.2	68	22
2615209		11.8	79	<10	<0.1	420	<0.5	246	10
2615210		13.7	78	<10	<0.1	420	<0.5	250	10
2615211		4.9	372	50	<0.1	1180	1.1	17	11
2615212		2.7	269	30	<0.1	820	1.8	81	22
2615213		3.8	350	10	<0.1	400	<0.5	10	8
2615214		21.0	347	20	<0.1	930	<0.5	9	16
2615215		7.0	272	<10	<0.1	150	<0.5	<2	10
2615216		9.6	160	<10	0.1	1090	<0.5	135	3
2615217		5.1	295	<10	<0.1	490	0.5	11	6
2615218		5.1	323	20	<0.1	1770	1.5	34	10
2615219		10.2	402	80	<0.1	1640	2.3	33	25
2615220		0.8	7	<10	0.3	740	<0.5	85	2
2615221		26.9	262	<10	0.3	720	0.7	17	16
2615222		3.5	273	10	0.1	930	1.8	20	7
2615223		7.6	257	10	<0.1	870	<0.5	105	11
2615224		6.4	33	<10	<0.1	580	<0.5	95	7
2615225		14.0	255	<10	<0.1	530	<0.5	47	30
2615226		13.3	286	30	<0.1	1300	1.0	51	25
2615227		12.6	217	10	<0.1	680	<0.5	18	25 7
2615228		4.4	397	20	0.1	690	0.6	8	15
2615229		9.6	332	30	<0.1	1030	1.3	12	10
2615230		8.9	312	30	<0.1	840	1.1	9	9
2615231		6.5	319	10	<0.1	1460	0.7	13	
2615232		2.5	333	40	<0.1	820	1.4	20	10 7
2615233		8.0	322	30	0.2	530	1.3	42	16
2615234		29.1	348	20	<0.1	1060	0.5	27	7
2615235		31.5	300	60	<0.1	1420	0.9	73	11
2615236		3.8	92	<10	0.6	470	<0.5	127	3
2615237		10.6	23	30	0.6	380	<0.5	158	9
2615238		12.7	182	30	0.1	450	0.7	25	8
2615239		10.9	118	<10	<0.1	120	<0.5	19	
2615240		0.6	2	<10	0.1	710	<0.5	96	6 2

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	Element Method	Ag GE_MMI_M	AI GE_MMI_M	As GE_MMI_M	Au GE_MMI_M	Ba GE_MMI_M	Bi GE_MMI_M	Ca GE_MMI_M	Cd GE_MMI_M
	Det.Lim.	0.5	0E_10001_00	1010	0.1	10	0.5	0Ľ_IMIMI_M	1
	Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
2615241		12.6	253	<10	<0.1	320	<0.5	8	20
2615242		15.9	213	<10	<0.1	340	<0.5	16	10
2615243		8.6	260	<10	<0.1	450	<0.5	9	31
2615244		14.1	276	10	0.1	860	<0.5	26	16
2615245		13.1	245	<10	<0.1	470	<0.5	24	16
2615246		4.6	300	<10	<0.1	700	0.9	11	23
2615247		7.5	269	<10	<0.1	480	<0.5	10	13
2615248		13.1	288	<10	<0.1	360	<0.5	19	11
2615249		6.8	169	10	0.2	330	0.9	93	5
2615250		6.0	201	20	<0.1	370	1.0	96	5 5
2615251		7.7	146	<10	0.1	540	<0.5	221	11
2615252		18.5	148	<10	1.2	370	<0.5	89	6
2615253		12.6	291	10	<0.1	1190	1.0	44	15
2615254		8.8	296	<10	<0.1	720	1.1	7	14
2615255		4.9	378	<10	<0.1	520	<0.5	8	10
2615256		4.7	322	10	<0.1	780	<0.5	38	25
2615257		8.1	344	30	<0.1	1210	1.2	18	33
2615258		13.9	296	10	<0.1	1090	1.0	38	16
2615259		8.5	233	<10	<0.1	1680	<0.5	39	33
2615260		0.8	7	<10	<0.1	730	<0.5	86	2
2615261		2.2	334	<10	<0.1	720	0.9	<2	13
2615262		28.9	117	<10	0.2	730	<0.5	23	11
2615263		8.8	263	<10	<0.1	500	<0.5	<2	13
2615264		4.6	300	<10	<0.1	540	1.0	<2	9
2615265		2.5	323	10	<0.1	560	0.8	3	11
2615266		13.7	241	10	0.1	600	0.6	66	17
2615267		7.8	339	80	<0.1	690	1.8	17	6
2615268		5.8	347	50	<0.1	1000	3.0	52	20
2615269		10.6	359	20	<0.1	1010	1.2	49	30
2615270		10.1	326	30	<0.1	980	1.3	52	24
2615271		9.1	267	<10	0.1	400	0.6	29	4
2615272		2.9	262	<10	<0.1	420	<0.5	13	27
2615273		4.6	152	<10	<0.1	230	<0.5	40	11
2615274		4.5	237	10	<0.1	140	<0.5	7	10
2615275		9.4	268	<10	<0.1	450	<0.5	26	15
2615276		17.5	254	<10	<0.1	270	<0.5	17	37
2615277		32.8	138	<10	<0.1	440	<0.5	191	5
2615278		11.8	320	<10	<0.1	410	<0.5	12	10
2615279		9.9	250	80	0.1	590	<0.5	87	22
2615280		0.9	6	<10	<0.1	730	<0.5	98	2

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Elemen	t Ag	AI	As	Au	Ba	Bi	Ca	Cd
Method	GE_MMI_M							
Det.Lim	. 0.5	1	10	0.1	10	0.5	2	1
Units	s ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
2615281	5.8	264	40	<0.1	810	0.7	55	33
2615282	7.3	313	60	0.2	550	<0.5	52	15
2615283	12.2	305	30	<0.1	380	0.6	22	31
2615284	4.5	279	190	0.1	1530	3.5	102	16
*Rep 2615201	10.5	67	20	0.2	500	<0.5	152	17
*Rep 2615219	10.1	353	70	<0.1	1470	1.9	33	26
*Rep 2615231	6.9	356	10	<0.1	1490	0.5	22	12
*Rep 2615243	7.5	264	<10	<0.1	440	<0.5	9	30
*Rep 2615266	12.8	233	20	<0.1	600	0.8	62	14
*Rep 2615281	6.0	276	60	0.3	880	0.6	73	38
*Std AMIS0169	8.3	66	<10	0.3	990	<0.5	32	2
*Std MMISRM18	19.3	24	10	7.2	140	<0.5	188	76
*BIk BLANK	<0.5	<1	<10	<0.1	<10	<0.5	<2	<1
*BIk BLANK	<0.5	<1	<10	<0.1	<10	<0.5	<2	<1
*BIk BLANK	<0.5	1	<10	<0.1	<10	<0.5	<2	<1
*BIk BLANK	<0.5	1	<10	<0.1	<10	<0.5	2	<1

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	Element Method	Ce GE_MMI_M	Co GE_MMI_M	Cr GE_MMI_M	Cs GE_MMI_M	Cu GE_MMI_M	Dy GE_MMI_M	Er GE_MMI_M	Eu GE_MMI_M
	Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
	Units	ppb							
2615201		103	110	200	2.0	1070	5.6	2.4	1.9
2615202		31	450	300	0.7	270	12.0	5.8	4.8
2615203		169	55	200	5.8	360	15.7	7.5	5.2
2615204		150	47	300	3.5	710	15.9	7.2	4.5
2615205		441	97	200	6.1	380	23.9	11.4	7.7
2615206		529	132	500	9.1	500	44.7	20.1	18.6
2615207		146	60	200	11.3	210	15.0	7.1	4.9
2615208		202	188	1100	23.6	410	18.0	9.1	6.1
2615209		68	8	<100	6.6	340	13.3	7.1	4.9
2615210		89	7	<100	7.1	290	14.9	8.1	5.5
2615211		260	208	300	12.3	330	14.3	6.9	4.6
2615212		54	51	400	1.9	260	6.2	3.5	2.1
2615213		37	73	100	1.0	120	6.2	3.5	1.7
2615214		126	164	200	11.5	340	17.4	10.0	4.8
2615215		73	50	<100	9.2	220	12.7	6.9	2.9
2615216		279	47	<100	11.6	910	27.6	14.5	7.7
2615217		175	67	200	7.1	250	19.6	9.2	5.9
2615218		137	34	400	4.4	300	15.9	8.5	5.4
2615219		403	213	700	5.8	520	27.9	14.5	9.0
2615220		12	6	<100	0.4	310	3.5	1.5	1.0
2615221		178	95	200	4.6	590	18.5	9.2	5.3
2615222		233	24	300	7.5	400	18.9	7.1	7.0
2615223		88	133	300	6.9	140	10.6	5.3	3.4
2615224		34	90	600	1.0	140	4.4	2.1	1.5
2615225		53	102	<100	6.2	220	8.1	3.9	1.9
2615226		48	81	200	3.4	280	7.7	4.7	2.1
2615227		257	88	300	3.7	330	18.8	9.0	7.0
2615228		69	111	200	6.4	460	9.4	5.7	2.4
2615229		78	108	400	2.3	290	7.8	4.3	2.5
2615230		73	101	300	1.9	270	7.8	4.5	2.5
2615231		113	105	300	6.6	260	12.4	6.2	4.1
2615232		48	30	300	1.5	150	4.2	2.2	1.6
2615233		72	29	300	5.5	240	10.1	4.9	2.8
2615234		71	83	300	5.5	330	8.6	4.5	2.4
2615235		214	101	300	5.3	430	21.0	11.5	6.1
2615236		263	190	<100	5.7	1000	17.2	7.8	7.1
2615237		285	597	200	1.9	1650	9.9	4.6	5.2
2615238		294	167	200	7.2	640	18.5	9.1	7.2
2615239		118	24	<100	6.1	230	19.1	10.7	7.1
2615240		8	4	<100	0.3	330	2.9	1.3	1.0

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	Element Method	Ce GE_MMI_M	Co GE_MMI_M	Cr GE_MMI_M	Cs GE_MMI_M	Cu GE_MMI_M	Dy GE_MMI_M	Er GE_MMI_M	Eu GE_MMI_M
	Det.Lim.	2	1	100	0.2		0.5	0.2	0.2
	Units	ppb							
2615241		28	53	<100	8.5	230	5.9	4.1	1.3
2615242		119	26	<100	5.9	230	12.7	6.6	3.9
2615243		29	44	<100	2.3	350	6.3	5.0	1.5
2615244		122	92	200	8.9	410	12.5	6.4	4.0
2615245		94	113	<100	4.1	260	12.6	7.4	3.8
2615246		42	28	<100	2.9	230	8.6	5.2	2.0
2615247		80	85	<100	9.4	270	8.8	5.2	2.8
2615248		69	131	<100	3.4	400	10.1	5.4	2.6
2615249		1230	119	200	2.2	1790	65.7	35.6	25.9
2615250		1030	158	300	2.5	1830	56.2	32.8	20.0
2615251		87	18	200	3.9	230	6.3	3.0	2.4
2615252		219	203	100	5.4	890	15.1	6.9	5.9
2615253		82	138	200	5.9	260	8.2	4.9	2.7
2615254		83	147	200	4.8	250	10.2	5.8	2.6
2615255		35	69	<100	3.7	120	5.9	3.9	1.8
2615256		49	118	200	6.3	390	8.8	5.0	2.0
2615257		74	72	300	9.2	320	6.9	3.4	2.0
2615258		156	117	200	5.5	490	12.3	5.5	4.1
2615259		41	18	<100	7.1	280	8.1	4.0	2.2
2615260		8	5	<100	0.4	330	2.9	1.4	0.8
2615261		62	33	100	2.8	120	7.2	4.0	2.4
2615262		296	24	<100	3.4	240	27.6	14.8	11.4
2615263		180	123	<100	4.1	200	17.3	10.0	5.7
2615264		133	51	200	4.1	170	16.4	8.9	4.1
2615265		86	95	200	4.6	430	11.0	6.0	3.1
2615266		289	61	100	8.4	270	23.8	12.3	8.4
2615267		310	232	600	8.1	300	16.4	7.8	5.5
2615268		818	516	500	5.3	1080	30.2	15.7	9.5
2615269		85	208	500	7.4	580	9.7	5.3	2.4
2615270		95	207	500	7.8	500	10.0	5.7	2.7
2615271		392	39	200	8.7	320	18.9	8.3	7.9
2615272		98	237	<100	4.4	390	14.7	9.2	3.5
2615273		154	58	<100	4.7	330	19.3	8.3	6.8
2615274		115	79	<100	3.7	740	16.8	8.6	4.8
2615275		22	192	100	2.7	140	5.3	3.7	1.5
2615276		55	184	<100	5.1	270	9.4	5.2	2.3
2615277		79	20	<100	2.1	270	7.9	3.9	3.4
2615278		58	59	400	5.0	550	7.8	3.9	2.1
2615279		69	89	100	7.1	150	7.4	4.3	1.8
2615280		8	5	<100	0.3	330	3.0	1.3	0.8

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	Element	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu
	Method	GE_MMI_M							
	Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
	Units	ppb							
2615281		222	131	300	8.3	260	15.8	8.2	5.7
2615282		96	119	300	7.5	380	9.7	5.3	3.1
2615283		148	128	200	9.0	400	19.2	10.4	6.5
2615284		750	184	800	20.4	600	36.5	16.2	16.8
*Rep 2615201		107	115	200	2.0	1060	5.5	2.6	2.2
*Rep 2615219		347	192	600	5.4	510	27.6	14.4	8.3
*Rep 2615231		110	124	300	7.0	270	12.5	6.5	4.0
*Rep 2615243		25	46	<100	2.3	350	5.9	4.5	1.3
*Rep 2615266		301	60	100	7.6	280	25.9	12.0	8.7
*Rep 2615281		240	136	300	8.6	280	15.2	7.3	5.4
*Std AMIS0169		752	101	100	8.1	3960	27.6	12.5	10.4
*Std MMISRM18		27	72	<100	4.5	860	3.1	1.3	1.1
*BIk BLANK		<2	<1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK		<2	1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK		2	1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK		2	1	<100	<0.2	<10	0.6	0.3	<0.2

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	Element	Fe	Ga	Gd GE_MMI_M	Hg	In CE MMI M	K CE MMI M	La CE MMI M	Li CE MMI M
	Method Det.Lim.	GE_MMI_M	GE_MMI_M 0.5	GE_MINI_M 0.5	GE_MMI_M	GE_MMI_M 0.1	GE_MMI_M 0.5	GE_MMI_M	GE_MMI_M
	Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
2615201		43	6.7	7.4	<1	<0.1	15.6	31	1
2615202		4	<0.5	17.8	<1	<0.1	5.6	38	<1
2615203		33	10.2	19.0	1	0.1	5.8	73	2
2615204		193	13.3	16.8	<1	0.2	6.9	57	2 5 3 9 3
2615205		99	6.9	28.2	<1	0.2	7.8	120	3
2615206		107	15.7	68.8	1	0.3	9.5	306	9
2615207		26	6.8	17.3	1	<0.1	5.3	56	3
2615208		210	23.4	21.7	1	0.3	12.1	85	19
2615209		11	1.0	19.0	<1	<0.1	7.0	37	2
2615210		9	1.0	22.7	<1	<0.1	6.3	40	3
2615211		142	19.3	15.2	2	0.4	8.6	55	19 2 3 7
2615212		142	43.8	6.6	<1	0.4	15.3	25	
2615213		95	47.3	5.6	<1	0.1	5.8	16	5 4
2615214		99	17.7	16.4	2	0.2	10.3	65	6
2615215		19	7.1	10.1	<1	0.1	5.6	29	
2615216		21	2.0	30.5	<1	<0.1	6.4	104	2 3
2615217		96	35.5	20.9	<1	0.2	4.8	87	4
2615218		136	22.5	19.8	1	0.5	6.4	84	8
2615219		316	49.7	32.1	2	0.5	5.2	145	5
2615220		9	1.5	4.3	<1	<0.1	6.1	4	5 6
2615221		65	7.4	19.0	<1	0.2	4.8	74	4
2615222		107	30.4	23.9	1	0.2	8.4	141	10
2615223		59	5.8	12.8	1	0.2	5.8	34	4
2615224		38	1.4	5.5	<1	<0.1	7.4	13	
2615225		48	8.5	8.4	1	0.1	21.9	24	2 3 15
2615226		195	34.4	7.6	1	0.2	12.0	35	15
2615227		62	8.1	22.9	1	0.2	5.7	124	4
2615228		155	12.3	8.9	<1	0.2	9.4	35	10
2615229		204	42.3	8.4	1	0.3	8.8	41	11
2615230		202	42.0	8.4	1	0.3	8.0	40	10
2615231		99	21.1	13.8	<1	0.2	9.5	60	5
2615232		141	52.4	4.4	<1	0.2	10.3	27	7
2615233		148	37.7	10.2	2	0.2	10.7	33	7
2615234		162	22.3	8.0	1	0.2	5.6	34	8
2615235		133	28.1	25.0	<1	0.2	13.9	83	18
2615236		12	2.6	26.2	<1	<0.1	20.3	116	<1
2615237		18	1.4	19.2	<1	<0.1	23.3	107	<1
2615238		68	21.6	25.6	<1	0.2	18.8	104	4
2615239		16	5.1	23.1	<1	<0.1	7.3	61	<1
2615240		2	0.7	3.8	<1	<0.1	6.3	3	5

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	Element Method Det.Lim.	Fe GE_MMI_M 1	Ga GE_MMI_M 0.5	Gd GE_MMI_M 0.5	Hg GE_MMI_M 1	In GE_MMI_M 0.1	K GE_MMI_M 0.5	La GE_MMI_M 1	Li GE_MMI_M 1
	Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
2615241		50	9.1	3.8	<1	0.1	6.8	13	2
2615242		54	13.6	13.1	<1	0.1	9.0	56	1
2615243		102	20.8	5.3	<1	0.2	7.3	14	1
2615244		51	10.9	12.6	1	0.1	6.6	55	2
2615245		38	8.2	12.7	1	0.1	7.7	41	2 3 3 3 2 2
2615246		67	23.0	6.4	1	0.3	16.0	21	3
2615247		58	13.8	9.3	1	0.2	9.6	37	3
2615248		74	6.8	8.6	<1	0.2	3.3	29	2
2615249		107	9.7	97.2	<1	0.1	4.4	514	1
2615250		150	10.8	80.1	<1	0.2	4.5	426	1
2615251		92	21.7	8.7	<1	<0.1	5.5	46	13
2615252		53	12.2	21.2	<1	<0.1	16.1	92	13 3 5 3
2615253		77	12.2	9.5	1	0.2	11.1	35	5
2615254		118	16.1	9.6	2	0.2	8.2	36	3
2615255		92	48.4	5.3	<1	0.2	8.8	15	4
2615256		67	11.0	6.8	2	0.2	15.0	22	
2615257		101	20.9	7.0	3	0.4	16.9	37	6
2615258		73	12.8	13.6	2	0.2	18.9	76	3 6 2
2615259		27	5.7	7.4	1	<0.1	8.2	18	10
2615260		3	0.6	3.8	<1	<0.1	6.9	3	6
2615261		100	59.2	7.4	<1	0.3	9.7	32	6
2615262		11	5.1	45.5	1	<0.1	6.8	220	<1
2615263		24	13.1	18.3	<1	0.1	6.6	85	
2615264		102	55.9	15.0	<1	0.2	5.3	67	3 7 3 3 5
2615265		147	16.5	10.5	<1	0.2	6.6	34	3
2615266		85	10.5	28.9	1	0.2	10.5	126	3
2615267		200	26.3	19.4	2	0.3	6.8	119	5
2615268		240	33.0	36.4	2	0.5	13.4	273	10
2615269		218	25.6	8.9	2	0.4	14.8	39	7
2615270		179	21.1	10.5	2	0.3	8.7	43	7
2615271		64	38.1	25.0	<1	0.1	6.9	184	6
2615272		43	10.3	13.0	<1	0.1	7.1	42	3
2615273		17	6.3	21.7	<1	<0.1	6.0	88	<1
2615274		34	7.1	16.0	<1	0.2	6.6	45	2
2615275		125	28.0	5.0	<1	0.2	7.2	9	7
2615276		30	6.7	8.7	<1	<0.1	11.0	20	4
2615277		24	13.8	11.9	<1	<0.1	8.5	59	7
2615278		117	8.6	6.3	<1	0.2	6.8	29	5
2615279		79	16.3	6.1	<1	0.2	8.5	22	4
2615280		4	1.2	4.0	<1	<0.1	6.9	3	5

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Element	Fe	Ga	Gd	Hg	In	К	La	Li
Method	GE_MMI_M							
Det.Lim.	1	0.5	0.5	1	0.1	0.5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
2615281	103	23.2	20.7	2	0.2	11.9	68	4
2615282	132	19.1	11.1	2	0.2	8.5	39	6
2615283	100	27.9	22.6	<1	0.2	13.0	62	6
2615284	203	42.0	55.8	1	0.4	9.3	258	29
*Rep 2615201	43	6.5	8.0	<1	<0.1	15.1	32	2
*Rep 2615219	286	45.5	30.2	1	0.3	5.4	120	5
*Rep 2615231	90	18.2	12.9	<1	0.2	8.9	56	6
*Rep 2615243	108	18.5	4.2	<1	0.1	8.6	12	<1
*Rep 2615266	87	10.7	30.2	1	0.2	10.2	138	3
*Rep 2615281	123	23.8	19.0	2	0.3	12.9	74	4
*Std AMIS0169	43	10.7	43.1	<1	<0.1	42.2	422	3
*Std MMISRM18	6	1.0	4.8	7	<0.1	24.2	7	<1
*BIk BLANK	1	0.5	<0.5	<1	<0.1	<0.5	<1	<1
*BIk BLANK	<1	<0.5	<0.5	<1	<0.1	<0.5	<1	<1
*BIk BLANK	1	<0.5	<0.5	<1	<0.1	<0.5	1	<1
*BIk BLANK	1	<0.5	<0.5	<1	<0.1	<0.5	1	<1

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	Element	Mg	Mn	Мо	Nb	Nd	Ni	Р	Pb
	Method	GE_MMI_M							
	Det.Lim.	0.5	100	2	0.5	1	5	0.1	5
	Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
2615201		160	4100	12	3.2	41	4430	0.8	185
2615202		206	6200	<2	<0.5	91	11900	0.1	22
2615203		4.6	1300	4	3.0	100	910	1.9	235
2615204		48.3	400	3	6.9	77	1330	2.4	119
2615205		9.1	1800	2	3.3	146	756	1.7	253
2615206		14.5	4700	6	8.4	386	888	3.9	573
2615207		1.2	1000	3	1.9	81	499	1.5	272
2615208		31.4	600	5	10.0	107	2160	5.0	309
2615209		64.7	2900	<2	<0.5	82	600	0.3	55
2615210		66.7	3100	<2	<0.5	91	656	0.3	34
2615211		7.4	900	5	6.7	72	580	5.7	437
2615212		15.1	2900	2	12.5	31	585	6.9	384
2615213		5.7	200	<2	10.1	22	346	1.9	199
2615214		3.8	1400	3	5.0	78	519	2.7	246
2615215		0.7	100	<2	0.9	50	164	0.6	384
2615216		19.1	2000	<2	<0.5	145	281	0.3	249
2615217		1.7	500	3	8.4	112	220	2.1	157
2615218		3.9	800	4	7.9	103	418	5.2	343
2615219		7.7	8900	8	21.6	181	1320	7.5	459
2615220		18.9	800	<2	<0.5	16	16	0.4	140
2615221		3.7	1000	3	3.4	91	464	1.2	442
2615222		7.0	6100	7	8.7	138	310	5.9	425
2615223		12.1	1200	3	1.4	46	1400	2.0	445
2615224		198	1800	<2	<0.5	25	7120	0.3	56
2615225		10.0	2400	<2	0.8	30	831	2.8	414
2615226		32.7	4900	4	11.1	34	1040	6.9	382
2615227		3.6	300	3	4.1	143	223	1.3	456
2615228		9.2	400	2	9.3	40	452	2.3	350
2615229		12.4	300	6	15.9	45	526	4.3	245
2615230		11.3	200	5	13.8	44	522	4.0	241
2615231		5.7	1500	4	7.5	67	417	3.1	330
2615232		5.8	300	6	21.7	23	400	3.9	168
2615233		34.1	3500	6	13.0	40	3180	5.9	360
2615234		5.7	700	4	8.8	36	409	3.5	276
2615235		12.8	2200	5	14.3	112	537	3.2	536
2615236		5.2	5100	5	1.5	166	204	0.7	195
2615237		153	9900	5	<0.5	150	9040	1.0	194
2615238		2.6	6100	8	5.2	157	307	4.2	364
2615239		<0.5	300	2	<0.5	111	90	0.2	192
2615240		19.7	600	2	<0.5	14	30	<0.1	138

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	Element	Mg	Mn	Мо	Nb	Nd	Ni	Р	Pb
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim. Units	0.5 ppm	100 ppb	2 ppb	0.5 ppb	1 ppb	5 ppb	0.1 ppm	5 ppb
2615241		0.8	200	<2	1.7	19	164	0.7	243
2615242		0.9	300	<2	2.0	66	296	0.7	245
2615243		2.3	600	<2	1.0	21	451	1.5	223
2615244		1.9	4600	3	2.8	66	364	3.0	129
2615245		3.0	900	<2	1.0	57	369	1.6	237
2615246		2.6	2700	<2	4.0	27	478	3.2	791
2615247		0.9	1100	2	3.2	47	340	1.5	452
2615248		2.1	200	3	1.1	40	321	0.9	138
2615249		11.7	2700	7	4.4	664	175	0.8	229
2615250		11.8	3300	8	5.8	549	180	1.0	225
2615251		37.2	300	5	8.1	53	198	2.0	91
2615252		7.1	5500	7	3.9	107	170	2.8	125
2615253		3.2	5600	3	4.1	41	494	4.0	310
2615254		2.5	2000	2	4.1	47	326	3.2	304
2615255		2.1	400	<2	7.2	22	202	2.3	251
2615256		3.4	3700	3	3.0	31	382	4.5	253
2615257		1.8	9200	6	5.1	36	371	21.0	294
2615258		6.5	6400	5	3.2	77	326	6.4	262
2615259		2.4	2200	3	0.9	26	400	3.3	151
2615260		19.5	700	3	<0.5	13	12	0.3	145
2615261		1.9	1000	4	13.1	36	151	6.6	325
2615262		0.9	900	5	<0.5	273	64	0.4	5250
2615263		<0.5	1300	2	0.9	104	146	1.2	269
2615264		2.0	2500	4	15.0	77	299	2.1	265
2615265		1.0	1000	3	5.8	47	187	1.9	251
2615266		5.0	3900	4	3.8	166	296	1.8	337
2615267		3.9	4100	7	13.9	115	222	3.8	355
2615268		13.6	4000	8	16.8	262	763	7.3	551
2615269		6.1	4000	4	7.5	47	478	4.7	354
2615270		5.0	4400	4	5.6	49	464	5.0	368
2615271		2.4	800	4	12.0	189	135	2.1	150
2615272		1.2	1000	<2	0.8	59	432	1.1	298
2615273		1.4	600	<2	<0.5	113	268	0.4	275
2615274		0.7	<100	<2	<0.5	71	197	0.6	454
2615275		7.7	100	<2	4.7	16	733	1.4	255
2615276		2.1	600	<2	<0.5	35	883	0.9	251
2615277		15.0	2500	4	3.2	73	144	1.0	56
2615278		1.0	300	2	2.5	33	409	2.1	140
2615279		6.3	2600	3	3.9	26	847	2.3	281
2615280		19.2	800	2	<0.5	13	29	0.1	146

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Element	Mg	Mn	Мо	Nb	Nd	Ni	Р	Pb
Method	GE_MMI_M							
Det.Lim.	0.5	100	2	0.5	1	5	0.1	5
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
2615281	3.2	5300	5	4.6	101	958	11.8	208
2615282	4.0	4600	4	4.1	50	806	7.6	138
2615283	6.6	1700	3	6.7	103	877	3.4	186
2615284	19.9	5000	7	19.7	318	608	4.5	457
*Rep 2615201	155	4300	11	2.8	43	4580	0.9	209
*Rep 2615219	7.4	8700	7	18.6	151	1370	6.4	484
*Rep 2615231	5.1	1500	4	7.0	69	406	2.7	333
*Rep 2615243	2.5	500	<2	1.1	19	384	1.3	207
*Rep 2615266	4.7	3300	4	3.6	178	271	1.7	358
*Rep 2615281	4.0	5700	6	5.5	106	969	12.2	199
*Std AMIS0169	31.1	3900	4	3.4	362	395	2.5	111
*Std MMISRM18	92.0	1000	30	<0.5	18	443	0.7	248
*BIk BLANK	<0.5	<100	<2	<0.5	<1	<5	<0.1	<5
*BIk BLANK	<0.5	<100	<2	<0.5	<1	<5	<0.1	<5
*BIk BLANK	<0.5	<100	<2	<0.5	1	<5	<0.1	<5
*BIk BLANK	<0.5	<100	<2	<0.5	1	6	<0.1	<5

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	Element Method Det.Lim. Units	Pd GE_MMI_M	Pr GE_MMI_M	Pt GE_MMI_M	Rb GE_MMI_M	Sb GE_MMI_M	Sc GE_MMI_M	Sm GE_MMI_M	Sn GE_MMI_M
		1 ppb	0.5 ppb	0.1 ppb	1 ppb	0.5 ppb	5 ppb	1 ppb	1 ppb
2615201		<1	8.8	0.1	66	2.3	21	8	1
2615202		<1	16.6	<0.1	14	< 0.5	13	20	<1
2615203		<1	21.5	<0.1	93	0.9	43	21	<1
2615204		<1	16.9	<0.1	70	0.6	39	17	<1
2615205		<1	34.1	<0.1	120	1.0	38	30	<1
2615206		<1	90.5	<0.1	126	2.1	68	80	2
2615207		<1	17.2	<0.1	106	<0.5	42	19	<1
2615208		<1	24.2	<0.1	125	1.6	64	23	1
2615209		<1	16.0	<0.1	59	<0.5	17	20	<1
2615210		<1	17.8	<0.1	65	<0.5	18	23	<1
2615211		<1	16.3	<0.1	75	1.7	48	16	<1
2615212		<1	7.0	<0.1	120	0.8	44	7	3
2615213		<1	4.6	<0.1	32	<0.5	31	5	1
2615214		<1	18.5	<0.1	68	0.5	47	17	<1
2615215		<1	10.7	<0.1	60	<0.5	32	11	<1
2615216		<1	31.4	<0.1	62	<0.5	42	31	<1
2615217		<1	25.4	<0.1	77	0.6	44	25	1
2615218		<1	24.1	<0.1	69	0.8	48	22	<1
2615219		<1	42.2	<0.1	75	2.0	74	37	4
2615220		<1	2.8	<0.1	12	<0.5	6	4	<1
2615221		<1	21.8	<0.1	121	0.9	54	20	<1
2615222		<1	35.7	<0.1	107	1.1	56	27	2
2615223		<1	10.5	<0.1	87	<0.5	36	12	<1
2615224		<1	5.1	<0.1	35	<0.5	22	6	<1
2615225		<1	7.5	<0.1	177	0.7	26	8	<1
2615226		<1	7.9	<0.1	121	1.0	51	7	2
2615227		<1	35.4	<0.1	98	<0.5	64	27	<1
2615228		<1	9.5	<0.1	111	0.6	46	9	<1
2615229		<1	10.8	<0.1	111	0.8	52	10	4
2615230		<1	10.5	<0.1	102	0.9	46	9	3
2615231		<1	16.9	<0.1	126	0.5	56	14	<1
2615232		<1	5.7	<0.1	49	0.8	48	5	
2615233		<1	9.2	<0.1	120	0.8	49	10	4
2615234		<1	9.4	<0.1	125	<0.5	43	8	<1
2615235		<1	25.6	<0.1	164	1.3	75	26	2
2615236		<1	35.5	<0.1	160	0.6	50	33	<1
2615237		<1	32.8	<0.1	100	1.1	27	26	<1
2615238		<1	36.7	<0.1	155	0.9	67	31	1
2615239		<1	23.9	<0.1	57	<0.5	58	26	<1
2615240		<1	2.5	<0.1	12	<0.5	17	4	<1

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	Element Method Det.Lim. Units	Pd GE_MMI_M	Pr GE_MMI_M	Pt GE_MMI_M	Rb GE_MMI_M	Sb GE_MMI_M	Sc GE_MMI_M	Sm GE_MMI_M	Sn GE_MMI_M
		1 ppb	0.5 ppb	0.1 ppb	1 ppb	0.5 ppb	5 ppb	1 ppb	1 ppb
2615241		<1	4.3	<0.1	102	<0.5	48	4	<1
2615242		<1	15.8	<0.1	87	0.8	56	14	<1
2615243		<1	4.8	<0.1	75	<0.5	21	5	<1
2615244		<1	15.6	<0.1	122	1.0	50	15	<1
2615245		<1	12.9	<0.1	105	<0.5	37	13	<1
2615246		<1	6.3	<0.1	128	0.6	21	6	<1
2615247		<1	11.0	<0.1	95	<0.5	26	10	<1
2615248		<1	8.6	<0.1	51	<0.5	26	9	<1
2615249		<1	155	<0.1	38	0.9	82	119	<1
2615250		<1	122	<0.1	40	0.8	94	100	<1
2615251		<1	12.9	<0.1	79	<0.5	20	10	<1
2615252		<1	26.9	<0.1	109	0.8	41	24	<1
2615253		<1	9.9	<0.1	176	<0.5	38	10	<1
2615254		<1	11.4	<0.1	184	<0.5	32	10	<1
2615255		<1	4.8	<0.1	224	<0.5	23	5	1
2615256		<1	6.5	<0.1	149	0.6	41	7	<1
2615257		<1	9.1	<0.1	202	2.2	31	7	2
2615258		<1	18.7	<0.1	131	0.8	39	16	<1
2615259		<1	5.8	<0.1	207	<0.5	21	8	<1
2615260		<1	2.1	<0.1	14	<0.5	<5	4	<1
2615261		<1	8.4	<0.1	138	0.7	33	7	3
2615262		<1	62.2	<0.1	89	0.8	42	50	<1
2615263		<1	24.0	<0.1	131	<0.5	42	21	<1
2615264		<1	19.1	<0.1	84	<0.5	59	16	4
2615265		<1	11.1	<0.1	64	0.9	41	12	<1
2615266		<1	38.2	<0.1	153	0.6	42	36	<1
2615267		<1	30.7	<0.1	76	1.4	75	24	2
2615268		<1	68.9	<0.1	99	1.7	81	48	4
2615269		<1	10.9	<0.1	97	0.8	69	10	1
2615270		<1	12.3	<0.1	93	0.7	68	12	<1
2615271		<1	47.9	<0.1	77	<0.5	62	33	2
2615272		<1	14.1	<0.1	102	<0.5	43	13	<1
2615273		<1	25.9	<0.1	80	<0.5	53	24	<1
2615274		<1	16.5	<0.1	43	<0.5	44	14	<1
2615275		<1	3.3	<0.1	48	<0.5	35	4	<1
2615276		<1	7.4	<0.1	91	<0.5	30	8	<1
2615277		<1	16.4	<0.1	59	0.6	28	15	<1
2615278		<1	7.7	<0.1	54	0.7	46	7	<1
2615279		<1	6.0	<0.1	98	0.7	26	6	<1
2615280		<1	2.2	<0.1	12	<0.5	7	4	<1

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## Final: VC151536 Order: KSK-15-13\_01/2615201-2615284

Report File No.: 0000012032

Element	Pd	Pr	Pt	Rb	Sb	Sc	Sm	Sn
Method	GE_MMI_M							
Det.Lim.	1	0.5	0.1	1	0.5	5	1	1
Units	ppb							
2615281	<1	25.0	<0.1	93	1.1	42	24	<1
2615282	<1	11.2	<0.1	110	1.1	42	11	<1
2615283	<1	22.4	<0.1	138	0.7	50	24	<1
2615284	<1	76.2	<0.1	110	2.6	82	68	3
*Rep 2615201	<1	9.5	<0.1	68	2.8	20	9	<1
*Rep 2615219	<1	37.3	<0.1	71	2.0	69	34	3
*Rep 2615231	<1	15.2	<0.1	121	0.6	58	14	<1
*Rep 2615243	<1	3.8	<0.1	66	<0.5	19	4	<1
*Rep 2615266	<1	42.0	<0.1	149	<0.5	45	35	<1
*Rep 2615281	<1	25.2	<0.1	91	1.1	44	22	<1
*Std AMIS0169	<1	98.0	0.2	253	1.1	59	60	<1
*Std MMISRM18	9	3.5	7.6	142	<0.5	<5	5	<1
*BIk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1
*BIk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1
*BIk BLANK	<1	<0.5	<0.1	<1	<0.5	6	<1	<1
*BIk BLANK	<1	<0.5	<0.1	<1	<0.5	6	<1	<1

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Report File No.: 0000012032

Element	Sr NAM M	Та	Tb	Те	Th	Ti		U
Method	GE_MMI_M 10	GE_MMI_M	GE_MMI_M 0.1	GE_MMI_M 10	GE_MMI_M 0.5	GE_MMI_M 10	GE_MMI_M 0.1	GE_MMI_M 0.5
Det.Lim. Units	ppb	ppb	0.1 ppb	ppb	0.5 ppb	ppb	ppb	0.5 ppb
2615201	260	1	1.0	10	7.0	920	0.2	5.8
2615202	160	<1	2.4	<10	4.1	30	0.1	1.5
2615203	<10	<1	2.7	<10	18.6	730	0.3	11.2
2615204	230	<1	2.7	<10	20.2	1410	0.2	10.9
2615205	230	<1	4.2	<10	29.2	730	0.4	7.7
2615206	210	<1	8.7	<10	37.8	2840	0.6	15.3
2615207	10	<1	2.6	<10	13.7	700	0.3	7.0
2615208	290	<1	3.3	<10	14.5	3420	0.5	8.4
2615209	660	<1	2.6	<10	7.6	100	<0.1	18.3
2615210	660	<1	2.8	<10	7.0	80	<0.1	20.4
2615211	130	<1	2.3	<10	22.6	2250	0.4	8.2
2615212	350	<1	1.1	<10	10.5	3810	0.3	5.0
2615213	170	<1	1.0	<10	3.2	3030	0.2	2.1
2615214	110	<1	2.7	<10	13.5	1840	0.5	8.2
2615215	<10	<1	2.1	<10	5.6	370	0.5	3.8
2615216	350	<1	4.9	<10	19.5	160	0.7	17.3
2615217	50	<1	3.4	<10	14.8	3220	0.4	7.2
2615218	170	<1	2.9	<10	28.3	1640	0.6	8.8
2615219	120	<1	5.0	<10	51.0	9060	0.4	16.0
2615220	230	<1	0.5	<10	2.9	250	0.1	1.8
2615221	60	<1	3.2	<10	26.2	1320	0.3	11.0
2615222	50	<1	3.3	<10	24.8	3160	0.5	13.9
2615223	320	<1	2.0	<10	11.2	920	0.3	7.0
2615224	260	<1	0.8	<10	4.6	270	<0.1	4.2
2615225	160	<1	1.2	<10	9.1	510	0.3	5.6
2615226	310	2	1.2	<10	14.0	4180	0.4	6.4
2615227	20	<1	3.4	<10	30.9	1840	0.2	11.3
2615228	70	<1	1.4	<10	10.2	2150	0.2	4.6
2615229	80	<1	1.4	<10	17.5	7260	0.4	6.5
2615230	70	<1	1.4	<10	17.0	6230	0.3	6.4
2615231	80	<1	2.0	<10	25.8	3250	0.4	7.7
2615232	120	<1	0.7	<10	12.5	8130	0.2	5.3
2615233	70	<1	1.7	<10	23.3	6280	0.5	11.6
2615234	100	<1	1.3	<10	13.5	4030	0.2	6.4
2615235	110	<1	3.6	<10	26.2	6440	0.4	10.4
2615236	120	<1	3.4	<10	25.9	490	0.3	13.8
2615237	220	<1	2.1	<10	17.3	210	0.4	5.3
2615238	<10	<1	3.5	<10	30.0	2100	0.2	12.7
2615239	<10	<1	3.5	<10	8.3	140	0.3	4.6
2615240	250	<1	0.5	<10	1.6	20	0.1	1.5

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	Element	Sr	Та	Tb	Te	Th	Ti	TI	U
	Method	GE_MMI_M							
	Det.Lim.	10	1	0.1	10	0.5	10	0.1	0.5
	Units	ppb							
2615241		<10	<1	0.9	<10	4.9	680	0.2	2.5
2615242		20	<1	2.0	<10	7.3	910	0.3	3.5
2615243		80	<1	0.9	<10	2.5	500	0.3	1.2
2615244		40	<1	2.2	<10	20.5	1120	0.5	9.9
2615245		80	<1	2.1	<10	8.4	380	0.3	4.4
2615246		50	<1	1.2	<10	5.2	2000	0.4	2.6
2615247		40	<1	1.4	<10	7.8	1040	0.3	4.9
2615248		80	<1	1.7	<10	6.4	580	0.2	3.3
2615249		130	<1	12.0	<10	34.3	2020	0.2	26.2
2615250		150	<1	11.1	<10	31.4	2370	0.3	24.9
2615251		430	<1	1.2	<10	11.4	2810	0.2	6.2
2615252		80	<1	2.9	<10	21.1	1550	0.4	12.5
2615253		90	<1	1.5	<10	28.1	1430	0.3	11.9
2615254		50	1	1.7	<10	17.2	1710	0.3	7.2
2615255		160	<1	1.0	<10	4.0	2910	0.4	2.0
2615256		230	1	1.4	<10	15.3	1060	0.2	11.0
2615257		40	<1	1.1	<10	27.1	1670	0.6	9.8
2615258		90	<1	2.2	<10	21.8	1240	0.4	12.7
2615259		230	<1	1.2	<10	7.0	430	0.3	5.0
2615260		250	<1	0.5	<10	1.2	30	<0.1	1.7
2615261		30	<1	1.2	<10	8.1	5170	0.4	4.2
2615262		20	<1	5.3	<10	7.6	200	0.3	6.8
2615263		<10	<1	3.0	<10	5.2	530	0.4	3.9
2615264		<10	1	2.5	<10	21.3	7940	0.4	8.4
2615265		30	<1	1.7	<10	11.2	1790	0.3	4.5
2615266		120	<1	4.2	<10	18.7	1230	0.4	12.1
2615267		50	1	2.8	<10	50.2	6870	0.3	16.9
2615268		210	3	5.5	<10	62.6	7070	0.4	15.9
2615269		200	<1	1.6	<10	27.0	3270	0.5	10.1
2615270		190	<1	1.8	<10	29.8	2620	0.4	11.0
2615271		20	<1	3.5	<10	15.8	5200	0.5	8.0
2615272		80	<1	2.2	<10	4.2	530	0.1	4.0
2615273		50	<1	3.2	<10	9.4	260	0.3	4.6
2615274		<10	<1	2.8	<10	6.1	380	0.1	3.3
2615275		100	<1	0.8	<10	3.0	2190	0.3	2.3
2615276		20	<1	1.6	<10	5.5	330	0.2	5.4
2615277		300	<1	1.6	<10	7.8	1380	0.2	6.0
2615278		40	<1	1.2	<10	7.9	970	0.2	3.6
2615279		320	<1	1.2	<10	10.8	1350	0.2	5.7
2615280		230	<1	0.5	<10	1.1	40	<0.1	1.5

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## Final: VC151536 Order: KSK-15-13\_01/2615201-2615284

Report File No.: 0000012032

E	lement	Sr	Та	Tb	Te	Th	Ti	TI	U
N	Nethod	GE_MMI_M							
D	et.Lim.	10	1	0.1	10	0.5	10	0.1	0.5
	Units	ppb							
2615281		150	<1	2.7	<10	21.0	1600	0.4	11.3
2615282		180	<1	1.8	<10	14.1	1390	0.4	8.7
2615283		90	<1	3.5	<10	12.6	3150	0.4	6.3
2615284		250	1	7.1	<10	44.5	8300	0.8	13.2
*Rep 2615201		250	<1	1.0	<10	7.3	980	0.2	5.8
*Rep 2615219		120	<1	4.4	<10	46.1	7300	0.4	14.9
*Rep 2615231		90	<1	2.2	<10	24.1	3020	0.3	7.9
*Rep 2615243		100	<1	0.8	<10	1.8	460	0.2	1.1
*Rep 2615266		110	<1	4.4	<10	19.0	1150	0.3	11.9
*Rep 2615281		210	<1	2.7	<10	23.1	1850	0.5	12.2
*Std AMIS0169		80	<1	5.5	<10	65.6	560	1.1	23.2
*Std MMISRM18		1290	<1	0.6	<10	14.3	90	0.1	25.7
*BIk BLANK		<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5
*BIk BLANK		<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5
*BIk BLANK		<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5
*BIk BLANK		<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5

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#### Final : VC151536 Order: KSK-15-13\_01/2615201-2615284 Report File No.: 0000012032

Element W Yb Zn Zr Method GE MMI M Det.Lim. 0.5 0.2 Units ppb ppb ppb ppb ppb <0.5 1.7 <0.5 4.0 <0.5 5.2 < 0.5 5.1 <0.5 8.2 0.7 13.2 <0.5 5.3 0.9 6.1 <0.5 5.4 <0.5 5.8 0.5 5.2 2.7 < 0.5 < 0.5 3.2 8.0 < 0.5 <0.5 5.0 <0.5 9.7 <0.5 6.6 0.6 5.9 11.4 2.4 < 0.5 1.3 <0.5 6.4 1.4 5.3 <0.5 4.1 <0.5 1.4 <0.5 3.0 0.7 3.7 0.5 6.9 <0.5 3.8 1.3 3.4 1.1 3.5 0.5 4.7 1.4 2.0 0.9 3.5 <0.5 3.0 1.5 8.3 <0.5 6.0 <0.5 3.8 0.5 6.5 <0.5 7.7 <0.5 1.2 

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Element W Yb Zn Zr Method GE MMI M Det.Lim. 0.5 0.2 ppb Units ppb ppb ppb ppb <0.5 3.8 <0.5 4.8 4.5 < 0.5 0.6 4.6 <0.5 5.2 <0.5 3.8 <0.5 4.4 3.8 <0.5 26.9 0.6 0.5 23.0 2.0 2.3 1.4 4.8 <0.5 3.7 <0.5 4.4 <0.5 3.6 <0.5 3.6 0.8 3.1 <0.5 3.9 <0.5 < 0.5 1.0 1.0 3.7 <0.5 9.4 <0.5 7.5 1.2 6.9 <0.5 5.0 <0.5 8.7 1.8 6.0 2.4 12.9 0.7 4.0 0.5 4.2 0.7 5.6 <0.5 6.5 < 0.5 6.6 <0.5 6.4 <0.5 2.7 <0.5 4.0 <0.5 2.5 < 0.5 <0.5 3.0 <0.5 1.1 

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#### Final : VC151536 Order: KSK-15-13\_01/2615201-2615284 Report File No.: 0000012032

W Yb Element Zn Zr Y Method GE MMI M Det.Lim. 0.5 0.2 10 2 Units ppb ppb ppb ppb ppb 2615281 1130 1.1 79 6.2 41 2615282 <0.5 50 3.5 1750 43 2615283 <0.5 108 6.8 410 46 2615284 1.9 163 10.7 330 111 \*Rep 2615201 <0.5 27 2.0 820 25 \*Rep 2615219 1.6 132 11.1 360 114 \*Rep 2615231 <0.5 69 4.4 690 84 \*Rep 2615243 <0.5 36 3.7 760 11 \*Rep 2615266 128 40 < 0.5 9.4 520 \*Rep 2615281 45 0.8 75 5.6 1480 \*Std AMIS0169 49 1.1 127 9.5 210 25 \*Std MMISRM18 < 0.5 18 0.8 680 \*BIk BLANK <0.5 <1 <0.2 <10 <2 \*BIk BLANK <0.5 <1 <0.2 <10 <2 \*BIk BLANK <1 <0.2 <10 <2 < 0.5 \*Blk BLANK <0.5 <1 0.2 <10 <2

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#### Certificate of Analysis Work Order : VC151544 [Report File No.: 0000012033]

Date: July 30, 2015

#### To: RON VOORDOUW EQUITY EXPLORATION CONSULTANTS LTD 200-900 WEST HASTINGS ST VANCOUVER BC V6C 1E5

P.O. No.: KSK-15-13\_01/2615285-2615368 Project No.: -Samples: 84 Received: Jul 9, 2015 Pages: Page 1 to 22 (Inclusive of Cover Sheet)

#### Methods Summary

No. Of Samples	Method Code
84	G_LOG02
84	GE_MMI_M

<u>Description</u> Pre-preparation processing, sorting, logging, boxing Mobile Metal ION standard package/ICP-MS

Storage: Pulp & Reject

REJECT STORAGE

STORE FOR 30 DAYS

Certified By Cam Chiang

Assistant Operations Manager

SGS Minerals Services Geochemistry Vancouver conforms to the requirements of ISO/IEC 17025 for specific tests as listed on their scope of accreditation which can be found at http://www.scc.ca/en/search/palcan/sgs

 Report Footer:
 L.N.R.
 = Listed not received n.a.
 I.S.
 = Insufficient Sample n.a.

 \*INF
 = Composition of this sample makes detection impossible by this method
 - = No result

 \*INF
 = Composition of this sample makes detection impossible by this method
 M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

 Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted
 Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

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Report File No.: 0000012033

	Element	Ag	AI	As	Au	Ва	Bi	Са	Cd
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim. Units	0.5 ppb	ı ppm	10 ppb	0.1 ppb	10 ppb	0.5 ppb	2 ppm	ı ppb
2615285		13.0	286	60	<0.1	350	0.6	27	8
2615286		4.4	248	20	<0.1	330	0.9	32	20
2615287		5.7	209	10	<0.1	310	<0.5	14	10
2615288		5.3	209	20	<0.1	270	<0.5	3	16
2615289		1.2	13	<10	<0.1	310	<0.5	99	4
2615290		0.9	16	<10	<0.1	340	<0.5	107	5
2615291		26.6	11	<10	0.6	1710	<0.5	176	5 6 7
2615292		16.8	2	30	0.8	1580	<0.5	468	7
2615293		19.8	5	<10	0.6	2280	<0.5	485	4
2615294		11.2	141	40	<0.1	730	0.5	205	25
2615295		8.9	169	10	<0.1	930	<0.5	98	25 9 6 5
2615296		14.5	149	20	<0.1	1270	<0.5	168	6
2615297		6.9	104	10	<0.1	560	<0.5	185	5
2615298		3.7	183	50	<0.1	960	2.0	107	94
2615299		1.3	279	20	<0.1	300	<0.5	8	12
2615300		0.8	3	<10	<0.1	840	<0.5	94	2
2615301		8.0	320	30	<0.1	1070	1.1	42	21
2615302		6.1	265	10	<0.1	660	<0.5	17	16
2615303		1.6	59	20	<0.1	350	<0.5	258	9
2615304		22.1	189	<10	<0.1	480	<0.5	20	4
2615305		14.3	242	50	<0.1	1190	0.5	62	16
2615306		7.9	167	230	0.2	610	0.6	156	9
2615307		6.1	311	110	<0.1	770	1.3	11	26
2615308		2.2	161	120	0.2	2460	1.0	26	5
2615309		7.7	63	30	0.2	550	<0.5	140	4
2615310		9.0	96	20	0.1	980	<0.5	159	3
2615311		2.2	70	70	<0.1	470	<0.5	229	3 12
2615312		7.4	253	30	0.2	630	<0.5	43	38
2615313		8.0	193	<10	<0.1	250	<0.5	23	12
2615314		4.3	66	20	0.5	1200	<0.5	176	2
2615315		5.2	183	10	0.3	400	0.6	130	21
2615316		6.2	297	30	0.1	1030	0.6	65	24
2615317		6.2	268	50	0.2	870	0.7	75	8
2615318		8.8	312	100	<0.1	1350	1.1	42	21
2615319		10.2	158	200	0.2	1000	0.9	179	20
2615320		0.7	2	20	<0.1	760	<0.5	94	1
2615321		17.4	12	40	0.2	70	<0.5	250	11
2615322		7.9	281	90	0.1	1130	1.4	40	16
2615323		8.2	204	50	0.1	810	0.6	142	8
2615324		9.2	197	20	<0.1	800	<0.5	162	20

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	Element	Ag	AI	As	Au	Ва	Bi	Са	Cd
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim. Units	0.5 ppb	ppm	10 ppb	0.1 ppb	10 ррb	0.5 ppb	2 ppm	r ppb
2615325		37.3	36	40	0.3	400	<0.5	164	3
2615326		4.9	208	300	0.1	540	0.6	112	6
2615327		1.8	185	<10	<0.1	200	<0.5	93	3
2615328		2.9	288	20	<0.1	1810	<0.5	11	9 8
2615329		17.7	150	20	0.3	660	<0.5	120	8
2615330		18.6	164	30	0.2	640	<0.5	133	8
2615331		15.3	152	20	0.1	530	<0.5	41	6
2615332		7.0	293	<10	<0.1	370	<0.5	27	13
2615333		11.3	264	30	<0.1	710	<0.5	51	
2615334		3.5	234	10	0.3	820	<0.5	40	5
2615335		12.0	41	20	0.1	1460	<0.5	260	10 5 2 2
2615336		3.6	156	<10	0.2	490	<0.5	15	2
2615337		5.2	318	20	<0.1	610	0.8	10	10
2615338		8.2	183	<10	0.1	330	<0.5	33	5
2615339		6.2	196	<10	<0.1	290	<0.5	29	6
2615340		0.6	2	<10	<0.1	770	<0.5	83	2
2615341		16.5	269	<10	<0.1	370	<0.5	29	11
2615342		11.6	55	20	0.4	830	<0.5	262	7
2615343		8.4	289	20	<0.1	640	<0.5	11	12
2615344		2.5	207	<10	<0.1	310	<0.5	5	21
2615345		11.4	222	<10	<0.1	260	<0.5	35	14
2615346		4.5	278	30	0.2	810	<0.5	28	9
2615347		<0.5	238	60	<0.1	470	1.6	<2	15
2615348		19.5	205	30	0.1	790	0.6	146	25
2615349		1.2	229	30	0.1	1070	<0.5	58	4
2615350		1.3	218	40	<0.1	900	<0.5	82	5
2615351		4.7	295	<10	<0.1	280	<0.5	<2	21
2615352		3.6	301	50	<0.1	850	<0.5	5	16
2615353		1.2	264	30	<0.1	490	0.8	22	18 7
2615354		2.8	296	80	0.1	660	0.5	74	7
2615355		8.7	202	90	<0.1	780	0.6	144	26
2615356		2.9	274	40	0.1	1820	<0.5	23	8
2615357		2.5	182	350	0.4	650	1.0	40	3
2615358		12.6	144	30	0.1	770	0.7	189	5
2615359		6.0	220	<10	<0.1	610	<0.5	28	12
2615360		0.7	5	<10	<0.1	800	<0.5	77	12 2
2615361		14.2	242	<10	<0.1	580	<0.5	7	15
2615362		10.3	90	90	0.3	890	<0.5	190	11
2615363		2.8	43	<10	<0.1	270	<0.5	102	28
2615364		1.7	85	<10	<0.1	1050	<0.5	138	16

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Element	Ag	AI	As	Au	Ba	Bi	Ca	Cd
Method	GE_MMI_M							
Det.Lim.	0.5	1	10	0.1	10	0.5	2	1
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
2615365	2.3	238	40	0.1	4420	0.9	94	8
2615366	11.6	217	<10	<0.1	300	<0.5	12	11
2615367	6.3	291	20	<0.1	1170	<0.5	7	7
2615368	12.6	8	<10	0.1	410	<0.5	149	15
*Rep 2615298	3.5	171	40	<0.1	880	1.6	107	85
*Rep 2615308	1.9	125	90	0.4	2270	0.9	31	4
*Rep 2615319	10.1	141	150	0.3	950	0.8	197	23
*Rep 2615330	15.8	143	20	0.2	630	<0.5	133	7
*Rep 2615350	1.4	182	30	0.1	860	<0.5	82	4
*Rep 2615364	2.1	90	10	<0.1	1090	<0.5	145	16
*Std AMIS0169	7.5	47	10	0.4	940	<0.5	36	2
*Std MMISRM18	19.7	23	20	7.5	170	<0.5	182	76
*BIk BLANK	<0.5	<1	10	<0.1	<10	<0.5	<2	<1
*BIk BLANK	<0.5	<1	<10	<0.1	<10	<0.5	2	<1
*BIk BLANK	<0.5	<1	<10	<0.1	<10	<0.5	<2	<1
*BIk BLANK	<0.5	<1	<10	<0.1	<10	<0.5	<2	<1

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	Element Method	Ce GE_MMI_M	Co GE_MMI_M	Cr GE_MMI_M	Cs GE_MMI_M	Cu GE_MMI_M	Dy GE_MMI_M	Er GE_MMI_M	Eu GE_MMI_M
	Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
	Units	ppb							
2615285		50	102	200	7.9	200	9.3	5.3	2.7
2615286		98	129	100	5.1	220	9.4	4.9	3.1
2615287		81	67	<100	3.8	170	12.2	6.4	3.5
2615288		43	42	<100	5.3	110	7.1	4.2	2.0
2615289		73	116	600	0.4	140	15.0	6.9	5.9
2615290		73	109	600	0.4	140	14.4	6.0	5.5
2615291		138	16	<100	0.4	1710	38.7	17.1	14.7
2615292		8	216	<100	0.2	2320	11.5	6.2	3.5
2615293		49	49	<100	0.2	1730	17.0	8.3	6.8
2615294		214	85	400	3.1	370	23.0	10.8	7.8
2615295		198	100	200	4.3	240	32.1	13.2	11.5
2615296		178	32	300	4.1	330	48.4	24.9	13.9
2615297		127	11	200	4.8	170	13.7	7.1	4.3
2615298		120	412	600	1.3	470	14.9	8.7	4.4
2615299		125	194	100	6.0	460	13.1	6.8	3.7
2615300		8	5	<100	0.3	330	2.9	1.6	0.9
2615301		172	82	200	7.2	360	18.2	9.5	5.4
2615302		68	83	100	15.3	240	9.8	5.1	2.3
2615303		97	339	<100	1.8	1010	4.9	2.9	2.1
2615304		138	24	<100	7.2	80	10.0	4.1	4.1
2615305		69	191	200	17.9	590	11.2	6.3	3.4
2615306		503	165	400	13.4	560	18.8	8.6	7.5
2615307		65	253	500	16.5	480	8.2	4.4	2.4
2615308		384	122	500	9.6	390	18.6	8.3	8.9
2615309		49	32	100	6.0	150	4.0	1.6	1.5
2615310		78	43	<100	7.4	190	6.9	3.2	3.0
2615311		89	230	200	3.5	1090	13.4	6.6	6.9
2615312		149	162	100	24.3	650	18.8	8.8	4.8
2615313		118	50	<100	8.2	180	14.2	6.3	4.5
2615314		101	42	200	8.4	430	8.0	3.5	3.4
2615315		50	166	200	19.4	400	8.2	4.5	3.0
2615316		192	146	300	14.5	490	12.5	6.6	4.2
2615317		181	160	400	13.2	340	16.0	8.0	5.6
2615318		124	434	800	14.6	510	12.3	7.7	3.9
2615319		134	230	400	22.8	490	12.8	6.1	4.9
2615320		8	5	<100	0.4	320	2.6	1.2	0.8
2615321		30	42	<100	15.6	270	4.7	1.9	1.9
2615322		338	343	1000	13.4	860	24.1	10.9	8.2
2615323		73	96	400	7.9	240	5.2	2.4	2.0
2615324		63	71	<100	3.4	180	5.5	2.9	1.9

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## Final : VC151544 Order: KSK-15-13\_01/2615285-2615368

Report File No.: 0000012033

	Element Method	Ce GE_MMI_M	Co GE_MMI_M	Cr GE_MMI_M	Cs GE_MMI_M	Cu GE_MMI_M	Dy GE_MMI_M	Er GE_MMI_M	Eu GE_MMI_M
	Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
	Units	ppb							
2615325		9	15	<100	3.8	150	2.9	1.2	1.2
2615326		390	373	300	3.8	290	14.1	6.9	5.5
2615327		236	41	<100	2.5	50	11.1	6.7	4.2
2615328		160	70	200	5.2	130	12.8	6.7	4.8
2615329		196	71	100	3.4	400	13.2	7.0	4.5
2615330		171	73	100	3.4	400	10.8	5.6	3.8
2615331		206	61	100	4.2	210	11.8	5.8	4.5
2615332		194	62	<100	7.7	210	17.6	8.3	6.1
2615333		175	174	200	2.5	390	15.4	8.1	4.2
2615334		251	37	200	4.3	310	17.0	7.6	6.6
2615335		185	122	<100	1.1	380	10.4	5.0	4.8
2615336		252	68	100	5.9	280	27.4	11.2	11.0
2615337		41	82	<100	3.1	220	7.5	4.8	1.7
2615338		302	32	100	4.5	400	34.9	15.2	13.6
2615339		198	59	100	8.9	150	18.6	7.8	7.2
2615340		8	3	<100	0.3	270	2.7	1.2	0.6
2615341		120	78	100	4.8	170	10.7	4.8	3.6
2615342		600	141	<100	1.3	1330	23.6	12.4	13.0
2615343		161	136	200	7.8	260	15.3	7.2	5.1
2615344		120	47	<100	6.1	370	12.7	5.8	3.8
2615345		232	49	<100	3.3	440	41.3	18.4	15.7
2615346		465	84	300	7.2	510	27.8	11.5	10.7
2615347		47	88	400	0.7	300	5.5	3.1	1.4
2615348		187	81	300	4.7	490	17.0	8.7	5.5
2615349		514	261	200	6.4	230	22.7	10.4	11.3
2615350		389	263	200	6.1	290	20.7	9.7	9.7
2615351		80	138	<100	6.0	540	11.5	6.1	2.9
2615352		229	441	900	4.9	440	14.3	6.0	4.5
2615353		131	247	400	1.5	360	14.4	7.7	4.1
2615354		339	251	1100	5.9	520	26.9	12.8	8.5
2615355		263	231	900	4.6	400	24.0	11.3	7.9
2615356		261	290	1300	3.6	300	12.6	5.0	4.0
2615357		96	219	200	2.7	900	6.0	3.0	1.6
2615358		217	147	100	2.1	580	12.8	7.0	4.1
2615359		119	50	<100	4.9	160	13.5	6.6	3.7
2615360		8	4	<100	0.3	290	2.5	1.2	0.6
2615361		56	31	<100	2.6	80	8.4	4.0	2.3
2615362		587	136	100	2.5	1960	44.3	21.5	17.2
2615363		24	190	800	1.2	110	4.6	2.2	1.0
2615364		70	251	1100	3.4	140	4.7	2.5	1.7

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Eleme	ent Ce	Co	Cr	Cs	Cu	Dy	Er	Eu
Meth	od GE_MMI_M	GE_MMI_M						
Det.Li	<b>m.</b> 2	1	100	0.2	10	0.5	0.2	0.2
Un	its ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2615365	168	53	400	6.8	210	13.4	6.3	5.2
2615366	125	45	<100	5.7	260	20.6	9.2	5.8
2615367	89	50	300	4.1	290	9.1	4.3	2.5
2615368	8	60	400	0.5	120	2.1	1.1	0.9
*Rep 2615298	117	353	600	1.3	460	15.9	8.5	4.1
*Rep 2615308	384	96	400	7.7	330	20.6	8.8	9.1
*Rep 2615319	140	217	300	20.9	430	13.6	6.5	4.8
*Rep 2615330	168	65	100	3.4	400	11.2	5.4	4.0
*Rep 2615350	354	222	200	5.7	230	19.7	8.7	9.8
*Rep 2615364	74	271	1100	3.3	130	5.0	2.4	1.8
*Std AMIS0169	651	85	<100	6.5	3610	24.1	10.7	9.8
*Std MMISRM18	25	76	<100	4.4	930	3.3	1.2	1.2
*BIk BLANK	<2	<1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK	<2	<1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK	3	<1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK	2	<1	<100	<0.2	<10	<0.5	<0.2	<0.2

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Report File No.: 0000012033

	Element Method Det.Lim.	Fe GE_MMI_M 1	Ga GE_MMI_M 0.5	Gd GE_MMI_M 0.5	Hg GE_MMI_M 1	In GE_MMI_M 0.1	K GE_MMI_M 0.5	La GE_MMI_M 1	Li GE_MMI_M 1
	Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
2615285		129	37.5	8.1	<1	0.2	11.5	21	19
2615286		39	5.2	10.6	1	0.1	5.3	41	3
2615287		24	6.0	10.6	<1	0.1	5.6	33	1
2615288		38	7.6	6.0	<1	0.1	9.1	21	<1
2615289		15	0.7	24.3	<1	<0.1	19.0	74	<1
2615290		16	0.6	21.9	<1	<0.1	23.7	68	<1
2615291		4	1.0	62.3	<1	<0.1	6.0	59	3
2615292		5	<0.5	16.2	<1	<0.1	2.9	5	31
2615293		5	<0.5	28.0	2	<0.1	3.8	35	5
2615294		109	7.2	30.1	<1	0.1	12.0	106	5
2615295		34	5.7	42.7	<1	<0.1	7.5	180	5 5 3 6
2615296		46	8.3	59.1	<1	<0.1	8.5	111	6
2615297		20	4.4	15.3	<1	<0.1	6.8	45	<1
2615298		168	20.5	16.8	<1	0.4	13.8	42	10
2615299		97	11.9	14.2	1	0.2	7.7	49	
2615300		4	<0.5	4.1	<1	<0.1	6.4	3	2 5 6 3 2
2615301		79	23.7	20.7	<1	0.2	9.9	69	6
2615302		50	12.2	7.6	<1	0.1	15.8	27	3
2615303		111	2.4	8.1	<1	<0.1	9.1	52	2
2615304		25	9.7	12.3	<1	<0.1	5.6	69	1
2615305		163	16.4	11.8	<1	0.3	5.4	23	27
2615306		116	8.4	25.9	<1	0.1	6.4	82	21
2615307		270	36.5	8.1	1	0.5	18.8	23	51
2615308		140	13.7	29.0	<1	0.2	1.8	158	11
2615309		40	10.8	5.2	<1	<0.1	4.2	25	3
2615310		53	12.3	10.6	<1	<0.1	3.9	36	3 7 2
2615311		136	3.8	18.6	<1	0.1	8.0	33	2
2615312		56	4.8	17.9	2	0.2	8.2	40	4
2615313		27	6.1	13.6	<1	<0.1	4.4	42	<1
2615314		36	4.2	12.1	<1	<0.1	4.5	51	4
2615315		133	12.4	10.3	<1	0.2	7.6	19	8
2615316		140	32.8	13.6	1	0.2	4.9	44	11
2615317		151	23.1	18.1	1	0.3	9.4	60	22
2615318		295	27.5	12.4	<1	0.4	13.5	33	15
2615319		209	11.7	15.2	<1	0.3	9.0	40	12
2615320		6	0.5	3.4	<1	<0.1	6.2	3	4
2615321		41	1.1	7.6	<1	<0.1	6.9	7	3
2615322		207	24.8	28.4	2	0.6	9.8	70	44
2615323		81	33.1	6.5	1	0.2	8.9	41	13
2615324		47	11.9	6.1	1	<0.1	5.4	28	1

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	Element	Fe	Ga	Gd	Hg	ln	K	La	Li
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim. Units	r ppm	0.5 ppb	0.5 ppb	r ppb	0.1 ppb	0.5 ppm	r ppb	ı ppb
2615325		10	2.3	3.9	<1	<0.1	7.3	9	1
2615326		92	7.3	18.7	<1	<0.1	2.8	76	6
2615327		52	3.3	13.7	<1	0.1	1.1	48	
2615328		65	11.1	14.3	1	0.2	3.9	72	2
2615329		118	12.2	14.8	<1	<0.1	7.1	51	1
2615330		95	9.9	12.0	<1	<0.1	7.7	44	1
2615331		26	5.8	16.3	<1	<0.1	25.2	59	<1
2615332		27	8.5	22.3	<1	0.1	7.0	79	
2615333		190	19.8	13.9	1	0.3	7.4	44	2 6 3
2615334		75	13.6	21.9	<1	0.1	6.9	115	3
2615335		51	3.1	17.7	<1	<0.1	3.0	81	<1
2615336		28	8.2	36.6	<1	<0.1	2.3	172	<1
2615337		128	33.4	5.5	<1	0.3	10.3	22	4
2615338		44	20.8	48.8	<1	<0.1	9.7	216	3
2615339		44	13.6	22.7	1	0.1	3.9	100	1
2615340		3	<0.5	3.5	<1	<0.1	5.5	3	4
2615341		39	7.9	12.2	1	0.1	4.1	54	2
2615342		35	1.9	47.6	<1	<0.1	6.5	221	<1
2615343		75	17.2	17.2	1	0.1	11.0	68	5
2615344		27	4.3	12.8	1	0.1	5.3	50	<1
2615345		58	7.1	55.7	<1	0.1	6.9	220	
2615346		83	15.5	33.9	<1	0.2	3.9	200	3
2615347		264	42.7	5.1	2	0.5	10.3	26	2 3 5
2615348		100	19.5	20.9	<1	0.2	8.2	74	17
2615349		126	21.7	35.2	<1	0.2	4.6	225	
2615350		92	11.1	30.3	<1	0.2	5.5	191	6 6
2615351		42	6.8	10.5	<1	0.2	7.0	32	1
2615352		91	8.5	15.2	<1	0.2	8.0	80	
2615353		208	20.7	15.2	<1	0.2	6.6	51	3
2615354		133	9.9	30.8	<1	0.1	3.6	132	10
2615355		90	5.7	28.8	<1	0.1	8.9	92	7
2615356		195	17.7	14.7	<1	0.2	7.2	104	11
2615357		463	7.4	5.0	<1	0.1	8.4	22	7
2615358		217	12.0	13.2	<1	0.1	6.1	57	4
2615359		91	13.5	12.7	<1	0.2	5.3	40	2
2615360		6	<0.5	3.4	<1	<0.1	5.8	3	4
2615361		28	6.5	7.5	<1	<0.1	9.8	26	3
2615362		88	5.7	62.5	<1	<0.1	5.3	226	1
2615363		39	1.1	4.6	<1	<0.1	7.6	9	
2615364		60	2.8	5.9	<1	<0.1	6.3	20	2

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Element	Fe	Ga	Gd	Hg	In	к	La	Li
Method	GE_MMI_M							
Det.Lim.	1	0.5	0.5	1	0.1	0.5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
2615365	129	24.6	17.4	<1	0.2	5.1	99	11
2615366	17	4.5	21.9	<1	0.1	4.6	54	<1
2615367	97	19.6	9.8	2	0.2	10.3	37	4
2615368	5	<0.5	3.0	<1	<0.1	4.5	5	<1
*Rep 2615298	165	20.4	16.9	2	0.4	13.2	43	9
*Rep 2615308	133	12.0	31.0	<1	0.2	1.4	163	8
*Rep 2615319	177	11.2	17.7	<1	0.3	8.4	40	13
*Rep 2615330	102	10.5	12.4	<1	<0.1	7.7	46	1
*Rep 2615350	85	11.0	28.8	<1	0.1	4.7	180	5
*Rep 2615364	68	3.8	5.7	<1	<0.1	6.3	21	4
*Std AMIS0169	33	10.0	36.9	<1	<0.1	41.8	381	<1
*Std MMISRM18	6	<0.5	5.1	9	<0.1	27.5	7	<1
*BIk BLANK	<1	<0.5	<0.5	<1	<0.1	<0.5	<1	<1
*BIk BLANK	1	<0.5	<0.5	<1	<0.1	<0.5	<1	<1
*BIk BLANK	<1	<0.5	<0.5	<1	<0.1	<0.5	<1	<1
*BIk BLANK	<1	<0.5	<0.5	<1	<0.1	<0.5	<1	<1

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	Element Method	Mg GE_MMI_M	Mn GE_MMI_M	Mo GE_MMI_M	Nb GE_MMI_M	Nd GE_MMI_M	Ni GE_MMI_M	P GE_MMI_M	Pb GE_MMI_M
	Det.Lim.	0.5	100_100	<u>GC_IVIIVII_IVI</u> 2	0.5		6L_1011011_101 5	0.1	GC_WIWII_WI 5
	Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
2615285		6.3	800	4	14.3	31	750	2.7	340
2615286		1.2	2400	<2	1.3	49	707	2.6	642
2615287		0.8	1300	2	0.8	51	428	1.0	225
2615288		<0.5	400	<2	0.5	27	240	0.9	203
2615289		182	2200	<2	<0.5	120	21300	0.4	31
2615290		219	1800	<2	<0.5	118	22800	0.3	36
2615291		337	1300	4	<0.5	191	1290	<0.1	20
2615292		138	4300	6	<0.5	25	1090	<0.1	32
2615293		134	1700	6	<0.5	91	807	<0.1	21
2615294		40.1	3100	5	3.6	154	2200	2.4	173
2615295		10.3	1400	3	1.4	219	1590	1.9	260
2615296		51.0	700	3	4.1	209	1880	1.3	129
2615297		69.2	2600	3	2.8	69	1140	1.3	26
2615298		31.1	9100	6	7.2	66	1990	8.0	727
2615299		3.2	200	2	2.4	66	915	3.9	155
2615300		19.6	600	2	<0.5	14	26	0.3	137
2615301		5.2	6100	4	8.3	98	667	3.4	617
2615302		5.1	1400	2	2.7	38	626	2.0	208
2615303		82.5	13800	4	1.3	66	1030	0.4	54
2615304		1.5	300	2	1.9	66	163	1.5	118
2615305		11.1	1000	3	5.5	37	1230	2.7	217
2615306		13.2	6100	3	3.8	113	1300	1.9	89
2615307		8.0	1900	4	15.7	32	738	5.1	229
2615308		12.2	1200	3	9.1	172	623	2.3	137
2615309		67.2	600	2	3.2	30	362	0.9	38
2615310		63.4	700	2	3.3	47	591	0.6	56
2615311		90.5	3400	2	<0.5	63	9560	0.8	99
2615312		4.6	1600	2	1.2	66	1660	2.6	216
2615313		1.4	500	<2	0.8	63	376	0.6	240
2615314		30.4	1800	2	1.6	70	265	1.1	66
2615315		17.2	2100	3	3.1	30	776	1.5	188
2615316		8.8	1800	3	10.0	62	754	2.6	211
2615317		9.3	3000	5	10.3	89	1030	2.1	240
2615318		10.5	3900	5	13.3	54	1150	4.1	197
2615319		45.0	3100	4	6.9	65	2670	1.9	158
2615320		19.0	600	<2	<0.5	12	38	<0.1	136
2615321		56.4	9000	2	<0.5	17	2910	0.5	17
2615322		12.2	12100	5	10.4	96	1920	6.2	166
2615323		11.6	3100	4	7.3	35	447	3.7	131
2615324		12.2	1000	<2	2.0	27	649	1.0	172

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	Element	Mg	Mn	Мо	Nb	Nd	Ni	P	Pb
	Method	GE_MMI_M 0.5	GE_MMI_M 100	GE_MMI_M 2	GE_MMI_M 0.5	GE_MMI_M	GE_MMI_M 5	GE_MMI_M 0.1	GE_MMI_M 5
	Det.Lim. Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
2615325		84.3	1000	<2	<0.5	17	1220	0.3	17
2615326		39.2	2000	2	3.5	108	5140	0.8	166
2615327		7.9	600	<2	1.2	66	1700	0.5	143
2615328		0.6	600	<2	3.5	82	197	1.7	326
2615329		10.1	3900	4	5.5	72	198	1.1	110
2615330		12.1	3600	4	5.3	61	216	1.0	107
2615331		3.6	600	6	3.3	86	140	0.9	56
2615332		1.0	1100	3	2.6	106	305	2.0	171
2615333		7.2	700	3	9.1	64	524	3.1	162
2615334		1.7	200	3	5.9	136	184	0.9	92
2615335		59.3	1200	4	1.4	114	215	0.3	25
2615336		1.1	800	5	4.5	199	87	0.9	82
2615337		2.8	400	3	12.3	26	247	1.8	251
2615338		2.7	100	3	7.3	279	93	0.8	193
2615339		2.0	800	4	4.7	120	145	1.2	93
2615340		17.2	500	<2	<0.5	11	15	<0.1	126
2615341		0.9	100	3	3.7	60	167	1.4	136
2615342		37.6	6400	7	<0.5	337	594	0.4	33
2615343		1.7	1400	3	6.8	89	338	2.1	212
2615344		<0.5	1500	2	0.6	66	305	1.5	114
2615345		3.9	600	<2	1.7	316	751	1.2	112
2615346		1.3	3400	5	7.6	231	274	4.1	89
2615347		4.1	400	3	18.1	25	320	5.9	238
2615348		19.4	1600	4	6.1	90	1010	2.2	148
2615349		6.4	5500	3	6.3	246	491	0.9	131
2615350		7.6	4900	3	4.5	215	440	0.7	103
2615351		1.2	500	<2	1.2	47	670	1.4	179
2615352		8.9	1200	3	3.3	84	1930	6.1	183
2615353		10.2	1800	3	8.4	72	1170	2.6	219
2615354		29.5	1000	4	6.2	192	2520	1.6	219
2615355		28.4	4300	5	3.2	150	3180	2.1	310
2615356		30.8	900	3	11.2	86	2270	3.9	206
2615357		4.2	7300	6	7.7	25	344	1.7	79
2615358		4.4	9000	7	5.4	71	218	0.9	127
2615359		0.8	1300	2	3.1	56	252	1.4	158
2615360		17.1	600	2	<0.5	12	15	<0.1	123
2615361		4.2	500	<2	2.0	34	450	1.0	238
2615362		11.6	12900	4	4.5	349	701	1.0	91
2615363		249	2500	<2	<0.5	17	8210	0.3	54
2615364		132	1700	<2	2.9	30	3790	0.5	84

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Element	Mg	Mn	Мо	Nb	Nd	Ni	Р	Pb
Method	GE_MMI_M							
Det.Lim.	0.5	100	2	0.5	1	5	0.1	5
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
2615365	12.0	1900	4	11.3	99	364	5.6	223
2615366	0.7	800	<2	0.6	98	456	1.0	162
2615367	1.9	5400	2	4.0	42	360	16.1	101
2615368	333	5500	<2	<0.5	13	4780	0.4	18
*Rep 2615298	29.7	8300	5	6.4	68	1980	7.3	741
*Rep 2615308	11.4	1100	2	7.3	176	578	2.1	136
*Rep 2615319	43.2	3000	4	5.1	67	3040	1.9	162
*Rep 2615330	12.7	3700	3	5.1	63	206	1.0	104
*Rep 2615350	6.8	4600	2	3.7	203	389	0.6	96
*Rep 2615364	131	1800	<2	2.4	31	3680	0.6	92
*Std AMIS0169	28.3	3700	3	1.5	314	382	2.3	94
*Std MMISRM18	93.4	900	30	<0.5	17	463	0.4	270
*BIk BLANK	<0.5	<100	<2	<0.5	<1	<5	<0.1	<5
*BIk BLANK	<0.5	<100	<2	<0.5	1	8	<0.1	<5
*BIk BLANK	<0.5	<100	<2	<0.5	1	<5	<0.1	<5
*BIk BLANK	<0.5	<100	<2	<0.5	1	<5	0.1	<5

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	Element Method	Pd GE_MMI_M	Pr GE_MMI_M	Pt GE_MMI_M	Rb GE_MMI_M	Sb GE_MMI_M	Sc GE_MMI_M	Sm GE_MMI_M	Sn GE_MMI_M
	Det.Lim. Units	1 ppb	0.5 ppb	0.1 ppb	1 ppb	0.5 ppb	5 ppb	1 ppb	1 ppb
2615285		<1	6.9	<0.1	107	0.7	45	8	2
2615286		<1	12.1	<0.1	64	0.8	28	12	<1
2615287		<1	10.9	<0.1	60	0.8	36	12	<1
2615288		<1	6.8	<0.1	74	<0.5	22	6	<1
2615289		<1	26.7	<0.1	23	<0.5	18	27	<1
2615290		<1	24.4	<0.1	24	<0.5	21	23	<1
2615291		<1	34.2	<0.1	32	<0.5	32	59	<1
2615292		<1	3.4	<0.1	19	<0.5	13	11	<1
2615293		<1	15.6	<0.1	36	<0.5	17	26	<1
2615294		<1	34.4	<0.1	84	<0.5	42	32	<1
2615295		<1	55.3	<0.1	128	<0.5	27	45	<1
2615296		<1	45.2	<0.1	92	0.8	60	55	<1
2615297		<1	16.1	<0.1	115	<0.5	32	16	<1
2615298		<1	15.1	<0.1	46	0.9	65	17	2
2615299		<1	15.6	<0.1	67	<0.5	31	14	<1
2615300		<1	2.5	<0.1	12	<0.5	6	4	<1
2615301		<1	20.3	<0.1	122	1.3	55	22	2
2615302		<1	8.3	<0.1	129	<0.5	28	8	<1
2615303		<1	15.2	<0.1	47	<0.5	20	11	<1
2615304		<1	18.0	<0.1	65	<0.5	26	15	<1
2615305		<1	8.3	<0.1	73	1.6	50	11	<1
2615306		<1	26.5	<0.1	71	4.2	79	28	<1
2615307		<1	7.4	<0.1	114	3.0	80	8	2
2615308		<1	42.3	<0.1	36	3.2	87	35	<1
2615309		<1	6.8	<0.1	42	<0.5	25	6	<1
2615310		<1	11.3	<0.1	48	<0.5	34	10	<1
2615311		<1	13.2	<0.1	53	5.0	137	17	<1
2615312		<1	15.3	<0.1	84	0.6	39	18	<1
2615313		<1	14.4	<0.1	51	<0.5	30	15	<1
2615314		<1	16.1	<0.1	24	0.6	39	16	<1
2615315		<1	6.5	<0.1	105	<0.5	46	9	<1
2615316		<1	14.5	<0.1	85	1.1	54	15	1
2615317		<1	19.5	<0.1	99	1.3	62	21	1
2615318		<1	11.4	<0.1	129	4.4	84	14	2
2615319		<1	13.9	<0.1	160	5.0	57	16	<1
2615320		<1	2.0	<0.1	11	<0.5	13	3	<1
2615321		<1	3.1	<0.1	116	4.8	54	5	<1
2615322		<1	24.7	<0.1	112	4.0	175	27	2
2615323		<1	8.6	<0.1	110	1.0	49	8	2
2615324		<1	6.9	<0.1	98	0.5	28	7	<1

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	Element Method Det.Lim.	Pd GE_MMI_M 1	Pr GE_MMI_M 0.5	Pt GE_MMI_M 0.1	Rb GE_MMI_M 1	Sb GE_MMI_M 0.5	Sc GE_MMI_M 5	Sm GE_MMI_M 1	Sn GE_MMI_M 1
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2615325		<1	3.6	<0.1	61	0.7	19	4	<1
2615326		<1	24.2	<0.1	63	12.1	44	23	<1
2615327		<1	16.0	<0.1	44	<0.5	20	15	<1
2615328		<1	18.9	<0.1	98	<0.5	52	17	<1
2615329		<1	15.5	<0.1	107	<0.5	41	16	<1
2615330		<1	13.1	<0.1	112	0.7	39	13	<1
2615331		<1	19.1	<0.1	147	<0.5	30	18	<1
2615332		<1	24.4	<0.1	92	<0.5	37	25	<1
2615333		<1	13.7	<0.1	61	<0.5	45	14	<1
2615334		<1	30.8	<0.1	48	<0.5	36	25	<1
2615335		<1	24.0	<0.1	21	<0.5	23	20	<1
2615336		<1	47.6	<0.1	82	<0.5	51	42	<1
2615337		<1	5.7	<0.1	79	<0.5	36	5	2
2615338		<1	65.2	<0.1	99	<0.5	61	52	<1
2615339		<1	27.8	<0.1	78	<0.5	41	25	<1
2615340		<1	2.9	<0.1	11	<0.5	<5	3	<1
2615341		<1	14.5	<0.1	62	<0.5	34	13	<1
2615342		<1	75.1	<0.1	48	3.1	29	60	<1
2615343		<1	19.5	<0.1	91	<0.5	48	17	<1
2615344		<1	15.5	<0.1	70	<0.5	30	13	<1
2615345		<1	68.0	<0.1	35	<0.5	43	63	<1
2615346		<1	53.9	<0.1	64	1.0	59	42	<1
2615347		<1	5.7	<0.1	21	0.5	30	4	2
2615348		<1	22.0	<0.1	128	0.6	41	21	1
2615349		<1	63.3	<0.1	87	<0.5	38	46	<1
2615350		<1	51.5	<0.1	80	0.7	41	39	<1
2615351		<1	9.5	<0.1	74	<0.5	34	10	<1
2615352		<1	19.4	<0.1	104	<0.5	42	17	<1
2615353		<1	15.5	<0.1	38	<0.5	34	16	1
2615354		<1	39.5	<0.1	62	1.1	58	36	<1
2615355		<1	31.5	<0.1	78	1.6	52	32	<1
2615356		<1	21.5	<0.1	50	<0.5	53	15	<1
2615357		<1	6.1	<0.1	55	1.1	29	5	<1
2615358		<1	15.7	<0.1	35	<0.5	26	14	<1
2615359		<1	11.8	<0.1	68	<0.5	24	12	<1
2615360		<1	1.9	<0.1	11	<0.5	<5	3	<1
2615361		<1	7.4	<0.1	64	<0.5	18	8	<1
2615362		<1	72.7	<0.1	41	1.9	88	68	<1
2615363		<1	3.4	<0.1	44	<0.5	23	4	<1
2615364		<1	6.5	<0.1	124	<0.5	22	6	<1

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Elemer	t Pd	Pr	Pt	Rb	Sb	Sc	Sm	Sn
Metho	d GE_MMI_M	GE_MMI_M						
Det.Lin	ı. 1	0.5	0.1	1	0.5	5	1	1
Unit	s ppb	ppb						
2615365	<1	24.3	<0.1	76	0.6	49	20	1
2615366	<1	19.9	<0.1	87	<0.5	27	22	<1
2615367	<1	10.1	<0.1	90	0.6	41	10	<1
2615368	<1	2.2	<0.1	20	<0.5	<5	3	<1
*Rep 2615298	<1	14.9	<0.1	42	0.7	62	16	1
*Rep 2615308	<1	45.3	<0.1	33	3.1	78	37	<1
*Rep 2615319	<1	14.8	<0.1	168	4.6	53	17	<1
*Rep 2615330	<1	13.2	<0.1	105	0.5	37	13	<1
*Rep 2615350	<1	48.8	<0.1	80	<0.5	35	36	<1
*Rep 2615364	<1	6.8	<0.1	123	<0.5	22	6	<1
*Std AMIS0169	<1	86.7	0.1	230	<0.5	49	54	<1
*Std MMISRM18	11	3.0	7.2	120	<0.5	<5	5	<1
*BIk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1
*BIk BLANK	<1	<0.5	<0.1	<1	<0.5	7	<1	<1
*BIk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1
*BIk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1

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1	lement Method	Sr GE_MMI_M 10	Ta GE_MMI_M	Tb GE_MMI_M 0.1	Te GE_MMI_M 10	Th GE_MMI_M 0.5	Ti GE_MMI_M 10	TI GE_MMI_M 0.1	U GE_MMI_M
U	et.Lim. Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	0.5 ppb
2615285		110	1	1.3	<10	8.0	4860	0.4	3.9
2615286		70	<1	1.5	<10	7.9	460	0.2	4.7
2615287		20	<1	1.9	<10	6.6	230	0.2	4.2
2615288		<10	<1	1.1	<10	2.1	260	0.3	1.9
2615289		170	<1	2.8	<10	9.3	170	0.1	4.9
2615290		210	<1	2.6	<10	9.6	170	<0.1	5.1
2615291		470	<1	7.5	<10	10.3	80	<0.1	23.5
2615292		710	<1	2.2	<10	0.9	<10	0.3	1.5
2615293		840	<1	3.5	<10	6.0	<10	0.2	10.0
2615294		300	<1	3.9	<10	10.7	1210	0.2	8.9
2615295		210	<1	5.4	<10	10.5	570	0.3	8.0
2615296		310	<1	8.2	<10	13.0	1230	0.2	8.1
2615297		310	<1	2.3	<10	6.2	1460	<0.1	3.9
2615298		170	<1	2.4	<10	10.9	3290	0.5	6.6
2615299		20	<1	2.3	<10	6.3	1010	0.2	2.8
2615300		250	<1	0.5	<10	1.1	60	<0.1	1.7
2615301		80	<1	3.3	<10	18.3	2900	0.5	7.3
2615302		50	<1	1.5	<10	6.8	880	0.2	4.0
2615303		710	<1	1.0	<10	4.1	230	<0.1	4.6
2615304		<10	<1	1.7	<10	10.7	750	0.3	3.9
2615305		170	<1	1.7	<10	9.1	1970	0.2	3.3
2615306		200	<1	3.4	<10	21.1	1030	0.4	6.4
2615307		50	<1	1.3	<10	13.3	5690	0.5	4.9
2615308		170	<1	3.6	<10	25.1	2250	0.4	6.3
2615309		440	<1	0.7	<10	5.2	1000	<0.1	2.4
2615310		410	<1	1.1	<10	5.9	1110	<0.1	2.6
2615311		600	<1	2.4	<10	4.0	160	<0.1	2.7
2615312		170	<1	3.1	<10	17.0	470	0.2	6.5
2615313		30	<1	2.3	<10	8.8	410	0.3	3.7
2615314		360	<1	1.6	<10	12.3	500	0.2	7.0
2615315		250	<1	1.4	<10	5.0	1390	0.1	2.7
2615316		140	<1	2.1	<10	13.3	4530	0.2	5.4
2615317		110	<1	2.7	<10	13.4	2900	0.5	6.6
2615318		160	<1	2.1	<10	27.4	6750	0.6	9.5
2615319		510	<1	2.2	<10	16.1	2060	0.3	6.7
2615320		230	<1	0.4	<10	1.2	60	<0.1	1.5
2615321		580	<1	0.9	<10	3.6	80	<0.1	3.5
2615322		110	<1	4.0	<10	29.9	3450	0.7	10.5
2615323		290	<1	0.9	<10	7.1	2870	0.4	3.7
2615324		340	<1	0.9	<10	4.8	800	0.2	2.1

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	Element Method	Sr GE_MMI_M	Ta GE_MMI_M	Tb GE_MMI_M	Te GE_MMI_M	Th GE_MMI_M	Ti GE_MMI_M	TI GE_MMI_M	U GE_MMI_M
	Det.Lim.		1	0.1		0.5	10	0.1	0.5
	Units	ppb	ppb						
2615325		350	<1	0.5	<10	2.0	160	<0.1	6.6
2615326		180	<1	2.6	<10	11.9	1010	0.2	4.8
2615327		80	<1	1.9	<10	6.4	220	0.2	6.4
2615328		30	<1	2.3	<10	14.3	1230	0.2	5.9
2615329		140	<1	2.3	<10	16.9	1750	0.3	10.0
2615330		180	<1	1.8	<10	14.3	1610	0.4	8.4
2615331		100	<1	2.5	<10	18.1	1000	0.3	9.5
2615332		30	<1	3.4	<10	13.5	790	0.4	8.8
2615333		180	<1	2.5	<10	22.5	2690	0.3	10.8
2615334		70	<1	3.3	<10	16.0	1430	0.4	6.8
2615335		1050	<1	2.1	<10	10.1	370	0.2	9.4
2615336		60	<1	5.1	<10	27.4	1450	0.3	12.7
2615337		80	<1	1.1	<10	12.7	3930	0.4	7.2
2615338		70	<1	6.5	<10	15.3	2450	0.2	11.9
2615339		50	<1	3.3	<10	20.4	1490	0.4	10.2
2615340		240	<1	0.4	<10	1.1	30	<0.1	1.5
2615341		50	<1	1.8	<10	12.5	1090	0.3	7.2
2615342		530	<1	5.2	<10	11.5	160	0.2	19.8
2615343		20	<1	2.5	<10	19.8	1850	0.4	8.4
2615344		<10	<1	2.0	<10	10.3	210	0.3	5.2
2615345		110	<1	7.6	<10	8.9	640	0.4	8.1
2615346		10	<1	5.2	<10	28.2	2210	0.6	15.4
2615347		30	<1	0.8	<10	13.8	4580	0.2	4.8
2615348		200	<1	2.8	<10	15.3	2450	0.3	8.3
2615349		280	<1	4.2	<10	19.1	1800	0.3	5.6
2615350		260	<1	3.8	<10	18.6	1380	0.2	5.9
2615351		<10	<1	2.0	<10	4.2	450	0.3	2.6
2615352		20	<1	2.5	<10	19.7	1090	0.3	8.0
2615353		90	<1	2.6	<10	8.0	2560	0.3	3.3
2615354		100	<1	4.6	<10	21.5	1780	0.9	7.7
2615355		180	<1	4.4	<10	17.1	1030	0.5	10.9
2615356		110	<1	2.2	<10	16.9	3930	0.3	5.8
2615357		230	<1	0.8	<10	12.8	1800	1.2	5.1
2615358		340	<1	2.0	<10	9.3	1610	0.5	9.2
2615359		90	<1	2.1	<10	9.0	1100	0.2	4.1
2615360		220	<1	0.5	<10	1.0	70	<0.1	1.4
2615361		<10	<1	1.4	<10	4.8	530	0.4	2.0
2615362		300	<1	8.3	<10	29.0	1380	0.6	12.3
2615363		280	<1	0.6	<10	3.1	160	<0.1	6.3
2615364		350	<1	0.9	<10	5.5	790	0.1	6.4

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Element	Sr	Та	Tb	Te	Th	Ti	TI	U
Method	GE_MMI_M							
Det.Lim.	10	1	0.1	10	0.5	10	0.1	0.5
Units	ppb							
2615365	350	<1	2.5	<10	15.9	3100	0.8	8.9
2615366	10	<1	3.5	<10	7.0	220	0.3	4.2
2615367	40	<1	1.6	<10	14.6	1330	0.4	5.2
2615368	310	<1	0.4	<10	1.0	40	0.1	2.6
*Rep 2615298	160	<1	2.5	<10	11.0	2840	0.6	5.9
*Rep 2615308	160	<1	3.6	<10	27.7	1840	0.4	6.2
*Rep 2615319	450	<1	2.2	<10	16.8	2030	0.2	6.6
*Rep 2615330	190	<1	2.0	<10	14.8	1420	0.4	8.9
*Rep 2615350	250	<1	3.5	<10	17.5	1170	0.2	5.8
*Rep 2615364	370	<1	0.8	<10	5.7	910	0.1	6.5
*Std AMIS0169	60	<1	4.4	<10	55.2	300	1.0	20.9
*Std MMISRM18	1540	<1	0.7	<10	14.7	20	<0.1	27.9
*BIk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5
*BIk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5
*BIk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5
*BIk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5

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	ment	W	Y	Yb	Zn	Zr
	thod	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Lim.	0.5	1	0.2	10	2
(	Jnits	ppb	ppb	ppb	ppb	ppb
2615285		1.5	50	4.4	110	47
2615286		0.7	43	3.7	1270	32
2615287		<0.5	68	4.7	120	18
2615288		<0.5	35	3.9	130	11
2615289		0.7	75	5.5	70	16
2615290		0.6	77	5.2	80	16
2615291		<0.5	205	12.6	30	17
2615292		<0.5	82	5.2	60	3
2615293		<0.5	106	6.3	40	8
2615294		0.6	128	8.4	570	29
2615295		1.2	138	10.0	620	23
2615296		0.9	267	17.4	100	46
2615297		0.7	65	5.4	230	41
2615298		1.5	85	7.2	3550	53
2615299		<0.5	63	4.9	440	19
2615300		<0.5	18	1.1	580	6
2615301		0.9	118	6.2	520	49
2615302		0.7	51	3.7	590	22
2615303		<0.5	41	2.5	350	8
2615304		<0.5	41	3.5	40	29
2615305		0.9	50	5.4	780	36
2615306		1.0	80	7.6	160	56
2615307		1.3	39	4.2	1150	53
2615308		1.2	95	6.1	100	76
2615309		<0.5	20	1.2	70	17
2615310		0.9	31	2.9	40	23
2615311		<0.5	68	5.9	570	53
2615312		<0.5	66	5.8	4020	28
2615313		0.5	61	4.5	210	23
2615314		1.0	38	2.5	40	33
2615315		<0.5	48	3.7	300	19
2615316		1.4	61	5.4	450	53
2615317		1.3	83	5.9	110	52
2615318		1.3	67	6.1	1070	80
2615319		0.9	58	5.0	950	54
2615320		<0.5	13	1.1	540	6
2615321		<0.5	22	2.1	40	22
2615322		1.8	84	9.7	930	94
2615323		1.1	26	2.2	170	55
2615324		<0.5	28	2.4	780	19

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#### Final : VC151544 Order: KSK-15-13\_01/2615285-2615368 Report File No.: 0000012033

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Element Method Det.Lim. Units	W GE_MMI_M 0.5 ppb	Y GE_MMI_M 1 ppb	Yb GE_MMI_M 0.2 ppb	Zn GE_MMI_M 10 ppb	Zr GE_MMI_M 2 ppb
2615325	<0.5	15	0.9	30	7
2615326	0.6	71	5.1	60	35
2615327	0.0	63	4.6	<10	13
2615328	0.6	60	5.1	50	51
2615329	0.9	58	5.0	80	41
2615330	0.9	53	4.4	120	33
2615331	1.3	58	4.1	40	37
2615332	0.5	95	5.7	300	34
2615333	1.4	69	6.5	850	40
2615334	0.8	84	5.6	40	36
2615335	0.8	59	3.7	50	14
2615336	1.7	110	8.7	10	61
2615337	1.5	41	3.9	300	33
2615338	1.1	166	11.3	120	48
2615339	1.4	68	6.1	20	48
2615340	0.5	12	1.0	470	5
2615341	<0.5	54	3.9	50	29
2615342	0.8	148	9.4	30	17
2615343	0.7	70	5.0	70	50
2615344	0.7	54	4.4	510	21
2615345	0.7	223	11.4	560	18
2615346	1.1	112	7.7	440	56
2615347	1.4	27	2.7	700	37
2615348	0.8	81	6.5	220	48
2615349	1.0	103	7.7	20	53
2615350	0.7	96	6.4	20	47
2615351	<0.5	71	4.2	720	17
2615352	<0.5	62	4.4	2500	49
2615353	0.6	83	5.2	370	42
2615354	<0.5	145	8.0	90	71
2615355	0.5	129	8.3	970	33
2615356	1.1	53	3.4	320	51
2615357	1.6	23	2.2	70	40
2615358	0.9	66	5.3	50	25
2615359	0.5	68	5.2	190	28
2615360	<0.5	15	0.9	540	6
2615361	<0.5	39	2.5	70	18
2615362	0.9	238	17.3	320	91
2615363	<0.5	20	2.0	460	8
2615364	<0.5	24	1.8	380	22

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#### Final : VC151544 Order: KSK-15-13\_01/2615285-2615368 Report File No.: 0000012033

W Yb Element Zn Zr Y Method GE MMI M Det.Lim. 0.5 0.2 10 2 Units ppb ppb ppb ppb ppb 2615365 1.9 4.7 260 58 90 2615366 <0.5 104 6.5 160 17 2615367 0.7 36 2.9 1050 53 2615368 <0.5 12 0.8 70 2 \*Rep 2615298 1.4 76 7.9 3190 51 \*Rep 2615308 1.8 82 6.8 80 76 \*Rep 2615319 1.1 58 5.7 1040 54 \*Rep 2615330 1.0 50 4.5 100 33 \*Rep 2615350 87 10 45 0.8 7.0 \*Rep 2615364 29 <0.5 23 2.0 460 39 \*Std AMIS0169 1.3 101 8.1 180 25 \*Std MMISRM18 <0.5 18 0.8 650 \*BIk BLANK <0.5 <1 <0.2 <10 <2 \*BIk BLANK <0.5 <1 < 0.2 <10 <2 \*BIk BLANK <2 < 0.5 <1 <0.2 <10 \*Blk BLANK <0.5 <1 <0.2 <10 <2

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#### Certificate of Analysis Work Order : VC151545 [Report File No.: 0000012034]

Date: July 30, 2015

#### To: RON VOORDOUW EQUITY EXPLORATION CONSULTANTS LTD 200-900 WEST HASTINGS ST VANCOUVER BC V6C 1E5

P.O. No.: KSK-15-13\_01/2615369-5411,2615451-5491 Project No.: -Samples: 84 Received: Jul 9, 2015 Pages: Page 1 to 22 (Inclusive of Cover Sheet)

#### Methods Summary

No. Of Samples	Method Code
84	G_LOG02
84	GE_MMI_M

Description Pre-preparation processing, sorting, logging, boxing Mobile Metal ION standard package/ICP-MS

Storage: Pulp & Reject

REJECT STORAGE

STORE FOR 30 DAYS

Certified By Cam Chiang

Assistant Operations Manager

SGS Minerals Services Geochemistry Vancouver conforms to the requirements of ISO/IEC 17025 for specific tests as listed on their scope of accreditation which can be found at http://www.scc.ca/en/search/palcan/sgs

 Report Footer:
 L.N.R.
 = Listed not received n.a.
 I.S.
 = Insufficient Sample n.a.

 \*INF
 = Composition of this sample makes detection impossible by this method
 -- = No result

 \*INF
 = Composition of this sample makes detection impossible by this method
 M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion
 Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted

 Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

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#### Final : VC151545 Order: KSK-15-13\_01/2615369-5411,2615451-5491 Report File No.: 0000012034

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	Element Method Det.Lim. Units	Ag	Al	As	Au	Ba	Bi	Ca	Cd
		GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
		0.5 ppb	1 ppm	10 ppb	0.1 ppb	10 ppb	0.5 ppb	2 ppm	1 ppb
2615369		4.3	32	10	0.5	560	<0.5	72	20
2615370		4.9	35	10	0.2	600	<0.5	90	21
2615371		3.2	69	<10	<0.1	340	<0.5	104	6
2615372		2.3	130	40	0.2	1440	0.6	44	3
2615373		2.0	238	<10	<0.1	580	<0.5	25	11
2615374		14.4	187	<10	<0.1	520	<0.5	98	7
2615375		12.3	211	<10	<0.1	350	<0.5	18	10
2615376		0.8	51	<10	0.2	520	<0.5	58	4
2615377		0.5	83	<10	0.1	510	0.5	16	27
2615378		0.9	30	<10	<0.1	640	<0.5	41	7
2615379		1.0	54	<10	<0.1	450	<0.5	42	25
2615380		0.6	3	<10	0.2	880	<0.5	93	2
2615381		<0.5	43	<10	0.2	580	<0.5	43	25 2 8 17
2615382		1.8	43	<10	<0.1	440	<0.5	33	17
2615383		0.8	38	10	0.2	980	<0.5	49	10
2615384		1.2	17	<10	0.6	370	<0.5	32	4
2615385		<0.5	80	10	0.6	870	<0.5	21	4
2615386		2.0	58	<10	0.2	540	<0.5	43	11
2615387		9.1	55	20	<0.1	590	<0.5	113	11
2615388		13.8	170	10	<0.1	970	<0.5	125	7
2615389		3.7	257	20	<0.1	1290	<0.5	75	18
2615390		3.3	231	20	<0.1	1240	<0.5	70	20
2615391		2.5	286	20	<0.1	710	<0.5	10	17
2615392		1.1	268	30	<0.1	560	0.5	8	8
2615393		1.5	80	20	<0.1	690	<0.5	69	7
2615394		1.9	53	20	0.9	500	<0.5	93	23
2615395		4.5	221	10	0.1	260	<0.5	3	
2615396		5.2	180	<10	<0.1	150	<0.5	<2	16 6 7
2615397		6.7	165	20	<0.1	490	0.6	18	7
2615398		13.9	143	10	<0.1	210	<0.5	6	16
2615399		7.0	194	10	0.2	1050	<0.5	3	16 8 2 16
2615400		0.7	5	10	0.1	890	<0.5	92	2
2615401		7.5	224	<10	<0.1	410	<0.5	7	16
2615402		5.1	150	10	0.1	400	<0.5	<2	5
2615403		7.6	278	20	<0.1	580	<0.5	4	16
2615404		9.1	228	<10	<0.1	170	<0.5	<2	15
2615405		2.0	252	<10	<0.1	210	<0.5	4	15 2
2615406		5.0	161	<10	0.2	510	<0.5	13	8
2615407		4.1	257	10	<0.1	290	<0.5	<2	10
2615408		5.1	278	20	0.4	330	<0.5	<2	9

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#### Final : VC151545 Order: KSK-15-13\_01/2615369-5411,2615451-5491 Report File No.: 0000012034

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	Element Method	Ag GE_MMI_M	AI GE_MMI_M	As GE_MMI_M	Au GE_MMI_M	Ba GE_MMI_M	Bi GE_MMI_M	Ca GE_MMI_M	Cd GE_MMI_M
	Det.Lim.	0.5		GE_IVIIVII_IVI 10	0.1	G⊑_iviivii_ivi 10	G⊑_iviivii_ivi 0.5	GE_IVIIVII_IVI 2	
	Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
2615409		1.8	294	20	<0.1	150	<0.5	<2	8
2615410		1.5	276	20	<0.1	170	<0.5	<2	8
2615411		6.2	251	20	0.2	2040	1.4	23	6
2615451		7.6	141	30	0.1	680	0.6	149	3
2615452		11.9	351	40	0.1	1210	0.6	6	18
2615453		21.8	278	30	<0.1	1420	0.6	33	21
2615454		20.8	203	10	<0.1	340	<0.5	21	8
2615455		9.0	205	<10	0.1	590	<0.5	10	
2615456		8.0	26	<10	0.4	3330	<0.5	380	3
2615457		7.1	4	<10	1.1	1650	<0.5	329	4
2615458		23.9	27	<10	0.3	2130	<0.5	451	36
2615459		19.5	13	<10	0.4	1810	<0.5	420	
2615460		0.7	2	<10	0.2	890	<0.5	87	2
2615461		2.2	7	<10	0.2	160	<0.5	54	27 2 3
2615462		0.5	79	<10	<0.1	480	<0.5	336	59
2615463		2.5	7	<10	0.6	1440	<0.5	214	
2615464		9.7	6	<10	0.7	1680	<0.5	244	2
2615465		9.7	5	<10	1.3	1320	<0.5	260	3
2615466		1.7	187	10	<0.1	740	<0.5	120	26
2615467		1.1	57	<10	0.6	2170	<0.5	145	3
2615468		1.3	23	<10	<0.1	400	<0.5	24	5
2615469		18.9	306	20	0.2	3680	0.8	77	9
2615470		18.9	300	20	0.2	3340	0.6	84	3 2 3 26 3 5 9 9
2615471		20.6	210	10	0.1	1240	<0.5	23	9
2615472		7.1	276	10	<0.1	790	<0.5	19	11
2615473		6.1	239	10	<0.1	770	<0.5	45	8
2615474		9.4	252	10	0.1	2100	0.8	36	8 5 9
2615475		8.9	261	20	<0.1	1240	<0.5	17	9
2615476		6.0	279	10	<0.1	520	<0.5	7	14
2615477		5.3	103	30	0.2	2130	<0.5	108	
2615478		15.2	178	<10	<0.1	450	<0.5	21	3 8 6 2 8
2615479		12.4	228	40	<0.1	3160	0.6	101	6
2615480		0.7	4	<10	<0.1	1030	<0.5	82	2
2615481		10.6	180	30	<0.1	2240	1.0	73	8
2615482		14.7	276	10	0.1	1630	<0.5	21	13
2615483		33.7	271	<10	<0.1	780	<0.5	30	14
2615484		16.5	289	10	<0.1	1080	<0.5	14	10
2615485		5.8	258	<10	0.1	1730	<0.5	51	7
2615486		23.7	241	<10	0.1	1280	<0.5	15	16
2615487		4.7	222	50	0.1	2320	2.2	85	14

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#### Final : VC151545 Order: KSK-15-13\_01/2615369-5411,2615451-5491 Report File No.: 0000012034

Element	Ag	Al	As	Au	Ba	Bi	Ca	Cd
Method	GE_MMI_M							
Det.Lim.	0.5	1	10	0.1	10	0.5	2	1
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
2615488	13.2	301	20	<0.1	1450	<0.5	41	4
2615489	8.8	173	<10	0.2	2530	<0.5	20	16
2615490	8.7	187	10	0.2	2380	0.9	12	16
2615491	15.5	194	<10	<0.1	980	<0.5	23	11
*Rep 2615388	14.3	173	10	<0.1	960	<0.5	129	8
*Rep 2615398	12.0	131	10	<0.1	210	<0.5	8	14
*Rep 2615452	11.4	317	40	0.1	1270	0.8	7	14
*Rep 2615473	5.5	247	10	0.1	780	<0.5	52	7
*Rep 2615485	5.9	261	10	<0.1	1770	<0.5	49	8
*Std AMIS0169	9.8	60	<10	1.0	920	<0.5	34	2
*Std MMISRM18	23.1	26	<10	8.4	220	<0.5	189	85
*BIk BLANK	<0.5	<1	<10	<0.1	<10	<0.5	<2	<1
*Blk BLANK	<0.5	<1	<10	<0.1	<10	<0.5	<2	<1
*Blk BLANK	<0.5	1	<10	<0.1	<10	<0.5	<2	<1
*Blk BLANK	<0.5	1	<10	<0.1	10	<0.5	<2	<1

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#### Final : VC151545 Order: KSK-15-13\_01/2615369-5411,2615451-5491 Report File No.: 0000012034

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-	Element Method Det.Lim. Units	Ce GE_MMI_M	Co GE_MMI_M	Cr GE_MMI_M	Cs GE_MMI_M	Cu GE_MMI_M	Dy GE_MMI_M	Er GE_MMI_M	Eu GE_MMI_M
		2 ppb	1 ppb	100 ppb	0.2 ppb	10 ppb	0.5 ppb	0.2 ppb	0.2 ppb
2615369		80	146	700	0.9	260	8.0	3.9	3.0
2615370		77	154	700	0.8	290	8.4	4.0	2.8
2615371		445	72	500	0.5	350	50.1	22.8	16.3
2615372		453	208	1400	2.4	610	31.0	13.8	12.3
2615373		126	110	300	4.0	390	17.8	8.1	5.4
2615374		122	36	200	2.6	410	34.0	17.3	12.5
2615375		44	57	100	2.4	130	8.8	5.0	2.2
2615376		53	94	700	1.5	260	4.1	1.6	1.5
2615377		54	223	1300	1.7	320	5.8	2.9	1.6
2615378		121	234	700	2.8	210	7.8	3.6	2.8
2615379		45	602	1300	1.8	180	5.3	2.7	1.5
2615380		8	7	<100	0.3	300	2.6	1.1	0.8
2615381		78	109	500	3.7	160	6.3	2.9	2.2
2615382		115	629	900	1.1	280	6.8	3.2	2.7
2615383		152	193	700	2.2	150	10.4	5.0	4.1
2615384		83	163	600	1.5	140	6.0	2.8	2.2
2615385		99	138	800	4.3	90	6.8	2.7	2.4
2615386		140	360	700	1.1	270	10.8	5.2	3.6
2615387		218	183	1300	2.2	530	43.3	19.7	16.4
2615388		75	163	600	3.5	150	7.5	3.5	2.8
2615389		82	293	1600	5.9	200	7.9	4.3	2.3
2615390		88	300	1600	5.2	200	7.2	3.7	2.3
2615391		29	59	200	6.5	470	4.3	2.3	1.1
2615392		68	133	500	1.7	310	8.8	4.6	2.4
2615393		92	393	1400	2.9	380	6.8	3.1	2.6
2615394		111	574	2300	2.2	280	7.3	3.4	2.5
2615395		138	57	<100	6.6	450	18.1	8.3	5.0
2615396		241	36	<100	7.1	330	21.4	9.5	8.3
2615397		158	126	200	6.2	260	16.9	7.8	6.0
2615398		111	50	<100	8.3	130	14.8	8.3	5.4
2615399		244	67	100	5.1	620	21.5	9.5	8.0
2615400		9	5	<100	0.4	310	3.1	1.3	0.8
2615401		62	77	<100	5.9	120	10.8	6.2	2.7
2615402		207	29	<100	3.6	120	20.7	9.8	8.6
2615403		64	152	<100	4.3	160	9.9	5.5	2.6
2615404		162	93	<100	4.1	230	18.8	11.0	6.2
2615405		124	8	<100	1.9	50	25.7	13.7	10.8
2615406		477	70	<100	4.6	340	42.5	18.4	16.1
2615407		112	94	<100	4.2	240	12.4	6.6	3.8
2615408		156	23	100	5.8	200	12.1	6.1	4.0

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	Element Method Det.Lim.	Ce	Со	Cr	Cs	Cu	Dy	Er	Eu
		GE_MMI_M							
		2	1	100	0.2	10	0.5	0.2	0.2
	Units	ppb							
2615409		105	30	<100	8.6	250	10.6	5.4	3.2
2615410		156	27	<100	8.3	270	14.7	7.6	4.6
2615411		850	55	300	5.8	570	39.5	18.3	16.4
2615451		249	246	300	4.3	1170	11.7	6.3	4.0
2615452		187	176	300	7.7	300	13.4	7.7	4.1
2615453		167	93	200	4.9	240	12.8	7.0	4.4
2615454		168	46	100	3.8	150	16.8	8.1	5.8
2615455		207	23	100	1.1	230	24.4	11.8	7.7
2615456		274	79	100	1.2	2080	14.3	7.0	6.9
2615457		7	5	<100	0.3	1400	5.7	3.1	1.9
2615458		202	40	<100	0.2	2420	28.5	14.7	9.5
2615459		152	79	100	0.3	6500	20.1	10.9	7.6
2615460		9	4	<100	0.4	350	3.0	1.6	0.9
2615461		53	315	900	0.6	210	9.0	5.2	2.9
2615462		80	33	<100	0.3	480	27.2	19.0	5.4
2615463		44	34	<100	0.4	620	3.4	2.0	1.1
2615464		17	13	<100	0.3	450	12.5	7.5	3.6
2615465		105	31	<100	0.7	1020	15.8	7.7	4.8
2615466		72	167	900	2.1	320	7.0	4.0	2.2
2615467		1790	79	400	0.5	390	146	76.7	51.1
2615468		48	179	1800	0.8	170	5.3	2.6	1.5
2615469		86	172	400	3.8	350	10.5	5.6	3.1
2615470		83	146	300	3.4	320	11.0	5.7	2.9
2615471		161	138	300	7.5	240	14.1	6.0	4.3
2615472		100	101	100	5.3	140	10.5	5.7	3.3
2615473		248	60	300	6.0	300	14.6	6.4	4.5
2615474		176	45	300	6.2	220	19.6	8.9	6.4
2615475		70	137	300	2.4	330	8.3	4.9	2.5
2615476		167	81	200	6.5	260	14.6	7.0	4.6
2615477		285	90	900	4.7	770	41.0	21.1	14.7
2615478		88	81	100	3.2	160	13.1	8.1	3.5
2615479		143	182	1200	4.0	270	9.9	4.8	2.9
2615480		8	5	<100	0.4	300	2.8	1.4	0.8
2615481		100	390	1700	3.0	400	8.0	3.8	2.9
2615482		118	139	200	5.8	170	9.8	4.6	3.4
2615483		142	71	300	9.5	300	10.2	5.2	3.6
2615484		62	110	200	5.4	210	11.1	6.9	2.8
2615485		169	74	200	3.5	120	11.7	5.4	4.2
2615486		144	104	100	5.5	90	17.7	9.2	5.5
2615487		63	188	700	4.4	530	5.4	2.8	1.4

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#### Final : VC151545 Order: KSK-15-13\_01/2615369-5411,2615451-5491 Report File No.: 0000012034

		•	•	•	2	-	-	-
Element	Ce	Co	Cr				Er	Eu
Method	GE_MMI_M							
Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
Units	ppb							
2615488	49	106	200	4.8	130	5.3	2.7	1.9
2615489	76	342	1500	4.0	90	5.4	2.9	2.0
2615490	75	314	1400	3.4	120	5.9	3.0	2.3
2615491	128	415	1100	6.5	120	11.6	5.9	3.8
*Rep 2615388	68	153	600	3.2	150	6.5	3.0	2.6
*Rep 2615398	109	46	<100	7.7	130	15.7	8.6	5.4
*Rep 2615452	205	159	400	7.5	300	13.3	7.2	4.4
*Rep 2615473	258	53	300	5.7	330	15.3	7.0	4.9
*Rep 2615485	159	81	200	4.2	120	11.1	5.4	3.9
*Std AMIS0169	699	99	<100	6.8	4000	26.3	11.6	10.4
*Std MMISRM18	25	85	<100	5.1	940	3.4	1.3	1.1
*BIk BLANK	<2	1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK	<2	<1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK	2	1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK	3	1	<100	<0.2	<10	<0.5	<0.2	<0.2

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	Element	Fe	Ga	Gd	Hg	In	K	La	Li
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim. Units	1 ppm	0.5 ppb	0.5 ppb	1 ppb	0.1 ppb	0.5 ppm	1 ppb	1 ppb
2615369		43	1.5	11.7	<1	<0.1	6.0	36	2
2615370		42	1.2	11.2	<1	<0.1	6.8	35	2
2615371		61	3.0	65.3	<1	<0.1	3.8	190	1
2615372		125	7.0	44.9	<1	<0.1	4.1	181	3
2615373		47	5.8	17.8	<1	0.2	6.3	56	3 2 1
2615374		25	5.0	47.7	<1	<0.1	8.7	149	1
2615375		33	10.4	7.3	<1	<0.1	5.1	19	2
2615376		36	3.3	5.2	<1	<0.1	3.1	23	2
2615377		109	7.6	6.4	<1	0.1	5.3	23	3
2615378		36	0.8	10.3	<1	<0.1	5.5	42	3
2615379		84	4.1	5.5	<1	<0.1	12.7	14	4
2615380		4	<0.5	3.7	<1	<0.1	6.5	3	4 5 1
2615381		37	2.5	8.0	<1	<0.1	4.4	38	1
2615382		47	2.2	8.6	<1	<0.1	6.3	40	3
2615383		37	1.4	15.3	<1	<0.1	4.3	72	1
2615384		26	0.6	8.4	<1	<0.1	3.8	32	2
2615385		81	5.1	8.4	<1	<0.1	5.2	40	2
2615386		67	2.8	14.1	<1	<0.1	7.5	52	5
2615387		31	1.3	62.5	<1	<0.1	7.7	196	2 2 5 2 7
2615388		95	11.2	9.1	<1	0.1	6.7	41	
2615389		102	13.7	8.2	<1	0.1	15.9	32	12
2615390		99	13.3	7.9	<1	0.1	13.7	35	11
2615391		128	20.4	4.4	2	0.2	12.1	14	2
2615392		208	17.9	8.8	1	0.4	6.4	29	4
2615393		134	5.7	8.9	<1	<0.1	8.0	37	4 5
2615394		60	3.2	9.8	<1	<0.1	8.5	36	4
2615395		33	6.6	18.2	1	0.1	5.7	62	<1
2615396		18	7.7	24.9	2	<0.1	3.9	118	<1
2615397		102	23.5	20.8	<1	0.1	6.5	90	2 <1
2615398		13	7.8	15.6	<1	<0.1	4.3	63	<1
2615399		25	6.7	23.4	<1	<0.1	4.1	125	2
2615400		3	<0.5	3.7	<1	<0.1	6.7	3	2
2615401		33	10.3	9.3	<1	0.1	6.9	31	2
2615402		12	7.0	24.7	<1	<0.1	5.3	103	<1
2615403		46	8.9	7.7	<1	0.2	5.0	29	2
2615404		21	9.0	19.6	<1	<0.1	5.0	86	<1
2615405		114	22.4	40.1	<1	0.2	2.0	148	<1
2615406		33	24.6	60.6	<1	<0.1	4.5	330	1
2615407		54	11.7	12.9	<1	0.1	6.2	51	1
2615408		40	4.9	14.2	<1	0.1	4.3	58	1

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	Element Method Det.Lim.	Fe GE_MMI_M 1	Ga GE_MMI_M 0.5	Gd GE_MMI_M 0.5	Hg GE_MMI_M 1	In GE_MMI_M 0.1	K GE_MMI_M 0.5	La GE_MMI_M 1	Li GE_MMI_M 1
	Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
2615409		43	3.9	9.8	<1	0.2	4.9	42	1
2615410		38	4.9	14.6	<1	0.2	6.1	62	<1
2615411		237	47.5	64.6	2	0.4	3.5	397	4
2615451		175	10.8	14.4	<1	0.1	3.0	71	6
2615452		93	18.3	14.9	<1	0.3	6.0	65	8
2615453		89	17.6	13.7	1	0.2	30.4	65	8 7 2 2 2 <1
2615454		28	9.3	20.3	<1	<0.1	2.1	76	2
2615455		44	5.6	27.1	<1	0.2	1.7	84	2
2615456		9	0.5	26.8	<1	<0.1	5.6	52	
2615457		3	<0.5	9.5	1	<0.1	3.9	5	11
2615458		13	0.5	46.1	<1	<0.1	5.7	67	1
2615459		17	<0.5	31.5	<1	<0.1	3.7	70	3
2615460		2	<0.5	4.0	<1	<0.1	5.8	4	
2615461		6	<0.5	12.4	<1	<0.1	3.1	16	<1
2615462		40	1.7	25.4	<1	<0.1	1.0	46	<1
2615463		4	<0.5	5.4	<1	<0.1	4.7	4	14
2615464		3	<0.5	18.7	1	<0.1	3.3	12	13
2615465		2	<0.5	23.8	1	<0.1	6.2	14	
2615466		119	16.0	7.6	<1	0.1	6.5	33	9 3 4
2615467		14	<0.5	222	<1	<0.1	2.1	714	4
2615468		29	1.0	5.8	<1	<0.1	4.1	15	3
2615469		156	32.8	10.6	<1	0.2	9.0	38	25
2615470		139	29.5	10.6	<1	0.2	8.1	39	24
2615471		39	8.6	14.2	2	0.2	9.3	72	
2615472		31	6.0	11.4	<1	0.1	5.8	38	2 2 2 18
2615473		32	5.7	17.2	<1	0.1	5.9	72	2
2615474		107	32.8	21.6	2	0.2	5.6	87	18
2615475		108	10.1	8.5	2	0.3	10.2	25	
2615476		36	7.6	16.0	1	0.1	6.2	65	5
2615477		78	6.1	63.5	<1	0.1	3.4	236	4
2615478		19	3.8	12.0	<1	<0.1	4.1	32	2
2615479		122	13.0	10.8	<1	0.2	6.6	47	2 6 5
2615480		3	<0.5	3.8	<1	<0.1	5.3	3	5
2615481		234	19.3	8.3	<1	0.2	10.9	46	18
2615482		63	12.5	11.1	<1	0.2	5.9	57	4
2615483		57	10.2	13.1	1	0.2	10.3	61	3
2615484		125	9.2	9.7	<1	0.3	3.6	26	4
2615485		90	8.9	14.2	1	0.2	6.7	57	4
2615486		50	7.9	18.8	<1	0.1	8.1	83	3
2615487		210	28.6	5.4	<1	0.3	24.3	18	19

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Gd Element Fe Ga Hg In Κ La Li Method GE MMI M Det.Lim. 0.5 1 0.5 0.1 0.5 1 ppm Units ppm ppb ppb ppb ppb ppb ppb 2615488 0.2 133 36.4 5.1 <1 4.7 41 1 2615489 84 16.0 6.9 <1 0.1 10.2 44 4 2615490 137 37.6 7.0 <1 0.3 9.1 58 5 2615491 71 13.5 <1 0.1 6.9 50 5 8.3 \*Rep 2615388 92 10.5 8.5 <1 <0.1 6.7 36 6 \*Rep 2615398 12 7.6 15.2 <1 <0.1 5.1 63 <1 \*Rep 2615452 115 1 0.3 11 24.1 15.3 5.2 73 \*Rep 2615473 33 5.4 16.8 <1 <0.1 7.0 80 2 \*Rep 2615485 89 54 5 9.6 12.8 <1 0.2 7.1 \*Std AMIS0169 41 10.4 41.7 <1 <0.1 45.7 398 1 \*Std MMISRM18 4 < 0.5 5.4 9 <0.1 25.3 6 <1 \*BIk BLANK <1 < 0.5 <0.5 <1 <0.1 < 0.5 <1 <1 \*Blk BLANK <1 < 0.5 < 0.5 <1 <0.1 < 0.5 <1 <1 \*BIk BLANK 1 < 0.5 <0.5 <1 < 0.1 < 0.5 <1 <1 \*Blk BLANK <0.1 1 < 0.5 <0.5 <1 < 0.5 <1 <1

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Report File No	Element Method	Mg GE_MMI_M	Mn GE_MMI_M	Mo GE_MMI_M	Nb GE_MMI_M	Nd GE_MMI_M	Ni GE_MMI_M	P GE_MMI_M	Pb GE_MMI_M
	Det.Lim.	0.5	100	2	0.5	1	5	0.1	5
	Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
2615369		153	2700	4	2.1	54	3540	1.1	68
2615370		163	2700	5	1.7	55	3670	1.1	81
2615371		181	2800	<2	0.9	295	13800	0.6	52
2615372		70.3	3200	4	7.0	245	3980	1.5	150
2615373		9.1	1300	<2	2.1	89	1720	2.1	220
2615374		19.9	700	<2	1.1	231	4440	0.6	406
2615375		2.3	1300	2	1.5	33	797	1.1	257
2615376		211	400	<2	1.5	29	2380	0.4	48
2615377		204	300	<2	3.7	32	3170	1.4	156
2615378		158	1600	2	1.1	58	4720	0.6	70
2615379		171	3200	3	2.9	22	3130	1.2	142
2615380		20.0	700	2	<0.5	13	18	<0.1	137
2615381		136	600	<2	1.9	49	2510	0.4	120
2615382		230	9700	3	1.7	55	7180	0.8	116
2615383		183	1000	<2	1.4	93	3820	0.6	78
2615384		170	1700	<2	0.7	47	5540	0.5	79
2615385		84.4	900	<2	4.5	50	2390	0.7	107
2615386		208	2600	2	1.8	76	8850	0.9	109
2615387		180	2700	2	1.3	336	11000	0.6	190
2615388		43.1	1200	3	5.0	50	2960	1.3	115
2615389		29.1	4600	2	4.5	38	2920	7.9	158
2615390		25.7	4200	3	4.8	39	2650	8.9	156
2615391		4.0	1200	3	2.2	16	486	8.3	124
2615392		18.8	400	<2	5.0	44	2190	5.0	246
2615393		170	4500	<2	2.8	46	4040	1.9	91
2615394		167	6100	2	1.5	51	5500	1.2	275
2615395		1.1	500	3	1.0	96	281	0.9	124
2615396		<0.5	500	<2	0.7	148	94	0.7	185
2615397		1.3	3300	4	6.8	101	292	3.6	239
2615398		<0.5	1200	3	<0.5	82	213	0.3	189
2615399		0.5	400	2	1.6	132	125	1.1	216
2615400		19.3	700	2	<0.5	13	6	<0.1	139
2615401		0.6	500	<2	<0.5	45	260	0.4	383
2615402		<0.5	400	3	<0.5	142	48	0.5	265
2615403		0.5	400	<2	1.3	40	396	1.2	375
2615404		<0.5	400	3	1.4	114	185	0.8	367
2615405		0.6	<100	<2	6.7	252	51	2.1	62
2615406		0.7	2000	3	3.7	331	186	1.9	335
2615407		<0.5	900	<2	1.9	65	213	1.7	250
2615408		<0.5	200	3	1.7	72	165	1.8	198

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#### Final : VC151545 Order: KSK-15-13\_01/2615369-5411,2615451-5491 Report File No.: 0000012034

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	Element	Mg	Mn	Мо	Nb	Nd	Ni	P	Pb
	Method	GE_MMI_M							
	Det.Lim.	0.5	100	2	0.5	1	5	0.1	5
	Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
2615409		<0.5	<100	2	1.4	58	202	1.2	127
2615410		<0.5	200	2	1.4	85	178	1.1	142
2615411		3.0	500	10	15.9	409	260	9.5	121
2615451		26.4	26400	9	6.0	84	533	1.0	103
2615452		1.9	1900	4	7.9	71	503	4.1	262
2615453		3.2	3500	5	9.0	72	472	3.2	166
2615454		1.0	1500	3	1.9	94	302	1.5	141
2615455		<0.5	100	<2	1.7	134	192	0.6	147
2615456		97.3	4200	3	0.6	122	801	0.1	23
2615457		102	600	3	<0.5	21	149	<0.1	21
2615458		137	2800	2	<0.5	145	2160	0.1	73
2615459		140	1700	9	<0.5	136	3650	0.2	77
2615460		19.6	600	2	<0.5	15	24	<0.1	143
2615461		182	7300	<2	<0.5	45	17200	0.2	59
2615462		197	2600	<2	<0.5	76	6280	0.3	154
2615463		145	2200	5	<0.5	14	217	<0.1	32
2615464		350	900	<2	<0.5	38	1310	<0.1	35
2615465		260	1900	<2	<0.5	53	1070	<0.1	78
2615466		42.1	1100	<2	3.5	37	1740	1.9	115
2615467		266	1100	<2	1.1	1130	3220	0.1	90
2615468		201	1000	<2	0.8	27	6090	0.6	27
2615469		18.2	1800	3	13.8	44	1150	3.8	268
2615470		17.1	1500	3	12.5	44	1140	3.3	268
2615471		4.1	3500	2	2.1	75	1380	2.8	230
2615472		1.3	700	3	1.9	57	703	2.3	238
2615473		6.0	600	3	2.5	72	470	2.6	156
2615474		12.3	600	3	15.8	113	876	3.7	175
2615475		10.5	500	3	3.8	33	2000	4.9	246
2615476		1.2	1500	3	3.0	77	474	2.4	199
2615477		55.4	3200	5	4.2	331	1620	2.6	92
2615478		1.9	1100	<2	<0.5	50	1040	0.6	186
2615479		32.9	4200	3	6.8	58	1390	5.9	129
2615480		17.8	600	2	<0.5	13	22	0.1	135
2615481		77.4	4400	4	12.8	51	2170	3.2	248
2615482		2.7	2200	4	3.6	61	568	2.0	181
2615483		4.8	1400	4	2.5	73	620	2.6	380
2615484		2.2	100	<2	3.1	42	541	2.3	248
2615485		4.7	600	2	3.5	70	622	3.2	168
2615486		0.8	1500	3	2.4	90	579	1.4	336
2615487		26.5	11800	4	7.4	24	1310	19.1	421

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#### Final : VC151545 Order: KSK-15-13\_01/2615369-5411,2615451-5491 Report File No.: 0000012034

Nb Nd Pb Element Mg Mn Mo Ni Ρ Method GE MMI M Det.Lim. 0.5 100 0.5 2 1 5 0.1 5 ppm Units ppb ppb ppb ppb ppb ppm ppb 2615488 300 4.9 2 5.4 30 630 5.3 148 2615489 50.1 2500 6 4.7 35 3190 3.6 74 2615490 34.9 3800 5 38 1680 6.1 126 8.3 2615491 20.2 2600 5 61 5240 23 219 3.7 \*Rep 2615388 43.7 1200 3 5.1 44 3010 1.2 111 \*Rep 2615398 <0.5 1100 2 <0.5 84 211 0.3 196 \*Rep 2615452 2.1 3 10.1 76 481 5.0 160 1700 \*Rep 2615473 6.8 500 4 3.3 83 415 2.0 146 \*Rep 2615485 4.9 2 67 600 3.3 628 3.3 167 \*Std AMIS0169 33.6 4100 4 2.1 352 463 2.2 110 \*Std MMISRM18 97.8 1000 35 < 0.5 17 512 0.5 294 \*BIk BLANK < 0.5 <100 <2 <0.5 <1 <5 <0.1 <5 \*Blk BLANK < 0.5 <100 <2 < 0.5 <1 <5 <0.1 <5 \*BIk BLANK <0.5 <100 <2 < 0.5 1 5 < 0.1 <5 \*Blk BLANK <0.5 <2 <0.5 <100 1 6 0.1 <5

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	Element	Pd	Pr	Pt GE_MMI_M	Rb	Sb GE_MMI_M	Sc	Sm	Sn
	Method	GE_MMI_M	GE_MMI_M 0.5	GE_ININI_INI 0.1	GE_MMI_M	GE_IVIIVII_IVI 0.5	GE_MMI_M 5	GE_MMI_M	GE_MMI_M
	Det.Lim. Units	ppb	ppb	ppb	ppb	0.5 ppb	ppb	ppb	ppb
2615369		<1	12.2	<0.1	44	<0.5	26	12	<1
2615370		<1	12.0	<0.1	37	< 0.5	26	11	<1
2615371		<1	67.5	<0.1	29	<0.5	60	62	<1
2615372		<1	55.4	<0.1	34	0.7	77	50	<1
2615373		<1	17.9	<0.1	73	<0.5	44	18	<1
2615374		<1	48.5	<0.1	54	<0.5	48	49	<1
2615375		<1	6.6	<0.1	79	<0.5	26	8	<1
2615376		<1	6.3	<0.1	20	<0.5	26	6	<1
2615377		<1	6.7	<0.1	33	<0.5	30	6	<1
2615378		<1	13.5	<0.1	65	<0.5	18	11	<1
2615379		<1	5.0	<0.1	66	<0.5	20	6	<1
2615380		<1	2.0	<0.1	11	<0.5	<5	3	<1
2615381		<1	10.7	<0.1	82	<0.5	14	10	<1
2615382		<1	12.1	<0.1	64	<0.5	25	10	<1
2615383		<1	20.5	<0.1	51	<0.5	25	17	<1
2615384		<1	10.7	<0.1	55	<0.5	13	9	<1
2615385		<1	11.6	<0.1	72	<0.5	18	9	<1
2615386		<1	16.1	<0.1	31	<0.5	28	16	<1
2615387		<1	70.0	<0.1	69	<0.5	39	66	<1
2615388		<1	11.4	<0.1	110	<0.5	24	10	<1
2615389		<1	8.4	<0.1	140	<0.5	41	8	<1
2615390		<1	9.2	<0.1	135	0.6	37	8	<1
2615391		<1	3.6	<0.1	102	<0.5	26	3	<1
2615392		<1	9.3	<0.1	23	<0.5	31	10	<1
2615393		<1	10.7	<0.1	75	<0.5	29	8	<1
2615394		<1	11.4	<0.1	56	<0.5	30	10	<1
2615395		<1	21.7	<0.1	57	<0.5	37	20	<1
2615396		<1	33.9	<0.1	82	<0.5	50	28	<1
2615397		<1	25.5	<0.1	101	<0.5	40	20	<1
2615398		<1	18.1	<0.1	75	<0.5	43	17	<1
2615399		<1	31.1	<0.1	71	<0.5	60	26	<1
2615400		<1	2.2	<0.1	11	<0.5	<5	3	<1
2615401		<1	9.6	<0.1	99	<0.5	26	10	<1
2615402		<1	32.6	<0.1	51	<0.5	53	29	<1
2615403		<1	8.8	<0.1	67	<0.5	32	8	<1
2615404		<1	24.5	<0.1	44	<0.5	41	22	<1
2615405		<1	56.8	<0.1	29	<0.5	28	47	<1
2615406		<1	83.2	<0.1	94	<0.5	49	63	<1
2615407		<1	14.0	<0.1	83	<0.5	40	14	<1
2615408		<1	17.4	<0.1	71	<0.5	43	15	<1

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	Element	Pd	Pr CE MMI M	Pt	Rb	Sb	Sc CE MMI M	Sm CE MML M	Sn CE MMI M
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim. Units	ppb	0.5 ppb	0.1 ppb	ppb	0.5 ppb	5 ppb	ppb	ppb
2615409		<1	12.9	<0.1	86	<0.5	28	11	<1
2615410		<1	19.5	<0.1	96	<0.5	33	17	<1
2615411		<1	116	<0.1	73	0.8	49	80	3
2615451		<1	21.0	<0.1	87	1.1	30	17	<1
2615452		<1	17.9	<0.1	142	0.9	49	15	1
2615453		<1	17.0	<0.1	165	0.8	41	15	1
2615454		<1	22.4	<0.1	51	0.6	30	23	<1
2615455		<1	30.1	<0.1	25	0.5	39	29	<1
2615456		<1	22.0	<0.1	52	<0.5	11	27	<1
2615457		<1	3.4	<0.1	36	<0.5	<5	7	<1
2615458		<1	29.7	<0.1	47	<0.5	13	42	<1
2615459		<1	27.5	<0.1	33	2.1	14	32	<1
2615460		<1	2.7	<0.1	11	<0.5	<5	4	<1
2615461		<1	8.2	0.1	27	<0.5	12	12	<1
2615462		<1	15.9	<0.1	27	0.8	31	20	<1
2615463		<1	2.0	<0.1	24	<0.5	<5	4	<1
2615464		<1	6.3	<0.1	42	<0.5	<5	14	<1
2615465		<1	7.9	<0.1	63	<0.5	<5	18	<1
2615466		<1	8.9	<0.1	48	<0.5	31	8	<1
2615467		<1	244	<0.1	23	<0.5	77	243	<1
2615468		<1	5.8	<0.1	33	<0.5	17	6	<1
2615469		<1	10.7	<0.1	117	<0.5	47	10	3
2615470		<1	10.5	<0.1	107	<0.5	44	11	3
2615471		<1	19.6	<0.1	149	0.5	32	16	<1
2615472		<1	12.2	<0.1	75	0.6	23	12	<1
2615473		<1	19.1	<0.1	138	<0.5	27	19	<1
2615474		<1	25.5	<0.1	60	0.6	45	24	2
2615475		<1	7.7	<0.1	73	<0.5	26	8	<1
2615476		<1	17.8	<0.1	92	<0.5	28	17	<1
2615477		<1	69.5	<0.1	62	0.5	81	68	<1
2615478		<1	11.5	<0.1	66	<0.5	27	13	<1
2615479		<1	13.3	<0.1	110	1.4	44	11	1
2615480		<1	2.3	<0.1	12	<0.5	<5	4	<1
2615481		<1	13.3	<0.1	91	0.9	52	10	2
2615482		<1	14.3	<0.1	170	0.7	28	13	<1
2615483		<1	17.0	<0.1	138	0.8	29	15	<1
2615484		<1	9.2	<0.1	116	<0.5	27	10	<1
2615485		<1	17.1	<0.1	163	<0.5	19	15	<1
2615486		<1	21.9	<0.1	112	0.9	28	20	<1
2615487		<1	5.6	<0.1	220	1.6	41	5	3

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#### Final : VC151545 Order: KSK-15-13\_01/2615369-5411,2615451-5491 Report File No.: 0000012034

Pt Sn Element Pd Pr Rb Sb Sc Sm Method GE MMI M Det.Lim. 0.5 0.5 0.1 5 1 1 Units ppb ppb ppb ppb ppb ppb ppb ppb 2615488 0.9 <1 7.3 < 0.1 112 18 6 1 2615489 <1 8.9 <0.1 95 0.7 24 7 1 2615490 <1 10.5 < 0.1 84 0.6 28 8 3 2615491 14.8 < 0.1 141 0.8 29 <1 14 <1 \*Rep 2615388 <1 9.9 <0.1 104 <0.5 21 9 <1 \*Rep 2615398 <1 18.1 <0.1 78 <0.5 44 17 <1 \*Rep 2615452 127 1.3 50 2 <1 20.0 0.1 16 \*Rep 2615473 <1 20.0 <0.1 123 0.6 31 18 <1 \*Rep 2615485 14 <1 <1 16.2 < 0.1 167 0.7 20 \*Std AMIS0169 <1 90.0 0.2 232 0.7 64 55 <1 \*Std MMISRM18 13 2.9 8.7 135 <0.5 <5 5 <1 \*BIk BLANK <1 < 0.5 < 0.1 <1 <0.5 <5 <1 <1 \*Blk BLANK <1 < 0.5 <0.1 <1 < 0.5 <5 <1 <1 \*BIk BLANK <1 < 0.5 < 0.1 <1 < 0.5 <5 <1 <1 \*Blk BLANK <0.5 <1 0.7 <0.1 <1 <5 <1 <1

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Report File NC	Element	Sr	Ta CE MMI M	Tb	Te GE_MMI_M	Th	Ti CE MMI M		
	Method	GE_MMI_M 10	GE_MMI_M	GE_MMI_M 0.1	GE_IMINI_M 10	GE_MMI_M 0.5	GE_MMI_M 10	GE_MMI_M 0.1	GE_MMI_M
	Det.Lim. Units	ppb	ppb	ppb	ppb	0.5 ppb	ppb	ppb	0.5 ppb
2615369		180	<1	1.6	<10	6.7	570	0.1	5.3
2615370		220	<1	1.5	<10	6.5	570	0.1	5.3
2615371		200	<1	9.2	<10	13.8	430	<0.1	10.6
2615372		180	<1	6.2	<10	31.4	2400	0.4	11.6
2615373		70	<1	2.9	<10	11.1	620	0.2	6.0
2615374		110	<1	6.4	<10	6.2	410	0.3	5.3
2615375		20	<1	1.4	<10	5.6	500	0.2	3.5
2615376		210	<1	0.7	<10	3.8	510	<0.1	5.3
2615377		100	<1	1.0	<10	5.7	1360	<0.1	5.1
2615378		170	<1	1.5	<10	5.1	400	<0.1	10.4
2615379		160	<1	0.8	<10	3.8	1280	<0.1	3.4
2615380		270	<1	0.6	<10	0.8	30	<0.1	1.3
2615381		170	<1	1.2	<10	4.5	850	<0.1	5.3
2615382		130	<1	1.3	<10	9.2	510	<0.1	9.3
2615383		220	<1	2.2	<10	7.7	470	<0.1	9.7
2615384		110	<1	1.0	<10	5.5	300	<0.1	6.9
2615385		140	<1	1.1	<10	6.0	1480	0.1	4.4
2615386		120	<1	2.1	<10	7.7	510	<0.1	7.1
2615387		320	<1	8.2	<10	9.8	400	0.2	14.0
2615388		390	<1	1.2	<10	6.6	1440	0.4	3.9
2615389		220	<1	1.3	<10	8.6	1060	0.3	4.9
2615390		200	<1	1.3	<10	8.7	1020	0.3	5.3
2615391		40	<1	0.7	<10	5.4	870	0.4	3.1
2615392		70	<1	1.5	<10	6.5	1690	0.1	3.4
2615393		220	<1	1.2	<10	5.2	770	0.2	4.7
2615394		260	<1	1.2	<10	5.4	670	0.2	6.3
2615395		10	<1	3.0	<10	11.6	360	0.5	10.1
2615396		<10	<1	3.8	<10	10.7	340	0.3	6.1
2615397		60	<1	2.7	<10	27.9	2380	0.3	12.7
2615398		<10	<1	2.5	<10	3.5	80	0.2	4.2
2615399		<10	<1	3.8	<10	30.8	560	0.2	9.0
2615400		300	<1	0.5	<10	1.7	10	<0.1	1.5
2615401		70	<1	1.6	<10	3.5	270	0.2	2.7
2615402		<10	<1	3.6	<10	7.7	190	0.5	5.8
2615403		90	<1	1.5	<10	4.7	510	0.3	3.3
2615404		<10	<1	3.0	<10	5.3	480	0.3	4.2
2615405		20	<1	4.5	<10	7.4	1040	0.2	6.7
2615406		30	<1	7.7	<10	11.6	1380	0.6	10.1
2615407		<10	<1	2.0	<10	12.0	770	0.2	8.4
2615408		<10	<1	2.1	<10	16.6	570	0.4	8.7

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	Element	Sr CE MMI M	Та	Tb	Te GE_MMI_M	Th	Ti GE_MMI_M		
	Method	GE_MMI_M 10	GE_MMI_M	GE_MMI_M 0.1	GE_MINI_M 10	GE_MMI_M 0.5	GE_IMIMI_IM 10	GE_MMI_M 0.1	GE_MMI_M
	Det.Lim. Units	ppb	ppb	ppb	ppb	0.5 ppb	ppb	ppb	0.5 ppb
0045400									
2615409		<10	<1	1.8	<10	8.0	210	0.3	4.5
2615410		<10	<1	2.4	<10	9.1	270	0.4	5.3
2615411		100	1	7.3	<10	62.1	7230	0.7	28.3
2615451		230	<1	1.9	<10	15.1	1790	0.2	12.8
2615452		20	<1	2.2	<10	26.2	3060	0.5	8.9
2615453		60	<1	2.2	<10	15.8	2650	0.5	7.1
2615454		<10	<1	2.9	<10	12.7	650	0.4	9.2
2615455		<10	<1	3.8	<10	13.6	430	0.5	7.7
2615456		670	<1	3.0	<10	11.0	40	0.5	15.4
2615457		540	<1	1.0	<10	1.8	20	0.4	1.5
2615458		740	<1	5.5	<10	17.9	10	0.3	80.8
2615459		660	<1	3.9	<10	24.8	20	0.1	56.3
2615460		260	<1	0.6	<10	2.4	30	<0.1	3.2
2615461		90	<1	1.7	<10	4.3	20	0.2	1.4
2615462		580	<1	4.1	<10	5.8	30	0.3	48.3
2615463		590	<1	0.6	<10	3.1	20	0.6	3.2
2615464		620	<1	2.5	<10	2.0	<10	0.4	3.1
2615465		480	<1	3.0	<10	3.4	<10	0.7	1.5
2615466		300	<1	1.2	<10	4.5	1710	0.2	2.5
2615467		520	<1	28.8	<10	81.6	220	0.4	31.5
2615468		80	<1	1.0	<10	6.4	290	<0.1	3.1
2615469		370	<1	1.7	<10	11.0	5390	0.4	5.3
2615470		360	<1	1.8	<10	10.0	4840	0.4	4.8
2615471		40	<1	2.4	<10	20.1	640	0.7	7.3
2615472		30	<1	1.8	<10	9.0	500	0.3	3.6
2615473		60	<1	2.7	<10	20.1	1040	0.4	9.0
2615474		130	<1	3.1	<10	15.2	4500	0.7	6.0
2615475		80	<1	1.3	<10	9.6	1370	0.3	5.4
2615476		<10	<1	2.5	<10	12.2	1070	0.3	4.4
2615477		260	<1	8.0	<10	20.0	1150	0.2	12.5
2615478		<10	<1	2.0	<10	6.2	200	0.2	3.2
2615479		380	<1	1.8	<10	13.6	2080	0.3	5.7
2615480		240	<1	0.5	<10	0.8	40	0.1	1.7
2615481		400	<1	1.3	<10	15.8	4870	0.3	5.3
2615482		60	<1	1.7	<10	10.9	1220	0.3	4.8
2615483		70	<1	1.9	<10	18.6	770	0.5	8.3
2615484		90	<1	1.6	<10	6.5	1300	0.2	4.8
2615485		140	<1	2.1	<10	13.5	880	0.3	5.0
2615486		50	<1	2.9	<10	10.0	780	0.4	5.3
2615487		330	<1	0.8	<10	14.0	2210	0.4	5.2

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#### Final : VC151545 Order: KSK-15-13\_01/2615369-5411,2615451-5491 Report File No.: 0000012034

	Sr	Та	Tb	т	Th	Ti	TI	
Element		-						U
Method	GE_MMI_M	GE_MMI_M				GE_MMI_M	GE_MMI_M	GE_MMI_M
Det.Lim.	10	1	0.1	10	0.5	10	0.1	0.5
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2615488	300	<1	0.8	<10	5.0	1470	0.3	2.2
2615489	220	<1	1.1	<10	5.1	1640	0.3	4.0
2615490	140	<1	1.0	<10	7.1	2660	0.4	5.0
2615491	60	<1	1.9	<10	14.7	1600	0.4	6.9
*Rep 2615388	390	<1	1.1	<10	5.8	1380	0.2	3.7
*Rep 2615398	<10	<1	2.6	<10	3.3	70	0.2	4.0
*Rep 2615452	20	1	2.2	<10	31.1	3850	0.6	9.6
*Rep 2615473	80	<1	3.0	<10	20.9	1020	0.4	9.7
*Rep 2615485	150	<1	2.1	<10	13.0	890	0.4	5.2
*Std AMIS0169	70	<1	5.3	<10	64.1	310	0.9	24.0
*Std MMISRM18	1560	<1	0.7	<10	15.1	<10	0.2	28.7
*BIk BLANK	<10	<1	<0.1	<10	<0.5	10	<0.1	<0.5
*BIk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5
*BIk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5
*BIk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5

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Element Method Det.Lim. Units	W GE_MMI_M 0.5 ppb	Y GE_MMI_M 1 ppb	Yb GE_MMI_M 0.2 ppb	Zn GE_MMI_M 10 ppb	Zr GE_MMI_M 2 ppb
2615369	1.0	41	3.3	130	28
2615370	0.8	43	3.0	180	28
2615371	0.6	249	15.7	40	23
2615372	1.6	149	10.3	60	65
2615373	<0.5	84	6.1	520	31
2615374	0.6	205	11.7	70	22
2615375	<0.5	46	3.7	140	17
2615376	<0.5	21	1.2	50	13
2615377	<0.5	24	2.2	250	19
2615378	0.8	35	2.3	60	21
2615379	1.0	23	2.0	360	20
2615380	0.8	16	1.0	520	4
2615381	0.5	28	2.3	90	32
2615382	<0.5	35	2.3	370	21
2615383	<0.5	55	3.1	160	27
2615384	0.9	27	2.3	50	16
2615385	0.8	30	1.9	50	21
2615386	<0.5	65	3.8	250	15
2615387	0.6	219	14.2	210	21
2615388	0.7	34	2.8	120	23
2615389	0.6	36	3.0	2730	33
2615390	0.9	33	2.6	2280	37
2615391	0.5	19	2.2	2010	42
2615392	0.6	43	4.4	640	27
2615393	0.9	33	2.7	330	18
2615394	0.6	32	3.2	170	21
2615395	0.5	90	6.6	190	22
2615396	<0.5	95	7.9	390	28
2615397	1.7	58	6.9	320	55
2615398	<0.5	94	6.9	670	12
2615399	0.7	87	7.2	140	51
2615400	<0.5	17	1.1	550	5
2615401	<0.5	66	5.4	80	14
2615402	<0.5	102	8.3	40	23
2615403	<0.5	58	4.3	530	16
2615404	<0.5	115	8.1	330	16
2615405	1.0	123	11.0	<10	28
2615406	1.2	182	12.9	410	28
2615407	<0.5	61	5.0	120	34
2615408	0.6	57	4.6	200	37

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	nent	W	Y	Yb	Zn	Zr
	thod	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
Det.		0.5	1	0.2	10	2
U	Inits	ppb	ppb	ppb	ppb	ppb
2615409		<0.5	59	4.1	250	19
2615410		<0.5	81	6.1	210	22
2615411		4.2	148	15.4	140	101
2615451		1.1	57	4.8	20	41
2615452		1.3	68	5.9	340	64
2615453		1.3	64	5.3	310	62
2615454		1.2	77	5.5	30	36
2615455		0.7	119	9.1	<10	29
2615456		0.9	76	4.2	20	16
2615457		1.5	35	3.0	<10	5
2615458		<0.5	163	12.4	120	24
2615459		1.1	119	8.6	40	30
2615460		0.9	16	1.3	500	6
2615461		0.9	50	3.6	140	6
2615462		0.6	191	15.1	750	12
2615463		<0.5	23	1.6	10	15
2615464		0.6	82	6.1	<10	9
2615465		1.8	88	5.9	<10	11
2615466		1.1	36	2.9	170	21
2615467		1.2	774	57.6	20	63
2615468		0.6	26	2.2	30	14
2615469		1.6	53	4.9	620	64
2615470		1.5	53	4.5	490	58
2615471		1.1	58	4.7	190	57
2615472		0.9	59	4.4	50	26
2615473		0.9	58	4.3	150	55
2615474		1.9	89	7.4	300	65
2615475		1.1	37	4.5	140	41
2615476		0.7	71	4.6	70	40
2615477		1.2	240	14.4	30	74
2615478		1.0	70	5.4	30	27
2615479		1.3	50	3.7	150	66
2615480		0.6	17	1.1	540	5
2615481		1.9	34	3.3	620	48
2615482		0.8	47	3.6	550	44
2615483		0.8	53	3.5	210	47
2615484		0.9	60	5.6	50	21
2615485		1.3	52	4.0	60	31
2615486		1.2	88	7.5	40	28
2615487		1.3	28	2.6	1510	72

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	Element Method Det.Lim. Units	W GE_MMI_M 0.5 ppb	Y GE_MMI_M 1 ppb	Yb GE_MMI_M 0.2 ppb	Zn GE_MMI_M 10 ppb	Zr GE_MMI_M 2 ppb
2615488		0.6	26	2.2	70	25
2615489		1.1	33	1.9	930	24
2615490		1.3	26	2.3	650	38
2615491		1.3	57	6.3	60	40
*Rep 2615388		1.0	32	2.9	160	23
*Rep 2615398		<0.5	91	7.2	650	13
*Rep 2615452		1.8	58	6.1	290	78
*Rep 2615473		1.0	61	4.4	100	60
*Rep 2615485		1.2	50	3.8	80	34
*Std AMIS0169		1.7	119	9.4	210	42
*Std MMISRM18		<0.5	22	0.9	770	25
*BIk BLANK		<0.5	<1	<0.2	<10	<2
*Blk BLANK		<0.5	<1	<0.2	<10	<2
*Blk BLANK		<0.5	<1	<0.2	<10	<2
*Blk BLANK		0.7	2	<0.2	<10	<2

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#### Certificate of Analysis Work Order : VC151546 [Report File No.: 0000012076]

Date: August 04, 2015

#### To: RON VOORDOUW EQUITY EXPLORATION CONSULTANTS LTD 200-900 WEST HASTINGS ST VANCOUVER BC V6C 1E5

P.O. No.: KSK-15-13\_01/2615492-2615575 Project No.: -Samples: 84 Received: Jul 9, 2015 Pages: Page 1 to 22 (Inclusive of Cover Sheet)

#### Methods Summary

No. Of Samples	Method Code
84	G_LOG02
84	GE_MMI_M

<u>Description</u> Pre-preparation processing, sorting, logging, boxing Mobile Metal ION standard package/ICP-MS

Storage: Pulp & Reject

REJECT STORAGE

STORE FOR 30 DAYS

Certified By Cam Chiang

Assistant Operations Manager

SGS Minerals Services Geochemistry Vancouver conforms to the requirements of ISO/IEC 17025 for specific tests as listed on their scope of accreditation which can be found at http://www.scc.ca/en/search/palcan/sgs

 Report Footer:
 L.N.R. = Listed not received n.a.
 I.S. = Insufficient Sample not received n.a.

 \*INF
 = Composition of this sample makes detection impossible by this method

 M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

 Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted

 Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

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Report File No.: 0000012076

	Element Method	Ag GE_MMI_M	Al GE_MMI_M	As GE_MMI_M	Au GE_MMI_M	Ba GE_MMI_M	Bi GE_MMI_M	Ca GE_MMI_M	Cd GE_MMI_M
	Det.Lim. Units	0.5 ppb	1 ppm	10 ppb	0.1 ppb	10 ррb	0.5 ppb	2 ppm	1 ppb
2615492		5.3	48	10	0.2	1010	<0.5	43	29
2615493		4.7	19	<10	0.3	600	<0.5	51	2
2615494		0.9	26	<10	<0.1	480	<0.5	79	20
2615495		5.8	192	20	<0.1	670	<0.5	66	7
2615496		3.9	252	30	<0.1	1370	1.6	55	15
2615497		6.9	235	20	<0.1	960	<0.5	25	23
2615498		1.0	220	20	<0.1	1260	2.9	44	23
2615499		3.5	245	<10	<0.1	330	<0.5	6	9
2615500		0.7	4	<10	<0.1	720	<0.5	93	9 2
2615501		4.7	304	40	<0.1	1280	1.2	71	24
2615502		5.8	248	20	0.3	1000	<0.5	17	8
2615503		6.9	141	<10	0.1	190	<0.5	9	8 12
2615504		6.8	292	<10	<0.1	470	<0.5	7	27
2615505		7.1	178	<10	<0.1	350	<0.5	5	18
2615506		6.2	282	20	0.1	1060	<0.5	17	17
2615507		8.2	263	<10	0.2	430	<0.5	30	
2615508		1.1	312	<10	<0.1	320	<0.5	11	9 3 5 6
2615509		1.6	137	20	0.2	970	<0.5	159	5
2615510		3.2	143	10	0.4	1010	0.6	161	6
2615511		16.2	201	<10	<0.1	850	<0.5	66	11
2615512		3.3	206	60	0.1	970	<0.5	47	9
2615513		11.0	218	10	0.1	390	<0.5	11	25
2615514		15.6	329	70	<0.1	760	<0.5	6	30
2615515		16.8	359	30	<0.1	1100	<0.5	16	18
2615516		1.8	249	50	<0.1	700	0.7	39	19
2615517		14.6	274	90	<0.1	820	0.5	15	7
2615518		21.9	172	10	0.2	750	<0.5	134	25
2615519		13.7	279	<10	0.2	1470	0.6	58	11
2615520		0.9	5	<10	<0.1	800	<0.5	111	2
2615521		3.8	285	20	0.3	1180	<0.5	18	6
2615522		5.4	272	<10	0.3	790	0.6	6	13
2615523		6.3	259	<10	0.2	370	<0.5	6	12
2615524		2.8	151	20	0.1	1120	1.0	56	20
2615525		3.5	20	80	0.2	670	0.5	255	6
2615526		4.0	57	20	0.4	450	0.6	354	36
2615527		5.3	306	210	0.4	2760	1.6	16	18
2615528		3.7	102	<10	0.4	300	<0.5	164	3
2615529		6.9	327	30	<0.1	450	<0.5	11	16
2615530		5.8	280	20	<0.1	380	<0.5	7	12
2615531		<0.5	216	<10	<0.1	1040	6.7	62	13

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	Element	Ag	AI	As	Au	Ва	Bi	Са	Cd
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M 1 ppb
	Det.Lim. Units	0.5 ppb	ו ppm	10 ppb	0.1 ppb	10 ppb	0.5 ppb	2 ppm	
2615532		2.9	237	<10	<0.1	240	<0.5	148	5
2615533		5.9	256	20	<0.1	290	<0.5	9	26
2615534		2.1	249	20	<0.1	320	<0.5	13	26 7
2615535		8.8	140	<10	0.2	510	<0.5	272	7
2615536		9.3	316	10	<0.1	710	0.6	50	10
2615537		23.4	208	<10	0.2	760	<0.5	83	13
2615538		13.5	237	<10	<0.1	340	<0.5	31	14
2615539		11.9	189	<10	0.2	120	<0.5	78	7
2615540		0.9	4	<10	0.2	670	<0.5	109	2
2615541		6.5	86	20	0.1	230	<0.5	298	14
2615542		11.2	162	10	0.1	460	<0.5	221	14
2615543		5.1	217	<10	<0.1	350	0.5	9	
2615544		12.4	228	50	0.4	590	<0.5	9	12 3 5
2615545		9.5	155	10	0.4	540	<0.5	30	5
2615546		10.4	239	30	<0.1	370	<0.5	145	38
2615547		14.0	326	460	0.2	1500	3.8	39	19
2615548		7.1	311	20	0.1	390	<0.5	17	
2615549		7.7	240	10	0.1	530	<0.5	4	8
2615550		8.4	276	10	0.1	510	0.7	4	9
2615551		12.4	265	30	0.1	800	0.8	11	4
2615552		6.1	312	30	0.1	1310	0.6	2	14
2615553		2.3	225	10	0.1	400	<0.5	9	22
2615554		2.5	180	<10	<0.1	180	<0.5	<2	8
2615555		0.6	200	<10	0.1	220	<0.5	<2	13
2615556		3.6	171	10	<0.1	520	<0.5	9	8
2615557		7.9	194	<10	<0.1	390	<0.5	4	16
2615558		12.0	267	30	0.3	1330	0.6	22	16
2615559		7.4	319	20	<0.1	1680	0.7	11	21
2615560		0.8	3	<10	0.1	810	<0.5	109	
2615561		7.7	254	<10	<0.1	590	<0.5	7	2
2615562		24.3	247	10	<0.1	330	<0.5	6	15
2615563		5.1	246	40	0.3	280	0.6	35	6
2615564		15.4	198	<10	0.2	220	<0.5	13	5
2615565		10.1	194	20	0.3	440	<0.5	67	4
2615566		8.7	231	20	0.2	960	<0.5	47	. 11
2615567		13.6	138	80	0.5	610	0.5	190	7
2615568		1.5	228	<10	<0.1	540	< 0.5	5	13
2615569		2.4	276	<10	0.2	150	< 0.5	3	8
2615570		2.9	291	<10	0.1	140	<0.5	2	9
2615571		4.5	278	10	<0.1	250	<0.5	<2	14

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Element Method	° °						Ca GE_MMI_M	Cd GE_MMI_M
Det.Lim.	0.5	1	10		10	0.5	2	1
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
2615572	3.8	307	20	0.1	380	<0.5	4	6
2615573	4.1	251	<10	0.2	200	<0.5	5	17
2615574	4.4	144	<10	0.2	240	<0.5	3	3
2615575	3.0	249	20	0.2	530	1.0	7	5
*Rep 2615502	5.2	218	20	0.3	850	<0.5	16	6
*Rep 2615515	16.7	333	40	0.1	1190	<0.5	12	16
*Rep 2615544	10.4	179	50	0.3	640	<0.5	18	3
*Rep 2615556	3.7	170	<10	0.1	530	<0.5	10	8
*Rep 2615567	13.8	148	80	0.4	560	<0.5	190	8
*Std AMIS0169	9.6	63	<10	0.6	1040	<0.5	41	2
*Std MMISRM18	22.5	24	10	7.6	140	<0.5	230	80
*Blk BLANK	<0.5	2	<10	<0.1	<10	<0.5	<2	<1
*Blk BLANK	<0.5	2	<10	<0.1	<10	<0.5	<2	<1
*Blk BLANK	<0.5	1	<10	<0.1	<10	<0.5	<2	<1
*BIk BLANK	<0.5	1	<10	<0.1	<10	<0.5	<2	<1

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## Final : VC151546 Order: KSK-15-13\_01/2615492-2615575

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	Element Method	Ce GE_MMI_M	Co GE_MMI_M	Cr GE_MMI_M	Cs GE_MMI_M	Cu GE_MMI_M	Dy GE_MMI_M	Er GE_MMI_M	Eu GE_MMI_M
	Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
	Units	ppb							
2615492		78	264	1300	3.4	240	6.6	2.8	2.1
2615493		132	52	300	2.3	210	21.4	10.0	8.3
2615494		383	1040	500	1.6	280	46.1	22.0	19.4
2615495		102	183	1000	3.7	150	12.3	6.0	3.9
2615496		85	297	800	2.8	410	11.1	6.4	3.2
2615497		65	441	400	2.8	260	11.7	6.8	2.4
2615498		37	98	400	1.5	240	7.1	4.2	1.6
2615499		22	122	200	5.1	280	5.3	3.6	0.9
2615500		9	4	<100	0.2	280	2.7	1.3	0.6
2615501		148	412	1100	4.5	630	14.1	7.3	4.3
2615502		134	117	900	5.0	360	13.5	6.7	4.0
2615503		204	15	<100	7.0	230	20.6	8.5	8.4
2615504		63	83	200	13.1	290	9.7	4.8	2.8
2615505		57	51	<100	3.7	240	11.1	6.3	2.5
2615506		52	47	100	3.8	170	7.4	3.9	2.5
2615507		720	18	200	12.4	700	76.4	31.2	30.1
2615508		458	9	300	5.2	250	31.1	14.1	13.0
2615509		874	59	300	8.2	1510	60.3	32.6	27.9
2615510		1120	64	300	7.9	1650	69.1	36.6	32.4
2615511		86	139	100	4.8	440	11.6	5.6	3.4
2615512		131	317	1000	4.0	310	16.9	7.2	5.3
2615513		50	91	<100	19.5	380	10.4	5.4	2.6
2615514		97	247	700	26.4	520	9.5	5.2	2.7
2615515		85	139	400	24.4	350	6.5	3.7	2.5
2615516		77	54	200	12.2	140	8.7	6.0	2.4
2615517		256	651	900	13.4	380	16.4	7.9	5.3
2615518		287	124	200	5.8	400	17.8	9.1	6.7
2615519		417	159	200	7.5	800	61.9	32.2	22.1
2615520		13	5	<100	0.3	290	3.4	1.4	0.9
2615521		260	141	300	6.5	280	17.0	7.6	5.9
2615522		422	68	200	8.3	910	39.4	18.9	13.5
2615523		223	60	100	4.3	530	33.6	19.1	8.2
2615524		208	1210	200	4.0	290	20.2	11.7	5.1
2615525		754	101	100	0.8	5130	33.3	13.7	15.5
2615526		385	84	<100	2.4	6960	38.8	19.5	13.2
2615527		2400	511	800	2.7	980	108	67.2	35.7
2615528		362	57	<100	1.3	950	50.9	24.2	23.3
2615529		63	42	100	2.7	180	8.1	4.5	2.9
2615530		47	26	<100	1.4	190	8.0	4.1	2.5
2615531		9	368	<100	3.5	90	2.5	3.8	0.4

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	Element	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim. Units	2	1	100 ppb	0.2	10 ppb	0.5	0.2	0.2
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2615532		175	25	200	9.3	850	58.0	30.0	22.5
2615533		67	34	200	10.9	360	9.7	5.2	2.7
2615534		39	26	100	3.7	190	7.0	3.1	1.8
2615535		180	111	100	6.0	570	12.7	6.5	4.8
2615536		265	114	200	5.6	370	14.4	6.6	5.1
2615537		234	32	100	6.8	350	17.0	8.5	5.3
2615538		70	46	<100	6.4	180	10.9	5.2	3.6
2615539		374	18	<100	4.2	390	40.9	17.5	15.1
2615540		9	4	<100	0.4	310	3.2	1.5	0.8
2615541		113	93	100	3.4	1380	13.4	7.2	4.7
2615542		77	95	100	3.3	380	8.7	4.5	2.8
2615543		42	107	100	3.6	250	7.9	5.0	1.5
2615544		350	58	600	4.7	320	27.4	12.4	11.0
2615545		313	202	400	6.4	610	22.8	9.6	8.4
2615546		132	372	300	10.4	720	15.6	7.8	4.1
2615547		441	697	800	10.5	540	12.4	6.6	5.8
2615548		131	94	200	7.2	300	17.6	10.1	5.2
2615549		139	78	100	6.1	300	19.2	9.7	5.2
2615550		126	97	100	6.8	310	18.2	9.6	4.8
2615551		305	170	500	9.7	310	23.8	11.8	8.5
2615552		210	131	400	4.9	240	14.1	6.9	5.0
2615553		124	30	100	7.6	570	10.0	5.4	3.0
2615554		35	16	<100	6.1	300	7.7	4.0	2.0
2615555		32	24	<100	8.0	290	6.3	2.8	1.4
2615556		93	93	<100	4.5	180	10.7	5.7	3.2
2615557		98	140	<100	2.5	210	14.2	7.0	4.7
2615558		540	181	600	7.7	630	35.4	19.0	14.4
2615559		80	109	200	5.6	330	10.2	5.4	3.6
2615560		8	4	<100	0.3	310	2.9	1.3	0.7
2615561		59	122	200	4.1	230	11.4	7.7	2.8
2615562		99	77	100	7.6	170	14.2	8.2	4.9
2615563		490	236	400	2.7	1040	48.3	27.0	22.8
2615564		161	95	200	2.6	440	20.0	9.5	6.2
2615565		317	176	200	4.3	320	23.5	10.6	8.5
2615566		243	66	300	6.1	530	31.6	14.3	11.4
2615567		351	172	300	6.2	510	19.6	10.0	8.7
2615568		144	40	<100	8.0	430	20.0	9.9	6.8
2615569		552	37	<100	1.5	640	78.7	32.5	22.3
2615570		373	53	<100	1.9	650	73.5	32.5	17.9
2615571		53	39	<100	6.5	290	7.0	4.0	2.0

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	Element	Ce	Co				Dy	Er	
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M			GE_MMI_M	GE_MMI_M	
	Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2615572		181	56	300	5.8	440	17.3	8.0	5.9
2615573		234	53	<100	4.2	980	29.8	14.1	8.0
2615574		217	26	<100	7.5	740	27.2	13.8	9.7
2615575		258	52	200	11.0	730	18.7	9.4	6.3
*Rep 2615502		109	120	900	4.5	460	13.8	5.4	4.0
*Rep 2615515		75	129	300	24.9	360	7.9	3.9	2.6
*Rep 2615544		403	69	500	5.0	300	30.8	14.2	12.0
*Rep 2615556		93	89	<100	4.3	170	11.1	5.9	2.9
*Rep 2615567		333	185	300	6.8	560	18.1	9.9	7.6
*Std AMIS0169		816	101	100	7.0	3710	29.5	12.8	11.8
*Std MMISRM18		21	77	<100	4.4	1000	3.7	1.4	1.2
*BIk BLANK		<2	1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK		3	<1	<100	<0.2	<10	<0.5	<0.2	<0.2
*Blk BLANK		2	<1	<100	<0.2	<10	<0.5	<0.2	<0.2
*BIk BLANK		2	<1	<100	<0.2	<10	<0.5	<0.2	<0.2

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	Element	Fe	Ga	Gd	Hg	In	K	La	Li
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim. Units	ו ppm	0.5 ppb	0.5 ppb	ppb	0.1 ppb	0.5 ppm	ppb	ı ppb
2615492		64	2.9	7.9	<1	0.1	7.2	31	4
2615493		15	0.9	32.5	<1	<0.1	8.3	114	<1
2615494		50	1.7	63.6	<1	<0.1	9.9	426	
2615495		82	12.9	14.4	<1	0.1	6.4	43	3 9 8
2615496		118	8.8	10.8	<1	0.3	16.5	32	8
2615497		115	18.8	8.4	<1	0.1	9.4	30	9
2615498		190	25.2	5.3	<1	0.5	29.4	19	10
2615499		92	8.0	3.5	<1	0.1	7.7	11	
2615500		3	<0.5	3.6	<1	<0.1	5.7	3	2 5 10
2615501		144	18.2	13.8	<1	0.3	11.8	55	10
2615502		147	13.7	16.2	1	0.2	4.3	55	14
2615503		13	11.0	25.7	1	<0.1	6.7	86	<1
2615504		65	18.3	9.5	2	0.2	9.2	29	
2615505		44	6.3	8.7	<1	0.2	8.1	29	2 2 3
2615506		100	38.7	6.6	1	0.2	5.4	31	3
2615507		87	31.7	96.5	1	0.1	4.4	488	4
2615508		91	19.3	43.7	<1	0.2	1.9	193	1
2615509		114	11.3	103	<1	<0.1	3.8	612	5
2615510		115	13.4	131	<1	<0.1	3.8	742	5
2615511		42	4.1	11.3	<1	0.1	4.4	34	3
2615512		181	17.1	17.5	1	0.4	4.6	59	18
2615513		70	8.1	8.4	<1	0.1	4.1	22	4
2615514		169	19.2	8.7	1	0.5	8.3	37	4 5 5
2615515		93	13.6	8.3	2	0.3	10.4	36	5
2615516		194	54.7	7.7	<1	0.3	5.4	29	8
2615517		191	16.4	19.3	2	0.6	5.1	70	15
2615518		61	3.9	24.0	<1	0.1	2.5	61	6
2615519		110	33.9	92.5	<1	0.2	6.6	307	6 5
2615520		5	0.8	4.3	<1	<0.1	6.5	4	4
2615521		79	12.0	20.2	1	0.1	4.9	78	3
2615522		94	24.8	46.9	<1	0.1	6.3	225	7
2615523		76	13.6	32.6	1	0.3	11.0	108	1
2615524		177	20.3	18.9	<1	0.2	14.7	73	7
2615525		116	3.7	47.3	<1	<0.1	9.3	470	5
2615526		125	3.4	51.9	<1	0.2	3.7	226	4
2615527		264	17.9	159	<1	0.2	9.6	693	14
2615528		32	2.2	86.2	<1	<0.1	5.7	375	7
2615529		90	41.9	8.3	1	0.3	16.9	41	
2615530		88	40.2	7.5	1	0.3	15.9	38	3 2 3
2615531		87	13.8	1.3	<1	0.6	21.7	3	3

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	Element	Fe	Ga	Gd	Hg		K	La	Li
	Method	GE_MMI_M	GE_MMI_M 0.5	GE_MMI_M 0.5	GE_MMI_M	GE_MMI_M 0.1	GE_MMI_M 0.5	GE_MMI_M	GE_MMI_M 1
	Det.Lim. Units	ppm	ppb	0.5 ppb	ppb	ppb	ppm	ppb	ppb
2615532		124	25.0	86.6	<1	<0.1	7.7	424	2
2615533		146	24.5	9.4	<1	0.2	4.9	33	6
2615534		189	24.7	4.9	<1	0.1	7.9	21	2
2615535		62	11.6	18.7	<1	<0.1	5.8	86	4
2615536		98	28.0	16.8	<1	0.2	6.3	89	5
2615537		56	12.9	21.1	<1	0.1	9.0	75	5 5 2
2615538		77	12.5	10.8	<1	0.1	4.7	34	2
2615539		33	7.4	54.2	<1	<0.1	3.8	221	<1
2615540		4	<0.5	4.0	<1	<0.1	7.4	3	
2615541		95	8.3	17.5	<1	<0.1	11.2	57	3
2615542		60	10.8	10.0	<1	<0.1	8.7	27	2
2615543		85	13.2	5.9	<1	0.2	9.5	19	5 3 2 3 3 3 3 7
2615544		64	10.3	35.2	<1	0.1	3.3	148	3
2615545		35	9.1	31.1	<1	<0.1	5.4	109	3
2615546		194	17.3	13.1	<1	0.2	9.4	45	7
2615547		326	18.4	21.2	2	0.7	7.6	53	15
2615548		90	16.3	17.8	<1	0.3	6.5	56	15 2 1
2615549		78	16.7	16.8	2	0.2	6.7	53	1
2615550		82	17.2	14.8	1	0.2	8.3	50	
2615551		203	36.2	30.5	2	0.2	5.9	141	5
2615552		137	22.7	16.0	<1	0.2	6.2	94	2 5 8
2615553		78	11.5	9.7	<1	0.2	8.5	51	1
2615554		28	7.9	5.8	<1	0.1	4.5	16	<1
2615555		59	6.7	5.0	<1	0.2	4.8	16	1
2615556		36	4.1	10.6	<1	<0.1	9.2	39	2
2615557		25	7.3	13.5	<1	<0.1	5.0	54	2 2 10
2615558		97	18.1	44.8	1	0.2	7.1	196	10
2615559		149	36.8	10.3	1	0.3	8.9	46	14
2615560		4	<0.5	3.8	<1	<0.1	7.8	3	5
2615561		47	10.3	11.0	<1	0.1	4.6	32	5 7
2615562		34	17.9	15.1	1	<0.1	7.5	46	
2615563		183	17.7	77.6	1	0.2	5.5	352	2
2615564		44	3.4	21.7	<1	0.1	6.5	58	3
2615565		45	3.8	29.6	1	<0.1	4.9	94	3
2615566		69	16.0	40.6	2	0.1	7.0	141	9
2615567		99	7.4	29.9	1	0.1	7.4	100	6
2615568		48	9.8	21.7	<1	0.2	6.8	102	2
2615569		55	21.7	86.3	<1	0.2	2.8	292	<1
2615570		55	23.2	71.8	<1	0.2	3.3	197	<1
2615571		47	6.3	6.3	<1	0.2	7.7	21	1

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Element	Fe	Ga	Gd	5		К	La	Li
Method	GE_MMI_M	GE_MMI_M				GE_MMI_M	GE_MMI_M	GE_MMI_M
Det.Lim.	1	0.5	0.5	1	0.1	0.5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
2615572	72	15.6	18.5	<1	0.2	9.0	89	<1
2615573	27	10.1	32.8	<1	0.1	5.2	93	<1
2615574	50	14.1	35.1	<1	<0.1	8.9	103	1
2615575	289	31.4	21.6	2	0.2	9.2	162	7
*Rep 2615502	180	11.6	12.8	<1	0.2	5.0	54	7
*Rep 2615515	117	15.2	7.4	2	0.3	8.1	36	4
*Rep 2615544	54	9.3	43.2	1	0.1	2.8	164	3
*Rep 2615556	37	3.9	10.3	<1	<0.1	8.7	36	2
*Rep 2615567	90	5.4	25.6	<1	<0.1	8.0	90	5
*Std AMIS0169	45	13.6	47.3	<1	<0.1	42.9	492	3
*Std MMISRM18	6	0.5	4.7	7	<0.1	31.3	6	<1
*BIk BLANK	1	<0.5	<0.5	<1	<0.1	<0.5	<1	<1
*BIk BLANK	1	0.5	0.6	<1	<0.1	0.7	<1	<1
*BIk BLANK	2	<0.5	<0.5	<1	<0.1	0.6	<1	<1
*BIk BLANK	2	0.8	<0.5	<1	<0.1	0.6	<1	<1

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	Element	Mg	Mn	Мо	Nb	Nd	Ni	P	Pb
	Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
	Det.Lim. Units	0.5 ppm	100 ppb	2 ppb	0.5 ppb	r ppb	5 ppb	0.1 ppm	5 ppb
0045400	onito								
2615492		160	4800	<2 <2	3.9	40	4110	1.5	173
2615493		200	600		1.4	179	7010	0.2	48
2615494		295	17800	3	1.5	518	25800	0.3	43
2615495		43.7	1200	2	7.0	58	2630	2.4	158
2615496		39.6	3200	<2	6.8	50	2620	3.6	793
2615497		14.5	600	<2	5.9	34	2480	3.5	144
2615498		35.7	3400	2	7.1	21	1280	9.9	1080
2615499		5.0	300	3	1.6	14	884	6.5	117
2615500		18.0	500	<2	< 0.5	13	18	0.2	123
2615501		33.2	5400	3	11.5	80	1640	6.6	328
2615502		12.6	600	2	5.6	65	1360	3.1	186
2615503		<0.5	1000	<2	1.9	113	121	1.6	185
2615504		0.9	3600	4	3.6	37	200	5.2	372
2615505		0.8	900	<2	<0.5	36	296	1.7	231
2615506		1.7	500	2	9.9	31	319	4.0	180
2615507		2.5	300	5	7.7	556	556	4.3	152
2615508		<0.5	<100	5	7.0	215	81	2.3	65
2615509		13.3	1100	2	6.1	653	829	2.2	70
2615510		12.7	1500	3	6.2	760	1010	2.9	85
2615511		5.2	1500	<2	0.8	47	1020	1.9	290
2615512		11.7	3100	<2	3.5	69	3240	4.5	814
2615513		1.3	800	<2	1.6	32	954	1.2	246
2615514		1.6	4000	3	6.6	43	666	4.6	344
2615515		2.0	2000	5	4.8	42	372	5.4	243
2615516		6.4	300	3	13.0	27	316	3.7	496
2615517		3.4	11700	5	7.0	79	1400	4.6	136
2615518		6.4	900	<2	1.1	88	1670	1.1	160
2615519		3.3	3000	3	9.6	429	295	4.3	631
2615520		20.2	600	<2	<0.5	15	21	0.3	121
2615521		1.1	6200	4	5.5	95	154	4.1	346
2615522		1.9	1400	5	8.0	278	162	3.5	452
2615523		1.1	1100	3	2.9	150	251	2.5	578
2615524		16.9	79700	10	7.9	94	543	3.6	161
2615525		44.7	5200	5	1.8	444	209	1.2	437
2615526		54.8	5900	33	1.0	283	1200	0.5	1790
2615527		6.0	21400	17	13.6	845	274	7.9	878
2615528		13.6	600	2	0.7	553	343	0.4	291
2615529		1.5	400	3	9.6	38	216	4.4	315
2615530		1.4	200	<2	6.2	31	173	4.1	262
2615531		28.6	400	<2	1.1	5	303	0.6	424

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	Element Method	Mg	Mn GE_MMI_M	Mo GE_MMI_M	Nb GE_MMI_M	Nd GE_MMI_M	Ni GE_MMI_M	P GE_MMI_M	Pb GE_MMI_M
	Det.Lim.	GE_MMI_M 0.5	GE_IMIMI_M 100	GE_ININI_INI 2	0.5		GE_IVIIVII_IVI 5	0.1	GE_IVIIVII_IVI 5
	Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
2615532		6.7	<100	4	9.2	491	165	1.1	92
2615533		2.1	<100	3	8.6	39	158	1.9	79
2615534		2.7	200	<2	5.6	24	172	2.6	58
2615535		32.2	4700	3	4.4	105	336	1.1	110
2615536		4.3	900	4	8.7	92	333	3.9	127
2615537		3.9	4200	3	3.8	85	719	2.9	120
2615538		1.3	500	<2	2.8	42	249	2.2	232
2615539		5.0	800	2	1.4	281	332	1.2	139
2615540		22.7	700	<2	<0.5	13	22	0.3	136
2615541		58.6	9800	3	2.5	73	1530	1.0	100
2615542		21.7	5700	<2	2.6	36	1200	1.4	226
2615543		2.1	600	<2	4.1	25	492	1.2	301
2615544		1.1	400	6	6.0	164	194	1.4	98
2615545		1.6	2600	3	3.5	137	709	2.0	86
2615546		14.3	3000	4	6.2	60	962	2.9	250
2615547		5.1	6400	7	9.9	88	2350	6.8	238
2615548		0.8	1300	2	4.9	81	455	1.9	284
2615549		0.6	1800	2	3.8	74	217	3.1	431
2615550		0.8	2100	3	4.0	68	226	3.3	511
2615551		1.5	2200	5	15.5	148	280	5.4	160
2615552		0.9	1600	<2	8.2	104	159	2.0	301
2615553		0.9	200	<2	3.1	52	164	1.5	269
2615554		<0.5	<100	<2	1.8	24	34	0.5	333
2615555		<0.5	<100	<2	1.2	18	138	1.7	190
2615556		0.9	700	<2	<0.5	45	425	0.6	139
2615557		<0.5	1100	<2	<0.5	60	232	1.1	262
2615558		4.0	9000	3	6.8	229	656	4.5	167
2615559		2.8	1500	<2	9.3	45	524	5.0	296
2615560		21.8	700	<2	<0.5	11	18	0.3	134
2615561		2.4	2400	<2	2.4	42	809	2.6	192
2615562		0.6	3100	<2	6.0	64	331	2.0	266
2615563		2.6	7900	8	7.1	501	394	2.0	133
2615564		0.8	400	<2	0.7	87	1060	0.8	228
2615565		3.3	2300	2	1.4	119	716	1.8	76
2615566		3.8	2900	3	5.0	179	698	4.4	126
2615567		16.1	4300	4	2.9	138	647	2.5	88
2615568		0.6	200	<2	2.3	107	123	3.1	294
2615569		<0.5	200	<2	4.0	446	159	5.3	194
2615570		0.5	300	<2	3.1	321	173	4.1	221
2615571		<0.5	500	<2	1.4	28	135	2.1	184

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Eleme Metho	, i i i i i i i i i i i i i i i i i i i		-			Ni GE_MMI_M	P GE_MMI_M	Pb GE_MMI_M
Det.Lir Uni				0.5 ppb		5 ppb	0.1 ppm	5 ppb
	bpin					ppp		
2615572	0.7	700	3	6.6	111	134	5.1	230
2615573	<0.5	2400	2	1.6	141	218	3.1	124
2615574	<0.5	500	3	1.7	182	90	0.6	150
2615575	2.1	500	5	8.6	125	315	7.4	50
*Rep 2615502	11.6	600	2	4.8	61	1220	2.8	168
*Rep 2615515	1.9	1600	5	6.1	39	337	5.2	258
*Rep 2615544	1.2	600	5	7.5	188	198	1.4	95
*Rep 2615556	0.9	900	<2	<0.5	45	362	0.6	140
*Rep 2615567	16.5	3900	4	3.2	132	563	2.0	81
*Std AMIS0169	33.7	4400	3	3.8	383	472	3.0	118
*Std MMISRM18	118	1000	26	<0.5	17	484	0.6	287
*BIk BLANK	<0.5	<100	<2	<0.5	<1	<5	<0.1	<5
*Blk BLANK	<0.5	<100	<2	<0.5	<1	<5	0.1	<5
*Blk BLANK	<0.5	<100	<2	<0.5	<1	<5	0.2	<5
*BIk BLANK	<0.5	<100	<2	<0.5	1	<5	0.2	<5

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	Element Method Det.Lim.	Pd GE_MMI_M 1	Pr GE_MMI_M 0.5	Pt GE_MMI_M 0.1	Rb GE_MMI_M 1	Sb GE_MMI_M 0.5	Sc GE_MMI_M 5	Sm GE_MMI_M 1	Sn GE_MMI_M 1
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2615492		<1	10.2	<0.1	90	<0.5	21	8	<1
2615493		<1	40.8	<0.1	68	<0.5	20	36	<1
2615494		<1	122	<0.1	58	<0.5	48	77	<1
2615495		<1	14.9	<0.1	68	0.6	34	15	<1
2615496		<1	10.0	<0.1	52	0.8	46	11	<1
2615497		<1	9.0	<0.1	65	<0.5	34	8	<1
2615498		<1	5.0	<0.1	40	0.6	41	4	1
2615499		<1	3.0	<0.1	43	0.7	24	3	<1
2615500		<1	2.2	<0.1	11	<0.5	<5	4	<1
2615501		<1	15.3	<0.1	84	1.0	60	16	<1
2615502		<1	18.4	<0.1	54	0.7	37	16	<1
2615503		<1	32.3	<0.1	88	<0.5	32	26	<1
2615504		<1	10.1	<0.1	158	1.0	33	10	<1
2615505		<1	10.2	<0.1	83	<0.5	24	8	<1
2615506		<1	7.4	<0.1	116	0.8	29	7	<1
2615507		<1	144	<0.1	64	0.8	66	111	<1
2615508		<1	54.9	<0.1	62	<0.5	80	53	<1
2615509		<1	180	<0.1	60	1.3	88	119	<1
2615510		<1	213	<0.1	77	1.3	90	150	<1
2615511		<1	11.1	<0.1	96	<0.5	27	10	<1
2615512		<1	19.6	<0.1	67	1.8	49	18	<1
2615513		<1	7.7	<0.1	69	<0.5	25	8	<1
2615514		<1	10.4	<0.1	89	1.9	63	9	<1
2615515		<1	10.5	<0.1	85	0.9	39	10	<1
2615516		<1	8.5	<0.1	57	0.8	29	7	<1
2615517		<1	22.1	<0.1	62	4.6	98	20	<1
2615518		<1	23.1	<0.1	61	2.2	42	24	<1
2615519		<1	105	<0.1	100	0.9	56	99	<1
2615520		<1	2.9	<0.1	10	<0.5	<5	4	<1
2615521		<1	24.7	<0.1	90	0.9	47	23	<1
2615522		<1	67.3	<0.1	68	<0.5	81	57	<1
2615523		<1	38.6	<0.1	74	0.5	49	35	<1
2615524		<1	22.8	<0.1	96	0.6	61	20	<1
2615525		<1	117	<0.1	25	1.2	40	62	<1
2615526		<1	79.7	<0.1	40	2.0	52	57	<1
2615527		1	235	<0.1	64	1.2	243	187	1
2615528		<1	124	<0.1	49	<0.5	58	104	<1
2615529		<1	10.0	<0.1	110	0.5	35	9	<1
2615530		<1	8.5	<0.1	96	0.6	25	6	<1
2615531		<1	1.1	<0.1	116	<0.5	30	1	<1

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	Element Method	Pd GE_MMI_M	Pr GE_MMI_M	Pt GE_MMI_M	Rb GE_MMI_M	Sb GE_MMI_M	Sc GE_MMI_M	Sm GE_MMI_M	Sn GE_MMI_M
	Det.Lim. Units	1 ppb	0.5 ppb	0.1 ppb	1 ppb	0.5 ppb	5 ppb	1 ppb	1 ppb
2615532		<1	115	<0.1	80	0.5	89	97	<1
2615533		<1	9.9	<0.1	48	<0.5	34	9	<1
2615534		<1	5.8	<0.1	42	0.6	25	5	<1
2615535		<1	26.3	<0.1	97	<0.5	24	22	<1
2615536		<1	24.0	<0.1	87	1.0	47	19	2
2615537		<1	23.9	<0.1	133	0.7	38	21	<1
2615538		<1	11.1	<0.1	74	<0.5	29	10	<1
2615539		<1	76.5	<0.1	43	<0.5	37	60	<1
2615540		<1	2.5	<0.1	11	<0.5	<5	4	<1
2615541		<1	18.3	<0.1	83	1.3	51	17	<1
2615542		<1	9.1	<0.1	89	0.7	39	10	<1
2615543		<1	6.1	<0.1	64	0.5	33	5	<1
2615544		<1	41.9	<0.1	67	1.3	93	38	<1
2615545		<1	36.5	<0.1	104	0.5	75	34	<1
2615546		<1	14.6	<0.1	73	0.7	45	13	<1
2615547		<1	20.0	<0.1	85	30.2	79	23	2
2615548		<1	18.7	<0.1	50	0.9	81	18	<1
2615549		<1	19.7	<0.1	76	0.8	38	18	<1
2615550		<1	17.2	<0.1	79	0.8	42	17	<1
2615551		<1	43.1	<0.1	102	0.7	75	33	1
2615552		<1	28.1	<0.1	59	0.8	62	20	<1
2615553		<1	14.6	<0.1	105	<0.5	25	10	<1
2615554		<1	6.0	<0.1	50	<0.5	29	5	<1
2615555		<1	4.7	<0.1	55	<0.5	18	5	<1
2615556		<1	12.0	<0.1	95	0.5	37	10	<1
2615557		<1	16.7	<0.1	39	<0.5	41	13	<1
2615558		<1	53.7	<0.1	100	2.5	201	49	<1
2615559		<1	12.3	<0.1	103	1.2	47	10	1
2615560		<1	2.1	<0.1	11	<0.5	<5	3	<1
2615561		<1	10.7	<0.1	55	0.5	41	10	<1
2615562		<1	14.8	<0.1	84	1.0	50	15	<1
2615563		<1	117	<0.1	36	2.8	107	98	<1
2615564		<1	21.5	<0.1	45	0.9	53	21	<1
2615565		<1	31.1	<0.1	77	1.8	61	30	<1
2615566		<1	43.2	<0.1	70	1.8	77	42	<1
2615567		<1	35.4	<0.1	94	5.2	67	32	<1
2615568		<1	30.1	<0.1	69	<0.5	40	22	<1
2615569		<1	110	<0.1	23	<0.5	87	93	<1
2615570		<1	81.1	<0.1	27	<0.5	92	70	<1
2615571		<1	7.0	<0.1	86	<0.5	33	6	<1

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Element Method	Pd GE_MMI_M	Pr GE_MMI_M				Sc GE_MMI_M	Sm GE_MMI_M	Sn GE_MMI_M
Det.Lim.	1	0.5	0.1	1	0.5	5	1	1
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2615572	<1	25.7	<0.1	44	0.9	53	22	<1
2615573	<1	35.0	<0.1	43	0.8	55	31	<1
2615574	<1	42.6	<0.1	75	0.9	49	40	<1
2615575	<1	36.4	<0.1	86	1.2	45	26	1
*Rep 2615502	<1	16.7	<0.1	47	0.7	38	14	<1
*Rep 2615515	<1	9.7	<0.1	71	1.2	40	8	<1
*Rep 2615544	<1	50.2	<0.1	70	1.5	81	47	<1
*Rep 2615556	<1	11.5	<0.1	94	<0.5	34	10	<1
*Rep 2615567	<1	29.6	<0.1	91	4.5	70	29	<1
*Std AMIS0169	<1	116	0.1	256	1.1	59	65	<1
*Std MMISRM18	15	3.0	6.2	116	<0.5	<5	5	<1
*Blk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1
*Blk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1
*Blk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1
*BIk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1

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·	Element Method Det.Lim.	Sr GE_MMI_M 10	Ta GE_MMI_M 1	Tb GE_MMI_M 0.1	Te GE_MMI_M 10	Th GE_MMI_M 0.5	Ti GE_MMI_M 10	TI GE_MMI_M 0.1	U GE_MMI_M 0.5
	Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
2615492		140	1	1.1	20	7.4	790	0.1	5.8
2615493		270	<1	3.9	10	10.6	320	<0.1	12.5
2615494		280	<1	7.6	20	12.5	270	0.3	9.8
2615495		130	1	1.9	<10	9.9	3300	0.3	5.4
2615496		200	<1	1.9	10	8.6	2590	0.2	4.4
2615497		220	<1	1.6	<10	8.1	2330	0.3	5.2
2615498		270	<1	0.9	10	8.0	2060	0.3	3.7
2615499		20	<1	0.6	<10	4.0	500	0.2	3.6
2615500		220	<1	0.4	<10	4.0	30	0.1	1.4
2615501		210	<1	2.4	<10	11.6	3950	0.4	7.7
2615502		50	<1	2.1	<10	12.3	2030	0.5	5.7
2615503		<10	<1	3.2	<10	13.5	410	0.4	6.3
2615504		<10	<1	1.4	<10	15.6	1270	0.8	7.3
2615505		20	<1	1.4	<10	5.4	210	0.3	4.5
2615506		90	<1	1.1	<10	7.3	3130	0.5	3.5
2615507		70	<1	12.5	<10	33.2	2470	0.8	23.6
2615508		<10	<1	6.0	<10	46.0	2770	0.2	15.0
2615509		330	<1	11.0	<10	45.6	1560	0.4	22.6
2615510		300	<1	12.9	<10	53.1	1990	0.3	24.9
2615511		240	<1	1.7	<10	16.6	310	0.2	5.8
2615512		130	<1	2.3	<10	17.1	1580	0.3	5.2
2615513		90	<1	1.4	<10	4.9	480	0.1	3.1
2615514		40	<1	1.4	<10	20.2	2660	0.3	6.1
2615515		70	<1	1.1	<10	16.0	1710	0.5	7.2
2615516		260	<1	1.1	<10	11.8	4750	0.3	4.7
2615517		40	<1	2.6	<10	50.0	3550	0.3	11.0
2615518		280	<1	3.0	<10	12.0	370	0.2	3.5
2615519		150	<1	10.9	<10	18.9	4250	0.7	11.2
2615520		230	<1	0.5	<10	1.8	80	<0.1	1.5
2615521		30	<1	2.9	<10	38.6	1900	0.7	11.0
2615522		<10	<1	6.9	<10	25.2	2910	0.5	17.7
2615523		<10	<1	4.9	<10	18.4	1290	0.5	8.8
2615524		220	<1	3.0	<10	22.2	2750	0.7	13.6
2615525		310	<1	5.5	<10	26.9	340	0.3	41.6
2615526		300	<1	5.7	<10	12.4	190	0.5	121
2615527		30	<1	19.6	<10	176	4780	0.8	82.2
2615528		160	<1	9.7	<10	14.7	350	0.3	17.0
2615529		70	<1	1.2	<10	8.2	2760	0.2	4.3
2615530		50	<1	1.1	<10	7.5	2430	0.3	3.5
2615531		810	<1	0.3	<10	5.1	470	0.3	2.3

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	Element Method Det.Lim.	Sr GE_MMI_M	Ta GE_MMI_M	Tb GE_MMI_M	Te GE_MMI_M	Th GE_MMI_M	Ti GE_MMI_M	TI GE_MMI_M	U GE_MMI_M
	Det.Lim. Units	10 ррb	1 ppb	0.1 ppb	10 ррb	0.5 ppb	10 ppb	0.1 ppb	0.5 ppb
2615532		310	<1	10.2	<10	18.6	4070	0.4	14.3
2615533		70	<1	1.4	<10	6.9	3730	0.3	4.5
2615534		70	<1	0.9	<10	7.4	1850	0.3	3.1
2615535		440	<1	2.3	<10	12.0	1750	0.2	9.0
2615536		130	<1	2.5	<10	22.8	2810	0.4	9.9
2615537		80	<1	2.6	<10	20.7	1670	0.6	8.8
2615538		80	<1	1.6	<10	8.3	790	0.1	5.2
2615539		20	<1	6.7	<10	13.1	460	0.3	10.6
2615540		230	<1	0.5	<10	1.3	30	<0.1	1.5
2615541		390	<1	2.1	<10	6.0	1060	0.2	6.1
2615542		170	<1	1.3	<10	11.0	1210	0.3	4.0
2615543		40	<1	1.0	<10	9.0	1460	0.2	4.6
2615544		10	<1	4.8	<10	30.4	3060	0.3	11.5
2615545		30	<1	3.8	<10	36.4	1360	0.3	10.7
2615546		350	<1	2.3	<10	13.8	1870	0.2	5.7
2615547		140	<1	2.5	<10	30.6	5220	0.4	8.4
2615548		10	<1	2.7	<10	19.1	1730	0.3	10.7
2615549		<10	<1	2.6	<10	15.8	1200	0.8	7.6
2615550		<10	<1	2.7	<10	13.4	1470	0.6	7.6
2615551		<10	1	4.1	<10	41.5	7020	0.4	15.6
2615552		<10	<1	2.2	<10	28.9	2500	0.3	8.1
2615553		30	<1	1.5	<10	9.7	910	0.2	3.8
2615554		<10	<1	0.9	<10	3.6	120	0.3	3.0
2615555		<10	<1	0.8	<10	5.9	350	0.4	2.6
2615556		50	<1	1.5	<10	7.2	160	0.2	4.0
2615557		<10	<1	1.9	<10	5.2	270	0.2	3.4
2615558		40	<1	6.2	<10	21.3	2650	0.3	12.1
2615559		80	<1	1.5	<10	10.8	3570	0.4	5.7
2615560		240	<1	0.5	<10	1.0	40	<0.1	1.3
2615561		30	<1	1.6	<10	5.8	1060	0.2	4.6
2615562		<10	2	2.2	<10	8.4	900	0.3	6.0
2615563		60	<1	8.9	<10	22.9	2630	0.3	15.8
2615564		20	<1	3.0	<10	14.5	250	0.3	3.9
2615565		110	<1	3.9	<10	25.3	620	0.5	8.0
2615566		90	<1	5.3	<10	22.2	1830	0.7	9.0
2615567		220	<1	3.4	<10	22.3	1120	0.3	8.8
2615568		<10	<1	2.9	<10	14.0	630	0.2	4.4
2615569		<10	<1	12.6	<10	29.6	720	0.1	28.4
2615570		<10	<1	10.7	<10	23.4	650	<0.1	26.1
2615571		<10	<1	1.0	<10	7.9	340	0.4	4.3

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Element	Sr	Ta				Ti	TI	U
Method	GE_MMI_M							
Det.Lim.	10	1	0.1	10	0.5	10	0.1	0.5
Units	ppb							
2615572	<10	<1	3.0	<10	32.4	1370	0.6	10.5
2615573	<10	<1	4.7	<10	16.0	700	0.3	9.6
2615574	<10	<1	4.6	<10	11.1	710	0.4	9.1
2615575	30	<1	3.2	<10	21.4	4030	0.7	16.8
*Rep 2615502	50	<1	2.1	<10	12.2	1500	0.6	5.6
*Rep 2615515	80	<1	1.1	<10	19.0	1670	0.6	7.5
*Rep 2615544	10	4	5.5	<10	32.4	3280	0.3	12.0
*Rep 2615556	50	<1	1.5	<10	6.7	190	0.3	3.9
*Rep 2615567	230	<1	3.4	<10	18.1	1030	0.3	8.8
*Std AMIS0169	70	<1	5.5	<10	77.6	710	1.1	24.0
*Std MMISRM18	1550	<1	0.7	<10	14.8	10	0.1	25.2
*Blk BLANK	<10	1	<0.1	<10	<0.5	<10	<0.1	<0.5
*Blk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5
*Blk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5
*BIk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5

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Element Method	W GE_MMI_M	Y GE_MMI_M	Yb GE_MMI_M	Zn GE_MMI_M	Zr GE_MMI_M
Det.Lim.	0.5	1	0.2	10	2
Units	ppb	ppb	ppb	ppb	ppb
2615492	0.8	26	2.2	850	25
2615493	<0.5	110	6.6	40	15
2615494	<0.5	264	18.1	250	17
2615495	1.0	46	5.1	100	50
2615496	<0.5	66	4.6	360	36
2615497	0.7	49	5.3	850	40
2615498	0.7	31	3.3	2720	41
2615499	<0.5	27	2.9	1150	21
2615500	<0.5	13	1.0	470	6
2615501	0.5	79	4.7	1670	52
2615502	1.1	52	5.2	270	58
2615503	<0.5	63	7.8	310	27
2615504	0.7	35	4.0	1280	42
2615505	<0.5	49	5.9	280	11
2615506	<0.5	36	3.3	440	31
2615507	1.2	275	21.8	80	49
2615508	1.0	123	9.9	20	100
2615509	1.4	337	25.7	70	75
2615510	1.8	432	30.6	80	87
2615511	<0.5	42	4.2	670	27
2615512	0.8	46	6.8	200	37
2615513	<0.5	47	4.9	140	13
2615514	0.5	40	4.6	590	58
2615515	0.6	33	3.2	490	51
2615516	1.2	34	6.3	100	35
2615517	1.6	53	7.6	1140	113
2615518	<0.5	74	7.7	50	25
2615519	0.8	291	23.3	310	48
2615520	<0.5	15	1.1	490	5
2615521	1.2	66	5.7	270	77
2615522	1.1	163	12.9	200	58
2615523	0.6	164	14.6	330	34
2615524	1.0	98	11.0	670	36
2615525	1.6	161	13.9	330	62
2615526	0.9	167	17.1	570	36
2615527	5.0	603	54.1	1520	313
2615528	<0.5	276	16.2	80	21
2615529	0.5	40	4.1	300	29
2615530	0.6	30	4.0	210	27
2615531	<0.5	14	7.9	190	12

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	ement	W	Y	Yb	Zn	Zr
	ethod	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
De	t.Lim. Units	0.5	1 nnh	0.2	10 nph	2
	Units	ppb	ppb	ppb	ppb	ppb
2615532		1.2	363	20.4	30	39
2615533		0.7	38	4.4	40	34
2615534		0.5	25	3.4	240	25
2615535		1.1	68	4.6	190	27
2615536		1.7	59	4.4	240	48
2615537		0.9	62	7.8	160	41
2615538		<0.5	41	4.6	140	25
2615539		<0.5	171	12.8	20	26
2615540		<0.5	15	1.4	540	6
2615541		0.5	70	6.1	290	14
2615542		<0.5	35	3.5	120	26
2615543		<0.5	38	4.3	70	25
2615544		1.2	105	10.1	20	77
2615545		1.1	86	8.7	30	65
2615546		0.6	59	6.4	170	31
2615547		1.7	54	5.2	1480	126
2615548		1.4	81	8.6	150	49
2615549		<0.5	71	8.6	310	32
2615550		<0.5	80	8.3	410	31
2615551		2.8	91	10.1	230	99
2615552		<0.5	61	6.6	640	57
2615553		<0.5	42	4.1	410	23
2615554		<0.5	28	3.9	130	13
2615555		<0.5	18	2.9	110	17
2615556		<0.5	51	4.8	540	17
2615557		<0.5	60	7.3	250	17
2615558		<0.5	185	15.6	320	61
2615559		0.6	39	4.7	770	47
2615560		<0.5	15	1.1	550	6
2615561		<0.5	61	7.0	180	22
2615562		<0.5	73	7.2	280	31
2615563		1.0	253	19.6	80	53
2615564		<0.5	72	8.2	40	28
2615565		<0.5	91	9.2	60	47
2615566		0.9	135	10.8	550	45
2615567		0.9	86	9.7	410	58
2615568		<0.5	82	8.0	80	34
2615569		<0.5	318	19.8	50	36
2615570		<0.5	306	21.6	110	29
2615571		<0.5	300	3.5	440	19

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W Yb Element Zn Zr Y Method GE MMI M Det.Lim. 0.5 0.2 10 2 Units ppb ppb ppb ppb ppb 2615572 160 0.6 74 5.7 63 2615573 <0.5 133 10.3 470 31 2615574 <0.5 126 11.3 190 23 2615575 1.4 67 7.0 120 43 49 \*Rep 2615502 0.8 44 5.0 230 \*Rep 2615515 0.7 30 3.8 460 57 \*Rep 2615544 108 11.3 30 82 1.7 \*Rep 2615556 <0.5 49 4.9 530 15 \*Rep 2615567 90 410 50 0.6 8.1 \*Std AMIS0169 57 1.6 117 10.6 210 \*Std MMISRM18 23 < 0.5 17 0.8 620 <2 \*BIk BLANK <0.5 <1 < 0.2 <10 \*Blk BLANK < 0.5 2 <0.2 <10 <2 \*BIk BLANK <0.5 <1 < 0.2 <10 <2 \*Blk BLANK <0.5 <1 <0.2 <10 <2

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### Certificate of Analysis Work Order : VC151547 [Report File No.: 0000012035]

Date: July 30, 2015

#### To: RON VOORDOUW EQUITY EXPLORATION CONSULTANTS LTD 200-900 WEST HASTINGS ST VANCOUVER BC V6C 1E5

P.O. No.: KSK-15-13\_01/2615576-2615584 Project No.: -Samples: 9 Received: Jul 9, 2015 Pages: Page 1 to 8 (Inclusive of Cover Sheet)

#### Methods Summary

No. Of Samples	Method Code
9	G_LOG02
9	GE_MMI_M

Description Pre-preparation processing, sorting, logging, boxing Mobile Metal ION standard package/ICP-MS

Storage: Pulp & Reject

REJECT STORAGE

STORE FOR 30 DAYS

Certified By Cam Chiang

Assistant Operations Manager

SGS Minerals Services Geochemistry Vancouver conforms to the requirements of ISO/IEC 17025 for specific tests as listed on their scope of accreditation which can be found at http://www.scc.ca/en/search/palcan/sgs

 Report Footer:
 L.N.R.
 = Listed not received n.a.
 I.S.
 = Insufficient Sample n.a.

 \*INF
 = Composition of this sample makes detection impossible by this method
 -- = No result

 \*INF
 = Composition of this sample makes detection impossible by this method
 M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion
 Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted

 Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

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Report File No.: 0000012035

Element	Ag	AI	As	Au	Ba	Bi	Ca	Cd
Method	GE_MMI_M							
Det.Lim.	0.5	1	10	0.1	10	0.5	2	1
Units	ppb	ppm	ppb	ppb	ppb	ppb	ppm	ppb
2615576	7.9	239	<10	<0.1	300	<0.5	19	12
2615577	3.8	259	10	<0.1	610	<0.5	10	13
2615578	6.8	167	<10	<0.1	670	0.5	33	9
2615579	3.7	226	40	<0.1	540	3.2	3	11
2615580	0.6	<1	<10	0.1	700	<0.5	82	1
2615581	4.5	237	<10	<0.1	330	<0.5	<2	8
2615582	0.7	285	<10	<0.1	700	0.7	51	5
2615583	8.6	202	<10	<0.1	150	<0.5	4	9
2615584	0.7	220	<10	0.1	470	<0.5	5	4
*Rep 2615576	7.1	245	<10	<0.1	290	<0.5	15	14
*Std AMIS0169	9.4	58	<10	0.6	910	<0.5	31	2
*BIk BLANK	<0.5	<1	<10	<0.1	<10	<0.5	<2	<1

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Report File No.: 0000012035

Element	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu
Method	GE_MMI_M							
Det.Lim.	2	1	100	0.2	10	0.5	0.2	0.2
Units	ppb							
2615576	155	46	<100	4.2	210	16.4	7.7	5.7
2615577	114	86	100	7.7	210	9.8	3.8	3.4
2615578	118	68	<100	6.6	110	13.6	6.0	5.2
2615579	51	103	600	4.8	680	5.3	3.0	1.3
2615580	7	4	<100	0.3	290	2.7	1.2	0.8
2615581	131	65	<100	5.5	450	19.0	9.1	5.0
2615582	24	236	<100	5.1	60	3.1	2.2	0.5
2615583	208	79	<100	5.6	80	20.9	10.6	7.6
2615584	236	26	100	4.2	220	19.5	9.4	8.1
*Rep 2615576	141	49	<100	4.5	210	16.5	7.5	5.3
*Std AMIS0169	704	94	<100	6.6	3710	25.7	11.9	10.4
*BIk BLANK	<2	<1	<100	<0.2	<10	<0.5	<0.2	<0.2

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Report File No.: 0000012035

Element	Fe	Ga	Gd	Hg	In	к	La	Li
Method	GE_MMI_M							
Det.Lim.	1	0.5	0.5	1	0.1	0.5	1	1
Units	ppm	ppb	ppb	ppb	ppb	ppm	ppb	ppb
2615576	37	11.7	19.7	<1	0.1	7.5	72	2
2615577	29	8.9	11.0	2	0.2	5.3	44	1
2615578	38	9.1	14.1	1	<0.1	11.5	50	<1
2615579	311	43.8	4.3	1	0.6	13.1	23	5
2615580	<1	<0.5	3.6	<1	<0.1	6.0	3	3
2615581	83	14.5	15.6	<1	0.2	6.0	69	3
2615582	113	21.4	1.8	<1	0.2	33.9	11	7
2615583	15	8.9	23.7	<1	<0.1	4.4	75	<1
2615584	27	11.3	25.0	<1	<0.1	2.7	118	1
*Rep 2615576	32	10.7	17.9	<1	<0.1	8.2	66	1
*Std AMIS0169	39	11.5	40.0	<1	<0.1	45.5	400	1
*BIk BLANK	1	<0.5	<0.5	<1	<0.1	<0.5	<1	<1

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Element	Mg	Mn	-			Ni	Р	Pb
Method	GE_MMI_M							
Det.Lim.	0.5	100	2	0.5	1	5	0.1	5
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppm	ppb
2615576	1.0	2100	3	2.1	94	401	2.6	157
2615577	<0.5	2800	4	2.1	54	166	4.2	144
2615578	1.5	2700	2	2.0	71	176	2.2	233
2615579	2.9	4700	10	22.4	23	196	9.2	275
2615580	17.1	600	<2	<0.5	12	12	0.1	131
2615581	1.3	400	4	4.9	93	161	2.1	250
2615582	27.2	2900	2	6.6	9	249	3.1	35
2615583	<0.5	1800	3	0.6	115	119	1.5	140
2615584	<0.5	100	3	1.3	154	124	1.1	140
*Rep 2615576	1.1	2300	3	2.8	87	419	2.4	188
*Std AMIS0169	30.4	3900	4	1.8	350	415	2.4	109
*BIk BLANK	<0.5	<100	<2	0.7	<1	<5	<0.1	<5

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Element	Pd	Pr	Pt	Rb	Sb	Sc	Sm	Sn
Method	GE_MMI_M							
Det.Lim.	1	0.5	0.1	1	0.5	5	1	1
Units	ppb							
2615576	<1	21.5	<0.1	88	<0.5	39	20	<1
2615577	<1	12.5	<0.1	97	0.7	36	12	<1
2615578	<1	15.5	<0.1	122	<0.5	32	15	<1
2615579	<1	5.0	<0.1	60	0.5	28	5	3
2615580	<1	2.1	<0.1	10	<0.5	<5	3	<1
2615581	<1	20.5	<0.1	60	<0.5	32	17	<1
2615582	<1	2.3	<0.1	262	<0.5	22	2	<1
2615583	<1	25.2	<0.1	54	<0.5	36	24	<1
2615584	<1	35.2	<0.1	45	<0.5	35	31	<1
*Rep 2615576	<1	19.5	<0.1	89	<0.5	36	18	<1
*Std AMIS0169	<1	91.2	<0.1	244	0.5	47	55	<1
*BIk BLANK	<1	<0.5	<0.1	<1	<0.5	<5	<1	<1

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Report File No.: 0000012035

Element	Sr	Та	Tb	Te	Th	Ti	TI	U
Method	GE_MMI_M							
Det.Lim.	10	1	0.1	10	0.5	10	0.1	0.5
Units	ppb							
2615576	20	<1	2.8	<10	12.5	810	0.3	9.2
2615577	<10	<1	1.7	<10	20.6	960	0.6	8.9
2615578	60	<1	2.3	<10	12.4	850	0.5	5.8
2615579	40	<1	0.9	<10	27.1	5290	0.5	8.4
2615580	220	<1	0.5	<10	<0.5	20	<0.1	1.6
2615581	<10	<1	2.9	<10	16.5	1460	0.5	9.6
2615582	660	<1	0.4	<10	7.7	1640	0.5	2.4
2615583	<10	<1	3.5	<10	10.0	400	0.4	5.3
2615584	<10	<1	3.5	<10	14.6	620	0.2	6.6
*Rep 2615576	20	<1	2.7	<10	11.0	640	0.4	8.9
*Std AMIS0169	70	<1	5.1	<10	63.5	520	1.0	23.7
*BIk BLANK	<10	<1	<0.1	<10	<0.5	<10	<0.1	<0.5

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### Final : VC151547 Order: KSK-15-13\_01/2615576-2615584 Report File No.: 0000012035

Element	W	Y	Yb	Zn	Zr
Method	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M	GE_MMI_M
Det.Lim.	0.5	1	0.2	10	2
Units	ppb	ppb	ppb	ppb	ppb
2615576	<0.5	71	5.7	460	29
2615577	<0.5	33	3.2	890	52
2615578	<0.5	53	5.0	470	30
2615579	1.6	23	2.0	480	61
2615580	<0.5	14	0.9	530	6
2615581	<0.5	84	6.4	130	31
2615582	<0.5	14	3.1	310	33
2615583	<0.5	100	8.0	60	25
2615584	<0.5	87	7.0	10	33
*Rep 2615576	<0.5	77	5.6	500	35
*Std AMIS0169	0.7	107	9.0	200	46
*BIk BLANK	<0.5	<1	<0.2	<10	2

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### Appendix F: Daily Prospecting Logs and Rock Sample Descriptions

#### MINERALS AND ALTERATION TYPES

Ankerite	Ep	Epidote	Py	Pyrite
Calcite	Hem	Hematite	Qtz	Quartz
Carbonate	Mag	Magnetite	Ser	Sericite
Chlorite	Mgs	Magnesite	Sil	Silica
Chrysotile	•	•		

Cal ( Cb ( Chl ( Ctl (

Ank



### Geological prospecting log - June 25th

First day of field work on the Midlothian Property. First part of the day spent collecting MMI samples together with other three members of the sampling team. At one of the soil sampling sites, found a low rounded outcrop of meta-andesite with a quartz-carbonate vein network trending 178/76W. Took sample (2615751).

After leaving the group, returned to the truck and followed line to the south to map the limit of the disturbed ground. Then walked along the road to the open pit. Found an outcrop of ultramafic with meta-andesite xenoliths in an area mapped by OGS as "meta-andesite".

Found Bjorkman Zone (actually a vein; here abbreviated "BV") and determined orientation of ~165/65E. Difficult to measure because rocks are magnetic. Visually projected the vein across the pit onto some "whitish" (i.e. veined?) rocks, which turned out to be weathered ultramafic (magnesite alteration?). Continued to walk around the pit and found chrysotile-rich shear zone ("CZ") trending ~180/65 E (also difficult to measure because of magnetic) and ~50-100 cm wide. Took sample 2615752. Could be that BV and CZ form part of same structure?

Walked around back of the BV and took an ultramafic + quartz vein sample in a pile of waste rock (2615753), then went into the forest to see if I could track this BV-CZ structure along the southern shoreline of the "far-north arm" of Lloyd Lake. Found two spots where there was some quartz + calcite veining, and took one sample (2615754). If there is a common structure for BC and CZ, it is narrow and only locally swells out to produce quartz ± calcite and/or chrysotile-rich zones. Intermittent ultramafic rocks are relatively undeformed and unaltered.

Walked along the northern shoreline of Lloyd Lake "proper" to track BV-CZ structure to the southeast. All outcrops are covered by disturbed ground but sampled a very hard fuchsitequartz-epidote flooded boulder (2615755).

Description	Easting	Northing	Date	Structure	Strike	Dip
Ultramafic contact	500128	5303445	06/25/2015			
Chrysotile shear zone	499778	5303188	06/25/2015	Chrysotile zone	180? 165?	65E
Quartz + carbonate veins	499572	5303340	06/25/2015	Veins	?	90
Leucogabbro dyke	499918	5303262	06/25/2015			

**Table F-1**: Geological waypoints taken on June 25<sup>th</sup>.

#### Geological prospecting log - June 26<sup>th</sup>

This day comprised an east-west traverse across the Timiskaming conglomerate. Started the day by walking northward on a road then jumping into the bush just before the northern edge of the Property. From here, the ground is relatively rocky to line 0+00W, after which it is generally more swampy and overgrown until line 8+00E. From there, the land slopes upwards and is generally drier although there are surprisingly few outcrops.



Rock types towards the western end of this traverse line consist of pebble conglomerate whereas at the eastern end the lithology is mostly quartzite. This suggests a northward curving contact between quartzite and an underlying conglomerate unit. Need to check the OGS map to see if they describe something similar.

The Proterozoic dykes form prominent north-south trending ridges. Found a couple of other narrow (<5 m wide) ridges that yielded diabase rocks, suggesting the presence of a few smaller dykes in between the larger ones.

No notable mineralization, alteration or structures were found.

ID	Easting	Northing	Date	Structure	Strike	Dip					
Matachewan dyke?	501643	5304153	06/26/2015	Dyke	360	90					
Conglomerate	502119	5304251	06/26/2015	Bedding	115	90					
Quartzite	502611	5304096	06/26/2015								
Pebble quartzite	502774	5303961	06/26/2015								
Quartzite	502783	5303915	06/26/2015								
Conglomerate	502807	5303888	06/26/2015								

**Table F-2**: Geological waypoints taken on June 26<sup>th</sup>.

### Geological prospecting log - June 27<sup>th</sup>

Started day walking north on Stairs Mine Road to northern part of the Property, in order to start a north-south traverse across the Timiskaming conglomerate in addition to a thin slither of metaandesite and then Gowganda sedimentary rocks. From the northern boundary of the Property to the Asbestos Mine Road, landscape is hummocky and, in places, anthropologically modified. This area appears to have been used for a fairly sizable gravel pit?

This northern area is notable for an abundance of erratic boulders, some of which are up to 3 m high. The gravel pit area is particularly good for seeing the diversity and shape of cobbles and boulders in this area. Outcrops are scarce but two samples (2615765, 2615766) were taken in order to evaluate any changes in chemistry from north to south.

South of the road, there is a fairly steady downhill to a swampy area connecting two lakes. The downhill slope hosts a fair number of outcrops that comprise pebble to cobble conglomerate (samples 2615767-5769) higher up giving way to dark grey conglomeratic quartzite and quartzite near the base. At the very base of the hill, and just before the swamp, is an outcrop of moderately dipping dark grey quartzite (2615771) that appears to immediately overlie a pebble conglomerate unit (2615772). Perhaps this is the contact between Gowganda and Timiskaming units? If it is, this contact lies ~300-400 further north than where it is mapped by the OGS.

On the other side of the swamp is a small angular subcrop consisting of dark grey quartzite cut by 0.5-10 cm wide quartz-ankerite veins. Unfortunately, there are no sulphides in either the vein or the host rock.



	Facting	Northing	Data		Strike	Din
ID	Easting	•	Date	Structure	Strike	Dip
Gravel pit	503162	5304263	06/27/2015			
Conglomerate	503161	5304392	06/27/2015	Bedding	87	90?
Pebble quartzite	503109	5304474	06/27/2015			
Diabase	503049	5304373	06/27/2015			
Gravel pit	503011	5304278	06/27/2015	Gravel pile	195-215	
Pebble quartzite	503009	5304265	06/27/2015	Bedding	100	?
Waste rock?	502874	5304234	06/27/2015			
Conglomerate	503106	5303664	06/27/2015	Bedding	200	25E
Quartzite	503098	5303578	06/27/2015			
Quartzite	503096	5303558	06/27/2015	Bedding	140	25SW
Quartz vein	502935	5303296	06/27/2015	Vein	200	55W
Quartzite	502970	5303240	06/27/2015			
No outcrop	503041	5302923	06/27/2015			
Quartzite	502835	5303381	06/27/2015			
Quartzite	502838	5303475	06/27/2015			
Pebble quartzite	502808	5303553	06/27/2015			

**Table F-3**: Geological waypoints taken on June 27<sup>th</sup>.

### Geological prospecting log - June 28th

Started the day at the western end of the Property, walking over a meta-andesitic unit bound by the western arm of Lloyd Lake. Rock types are generally light to medium greenish-grey, massive, meta-anesite, typically with scattered quartz-carbonate veins and/or sweats. A subcrop of "tuffaceous" textured rock – comprising rounded meta-andesitic inclusions within an aphanitic groundmass – was found as well as a volcaniclastic unit, comprising fissile, strongly chlorite-altered, meta-andesite with rounded clasts ranging up to 5 cm in diameter. The volcaniclastic ranges from clast- to matrix-supported.

An impressive outcrop of diabase (?) was found as well, but is massive and unmineralized. Gabbro was found adjacent to somewhat slightly more quartz-carbonate altered mafic volcanic.

After emerging on the road, I walked north around Lloyd Lake and back along the western shoreline in order to examine an area of historic sampling that returned weakly anomalous gold from the contact between meta-andesitic and felsic volcanic units. In walking around Lloyd Lake, found an flat road bed outcrop of strongly sheared ultramafic volcanic. The felsic-andesite contact zone lies in a thickly overgrown cut block and is difficult to traverse. Several outcrops were found, however, with all consisting of relatively intensely quartz-carbonate altered mafic volcanic.

No significant mineralization or alteration was found.



ID	Easting	Northing	Date	Structure	Strike	Dip
Meta-andesite	498553	5303317	06/28/2015			
Meta-andesite	498511	5303325	06/28/2015			
No outcrop	498400	5303370	06/28/2015			
Meta-andesite	498536	5303509	06/28/2015			
Ultramafic	498835	5302921	06/28/2015	Foliation	70	80S
Gabbro	498613	5303826	06/28/2015			
Trench	498710	5303037	06/28/2015			
Gravel pit	498650	5303921	06/28/2015			
Shear zone	498571	5304178	06/28/2015	Foliation	86	?
Gravel pit	497874	5304034	06/28/2015			
Lake edge	497744	5304042	06/28/2015			

 Table F-4: Geological waypoints taken on June 28<sup>th</sup>.



2615751	UTM Easting	UTM											Secondaries			
2615751		Northing	Date	Sample Type	Stucture	Strike	Dip	Rock Type	Alter Type	Intensity	Type	allics %	Type	Intensity	Comments	Sample
	500395	5303655	25-Jun-15	Grab	Vein	178°	76°N	Mafic volcanic	Silica	Weak	Py	0.1	1960	incensity	Localized qtz-cal breccia vein stockwork; also sheared qtz-cal	RV
				Giub	veni	170°	-	Walle Volcame		Mod to	. ,	0.1			veins with 1% py Mgs- and ctl-altered ol-rich ultramafic with very large ctl	
	499772	5303186	25-Jun-15	Grab	Host zone	(165°?)	65°E	Ultramafic	Ctl + Mgs	weak	Mag	0.5			crystals on fracture surface; cut by mag veins	RV
2615753	499688	5303236	25-Jun-15	Float				Pyroxenite (?)			Py	0.1			Hosts 2 cm wide qtz +/- cal, ser, py vein	RV
2615754	499631	5303357	25-Jun-15	Grab				Melatroctolite			Ру	<0.1			Hosts a sheared, granular, qtz-cal vein; most cb disolved? Nicely formed qtz crystals growing into voids	RV
2615755	499939	5303114	25-Jun-15	Float				Ultramafic?	Fuchsite + Sil + Ep	Strong	Mag	0.5			Pervasively and strongly altered; boulder looks out of place relative to surrounding ones	RV
2615756	501083	5304360	26-Jun-15	Grab				Conglomerate			Ру	0.5			Massive, matrix-supported, clasts of qtz, basalt; clasts range from sub-rounded to sub-angular	RV
2615757	501122	5304394	26-Jun-15	Grab	Bedding	120°	40°N	Conglomerate			Ру	0.5	Hem	Weak	Could be sub-crop; more foliated and hem-altered than previous sample	RV
2615758	501424	5304310	26-Jun-15	Grab	Bedding	70°	30°N	Conglomerate			Py	1	Hem	Weak	Relatively py-rich; appears to be gently north-dipping	RV
2615759	501600	5304246	26-Jun-15	Grab				Quartzitic conglomerate			Ру	0.1			Relatively unaltered and unmineralized but with a moderate foliation; also appears more quartzite-rich than at other	RV
2645762															localities	
2615760			26-Jun-15	Std Si54											Massive to moderately foliated; lots of Fe-staining on surface;	RV
2615761	502061	5304258	26-Jun-15	Grab				Quartzitic conglomerate			Ру	0.1	Hem + Jarosite	Weak	forms resistant subcrock (or contract) hold that is reminiscent of dyke occurrences	RV
2615762	502326	5304094	26-Jun-15	Grab				Quartzitic conglomerate	Cb	Weak			Hem	Weak	Massive to weakly foliated with deep rust-stained surface; possibly some ank?	RV
2615763	502611	5304096	26-Jun-15	Grab				Quartzite			Ру	0.1	Hem	Weak	Massive grey with scattered qtz and characteristics "charcoal" pebbles and fragments	RV
2615764	502808	5303885	26-Jun-15	Grab				Conglomerate			Ру	0.1			Relatively fine-grained conglomerate; possibly transitional unit from quartzite to conglomerate	RV
2615765	502860	5304179	27-Jun-15	Grab				Quartzite			Ру	0.1	Hem	Weak	Contains small inclusions of py-bearing graphitic argillite	RV
2615766	502804	5304059	27-Jun-15	Grab				Conglomerate			Ру	0.1			Sub-crop; massive to weakly foliated	RV
2615767	503093	5303761	27-Jun-15	Grab				Quartzitic conglomerate			Ру	0.1			Weakly foliated (imbricated?); clasts include black argillite	RV
2615768	503108	5303671	27-Jun-15	Grab				Conglomerate	Cb	Weak					Clasts up to 5 cm in length; ranges from clast= to matrix- supported; weak ank alteration	RV
2615769	503115	5303616	27-Jun-15	Grab				Conglomerate with qtz-ank vein			Ру	0.1	Hem	Weak	Irregular, granular, qtz-ank vein; conglomerate with clasts to 5 cm	RV
2615770			27-Jun-15	Std Si54												RV
2615771	503076	5303540	27-Jun-15	Grab	Bedding	205°	25°E	Quartzite	Cb	Weak	Ру	0.5			Massive to weakly bedded; dark grey	RV
2615772	503085	5303543	27-Jun-15	Grab				Conglomerate			Ру	1			Relatively py-rich; immeiately below grey quartzite - possible contact between Timiskaming and Proterozoic sedimentary rocks?	RV
2615773	502936	5303291	27-Jun-15	Grab	Vein	190°	85°W	Quartzite + qtz-ank vein							Dark grey host rock, scattered rounded pebbles; sheared in qtz- ank veins (85% qtz, 15% ank)	RV
2615774	502932	5303287	27-Jun-15	Grab	Vein	200°	55°W	Quartzite + qtz-ank vein							Mostly qtz-ank vein (80:20), very coarse crystalline vein material, no sulphides; host rock is dark grey quartzite	RV
2615775	502973	5303003	27-Jun-15	Grab	Bedding	50°	30°NW	Conglomeraitic quartzite			Py	0.1			Dark grey, massive, 10% clasts that include black argillite	RV
	498958	5303371	28-Jun-15	Grab	Vein	250°	60°N	Mafic volcanic with qtz-cb			, Py	0.1	Hem	Weak	Massive, greenish-grey; veins are weakly deformed, 5% veining	RV
	498612	5303315	28-Jun-15	Grab				veins Mafic volcanic with qtz-cb			, Py	0.5	Hem	Weak	in total Massive, greenish-grey; amoeboid qtz-cb sweats comprise 5%	RV
								sweats							of the rock See pictures. Rounded clasts of volcanic material (up to 1 cm in	
2615778	498504	5303493	28-Jun-15	Grab				Mafic "tuff"			Ру	0.5	Hem	Weak	diameter), tightly packed and within matrix of volcanic, cb and trace pv	RV
2615779	498539	5303681	28-Jun-15	Grab				Volcaniclastic	Chl	Mod	Ру	0.5			Imbricated and fissile; clasts are of various composition and up to 2 cm long; matrix is chl with minor py and qtz-cb sweats	RV
2615780			28-Jun-15	Std Si54												RV
2615781	498543	5303682	28-Jun-15	Grab				Mafic volcanic with qtz-cb sweats	Cb	Weak	Ру	0.1			Dark greenish-grey with 10% qtz-cb sweats	RV
2615782	498544	5303692	28-Jun-15	Grab				Volcaniclastic	Chl	Mod	Ру	0.5			Massive, various clasts up to 5 cm in daimeter, matrix- to clast- supported, dark green chl-rich matrix	RV
	498614 498022	5303819 5304160	28-Jun-15 28-Jun-15	Grab Grab				Mafic volcanic Gabbro	Ep	Weak	Py Py	1	Hem	Weak	Massive, dark grey, with qtz-cb sweats (1%) and py on fracture surface; adjacent to gabbro Fine-grained, massive, gabbro	RV RV

Sample ID	UTM	UTM	Date	Sample	Stucture	Strike	Dip	Pock Tupo	Alteration         Metallics         Secondaries         Comments           Type         Intensity         Type         %         Type         Intensity		Commonts	Sampler			
Sample ib	Easting	Northing	Date	Type	Stucture	JUIKE	Dip	Rock Type			comments	Sampler			
2615785	497891	5304105	28-Jun-15	Grab				Mafic volcanic	Cb + Qtz	Mod	Py	0.1		Qtz-cb flooded mafic volcanic	RV
2615786	497856	5304088	28-Jun-15	Grab				Mafic volcanic	Cb + Qtz	Mod	Dv	0.1		Qtz-cb flooded; knobbly weathering (almost like a	DV/
2013780	497630	3304088	28-Jun-13	Giab					CD + QIZ	WOU	гy	0.1		conglomerate)	ΓV
2615787	497800	5304007	28-Jun-15	Grab				Mafic volcanic	Cb + Qtz	Mod	Py	0.1		Qtz-cb flooded subcrop	RV

Appendix G: Certificates of Analysis for Rock Samples



### Certificate of Analysis Work Order : SD150016 [Report File No.: 0000012067]

Date: August 04, 2015

#### To: RON VOORDOUW EQUITY EXPLORATION CONSULTANTS LTD 200-900 WEST HASTINGS ST VANCOUVER BC V6C 1E5

P.O. No.: KSK-15-13 02/2615751-787 Project No.: -Samples: 37 Received: Jul 3, 2015 Pages: Page 1 to 15 (Inclusive of Cover Sheet)

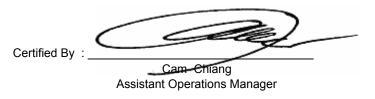
#### Methods Summary

No. Of Samples	Method Code	<u>Description</u>
37	G_LOG02	Pre-preparation processing, sorting, logging, boxing
37	G_WGH79	Weighing of samples and reporting of weights
34	G_PRP89	Weigh, dry, (up to 3.0 kg) crush to 75% passing 2 mm, split 250 g, pulverize to
37	GE_FAA313	@Au, FAS, AAS, 30g-5ml(FINAL-WT)
37	GE_IC40A	Multi-acid (4-acid) digestion/ICP-AES finish
37	GE_IC40M	Multi-acid (4-acid) digestion/ICP-MS finish
2	GO_ICP41Q	Ore-Grade, 4-Acid Digest/ICP-AES
Storage: Pulp & Re	ject_	

**REJECT STORAGE** PULP STORAGE

#### Comments:

Preparation of samples was performed at the SGS Sudbury site.



SGS Minerals Services Geochemistry Vancouver conforms to the requirements of ISO/IEC 17025 for specific tests as listed on their scope of accreditation which can be found at http://www.scc.ca/en/search/palcan/sgs

I.S.

Report Footer:

L.N.R. = Listed not received = Not applicable

n.a.

= Insufficient Sample = No result

\*INF = Composition of this sample makes detection impossible by this method

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

Methods marked with an asterisk (e.g. \*NAA08V) were subcontracted

Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

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Report File No.: 0000012067

	Element Method	WtKg G_WGH79	@Au GE_FAA313	Ag@ GE_ICM40B	AI@ GE_ICM40B	Ba@ GE_ICM40B	Ca@ GE_ICM40B	Cr@ GE_ICM40B	Cu@ GE_ICM40B
	Det.Lim.	0.01	5	0.02	0.01	1	0.01	1	0.5
	Units	kg	ppb	ppm	%	ppm	%	ppm	ppm
2615751		1.218	<5	0.12	8.09	630	3.47	136	91.2
2615752		1.966	<5	0.03	0.79	<1	0.05	2410	<0.5
2615753		1.417	<5	0.06	5.57	2	8.77	348	104
2615754		1.495	<5	0.16	3.14	21	4.05	993	27.4
2615755		2.286	292	0.09	2.59	<1	>15.0	67	24.3
2615756		1.914	<5	0.04	5.57	119	6.70	342	80.3
2615757		1.042	7	0.07	6.38	152	3.85	814	84.9
2615758		1.234	<5	0.06	6.04	226	4.11	1070	63.1
2615759		1.365	<5	0.15	6.15	187	4.25	851	83.8
2615760		0.106	1730	0.68	7.98	198	2.45	50	33.9
2615761		1.142	<5	0.06	5.02	191	6.01	365	67.2
2615762		0.782	<5	0.03	6.77	201	4.68	312	78.2
2615763		1.342	<5	0.14	6.06	141	4.41	445	79.3
2615764		1.496	<5	0.08	6.51	497	4.53	406	67.6
2615765		1.063	<5	0.08	7.28	166	2.54	615	86.1
2615766		1.126	<5	0.05	7.58	390	2.82	319	87.3
2615767		1.515	<5	0.08	5.72	94	6.84	510	53.4
2615768		1.558	<5	0.03	6.57	270	3.81	239	56.7
2615769		1.512	<5	0.05	6.09	286	2.79	258	99.3
2615770		0.104	1830	0.64	8.01	209	2.49	46	34.7
2615771		1.175	<5	0.05	6.60	18	1.45	502	61.4
2615772		1.055	<5	0.06	6.80	27	0.78	575	56.1
2615773		1.573	<5	<0.02	7.09	417	1.14	60	1.8
2615774		1.726	<5	<0.02	3.66	157	1.33	50	1.4
2615775		1.075	<5	0.04	6.71	172	3.73	285	85.3
2615776		1.179	<5	0.03	8.02	116	3.38	46	34.4
2615777		1.227	<5	0.06	8.29	30	6.96	60	42.2
2615778		0.905	<5	0.02	8.85	393	3.58	76	12.9
2615779		1.175	<5	0.05	7.27	100	3.36	315	97.8
2615780		0.105	1760	0.77	8.05	202	2.52	58	35.0
2615781		0.962	<5	0.05	7.40	134	4.49	28	39.5
2615782		1.261	<5	0.06	7.51	48	1.80	615	82.6
2615783		1.346	34	0.08	7.68	73	5.20	32	49.4
2615784		1.209	<5	0.11	7.03	294	5.92	64	147
2615785		1.108	<5	0.03	6.73	230	6.60	<1	11.2
2615786		0.965	<5	<0.02	6.17	304	10.1	<1	11.1
2615787		1.421	<5	0.25	6.40	123	9.55	<1	68.5
*Dup 2615787		N.A.	<5	0.22	6.25	125	9.32	<1	65.1

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Report File No.: 0000012067

Element Method	@Au GE_FAA313	Ag@ GE_ICM40B	AI@ GE_ICM40B	-	Ca@ GE_ICM40B	GE_ICM40B	Cu@ GE_ICM40B
Det.Lim. Units	5 ppb	0.02 ppm	0.01 %	1 ppm	0.01 %		0.5 ppm
*Rep 2615766		0.06	7.69	398	2.86	347	86.9
*Std OREAS901		0.37	6.64	218	0.09	40	1380
*Std CH-4		2.17	7.54	456	1.91	78	2010
*BIk BLANK		0.03	<0.01	<1	<0.01	<1	0.6
*Rep 2615756	<5						
*Std OXN117	7740						
*Std OXJ111	2200						
*BIk BLANK	<5						

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	Element	Fe@	K@	Li@	Mg@	Mn@	Na@	Ni@	P@
	Method	GE_ICM40B							
	Det.Lim.	0.01	0.01	1	0.01	2	0.01	0.5	0.005
	Units	%	%	ppm	%	ppm	%	ppm	%
2615751		5.41	1.89	20	2.50	1090	2.58	108	0.125
2615752		5.91	<0.01	<1	>15.0	851	0.01	2140	<0.005
2615753		4.35	0.04	9	4.60	715	0.29	172	<0.005
2615754		5.34	0.12	18	7.63	1020	0.31	371	<0.005
2615755		4.39	<0.01	<1	6.78	2160	0.01	216	<0.005
2615756		6.31	0.37	104	4.24	1790	1.93	358	0.029
2615757		8.26	0.51	152	3.57	1680	1.43	453	0.025
2615758		9.32	0.71	146	2.56	1970	1.27	881	0.033
2615759		7.75	0.57	136	3.93	1650	1.41	561	0.027
2615760		5.58	4.54	3	1.88	512	2.93	76.7	0.114
2615761		7.62	0.88	36	3.25	1790	1.20	351	0.024
2615762		5.34	0.81	51	2.19	1600	2.91	389	0.031
2615763		6.53	0.53	88	2.25	1600	1.92	488	0.035
2615764		6.35	0.97	89	3.03	1500	1.91	262	0.048
2615765		7.72	0.33	155	3.43	1010	2.29	401	0.074
2615766		6.86	0.76	81	2.77	1140	2.49	250	0.050
2615767		5.32	0.09	38	3.59	1320	2.44	342	0.030
2615768		6.40	0.76	110	3.03	1900	2.03	232	0.052
2615769		6.61	0.89	111	2.53	1580	1.31	197	0.049
2615770		5.71	4.49	3	1.96	540	2.90	78.3	0.115
2615771		6.42	0.03	180	5.22	707	1.67	401	0.030
2615772		7.04	0.02	143	3.89	849	2.30	322	0.037
2615773		3.93	2.18	50	2.14	410	0.92	56.4	0.056
2615774		2.07	0.81	25	1.02	329	0.73	27.1	0.045
2615775		7.63	0.41	115	2.98	1640	2.27	265	0.044
2615776		3.95	0.42	19	1.87	797	3.55	56.5	0.060
2615777		4.38	0.14	11	1.81	874	1.82	61.1	0.057
2615778		4.46	1.73	20	1.43	985	1.55	52.1	0.074
2615779		8.63	0.34	79	3.54	1900	2.06	213	0.031
2615780		5.82	4.56	4	1.94	527	2.94	76.4	0.110
2615781		3.59	0.88	19	1.23	594	1.43	23.2	0.048
2615782		7.46	0.06	88	4.06	1110	2.77	363	0.040
2615783		3.73	0.60	20	1.08	567	1.90	30.8	0.053
2615784		10.0	0.53	37	3.56	1660	2.19	68.6	0.059
2615785		1.67	0.76	30	0.36	1320	3.26	2.7	0.050
2615786		1.31	1.04	23	0.25	1720	2.19	<0.5	0.050
2615787		3.67	0.42	58	0.60	2160	2.93	0.6	0.020
*Dup 2615787		3.65	0.42	58	0.59	2080	2.82	< 0.5	0.023

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Element	Fe@	K@	Li@	Mg@	Mn@	Na@	Ni@	P@
Method	GE_ICM40B							
Det.Lim.	0.01	0.01	1	0.01	2	0.01	0.5	0.005
Units	%	%	ppm	%	ppm	%	ppm	%
*Rep 2615766	6.92	0.78	84	2.87	1190	2.53	256	0.055
*Std OREAS901	3.96	3.76	17	0.60	270	0.05	38.1	0.054
*Std CH-4	4.97	1.88	14	1.42	432	3.26	51.4	0.069
*Blk BLANK	<0.01	<0.01	<1	<0.01	<2	<0.01	<0.5	<0.005

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Element	I GE_ICM40B	Sr@ GE_ICM40B	Ti@ GE_ICM40B	V@ GE_ICM40B	Zn@ GE_ICM40B	Zr@ GE_ICM40B	As@ GE_ICM40B	Be@ GE_ICM40B
Det.Lim. Units		0.5 ppm	0.01 %	2 ppm	1 ppm	0.5 ppm	1 ppm	0.1 ppm
2615751	0.02	251	0.68	143	105	177	<1	0.7
2615752	<0.01	1.4	0.03	29	42	5.3	<1	<0.1
2615753	0.02	7.5	0.04	118	23	14.0	<1	0.1
2615754	0.02	11.6	0.13	86	47	14.0	1	0.1
2615755	<0.03	6.4	0.13	35	60	3.9	264	<0.1
2615756	0.20	193	0.02	171	82	48.8	6	0.1
2615757	0.20	133	0.20	220	126	52.9	10	0.3
2615758	0.95	171	0.15	161	120	61.8	15	0.4
2615759	0.93	166	0.13	206	132	49.1	17	0.3
2615760	2.94	384	0.23	72	63	90.9	21	2.9
2615761	0.13	212	0.57	152	152	47.8	54	0.4
2615762	0.08	178	0.12	152	74	68.4	4	0.4
2615763	0.08	178	0.19	167	88	62.1	21	0.5
2615764	0.00	139	0.17	183	85	82.3	12	0.4
2615765	0.22	199	0.24	232	149	75.4	9	0.0
	0.22	152	0.16	232	149	81.2	11	0.4
2615766 2615767	0.13	394	0.35	126	101	49.3	12	0.7
2615768				126		49.3	27	
2615769	0.17	219 137	0.19	130	78 78	73.7	44	0.5
	2.92	378	0.26	73	64	90.2	26	2.9
2615770			0.57					
2615771	0.46	133	0.24	171	113	75.6	9	0.4
2615772	0.34	112	0.48	215	111	72.2	6	0.6
2615773	<0.01	50.5	0.26	84	45 26	121	5	0.7
2615774	< 0.01	65.7	0.12	43		57.0	2	0.3
2615775	0.16	172	0.20	210	109	70.1	8	0.5
2615776	0.01	188	0.39	89	63	146	8	0.7
2615777	0.02	43.9	0.36	89	62	132	<1	0.8
2615778	0.09	390	0.41	98	46	150	<1	0.6
2615779	0.07	115	0.53	247	102	61.3	3	0.3
2615780	2.93	384	0.58	67	69	89.9	23	3.0
2615781	0.09	126	0.31	76	91	170	1	1.0
2615782	0.19	110	0.39	207	98	71.1	5	0.4
2615783	0.28	101	0.31	78	138	166	3	1.2
2615784	0.15	180	0.89	406	135	120	2	0.9
2615785	<0.01	133	0.20	21	39	146	4	0.7
2615786	0.01	150	0.16	20	36	132	2	0.8
2615787	0.02	126	0.18	20	49	138	8	0.4
*Dup 2615787	0.02	123	0.17	19	47	138	7	0.5

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Element	S@	Sr@	Ti@	V@	Zn@	Zr@	As@	Be@
Method	GE_ICM40B							
Det.Lim.	0.01	0.5	0.01	2	1	0.5	1	0.1
Units	%	ppm	%	ppm	ppm	ppm	ppm	ppm
*Rep 2615766	0.11	173	0.35	231	102	82.5	11	0.7
*Std OREAS901	0.04	30.6	0.24	81	23	178	65	6.6
*Std CH-4	0.64	204	0.28	83	203	120	8	0.8
*BIk BLANK	<0.01	<0.5	<0.01	<2	1	<0.5	<1	<0.1

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Report File No.: 0000012067

	Element	Bi@	Cd@	Ce@	Co@	Cs@	Ga@	Hf@	In@
	Method	GE_ICM40B							
	Det.Lim. Units	0.04	0.02	0.05	0.1	l nnm	0.1	0.02	0.02
	Units	ppm							
2615751		<0.04	0.22	47.9	37.4	<1	20.1	4.17	0.06
2615752		<0.04	<0.02	0.61	115	<1	1.7	0.12	<0.02
2615753		<0.04	0.04	2.84	33.4	<1	8.7	0.42	0.03
2615754		<0.04	0.05	2.00	52.1	<1	6.1	0.41	0.02
2615755		<0.04	0.81	1.86	41.7	<1	5.9	0.07	<0.02
2615756		<0.04	0.20	10.5	45.0	3	12.5	1.34	0.06
2615757		0.04	0.19	9.17	48.4	3	16.4	1.39	0.07
2615758		<0.04	0.15	13.1	45.2	4	15.5	1.74	0.05
2615759		0.04	0.20	12.1	59.0	4	14.8	1.30	0.07
2615760		1.67	0.41	31.9	21.4	3	23.4	2.16	0.06
2615761		<0.04	0.39	12.1	49.1	4	12.2	1.30	0.07
2615762		<0.04	0.18	19.1	32.9	5	15.6	1.98	0.06
2615763		<0.04	0.17	15.8	48.8	3	13.1	1.77	0.06
2615764		<0.04	0.12	29.3	43.6	7	15.5	2.12	0.06
2615765		0.05	0.11	25.9	56.5	2	18.3	2.20	0.05
2615766		0.04	0.08	34.7	44.9	4	18.7	2.26	0.07
2615767		0.05	0.53	16.7	37.5	3	12.3	1.45	0.06
2615768		<0.04	0.14	32.5	32.5	5	14.4	1.94	0.05
2615769		<0.04	0.11	20.4	35.9	5	13.9	1.86	0.06
2615770		1.64	0.42	31.8	21.2	3	23.2	2.12	0.06
2615771		0.04	0.08	20.0	39.5	<1	15.7	1.93	0.05
2615772		0.11	0.06	21.9	44.1	<1	17.1	1.90	0.05
2615773		<0.04	0.03	23.7	18.2	8	16.3	2.82	0.04
2615774		<0.04	0.03	13.9	8.9	3	7.3	1.38	<0.02
2615775		<0.04	0.13	21.2	47.1	3	16.7	2.01	0.06
2615776		<0.04	0.18	32.2	18.2	1	16.9	3.49	0.04
2615777		0.05	0.16	28.5	18.5	<1	26.1	3.21	0.04
2615778		<0.04	0.04	31.9	15.4	2	22.9	3.53	0.04
2615779		0.04	0.11	14.5	49.3	3	16.9	1.63	0.07
2615780		1.88	0.42	32.3	21.7	3	24.0	2.15	0.06
2615781		0.07	0.10	42.0	12.3	<1	17.4	4.58	0.04
2615782		0.09	0.08	13.4	55.1	<1	17.5	1.93	0.05
2615783		0.10	0.25	36.6	13.8	1	22.8	4.30	0.06
2615784		0.06	0.13	30.9	52.7	2	19.6	3.34	0.10
2615785		<0.04	0.05	24.2	4.9	2	16.8	4.05	0.02
2615786		< 0.04	0.05	28.2	2.3	2	15.3	3.68	< 0.02
2615787		0.11	< 0.02	27.8	10.8	1	16.8	3.65	0.12
*Dup 2615787		0.11	0.02	27.2	10.5	1	17.2	3.66	0.11

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Element	Bi@	Cd@	Ce@	Co@	Cs@	Ga@	Hf@	In@
Method	GE_ICM40B							
Det.Lim.	0.04	0.02	0.05	0.1	1	0.1	0.02	0.02
Units	ppm							
*Rep 2615766	0.04	0.09	35.0	46.4	4	19.3	2.36	0.07
*Std OREAS901	4.84	0.04	89.2	71.8	5	19.5	5.14	0.28
*Std CH-4	0.52	1.20	32.1	23.2	3	19.5	3.19	0.13
*BIk BLANK	<0.04	<0.02	<0.05	<0.1	<1	<0.1	<0.02	<0.02

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	Element	La@	Lu@	Mo@	Nb@	Pb@	Rb@	Sb@	Sc@
	Method	GE_ICM40B							
	Det.Lim.	0.1	0.01	0.05	0.1	0.5	0.2	0.05	0.5
	Units	ppm							
2615751		19.5	0.32	2.89	11.3	2.4	59.2	0.14	21.6
2615752		0.2	0.03	0.07	0.1	0.6	0.5	<0.05	8.2
2615753		1.0	0.10	0.99	0.6	0.7	0.4	0.08	27.7
2615754		0.7	0.09	1.42	0.5	3.8	2.9	0.20	20.0
2615755		1.1	0.04	1.15	0.1	<0.5	<0.2	1.57	4.7
2615756		4.3	0.18	0.61	1.1	1.9	14.6	0.85	26.7
2615757		3.6	0.20	0.48	1.0	2.7	18.8	1.66	33.4
2615758		5.1	0.20	0.53	1.0	3.1	25.1	7.07	28.9
2615759		4.8	0.22	0.44	1.5	6.5	22.3	3.73	31.4
2615760		15.1	0.09	1.75	19.3	89.7	339	1.08	6.5
2615761		5.0	0.18	0.46	0.6	1.8	31.4	1.46	25.5
2615762		7.8	0.22	0.58	1.5	1.5	34.0	0.31	23.6
2615763		6.6	0.18	0.57	1.2	1.8	21.3	0.87	26.5
2615764		12.3	0.22	0.37	2.0	2.5	30.9	2.05	28.5
2615765		10.0	0.22	0.35	1.2	3.0	12.1	3.05	32.1
2615766		14.7	0.26	0.37	2.3	2.6	25.7	0.75	34.9
2615767		7.3	0.17	0.81	1.2	4.5	4.0	0.32	20.4
2615768		14.0	0.17	0.40	1.6	2.1	26.2	1.67	22.1
2615769		8.6	0.20	0.86	1.8	2.8	30.3	2.15	25.7
2615770		15.2	0.09	1.73	18.7	87.5	338	1.08	6.5
2615771		8.2	0.20	0.59	2.1	2.6	0.8	0.61	25.8
2615772		9.4	0.21	0.60	3.2	2.3	0.6	1.08	29.9
2615773		9.9	0.18	1.12	4.9	1.3	72.9	0.60	12.4
2615774		5.9	0.09	2.17	1.9	1.3	27.1	0.37	5.7
2615775		8.2	0.22	0.43	1.3	1.9	14.5	1.86	32.3
2615776		13.7	0.26	0.63	7.6	2.5	17.0	0.11	15.4
2615777		12.0	0.26	1.41	6.7	2.8	4.7	0.08	14.7
2615778		13.7	0.24	0.55	7.6	2.3	79.8	0.06	16.1
2615779		5.8	0.38	0.27	2.6	1.3	12.0	0.56	36.7
2615780		15.5	0.09	1.81	19.8	91.5	348	1.10	6.7
2615781		19.2	0.29	1.14	8.1	3.7	33.7	0.08	11.6
2615782		5.3	0.22	0.28	2.6	1.8	2.5	0.53	33.1
2615783		16.6	0.24	2.49	7.7	2.8	18.6	0.13	11.8
2615784		13.4	0.55	0.69	6.1	5.3	19.8	0.10	40.2
2615785		10.9	0.19	0.39	5.9	2.2	26.5	0.12	6.4
2615786		13.7	0.18	0.20	4.9	1.6	34.9	0.08	5.3
2615787		13.7	0.15	0.36	5.3	2.0	15.4	0.08	5.8
*Dup 2615787		13.4	0.14	0.35	5.1	1.9	15.5	0.06	5.8

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Element	La@	Lu@	Mo@	Nb@	Pb@	Rb@	Sb@	Sc@
Method	GE_ICM40B							
Det.Lim.	0.1	0.01	0.05	0.1	0.5	0.2	0.05	0.5
Units	ppm							
*Rep 2615766	15.0	0.27	0.44	2.3	2.6	26.3	0.78	36.3
*Std OREAS901	44.3	0.58	3.37	9.3	16.8	160	2.56	14.3
*Std CH-4	15.1	0.18	3.25	3.8	15.9	81.3	0.80	13.2
*BIk BLANK	<0.1	<0.01	<0.05	<0.1	<0.5	<0.2	<0.05	<0.5

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	Element	Se@	Sn@	Ta@	Tb@	Te@	Th@	TI@	U@
	Method	GE_ICM40B							
	Det.Lim.	2	0.3	0.05	0.05	0.05	0.2	0.02	0.05
	Units	ppm							
2615751		<2	1.5	0.87	0.79	<0.05	1.6	0.23	0.37
2615752		<2	<0.3	<0.05	<0.05	<0.05	<0.2	<0.02	<0.05
2615753		<2	0.5	<0.05	0.17	<0.05	<0.2	<0.02	<0.05
2615754		<2	<0.3	<0.05	0.13	<0.05	<0.2	0.03	<0.05
2615755		<2	<0.3	<0.05	0.06	<0.05	<0.2	<0.02	<0.05
2615756		<2	0.5	0.08	0.26	<0.05	0.7	0.09	0.17
2615757		<2	0.5	0.08	0.25	<0.05	0.5	0.14	0.19
2615758		<2	0.4	0.09	0.25	<0.05	1.3	0.39	0.33
2615759		<2	0.6	0.16	0.35	<0.05	0.5	0.13	0.13
2615760		<2	1.6	1.36	0.40	0.41	2.2	2.14	0.84
2615761		<2	0.5	<0.05	0.27	<0.05	0.7	0.22	0.17
2615762		<2	0.6	0.12	0.32	<0.05	1.4	0.23	0.30
2615763		<2	0.6	0.09	0.26	<0.05	1.1	0.14	0.28
2615764		<2	0.6	0.16	0.37	<0.05	1.7	0.25	0.39
2615765		<2	0.5	0.11	0.30	<0.05	1.5	0.10	0.37
2615766		<2	0.8	0.18	0.42	<0.05	1.9	0.16	0.52
2615767		<2	0.4	0.09	0.27	<0.05	1.3	0.04	0.33
2615768		<2	0.5	0.14	0.36	<0.05	2.3	0.20	0.57
2615769		<2	0.6	0.16	0.37	<0.05	0.8	0.24	0.20
2615770		<2	1.6	1.22	0.40	0.30	2.3	2.41	0.84
2615771		<2	<0.3	0.19	0.31	<0.05	1.3	<0.02	0.32
2615772		<2	0.9	0.23	0.39	<0.05	1.2	<0.02	0.28
2615773		<2	1.2	0.37	0.31	<0.05	1.5	0.24	0.37
2615774		<2	0.6	0.14	0.18	<0.05	0.7	0.09	0.18
2615775		<2	0.5	0.09	0.26	<0.05	1.4	0.11	0.34
2615776		<2	1.3	0.55	0.55	<0.05	1.6	0.03	0.39
2615777		<2	1.4	0.51	0.52	<0.05	1.5	<0.02	0.37
2615778		<2	1.2	0.61	0.53	<0.05	1.7	0.23	0.41
2615779		<2	0.7	0.19	0.62	<0.05	0.7	0.09	0.18
2615780		<2	1.9	1.44	0.41	0.38	2.2	2.22	0.90
2615781		<2	1.9	0.74	0.61	<0.05	3.6	0.14	0.86
2615782		<2	0.6	0.24	0.28	<0.05	1.0	0.05	0.25
2615783		<2	2.5	0.73	0.54	<0.05	3.3	0.10	0.81
2615784		<2	1.3	0.43	0.90	<0.05	3.6	0.12	0.86
2615785		<2	1.5	0.58	0.41	<0.05	3.2	0.24	0.83
2615786		<2	1.2	0.48	0.38	<0.05	2.8	0.32	0.79
2615787		<2	1.3	0.50	0.32	<0.05	2.9	0.19	0.45
*Dup 2615787		<2	1.3	0.49	0.32	<0.05	2.9	0.19	0.44

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Element	Se@	Sn@	Ta@	Tb@	Te@	Th@	TI@	U@
Method	GE_ICM40B							
Det.Lim.	2	0.3	0.05	0.05	0.05	0.2	0.02	0.05
Units	ppm							
*Rep 2615766	<2	0.8	0.17	0.42	<0.05	1.9	0.17	0.52
*Std OREAS901	3	3.6	0.83	1.30	0.10	17.5	0.79	11.2
*Std CH-4	2	1.3	0.30	0.40	0.48	2.6	0.40	0.80
*BIk BLANK	<2	<0.3	<0.05	<0.05	<0.05	<0.2	<0.02	<0.05

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	Element Method	W@ GE_ICM40B	Y@ GE_ICM40B	Yb@ GE_ICM40B	Ca GO_ICP41Q	Mg GO_ICP41Q
	Det.Lim.	0.1	0.1	0.1	0.01	0.1
	Units	ppm	ppm	ppm	%	%
2615751		0.4	23.1	2.1	N.A.	N.A.
2615752		<0.1	1.6	0.2	N.A.	24.5
2615753		<0.1	6.0	0.7	N.A.	N.A.
2615754		<0.1	4.7	0.6	N.A.	N.A.
2615755		1.0	2.4	0.2	21.1	N.A.
2615756		<0.1	8.8	1.1	N.A.	N.A.
2615757		<0.1	9.8	1.2	N.A.	N.A.
2615758		<0.1	8.8	1.2	N.A.	N.A.
2615759		0.2	10.9	1.3	N.A.	N.A.
2615760		0.3	8.5	0.6	N.A.	N.A.
2615761		0.2	8.8	1.1	N.A.	N.A.
2615762		0.1	10.7	1.3	N.A.	N.A.
2615763		<0.1	8.9	1.1	N.A.	N.A.
2615764		0.6	9.4	1.3	N.A.	N.A.
2615765		0.2	8.8	1.3	N.A.	N.A.
2615766		0.2	10.6	1.5	N.A.	N.A.
2615767		0.1	7.4	1.0	N.A.	N.A.
2615768		0.2	9.2	1.1	N.A.	N.A.
2615769		1.1	9.8	1.2	N.A.	N.A.
2615770		0.4	8.4	0.6	N.A.	N.A.
2615771		0.3	8.4	1.1	N.A.	N.A.
2615772		0.7	9.5	1.2	N.A.	N.A.
2615773		0.6	9.2	1.0	N.A.	N.A.
2615774		0.1	5.0	0.5	N.A.	N.A.
2615775		0.1	8.2	1.2	N.A.	N.A.
2615776		0.4	17.5	1.7	N.A.	N.A.
2615777		0.2	17.0	1.6	N.A.	N.A.
2615778		0.2	16.6	1.5	N.A.	N.A.
2615779		0.9	22.8	2.4	N.A.	N.A.
2615780		0.4	8.5	0.6	N.A.	N.A.
2615781		0.3	19.1	1.8	N.A.	N.A.
2615782		1.0	8.8	1.2	N.A.	N.A.
2615783		0.3	16.0	1.5	N.A.	N.A.
2615784		0.2	32.5	3.4	N.A.	N.A.
2615785		0.3	12.6	1.1	N.A.	N.A.
2615786		0.3	12.4	1.1	N.A.	N.A.
2615787		0.3	9.4	0.9	N.A.	N.A.
*Dup 2615787		0.3	9.2	0.9	N.A.	N.A.
*Std SRM88B					20.8	13.1
*BIk BLANK					<0.01	<0.1

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Element	W@	Y@	Yb@	Ca	Mg
Method	GE_ICM40B	GE_ICM40B	GE_ICM40B	GO_ICP41Q	GO_ICP41Q
Det.Lim.	0.1	0.1	0.1	0.01	0.1
Units	ppm	ppm	ppm	%	%
*Rep 2615766	0.2	10.9	1.5		
*Std OREAS901	3.2	40.3	3.7		
*Std CH-4	3.5	11.3	1.1		
*BIk BLANK	<0.1	<0.1	<0.1		
*Rep 2615752				N.A.	24.4

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Appendix H: Quality Control / Quality Assurance



#### **QUALITY CONTROL / QUALITY ASSURANCE**

#### I Chain of Custody

All soil and rock samples were packed in rice sacks and sealed with uniquely-numbered nonresealable security straps. Rice sacks were trucked to SGS labs in Sudbury, Ontarion, an ISO 9001 registered laboratory. SGS reported that all bags were received in good condition, with all security straps intact, and with no evidence of tampering.

#### II Blanks

Blanks are samples that are known to be barren of mineralization and are inserted into the sample stream in the field to determine whether contamination has occurred during the analytical process.

#### a. Soil sample blanks

Seventeen samples of silica sand were inserted into the soil sampling stream at intervals of one blank for every 20 samples. Assays returned uniformly low values for Ag (≤0.9 ppb), Co ≤7 ppb, Cr ≤100 ppb, Cu ≤330 ppb, Ni ≤38 ppb, Pb ≤146 ppb, Sb ≤dl, Te ≤dl and Zn ≤650 ppb.

Values for gold ranged from <dl to 0.2 ppb, with one sample returning 0.3 ppb. Although these values are very low they are close to the 0.5 ppb value that is considered anomalous for soils collected during the field program.

Because of the low detection limits for most elements, a better gauge of contamination is probably the coefficient of variation (CV), which is the ratio of the standard deviation to the mean. A low CV means fairly consistent abundances and, therefore, a low probability of contamination. Thirty-nine of the 53 elements (74%) have CV's  $\leq$ 20%, in comparison to just two of the 53 elements (4%) showing such low CV in the soil data. Those elements within the "blank" that have CV  $\geq$ 20% are mostly elements that analyzed close to their detection limits, so that the 17 analyses are a mix of results just above and below detection that will lead to a high CV. The exceptions to this are U, Th and Ti, which each have one or two anomalously high values that may be indicative of contamination. However, since these elements are of little interest to the Midlothian work program this is not particularly concerning.

#### b. Rock sample blanks

No blanks were submitted with the rock samples.

#### III Field Duplicate Analysis

Field duplicates are two samples taken of the same material in the field. In the case of the soil sampling, this involved taking two soil samples from the same pit. Field duplicates are used to evaluate the reproducibility of analytical data.

#### a. Soil sample field duplicates

The reproducibility of field duplicate data is good for these elements that analyzed predominantly over the detection limit, like Ag, Cu, Ni, Pb and Zn (Figure I-1A to H). Elements that analyse close to detection, like Au, As and Mo for example, show more variation between field duplicates although the correlations between parent and daughter samples still tend to be positive.

#### a. Rock sample blanks

No field duplicates were submitted for the rock samples.



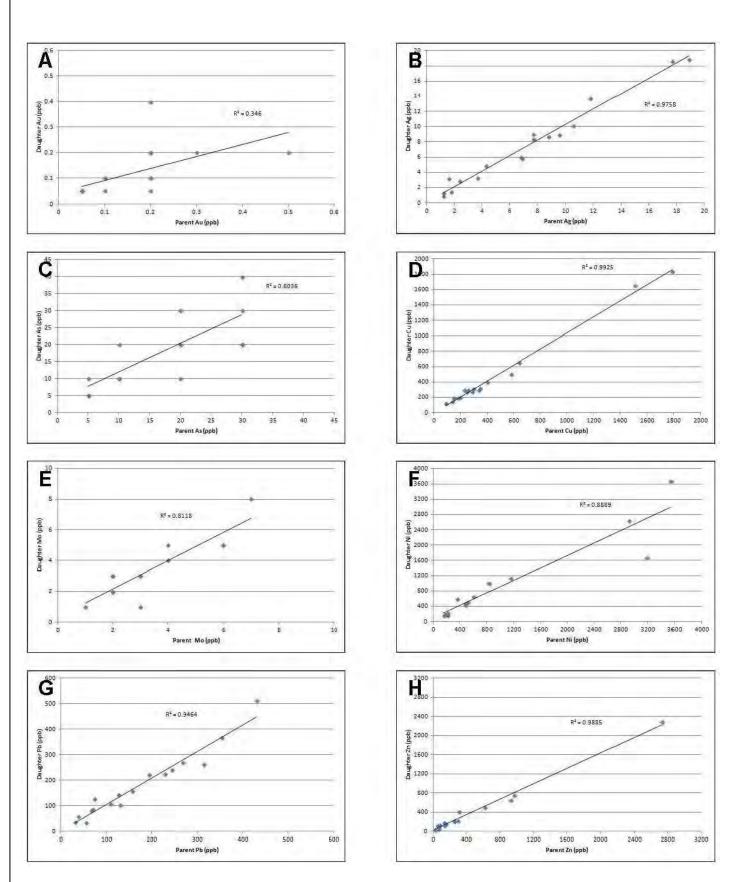


Figure I-1.:Scatter plots showing correlation between parent and daughter field duplicate assays for (A) gold, (B) silver, (C) arsenic, (D) copper, (E) molybdenum, (F) nickel, (G) lead and (H) zinc.



#### IV Standards

Standard reference materials (SRM) are inserted into the sample stream to gauge the accuracy of the lab's analyses.

#### a. Soil sample field duplicates

No SRMs were submitted with the soil samples.

#### b. Rock sample blanks

Rock samples were submitted along with three SRM's comprising ROCKLABS Si54, which has a mean concentration of 1.780 g/t Au with a 95% confidence interval of  $\pm 0.011$  g/t and standard deviation of 0.034 g/t. Analytical results for the SRM, along with calculated z-scores, are tabulated in Table I-1 below.

Z-scores range from 0.6 to 1.5, which are within ±2 standard deviations ( $\sigma$ ) parameter typically established as the "warning limit" and the ±3 $\sigma$  parameter comprising the "control limits". Since none of the the SRM's analyzed outside of these limits there were no standard failures.

Sample ID	Sample Type	Measured Au (ppb)	Si54 Au (ppb)	Difference (ppb)	Si54 2σ (ppb)	Z-score
2615760	Standard Si54	1730	1780	50	34	1.5
2615770	Standard Si54	1830	1780	50	34	1.5
2615780	Standard Si54	1760	1780	20	34	0.6

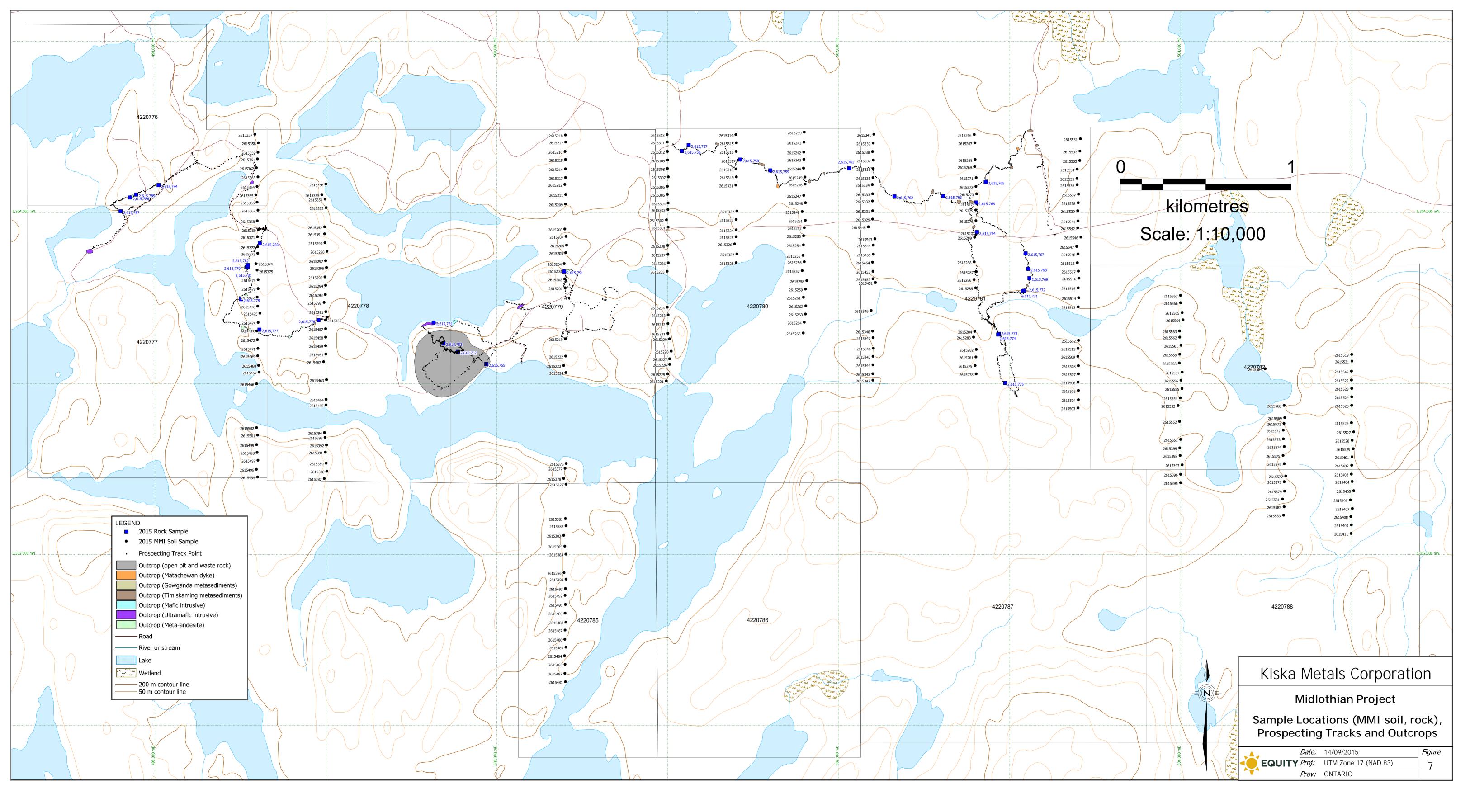
#### V Conclusions

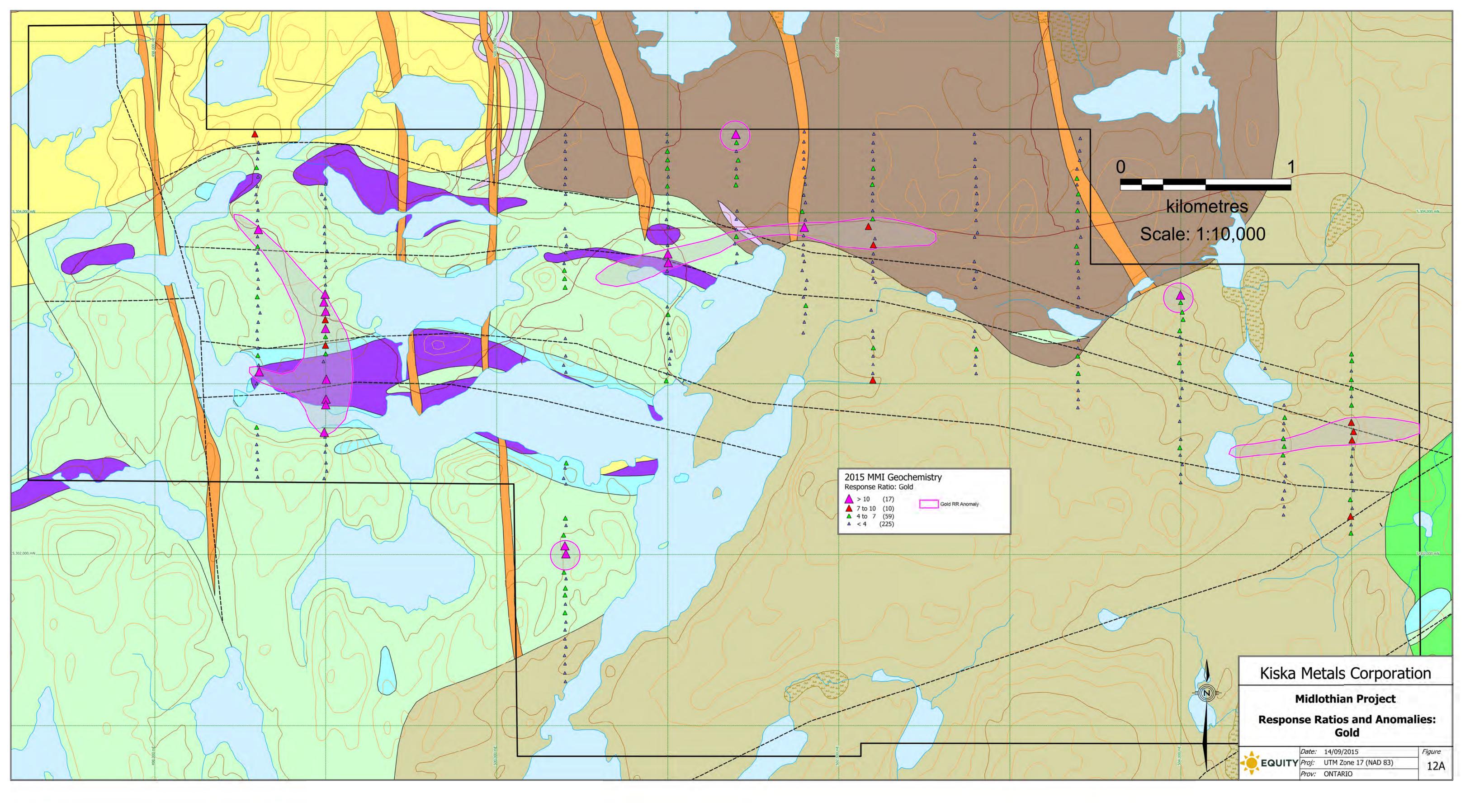
- There is no evidence of tampering with the samples between collection and the laboratory.
- Consistently low values for all metals of interest, in addition to low coefficients of variation, indicate that contamination of soil samples did not take place in the field, or in the lab.
- Field duplicate soil samples show excellent reproducibility for those elements that analyzed predominantly above detection and acceptable reproducibility for elements at lower concentrations.
- The significant overlap in gold values for field samples and blank material reflects the uniform and very low concentration of gold in soils on the Property.
- All three gold analyses of SRM Si54 fell within the 2σ warning limits.
- Although not presented here, ALS Minerals carries out a full QA/QC protocol, including blanks, duplicates and standards, on laboratory handling and analysis of samples and satisfy themselves that results are satisfactory, prior to issuing certificates.

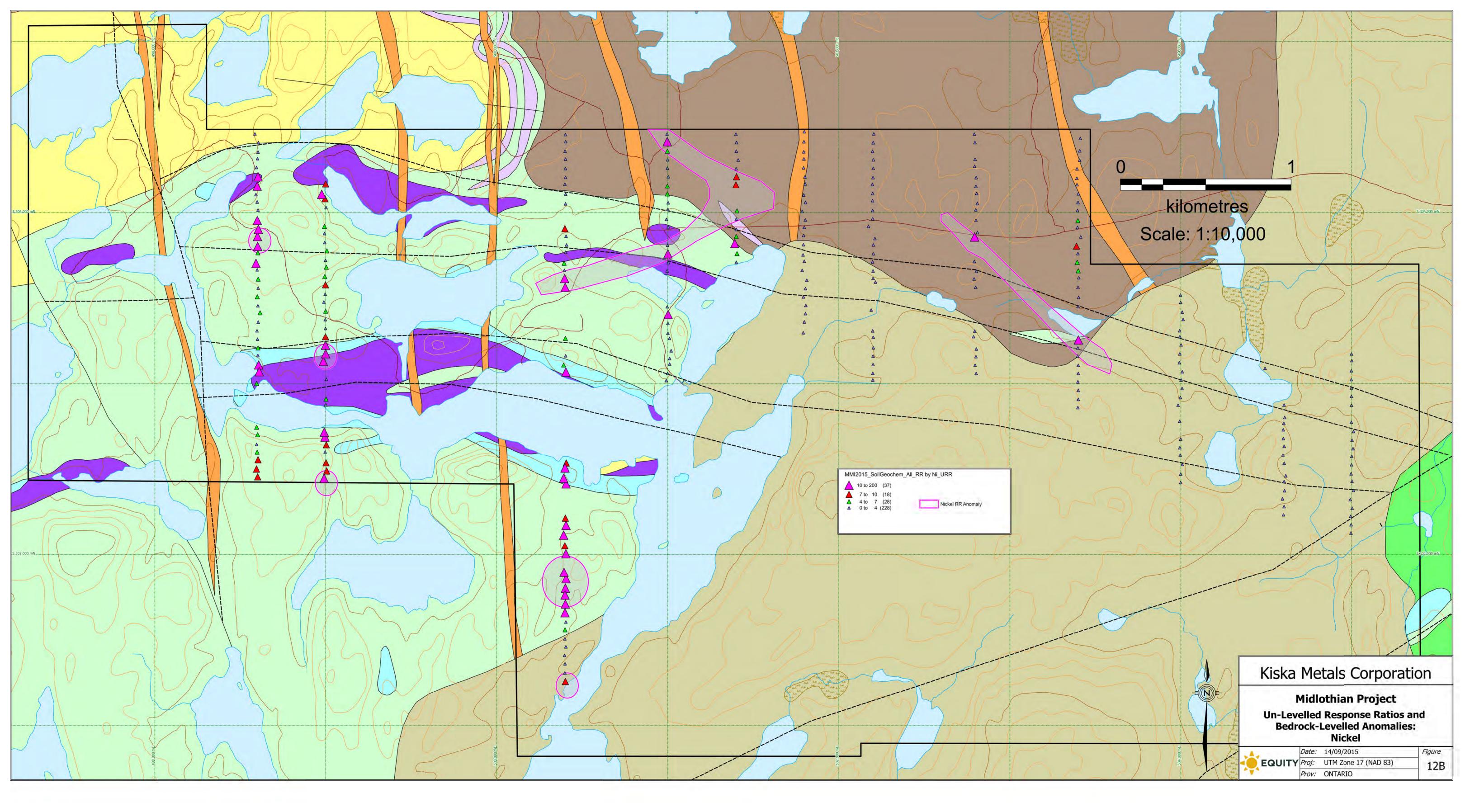


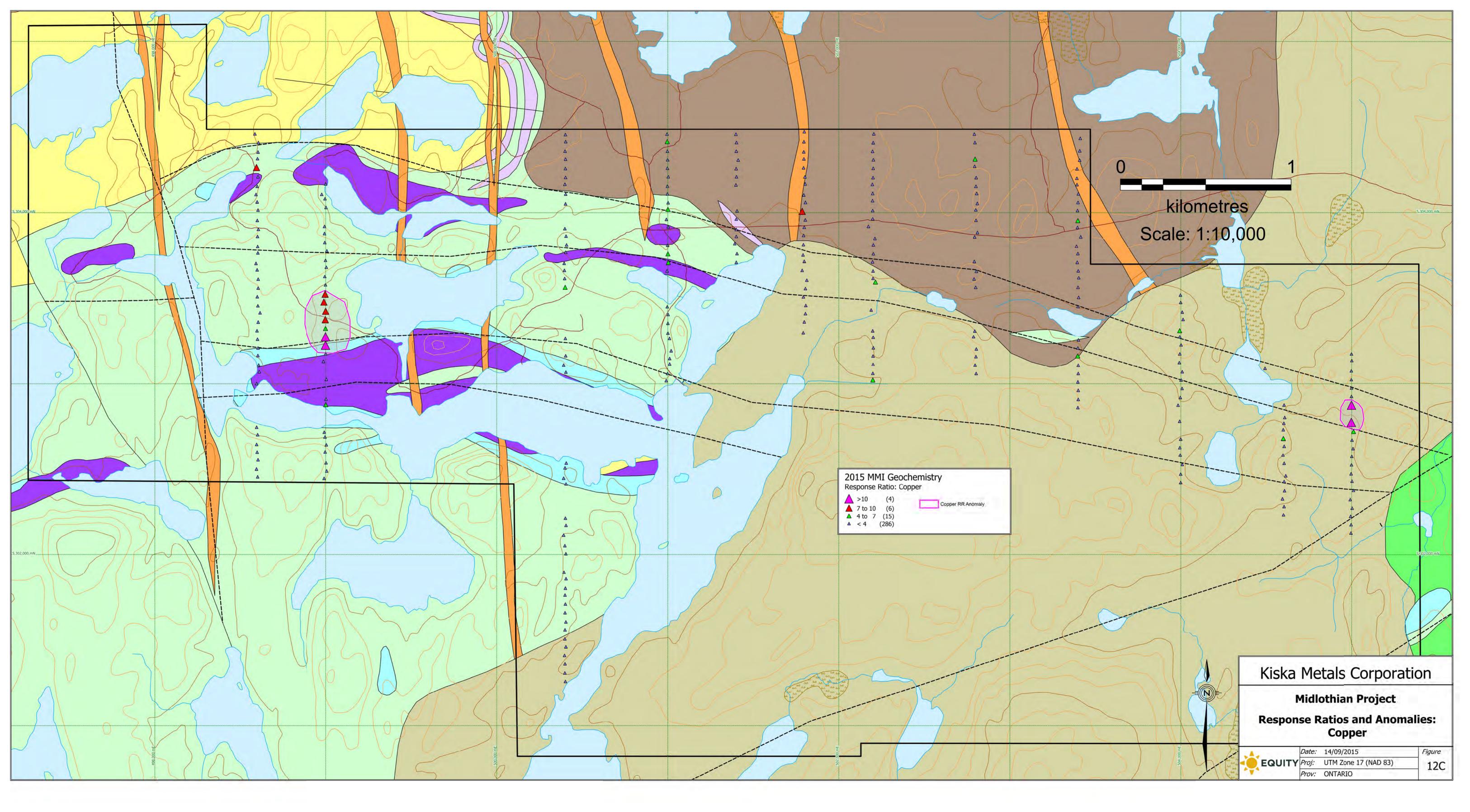
Appendix I: Oversize Figures

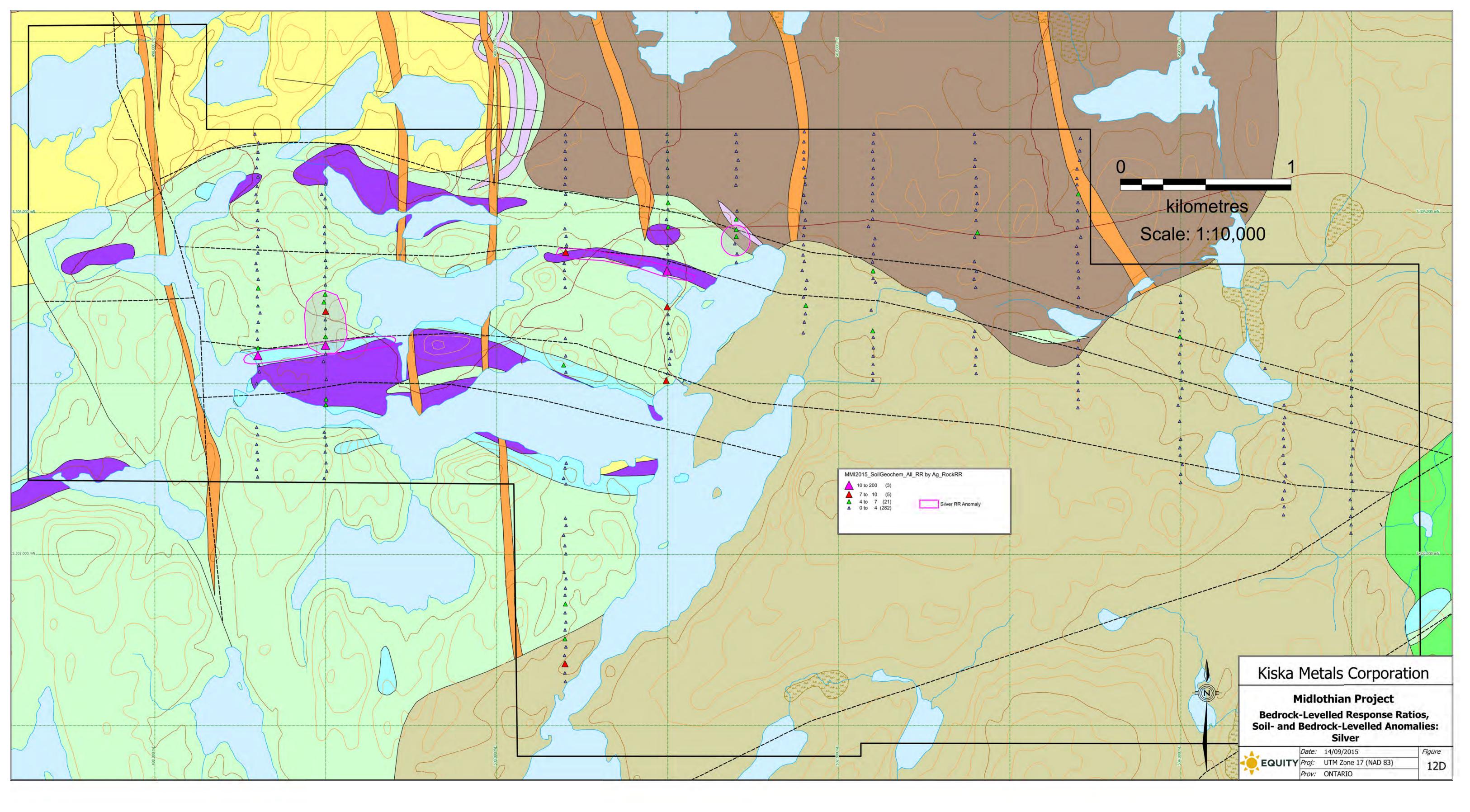


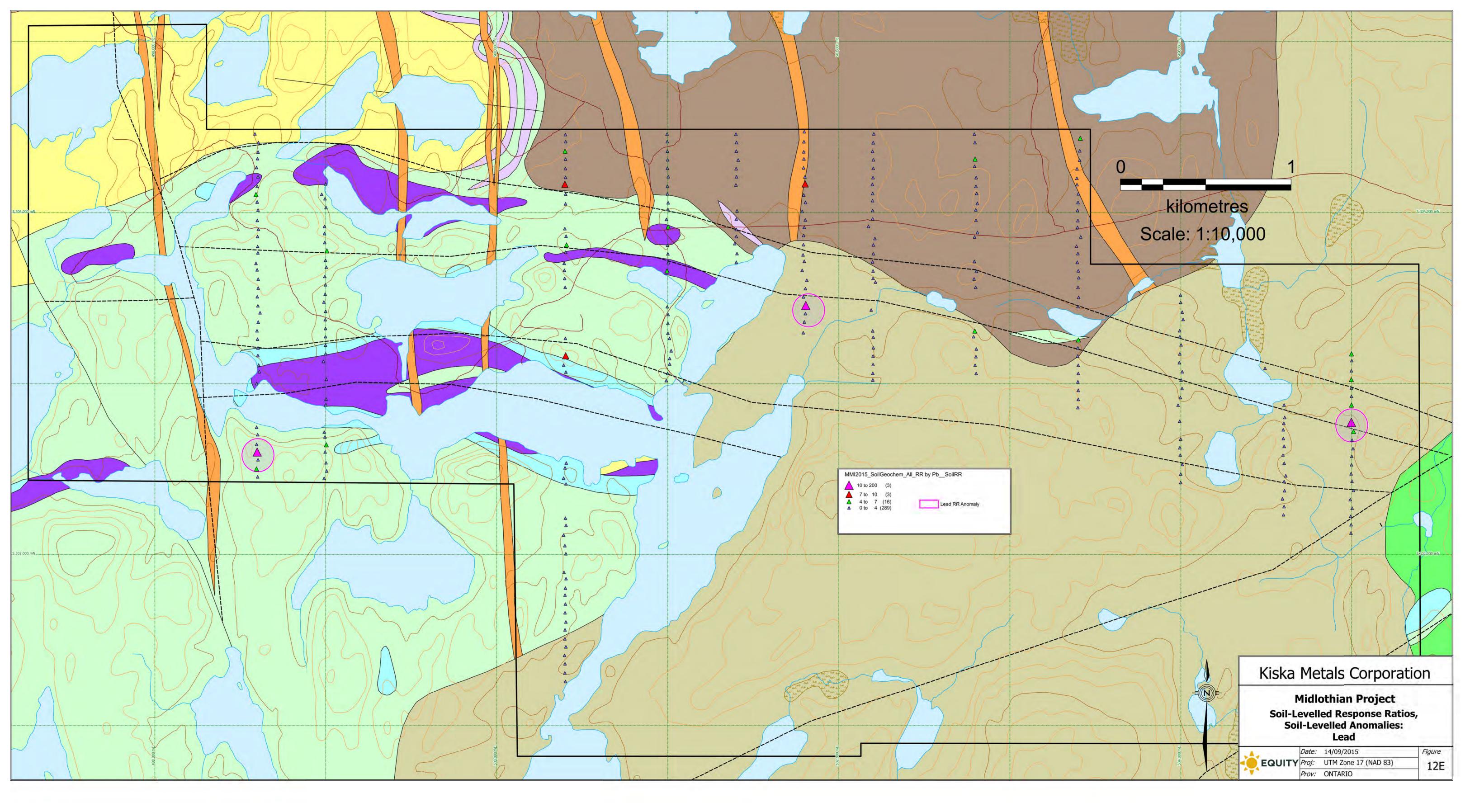


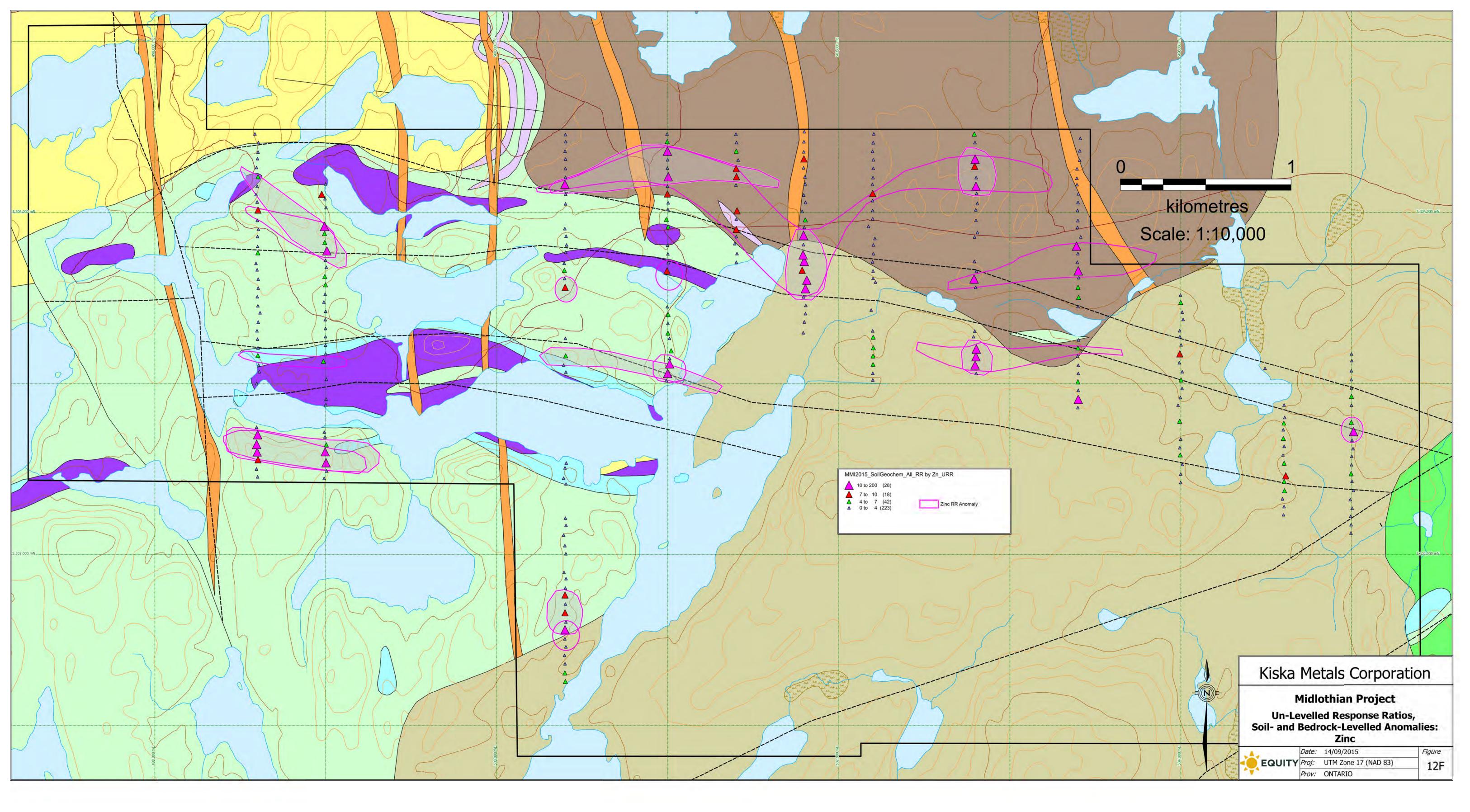


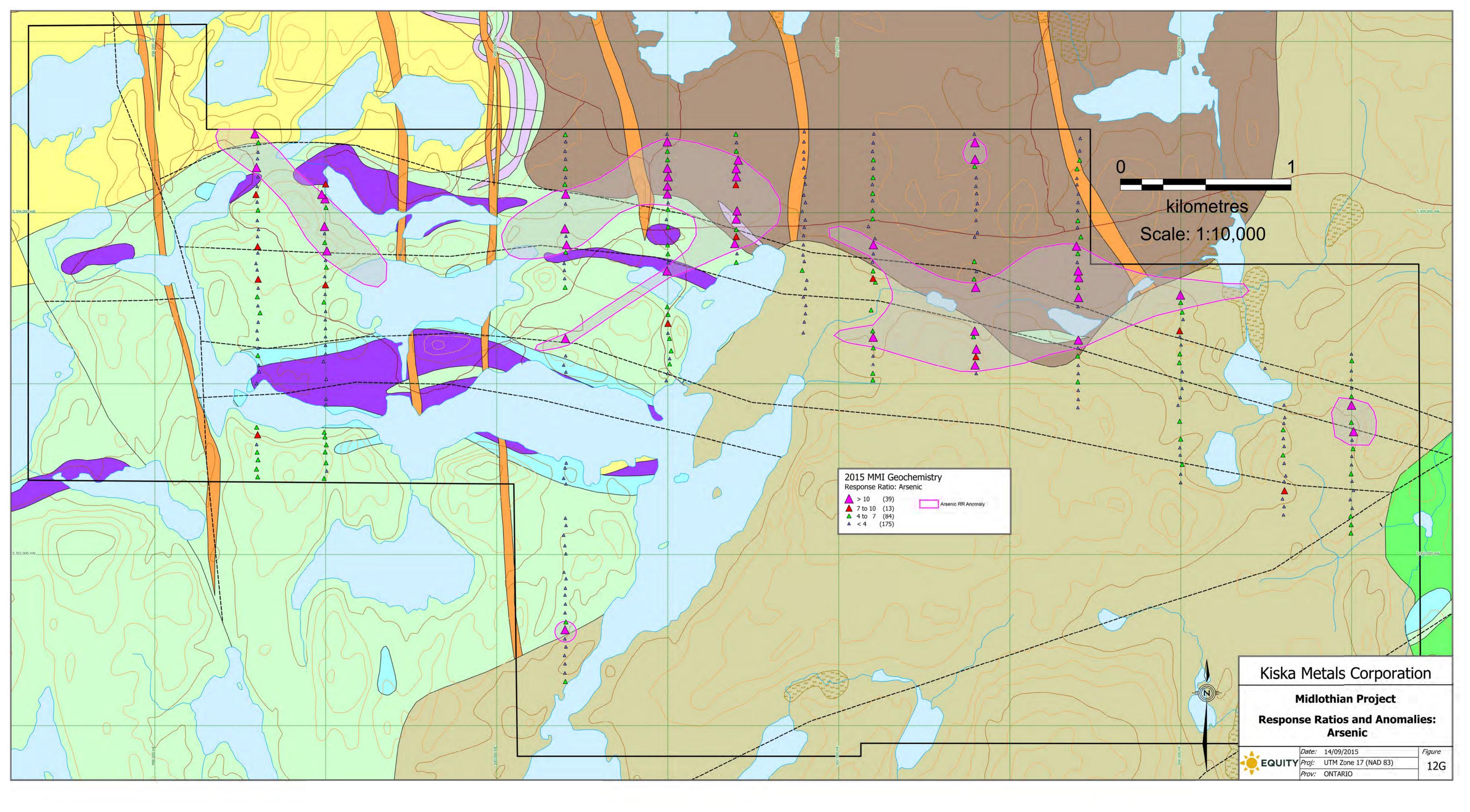


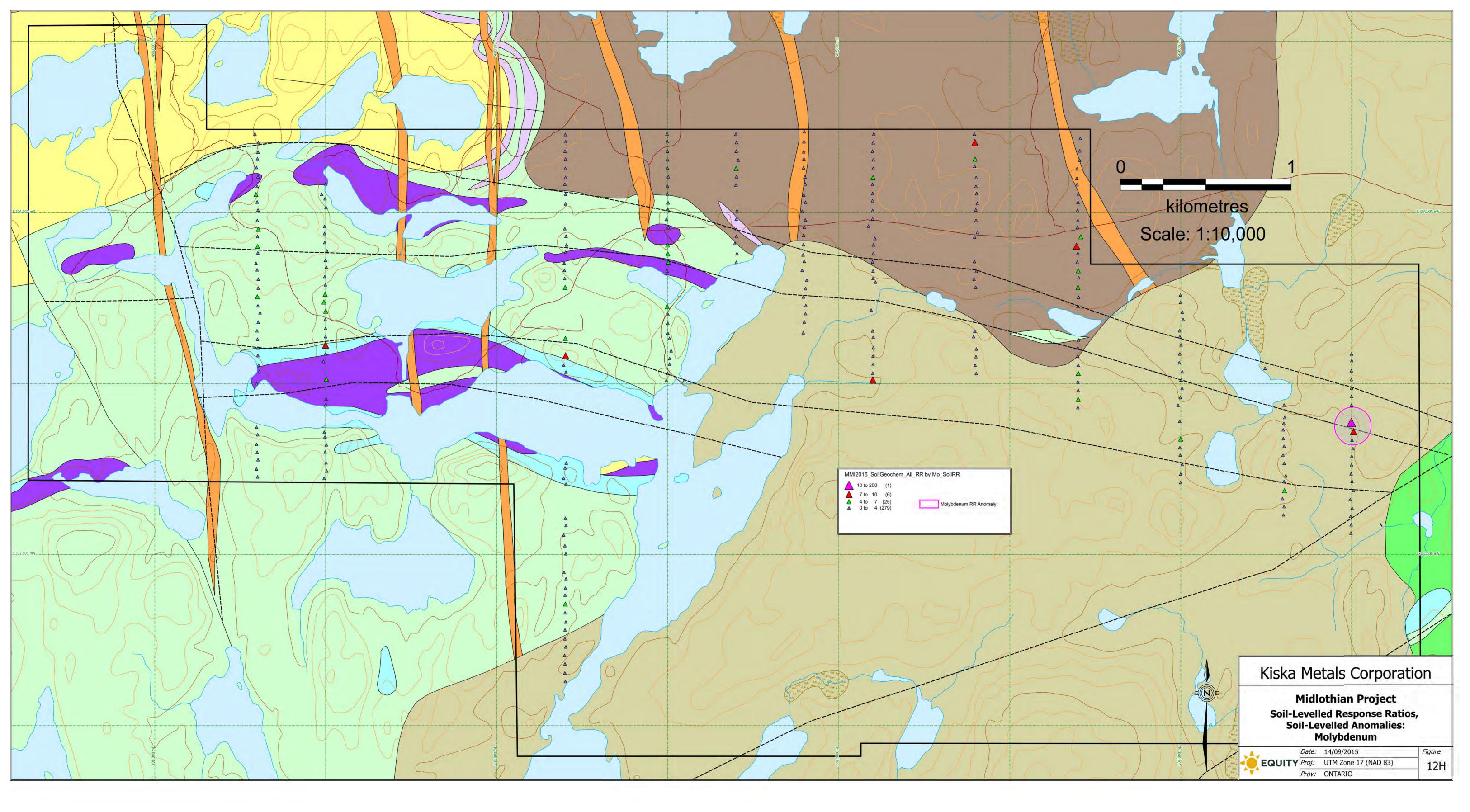


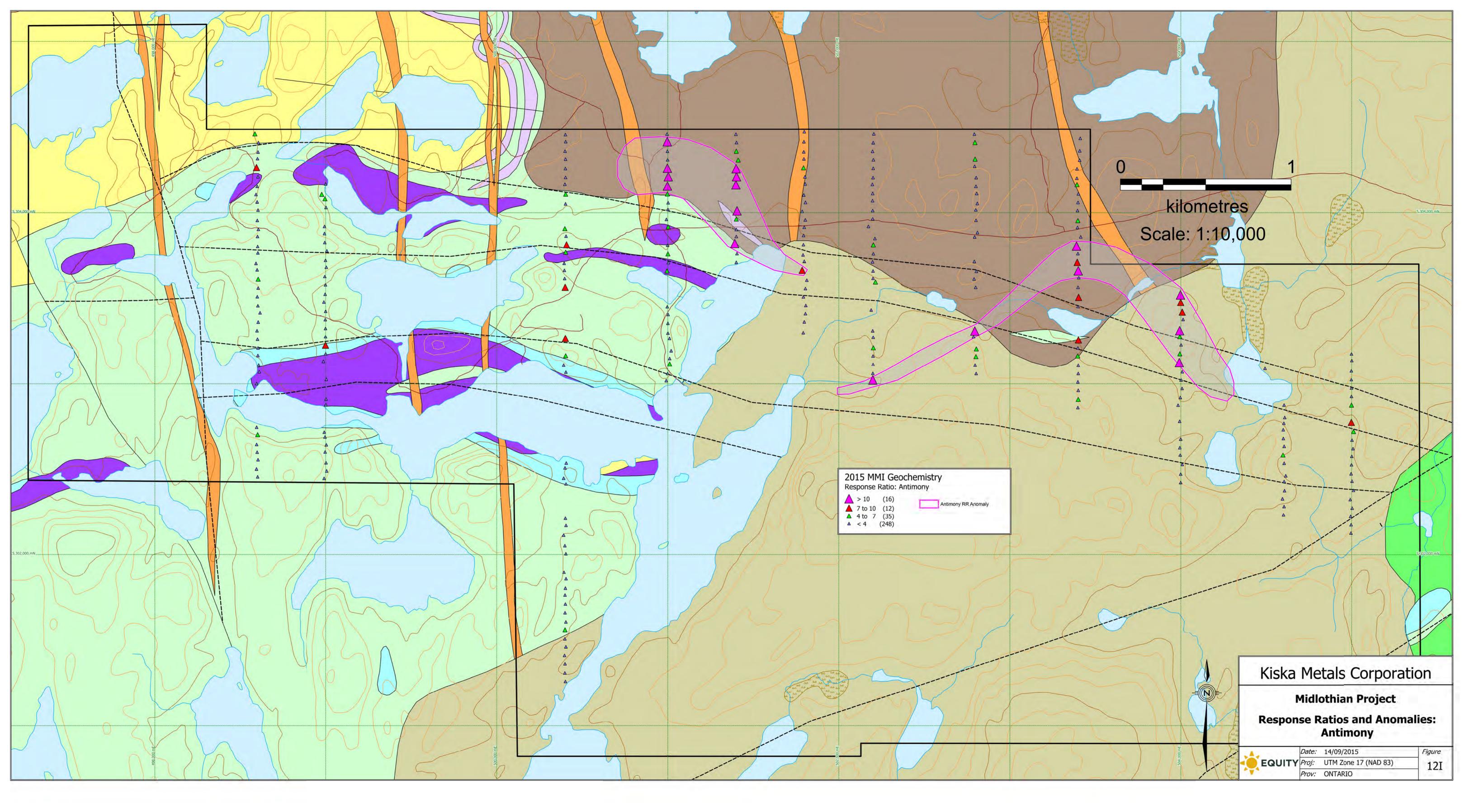


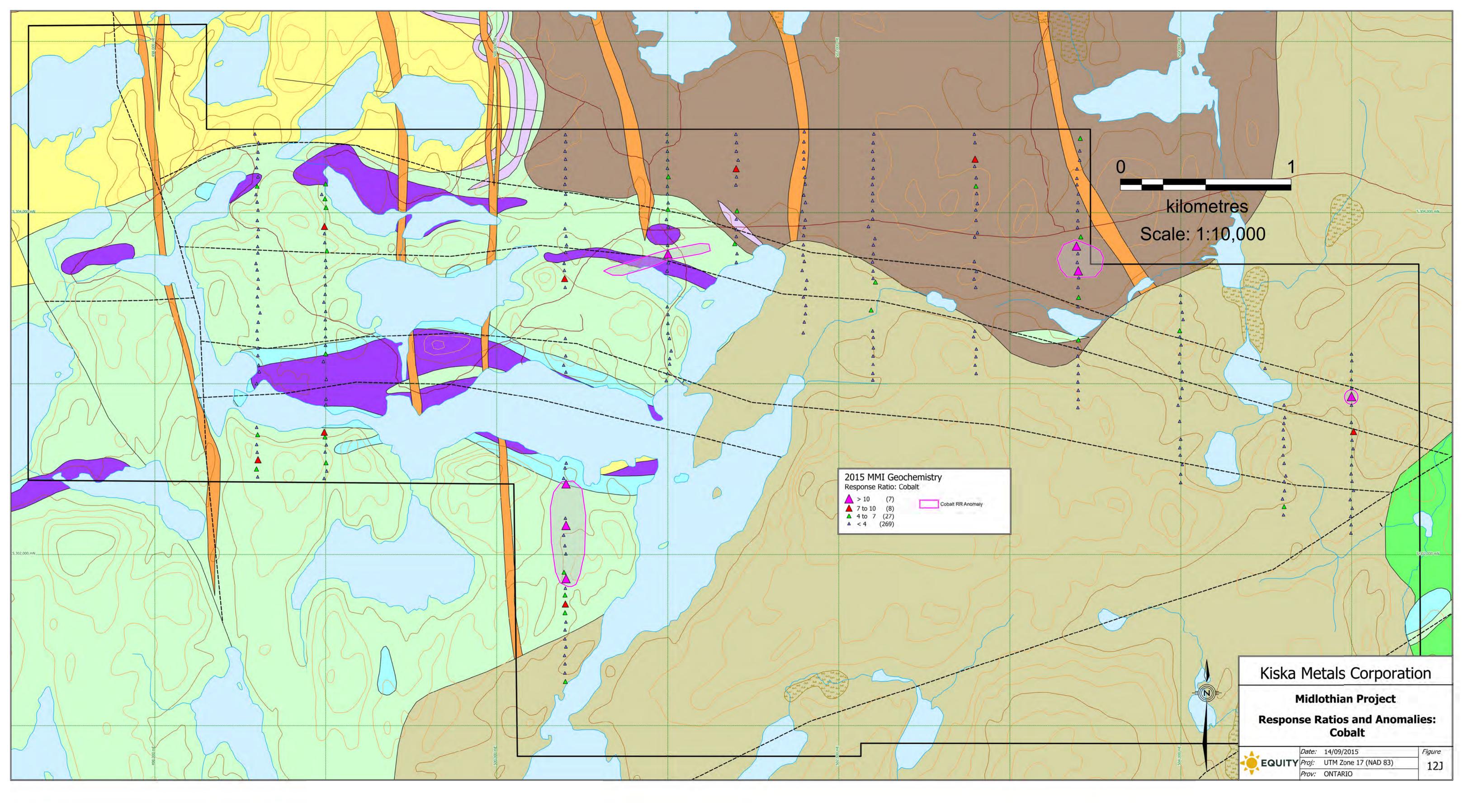


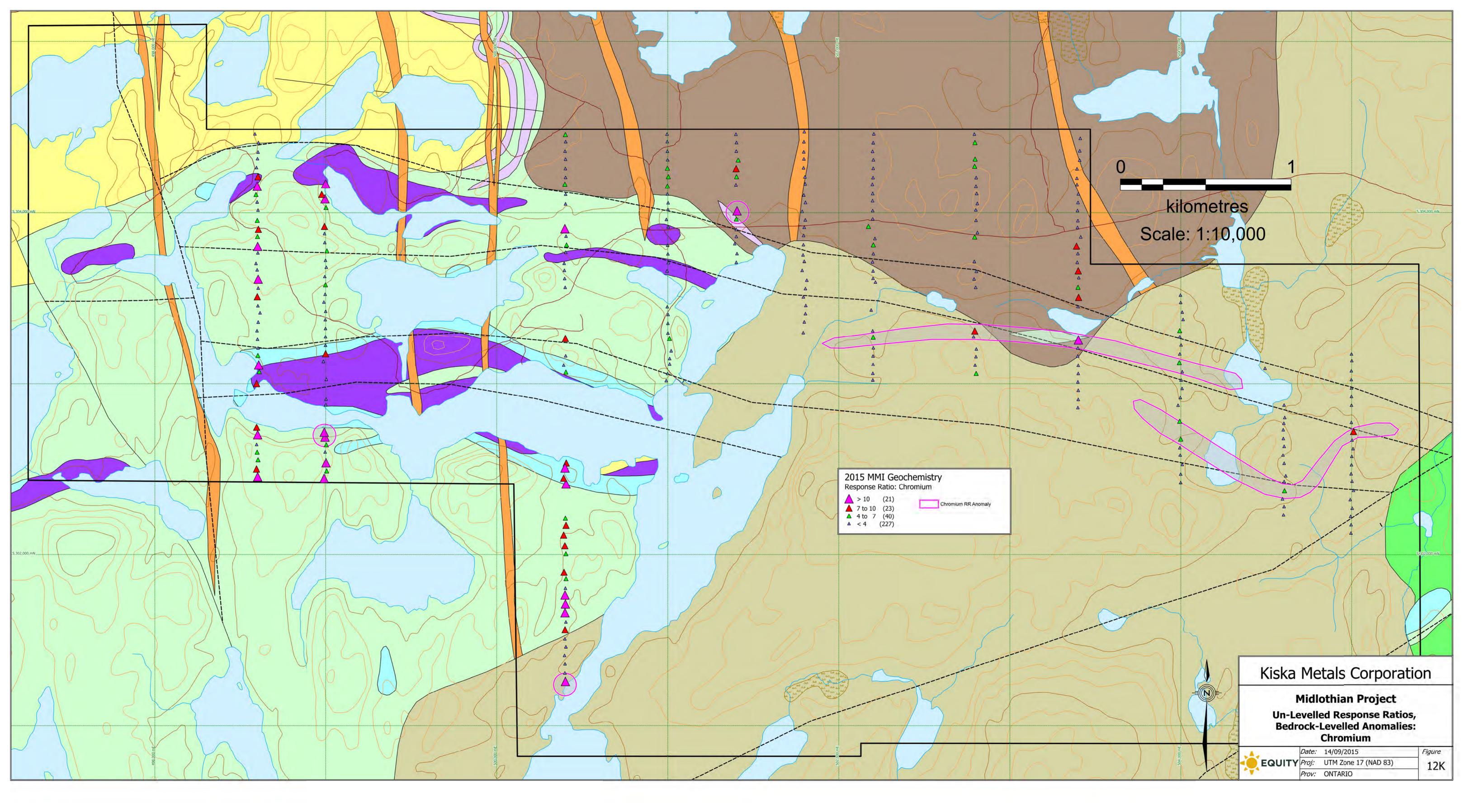


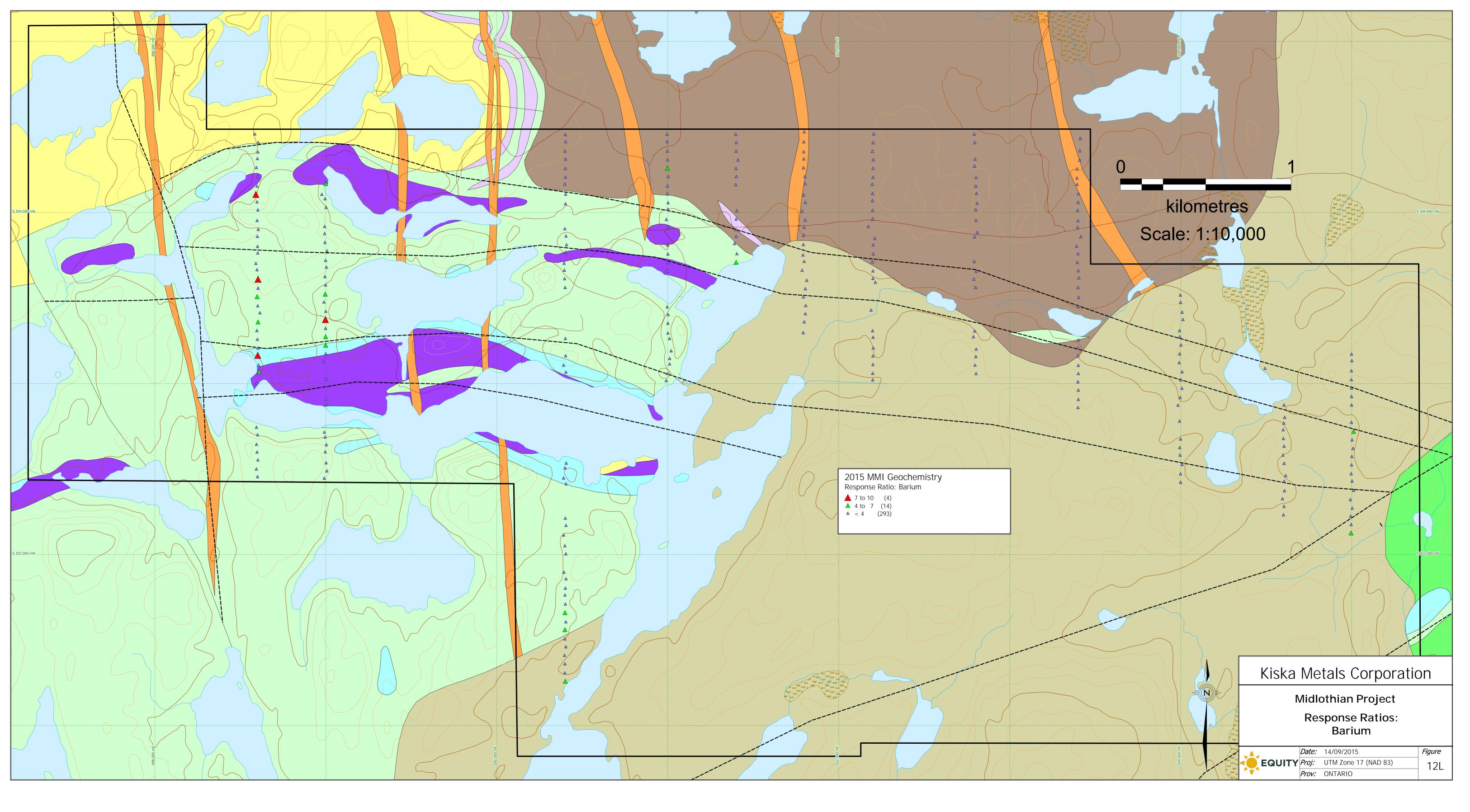


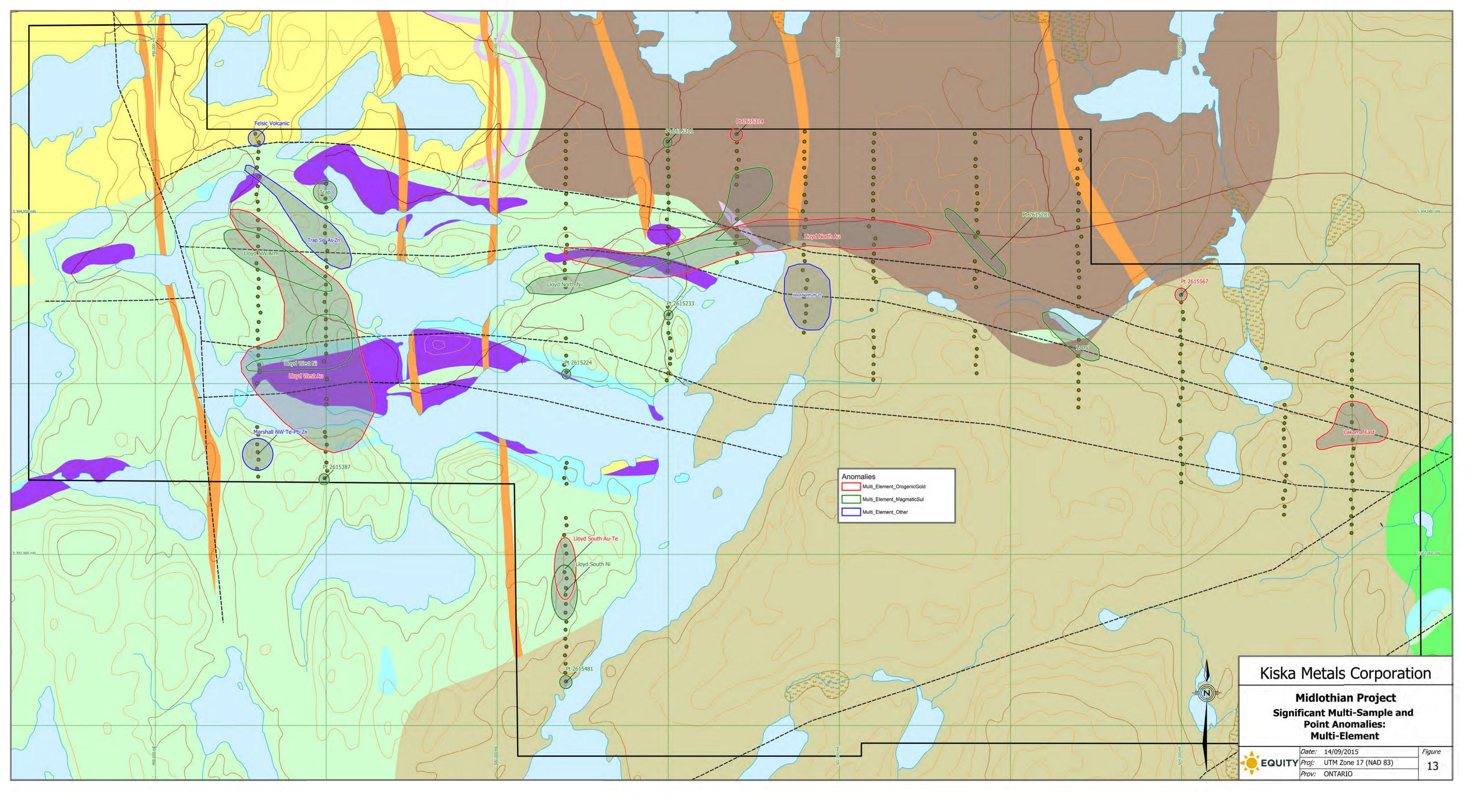












Appendix J: Data Disk



Appendix K: Geologist's Certificates



## GEOLOGIST'S CERTIFICATE Ronald J. Voordouw 2327 Mary Hill Road Port Coquitlam, BC, Canada

I, RONALD VOORDOUW, do hereby certify that:

I am presently a Project Geologist with Equity Exploration Consultants Ltd, with offices at Suite 200–900 West Hastings Street, Vancouver, B.C.

I am a professional geoscientist in good standing in the province of Newfoundland and Labrador.

I am a author of the assessment report 2015 Geological and Geochemical Report on the Midlothian Project prepared for Kiska Metals Inc.

I graduated from the University of Calgary, Calgary, AB, Canada with a Bachelor of Science degree in geology in 1999 and with a Doctorate in geology in 2006 from the Memorial University of Newfoundland, Canada

Since 2006 I have been involved in natural resource exploration for base metals and gold (2006, 2011 – present); research on PGE deposits (2007, 2008); and regional geological mapping (2009, 2010) in Canada and South Africa.

I was directly involved with managing of the 2015 summer work program on the Midlothian Property (June 24-July 2).

Dated at Vancouver, British Columbia, this 18<sup>th</sup> day of September, 2015.

Ronald Voordouw, Ph.D., P.Geo



