REPORT ON THE

2010 JVX INTEREPRETATION AND PRIORITIZATION OF THE 2009 VTEM ANOMALIES

AND ON THE

2010 SGH, ENZYME LEACH GEOCHEMICAL SURVEYS (LINES 32-40)

TO DELINEATE 2010 DRILL TARGETS

ON THE STURGEON LAKE PROJECT,

PATRICIA MINING DIVISION,

NORTHWESTERN ONTARIO

UTM ZONE 15, 671111E, 5523806N (NAD 83)

FOR EXCALIBUR RESOURCES LTD.

BY

GEOFINE EXPLORATION CONSULTANTS LTD.

JULY 2010

SUMMARY:

REPORT ON 2010 EXPLORATION ACTIVITIES

STURGEON LAKE PROJECT:

The Sturgeon Lake project is located in the Wabigoon Subprovince, mainly in the Bell Lake/Dunne Lake Areas of the Sturgeon-Savant greenstone belt, about 8-18 km east of the historic Sturgeon Lake VMS Camp or about 200 km northwest of Thunder Bay, Northwestern Ontario. Excalibur Resources Ltd. ("XBR") has a 100% interest in the Property, which comprises 43 contiguous mining claims with lumber road access.

As indicated by Excalibur (2010), ***the Company began staking the Sturgeon Lake property after recognizing that the majority of significant geophysical conductors identified in the Sturgeon Lake camp in a 1990's government airborne survey (OGS, 1990) are located on the property being staked and that the area was never thoroughly explored. Past drilling is minimal to non-existent over most of the property. The Company has determined from historical data that surveys undertaken on the west side of the property confirm that identified geophysical conductors are sulphide rich, including the presence of massive sulphide lenses. The Excalibur property contains numerous extensive zones of multiple, subparallel and stacked sulfide bearing conductors that cumulatively exceed 100 km of strike length.***

The results of the 1990 airborne survey referenced above provide some evidence for the historic hypothesis of Canadian Javelin (1970): ***If the (Mattagami Lake) mineralization is controlled by structural features and the presence of fractured and brecciated rhyolites and tuffs, in close proximity to more competent and inhospitable andesites, then any area along the (acid-basic metavolcanic) contact zone and within the inferred synclinal fold structure would be a geologically encouraging area in which to search for additional zones of ore grade sulphide mineralization. Under this hypothesis the entire 25 km (strike) length of this contact zone would thus be worthy of detailed examination.*** Classic airborne EM formational conductors are associated with the favorable zone and often have barren iron sulfides and graphite as sources, which can overpower the VMS signature of a proximal base and/or precious metal deposit.

The principal exploration target is Sturgeon Lake type volcanogenic massive sulfide mineralization similar to that mined historically at the Sturgeon Lake, Sub-Creek Zone, Lyon, F Group and Mattabi VMS deposits. The deposits and new VMS targets are located within the Sturgeon Lake Archean volcanic caldera complex where mineralization is interpreted to be localized at several pale-seafloor horizons by synvolcanic structural controls (Groves et al., 1988; Morton et al., 1990, 1991, 1996; Mumin et al., 1991, 1994; Mumin et al., 2007). There is also apparent potential for gold mineralization associated with sulfidized iron formation and deformation zones, often proximal to intrusive complexes e.g., the Vista Lake syenite complex.

The XBR claim block includes the along strike continuation of the favorable Sturgeon Lake Camp VMS mafic-felsic stratigraphy. Most of the XBR work reported herein was carried out in 2010, subsequent to a 1069 line km VTEM airborne survey initiated on behalf of XBR by Geotech Ltd. in November 2009. Geotech (2010) picked 713 EM anomalies in the area of interest and carried out Maxwell Modelling on 21 EM anomalies or anomaly sets within the area of interest, as chosen by Dr. Mumin, based on his knowledge of the Sturgeon Lake Camp e.g. Mumin et al., 2007. Dr. Mumin has supervised all the XBR fieldwork on the Property since 2008, when a small reconnaissance program was carried out to facilitate his compilation of the geology and historic drill holes on the Property in 2009. The 2008 program included the collection of 9 rock samples, 5 of which were composites from a stratabound massive sulfide horizon up to 8 m wide and that can be traced for 1 km. The in situ samples (20041-43; 21661, -62) have a multielement signature that includes anomalous Au, As, Cu, Fe, S, Sb, Ni and some Zn and Cd values. The highest Cu and Zn values (765 and 3410 ppm, respectively) were returned from two semi massive sulfide boulders (21663, -64) collected in the vicinity of the horizon. The target is located in the central area of the Property in proximity to VTEM anomaly 2510C that has never been drill tested. A pyritized boulder collected along the Bright Sands Road contained strongly anomalous Au (458 ppb) and Cu (309 ppm).

The VTEM anomalies located mainly on the west sheet of the airborne survey have been interpreted and prioritized by Dr. Ian Johnson of JVX Ltd. (Appendix D). The geochemical soil survey was initiated in 2010 to evaluate/prioritize the 21 VTEM anomalies or anomaly sets that were selected for Maxwell Modelling. As of June 15, 2010, 212 mainly upper B horizon samples had been collected by XBR on 9 traverse lines (L32-40) installed to evaluate 5 of the VTEM anomalies. The 212 samples were processed by Activation Laboratories Ltd. (“Actlabs”) for soil gas hydrocarbon signatures (SGH); and, 141 sample splits from the original material, by Enzyme Leach, as the availability of non-organic material allowed. The SGH results obtained to date have been interpreted by Actlabs (Appendix E); and the Enzyme Leach results by Mount Morgan Resources Ltd. (Appendix F) based on field data supplied by XBR.

Geofine Exploration Consultants Ltd. (“Geofine”) was commissioned by XBR in July, 2010 to review the program and prepare an assessment report on field work carried out on the Sturgeon Lake project to June 15, 2010. Geofine has reviewed the XBR technical data base provided by XBR, has commissioned the work of JVX and Mount. Morgan and has reviewed the project in the field.

The cost of the historic and 2010 field work to June 15 along with interpretations and reporting herein totals approximately $145,000 and is summarized from XBR invoices by exploration category in Table E1. The current work is on-going, with grid installation, road construction and geochemical sampling constituting the main activities in preparation for a late summer drill program.

A. CONCLUSIONS:

Based on the favorable geological setting and the recent delineation of numerous associated VTEM anomalies over a 25 km strike length, the apparent task at hand is to identify and evaluate drill targets that have the geophysical and geochemical signatures indicative of the target base and precious metal mineralizations. As indicated by Dr. Johnson, ***the geophysical expression and setting of all suggested drill targets, regardless of source, should be reviewed. The amplitude, quality and clarity of the EM and magnetic anomalies that may define the target should be checked. There may be a much better geophysical target on the next line.***

Although the historic exploration effort since 1969 has included a number of airborne EM and ground follow-up surveys including geophysical and diamond drilling; and, although such work has not produced indications of economic mineralization, the work has been successful in locating chemical sediments and massive sulfide mineralization at the favorable stratigraphic level (e.g., Mattagami Lake Mines, 1972; AFRI52G15SW0020). Anomalous copper and zinc values are often associated with such drill intersections (Newconex, 1970; AFR52G15SW0016, 17); and, historic geochemical surveys have also located interesting gold targets associated with iron formation (Hemlo Gold, 1992; MDI52G15SE0004).The application of state of the art sulfide detection tools by XBR such as VTEM surveying; the utilization of the thorough VTEM evaluation and classification methodology of JVX; and the attempt to confirm VMS base metal environments and multielement signatures with SGH and Enzyme Leach soil geochemistry and careful geological scrutiny, all interpreted with reference to the results of the historic work, is an appropriate exploration strategy to identify priority drill targets.

For example, Dr Johnson (JVX Report, Appendix D) has reviewed all the VTEM results from the west airborne data sheet and a number of those from the east sheet, utilizing a regional compilation based on a 1990 Aerodat HEM/magnetic survey, drill holes from the Ontario Drill Hole Database, mineral deposits from the Mineral Deposit Inventory and anomalous gold values from a regional lake sediment geochemical survey. He concludes the area of the west sheet is well populated with bands of formational conductors that appear to be largely made up of strong, shallow, steeply dipping zones of graphite and iron sulphides. These EM features could overpower responses from any nearby VMS deposit. Geochemistry may suggest segments of these formational conductors that are worth a second look. The 2010 SGH and Enzyme Leach soil geochemical data was not available to Dr. Johnson at the time of the preparation of the JVX Report.

His study has identified three priority drill targets on the Property with some attributes of classical EM/magnetic expression associated with VMS base metal deposits. Other priority targets have been recommended on ground currently open for staking east of the Property i.e., East Target Area, described in Section 8.4.c. of this report. Two of the targets on the Property are VMS targets based on the airborne geophysics alone and the third is a possible VMS/precious metal target centered on EM anomaly 1280A (conductor P1) enhanced by a marginally anomalous lake sediment gold value.

Drill Target 1: Conductor K:

The first and best target is conductor K in claim 4211358 in the northeast part of the area. K is 300 m long near-vertical one thin sheet conductor (2240D to 2270D) with a coincident magnetic high to 150 nT (Figure A left). The best EM anomaly of the 4 is 2250C. 2250C appears to represent a thick sheet conductor at 671175 e, 5524594 n with a steep dip (83°) to the south. Estimated depth is less than 10 m – the EM anomaly is very strong (BF26 > 3.5). Conductance estimates are 57 S dB/dt and 83 S B field. In the Aerodat survey, K is a single EM anomaly with an associated magnetic high. Some would consider drill testing conductor K without a ground EM/magnetic survey. In this case the drill would set up 50 m south of the conductor that is at 671175 e, 5524544 n. Azimuth 0°. Inclination -45°. Length to 150 m. Others would do a small HLEM/magnetic survey to confirm and better define the target. The ground survey might consist of 4 lines of HLEM at 100 m (444 and 1777 Hz, 100 m coil separation) and 8 lines of magnetics at 50 m.

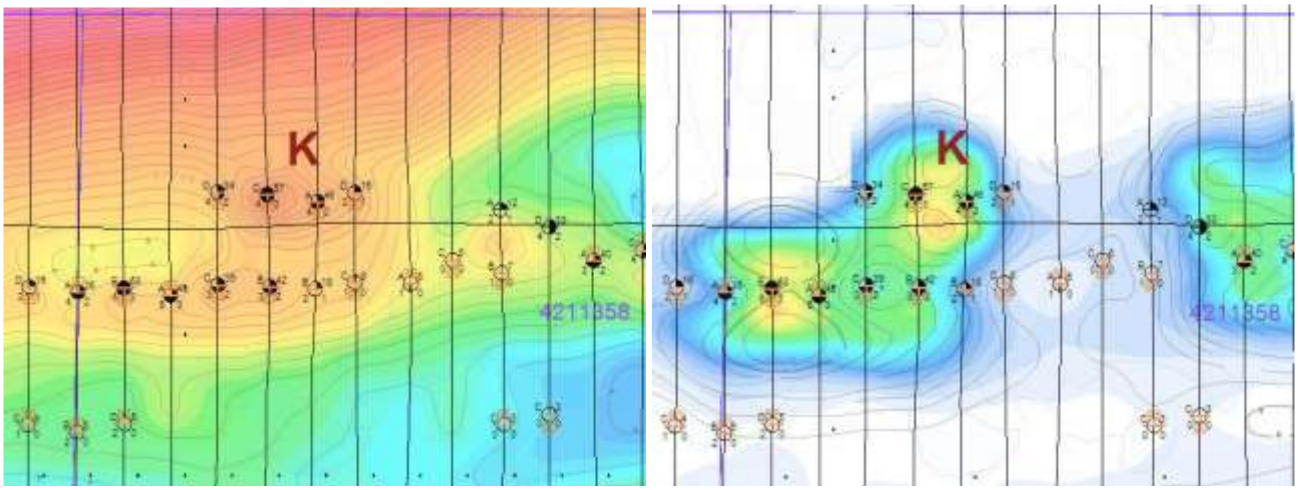


Figure A, Conductor K. TMI left. B field time constant right

Drill Target 2: Conductor O4:

Another possible target is a distinct 1350 nT magnetic high on conductor O4 in claim 4211354. The magnetic anomaly is centered on 1900F (Figure B). The magnetic anomaly is 200 m long and is consistent with a shallow, vertical tabular body. 1900F suggests a thick sheet conductor at 667668 e, 5522315 n with a steep dip (84°) to the north. The high amplitude butterfly EM anomaly (BF26 > 1.4 on the down dip side) of a shallow, strong, near-vertical sheet type conductor is clear from figure 7 right. The depth estimate is less than 10 m. Conductance estimates are 39 S dB/dt and 130 S B field. A break in the conductor on line 1860 and a change on line 1920 suggest the target conductor may be only 300 m long – a good number for VMS. If drill testing without ground confirmation, the drill could be set up 50 m north of the conductor, that is at 667668 e, 5522365. Azimuth 180°. Dip -45°. Length to 150 m.

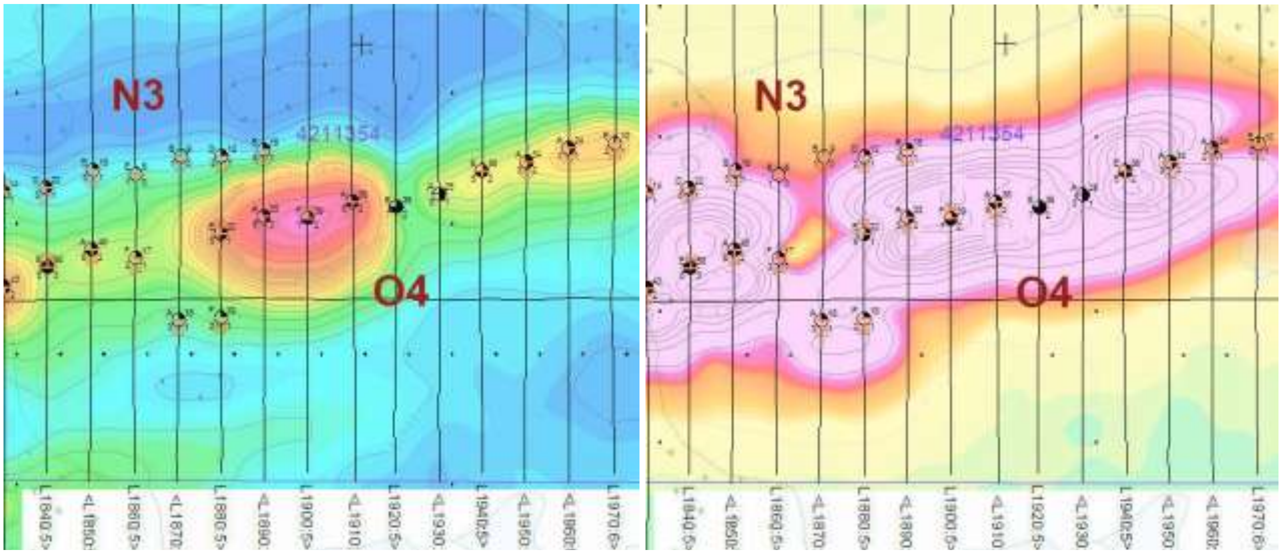


Figure B, Conductor O4. TMI left. B field channel 26 amplitude (BF26) right

Drill Target 3: Conductor P1:
3. 1280A suggests a thick sheet conductor at 661470 e, 5521565 n with a steep dip to the south (76°). Depth from simple models is less than 10 m (BF26 > 2.28 over the down dip side). The dB/dt conductance estimate is 54 S. The peak of a 300 nT magnetic high is 25 m south of the leading edge of the conductor. 1280A is under a small lake and 189 m north or 104 m south of the lake shores (Figure C right). 1820A would have to be drill tested in the winter. Alternatively, it might be possible to test this target from the north shore by aiming at the neighboring EM anomaly 1290G that is only 37 m south of the lake's north shore. Lake boundaries on VTEM lines 1280 and 1290 should be checked with a GPS receiver. 1290G represents a shallow, vertical, thick sheet conductor at 661572 e, 5521558 n. To test 1290G, the drill could be set up 50 m north of the target, that is at 661572 e, 5521608 n. Azimuth 180°. Dip -45°. Length to 150 m.

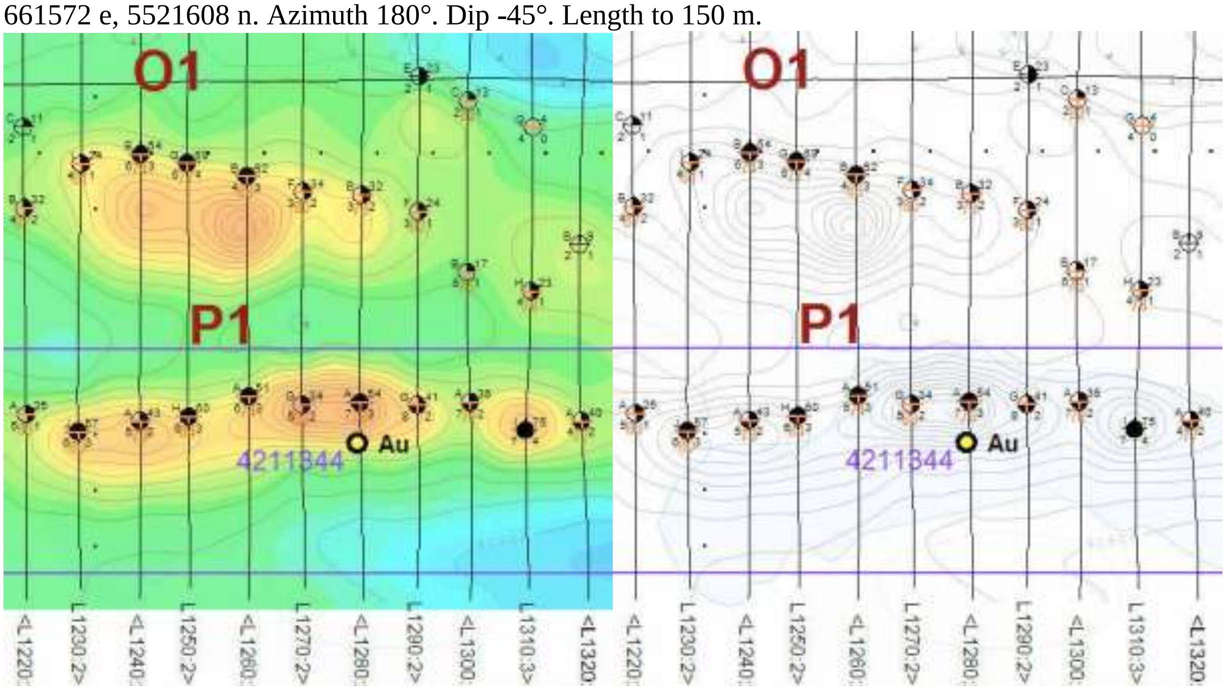


Figure C, Conductor P1. TMI left. Topography right

The JVX study on the west airborne data sheet has been an independent exercise relative to that of XBR, which originally identified 21 VTEM anomalies and anomaly sets on which Maxwell Modelling was contracted to Geotech Ltd (Geotech, 2010). The SGH and Enzyme Leach geochemical surveys were initiated by XBR to evaluate the VTEM anomalies on which the modelling was carried out. The interpretation of the initial SGH samples as provided by Actlabs (Appendix E) has located a strong SGH signature on Lines 37-38 as shown in Figure S1 below.

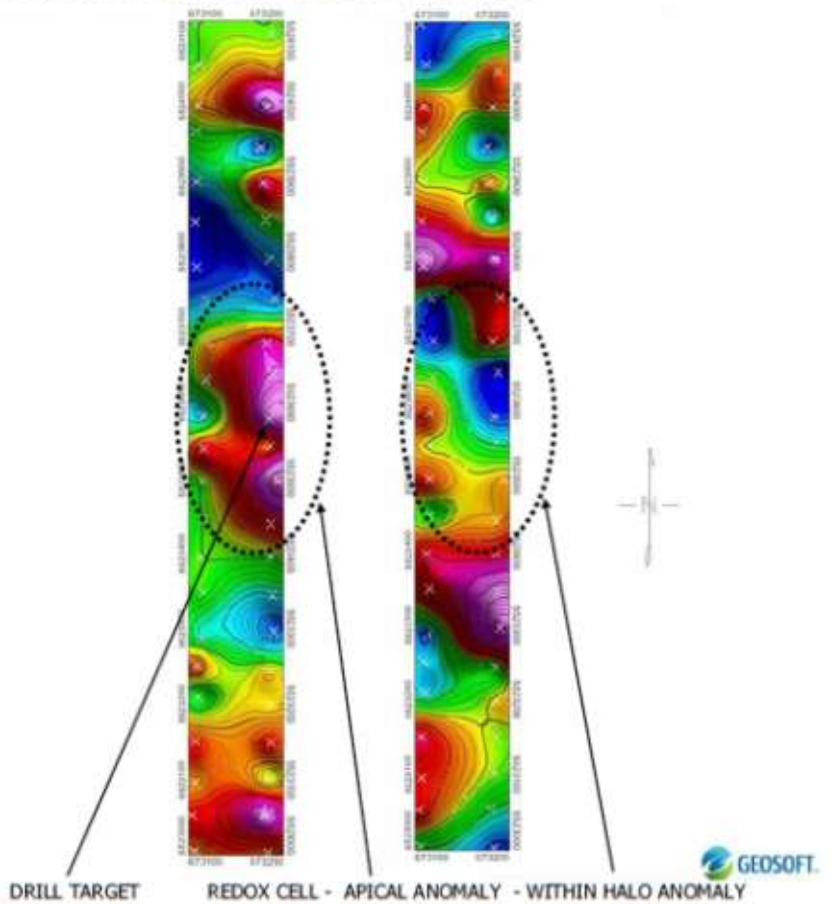
Actlabs indicates that the SGH results from the soil samples on Lines 37-38 suggest a **"rating of 5.0"** for the area within the dotted black oval interpretation on Figure S1 below, in relation to the presence of a VMS based target beneath this survey area. This rating is based on a scale of 6.0 in 0.5 increments, with a value of 6.0 being the best. This rating represents the similarity of these SGH results with case studies over a volcanic massive sulphide (VMS) type target, to the SGH case studies conducted at the Hanson Lake VMS deposit in Saskatchewan, the South Gilmour VMS deposit in New Brunswick and the Cross Lake VMS deposit in Ontario (Actlabs, 2010).

FIGURE S1:

Quality Analysis ... **Actlabs** Innovative Technologies

INTERPRETION OF SGH RESULTS – A10-2995
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH "VMS" PATHFINDER CLASS MAPS – Lines 37-38



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The Enzyme Leach samples were analyzed by Actlabs and the results were interpreted by Dr. Mark Fedikow of Mount Morgan Resources Ltd. (Appendix F). The results are summarized in the table below:

Summary of anomalous responses in Enzyme Leach data, Sturgeon Lake area.				
Line	Anomaly	No. of Samples	Location	
32	Co	3	0+50 to 1+50	
33	Nil			
34	Zn+/- Cu, Mo, Sb, Co, Mn	3	11+50 to 12+50	
35	Nil			
36	Zn- REE; Co-Mn	1	3+00; 4+50	
37	Cu, Au	1	6+50	
	Pb; Zn	1	11+00;1+50	
38	Zn, Pb, Ni, Co, Mn	1	0+50	
39	Zn, Co	4	4+00 to 5+50	
40	Cu, Pb, Zn, Mo, Sb	1	2+75	
	Co	1	4+50	
	As	1	5+50	
	Au, Tl, Br	3	2+50 to 3+00	

Dr Fedikow concludes that:

1. the Enzyme Leach survey has returned two potential follow-up targets where ground geophysical surveys or diamond drill testing can be focused: the Line 34 anomaly is the priority response and it consists of a three sample, 100 m elevated response for the suite Zn-Cu-Mo-Sb-Co suggesting a zone of sulphide mineralization with pyrite in association with mafic lithologies. The secondary anomaly is located on Line 40 where a single sample Cu, Pb, Zn, Mo and Sb anomaly is encapsulated by a three sample Au-Tl-Br anomaly. This is also suggestive of a base metal mineralized signature with associated Au.

2. Examination of the locations of VTEM anomaly centers and the locations of Enzyme Leach anomalies apparently reveals that for the most part very little correspondence exists between these two sets of data. VTEM anomalies on lines 32 and 33 have an association of Co-only in the Enzyme Leach data suggesting the VTEM anomaly in this area is “pyrite-only” without base and/or precious metals.

3. A review of the Enzyme Leach data indicates that in the immediate area of the SGH anomaly on Lines 37 – 38 there are single sample Cu-Au, Pb and Zn Enzyme Leach anomalies on line 37. Single sample anomalies are usually accepted with some reticence as they are subject to reproducibility tests to determine whether this anomaly is real or spurious. Nevertheless, in this survey there appears to be some limited correspondence between Enzyme Leach and SGH, albeit from single sample base metal anomalies.

It is concluded that the JVX study has identified three priority drill targets on the Property with some attributes of classical EM/magnetic expression associated with VMS base metal deposits. The East Target Area, with apparent structural deformation and EM and geochemical association, has been indentified in proximity to the northeastern boundary of the Property and includes the apparent East drill target. The initial SGH and Enzyme Leach results as summarized in Table S2 below, along with the location of the target EM anomaly centers, are suggestive of additional drill targets on the Property, e.g., VTEM anomaly 2450A on grid line L38 and anomaly 2510C on L40. The massive sulfide horizon referenced above is located in proximity to VTEM 2510C. However, as Dr. Fedikow points out, based on the initial geochemical data, there is limited correspondence between anomalous Enzyme Leach responses, VTEM geophysical anomalies and SGH anomalies.

TABLE S2					
Summary of Anomalous Responses - VTEM, SGH and ENZYME LEACH DATA					
	----------Enzyme Leach Response----------			**VTEM Anomaly**	**SGH Anomaly**
Line	**Anomaly**	**No. of Samples**	**Location**	**Location/No.**	**Location**
32	Co	3	0+50 to 1+50	3+00 / 1670C	Na
33	Nil			3+00 / 1670C	Na
34	Zn+/- Cu, Mo, Sb, Co, Mn	3	11+50 to 12+50	17+69 / 1690A	Na
				3+22 / 1690B	
35	Nil			17+75 / 1690A	Na
36	Zn- REE; Co-Mn	1	3+00; 4+50	3+74 / 1690B	Na
37	Cu, Au	1	6+50	4+50 / 2450A	none
	Pb; Zn	1	11+00; 11+50		none
38	Zn, Pb, Ni, Co, Mn	1	0+50	4+50 / 2450A	6+00 str
39	Zn, Co	4	4+00 to 5+50	2+75 / 2510C	2+75 weak
					5+50 mod
					7+50 str
40	Cu, Pb, Zn, Mo, Sb	1	2+75	2+75 / 2510C	2+75 weak
	Co	1	4+50		none
	As	1	5+50		none
	Au, Tl, Br	3	2+50 to 3+00	2+75 / 2510C	2+75 weak

B. RECOMMENDATIONS:

The priority drill targets identified by JVX are recommended as the foundation of a 2010 drill program. The additional drill targets that have been suggested by the initial results of the geochemical screening surveys and geological surveys, as referenced above, and those that may be identified by the interpretation of the outstanding SGH and Enzyme Leach results and ongoing geological surveys should be reviewed by JVX. Final targeting based on the EM and magnetic expression is required for additional drill targets to become components of the program. New targets indentified in the East Target Area, northeast of the Property, need to be acquired by claim staking and investigated with geochemical and geological surveys, along with geophysical interpretation of the 1990 Aerodat EM survey that provides the only airborne coverage. The East Target Area offers interesting attributes, as described above, that have not been drill tested,

Prior to the initiation of diamond drilling, all priority targets identified by XBR should be adequately screened by geochemical and ground geophysical methods as required, including Maxmin EM and magnetic surveying. To avoid critical gaps in the geochemical data base, a hand turned soil auger should be used where near surface sampling is not amenable to provide appropriate material for Enzyme Leach analysis. Attempts should be made to fill in critical gaps in sampling over potential drill targets. The Enhanced Enzyme Leach method should be employed on all samples in order to adequately assess the apparent gold potential that the standard method does not facilitate.

Such further evaluation and ranking should provide the necessary rationale for an effective drilling for discovery program. More than one drill hole is recommended on priority VTEM targets. The drill program should be carefully orchestrated based on discovery criteria including reference to stratigraphic level (the acid-basic metavolcanic contact zone), structural controls (synvolcanic structures and junctions), alteration halos e.g., epidote, chlorite, carbonate, sericite and evidence of along strike or down plunge compositional zoning in sulfide mineralization. VTEM anomalies may be readily explained in drill core but a pyrrhotite-pyrite-graphite intersection could mask the along strike and/or down plunge expression of a base metal VMS horizon. In such favorable environments, a detailed structural fabric analysis is often the prerequisite for delineating the controls for initial and on-going drill evaluation, particularly for gold targets. According to Mumin et al. (2007), ***one of the best methods for locating VMS deposits is to delineate the attitudes of synvolcanic structures, and explore those with associated high-temperature hydrothermal minerals. Excellent exploration targets occur where synvolcanic structures with high-temperature hydrothermal alteration intersect paleo-seafloor horizons.***

A phased, 2010 follow-up drill program is recommended by Geofine once all the SGH and Enzyme Leach results have been obtained, interpreted, integrated with the geophysical data and reviewed by JVX. The process will define the size of and rationale for the drilling for discovery program, including drill parameters and drill order.

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Dec. 8, 2010

Submission Number: 2.45924
Transaction Number W1030.02011

Attention Bruce Gates:

Dear Bruce,

Thank you for taking the time to discuss the modifications required for the above XBR assessment report as noted in your letter of November 5, 2010. Part A to this letter summarizes the components of the Addendum to the Report that are herein provided. Part B to this letter details the assessment calculations and the allocation of work. Various tables (Tables E1A, 6(B)1 & 2) are provided to explain the revisions.

A. The Addendum to the Assessment Report is comprised of:

1). Revised Agent letter from Excalibur Resources designating Tim Gallagher as their agent as James Kendall is no longer with the company.
2). Revised Subsection 65(2) and 66(3) including Section 6B, signed by the new agent of XBR.
3). Revised Section 8 wording clarifying that the geochemical sampling was carried out on cut lines; and, showing the location of the 2008 rock samples on the claim fabric (Figures 3A, 3B).
4). Table E1 with $121,134 of eligible expenditures that have been reduced from $146,797. The calculations and explanation of the reduction is provided in Section B below.
5). Figures modified with higher resolution where possible. See Section B.7 below.
6). Appendix A: Signed Certificates of analyses for the 2008 and 2010 rock, Enzyme Leach and SGH samples as provided by ACTLABS.

B. EXPLANATION OF REDUCTIONS & REVISIONS:

The revised expenditures of work done on each claim have been calculated as follows in Tables 6(B)1, 6(B)2, E1A. These tables are for your reference only and should not form part of the Addendum.

Expenditure Calculation:
355, 2010 SGH and Enzyme Leach samples
331 samples eligible for filing (355 less 24 ineligible samples from claim 4256062).
Cost per each 2010 sample is calculated at $57.55 ($19,054 eligible lab costs for 331 samples)
Cost per line km is calculated at $1059.3 ($ 10,063 eligible costs for 9.5 km line cutting & trail scouting; see Table E1).

Cost of the JVX Geophysical Interpretation ($6045/554 claim units for the property) and distributed to each claim based on number of units in each claim (Table 6(B)1).

$8450 of 2008 expenditures (including geological compilation) was divided by the number of 2008 samples and the cost allocated to the claims on which the samples were taken. The 2008 sample locations are now shown with the claim fabric on Figures 3A & 3B in the Addendum.

The balance of the eligible expenditures, less the specific amounts referenced above, are referred to as general expenditures and are comprised of the 2010 expenditures in the following categories in Table E1: Geologists Wages and Expenses, Subsistence/Accommodation, Vehicle Rental and Compilation & Assessment Report. This general expenditure of $75,895 (see Table 6(B)2) was allocated pro rata to each claim based on the number of 2010 samples collected on that claim. This general cost is calculated to be $229.29 per sample.

Specifically these calculations have been used for the following revisions:

1) Sampling was performed on claim 4257093 and it is now included in the revised list of claims on which XBR is reporting work (Table 6B). Sampling on this claim includes parts of both L39 and L40 and therefore a total of 24 SGH and 10 EL samples and 950m of line cutting have now been included as eligible work along with the pro rata share of the general costs (Tables 6(B)1, 6(B)2).

2) Claim 4256062 was not in existence at the time sampling was carried out on Lines 37 and 38. Therefore the 14 SGH, 10 EL samples and 500m of line cutting and the related costs have been removed from the total credit claimed (Table 6(B)2).

3) The brushing out of the claims was not related to the lines that were installed to enable the Enzyme Leach and SGH sampling. The cost of this work ($1512) has now been evenly distributed over the 6 claims (4211349, 353, 354, 362, 363, 365) on which this work relates

4) Table E1A documents the revised eligible expenditures by category and the revised amounts are bolded in Table E1.

   Only consumable items remain in the Equipment and Supplies category – all items that might be considered assets have been removed.

   Wages not directly related to the field work (i.e., budgeting) have been removed. The cost of tire replacement has been removed for now as the requested Truck Rental Agreement is not currently available. XBR confirms that the costs associated with the trail construction relate directly to the access for the installation of the lines on which the soil samples were taken.

5) Table E1 now totals $121,134 (total eligible expenditures). Direct sample expenditures (2008, 2010 analyses, line cutting) totalling $37,683 were allocated to the claims by the number of samples collected on each claim as shown in Table 6(B)2. Additional general 2010 expenditures of $75,895 in report/interpretation/wages/camp etc. were allocated to the claims as a percentage of the total samples taken on each of the claims (Table 6(B)1). The JVX report ($6045.43) was allocated to all claims on a percentage basis i.e., the number of units of a claim over the total number of claim units (554).

6). The signed certificates for the 2008 and 2010 work have been obtained from ACTLABS by XBR and are in Appendix A of the Addendum.

7). The figures from Appendix B in the Report have been modified using higher resolution where possible and are provided in the Addendum. In the case of some of the regional figures they are for reference only and the scale is set. The printed copy is enclosed to provide a higher resolution of the figures then perhaps the .pdf format did provide.

If you have any questions or require further information, please feel free to contact Janine Calder or David Molloy @ 905-477-7072

Regards,

Janine Calder
Geofine Exploration Consultants Ltd.

		TABLE E1			July 28 2010	
		SUMMARY OF EXPENDITURES			**rev Dec 7 2010**	
		Sturgeon Lake Property				
EXPENDITURE						
CATEGORY	**CONTRACTOR**	**ACTIVITY**	**DATE**	**NOTES**	**GROSS**	**GST**
Year						
EQUIPMENT & SUPPLIES						
		Safety Equip	13/05/2010	IRL	428.75	20.42
		Map Equip	13/05/2010	Deakin	**1055.71**	
		Sample/Line Equip	13/05/2010	IRL	**2771.58**	
		Camp Equip	06/05/2010	ImperialSupplies	**1482.93**	
		Food/shipping	29/06/2010	Gramma's SM	13445.73	
FIELD CREW WAGES						
2008	H Mumin	recon/sample 5 days @ $800/day	Aug 19-23 2008		4000	0
2009	H Mumin	data compilation 3 days @ $800	May 25-June 9 2009		2400	
2009	A Mumin	data compilation 14 days @ $125	May 25-June 9 2009		1750	
		exp			300	
2010	**Geologists Wages & expenses:**					
	B Ohyrn	mob, staking layout 4.5day @ 225	May 31-June 15 2010		1012.50	0
		map/sample	May 31-June 15 2010		2587.50	0
		mob expenses, hotel, food	May 31-June 15 2010		989.00	0
	R Moody	map, sample 15 days @ $350/day	June 1-15 2010		5250.00	0
	A Mumin	prep, field mob, layout of lines,	Apr 24-May 31 2010	50%	**2505.00**	0
		samples, 167 hrs @ $30/hr				
		map, sample 15 days @ $350/day	June 1-15 2010		5250.00	
	J Duku	map, sample 15 days @ $200/day	June 1-15 2010		3000.00	0
SUBSISTANCE/ACCOMMODATION						
2010	Haveman Bros	Camp Install 10% allocation	May-10		1116.441	49.4
2010	Haveman Bros	Camp Rent	May 10-June 10 2010		11164.41	471.33
2010	Haveman Bros	Camp Setup, materials, delivery	June 10-July 10 2010		1002.677	47.112
		10% allocation				
2010	Haveman Bros	Camp Rent	June 10-July 10 2010			
2010	Haveman Bros	Staking/mob 3 man days @ $360	01-Jun-10			
2010	H Stewart	H Stewart 26 days @ $300/day	May 6 - 31	cook/first aid	8190	390
2010	H Stewart	H Stewart 15 days @ $300/day	June 1-June 15	cook/first aid	4725.00	225
2010	LUP	Water well Fee - Camp	May 1 2010		189.00	
2010	Health Unit	Grey water pit - Camp	May 18 2010		200.00	
VEHICLE RENTAL/MILAGE						
		Truck Rental	**claim when proof of rental**			
		Boat Rental $150/day for 30 day				
2010		Truck Repair	Upsala Garage (8 tires)	12/06/2010	0	
LINECUTTING/GRID RESTORATION/CLAIM MAINTENANCE						
	Haveman Bros	Linecutting				
2010		10 km @ $765/km (less 500m)	June 1 -14	Lines 32-40	7781.00	370.5
2010	Haveman Bros	rebrush claims 4 @ $360/day	01-Jun-10		1512.00	72
ACCESS/TRAIL INSTALLATION						
2010	ConRod Expl Serv	**Road/Trail Construction to install sample lines**				
		Scouts 6 man days @ $275/day	June		2402.90	0
		+ food/accom				
GEOPHYSICAL SURVEYS/INTERPRETATION						
	Geotech	Maxwell Model 29 @ $250	April 2010		FILED	
		RDI 90km @ $50	April 2010		FILED	
2010	JVX VTEM Interp		July 8-26		6045.50	695.5
ANALYTICAL						
2010	Actlabs analyses	114 soil samples A10-3207	June 1-15	(-24 samples)	**5644.76**	**649.4**
2010	Actlabs analyses	68 soil samples A10-2995	June 1-15		4861.76	231.51
2010	Actlabs analyses	103 SGH, 78 EL A10-3542	June 1-15		8547.66	983.36
COMPILATION & ASSESSMENT REPORT						
2010	Geofine Exploration	Report, compilation	June 28- July 27		5650.00	650
2010	Geofine Exploration	On-site property review incl mila.	August		1921.00	220
2010	Mount Morgan	Enzyme LeachRe/ Interpretation	19-Jul-10		1950.00	95
		for Samples taken to June 15 10				
		inv # 0271-521				
				TOTAL	**121132.81**	**5170.53**

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Mount Morgan Resources Ltd.

REPORT ON 2010 EXPLORATION ACTIVITIES CARRIED OUT TO DELINEATE DRILL TARGETS ON THE STURGEON LAKE PROJECT

PATRICIA MINING DIVISION,
NORTHWESTERN ONTARIO

UTM ZONE 15, 671111E, 5523806N (NAD 83)

FOR EXCALIBUR RESOURCES LTD.

1. INTRODUCTION:

This report references the results and interpretations of the exploration activities carried out on the Sturgeon Lake Project from June 2008 to June 15, 2010. Most of this work was related to the follow-up of the 2009 VTEM airborne survey flown by Geotech Ltd. for Excalibur Resources Ltd. ("XBR").

The work referenced herein includes the initial reconnaissance geochemical and geological work in 2008; a geological and geophysical compilation of the Property and surrounding area (Figure G1) and a compilation of geology and historic exploration data in the Glitter Lake area (Figure G2), both prepared in 2009 by Dr. Hamid Mumin, the project's QP; the 2010 interpretation and prioritization of the Geotech VTEM anomalies by JVX Ltd (Appendix D); and, the review and interpretation of the initial results from the SGH and Enzyme Leach soil geochemical surveys (Appendices E, F) currently underway to further evaluate the VTEM anomalies.

The project was initiated by XBR in 2008 as an attempt to discover Sturgeon Lake type VMS deposits along the eastern extension of the favorable mafic and felsic stratigraphy. Dr. Mumin has supervised all the field work based on his expertise with regard to such mineralization e.g., ***Structural Controls on Massive Sulfide Deposition and Hydrothermal Alteration in the South Sturgeon Lake Caldera, Northwestern Ontario*** **(Mumin et al., 2007). As described therein, the Sturgeon Lake massive sulfide deposits are typical Archean Zn-Cu-Ag-rich volcanogenic massive sulfide lenses, with anomalously high lead values, and minor gold values (Table H1). They are compositionally zoned with a Cu-rich footwall near the region of hydrothermal discharge, and a sphalerite-pyrite rich upper and distal portion. Given the clustering of such VMS deposits (the average VMS camp in Canada has about 9 deposits, although the range is from 4 in Manitowadge to 21 in Noranda); and, the lensoidal nature of deposits (individual**

deposits such as Millenbach consist of 16 discrete lenses, which can range from several thousand to millions of tonnes in size (Galley et al, 2010)), exploration via a thorough knowledge of the structural controls and persistence based on target screening in such environments is often the key to discovery.

Geofine Exploration Consultants Ltd. ("Geofine") was contracted to facilitate the drill targeting and the preparation of this assessment report. Geofine engaged JVX Ltd. to evaluate and prioritize the VTEM anomalies; Mount Morgan Resources Ltd. to interpret the initial Enzyme Leach data; and has reviewed and integrated the geochemical survey data prepared by the XBR field crew. The author has examined and studied geological publications and assessment report files downloaded from the Ontario Ministry of Northern Development, Mines and Forestry ("MNDMF") website; and has reviewed the program on the Property with the field crew.

2. LOCATION, ACCESS, INFRASTRUCTURE:

The Sturgeon Lake Property (Figure 1) is situated in the Patricia Mining Division of Northwestern Ontario. The exploration camp has UTM co-ordinates of ZONE 15, 671111E, 5523806N (NAD 83) and is located on mineral claim 4211358 (Figure P1). The camp can accommodate 23 people and includes a satellite internet, telephone and TV. Six sleeping tents are located on one side of the Bright Sands Road. The core shack, storage, dry, kitchen/dining area, office and cook/first aid tents are located in an area directly across the road and in proximity to the generator, leach pits, weeping tile bed and water well.

The project is mainly located in the Bell Lake (G-2533), Dunne Lake (G-2539), Mountairy Lake (G-0743) and Hilltop Lake (G-2546) Areas, about 8-18 km east of the historic Sturgeon Lake mining camp or about 200 km northwest of Thunder Bay, Northwestern Ontario. Road access to the Property is provided by a series of lumber roads including the Graham Forestry Road, which trends north off the Trans-Canada Highway near Upsala, Ontario (Figures 1, 2). The road is maintained year round and provides access to the Bright Sands Road at km 89 from the Trans Canada Highway near Upsala. The camp is located about 36 km west on the Bright Sands Road (Figure 3).

In view of a caribou corridor on the east side of the Property, a permit from the MNDMF is required to travel the Bright Sands Road west to the Sturgeon Lake project camp. There are about 14 km of historic lumber roads and trails on the Property which are currently being expanded in anticipation of a 2010 drill program (Figure 3). However, in a recent agreement with the Fort Francis Northern Wilderness Outfitters' Lodge on Glitter Lake, roads will not be built within one mile of the shoreline of the lake. Access can also be gained by floatplane from Ignace, Ontario (Figure 1), which is provided by the Outfitters.

3. PROPERTY, OWNERSHIP, NATIVE AGREEMENTS:

The Sturgeon Property (Figures P1, Table P1) comprises 43 contiguous mineral claims in which XBR has a 100% ownership interest. One claim (4257093) has yet to be recorded on the claim map G2539 and the registration of the four most recent claims (4256062 and 4257093 - 95) needs to be finalized in the Ontario MNDMF searchable mineral title's database. The claims were acquired by staking between February 18, 2008 and July 12, 2010 and are registered in the name of Excalibur Resources Ltd. The claims are shown in Table P1 and are located on MNDMF claim maps in the Bell, Dunne, Mountairy, and Hilltop Lake Areas (Figure 2). The upcoming assessment requirements as shown in Table P1 are expected to be satisfied by this report.

A Memorandum of Understanding (the "MOU") was signed by XBR with Lac des Milles Lacs First Nation ("LDMLFN") on June 28, 2010. LDMLFN has formed a joint venture with Outland of Thunder Bay, Ontario to provide services to the mineral exploration industry. As part of the MOU, XBR will rent two ATVs from LDMLFN and will hire and train a LDMLFN worker for core sawing.

4. TOPOGRAPHY, DRAINAGE, CLIMATE, WILDLIFE & VEGETATION

Much of the physiography of the Sturgeon Lake area has been fashioned by Pleistocene glaciations. The elevation of Sturgeon Lake is 409 metres above sea level and the maximum local relief is not more than 40 metres above this elevation. The relief is generally flat to gently rolling, but does reflect the distribution of the Pleistocene and Recent deposits, specifically northeast to north-northeast trending esker-outwash-delta complexes and ground morainal areas. The area is situated in the Brown-Podzolic soil zone which is typical in the northern forests of mixed hardwoods and conifers. About 10-15% of the area comprises low, swampy ground with peat bogs, sphagnum moss, alders and Labrador Tea. Another 10-15% is occupied by lakes, the largest of which includes Glitter Lake in the West and Sassafras and Long Neck Lakes in the east. The lakes are connected by a generally well developed drainage system, which is part of the English River basin that flows to Hudson Bay.

Outcrop density is quite low due to the extensive overburden cover. The outcrop exposures are generally small and found on lake shores. The area is mostly covered by a mixed growth of jack pine, spruce, poplar, and birch, with cedar prominent in much of the swampy areas. About 10% of the forests have been lumbered and replanted in the last 25 years and approximately 14 km of forest roads and trails remain. Sport and commercial fishing for pike, pickerel, whitefish, and lake trout is carried out on Sturgeon, Bell and Glitter Lakes. Wild life includes black bear, moose, caribou, foxes, wolves, skunks, partridge, whiskey jacks and crows.

5. <u>EXPLORATION HISTORY AND MINERALIZATION:</u>

The Sturgeon Lake area has had a long and successful history that has mainly focused on the exploration for Sturgeon Lake type volcanogenic sulfide mineralization (Table H1; Figures G1, G 4, H1, H2). The effort has mainly utilized geophysical techniques and diamond drilling in view of the extensive Pleistocene and Recent overburden cover. There is also some historic and current evidence of precious metal potential.

As referenced by Trowell (1974) sulphide mineralization consisting of pyrite and pyrrhotite, locally accompanied by very minor amounts of chalcopyrite, is diffused throughout the metavolcanics in the Glitter Lake area. No major concentrations were noted. The sulphides are generally disseminated, although locally stringers or veinlets of sulphides are also present. Disseminated sulphides also occur in the metasedimentary and mafic intrusive rocks. Analyses done by the Mineral Research Branch, Ontario Division of Mines show that the mafic intrusive rocks contain only trace amounts of copper and nickel. Iron formation is indicated in the metasedimentary belt as shown by the ODM-GSC Aeromagnetic Map 1117G, Bell Lake (1990). Very few outcrops of iron formation were found.

5.A. <u>GOLD MINERALIZATON:</u>

Exploration for gold is thought to have commenced around 1898 (Moore, 1911). The geological and geophysical setting of the Sturgeon Lake gold mineralization is shown on Figures H1 and H2. The mineralization has been classified into four types (Blackburn et al., 1983):

1. <u>Dilatant zones at granitoid-volcanic rock contacts</u> e.g. the St. Anthony Mine in the North Sturgeon Lake area.

2. <u>Shear-zone-hosted sulphide deposits and associated quartz veins</u> e.g. the Iron Duke and the "Triangle" zone, on the peninsula separating the Northeast and North Bays of Sturgeon Lake.

3. <u>Grey-to-black quartz veins located at granitoid contacts and breaks in volcanic stratigraphy</u>. e.g., the Rainbow Island, Armstrong-Best and L.W. Green deposits.

4. <u>Quartz-tourmaline veins in the Beidelman Bay Granodiorite</u> e.g. the Darkwater Mine.

The St. Anthony Mine is the most important gold deposit located in the north Sturgeon Lake area (Figure H1). The mine was discovered soon after the commencement of exploration in the Sturgeon Lake area and mining continued intermittently until 1941. A total of 63,310 ounces of gold and 16,341 ounces of silver were recovered from 331,069 tons of rock milled (Blackburn et al., 1983).

Pacific Iron Ore Corporation, by amalgamation in 2008 with Emerald Fields, acquired the St. Anthony property. A second group of claims, the Best/King Bay property is contiguous with the St. Anthony property on the southwest and contains a number of high grade gold occurrences, the most intensely explored being the Best-Armstrong and Mac Read occurrences (Evans, 2009).

Gold is associated with numerous high temperature quartz vein systems hosted by several rock types within deformation zones and are commonly associated with QFP dykes and occasional felsic stocks. The main ore body as described by Graham (1930) consists of north-south fissure veins at the contact between Keewatin pillow lavas and a small dome of granodiorite, which is an offshoot from the granodiorite boss in the North Arm. The sulphides are pyrite, with lesser amounts of chalcopyrite, galena, and sphalerite. The pyrite contains low gold values generally in the range of 0.2-2.0 g/t. In both the QFP and mafic volcanics, most of the sulphide content is higher in host rocks rather than the veins and the sulphides have penetrated into the wall rock, in which widespread gold values are found. The main vein is 1,100 feet long on the surface and the maximum width is 25 feet.

The Darkwater Mine (Figure H1) was developed between 1934 and 1937. Gold mineralization is associated with quartz-tourmaline veins in the Beidelman Bay Granodiorite near the contact with the volcanic rocks. The Beidelman Bay body is considered to be a subvolcanic sill and a possible feeder to the overlying felsic volcanic edifice hosting the base metal deposits on south Sturgeon Lake (Blackburn et al., 1983), The veins contain varying amounts of tourmaline and pyrite with traces of sphalerite and chalcopyrite. The Darkwater property was developed on these veins which were reported to die out at depth (Horwood 1937). Other similar veins have been reported to the west of the Darkwater Mine.

Exploration activities on or in the vicinity of XBR's Sturgeon Lake Property as described below mainly relate to the search for VMS mineralization. However, Noranda explored the Benderite Showing (MDI52G15SE0004, -0005) on Hemlo's Quill Lake property in the Dunne Lake Area in 1991 - 1992 (Figures H3, G5, G6; AFRI Files 52G15SE0001, -02; Tables H2B, H3C, D). Adam Benderite, a local prospector, discovered gold mineralization (values up to 5.2 g Au/t) in a number of gossan showings with pyrite and arsenopyrite exposed during logging road construction. Hemlo Gold optioned the property in 1991 and Norex conducted reconnaissance geological and prospecting surveys, gridding, soil and humus geochemical and IP surveys, trenching and rock geochemistry in 1991. Six short holes totalling 789 m (Tables H2B, H3C, D) tested iron formation in 1992 and results ranged up to 1.65 g Au/t over 1.7 m in 92-1 and 2.05 g Au/t over 1.2 m in 92-6.

Although the drilling results were disappointing, the anomalous soil geochemistry was reported to have been successful in targeting auriferous zones on the Quill Lake property. Recommendations were made to complete prospecting, rock and soil geochemical surveys over the rest of the property during Phase 1.

5.B. IRON MINERALIZATON:

The Benderite Showing is hosted by iron formation located near the contact of the Vista Lake syenite complex (Figures H3, G5). The Sassafras Showings SE and NE (MDI52G15SE0006, -0005, respectively) are located to the east of the Benderite Showing in the Sassafras Lake area in a similar geological setting. The showings were tested by NA Timmins in 1957 with 8 drill holes (Figures H3, G5, Tables H2B, H3C, D). The results ranged up to 25.36% iron over 195 feet and 22.85% iron over 290 feet.

5.C. STRATABOUND VOLCANOGENIC MASSIVE SULFIDES:

The historic discovery of the five zinc, copper, lead, silver and gold volcanogenic massive sulfide deposits (Figures G1, G4, H1; Table H1) in the Sturgeon Lake camp resulted from an airborne electromagnetic-magnetic survey flown in 1969 by Mattagami Lake Mines Limited. The airborne survey had delineated several anomalous conductivity and magnetic zones on which various ground follow-up techniques and systematic diamond drilling discovered economic mineralization.

Subsequent to the discovery of the Sturgeon Lake orebodies, there has been a considerable exploration effort, most often involving the same exploration strategy as for the original discoveries: airborne surveys, ground geophysical follow-up, diamond drilling. The on-going effort has been supported by government surveys, including mapping e.g., by D.P. Rogers and assistants (1964) and by N.F. Trowell and assistants (1970, 1974, 1986); an airborne electromagnetic and total magnetic intensity survey, Sturgeon Lake-Savant Lake area by the Ontario Geological Survey (1990); field reviews (GAC Field Trip B3, Morton et al., 1996); on-going academic research including Groves et al., 1988; Morton et al., 1990, 1991, 1996; Mumin and Scott et al. 1991, 1994; Mumin, Scott, Somarin, Oran**,** 2007**;** and, lake sediment geochemical surveys (Russell et al., 2002).

Significant observations on relevant exploration rationale include Canadian Javelin, 1970, AFRI 52G15SW0033): the acid-basic metavolcanic contact zone appears to be the geologically favorable area for the emplacement of sulphide mineralization; and, Mumin et al (2007): one of the best methods for locating volcanogenic massive sulfide deposits is to delineate the attitudes of synvolcanic structures (Figure G4), and explore those that show evidence of associated high-temperature hydrothermal mineral assemblages. Excellent exploration targets occur where synvolcanic structures with hydrothermal alteration intersect paleo-seafloor horizons.

Historic company activities on and in the vicinity of the Property are partially documented by the 37 AFRI Reports (Table H2A-D), all of which include diamond drilling components. The geology intersected in the historic drill holes and apparent explanation of the conductors is provided in Tables H3B, D. Although such historic work has not produced indications of any economic mineralization, the work has been successful in locating chemical sediments and massive sulfide mineralization at the favorable stratigraphic levels (e.g., Mattagami Lake Mines, 1972, AFRI 52G15SW0020). Anomalous Cu and Zn values are often associated with such drill intersections (Newconex, 1970, AFRI 52G15SW0017); and, historic geochemical surveys have also located interesting gold targets (Hemlo Gold, 1992, AFRI 52G15SE0002).

The XBR project was initiated in 2008 under the direction of Dr. Mumin to discover Sturgeon Lake type VMS deposits along the eastern extension of the favourable mafic and felsic stratigraphy. XBR carried out a 1069 line km Geotech Ltd. VTEM airborne survey in November 2009. Geotech (2010) picked 713 EM anomalies in the area of interest and carried out Maxwell modelling on 21 EM anomalies or anomaly sets within the area of interest.

6. REGIONAL GEOLOGY:

The western area of the Property (Figures G1, G2, G4, G6, H1, H2) is located in the Savant Lake – Sturgeon Lake greenstone belt of the Wabigoon Subprovince (Figure G3). As reported in Open File 3738 (Percival et al., 1999), the belt comprises three main tectonostratigraphic assemblages: 1) a volcanic-dominated continental margin forms the eastern margin and is juxtaposed with 2) a volcanic terrane consisting of tholeiitic and VMS bearing calc-alkaline volcanic sequences, overlain by 3) a sedimentary overlap sequence of conglomerate and wacke (Post, Quest Lake sediments) interpreted as a foredeep succession deposited during amalgamation of the continent margin and oceanic terranes. All units were affected by greenschist to amphibolite facies metamorphism and two phases of ductile deformation that produced steep, north-trending D1 folds and foliations and east-trending D2 structures.

The western project area (Figure G3) extends into the central Wabigoon region, which is thought to be mainly basement to bordering Neoarchean greenstone belts (Percival et al., 1999). The region is dominated by granitoid rock types and presents a complex record of regional magmatic and structural events. Tonalite gneisses display early D1 and D2 fabrics, while younger supracrustal and plutonic rocks are characterized by a regional S3 foliation, folded into upright east-trending F4 folds. Amphibolite-facies metamorphism accompanied both D3 and D4 events. The lithologies were intruded by ultramafic rocks, gabbro and diorite. Since the gabbro and diorite have also been metamorphosed under the same metamorphic facies conditions as the rocks they intrude, they were probably formed contemporaneously with the mafic volcanism.

The southern limit of the Archean greenstone belt extends from Beidelman Bay on Sturgeon Lake, eastward across Darkwater Lake, north of Bell Lake, across the southern tip of Glitter Lake and east to the area southwest of Sassafras Lake, an approximate distance of 22 km (Figures G1, G2, G5, G6). The eastern limit roughly parallels the west shore of Quest Lake, and then swings south-easterly to apparently join the southern limit in a "pinched" situation southwest of Sassafras Lake (Figure G5). The assumed favorable VMS horizon, i.e., acid-basic metavolcanic contact, extends from just north of Darkwater Lake, eastward through Claw Lake to Hump Lake whereupon it swings northwestward approximately paralleling the south shore of the Barge, Post, Willet Lake series, to the area at the southwest end of the Narrows on Sturgeon Lake (Figure G1).

Detailed mapping coupled with the relogging of 200,000 m of diamond drill core volcanology has resulted in the delineation of a well preserved Archean submarine caldera complex i.e., the Sturgeon Lake Caldera (Morton et al., 1988, 1989, 1990). The complex is approximately 30 km in strike length and contains up to 4500 m of caldera fill material. Five separate, major ash flow tuff units have been defined, and each can be traced for kilometers across the complex with individual thicknesses ranging from 100 to more than 1200 m. The on-going work has defined numerous synvolcanic faults, some of which may represent individual caldera boundaries. As described by Mumin et al. (2007) the synvolcanic structures played a fundamental role in the genesis, morphology, and sitting of volcanogenic massive sulfide ores and associated hydrothermal alteration in the Archean South Sturgeon Lake caldera complex. The most voluminous and persistent hydrothermal venting and massive sulfide deposition occurred along synvolcanic rifts and grabens associated with faults and tectonic fissures that created permeable fracture zones deep enough to access the underlying hydrothermal reservoir.

7. STURGEON LAKE PROPERTY GEOLOGY:

The geology of the Sturgeon Lake Property as compiled by Dr. Mumin is shown on Figures G1, G2; and, on Figures G5 and G6, OGS Maps 3738 and 2284, respectively. A stratigraphic column of the Glitter Lake area prepared by Trowell (1974) is provided in Table G1 below. As described by XBR, the area is underlain predominantly by felsic to mafic metavolcanics, with some metasediments and felsic to intermediate intrusive rocks. The metamorphic grade in the area is upper greenschist to lower amphibolite facies. The metavolcanics and metasediments strike 82°-85° on average, with a sub-vertical dip ranging from ~82° NNW to ~82° SSE.

The lapilli fragments in many of the tuffs have been flattened due to regional stresses. Pumice bombs up to 10 cm in length are visible in some areas. There are also possible remnant pillow fragments in some locations, although these have been highly distorted in most cases. The intrusive rocks appear to be mainly syenite and diorite, with late cross-cutting granitic and pegmatitic dykes. The sedimentary rocks in the area appear to be mainly metapelites and metawackes metamorphosed into garnet biotite schists and/or garnet staurolite biotite schists.

Visible mineralization on the Property is limited to a zone around soil Lines 39 and 40 (Figure 3) that trends westward for at least a kilometer and is exposed in road beds. The massive pyrrhotite horizon appears to be hosted by a sandy conglomerate. The horizon is strata bound, and ranges in width from 10-20 cms to ~7-8 m. Mineralized boulders have also been found, some of which consist of massive sulphides (py +/- po) with up to 0.5% cpy. Most of the geophysical conductors on the property are located on low ground and in swampy areas with little to no outcrop exposure. A strong magnetic anomaly is reported to occur in the northern part of the Property thought to be associated with iron formation hosted by felsic intrusives.

The Precambrian bedrock is extensively overlain by Pleistocene glacial fluvial sand and gravel deposits, and by Recent accumulations of swamp and muskeg. Many of the historic drill holes appear to have intersected sulfide and graphitic horizons at or in proximity to the favorable acid-mafic metavolcanic contact zone (Figure G2). As referenced in Section 5.A., gold values are associated with the iron formation near Quill Lake.

TABLE G1

TABLE OF LITHOLOGIC UNITS FOR THE GLITTER LAKE AREA

CENOZOIC

QUATERNARY

Recent and Pleistocene

Glacial drift; gravel, sand, boulders

Unconformity

PRECAMBRIAN

EARLY PRECAMBRIAN (ARCHEAN)

LATE FELSIC TO INTERMEDIATE INTRUSIVE ROCKS

Vista Lake Intrusive Rocks

Syenite, monzonite, syenodiorite, granitic dikes and irregular masses, migmatite

Intrusive Contact

EARLY FELSIC INTRUSIVE AND METAMORPHIC ROCKS

Early Granitic Rocks

Biotite granodiorite, hornblende-biotite granodiorite, hornblende granodiorite, biotite-hornblende granodiorite; granite, quartz diorite, syenite; porphyroblastic biotite granodiorite; porphyroblastic hornblende-biotite granodiorite; aplite, pegmatite veins, dikes, and irregular masses

Migmatite Assemblage

Migmatite; hybrid granitic gneiss

EARLY MAFIC INTRUSIVE ROCKS

Metagabbro, metadiorite; hornblende diorite; (meta)pyroxenite; olivine gabbro

Intrusive Contact

METASEDIMENTS

Arkose; greywacke, siltstone, tuffaceous greywacke; argillite; conglomerate; iron formation

METAVOLCANICS

Felsic to Intermediate Metavolcanics

Felsic lava; tuff to lapillistone; lapillistone to pyroclastic breccia; carbonate-sericite-quartz-(chloritoid) schists; quartz and quartz-feldspar porphyry; chert; graphitic tuff

Mafic to Intermediate Metavolcanics

Volcanic flows, amphibolite, chlorite schist; porphyritic lava; gneissic metavolcanics; tuff, lapillistone, pyroclastic breccia; fragmental units; migmatitic metavolcanics; pillow lava; tuffaceous metasediments; amygdaloidal metavolcanics

5

Geology of Glitter Lake Area, District of Thunder Bay
By N.F. Trowell; Geological Report 120
Toronto ODM 1974

8. STURGEON LAKE PROPERTY EXPLORATION PROGRAMS:

The exploration activities described herein mainly relate to the follow-up of the VTEM airborne survey commissioned by Excalibur Resources Ltd. ("XBR") and flown by Geotech Ltd. (2009) of Aurora, Ontario. In 2010, the survey data was interpreted by Geotech using Maxwell Modelling of 21 anomalies or anomaly sets (Figure 3; Geotech, 2010). The VTEM anomalies on the west half of the Property (west half of Figure G1 i.e., west of UTM 672000E, Figure 3) were evaluated and prioritized by Dr. Ian Johnson of JVX Ltd. of Richmond Hill, Ontario in July 2010. The JVX report is included in Appendix D.

In May 2010, XBR initiated a program of SGH and Enzyme Leach soil geochemical surveys to evaluate the EM anomalies that were Maxwell Modelled; and, to test the priority targets with a late summer drill program. The XBR geochemical program is on-going and will comprise the collection of approximately 1000 soil samples on 40 lines that total about 52 km (Figure 3).

The initial 2010 soil samples are summarized in Table S1 and described in Tables 2A, B. They were analyzed by Actlabs of Ancaster, Ontario, which also carried out an evaluation of the SGH samples for line pairs L37-38 and for L39-40. The Actlabs' reports compiled by Dr. Dale Sutherland are attached hereto in Appendix E. The Certificates of Analyses for the SGH and Enzyme Leach results are provided in Appendix A. The locations of the samples on L32-40 are shown on Figures 4A and B and in Table S1. The results of the Enzyme Leach samples were interpreted by Dr. Mark Fedikow of Mount Morgan Resources Ltd. of Winnipeg and the report is attached as Appendix F.

The XBR 2010 field program has included the staking of 4 additional claims in the Dunne Lake Area (Table P1, Figure P1) and the installation of infrastructure to support the geochemical program and the pending drill program. Trail cutting for grid and drill access is on-going and is being provided by Haveman Brothers Forestry Services Ltd. of Thunder Bay, who also installed the camp and the geochemical survey lines. Elk Construction of Ignace is building the trails and has obtained the cutting permits. Grammas' Super Market of Ignace provides expediting services including groceries and secure transport of samples to the Greyhound Bus depot in Ignace for shipment to Actlabs.

In addition to the 2010 activities and expenditures, XBR collected 4 soil and 9 rock samples as part of a reconnaissance program carried out in August of 2008. The 2008 samples are summarized in Table S1, described in Table 1 and located on Figure 3. The analytical results as provided by Actlabs are shown in Table 1A and included on Certificates of Analysis in Appendix A. Based on the 2008 reconnaissance program, a 2009 geological compilation of the Property (Figures G1, G2) was completed between May 25 and June 9, 2009. All the field work from 2008 to date has been supervised by Dr. Hamid Mumin P. Eng., P.Geo., Senior Consultant to XBR, of Winnipeg Manitoba. The cost of the field work by exploration category to June 15, 2010, the preparation of the interpretive reports referenced above and this assessment report is shown in Table E1 and totals about $145,000.

Geofine Exploration Consultants Ltd. of Markham, Ontario has reviewed the geochemical field data provided by XBR and has compiled the Enzyme Leach analytical results for interpretation by Mount Morgan; and, has initiated the JVX evaluation/prioritization of the VTEM anomalies. Geofine has also compiled the expenditure data (Table E1) and has visited the Property to review aspects of the work and status of the project, including discussions with Ahmad Mumin, the on site project supervisor of the field activities referenced in this report.

		TABLE E1			July 28 2010	
		SUMMARY OF EXPENDITURES				
		Sturgeon Lake Property				
EXPENDITURE						
CATEGORY	**CONTRACTOR**	**ACTIVITY**	**DATE**	**NOTES**	**GROSS**	**GST**
Year						
EQUIPMENT & SUPPLIES						
		Safety Equip	13/05/2010	IRL	428.75	20.42
		Map Equip	13/05/2010	Deakin	1512.54	
		Sample/Line Equip	13/05/2010	IRL	3622.64	
		Camp Equip	06/05/2010	ImperialSupplies	1614.93	
		Food/shipping	29/06/2010	Gramma's SM	13445.73	
FIELD CREW WAGES						
2008	H Mumin	recon/sample 5 days @ $800/day	Aug 19-23 2008		4000	0
2009	H Mumin	data compilation 3 days @ $800	May 25-June 9 2009		2400	
2009	A Mumin	data compilation 14 days @ $125	May 25-June 9 2009		17580	
		exp			300	
2010	**Geologists Wages & expenses:**					
	B Ohyrn	mob, staking layout 4.5day @ 225	May 31-June 15 2010		1012.50	0
		map/sample	May 31-June 15 2010		2587.50	0
		mob expenses, hotel, food	May 31-June 15 2010		989.00	0
	R Moody	map, sample 15 days @ $350/day	June 1-15 2010		5250.00	0
	A Mumin	budget, prep, field mob	Apr 24-May 31 2010		5010.00	0
		167 hrs @ $30/hr				
		map, sample 15 days @ $350/day	June 1-15 2010		5250.00	
	J Duku	map, sample 15 days @ $200/day	June 1-15 2010		3000.00	0
SUBSISTANCE/ACCOMMODATION						
2010	Haveman Bros	Camp Install 10% allocation	May-10		1116.441	49.4
2010	Haveman Bros	Camp Rent	May 10-June 10 2010		11164.41	471.33
2010	Haveman Bros	Camp Setup, materials, delivery	June 10-July 10 2010		1002.677	47.112
		10% allocation				
2010	Haveman Bros	Camp Rent	June 10-July 10 2010			
2010	Haveman Bros	Staking/mob 3 man days @ $360	01-Jun-10			
2010	H Stewart	H Stewart 26 days @ $300/day	May 6 - 31	cook/first aid	8190	390
2010	H Stewart	H Stewart 15 days @ $300/day	June 1-June 15	cook/first aid	4725.00	225
2010	LUP	Water well Fee - Camp	May 1 2010		189.00	
2010	Health Unit	Grey water pit - Camp	May 18 2010		200.00	
VEHICLE RENTAL/MILAGE						
		Truck Rental				
		Boat Rental $150/day for 30 day				
2010		Truck Repair	Upsala Garage (8 tires)	12/06/2010	2974.16	
LINECUTTING/GRID RESTORATION/CLAIM MAINTENANCE						
	Haveman Bros	Linecutting				
2010		10 km @ $765/km	June 1 -14	Lines 32-40	8190.00	390
2010	Haveman Bros	rebrush claims 4 @ $360/day	01-Jun-10		1512.00	72
ACCESS/TRAIL INSTALLATION						
2010	ConRod Expl Serv	Road/Trail Construction				
		Scouts 6 man days @ $275/day	June		2402.90	0
		+ food/accom				
GEOPHYSICAL SURVEYS/INTERPRETATION						
	Geotech	Maxwell Model 29 @ $250	April 2010		FILED	
		RDI 90km @ $50	April 2010		FILED	
2010	JVX VTEM Interp		July 8-26		6045.50	695.5
ANALYTICAL						
2010	Actlabs analyses	87 soil samples A10-3207	June 1-15		7150.02	822.57
2010	Actlabs analyses	68 soil samples A10-2995	June 1-15		4861.76	231.51
2010	Actlabs analyses	103 SGH, 78 EL A10-3542	June 1-15		8547.66	983.36
COMPILATION & ASSESSMENT REPORT						
2010	Geofine Exploration	Report, compilation	June 28- July 27		5650.00	650
2010	Geofine Exploration	On-site property review incl mila.	August		1921.00	220
2010	Mount Morgan	Enzyme LeachRe/ Interpretation	19-Jul-10		1950.00	95
		for Samples taken to June 15 10				
		inv # 0271-521				
				TOTAL	**145796.12**	**5363.20**

December 7, 2010

Addendum to Sturgeon Lake Report, July 2010:

Section 8.2 SAMPLING METHODS:
8.2.a. SOIL SAMPLING

Ten kilometers of line was cut to install 9, north-south soil sample lines. The 10 km of lines were compassed and picketed every 50 m and each line labeled from south to north starting with 0 m. The lines were not installed as a grid but instead as paired geochemical sample lines located 100 m apart to adequately evaluate the priority geophysical anomalies outlined by the VTEM survey. The soil sample lines along with sample locations and numbers are shown on Figures 4A, 4B.

Twelve SGH and 10 Enzyme Leach samples were collected and 500 m of line cutting carried out on claim 4256062. However the work is ineligible as the claim was not yet recorded. The costs associated with these 24 samples ($57.44/sample) and linecutting ($1068/line km) have been removed from Tables E1 and 6B.

8.4 DELINEATION OF DRILL TARGETS VIA THE FOLLOW-UP OF THE 2009 VTEM AIRBORNE SURVEY:

8.4.b. XBR 2008, 2009 EXPLORATION ACTIVITIES:

Figures 3A & 3B attached hereto provide locations for the 2008 rock samples on the claim fabric. GPS coordinates provided by XBR were used to plot the samples.

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David E. Molloy P.Geo.

8.1. 2010 SECURITY, SAFETY, ENVIRONMENTAL PROTECTION, QUALITY ASSURANCE OF ANALYTICAL DATA, DATA VERIFICATION, NATIVE CONSULTATION:

8.1.a. SECURITY:

The 2010 exploration program utilized a number of security/confidentiality measures and procedures. The requirement of confidentiality for contract geologists was documented in their service contracts. The cook/first aid attendant/camp manager was present at the camp on a full time basis to supervise the exploration camp and to ensure privacy and security for the program orchestration, sample shipments, communications and database generation.

Samples were stored on-site in a locked core tent until transferred to the expeditor (Grammas' Super Market), who transported the soil samples to Ignace, Ontario where they were stored in a locked facility until they were shipped by bus to Actlabs in Ancaster, Ontario.

The camp manager, geologists, line cutters, and construction contractors have all had safety training. First aid equipment is on site and fire extinguishers are located in every tent. Two fire muster areas are clearly marked by signs in the camp. An Iridium satellite telephone with emergency phone numbers is provided to field crews for communication.

8.1.b. SAFETY, ENVIRONMENTAL PROTECTION:

All personnel became familiar with safety requirements and environmental regulations via safety meetings and safety training re. emergency procedures for fire and medical situations. All contractor staff was required to have first aid training. The cook was on site for the duration of the program and a first aid station was maintained in his tent. Satellite communication systems were utilized on site as well as one satellite telephone for field use. The camp and many of the work sites have road access to the town of Ignace, where the Mary Burgland Community Health Centre is located. The closest hospital is in Thunder Bay.

The program was carried out with adherence to the appropriate environmental standards, safeguards and equipment requirements. The campsite is maintained in a clean and natural state with garbage burned in a proper fire pit on a daily basis and non-combustible materials transported to Ignace. Fuel that is consumed by the generator, vehicles & tent heaters is provided by Andre Tardiff Agency Ltd. of Dryden. Absorbent materials are placed under all drums used for tent heating.

The southern extent of a woodland caribou range is located on the east side of the Sturgeon Lake Property. The Ministry of Natural Resources ("MNR") has placed travel restrictions on the Bright Sands Road to keep disturbance of the caribou to a minimum. Travel permits must be obtained from the MNR to drive the Bright Sands Road. No work by Excalibur has been carried out or is planned for this area.

The camp is rented from Haveman Bros. and is maintained by the cook. The camp will continue to support the line cutting crew, geochemical and geological personnel and the 2 phases of diamond drilling planned by XBR for 2010. The contractors who are building the trails are supported out of the camp, thus reducing traffic in the caribou range. All garbage and materials are removed by outgoing contractors or the expeditor, or burned onsite. Photos documenting most of the activities are taken by the onsite XBR supervisor.

8.1.c. QUALITY ASSURANCE:

In the initial stages of the 2010 geochemical program, XBR relied on the Actlabs' QA/QC procedure. The company has now instituted the submission of duplicate, standard and blank check samples as an operational procedure.

The Actlabs' SGH QA/QC process including reporting limits, laboratory replicate analysis, historical SGH precision and laboratory materials blank utilization is described in the Actlabs' report included in Appendix E. Actlabs does recommend sample splits or field duplicates be taken in proximity to the original sample and full disclosure of the parameters of the checks prior to analysis.

The Actlabs' Certificates of Analysis for the Enzyme Leach results are included in Appendix A, along with the results of their in-house analytical and duplicate check samples. Dr. Fedikow has reported on the results of the check samples in his report on the interpretation of the Enzyme Leach results (Appendix F):

Analytical Data Quality-Analytical Duplicates:

The reproducibility of the Enzyme Leach analyses in the Sturgeon Lake dataset was monitored with the use of analytical duplicates. These are samples that are selected and re-analyzed under the same conditions as the remainder of the unknown soil samples. The duplicate pairs, which illustrate the analytical reproducibility, are given in table form below for selected elements.

Review of all analytical data indicates good reproducibility over a broad range of concentration for most elements of interest. The results for the commodity and lithologically-sensitive elements indicate excellent reproducibility across a wide range of concentration and this same quality of analytical data is observed for the majority of the EL element suite. Some variability is noted for the elements near the LLD. Occasionally there are duplicate pairs that exhibit variability for select elements but these sample pairs are not indicative of the sample pairs. Overall analytical reproducibility for the Sturgeon Lake EL survey is interpreted to be excellent and not a hindrance to the recognition of anomalous responses at all concentration/contrast levels. A review of the replicate analyses of the analytical blank ("Method Blank") indicates there are no contaminants being introduced into the sample at the laboratory stage.

Analyte Symbol	Au	Co	Ni	Cu	Zn	Pb	Ag	La
Unit Symbol	Ppb	Ppb	Ppb	Ppb	Ppb	Ppb	ppb	ppb
Detection Limit	0.005	0.2	1	1	5	0.1	0.1	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36022 Original	< 0.005	12	17	8	9	< 0.1	< 0.1	4.66
36022 Duplicate	< 0.005	13	18	9	10	< 0.1	< 0.1	4.61
36032 Original	< 0.005	17	39	11	9	1.6	< 0.1	7.72
36032 Duplicate	< 0.005	17	39	11	8	1.2	< 0.1	7.36
36049 Original	0.009	21	28	8	45	1.3	< 0.1	8.67
36049 Duplicate	0.006	22	25	7	47	2.2	< 0.1	8.95
Method Blank Method Blank	< 1000	< 1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1

8.1.d. DATA VERIFICATION:

Onsite XBR personnel provided all the sample descriptions and locations for the soil samples collected on Lines 32-40 (Tables 1, S1, 2A, B; Figures 3, 4A, B). Data verification was carried out by field staff relating to technical information; and, financial information was provided by XBR management and compiled by Geofine as shown in Table E1 (Section 8).

The location of the Maxwell Modelled VTEM anomalies in the field and the layout of the soil geochemical lines to further prioritize the anomaly centers was determined by Dr. Mumin, based on GPS co-ordinates, which were provided for the start points of the lines. The sample lines (Figures 3, 4A, B) were laid out to meet Actlabs' requirements for the interpretation of the data i.e., to generate a sufficient number of background values on either side of the anticipated anomalous zone associated with the EM anomaly. Dr. Mumin also provided the specifications for the soil sample collection procedures i.e., the SGH and Enzyme Leach samples were mainly taken from the upper 10 cm of the B horizon (see section 8.2.a. below). Geofine reviewed the geochemical technical database and modifications, as provided by XBR.

Data verification with regard to the mining claims included field verification of the corners and lines on XBR's claims in the eastern area of Dunne Lake. The review indicated that the claim lines were often obscure, with limited brush cutting and blazing. The corner posts were tagged properly, although some discrepancies were reported as noted below, even though line posts were properly positioned along the lines every 400 meters (XBR, 2010).

The following is a list of corners that were checked:

Claim # 4211349: corner # 2 OK, 60 meters west of recorded location.
Claim # 4211354: corner # 3 OK, 60 m west of recorded location.
Claim # 4211354: corner # 2 OK.
Claim # 4211353: corner # 3 OK.
Claim # 4211362: corner # 1 OK, 145 m north of recorded location.

Claim # 4211363: corner # 4 same as above.
Claim # 4211362: corner # 4 not found.
Claim # 4211362: corner # 3 not found.
Claim # 4211363: corner # 3 OK, (this post was re-located), mistakenly marked as corner # 2.
Claim # 4211363: corner # 2 OK.
Claim # 4211365: corner # 2 & 3 OK.

8.1.e. FIRST NATION CONSULTATION & PARTICIPATION:

XBR has signed a Memorandum of Understanding with Lac des Milles Lacs First Nation (LDMLFN) on June 28, 2010. LDMLFN has formed a joint venture with Outland of Thunder Bay, Ontario to provide services to the mineral exploration industry. XBR crews will rent two ATVs from Outland / LDMLFN to be utilized during the upcoming drill program, and will hire personnel from the LDMLFN for core sawing.

8.2. SAMPLING METHODS:

8.2.a. SOIL SAMPLING

The soil samples were taken mainly from the top 10 cm of the B horizon at picketed stations located 50 m apart. The paired sample lines (Figures 3, 4A, B) are located 100 m apart. In most cases, one sample provided split material for the SGH and Enzyme Leach analytical procedures. However, where such material was not available, samples for SGH analysis were taken from the lower most 5 cm of the A horizon; or in swampy areas, samples comprised of organic peat were collected from a depth ranging between 20 to 40cm. Samples (212) were collected at all stations and were run with SGH (Tables S1, 2A, 2B). Enzyme Leach was run only on the B horizon material (141 samples), thus accounting for the gaps in the Enzyme Leach analytical data shown in the Fedikow report (Appendix F). The sample holes were dug with an unpainted shovel and cleaned out with a plastic trowel to ensure no contamination of sample material. The A-B soil horizon interface was identified and the sample intervals were measured from that point. In swampy areas the hole was dug to about 50 cm and a representative sample of organic peat was taken. All samples were obtained with plastic scoops and about 200 grams of material was placed in plastic sample bags, tagged and sealed with zip ties After each sample was taken, the spade and scoop were cleaned.

8.2.b. REPRESENTATIVE ROCK AND BOULDER SAMPLES:

In 2008, 5 representative in-situ samples and 4 boulder samples with visible sulphides including massive sulfides were taken during a reconnaissance geological survey (Tables S1, 1). The samples constitute a composite of an outcrops or boulders such that they are considered representative of the general composition of the materials sampled. The samples are described in Table 1 and the analytical results are provided in Table 1A and on Certificates of Analysis in Appendix A. The geological information was incorporated into the 2009 geophysical and geological compilation maps

(Figures G1, G2) prepared for XBR.

8.3. SAMPLE PREPARATION AND ANALYTICAL METHODS:

8.3.a. SOIL GAS HYDROCARBONS (SGH):

The 212 soil samples collected in 2010 were prepared at Activation Laboratories Ltd., (“Actlabs”) in Ancaster, Ontario**.** As described in the Actlabs report (Appendix E), the soil samples are air dried and sieved to -80 mesh. A sub-sample is accurately weighed and an extraction is done analogous to a weak leach. The extracted samples are analyzed by a Gas Chromatography/Mass Spectrometer (GC/MS). This method is highly specific and highly sensitive. Each compound has a “Reporting Limit” of 1 part-per trillion (ppt). Each sample is analyzed for 162 target hydrocarbons that have been specifically picked to define a buried mineral or petroleum signature. The selection of compounds also eliminates interferences from sampling, shipping, handling and from general cultural activities.

8.3.b. ENZYME LEACH SOIL SAMPLES – ICP/MS:

The 4 soil samples taken in 2008 and 141 taken in 2010 (Tables 1, S1; Figures 3, 4A, B) were analyzed at Actlabs with Enzyme Leach. As described in the Actlabs’ (2010) report included in Appendix F, a 0.75 g sample of -60 mesh B soil horizon material is leached in enzyme matrix containing a glucose oxidaze solution at 30 ^{o}C for 1 hour. The enzyme reacts with amorphous MnO_2 dissolving it. The metals are complexed with the gluconic acid present.

The solutions are analyzed on a Perkin Elmer ELAN 6000, 6100 or 9000 ICP/MS. One matrix blank is analyzed per 49 samples. Two controls are run at the beginning and end of the group of 49 samples. Duplicate samples are leached and run every 10 samples.

8.3.c. Total Digestion - ICP, INAA:

The nine rock and boulder samples that were collected in 2008 (Tables 1, S1) were run by Actlabs with Total Digestion – ICP and INAA. The process as described by Actlabs is provided below.

INAA PORTION:

A 30g aliquot, if available, is encapsulated in a polyethylene vial and irradiated with flux wires and an internal standard (1 for every 11 samples) at a thermal neutron flux of $7x10^{12n\ cm-2\ s-1}$**.** After a 7-day decay to allow Na-24 to decay the samples are counted on a high purity Ge detector with resolution of better than 1.7 KeV for the 1332 KeV Co-60 photopeak. Using the flux wires, the decay-corrected activities are compared to a calibration developed from multiple certified international reference materials. One standard is run for every 11 samples. One blank is analyzed per work order. Selected duplicates are analyzed when enough material is submitted.

ICP PORTION:

A 0.25 g aliquot of sample is digested in HCLO4-HNO3-HCL-HF at 260 degrees C to fuming and is diluted with dilute HCL. This leach is partial for magnetite, chromite, barite, spinels, zircon and massive sulfides. The solutions are read on a Varian Vista or Varian 736ES ICP. Reported QC includes a blank analysis frequency of 2%, 1 for every 40 or less samples, a sample replicate frequency of 7%, 1 for every 15 or less samples, and 6% or more are analyzed international standards. Additionally there is an internal method of QC with a frequency of 20%.

8.4 DELINEATION OF DRILL TARGETS VIA THE FOLLOW-UP OF THE 2009 VTEM AIRBORNE SURVEY:

8.4.a. COMPILATION OF HISTORIC EXPLORATION ACTIVITIES:

The review of historic activities on and in the vicinity of the Property is an essential prerequisite in determining the exploration rationale and strategy for future work. As referenced in Section 5, subsequent to the discovery of the Sturgeon Lake orebodies, there has been a considerable exploration effort. In view of the poor geological exposure, the work most often entailed the same exploration strategy as for the original discoveries: airborne surveys, ground geophysical follow-up and diamond drilling. The MNDMF website lists 138 reports for exploration activities (AFRI Files) on and in the vicinity of the Property; however, there are only 9 mineral showings with two located on or in the immediate vicinity of the Property (Figures G5, G6; Tables H3C, D): gold on Hemlo's Quill Lake Property (MDI52G15SE00004); and, iron in the Sassafras Lake area MDI52G15SE00005, -00006.

As shown in Tables H2A-D, 37 of the AFRI Files reference diamond drilling on and in the vicinity of the Sturgeon Lake Property. The geology intersected in the historic drill holes, mainly on the Property, and the apparent explanation of the conductors is provided in Tables H3B, D and on Figure G2. The target EM anomalies were in most cases apparently explained by intersections of massive sulfides and sulfidized graphitic horizons. Although such historic work has not produced indications of any economic mineralization, the work has been successful in locating cherty chemical sediments and massive sulfide mineralization with some indications of base metal geochemical signatures. Most importantly, the holes have intersected indications of the stratigraphic level favorable for VMS mineralization i.e., the rhyolite - andesite contact zone (Tables H3B, D; e.g. Newconex 1970 and Mattagami Lake 1972 drill holes).

Significant observations on relevant exploration rationale and targeting on and in the vicinity of the Property include Canadian Javelin (1970): the acid-basic metavolcanic contact zone appears to be the geologically favorable area for the emplacement of sulphide mineralization; and, Mumin et al. (2007): one of the best methods for locating volcanogenic massive sulfide deposits is to delineate the attitudes of synvolcanic structures (Figure G4), and explore those that show evidence of associated high-temperature hydrothermal mineral assemblages. Excellent exploration targets occur where synvolcanic structures with hydrothermal alteration intersect paleo-seafloor horizons; AFRI Files

52G15SE0001, -0002: the soil geochemistry was reported to have been very successful in targeting anomalous auriferous zones on the Quill Lake property referenced above (MDI52G15SE00004); and, Russell et al., 2002: the anomalous results of lake sediment samples mainly off but in proximity to the east end of the Property as referenced below:

10. Mountairy Lake area (Map 3) Cu, Ni, Mo, REEs, Cs, ±Zn, ±V, ±Co, ±Cd
Sites: 5343-5346, 5361, 5364, 5365, 5367-5369, 5427-5431 (OGS OFR 6087):

This anomaly occurs in an elongate band to the southeast of the Sturgeon Lake greenstone belt. REEs are prominent in the area, ranging from elevated to highly anomalous at 11 sites. Many of these sites also have elevated to highly anomalous Cs. Sites 5343 to 5346 and 5361, located in a small cluster at the northeast end of this area returned highly anomalous Cu values between 86 and 161 ppm. These sites also returned elevated to highly anomalous values for Ni and Mo, with sites 5344 and 5361 having the highest of these values, as well as Cd levels which are elevated (site 5361) and anomalous (site 5344). Previous geophysical work has identified a number of electromagnetic anomalies a few kilometers to the west of these sites (Ontario Geological Survey 1990). Site 5368, in the central part of this area, is elevated in Cu and Zn (48 ppm and 118 ppm), anomalous in Ni (40 ppm) and V and highly anomalous in Co. Site 5365, located to the northeast in the same lake, is anomalous in Ni and Co, and elevated in Zn and V. Sites 5427 and 5427, located at the southwest end of this area, are highly anomalous and elevated in Ni (41 and 34 ppm). These sites are also elevated in Zn and anomalous in Co. This area occurs in a northeast-trending band of mafic metavolcanic and metasedimentary rocks bounded by granitic intrusive rocks to the north and south. An extensive iron formation occurs within the metasedimentary unit. The REE anomalies may represent an area of intrusion-related hydrothermal alteration which would provide a potential base metal target.

8.4.b. <u>XBR 2008, 2009 EXPLORATION ACTIVITIES:</u>

Dr. Mumin has supervised all the XBR fieldwork on the Property since 2008, when a small reconnaissance program was carried out to facilitate his 2009 compilation of the geology and historic drill holes. The reconnaissance program included the collection of 4 soil and nine rock samples in August of 2008. The samples are summarized in Table S1, described in Table 1 and located on Figure 3. The analytical results as provided by Actlabs are included in Table 1A and Appendix A.

The in situ rock and boulder samples are of particular interest since most of them are reported to contain semi-massive sulfide mineralization (py, po +/- up to 0.5 % cpy). XBR indicates that most of the samples were taken from a stratabound massive sulfide horizon that ranges in width from 10-20 cms up to 8 m and that can be traced over a distance of 1km. The horizon outcrops along two roads and is interpreted to comprise sedex style sulfide mineralization hosted by a sandy conglomerate (XBR 2010 field notes). As shown in Figure 3, the mineralization outcrops in the vicinity of soil sample lines L39-40 (Figure 4A) and perhaps is related to VTEM anomaly 2510C.

The XBR 2009 geological compilation (Figure G1) illustrates the eastern extension of the favorable acid-base contact zone from the Sturgeon Lake VMS camp (Table H1; Figures H1, G1, G2, G4) through most of the XBR Property. Figure G2 suggests there are three cycles of felsic volcanism on and in the vicinity of the western area of the Property (Glitter Lake area) and that historic drilling has intersected massive sulfide mineralization associated with all of them. The massive sulfide horizon sampled by XBR in 2008 is located ~11 km east of the easternmost historic drill indications of massive sulfide mineralization.

8.4.c. JVX EVALUATION/PRIORITIZATION OF DRILL TARGTS AND NEW TARGETS IDENTIFIED BY JVX AND GEOFINE:

JVX Ltd. was commission to evaluate all the VTEM anomalies on the west sheet of the 2009 Geotech airborne survey (JVX Report, Appendix D). As indicated by Dr. Johnson of JVX, ***the geophysical expression and setting of all suggested drill targets, regardless of source, should be reviewed. The amplitude, quality and clarity of the EM and magnetic anomalies that may define the target should be checked. There may be a much better geophysical target on the next line.***

Dr. Johnson utilized a regional compilation that referenced the 1990 Aerodat HEM/magnetic survey (OGS GDS 1033 a&b), drill holes from the Ontario Drill Hole Database (MNDMF, 2010) and mineral deposits from the Mineral Deposit Inventory (MNDMF, 2010); and anomalous gold values from a 2002 regional lake sediment geochemical survey (Russell et al., 2002). Dr. Johnson concludes ***the area of the west sheet is well populated with bands of formational conductors that appear to be largely made up of strong, shallow, steeply dipping zones of graphite and iron sulphides. These are powerful EM features that could overpower responses from any nearby VMS deposit. Geochemistry may suggest segments of these formational conductors that are worth a second look.*** The 2010 SGH and Enzyme Leach soil geochemical data was not available to Dr. Johnson at the time of the preparation of the JVX report.

The study has identified three priority drill targets on the Property with some attributes of classical EM/magnetic expression associated with VMS base metal deposits. Other priority targets have been recommended on ground currently open for staking east of the Property. Two of the targets on the Property are VMS targets based on the airborne geophysics alone and the third is a possible VMS/precious metal target centered on EM anomaly 1280A (conductor P1), enhanced by a marginally anomalous lake sediment gold value.

Drill Target 1: Conductor K:

The first and best target is conductor K in claim 4211358 in the northeast part of the area. K is 300 m long near-vertical one thin sheet conductor (2240D to 2270D) with a coincident magnetic high to 150 nT (Figure A left). The best EM anomaly of the 4 is 2250C. 2250C appears to represent a thick sheet conductor at 671175 e, 5524594 n with a steep dip (83°) to the south. Estimated depth is less than 10 m – the EM anomaly is very strong (BF26 > 3.5). Conductance estimates are 57 S dB/dt and 83 S B field. In the Aerodat survey, K is a single EM anomaly with an associated magnetic high. Some would consider drill testing conductor K without a ground EM/magnetic survey. In this case the drill would set up 50 m south of the conductor that is at 671175 e, 5524544 n. Azimuth 0°. Inclination -45°. Length to 150 m. Others would do a small HLEM/magnetic survey to confirm and better define the target. The ground survey might consist of 4 lines of HLEM at 100 m (444 and 1777 Hz, 100 m coil separation) and 8 lines of magnetics at 50 m.

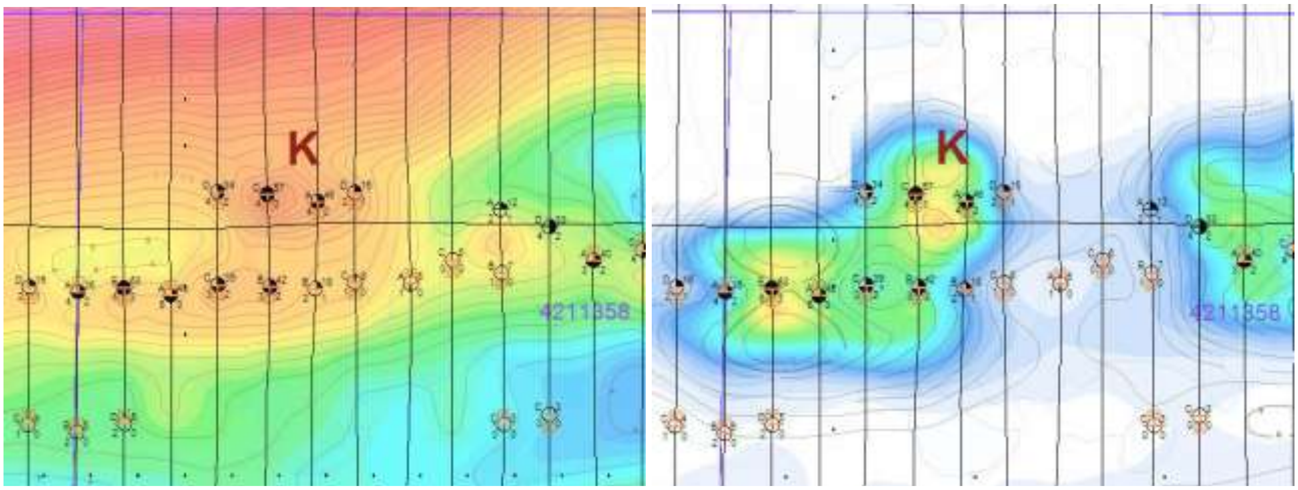


Figure A, Conductor K. TMI left. B field time constant right

Drill Target 2: Conductor O4:

Another possible target is a distinct 1350 nT magnetic high on conductor O4 in claim 4211354. The magnetic anomaly is centered on 1900F (Figure B). The magnetic anomaly is 200 m long and is consistent with a shallow, vertical tabular body. 1900F suggests a thick sheet conductor at 667668 e, 5522315 n with a steep dip (84°) to the north. The high amplitude butterfly EM anomaly (BF26 > 1.4 on the down dip side) of a shallow, strong, near-vertical sheet type conductor is clear from figure 7 right. The depth estimate is less than 10 m. Conductance estimates are 39 S dB/dt and 130 S B field. A break in the conductor on line 1860 and a change on line 1920 suggest the target conductor may be only 300 m long – a good number for VMS. If drill testing without ground confirmation, the drill could be set up 50 m north of the conductor, that is at 667668 e, 5522365. Azimuth 180°. Dip -45°. Length to 150 m.

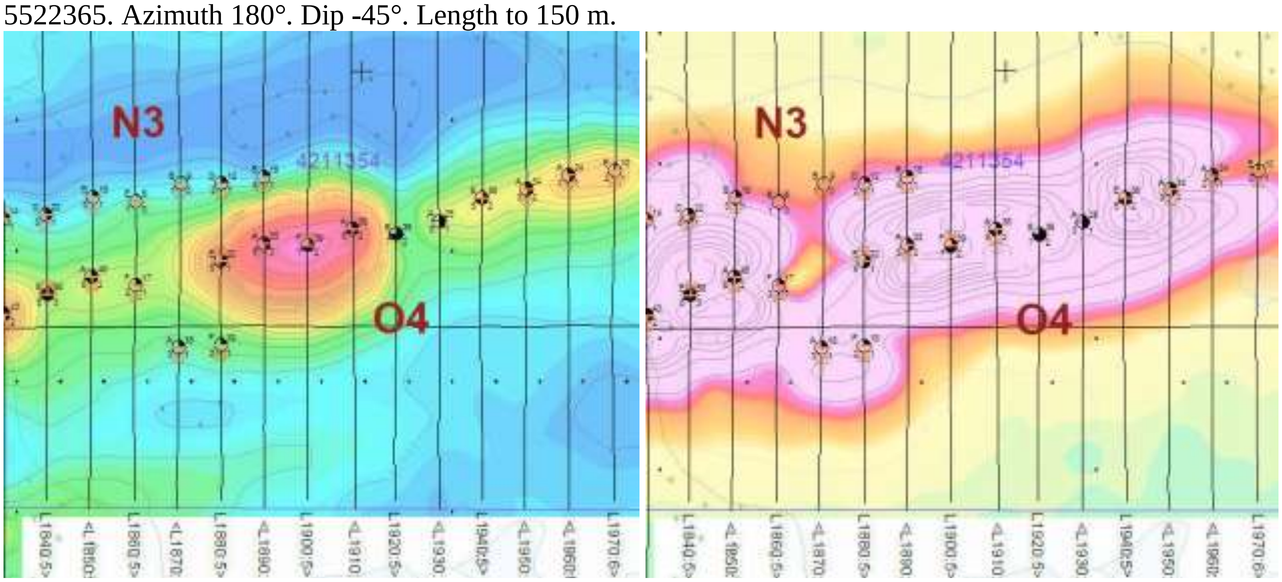


Figure B, Conductor O4. TMI left. B field channel 26 amplitude (BF26) right

Drill Target 3: Conductor P1:

3. 1280A suggests a thick sheet conductor at 661470 e, 5521565 n with a steep dip to the south (76°). Depth from simple models is less than 10 m (BF26 > 2.28 over the down dip side). The dB/dt conductance estimate is 54 S. The peak of a 300 nT magnetic high is 25 m south of the leading edge of the conductor. 1280A is under a small lake and 189 m north or 104 m south of the lake shores (Figure C right). 1820A would have to be drill tested in the winter. Alternatively, it might be possible to test this target from the north shore by aiming at the neighboring EM anomaly 1290G that is only 37 m south of the lake's north shore. Lake boundaries on VTEM lines 1280 and 1290 should be checked with a GPS receiver. 1290G represents a shallow, vertical, thick sheet conductor at 661572 e, 5521558 n. To test 1290G, the drill could be set up 50 m north of the target, that is at 661572 e, 5521608 n. Azimuth 180°. Dip -45°. Length to 150 m.

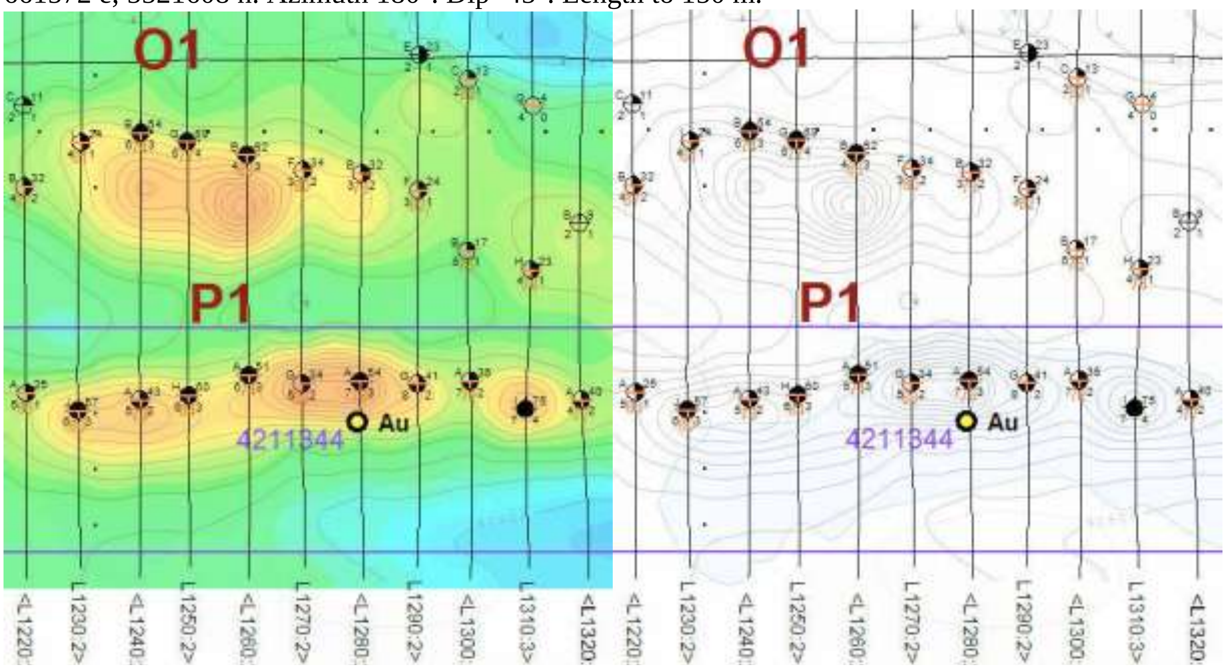


Figure C, Conductor P1. TMI left. Topography right

East Drill Target and East Target Area:

There is a short bedrock conductor with coincident 7,000 nT magnetic high in the extreme northeast corner of the Glitter Lake/Grid Iron Lake survey (Figure D). The target is centered at EM anomaly 3710D at 685775 e, 5528675 n (NAD83, Z15N). The conductor appears to be a thin sheet with a steep dip to the south. Depth looks to be shallow (< 25 m). Conductance estimates are only moderate (15 S). The target is 450 m north of Excalibur claim 4224477. MMS (magmatic massive sulphides – Ni, Cu with possible platinum/palladium) should be considered for any moderate to short strike length conductor over a very strong magnetic high of the same dimensions. The magnetic high may represent ultramafics (peridotite, pyroxenite). EM conductors in ultramafics can be caused by massive Fe/NI/Cu sulphides or serpentinite (metamorphosed ultramafics that have a distinct texture of magnetite veining. Electrical conduction is caused by the magnetite – nothing economic). The low conductance estimates of 3710D would be more consistent with serpentinite – massive Fe/Ni/Cu sulphides typically show very high conductance values. Chromitite should be considered in any ultramafic setting. Chromitite is non-magnetic and non-conducting.

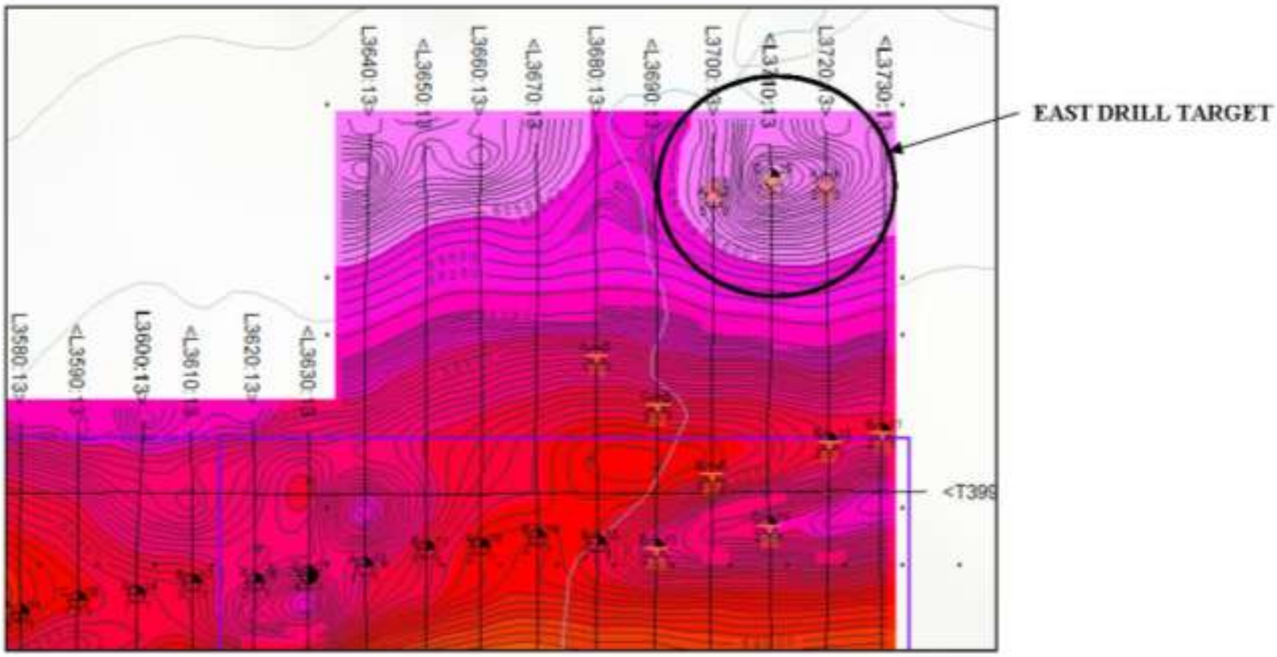


Figure D. East Drill Target on Magnetics from the extreme northeast corner of the VTEM survey (See Figure E)

After JVX, 2010; mod by gfx

The East Target Area

The East Target Area (Figure E) exhibits a number of attributes that include the East Drill target referenced above; the prominent flexure as delineated by the magnetic response in Figure F below; the airborne EM anomalies associated with the flexure (Figure F); the lake sediment anomalies recommended by the OGS (Section 8.4.a above: ***Mountairy Lake area)***; most of the targets are on ground open for staking; and, road access is nearby (Figure E). Detailed research to establish the exploration rationale for the targets, as was applied to the west data sheet of the VTEM survey, is recommended before claim staking is initiated.

EAST TARGET AREA

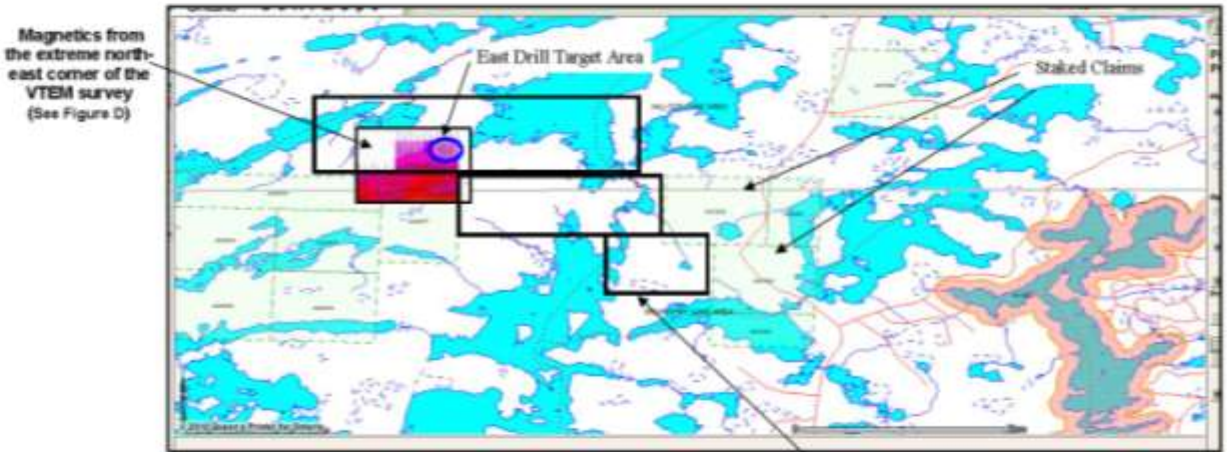


Figure E. Possible Land Acquisition

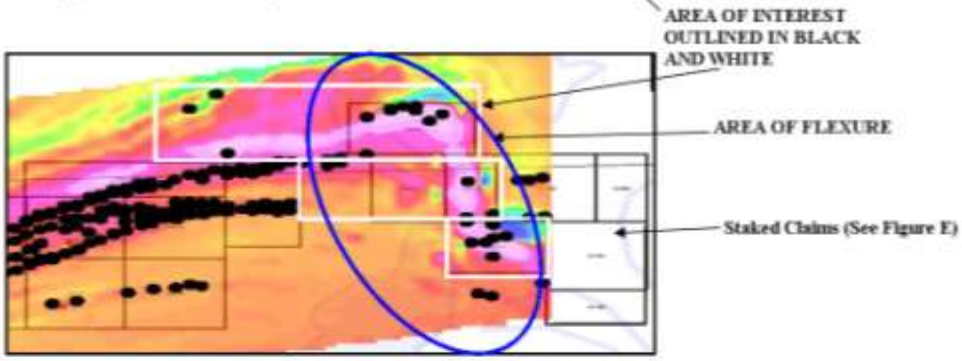


Figure F. Area of Possible Land Acquisition with Magnetics and EM anomaly centres from the 1990 Aerodat survey

Mod. By gfx July 2010

After JVX, 2010

8.4.d. 2010 SOIL GEOCHEMICAL SURVEYS TO EVALUATE MAXWELL MODELLED VTEM CENTERS:

Based on the results from the 2009 airborne survey, Geotech (2010) picked 713 EM anomalies and carried out Maxwell Modelling on 21 EM anomalies or anomaly sets, as chosen by Dr. Hamid Mumin, based on his knowledge of the Sturgeon Lake Camp e.g. Mumin et al., 2007. The geochemical soil survey was initiated in 2010 to evaluate/prioritize the anomalies that were selected for Maxwell Modelling. As Dr. Johnson references in Section 8.4.c. above, although most anomalies appear formational and composed of zones of graphite and iron sulphides that could mask responses from any nearby VMS deposits, geochemistry may suggest segments of these formational conductors that are worth a second look.

As of June 15, 2010, 212 mainly upper B horizon samples had been collected by XBR on 9 traverse lines (L32-40; Figures 3, 4A, B) installed to evaluate 5 VTEM anomalies. The layout of the traverse lines and sample collection protocols is described in Section 8.2.a. above. The 212 samples were processed by Activation Laboratories Ltd. (“Actlabs”) for soil gas hydrocarbon signatures (SGH) to identify VMS environments ; and, 141 sample splits from the original material, by Enzyme Leach (as the availability of B-horizon, non-organic material allowed) to delineate multielement VMS geochemical signatures. The SGH results obtained to date have been interpreted by Dr. Dale Sutherland of Actlabs (Appendix E); and the Enzyme Leach results by Dr. Mark Fedikow of Mount Morgan Resources Ltd. (Appendix F) based on field data supplied by XBR.

8.4.e.i. INTERPRETATION OF SGH SAMPLES:

The interpretation of the initial SGH samples on lines L37-38 and L39-40 as provided by Actlabs in separate reports included in Appendix E has located an important SGH signature on L37-38 as shown in Figure S1 below. The SGH signature located on L39-40 is weaker and entails a low level of confidence. However, the anomaly should be appraised in view of other factors, including the massive sulfide mineralization found nearby (Figure 3) and described in Section 8.4.b. above.

Actlabs indicates that the SGH results from the soil samples on L37-38 suggest a **“rating of 5.0”** for the area within the dotted black oval interpretation on Figure S1 below, in relation to the presence of a VMS based target beneath this survey area. This rating is based on a scale of 6.0 in 0.5 increments, with a value of 6.0 being the best. This rating represents the similarity of these SGH results with case studies over a volcanic massive sulphide (VMS) type target, to the SGH case studies conducted at the Hanson Lake VMS deposit in Saskatchewan, the South Gilmour VMS deposit in New Brunswick and the Cross Lake VMS deposit in Ontario (Actlabs, 2010).

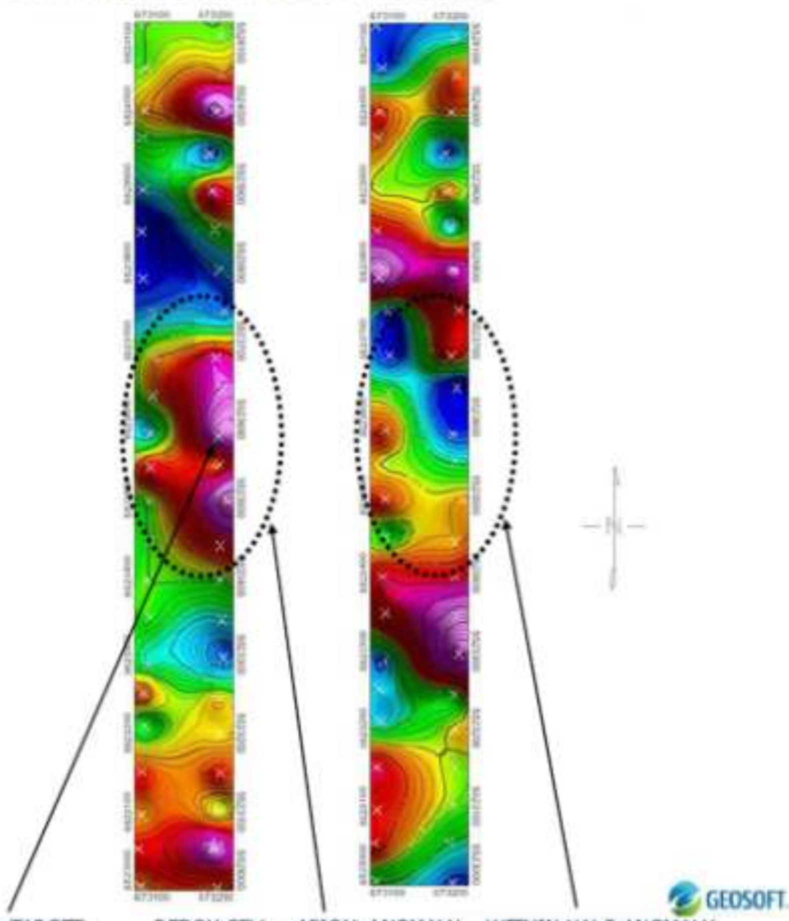
Actlabs also indicates that the SGH results from the soil samples on L39-40 suggest a **“rating of 3.0”** for the area within the dotted black oval interpretation on Figure S2 below, in relation to the presence of a VMS based target beneath this area. The degree of confidence in the rating only starts to be “good” at a level of 4.0.

FIGURE S1:

Quality Analysis ... Actlabs Innovative Technologies

INTERPRETION OF SGH RESULTS – A10-2995
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH "VMS" PATHFINDER CLASS MAPS – Lines 37-38



Results represent only the material tested. Actlabs is not liable for any claim/damage from the use of this report in excess of the test cost. Samples are discarded in 90 days unless requested otherwise. This report is only to be reproduced in full.

June 26, 2010 **Activation Laboratories Ltd.** Page 19 of 23

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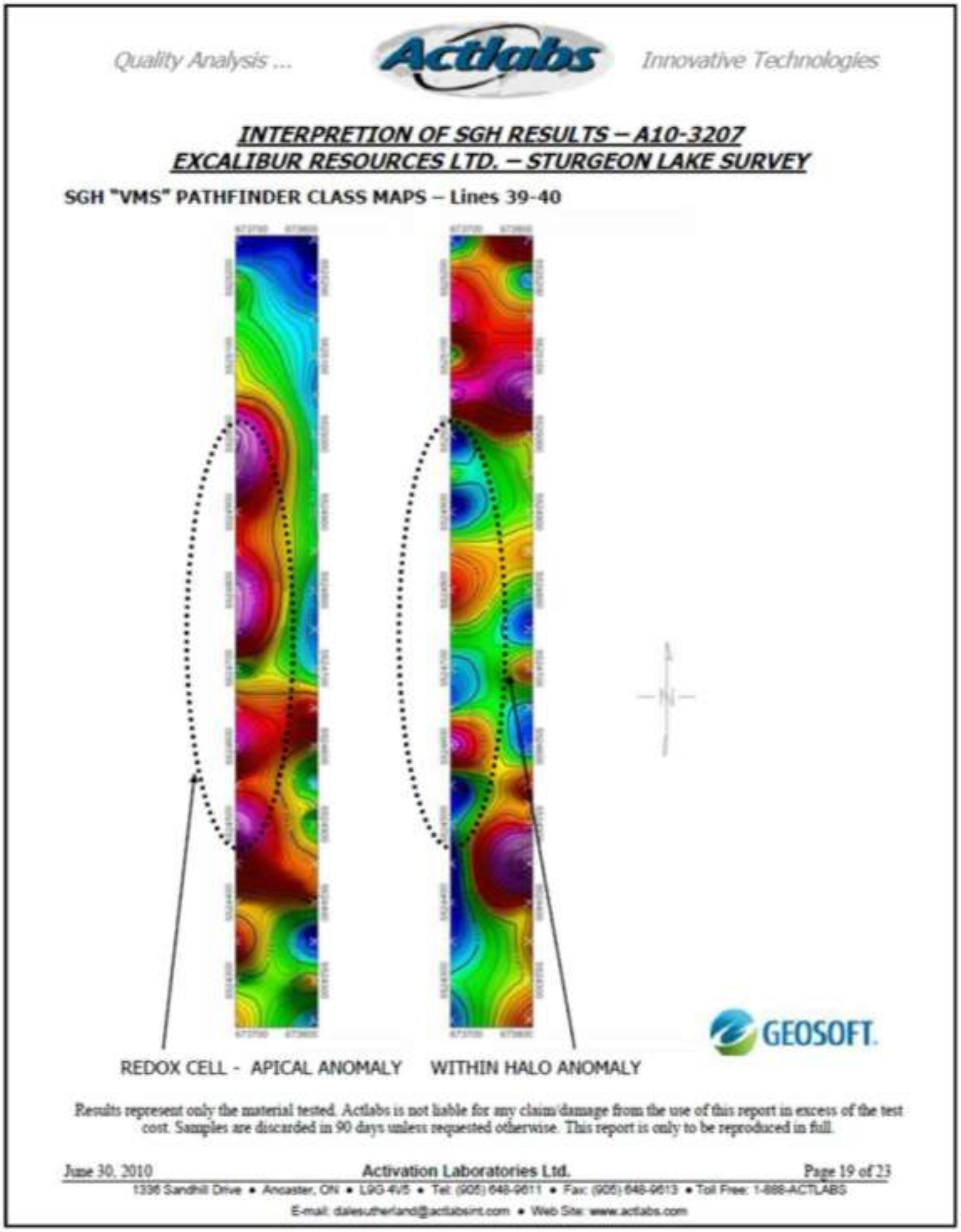
E-mail: dalesutherland@actlabsint.com • Web Site: www.actlabs.com

FIGURE S2:


Quality Analysis ... Innovative Technologies

INTERPRETION OF SGH RESULTS – A10-3207
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH "VMS" PATHFINDER CLASS MAPS – Lines 39-40

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8.4.e.ii. INTERPRETATION OF ENZYME LEACH SAMPLES:

The Enzyme Leach samples were analyzed by Actlabs and the initial results interpreted by Dr. Mark Fedikow of Mount Morgan Resources Ltd. (Appendix F). The results are summarized in the table below:

Summary of anomalous responses in Enzyme Leach data, Sturgeon Lake area.				
Line	Anomaly	No. of Samples	Location	
32	Co	3	0+50 to 1+50	
33	Nil			
34	Zn+/- Cu, Mo, Sb, Co, Mn	3	11+50 to 12+50	
35	Nil			
36	Zn- REE; Co-Mn	1	3+00; 4+50	
37	Cu, Au	1	6+50	
	Pb; Zn	1	11+00;1+50	
38	Zn, Pb, Ni, Co, Mn	1	0+50	
39	Zn, Co	4	4+00 to 5+50	
40	Cu, Pb, Zn, Mo, Sb	1	2+75	
	Co	1	4+50	
	As	1	5+50	
	Au, Tl, Br	3	2+50 to 3+00	

Dr Fedikow concludes that:

1. the Enzyme Leach survey has returned two potential follow-up targets where ground geophysical surveys or diamond drill testing can be focused: the Line 34 anomaly is the priority response and it consists of a three sample, 100 m elevated response for the suite Zn-Cu-Mo-Sb-Co suggesting a zone of sulphide mineralization with pyrite in association with mafic lithologies. The secondary anomaly is located on Line 40 where a single sample Cu, Pb, Zn, Mo and Sb anomaly is encapsulated by a three sample Au-Tl-Br anomaly. This is also suggestive of a base metal mineralized signature with associated Au.

2. Examination of the locations of VTEM anomaly centers and the locations of Enzyme Leach anomalies apparently reveals that for the most part very little correspondence exists between these two sets of data. VTEM anomalies on Lines 32 and 33 have an association of Co-only in the Enzyme Leach data suggesting the VTEM anomaly in this area is “pyrite-only” without base and/or precious metals.

3. A review of the enzyme leach data indicates that in the immediate area of the SGH anomaly on Lines 37 – 38 there are single sample Cu-Au, Pb and Zn enzyme leach anomalies on line 37. Single sample anomalies are usually accepted with some reticence as they are subject to reproducibility tests to determine whether this anomaly is real or spurious. Nevertheless, in this survey there appears to be some limited correspondence between Enzyme Leach and SGH, albeit from single sample base metal anomalies.

9. CONCLUSIONS, RECOMMENDATIONS:

9.A. CONCLUSIONS:

The application of state of the art sulfide detection tools by XBR such as VTEM surveying; the utilization of the thorough VTEM evaluation and classification methodology of JVX; and, the attempt to confirm the presence of VMS base metal environments and associated multielement geochemical signatures with SGH and Enzyme Leach soil surveys, all interpreted with reference to the results of the historic work, has proven to be an appropriate exploration strategy to identify priority drill targets on the Sturgeon Lake Property.

It is concluded that the JVX study of the VTEM anomalies has identified three priority drill targets with some attributes of classical EM/magnetic expression associated with VMS base/precious metal deposits. Other priority targets have been recognized on ground currently open for staking east of the Property i.e., in the East Target Area and specially the East Drill Target (EM anomaly 3710D). The East Target Area also exhibits a number of attributes, including a prominent flexure as delineated by the magnetic response and associated EM anomalies. Detailed research to establish the exploration rationale for the targets, as was applied to area of the west sheet of the VTEM survey, is recommended before claim staking is initiated.

The initial SGH and Enzyme Leach results as summarized in Table S2 below, along with the location of the target EM anomaly centers are suggestive of additional drill targets on the Property, e.g., VTEM anomaly 2450A on line L38 and anomaly 2510C on L40. However, as Dr. Fedikow points out, based on the initial geochemical data, there is currently limited correspondence between anomalous Enzyme Leach responses, VTEM geophysical anomalies and SGH anomalies.

Notwithstanding the above, the results for the majority of the soil samples have yet to be interpreted and integrated with the geophysical data. Moreover, as reported in Section 8.4.a., XBR has discovered a zone of massive sulfide mineralization with an interesting multielement signature on which geological and geochemical information is being compiled. The formulation of a drill program on the Sturgeon Lake Property requires the compilation, interpretation and integration of all geological, geochemical and geophysical data to optimize its success via the recognition of the priority drill targets.

TABLE S2					
Summary of Anomalous Responses - VTEM, SGH and ENZYME LEACH DATA					
	----------Enzyme Leach Response----------			**VTEM Anomaly**	**SGH Anomaly**
Line	**Anomaly**	**No. of Samples**	**Location**	**Location/No.**	**Location**
32	Co	3	0+50 to 1+50	3+00 / 1670C	na
33	Nil			3+00 / 1670C	na
34	Zn+/- Cu, Mo, Sb, Co, Mn	3	11+50 to 12+50	17+69 / 1690A	na
				3+22 / 1690B	
35	Nil			17+75 / 1690A	na
36	Zn- REE; Co-Mn	1	3+00; 4+50	3+74 / 1690B	na
37	Cu, Au	1	6+50	4+50 / 2450A	none
	Pb; Zn	1	11+00; 11+50		none
38	Zn, Pb, Ni, Co, Mn	1	0+50	4+50 / 2450A	6+00 str
39	Zn, Co	4	4+00 to 5+50	2+75 / 2510C	2+75 weak
					5+50 mod
					7+50 str
40	Cu, Pb, Zn, Mo, Sb	1	2+75	2+75 / 2510C	2+75 weak
	Co	1	4+50		none
	As	1	5+50		none
	Au, Tl, Br	3	2+50 to 3+00	2+75 / 2510C	2+75 weak

9.B. <u>RECOMMENDATIONS:</u>

The priority drill targets identified by JVX are recommended as the foundation of a 2010 drill program. The East Drill target also identified by JVX and the East Target Area suggested by Geofine should be researched in detail and claim staking initiated as required. The East Drill Target and others so identified could entail an enhanced drilling for discovery opportunity.

The additional drill targets that have also been suggested by the initial results of the geochemical screening surveys, as referenced above, and those that may be so identified by the interpretation of the outstanding SGH and Enzyme Leach results, should be reviewed by JVX. Such final targeting based on the EM and magnetic expression is recommended for the additional drill targets to become components of the program.

Prior to the initiation of diamond drilling, all priority targets identified by XBR should be adequately screened by geochemical and ground geophysical methods as required, including Maxmin EM and magnetic surveying. To avoid critical gaps in the geochemical data base, a hand turned soil auger should be used where near surface sampling is not amenable to provide appropriate material for Enzyme Leach surveying. Attempts should be made to fill in critical gaps in sampling over potential drill targets. The Enhanced Enzyme Leach analytical procedure should be employed on all samples in order to adequately assess the apparent gold potential that the standard method does not facilitate.

Such further evaluation and ranking should provide the necessary rationale for an effective, phased drilling for discovery program. More than one drill hole is recommended on priority VTEM targets. The drill program should be carefully orchestrated based on discovery criteria including reference to stratigraphic level (the acid-basic metavolcanic contact zone), structural controls (synvolcanic structures and junctions), alteration halos e.g., epidote, chlorite, carbonate, sericite and evidence of along strike or down plunge compositional zoning in geochemical signatures of sulfide mineralization and host rocks. VTEM anomalies may be readily explained in drill core but a pyrrhotite-pyrite-graphite intersection could mask the along strike and/or down plunge expression of a base metal VMS horizon that does have a geochemical expression. In such favorable environments, a detailed structural fabric analysis is often the prerequisite for delineating the controls for initial and on-going drill evaluation, particularly for gold targets. According to Mumin et al. (2007), ***one of the best methods for locating VMS deposits is to delineate the attitudes of synvolcanic structures, and explore those with associated high-temperature hydrothermal minerals. Excellent exploration targets occur where synvolcanic structures with high-temperature hydrothermal alteration intersect paleo-seafloor horizons.***

A phased, 2010 follow-up drill program is recommended by Geofine once all the SGH and Enzyme Leach results have been obtained, interpreted, integrated with the geophysical data and reviewed by JVX. Data acquired from new claims staked in the East Target Area should be included in the prioritization. The process will define the size of and rationale for the drilling for discovery program, including drill parameters and drill order.

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11. STATEMENT OF QUALIFICATIONS:

I, David E. Molloy P. Geo. of the Town of Unionville, of the Regional Municipality of York, Ontario, hereby certify that:

i. I am President of Geofine Exploration Consultants Ltd. with a business address at 49 Normandale Road, Unionville, Ontario, L3R 4J8.

ii. I am a graduate of McMaster University, in the City of Hamilton, Ontario, with a B.A. in Philosophy (1968); I am a graduate of the University of Waterloo, in the City of Waterloo, Ontario, with a B.Sc. in Earth Science (1972);

iii. I have practiced my profession in mineral exploration continuously for the past 37 years, including 18 years as a consultant; 10 years with St. Joe Canada Inc./Bond Gold Canada Inc./LAC Minerals Ltd. as Regional Geologist, Exploration Manager, Vice President and as Senior Vice President, Canadian Exploration; and, 9 years with Beth-Canada Mining Company and Gold Fields Mining Corporation as a Regional Geologist;

iv. I am a Fellow of The Geological Association of Canada;

v. I am a Member of the Canadian Institute of Mining and Metallurgy, the Association of Exploration Geochemists, the Prospectors and Developers Association; and, the Association for Mineral Exploration BC;

vi. I am a member of the Association of Professional Geoscientists of Ontario and the Association of Professional Engineers and Geoscientists of BC;

vii. I have visited the Sturgeon Lake Property and reviewed the progress of the 2010 exploration activities of Excalibur Resources Ltd. and have supervised the preparation of this report entitled "Report on the 2010 JVX Interpretation and Prioritization of the 2009 VTEM Anomalies and on the 2010 SGH, Enzyme Leach Geochemical Surveys (Lines 32-40) to Delineate Drill Targets on the Sturgeon Lake Project, Patricia Mining, Northwestern Ontario, July, 2010" by Geofine Exploration Consultants Ltd. for Excalibur Resources Ltd.

viii. The recommendations herein are solely the responsibility of Geofine Exploration Consultants Ltd.

David E. Molloy, P. Geo.,
President

Dated at Unionville, Ontario, this 31st day of July 2010.

Quality Analysis ... ***Innovative Technologies***

Date Submitted:	02-Jul-10
Invoice No.:	A10-3542 (i)
Invoice Date:	14-Jul-10
Your Reference:	STURGEN LAKE

Excalibur Resources Ltd.
Excalibur Resources

Canada

ATTN: Ahmad Mumin

CERTIFICATE OF ANALYSIS

103 Soil samples were submitted for analysis.

The following analytical packages were requested: Code 7-Enhanced Enzyme Leach Enzyme Leach ICP/MS(ENZYME)
Code SGH Soil Gas Hydrocarbons

REPORT **A10-3542 (i)**

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Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1	5	0.1	0.3	0.05	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36154	2000	28	6	10.5	0.9	3	0.4	0.10	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.40	0.20	6.0	16	1	< 5	0.7	1.0	0.10	< 0.1	< 0.1
36155	4000	76	17	31.2	1.2	4	0.3	0.80	< 0.5	0.1	< 0.005	0.008	< 0.1	1.60	0.90	14.0	25	3	37	0.9	2.0	0.10	< 0.1	1.0
36157	3000	44	9	17.6	1.5	3	0.5	0.40	< 0.5	0.1	0.010	< 0.005	< 0.1	1.00	0.50	9.0	14	2	16	0.9	2.0	0.20	< 0.1	< 0.1
36158	2000	50	12	29.0	1.1	3	0.4	0.70	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.10	0.50	8.0	16	3	21	0.7	2.0	0.10	< 0.1	1.0
36159	3000	70	18	44.7	1.2	3	0.4	0.80	< 0.5	0.1	< 0.005	< 0.005	0.1	2.80	0.90	13.0	26	4	36	1.0	2.0	0.20	< 0.1	1.0
36160	3000	49	11	21.8	1.1	4	0.3	0.70	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.00	0.50	8.9	16	3	29	0.8	1.0	0.10	< 0.1	< 0.1
36161	3000	54	11	12.0	0.6	4	0.2	0.30	< 0.5	< 0.1	< 0.005	0.006	< 0.1	0.80	0.40	4.1	13	1	12	0.3	1.0	0.10	< 0.1	1.0
36162	4000	63	14	34.3	1.7	3	0.6	0.70	< 0.5	0.1	0.010	< 0.005	0.1	1.00	0.50	19.0	23	4	64	0.8	2.0	0.10	< 0.1	1.0
36163	3000	58	17	14.7	1.3	2	0.4	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.50	0.50	17.0	30	6	22	1.1	2.0	0.10	< 0.1	1.0
36164	3000	67	16	34.5	2.0	3	0.7	0.60	< 0.5	0.1	< 0.005	0.005	0.1	3.00	0.80	26.5	18	5	62	0.8	2.0	0.10	< 0.1	1.0
36165	4000	69	21	58.2	2.0	4	1.1	0.50	< 0.5	0.1	0.010	< 0.005	< 0.1	2.60	0.80	10.0	16	6	20	1.0	3.0	0.10	< 0.1	< 0.1
36166	5000	48	10	15.7	1.0	4	0.7	0.30	< 0.5	0.1	< 0.005	< 0.005	< 0.1	1.70	1.00	12.0	14	6	25	0.5	1.0	0.10	< 0.1	2.0
36167	3000	41	13	52.8	1.7	2	1.0	0.50	< 0.5	0.1	0.010	< 0.005	< 0.1	0.80	0.50	4.7	19	4	221	0.6	1.0	0.20	< 0.1	1.0
36168	3000	39	8	16.9	1.4	2	0.5	0.60	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.80	0.50	10.0	17	1	84	0.6	1.0	0.10	< 0.1	1.0
36169	3000	46	15	13.3	1.8	3	0.4	0.60	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.60	0.30	8.2	24	1	33	0.6	2.0	0.10	< 0.1	1.0
36170	3000	49	16	53.0	2.5	2	0.8	0.80	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.00	0.50	9.6	15	3	34	1.0	3.0	0.20	< 0.1	< 0.1
36171	2000	40	9	24.9	2.1	2	0.5	0.90	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.60	0.30	6.7	23	3	17	0.5	2.0	0.10	< 0.1	< 0.1
36172	4000	55	12	56.6	3.6	2	1.0	0.50	< 0.5	0.2	0.010	0.021	< 0.1	0.80	0.50	7.8	15	7	87	1.4	2.0	0.10	< 0.1	1.0
36173	4000	73	14	18.4	1.3	3	0.7	0.90	< 0.5	< 0.1	0.010	< 0.005	0.1	0.50	0.40	4.3	14	< 1	16	0.5	1.0	0.10	< 0.1	< 0.1
36174	3000	54	14	29.6	1.3	2	0.4	0.60	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.90	0.60	7.1	22	3	14	0.9	3.0	0.10	< 0.1	< 0.1
36175	2000	50	11	30.9	1.6	2	0.2	0.50	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.10	0.50	4.1	15	6	11	1.0	2.0	0.10	< 0.1	1.0
36176	3000	53	13	16.9	0.9	3	0.3	0.50	< 0.5	< 0.1	< 0.005	0.005	< 0.1	1.00	0.60	8.3	24	3	24	0.6	1.0	0.10	< 0.1	1.0
36177	4000	54	15	36.6	1.6	2	1.0	0.60	< 0.5	0.1	0.010	< 0.005	< 0.1	1.40	0.70	7.0	14	5	51	1.0	2.0	0.20	< 0.1	1.0
36178	2000	56	12	6.8	0.4	2	< 0.1	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.60	0.40	9.4	21	2	< 5	0.2	1.0	0.10	< 0.1	< 0.1
36180	3000	73	13	2.8	0.6	3	0.1	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.30	0.30	4.1	7	< 1	< 5	1.2	< 0.3	< 0.05	< 0.1	< 0.1
36181	2000	49	8	14.5	1.4	2	0.2	0.40	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.60	0.30	6.6	11	2	38	1.1	2.0	0.10	< 0.1	< 0.1
36182	< 1000	13	2	44.9	0.2	2	0.3	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.40	0.20	6.8	28	2	15	1.5	1.0	0.10	< 0.1	< 0.1
36183	2000	75	13	11.6	1.1	3	0.1	0.40	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.00	0.30	10.0	14	2	30	0.9	1.0	0.10	< 0.1	2.0
36184	< 1000	52	10	8.6	0.9	4	0.2	0.50	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.50	0.35	12.5	23	1	17	0.6	1.0	0.10	< 0.1	1.0
36185	1000	60	14	3.2	0.7	3	0.1	0.40	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.50	0.30	7.6	16	< 1	17	0.7	< 0.3	0.10	< 0.1	1.0
36186	2000	66	13	8.3	1.1	3	0.3	0.20	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.50	0.30	14.0	9	2	10	0.3	1.0	0.10	< 0.1	< 0.1
36187	2000	45	8	5.0	0.5	2	0.3	0.30	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.50	0.30	8.5	11	3	< 5	0.7	1.0	0.10	< 0.1	< 0.1
36188	3000	74	20	30.6	3.0	2	0.5	0.30	< 0.5	0.1	0.010	< 0.005	< 0.1	1.00	0.50	12.0	19	11	27	0.9	2.0	0.20	< 0.1	1.0
36192	< 1000	25	6	7.1	0.3	1	0.3	0.20	< 0.5	0.1	0.010	< 0.005	< 0.1	0.80	0.40	5.7	5	6	10	< 0.1	< 0.3	0.10	< 0.1	< 0.1
36194	2000	40	7	7.1	0.7	2	0.4	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.90	0.50	3.2	5	5	19	0.2	< 0.3	0.10	< 0.1	< 0.1
36195	2000	31	8	6.3	0.8	1	0.1	0.30	< 0.5	< 0.1	< 0.005	0.005	< 0.1	0.50	0.40	4.3	11	2	12	0.4	< 0.3	0.10	< 0.1	< 0.1
36196	2000	30	9	8.6	0.6	1	0.4	0.40	< 0.5	< 0.1	0.010	0.006	< 0.1	0.50	0.30	3.5	7	2	24	0.3	< 0.3	0.10	< 0.1	< 0.1
36197	2000	59	10	11.6	0.9	2	0.3	0.50	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.20	13.0	8	2	8	0.7	1.0	< 0.05	< 0.1	1.0
36198	1000	50	8	4.8	0.5	1	0.1	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.30	0.30	6.4	12	< 1	8	0.5	< 0.3	< 0.05	< 0.1	< 0.1
36199	2000	42	10	9.9	1.6	2	0.2	0.40	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.70	0.50	3.7	11	7	14	0.7	1.0	0.10	< 0.1	< 0.1
36200	2000	37	5	7.4	0.4	2	0.4	0.40	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.30	0.30	12.0	6	< 1	7	0.7	< 0.3	0.10	< 0.1	< 0.1
36201	2000	61	8	2.4	0.4	3	0.4	0.30	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.20	0.30	2.1	8	< 1	7	0.8	< 0.3	0.10	< 0.1	< 0.1
36204	< 1000	17	2	20.8	0.2	1	0.2	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.20	0.10	5.9	14	< 1	7	0.1	< 0.3	< 0.05	< 0.1	< 0.1
36205	1000	49	6	4.8	0.4	2	< 0.1	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.30	0.20	6.7	8	< 1	20	0.9	1.0	< 0.05	< 0.1	1.0
36206	2000	44	9	2.9	0.4	2	0.1	0.10	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.40	0.20	7.5	18	< 1	10	0.8	< 0.3	< 0.05	< 0.1	1.0
36211	12000	95	8	3670	21.0	3	36.0	1.70	< 0.5	12.0	0.080	< 0.005	< 0.1	1.50	1.10	4.0	13	12	65	0.6	1.0	0.60	< 0.1	1.0
36216	2000	48	9	3.8	0.7	2	0.1	0.10	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.40	0.30	17.0	11	3	45	0.5	< 0.3	0.10	< 0.1	6.0
36218	4000	39	6	3.7	1.4	3	0.2	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.20	0.20	8.2	15	1	13	1.1	1.0	< 0.05	< 0.1	1.0
36219	5000	67	12	8.9	1.7	4	0.5	0.10	< 0.5	0.2	0.010	< 0.005	< 0.1	0.80	0.60	18.0	28	5	13	1.7	1.0	< 0.05	< 0.1	1.0
36220	4000	59	10	4.9	1.6	3	0.4	0.20	< 0.5	< 0.1	< 0.005	< 0.005	0.1	0.70	0.50	4.6	10	4	17	2.2	1.0	0.10	< 0.1	< 0.1
36221	5000	83	14	12.6	2.0	4	0.6	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.10	0.60	13.0	15	3	< 5	0.9	1.0	0.10	< 0.1	1.0
36225	7000	51	18	16.3	3.2	4	0.3	0.40	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.20	0.90	15.0	17	3	16	1.5	2.0	0.10	< 0.1	< 0.1

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1	5	0.1	0.3	0.05	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36226	4000	50	12	8.8	1.7	4	0.4	0.40	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.30	1.00	22.0	30	4	19	1.0	1.0	0.10	< 0.1	1.0
36227	3000	29	9	9.1	0.9	3	0.3	0.40	< 0.5	< 0.1	< 0.005	< 0.005	0.1	0.60	0.50	11.0	13	1	< 5	0.1	1.0	< 0.05	< 0.1	< 0.1
36228	5000	42	12	8.0	0.8	3	0.1	0.30	< 0.5	< 0.1	< 0.005	< 0.005	0.1	0.70	0.40	14.0	25	< 1	< 5	0.6	1.0	< 0.05	< 0.1	< 0.1
36229	9000	39	11	10.8	1.6	4	0.6	0.40	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.60	0.60	6.4	17	3	28	0.6	1.0	0.10	< 0.1	< 0.1
36230	5000	36	12	22.3	1.8	3	1.2	0.55	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.80	0.80	9.8	21	2	33	0.9	2.0	0.10	< 0.1	< 0.1
36231	5000	38	10	8.6	1.2	3	0.2	0.50	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.40	6.4	20	< 1	< 5	< 0.1	1.0	0.10	< 0.1	< 0.1
36232	5000	56	15	37.9	3.4	4	1.0	0.50	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.10	0.80	10.0	31	6	88	0.9	2.0	0.10	< 0.1	< 0.1
36233	5000	56	13	31.2	1.9	3	0.9	0.60	< 0.5	< 0.1	0.010	< 0.005	< 0.1	2.40	1.50	6.0	20	5	19	1.3	2.0	0.10	< 0.1	< 0.1
36234	3000	38	9	18.7	0.5	2	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.00	0.70	5.7	11	< 1	< 5	< 0.1	< 0.3	< 0.05	< 0.1	< 0.1
36235	3000	38	7	9.9	1.0	4	0.7	0.40	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.60	0.60	13.0	12	< 1	< 5	0.1	1.0	< 0.05	< 0.1	< 0.1
36251	2000	32	5	5.7	0.4	4	0.3	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.30	0.30	9.2	9	< 1	< 5	0.5	1.0	< 0.05	< 0.1	< 0.1
36252	4000	41	11	18.8	1.2	3	0.5	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.60	0.80	5.8	14	12	< 5	0.4	1.0	0.10	< 0.1	< 0.1
36254	3000	61	11	10.9	0.9	4	0.1	0.40	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.90	0.80	6.7	26	19	< 5	< 0.1	< 0.3	0.10	< 0.1	< 0.1
36255	3000	51	12	23.8	1.5	3	0.3	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.10	1.05	17.5	29	20	< 5	< 0.1	1.0	0.10	< 0.1	< 0.1
36257	2000	73	9	9.8	0.4	4	0.4	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.50	0.50	6.1	4	1	< 5	0.4	1.0	< 0.05	< 0.1	< 0.1
36258	3000	50	8	4.3	0.5	3	< 0.1	0.20	< 0.5	< 0.1	0.030	< 0.005	< 0.1	0.20	0.40	8.1	14	< 1	26	1.7	< 0.3	0.10	< 0.1	1.0
36259	4000	99	24	0.6	0.7	4	< 0.1	0.10	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.50	0.60	15.0	23	6	32	1.6	< 0.3	0.10	< 0.1	1.0
36260	4000	71	40	7.2	0.3	3	< 0.1	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.50	8.4	8	4	< 5	1.1	< 0.3	0.10	< 0.1	1.0
36261	4000	91	23	21.1	1.3	5	0.1	0.50	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.50	0.90	15.0	22	9	29	1.6	1.0	0.10	< 0.1	1.0
36262	5000	75	12	67.1	4.9	4	0.7	0.30	< 0.5	0.2	< 0.005	< 0.005	< 0.1	0.70	0.50	11.0	24	4	12	2.1	3.0	0.10	< 0.1	1.0
36263	3000	117	20	9.0	1.1	4	< 0.1	0.30	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.70	0.50	21.0	14	4	< 5	1.8	1.0	< 0.05	< 0.1	1.0
36264	4000	134	27	13.2	0.8	4	0.1	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.60	0.60	14.0	30	3	14	0.9	1.0	0.10	< 0.1	1.0
36269	4000	86	35	8.1	1.5	5	< 0.1	0.15	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.05	0.80	20.0	27	22	14	0.1	< 0.3	< 0.05	< 0.1	2.0
36270	3000	99	23	9.4	2.0	5	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.00	0.80	21.0	32	17	5	< 0.1	< 0.3	0.10	< 0.1	2.0
36271	4000	52	11	9.0	1.6	4	0.2	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.60	0.70	13.0	15	8	14	0.5	1.0	0.10	< 0.1	< 0.1
36272	4000	58	9	8.2	1.1	3	0.4	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.50	0.60	6.7	7	4	< 5	0.5	1.0	< 0.05	< 0.1	< 0.1

Analyte Symbol	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36154	< 0.01	< 0.2	0.094	< 0.5	280	< 3	0.88	1.5	0.6	0.10	0.03	1.75	2.83	0.37	1.45	0.30	0.10	0.24	< 0.01	0.27	< 0.01	0.09	< 0.01	0.10
36155	< 0.01	< 0.2	0.227	< 0.5	490	< 3	2.50	5.2	0.7	0.20	0.04	7.68	14.1	1.92	7.82	1.28	0.40	0.97	0.10	0.35	0.10	0.26	< 0.01	0.20
36157	0.01	< 0.2	0.125	< 0.5	340	< 3	0.81	2.9	0.7	0.10	0.04	2.11	3.62	0.48	1.86	0.33	0.10	0.27	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.10
36158	< 0.01	< 0.2	0.084	< 0.5	370	< 3	1.27	3.3	0.6	0.10	0.02	3.60	5.61	0.74	2.94	0.51	0.20	0.42	0.10	< 0.01	< 0.01	0.12	< 0.01	0.10
36159	< 0.01	< 0.2	0.169	< 0.5	500	< 3	2.41	8.6	1.0	0.40	0.03	6.22	11.1	1.49	5.68	0.99	0.30	0.85	0.10	0.23	0.10	0.25	< 0.01	0.20
36160	< 0.01	< 0.2	0.102	< 0.5	190	< 3	3.68	3.4	0.6	0.20	< 0.02	2.42	3.70	0.47	1.84	0.36	0.10	0.29	< 0.01	< 0.01	< 0.01	0.11	< 0.01	0.10
36161	0.01	< 0.2	0.111	< 0.5	110	< 3	1.28	3.2	0.2	0.10	< 0.02	2.99	4.72	0.59	2.31	0.46	0.10	0.40	0.10	< 0.01	< 0.01	0.13	< 0.01	0.10
36162	0.01	< 0.2	0.191	< 0.5	340	< 3	0.79	3.2	0.8	0.10	0.03	2.02	3.64	0.44	1.77	0.33	0.10	0.31	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.10
36163	< 0.01	< 0.2	0.177	< 0.5	310	< 3	0.96	2.9	0.7	0.10	0.02	2.61	5.62	0.63	2.46	0.46	0.10	0.35	< 0.01	< 0.01	< 0.01	0.11	< 0.01	0.10
36164	< 0.01	< 0.2	0.193	< 0.5	430	< 3	1.00	5.7	0.9	0.20	0.03	4.49	8.83	0.90	3.41	0.56	0.20	0.45	0.10	< 0.01	< 0.01	0.12	< 0.01	0.10
36165	0.01	< 0.2	0.112	< 0.5	730	< 3	1.36	7.8	1.4	0.40	0.07	4.94	8.34	1.12	4.46	0.76	0.20	0.57	0.10	0.03	< 0.01	0.16	< 0.01	0.10
36166	< 0.01	< 0.2	0.155	< 0.5	130	< 3	2.90	3.2	0.1	0.10	< 0.02	8.45	17.7	2.17	8.74	1.57	0.40	1.25	0.10	0.29	0.10	0.30	< 0.01	0.20
36167	< 0.01	< 0.2	0.071	< 0.5	310	< 3	1.58	3.6	0.7	0.10	0.02	7.06	13.7	1.66	6.61	0.99	0.30	0.87	0.10	0.04	0.10	0.15	< 0.01	0.10
36168	0.01	< 0.2	0.138	< 0.5	330	< 3	0.67	1.8	0.6	0.10	0.02	2.48	4.14	0.49	1.93	0.34	0.10	0.30	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.10
36169	0.01	< 0.2	0.122	< 0.5	220	< 3	0.76	2.1	0.4	0.10	< 0.02	1.49	2.89	0.33	1.55	0.25	0.10	0.25	< 0.01	< 0.01	< 0.01	0.08	< 0.01	0.10
36170	< 0.01	0.7	0.142	< 0.5	490	< 3	0.57	4.6	1.0	0.20	0.04	1.48	2.84	0.35	1.47	0.25	0.10	0.23	< 0.01	< 0.01	< 0.01	0.07	< 0.01	0.10
36171	< 0.01	< 0.2	0.116	< 0.5	360	< 3	0.42	2.6	0.6	0.10	0.02	1.09	1.75	0.22	0.92	0.16	0.10	0.14	< 0.01	< 0.01	< 0.01	0.05	< 0.01	0.10
36172	0.01	< 0.2	0.049	< 0.5	420	< 3	0.57	4.2	0.9	0.20	0.04	1.55	2.06	0.30	1.24	0.24	0.10	0.19	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.10
36173	< 0.01	< 0.2	0.056	< 0.5	150	< 3	0.29	2.3	0.5	0.10	< 0.02	0.56	1.19	0.13	0.51	0.11	0.10	0.10	< 0.01	< 0.01	< 0.01	0.04	< 0.01	< 0.01
36174	0.01	< 0.2	0.075	< 0.5	460	< 3	1.11	4.8	0.7	0.20	0.04	2.20	3.23	0.46	1.73	0.31	0.10	0.30	< 0.01	< 0.01	< 0.01	0.11	< 0.01	0.10
36175	0.01	< 0.2	0.106	< 0.5	300	< 3	1.18	4.6	0.7	0.20	0.03	2.69	5.11	0.62	2.43	0.45	0.20	0.39	0.10	< 0.01	< 0.01	0.12	< 0.01	0.10
36176	0.01	< 0.2	0.102	< 0.5	180	< 3	1.12	3.1	0.2	0.10	< 0.02	2.12	4.12	0.49	1.96	0.38	0.10	0.35	< 0.01	< 0.01	< 0.01	0.11	< 0.01	0.10
36177	0.01	< 0.2	0.076	< 0.5	330	< 3	0.82	3.7	0.9	0.20	0.03	2.73	3.91	0.54	2.15	0.41	0.20	0.31	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.10
36178	0.01	< 0.2	0.113	< 0.5	80	< 3	1.49	2.2	0.1	0.10	< 0.02	2.67	5.44	0.65	2.64	0.51	0.10	0.42	0.10	< 0.01	< 0.01	0.14	< 0.01	0.10
36180	< 0.01	< 0.2	0.160	< 0.5	50	< 3	0.51	0.8	0.1	< 0.01	< 0.02	1.44	2.43	0.31	0.89	0.15	< 0.01	0.16	< 0.01	< 0.01	< 0.01	0.05	< 0.01	< 0.01
36181	< 0.01	< 0.2	0.076	< 0.5	230	< 3	0.57	2.0	0.6	0.10	0.02	1.04	2.12	0.25	0.90	0.18	0.10	0.18	< 0.01	< 0.01	< 0.01	0.07	< 0.01	0.10
36182	< 0.01	< 0.2	0.102	< 0.5	460	< 3	1.34	0.9	0.8	0.10	0.03	2.22	4.43	0.62	2.55	0.49	0.20	0.40	0.10	< 0.01	< 0.01	0.13	< 0.01	0.10
36183	< 0.01	< 0.2	0.156	< 0.5	80	< 3	1.93	3.7	0.1	0.20	< 0.02	3.14	5.47	0.67	2.66	0.47	0.20	0.47	0.10	0.06	0.10	0.18	< 0.01	0.20
36184	< 0.01	< 0.2	0.171	< 0.5	120	< 3	0.62	1.5	0.2	0.10	< 0.02	1.11	2.28	0.26	1.06	0.20	0.10	0.17	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.10
36185	< 0.01	< 0.2	0.137	< 0.5	70	< 3	0.51	1.7	< 0.1	0.10	< 0.02	0.70	1.62	0.17	0.66	0.16	0.10	0.15	< 0.01	< 0.01	< 0.01	0.05	< 0.01	0.10
36186	< 0.01	< 0.2	0.078	< 0.5	60	< 3	0.50	1.7	0.1	0.10	< 0.02	0.59	1.53	0.16	0.67	0.13	0.10	0.14	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.10
36187	0.01	< 0.2	0.055	< 0.5	70	< 3	0.76	1.9	0.1	0.10	< 0.02	1.05	1.87	0.24	0.92	0.17	0.10	0.19	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.10
36188	< 0.01	< 0.2	0.117	< 0.5	320	< 3	1.92	3.1	0.5	0.10	0.02	2.62	8.31	0.68	2.79	0.59	0.20	0.49	0.20	0.11	0.10	0.20	< 0.01	0.20
36192	< 0.01	< 0.2	0.053	< 0.5	100	< 3	1.90	1.4	0.3	0.10	< 0.02	2.19	3.70	0.74	3.56	0.74	0.20	0.58	0.10	0.05	0.10	0.16	< 0.01	0.20
36194	0.01	< 0.2	0.058	< 0.5	130	< 3	1.89	1.6	0.2	0.10	0.02	2.68	6.89	0.87	3.85	0.78	0.20	0.62	0.10	0.07	0.10	0.20	< 0.01	0.20
36195	< 0.01	< 0.2	0.053	< 0.5	90	< 3	0.66	1.7	0.1	0.10	< 0.02	0.78	1.87	0.21	0.79	0.20	0.10	0.17	< 0.01	< 0.01	< 0.01	0.08	< 0.01	0.10
36196	< 0.01	< 0.2	0.072	< 0.5	70	< 3	0.26	1.2	< 0.1	0.10	< 0.02	0.33	0.89	0.10	0.42	0.06	0.10	0.07	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
36197	< 0.01	< 0.2	0.046	< 0.5	90	< 3	0.55	1.8	0.1	0.10	< 0.02	0.96	1.84	0.23	0.90	0.20	0.10	0.16	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.10
36198	< 0.01	< 0.2	0.068	< 0.5	50	< 3	0.59	1.1	< 0.1	0.10	< 0.02	0.89	1.57	0.22	0.89	0.20	0.10	0.16	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.10
36199	< 0.01	< 0.2	0.105	< 0.5	130	< 3	1.33	2.3	0.2	0.10	< 0.02	2.34	4.11	0.52	2.13	0.43	0.20	0.37	0.10	< 0.01	< 0.01	0.14	< 0.01	0.10
36200	< 0.01	< 0.2	0.051	< 0.5	80	< 3	0.28	0.6	< 0.1	< 0.01	< 0.02	0.51	1.22	0.14	0.55	0.11	0.10	0.08	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
36201	0.01	< 0.2	0.063	< 0.5	50	< 3	0.22	0.8	< 0.1	< 0.01	< 0.02	0.40	0.81	0.10	0.41	0.08	0.10	0.07	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
36204	< 0.01	< 0.2	0.040	< 0.5	130	< 3	0.12	0.5	0.3	< 0.01	< 0.02	0.15	0.57	0.06	0.21	0.05	< 0.01	0.05	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
36205	< 0.01	< 0.2	0.095	< 0.5	90	< 3	0.37	1.0	0.1	0.10	< 0.02	0.73	1.44	0.15	0.60	0.12	< 0.01	0.09	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
36206	0.01	< 0.2	0.081	< 0.5	70	< 3	0.40	1.1	0.2	0.10	< 0.02	0.72	1.53	0.17	0.70	0.13	0.10	0.12	< 0.01	< 0.01	< 0.01	0.04	< 0.01	0.10
36211	< 0.01	0.2	0.260	< 0.5	880	< 3	4.49	6.2	3.4	0.20	0.20	9.08	14.7	2.15	8.87	1.51	0.40	1.21	0.10	0.38	0.10	0.38	0.10	0.40
36216	< 0.01	< 0.2	0.101	< 0.5	70	< 3	1.03	1.7	0.1	0.10	< 0.02	1.72	3.30	0.39	1.55	0.29	0.20	0.26	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.10
36218	< 0.01	< 0.2	0.213	< 0.5	150	< 3	0.75	1.0	0.2	0.10	< 0.02	1.66	2.70	0.36	1.34	0.19	0.10	0.22	< 0.01	0.15	< 0.01	0.06	< 0.01	0.10
36219	< 0.01	< 0.2	0.350	< 0.5	230	< 3	1.48	1.6	0.4	0.10	< 0.02	3.69	7.59	0.91	3.46	0.64	0.20	0.60	0.10	< 0.01	0.10	0.17	< 0.01	0.20
36220	< 0.01	< 0.2	0.086	< 0.5	100	< 3	1.59	2.5	0.3	0.10	< 0.02	3.12	5.68	0.65	2.44	0.43	0.20	0.48	0.10	< 0.01	0.10	0.16	< 0.01	0.10
36221	0.01	< 0.2	0.171	< 0.5	100	< 3	1.63	3.9	0.2	0.20	< 0.02	3.50	6.59	0.77	3.14	0.59	0.20	0.50	0.10	< 0.01	0.10	0.16	< 0.01	0.20
36225	0.01	< 0.2	0.313	< 0.5	300	< 3	2.55	4.6	0.6	0.20	0.02	5.56	9.78	1.15	4.67	0.90	0.40	0.78	0.10	< 0.01	0.10	0.29	< 0.01	0.30

Analyte Symbol	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36226	0.01	< 0.2	0.344	< 0.5	190	< 3	2.59	4.1	0.5	0.20	0.03	5.80	12.2	1.34	5.16	0.96	0.30	0.81	0.10	< 0.01	0.10	0.26	< 0.01	0.20
36227	0.01	< 0.2	0.169	< 0.5	170	< 3	1.19	2.4	0.2	0.10	< 0.02	5.29	7.54	0.82	3.06	0.49	0.20	0.46	0.10	< 0.01	0.10	0.12	< 0.01	0.10
36228	0.01	< 0.2	0.172	< 0.5	220	< 3	0.97	2.6	0.2	0.10	< 0.02	2.17	4.13	0.48	1.95	0.32	0.10	0.31	< 0.01	< 0.01	< 0.01	0.08	< 0.01	0.10
36229	0.02	< 0.2	0.150	< 0.5	210	< 3	0.59	1.6	0.3	0.10	< 0.02	2.08	3.73	0.41	1.70	0.27	0.20	0.26	< 0.01	< 0.01	< 0.01	0.06	< 0.01	< 0.01
36230	< 0.01	< 0.2	0.131	< 0.5	320	< 3	1.18	3.3	0.6	0.10	0.02	4.89	7.43	0.80	2.81	0.51	0.20	0.44	0.10	< 0.01	< 0.01	0.11	< 0.01	0.10
36231	0.01	< 0.2	0.123	< 0.5	120	< 3	0.89	2.7	0.2	0.10	< 0.02	2.29	3.09	0.42	1.53	0.31	0.10	0.30	< 0.01	< 0.01	< 0.01	0.10	< 0.01	0.10
36232	0.01	< 0.2	0.130	< 0.5	500	< 3	1.43	2.9	0.8	0.10	0.03	5.32	10.0	1.24	4.85	0.83	0.20	0.65	0.10	< 0.01	< 0.01	0.13	< 0.01	0.10
36233	< 0.01	< 0.2	0.306	< 0.5	370	< 3	3.31	3.5	0.7	0.20	0.02	16.8	33.1	3.97	14.6	2.33	0.60	1.86	0.20	0.18	0.10	0.33	< 0.01	0.30
36234	< 0.01	< 0.2	0.203	< 0.5	100	< 3	2.87	4.2	0.2	0.20	< 0.02	5.57	8.88	1.09	4.14	0.78	0.40	0.73	0.10	< 0.01	0.10	0.29	< 0.01	0.30
36235	< 0.01	< 0.2	0.194	< 0.5	160	< 3	0.79	1.6	0.2	0.10	< 0.02	2.89	4.66	0.56	2.29	0.41	0.10	0.36	< 0.01	< 0.01	< 0.01	0.07	< 0.01	0.10
36251	< 0.01	< 0.2	0.068	< 0.5	90	< 3	0.36	0.8	0.1	< 0.01	< 0.02	0.71	1.75	0.18	0.79	0.13	0.10	0.15	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
36252	< 0.01	< 0.2	0.187	< 0.5	160	< 3	2.39	2.6	0.3	0.10	< 0.02	3.21	5.49	0.86	3.67	0.71	0.30	0.69	0.10	< 0.01	0.10	0.18	< 0.01	0.20
36254	< 0.01	< 0.2	0.287	< 0.5	40	< 3	3.75	2.4	< 0.1	0.10	< 0.02	10.1	18.8	2.59	10.3	2.07	0.40	1.80	0.20	0.24	0.10	0.34	< 0.01	0.30
36255	< 0.01	< 0.2	0.270	< 0.5	200	< 3	2.55	3.2	0.4	0.15	< 0.02	4.63	9.72	1.25	4.97	0.89	0.30	0.82	0.10	< 0.01	0.10	0.26	< 0.01	0.25
36257	0.01	< 0.2	0.092	< 0.5	220	< 3	1.37	1.7	0.3	0.10	< 0.02	2.52	5.63	0.67	2.75	0.50	0.20	0.46	0.10	< 0.01	0.10	0.12	< 0.01	0.10
36258	< 0.01	< 0.2	0.227	< 0.5	40	< 3	0.62	1.0	< 0.1	< 0.01	< 0.02	0.85	1.85	0.19	0.79	0.15	0.10	0.17	< 0.01	< 0.01	< 0.01	0.05	< 0.01	0.10
36259	< 0.01	< 0.2	0.302	< 0.5	30	< 3	2.61	1.9	< 0.1	0.10	< 0.02	4.33	7.40	0.91	3.55	0.66	0.20	0.63	0.10	< 0.01	0.10	0.22	< 0.01	0.20
36260	< 0.01	< 0.2	0.301	< 0.5	50	< 3	2.99	1.8	< 0.1	0.10	< 0.02	6.18	11.7	1.22	4.89	0.83	0.30	0.80	0.10	< 0.01	0.10	0.28	< 0.01	0.30
36261	0.01	< 0.2	0.267	< 0.5	140	< 3	3.89	6.5	0.3	0.30	< 0.02	6.35	12.6	1.50	5.86	1.25	0.50	1.06	0.10	0.20	0.10	0.37	0.10	0.40
36262	< 0.01	< 0.2	0.143	< 0.5	730	< 3	0.92	2.4	1.3	0.10	0.05	1.44	3.34	0.37	1.46	0.33	0.10	0.25	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.10
36263	< 0.01	< 0.2	0.214	< 0.5	60	< 3	1.51	3.7	< 0.1	0.10	< 0.02	2.28	4.76	0.51	2.21	0.39	0.20	0.31	0.10	< 0.01	0.10	0.15	< 0.01	0.20
36264	0.01	< 0.2	0.322	< 0.5	190	< 3	1.91	3.1	0.2	0.10	< 0.02	2.29	4.56	0.57	2.24	0.45	0.20	0.39	0.10	< 0.01	< 0.01	0.20	< 0.01	0.20
36269	< 0.01	< 0.2	0.201	< 0.5	70	< 3	2.70	3.0	0.1	0.10	< 0.02	4.57	10.1	1.15	4.39	1.00	0.30	0.83	0.10	< 0.01	0.10	0.28	< 0.01	0.30
36270	< 0.01	< 0.2	0.179	< 0.5	80	< 3	2.49	2.8	0.2	0.10	< 0.02	3.84	8.70	0.97	3.85	0.83	0.30	0.73	0.10	< 0.01	0.10	0.28	< 0.01	0.30
36271	0.01	< 0.2	0.189	< 0.5	130	< 3	1.29	2.1	0.2	0.10	< 0.02	1.86	4.23	0.49	1.98	0.40	0.20	0.35	0.10	< 0.01	< 0.01	0.13	< 0.01	0.20
36272	< 0.01	< 0.2	0.066	< 0.5	150	< 3	1.28	1.8	0.3	0.10	< 0.02	1.26	2.70	0.38	1.65	0.31	0.20	0.34	< 0.01	< 0.01	< 0.01	0.13	< 0.01	0.20

Analyte Symbol	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.5	0.1	10	0.4	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36154	< 0.01	2.7	1.0	< 10	33.9	66.4	158	0.60	130	< 0.5	< 0.5	< 0.5	< 0.5
36155	< 0.01	9.2	2.0	< 10	5510	87.9	127	1.10	557	< 0.5	< 0.5	< 0.5	< 0.5
36157	< 0.01	11.0	1.0	< 10	316	46.4	299	0.50	211	< 0.5	< 0.5	< 0.5	< 0.5
36158	< 0.01	5.4	2.0	< 10	513	36.6	262	0.30	358	< 0.5	< 0.5	< 0.5	< 0.5
36159	< 0.01	7.9	2.0	< 10	1580	89.0	238	1.10	513	< 0.5	< 0.5	< 0.5	< 0.5
36160	< 0.01	6.9	2.0	< 10	510	64.8	192	0.50	474	< 0.5	< 0.5	< 0.5	< 0.5
36161	< 0.01	5.7	2.0	< 10	58.3	42.2	104	0.60	258	< 0.5	< 0.5	< 0.5	< 0.5
36162	< 0.01	7.4	2.0	< 10	1360	56.8	230	0.90	352	< 0.5	< 0.5	< 0.5	< 0.5
36163	< 0.01	21.0	2.0	< 10	348	70.7	243	0.80	295	< 0.5	< 0.5	< 0.5	< 0.5
36164	< 0.01	10.5	1.5	< 10	4390	37.7	228	0.20	550	< 0.5	< 0.5	< 0.5	< 0.5
36165	< 0.01	5.0	1.0	< 10	965	63.0	294	0.30	305	< 0.5	< 0.5	< 0.5	< 0.5
36166	< 0.01	3.5	2.0	< 10	515	58.7	134	0.60	202	< 0.5	< 0.5	< 0.5	< 0.5
36167	< 0.01	7.7	1.0	< 10	212	42.1	214	0.10	749	< 0.5	< 0.5	< 0.5	< 0.5
36168	< 0.01	7.8	1.0	< 10	151	42.0	236	1.00	257	< 0.5	< 0.5	< 0.5	< 0.5
36169	< 0.01	5.7	1.0	< 10	113	39.9	233	0.70	291	< 0.5	< 0.5	< 0.5	< 0.5
36170	< 0.01	6.4	1.0	< 10	1120	80.4	209	0.70	374	< 0.5	< 0.5	< 0.5	< 0.5
36171	< 0.01	11.0	1.0	< 10	98.4	46.8	270	0.90	393	< 0.5	< 0.5	< 0.5	< 0.5
36172	< 0.01	8.1	1.0	< 10	373	16.5	284	0.10	696	< 0.5	< 0.5	< 0.5	< 0.5
36173	< 0.01	5.3	1.0	< 10	145	45.8	312	0.40	387	< 0.5	< 0.5	< 0.5	< 0.5
36174	< 0.01	3.8	2.0	< 10	298	51.4	225	0.60	365	< 0.5	< 0.5	< 0.5	< 0.5
36175	< 0.01	4.7	1.0	< 10	53.6	31.0	230	0.60	263	< 0.5	< 0.5	< 0.5	< 0.5
36176	< 0.01	8.4	2.0	< 10	499	20.1	135	0.70	396	< 0.5	< 0.5	< 0.5	< 0.5
36177	< 0.01	5.7	1.0	< 10	789	92.6	252	0.40	371	< 0.5	< 0.5	< 0.5	< 0.5
36178	< 0.01	1.2	1.0	< 10	434	27.0	87.4	0.60	209	< 0.5	< 0.5	< 0.5	< 0.5
36180	< 0.01	2.5	1.0	< 10	29.1	24.2	145	0.40	53.9	< 0.5	< 0.5	< 0.5	< 0.5
36181	< 0.01	5.3	1.0	< 10	286	20.0	110	0.20	92.0	< 0.5	< 0.5	< 0.5	< 0.5
36182	< 0.01	3.7	1.0	< 10	49.8	18.6	124	0.40	233	< 0.5	< 0.5	< 0.5	< 0.5
36183	< 0.01	2.8	2.0	< 10	955	49.3	170	0.70	830	< 0.5	< 0.5	< 0.5	< 0.5
36184	< 0.01	7.1	1.0	< 10	655	61.8	134	0.85	317	< 0.5	< 0.5	< 0.5	< 0.5
36185	< 0.01	7.1	1.0	< 10	231	56.3	119	0.90	316	< 0.5	< 0.5	< 0.5	< 0.5
36186	< 0.01	4.0	1.0	< 10	86.6	19.6	138	0.60	268	< 0.5	< 0.5	< 0.5	< 0.5
36187	< 0.01	3.5	1.0	< 10	318	53.2	134	0.40	265	< 0.5	< 0.5	< 0.5	< 0.5
36188	< 0.01	4.6	1.0	< 10	261	33.8	162	0.50	257	< 0.5	< 0.5	< 0.5	< 0.5
36192	< 0.01	0.9	< 0.1	< 10	844	22.5	76.7	0.30	224	< 0.5	< 0.5	< 0.5	< 0.5
36194	< 0.01	1.8	< 0.1	< 10	164	18.7	79.7	0.20	233	< 0.5	< 0.5	< 0.5	< 0.5
36195	< 0.01	2.7	1.0	< 10	411	39.3	94.1	0.40	279	< 0.5	< 0.5	< 0.5	< 0.5
36196	< 0.01	3.4	< 0.1	< 10	197	59.7	116	1.10	413	< 0.5	< 0.5	< 0.5	< 0.5
36197	< 0.01	2.9	1.0	< 10	785	42.8	113	0.30	275	< 0.5	< 0.5	< 0.5	< 0.5
36198	< 0.01	2.1	1.0	< 10	123	47.8	76.4	0.30	162	< 0.5	< 0.5	< 0.5	< 0.5
36199	< 0.01	2.9	1.0	< 10	331	49.2	79.9	0.50	384	< 0.5	< 0.5	< 0.5	< 0.5
36200	< 0.01	3.6	1.0	< 10	554	25.4	83.5	0.20	219	< 0.5	< 0.5	< 0.5	< 0.5
36201	< 0.01	2.7	1.0	< 10	111	58.8	139	0.60	185	< 0.5	< 0.5	< 0.5	< 0.5
36204	< 0.01	3.2	1.0	< 10	89.4	15.4	150	0.20	131	< 0.5	< 0.5	< 0.5	< 0.5
36205	< 0.01	2.0	1.0	< 10	548	38.0	127	0.40	151	< 0.5	< 0.5	< 0.5	< 0.5
36206	< 0.01	8.8	1.0	< 10	106	63.6	161	0.40	132	< 0.5	< 0.5	< 0.5	< 0.5
36211	0.10	8.9	< 0.1	< 10	1640	10.1	672	0.40	482	< 0.5	< 0.5	< 0.5	< 0.5
36216	< 0.01	17.0	2.0	< 10	640	56.5	70.9	0.80	601	< 0.5	< 0.5	< 0.5	< 0.5
36218	< 0.01	7.5	2.0	< 10	72.6	122	188	1.70	423	< 0.5	< 0.5	< 0.5	< 0.5
36219	< 0.01	36.0	2.0	< 10	31.1	79.2	303	1.40	160	< 0.5	< 0.5	< 0.5	< 0.5
36220	< 0.01	1.0	1.0	< 10	73.3	91.3	307	0.70	262	< 0.5	< 0.5	< 0.5	< 0.5
36221	< 0.01	7.5	2.0	< 10	626	132	340	0.90	515	< 0.5	< 0.5	< 0.5	< 0.5
36225	< 0.01	10.0	2.0	< 10	462	69.7	165	0.90	768	< 0.5	< 0.5	< 0.5	< 0.5

Analyte Symbol	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.5	0.1	10	0.4	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36226	< 0.01	5.4	2.0	< 10	3790	93.9	173	1.50	351	< 0.5	< 0.5	< 0.5	< 0.5
36227	< 0.01	2.0	2.0	< 10	2620	106	210	0.90	306	< 0.5	< 0.5	< 0.5	< 0.5
36228	< 0.01	11.0	3.0	< 10	430	109	163	0.70	516	< 0.5	< 0.5	< 0.5	< 0.5
36229	< 0.01	14.0	2.0	< 10	455	99.8	405	0.60	725	< 0.5	< 0.5	< 0.5	< 0.5
36230	< 0.01	7.9	1.5	< 10	432	130	391	0.55	779	< 0.5	< 0.5	< 0.5	< 0.5
36231	< 0.01	6.3	2.0	< 10	125	39.9	389	0.70	466	< 0.5	< 0.5	< 0.5	< 0.5
36232	< 0.01	6.0	1.0	< 10	135	107	330	0.60	281	< 0.5	< 0.5	< 0.5	< 0.5
36233	< 0.01	12.0	2.0	< 10	103	78.5	269	1.50	321	< 0.5	< 0.5	< 0.5	< 0.5
36234	< 0.01	2.9	4.0	< 10	39.2	39.7	133	0.60	1170	< 0.5	< 0.5	< 0.5	< 0.5
36235	< 0.01	7.4	2.0	< 10	138	60.3	302	0.90	315	< 0.5	< 0.5	< 0.5	< 0.5
36251	< 0.01	4.2	1.0	< 10	152	49.6	295	0.30	439	< 0.5	< 0.5	< 0.5	< 0.5
36252	< 0.01	3.5	1.0	< 10	315	83.4	245	1.50	851	< 0.5	< 0.5	< 0.5	< 0.5
36254	< 0.01	7.7	2.0	< 10	279	51.4	191	1.60	516	< 0.5	< 0.5	< 0.5	< 0.5
36255	< 0.01	4.0	1.0	< 10	553	91.8	209	2.80	610	< 0.5	< 0.5	< 0.5	< 0.5
36257	< 0.01	1.7	1.0	< 10	302	76.8	388	0.40	179	< 0.5	< 0.5	< 0.5	< 0.5
36258	< 0.01	6.2	2.0	< 10	412	87.5	284	0.70	810	< 0.5	< 0.5	< 0.5	< 0.5
36259	< 0.01	8.3	3.0	< 10	134	45.8	193	0.80	326	< 0.5	< 0.5	< 0.5	< 0.5
36260	< 0.01	4.0	2.0	< 10	136	87.0	150	0.60	312	< 0.5	< 0.5	< 0.5	< 0.5
36261	0.10	7.4	4.0	< 10	145	93.5	531	0.80	1030	< 0.5	< 0.5	< 0.5	< 0.5
36262	< 0.01	7.5	1.0	< 10	157	29.9	153	0.20	236	< 0.5	< 0.5	< 0.5	< 0.5
36263	< 0.01	6.0	2.0	< 10	1170	92.1	667	0.90	568	< 0.5	< 0.5	< 0.5	< 0.5
36264	< 0.01	7.5	2.0	< 10	97.9	70.7	189	1.00	336	< 0.5	< 0.5	< 0.5	< 0.5
36269	< 0.01	10.0	2.0	< 10	89.4	69.2	125	1.55	373	< 0.5	< 0.5	< 0.5	< 0.5
36270	< 0.01	10.0	2.0	< 10	83.5	68.6	129	1.80	354	< 0.5	< 0.5	< 0.5	< 0.5
36271	< 0.01	7.3	1.0	< 10	436	82.5	171	0.80	450	< 0.5	< 0.5	< 0.5	< 0.5
36272	< 0.01	4.9	1.0	< 10	78.5	53.4	191	0.40	427	< 0.5	< 0.5	< 0.5	< 0.5

Quality Control

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1	5	0.1	0.3	0.05	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas				41.7												1.9	4	7	< 5	0.8				
SO-3 Cert				38000												8000	16000	17000	52000	14000				
SO-3 Meas				88.7												82.0	24	171	96	15.0				
SO-3 Cert				38000												8000	16000	17000	52000	14000				
36164 Orig	2000	66	15	34.3	2.0	3	0.6	0.60	< 0.5	0.1	0.010	0.005	0.1	2.90	0.80	25.0	17	5	55	0.9	2.0	0.10	< 0.1	1.0
36164 Dup	3000	69	16	34.7	2.1	3	0.8	0.60	< 0.5	0.1	< 0.005	0.005	0.1	3.10	0.80	28.0	19	5	69	0.7	2.0	0.10	< 0.1	1.0
36184 Orig	1000	51	10	7.2	0.9	4	0.2	0.50	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.50	0.30	12.0	21	1	11	0.5	1.0	0.10	< 0.1	1.0
36184 Dup	< 1000	53	10	10.0	1.0	3	0.1	0.50	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.50	0.40	13.0	24	1	23	0.6	1.0	0.10	< 0.1	1.0
36230 Orig	5000	38	12	23.3	1.9	3	1.2	0.60	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.80	0.80	10.0	21	2	28	0.7	2.0	0.10	< 0.1	< 0.1
36230 Dup	5000	35	12	21.4	1.8	3	1.2	0.50	< 0.5	0.1	< 0.005	< 0.005	< 0.1	0.80	0.80	9.6	20	1	38	1.1	2.0	0.10	< 0.1	< 0.1
36255 Orig	3000	51	12	23.9	1.5	3	0.3	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.10	1.10	18.0	30	17	< 5	< 0.1	1.0	0.10	< 0.1	< 0.1
36255 Dup	3000	52	12	23.6	1.5	3	0.2	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.10	1.00	17.0	28	23	< 5	< 0.1	1.0	0.10	< 0.1	< 0.1
36269 Orig	4000	83	34	8.1	1.5	5	< 0.1	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.00	0.80	20.0	27	21	16	0.1	1.0	< 0.05	< 0.1	2.0
36269 Dup	4000	89	36	8.1	1.5	5	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.10	0.80	20.0	26	23	12	0.1	< 0.3	< 0.05	< 0.1	2.0

Quality Control

Analyte Symbol	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas					160	< 3																		
SO-3 Cert					2000000	26000																		
SO-3 Meas					720	< 3																		
SO-3 Cert					2000000	26000																		
36164 Orig	< 0.01	< 0.2	0.188	< 0.5	420	< 3	0.96	6.1	0.9	0.20	0.03	4.40	8.76	0.89	3.41	0.56	0.20	0.43	0.10	< 0.01	< 0.01	0.12	< 0.01	0.10
36164 Dup	< 0.01	< 0.2	0.199	< 0.5	430	< 3	1.03	5.3	0.9	0.20	0.03	4.59	8.90	0.92	3.42	0.56	0.20	0.47	0.10	< 0.01	< 0.01	0.12	< 0.01	0.10
36184 Orig	< 0.01	< 0.2	0.162	< 0.5	100	< 3	0.60	1.5	0.1	0.10	< 0.02	1.10	2.29	0.26	1.05	0.20	0.10	0.16	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.10
36184 Dup	< 0.01	< 0.2	0.180	< 0.5	140	< 3	0.63	1.6	0.2	0.10	< 0.02	1.12	2.28	0.27	1.07	0.20	0.10	0.18	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.10
36230 Orig	0.01	< 0.2	0.134	< 0.5	340	< 3	1.19	3.3	0.6	0.10	0.02	4.93	7.08	0.80	2.89	0.55	0.20	0.44	0.10	< 0.01	< 0.01	0.11	< 0.01	0.10
36230 Dup	< 0.01	< 0.2	0.128	< 0.5	300	< 3	1.18	3.4	0.7	0.10	0.02	4.86	7.78	0.79	2.73	0.47	0.20	0.43	0.10	< 0.01	< 0.01	0.12	< 0.01	0.10
36255 Orig	0.01	< 0.2	0.258	< 0.5	200	< 3	2.60	3.2	0.4	0.20	< 0.02	4.91	10.2	1.32	5.31	0.94	0.30	0.88	0.10	< 0.01	0.10	0.27	0.10	0.20
36255 Dup	< 0.01	< 0.2	0.282	< 0.5	200	< 3	2.50	3.2	0.4	0.10	0.02	4.35	9.24	1.17	4.64	0.85	0.30	0.76	0.10	< 0.01	0.10	0.26	< 0.01	0.30
36269 Orig	< 0.01	< 0.2	0.210	< 0.5	60	< 3	2.69	2.9	0.1	0.10	< 0.02	4.36	9.64	1.11	4.18	0.95	0.30	0.78	0.10	< 0.01	0.10	0.28	< 0.01	0.30
36269 Dup	0.01	< 0.2	0.193	< 0.5	80	< 3	2.72	3.1	0.1	0.10	< 0.02	4.79	10.5	1.19	4.61	1.04	0.30	0.88	0.10	< 0.01	0.10	0.28	< 0.01	0.30

Quality Control

Analyte Symbol	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.5	0.1	10	0.4	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas					538	93.3	1050		91.4				
SO-3 Cert					520000	39000	217000		296000				
SO-3 Meas					38900	46.5	443		882				
SO-3 Cert					520000	39000	217000		296000				
36164 Orig	< 0.01	10.0	1.0	< 10	4120	36.3	215	0.20	518	< 0.5	< 0.5	< 0.5	< 0.5
36164 Dup	< 0.01	11.0	2.0	< 10	4660	39.0	240	0.20	581	< 0.5	< 0.5	< 0.5	< 0.5
36184 Orig	< 0.01	6.9	1.0	< 10	618	60.2	126	0.80	295	< 0.5	< 0.5	< 0.5	< 0.5
36184 Dup	< 0.01	7.2	1.0	< 10	692	63.3	141	0.90	338	< 0.5	< 0.5	< 0.5	< 0.5
36230 Orig	< 0.01	7.8	2.0	< 10	452	134	405	0.50	806	< 0.5	< 0.5	< 0.5	< 0.5
36230 Dup	< 0.01	7.9	1.0	< 10	411	126	376	0.60	751	< 0.5	< 0.5	< 0.5	< 0.5
36255 Orig	< 0.01	4.1	1.0	< 10	567	92.5	212	2.80	630	< 0.5	< 0.5	< 0.5	< 0.5
36255 Dup	0.10	3.9	1.0	< 10	538	91.0	206	2.80	589	< 0.5	< 0.5	< 0.5	< 0.5
36269 Orig	< 0.01	10.0	2.0	< 10	89.2	69.9	125	1.50	371	< 0.5	< 0.5	< 0.5	< 0.5
36269 Dup	< 0.01	10.0	2.0	< 10	89.6	68.4	124	1.60	374	< 0.5	< 0.5	< 0.5	< 0.5

Final Report
Activation Laboratories

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas				41.7												1.9	4	7
SO-3 Cert				38000												8000	16000	17000
SO-3 Meas				88.7												82	24	171
SO-3 Cert				38000												8000	16000	17000
36164 Orig	2000	66	15	34.3	2	3	0.6	0.6	< 0.5	0.1	0.01	0.005	0.1	2.9	0.8	25	17	5
36164 Dup	3000	69	16	34.7	2.1	3	0.8	0.6	< 0.5	0.1	< 0.005	0.005	0.1	3.1	0.8	28	19	5
36184 Orig	1000	51	10	7.2	0.9	4	0.2	0.5	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.5	0.3	12	21	1
36184 Dup	< 1000	53	10	10	1	3	0.1	0.5	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.5	0.4	13	24	1
36230 Orig	5000	38	12	23.3	1.9	3	1.2	0.6	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.8	0.8	10	21	2
36230 Dup	5000	35	12	21.4	1.8	3	1.2	0.5	< 0.5	0.1	< 0.005	< 0.005	< 0.1	0.8	0.8	9.6	20	1
36255 Orig	3000	51	12	23.9	1.5	3	0.3	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.1	1.1	18	30	17
36255 Dup	3000	52	12	23.6	1.5	3	0.2	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.1	1	17	28	23
36269 Orig	4000	83	34	8.1	1.5	5	< 0.1	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1	0.8	20	27	21
36269 Dup	4000	89	36	8.1	1.5	5	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.1	0.8	20	26	23

Final Report
Activation Laboratories

Analyte Symbol	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	5	0.1	0.3	0.05	0.1	0.1	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas	< 5	0.8									160	< 3						
SO-3 Cert	52000	14000									2000000	26000						
SO-3 Meas	96	15									720	< 3						
SO-3 Cert	52000	14000									2000000	26000						
36164 Orig	55	0.9	2	0.1	< 0.1	1	< 0.01	< 0.2	0.188	< 0.5	420	< 3	0.96	6.1	0.9	0.2	0.03	4.4
36164 Dup	69	0.7	2	0.1	< 0.1	1	< 0.01	< 0.2	0.199	< 0.5	430	< 3	1.03	5.3	0.9	0.2	0.03	4.59
36184 Orig	11	0.5	1	0.1	< 0.1	1	< 0.01	< 0.2	0.162	< 0.5	100	< 3	0.6	1.5	0.1	0.1	< 0.02	1.1
36184 Dup	23	0.6	1	0.1	< 0.1	1	< 0.01	< 0.2	0.18	< 0.5	140	< 3	0.63	1.6	0.2	0.1	< 0.02	1.12
36230 Orig	28	0.7	2	0.1	< 0.1	< 0.1	0.01	< 0.2	0.134	< 0.5	340	< 3	1.19	3.3	0.6	0.1	0.02	4.93
36230 Dup	38	1.1	2	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.128	< 0.5	300	< 3	1.18	3.4	0.7	0.1	0.02	4.86
36255 Orig	< 5	< 0.1	1	0.1	< 0.1	< 0.1	0.01	< 0.2	0.258	< 0.5	200	< 3	2.6	3.2	0.4	0.2	< 0.02	4.91
36255 Dup	< 5	< 0.1	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.282	< 0.5	200	< 3	2.5	3.2	0.4	0.1	0.02	4.35
36269 Orig	16	0.1	1	< 0.05	< 0.1	2	< 0.01	< 0.2	0.21	< 0.5	60	< 3	2.69	2.9	0.1	0.1	< 0.02	4.36
36269 Dup	12	0.1	< 0.3	< 0.05	< 0.1	2	0.01	< 0.2	0.193	< 0.5	80	< 3	2.72	3.1	0.1	0.1	< 0.02	4.79

Final Report
Activation Laboratories

Analyte Symbol	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.1	10	0.4	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas																	538	93.3
SO-3 Cert																	520000	39000
SO-3 Meas																	38900	46.5
SO-3 Cert																	520000	39000
36164 Orig	8.76	0.89	3.41	0.56	0.2	0.43	0.1	< 0.01	< 0.01	0.12	< 0.01	0.1	< 0.01	10	1	< 10	4120	36.3
36164 Dup	8.9	0.92	3.42	0.56	0.2	0.47	0.1	< 0.01	< 0.01	0.12	< 0.01	0.1	< 0.01	11	2	< 10	4660	39
36184 Orig	2.29	0.26	1.05	0.2	0.1	0.16	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.1	< 0.01	6.9	1	< 10	618	60.2
36184 Dup	2.28	0.27	1.07	0.2	0.1	0.18	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.1	< 0.01	7.2	1	< 10	692	63.3
36230 Orig	7.08	0.8	2.89	0.55	0.2	0.44	0.1	< 0.01	< 0.01	0.11	< 0.01	0.1	< 0.01	7.8	2	< 10	452	134
36230 Dup	7.78	0.79	2.73	0.47	0.2	0.43	0.1	< 0.01	< 0.01	0.12	< 0.01	0.1	< 0.01	7.9	1	< 10	411	126
36255 Orig	10.2	1.32	5.31	0.94	0.3	0.88	0.1	< 0.01	0.1	0.27	0.1	0.2	< 0.01	4.1	1	< 10	567	92.5
36255 Dup	9.24	1.17	4.64	0.85	0.3	0.76	0.1	< 0.01	0.1	0.26	< 0.01	0.3	0.1	3.9	1	< 10	538	91
36269 Orig	9.64	1.11	4.18	0.95	0.3	0.78	0.1	< 0.01	0.1	0.28	< 0.01	0.3	< 0.01	10	2	< 10	89.2	69.9
36269 Dup	10.5	1.19	4.61	1.04	0.3	0.88	0.1	< 0.01	0.1	0.28	< 0.01	0.3	< 0.01	10	2	< 10	89.6	68.4

Final Report
Activation Laboratories

Analyte Symbol	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas	1050		91.4				
SO-3 Cert	217000		296000				
SO-3 Meas	443		882				
SO-3 Cert	217000		296000				
36164 Orig	215	0.2	518	< 0.5	< 0.5	< 0.5	< 0.5
36164 Dup	240	0.2	581	< 0.5	< 0.5	< 0.5	< 0.5
36184 Orig	126	0.8	295	< 0.5	< 0.5	< 0.5	< 0.5
36184 Dup	141	0.9	338	< 0.5	< 0.5	< 0.5	< 0.5
36230 Orig	405	0.5	806	< 0.5	< 0.5	< 0.5	< 0.5
36230 Dup	376	0.6	751	< 0.5	< 0.5	< 0.5	< 0.5
36255 Orig	212	2.8	630	< 0.5	< 0.5	< 0.5	< 0.5
36255 Dup	206	2.8	589	< 0.5	< 0.5	< 0.5	< 0.5
36269 Orig	125	1.5	371	< 0.5	< 0.5	< 0.5	< 0.5
36269 Dup	124	1.6	374	< 0.5	< 0.5	< 0.5	< 0.5

Final Report
Activation Laboratories

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
3542 36154	2000	28	6	10.5	0.9	3	0.4	0.1	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.4	0.2	6	16
3542 36155	4000	76	17	31.2	1.2	4	0.3	0.8	< 0.5	0.1	< 0.005	0.008	< 0.1	1.6	0.9	14	25
3542 36157	3000	44	9	17.6	1.5	3	0.5	0.4	< 0.5	0.1	0.01	< 0.005	< 0.1	1	0.5	9	14
3542 36158	2000	50	12	29	1.1	3	0.4	0.7	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.1	0.5	8	16
3542 36159	3000	70	18	44.7	1.2	3	0.4	0.8	< 0.5	0.1	< 0.005	< 0.005	0.1	2.8	0.9	13	26
3542 36160	3000	49	11	21.8	1.1	4	0.3	0.7	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1	0.5	8.9	16
3542 36161	3000	54	11	12	0.6	4	0.2	0.3	< 0.5	< 0.1	< 0.005	0.006	< 0.1	0.8	0.4	4.1	13
3542 36162	4000	63	14	34.3	1.7	3	0.6	0.7	< 0.5	0.1	0.01	< 0.005	0.1	1	0.5	19	23
3542 36174	3000	54	14	29.6	1.3	2	0.4	0.6	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.9	0.6	7.1	22
3542 36173	4000	73	14	18.4	1.3	3	0.7	0.9	< 0.5	< 0.1	0.01	< 0.005	0.1	0.5	0.4	4.3	14
3542 36172	4000	55	12	56.6	3.6	2	1	0.5	< 0.5	0.2	0.01	0.021	< 0.1	0.8	0.5	7.8	15
3542 36171	2000	40	9	24.9	2.1	2	0.5	0.9	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.6	0.3	6.7	23
3542 36170	3000	49	16	53	2.5	2	0.8	0.8	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1	0.5	9.6	15
3542 36169	3000	46	15	13.3	1.8	3	0.4	0.6	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.6	0.3	8.2	24
3542 36168	3000	39	8	16.9	1.4	2	0.5	0.6	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.8	0.5	10	17
3542 36167	3000	41	13	52.8	1.7	2	1	0.5	< 0.5	0.1	0.01	< 0.005	< 0.1	0.8	0.5	4.7	19
3542 36166	5000	48	10	15.7	1	4	0.7	0.3	< 0.5	0.1	< 0.005	< 0.005	< 0.1	1.7	1	12	14
3542 36165	4000	69	21	58.2	2	4	1.1	0.5	< 0.5	0.1	0.01	< 0.005	< 0.1	2.6	0.8	10	16
3542 36164	3000	67	16	34.5	2	3	0.7	0.6	< 0.5	0.1	< 0.005	0.005	0.1	3	0.8	26.5	18
3542 36163	3000	58	17	14.7	1.3	2	0.4	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.5	0.5	17	30
3542 36177	4000	54	15	36.6	1.6	2	1	0.6	< 0.5	0.1	0.01	< 0.005	< 0.1	1.4	0.7	7	14
3542 36176	3000	53	13	16.9	0.9	3	0.3	0.5	< 0.5	< 0.1	< 0.005	0.005	< 0.1	1	0.6	8.3	24
3542 36175	2000	50	11	30.9	1.6	2	0.2	0.5	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.1	0.5	4.1	15
3542 36178	2000	56	12	6.8	0.4	2	< 0.1	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.6	0.4	9.4	21
3542 36180	3000	73	13	2.8	0.6	3	0.1	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.3	0.3	4.1	7
3542 36181	2000	49	8	14.5	1.4	2	0.2	0.4	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.6	0.3	6.6	11
3542 36182	< 1000	13	2	44.9	0.2	2	0.3	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.4	0.2	6.8	28
3542 36183	2000	75	13	11.6	1.1	3	0.1	0.4	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1	0.3	10	14
3542 36184	< 1000	52	10	8.6	0.9	4	0.2	0.5	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.5	0.35	12.5	23
3542 36185	1000	60	14	3.2	0.7	3	0.1	0.4	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.5	0.3	7.6	16
3542 36186	2000	66	13	8.3	1.1	3	0.3	0.2	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.5	0.3	14	9
3542 36187	2000	45	8	5	0.5	2	0.3	0.3	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.5	0.3	8.5	11
3542 36188	3000	74	20	30.6	3	2	0.5	0.3	< 0.5	0.1	0.01	< 0.005	< 0.1	1	0.5	12	19
3542 36192	< 1000	25	6	7.1	0.3	1	0.3	0.2	< 0.5	0.1	0.01	< 0.005	< 0.1	0.8	0.4	5.7	5
3542 36194	2000	40	7	7.1	0.7	2	0.4	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.9	0.5	3.2	5
3542 36195	2000	31	8	6.3	0.8	1	0.1	0.3	< 0.5	< 0.1	< 0.005	0.005	< 0.1	0.5	0.4	4.3	11
3542 36196	2000	30	9	8.6	0.6	1	0.4	0.4	< 0.5	< 0.1	0.01	0.006	< 0.1	0.5	0.3	3.5	7
3542 36197	2000	59	10	11.6	0.9	2	0.3	0.5	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.2	13	8
3542 36198	1000	50	8	4.8	0.5	1	0.1	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.3	0.3	6.4	12
3542 36199	2000	42	10	9.9	1.6	2	0.2	0.4	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.7	0.5	3.7	11
3542 36200	2000	37	5	7.4	0.4	2	0.4	0.4	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.3	0.3	12	6
3542 36201	2000	61	8	2.4	0.4	3	0.4	0.3	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.2	0.3	2.1	8
3542 36204	< 1000	17	2	20.8	0.2	1	0.2	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.2	0.1	5.9	14
3542 36205	1000	49	6	4.8	0.4	2	< 0.1	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.3	0.2	6.7	8
3542 36206	2000	44	9	2.9	0.4	2	0.1	0.1	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.4	0.2	7.5	18
3542 36211	12000	95	8	3670	21	3	36	1.7	< 0.5	12	0.08	< 0.005	< 0.1	1.5	1.1	4	13

Final Report
Activation Laboratories

	Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni
	Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
	Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1
	Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
3542	36216	2000	48	9	3.8	0.7	2	0.1	0.1	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.4	0.3	17	11
3542	36218	4000	39	6	3.7	1.4	3	0.2	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.2	0.2	8.2	15
3542	36219	5000	67	12	8.9	1.7	4	0.5	0.1	< 0.5	0.2	0.01	< 0.005	< 0.1	0.8	0.6	18	28
3542	36220	4000	59	10	4.9	1.6	3	0.4	0.2	< 0.5	< 0.1	< 0.005	< 0.005	0.1	0.7	0.5	4.6	10
3542	36221	5000	83	14	12.6	2	4	0.6	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.1	0.6	13	15
3542	36225	7000	51	18	16.3	3.2	4	0.3	0.4	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.2	0.9	15	17
3542	36226	4000	50	12	8.8	1.7	4	0.4	0.4	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.3	1	22	30
3542	36227	3000	29	9	9.1	0.9	3	0.3	0.4	< 0.5	< 0.1	< 0.005	< 0.005	0.1	0.6	0.5	11	13
3542	36228	5000	42	12	8	0.8	3	0.1	0.3	< 0.5	< 0.1	< 0.005	< 0.005	0.1	0.7	0.4	14	25
3542	36229	9000	39	11	10.8	1.6	4	0.6	0.4	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.6	0.6	6.4	17
3542	36230	5000	36	12	22.3	1.8	3	1.2	0.55	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.8	0.8	9.8	21
3542	36231	5000	38	10	8.6	1.2	3	0.2	0.5	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.4	6.4	20
3542	36232	5000	56	15	37.9	3.4	4	1	0.5	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.1	0.8	10	31
3542	36233	5000	56	13	31.2	1.9	3	0.9	0.6	< 0.5	< 0.1	0.01	< 0.005	< 0.1	2.4	1.5	6	20
3542	36234	3000	38	9	18.7	0.5	2	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1	0.7	5.7	11
3542	36235	3000	38	7	9.9	1	4	0.7	0.4	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.6	0.6	13	12
3542	36251	2000	32	5	5.7	0.4	4	0.3	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.3	0.3	9.2	9
3542	36252	4000	41	11	18.8	1.2	3	0.5	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.6	0.8	5.8	14
3542	36254	3000	61	11	10.9	0.9	4	0.1	0.4	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.9	0.8	6.7	26
3542	36255	3000	51	12	23.8	1.5	3	0.3	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.1	1.05	17.5	29
3542	36257	2000	73	9	9.8	0.4	4	0.4	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.5	0.5	6.1	4
3542	36258	3000	50	8	4.3	0.5	3	< 0.1	0.2	< 0.5	< 0.1	0.03	< 0.005	< 0.1	0.2	0.4	8.1	14
3542	36259	4000	99	24	0.6	0.7	4	< 0.1	0.1	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.5	0.6	15	23
3542	36260	4000	71	40	7.2	0.3	3	< 0.1	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.5	8.4	8
3542	36261	4000	91	23	21.1	1.3	5	0.1	0.5	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.5	0.9	15	22
3542	36262	5000	75	12	67.1	4.9	4	0.7	0.3	< 0.5	0.2	< 0.005	< 0.005	< 0.1	0.7	0.5	11	24
3542	36263	3000	117	20	9	1.1	4	< 0.1	0.3	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.7	0.5	21	14
3542	36264	4000	134	27	13.2	0.8	4	0.1	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.6	0.6	14	30
3542	36269	4000	86	35	8.1	1.5	5	< 0.1	0.15	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.05	0.8	20	27
3542	36270	3000	99	23	9.4	2	5	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1	0.8	21	32
3542	36271	4000	52	11	9	1.6	4	0.2	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.6	0.7	13	15
3542	36272	4000	58	9	8.2	1.1	3	0.4	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.5	0.6	6.7	7

Final Report
Activation Laboratories

Analyte Symbol	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1	5	0.1	0.3	0.05	0.1	0.1	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36154	1	< 5	0.7	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.094	< 0.5	280	< 3	0.88	1.5	0.6	0.1	0.03
36155	3	37	0.9	2	0.1	< 0.1	1	< 0.01	< 0.2	0.227	< 0.5	490	< 3	2.5	5.2	0.7	0.2	0.04
36157	2	16	0.9	2	0.2	< 0.1	< 0.1	0.01	< 0.2	0.125	< 0.5	340	< 3	0.81	2.9	0.7	0.1	0.04
36158	3	21	0.7	2	0.1	< 0.1	1	< 0.01	< 0.2	0.084	< 0.5	370	< 3	1.27	3.3	0.6	0.1	0.02
36159	4	36	1	2	0.2	< 0.1	1	< 0.01	< 0.2	0.169	< 0.5	500	< 3	2.41	8.6	1	0.4	0.03
36160	3	29	0.8	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.102	< 0.5	190	< 3	3.68	3.4	0.6	0.2	< 0.02
36161	1	12	0.3	1	0.1	< 0.1	1	0.01	< 0.2	0.111	< 0.5	110	< 3	1.28	3.2	0.2	0.1	< 0.02
36162	4	64	0.8	2	0.1	< 0.1	1	0.01	< 0.2	0.191	< 0.5	340	< 3	0.79	3.2	0.8	0.1	0.03
36174	3	14	0.9	3	0.1	< 0.1	< 0.1	0.01	< 0.2	0.075	< 0.5	460	< 3	1.11	4.8	0.7	0.2	0.04
36173	< 1	16	0.5	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.056	< 0.5	150	< 3	0.29	2.3	0.5	0.1	< 0.02
36172	7	87	1.4	2	0.1	< 0.1	1	0.01	< 0.2	0.049	< 0.5	420	< 3	0.57	4.2	0.9	0.2	0.04
36171	3	17	0.5	2	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.116	< 0.5	360	< 3	0.42	2.6	0.6	0.1	0.02
36170	3	34	1	3	0.2	< 0.1	< 0.1	< 0.01	0.7	0.142	< 0.5	490	< 3	0.57	4.6	1	0.2	0.04
36169	1	33	0.6	2	0.1	< 0.1	1	0.01	< 0.2	0.122	< 0.5	220	< 3	0.76	2.1	0.4	0.1	< 0.02
36168	1	84	0.6	1	0.1	< 0.1	1	0.01	< 0.2	0.138	< 0.5	330	< 3	0.67	1.8	0.6	0.1	0.02
36167	4	221	0.6	1	0.2	< 0.1	1	< 0.01	< 0.2	0.071	< 0.5	310	< 3	1.58	3.6	0.7	0.1	0.02
36166	6	25	0.5	1	0.1	< 0.1	2	< 0.01	< 0.2	0.155	< 0.5	130	< 3	2.9	3.2	0.1	0.1	< 0.02
36165	6	20	1	3	0.1	< 0.1	< 0.1	0.01	< 0.2	0.112	< 0.5	730	< 3	1.36	7.8	1.4	0.4	0.07
36164	5	62	0.8	2	0.1	< 0.1	1	< 0.01	< 0.2	0.193	< 0.5	430	< 3	1	5.7	0.9	0.2	0.03
36163	6	22	1.1	2	0.1	< 0.1	1	< 0.01	< 0.2	0.177	< 0.5	310	< 3	0.96	2.9	0.7	0.1	0.02
36177	5	51	1	2	0.2	< 0.1	1	0.01	< 0.2	0.076	< 0.5	330	< 3	0.82	3.7	0.9	0.2	0.03
36176	3	24	0.6	1	0.1	< 0.1	1	0.01	< 0.2	0.102	< 0.5	180	< 3	1.12	3.1	0.2	0.1	< 0.02
36175	6	11	1	2	0.1	< 0.1	1	0.01	< 0.2	0.106	< 0.5	300	< 3	1.18	4.6	0.7	0.2	0.03
36178	2	< 5	0.2	1	0.1	< 0.1	< 0.1	0.01	< 0.2	0.113	< 0.5	80	< 3	1.49	2.2	0.1	0.1	< 0.02
36180	< 1	< 5	1.2	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.16	< 0.5	50	< 3	0.51	0.8	0.1	< 0.01	< 0.02
36181	2	38	1.1	2	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.076	< 0.5	230	< 3	0.57	2	0.6	0.1	0.02
36182	2	15	1.5	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.102	< 0.5	460	< 3	1.34	0.9	0.8	0.1	0.03
36183	2	30	0.9	1	0.1	< 0.1	2	< 0.01	< 0.2	0.156	< 0.5	80	< 3	1.93	3.7	0.1	0.2	< 0.02
36184	1	17	0.6	1	0.1	< 0.1	1	< 0.01	< 0.2	0.171	< 0.5	120	< 3	0.62	1.5	0.2	0.1	< 0.02
36185	< 1	17	0.7	< 0.3	0.1	< 0.1	1	< 0.01	< 0.2	0.137	< 0.5	70	< 3	0.51	1.7	< 0.1	0.1	< 0.02
36186	2	10	0.3	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.078	< 0.5	60	< 3	0.5	1.7	0.1	0.1	< 0.02
36187	3	< 5	0.7	1	0.1	< 0.1	< 0.1	0.01	< 0.2	0.055	< 0.5	70	< 3	0.76	1.9	0.1	0.1	< 0.02
36188	11	27	0.9	2	0.2	< 0.1	1	< 0.01	< 0.2	0.117	< 0.5	320	< 3	1.92	3.1	0.5	0.1	0.02
36192	6	10	< 0.1	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.053	< 0.5	100	< 3	1.9	1.4	0.3	0.1	< 0.02
36194	5	19	0.2	< 0.3	0.1	< 0.1	< 0.1	0.01	< 0.2	0.058	< 0.5	130	< 3	1.89	1.6	0.2	0.1	0.02
36195	2	12	0.4	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.053	< 0.5	90	< 3	0.66	1.7	0.1	0.1	< 0.02
36196	2	24	0.3	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.072	< 0.5	70	< 3	0.26	1.2	< 0.1	0.1	< 0.02
36197	2	8	0.7	1	< 0.05	< 0.1	1	< 0.01	< 0.2	0.046	< 0.5	90	< 3	0.55	1.8	0.1	0.1	< 0.02
36198	< 1	8	0.5	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.068	< 0.5	50	< 3	0.59	1.1	< 0.1	0.1	< 0.02
36199	7	14	0.7	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.105	< 0.5	130	< 3	1.33	2.3	0.2	0.1	< 0.02
36200	< 1	7	0.7	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.051	< 0.5	80	< 3	0.28	0.6	< 0.1	< 0.01	< 0.02
36201	< 1	7	0.8	< 0.3	0.1	< 0.1	< 0.1	0.01	< 0.2	0.063	< 0.5	50	< 3	0.22	0.8	< 0.1	< 0.01	< 0.02
36204	< 1	7	0.1	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.04	< 0.5	130	< 3	0.12	0.5	0.3	< 0.01	< 0.02
36205	< 1	20	0.9	1	< 0.05	< 0.1	1	< 0.01	< 0.2	0.095	< 0.5	90	< 3	0.37	1	0.1	0.1	< 0.02
36206	< 1	10	0.8	< 0.3	< 0.05	< 0.1	1	0.01	< 0.2	0.081	< 0.5	70	< 3	0.4	1.1	0.2	0.1	< 0.02
36211	12	65	0.6	1	0.6	< 0.1	1	< 0.01	0.2	0.26	< 0.5	880	< 3	4.49	6.2	3.4	0.2	0.2

Final Report
Activation Laboratories

Analyte Symbol	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1	5	0.1	0.3	0.05	0.1	0.1	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36216	3	45	0.5	< 0.3	0.1	< 0.1	6	< 0.01	< 0.2	0.101	< 0.5	70	< 3	1.03	1.7	0.1	0.1	< 0.02
36218	1	13	1.1	1	< 0.05	< 0.1	1	< 0.01	< 0.2	0.213	< 0.5	150	< 3	0.75	1	0.2	0.1	< 0.02
36219	5	13	1.7	1	< 0.05	< 0.1	1	< 0.01	< 0.2	0.35	< 0.5	230	< 3	1.48	1.6	0.4	0.1	< 0.02
36220	4	17	2.2	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.086	< 0.5	100	< 3	1.59	2.5	0.3	0.1	< 0.02
36221	3	< 5	0.9	1	0.1	< 0.1	1	0.01	< 0.2	0.171	< 0.5	100	< 3	1.63	3.9	0.2	0.2	< 0.02
36225	3	16	1.5	2	0.1	< 0.1	< 0.1	0.01	< 0.2	0.313	< 0.5	300	< 3	2.55	4.6	0.6	0.2	0.02
36226	4	19	1	1	0.1	< 0.1	1	0.01	< 0.2	0.344	< 0.5	190	< 3	2.59	4.1	0.5	0.2	0.03
36227	1	< 5	0.1	1	< 0.05	< 0.1	< 0.1	0.01	< 0.2	0.169	< 0.5	170	< 3	1.19	2.4	0.2	0.1	< 0.02
36228	< 1	< 5	0.6	1	< 0.05	< 0.1	< 0.1	0.01	< 0.2	0.172	< 0.5	220	< 3	0.97	2.6	0.2	0.1	< 0.02
36229	3	28	0.6	1	0.1	< 0.1	< 0.1	0.02	< 0.2	0.15	< 0.5	210	< 3	0.59	1.6	0.3	0.1	< 0.02
36230	2	33	0.9	2	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.131	< 0.5	320	< 3	1.18	3.3	0.6	0.1	0.02
36231	< 1	< 5	< 0.1	1	0.1	< 0.1	< 0.1	0.01	< 0.2	0.123	< 0.5	120	< 3	0.89	2.7	0.2	0.1	< 0.02
36232	6	88	0.9	2	0.1	< 0.1	< 0.1	0.01	< 0.2	0.13	< 0.5	500	< 3	1.43	2.9	0.8	0.1	0.03
36233	5	19	1.3	2	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.306	< 0.5	370	< 3	3.31	3.5	0.7	0.2	0.02
36234	< 1	< 5	< 0.1	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.203	< 0.5	100	< 3	2.87	4.2	0.2	0.2	< 0.02
36235	< 1	< 5	0.1	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.194	< 0.5	160	< 3	0.79	1.6	0.2	0.1	< 0.02
36251	< 1	< 5	0.5	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.068	< 0.5	90	< 3	0.36	0.8	0.1	< 0.01	< 0.02
36252	12	< 5	0.4	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.187	< 0.5	160	< 3	2.39	2.6	0.3	0.1	< 0.02
36254	19	< 5	< 0.1	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.287	< 0.5	40	< 3	3.75	2.4	< 0.1	0.1	< 0.02
36255	20	< 5	< 0.1	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.27	< 0.5	200	< 3	2.55	3.2	0.4	0.15	< 0.02
36257	1	< 5	0.4	1	< 0.05	< 0.1	< 0.1	0.01	< 0.2	0.092	< 0.5	220	< 3	1.37	1.7	0.3	0.1	< 0.02
36258	< 1	26	1.7	< 0.3	0.1	< 0.1	1	< 0.01	< 0.2	0.227	< 0.5	40	< 3	0.62	1	< 0.1	< 0.01	< 0.02
36259	6	32	1.6	< 0.3	0.1	< 0.1	1	< 0.01	< 0.2	0.302	< 0.5	30	< 3	2.61	1.9	< 0.1	0.1	< 0.02
36260	4	< 5	1.1	< 0.3	0.1	< 0.1	1	< 0.01	< 0.2	0.301	< 0.5	50	< 3	2.99	1.8	< 0.1	0.1	< 0.02
36261	9	29	1.6	1	0.1	< 0.1	1	0.01	< 0.2	0.267	< 0.5	140	< 3	3.89	6.5	0.3	0.3	< 0.02
36262	4	12	2.1	3	0.1	< 0.1	1	< 0.01	< 0.2	0.143	< 0.5	730	< 3	0.92	2.4	1.3	0.1	0.05
36263	4	< 5	1.8	1	< 0.05	< 0.1	1	< 0.01	< 0.2	0.214	< 0.5	60	< 3	1.51	3.7	< 0.1	0.1	< 0.02
36264	3	14	0.9	1	0.1	< 0.1	1	0.01	< 0.2	0.322	< 0.5	190	< 3	1.91	3.1	0.2	0.1	< 0.02
36269	22	14	0.1	< 0.3	< 0.05	< 0.1	2	< 0.01	< 0.2	0.201	< 0.5	70	< 3	2.7	3	0.1	0.1	< 0.02
36270	17	5	< 0.1	< 0.3	0.1	< 0.1	2	< 0.01	< 0.2	0.179	< 0.5	80	< 3	2.49	2.8	0.2	0.1	< 0.02
36271	8	14	0.5	1	0.1	< 0.1	< 0.1	0.01	< 0.2	0.189	< 0.5	130	< 3	1.29	2.1	0.2	0.1	< 0.02
36272	4	< 5	0.5	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.066	< 0.5	150	< 3	1.28	1.8	0.3	0.1	< 0.02

Final Report
Activation Laboratories

Analyte Symbol	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.1	10	0.4
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36154	1.75	2.83	0.37	1.45	0.3	0.1	0.24	< 0.01	0.27	< 0.01	0.09	< 0.01	0.1	< 0.01	2.7	1	< 10	33.9
36155	7.68	14.1	1.92	7.82	1.28	0.4	0.97	0.1	0.35	0.1	0.26	< 0.01	0.2	< 0.01	9.2	2	< 10	5510
36157	2.11	3.62	0.48	1.86	0.33	0.1	0.27	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.1	< 0.01	11	1	< 10	316
36158	3.6	5.61	0.74	2.94	0.51	0.2	0.42	0.1	< 0.01	< 0.01	0.12	< 0.01	0.1	< 0.01	5.4	2	< 10	513
36159	6.22	11.1	1.49	5.68	0.99	0.3	0.85	0.1	0.23	0.1	0.25	< 0.01	0.2	< 0.01	7.9	2	< 10	1580
36160	2.42	3.7	0.47	1.84	0.36	0.1	0.29	< 0.01	< 0.01	< 0.01	0.11	< 0.01	0.1	< 0.01	6.9	2	< 10	510
36161	2.99	4.72	0.59	2.31	0.46	0.1	0.4	0.1	< 0.01	< 0.01	0.13	< 0.01	0.1	< 0.01	5.7	2	< 10	58.3
36162	2.02	3.64	0.44	1.77	0.33	0.1	0.31	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.1	< 0.01	7.4	2	< 10	1360
36174	2.2	3.23	0.46	1.73	0.31	0.1	0.3	< 0.01	< 0.01	< 0.01	0.11	< 0.01	0.1	< 0.01	3.8	2	< 10	298
36173	0.56	1.19	0.13	0.51	0.11	0.1	0.1	< 0.01	< 0.01	< 0.01	0.04	< 0.01	< 0.01	< 0.01	5.3	1	< 10	145
36172	1.55	2.06	0.3	1.24	0.24	0.1	0.19	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.1	< 0.01	8.1	1	< 10	373
36171	1.09	1.75	0.22	0.92	0.16	0.1	0.14	< 0.01	< 0.01	< 0.01	0.05	< 0.01	0.1	< 0.01	11	1	< 10	98.4
36170	1.48	2.84	0.35	1.47	0.25	0.1	0.23	< 0.01	< 0.01	< 0.01	0.07	< 0.01	0.1	< 0.01	6.4	1	< 10	1120
36169	1.49	2.89	0.33	1.55	0.25	0.1	0.25	< 0.01	< 0.01	< 0.01	0.08	< 0.01	0.1	< 0.01	5.7	1	< 10	113
36168	2.48	4.14	0.49	1.93	0.34	0.1	0.3	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.1	< 0.01	7.8	1	< 10	151
36167	7.06	13.7	1.66	6.61	0.99	0.3	0.87	0.1	0.04	0.1	0.15	< 0.01	0.1	< 0.01	7.7	1	< 10	212
36166	8.45	17.7	2.17	8.74	1.57	0.4	1.25	0.1	0.29	0.1	0.3	< 0.01	0.2	< 0.01	3.5	2	< 10	515
36165	4.94	8.34	1.12	4.46	0.76	0.2	0.57	0.1	0.03	< 0.01	0.16	< 0.01	0.1	< 0.01	5	1	< 10	965
36164	4.49	8.83	0.9	3.41	0.56	0.2	0.45	0.1	< 0.01	< 0.01	0.12	< 0.01	0.1	< 0.01	10.5	1.5	< 10	4390
36163	2.61	5.62	0.63	2.46	0.46	0.1	0.35	< 0.01	< 0.01	< 0.01	0.11	< 0.01	0.1	< 0.01	21	2	< 10	348
36177	2.73	3.91	0.54	2.15	0.41	0.2	0.31	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.1	< 0.01	5.7	1	< 10	789
36176	2.12	4.12	0.49	1.96	0.38	0.1	0.35	< 0.01	< 0.01	< 0.01	0.11	< 0.01	0.1	< 0.01	8.4	2	< 10	499
36175	2.69	5.11	0.62	2.43	0.45	0.2	0.39	0.1	< 0.01	< 0.01	0.12	< 0.01	0.1	< 0.01	4.7	1	< 10	53.6
36178	2.67	5.44	0.65	2.64	0.51	0.1	0.42	0.1	< 0.01	< 0.01	0.14	< 0.01	0.1	< 0.01	1.2	1	< 10	434
36180	1.44	2.43	0.31	0.89	0.15	< 0.01	0.16	< 0.01	< 0.01	< 0.01	0.05	< 0.01	< 0.01	< 0.01	2.5	1	< 10	29.1
36181	1.04	2.12	0.25	0.9	0.18	0.1	0.18	< 0.01	< 0.01	< 0.01	0.07	< 0.01	0.1	< 0.01	5.3	1	< 10	286
36182	2.22	4.43	0.62	2.55	0.49	0.2	0.4	0.1	< 0.01	< 0.01	0.13	< 0.01	0.1	< 0.01	3.7	1	< 10	49.8
36183	3.14	5.47	0.67	2.66	0.47	0.2	0.47	0.1	0.06	0.1	0.18	< 0.01	0.2	< 0.01	2.8	2	< 10	955
36184	1.11	2.28	0.26	1.06	0.2	0.1	0.17	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.1	< 0.01	7.1	1	< 10	655
36185	0.7	1.62	0.17	0.66	0.16	0.1	0.15	< 0.01	< 0.01	< 0.01	0.05	< 0.01	0.1	< 0.01	7.1	1	< 10	231
36186	0.59	1.53	0.16	0.67	0.13	0.1	0.14	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.1	< 0.01	4	1	< 10	86.6
36187	1.05	1.87	0.24	0.92	0.17	0.1	0.19	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.1	< 0.01	3.5	1	< 10	318
36188	2.62	8.31	0.68	2.79	0.59	0.2	0.49	0.2	0.11	0.1	0.2	< 0.01	0.2	< 0.01	4.6	1	< 10	261
36192	2.19	3.7	0.74	3.56	0.74	0.2	0.58	0.1	0.05	0.1	0.16	< 0.01	0.2	< 0.01	0.9	< 0.1	< 10	844
36194	2.68	6.89	0.87	3.85	0.78	0.2	0.62	0.1	0.07	0.1	0.2	< 0.01	0.2	< 0.01	1.8	< 0.1	< 10	164
36195	0.78	1.87	0.21	0.79	0.2	0.1	0.17	< 0.01	< 0.01	< 0.01	0.08	< 0.01	0.1	< 0.01	2.7	1	< 10	411
36196	0.33	0.89	0.1	0.42	0.06	0.1	0.07	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	3.4	< 0.1	< 10	197
36197	0.96	1.84	0.23	0.9	0.2	0.1	0.16	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.1	< 0.01	2.9	1	< 10	785
36198	0.89	1.57	0.22	0.89	0.2	0.1	0.16	< 0.01	< 0.01	< 0.01	0.06	< 0.01	0.1	< 0.01	2.1	1	< 10	123
36199	2.34	4.11	0.52	2.13	0.43	0.2	0.37	0.1	< 0.01	< 0.01	0.14	< 0.01	0.1	< 0.01	2.9	1	< 10	331
36200	0.51	1.22	0.14	0.55	0.11	0.1	0.08	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	3.6	1	< 10	554
36201	0.4	0.81	0.1	0.41	0.08	0.1	0.07	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	2.7	1	< 10	111
36204	0.15	0.57	0.06	0.21	0.05	< 0.01	0.05	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	3.2	1	< 10	89.4
36205	0.73	1.44	0.15	0.6	0.12	< 0.01	0.09	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	2	1	< 10	548
36206	0.72	1.53	0.17	0.7	0.13	0.1	0.12	< 0.01	< 0.01	< 0.01	0.04	< 0.01	0.1	< 0.01	8.8	1	< 10	106
36211	9.08	14.7	2.15	8.87	1.51	0.4	1.21	0.1	0.38	0.1	0.38	0.1	0.4	0.1	8.9	< 0.1	< 10	1640

Report: A10-3542 (i)
Report Date: 7/1

Final Report
Activation Laboratories

Analyte Symbol	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.1	10	0.4
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36216	1.72	3.3	0.39	1.55	0.29	0.2	0.26	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.1	< 0.01	17	2	< 10	640
36218	1.66	2.7	0.36	1.34	0.19	0.1	0.22	< 0.01	0.15	< 0.01	0.06	< 0.01	0.1	< 0.01	7.5	2	< 10	72.6
36219	3.69	7.59	0.91	3.46	0.64	0.2	0.6	0.1	< 0.01	0.1	0.17	< 0.01	0.2	< 0.01	36	2	< 10	31.1
36220	3.12	5.68	0.65	2.44	0.43	0.2	0.48	0.1	< 0.01	0.1	0.16	< 0.01	0.1	< 0.01	1	1	< 10	73.3
36221	3.5	6.59	0.77	3.14	0.59	0.2	0.5	0.1	< 0.01	0.1	0.16	< 0.01	0.2	< 0.01	7.5	2	< 10	626
36225	5.56	9.78	1.15	4.67	0.9	0.4	0.78	0.1	< 0.01	0.1	0.29	< 0.01	0.3	< 0.01	10	2	< 10	462
36226	5.8	12.2	1.34	5.16	0.96	0.3	0.81	0.1	< 0.01	0.1	0.26	< 0.01	0.2	< 0.01	5.4	2	< 10	3790
36227	5.29	7.54	0.82	3.06	0.49	0.2	0.46	0.1	< 0.01	0.1	0.12	< 0.01	0.1	< 0.01	2	2	< 10	2620
36228	2.17	4.13	0.48	1.95	0.32	0.1	0.31	< 0.01	< 0.01	< 0.01	0.08	< 0.01	0.1	< 0.01	11	3	< 10	430
36229	2.08	3.73	0.41	1.7	0.27	0.2	0.26	< 0.01	< 0.01	< 0.01	0.06	< 0.01	< 0.01	< 0.01	14	2	< 10	455
36230	4.89	7.43	0.8	2.81	0.51	0.2	0.44	0.1	< 0.01	< 0.01	0.11	< 0.01	0.1	< 0.01	7.9	1.5	< 10	432
36231	2.29	3.09	0.42	1.53	0.31	0.1	0.3	< 0.01	< 0.01	< 0.01	0.1	< 0.01	0.1	< 0.01	6.3	2	< 10	125
36232	5.32	10	1.24	4.85	0.83	0.2	0.65	0.1	< 0.01	< 0.01	0.13	< 0.01	0.1	< 0.01	6	1	< 10	135
36233	16.8	33.1	3.97	14.6	2.33	0.6	1.86	0.2	0.18	0.1	0.33	< 0.01	0.3	< 0.01	12	2	< 10	103
36234	5.57	8.88	1.09	4.14	0.78	0.4	0.73	0.1	< 0.01	0.1	0.29	< 0.01	0.3	< 0.01	2.9	4	< 10	39.2
36235	2.89	4.66	0.56	2.29	0.41	0.1	0.36	< 0.01	< 0.01	< 0.01	0.07	< 0.01	0.1	< 0.01	7.4	2	< 10	138
36251	0.71	1.75	0.18	0.79	0.13	0.1	0.15	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	4.2	1	< 10	152
36252	3.21	5.49	0.86	3.67	0.71	0.3	0.69	0.1	< 0.01	0.1	0.18	< 0.01	0.2	< 0.01	3.5	1	< 10	315
36254	10.1	18.8	2.59	10.3	2.07	0.4	1.8	0.2	0.24	0.1	0.34	< 0.01	0.3	< 0.01	7.7	2	< 10	279
36255	4.63	9.72	1.25	4.97	0.89	0.3	0.82	0.1	< 0.01	0.1	0.26	< 0.01	0.25	< 0.01	4	1	< 10	553
36257	2.52	5.63	0.67	2.75	0.5	0.2	0.46	0.1	< 0.01	0.1	0.12	< 0.01	0.1	< 0.01	1.7	1	< 10	302
36258	0.85	1.85	0.19	0.79	0.15	0.1	0.17	< 0.01	< 0.01	< 0.01	0.05	< 0.01	0.1	< 0.01	6.2	2	< 10	412
36259	4.33	7.4	0.91	3.55	0.66	0.2	0.63	0.1	< 0.01	0.1	0.22	< 0.01	0.2	< 0.01	8.3	3	< 10	134
36260	6.18	11.7	1.22	4.89	0.83	0.3	0.8	0.1	< 0.01	0.1	0.28	< 0.01	0.3	< 0.01	4	2	< 10	136
36261	6.35	12.6	1.5	5.86	1.25	0.5	1.06	0.1	0.2	0.1	0.37	0.1	0.4	0.1	7.4	4	< 10	145
36262	1.44	3.34	0.37	1.46	0.33	0.1	0.25	< 0.01	< 0.01	< 0.01	0.09	< 0.01	0.1	< 0.01	7.5	1	< 10	157
36263	2.28	4.76	0.51	2.21	0.39	0.2	0.31	0.1	< 0.01	0.1	0.15	< 0.01	0.2	< 0.01	6	2	< 10	1170
36264	2.29	4.56	0.57	2.24	0.45	0.2	0.39	0.1	< 0.01	< 0.01	0.2	< 0.01	0.2	< 0.01	7.5	2	< 10	97.9
36269	4.57	10.1	1.15	4.39	1	0.3	0.83	0.1	< 0.01	0.1	0.28	< 0.01	0.3	< 0.01	10	2	< 10	89.4
36270	3.84	8.7	0.97	3.85	0.83	0.3	0.73	0.1	< 0.01	0.1	0.28	< 0.01	0.3	< 0.01	10	2	< 10	83.5
36271	1.86	4.23	0.49	1.98	0.4	0.2	0.35	0.1	< 0.01	< 0.01	0.13	< 0.01	0.2	< 0.01	7.3	1	< 10	436
36272	1.26	2.7	0.38	1.65	0.31	0.2	0.34	< 0.01	< 0.01	< 0.01	0.13	< 0.01	0.2	< 0.01	4.9	1	< 10	78.5

Final Report
Activation Laboratories

Analyte Symbol	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36154	66.4	158	0.6	130	< 0.5	< 0.5	< 0.5	< 0.5
36155	87.9	127	1.1	557	< 0.5	< 0.5	< 0.5	< 0.5
36157	46.4	299	0.5	211	< 0.5	< 0.5	< 0.5	< 0.5
36158	36.6	262	0.3	358	< 0.5	< 0.5	< 0.5	< 0.5
36159	89	238	1.1	513	< 0.5	< 0.5	< 0.5	< 0.5
36160	64.8	192	0.5	474	< 0.5	< 0.5	< 0.5	< 0.5
36161	42.2	104	0.6	258	< 0.5	< 0.5	< 0.5	< 0.5
36162	56.8	230	0.9	352	< 0.5	< 0.5	< 0.5	< 0.5
36174	51.4	225	0.6	365	< 0.5	< 0.5	< 0.5	< 0.5
36173	45.8	312	0.4	387	< 0.5	< 0.5	< 0.5	< 0.5
36172	16.5	284	0.1	696	< 0.5	< 0.5	< 0.5	< 0.5
36171	46.8	270	0.9	393	< 0.5	< 0.5	< 0.5	< 0.5
36170	80.4	209	0.7	374	< 0.5	< 0.5	< 0.5	< 0.5
36169	39.9	233	0.7	291	< 0.5	< 0.5	< 0.5	< 0.5
36168	42	236	1	257	< 0.5	< 0.5	< 0.5	< 0.5
36167	42.1	214	0.1	749	< 0.5	< 0.5	< 0.5	< 0.5
36166	58.7	134	0.6	202	< 0.5	< 0.5	< 0.5	< 0.5
36165	63	294	0.3	305	< 0.5	< 0.5	< 0.5	< 0.5
36164	37.7	228	0.2	550	< 0.5	< 0.5	< 0.5	< 0.5
36163	70.7	243	0.8	295	< 0.5	< 0.5	< 0.5	< 0.5
36177	92.6	252	0.4	371	< 0.5	< 0.5	< 0.5	< 0.5
36176	20.1	135	0.7	396	< 0.5	< 0.5	< 0.5	< 0.5
36175	31	230	0.6	263	< 0.5	< 0.5	< 0.5	< 0.5
36178	27	87.4	0.6	209	< 0.5	< 0.5	< 0.5	< 0.5
36180	24.2	145	0.4	53.9	< 0.5	< 0.5	< 0.5	< 0.5
36181	20	110	0.2	92	< 0.5	< 0.5	< 0.5	< 0.5
36182	18.6	124	0.4	233	< 0.5	< 0.5	< 0.5	< 0.5
36183	49.3	170	0.7	830	< 0.5	< 0.5	< 0.5	< 0.5
36184	61.8	134	0.85	317	< 0.5	< 0.5	< 0.5	< 0.5
36185	56.3	119	0.9	316	< 0.5	< 0.5	< 0.5	< 0.5
36186	19.6	138	0.6	268	< 0.5	< 0.5	< 0.5	< 0.5
36187	53.2	134	0.4	265	< 0.5	< 0.5	< 0.5	< 0.5
36188	33.8	162	0.5	257	< 0.5	< 0.5	< 0.5	< 0.5
36192	22.5	76.7	0.3	224	< 0.5	< 0.5	< 0.5	< 0.5
36194	18.7	79.7	0.2	233	< 0.5	< 0.5	< 0.5	< 0.5
36195	39.3	94.1	0.4	279	< 0.5	< 0.5	< 0.5	< 0.5
36196	59.7	116	1.1	413	< 0.5	< 0.5	< 0.5	< 0.5
36197	42.8	113	0.3	275	< 0.5	< 0.5	< 0.5	< 0.5
36198	47.8	76.4	0.3	162	< 0.5	< 0.5	< 0.5	< 0.5
36199	49.2	79.9	0.5	384	< 0.5	< 0.5	< 0.5	< 0.5
36200	25.4	83.5	0.2	219	< 0.5	< 0.5	< 0.5	< 0.5
36201	58.8	139	0.6	185	< 0.5	< 0.5	< 0.5	< 0.5
36204	15.4	150	0.2	131	< 0.5	< 0.5	< 0.5	< 0.5
36205	38	127	0.4	151	< 0.5	< 0.5	< 0.5	< 0.5
36206	63.6	161	0.4	132	< 0.5	< 0.5	< 0.5	< 0.5
36211	10.1	672	0.4	482	< 0.5	< 0.5	< 0.5	< 0.5

Final Report
Activation Laboratories

Analyte Symbol	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36216	56.5	70.9	0.8	601	< 0.5	< 0.5	< 0.5	< 0.5
36218	122	188	1.7	423	< 0.5	< 0.5	< 0.5	< 0.5
36219	79.2	303	1.4	160	< 0.5	< 0.5	< 0.5	< 0.5
36220	91.3	307	0.7	262	< 0.5	< 0.5	< 0.5	< 0.5
36221	132	340	0.9	515	< 0.5	< 0.5	< 0.5	< 0.5
36225	69.7	165	0.9	768	< 0.5	< 0.5	< 0.5	< 0.5
36226	93.9	173	1.5	351	< 0.5	< 0.5	< 0.5	< 0.5
36227	106	210	0.9	306	< 0.5	< 0.5	< 0.5	< 0.5
36228	109	163	0.7	516	< 0.5	< 0.5	< 0.5	< 0.5
36229	99.8	405	0.6	725	< 0.5	< 0.5	< 0.5	< 0.5
36230	130	391	0.55	779	< 0.5	< 0.5	< 0.5	< 0.5
36231	39.9	389	0.7	466	< 0.5	< 0.5	< 0.5	< 0.5
36232	107	330	0.6	281	< 0.5	< 0.5	< 0.5	< 0.5
36233	78.5	269	1.5	321	< 0.5	< 0.5	< 0.5	< 0.5
36234	39.7	133	0.6	1170	< 0.5	< 0.5	< 0.5	< 0.5
36235	60.3	302	0.9	315	< 0.5	< 0.5	< 0.5	< 0.5
36251	49.6	295	0.3	439	< 0.5	< 0.5	< 0.5	< 0.5
36252	83.4	245	1.5	851	< 0.5	< 0.5	< 0.5	< 0.5
36254	51.4	191	1.6	516	< 0.5	< 0.5	< 0.5	< 0.5
36255	91.8	209	2.8	610	< 0.5	< 0.5	< 0.5	< 0.5
36257	76.8	388	0.4	179	< 0.5	< 0.5	< 0.5	< 0.5
36258	87.5	284	0.7	810	< 0.5	< 0.5	< 0.5	< 0.5
36259	45.8	193	0.8	326	< 0.5	< 0.5	< 0.5	< 0.5
36260	87	150	0.6	312	< 0.5	< 0.5	< 0.5	< 0.5
36261	93.5	531	0.8	1030	< 0.5	< 0.5	< 0.5	< 0.5
36262	29.9	153	0.2	236	< 0.5	< 0.5	< 0.5	< 0.5
36263	92.1	667	0.9	568	< 0.5	< 0.5	< 0.5	< 0.5
36264	70.7	189	1	336	< 0.5	< 0.5	< 0.5	< 0.5
36269	69.2	125	1.55	373	< 0.5	< 0.5	< 0.5	< 0.5
36270	68.6	129	1.8	354	< 0.5	< 0.5	< 0.5	< 0.5
36271	82.5	171	0.8	450	< 0.5	< 0.5	< 0.5	< 0.5
36272	53.4	191	0.4	427	< 0.5	< 0.5	< 0.5	< 0.5

Final Report
Activation Laboratories

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
TILL-2 Meas		996		76.7	28		40	1.8		4.8		0.045	0.1	11	12	31	48
TILL-2 Cert		12200		77000	26000		14000	800		5000		2	70	18400	5700	15000	32000
SO-3 Meas				40.3												2.1	6
SO-3 Cert				38000												8000	16000
SO-3 Meas				34.5									< 0.1			2.2	5
SO-3 Cert				38000									17			8000	16000
36077 Orig	4000	71	15	9.3	0.9	4	< 0.1	0.4	< 0.5	< 0.1	0.03	< 0.005	< 0.1	0.6	0.4	12	17
36077 Dup	4000	69	14	9.8	0.8	4	< 0.1	0.3	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.5	0.4	12	18
36086 Orig	1000	127	17	4.2	0.9	6	< 0.1	0.1	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.6	0.6	9.4	22
36086 Dup	1000	122	17	4	0.8	5	< 0.1	0.1	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.6	0.6	9.6	21
36097 Orig	2000	81	11	2.1	0.4	4	< 0.1	< 0.01	< 0.5	< 0.1	0.02	0.012	< 0.1	0.4	0.2	19	14
36097 Dup	2000	84	11	2.1	0.4	5	< 0.1	< 0.01	< 0.5	< 0.1	0.02	0.01	< 0.1	0.4	0.1	17	13
36202 Orig	4000	57	19	10.9	1.6	3	0.1	0.4	< 0.5	< 0.1	0.02	< 0.005	< 0.1	1	0.5	18	26
36202 Dup	4000	55	20	9.8	1.6	3	< 0.1	0.3	< 0.5	< 0.1	0.02	< 0.005	< 0.1	1.1	0.6	20	25
Method Blank Method Blank	< 1000	< 1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	< 0.01	< 0.01	< 0.2	< 1
Method Blank Method Blank	< 1000	< 1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	< 0.01	< 0.01	< 0.2	< 1

Final Report
Activation Laboratories

Analyte Symbol	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1	5	0.1	0.3	0.05	0.1	0.1	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
TILL-2 Meas	227	156	22									2020	< 3	33.8	43	7.6	1.7
TILL-2 Cert	150000	130000	31000									5300000	74000	40000	390000	20000	11000
SO-3 Meas	5	< 5	1.6									240	< 3				
SO-3 Cert	17000	52000	14000									2000000	26000				
SO-3 Meas	6	< 5	3.4									160	< 3				
SO-3 Cert	17000	52000	14000									2000000	26000				
36077 Orig	6	< 5	< 0.1	< 0.3	0.2	< 0.1	< 0.1	< 0.01	< 0.2	0.11	< 0.5	100	< 3	1.2	0.9	0.3	0.1
36077 Dup	5	< 5	< 0.1	< 0.3	0.2	< 0.1	< 0.1	< 0.01	< 0.2	0.115	< 0.5	90	< 3	1.02	0.9	0.3	0.1
36086 Orig	4	< 5	0.9	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.092	< 0.5	50	< 3	1.96	1.1	0.3	0.1
36086 Dup	4	< 5	0.9	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.1	< 0.5	60	< 3	1.88	1.1	0.3	0.1
36097 Orig	6	48	1.3	< 0.3	< 0.05	< 0.1	1	< 0.01	< 0.2	0.085	< 0.5	40	< 3	0.61	0.6	0.3	0.1
36097 Dup	5	39	1.6	< 0.3	< 0.05	< 0.1	1	< 0.01	< 0.2	0.068	< 0.5	40	< 3	0.55	0.6	0.2	0.1
36202 Orig	2	26	1.3	2	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.232	< 0.5	430	< 3	0.41	4.4	1	0.2
36202 Dup	2	26	1.1	2	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.251	< 0.5	400	< 3	0.46	3.8	1	0.1
Method Blank Method Blank	< 1	< 5	< 0.1	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	< 0.005	< 0.5	< 10	< 3	< 0.05	< 0.1	0.3	< 0.01
Method Blank Method Blank	< 1	< 5	< 0.1	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	< 0.005	< 0.5	< 10	< 3	< 0.05	< 0.1	0.3	< 0.01

Final Report
Activation Laboratories

Analyte Symbol	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
TILL-2 Meas	0.6	27.6	75.5		33.5	8.14	1.9		1.1			3.33		3.7	0.5	35	5
TILL-2 Cert	1900	44000	98000		36000	7400	1000		1200			3700		3700	600	47000	4000
SO-3 Meas																	
SO-3 Cert																	
SO-3 Meas																	
SO-3 Cert																	
36077 Orig	< 0.02	1.43	2.34	0.35	1.53	0.29	0.1	0.18	< 0.01	0.01	< 0.01	0.04	< 0.01	0.1	< 0.01	2.9	1
36077 Dup	< 0.02	1.06	1.67	0.27	1.17	0.17	0.2	0.19	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	2.4	1
36086 Orig	< 0.02	2.19	3.47	0.47	1.95	0.41	0.2	0.33	< 0.01	0.14	< 0.01	0.11	< 0.01	0.1	< 0.01	0.7	1
36086 Dup	< 0.02	1.99	3.15	0.43	1.9	0.33	0.2	0.33	< 0.01	0.14	< 0.01	0.12	< 0.01	0.2	< 0.01	0.6	1
36097 Orig	< 0.02	< 0.01	< 0.01	< 0.01	0.07	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	5.7	1
36097 Dup	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	4.9	1
36202 Orig	< 0.02	1.57	3.4	0.42	1.98	0.38	0.1	0.3	< 0.01	0.06	< 0.01	0.08	< 0.01	0.1	< 0.01	9.2	2
36202 Dup	< 0.02	1.65	3.52	0.44	2.22	0.48	0.1	0.27	< 0.01	0.04	< 0.01	0.07	< 0.01	0.1	< 0.01	8.9	2
Method Blank Method Blank	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.1
Method Blank Method Blank	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.1

Final Report
Activation Laboratories

Analyte Symbol	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	10	0.4	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
TILL-2 Meas	30	6410	229	688	8.6	1320				
TILL-2 Cert	12000	780000	143000	144000	12000	540000				
SO-3 Meas		476	91	963		93.3				
SO-3 Cert		520000	39000	217000		296000				
SO-3 Meas		352	87.4	832		81.8				
SO-3 Cert		520000	39000	217000		296000				
36077 Orig	< 10	1680	62.7	125	1.5	630	< 0.5	< 0.5	< 0.5	< 0.5
36077 Dup	< 10	1640	61.7	121	1.4	611	< 0.5	< 0.5	< 0.5	< 0.5
36086 Orig	< 10	111	29.7	185	0.7	380	< 0.5	< 0.5	< 0.5	< 0.5
36086 Dup	< 10	111	29	182	0.7	377	< 0.5	< 0.5	< 0.5	< 0.5
36097 Orig	< 10	1270	59	364	0.5	291	< 0.5	< 0.5	< 0.5	< 0.5
36097 Dup	< 10	1180	57.8	354	0.5	265	< 0.5	< 0.5	< 0.5	< 0.5
36202 Orig	< 10	944	79	146	1.3	388	< 0.5	< 0.5	< 0.5	< 0.5
36202 Dup	< 10	1160	80.5	151	1.4	415	< 0.5	< 0.5	< 0.5	< 0.5
Method Blank Method Blank	< 10	< 0.4	< 0.1	< 0.1	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Method Blank Method Blank	< 10	< 0.4	< 0.1	< 0.1	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

Final Report
Activation Laboratories

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36065	3000	64	27	4.7	1.5	4	< 0.1	0.7	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.6	0.4	3.9	18	4
36066	4000	107	12	5.9	1	2	< 0.1	< 0.01	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.6	0.3	39	30	5
36067	4000	79	8	16.3	0.6	4	0.1	0.5	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.2	0.2	12	9	3
36068	1000	34	6	10.3	0.6	3	< 0.1	0.1	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.5	0.2	21	11	8
36069	1000	76	12	6.7	0.7	3	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.3	0.2	5.1	12	3
36070	3000	70	13	6.6	1.3	3	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.4	5.8	13	2
36071	2000	73	9	6.2	0.4	3	3.2	< 0.01	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.3	0.2	8.7	9	2
36075	3000	42	10	18.4	2.8	2	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.3	0.2	22	16	5
36076	4000	44	14	13.6	1.5	3	< 0.1	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.4	18	14	3
36077	4000	70	15	9.5	0.9	4	< 0.1	0.35	< 0.5	< 0.1	0.025	< 0.005	< 0.1	0.55	0.4	12	18	5
36078	3000	61	9	5.4	0.6	2	< 0.1	0.1	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.3	0.3	4.7	11	3
36079	3000	103	11	5.8	0.8	5	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.3	15	15	4
36080	3000	95	12	5.4	1.2	4	< 0.1	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.4	9.6	15	1
36081	2000	53	11	8.3	0.8	1	< 0.1	< 0.01	< 0.5	< 0.1	0.02	< 0.005	< 0.1	2	0.5	8.5	17	7
36082	< 1000	56	10	6.3	0.5	3	< 0.1	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.6	0.4	14	14	1
36083	2000	50	8	11.9	1.1	4	0.7	< 0.01	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.5	0.4	18	8	5
36084	3000	59	18	19.5	0.3	2	< 0.1	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.3	6.3	8	8
36085	2000	69	11	4.9	< 0.1	4	< 0.1	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.6	0.6	2.4	9	4
36086	1000	125	17	4.1	0.9	6	< 0.1	0.1	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.6	0.6	9.5	22	4
36087	2000	103	80	0.7	0.7	4	< 0.1	0.2	< 0.5	< 0.1	0.04	< 0.005	< 0.1	0.5	0.4	5.2	12	5
36088	2000	68	11	11.6	0.1	2	< 0.1	< 0.01	< 0.5	< 0.1	0.03	0.005	< 0.1	0.4	0.2	21	8	3
36089	3000	112	19	10	0.9	4	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.8	0.8	6.1	20	12
36090	2000	70	12	3.8	1.4	4	< 0.1	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.5	0.5	4.1	10	4
36091	2000	80	16	33.3	0.8	2	< 0.1	0.8	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.7	0.4	4.2	11	6
36092	2000	60	7	9.7	0.2	5	0.2	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.3	2.9	11	4
36093	3000	65	11	5.7	0.3	4	< 0.1	0.1	< 0.5	< 0.1	0.02	0.005	< 0.1	0.3	0.4	6.3	19	3
36094	2000	69	11	1.7	0.7	3	< 0.1	< 0.01	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.6	0.4	4.2	14	< 1
36097	2000	82	11	2.1	0.4	5	< 0.1	< 0.01	< 0.5	< 0.1	0.02	0.011	< 0.1	0.4	0.15	18	14	5
36098	2000	61	7	1.9	0.5	5	< 0.1	< 0.01	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.5	0.2	13	21	1
36099	3000	45	11	19.6	1.7	4	< 0.1	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.6	0.4	11	28	3
36100	3000	64	18	18.5	0.6	2	< 0.1	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1	0.4	9.5	25	2
36104	3000	91	22	37.3	3.7	4	< 0.1	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.5	1	18	27	14
36105	2000	34	7	8.9	0.4	3	< 0.1	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.3	0.3	4.8	9	3
36107	2000	75	17	24.1	1.7	2	< 0.1	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	2.4	1.2	9.8	21	8
36109	3000	136	18	6	0.7	5	< 0.1	0.2	< 0.5	< 0.1	0.02	0.012	< 0.1	1	0.7	9.9	19	7
36110	4000	121	34	11.8	5.3	11	3	1.5	< 0.5	< 0.1	0.04	0.011	< 0.1	2.4	0.8	18	22	45
36111	4000	225	38	15.3	1.7	5	< 0.1	0.4	< 0.5	< 0.1	0.01	0.006	< 0.1	1.9	1.7	13	24	19
36113	5000	52	9	71.5	1.9	3	< 0.1	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.8	2	61	27	20
36116	2000	86	10	42.6	26	5	< 0.1	0.1	< 0.5	< 0.1	0.02	< 0.005	< 0.1	1.2	1	12	26	14
36118	2000	73	13	13.1	1.6	3	< 0.1	< 0.01	< 0.5	< 0.1	0.04	< 0.005	< 0.1	2.1	1.7	3.7	25	33
36119	2000	97	10	3.5	0.2	3	< 0.1	< 0.01	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.2	0.5	5.6	11	4
36126	2000	35	5	18	0.4	3	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.7	0.4	6.4	20	5
36127	3000	49	10	10.7	1.1	3	< 0.1	< 0.01	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.2	0.4	29	37	1
36128	3000	61	9	7	0.1	4	< 0.1	< 0.01	< 0.5	< 0.1	0.04	0.005	< 0.1	0.8	0.3	10	18	< 1
36129	4000	57	8	9.8	0.3	4	< 0.1	< 0.01	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.5	0.2	5.6	18	< 1
36130	4000	51	8	3.2	0.3	3	< 0.1	< 0.01	< 0.5	< 0.1	0.01	0.005	< 0.1	0.4	0.2	7.6	15	< 1

Final Report
Activation Laboratories

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36131	3000	46	5	0.5	0.7	2	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.2	20	13	2
36132	4000	70	8	1.1	0.9	3	< 0.1	0.4	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.3	0.2	11	17	< 1
36133	4000	68	7	4	0.4	2	< 0.1	0.3	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.1	< 0.01	3	10	< 1
36134	3000	61	8	4.6	0.6	3	0.1	0.5	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.3	0.1	4.1	5	< 1
36135	4000	100	13	18.2	1.5	3	< 0.1	0.4	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.7	0.4	13	15	3
36136	2000	36	7	21.9	0.8	2	< 0.1	0.1	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.2	0.3	6.8	10	< 1
36150	4000	75	20	31.9	4.4	3	0.4	0.7	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.7	0.9	69	37	8
36151	3000	66	13	18.6	1.9	2	0.4	0.8	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.9	0.5	13	27	6
36152	3000	60	8	2.4	0.6	3	0.1	0.3	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.3	0.1	6.7	10	4
36202	4000	56	20	10.4	1.6	3	< 0.1	0.35	< 0.5	< 0.1	0.02	< 0.005	< 0.1	1.05	0.55	19	26	2
36203	3000	60	10	2.1	1.2	3	< 0.1	0.2	< 0.5	< 0.1	0.02	< 0.005	< 0.1	0.4	0.2	9.1	16	< 1

Final Report
Activation Laboratories

Analyte Symbol	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	5	0.1	0.3	0.05	0.1	0.1	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36065	17	1.9	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.069	< 0.5	120	< 3	1.41	1.5	0.6	0.1	< 0.02	1.25
36066	13	1.4	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.065	< 0.5	90	< 3	1.84	1.3	0.4	0.1	< 0.02	1.62
36067	< 5	2.1	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.059	< 0.5	70	< 3	0.66	0.4	0.4	< 0.01	< 0.02	0.12
36068	6	1.4	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.033	< 0.5	110	< 3	0.79	0.7	0.4	0.1	< 0.02	0.57
36069	< 5	1.2	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.042	< 0.5	60	< 3	0.91	0.7	0.3	0.1	< 0.02	0.46
36070	< 5	1.2	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.063	< 0.5	100	< 3	1.13	0.9	0.4	0.1	< 0.02	0.51
36071	< 5	1.6	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.029	< 0.5	70	< 3	0.58	0.6	0.4	< 0.01	< 0.02	< 0.01
36075	16	1.7	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.034	< 0.5	210	< 3	0.74	0.9	0.7	0.1	< 0.02	< 0.01
36076	36	1.4	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.048	< 0.5	260	< 3	0.87	0.8	0.8	0.1	0.07	0.13
36077	< 5	< 0.1	< 0.3	0.2	< 0.1	< 0.1	< 0.01	< 0.2	0.112	< 0.5	90	< 3	1.11	0.9	0.3	0.1	< 0.02	1.24
36078	< 5	3	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.054	< 0.5	60	< 3	1.08	1.6	0.3	0.1	< 0.02	0.39
36079	22	1.5	< 0.3	0.1	< 0.1	< 0.1	< 0.01	0.7	0.082	< 0.5	50	< 3	0.79	0.7	0.2	0.1	< 0.02	0.12
36080	11	1.3	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.119	< 0.5	70	< 3	0.98	1.8	0.3	0.1	< 0.02	0.29
36081	< 5	1.7	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.105	< 0.5	180	< 3	1.54	2.9	0.8	0.2	< 0.02	2.73
36082	9	1	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.115	< 0.5	70	< 3	0.82	1.1	0.3	0.1	< 0.02	0.16
36083	16	1	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.059	< 0.5	100	< 3	0.58	0.5	0.4	< 0.01	< 0.02	0.09
36084	8	0.7	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.031	< 0.5	80	< 3	1.31	0.6	0.3	< 0.01	< 0.02	0.97
36085	12	0.9	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.104	< 0.5	80	< 3	1.49	0.6	0.3	< 0.01	< 0.02	1.91
36086	< 5	0.9	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.096	< 0.5	50	< 3	1.92	1.1	0.3	0.1	< 0.02	2.09
36087	< 5	0.5	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.122	< 0.5	30	< 3	1.16	0.4	0.2	< 0.01	< 0.02	0.63
36088	< 5	0.7	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.114	< 0.5	80	< 3	0.63	0.6	0.3	0.1	< 0.02	< 0.01
36089	13	1.1	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.136	< 0.5	90	< 3	2.6	1.2	0.3	0.1	< 0.02	3.87
36090	< 5	0.7	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.14	< 0.5	60	< 3	0.84	0.5	0.3	< 0.01	< 0.02	0.54
36091	14	1.8	2	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.022	< 0.5	260	< 3	1.37	2	1.1	0.1	0.03	0.75
36092	< 5	0.6	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.07	< 0.5	70	< 3	0.53	0.2	0.2	< 0.01	< 0.02	< 0.01
36093	7	0.9	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.071	< 0.5	80	< 3	0.74	0.5	0.3	0.1	< 0.02	< 0.01
36094	< 5	1.9	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.038	< 0.5	80	< 3	0.8	1	0.4	0.1	< 0.02	0.26
36097	44	1.5	< 0.3	< 0.05	< 0.1	1	< 0.01	< 0.2	0.076	< 0.5	40	< 3	0.58	0.6	0.3	0.1	< 0.02	< 0.01
36098	20	1.3	< 0.3	< 0.05	< 0.1	1	< 0.01	< 0.2	0.146	< 0.5	110	< 3	0.51	1.5	0.3	0.1	< 0.02	< 0.01
36099	13	2.3	3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.062	< 0.5	430	< 3	1.46	1.5	1.2	0.1	0.02	2.16
36100	22	2.2	2	0.1	< 0.1	1	< 0.01	< 0.2	0.097	< 0.5	310	< 3	1.3	2.7	0.8	0.2	< 0.02	1.93
36104	46	2.4	2	0.1	< 0.1	1	< 0.01	< 0.2	0.183	< 0.5	430	< 3	2.39	2.3	1	0.2	0.02	5
36105	< 5	1.3	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.043	< 0.5	120	< 3	0.87	1.1	0.4	0.1	< 0.02	0.99
36107	10	2.2	1	0.2	< 0.1	< 0.1	< 0.01	< 0.2	0.201	< 0.5	320	< 3	3.36	2.9	0.8	0.2	0.04	6.13
36109	13	1.4	< 0.3	0.1	< 0.1	1	< 0.01	< 0.2	0.311	< 0.5	100	< 3	1.02	1.1	0.3	0.1	< 0.02	1.22
36110	305	3.1	2	0.2	< 0.1	2	0.04	< 0.2	0.372	< 0.5	140	< 3	1.76	3.6	0.4	0.2	< 0.02	1.04
36111	42	2.2	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.502	< 0.5	120	< 3	4.1	2.6	0.4	0.1	< 0.02	8.75
36113	5	1.7	2	0.2	< 0.1	< 0.1	< 0.01	< 0.2	0.508	< 0.5	400	< 3	6.68	2.5	0.8	0.2	0.02	11.8
36116	35	1.6	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.591	< 0.5	370	< 3	1.73	0.9	0.8	0.1	< 0.02	3.94
36118	< 5	1.3	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.405	< 0.5	100	< 3	9.29	1.9	0.3	0.1	< 0.02	34.4
36119	< 5	1.4	< 0.3	< 0.05	< 0.1	1	< 0.01	< 0.2	0.168	< 0.5	30	< 3	1.86	0.7	0.2	0.1	< 0.02	4.73
36126	< 5	1.6	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.067	< 0.5	170	< 3	1.59	0.8	0.6	0.1	< 0.02	1.67
36127	< 5	2.1	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.096	< 0.5	260	< 3	2.36	1.8	0.9	0.2	< 0.02	2.74
36128	< 5	1.4	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.043	< 0.5	140	< 3	1.09	1.1	0.5	0.1	0.05	1.36
36129	< 5	1.1	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	< 0.005	< 0.5	110	< 3	0.88	0.8	0.3	0.1	< 0.02	0.61
36130	< 5	1.3	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.06	< 0.5	70	< 3	0.89	0.6	0.3	0.1	< 0.02	0.36

Final Report
Activation Laboratories

Analyte Symbol	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	5	0.1	0.3	0.05	0.1	0.1	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36131	7	8.2	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.136	< 0.5	60	< 3	0.24	0.8	0.3	< 0.01	< 0.02	1.22
36132	16	2.2	< 0.3	0.2	< 0.1	< 0.1	0.01	< 0.2	0.252	< 0.5	60	< 3	< 0.05	0.9	0.3	0.1	< 0.02	0.38
36133	< 5	0.6	< 0.3	0.2	< 0.1	< 0.1	< 0.01	< 0.2	0.108	< 0.5	20	< 3	< 0.05	0.4	0.2	< 0.01	< 0.02	0.06
36134	< 5	1.2	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.097	< 0.5	40	< 3	< 0.05	1.3	0.2	0.1	< 0.02	0.24
36135	16	1.3	2	0.1	< 0.1	1	< 0.01	< 0.2	0.183	< 0.5	190	< 3	0.56	2.7	0.5	0.1	< 0.02	1.05
36136	< 5	0.1	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.129	< 0.5	180	< 3	2.62	3.4	0.8	0.2	< 0.02	5.3
36150	96	2	3	0.3	< 0.1	1	0.01	< 0.2	0.162	< 0.5	520	< 3	1.68	7.8	1.5	0.4	0.04	5.7
36151	297	0.5	1	0.1	< 0.1	1	0.01	< 0.2	0.134	< 0.5	210	< 3	0.29	3.4	0.5	0.2	< 0.02	2.45
36152	55	< 0.1	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.165	< 0.5	50	< 3	< 0.05	0.7	0.2	< 0.01	< 0.02	< 0.01
36202	26	1.2	2	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.241	< 0.5	420	< 3	0.44	4.1	1	0.15	< 0.02	1.61
36203	9	3.6	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.228	< 0.5	110	< 3	< 0.05	1.1	0.4	0.1	< 0.02	< 0.01

Final Report
Activation Laboratories

Analyte Symbol	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.1	10	0.4	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36065	2.85	0.34	1.4	0.28	0.1	0.21	< 0.01	0.14	< 0.01	0.05	< 0.01	0.1	< 0.01	4.3	1	< 10	57.2	42.1
36066	2.99	0.38	1.62	0.33	0.1	0.28	< 0.01	0.13	< 0.01	0.11	< 0.01	0.1	< 0.01	3.6	1	< 10	2190	51.6
36067	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	4.3	1	< 10	870	40.3
36068	1.32	0.15	0.64	0.09	0.1	0.07	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	1.4	1	< 10	975	69.3
36069	0.18	0.08	0.5	0.12	0.1	0.05	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	1.8	1	< 10	154	40.6
36070	0.8	0.15	0.77	0.14	0.1	0.13	< 0.01	< 0.01	< 0.01	0.03	< 0.01	0.1	< 0.01	2.7	1	< 10	174	40
36071	< 0.01	< 0.01	< 0.01	< 0.01	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	1.5	1	< 10	282	43.7
36075	< 0.01	< 0.01	0.03	< 0.01	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	7.5	< 0.1	< 10	1830	74.4
36076	0.48	0.09	0.47	0.06	0.1	0.08	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2	< 0.1	< 10	4950	79.4
36077	2	0.31	1.35	0.23	0.15	0.19	< 0.01	< 0.01	< 0.01	0.04	< 0.01	< 0.01	< 0.01	2.7	1	< 10	1660	62.2
36078	0.34	0.14	0.68	0.12	0.1	0.13	< 0.01	< 0.01	< 0.01	0.02	< 0.01	0.1	< 0.01	1.4	1	< 10	68.2	44.1
36079	< 0.01	< 0.01	0.19	< 0.01	0.1	0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	4.1	1	< 10	712	31.6
36080	< 0.01	0.07	0.4	0.06	0.1	0.07	< 0.01	< 0.01	< 0.01	0.03	< 0.01	0.1	< 0.01	1.7	1	< 10	722	47.4
36081	4.72	0.57	2.39	0.39	0.1	0.32	0.1	0.13	< 0.01	0.07	< 0.01	0.1	< 0.01	9.2	1	< 10	27.9	44.3
36082	0.65	0.06	0.33	0.08	0.1	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2.3	1	< 10	727	42.8
36083	0.94	0.06	0.38	0.04	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2.9	< 0.1	< 10	897	72.3
36084	1.15	0.22	1.04	0.23	0.1	0.24	< 0.01	0.02	< 0.01	0.04	< 0.01	0.1	< 0.01	2.5	1	< 10	414	40.8
36085	4.03	0.55	2.35	0.41	0.1	0.32	< 0.01	0.07	< 0.01	0.06	< 0.01	0.1	< 0.01	0.9	1	< 10	138	20.4
36086	3.31	0.45	1.92	0.37	0.2	0.33	< 0.01	0.14	< 0.01	0.12	< 0.01	0.15	< 0.01	0.6	1	< 10	111	29.4
36087	1.44	0.2	1.05	0.19	0.1	0.14	< 0.01	0.01	< 0.01	0.03	< 0.01	0.1	< 0.01	1.9	1	< 10	91	31.2
36088	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.8	1	< 10	1450	46.8
36089	7.59	1.06	4.48	0.86	0.3	0.68	0.1	0.28	0.1	0.18	< 0.01	0.2	< 0.01	0.7	1	< 10	508	50.9
36090	1.22	0.16	0.81	0.11	0.1	0.09	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	1.3	< 0.1	< 10	170	29.9
36091	1.65	0.2	0.91	0.16	0.1	0.16	< 0.01	0.04	< 0.01	0.08	< 0.01	0.1	< 0.01	2.6	1	< 10	170	64.5
36092	< 0.01	< 0.01	0.2	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	1.5	1	< 10	71.6	35.8
36093	0.15	0.03	0.28	0.05	0.1	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2.5	1	< 10	169	49.7
36094	0.52	0.09	0.46	0.11	0.1	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	2.4	< 0.1	< 10	196	41.8
36097	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	5.3	1	< 10	1230	58.4
36098	< 0.01	< 0.01	0.19	0.02	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	6.4	1	< 10	1300	65.8
36099	1.92	0.33	1.14	0.1	0.1	0.19	< 0.01	0.03	< 0.01	0.06	< 0.01	0.1	< 0.01	2.7	2	< 10	314	86
36100	2.89	0.42	1.59	0.27	0.1	0.17	< 0.01	0.06	< 0.01	0.07	< 0.01	0.1	< 0.01	1.7	1	< 10	851	176
36104	9.91	1.19	4.59	0.9	0.2	0.6	0.1	0.26	0.1	0.15	< 0.01	0.1	< 0.01	2.2	1	< 10	560	68.6
36105	2.01	0.19	0.85	0.09	0.2	0.08	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	1.7	1	< 10	103	63.8
36107	13.3	1.62	6.57	1.12	0.3	0.88	0.1	0.42	0.1	0.24	< 0.01	0.3	< 0.01	5.7	1	< 10	545	73.3
36109	2.62	0.3	1.19	0.2	0.1	0.17	< 0.01	0.02	< 0.01	0.04	< 0.01	< 0.01	< 0.01	4.6	1	< 10	134	47.4
36110	2.47	0.32	3.07	0.32	0.1	0.31	< 0.01	0.16	< 0.01	0.12	< 0.01	0.1	< 0.01	5	1	< 10	2390	10.3
36111	16.9	1.99	7.56	1.34	0.3	1.07	0.1	0.53	0.1	0.32	< 0.01	0.3	< 0.01	3.9	1	< 10	369	70.2
36113	26.5	3.04	12.3	3.03	0.5	1.72	0.2	0.94	0.2	0.54	0.1	0.6	0.1	6.6	2	< 10	9400	55.2
36116	8.34	0.95	3.62	0.58	0.2	0.42	< 0.01	0.16	< 0.01	0.11	< 0.01	0.1	< 0.01	6.4	1	< 10	422	91.9
36118	62.2	6.75	25.5	4.34	0.9	3.35	0.4	1.62	0.3	0.78	0.1	0.6	0.1	4	2	< 10	76.5	25.9
36119	8.17	0.8	2.89	0.48	0.2	0.44	< 0.01	0.13	< 0.01	0.13	< 0.01	0.1	< 0.01	9.9	1	< 10	125	41.5
36126	4.46	0.5	2.21	0.39	0.1	0.31	< 0.01	0.08	< 0.01	0.07	< 0.01	0.1	< 0.01	1.3	1	< 10	107	31.9
36127	6.01	0.75	3	0.55	0.2	0.44	0.1	0.17	0.1	0.14	< 0.01	0.2	< 0.01	13	2	< 10	466	82.7
36128	2.23	0.3	1.38	0.21	0.1	0.17	< 0.01	0.02	< 0.01	0.03	< 0.01	0.1	< 0.01	6.7	1	< 10	225	49.8
36129	1.07	0.16	0.73	0.14	0.1	0.06	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	2.6	2	< 10	304	62.9
36130	0.8	0.13	0.66	0.12	0.1	0.09	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	4.6	2	< 10	253	50.9

Final Report
Activation Laboratories

Analyte Symbol	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.1	10	0.4	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36131	2.4	0.29	1.25	0.27	0.1	0.16	< 0.01	0.08	< 0.01	0.04	< 0.01	< 0.01	< 0.01	9.9	1	< 10	1860	45.8
36132	0.74	0.1	0.57	0.18	0.1	0.11	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01	< 0.01	5.1	2	< 10	601	37.2
36133	< 0.01	< 0.01	0.04	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	5.1	2	< 10	122	38.5
36134	0.17	0.05	0.34	0.08	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	4.3	2	< 10	189	34.5
36135	1.9	0.29	1.31	0.26	0.1	0.2	< 0.01	0.09	< 0.01	0.09	< 0.01	0.1	< 0.01	4.6	2	< 10	1060	103
36136	11.7	1.58	6.61	1.2	0.3	0.92	0.1	0.42	0.1	0.25	< 0.01	0.2	< 0.01	6.4	2	< 10	30.9	43.8
36150	7.43	0.96	3.47	0.67	0.4	0.57	0.1	0.3	0.1	0.2	< 0.01	0.2	< 0.01	14	2	< 10	4490	53.2
36151	2.88	0.42	1.66	0.28	0.1	0.24	< 0.01	0.04	< 0.01	0.06	< 0.01	0.1	< 0.01	4.2	2	< 10	632	57.5
36152	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	6.3	1	< 10	316	79.2
36202	3.46	0.43	2.1	0.43	0.1	0.29	< 0.01	0.05	< 0.01	0.07	< 0.01	0.1	< 0.01	9	2	< 10	1050	79.8
36203	< 0.01	< 0.01	0.08	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	8.2	1	< 10	275	80.3

Analyte Symbol	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36065	336	0.8	215	< 0.5	< 0.5	< 0.5	< 0.5
36066	146	0.5	592	< 0.5	< 0.5	< 0.5	< 0.5
36067	228	0.8	270	< 0.5	< 0.5	< 0.5	< 0.5
36068	160	0.6	580	< 0.5	< 0.5	< 0.5	< 0.5
36069	151	0.5	486	< 0.5	< 0.5	< 0.5	< 0.5
36070	165	0.7	487	< 0.5	< 0.5	< 0.5	< 0.5
36071	175	0.3	548	< 0.5	< 0.5	< 0.5	< 0.5
36075	192	0.3	591	< 0.5	< 0.5	< 0.5	< 0.5
36076	167	0.9	702	< 0.5	< 0.5	< 0.5	< 0.5
36077	123	1.45	621	< 0.5	< 0.5	< 0.5	< 0.5
36078	128	0.6	353	< 0.5	< 0.5	< 0.5	< 0.5
36079	114	0.8	604	< 0.5	< 0.5	< 0.5	< 0.5
36080	135	0.6	643	< 0.5	< 0.5	< 0.5	< 0.5
36081	170	0.5	381	< 0.5	< 0.5	< 0.5	< 0.5
36082	147	0.5	681	< 0.5	< 0.5	< 0.5	< 0.5
36083	200	0.5	559	< 0.5	< 0.5	< 0.5	< 0.5
36084	109	0.8	444	< 0.5	< 0.5	< 0.5	< 0.5
36085	60.3	0.8	310	< 0.5	< 0.5	< 0.5	< 0.5
36086	184	0.7	379	< 0.5	< 0.5	< 0.5	< 0.5
36087	78.2	1.1	247	< 0.5	< 0.5	< 0.5	< 0.5
36088	302	0.8	302	< 0.5	< 0.5	< 0.5	< 0.5
36089	170	0.9	597	< 0.5	< 0.5	< 0.5	< 0.5
36090	92.6	0.8	228	< 0.5	< 0.5	< 0.5	< 0.5
36091	213	0.4	488	< 0.5	< 0.5	< 0.5	< 0.5
36092	190	0.7	313	< 0.5	< 0.5	< 0.5	< 0.5
36093	140	0.5	405	< 0.5	< 0.5	< 0.5	< 0.5
36094	167	0.3	342	< 0.5	< 0.5	< 0.5	< 0.5
36097	359	0.5	278	< 0.5	< 0.5	< 0.5	< 0.5
36098	169	0.9	682	< 0.5	< 0.5	< 0.5	< 0.5
36099	329	0.7	409	< 0.5	< 0.5	< 0.5	< 0.5
36100	198	0.5	559	< 0.5	< 0.5	< 0.5	< 0.5
36104	226	0.6	340	< 0.5	< 0.5	< 0.5	< 0.5
36105	239	0.6	277	< 0.5	< 0.5	< 0.5	< 0.5
36107	152	2.1	401	< 0.5	< 0.5	< 0.5	< 0.5
36109	173	1.5	225	< 0.5	< 0.5	< 0.5	< 0.5
36110	152	0.3	271	< 0.5	< 0.5	< 0.5	< 0.5
36111	114	3.3	374	< 0.5	< 0.5	< 0.5	< 0.5
36113	183	1.5	316	< 0.5	< 0.5	< 0.5	< 0.5
36116	146	5	357	< 0.5	< 0.5	< 0.5	< 0.5
36118	104	2.5	197	< 0.5	< 0.5	< 0.5	< 0.5
36119	300	1.2	434	< 0.5	< 0.5	< 0.5	< 0.5
36126	184	0.7	212	< 0.5	< 0.5	< 0.5	< 0.5
36127	217	0.8	433	< 0.5	< 0.5	< 0.5	< 0.5
36128	244	0.6	167	< 0.5	< 0.5	< 0.5	< 0.5
36129	232	0.7	325	< 0.5	< 0.5	< 0.5	< 0.5
36130	157	0.6	199	< 0.5	< 0.5	< 0.5	< 0.5

Analyte Symbol	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36131	78.7	0.7	268	< 0.5	< 0.5	< 0.5	< 0.5
36132	97.4	0.7	546	< 0.5	< 0.5	< 0.5	< 0.5
36133	145	0.2	263	< 0.5	< 0.5	< 0.5	< 0.5
36134	361	0.4	333	< 0.5	< 0.5	< 0.5	< 0.5
36135	113	0.8	482	< 0.5	< 0.5	< 0.5	< 0.5
36136	120	0.7	370	< 0.5	< 0.5	< 0.5	< 0.5
36150	452	0.4	1800	< 0.5	< 0.5	< 0.5	< 0.5
36151	385	0.3	737	< 0.5	< 0.5	< 0.5	< 0.5
36152	166	0.9	361	< 0.5	< 0.5	< 0.5	< 0.5
36202	149	1.35	402	< 0.5	< 0.5	< 0.5	< 0.5
36203	119	0.2	181	< 0.5	< 0.5	< 0.5	< 0.5

Quality Analysis ... *Innovative Technologies*

Date Submitted: 17-Jun-10
Invoice No.: A10-3207 (i)
Invoice Date: 08-Jul-10
Your Reference: STURGEN LAKE

Excalibur Resources Ltd.
Excalibur Resources

Canada

ATTN: Ahmad Mumin

CERTIFICATE OF ANALYSIS

87 Soil samples were submitted for analysis.

The following analytical packages were requested: Code 7-Enhanced Enzyme Leach Enzyme Leach ICP/MS(ENZYME)
Code SGH Soil Gas Hydrocarbons

REPORT **A10-3207 (i)**

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Notes:

CERTIFIED BY :

Emmanuel Eseme , Ph.D.
Quality Control

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LAB 266
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Accrédité CCN

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Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1	5	0.1	0.3	0.05	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36065	3000	64	27	4.7	1.5	4	< 0.1	0.70	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.60	0.40	3.9	18	4	17	1.9	1.0	0.10	< 0.1	< 0.1
36066	4000	107	12	5.9	1.0	2	< 0.1	< 0.01	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.60	0.30	39.0	30	5	13	1.4	1.0	0.10	< 0.1	< 0.1
36067	4000	79	8	16.3	0.6	4	0.1	0.50	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.20	0.20	12.0	9	3	< 5	2.1	< 0.3	< 0.05	< 0.1	< 0.1
36068	1000	34	6	10.3	0.6	3	< 0.1	0.10	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.50	0.20	21.0	11	8	6	1.4	< 0.3	< 0.05	< 0.1	< 0.1
36069	1000	76	12	6.7	0.7	3	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.30	0.20	5.1	12	3	< 5	1.2	1.0	0.10	< 0.1	< 0.1
36070	3000	70	13	6.6	1.3	3	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.40	5.8	13	2	< 5	1.2	1.0	< 0.05	< 0.1	< 0.1
36071	2000	73	9	6.2	0.4	3	3.2	< 0.01	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.30	0.20	8.7	9	2	< 5	1.6	1.0	< 0.05	< 0.1	< 0.1
36075	3000	42	10	18.4	2.8	2	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.30	0.20	22.0	16	5	16	1.7	1.0	0.10	< 0.1	< 0.1
36076	4000	44	14	13.6	1.5	3	< 0.1	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.40	18.0	14	3	36	1.4	1.0	< 0.05	< 0.1	< 0.1
36077	4000	70	15	9.5	0.9	4	< 0.1	0.35	< 0.5	< 0.1	0.025	< 0.005	< 0.1	0.55	0.40	12.0	18	5	< 5	< 0.1	< 0.3	0.20	< 0.1	< 0.1
36078	3000	61	9	5.4	0.6	2	< 0.1	0.10	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.30	0.30	4.7	11	3	< 5	3.0	1.0	0.10	< 0.1	< 0.1
36079	3000	103	11	5.8	0.8	5	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.30	15.0	15	4	22	1.5	< 0.3	0.10	< 0.1	< 0.1
36080	3000	95	12	5.4	1.2	4	< 0.1	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.40	9.6	15	1	11	1.3	1.0	< 0.05	< 0.1	< 0.1
36081	2000	53	11	8.3	0.8	1	< 0.1	< 0.01	< 0.5	< 0.1	0.020	< 0.005	< 0.1	2.00	0.50	8.5	17	7	< 5	1.7	1.0	0.10	< 0.1	< 0.1
36082	< 1000	56	10	6.3	0.5	3	< 0.1	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.60	0.40	14.0	14	1	9	1.0	< 0.3	< 0.05	< 0.1	< 0.1
36083	2000	50	8	11.9	1.1	4	0.7	< 0.01	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.50	0.40	18.0	8	5	16	1.0	< 0.3	0.10	< 0.1	< 0.1
36084	3000	59	18	19.5	0.3	2	< 0.1	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.30	6.3	8	8	8	0.7	< 0.3	0.10	< 0.1	< 0.1
36085	2000	69	11	4.9	< 0.1	4	< 0.1	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.60	0.60	2.4	9	4	12	0.9	< 0.3	< 0.05	< 0.1	< 0.1
36086	1000	125	17	4.1	0.9	6	< 0.1	0.10	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.60	0.60	9.5	22	4	< 5	0.9	< 0.3	< 0.05	< 0.1	< 0.1
36087	2000	103	80	0.7	0.7	4	< 0.1	0.20	< 0.5	< 0.1	0.040	< 0.005	< 0.1	0.50	0.40	5.2	12	5	< 5	0.5	< 0.3	0.10	< 0.1	< 0.1
36088	2000	68	11	11.6	0.1	2	< 0.1	< 0.01	< 0.5	< 0.1	0.030	0.005	< 0.1	0.40	0.20	21.0	8	3	< 5	0.7	< 0.3	0.10	< 0.1	< 0.1
36089	3000	112	19	10.0	0.9	4	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.80	0.80	6.1	20	12	13	1.1	1.0	0.10	< 0.1	< 0.1
36090	2000	70	12	3.8	1.4	4	< 0.1	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.50	0.50	4.1	10	4	< 5	0.7	< 0.3	0.10	< 0.1	< 0.1
36091	2000	80	16	33.3	0.8	2	< 0.1	0.80	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.70	0.40	4.2	11	6	14	1.8	2.0	0.10	< 0.1	< 0.1
36092	2000	60	7	9.7	0.2	5	0.2	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.30	2.9	11	4	< 5	0.6	< 0.3	0.10	< 0.1	< 0.1
36093	3000	65	11	5.7	0.3	4	< 0.1	0.10	< 0.5	< 0.1	0.020	0.005	< 0.1	0.30	0.40	6.3	19	3	7	0.9	< 0.3	0.10	< 0.1	< 0.1
36094	2000	69	11	1.7	0.7	3	< 0.1	< 0.01	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.60	0.40	4.2	14	< 1	< 5	1.9	1.0	0.10	< 0.1	< 0.1
36097	2000	82	11	2.1	0.4	5	< 0.1	< 0.01	< 0.5	< 0.1	0.020	0.011	< 0.1	0.40	0.15	18.0	14	5	44	1.5	< 0.3	< 0.05	< 0.1	1.0
36098	2000	61	7	1.9	0.5	5	< 0.1	< 0.01	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.50	0.20	13.0	21	1	20	1.3	< 0.3	< 0.05	< 0.1	1.0
36099	3000	45	11	19.6	1.7	4	< 0.1	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.60	0.40	11.0	28	3	13	2.3	3.0	0.10	< 0.1	< 0.1
36100	3000	64	18	18.5	0.6	2	< 0.1	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.00	0.40	9.5	25	2	22	2.2	2.0	0.10	< 0.1	1.0
36104	3000	91	22	37.3	3.7	4	< 0.1	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.50	1.00	18.0	27	14	46	2.4	2.0	0.10	< 0.1	1.0
36105	2000	34	7	8.9	0.4	3	< 0.1	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.30	0.30	4.8	9	3	< 5	1.3	1.0	0.10	< 0.1	< 0.1
36107	2000	75	17	24.1	1.7	2	< 0.1	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	2.40	1.20	9.8	21	8	10	2.2	1.0	0.20	< 0.1	< 0.1
36109	3000	136	18	6.0	0.7	5	< 0.1	0.20	< 0.5	< 0.1	0.020	0.012	< 0.1	1.00	0.70	9.9	19	7	13	1.4	< 0.3	0.10	< 0.1	1.0
36110	4000	121	34	11.8	5.3	11	3.0	1.50	< 0.5	< 0.1	0.040	0.011	< 0.1	2.40	0.80	18.0	22	45	305	3.1	2.0	0.20	< 0.1	2.0
36111	4000	225	38	15.3	1.7	5	< 0.1	0.40	< 0.5	< 0.1	0.010	0.006	< 0.1	1.90	1.70	13.0	24	19	42	2.2	1.0	0.10	< 0.1	< 0.1
36113	5000	52	9	71.5	1.9	3	< 0.1	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.80	2.00	61.0	27	20	5	1.7	2.0	0.20	< 0.1	< 0.1
36116	2000	86	10	42.6	26.0	5	< 0.1	0.10	< 0.5	< 0.1	0.020	< 0.005	< 0.1	1.20	1.00	12.0	26	14	35	1.6	1.0	0.10	< 0.1	< 0.1
36118	2000	73	13	13.1	1.6	3	< 0.1	< 0.01	< 0.5	< 0.1	0.040	< 0.005	< 0.1	2.10	1.70	3.7	25	33	< 5	1.3	1.0	0.10	< 0.1	< 0.1
36119	2000	97	10	3.5	0.2	3	< 0.1	< 0.01	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.20	0.50	5.6	11	4	< 5	1.4	< 0.3	< 0.05	< 0.1	1.0
36126	2000	35	5	18.0	0.4	3	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	0.70	0.40	6.4	20	5	< 5	1.6	1.0	< 0.05	< 0.1	< 0.1
36127	3000	49	10	10.7	1.1	3	< 0.1	< 0.01	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.20	0.40	29.0	37	1	< 5	2.1	1.0	< 0.05	< 0.1	< 0.1
36128	3000	61	9	7.0	0.1	4	< 0.1	< 0.01	< 0.5	< 0.1	0.040	0.005	< 0.1	0.80	0.30	10.0	18	< 1	< 5	1.4	1.0	0.10	< 0.1	< 0.1
36129	4000	57	8	9.8	0.3	4	< 0.1	< 0.01	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.50	0.20	5.6	18	< 1	< 5	1.1	1.0	0.10	< 0.1	< 0.1
36130	4000	51	8	3.2	0.3	3	< 0.1	< 0.01	< 0.5	< 0.1	0.010	0.005	< 0.1	0.40	0.20	7.6	15	< 1	< 5	1.3	< 0.3	< 0.05	< 0.1	< 0.1
36131	3000	46	5	0.5	0.7	2	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.20	20.0	13	2	7	8.2	< 0.3	0.10	< 0.1	< 0.1
36132	4000	70	8	1.1	0.9	3	< 0.1	0.40	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.30	0.20	11.0	17	< 1	16	2.2	< 0.3	0.20	< 0.1	< 0.1
36133	4000	68	7	4.0	0.4	2	< 0.1	0.30	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.10	< 0.01	3.0	10	< 1	< 5	0.6	< 0.3	0.20	< 0.1	< 0.1
36134	3000	61	8	4.6	0.6	3	0.1	0.50	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.30	0.10	4.1	5	< 1	< 5	1.2	< 0.3	0.10	< 0.1	< 0.1
36135	4000	100	13	18.2	1.5	3	< 0.1	0.40	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.70	0.40	13.0	15	3	16	1.3	2.0	0.10	< 0.1	1.0
36136	2000	36	7	21.9	0.8	2	< 0.1	0.10	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.20	0.30	6.8	10	< 1	< 5	0.1	1.0	0.10	< 0.1	< 0.1

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1	5	0.1	0.3	0.05	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36150	4000	75	20	31.9	4.4	3	0.4	0.70	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.70	0.90	69.0	37	8	96	2.0	3.0	0.30	< 0.1	1.0
36151	3000	66	13	18.6	1.9	2	0.4	0.80	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.90	0.50	13.0	27	6	297	0.5	1.0	0.10	< 0.1	1.0
36152	3000	60	8	2.4	0.6	3	0.1	0.30	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.30	0.10	6.7	10	4	55	< 0.1	< 0.3	< 0.05	< 0.1	< 0.1
36202	4000	56	20	10.4	1.6	3	< 0.1	0.35	< 0.5	< 0.1	0.020	< 0.005	< 0.1	1.05	0.55	19.0	26	2	26	1.2	2.0	0.10	< 0.1	< 0.1
36203	3000	60	10	2.1	1.2	3	< 0.1	0.20	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.40	0.20	9.1	16	< 1	9	3.6	1.0	0.10	< 0.1	< 0.1

Analyte Symbol	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36065	< 0.01	< 0.2	0.069	< 0.5	120	< 3	1.41	1.5	0.6	0.10	< 0.02	1.25	2.85	0.34	1.40	0.28	0.10	0.21	< 0.01	0.14	< 0.01	0.05	< 0.01	0.10
36066	< 0.01	< 0.2	0.065	< 0.5	90	< 3	1.84	1.3	0.4	0.10	< 0.02	1.62	2.99	0.38	1.62	0.33	0.10	0.28	< 0.01	0.13	< 0.01	0.11	< 0.01	0.10
36067	< 0.01	< 0.2	0.059	< 0.5	70	< 3	0.66	0.4	0.4	< 0.01	< 0.02	0.12	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36068	< 0.01	< 0.2	0.033	< 0.5	110	< 3	0.79	0.7	0.4	0.10	< 0.02	0.57	1.32	0.15	0.64	0.09	0.10	0.07	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36069	< 0.01	< 0.2	0.042	< 0.5	60	< 3	0.91	0.7	0.3	0.10	< 0.02	0.46	0.18	0.08	0.50	0.12	0.10	0.05	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01
36070	< 0.01	< 0.2	0.063	< 0.5	100	< 3	1.13	0.9	0.4	0.10	< 0.02	0.51	0.80	0.15	0.77	0.14	0.10	0.13	< 0.01	< 0.01	< 0.01	0.03	< 0.01	0.10
36071	< 0.01	< 0.2	0.029	< 0.5	70	< 3	0.58	0.6	0.4	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.10	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36075	< 0.01	< 0.2	0.034	< 0.5	210	< 3	0.74	0.9	0.7	0.10	< 0.02	< 0.01	< 0.01	< 0.01	0.03	< 0.01	0.10	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36076	< 0.01	< 0.2	0.048	< 0.5	260	< 3	0.87	0.8	0.8	0.10	0.07	0.13	0.48	0.09	0.47	0.06	0.10	0.08	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36077	< 0.01	< 0.2	0.112	< 0.5	90	< 3	1.11	0.9	0.3	0.10	< 0.02	1.24	2.00	0.31	1.35	0.23	0.15	0.19	< 0.01	< 0.01	< 0.01	0.04	< 0.01	< 0.01
36078	< 0.01	< 0.2	0.054	< 0.5	60	< 3	1.08	1.6	0.3	0.10	< 0.02	0.39	0.34	0.14	0.68	0.12	0.10	0.13	< 0.01	< 0.01	< 0.01	0.02	< 0.01	0.10
36079	< 0.01	0.7	0.082	< 0.5	50	< 3	0.79	0.7	0.2	0.10	< 0.02	0.12	< 0.01	< 0.01	0.19	< 0.01	0.10	0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01
36080	< 0.01	< 0.2	0.119	< 0.5	70	< 3	0.98	1.8	0.3	0.10	< 0.02	0.29	< 0.01	0.07	0.40	0.06	0.10	0.07	< 0.01	< 0.01	< 0.01	0.03	< 0.01	0.10
36081	< 0.01	< 0.2	0.105	< 0.5	180	< 3	1.54	2.9	0.8	0.20	< 0.02	2.73	4.72	0.57	2.39	0.39	0.10	0.32	0.10	0.13	< 0.01	0.07	< 0.01	0.10
36082	< 0.01	< 0.2	0.115	< 0.5	70	< 3	0.82	1.1	0.3	0.10	< 0.02	0.16	0.65	0.06	0.33	0.08	0.10	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36083	< 0.01	< 0.2	0.059	< 0.5	100	< 3	0.58	0.5	0.4	< 0.01	< 0.02	0.09	0.94	0.06	0.38	0.04	0.10	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36084	< 0.01	< 0.2	0.031	< 0.5	80	< 3	1.31	0.6	0.3	< 0.01	< 0.02	0.97	1.15	0.22	1.04	0.23	0.10	0.24	< 0.01	0.02	< 0.01	0.04	< 0.01	0.10
36085	< 0.01	< 0.2	0.104	< 0.5	80	< 3	1.49	0.6	0.3	< 0.01	< 0.02	1.91	4.03	0.55	2.35	0.41	0.10	0.32	< 0.01	0.07	< 0.01	0.06	< 0.01	0.10
36086	< 0.01	< 0.2	0.096	< 0.5	50	< 3	1.92	1.1	0.3	0.10	< 0.02	2.09	3.31	0.45	1.92	0.37	0.20	0.33	< 0.01	0.14	< 0.01	0.12	< 0.01	0.15
36087	< 0.01	< 0.2	0.122	< 0.5	30	< 3	1.16	0.4	0.2	< 0.01	< 0.02	0.63	1.44	0.20	1.05	0.19	0.10	0.14	< 0.01	0.01	< 0.01	0.03	< 0.01	0.10
36088	< 0.01	< 0.2	0.114	< 0.5	80	< 3	0.63	0.6	0.3	0.10	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36089	< 0.01	< 0.2	0.136	< 0.5	90	< 3	2.60	1.2	0.3	0.10	< 0.02	3.87	7.59	1.06	4.48	0.86	0.30	0.68	0.10	0.28	0.10	0.18	< 0.01	0.20
36090	< 0.01	< 0.2	0.140	< 0.5	60	< 3	0.84	0.5	0.3	< 0.01	< 0.02	0.54	1.22	0.16	0.81	0.11	0.10	0.09	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36091	< 0.01	< 0.2	0.022	< 0.5	260	< 3	1.37	2.0	1.1	0.10	0.03	0.75	1.65	0.20	0.91	0.16	0.10	0.16	< 0.01	0.04	< 0.01	0.08	< 0.01	0.10
36092	< 0.01	< 0.2	0.070	< 0.5	70	< 3	0.53	0.2	0.2	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01	0.20	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36093	< 0.01	< 0.2	0.071	< 0.5	80	< 3	0.74	0.5	0.3	0.10	< 0.02	< 0.01	0.15	0.03	0.28	0.05	0.10	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36094	< 0.01	< 0.2	0.038	< 0.5	80	< 3	0.80	1.0	0.4	0.10	< 0.02	0.26	0.52	0.09	0.46	0.11	0.10	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36097	< 0.01	< 0.2	0.076	< 0.5	40	< 3	0.58	0.6	0.3	0.10	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36098	< 0.01	< 0.2	0.146	< 0.5	110	< 3	0.51	1.5	0.3	0.10	< 0.02	< 0.01	< 0.01	< 0.01	0.19	0.02	0.10	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36099	< 0.01	< 0.2	0.062	< 0.5	430	< 3	1.46	1.5	1.2	0.10	0.02	2.16	1.92	0.33	1.14	0.10	0.10	0.19	< 0.01	0.03	< 0.01	0.06	< 0.01	0.10
36100	< 0.01	< 0.2	0.097	< 0.5	310	< 3	1.30	2.7	0.8	0.20	< 0.02	1.93	2.89	0.42	1.59	0.27	0.10	0.17	< 0.01	0.06	< 0.01	0.07	< 0.01	0.10
36104	< 0.01	< 0.2	0.183	< 0.5	430	< 3	2.39	2.3	1.0	0.20	0.02	5.00	9.91	1.19	4.59	0.90	0.20	0.60	0.10	0.26	0.10	0.15	< 0.01	0.10
36105	< 0.01	< 0.2	0.043	< 0.5	120	< 3	0.87	1.1	0.4	0.10	< 0.02	0.99	2.01	0.19	0.85	0.09	0.20	0.08	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36107	< 0.01	< 0.2	0.201	< 0.5	320	< 3	3.36	2.9	0.8	0.20	0.04	6.13	13.3	1.62	6.57	1.12	0.30	0.88	0.10	0.42	0.10	0.24	< 0.01	0.30
36109	< 0.01	< 0.2	0.311	< 0.5	100	< 3	1.02	1.1	0.3	0.10	< 0.02	1.22	2.62	0.30	1.19	0.20	0.10	0.17	< 0.01	0.02	< 0.01	0.04	< 0.01	< 0.01
36110	0.04	< 0.2	0.372	< 0.5	140	< 3	1.76	3.6	0.4	0.20	< 0.02	1.04	2.47	0.32	3.07	0.32	0.10	0.31	< 0.01	0.16	< 0.01	0.12	< 0.01	0.10
36111	< 0.01	< 0.2	0.502	< 0.5	120	< 3	4.10	2.6	0.4	0.10	< 0.02	8.75	16.9	1.99	7.56	1.34	0.30	1.07	0.10	0.53	0.10	0.32	< 0.01	0.30
36113	< 0.01	< 0.2	0.508	< 0.5	400	< 3	6.68	2.5	0.8	0.20	0.02	11.8	26.5	3.04	12.3	3.03	0.50	1.72	0.20	0.94	0.20	0.54	0.10	0.60
36116	< 0.01	< 0.2	0.591	< 0.5	370	< 3	1.73	0.9	0.8	0.10	< 0.02	3.94	8.34	0.95	3.62	0.58	0.20	0.42	< 0.01	0.16	< 0.01	0.11	< 0.01	0.10
36118	< 0.01	< 0.2	0.405	< 0.5	100	< 3	9.29	1.9	0.3	0.10	< 0.02	34.4	62.2	6.75	25.5	4.34	0.90	3.35	0.40	1.62	0.30	0.78	0.10	0.60
36119	< 0.01	< 0.2	0.168	< 0.5	30	< 3	1.86	0.7	0.2	0.10	< 0.02	4.73	8.17	0.80	2.89	0.48	0.20	0.44	< 0.01	0.13	< 0.01	0.13	< 0.01	0.10
36126	< 0.01	< 0.2	0.067	< 0.5	170	< 3	1.59	0.8	0.6	0.10	< 0.02	1.67	4.46	0.50	2.21	0.39	0.10	0.31	< 0.01	0.08	< 0.01	0.07	< 0.01	0.10
36127	< 0.01	< 0.2	0.096	< 0.5	260	< 3	2.36	1.8	0.9	0.20	< 0.02	2.74	6.01	0.75	3.00	0.55	0.20	0.44	0.10	0.17	0.10	0.14	< 0.01	0.20
36128	< 0.01	< 0.2	0.043	< 0.5	140	< 3	1.09	1.1	0.5	0.10	0.05	1.36	2.23	0.30	1.38	0.21	0.10	0.17	< 0.01	0.02	< 0.01	0.03	< 0.01	0.10
36129	< 0.01	< 0.2	< 0.005	< 0.5	110	< 3	0.88	0.8	0.3	0.10	< 0.02	0.61	1.07	0.16	0.73	0.14	0.10	0.06	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
36130	< 0.01	< 0.2	0.060	< 0.5	70	< 3	0.89	0.6	0.3	0.10	< 0.02	0.36	0.80	0.13	0.66	0.12	0.10	0.09	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01
36131	< 0.01	< 0.2	0.136	< 0.5	60	< 3	0.24	0.8	0.3	< 0.01	< 0.02	1.22	2.40	0.29	1.25	0.27	0.10	0.16	< 0.01	0.08	< 0.01	0.04	< 0.01	< 0.01
36132	0.01	< 0.2	0.252	< 0.5	60	< 3	< 0.05	0.9	0.3	0.10	< 0.02	0.38	0.74	0.10	0.57	0.18	0.10	0.11	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
36133	< 0.01	< 0.2	0.108	< 0.5	20	< 3	< 0.05	0.4	0.2	< 0.01	< 0.02	0.06	< 0.01	< 0.01	0.04	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36134	< 0.01	< 0.2	0.097	< 0.5	40	< 3	< 0.05	1.3	0.2	0.10	< 0.02	0.24	0.17	0.05	0.34	0.08	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36135	< 0.01	< 0.2	0.183	< 0.5	190	< 3	0.56	2.7	0.5	0.10	< 0.02	1.05	1.90	0.29	1.31	0.26	0.10	0.20	< 0.01	0.09	< 0.01	0.09	< 0.01	0.10
36136	< 0.01	< 0.2	0.129	< 0.5	180	< 3	2.62	3.4	0.8	0.20	< 0.02	5.30	11.7	1.58	6.61	1.20	0.30	0.92	0.10	0.42	0.10	0.25	< 0.01	0.20

Analyte Symbol	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36150	0.01	< 0.2	0.162	< 0.5	520	< 3	1.68	7.8	1.5	0.40	0.04	5.70	7.43	0.96	3.47	0.67	0.40	0.57	0.10	0.30	0.10	0.20	< 0.01	0.20
36151	0.01	< 0.2	0.134	< 0.5	210	< 3	0.29	3.4	0.5	0.20	< 0.02	2.45	2.88	0.42	1.66	0.28	0.10	0.24	< 0.01	0.04	< 0.01	0.06	< 0.01	0.10
36152	< 0.01	< 0.2	0.165	< 0.5	50	< 3	< 0.05	0.7	0.2	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36202	< 0.01	< 0.2	0.241	< 0.5	420	< 3	0.44	4.1	1.0	0.15	< 0.02	1.61	3.46	0.43	2.10	0.43	0.10	0.29	< 0.01	0.05	< 0.01	0.07	< 0.01	0.10
36203	< 0.01	< 0.2	0.228	< 0.5	110	< 3	< 0.05	1.1	0.4	0.10	< 0.02	< 0.01	< 0.01	< 0.01	0.08	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Analyte Symbol	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.5	0.1	10	0.4	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36065	< 0.01	4.3	1.0	< 10	57.2	42.1	336	0.80	215	< 0.5	< 0.5	< 0.5	< 0.5
36066	< 0.01	3.6	1.0	< 10	2190	51.6	146	0.50	592	< 0.5	< 0.5	< 0.5	< 0.5
36067	< 0.01	4.3	1.0	< 10	870	40.3	228	0.80	270	< 0.5	< 0.5	< 0.5	< 0.5
36068	< 0.01	1.4	1.0	< 10	975	69.3	160	0.60	580	< 0.5	< 0.5	< 0.5	< 0.5
36069	< 0.01	1.8	1.0	< 10	154	40.6	151	0.50	486	< 0.5	< 0.5	< 0.5	< 0.5
36070	< 0.01	2.7	1.0	< 10	174	40.0	165	0.70	487	< 0.5	< 0.5	< 0.5	< 0.5
36071	< 0.01	1.5	1.0	< 10	282	43.7	175	0.30	548	< 0.5	< 0.5	< 0.5	< 0.5
36075	< 0.01	7.5	< 0.1	< 10	1830	74.4	192	0.30	591	< 0.5	< 0.5	< 0.5	< 0.5
36076	< 0.01	2.0	< 0.1	< 10	4950	79.4	167	0.90	702	< 0.5	< 0.5	< 0.5	< 0.5
36077	< 0.01	2.7	1.0	< 10	1660	62.2	123	1.45	621	< 0.5	< 0.5	< 0.5	< 0.5
36078	< 0.01	1.4	1.0	< 10	68.2	44.1	128	0.60	353	< 0.5	< 0.5	< 0.5	< 0.5
36079	< 0.01	4.1	1.0	< 10	712	31.6	114	0.80	604	< 0.5	< 0.5	< 0.5	< 0.5
36080	< 0.01	1.7	1.0	< 10	722	47.4	135	0.60	643	< 0.5	< 0.5	< 0.5	< 0.5
36081	< 0.01	9.2	1.0	< 10	27.9	44.3	170	0.50	381	< 0.5	< 0.5	< 0.5	< 0.5
36082	< 0.01	2.3	1.0	< 10	727	42.8	147	0.50	681	< 0.5	< 0.5	< 0.5	< 0.5
36083	< 0.01	2.9	< 0.1	< 10	897	72.3	200	0.50	559	< 0.5	< 0.5	< 0.5	< 0.5
36084	< 0.01	2.5	1.0	< 10	414	40.8	109	0.80	444	< 0.5	< 0.5	< 0.5	< 0.5
36085	< 0.01	0.9	1.0	< 10	138	20.4	60.3	0.80	310	< 0.5	< 0.5	< 0.5	< 0.5
36086	< 0.01	0.6	1.0	< 10	111	29.4	184	0.70	379	< 0.5	< 0.5	< 0.5	< 0.5
36087	< 0.01	1.9	1.0	< 10	91.0	31.2	78.2	1.10	247	< 0.5	< 0.5	< 0.5	< 0.5
36088	< 0.01	0.8	1.0	< 10	1450	46.8	302	0.80	302	< 0.5	< 0.5	< 0.5	< 0.5
36089	< 0.01	0.7	1.0	< 10	508	50.9	170	0.90	597	< 0.5	< 0.5	< 0.5	< 0.5
36090	< 0.01	1.3	< 0.1	< 10	170	29.9	92.6	0.80	228	< 0.5	< 0.5	< 0.5	< 0.5
36091	< 0.01	2.6	1.0	< 10	170	64.5	213	0.40	488	< 0.5	< 0.5	< 0.5	< 0.5
36092	< 0.01	1.5	1.0	< 10	71.6	35.8	190	0.70	313	< 0.5	< 0.5	< 0.5	< 0.5
36093	< 0.01	2.5	1.0	< 10	169	49.7	140	0.50	405	< 0.5	< 0.5	< 0.5	< 0.5
36094	< 0.01	2.4	< 0.1	< 10	196	41.8	167	0.30	342	< 0.5	< 0.5	< 0.5	< 0.5
36097	< 0.01	5.3	1.0	< 10	1230	58.4	359	0.50	278	< 0.5	< 0.5	< 0.5	< 0.5
36098	< 0.01	6.4	1.0	< 10	1300	65.8	169	0.90	682	< 0.5	< 0.5	< 0.5	< 0.5
36099	< 0.01	2.7	2.0	< 10	314	86.0	329	0.70	409	< 0.5	< 0.5	< 0.5	< 0.5
36100	< 0.01	1.7	1.0	< 10	851	176	198	0.50	559	< 0.5	< 0.5	< 0.5	< 0.5
36104	< 0.01	2.2	1.0	< 10	560	68.6	226	0.60	340	< 0.5	< 0.5	< 0.5	< 0.5
36105	< 0.01	1.7	1.0	< 10	103	63.8	239	0.60	277	< 0.5	< 0.5	< 0.5	< 0.5
36107	< 0.01	5.7	1.0	< 10	545	73.3	152	2.10	401	< 0.5	< 0.5	< 0.5	< 0.5
36109	< 0.01	4.6	1.0	< 10	134	47.4	173	1.50	225	< 0.5	< 0.5	< 0.5	< 0.5
36110	< 0.01	5.0	1.0	< 10	2390	10.3	152	0.30	271	< 0.5	< 0.5	< 0.5	< 0.5
36111	< 0.01	3.9	1.0	< 10	369	70.2	114	3.30	374	< 0.5	< 0.5	< 0.5	< 0.5
36113	0.10	6.6	2.0	< 10	9400	55.2	183	1.50	316	< 0.5	< 0.5	< 0.5	< 0.5
36116	< 0.01	6.4	1.0	< 10	422	91.9	146	5.00	357	< 0.5	< 0.5	< 0.5	< 0.5
36118	0.10	4.0	2.0	< 10	76.5	25.9	104	2.50	197	< 0.5	< 0.5	< 0.5	< 0.5
36119	< 0.01	9.9	1.0	< 10	125	41.5	300	1.20	434	< 0.5	< 0.5	< 0.5	< 0.5
36126	< 0.01	1.3	1.0	< 10	107	31.9	184	0.70	212	< 0.5	< 0.5	< 0.5	< 0.5
36127	< 0.01	13.0	2.0	< 10	466	82.7	217	0.80	433	< 0.5	< 0.5	< 0.5	< 0.5
36128	< 0.01	6.7	1.0	< 10	225	49.8	244	0.60	167	< 0.5	< 0.5	< 0.5	< 0.5
36129	< 0.01	2.6	2.0	< 10	304	62.9	232	0.70	325	< 0.5	< 0.5	< 0.5	< 0.5
36130	< 0.01	4.6	2.0	< 10	253	50.9	157	0.60	199	< 0.5	< 0.5	< 0.5	< 0.5
36131	< 0.01	9.9	1.0	< 10	1860	45.8	78.7	0.70	268	< 0.5	< 0.5	< 0.5	< 0.5
36132	< 0.01	5.1	2.0	< 10	601	37.2	97.4	0.70	546	< 0.5	< 0.5	< 0.5	< 0.5
36133	< 0.01	5.1	2.0	< 10	122	38.5	145	0.20	263	< 0.5	< 0.5	< 0.5	< 0.5
36134	< 0.01	4.3	2.0	< 10	189	34.5	361	0.40	333	< 0.5	< 0.5	< 0.5	< 0.5
36135	< 0.01	4.6	2.0	< 10	1060	103	113	0.80	482	< 0.5	< 0.5	< 0.5	< 0.5
36136	< 0.01	6.4	2.0	< 10	30.9	43.8	120	0.70	370	< 0.5	< 0.5	< 0.5	< 0.5

Analyte Symbol	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.5	0.1	10	0.4	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36150	< 0.01	14.0	2.0	< 10	4490	53.2	452	0.40	1800	< 0.5	< 0.5	< 0.5	< 0.5
36151	< 0.01	4.2	2.0	< 10	632	57.5	385	0.30	737	< 0.5	< 0.5	< 0.5	< 0.5
36152	< 0.01	6.3	1.0	< 10	316	79.2	166	0.90	361	< 0.5	< 0.5	< 0.5	< 0.5
36202	< 0.01	9.0	2.0	< 10	1050	79.8	149	1.35	402	< 0.5	< 0.5	< 0.5	< 0.5
36203	< 0.01	8.2	1.0	< 10	275	80.3	119	0.20	181	< 0.5	< 0.5	< 0.5	< 0.5

Quality Control

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1	5	0.1	0.3	0.05	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
TILL-2 Meas		996		76.7	28.0		40.0	1.80		4.8		0.045	0.1	11.0	12.0	31.0	48	227	156	22.0				
TILL-2 Cert		12200.0		77000	26000		14000	800.0		5000		2	70.0	18400.0	5700.0	15000	32000	150000	130000	31000				
SO-3 Meas				40.3												2.1	6	5	< 5	1.6				
SO-3 Cert				38000												8000	16000	17000	52000	14000				
SO-3 Meas				34.5									< 0.1			2.2	5	6	< 5	3.4				
SO-3 Cert				38000									17.0			8000	16000	17000	52000	14000				
36077 Orig	4000	71	15	9.3	0.9	4	< 0.1	0.40	< 0.5	< 0.1	0.030	< 0.005	< 0.1	0.60	0.40	12.0	17	6	< 5	< 0.1	< 0.3	0.20	< 0.1	< 0.1
36077 Dup	4000	69	14	9.8	0.8	4	< 0.1	0.30	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.50	0.40	12.0	18	5	< 5	< 0.1	< 0.3	0.20	< 0.1	< 0.1
36086 Orig	1000	127	17	4.2	0.9	6	< 0.1	0.10	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.60	0.60	9.4	22	4	< 5	0.9	< 0.3	< 0.05	< 0.1	< 0.1
36086 Dup	1000	122	17	4.0	0.8	5	< 0.1	0.10	< 0.5	< 0.1	0.020	< 0.005	< 0.1	0.60	0.60	9.6	21	4	< 5	0.9	< 0.3	0.10	< 0.1	< 0.1
36097 Orig	2000	81	11	2.1	0.4	4	< 0.1	< 0.01	< 0.5	< 0.1	0.020	0.012	< 0.1	0.40	0.20	19.0	14	6	48	1.3	< 0.3	< 0.05	< 0.1	1.0
36097 Dup	2000	84	11	2.1	0.4	5	< 0.1	< 0.01	< 0.5	< 0.1	0.020	0.010	< 0.1	0.40	0.10	17.0	13	5	39	1.6	< 0.3	< 0.05	< 0.1	1.0
36202 Orig	4000	57	19	10.9	1.6	3	0.1	0.40	< 0.5	< 0.1	0.020	< 0.005	< 0.1	1.00	0.50	18.0	26	2	26	1.3	2.0	0.10	< 0.1	< 0.1
36202 Dup	4000	55	20	9.8	1.6	3	< 0.1	0.30	< 0.5	< 0.1	0.020	< 0.005	< 0.1	1.10	0.60	20.0	25	2	26	1.1	2.0	0.10	< 0.1	< 0.1
Method Blank Method Blank	< 1000	< 1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	< 0.01	< 0.01	< 0.2	< 1	< 1	< 5	< 0.1	< 0.3	< 0.05	< 0.1	< 0.1
Method Blank Method Blank	< 1000	< 1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	< 0.01	< 0.01	< 0.2	< 1	< 1	< 5	< 0.1	< 0.3	< 0.05	< 0.1	< 0.1

Quality Control

Analyte Symbol	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
TILL-2 Meas					2020	< 3	33.8	43.0	7.6	1.70	0.60	27.6	75.5		33.5	8.14	1.90		1.10			3.33		3.70
TILL-2 Cert					5300000	74000	40000	390000	20000	11000	1900.0	44000	98000		36000	7400.0	1000.0		1200.0			3700.0		3700.0
SO-3 Meas					240	< 3																		
SO-3 Cert					2000000	26000																		
SO-3 Meas					160	< 3																		
SO-3 Cert					2000000	26000																		
36077 Orig	< 0.01	< 0.2	0.110	< 0.5	100	< 3	1.20	0.9	0.3	0.10	< 0.02	1.43	2.34	0.35	1.53	0.29	0.10	0.18	< 0.01	0.01	< 0.01	0.04	< 0.01	0.10
36077 Dup	< 0.01	< 0.2	0.115	< 0.5	90	< 3	1.02	0.9	0.3	0.10	< 0.02	1.06	1.67	0.27	1.17	0.17	0.20	0.19	< 0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
36086 Orig	< 0.01	< 0.2	0.092	< 0.5	50	< 3	1.96	1.1	0.3	0.10	< 0.02	2.19	3.47	0.47	1.95	0.41	0.20	0.33	< 0.01	0.14	< 0.01	0.11	< 0.01	0.10
36086 Dup	< 0.01	< 0.2	0.100	< 0.5	60	< 3	1.88	1.1	0.3	0.10	< 0.02	1.99	3.15	0.43	1.90	0.33	0.20	0.33	< 0.01	0.14	< 0.01	0.12	< 0.01	0.20
36097 Orig	< 0.01	< 0.2	0.085	< 0.5	40	< 3	0.61	0.6	0.3	0.10	< 0.02	< 0.01	< 0.01	< 0.01	0.07	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36097 Dup	< 0.01	< 0.2	0.068	< 0.5	40	< 3	0.55	0.6	0.2	0.10	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
36202 Orig	< 0.01	< 0.2	0.232	< 0.5	430	< 3	0.41	4.4	1.0	0.20	< 0.02	1.57	3.40	0.42	1.98	0.38	0.10	0.30	< 0.01	0.06	< 0.01	0.08	< 0.01	0.10
36202 Dup	< 0.01	< 0.2	0.251	< 0.5	400	< 3	0.46	3.8	1.0	0.10	< 0.02	1.65	3.52	0.44	2.22	0.48	0.10	0.27	< 0.01	0.04	< 0.01	0.07	< 0.01	0.10
Method Blank Method Blank	< 0.01	< 0.2	< 0.005	< 0.5	< 10	< 3	< 0.05	< 0.1	0.3	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Method Blank Method Blank	< 0.01	< 0.2	< 0.005	< 0.5	< 10	< 3	< 0.05	< 0.1	0.3	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Quality Control

Analyte Symbol	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.5	0.1	10	0.4	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
TILL-2 Meas	0.50	35.0	5.0	30	6410	229	688	8.60	1320				
TILL-2 Cert	600.0	47000	4000.0	12000	780000	143000	144000	12000	540000				
SO-3 Meas					476	91.0	963		93.3				
SO-3 Cert					520000	39000	217000		296000				
SO-3 Meas					352	87.4	832		81.8				
SO-3 Cert					520000	39000	217000		296000				
36077 Orig	< 0.01	2.9	1.0	< 10	1680	62.7	125	1.50	630	< 0.5	< 0.5	< 0.5	< 0.5
36077 Dup	< 0.01	2.4	1.0	< 10	1640	61.7	121	1.40	611	< 0.5	< 0.5	< 0.5	< 0.5
36086 Orig	< 0.01	0.7	1.0	< 10	111	29.7	185	0.70	380	< 0.5	< 0.5	< 0.5	< 0.5
36086 Dup	< 0.01	0.6	1.0	< 10	111	29.0	182	0.70	377	< 0.5	< 0.5	< 0.5	< 0.5
36097 Orig	< 0.01	5.7	1.0	< 10	1270	59.0	364	0.50	291	< 0.5	< 0.5	< 0.5	< 0.5
36097 Dup	< 0.01	4.9	1.0	< 10	1180	57.8	354	0.50	265	< 0.5	< 0.5	< 0.5	< 0.5
36202 Orig	< 0.01	9.2	2.0	< 10	944	79.0	146	1.30	388	< 0.5	< 0.5	< 0.5	< 0.5
36202 Dup	< 0.01	8.9	2.0	< 10	1160	80.5	151	1.40	415	< 0.5	< 0.5	< 0.5	< 0.5
Method Blank Method Blank	< 0.01	< 0.5	< 0.1	< 10	< 0.4	< 0.1	< 0.1	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Method Blank Method Blank	< 0.01	< 0.5	< 0.1	< 10	< 0.4	< 0.1	< 0.1	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA	014 - LB
36065	38	82	16	13	15	15	6	12	1	-1	1	-1	2	-1
36066	38	83	18	11	17	22	4	14	2	-1	1	-1	1	1
36067	38	76	19	11	25	27	5	15	-1	-1	1	-1	2	-1
36068	34	73	18	11	20	24	5	10	2	-1	1	-1	3	-1
36069	37	18	17	6	24	32	4	13	2	-1	1	-1	-1	1
36069-R	36	79	17	11	21	22	6	13	1	-1	1	-1	2	-1
36070	42	18	19	5	24	28	5	15	-1	-1	1	-1	-1	1
36071	39	78	19	11	22	28	5	12	2	-1	1	-1	2	-1
36072	11	26	31	5	27	34	4	7	-1	-1	-1	-1	2	-1
36073	45	92	24	8	14	17	5	7	-1	-1	-1	-1	-1	-1
36074	24	85	34	12	20	20	4	7	-1	-1	-1	-1	2	-1
36075	42	83	19	5	18	20	3	9	1	-1	2	-1	-1	-1
36076	38	77	19	9	20	22	1	8	1	-1	-1	-1	2	-1
36077	39	83	17	12	20	23	6	11	2	-1	1	-1	3	-1
36078	38	77	19	4	28	31	4	13	2	-1	1	-1	-1	-1
36079	38	80	19	3	20	21	4	10	1	-1	-1	-1	1	-1
36080	43	17	19	14	15	15	4	12	1	-1	1	-1	-1	-1
36081	35	77	17	5	17	22	6	10	1	-1	1	-1	1	-1
36082	36	80	18	4	15	16	4	11	2	-1	1	-1	1	-1
36083	42	88	18	9	15	16	2	10	1	-1	1	-1	1	-1
36084	41	85	19	15	24	28	5	9	1	-1	1	-1	1	-1
36084-R	41	82	19	3	17	14	4	10	2	-1	1	-1	1	-1
36085	33	70	17	7	12	14	3	6	-1	-1	1	-1	1	-1
36086	39	17	18	6	19	19	4	11	2	-1	1	-1	1	-1
36087	34	68	17	5	8	8	3	2	-1	-1	-1	-1	1	-1
36088	36	73	17	11	17	21	3	10	2	-1	1	-1	-1	-1
36089	37	76	17	8	14	15	5	9	1	-1	1	-1	1	-1
36090	39	78	17	12	8	9	3	9	-1	-1	1	-1	2	-1
36091	42	86	19	13	19	20	5	11	2	-1	1	-1	2	-1
36092	37	80	18	8	14	17	5	9	-1	-1	1	-1	1	-1
36093	30	69	15	3	4	4	3	4	-1	-1	1	-1	-1	-1
36094	33	13	15	4	11	14	4	7	1	-1	1	-1	1	-1
36095	56	104	24	22	32	39	9	9	2	-1	2	-1	2	-1
36096	24	76	30	4	45	51	3	10	2	-1	2	-1	1	-1
36097	26	61	14	2	7	9	2	6	-1	-1	-1	-1	1	-1
36098	26	66	15	1	14	15	3	5	-1	-1	-1	-1	1	-1
36099	30	17	14	6	17	19	4	6	-1	-1	-1	-1	-1	-1
36099-R	8	11	15	6	9	12	2	5	-1	-1	-1	-1	1	-1
36100	27	12	15	8	11	11	3	4	-1	-1	-1	-1	-1	-1
36104	54	87	17	10	15	18	3	6	-1	-1	-1	-1	1	-1
36105	35	77	19	9	17	17	3	10	1	-1	-1	-1	-1	-1
36106	39	80	21	13	17	18	3	4	-1	-1	-1	-1	-1	-1
36107	38	79	20	7	36	41	2	12	2	-1	1	-1	-1	-1
36108	175	172	54	101	55	78	-1	14	-1	-1	-1	-1	1	-1
36109	40	87	19	12	19	23	4	9	1	-1	1	-1	2	-1
36110	17	101	25	11	23	24	4	5	-1	-1	1	-1	-1	-1
36111	55	99	21	10	24	25	7	11	2	-1	1	-1	-1	-1
36112	31	34	17	8	27	28	3	9	1	-1	1	-1	2	-1
36113	38	42	21	12	25	28	6	9	1	-1	2	-1	3	-1
36114	42	89	23	14	22	25	5	3	-1	-1	-1	-1	1	-1
36115	33	35	19	3	22	22	3	7	-1	-1	1	-1	3	-1
36116	32	71	16	4	18	18	3	4	-1	-1	-1	-1	2	-1
36117	35	85	22	22	16	19	6	12	1	-1	2	-1	-1	-1
36117-R	34	77	22	17	16	19	4	7	1	-1	2	-1	-1	-1

	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA	014 - LB
36118	30	73	17	9	10	8	1	5	-1	-1	1	-1	2	-1
36119	34	78	15	9	16	20	4	1	-1	-1	1	-1	1	-1
36120	35	81	18	5	19	22	4	7	1	-1	1	-1	-1	-1
36121	96	166	51	6	55	62	9	6	1	-1	3	-1	-1	-1
36122	43	98	44	31	27	30	3	4	-1	-1	2	-1	1	-1
36123	32	95	70	24	35	35	7	22	1	-1	1	-1	3	1
36124	27	26	38	22	44	43	5	4	-1	-1	1	-1	-1	-1
36125	57	121	39	39	29	28	10	34	3	-1	3	-1	2	2
36126	30	40	16	11	9	9	3	6	-1	-1	1	-1	3	-1
36127	38	89	20	5	43	52	6	14	3	-1	2	-1	2	-1
36128	36	81	18	8	15	15	4	6	-1	-1	1	-1	-1	-1
36129	37	84	17	10	22	22	5	8	1	-1	1	-1	2	-1
36130	32	76	17	12	14	18	3	8	1	-1	1	-1	2	-1
36131	33	75	16	12	11	9	2	1	-1	-1	-1	-1	-1	-1
36132	37	85	17	14	14	15	2	7	1	-1	-1	-1	3	-1
36132-R	40	89	18	4	13	15	1	8	1	-1	-1	-1	3	-1
36133	35	83	16	8	7	7	3	-1	-1	-1	1	-1	3	-1
36134	34	79	16	14	7	7	4	7	1	-1	-1	-1	2	-1
36135	49	108	19	4	13	16	4	7	1	-1	1	-1	2	-1
36136	28	13	16	2	14	17	3	4	-1	-1	-1	-1	-1	-1
36137	29	73	31	21	37	44	-1	10	1	-1	1	-1	1	-1
36138	38	93	31	7	33	32	4	8	-1	-1	1	-1	1	-1
36139	58	168	37	47	38	42	11	11	2	-1	2	-1	2	-1
36140	40	85	26	26	8	8	4	6	-1	-1	1	-1	-1	-1
36141	38	105	39	26	52	64	3	11	2	-1	1	-1	3	-1
36142	43	137	44	40	48	48	10	28	-1	-1	2	-1	3	-1
36143	46	187	45	72	19	19	4	11	-1	-1	1	-1	2	-1
36144	31	108	28	22	16	18	4	7	-1	-1	3	-1	-1	-1
36145	43	79	44	89	15	15	4	11	-1	1	1	-1	2	-1
36146	67	133	34	46	16	15	7	48	3	-1	2	-1	4	1
36147	37	118	31	7	25	27	7	2	-1	-1	1	-1	1	-1
36147-R	34	107	29	33	19	21	4	8	1	-1	1	-1	-1	-1
36148	33	79	28	34	16	16	4	4	-1	-1	1	-1	1	-1
36149	135	225	39	90	17	20	10	9	-1	-1	2	-1	1	-1
36150	14	99	18	14	15	15	3	8	1	-1	1	-1	-1	-1
36151	44	95	21	5	15	18	5	12	2	-1	1	-1	-1	1
36152	36	77	18	4	14	15	3	7	1	-1	-1	-1	1	-1
36202	47	43	19	22	10	13	3	7	1	-1	-1	-1	1	-1
36203	39	88	18	17	11	14	3	8	1	-1	1	-1	2	-1
LMB-QA	28	13	11	9	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	28	58	13	4	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
LMB-QA	29	11	12	10	2	2	2	3	-1	-1	-1	-1	1	-1

<u>SOIL GAS HYDROCARBONS (SGH) by GC/MS</u>

A10-3207 - Date: June 25, 2010 - Activation Laboratories Ltd.
Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested samples are discarded in 90 days.
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Excalibur Resources Ltd. - Jim Kendall
Sturgeon Lake Project Site - Sample Lines 32, 33, 34, 40

	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA	014 - LB

R=Replicate Sample
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)
LMB-QA = Laboratory Materials Blank - Quality Assurance

LEGEND FOR COLUMN HEADINGS - SGH COMPOUND CLASSES

LA, HA, LBA, HBA = ALKYL-ALKANES
LB, HB, LPB, HPB = ALKYL-BENZENES
LAR, MAR, HAR = ALKYL-AROMATICS
LBI, MBI, HBI, LPH, MPH, HPH = ALKYL-POLYAROMATICS
THI = ALKYL-DIVINYLENE SULPHIDES
ALK = ALKYL-ALKENES

	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA	027 - LB	028 - ALK
36065	1	2	2	1	1	1	-1	-1	5	-1	1	1	6	3
36066	-1	1	2	-1	-1	-1	-1	-1	5	-1	1	2	5	3
36067	1	2	3	2	-1	-1	-1	-1	7	-1	1	2	7	4
36068	1	-1	2	-1	1	1	-1	-1	5	-1	1	2	6	4
36069	1	-1	2	-1	-1	-1	-1	-1	4	-1	-1	1	6	3
36069-R	1	-1	2	-1	-1	-1	-1	-1	4	-1	1	1	6	3
36070	1	3	3	-1	-1	1	-1	-1	7	-1	1	2	10	4
36071	1	1	-1	-1	-1	-1	-1	-1	6	-1	-1	2	8	4
36072	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36073	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36074	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36075	2	-1	2	2	1	-1	-1	-1	6	-1	1	3	9	4
36076	1	-1	-1	-1	-1	-1	-1	-1	4	-1	-1	2	5	2
36077	-1	-1	1	-1	-1	-1	-1	-1	7	-1	2	2	9	4
36078	1	-1	-1	-1	-1	-1	-1	-1	5	-1	1	1	8	3
36079	-1	-1	1	-1	-1	-1	-1	-1	4	-1	-1	2	5	3
36080	1	2	2	2	-1	-1	-1	-1	6	-1	1	2	8	3
36081	1	-1	2	1	-1	1	-1	-1	7	-1	2	2	12	5
36082	1	-1	-1	-1	-1	-1	-1	-1	5	-1	1	2	9	4
36083	1	-1	1	2	-1	-1	-1	-1	5	-1	1	2	6	4
36084	1	-1	2	1	-1	-1	-1	-1	7	-1	2	2	10	4
36084-R	1	-1	-1	-1	-1	-1	-1	-1	6	-1	2	2	10	4
36085	-1	-1	1	-1	-1	-1	-1	-1	3	-1	-1	-1	4	2
36086	-1	-1	-1	-1	-1	-1	-1	-1	4	-1	1	1	5	3
36087	1	-1	1	-1	-1	-1	-1	1	2	-1	-1	-1	3	2
36088	1	-1	1	-1	-1	-1	-1	-1	5	-1	1	2	7	3
36089	1	-1	1	-1	-1	-1	-1	-1	5	-1	1	1	8	3
36090	-1	-1	-1	-1	-1	-1	-1	-1	4	-1	1	1	7	4
36091	2	-1	2	2	1	-1	-1	-1	8	-1	2	3	14	5
36092	-1	-1	1	-1	-1	-1	-1	-1	5	-1	1	1	5	3
36093	-1	-1	-1	-1	-1	-1	-1	-1	3	-1	-1	1	4	2
36094	1	-1	1	1	-1	-1	-1	-1	6	-1	1	2	8	4
36095	-1	1	1	1	1	2	-1	2	2	-1	-1	2	-1	2
36096	-1	1	1	1	1	-1	-1	-1	-1	-1	-1	-1	1	-1
36097	-1	1	-1	-1	-1	-1	-1	-1	3	-1	-1	-1	3	2
36098	-1	1	-1	-1	-1	-1	-1	-1	3	-1	-1	-1	3	2
36099	-1	-1	-1	-1	-1	-1	-1	-1	4	-1	-1	1	5	2
36099-R	-1	-1	-1	-1	-1	-1	-1	-1	3	-1	-1	1	4	3
36100	-1	1	-1	-1	-1	-1	-1	-1	4	-1	-1	1	4	3
36104	-1	-1	-1	-1	-1	-1	-1	-1	5	-1	1	2	6	3
36105	1	-1	-1	1	2	-1	-1	-1	9	-1	2	2	9	6
36106	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1
36107	1	1	2	2	1	-1	-1	-1	12	-1	3	3	18	7
36108	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1
36109	1	2	-1	-1	2	-1	-1	-1	9	-1	3	2	10	6
36110	-1	1	-1	-1	-1	-1	-1	-1	5	-1	1	3	4	4
36111	-1	-1	-1	-1	-1	-1	-1	-1	7	-1	2	2	8	4
36112	1	-1	-1	-1	2	1	-1	-1	9	-1	3	1	12	6
36113	2	2	1	-1	2	-1	-1	-1	13	-1	4	2	31	9
36114	-1	-1	-1	-1	-1	-1	-1	-1	3	-1	-1	2	5	2
36115	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1	1
36116	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
36117	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36117-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1

	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA	027 - LB	028 - ALK
36118	-1	-1	-1	-1	-1	1	-1	-1	1	-1	-1	-1	1	1
36119	-1	-1	-1	-1	-1	1	-1	-1	2	-1	-1	2	1	2
36120	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	2	-1	1
36121	-1	-1	-1	-1	-1	1	-1	2	-1	-1	-1	-1	-1	-1
36122	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36123	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36124	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36125	-1	-1	-1	1	-1	1	-1	1	-1	-1	-1	-1	-1	-1
36126	-1	-1	-1	-1	-1	1	-1	-1	1	-1	-1	-1	2	1
36127	1	-1	2	2	-1	2	-1	-1	5	-1	1	3	5	3
36128	1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	1	2	2
36129	-1	-1	1	-1	-1	-1	-1	-1	2	-1	-1	1	2	2
36130	-1	-1	-1	-1	-1	-1	-1	-1	3	-1	-1	1	3	2
36131	-1	1	-1	-1	-1	-1	-1	-1	3	-1	-1	2	3	2
36132	-1	-1	-1	-1	-1	-1	-1	-1	3	-1	-1	2	4	2
36132-R	1	-1	-1	-1	1	-1	-1	-1	3	-1	-1	1	4	2
36133	-1	-1	-1	-1	-1	-1	-1	-1	3	-1	-1	2	2	2
36134	1	-1	-1	-1	-1	-1	-1	-1	3	-1	-1	1	2	2
36135	1	2	-1	-1	-1	-1	-1	-1	4	-1	1	3	5	3
36136	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	1
36137	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1	-1	-1
36138	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36139	-1	1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36140	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36141	-1	1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	1
36142	-1	-1	1	1	-1	1	-1	1	-1	-1	-1	-1	-1	1
36143	-1	-1	1	1	-1	1	-1	-1	-1	-1	-1	-1	2	1
36144	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36145	-1	-1	1	2	-1	1	-1	-1	-1	-1	-1	-1	-1	1
36146	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
36147	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36147-R	-1	-1	1	1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1
36148	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36149	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	1	-1	-1
36150	1	2	-1	-1	2	-1	-1	-1	8	-1	2	3	10	5
36151	2	2	3	2	2	-1	-1	-1	13	-1	4	4	23	9
36152	1	-1	-1	-1	-1	-1	-1	-1	5	-1	2	2	6	4
36202	1	2	1	1	1	-1	-1	-1	8	-1	2	3	6	5
36203	1	2	2	1	2	-1	-1	-1	8	-1	2	2	10	6
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA	027 - LB	028 - ALK

	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB
36065	1	-1	2	-1	-1	1	-1	-1	2	1	-1	-1	2	-1
36066	-1	-1	2	-1	-1	1	-1	-1	2	1	-1	-1	2	-1
36067	-1	-1	3	-1	-1	2	-1	-1	3	1	-1	-1	1	-1
36068	1	-1	2	-1	-1	2	-1	-1	3	1	-1	-1	-1	-1
36069	1	-1	2	-1	-1	1	-1	-1	3	-1	-1	-1	-1	-1
36069-R	-1	-1	2	-1	-1	1	-1	-1	3	-1	-1	-1	-1	-1
36070	1	-1	3	-1	-1	2	-1	-1	3	1	-1	-1	1	-1
36071	-1	-1	3	-1	-1	2	-1	-1	3	1	-1	-1	2	-1
36072	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	-1	2	-1
36073	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
36074	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1
36075	2	-1	3	-1	-1	2	-1	-1	3	2	-1	-1	1	-1
36076	1	-1	2	-1	-1	1	-1	-1	2	-1	-1	-1	1	-1
36077	2	-1	3	-1	-1	2	-1	-1	3	-1	-1	-1	1	-1
36078	-1	-1	2	-1	-1	2	-1	-1	3	-1	-1	-1	-1	-1
36079	-1	-1	2	-1	-1	1	-1	-1	2	-1	-1	-1	1	-1
36080	2	-1	3	-1	-1	2	-1	-1	3	-1	-1	-1	1	-1
36081	1	-1	3	-1	-1	2	-1	-1	3	1	-1	-1	2	-1
36082	1	-1	2	-1	-1	2	-1	-1	3	-1	-1	-1	-1	-1
36083	2	-1	2	-1	-1	2	-1	-1	3	-1	-1	-1	1	-1
36084	2	-1	3	-1	-1	2	-1	-1	3	-1	-1	-1	-1	-1
36084-R	2	-1	3	-1	-1	2	-1	-1	3	-1	-1	-1	-1	-1
36085	1	-1	2	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	-1
36086	1	-1	2	-1	-1	-1	-1	-1	2	1	-1	-1	2	-1
36087	-1	-1	1	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	-1
36088	1	-1	2	-1	-1	1	-1	-1	2	1	-1	-1	1	-1
36089	1	-1	2	-1	-1	2	-1	-1	3	1	-1	-1	-1	-1
36090	-1	-1	2	-1	-1	-1	-1	-1	3	-1	-1	-1	-1	-1
36091	2	-1	4	-1	-1	3	-1	-1	4	1	-1	-1	1	-1
36092	-1	-1	2	-1	-1	1	-1	-1	2	-1	-1	-1	-1	-1
36093	-1	-1	1	-1	-1	1	-1	-1	2	-1	-1	-1	-1	-1
36094	2	-1	3	-1	-1	2	-1	-1	3	2	-1	-1	2	-1
36095	-1	-1	2	-1	-1	-1	-1	2	-1	2	-1	-1	2	-1
36096	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1
36097	-1	-1	1	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	-1
36098	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	-1
36099	1	-1	2	-1	-1	1	-1	-1	2	1	-1	-1	1	-1
36099-R	1	-1	2	-1	-1	1	-1	-1	2	1	-1	-1	1	-1
36100	1	-1	2	-1	-1	-1	-1	-1	2	2	-1	-1	1	-1
36104	2	-1	3	-1	-1	1	-1	-1	3	1	-1	-1	1	-1
36105	-1	-1	3	-1	-1	2	-1	-1	3	-1	-1	-1	-1	-1
36106	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36107	3	-1	4	-1	-1	4	-1	-1	5	-1	-1	-1	1	-1
36108	-1	-1	-1	-1	-1	-1	-1	-1	1	1	-1	-1	1	-1
36109	-1	-1	3	-1	-1	2	-1	-1	3	-1	-1	-1	-1	-1
36110	2	-1	3	-1	-1	-1	-1	-1	2	2	-1	-1	2	-1
36111	2	-1	3	-1	-1	2	-1	-1	3	-1	-1	-1	-1	-1
36112	-1	-1	3	-1	-1	2	-1	-1	3	1	-1	-1	-1	-1
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36117	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	2	-1
36117-R	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	2	-1

	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB
36118	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
36119	-1	-1	1	-1	-1	-1	-1	1	1	1	-1	-1	2	-1
36120	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	2	-1
36121	-1	-1	-1	-1	-1	-1	-1	2	-1	2	-1	-1	2	-1
36122	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
36123	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36124	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1
36125	-1	-1	1	-1	-1	-1	-1	2	-1	2	-1	-1	1	-1
36126	-1	-1	-1	-1	-1	-1	-1	-1	1	1	-1	-1	1	-1
36127	1	-1	2	-1	-1	2	-1	-1	3	3	-1	-1	4	-1
36128	-1	-1	1	-1	-1	-1	-1	-1	1	-1	-1	-1	1	-1
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36130	-1	-1	2	-1	-1	-1	-1	-1	2	1	-1	-1	2	-1
36131	1	-1	2	-1	-1	-1	-1	-1	2	2	-1	-1	2	-1
36132	-1	-1	2	-1	-1	-1	-1	-1	2	1	-1	-1	-1	-1
36132-R	1	-1	2	-1	-1	1	-1	-1	2	-1	-1	-1	1	-1
36133	-1	-1	1	-1	-1	-1	-1	-1	1	2	-1	-1	2	-1
36134	-1	-1	2	-1	-1	-1	-1	-1	2	1	-1	-1	2	-1
36135	-1	-1	3	-1	-1	1	-1	-1	2	3	-1	-1	3	-1
36136	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	1	-1
36137	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1
36138	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	-1	2	-1
36139	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
36140	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	1	-1
36141	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	1	-1
36142	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	-1	-1
36143	-1	-1	-1	-1	-1	-1	-1	-1	1	3	-1	-1	3	-1
36144	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36145	-1	-1	-1	-1	-1	-1	-1	1	-1	2	-1	-1	2	-1
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36147	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	2	-1
36147-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	2	-1
36148	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	2	-1
36149	-1	-1	-1	-1	-1	-1	-1	-1	-1	3	-1	-1	3	-1
36150	3	-1	4	-1	-1	2	-1	-1	1	3	-1	-1	3	-1
36151	3	-1	5	-1	-1	3	-1	-1	-1	-1	-1	-1	-1	-1
36152	2	-1	3	-1	-1	1	-1	-1	2	1	-1	-1	-1	-1
36202	3	-1	4	-1	-1	2	-1	-1	2	1	-1	-1	2	-1
36203	2	-1	3	-1	-1	2	-1	-1	3	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1

	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB

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STURGEON LAKE PROJECT SITE

	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 - HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
36065	-1	-1	3	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36066	-1	-1	3	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36067	-1	-1	4	-1	-1	-1	-1	2	-1	-1	-1	-1	-1	-1
36068	-1	-1	3	-1	1	1	1	1	-1	-1	-1	-1	-1	-1
36069	-1	-1	2	-1	2	1	1	1	-1	-1	-1	1	-1	-1
36069-R	-1	-1	3	-1	-1	1	1	1	-1	-1	-1	1	-1	-1
36070	-1	-1	4	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36071	-1	-1	3	-1	2	-1	-1	2	-1	-1	-1	1	-1	-1
36072	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36073	-1	-1	1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36074	-1	-1	1	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36075	-1	-1	4	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36076	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	1	-1	-1
36077	-1	-1	3	-1	-1	-1	-1	2	-1	-1	-1	1	-1	-1
36078	-1	-1	3	-1	-1	-1	-1	1	-1	-1	-1	1	-1	-1
36079	-1	-1	2	-1	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
36080	-1	-1	3	-1	2	-1	-1	2	-1	-1	-1	1	-1	-1
36081	-1	-1	4	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
36082	-1	-1	3	-1	2	1	1	2	-1	-1	-1	-1	-1	-1
36083	-1	-1	3	-1	2	1	1	2	-1	-1	-1	1	-1	-1
36084	-1	-1	4	-1	2	-1	-1	2	-1	-1	-1	1	-1	-1
36084-R	-1	-1	4	-1	2	1	-1	2	-1	-1	-1	1	-1	-1
36085	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36086	-1	-1	3	-1	2	-1	-1	2	-1	-1	-1	1	-1	-1
36087	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36088	-1	-1	3	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36089	-1	-1	3	-1	2	-1	1	1	-1	-1	-1	1	-1	-1
36090	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36091	-1	-1	5	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
36092	-1	-1	2	-1	-1	1	1	-1	-1	-1	-1	1	-1	-1
36093	-1	-1	2	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36094	-1	-1	3	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36095	-1	-1	5	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36096	-1	-1	1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36097	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36098	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36099	-1	-1	2	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36099-R	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36100	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36104	-1	-1	2	-1	1	-1	1	1	-1	-1	-1	1	-1	-1
36105	-1	-1	4	-1	3	-1	-1	2	-1	-1	-1	1	-1	-1
36106	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36107	-1	-1	4	-1	3	-1	-1	1	-1	-1	-1	-1	-1	-1
36108	-1	-1	2	-1	-1	-1	-1	2	-1	-1	-1	-1	-1	-1
36109	-1	-1	3	-1	2	-1	-1	1	-1	-1	-1	1	-1	-1
36110	-1	-1	3	-1	2	1	1	2	-1	-1	-1	1	-1	-1
36111	-1	-1	3	-1	2	1	1	1	-1	-1	-1	1	-1	-1
36112	-1	-1	3	-1	2	-1	-1	2	-1	-1	-1	1	-1	-1
36113	-1	-1	5	-1	3	-1	-1	2	-1	-1	-1	1	-1	-1
36114	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36115	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36116	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36117	-1	-1	4	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36117-R	-1	-1	4	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1

	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 - HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
36118	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36119	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36120	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36121	-1	-1	3	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36122	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36123	-1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36124	-1	-1	2	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36125	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36126	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36127	-1	-1	6	-1	4	-1	-1	2	-1	-1	-1	1	-1	-1
36128	-1	-1	2	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
36129	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36130	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36131	-1	-1	3	-1	-1	-1	-1	2	-1	-1	-1	-1	-1	-1
36132	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36132-R	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36133	-1	-1	3	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36134	-1	-1	3	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36135	-1	-1	5	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
36136	-1	-1	2	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
36137	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36138	-1	-1	3	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36139	-1	-1	2	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	-1
36140	-1	-1	1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36141	-1	-1	2	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36142	-1	-1	3	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36143	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36144	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36145	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36146	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36147	-1	-1	1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36147-R	-1	-1	1	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36148	-1	-1	2	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36149	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
36150	-1	-1	5	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
36151	-1	-1	4	-1	3	-1	-1	2	-1	-1	-1	-1	-1	-1
36152	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	1	-1	-1
36202	-1	-1	3	-1	3	-1	-1	1	-1	-1	-1	1	-1	-1
36203	-1	-1	2	-1	2	-1	-1	1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 - HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI

	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
36065	-1	-1	-1	-1	1	4	2	6	-1	3	1	-1	5	1
36066	-1	-1	-1	-1	-1	4	1	4	-1	5	-1	1	6	1
36067	-1	-1	-1	-1	1	4	2	5	-1	3	-1	-1	5	1
36068	-1	-1	-1	-1	1	4	1	4	-1	4	1	-1	5	1
36069	-1	-1	-1	-1	1	3	1	4	1	4	1	-1	4	1
36069-R	-1	-1	-1	-1	1	4	1	5	1	4	1	1	5	1
36070	-1	-1	-1	-1	1	4	2	5	1	5	1	-1	6	1
36071	-1	-1	-1	-1	1	4	2	4	-1	4	-1	-1	4	-1
36072	-1	-1	-1	-1	1	2	-1	2	-1	3	-1	-1	4	-1
36073	-1	-1	-1	-1	-1	2	-1	3	-1	3	-1	-1	4	-1
36074	-1	-1	-1	-1	-1	3	-1	3	-1	3	-1	-1	4	-1
36075	-1	-1	-1	-1	1	5	1	5	1	5	-1	1	6	1
36076	-1	-1	-1	-1	1	3	1	3	1	3	-1	-1	5	1
36077	-1	-1	-1	-1	-1	4	2	6	-1	5	1	-1	5	1
36078	-1	-1	-1	-1	-1	3	1	5	1	5	1	1	6	1
36079	-1	-1	-1	-1	-1	3	1	4	-1	4	-1	-1	4	-1
36080	-1	-1	-1	-1	1	4	1	4	-1	3	1	1	5	1
36081	-1	-1	-1	-1	1	4	2	5	-1	4	-1	-1	7	1
36082	-1	-1	-1	-1	1	3	2	5	1	5	1	1	6	1
36083	-1	-1	-1	-1	1	4	1	4	1	5	1	1	6	1
36084	-1	-1	-1	-1	1	4	1	4	-1	5	-1	1	7	1
36084-R	-1	-1	-1	-1	1	4	-1	4	-1	5	-1	1	5	-1
36085	-1	-1	-1	-1	-1	3	1	4	1	4	-1	-1	4	-1
36086	-1	-1	-1	-1	1	3	1	4	-1	4	1	1	4	-1
36087	-1	-1	-1	-1	1	3	1	4	-1	4	-1	-1	3	1
36088	-1	-1	-1	-1	1	3	1	4	-1	6	-1	-1	6	-1
36089	-1	-1	-1	-1	1	3	1	4	1	3	-1	1	5	1
36090	-1	-1	-1	-1	-1	3	1	3	-1	5	-1	-1	4	-1
36091	-1	-1	-1	-1	1	5	2	5	1	7	1	-1	8	1
36092	-1	-1	-1	-1	-1	3	1	3	-1	4	-1	1	4	1
36093	-1	-1	-1	-1	-1	3	1	3	-1	4	-1	-1	4	-1
36094	-1	-1	-1	-1	1	4	2	4	1	4	1	-1	6	1
36095	-1	-1	-1	-1	1	5	1	5	1	-1	1	-1	8	1
36096	-1	-1	-1	-1	-1	3	1	3	-1	2	-1	-1	4	-1
36097	-1	-1	-1	-1	1	3	-1	3	1	3	-1	-1	4	-1
36098	-1	-1	-1	-1	-1	3	-1	3	-1	4	-1	-1	4	-1
36099	-1	-1	-1	-1	1	3	1	4	-1	4	-1	-1	4	-1
36099-R	-1	-1	-1	-1	1	3	1	3	1	5	-1	-1	5	-1
36100	-1	-1	-1	-1	-1	3	1	3	-1	3	-1	-1	3	-1
36104	-1	-1	-1	-1	1	3	1	3	1	3	-1	-1	4	-1
36105	-1	-1	-1	-1	1	4	1	5	1	5	1	-1	6	1
36106	-1	-1	-1	-1	-1	3	-1	3	-1	4	-1	-1	5	-1
36107	-1	-1	-1	-1	1	5	2	7	1	7	-1	1	6	1
36108	-1	-1	-1	-1	-1	4	1	4	-1	3	-1	-1	5	1
36109	-1	-1	-1	-1	1	3	1	4	-1	5	1	-1	5	1
36110	-1	-1	-1	-1	1	4	1	4	1	3	1	-1	5	-1
36111	-1	-1	-1	-1	1	3	1	4	1	5	1	-1	4	1
36112	-1	-1	-1	-1	-1	4	1	5	-1	3	-1	-1	5	-1
36113	1	-1	-1	-1	1	5	2	11	-1	4	-1	1	8	1
36114	-1	-1	-1	-1	1	3	-1	3	-1	3	-1	-1	4	-1
36115	-1	-1	-1	-1	1	3	-1	3	1	4	1	-1	4	-1
36116	-1	-1	-1	-1	-1	3	-1	3	1	4	-1	-1	4	-1
36117	-1	-1	-1	-1	1	3	-1	3	-1	4	-1	1	4	-1
36117-R	-1	-1	-1	-1	1	4	-1	4	-1	4	1	-1	5	-1

	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
36118	-1	-1	-1	-1	-1	3	-1	3	1	5	-1	-1	5	1
36119	-1	-1	-1	-1	1	-1	-1	3	1	4	-1	-1	5	-1
36120	-1	-1	-1	-1	1	3	-1	3	1	4	-1	-1	4	1
36121	-1	-1	-1	-1	1	1	-1	3	-1	3	1	-1	5	-1
36122	-1	-1	-1	-1	-1	3	-1	3	1	3	-1	-1	3	-1
36123	-1	-1	-1	-1	-1	3	-1	3	-1	3	-1	-1	4	-1
36124	-1	-1	-1	-1	-1	3	-1	3	1	3	-1	-1	3	1
36125	-1	-1	-1	-1	-1	3	-1	3	-1	3	1	-1	5	1
36126	-1	-1	-1	-1	1	3	-1	4	1	5	-1	-1	5	-1
36127	-1	-1	-1	-1	1	4	2	4	1	6	1	1	8	1
36128	-1	-1	-1	-1	1	3	-1	3	1	4	-1	1	5	-1
36129	-1	-1	-1	-1	1	3	-1	3	1	4	-1	1	6	-1
36130	-1	-1	-1	-1	-1	3	1	3	1	4	-1	-1	5	-1
36131	-1	-1	-1	-1	1	3	-1	3	-1	4	-1	-1	5	-1
36132	-1	-1	-1	-1	1	3	1	4	1	5	-1	-1	5	1
36132-R	-1	-1	-1	-1	1	3	1	4	-1	4	-1	-1	5	1
36133	-1	-1	-1	-1	1	4	-1	3	-1	4	-1	-1	6	-1
36134	-1	-1	-1	-1	1	4	1	4	-1	5	1	-1	6	1
36135	-1	-1	-1	-1	1	4	1	4	-1	6	-1	-1	7	1
36136	-1	-1	-1	-1	-1	3	-1	3	-1	4	-1	1	4	-1
36137	-1	-1	-1	-1	1	3	-1	3	-1	4	-1	-1	4	-1
36138	-1	-1	-1	-1	-1	2	-1	3	-1	4	-1	-1	4	-1
36139	-1	-1	-1	-1	1	3	1	3	1	4	-1	-1	5	1
36140	-1	-1	-1	-1	-1	3	-1	3	1	3	-1	-1	4	-1
36141	-1	-1	-1	-1	1	4	1	4	1	4	-1	-1	5	1
36142	-1	-1	-1	-1	-1	3	1	3	1	4	1	-1	5	-1
36143	-1	-1	-1	-1	1	4	1	4	1	4	1	-1	5	-1
36144	-1	-1	-1	-1	-1	3	-1	3	1	4	-1	-1	4	-1
36145	-1	-1	-1	-1	1	3	1	3	1	4	-1	1	4	-1
36146	-1	-1	-1	-1	-1	3	-1	3	-1	4	-1	-1	5	-1
36147	-1	-1	-1	-1	1	3	-1	3	1	2	-1	-1	4	-1
36147-R	-1	-1	-1	-1	-1	2	-1	3	-1	4	-1	-1	4	-1
36148	-1	-1	-1	-1	1	1	-1	3	1	3	-1	-1	4	-1
36149	-1	-1	-1	-1	-1	3	1	4	-1	5	1	-1	5	-1
36150	-1	-1	-1	-1	1	5	1	5	1	7	1	-1	7	1
36151	-1	-1	-1	-1	-1	4	2	5	-1	7	1	1	7	1
36152	-1	-1	-1	-1	1	3	1	3	1	5	-1	-1	5	-1
36202	-1	-1	-1	-1	1	4	2	5	1	6	-1	1	7	1
36203	-1	-1	-1	-1	-1	3	1	4	1	5	1	-1	6	1
LMB-QA	-1	-1	-1	-1	-1	2	-1	2	1	3	-1	-1	3	-1
LMB-QA	-1	-1	-1	-1	-1	2	-1	2	1	1	-1	-1	4	-1
LMB-QA	-1	-1	-1	-1	1	3	-1	2	-1	3	-1	-1	4	-1

	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB

	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
36065	1	1	2	3	1	1	-1	2	-1	2	2	2	4	2
36066	-1	1	4	3	-1	1	-1	2	-1	1	2	2	4	2
36067	1	1	3	4	1	1	-1	2	-1	2	2	2	3	1
36068	1	1	4	4	1	1	-1	2	-1	1	1	2	4	2
36069	1	1	3	2	1	1	-1	1	-1	1	2	2	3	1
36069-R	1	1	4	3	1	-1	1	2	-1	1	1	2	3	2
36070	1	1	4	3	1	1	-1	2	-1	1	2	2	5	2
36071	1	1	4	2	1	-1	-1	2	-1	1	1	2	5	2
36072	-1	-1	3	3	-1	-1	-1	1	-1	1	1	2	5	2
36073	-1	-1	3	3	-1	-1	-1	1	-1	-1	1	2	1	2
36074	-1	-1	3	3	1	-1	-1	1	-1	1	1	2	3	1
36075	1	1	5	5	1	1	1	2	-1	1	2	2	6	2
36076	-1	1	3	4	1	-1	-1	2	-1	1	1	2	4	2
36077	-1	1	4	4	-1	-1	-1	2	-1	1	2	2	5	2
36078	1	1	4	4	1	-1	-1	2	-1	1	2	2	6	2
36079	-1	-1	3	3	-1	1	-1	1	-1	1	2	2	4	1
36080	1	1	4	-1	1	-1	-1	2	-1	1	1	2	4	2
36081	1	1	4	4	-1	1	1	2	-1	2	2	2	3	2
36082	1	1	5	4	1	1	-1	2	-1	1	1	2	-1	2
36083	1	1	4	5	1	1	1	2	-1	2	2	2	6	1
36084	1	1	4	3	1	1	1	2	-1	2	2	2	-1	2
36084-R	1	1	4	4	1	1	-1	2	-1	2	1	2	-1	2
36085	-1	-1	3	-1	-1	-1	-1	1	-1	1	1	2	4	2
36086	1	1	3	3	-1	-1	-1	1	-1	1	1	2	5	2
36087	-1	-1	2	3	1	-1	-1	1	-1	1	1	2	4	2
36088	-1	1	4	5	-1	1	-1	2	-1	1	1	2	2	2
36089	-1	1	3	-1	1	-1	-1	1	-1	1	1	2	5	2
36090	-1	1	3	3	-1	-1	-1	1	-1	1	1	2	2	2
36091	1	1	5	5	1	1	1	-1	-1	1	2	2	3	2
36092	-1	1	3	4	-1	-1	-1	2	-1	1	-1	2	6	2
36093	-1	-1	3	3	-1	-1	-1	2	-1	1	1	2	3	2
36094	1	1	4	4	1	-1	-1	2	-1	1	1	2	3	2
36095	1	1	5	5	1	-1	1	2	-1	1	2	2	12	2
36096	-1	-1	3	3	-1	-1	-1	1	-1	-1	1	1	5	1
36097	-1	-1	3	3	1	-1	-1	1	-1	1	1	2	8	1
36098	-1	-1	3	4	-1	-1	-1	1	-1	1	1	2	6	1
36099	-1	-1	3	2	-1	-1	-1	1	-1	1	1	2	4	2
36099-R	-1	-1	4	3	-1	-1	-1	2	-1	1	1	2	1	1
36100	-1	-1	2	1	-1	-1	-1	1	-1	1	1	2	5	2
36104	-1	-1	3	3	1	-1	-1	1	-1	-1	1	2	4	1
36105	1	1	4	2	1	-1	-1	2	-1	1	1	2	4	2
36106	-1	-1	4	4	-1	-1	-1	1	-1	1	1	2	7	2
36107	1	1	4	5	1	-1	-1	2	-1	1	1	2	2	2
36108	1	1	3	4	1	-1	-1	1	-1	1	1	2	5	1
36109	1	1	3	3	-1	-1	-1	2	-1	1	2	2	5	1
36110	-1	1	4	5	1	1	-1	2	-1	1	1	2	7	2
36111	-1	-1	3	3	1	-1	-1	1	-1	1	2	2	5	1
36112	-1	-1	4	4	-1	-1	-1	2	-1	1	1	2	4	2
36113	1	1	5	5	1	-1	-1	2	-1	1	2	2	3	2
36114	-1	-1	3	3	-1	-1	-1	1	-1	1	2	2	3	2
36115	-1	-1	3	3	-1	-1	-1	1	-1	-1	1	2	5	2
36116	-1	-1	3	2	-1	-1	-1	1	-1	1	1	2	5	2
36117	-1	-1	4	2	-1	-1	-1	1	-1	1	1	2	5	2
36117-R	-1	-1	4	4	-1	-1	-1	1	-1	1	1	2	7	1

	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
36118	-1	-1	3	2	-1	-1	-1	1	-1	1	1	2	6	2
36119	-1	-1	4	4	-1	-1	-1	1	-1	1	1	2	6	2
36120	-1	-1	3	3	-1	-1	-1	1	-1	1	1	2	5	2
36121	-1	-1	3	3	-1	-1	-1	1	-1	1	2	1	7	1
36122	-1	-1	3	3	-1	-1	-1	1	-1	1	1	2	5	1
36123	-1	-1	3	3	-1	-1	-1	1	-1	1	1	2	7	2
36124	-1	-1	2	3	-1	-1	-1	1	-1	1	1	2	6	2
36125	-1	-1	3	3	-1	-1	-1	1	-1	1	1	2	4	2
36126	-1	-1	4	1	-1	-1	-1	1	-1	1	1	2	8	2
36127	1	1	5	2	1	1	-1	2	-1	2	1	2	7	2
36128	-1	-1	4	2	-1	-1	-1	1	-1	1	1	2	6	2
36129	-1	-1	4	1	-1	-1	-1	2	-1	1	1	2	9	2
36130	-1	-1	3	-1	-1	-1	-1	2	-1	1	1	2	8	2
36131	-1	-1	4	2	1	-1	-1	2	-1	1	2	2	9	1
36132	-1	1	4	2	1	-1	-1	1	-1	1	1	2	7	2
36132-R	1	1	4	4	1	-1	-1	2	-1	1	1	2	7	2
36133	-1	-1	4	2	1	-1	-1	2	-1	1	2	2	5	1
36134	-1	1	4	4	1	-1	-1	2	-1	2	1	2	7	2
36135	1	1	5	-1	1	-1	-1	2	-1	1	2	2	10	2
36136	-1	-1	3	3	-1	-1	-1	1	-1	1	1	2	6	2
36137	-1	-1	3	4	-1	-1	-1	1	-1	1	1	2	8	1
36138	-1	-1	3	4	-1	-1	-1	1	-1	1	2	2	6	1
36139	-1	-1	3	4	-1	-1	-1	1	-1	-1	1	2	7	2
36140	-1	-1	3	3	-1	-1	-1	2	-1	1	1	2	6	2
36141	-1	-1	4	4	-1	-1	-1	1	-1	1	1	2	8	2
36142	-1	-1	3	3	-1	-1	-1	1	-1	1	1	2	8	2
36143	-1	-1	4	4	1	-1	-1	2	-1	1	1	2	8	1
36144	-1	-1	3	3	-1	-1	-1	1	-1	1	1	1	6	1
36145	-1	-1	3	-1	1	-1	-1	1	-1	1	1	2	5	2
36146	-1	-1	4	-1	-1	-1	-1	1	-1	1	1	2	9	1
36147	1	-1	3	1	1	-1	-1	1	-1	1	2	2	6	1
36147-R	-1	-1	3	3	-1	-1	-1	1	-1	1	1	2	5	2
36148	-1	-1	4	4	-1	-1	-1	1	-1	1	1	2	7	2
36149	-1	-1	4	3	-1	-1	-1	1	-1	1	1	2	6	1
36150	1	1	5	6	1	1	-1	2	-1	2	1	2	9	2
36151	1	1	4	5	-1	-1	-1	2	-1	2	2	2	3	2
36152	-1	1	4	4	1	-1	-1	2	-1	2	1	2	4	2
36202	1	1	5	5	1	1	-1	2	-1	1	1	2	7	2
36203	-1	1	4	4	1	-1	-1	2	-1	1	2	2	4	1
LMB-QA	-1	-1	3	2	-1	-1	-1	1	-1	-1	1	2	3	1
LMB-QA	-1	-1	2	1	-1	-1	-1	1	-1	1	1	2	4	1
LMB-QA	-1	-1	3	3	-1	-1	-1	1	-1	1	1	2	5	2

	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
STURGEON LAKE PROJECT SITE

	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
36065	20	1	2	16	-1	2	2	2	13	2	2	3	11	2
36066	5	-1	2	5	-1	2	2	2	13	2	-1	2	11	2
36067	6	1	2	5	-1	2	2	2	14	3	2	3	11	2
36068	5	-1	2	4	-1	2	2	2	12	2	-1	2	10	2
36069	7	1	2	6	-1	2	2	2	10	2	1	2	9	-1
36069-R	6	-1	2	4	-1	2	2	2	11	2	2	2	8	-1
36070	6	1	2	6	-1	2	2	2	13	2	2	3	9	2
36071	6	-1	2	5	-1	2	2	2	12	2	2	2	9	2
36072	5	-1	2	4	-1	2	2	1	9	2	2	2	1	2
36073	5	-1	2	4	-1	2	1	1	8	2	1	2	6	2
36074	6	-1	3	3	1	2	2	1	9	2	2	2	8	2
36075	9	1	2	8	-1	2	3	2	18	3	2	2	16	3
36076	6	-1	2	4	-1	2	2	2	12	2	2	2	10	2
36077	7	-1	2	6	-1	2	2	2	13	3	2	2	9	2
36078	6	-1	2	5	-1	2	2	2	12	2	2	2	10	2
36079	6	-1	1	3	-1	2	2	1	11	2	2	2	9	2
36080	10	-1	2	6	-1	2	2	2	13	2	2	2	10	2
36081	7	1	2	7	-1	2	3	2	18	3	2	3	15	3
36082	7	-1	1	6	-1	2	2	1	12	2	2	2	10	2
36083	9	-1	2	5	-1	2	2	2	14	2	2	2	12	2
36084	9	-1	2	7	-1	2	2	2	15	3	2	3	13	2
36084-R	6	1	2	6	-1	2	2	2	15	2	2	2	12	2
36085	6	-1	2	5	-1	2	2	1	10	2	1	2	8	2
36086	7	-1	2	7	-1	2	2	2	11	2	1	2	3	2
36087	6	-1	2	3	-1	2	2	1	9	2	1	2	7	2
36088	7	1	1	5	1	2	2	1	12	2	2	2	9	2
36089	5	-1	1	5	-1	2	2	2	12	2	2	2	10	2
36090	7	-1	1	3	-1	2	2	1	5	2	2	2	7	2
36091	7	1	2	5	-1	2	3	2	18	3	2	3	14	3
36092	8	-1	2	6	-1	2	2	1	11	2	2	2	9	2
36093	5	-1	1	5	1	2	2	1	10	2	2	2	8	2
36094	6	-1	1	7	-1	2	2	2	13	2	2	2	11	2
36095	13	1	5	10	-1	2	3	1	21	3	2	2	17	3
36096	8	-1	2	6	-1	2	2	1	9	1	2	2	3	2
36097	9	-1	1	6	-1	2	1	1	8	2	1	2	-1	1
36098	6	-1	-1	6	-1	2	2	1	9	1	-1	2	7	2
36099	5	-1	2	4	-1	2	2	1	10	2	2	2	2	2
36099-R	7	-1	1	4	-1	2	2	1	9	2	2	2	7	2
36100	3	-1	1	3	-1	2	2	1	8	-1	2	2	1	2
36104	7	-1	1	5	-1	2	2	1	9	1	2	2	7	2
36105	6	1	2	5	-1	2	2	2	17	2	2	2	14	3
36106	10	-1	2	6	-1	2	1	1	12	2	1	2	10	2
36107	9	1	2	7	-1	2	2	2	18	2	2	3	16	3
36108	7	-1	2	5	-1	2	2	2	18	2	2	2	16	3
36109	7	-1	2	4	-1	2	2	2	12	2	2	2	4	2
36110	10	-1	2	9	1	2	2	1	12	2	-1	2	10	2
36111	8	-1	2	5	-1	2	1	2	12	2	1	2	10	2
36112	5	-1	2	6	1	2	2	1	14	2	2	2	12	2
36113	9	1	2	7	1	2	2	2	22	2	2	3	19	3
36114	6	-1	2	4	-1	2	1	1	9	2	2	2	7	2
36115	6	-1	2	6	-1	2	2	1	9	2	2	2	8	2
36116	7	-1	2	4	-1	2	2	1	9	2	1	2	3	2
36117	9	-1	4	6	1	2	2	1	12	2	2	2	10	2
36117-R	9	-1	3	8	-1	2	2	2	12	2	2	2	10	2

	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
36118	9	-1	2	7	-1	2	2	1	10	2	2	2	7	2
36119	9	-1	1	5	-1	2	2	1	10	2	1	2	8	2
36120	7	-1	2	6	1	2	2	1	11	2	2	2	9	2
36121	7	-1	12	5	-1	3	2	1	13	2	2	2	11	3
36122	8	-1	4	5	-1	2	2	1	9	2	2	2	8	2
36123	8	-1	6	6	-1	3	2	2	9	1	2	2	7	2
36124	7	-1	4	5	-1	2	1	1	9	2	1	2	8	2
36125	6	-1	8	4	-1	3	2	2	12	2	2	2	9	2
36126	9	-1	1	6	-1	2	2	2	11	2	2	2	8	-1
36127	8	-1	2	5	-1	2	3	2	17	-1	2	3	14	3
36128	9	-1	1	8	-1	2	2	1	13	-1	2	2	10	2
36129	13	-1	2	11	1	2	2	1	12	2	2	2	10	2
36130	13	-1	1	10	-1	2	2	2	11	-1	2	2	10	2
36131	13	-1	2	12	-1	2	2	2	12	2	1	2	12	2
36132	13	-1	2	10	-1	2	2	2	13	2	2	2	10	2
36132-R	10	-1	2	9	1	2	2	2	12	2	2	2	2	2
36133	10	-1	1	8	-1	2	2	2	14	-1	2	2	12	2
36134	13	-1	2	7	-1	2	2	2	14	2	2	2	12	2
36135	13	-1	2	14	-1	2	2	2	15	-1	2	3	16	2
36136	6	-1	1	5	-1	2	2	1	9	2	1	2	7	2
36137	9	-1	4	6	-1	2	2	1	9	2	2	2	8	-1
36138	8	-1	9	7	-1	3	2	1	11	2	2	2	10	2
36139	7	-1	9	6	-1	3	2	1	12	2	2	2	10	3
36140	6	-1	2	4	-1	2	2	1	8	2	1	2	6	-1
36141	9	-1	15	5	-1	4	2	2	12	2	2	2	10	-1
36142	9	1	22	5	-1	5	2	2	13	2	2	2	11	3
36143	9	-1	7	6	-1	3	2	2	12	2	2	2	10	2
36144	9	-1	4	6	-1	2	1	1	9	2	2	2	3	2
36145	9	-1	5	7	1	2	1	2	10	2	2	2	7	2
36146	9	-1	3	5	-1	2	2	1	10	2	2	2	8	2
36147	9	-1	4	6	-1	2	2	2	9	2	2	2	8	-1
36147-R	7	-1	3	4	-1	2	1	1	9	2	2	2	7	2
36148	8	-1	3	6	1	2	1	1	10	2	2	2	8	2
36149	8	-1	4	6	-1	2	2	1	11	2	2	2	8	-1
36150	15	1	2	11	-1	2	3	2	22	-1	2	3	19	3
36151	11	-1	2	5	-1	2	2	2	16	3	2	3	13	2
36152	9	1	2	6	-1	2	2	2	12	2	1	2	9	2
36202	14	1	2	7	-1	2	2	2	16	2	2	2	5	2
36203	10	-1	1	9	-1	2	1	2	13	2	2	2	9	2
LMB-QA	4	-1	1	3	-1	1	1	1	6	1	2	2	3	2
LMB-QA	5	-1	1	3	-1	2	1	1	7	2	2	1	6	2
LMB-QA	5	-1	1	4	1	2	1	1	8	2	1	1	6	2

	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI

	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI
36065	2	2	-1	2	2	2	2	1	2	6	8	12	3	6
36066	2	2	-1	2	2	2	3	1	2	6	8	13	3	5
36067	2	2	-1	2	2	2	3	1	2	6	8	12	4	9
36068	2	-1	-1	2	2	2	2	1	2	6	8	14	3	7
36069	2	2	-1	2	2	2	2	1	2	6	7	12	3	7
36069-R	2	2	-1	2	2	2	3	1	2	5	7	13	3	6
36070	2	2	-1	2	2	2	3	1	2	5	7	13	3	9
36071	2	2	-1	2	2	2	2	1	2	5	7	12	3	13
36072	2	2	-1	2	2	2	2	1	2	6	7	11	3	6
36073	2	2	-1	2	2	2	2	1	2	6	7	11	3	5
36074	1	2	-1	2	2	2	2	1	2	6	7	12	3	5
36075	2	2	-1	2	2	2	3	1	2	6	8	15	4	7
36076	2	2	-1	2	2	2	2	1	2	5	7	13	3	6
36077	2	2	-1	2	2	2	3	1	2	6	7	13	4	7
36078	2	2	-1	2	2	2	2	1	2	6	7	12	3	6
36079	2	2	-1	2	2	2	3	1	2	5	7	11	4	6
36080	2	2	-1	2	2	2	2	1	2	5	7	14	4	6
36081	2	2	-1	2	2	2	3	1	2	6	8	13	3	7
36082	2	2	-1	2	2	2	2	1	2	5	7	14	3	7
36083	2	2	-1	2	2	2	3	1	2	5	6	13	4	6
36084	2	2	-1	2	2	2	3	1	2	6	8	13	3	8
36084-R	2	2	-1	2	2	2	3	1	2	5	7	13	4	8
36085	2	2	-1	2	2	2	3	1	2	6	7	12	3	7
36086	2	2	-1	2	2	2	3	1	2	5	6	14	4	6
36087	2	2	-1	2	2	2	2	1	2	6	7	12	4	6
36088	2	2	-1	2	2	2	2	1	2	6	7	12	3	7
36089	2	2	-1	2	2	2	2	1	2	5	7	12	3	7
36090	2	2	-1	2	2	2	2	1	2	5	7	12	3	9
36091	2	2	-1	2	2	2	3	1	2	6	7	13	3	9
36092	2	2	-1	2	2	2	2	1	2	5	6	13	3	8
36093	2	2	-1	2	2	2	2	1	2	6	7	13	3	6
36094	2	2	-1	2	2	2	3	1	2	6	7	13	3	8
36095	2	2	-1	2	2	2	3	1	2	6	7	17	4	8
36096	2	2	-1	2	2	2	2	1	2	6	7	10	3	7
36097	2	2	-1	2	2	2	2	1	2	5	7	11	3	7
36098	2	2	-1	2	2	2	2	1	2	5	7	10	3	7
36099	2	2	-1	2	2	2	2	1	2	6	7	12	3	5
36099-R	2	2	-1	2	2	2	3	1	2	6	6	12	3	5
36100	2	2	-1	2	2	2	2	1	2	5	7	11	3	6
36104	2	2	-1	2	2	2	2	1	2	5	6	11	3	5
36105	2	2	-1	2	2	2	3	1	2	6	7	16	3	7
36106	2	2	-1	2	2	2	2	1	2	5	6	12	4	4
36107	2	2	-1	2	2	2	3	1	2	5	7	14	3	6
36108	2	2	-1	2	2	2	3	1	2	6	7	16	3	6
36109	2	2	-1	2	2	2	2	1	2	6	7	13	3	7
36110	2	2	-1	2	2	2	3	1	2	6	7	15	4	6
36111	2	2	-1	2	2	2	2	1	2	6	7	12	3	6
36112	2	2	-1	2	2	2	3	1	2	6	7	14	3	6
36113	2	3	-1	2	2	2	3	1	2	6	7	18	4	8
36114	2	2	-1	2	2	2	2	1	2	6	7	13	4	6
36115	2	2	-1	2	2	2	2	1	2	5	6	11	4	5
36116	2	2	-1	2	2	2	2	1	2	5	6	11	3	7
36117	2	2	-1	2	2	2	2	1	2	6	7	14	3	5
36117-R	2	2	-1	2	2	2	2	1	2	5	6	12	3	5

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
STURGEON LAKE PROJECT SITE

	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI
36118	2	2	-1	2	2	2	2	1	2	6	6	12	3	6
36119	2	2	-1	2	2	2	2	1	2	5	6	12	3	5
36120	2	2	-1	2	2	2	2	1	2	6	7	12	3	6
36121	2	2	-1	2	2	2	2	1	2	6	6	12	3	6
36122	2	2	-1	1	2	2	2	1	2	5	6	12	3	6
36123	2	2	-1	2	2	2	2	1	2	6	6	11	4	6
36124	2	2	-1	2	2	2	2	1	-1	6	6	10	3	6
36125	2	2	-1	2	2	3	3	1	2	7	6	16	3	12
36126	2	2	-1	2	2	2	2	1	2	6	7	13	3	6
36127	2	2	-1	2	2	2	3	1	2	6	7	14	4	8
36128	2	2	-1	2	2	2	2	1	2	6	7	14	4	5
36129	2	2	-1	2	2	2	2	1	2	6	6	14	3	6
36130	2	2	-1	2	2	2	2	1	2	6	7	13	4	5
36131	2	2	-1	2	2	2	3	1	2	6	7	13	3	7
36132	2	2	-1	2	2	2	3	1	2	6	6	15	4	11
36132-R	2	2	-1	2	2	2	3	1	2	6	7	11	3	10
36133	2	2	-1	2	2	2	2	1	2	6	7	15	4	7
36134	2	2	-1	2	2	2	3	1	2	5	6	14	3	9
36135	2	2	-1	2	2	2	3	1	2	6	7	16	3	7
36136	2	2	-1	2	2	2	2	1	2	6	6	10	3	5
36137	2	2	-1	2	2	2	2	1	2	6	6	12	3	6
36138	2	2	-1	2	2	2	2	1	2	6	7	11	4	6
36139	2	2	-1	2	2	2	2	1	2	6	6	11	3	7
36140	2	2	-1	2	2	2	2	1	2	5	5	12	3	5
36141	2	-1	-1	2	2	2	2	1	2	6	7	13	4	1
36142	2	2	-1	2	2	3	3	1	2	7	7	14	4	4
36143	2	2	-1	2	2	2	3	1	2	6	7	11	4	9
36144	2	2	-1	1	2	2	2	1	2	6	6	11	3	6
36145	2	2	-1	2	2	2	2	1	2	6	6	12	3	7
36146	2	2	-1	2	2	2	2	1	2	7	6	13	3	5
36147	2	2	-1	2	2	2	2	1	2	6	7	11	3	5
36147-R	1	2	-1	2	2	2	2	1	2	6	6	10	3	5
36148	2	2	-1	2	2	2	2	1	2	6	6	11	3	5
36149	2	2	-1	2	2	2	2	1	2	5	6	12	3	7
36150	2	2	-1	2	2	2	3	1	2	5	7	15	4	7
36151	3	3	-1	2	2	2	3	1	2	5	6	15	3	8
36152	2	2	-1	2	2	2	3	1	2	6	7	13	3	7
36202	2	2	-1	2	2	2	3	1	2	6	7	14	4	8
36203	2	2	-1	2	2	2	3	1	2	6	6	14	3	6
LMB-QA	2	2	-1	2	2	1	2	1	2	5	7	11	3	4
LMB-QA	1	2	-1	1	2	2	2	-1	2	6	6	10	3	4
LMB-QA	1	2	-1	2	2	2	2	1	2	6	6	9	3	4

	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI

	113 - HBA	114 - MBI	115 - MBL	116 - MAR	117 - HA	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH
36065	14	5	6	4	19	6	12	4	6	12	6	6	6	6
36066	7	5	6	4	22	5	16	4	5	13	6	6	6	6
36067	12	7	7	4	20	-1	6	4	5	13	6	6	6	6
36068	13	6	6	4	21	6	7	4	6	14	5	6	6	6
36069	11	6	6	3	18	6	13	4	5	12	5	6	6	6
36069-R	11	5	6	4	8	5	13	5	5	12	1	6	5	5
36070	13	6	7	4	21	5	12	4	5	12	6	6	6	6
36071	11	7	7	4	21	6	15	5	6	11	5	6	6	5
36072	11	5	5	4	18	5	12	4	5	11	5	5	6	5
36073	12	5	5	4	18	5	12	4	5	11	5	5	6	5
36074	11	5	5	4	24	5	14	5	5	11	5	6	5	5
36075	14	5	6	4	24	6	18	5	6	12	5	6	6	6
36076	12	5	5	4	20	6	16	-1	5	10	5	6	5	5
36077	11	6	6	4	18	6	14	4	5	11	5	6	6	6
36078	13	5	6	4	19	5	15	4	5	10	5	6	5	5
36079	12	6	6	4	22	5	14	4	5	11	5	7	6	6
36080	14	4	5	4	21	5	15	4	5	11	5	6	6	6
36081	15	5	7	4	23	5	16	4	5	12	5	7	6	6
36082	15	5	6	4	25	5	18	5	5	11	5	7	6	6
36083	14	5	6	4	22	6	6	4	6	11	5	7	6	6
36084	13	6	6	4	23	6	18	5	5	10	-1	7	6	5
36084-R	13	6	6	4	20	6	16	5	5	10	-1	6	5	6
36085	13	5	6	4	19	5	11	4	5	10	1	6	6	5
36086	14	5	5	4	20	6	15	5	5	10	-1	6	6	5
36087	12	5	5	3	20	5	15	5	5	11	5	6	5	5
36088	11	5	6	4	22	5	14	5	5	10	5	6	5	5
36089	12	5	5	3	16	6	16	5	5	10	5	6	5	5
36090	12	5	6	4	10	5	13	4	5	10	5	6	6	5
36091	13	6	7	4	24	5	15	4	5	11	5	-1	6	5
36092	12	5	6	4	19	5	14	5	5	9	5	6	6	5
36093	-1	5	6	4	19	5	12	4	5	9	5	6	5	5
36094	12	6	6	4	20	6	15	-1	5	10	5	6	6	6
36095	16	6	7	4	37	5	21	5	5	10	5	7	6	5
36096	11	5	6	4	20	5	15	4	5	8	5	6	5	5
36097	13	5	6	4	19	5	13	4	5	9	5	6	5	5
36098	11	5	5	3	18	5	2	4	5	9	5	6	6	5
36099	13	4	5	4	21	5	12	5	4	10	-1	6	6	5
36099-R	11	4	5	3	23	5	16	5	5	10	5	6	6	5
36100	10	5	5	4	18	5	7	4	5	10	5	6	5	5
36104	12	4	5	3	18	5	14	4	5	10	5	6	6	6
36105	14	5	6	4	25	6	19	5	5	10	5	7	5	6
36106	13	5	5	4	20	5	15	4	5	10	5	6	6	6
36107	12	6	7	4	22	6	18	4	6	10	6	7	6	6
36108	14	6	6	4	30	5	18	4	5	10	5	-1	6	5
36109	14	5	6	3	22	6	14	4	5	10	5	7	6	6
36110	15	5	6	5	21	6	17	4	5	11	5	7	6	6
36111	11	5	5	4	20	5	13	4	5	10	5	6	6	5
36112	14	6	7	4	22	6	15	4	6	10	-1	-1	6	5
36113	17	6	7	4	32	6	11	4	6	10	6	7	6	7
36114	12	5	6	3	23	6	2	5	6	10	5	6	6	5
36115	12	4	5	3	22	5	6	4	5	9	5	6	-1	5
36116	5	5	5	4	21	5	18	5	5	10	5	7	6	5
36117	13	4	5	4	18	5	17	4	5	9	-1	7	6	5
36117-R	12	5	5	4	21	5	14	4	5	9	5	6	6	5

	113 - HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH
36118	13	5	5	4	25	5	16	5	5	10	5	6	6	6
36119	12	5	6	4	20	5	15	4	5	10	5	6	6	5
36120	13	5	6	4	22	5	6	4	5	9	5	6	6	5
36121	12	7	7	4	25	5	8	4	5	9	5	7	6	5
36122	12	6	6	4	20	5	14	5	5	9	6	-1	6	6
36123	13	7	8	3	19	5	13	5	5	10	6	4	6	6
36124	11	6	6	4	19	5	13	4	5	10	5	7	-1	5
36125	15	11	11	4	26	7	2	4	6	10	-1	7	-1	6
36126	13	5	6	4	23	5	14	4	5	10	5	6	6	6
36127	13	5	6	4	23	5	17	4	5	10	5	6	6	6
36128	13	5	5	4	24	5	16	5	5	9	5	6	6	6
36129	12	5	5	4	26	5	9	5	5	10	5	6	6	5
36130	14	5	6	4	21	5	15	4	5	9	5	6	6	5
36131	13	5	6	4	24	5	17	5	5	10	5	7	6	6
36132	14	7	7	4	25	5	17	4	5	10	5	7	6	6
36132-R	13	6	6	4	20	6	17	5	6	10	5	-1	-1	6
36133	15	5	6	4	24	5	17	4	5	11	5	6	6	6
36134	13	6	6	4	24	5	14	5	5	10	5	7	-1	5
36135	14	5	6	4	28	5	19	5	5	11	-1	7	6	6
36136	11	5	6	4	20	6	15	4	5	10	5	6	6	5
36137	13	6	7	4	20	5	13	4	5	10	6	8	7	6
36138	13	7	7	4	20	6	7	5	5	10	5	8	6	6
36139	14	7	8	4	24	5	8	5	5	10	-1	5	6	5
36140	12	5	6	4	25	5	14	5	5	10	5	-1	6	6
36141	14	8	9	4	25	6	15	5	5	10	-1	-1	6	6
36142	14	12	12	4	26	7	19	5	7	9	6	7	7	6
36143	14	7	7	4	23	5	15	5	6	10	5	8	6	6
36144	11	5	6	3	19	5	14	4	5	9	5	-1	6	6
36145	12	7	8	4	20	5	16	5	5	9	5	4	6	6
36146	12	5	6	4	23	5	16	4	5	10	5	6	6	6
36147	12	5	6	3	19	5	12	4	5	10	5	7	5	5
36147-R	12	5	5	4	17	5	14	4	5	9	5	6	6	5
36148	13	5	6	4	22	5	13	5	5	10	5	7	6	6
36149	11	6	6	4	25	5	9	4	5	10	5	-1	6	5
36150	13	5	6	4	27	5	21	-1	6	11	6	7	6	6
36151	13	6	7	4	23	6	14	4	6	11	6	7	6	6
36152	13	5	6	4	21	6	-1	5	5	10	5	7	6	5
36202	16	5	6	4	28	6	17	5	6	10	6	7	7	6
36203	13	5	6	4	22	5	14	4	5	10	5	6	6	6
LMB-QA	12	4	5	4	19	5	12	5	5	12	5	6	6	5
LMB-QA	12	5	5	3	17	-1	6	4	5	9	5	6	5	5
LMB-QA	11	4	5	3	18	5	12	-1	5	10	5	5	5	5

	113 - HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH
36065	4	4	4	6	6	13	11	19	11	10	6	9	10	9
36066	5	3	4	5	6	16	12	19	11	10	6	9	1	8
36067	5	3	4	5	5	15	12	19	12	10	6	9	1	9
36068	5	3	4	5	5	15	12	18	11	9	6	9	2	9
36069	4	3	4	5	5	15	11	17	11	9	6	9	1	9
36069-R	4	3	4	5	5	16	12	18	11	10	6	9	2	9
36070	4	3	4	5	5	16	11	17	10	9	6	9	10	8
36071	5	4	4	6	5	16	11	17	11	11	6	8	10	8
36072	4	3	4	5	5	14	12	17	11	9	6	8	10	9
36073	4	3	4	5	5	13	10	17	10	9	5	9	10	9
36074	4	3	4	5	5	14	11	17	11	9	5	9	10	9
36075	5	3	4	5	5	17	11	18	11	10	6	9	10	8
36076	4	3	4	5	5	15	11	15	11	9	5	8	1	9
36077	4	3	4	5	6	15	11	18	11	9	5	8	10	9
36078	4	3	4	5	5	16	12	17	10	9	6	8	10	9
36079	4	3	4	5	5	18	11	17	11	9	6	8	11	9
36080	5	3	4	6	5	16	11	18	11	11	6	9	2	9
36081	5	3	4	6	6	16	11	16	10	10	5	8	10	9
36082	4	3	4	5	5	19	12	17	11	10	5	8	10	8
36083	5	3	4	6	5	16	12	18	11	9	6	9	10	9
36084	4	3	4	6	5	15	12	16	11	10	6	9	11	9
36084-R	5	3	4	6	5	16	12	17	11	9	6	9	10	10
36085	4	3	4	5	5	15	11	16	11	9	6	8	11	9
36086	4	3	4	5	5	16	11	17	11	9	5	9	9	8
36087	4	3	4	6	5	16	11	16	11	10	6	9	10	9
36088	4	3	4	6	5	15	11	16	11	9	5	9	10	9
36089	4	3	4	5	5	15	12	16	11	9	5	9	10	9
36090	4	3	4	5	5	17	12	16	12	10	6	8	10	8
36091	4	3	4	5	5	19	11	17	11	10	6	8	10	9
36092	4	3	4	5	5	15	12	17	11	9	5	8	10	8
36093	4	3	4	5	5	16	10	16	11	10	5	8	9	8
36094	5	3	4	5	5	16	11	16	12	9	6	9	10	8
36095	4	3	4	5	5	19	11	17	12	10	6	9	10	8
36096	4	3	4	5	5	14	11	15	11	8	5	8	9	8
36097	4	3	4	5	5	16	11	15	11	10	6	8	10	8
36098	4	3	4	5	5	16	11	15	10	10	6	8	2	9
36099	4	3	4	5	5	16	10	15	10	9	5	8	10	8
36099-R	4	3	4	5	5	18	11	16	10	10	6	8	10	9
36100	4	3	4	5	5	13	12	16	11	9	6	8	10	8
36104	5	3	4	5	5	14	10	16	11	9	6	9	2	9
36105	5	4	4	6	5	17	12	17	11	10	6	8	2	9
36106	4	3	4	5	5	14	11	15	11	10	7	9	10	8
36107	5	3	4	5	5	17	11	18	11	9	6	9	10	8
36108	4	3	4	5	5	20	12	17	11	10	6	9	9	8
36109	4	3	5	5	5	17	12	16	10	9	6	8	10	9
36110	4	3	4	5	5	19	12	18	11	10	6	9	2	9
36111	4	3	4	5	6	15	12	17	11	10	6	9	10	9
36112	5	3	4	5	6	19	12	18	12	11	6	9	10	10
36113	5	4	4	6	6	23	12	17	12	9	6	9	2	9
36114	4	3	4	5	5	18	11	16	11	10	5	9	10	9
36115	4	3	4	6	5	15	11	15	11	9	5	8	11	9
36116	4	3	4	5	5	16	12	16	11	10	7	9	2	9
36117	5	3	4	5	5	16	12	16	11	10	6	9	10	9
36117-R	4	3	4	5	5	17	11	16	12	10	6	8	11	9

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH
36118	4	3	4	5	5	17	12	16	11	11	6	8	11	9
36119	4	3	4	5	5	15	11	17	10	9	5	8	10	9
36120	4	4	4	5	6	16	12	17	11	10	6	9	10	8
36121	4	3	4	5	5	16	12	15	11	10	5	9	10	9
36122	5	3	4	5	5	15	12	17	12	9	5	9	10	9
36123	4	3	4	5	5	13	11	16	11	10	6	8	10	8
36124	4	3	4	6	6	13	12	16	11	9	6	9	11	9
36125	4	3	4	6	5	18	11	16	11	11	7	8	10	9
36126	4	3	5	6	5	14	11	16	10	9	6	8	10	8
36127	4	4	4	5	6	17	11	16	10	10	7	9	10	9
36128	5	3	4	5	5	17	12	17	11	10	6	9	2	9
36129	4	3	4	5	5	17	12	16	11	10	6	8	10	9
36130	5	3	4	5	5	16	12	16	11	8	6	9	10	8
36131	5	3	4	5	5	17	12	16	11	10	7	8	10	9
36132	5	3	4	5	6	18	11	16	11	10	7	9	10	8
36132-R	5	3	4	6	5	17	12	16	12	10	6	9	10	9
36133	4	3	4	5	5	18	11	16	11	9	5	9	10	9
36134	4	4	4	5	5	18	11	17	12	10	7	8	11	9
36135	4	3	4	6	5	19	12	16	11	10	7	9	10	9
36136	4	3	4	6	5	15	11	15	11	10	6	9	1	9
36137	4	3	4	5	5	16	11	15	11	9	6	9	10	9
36138	5	3	5	6	5	17	11	18	12	10	6	9	11	9
36139	4	3	4	5	5	15	12	17	12	10	7	9	10	8
36140	4	3	4	5	5	18	12	16	11	10	6	8	10	9
36141	4	3	4	5	5	15	12	17	12	9	6	9	1	8
36142	4	3	4	5	6	16	11	15	12	11	6	9	11	9
36143	5	3	4	5	5	17	10	16	10	10	5	9	11	9
36144	4	3	4	5	6	15	11	16	10	10	6	9	9	9
36145	5	3	4	6	5	17	11	15	11	10	6	9	10	10
36146	4	3	4	5	5	16	12	16	12	10	6	8	10	8
36147	4	3	5	6	5	16	12	17	11	9	6	9	11	9
36147-R	4	3	4	5	5	14	11	16	9	10	6	9	10	8
36148	4	3	4	5	5	16	12	15	10	9	6	9	10	9
36149	4	3	4	5	5	16	12	16	11	10	5	8	10	9
36150	5	3	4	5	6	20	13	18	12	11	6	9	2	9
36151	4	3	4	6	6	17	12	16	12	9	5	9	11	9
36152	5	3	4	5	5	17	13	17	11	10	6	9	10	8
36202	5	3	4	6	6	18	12	16	11	9	5	9	11	10
36203	5	3	4	5	6	16	12	17	11	10	6	8	10	9
LMB-QA	4	3	5	6	5	12	12	18	11	8	5	9	10	9
LMB-QA	5	3	4	5	5	15	12	16	10	9	5	9	10	9
LMB-QA	4	3	4	5	5	14	11	16	10	9	5	8	10	9

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
36065	11	11	39	12	28	17	7	9	2	10	9	3	18	17
36066	9	10	35	12	32	3	7	8	11	10	9	13	17	15
36067	10	12	41	11	30	17	7	9	11	11	9	3	17	16
36068	9	10	41	12	29	3	7	8	11	2	10	8	16	4
36069	10	11	32	11	30	3	7	8	10	10	9	2	17	16
36069-R	10	11	34	11	28	16	7	9	2	10	9	13	17	2
36070	10	2	34	11	28	2	7	8	11	2	9	13	18	17
36071	10	10	35	11	32	3	7	9	11	11	9	5	17	17
36072	9	11	34	11	30	4	7	8	10	10	9	12	16	17
36073	10	11	32	11	29	17	6	9	10	10	9	12	2	16
36074	9	11	34	11	34	3	7	7	2	10	9	13	17	16
36075	9	10	44	11	37	3	7	8	2	11	10	7	17	17
36076	10	11	40	11	31	17	7	9	10	11	9	13	18	16
36077	10	11	40	11	30	17	7	9	11	11	9	2	16	17
36078	9	10	39	11	31	3	7	8	11	2	10	2	16	3
36079	9	10	41	11	31	3	7	8	11	2	9	3	16	16
36080	10	1	37	11	27	2	8	8	11	11	9	3	18	3
36081	10	1	36	12	33	2	7	8	11	2	9	14	18	17
36082	10	9	37	11	48	4	8	8	11	2	10	12	16	17
36083	9	10	42	11	36	18	7	9	11	11	9	13	17	16
36084	10	11	35	11	32	4	7	8	10	10	10	2	18	17
36084-R	9	11	37	12	28	18	7	8	11	2	9	3	17	16
36085	9	1	37	10	28	2	7	9	11	10	9	12	16	16
36086	9	11	33	11	25	3	7	8	11	10	9	13	16	16
36087	9	2	35	11	32	3	7	9	10	11	9	13	16	3
36088	9	11	33	10	24	3	7	8	10	2	9	13	17	17
36089	9	11	36	11	26	1	7	8	10	10	9	13	2	16
36090	9	9	38	11	35	1	7	8	2	2	10	2	16	17
36091	9	1	41	11	36	2	7	9	11	2	9	2	17	3
36092	9	11	4	11	29	4	7	8	10	10	10	13	17	15
36093	9	11	36	10	29	17	7	8	10	10	9	12	16	3
36094	10	11	35	11	35	2	7	8	11	2	9	3	17	17
36095	9	10	47	11	42	16	7	9	11	10	9	13	16	16
36096	9	11	35	10	25	16	7	8	11	10	9	12	15	15
36097	9	2	37	11	33	3	7	9	11	10	9	12	3	16
36098	8	9	33	11	27	4	7	8	11	10	9	12	15	2
36099	9	11	32	11	31	3	7	8	10	2	10	13	16	16
36099-R	9	10	35	10	21	16	7	8	11	10	9	1	16	3
36100	9	11	31	2	30	2	7	8	12	2	9	2	16	16
36104	10	1	34	11	28	2	7	7	11	10	9	13	16	17
36105	10	11	37	12	38	17	7	9	11	11	9	1	17	16
36106	9	1	36	10	33	2	7	8	11	2	9	3	16	17
36107	9	11	38	12	36	2	7	8	10	11	9	14	19	3
36108	9	10	51	11	36	3	7	8	2	10	10	2	15	16
36109	10	11	39	11	32	5	7	8	11	10	9	2	17	3
36110	9	10	38	11	34	2	7	9	12	11	10	3	17	17
36111	10	10	35	12	22	1	7	8	11	11	9	3	16	2
36112	11	12	45	12	34	17	8	9	11	11	9	2	17	18
36113	11	12	52	12	42	18	8	9	11	12	10	2	20	17
36114	9	11	35	12	34	2	7	8	11	10	10	13	17	17
36115	9	11	34	12	32	4	7	9	11	2	10	13	17	16
36116	10	10	37	11	33	16	7	9	11	2	10	13	16	16
36117	10	11	39	11	33	1	7	8	11	10	9	12	16	17
36117-R	9	1	39	11	26	2	7	8	11	11	10	2	16	17

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
36118	9	11	37	2	32	17	8	8	12	11	10	13	15	16
36119	9	2	26	11	25	2	7	8	11	2	9	3	16	17
36120	9	11	37	11	37	4	8	9	11	11	10	2	16	17
36121	9	1	38	11	28	2	7	9	10	2	9	13	16	2
36122	9	11	38	11	29	16	7	9	11	11	10	13	16	19
36123	9	1	14	10	29	2	7	9	2	11	10	13	2	17
36124	10	2	30	11	30	2	8	9	11	11	10	3	16	17
36125	9	10	38	12	29	4	8	9	11	12	9	2	16	17
36126	10	1	40	12	28	2	7	8	12	11	10	13	17	17
36127	9	10	39	12	38	16	7	8	2	10	9	2	15	2
36128	11	10	38	11	41	3	7	9	10	2	9	13	17	17
36129	10	11	37	11	43	18	7	9	10	11	10	2	16	16
36130	9	1	39	11	37	9	7	9	2	11	9	13	17	16
36131	9	10	40	12	35	1	7	9	1	12	9	13	16	17
36132	10	10	34	12	34	3	7	9	2	11	10	13	16	3
36132-R	10	11	21	12	33	2	7	9	11	11	9	14	17	17
36133	9	11	41	12	32	17	7	8	10	11	9	13	2	17
36134	10	10	43	12	25	4	7	9	1	11	10	13	16	17
36135	9	11	41	11	39	2	7	9	11	1	9	3	15	17
36136	10	12	34	11	32	18	7	9	11	2	10	13	18	3
36137	9	10	38	12	32	17	7	8	2	10	9	3	16	2
36138	10	12	40	11	33	18	7	9	11	11	10	2	16	17
36139	9	1	36	11	33	3	7	8	11	2	9	13	16	2
36140	10	10	37	11	38	3	7	9	11	10	9	13	2	17
36141	9	11	35	10	30	1	7	1	11	11	9	2	16	16
36142	10	12	44	11	32	18	7	9	12	11	9	2	17	16
36143	9	12	17	11	34	17	7	9	11	11	10	2	16	17
36144	9	10	34	11	34	16	7	9	11	1	9	13	16	2
36145	10	11	22	11	28	2	7	9	11	11	10	2	2	17
36146	9	11	35	11	30	17	7	8	11	10	9	12	15	2
36147	9	11	36	12	30	3	8	9	11	2	9	13	17	17
36147-R	9	11	33	10	23	16	7	8	2	10	9	3	17	16
36148	9	2	18	11	33	2	7	8	2	11	9	13	17	3
36149	9	9	32	10	30	4	7	9	11	1	9	1	15	16
36150	9	9	52	13	44	3	8	9	12	1	10	2	17	17
36151	10	2	37	12	27	3	8	9	12	2	10	1	17	17
36152	10	10	41	12	29	17	7	9	11	11	10	13	16	17
36202	10	12	35	13	35	17	7	9	11	11	9	3	17	17
36203	9	10	33	12	33	11	8	8	12	11	10	2	17	2
LMB-QA	9	11	31	10	30	2	6	8	11	1	9	2	16	16
LMB-QA	9	10	33	11	29	4	7	8	11	11	9	13	16	16
LMB-QA	10	11	31	11	29	17	7	8	2	11	9	12	2	17

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
STURGEON LAKE PROJECT SITE

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
36065	17	14	16	40	18	18	50	18
36066	16	13	14	39	17	18	41	18
36067	17	14	15	40	3	19	51	19
36068	16	13	13	34	3	19	19	17
36069	17	14	15	36	17	17	50	18
36069-R	16	15	14	41	17	3	52	17
36070	17	13	15	38	16	17	51	19
36071	17	14	14	38	18	3	51	4
36072	17	14	14	35	2	16	44	3
36073	17	14	14	39	17	17	43	2
36074	18	13	15	35	2	17	29	19
36075	18	14	14	42	18	18	32	4
36076	17	14	15	17	17	17	51	4
36077	16	14	14	41	17	18	52	19
36078	16	14	14	39	17	17	24	4
36079	17	14	14	38	18	18	49	18
36080	16	15	15	40	19	4	42	19
36081	17	15	15	39	3	17	27	19
36082	17	13	14	36	18	18	47	17
36083	18	14	15	2	3	19	46	19
36084	17	15	15	38	17	18	26	18
36084-R	16	15	14	39	17	17	20	18
36085	17	14	14	36	17	2	50	17
36086	17	15	14	41	17	17	53	18
36087	16	14	15	40	18	3	53	18
36088	17	14	14	34	16	18	45	3
36089	16	13	14	38	16	16	27	16
36090	16	14	14	40	17	3	47	2
36091	17	14	14	-1	17	18	46	18
36092	17	13	14	-1	16	17	50	18
36093	16	14	-1	36	3	3	43	18
36094	17	14	14	39	17	17	49	19
36095	16	14	15	18	17	18	26	19
36096	16	13	14	39	17	3	30	17
36097	16	14	15	36	17	2	47	4
36098	15	14	14	38	2	18	49	3
36099	16	14	13	30	17	16	47	17
36099-R	16	14	14	37	17	17	50	18
36100	16	13	13	30	18	18	48	18
36104	16	13	14	35	18	16	52	17
36105	17	14	14	39	17	17	29	3
36106	18	13	15	2	4	18	51	18
36107	16	14	14	39	18	3	49	18
36108	17	14	14	43	3	3	61	18
36109	17	14	-1	40	16	2	48	19
36110	16	15	15	38	3	4	44	20
36111	17	14	14	40	3	18	50	19
36112	17	14	15	44	18	4	51	19
36113	16	15	15	43	18	19	52	19
36114	18	14	15	43	17	18	55	19
36115	16	15	14	34	18	3	24	19
36116	17	14	14	41	18	17	46	18
36117	17	14	14	37	17	17	21	18
36117-R	17	14	14	39	18	19	51	18

	155 - HPH	156 - HBL	157 - HAR	158 - HBA	159 - HBA	160 - HBL	161 - HA	162 - HPH
36118	17	14	14	37	19	17	50	18
36119	17	15	14	42	17	3	47	18
36120	18	15	15	37	17	18	21	18
36121	17	14	15	36	17	16	26	3
36122	17	15	14	36	16	19	14	20
36123	17	14	14	36	17	17	44	18
36124	18	14	15	19	3	17	45	19
36125	17	14	14	35	17	18	45	2
36126	17	14	15	32	18	19	44	4
36127	17	15	15	39	18	18	45	19
36128	18	14	14	34	18	17	32	18
36129	17	15	14	39	16	17	52	19
36130	17	15	16	41	18	18	48	19
36131	18	15	16	43	19	2	20	19
36132	16	14	15	40	18	19	49	20
36132-R	16	15	15	40	2	19	7	19
36133	17	14	16	36	18	17	45	3
36134	16	15	15	40	19	3	49	18
36135	18	14	15	40	17	18	23	19
36136	19	14	16	43	20	4	47	3
36137	17	14	15	35	17	19	3	19
36138	19	15	15	42	2	19	52	20
36139	17	14	14	37	17	18	46	19
36140	18	15	14	41	17	17	51	18
36141	16	14	15	41	18	17	49	2
36142	17	15	15	44	18	19	58	19
36143	17	14	14	36	3	19	51	18
36144	18	15	15	22	2	2	49	18
36145	18	14	15	42	18	18	49	3
36146	17	14	16	41	19	18	23	4
36147	18	14	15	34	18	18	49	19
36147-R	16	14	-1	37	17	17	49	18
36148	18	14	15	41	19	3	49	20
36149	17	14	14	41	17	16	45	19
36150	18	15	14	43	19	18	25	20
36151	17	14	14	39	17	17	51	3
36152	18	14	15	18	17	18	51	20
36202	18	14	15	44	3	20	46	3
36203	3	15	15	40	18	20	27	19
LMB-QA	17	14	14	37	17	17	29	18
LMB-QA	17	14	14	35	3	17	19	18
LMB-QA	17	13	15	36	17	3	35	18

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH

Final Report
Activation Laboratories

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas				41.7												1.9	4
SO-3 Cert				38000												8000	16000
36022 Orig	3000	116	20	19.8	1.5	6	0.2	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	2.4	1.2	12	17
36022 Dup	5000	112	21	20.4	1.5	6	0.3	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	2.5	1.2	13	18
36032 Orig	3000	154	20	27.5	2	7	< 0.1	0.2	< 0.5	< 0.1	0.03	< 0.005	0.1	1	0.9	17	39
36032 Dup	2000	153	20	27.1	2	7	2.5	0.2	< 0.5	< 0.1	0.03	< 0.005	< 0.1	1	0.9	17	39
36049 Orig	4000	131	16	11.9	2	3	< 0.1	0.5	< 0.5	< 0.1	0.01	0.009	0.1	1.5	1.3	21	28
36049 Dup	4000	134	15	11.7	2	2	0.1	0.5	< 0.5	< 0.1	< 0.005	0.006	< 0.1	1.5	1.3	22	25
Method Blank Method Blank	< 1000	< 1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	< 0.01	< 0.01	< 0.2	< 1

Final Report
Activation Laboratories

Analyte Symbol	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1	5	0.1	0.3	0.05	0.1	0.1	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas	7	< 5	0.8									160	< 3				
SO-3 Cert	17000	52000	14000									2000000	26000				
36022 Orig	8	9	< 0.1	1	0.1	< 0.1	< 0.1	0.01	< 0.2	0.231	< 0.5	100	< 3	1.87	4.4	0.2	0.2
36022 Dup	9	10	< 0.1	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.249	< 0.5	90	< 3	1.97	5.7	0.2	0.2
36032 Orig	11	9	1.6	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.562	< 0.5	120	< 3	2.85	1.8	0.2	0.1
36032 Dup	11	8	1.2	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.491	< 0.5	120	< 3	2.81	1.8	0.1	0.1
36049 Orig	8	45	1.3	1	0.1	< 0.1	1	0.01	< 0.2	0.318	< 0.5	110	< 3	3.42	2.3	0.1	0.1
36049 Dup	7	47	2.2	1	0.1	< 0.1	1	< 0.01	< 0.2	0.329	< 0.5	100	< 3	3.44	2.4	0.1	0.1
Method Blank Method Blank	< 1	< 5	< 0.1	< 0.3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	< 0.005	< 0.5	< 10	< 3	< 0.05	< 0.1	< 0.1	< 0.01

Final Report
Activation Laboratories

Analyte Symbol	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas																	
SO-3 Cert																	
36022 Orig	< 0.02	4.66	9.84	1.12	4.3	0.86	0.2	0.65	0.1	0.4	0.1	0.2	< 0.01	0.2	< 0.01	2.6	1
36022 Dup	0.02	4.61	9.66	1.2	4.24	0.89	0.2	0.67	0.1	0.41	0.1	0.19	< 0.01	0.2	< 0.01	2.9	1
36032 Orig	< 0.02	7.72	14.3	1.78	6.63	1.18	0.3	0.89	0.1	0.48	0.1	0.24	< 0.01	0.2	< 0.01	5.3	1
36032 Dup	< 0.02	7.36	13.9	1.68	6.29	1.18	0.3	0.87	0.1	0.44	0.1	0.25	< 0.01	0.3	< 0.01	5.1	1
36049 Orig	< 0.02	8.67	16.1	2.16	7.1	1.31	0.3	1.04	0.1	0.63	0.1	0.34	< 0.01	0.3	< 0.01	11	2
36049 Dup	< 0.02	8.95	16.7	2.04	7.05	1.31	0.3	1.06	0.1	0.62	0.1	0.31	< 0.01	0.3	< 0.01	10	2
Method Blank Method Blank	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.5	< 0.1

Final Report
Activation Laboratories

Analyte Symbol	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	10	0.4	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas		538	93.3	1050		91.4				
SO-3 Cert		520000	39000	217000		296000				
36022 Orig	< 10	321	86.7	258	0.7	237	< 0.5	< 0.5	< 0.5	< 0.5
36022 Dup	< 10	336	86.3	250	0.7	229	< 0.5	< 0.5	< 0.5	< 0.5
36032 Orig	< 10	123	25.8	125	2.2	294	< 0.5	< 0.5	< 0.5	< 0.5
36032 Dup	< 10	124	25.2	127	2.1	298	< 0.5	< 0.5	< 0.5	< 0.5
36049 Orig	< 10	372	54.6	178	2	327	< 0.5	< 0.5	< 0.5	< 0.5
36049 Dup	< 10	371	54.1	186	1.8	339	< 0.5	< 0.5	< 0.5	< 0.5
Method Blank Method Blank	< 10	< 0.4	< 0.1	< 0.1	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

Final Report
Activation Laboratories

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36000	2000	45	4	24.3	0.4	3	0.6	0.3	0.7	0.3	0.03	0.005	0.6	1.5	2.5	1.2	8	5
36001	4000	151	29	41.3	5.8	4	1.4	0.4	< 0.5	0.1	0.03	< 0.005	< 0.1	4.5	0.9	92	104	13
36002	3000	43	8	21.4	1.5	3	0.5	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.5	0.4	18	26	8
36003	2000	91	13	9.6	1.4	4	< 0.1	0.1	< 0.5	< 0.1	0.01	0.008	< 0.1	1	0.3	18	30	2
36010	5000	103	21	6.5	3.4	4	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.7	0.9	46	27	9
36012	3000	133	21	12.5	2.5	4	< 0.1	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.2	0.5	24	35	7
36018	3000	107	12	17.7	1.5	5	0.2	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.2	0.4	12	23	2
36020	2000	82	19	26.5	2.5	5	0.5	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	2.4	1.3	6.8	17	11
36021	3000	130	18	8.6	1.7	7	0.1	0.1	< 0.5	< 0.1	0.02	< 0.005	< 0.1	1.8	0.9	6.5	17	5
36022	4000	114	21	20.1	1.5	6	0.3	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	2.45	1.2	12.5	18	8
36023	2000	41	5	12.3	1.4	5	< 0.1	0.2	< 0.5	< 0.1	0.01	0.006	0.1	0.6	0.4	23	24	< 1
36024	2000	113	16	6.1	1.1	6	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.6	0.3	19	20	< 1
36025	2000	70	9	7.1	0.7	5	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.4	0.1	6.5	12	16
36026	2000	60	8	3	1.1	5	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	0.008	0.1	0.4	0.2	14	12	< 1
36028	2000	141	24	11.8	0.4	4	< 0.1	< 0.01	< 0.5	< 0.1	0.02	0.005	0.1	0.5	0.6	8.7	15	5
36029	2000	191	40	2	1.4	7	< 0.1	< 0.01	< 0.5	< 0.1	0.02	< 0.005	0.1	0.7	0.6	13	23	7
36030	3000	133	21	10.5	1.1	6	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	2.1	0.9	11	22	12
36031	5000	277	43	10.8	1.7	9	< 0.1	0.3	< 0.5	< 0.1	0.03	0.011	< 0.1	1.3	1.4	22	45	19
36032	3000	154	20	27.3	2	7	< 0.1	0.2	< 0.5	< 0.1	0.03	< 0.005	< 0.1	1	0.9	17	39	11
36033	3000	87	22	11.8	1.8	7	0.2	0.2	< 0.5	< 0.1	0.02	0.007	< 0.1	1.7	1.9	11	16	12
36034	3000	93	29	34.3	1.6	7	< 0.1	0.3	< 0.5	< 0.1	0.02	< 0.005	< 0.1	1.3	1.4	12	22	17
36036	2000	83	19	58.9	2	6	0.1	0.1	< 0.5	< 0.1	0.03	0.016	0.1	5.9	2.8	49	21	59
36037	2000	82	25	33.2	3.3	6	< 0.1	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	3.1	1.4	14	21	12
36043	2000	120	19	6.9	2.9	6	< 0.1	0.2	< 0.5	< 0.1	0.01	0.007	0.1	0.9	0.7	10	20	5
36044	3000	105	20	5.2	1.4	8	< 0.1	0.3	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.1	1.1	9.8	18	4
36045	2000	165	20	9.2	2.4	8	< 0.1	0.6	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1	0.7	17	28	4
36046	2000	113	21	28.4	2.1	6	< 0.1	0.4	< 0.5	< 0.1	0.02	0.008	0.1	2.6	1.4	7	19	20
36049	4000	133	16	11.8	2	3	< 0.1	0.5	< 0.5	< 0.1	< 0.005	0.007	< 0.1	1.5	1.3	21.5	27	7
36050	4000	70	21	33.9	5.2	7	0.4	0.6	< 0.5	< 0.1	0.02	< 0.005	< 0.1	2.6	2	13	29	17
36051	2000	52	4	24.7	0.9	5	< 0.1	0.2	< 0.5	< 0.1	0.03	0.006	< 0.1	2.1	1.4	8	32	23
36052	3000	75	8	101	8.1	5	1.2	0.1	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.4	0.9	18	35	14
36053	3000	108	15	15.6	1	6	0.1	0.7	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.9	0.6	6.4	13	2
36054	3000	194	26	4.7	1.6	7	< 0.1	0.7	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.8	0.6	9.9	22	2
36055	3000	141	18	10.4	1.5	6	< 0.1	0.4	< 0.5	< 0.1	< 0.005	0.005	< 0.1	1.3	0.7	7.5	16	5
36061	3000	125	12	8.2	0.8	5	< 0.1	0.4	< 0.5	< 0.1	0.01	< 0.005	< 0.1	0.5	0.2	6	7	< 1
36062	3000	156	27	12	1.1	6	0.3	0.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.9	0.9	25	14	8
36063	2000	80	12	30.7	1.7	4	< 0.1	0.2	< 0.5	< 0.1	0.01	< 0.005	< 0.1	5.3	1.9	12	15	13
36064	4000	155	27	12.3	1.8	8	< 0.1	0.5	< 0.5	< 0.1	0.01	< 0.005	< 0.1	1.3	0.9	17	33	9
36101	2000	134	25	31.3	2.4	5	< 0.1	1.2	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	2.6	1.7	14	29	11
36102	6000	236	58	10.6	5.5	8	< 0.1	0.3	< 0.5	< 0.1	0.03	< 0.005	< 0.1	6.1	2.3	24	34	42
36103	4000	115	33	7.2	2.4	5	0.4	0.3	< 0.5	< 0.1	0.02	< 0.005	< 0.1	1.2	0.8	11	16	7

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Analyte Symbol	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	5	0.1	0.3	0.05	0.1	0.1	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36000	5	1	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.333	< 0.5	240	< 3	8.8	1.4	0.5	0.1	0.03	31.2
36001	178	8.2	4	0.3	< 0.1	2	0.01	0.4	0.482	< 0.5	900	< 3	4.36	10	1.6	0.4	0.07	9.12
36002	36	3.7	1	0.2	< 0.1	1	< 0.01	< 0.2	0.374	< 0.5	530	< 3	2.14	2.2	0.6	0.1	0.03	10.4
36003	18	2	1	0.1	< 0.1	1	0.01	< 0.2	0.318	< 0.5	270	< 3	1.24	1.7	0.3	0.1	< 0.02	2.14
36010	13	1.2	2	0.1	< 0.1	< 0.1	0.01	< 0.2	0.238	< 0.5	250	< 3	3.36	3.2	0.4	0.2	0.02	8.1
36012	25	1.9	1	0.1	< 0.1	1	< 0.01	< 0.2	0.321	< 0.5	140	< 3	1.47	4.8	0.2	0.2	< 0.02	2.08
36018	11	0.4	1	0.1	< 0.1	1	< 0.01	< 0.2	0.274	< 0.5	210	< 3	1.57	2	0.3	0.1	< 0.02	4.14
36020	19	1.3	2	0.1	< 0.1	1	0.01	< 0.2	0.197	< 0.5	350	< 3	2.76	5	0.7	0.2	0.03	6.55
36021	6	0.6	< 0.3	0.1	< 0.1	1	< 0.01	< 0.2	0.274	< 0.5	80	< 3	1.56	3.3	< 0.1	0.2	< 0.02	2.99
36022	9	< 0.1	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.24	< 0.5	90	< 3	1.92	5.1	0.2	0.2	< 0.02	4.64
36023	8	1.8	3	0.1	< 0.1	1	0.01	< 0.2	0.122	< 0.5	180	< 3	0.73	1.5	0.2	0.1	< 0.02	1.19
36024	21	2.7	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.117	< 0.5	60	< 3	1.21	2.1	< 0.1	0.1	< 0.02	1.48
36025	25	1.2	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.097	< 0.5	90	< 3	0.54	1	0.1	0.1	< 0.02	0.87
36026	53	1.9	1	0.1	< 0.1	1	< 0.01	< 0.2	0.077	< 0.5	80	< 3	0.62	0.8	0.1	< 0.01	< 0.02	0.92
36028	16	1	< 0.3	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.189	< 0.5	50	< 3	3.26	1.2	< 0.1	0.1	< 0.02	4.65
36029	25	1.6	1	0.1	< 0.1	1	< 0.01	< 0.2	0.155	< 0.5	60	< 3	1.88	1.8	0.1	0.1	< 0.02	2.62
36030	10	1.4	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.299	< 0.5	150	< 3	6	5.9	0.3	0.3	< 0.02	10.7
36031	20	2	1	0.1	< 0.1	1	< 0.01	< 0.2	0.488	< 0.5	110	< 3	3.11	2.7	0.1	0.1	< 0.02	7.85
36032	8	1.4	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.526	< 0.5	120	< 3	2.83	1.8	0.2	0.1	< 0.02	7.54
36033	10	0.8	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.36	< 0.5	190	< 3	2.59	2.5	0.3	0.1	< 0.02	7.36
36034	7	< 0.1	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.312	< 0.5	340	< 3	2.29	2.6	0.6	0.1	< 0.02	6.48
36036	27	1	1	0.2	< 0.1	< 0.1	0.01	< 0.2	0.354	< 0.5	140	< 3	15.1	8.9	0.6	0.3	0.03	34.4
36037	25	1.5	3	0.1	< 0.1	< 0.1	0.01	< 0.2	0.281	< 0.5	400	< 3	3.31	5.5	0.8	0.2	0.03	7.96
36043	16	2.7	1	0.1	< 0.1	< 0.1	0.01	< 0.2	0.276	< 0.5	120	< 3	1.69	1.9	0.2	0.1	< 0.02	2.65
36044	22	2	< 0.3	0.1	< 0.1	1	< 0.01	< 0.2	0.401	< 0.5	120	< 3	1.42	1.8	0.1	0.1	< 0.02	4.89
36045	34	9.6	1	0.1	< 0.1	2	< 0.01	< 0.2	0.461	< 0.5	90	< 3	1.91	5.7	0.1	0.2	< 0.02	3.54
36046	21	1.8	1	0.1	< 0.1	< 0.1	0.01	< 0.2	0.291	< 0.5	170	< 3	4.71	5.6	0.3	0.2	< 0.02	11.8
36049	46	1.8	1	0.1	< 0.1	1	< 0.01	< 0.2	0.323	< 0.5	100	< 3	3.43	2.3	0.1	0.1	< 0.02	8.81
36050	56	4.6	1	0.1	< 0.1	1	0.01	< 0.2	0.365	< 0.5	460	< 3	3.67	4.3	0.8	0.2	0.02	11.4
36051	< 5	1.7	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.319	< 0.5	200	< 3	8.31	3	0.6	0.1	< 0.02	24.4
36052	113	0.6	1	0.1	< 0.1	1	< 0.01	< 0.2	0.366	< 0.5	680	< 3	2.1	1	0.9	< 0.01	0.04	6.09
36053	14	1	1	0.1	< 0.1	1	< 0.01	< 0.2	0.319	< 0.5	100	< 3	0.93	1.9	0.1	0.1	< 0.02	2.53
36054	20	1.1	1	< 0.05	< 0.1	< 0.1	0.01	< 0.2	0.453	< 0.5	60	< 3	1.67	2.3	< 0.1	0.1	< 0.02	4.62
36055	7	3.3	1	< 0.05	< 0.1	< 0.1	< 0.01	< 0.2	0.238	< 0.5	60	< 3	2.1	4.4	< 0.1	0.2	< 0.02	5.43
36061	< 5	1.7	1	0.1	< 0.1	< 0.1	< 0.01	0.2	0.218	< 0.5	40	< 3	1.42	1.9	< 0.1	0.1	< 0.02	3.9
36062	64	8.1	1	< 0.05	< 0.1	1	< 0.01	< 0.2	0.261	< 0.5	100	< 3	3.1	2.8	0.1	0.1	< 0.02	11
36063	14	3.8	1	0.1	< 0.1	< 0.1	0.01	< 0.2	0.389	< 0.5	190	< 3	8.11	5.5	0.8	0.2	0.03	26
36064	13	1.5	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.386	< 0.5	170	< 3	1.4	2.8	0.1	0.1	< 0.02	4.15
36101	36	3.9	1	0.2	< 0.1	1	< 0.01	< 0.2	0.481	< 0.5	200	< 3	3.99	3.9	0.2	0.2	< 0.02	12
36102	50	3.1	1	0.1	< 0.1	1	0.01	< 0.2	0.718	< 0.5	140	< 3	4.64	9	0.3	0.4	< 0.02	15.5
36103	24	4.5	1	0.1	< 0.1	< 0.1	< 0.01	< 0.2	0.37	< 0.5	180	< 3	0.81	1.4	0.1	0.1	< 0.02	3.22

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Activation Laboratories

Analyte Symbol	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.1	10	0.4	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36000	22.6	8.46	32	5.32	0.9	3.88	0.4	1.63	0.3	0.78	0.1	0.6	0.1	4	1	< 10	20.6	54.4
36001	14.2	2.29	8.6	1.83	0.5	1.28	0.2	0.86	0.2	0.44	0.1	0.5	0.1	27	3	< 10	3610	91.8
36002	15.7	2.23	8.14	1.37	0.3	1.07	0.1	0.41	0.1	0.22	< 0.01	0.2	< 0.01	4.7	1	< 10	1680	47.4
36003	3.94	0.54	2.06	0.43	0.2	0.37	< 0.01	0.2	< 0.01	0.13	< 0.01	0.1	< 0.01	6.7	2	< 10	897	71.5
36010	17.6	2.02	7.7	1.58	0.4	1.2	0.2	0.67	0.1	0.32	< 0.01	0.4	< 0.01	7.1	1	< 10	867	64.9
36012	4.28	0.51	2	0.48	0.1	0.41	0.1	0.24	< 0.01	0.15	< 0.01	0.1	< 0.01	18	< 0.1	< 10	806	65.1
36018	8.97	1.1	4.39	0.93	0.3	0.62	0.1	0.27	< 0.01	0.14	< 0.01	0.2	< 0.01	11	1	< 10	372	176
36020	12.7	1.67	6.61	1.21	0.3	0.92	0.1	0.54	0.1	0.27	< 0.01	0.2	< 0.01	12	1	< 10	319	63.7
36021	6.49	0.73	2.88	0.61	0.2	0.48	0.1	0.34	0.1	0.16	< 0.01	0.1	< 0.01	2.8	1	< 10	218	154
36022	9.75	1.16	4.27	0.88	0.2	0.66	0.1	0.41	0.1	0.19	< 0.01	0.2	< 0.01	2.8	1	< 10	329	86.5
36023	2.4	0.29	1.22	0.33	0.1	0.24	< 0.01	0.14	< 0.01	0.08	< 0.01	0.1	< 0.01	5.6	1	< 10	36.1	20.6
36024	3.12	0.36	1.55	0.34	0.2	0.23	< 0.01	0.17	< 0.01	0.11	< 0.01	0.1	< 0.01	11	2	< 10	780	36.7
36025	2.23	0.23	0.84	0.23	0.1	0.15	< 0.01	0.1	< 0.01	0.04	< 0.01	0.1	< 0.01	5.4	1	< 10	572	34.5
36026	2.45	0.23	1.04	0.27	0.1	0.19	< 0.01	0.1	< 0.01	0.06	< 0.01	0.1	< 0.01	8.8	1	< 10	484	38.9
36028	7.74	1.01	3.93	0.89	0.3	0.76	0.1	0.59	0.1	0.32	< 0.01	0.3	< 0.01	5.3	2	< 10	41.4	40.1
36029	5.16	0.65	2.65	0.67	0.2	0.47	0.1	0.36	0.1	0.18	< 0.01	0.2	< 0.01	13	2	< 10	39.7	16.2
36030	21.6	2.6	10	2.15	0.6	1.64	0.2	1.19	0.2	0.6	0.1	0.5	0.1	7.6	1	< 10	237	66.3
36031	14.5	1.66	6.25	1.32	0.4	1.05	0.1	0.61	0.1	0.27	< 0.01	0.3	< 0.01	7.7	2	< 10	352	82.6
36032	14.1	1.73	6.46	1.18	0.3	0.88	0.1	0.46	0.1	0.24	< 0.01	0.25	< 0.01	5.2	1	< 10	123	25.5
36033	14.4	1.75	6.83	1.34	0.3	0.96	0.1	0.51	0.1	0.26	< 0.01	0.2	< 0.01	4	1	< 10	646	28.4
36034	13	1.5	5.88	1.15	0.3	0.75	0.1	0.44	0.1	0.21	< 0.01	0.2	< 0.01	9.3	1	< 10	244	25.8
36036	81.8	9.97	39.9	7.94	1.6	5.77	0.7	3.14	0.5	1.43	0.2	1.4	0.2	4.8	1	< 10	6260	37.6
36037	15.2	1.91	7.46	1.45	0.4	1.08	0.2	0.65	0.1	0.36	0.1	0.3	< 0.01	11	2	< 10	90.5	47.7
36043	5.91	0.66	2.67	0.56	0.2	0.47	0.1	0.3	0.1	0.17	< 0.01	0.1	< 0.01	12	1	< 10	34.9	44.6
36044	8.8	1.02	3.68	0.68	0.2	0.52	0.1	0.24	< 0.01	0.14	< 0.01	0.1	< 0.01	6.4	1	< 10	294	52.1
36045	5.59	0.69	2.65	0.62	0.2	0.48	0.1	0.34	0.1	0.19	< 0.01	0.2	< 0.01	16	2	< 10	364	31.2
36046	23.5	2.66	10.1	1.93	0.4	1.56	0.2	0.91	0.2	0.47	0.1	0.4	< 0.01	5.9	1	< 10	149	46.6
36049	16.4	2.1	7.07	1.31	0.3	1.05	0.1	0.63	0.1	0.33	< 0.01	0.3	< 0.01	10.5	2	< 10	372	54.3
36050	22.2	2.75	9.96	1.87	0.4	1.38	0.2	0.76	0.1	0.39	< 0.01	0.3	< 0.01	10	1	< 10	506	58.6
36051	42.6	5.68	21.7	3.7	0.8	3.01	0.3	1.38	0.2	0.71	0.1	0.6	0.1	8.6	2	< 10	63.3	30.1
36052	10.9	1.56	5.94	1.11	0.3	0.86	0.1	0.4	0.1	0.2	< 0.01	0.2	< 0.01	32	1	< 10	1070	57
36053	4.34	0.52	1.97	0.41	0.1	0.3	< 0.01	0.18	< 0.01	0.07	< 0.01	0.1	< 0.01	5.3	1	< 10	73.1	63.7
36054	6.88	0.8	3.08	0.66	0.2	0.49	0.1	0.26	< 0.01	0.14	< 0.01	0.2	< 0.01	8.2	1	< 10	70	58.6
36055	7.86	0.9	3.43	0.75	0.2	0.63	0.1	0.41	0.1	0.19	< 0.01	0.2	< 0.01	3.1	1	< 10	194	29.2
36061	6	0.74	2.75	0.58	0.2	0.38	0.1	0.24	< 0.01	0.14	< 0.01	0.1	< 0.01	5.5	1	< 10	328	43
36062	22.4	2.62	9.8	1.89	0.5	1.33	0.2	0.64	0.1	0.3	< 0.01	0.2	< 0.01	9.7	1	< 10	1570	31.3
36063	51.7	6.17	23.5	4.17	0.9	2.99	0.3	1.57	0.3	0.78	0.1	0.7	0.1	9.4	1	< 10	41.2	28.7
36064	7.55	0.88	3.29	0.59	0.2	0.48	0.1	0.26	< 0.01	0.12	< 0.01	0.1	< 0.01	8	1	< 10	548	77.1
36101	22.7	2.75	10.4	1.95	0.4	1.34	0.2	0.78	0.1	0.37	0.1	0.4	< 0.01	17	2	< 10	117	64.9
36102	29.2	3.59	13.6	2.46	0.5	1.87	0.2	0.96	0.2	0.5	0.1	0.4	0.1	35	2	< 10	121	121
36103	6.35	0.72	2.7	0.64	0.2	0.44	< 0.01	0.18	< 0.01	0.09	< 0.01	0.1	< 0.01	14	1	< 10	558	70.1

Report: A10-2995 (i) rev 1 Rev, 1
Report Date: 7/8/

Final Report
Activation Laboratories

Analyte Symbol	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36000	361	0.6	499	< 0.5	< 0.5	< 0.5	< 0.5
36001	546	0.6	925	< 0.5	< 0.5	< 0.5	< 0.5
36002	164	0.5	512	< 0.5	< 0.5	< 0.5	< 0.5
36003	201	1.2	463	< 0.5	< 0.5	< 0.5	< 0.5
36010	59.2	1.6	237	< 0.5	< 0.5	< 0.5	< 0.5
36012	93.5	1.9	361	< 0.5	< 0.5	< 0.5	< 0.5
36018	264	1.7	381	< 0.5	< 0.5	< 0.5	< 0.5
36020	205	0.3	285	< 0.5	< 0.5	< 0.5	< 0.5
36021	193	1.2	324	< 0.5	< 0.5	< 0.5	< 0.5
36022	254	0.7	233	< 0.5	< 0.5	< 0.5	< 0.5
36023	94	0.2	142	< 0.5	< 0.5	< 0.5	< 0.5
36024	225	0.3	610	< 0.5	< 0.5	< 0.5	< 0.5
36025	209	0.4	329	< 0.5	< 0.5	< 0.5	< 0.5
36026	131	0.5	152	< 0.5	< 0.5	< 0.5	< 0.5
36028	128	1	797	< 0.5	< 0.5	< 0.5	< 0.5
36029	149	0.9	226	< 0.5	< 0.5	< 0.5	< 0.5
36030	184	3.1	362	< 0.5	< 0.5	< 0.5	< 0.5
36031	215	2.6	287	< 0.5	< 0.5	< 0.5	< 0.5
36032	126	2.15	296	< 0.5	< 0.5	< 0.5	< 0.5
36033	120	2.7	318	< 0.5	< 0.5	< 0.5	< 0.5
36034	112	2.1	360	< 0.5	< 0.5	< 0.5	< 0.5
36036	197	2	990	< 0.5	< 0.5	< 0.5	< 0.5
36037	145	2.4	587	< 0.5	< 0.5	< 0.5	< 0.5
36043	142	1.3	215	< 0.5	< 0.5	< 0.5	< 0.5
36044	113	1.1	240	< 0.5	< 0.5	< 0.5	< 0.5
36045	133	0.8	691	< 0.5	< 0.5	< 0.5	< 0.5
36046	189	0.8	401	< 0.5	< 0.5	< 0.5	< 0.5
36049	182	1.9	333	< 0.5	< 0.5	< 0.5	< 0.5
36050	222	1	426	< 0.5	< 0.5	< 0.5	< 0.5
36051	167	0.9	362	< 0.5	< 0.5	< 0.5	< 0.5
36052	173	0.7	341	< 0.5	< 0.5	< 0.5	< 0.5
36053	218	0.7	421	< 0.5	< 0.5	< 0.5	< 0.5
36054	248	1.2	558	< 0.5	< 0.5	< 0.5	< 0.5
36055	290	1	344	< 0.5	< 0.5	< 0.5	< 0.5
36061	333	0.9	253	< 0.5	< 0.5	< 0.5	< 0.5
36062	222	0.8	196	< 0.5	< 0.5	< 0.5	< 0.5
36063	260	1.3	681	< 0.5	< 0.5	< 0.5	< 0.5
36064	165	2.6	287	< 0.5	< 0.5	< 0.5	< 0.5
36101	254	1.2	526	< 0.5	< 0.5	< 0.5	< 0.5
36102	185	3	389	< 0.5	< 0.5	< 0.5	< 0.5
36103	180	1.9	256	< 0.5	< 0.5	< 0.5	< 0.5

Date Submitted:	09-Jun-10
Invoice No.:	A10-2995 (i)
Invoice Date:	08-Jul-10
Your Reference:	STURGEN LAKE

Excalibur Resources Ltd.
Excalibur Resources

Canada

ATTN: Ahmad Mumin

CERTIFICATE OF ANALYSIS

68 Soil samples were submitted for analysis.

The following analytical packages were requested:

Code 7-Enhanced Enzyme Leach Enzyme Leach ICP/MS(ENZYME)
Code SGH Soil Gas Hydrocarbons

REPORT **A10-2995 (i)**

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Notes:

CERTIFIED BY :

Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited LAB 266
LAB 266 Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Activation Laboratories Ltd. Report: A10-2995 (i) rev 1

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1	5	0.1	0.3	0.05	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36000	2000	45	4	24.3	0.4	3	0.6	0.30	0.7	0.3	0.030	0.005	0.6	1.50	2.50	1.2	8	5	5	1.0	1.0	0.10	< 0.1	< 0.1
36001	4000	151	29	41.3	5.8	4	1.4	0.40	< 0.5	0.1	0.030	< 0.005	< 0.1	4.50	0.90	92.0	104	13	178	8.2	4.0	0.30	< 0.1	2.0
36002	3000	43	8	21.4	1.5	3	0.5	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.50	0.40	18.0	26	8	36	3.7	1.0	0.20	< 0.1	1.0
36003	2000	91	13	9.6	1.4	4	< 0.1	0.10	< 0.5	< 0.1	0.010	0.008	< 0.1	1.00	0.30	18.0	30	2	18	2.0	1.0	0.10	< 0.1	1.0
36010	5000	103	21	6.5	3.4	4	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.70	0.90	46.0	27	9	13	1.2	2.0	0.10	< 0.1	< 0.1
36012	3000	133	21	12.5	2.5	4	< 0.1	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.20	0.50	24.0	35	7	25	1.9	1.0	0.10	< 0.1	1.0
36018	3000	107	12	17.7	1.5	5	0.2	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.20	0.40	12.0	23	2	11	0.4	1.0	0.10	< 0.1	1.0
36020	2000	82	19	26.5	2.5	5	0.5	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	2.40	1.30	6.8	17	11	19	1.3	2.0	0.10	< 0.1	1.0
36021	3000	130	18	8.6	1.7	7	0.1	0.10	< 0.5	< 0.1	0.020	< 0.005	< 0.1	1.80	0.90	6.5	17	5	6	0.6	< 0.3	0.10	< 0.1	1.0
36022	4000	114	21	20.1	1.5	6	0.3	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	2.45	1.20	12.5	18	8	9	< 0.1	1.0	0.10	< 0.1	< 0.1
36023	2000	41	5	12.3	1.4	5	< 0.1	0.20	< 0.5	< 0.1	0.010	0.006	0.1	0.60	0.40	23.0	24	< 1	8	1.8	3.0	0.10	< 0.1	1.0
36024	2000	113	16	6.1	1.1	6	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.60	0.30	19.0	20	< 1	21	2.7	1.0	0.10	< 0.1	< 0.1
36025	2000	70	9	7.1	0.7	5	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.40	0.10	6.5	12	16	25	1.2	1.0	< 0.05	< 0.1	< 0.1
36026	2000	60	8	3.0	1.1	5	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	0.008	0.1	0.40	0.20	14.0	12	< 1	53	1.9	1.0	0.10	< 0.1	1.0
36028	2000	141	24	11.8	0.4	4	< 0.1	< 0.01	< 0.5	< 0.1	0.020	0.005	0.1	0.50	0.60	8.7	15	5	16	1.0	< 0.3	0.10	< 0.1	< 0.1
36029	2000	191	40	2.0	1.4	7	< 0.1	< 0.01	< 0.5	< 0.1	0.020	< 0.005	0.1	0.70	0.60	13.0	23	7	25	1.6	1.0	0.10	< 0.1	1.0
36030	3000	133	21	10.5	1.1	6	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	2.10	0.90	11.0	22	12	10	1.4	1.0	0.10	< 0.1	< 0.1
36031	5000	277	43	10.8	1.7	9	< 0.1	0.30	< 0.5	< 0.1	0.030	0.011	< 0.1	1.30	1.40	22.0	45	19	20	2.0	1.0	0.10	< 0.1	1.0
36032	3000	154	20	27.3	2.0	7	< 0.1	0.20	< 0.5	< 0.1	0.030	< 0.005	< 0.1	1.00	0.90	17.0	39	11	8	1.4	1.0	0.10	< 0.1	< 0.1
36033	3000	87	22	11.8	1.8	7	0.2	0.20	< 0.5	< 0.1	0.020	0.007	< 0.1	1.70	1.90	11.0	16	12	10	0.8	1.0	0.10	< 0.1	< 0.1
36034	3000	93	29	34.3	1.6	7	< 0.1	0.30	< 0.5	< 0.1	0.020	< 0.005	< 0.1	1.30	1.40	12.0	22	17	7	< 0.1	1.0	0.10	< 0.1	< 0.1
36036	2000	83	19	58.9	2.0	6	0.1	0.10	< 0.5	< 0.1	0.030	0.016	0.1	5.90	2.80	49.0	21	59	27	1.0	1.0	0.20	< 0.1	< 0.1
36037	2000	82	25	33.2	3.3	6	< 0.1	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	3.10	1.40	14.0	21	12	25	1.5	3.0	0.10	< 0.1	< 0.1
36043	2000	120	19	6.9	2.9	6	< 0.1	0.20	< 0.5	< 0.1	0.010	0.007	0.1	0.90	0.70	10.0	20	5	16	2.7	1.0	0.10	< 0.1	< 0.1
36044	3000	105	20	5.2	1.4	8	< 0.1	0.30	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.10	1.10	9.8	18	4	22	2.0	< 0.3	0.10	< 0.1	1.0
36045	2000	165	20	9.2	2.4	8	< 0.1	0.60	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.00	0.70	17.0	28	4	34	9.6	1.0	0.10	< 0.1	2.0
36046	2000	113	21	28.4	2.1	6	< 0.1	0.40	< 0.5	< 0.1	0.020	0.008	0.1	2.60	1.40	7.0	19	20	21	1.8	1.0	0.10	< 0.1	< 0.1
36049	4000	133	16	11.8	2.0	3	< 0.1	0.50	< 0.5	< 0.1	< 0.005	0.007	< 0.1	1.50	1.30	21.5	27	7	46	1.8	1.0	0.10	< 0.1	1.0
36050	4000	70	21	33.9	5.2	7	0.4	0.60	< 0.5	< 0.1	0.020	< 0.005	< 0.1	2.60	2.00	13.0	29	17	56	4.6	1.0	0.10	< 0.1	1.0
36051	2000	52	4	24.7	0.9	5	< 0.1	0.20	< 0.5	< 0.1	0.030	0.006	< 0.1	2.10	1.40	8.0	32	23	< 5	1.7	1.0	0.10	< 0.1	< 0.1
36052	3000	75	8	101	8.1	5	1.2	0.10	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.40	0.90	18.0	35	14	113	0.6	1.0	0.10	< 0.1	1.0
36053	3000	108	15	15.6	1.0	6	0.1	0.70	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.90	0.60	6.4	13	2	14	1.0	1.0	0.10	< 0.1	1.0
36054	3000	194	26	4.7	1.6	7	< 0.1	0.70	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.80	0.60	9.9	22	2	20	1.1	1.0	< 0.05	< 0.1	< 0.1
36055	3000	141	18	10.4	1.5	6	< 0.1	0.40	< 0.5	< 0.1	< 0.005	0.005	< 0.1	1.30	0.70	7.5	16	5	7	3.3	1.0	< 0.05	< 0.1	< 0.1
36061	3000	125	12	8.2	0.8	5	< 0.1	0.40	< 0.5	< 0.1	0.010	< 0.005	< 0.1	0.50	0.20	6.0	7	< 1	< 5	1.7	1.0	0.10	< 0.1	< 0.1
36062	3000	156	27	12.0	1.1	6	0.3	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	1.90	0.90	25.0	14	8	64	8.1	1.0	< 0.05	< 0.1	1.0
36063	2000	80	12	30.7	1.7	4	< 0.1	0.20	< 0.5	< 0.1	0.010	< 0.005	< 0.1	5.30	1.90	12.0	15	13	14	3.8	1.0	0.10	< 0.1	< 0.1
36064	4000	155	27	12.3	1.8	8	< 0.1	0.50	< 0.5	< 0.1	0.010	< 0.005	< 0.1	1.30	0.90	17.0	33	9	13	1.5	1.0	0.10	< 0.1	< 0.1
36101	2000	134	25	31.3	2.4	5	< 0.1	1.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	2.60	1.70	14.0	29	11	36	3.9	1.0	0.20	< 0.1	1.0
36102	6000	236	58	10.6	5.5	8	< 0.1	0.30	< 0.5	< 0.1	0.030	< 0.005	< 0.1	6.10	2.30	24.0	34	42	50	3.1	1.0	0.10	< 0.1	1.0
36103	4000	115	33	7.2	2.4	5	0.4	0.30	< 0.5	< 0.1	0.020	< 0.005	< 0.1	1.20	0.80	11.0	16	7	24	4.5	1.0	0.10	< 0.1	< 0.1

Analyte Symbol	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36000	< 0.01	< 0.2	0.333	< 0.5	240	< 3	8.80	1.4	0.5	0.10	0.03	31.2	22.6	8.46	32.0	5.32	0.90	3.88	0.40	1.63	0.30	0.78	0.10	0.60
36001	0.01	0.4	0.482	< 0.5	900	< 3	4.36	10.0	1.6	0.40	0.07	9.12	14.2	2.29	8.60	1.83	0.50	1.28	0.20	0.86	0.20	0.44	0.10	0.50
36002	< 0.01	< 0.2	0.374	< 0.5	530	< 3	2.14	2.2	0.6	0.10	0.03	10.4	15.7	2.23	8.14	1.37	0.30	1.07	0.10	0.41	0.10	0.22	< 0.01	0.20
36003	0.01	< 0.2	0.318	< 0.5	270	< 3	1.24	1.7	0.3	0.10	< 0.02	2.14	3.94	0.54	2.06	0.43	0.20	0.37	< 0.01	0.20	< 0.01	0.13	< 0.01	0.10
36010	0.01	< 0.2	0.238	< 0.5	250	< 3	3.36	3.2	0.4	0.20	0.02	8.10	17.6	2.02	7.70	1.58	0.40	1.20	0.20	0.67	0.10	0.32	< 0.01	0.40
36012	< 0.01	< 0.2	0.321	< 0.5	140	< 3	1.47	4.8	0.2	0.20	< 0.02	2.08	4.28	0.51	2.00	0.48	0.10	0.41	0.10	0.24	< 0.01	0.15	< 0.01	0.10
36018	< 0.01	< 0.2	0.274	< 0.5	210	< 3	1.57	2.0	0.3	0.10	< 0.02	4.14	8.97	1.10	4.39	0.93	0.30	0.62	0.10	0.27	< 0.01	0.14	< 0.01	0.20
36020	0.01	< 0.2	0.197	< 0.5	350	< 3	2.76	5.0	0.7	0.20	0.03	6.55	12.7	1.67	6.61	1.21	0.30	0.92	0.10	0.54	0.10	0.27	< 0.01	0.20
36021	< 0.01	< 0.2	0.274	< 0.5	80	< 3	1.56	3.3	< 0.1	0.20	< 0.02	2.99	6.49	0.73	2.88	0.61	0.20	0.48	0.10	0.34	0.10	0.16	< 0.01	0.10
36022	< 0.01	< 0.2	0.240	< 0.5	90	< 3	1.92	5.1	0.2	0.20	< 0.02	4.64	9.75	1.16	4.27	0.88	0.20	0.66	0.10	0.41	0.10	0.19	< 0.01	0.20
36023	0.01	< 0.2	0.122	< 0.5	180	< 3	0.73	1.5	0.2	0.10	< 0.02	1.19	2.40	0.29	1.22	0.33	0.10	0.24	< 0.01	0.14	< 0.01	0.08	< 0.01	0.10
36024	< 0.01	< 0.2	0.117	< 0.5	60	< 3	1.21	2.1	< 0.1	0.10	< 0.02	1.48	3.12	0.36	1.55	0.34	0.20	0.23	< 0.01	0.17	< 0.01	0.11	< 0.01	0.10
36025	< 0.01	< 0.2	0.097	< 0.5	90	< 3	0.54	1.0	0.1	0.10	< 0.02	0.87	2.23	0.23	0.84	0.23	0.10	0.15	< 0.01	0.10	< 0.01	0.04	< 0.01	0.10
36026	< 0.01	< 0.2	0.077	< 0.5	80	< 3	0.62	0.8	0.1	< 0.01	< 0.02	0.92	2.45	0.23	1.04	0.27	0.10	0.19	< 0.01	0.10	< 0.01	0.06	< 0.01	0.10
36028	< 0.01	< 0.2	0.189	< 0.5	50	< 3	3.26	1.2	< 0.1	0.10	< 0.02	4.65	7.74	1.01	3.93	0.89	0.30	0.76	0.10	0.59	0.10	0.32	< 0.01	0.30
36029	< 0.01	< 0.2	0.155	< 0.5	60	< 3	1.88	1.8	0.1	0.10	< 0.02	2.62	5.16	0.65	2.65	0.67	0.20	0.47	0.10	0.36	0.10	0.18	< 0.01	0.20
36030	< 0.01	< 0.2	0.299	< 0.5	150	< 3	6.00	5.9	0.3	0.30	< 0.02	10.7	21.6	2.60	10.0	2.15	0.60	1.64	0.20	1.19	0.20	0.60	0.10	0.50
36031	< 0.01	< 0.2	0.488	< 0.5	110	< 3	3.11	2.7	0.1	0.10	< 0.02	7.85	14.5	1.66	6.25	1.32	0.40	1.05	0.10	0.61	0.10	0.27	< 0.01	0.30
36032	< 0.01	< 0.2	0.526	< 0.5	120	< 3	2.83	1.8	0.2	0.10	< 0.02	7.54	14.1	1.73	6.46	1.18	0.30	0.88	0.10	0.46	0.10	0.24	< 0.01	0.25
36033	< 0.01	< 0.2	0.360	< 0.5	190	< 3	2.59	2.5	0.3	0.10	< 0.02	7.36	14.4	1.75	6.83	1.34	0.30	0.96	0.10	0.51	0.10	0.26	< 0.01	0.20
36034	< 0.01	< 0.2	0.312	< 0.5	340	< 3	2.29	2.6	0.6	0.10	< 0.02	6.48	13.0	1.50	5.88	1.15	0.30	0.75	0.10	0.44	0.10	0.21	< 0.01	0.20
36036	0.01	< 0.2	0.354	< 0.5	140	< 3	15.1	8.9	0.6	0.30	0.03	34.4	81.8	9.97	39.9	7.94	1.60	5.77	0.70	3.14	0.50	1.43	0.20	1.40
36037	0.01	< 0.2	0.281	< 0.5	400	< 3	3.31	5.5	0.8	0.20	0.03	7.96	15.2	1.91	7.46	1.45	0.40	1.08	0.20	0.65	0.10	0.36	0.10	0.30
36043	0.01	< 0.2	0.276	< 0.5	120	< 3	1.69	1.9	0.2	0.10	< 0.02	2.65	5.91	0.66	2.67	0.56	0.20	0.47	0.10	0.30	0.10	0.17	< 0.01	0.10
36044	< 0.01	< 0.2	0.401	< 0.5	120	< 3	1.42	1.8	0.1	0.10	< 0.02	4.89	8.80	1.02	3.68	0.68	0.20	0.52	0.10	0.24	< 0.01	0.14	< 0.01	0.10
36045	< 0.01	< 0.2	0.461	< 0.5	90	< 3	1.91	5.7	0.1	0.20	< 0.02	3.54	5.59	0.69	2.65	0.62	0.20	0.48	0.10	0.34	0.10	0.19	< 0.01	0.20
36046	0.01	< 0.2	0.291	< 0.5	170	< 3	4.71	5.6	0.3	0.20	< 0.02	11.8	23.5	2.66	10.1	1.93	0.40	1.56	0.20	0.91	0.20	0.47	0.10	0.40
36049	< 0.01	< 0.2	0.323	< 0.5	100	< 3	3.43	2.3	0.1	0.10	< 0.02	8.81	16.4	2.10	7.07	1.31	0.30	1.05	0.10	0.63	0.10	0.33	< 0.01	0.30
36050	0.01	< 0.2	0.365	< 0.5	460	< 3	3.67	4.3	0.8	0.20	0.02	11.4	22.2	2.75	9.96	1.87	0.40	1.38	0.20	0.76	0.10	0.39	< 0.01	0.30
36051	< 0.01	< 0.2	0.319	< 0.5	200	< 3	8.31	3.0	0.6	0.10	< 0.02	24.4	42.6	5.68	21.7	3.70	0.80	3.01	0.30	1.38	0.20	0.71	0.10	0.60
36052	< 0.01	< 0.2	0.366	< 0.5	680	< 3	2.10	1.0	0.9	< 0.01	0.04	6.09	10.9	1.56	5.94	1.11	0.30	0.86	0.10	0.40	0.10	0.20	< 0.01	0.20
36053	< 0.01	< 0.2	0.319	< 0.5	100	< 3	0.93	1.9	0.1	0.10	< 0.02	2.53	4.34	0.52	1.97	0.41	0.10	0.30	< 0.01	0.18	< 0.01	0.07	< 0.01	0.10
36054	0.01	< 0.2	0.453	< 0.5	60	< 3	1.67	2.3	< 0.1	0.10	< 0.02	4.62	6.88	0.80	3.08	0.66	0.20	0.49	0.10	0.26	< 0.01	0.14	< 0.01	0.20
36055	< 0.01	< 0.2	0.238	< 0.5	60	< 3	2.10	4.4	< 0.1	0.20	< 0.02	5.43	7.86	0.90	3.43	0.75	0.20	0.63	0.10	0.41	0.10	0.19	< 0.01	0.20
36061	< 0.01	0.2	0.218	< 0.5	40	< 3	1.42	1.9	< 0.1	0.10	< 0.02	3.90	6.00	0.74	2.75	0.58	0.20	0.38	0.10	0.24	< 0.01	0.14	< 0.01	0.10
36062	< 0.01	< 0.2	0.261	< 0.5	100	< 3	3.10	2.8	0.1	0.10	< 0.02	11.0	22.4	2.62	9.80	1.89	0.50	1.33	0.20	0.64	0.10	0.30	< 0.01	0.20
36063	0.01	< 0.2	0.389	< 0.5	190	< 3	8.11	5.5	0.8	0.20	0.03	26.0	51.7	6.17	23.5	4.17	0.90	2.99	0.30	1.57	0.30	0.78	0.10	0.70
36064	< 0.01	< 0.2	0.386	< 0.5	170	< 3	1.40	2.8	0.1	0.10	< 0.02	4.15	7.55	0.88	3.29	0.59	0.20	0.48	0.10	0.26	< 0.01	0.12	< 0.01	0.10
36101	< 0.01	< 0.2	0.481	< 0.5	200	< 3	3.99	3.9	0.2	0.20	< 0.02	12.0	22.7	2.75	10.4	1.95	0.40	1.34	0.20	0.78	0.10	0.37	0.10	0.40
36102	0.01	< 0.2	0.718	< 0.5	140	< 3	4.64	9.0	0.3	0.40	< 0.02	15.5	29.2	3.59	13.6	2.46	0.50	1.87	0.20	0.96	0.20	0.50	0.10	0.40
36103	< 0.01	< 0.2	0.370	< 0.5	180	< 3	0.81	1.4	0.1	0.10	< 0.02	3.22	6.35	0.72	2.70	0.64	0.20	0.44	< 0.01	0.18	< 0.01	0.09	< 0.01	0.10

Analyte Symbol	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.5	0.1	10	0.4	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36000	0.10	4.0	1.0	< 10	20.6	54.4	361	0.60	499	< 0.5	< 0.5	< 0.5	< 0.5
36001	0.10	27.0	3.0	< 10	3610	91.8	546	0.60	925	< 0.5	< 0.5	< 0.5	< 0.5
36002	< 0.01	4.7	1.0	< 10	1680	47.4	164	0.50	512	< 0.5	< 0.5	< 0.5	< 0.5
36003	< 0.01	6.7	2.0	< 10	897	71.5	201	1.20	463	< 0.5	< 0.5	< 0.5	< 0.5
36010	< 0.01	7.1	1.0	< 10	867	64.9	59.2	1.60	237	< 0.5	< 0.5	< 0.5	< 0.5
36012	< 0.01	18.0	< 0.1	< 10	806	65.1	93.5	1.90	361	< 0.5	< 0.5	< 0.5	< 0.5
36018	< 0.01	11.0	1.0	< 10	372	176	264	1.70	381	< 0.5	< 0.5	< 0.5	< 0.5
36020	< 0.01	12.0	1.0	< 10	319	63.7	205	0.30	285	< 0.5	< 0.5	< 0.5	< 0.5
36021	< 0.01	2.8	1.0	< 10	218	154	193	1.20	324	< 0.5	< 0.5	< 0.5	< 0.5
36022	< 0.01	2.8	1.0	< 10	329	86.5	254	0.70	233	< 0.5	< 0.5	< 0.5	< 0.5
36023	< 0.01	5.6	1.0	< 10	36.1	20.6	94.0	0.20	142	< 0.5	< 0.5	< 0.5	< 0.5
36024	< 0.01	11.0	2.0	< 10	780	36.7	225	0.30	610	< 0.5	< 0.5	< 0.5	< 0.5
36025	< 0.01	5.4	1.0	< 10	572	34.5	209	0.40	329	< 0.5	< 0.5	< 0.5	< 0.5
36026	< 0.01	8.8	1.0	< 10	484	38.9	131	0.50	152	< 0.5	< 0.5	< 0.5	< 0.5
36028	< 0.01	5.3	2.0	< 10	41.4	40.1	128	1.00	797	< 0.5	< 0.5	< 0.5	< 0.5
36029	< 0.01	13.0	2.0	< 10	39.7	16.2	149	0.90	226	< 0.5	< 0.5	< 0.5	< 0.5
36030	0.10	7.6	1.0	< 10	237	66.3	184	3.10	362	< 0.5	< 0.5	< 0.5	< 0.5
36031	< 0.01	7.7	2.0	< 10	352	82.6	215	2.60	287	< 0.5	< 0.5	< 0.5	< 0.5
36032	< 0.01	5.2	1.0	< 10	123	25.5	126	2.15	296	< 0.5	< 0.5	< 0.5	< 0.5
36033	< 0.01	4.0	1.0	< 10	646	28.4	120	2.70	318	< 0.5	< 0.5	< 0.5	< 0.5
36034	< 0.01	9.3	1.0	< 10	244	25.8	112	2.10	360	< 0.5	< 0.5	< 0.5	< 0.5
36036	0.20	4.8	1.0	< 10	6260	37.6	197	2.00	990	< 0.5	< 0.5	< 0.5	< 0.5
36037	< 0.01	11.0	2.0	< 10	90.5	47.7	145	2.40	587	< 0.5	< 0.5	< 0.5	< 0.5
36043	< 0.01	12.0	1.0	< 10	34.9	44.6	142	1.30	215	< 0.5	< 0.5	< 0.5	< 0.5
36044	< 0.01	6.4	1.0	< 10	294	52.1	113	1.10	240	< 0.5	< 0.5	< 0.5	< 0.5
36045	< 0.01	16.0	2.0	< 10	364	31.2	133	0.80	691	< 0.5	< 0.5	< 0.5	< 0.5
36046	< 0.01	5.9	1.0	< 10	149	46.6	189	0.80	401	< 0.5	< 0.5	< 0.5	< 0.5
36049	< 0.01	10.5	2.0	< 10	372	54.3	182	1.90	333	< 0.5	< 0.5	< 0.5	< 0.5
36050	< 0.01	10.0	1.0	< 10	506	58.6	222	1.00	426	< 0.5	< 0.5	< 0.5	< 0.5
36051	0.10	8.6	2.0	< 10	63.3	30.1	167	0.90	362	< 0.5	< 0.5	< 0.5	< 0.5
36052	< 0.01	32.0	1.0	< 10	1070	57.0	173	0.70	341	< 0.5	< 0.5	< 0.5	< 0.5
36053	< 0.01	5.3	1.0	< 10	73.1	63.7	218	0.70	421	< 0.5	< 0.5	< 0.5	< 0.5
36054	< 0.01	8.2	1.0	< 10	70.0	58.6	248	1.20	558	< 0.5	< 0.5	< 0.5	< 0.5
36055	< 0.01	3.1	1.0	< 10	194	29.2	290	1.00	344	< 0.5	< 0.5	< 0.5	< 0.5
36061	< 0.01	5.5	1.0	< 10	328	43.0	333	0.90	253	< 0.5	< 0.5	< 0.5	< 0.5
36062	< 0.01	9.7	1.0	< 10	1570	31.3	222	0.80	196	< 0.5	< 0.5	< 0.5	< 0.5
36063	0.10	9.4	1.0	< 10	41.2	28.7	260	1.30	681	< 0.5	< 0.5	< 0.5	< 0.5
36064	< 0.01	8.0	1.0	< 10	548	77.1	165	2.60	287	< 0.5	< 0.5	< 0.5	< 0.5
36101	< 0.01	17.0	2.0	< 10	117	64.9	254	1.20	526	< 0.5	< 0.5	< 0.5	< 0.5
36102	0.10	35.0	2.0	< 10	121	121	185	3.00	389	< 0.5	< 0.5	< 0.5	< 0.5
36103	< 0.01	14.0	1.0	< 10	558	70.1	180	1.90	256	< 0.5	< 0.5	< 0.5	< 0.5

Quality Control

Analyte Symbol	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1000	1	1	0.1	0.1	1	0.1	0.01	0.5	0.1	0.005	0.005	0.1	0.01	0.01	0.2	1	1	5	0.1	0.3	0.05	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas				41.7												1.9	4	7	< 5	0.8				
SO-3 Cert				38000												8000	16000	17000	52000	14000				
36022 Orig	3000	116	20	19.8	1.5	6	0.2	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	2.40	1.20	12.0	17	8	9	< 0.1	1.0	0.10	< 0.1	< 0.1
36022 Dup	5000	112	21	20.4	1.5	6	0.3	0.20	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	2.50	1.20	13.0	18	9	10	< 0.1	1.0	0.10	< 0.1	< 0.1
36032 Orig	3000	154	20	27.5	2.0	7	< 0.1	0.20	< 0.5	< 0.1	0.030	< 0.005	0.1	1.00	0.90	17.0	39	11	9	1.6	1.0	0.10	< 0.1	< 0.1
36032 Dup	2000	153	20	27.1	2.0	7	2.5	0.20	< 0.5	< 0.1	0.030	< 0.005	< 0.1	1.00	0.90	17.0	39	11	8	1.2	1.0	0.10	< 0.1	< 0.1
36049 Orig	4000	131	16	11.9	2.0	3	< 0.1	0.50	< 0.5	< 0.1	0.010	0.009	0.1	1.50	1.30	21.0	28	8	45	1.3	1.0	0.10	< 0.1	1.0
36049 Dup	4000	134	15	11.7	2.0	2	0.1	0.50	< 0.5	< 0.1	< 0.005	0.006	< 0.1	1.50	1.30	22.0	25	7	47	2.2	1.0	0.10	< 0.1	1.0
Method Blank Method Blank	< 1000	< 1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.01	< 0.5	< 0.1	< 0.005	< 0.005	< 0.1	< 0.01	< 0.01	< 0.2	< 1	< 1	< 5	< 0.1	< 0.3	< 0.05	< 0.1	< 0.1

Quality Control

Analyte Symbol	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.2	0.005	0.5	10	3	0.05	0.1	0.1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas					160	< 3																		
SO-3 Cert					2000000	26000																		
36022 Orig	0.01	< 0.2	0.231	< 0.5	100	< 3	1.87	4.4	0.2	0.20	< 0.02	4.66	9.84	1.12	4.30	0.86	0.20	0.65	0.10	0.40	0.10	0.20	< 0.01	0.20
36022 Dup	< 0.01	< 0.2	0.249	< 0.5	90	< 3	1.97	5.7	0.2	0.20	0.02	4.61	9.66	1.20	4.24	0.89	0.20	0.67	0.10	0.41	0.10	0.19	< 0.01	0.20
36032 Orig	< 0.01	< 0.2	0.562	< 0.5	120	< 3	2.85	1.8	0.2	0.10	< 0.02	7.72	14.3	1.78	6.63	1.18	0.30	0.89	0.10	0.48	0.10	0.24	< 0.01	0.20
36032 Dup	< 0.01	< 0.2	0.491	< 0.5	120	< 3	2.81	1.8	0.1	0.10	< 0.02	7.36	13.9	1.68	6.29	1.18	0.30	0.87	0.10	0.44	0.10	0.25	< 0.01	0.30
36049 Orig	0.01	< 0.2	0.318	< 0.5	110	< 3	3.42	2.3	0.1	0.10	< 0.02	8.67	16.1	2.16	7.10	1.31	0.30	1.04	0.10	0.63	0.10	0.34	< 0.01	0.30
36049 Dup	< 0.01	< 0.2	0.329	< 0.5	100	< 3	3.44	2.4	0.1	0.10	< 0.02	8.95	16.7	2.04	7.05	1.31	0.30	1.06	0.10	0.62	0.10	0.31	< 0.01	0.30
Method Blank Method Blank	< 0.01	< 0.2	< 0.005	< 0.5	< 10	< 3	< 0.05	< 0.1	< 0.1	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Quality Control

Analyte Symbol	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.5	0.1	10	0.4	0.1	0.1	0.01	0.5	0.5	0.5	0.5	0.5
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
SO-3 Meas					538	93.3	1050		91.4				
SO-3 Cert					520000	39000	217000		296000				
36022 Orig	< 0.01	2.6	1.0	< 10	321	86.7	258	0.70	237	< 0.5	< 0.5	< 0.5	< 0.5
36022 Dup	< 0.01	2.9	1.0	< 10	336	86.3	250	0.70	229	< 0.5	< 0.5	< 0.5	< 0.5
36032 Orig	< 0.01	5.3	1.0	< 10	123	25.8	125	2.20	294	< 0.5	< 0.5	< 0.5	< 0.5
36032 Dup	< 0.01	5.1	1.0	< 10	124	25.2	127	2.10	298	< 0.5	< 0.5	< 0.5	< 0.5
36049 Orig	< 0.01	11.0	2.0	< 10	372	54.6	178	2.00	327	< 0.5	< 0.5	< 0.5	< 0.5
36049 Dup	< 0.01	10.0	2.0	< 10	371	54.1	186	1.80	339	< 0.5	< 0.5	< 0.5	< 0.5
Method Blank Method Blank	< 0.01	< 0.5	< 0.1	< 10	< 0.4	< 0.1	< 0.1	< 0.01	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA	014 - LB
36000	35	18	19	15	17	17	7	20	3	1	1	-1	2	3
36001	31	52	39	9	30	29	8	22	3	1	-1	-1	4	7
36002	41	53	33	17	18	17	5	4	2	-1	-1	-1	4	3
36003	39	49	30	19	31	31	6	24	3	2	2	-1	-1	5
36004	35	76	20	5	15	15	5	17	2	-1	2	-1	5	3
36004-R	34	74	19	16	20	20	4	19	3	-1	-1	-1	-1	3
36005	35	40	43	13	24	24	8	20	3	-1	-1	-1	2	4
36006	50	163	55	35	35	36	10	17	2	-1	2	2	4	4
36007	39	124	59	38	46	47	9	25	3	-1	2	4	4	3
36008	44	93	32	8	36	36	4	22	3	1	2	1	-1	3
36009	38	23	25	5	29	28	6	24	3	1	2	-1	4	3
36010	43	56	28	19	32	32	7	29	-1	2	3	-1	-1	4
36011	36	51	27	6	23	31	3	17	-1	1	2	2	7	3
36012	44	20	29	4	42	42	-1	32	1	2	3	-1	-1	4
36013	13	19	32	11	27	36	1	15	2	-1	-1	-1	2	3
36014	43	101	32	9	22	21	2	19	2	1	-1	-1	3	4
36015	31	103	47	10	26	25	6	9	-1	-1	-1	-1	3	1
36016	57	120	42	13	24	25	4	11	1	-1	-1	-1	3	-1
36017	12	45	23	12	21	20	8	17	2	-1	3	-1	-1	3
36018	52	43	43	25	71	70	12	45	2	3	5	-1	-1	7
36019	25	18	39	10	37	44	2	1	-1	-1	-1	-1	-1	-1
36019-R	38	35	36	8	21	25	2	-1	-1	-1	-1	-1	-1	1
36020	52	42	27	23	34	33	12	27	1	2	1	-1	-1	5
36021	43	85	34	5	29	29	8	24	-1	1	3	3	8	3
36022	47	23	34	14	30	31	1	20	3	1	2	-1	-1	2
36023	39	42	27	11	15	15	8	16	2	1	-1	-1	-1	4
36024	46	94	30	8	33	34	3	30	1	2	3	2	-1	3
36025	39	82	27	16	26	32	9	24	-1	1	2	1	6	3
36026	42	96	36	18	47	46	8	23	3	1	-1	-1	-1	6
36027	40	25	31	16	27	32	3	10	-1	-1	-1	-1	-1	2
36028	48	20	19	15	21	28	6	26	-1	1	3	-1	6	3
36029	12	39	31	17	23	23	5	16	-1	-1	-1	-1	-1	2
36030	43	95	27	7	45	47	10	22	-1	1	2	-1	-1	3
36031	47	98	31	9	24	23	7	19	3	-1	2	1	3	2
36032	40	47	26	6	26	27	5	16	2	1	-1	-1	2	2
36033	43	93	31	5	57	56	6	31	5	-1	-1	-1	-1	2
36034	45	21	31	7	58	61	8	26	-1	1	-1	-1	3	3
36034-R	51	86	33	8	52	52	2	32	1	2	-1	-1	4	3
36035	41	83	55	14	34	42	7	14	-1	-1	1	1	-1	2
36036	40	53	26	6	26	26	9	23	-1	2	4	3	4	3
36037	40	10	27	10	49	48	5	19	3	-1	-1	-1	2	2
36038	33	18	47	5	28	36	7	2	-1	-1	-1	-1	3	-1
36039	46	141	54	37	27	26	9	18	2	-1	2	2	2	2
36040	29	93	27	22	35	35	8	3	1	2	2	2	3	2
36041	42	57	33	9	25	25	6	10	1	-1	1	-1	2	-1
36042	30	68	48	24	44	55	11	2	-1	1	3	3	2	2
36043	39	92	24	7	24	33	9	19	1	2	2	1	7	4
36044	41	13	24	7	29	36	6	13	2	-1	1	2	4	1
36045	42	18	27	10	27	29	1	20	2	1	2	1	-1	2
36046	45	42	29	9	31	37	10	26	-1	2	3	1	-1	3
36047	12	18	34	17	22	27	5	12	2	-1	2	-1	3	1
36048	67	149	33	29	22	26	11	18	2	-1	4	2	2	1
36049	42	12	27	10	37	38	6	24	4	1	3	2	-1	2
36049-R	43	53	30	10	36	36	5	24	3	1	3	2	-1	3

	001 - LA	002 - LA	003 - LB	004 - LA	005 - LB	006 - LB	007 - LA	008 - LB	009 - LB	010 - LB	011 - LA	012 - LB	013 - LBA	014 - LB
36050	40	48	24	6	20	20	7	15	2	-1	-1	-1	3	2
36051	36	44	24	6	19	24	8	15	1	2	2	2	6	2
36052	40	48	30	17	24	32	3	15	2	-1	1	1	-1	3
36053	38	45	22	-1	12	11	9	14	-1	-1	2	-1	-1	1
36054	43	24	27	7	29	33	3	19	3	1	2	1	-1	2
36055	41	15	26	8	18	22	7	19	3	-1	2	2	-1	2
36056	28	31	32	9	13	14	1	4	-1	1	1	1	3	-1
36057	32	123	43	12	30	36	8	2	1	-1	2	1	2	2
36058	35	130	55	38	39	48	8	2	2	-1	2	2	5	1
36059	27	58	56	8	43	42	9	15	2	1	-1	2	3	1
36060	42	161	65	27	43	53	16	17	2	-1	1	2	5	2
36061	38	13	22	5	13	13	14	22	-1	1	4	2	9	2
36062	43	61	32	11	27	29	10	3	2	2	4	5	14	3
36063	37	14	23	17	8	9	4	12	2	-1	2	-1	4	1
36064	36	62	26	10	20	24	2	14	2	-1	2	-1	-1	2
36064-R	48	104	28	16	20	24	5	15	-1	1	2	-1	3	2
36101	43	64	27	8	22	27	10	19	1	2	4	-1	2	3
36102	45	113	31	11	22	28	11	17	3	1	4	-1	1	3
36103	32	107	31	23	21	27	11	17	1	1	3	1	-1	4
LMB-QA	29	60	14	8	1	1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	31	72	17	9	4	4	-1	-1	-1	-1	-1	-1	1	-1

SOIL GAS HYDROCARBONS (SGH) by GC/MS

A10-2995 - Date: June 22, 2010 - Activation Laboratories Ltd.
Results represent only the material tested. Actlabs is not liable for any claim/damage from use of this report in excess of the test cost. Unless requested samples are discarded in 90 days.
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Excalibur Resources Ltd. - Jim Kendall
Sturgeon Lake Project Sites - Lines 37, 38 and 39 (partial)

R=Replicate Sample
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)
LMB-QA = Laboratory Materials Blank - Quality Assurance

LEGEND FOR COLUMN HEADINGS - SGH COMPOUND CLASSES

LA, HA, LBA, HBA = ALKYL-ALKANES
LB, HB, LPB, HPB = ALKYL-BENZENES
LAR, MAR, HAR = ALKYL-AROMATICS
LBI, MBI, HBI, LPH, MPH, HPH = ALKYL-POLYAROMATICS
THI = ALKYL-DIVINYLENE SULPHIDES
ALK = ALKYL-ALKENES

	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA	027 - LB	028 - ALK
36000	2	2	2	6	5	2	-1	1	17	-1	6	2	16	7
36001	1	5	7	11	8	-1	-1	1	14	-1	4	2	8	6
36002	-1	3	4	6	5	-1	-1	-1	7	-1	2	1	7	4
36003	1	4	5	7	5	-1	-1	1	13	-1	4	2	9	5
36004	1	-1	-1	3	3	1	-1	1	7	-1	2	1	7	4
36004-R	2	3	-1	3	3	1	-1	1	8	-1	2	1	8	4
36005	1	5	4	6	5	1	-1	-1	10	-1	3	1	7	6
36006	-1	2	2	3	3	2	-1	-1	2	-1	1	2	2	2
36007	-1	2	2	3	3	2	-1	-1	1	-1	-1	1	1	1
36008	1	2	2	3	3	-1	-1	-1	6	-1	2	1	6	4
36009	2	3	1	4	4	1	-1	-1	11	-1	4	2	9	6
36010	2	2	-1	4	5	1	-1	-1	16	-1	5	2	11	6
36011	1	4	-1	4	3	1	-1	1	9	-1	3	2	9	5
36012	3	4	3	4	5	1	-1	2	19	-1	5	3	11	7
36013	-1	1	-1	1	3	-1	-1	-1	8	-1	2	2	6	5
36014	1	6	4	2	5	1	-1	2	12	-1	3	3	8	6
36015	-1	-1	-1	1	2	1	-1	1	2	-1	-1	1	1	1
36016	-1	-1	1	2	2	-1	-1	-1	1	-1	-1	-1	-1	1
36017	2	5	3	4	4	2	-1	-1	15	-1	4	5	13	7
36018	3	3	1	9	9	2	-1	1	33	-1	9	4	21	11
36019	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36019-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36020	3	8	2	7	8	2	-1	-1	31	-1	7	4	20	12
36021	2	2	2	7	7	1	-1	2	30	-1	9	2	15	10
36022	1	5	2	4	4	-1	-1	1	21	-1	5	2	11	7
36023	2	4	2	4	4	-1	-1	-1	11	-1	3	2	7	5
36024	2	8	2	5	5	-1	-1	-1	16	-1	4	2	14	8
36025	2	-1	1	4	4	-1	-1	1	18	-1	5	2	13	7
36026	2	7	3	6	6	-1	-1	-1	20	-1	5	2	12	7
36027	-1	-1	1	2	2	-1	-1	-1	2	-1	-1	-1	3	2
36028	2	1	1	4	5	2	-1	1	25	-1	7	2	19	9
36029	1	-1	-1	2	3	-1	-1	-1	9	-1	2	1	6	4
36030	2	2	-1	1	4	1	-1	-1	23	-1	5	2	12	8
36031	-1	1	-1	2	4	-1	-1	-1	12	-1	3	2	10	6
36032	-1	3	1	2	2	-1	-1	-1	10	-1	2	1	7	5
36033	2	5	2	3	3	-1	-1	-1	15	-1	4	2	11	7
36034	3	6	2	4	4	2	-1	-1	20	-1	4	3	16	9
36034-R	2	7	2	3	4	1	-1	2	26	-1	5	3	15	8
36035	-1	-1	1	2	2	1	-1	-1	2	-1	1	-1	2	2
36036	2	3	3	7	7	2	-1	1	22	-1	7	3	22	11
36037	2	2	1	3	4	2	-1	1	17	-1	3	2	11	8
36038	-1	1	1	2	2	1	-1	-1	2	-1	1	-1	2	2
36039	-1	-1	-1	2	2	1	-1	-1	1	-1	-1	-1	1	1
36040	-1	1	1	2	2	2	-1	-1	1	-1	-1	1	-1	1
36041	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1	1	-1	-1
36042	-1	2	2	1	1	2	-1	-1	-1	-1	-1	2	-1	1
36043	1	1	4	-1	3	1	-1	1	11	-1	2	2	8	5
36044	-1	2	-1	2	3	-1	-1	1	8	-1	2	1	6	4
36045	-1	1	3	3	3	1	-1	-1	12	-1	2	2	9	6
36046	3	2	1	3	4	3	-1	1	20	-1	2	4	21	9
36047	-1	-1	-1	-1	2	1	-1	1	9	-1	1	2	4	4
36048	-1	1	-1	1	2	6	-1	1	2	-1	-1	3	2	2
36049	2	3	4	3	4	1	-1	-1	26	-1	4	3	19	9
36049-R	2	2	4	3	3	2	-1	-1	20	-1	3	3	21	9

	015 - LAR	016 - LB	017 - LB	018 - LB	019 - LB	020 - LA	021 - LPH	022 - LBA	023 - LAR	024 - LB	025 - LAR	026 - LBA	027 - LB	028 - ALK
36050	2	2	1	2	3	2	-1	-1	17	-1	2	2	10	6
36051	2	1	2	3	3	1	-1	-1	15	-1	3	2	14	6
36052	2	2	1	3	3	-1	-1	-1	9	-1	1	2	7	4
36053	2	2	2	3	3	8	-1	7	15	-1	2	3	15	7
36054	2	2	2	3	3	-1	-1	-1	17	-1	3	2	11	6
36055	2	2	2	3	3	2	-1	-1	22	-1	4	3	20	9
36056	-1	-1	-1	1	1	-1	-1	-1	2	-1	-1	-1	1	1
36057	-1	-1	-1	-1	1	1	-1	-1	2	-1	-1	-1	1	2
36058	-1	-1	-1	2	2	2	-1	-1	3	-1	-1	-1	2	2
36059	-1	-1	1	3	2	1	-1	-1	2	-1	-1	2	2	2
36060	-1	2	-1	2	3	2	-1	-1	4	-1	1	2	3	3
36061	3	3	2	7	8	3	-1	1	57	-1	12	5	42	19
36062	4	4	-1	6	11	3	-1	1	47	-1	11	6	39	19
36063	-1	2	-1	2	2	2	-1	2	9	-1	1	2	9	5
36064	2	2	2	3	3	-1	-1	-1	26	-1	4	3	13	8
36064-R	-1	-1	1	2	3	-1	-1	-1	26	-1	4	3	14	8
36101	4	7	2	6	6	3	-1	-1	36	-1	5	5	30	14
36102	4	9	-1	3	7	-1	-1	-1	45	-1	7	6	37	16
36103	-1	6	3	6	6	2	-1	-1	29	-1	5	3	17	10
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB
36000	5	-1	6	-1	6	10	-1	-1	7	-1	1	-1	-1	2
36001	8	-1	9	-1	-1	1	-1	-1	7	3	1	-1	3	2
36002	4	-1	4	-1	3	3	-1	-1	4	-1	1	-1	-1	2
36003	6	-1	7	-1	4	5	-1	-1	6	-1	-1	-1	1	2
36004	5	-1	5	-1	2	4	-1	-1	4	1	-1	-1	2	-1
36004-R	5	-1	5	-1	2	4	-1	-1	3	1	-1	-1	1	-1
36005	6	-1	7	-1	2	4	-1	-1	5	-1	-1	-1	-1	1
36006	1	-1	-1	-1	-1	-1	-1	-1	1	1	-1	-1	2	-1
36007	1	-1	2	-1	-1	-1	-1	2	-1	1	-1	-1	1	-1
36008	4	-1	4	-1	2	3	-1	-1	4	1	-1	-1	2	1
36009	5	-1	6	-1	3	7	-1	-1	4	1	-1	-1	2	1
36010	9	-1	9	-1	3	6	-1	1	5	2	-1	-1	2	2
36011	5	-1	5	-1	3	4	-1	-1	5	-1	-1	-1	1	1
36012	9	-1	9	-1	3	5	-1	1	2	3	1	-1	3	1
36013	6	-1	6	-1	1	3	-1	-1	4	-1	-1	-1	1	1
36014	8	-1	9	-1	2	5	-1	-1	5	4	-1	-1	4	1
36015	1	-1	1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1
36016	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36017	8	-1	8	-1	4	6	-1	-1	4	2	1	-1	2	1
36018	6	-1	9	-1	8	14	-1	-1	10	2	2	-1	2	2
36019	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36019-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
36020	13	-1	14	-1	5	8	-1	1	3	3	1	-1	3	2
36021	8	-1	9	-1	6	9	-1	-1	7	-1	1	-1	1	2
36022	5	-1	6	-1	4	6	-1	-1	6	1	-1	-1	2	1
36023	6	-1	6	-1	2	3	-1	-1	5	-1	-1	-1	-1	2
36024	7	-1	8	-1	5	8	-1	-1	7	2	1	-1	2	2
36025	6	-1	7	-1	4	6	-1	-1	7	-1	1	-1	1	1
36026	9	-1	9	-1	3	5	-1	-1	7	1	-1	-1	1	2
36027	1	-1	-1	-1	-1	2	-1	-1	2	-1	-1	-1	-1	-1
36028	8	-1	9	-1	9	12	-1	-1	5	1	1	-1	1	1
36029	3	-1	4	-1	1	3	-1	-1	4	-1	-1	-1	-1	-1
36030	8	-1	9	-1	4	6	-1	-1	2	2	-1	-1	2	1
36031	5	-1	5	-1	2	4	-1	-1	5	-1	-1	-1	-1	-1
36032	4	-1	5	-1	1	6	-1	-1	3	2	-1	-1	2	-1
36033	5	-1	6	-1	5	7	-1	-1	4	1	-1	-1	1	-1
36034	6	-1	6	-1	4	7	-1	-1	2	2	1	-1	2	1
36034-R	9	-1	10	-1	4	7	-1	-1	2	2	-1	-1	2	1
36035	1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
36036	9	-1	10	-1	9	14	-1	-1	10	-1	1	-1	1	2
36037	7	-1	8	-1	2	4	-1	1	-1	4	-1	-1	4	1
36038	1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	-1	-1	-1
36039	1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36040	-1	-1	-1	-1	-1	-1	-1	2	-1	1	-1	-1	3	-1
36041	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36042	-1	-1	-1	-1	-1	-1	-1	2	-1	-1	-1	-1	1	-1
36043	4	-1	4	-1	2	2	-1	-1	2	2	-1	-1	2	-1
36044	3	-1	3	-1	1	1	-1	-1	2	-1	-1	-1	-1	-1
36045	4	-1	5	-1	2	4	-1	-1	4	-1	-1	-1	-1	-1
36046	3	-1	5	-1	4	8	-1	-1	6	2	1	-1	2	1
36047	2	-1	3	-1	-1	3	-1	-1	2	2	-1	-1	2	-1
36048	-1	-1	1	-1	-1	1	-1	1	1	3	-1	-1	4	-1
36049	6	-1	7	-1	3	10	-1	-1	5	1	-1	-1	1	-1
36049-R	7	-1	7	-1	-1	7	-1	-1	6	1	-1	-1	1	-1

	029 - HB	030 - HB	031 - HB	032 - HB	033 - HB	034 - HB	035 - LAR	036 - LBA	037 - HB	038 - LBA	039 - LAR	040 - LPB	041 - LBA	042 - LPB
36050	5	-1	6	-1	2	4	-1	-1	1	3	-1	-1	3	-1
36051	3	-1	4	-1	-1	5	-1	-1	5	-1	-1	-1	-1	-1
36052	4	-1	4	-1	-1	2	-1	-1	3	-1	-1	-1	-1	-1
36053	4	-1	5	-1	-1	1	-1	-1	6	1	-1	-1	1	-1
36054	4	-1	5	-1	-1	4	-1	-1	5	-1	-1	-1	-1	-1
36055	6	-1	7	-1	-1	13	-1	-1	4	1	-1	-1	1	-1
36056	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36057	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
36058	1	-1	1	-1	-1	-1	-1	1	-1	1	-1	-1	1	-1
36059	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1	-1	1	-1
36060	1	-1	2	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	1
36061	11	-1	13	-1	-1	14	-1	-1	3	1	1	-1	1	1
36062	13	-1	15	-1	8	11	-1	-1	13	-1	2	-1	-1	2
36063	3	-1	3	-1	-1	2	-1	-1	4	2	-1	-1	2	-1
36064	5	-1	5	-1	-1	8	-1	-1	4	-1	-1	-1	-1	-1
36064-R	4	-1	5	-1	-1	9	-1	-1	4	-1	-1	-1	-1	-1
36101	12	-1	13	-1	-1	12	-1	-1	6	2	1	-1	2	1
36102	11	-1	8	-1	-1	14	-1	-1	9	2	1	-1	2	1
36103	7	-1	7	-1	3	4	-1	-1	6	1	1	-1	1	1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	1	-1	1	-1	-1	1	-1

	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 - HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
36000	1	1	5	-1	3	4	4	3	-1	-1	1	4	-1	-1
36001	1	1	7	-1	4	2	2	4	-1	-1	1	3	-1	-1
36002	-1	1	3	-1	2	2	2	2	-1	-1	1	3	-1	-1
36003	1	1	4	-1	2	2	2	2	-1	-1	1	3	-1	-1
36004	-1	-1	3	-1	2	3	3	2	-1	-1	-1	3	-1	-1
36004-R	-1	-1	4	-1	2	3	3	2	-1	-1	-1	3	-1	-1
36005	-1	-1	5	-1	3	1	1	3	-1	-1	-1	2	-1	-1
36006	-1	-1	4	-1	2	1	1	2	-1	-1	-1	1	-1	-1
36007	-1	-1	3	-1	2	1	1	2	-1	-1	-1	-1	-1	-1
36008	-1	-1	3	-1	2	2	2	2	-1	-1	-1	2	-1	-1
36009	-1	-1	4	-1	2	-1	-1	2	-1	-1	-1	2	-1	-1
36010	-1	-1	6	-1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
36011	1	1	4	-1	3	2	2	2	-1	-1	-1	3	-1	-1
36012	-1	-1	6	-1	3	-1	-1	3	-1	-1	1	-1	-1	-1
36013	-1	-1	5	-1	2	1	2	2	-1	-1	-1	2	-1	-1
36014	-1	1	8	-1	3	1	1	4	-1	-1	1	2	-1	-1
36015	-1	-1	2	-1	1	1	1	-1	-1	-1	-1	-1	-1	-1
36016	-1	-1	-1	-1	1	1	-1	1	-1	-1	-1	-1	-1	-1
36017	1	-1	5	-1	3	3	4	3	-1	-1	-1	3	-1	-1
36018	2	-1	8	-1	4	1	2	4	-1	-1	-1	2	-1	-1
36019	-1	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36019-R	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36020	-1	-1	8	-1	4	-1	-1	3	-1	-1	1	-1	-1	-1
36021	1	2	5	-1	3	1	2	3	-1	-1	1	3	-1	-1
36022	1	1	4	-1	2	1	1	2	-1	-1	-1	2	-1	-1
36023	-1	1	4	-1	2	2	2	2	-1	-1	-1	3	-1	-1
36024	1	1	3	-1	3	1	1	2	-1	-1	1	2	-1	-1
36025	1	1	4	-1	3	1	1	3	-1	-1	1	3	-1	-1
36026	1	1	3	-1	2	2	2	2	-1	-1	1	3	-1	-1
36027	-1	-1	2	-1	1	1	1	1	-1	-1	-1	1	-1	-1
36028	-1	-1	5	-1	3	-1	-1	3	-1	-1	-1	1	-1	-1
36029	-1	-1	2	-1	2	1	-1	2	-1	-1	-1	2	-1	-1
36030	-1	-1	5	-1	3	-1	-1	2	-1	-1	-1	1	-1	-1
36031	-1	-1	3	-1	2	1	-1	2	-1	-1	-1	2	-1	-1
36032	-1	-1	3	-1	2	1	2	2	-1	-1	-1	2	-1	-1
36033	-1	-1	3	-1	2	1	2	2	-1	-1	-1	2	-1	-1
36034	-1	-1	6	-1	3	3	3	3	-1	-1	1	3	-1	-1
36034-R	-1	-1	5	-1	3	2	3	2	-1	-1	1	3	-1	-1
36035	-1	-1	2	-1	1	1	1	1	-1	-1	-1	1	-1	-1
36036	2	2	7	-1	5	8	8	5	-1	-1	1	9	-1	-1
36037	-1	-1	7	-1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
36038	-1	-1	2	-1	1	1	1	1	-1	-1	-1	1	-1	-1
36039	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36040	-1	-1	3	-1	1	-1	-1	2	-1	-1	-1	-1	-1	-1
36041	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36042	-1	-1	3	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36043	-1	1	4	-1	2	3	3	2	-1	-1	-1	3	-1	-1
36044	-1	-1	3	-1	2	2	2	2	-1	-1	-1	2	-1	-1
36045	-1	-1	4	-1	3	-1	-1	3	-1	-1	-1	2	-1	-1
36046	1	1	9	-1	4	5	6	4	-1	-1	-1	7	-1	-1
36047	-1	-1	5	-1	3	1	1	3	-1	-1	-1	2	-1	-1
36048	-1	-1	8	-1	4	1	1	4	-1	-1	-1	-1	-1	-1
36049	-1	-1	5	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36049-R	-1	-1	5	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1

	043 - HB	044 - HB	045 - LA	046 - LPH	047 - LBA	048 - HB	049 - HB	050 - LBA	051 - LBI	052 - LPB	053 - LPB	054 - HB	055 - LPB	056 - LBI
36050	-1	-1	7	-1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
36051	-1	1	3	-1	2	3	3	1	-1	-1	-1	4	-1	-1
36052	-1	-1	3	-1	2	2	1	2	-1	-1	-1	2	-1	-1
36053	1	1	5	-1	2	-1	-1	2	-1	-1	-1	2	-1	-1
36054	-1	-1	4	-1	2	-1	-1	2	-1	-1	-1	-1	-1	-1
36055	-1	-1	5	-1	3	-1	-1	3	-1	-1	-1	-1	-1	-1
36056	-1	-1	2	-1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1
36057	-1	-1	2	-1	1	-1	-1	1	-1	-1	-1	-1	-1	-1
36058	-1	-1	3	-1	1	1	1	1	-1	-1	-1	1	-1	-1
36059	-1	-1	2	-1	2	1	1	2	-1	-1	-1	-1	-1	-1
36060	-1	-1	4	-1	2	1	1	2	-1	-1	-1	1	-1	-1
36061	-1	-1	7	-1	4	-1	-1	4	-1	-1	1	-1	-1	-1
36062	2	1	7	-1	4	-1	-1	3	-1	-1	1	2	-1	-1
36063	-1	-1	5	-1	3	3	3	3	-1	-1	-1	4	-1	-1
36064	-1	-1	4	-1	3	-1	-1	2	-1	-1	-1	1	-1	-1
36064-R	-1	-1	4	-1	3	-1	1	2	-1	-1	-1	1	-1	-1
36101	-1	-1	8	-1	3	-1	1	3	-1	-1	-1	1	-1	-1
36102	1	-1	7	-1	3	-1	-1	2	-1	-1	1	-1	-1	-1
36103	2	2	6	-1	4	2	2	3	-1	-1	-1	3	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
LMB-QA	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
36000	2	1	1	3	1	24	5	47	1	4	1	1	3	2
36001	2	1	1	2	1	15	4	28	2	5	1	2	11	2
36002	-1	-1	-1	2	1	7	3	14	1	2	1	1	4	1
36003	-1	-1	-1	2	1	9	4	22	1	4	1	1	6	2
36004	1	-1	-1	2	1	15	3	28	1	3	1	1	6	2
36004-R	1	-1	-1	1	1	11	3	28	1	4	1	-1	7	1
36005	1	-1	1	1	1	11	3	21	2	3	1	1	7	1
36006	-1	-1	-1	-1	1	5	2	6	1	2	1	1	6	-1
36007	-1	-1	-1	-1	1	3	1	4	-1	4	1	-1	5	1
36008	-1	-1	-1	1	1	6	3	8	1	4	1	-1	6	1
36009	-1	-1	-1	2	1	11	3	20	1	3	1	-1	6	2
36010	2	-1	1	2	-1	12	4	22	2	3	1	1	6	2
36011	1	-1	-1	2	1	8	3	16	1	3	1	1	6	2
36012	2	-1	1	2	-1	12	4	30	2	5	1	1	3	2
36013	-1	-1	-1	1	1	9	2	15	1	3	1	-1	7	2
36014	2	-1	-1	2	1	10	3	25	2	4	1	1	10	2
36015	-1	-1	-1	-1	1	3	1	3	1	3	-1	-1	1	-1
36016	-1	-1	-1	-1	-1	3	1	3	1	2	-1	-1	3	1
36017	2	-1	-1	2	1	12	3	36	1	4	1	1	6	1
36018	2	2	2	3	1	19	9	46	2	4	2	1	8	3
36019	-1	-1	-1	-1	-1	2	-1	3	-1	3	-1	-1	4	-1
36019-R	-1	-1	-1	-1	1	2	-1	3	1	2	-1	-1	-1	-1
36020	1	2	2	3	1	19	5	63	2	3	2	1	10	2
36021	1	1	1	2	1	14	4	28	2	3	2	1	5	2
36022	-1	-1	1	1	1	9	3	21	1	2	1	1	5	1
36023	2	-1	1	2	-1	10	3	19	-1	2	1	1	5	2
36024	1	1	1	2	1	7	4	18	1	3	1	1	6	2
36025	1	1	1	2	1	8	4	20	1	4	1	1	8	2
36026	-1	1	1	2	1	7	4	18	2	1	1	1	5	2
36027	-1	-1	-1	-1	-1	3	1	4	1	3	1	-1	3	1
36028	-1	-1	-1	2	1	11	4	40	1	4	1	1	6	2
36029	-1	-1	-1	1	1	5	2	9	-1	3	-1	1	5	1
36030	-1	-1	-1	1	1	10	3	22	1	5	1	-1	8	1
36031	-1	-1	-1	1	1	5	3	8	1	4	1	1	5	1
36032	-1	-1	-1	-1	1	6	2	16	1	4	1	1	6	1
36033	1	-1	-1	2	1	7	3	21	1	3	1	-1	7	1
36034	1	1	1	2	1	11	4	35	1	5	2	1	9	2
36034-R	1	1	1	1	1	12	3	32	2	3	1	1	7	2
36035	-1	-1	-1	-1	1	3	1	4	1	4	-1	-1	5	1
36036	2	2	2	3	2	18	6	67	-1	5	2	1	11	2
36037	1	-1	-1	1	1	13	3	30	1	4	1	1	9	1
36038	-1	-1	-1	-1	1	3	1	4	1	2	-1	-1	4	1
36039	-1	-1	-1	-1	1	3	1	3	-1	3	1	-1	4	-1
36040	-1	-1	-1	-1	1	3	1	4	1	1	1	1	4	-1
36041	-1	-1	-1	-1	1	3	1	3	-1	3	-1	-1	3	1
36042	-1	-1	-1	-1	1	3	-1	4	1	4	-1	-1	5	1
36043	1	-1	-1	-1	1	7	4	22	2	3	1	1	6	2
36044	-1	-1	-1	-1	1	4	3	17	1	2	1	-1	5	1
36045	1	-1	-1	-1	1	5	3	22	1	2	1	-1	5	1
36046	2	-1	-1	1	1	10	4	50	2	5	2	1	10	2
36047	-1	-1	-1	-1	1	5	1	9	1	3	1	1	6	1
36048	-1	-1	-1	-1	1	6	-1	7	1	8	1	-1	11	1
36049	2	-1	-1	-1	1	6	3	30	2	3	1	1	6	1
36049-R	2	-1	-1	-1	-1	-1	3	30	-1	4	1	1	6	1

	057 - ALK	058 - LPB	059 - LPB	060 - LPH	061 - LBI	062 - LBA	063 - LPH	064 - LBA	065 - HPB	066 - LBA	067 - LBI	068 - HPB	069 - LA	070 - HPB
36050	-1	-1	-1	-1	1	5	2	23	-1	3	1	-1	7	1
36051	1	-1	-1	-1	1	6	2	25	-1	2	1	1	5	1
36052	-1	-1	-1	-1	1	4	2	12	1	2	1	1	4	1
36053	2	-1	-1	-1	1	7	4	25	1	4	1	1	7	2
36054	1	-1	-1	-1	1	5	3	11	1	3	1	-1	6	1
36055	2	-1	-1	-1	1	6	3	30	1	3	1	1	6	1
36056	-1	-1	-1	-1	1	3	1	3	1	3	-1	-1	3	-1
36057	-1	-1	-1	-1	1	3	-1	3	1	4	-1	-1	4	1
36058	-1	-1	-1	-1	1	4	2	4	1	2	1	-1	5	1
36059	-1	-1	-1	-1	1	4	1	5	1	4	1	-1	5	-1
36060	-1	-1	-1	-1	1	4	2	5	1	2	1	1	5	1
36061	3	1	1	1	1	15	4	43	2	6	2	1	10	2
36062	-1	2	2	1	1	14	6	56	2	4	2	1	8	2
36063	2	-1	-1	-1	-1	7	3	27	-1	3	1	1	7	1
36064	-1	-1	-1	-1	1	5	2	11	-1	5	1	1	6	1
36064-R	1	-1	-1	-1	1	5	2	10	-1	2	1	1	5	1
36101	2	-1	1	-1	1	9	4	43	1	4	1	1	8	2
36102	-1	1	1	1	1	10	5	30	2	4	2	1	8	2
36103	1	-1	1	1	1	9	5	37	1	3	1	1	7	2
LMB-QA	-1	-1	-1	-1	1	2	-1	2	1	3	-1	-1	3	-1
LMB-QA	-1	-1	-1	-1	-1	3	-1	3	-1	1	-1	-1	3	-1

	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
36000	1	1	5	6	1	1	-1	3	-1	1	2	2	6	2
36001	2	2	6	8	-1	1	1	3	-1	2	3	2	11	2
36002	1	1	4	4	1	1	-1	2	-1	1	2	2	6	2
36003	2	1	4	5	1	1	-1	3	-1	1	2	2	1	2
36004	1	1	4	6	-1	1	1	3	-1	2	2	2	7	2
36004-R	1	1	5	6	1	1	-1	3	-1	2	2	2	6	2
36005	1	1	5	6	1	1	1	3	-1	1	2	2	7	2
36006	-1	-1	3	4	-1	-1	-1	2	-1	1	2	2	7	2
36007	1	-1	3	3	1	-1	-1	2	-1	1	1	2	4	2
36008	1	1	4	4	1	1	-1	2	-1	-1	1	2	3	2
36009	1	1	4	3	-1	1	-1	2	-1	1	2	2	4	2
36010	2	2	5	7	2	1	1	3	-1	2	2	2	8	2
36011	1	1	4	5	1	1	1	3	-1	2	2	2	4	2
36012	2	2	6	6	-1	1	1	3	-1	2	2	2	4	2
36013	1	1	4	5	-1	1	-1	3	-1	1	2	2	3	2
36014	2	1	6	7	-1	1	1	4	1	2	3	2	8	2
36015	-1	-1	3	3	-1	-1	-1	1	-1	-1	1	2	3	2
36016	-1	-1	-1	2	1	-1	-1	1	-1	1	1	2	6	1
36017	1	1	5	-1	1	1	1	3	-1	2	2	2	7	2
36018	3	2	7	8	-1	2	-1	4	1	2	2	2	7	2
36019	-1	-1	2	3	-1	-1	-1	1	-1	1	1	2	6	2
36019-R	-1	-1	2	3	-1	-1	-1	1	-1	-1	1	2	2	2
36020	2	2	8	10	-1	2	2	5	-1	2	4	2	12	2
36021	1	1	4	5	1	1	1	3	-1	2	2	2	6	2
36022	1	1	4	5	1	1	1	3	1	1	2	2	5	2
36023	1	1	4	5	-1	1	1	3	-1	2	2	2	4	2
36024	2	1	5	3	-1	1	1	2	-1	1	2	2	10	2
36025	1	1	5	6	1	1	1	3	-1	1	2	2	-1	2
36026	2	1	4	5	1	1	-1	3	-1	1	2	2	2	2
36027	1	-1	3	4	1	-1	-1	2	-1	1	1	2	5	2
36028	2	1	4	3	1	1	1	3	-1	2	2	2	8	2
36029	1	-1	3	4	1	-1	-1	2	-1	1	1	2	6	2
36030	1	1	5	7	1	1	1	3	1	1	2	2	3	2
36031	1	1	4	5	1	1	-1	2	-1	1	1	2	3	2
36032	1	1	4	2	1	1	-1	2	-1	1	1	2	9	2
36033	1	1	5	6	-1	1	1	3	-1	1	2	2	9	2
36034	2	1	6	3	-1	1	1	4	-1	2	3	2	6	2
36034-R	2	1	5	6	-1	1	1	4	1	2	2	2	4	2
36035	-1	-1	3	2	-1	-1	-1	2	-1	1	1	2	7	2
36036	2	2	8	9	2	2	1	5	-1	2	3	3	12	2
36037	1	1	6	8	1	1	1	3	-1	2	2	2	9	2
36038	-1	-1	3	3	1	-1	-1	1	-1	1	1	2	4	1
36039	-1	-1	-1	1	-1	-1	-1	1	-1	1	2	2	6	1
36040	-1	-1	3	3	-1	-1	-1	2	-1	1	1	2	2	2
36041	-1	1	3	2	-1	-1	-1	-1	-1	1	1	1	1	1
36042	1	1	3	4	1	-1	-1	-1	-1	1	1	2	8	1
36043	1	1	4	5	1	1	-1	3	-1	1	2	2	8	2
36044	1	1	3	4	1	1	-1	2	-1	1	2	2	4	2
36045	1	1	4	5	1	1	1	2	-1	1	2	2	5	2
36046	2	2	7	8	2	1	1	4	1	2	2	2	3	2
36047	1	1	5	6	1	1	1	3	-1	1	2	2	5	2
36048	-1	-1	6	7	1	-1	1	3	-1	1	2	2	12	2
36049	1	1	5	5	1	1	1	3	-1	1	2	2	7	2
36049-R	1	1	4	5	-1	1	1	3	-1	2	2	2	6	2

	071 - HPB	072 - HPB	073 - HBA	074 - HBA	075 - HPB	076 - LPH	077 - MAR	078 - ALK	079 - LBI	080 - LPH	081 - MAR	082 - LPH	083 - HBA	084 - HBA
36050	1	1	5	6	1	1	1	3	-1	1	2	2	5	2
36051	1	1	3	4	-1	1	-1	3	-1	1	1	2	5	2
36052	1	1	3	3	1	-1	-1	2	-1	1	2	2	5	2
36053	2	1	5	6	1	1	1	3	-1	2	2	2	9	2
36054	1	1	4	4	1	1	1	2	-1	1	2	2	7	2
36055	1	1	5	6	1	1	-1	3	-1	2	2	2	8	2
36056	-1	-1	3	3	-1	-1	-1	1	-1	-1	1	2	2	2
36057	-1	-1	3	4	-1	-1	-1	2	-1	1	1	2	13	2
36058	1	-1	-1	3	-1	-1	-1	2	-1	-1	1	2	3	2
36059	-1	-1	3	2	1	-1	-1	2	-1	1	1	2	5	2
36060	1	1	3	4	1	-1	-1	2	-1	1	2	2	2	2
36061	2	2	5	8	2	2	1	6	-1	2	2	3	6	3
36062	2	2	5	8	-1	1	1	5	-1	2	2	3	3	3
36063	1	1	2	5	-1	1	-1	3	-1	2	2	2	6	2
36064	1	1	5	5	1	1	-1	2	-1	1	2	2	4	2
36064-R	1	1	5	5	-1	1	1	2	-1	2	2	2	3	2
36101	2	2	6	7	1	1	1	4	-1	2	2	2	5	2
36102	2	2	6	6	2	1	1	5	1	2	2	2	3	2
36103	2	2	5	6	1	1	1	4	-1	2	2	2	9	2
LMB-QA	-1	-1	2	3	-1	-1	-1	1	-1	1	-1	2	4	1
LMB-QA	-1	-1	3	-1	-1	-1	-1	1	-1	1	1	2	6	2

Excalibur Resources Ltd.
Jim Kendall
-1=Reporting Limit of 1pg/g (ppt=parts per trillion)

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
Sturgeon Lake Survey - Lines 37, 38 39 (partial)

Activation Laboratories Ltd.
Date: June 23, 2010
R=Replicate Sample

	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
36000	9	1	2	7	-1	2	2	4	13	2	2	6	7	2
36001	11	1	3	12	1	3	2	4	27	2	2	5	12	2
36002	8	-1	2	8	-1	2	2	3	12	2	2	4	1	2
36003	8	-1	2	8	-1	2	2	4	13	2	2	5	7	2
36004	8	-1	2	7	-1	2	2	3	13	2	2	4	8	2
36004-R	8	-1	2	7	-1	2	2	3	13	2	2	4	8	2
36005	-1	-1	2	8	1	3	2	3	17	2	2	4	10	2
36006	7	-1	4	6	1	2	2	2	12	2	3	2	7	2
36007	6	-1	3	5	-1	2	2	1	10	2	2	2	6	2
36008	9	-1	2	7	-1	2	1	2	11	2	2	3	7	2
36009	5	-1	2	9	-1	2	1	3	12	2	3	4	3	2
36010	10	-1	3	10	-1	4	2	5	16	2	3	7	9	3
36011	4	-1	2	7	-1	2	2	3	14	2	2	4	8	2
36012	11	-1	2	11	-1	3	2	8	17	2	2	5	10	2
36013	6	-1	2	6	1	4	2	2	16	2	2	3	9	2
36014	11	1	2	13	-1	3	2	3	26	3	2	4	11	2
36015	5	-1	2	4	-1	2	2	1	6	1	2	2	4	1
36016	5	-1	2	4	-1	2	1	2	-1	2	3	2	5	2
36017	6	1	2	7	-1	2	2	3	15	2	2	4	8	2
36018	12	1	3	13	-1	-1	2	6	21	2	3	10	13	2
36019	6	-1	1	5	-1	1	1	1	7	1	2	2	5	2
36019-R	5	-1	1	5	1	2	1	1	7	2	2	2	3	1
36020	16	1	2	17	-1	4	2	5	30	2	3	7	3	2
36021	4	-1	3	7	-1	2	2	3	13	2	3	4	3	2
36022	7	1	2	5	-1	2	2	2	13	2	2	4	8	2
36023	6	-1	2	6	-1	2	2	8	11	2	2	4	6	2
36024	10	-1	2	9	-1	2	2	3	12	2	3	4	7	2
36025	8	-1	2	10	-1	2	2	8	13	2	1	4	9	2
36026	7	-1	2	6	-1	2	1	3	10	2	2	4	7	2
36027	5	-1	2	5	-1	2	1	1	8	1	2	2	5	2
36028	8	1	2	7	-1	2	2	3	17	2	3	4	10	2
36029	6	-1	2	5	-1	2	1	2	9	2	2	2	6	2
36030	10	-1	2	10	-1	2	2	2	16	2	2	3	9	2
36031	8	-1	2	7	1	2	2	2	12	2	2	3	7	2
36032	9	-1	2	9	-1	2	2	2	13	2	2	3	9	2
36033	8	-1	2	8	-1	2	2	2	13	2	2	4	2	2
36034	5	1	2	9	1	3	2	3	20	2	2	5	11	2
36034-R	4	1	2	6	-1	2	2	3	17	2	2	5	9	2
36035	5	-1	2	6	-1	2	2	2	10	2	2	2	3	2
36036	11	1	2	14	-1	-1	2	4	26	2	4	6	14	2
36037	10	1	2	11	-1	3	2	3	25	2	2	4	3	2
36038	5	-1	2	6	-1	2	2	1	8	2	2	2	5	2
36039	7	-1	5	7	-1	-1	1	1	10	2	7	2	7	3
36040	5	-1	2	3	1	-1	2	1	10	2	2	2	3	2
36041	3	-1	2	3	1	2	2	1	8	1	2	2	5	2
36042	7	-1	3	7	-1	2	2	2	11	2	-1	2	8	2
36043	10	1	2	6	1	2	1	2	13	2	2	4	10	2
36044	5	-1	2	6	-1	2	2	2	11	2	2	3	8	2
36045	6	-1	2	4	-1	2	1	2	12	2	2	3	9	2
36046	10	1	2	10	1	2	2	3	22	2	-1	5	15	2
36047	4	1	2	4	-1	2	2	2	17	2	2	2	11	2
36048	13	1	2	11	-1	2	2	2	23	2	2	2	15	2
36049	8	-1	2	6	-1	2	2	2	14	2	2	4	10	2
36049-R	8	1	2	6	-1	2	2	2	14	2	2	4	10	-1

	085 - LPH	086 - LBI	087 - MAR	088 - HBA	089 - THI	090 - HPB	091 - LBI	092 - LPH	093 - LA	094 - LBI	095 - MAR	096 - LPH	097 - HBA	098 - THI
36050	7	-1	2	5	-1	2	2	2	17	2	2	3	4	2
36051	6	-1	2	3	-1	2	2	2	10	2	2	3	8	2
36052	6	-1	1	5	-1	2	2	2	9	2	2	3	6	2
36053	8	1	2	8	-1	2	2	3	15	2	2	5	9	2
36054	7	-1	2	7	1	2	2	2	12	2	2	3	4	2
36055	6	-1	2	5	-1	2	2	2	14	2	2	3	11	2
36056	2	-1	2	1	-1	2	1	2	8	2	2	2	6	2
36057	9	-1	3	6	-1	2	1	2	9	2	2	2	7	2
36058	5	-1	6	6	-1	3	2	1	10	2	2	2	8	2
36059	5	1	3	4	-1	2	2	2	12	2	2	2	8	2
36060	3	-1	11	4	1	4	2	2	13	2	2	3	3	2
36061	5	1	3	5	-1	2	2	3	25	2	-1	5	6	2
36062	-1	1	3	7	-1	3	2	3	17	2	3	6	11	2
36063	8	-1	2	7	-1	2	2	2	13	2	2	4	10	2
36064	8	1	2	7	-1	2	2	2	15	2	2	3	11	2
36064-R	6	1	2	5	-1	2	2	2	14	2	2	3	10	2
36101	7	1	2	8	-1	2	2	3	20	2	2	5	14	2
36102	8	1	2	8	-1	2	2	3	24	2	3	6	18	2
36103	9	1	2	8	1	2	2	3	19	2	2	6	15	-1
LMB-QA	4	-1	1	3	-1	2	1	1	5	1	2	2	4	1
LMB-QA	3	-1	2	3	1	2	2	1	6	2	1	2	4	2

	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI
36000	3	3	-1	2	2	3	4	1	2	6	6	17	3	7
36001	3	3	-1	2	2	-1	4	1	2	6	8	21	4	8
36002	2	2	-1	2	2	2	3	1	2	6	7	13	4	6
36003	3	3	-1	2	2	3	3	1	2	6	7	17	3	9
36004	2	3	-1	2	2	3	3	1	2	7	7	17	4	6
36004-R	2	2	-1	2	2	3	3	1	2	6	7	16	3	7
36005	2	3	-1	2	2	3	4	1	2	6	7	18	4	8
36006	2	2	-1	2	2	3	3	1	2	7	7	19	4	7
36007	2	2	-1	2	2	2	2	1	2	6	6	13	4	7
36008	2	3	-1	2	2	2	3	1	2	6	7	14	3	7
36009	2	3	-1	2	2	2	3	1	2	6	8	16	3	7
36010	3	4	-1	2	2	3	4	1	2	7	7	18	3	10
36011	2	3	-1	2	2	3	3	1	2	7	7	17	4	8
36012	2	3	-1	2	2	3	4	1	2	7	8	18	4	11
36013	2	3	-1	2	2	3	3	1	2	7	-1	17	3	6
36014	2	3	-1	2	2	-1	4	1	2	-1	8	22	4	7
36015	2	2	-1	2	2	2	2	-1	2	6	6	12	3	8
36016	2	2	-1	2	2	2	2	1	2	6	6	13	4	8
36017	2	3	-1	2	2	3	3	1	2	7	8	16	4	11
36018	3	4	-1	2	3	4	4	1	2	7	8	21	4	10
36019	2	2	-1	1	2	2	2	1	2	6	6	11	4	5
36019-R	2	2	-1	1	2	2	2	1	2	6	6	9	3	5
36020	3	4	-1	2	2	2	6	1	2	8	9	25	4	9
36021	2	3	-1	2	2	3	4	1	2	6	7	16	4	8
36022	2	2	-1	2	2	3	3	1	2	6	6	15	3	6
36023	2	3	-1	2	2	3	3	1	2	6	7	15	4	7
36024	2	3	-1	2	2	3	3	1	2	6	7	15	4	7
36025	2	3	-1	2	2	3	3	1	2	6	7	17	4	12
36026	2	2	-1	2	2	2	3	1	2	6	7	13	3	6
36027	2	2	-1	2	2	2	2	1	2	6	6	11	3	5
36028	2	3	-1	2	2	3	4	1	2	5	6	17	4	6
36029	2	2	-1	2	2	2	3	1	2	6	7	13	3	6
36030	2	2	-1	2	2	3	3	1	2	7	7	16	4	6
36031	2	2	-1	2	2	2	3	1	2	6	6	15	3	8
36032	2	2	-1	2	2	2	3	1	2	6	8	15	3	6
36033	2	2	-1	2	2	2	3	1	2	6	7	15	4	6
36034	3	3	-1	2	2	3	4	1	2	7	8	20	3	7
36034-R	2	3	-1	2	2	3	4	1	2	6	7	18	4	7
36035	2	2	-1	2	2	2	2	-1	2	6	6	14	3	5
36036	3	4	-1	2	2	4	5	2	2	7	8	26	5	10
36037	2	3	-1	2	2	-1	4	1	2	6	8	20	4	8
36038	2	2	-1	2	2	2	2	-1	2	6	7	10	3	5
36039	2	2	-1	2	2	2	3	1	2	6	7	13	4	6
36040	2	2	-1	1	2	2	3	1	2	6	7	14	3	-1
36041	1	2	-1	2	2	2	3	1	2	6	7	11	3	5
36042	1	2	-1	2	2	2	3	1	2	6	7	15	4	6
36043	2	3	-1	2	2	2	4	1	2	6	8	21	3	11
36044	2	2	-1	2	2	2	3	1	2	6	8	16	4	7
36045	2	2	-1	2	2	2	3	1	2	6	7	15	3	7
36046	3	3	-1	2	2	3	5	1	2	7	9	21	4	9
36047	2	2	-1	2	2	2	3	1	2	6	9	16	4	6
36048	2	2	-1	2	2	2	3	1	2	6	8	20	4	5
36049	2	2	-1	2	2	2	3	1	2	6	9	17	4	7
36049-R	2	3	-1	2	2	3	3	1	2	6	8	16	4	7

SOIL GAS HYDROCARBONS
(SGH) by GC/MS
Sturgeon Lake Survey - Lines 37, 38 39 (partial)

	099 - LPH	100 - LPH	101 - MAR	102 - MBI	103 - LPH	104 - MAR	105 - ALK	106 - MBI	107 - MBI	108 - LPH	109 - MAR	110 - HBA	111 - MAR	112 - MBI
36050	2	3	-1	2	2	2	3	1	2	6	8	19	3	7
36051	2	2	-1	2	2	2	3	1	2	6	8	15	3	6
36052	2	2	-1	2	2	2	3	1	2	6	7	12	4	6
36053	3	3	-1	2	2	3	3	1	2	7	8	18	4	8
36054	2	2	-1	2	2	2	3	1	2	6	8	15	3	7
36055	2	3	-1	2	2	3	3	1	2	7	8	17	3	7
36056	2	2	-1	2	2	2	2	1	2	6	7	13	4	6
36057	2	2	-1	2	2	2	2	1	2	6	7	14	3	5
36058	1	2	-1	2	2	2	2	1	2	6	7	14	4	6
36059	2	2	-1	2	2	2	2	1	2	6	7	15	4	6
36060	2	2	-1	2	2	3	3	1	2	6	8	17	3	9
36061	2	3	-1	2	2	4	6	2	3	9	10	32	4	10
36062	3	3	-1	2	2	4	5	2	2	8	8	23	4	9
36063	2	3	-1	2	2	3	3	1	3	6	8	18	4	8
36064	2	2	-1	2	2	2	4	1	2	6	9	17	4	6
36064-R	2	2	-1	2	2	2	3	1	2	7	8	16	4	6
36101	3	3	-1	2	2	3	4	1	2	7	8	22	4	7
36102	3	3	-1	2	2	3	5	1	2	6	8	22	4	8
36103	2	3	-1	2	2	3	4	1	2	7	8	22	4	9
LMB-QA	1	2	-1	1	2	2	2	1	2	5	6	10	3	4
LMB-QA	1	2	-1	2	2	2	2	1	2	6	7	11	3	4

	113 - HBA	114 - MBI	115 - MBI	116 - MAR	117 - HA	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH
36000	17	8	9	4	25	8	17	4	8	10	8	8	6	7
36001	20	7	8	4	37	8	24	5	7	11	7	9	7	7
36002	15	6	7	4	25	6	15	4	6	11	6	7	6	7
36003	15	8	9	4	28	7	19	5	7	10	6	9	6	7
36004	11	6	7	4	23	7	15	4	6	10	6	7	7	6
36004-R	11	7	7	4	25	7	20	5	1	10	6	7	6	7
36005	17	6	7	4	35	7	20	5	7	10	7	8	7	7
36006	14	8	8	3	28	6	13	5	6	9	5	8	6	5
36007	14	6	7	3	25	6	14	5	6	9	6	7	6	6
36008	15	6	7	4	24	6	15	5	6	10	6	7	6	6
36009	13	7	8	4	24	7	18	4	7	9	7	7	6	7
36010	14	9	10	4	33	10	21	5	9	10	8	10	7	9
36011	14	7	8	4	31	7	20	5	7	10	7	8	7	8
36012	14	9	9	4	29	7	20	5	7	10	6	8	6	7
36013	16	5	6	4	27	7	17	4	6	9	6	7	7	6
36014	18	7	8	4	39	7	23	5	7	11	7	9	7	7
36015	12	5	6	4	20	5	13	5	5	9	5	6	6	6
36016	14	7	7	4	23	5	13	4	5	8	5	7	6	5
36017	14	8	9	4	28	7	20	5	7	11	7	8	7	7
36018	16	10	11	4	31	10	22	4	9	10	8	9	7	9
36019	12	5	5	4	19	5	13	4	5	8	5	6	6	5
36019-R	12	5	6	4	16	5	12	5	5	8	5	6	6	6
36020	20	9	10	4	42	9	27	5	9	10	8	11	9	8
36021	14	7	9	4	27	8	17	5	7	9	7	8	6	7
36022	13	7	7	4	27	7	19	5	6	9	6	7	6	6
36023	14	7	8	4	24	7	19	5	6	9	6	8	6	7
36024	17	6	8	4	27	7	17	5	6	9	6	7	6	7
36025	14	9	9	4	27	7	18	5	7	9	6	8	6	7
36026	13	6	7	4	23	6	16	4	6	9	6	7	6	6
36027	12	5	5	4	22	-1	16	4	5	9	6	6	6	6
36028	14	8	9	4	29	6	19	4	6	9	7	1	6	7
36029	15	5	6	4	19	6	15	4	-1	9	6	6	6	6
36030	14	6	7	4	27	6	20	5	6	10	6	7	-1	7
36031	16	6	8	4	24	6	16	4	6	9	6	7	7	7
36032	14	6	6	4	22	6	2	5	6	9	6	7	6	6
36033	13	6	7	4	26	7	17	4	7	9	6	8	6	6
36034	16	7	8	5	37	7	23	5	7	11	7	8	8	7
36034-R	13	6	8	4	28	7	21	5	6	10	6	7	7	7
36035	13	5	6	4	22	6	17	-1	5	8	5	6	6	6
36036	20	12	14	4	37	9	26	5	8	10	8	10	8	8
36037	13	7	9	5	41	6	25	5	7	11	7	8	8	7
36038	13	5	5	4	19	5	11	4	5	9	6	7	6	6
36039	12	7	7	4	25	6	15	4	5	8	5	8	6	6
36040	15	5	6	4	23	5	16	4	5	9	5	6	6	6
36041	12	4	5	4	24	5	17	5	5	10	5	6	6	6
36042	15	5	6	4	24	5	16	4	5	9	5	7	6	6
36043	15	8	8	4	28	7	18	5	6	11	6	7	6	6
36044	16	6	7	4	25	7	18	5	6	11	6	6	7	6
36045	14	6	7	4	27	6	17	5	6	11	6	7	6	6
36046	18	8	8	5	34	8	24	4	7	12	7	8	7	7
36047	17	5	6	4	28	6	19	-1	6	11	6	7	6	6
36048	20	6	7	5	40	6	21	5	6	10	5	7	6	6
36049	17	6	8	4	27	6	16	5	6	10	6	6	6	6
36049-R	15	6	7	4	27	7	17	4	7	11	6	8	7	7

	113 - HBA	114 - MBI	115 - MBL	116 - MAR	117 - HA	118 - MPH	119 - HBA	120 - THI	121 - MPH	122 - MPH	123 - MPH	124 - MBI	125 - HAR	126 - MPH
36050	16	6	7	4	28	6	20	5	6	10	6	7	7	6
36051	16	5	6	4	25	6	18	5	6	10	6	7	6	6
36052	14	5	6	4	22	5	15	4	6	10	5	6	7	6
36053	17	8	8	4	27	8	19	4	7	10	7	1	7	7
36054	12	6	6	4	25	6	17	5	6	9	5	7	6	6
36055	18	6	8	4	28	6	18	5	6	11	6	7	7	7
36056	12	6	6	4	20	5	14	5	5	9	5	6	6	6
36057	13	5	5	3	21	5	16	5	5	8	5	6	6	6
36058	13	6	7	3	25	5	16	4	5	8	5	7	6	5
36059	14	7	6	4	28	6	18	-1	5	9	5	8	6	6
36060	17	8	9	4	37	6	18	5	6	10	6	9	6	6
36061	20	10	12	5	40	10	29	5	9	12	7	9	8	8
36062	21	10	13	4	36	9	21	4	8	11	8	8	8	8
36063	15	7	8	4	29	7	19	-1	7	10	6	7	6	7
36064	15	6	6	4	29	7	19	5	6	10	6	6	7	6
36064-R	15	6	7	4	29	6	18	5	6	9	6	7	7	6
36101	16	7	8	4	35	8	25	5	8	10	6	8	7	6
36102	20	7	9	5	38	9	24	4	8	11	7	9	7	8
36103	16	7	9	4	36	9	23	4	8	10	7	9	-1	7
LMB-QA	10	4	4	4	17	5	2	4	5	8	5	5	5	5
LMB-QA	13	4	5	4	20	5	14	4	5	9	5	6	6	6

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH
36000	6	3	5	7	6	20	11	17	12	10	7	9	11	9
36001	6	3	4	6	6	22	11	19	12	9	6	9	11	9
36002	5	3	4	6	5	18	12	16	12	11	6	9	11	9
36003	5	3	5	6	6	19	12	16	12	11	7	10	11	9
36004	5	4	4	6	6	22	12	17	12	10	6	9	11	9
36004-R	5	3	5	6	5	21	11	18	12	10	6	9	11	10
36005	5	3	5	6	6	22	12	16	13	10	6	10	2	10
36006	4	3	4	6	6	26	12	16	15	11	6	10	2	9
36007	4	3	4	5	6	17	12	16	12	10	7	9	10	9
36008	4	3	4	6	5	18	11	16	12	10	7	8	2	9
36009	5	3	4	6	5	18	11	16	12	11	6	9	1	9
36010	6	3	5	7	7	22	11	18	13	10	6	10	2	10
36011	5	3	4	6	6	22	12	16	13	10	7	10	12	9
36012	5	4	5	6	6	23	12	17	13	11	7	9	12	9
36013	5	4	5	6	6	20	11	16	11	11	7	9	10	9
36014	5	4	4	6	6	23	11	18	13	12	7	10	11	9
36015	4	3	4	5	5	15	11	16	10	11	6	8	1	9
36016	4	3	4	5	5	16	11	14	10	10	6	9	10	8
36017	5	4	5	6	6	23	11	17	13	11	7	9	11	9
36018	6	4	5	7	7	27	12	18	13	12	7	10	12	10
36019	4	3	5	6	5	14	11	16	11	9	6	9	9	8
36019-R	4	3	4	5	5	14	11	13	10	9	5	8	10	9
36020	6	4	5	7	6	34	12	20	13	12	8	10	12	10
36021	5	3	5	6	5	20	12	18	13	10	6	9	11	1
36022	5	3	4	6	6	20	12	17	11	10	6	9	11	9
36023	6	3	4	5	6	20	12	17	13	11	6	9	1	10
36024	5	3	4	5	6	18	11	15	11	10	6	9	11	9
36025	6	3	5	6	6	19	11	15	13	9	7	11	11	10
36026	5	4	5	6	6	20	12	17	11	10	6	9	11	9
36027	4	3	4	5	5	15	12	15	12	9	6	8	10	9
36028	5	3	4	5	6	22	12	17	12	9	7	9	11	9
36029	5	3	4	6	5	16	12	14	12	11	6	10	11	9
36030	5	3	4	5	5	20	12	17	12	10	6	9	1	9
36031	5	3	4	6	5	17	11	16	12	12	6	9	11	9
36032	4	3	5	6	6	18	11	17	13	10	7	10	11	8
36033	5	3	5	5	6	19	12	17	12	11	7	9	10	9
36034	5	3	4	5	6	28	14	18	13	12	7	10	12	9
36034-R	6	4	5	6	6	26	11	17	13	11	6	10	11	9
36035	5	3	4	6	5	16	12	16	11	9	5	9	10	9
36036	6	3	6	7	7	30	12	21	14	12	7	11	13	10
36037	5	3	5	6	6	29	13	19	13	11	7	10	11	9
36038	4	3	4	5	6	16	11	15	13	9	5	9	11	1
36039	5	4	5	6	5	15	12	14	11	11	6	9	10	8
36040	4	3	4	5	5	19	12	18	12	10	5	8	10	9
36041	5	3	4	5	5	17	11	17	11	10	6	9	2	9
36042	5	3	4	6	5	18	12	17	11	10	6	9	11	9
36043	5	3	5	6	5	27	11	18	11	10	6	10	11	9
36044	5	3	4	6	5	19	12	18	12	11	6	9	11	9
36045	4	3	4	6	5	24	12	17	12	11	7	9	1	9
36046	5	4	5	7	6	27	14	20	13	11	7	10	11	10
36047	4	3	4	6	5	20	12	20	12	10	6	9	11	8
36048	4	3	5	6	5	20	12	18	10	9	6	9	10	9
36049	5	4	5	6	6	21	11	18	12	9	6	9	2	10
36049-R	5	4	4	6	6	22	12	17	12	10	6	9	10	9

	127 - MPH	128 - MPH	129 - HAR	130 - HAR	131 - MPH	132 - ALK	133 - HAR	134 - HAR	135 - MPH	136 - MPH	137 - HBI	138 - HBI	139 - HPH	140 - HPH
36050	5	3	5	6	6	24	12	17	12	10	6	9	11	9
36051	5	3	5	6	6	20	12	18	12	11	6	9	2	10
36052	4	3	4	6	5	17	12	16	11	11	6	9	10	9
36053	5	3	5	6	6	23	11	17	11	11	7	10	1	9
36054	5	4	4	6	5	18	12	17	12	10	6	9	10	10
36055	5	3	5	6	6	22	12	18	13	9	6	9	2	9
36056	5	3	4	5	5	16	12	16	11	9	6	9	11	8
36057	4	3	4	6	5	16	12	16	10	11	6	8	2	8
36058	4	3	4	5	5	17	12	16	11	11	6	9	10	8
36059	5	3	4	5	5	18	12	16	11	9	6	9	10	9
36060	5	3	4	6	6	17	13	16	11	10	5	9	2	9
36061	6	4	5	7	7	32	11	20	16	11	6	11	12	10
36062	6	3	5	7	6	26	12	18	14	10	6	10	12	10
36063	5	3	5	6	6	22	12	17	13	11	7	10	11	10
36064	5	3	5	6	5	21	12	17	11	9	6	9	2	9
36064-R	5	3	4	6	6	20	12	17	12	10	6	9	11	9
36101	5	3	5	6	6	27	12	20	12	11	7	10	11	9
36102	6	4	5	7	6	27	13	19	12	11	7	11	2	10
36103	5	4	4	6	6	25	13	19	13	12	6	10	5	10
LMB-QA	4	3	4	5	5	12	11	14	11	10	6	8	-1	8
LMB-QA	4	3	4	5	6	14	12	15	11	10	6	9	10	9

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
36000	10	12	48	13	35	18	8	10	2	12	10	22	30	18
36001	11	12	54	13	44	19	8	9	2	11	9	20	27	17
36002	9	12	44	12	29	18	7	9	10	11	9	17	23	17
36003	10	11	49	12	42	18	8	9	12	12	10	18	25	18
36004	10	12	46	13	35	19	8	10	2	12	10	20	26	17
36004-R	11	12	49	12	31	19	8	10	12	2	10	20	27	17
36005	11	2	58	11	42	3	8	9	12	11	10	20	28	4
36006	11	12	45	12	35	2	7	8	11	10	10	13	17	17
36007	9	11	41	11	27	17	7	9	11	11	10	13	17	3
36008	9	10	42	11	31	4	8	9	12	12	10	5	20	17
36009	10	11	41	13	37	2	8	9	2	11	9	6	20	3
36010	12	12	53	13	44	5	8	10	12	12	10	24	33	21
36011	10	11	56	13	37	11	8	1	12	12	10	13	26	18
36012	11	2	55	13	39	3	8	10	13	13	10	26	35	19
36013	10	12	49	11	27	17	7	9	11	2	9	17	23	18
36014	10	11	62	11	41	2	7	9	2	2	10	20	27	18
36015	10	11	31	11	29	18	7	9	11	11	9	3	16	17
36016	9	9	36	11	28	4	7	9	11	12	10	13	16	16
36017	11	10	56	12	44	4	8	10	2	12	10	20	28	18
36018	12	13	53	14	49	4	9	10	12	12	11	25	35	19
36019	9	11	4	11	26	3	7	9	2	2	9	2	16	17
36019-R	9	12	35	12	32	18	7	8	11	11	9	13	17	17
36020	12	12	74	14	51	4	8	10	13	13	10	30	41	20
36021	11	12	47	12	41	2	8	10	12	11	10	16	22	18
36022	10	12	49	12	38	19	7	9	11	11	10	9	21	17
36023	11	12	43	12	41	4	8	10	2	11	10	18	24	3
36024	11	12	41	12	36	19	7	9	11	2	10	15	19	18
36025	12	13	44	13	45	3	8	10	11	12	10	16	20	17
36026	10	12	38	12	37	1	8	9	12	11	9	17	22	16
36027	9	10	6	10	31	2	7	9	1	10	10	2	16	16
36028	10	11	56	12	38	5	7	9	12	12	10	16	20	3
36029	10	11	38	11	33	1	7	9	11	11	10	6	18	17
36030	9	2	53	12	37	2	7	9	11	11	10	16	21	17
36031	11	12	38	13	34	19	8	9	12	11	10	6	19	19
36032	10	11	45	11	32	4	7	9	11	12	10	16	21	17
36033	10	10	45	12	29	4	8	9	12	11	10	6	21	18
36034	11	11	63	14	53	3	8	9	1	2	11	27	37	18
36034-R	12	12	56	13	43	5	8	10	12	12	10	23	32	19
36035	10	12	40	11	26	18	8	9	2	11	9	14	18	3
36036	15	15	72	17	51	23	10	12	14	2	11	25	33	4
36037	11	2	69	13	49	3	8	10	2	11	10	24	33	4
36038	9	12	37	11	25	3	7	9	11	11	10	3	16	3
36039	10	2	33	2	26	2	7	8	11	1	9	13	16	17
36040	10	2	41	13	37	3	8	8	12	10	12	3	16	16
36041	10	12	40	11	29	3	7	9	11	11	10	13	17	17
36042	9	11	43	11	30	18	8	9	11	12	10	6	16	16
36043	11	2	50	13	41	3	9	9	2	12	9	18	25	18
36044	10	10	49	11	37	1	7	9	11	2	10	6	22	18
36045	10	12	46	12	36	2	7	9	11	2	10	16	21	3
36046	12	12	58	2	47	18	8	9	12	11	10	22	31	18
36047	9	1	51	12	32	2	8	9	11	11	10	17	21	3
36048	10	11	54	12	34	17	8	9	12	10	10	13	18	2
36049	10	13	44	12	43	19	8	9	12	11	10	7	24	18
36049-R	10	11	50	13	41	18	8	8	2	12	10	18	24	2

	141 - HBI	142 - HPH	143 - HA	144 - HBI	145 - HBA	146 - HPH	147 - HBI	148 - HPH	149 - HBI	150 - HPH	151 - HBI	152 - HPH	153 - HPH	154 - HPH
36050	11	11	53	12	36	17	8	9	12	11	10	16	34	18
36051	11	12	41	12	40	5	8	9	2	2	10	8	22	17
36052	10	11	40	12	36	18	7	9	11	1	9	15	21	2
36053	10	2	45	12	38	3	8	10	12	1	10	22	32	3
36054	10	1	45	12	36	10	7	8	12	2	9	15	22	17
36055	11	12	53	12	41	2	8	9	12	2	10	8	21	17
36056	9	12	38	12	35	12	7	9	11	11	9	2	17	2
36057	10	11	43	11	34	17	7	9	2	2	10	2	16	17
36058	9	11	40	11	29	2	7	9	11	11	9	2	17	16
36059	10	12	47	12	35	18	7	9	2	10	9	13	17	17
36060	11	12	53	11	38	2	8	9	2	10	10	2	17	17
36061	15	16	67	15	47	24	10	2	14	3	11	6	33	21
36062	13	13	55	15	48	2	9	11	13	3	11	14	30	18
36063	12	12	50	13	41	18	8	10	2	2	10	19	27	19
36064	11	12	47	12	42	2	7	9	11	11	10	16	21	18
36064-R	10	11	52	12	37	5	8	8	12	2	10	16	20	16
36101	11	12	63	13	50	1	9	10	12	2	10	7	27	18
36102	11	13	64	14	49	21	9	9	13	3	11	23	32	19
36103	13	2	60	15	48	2	9	9	3	11	10	6	35	17
LMB-QA	8	9	29	11	22	3	7	8	11	10	9	13	15	16
LMB-QA	9	10	14	11	32	2	7	8	11	11	10	13	15	2

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
36000	17	15	14	46	17	17	53	19
36001	17	14	15	48	18	19	56	20
36002	17	15	14	46	17	17	52	18
36003	18	15	15	-1	19	3	54	19
36004	18	14	15	41	19	19	54	19
36004-R	18	15	14	47	18	18	64	20
36005	18	14	16	48	18	2	62	18
36006	17	14	15	45	18	18	33	3
36007	17	14	15	43	17	17	11	19
36008	18	15	16	42	19	18	58	18
36009	17	14	15	41	19	18	49	4
36010	19	14	15	37	19	4	57	20
36011	18	-1	15	42	19	19	48	19
36012	18	14	14	43	3	19	58	19
36013	18	14	15	46	18	18	56	19
36014	19	16	15	44	18	3	58	3
36015	16	14	15	40	17	18	51	18
36016	17	15	14	42	17	18	38	19
36017	3	15	15	45	19	4	59	18
36018	18	13	14	42	17	19	62	18
36019	17	15	15	41	18	2	19	19
36019-R	16	-1	14	2	17	17	9	3
36020	18	15	15	53	20	19	73	19
36021	18	15	15	42	2	17	29	3
36022	17	15	16	44	18	4	52	19
36023	17	15	14	42	18	18	56	18
36024	18	13	14	41	17	3	49	19
36025	18	15	16	-1	17	17	48	3
36026	17	15	15	44	18	19	50	19
36027	17	14	-1	38	18	19	44	18
36028	18	14	15	47	18	19	19	3
36029	17	15	15	40	18	18	22	20
36030	18	15	15	40	18	18	12	3
36031	18	15	14	43	17	17	47	18
36032	17	15	15	43	17	19	56	19
36033	17	13	14	39	19	20	58	4
36034	18	15	15	41	10	19	58	19
36034-R	18	15	15	45	17	19	63	20
36035	19	14	15	41	4	17	56	19
36036	20	16	16	51	19	21	68	22
36037	17	15	-1	45	19	19	63	2
36038	18	15	15	38	17	17	28	17
36039	16	14	15	-1	20	18	54	2
36040	17	13	14	46	18	23	73	2
36041	17	14	15	49	18	18	29	19
36042	4	14	15	44	18	19	28	19
36043	18	15	15	48	3	19	58	18
36044	17	15	15	46	2	19	59	19
36045	17	15	15	48	18	19	55	19
36046	18	15	15	48	18	3	63	3
36047	17	15	16	44	19	4	60	18
36048	15	14	15	44	17	18	56	19
36049	17	14	15	49	17	18	56	4
36049-R	18	14	14	44	18	19	58	20

	155 - HPH	156 - HBI	157 - HAR	158 - HBA	159 - HBA	160 - HBI	161 - HA	162 - HPH
36050	16	15	16	21	19	18	54	3
36051	18	14	15	43	17	18	23	20
36052	18	14	15	42	17	17	52	17
36053	19	16	16	46	18	4	55	4
36054	17	16	15	44	3	17	32	3
36055	18	14	15	46	17	18	57	3
36056	18	14	15	-1	3	18	28	18
36057	17	14	14	43	2	3	13	20
36058	17	14	15	41	19	17	51	3
36059	16	14	15	44	2	20	55	19
36060	17	13	13	42	17	18	58	2
36061	3	16	16	55	3	19	73	21
36062	3	15	16	50	19	19	30	20
36063	18	15	15	47	18	18	60	3
36064	18	-1	15	48	18	19	32	19
36064-R	18	16	15	45	19	19	35	5
36101	18	15	16	47	18	19	50	20
36102	18	16	17	45	19	19	56	3
36103	18	15	16	55	20	2	80	19
LMB-QA	17	14	15	39	18	18	50	18
LMB-QA	18	14	15	38	18	18	49	19

Quality Analysis ... Innovative Technologies

Date Submitted: 12-Sep-08
Invoice No.: A08-6138
Invoice Date: 04-Nov-08
Your Reference: STURGEON LAKE

Brandon University
270-18th Street
Manitoba R7A 6A9
Canada

ATTN: H Mumin

CERTIFICATE OF ANALYSIS

10 Rock samples and 4 Soil samples were submitted for analysis.

The following analytical packages were requested:

Code SGH Soil Gas Hydrocarbons
Code 1H INAA(INAAGEO)/Total Digestion ICP(TOTAL)
Code 7-Enzyme Leach Enzyme Leach ICP/MS(ENZYME)

REPORT **A08-6138**

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

Notes:
Elements which exceed the upper limits should be analyzed by assay techniques. Some elements are reported by multiple techniques. These are indicated by MULT.

CERTIFIED BY :

Elitsa Hrischeva, Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited LAB 266
LAB 266 Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Analyte Symbol	Au	Ag	Cu	Cd	Mo	Pb	Ni	Zn	S	Al	As	Ba	Be	Bi	Br	Ca	Co	Cr	Cs	Eu	Fe	Hf	Hg	Ir
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb
Detection Limit	2	0.3	1	0.3	1	3	1	1	0.01	0.01	0.5	50	1	2	0.5	0.01	1	2	1	0.2	0.01	1	1	5
Analysis Method	INAA	MULT INAA / TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	MULT INAA / TD-ICP	MULT INAA / TD-ICP	TD-ICP	TD-ICP	INAA	INAA	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
20041	22	0.6	378	1.8	< 1	18	254	236	16.2	4.41	161	< 50	< 1	< 2	2.8	1.45	258	37	5	< 0.2	22.1	1	< 1	< 5
20042	39	0.8	328	1.1	< 1	9	180	74	16.3	1.95	177	< 50	< 1	< 2	< 0.5	1.22	147	47	< 1	0.3	35.9	1	< 1	< 5
20043	15	< 0.3	172	0.8	2	< 3	98	83	8.88	1.70	84.9	< 50	< 1	< 2	< 0.5	0.62	58	46	< 1	< 0.2	14.0	< 1	< 1	< 5
20044	458	< 0.3	309	0.3	< 1	< 3	19	31	3.71	7.03	< 0.5	< 50	< 1	< 2	< 0.5	2.29	67	25	< 1	< 0.2	10.2	2	< 1	< 5
20045	< 2	< 0.3	5	0.7	< 1	4	70	81	0.03	6.93	6.9	< 50	< 1	< 2	< 0.5	9.26	44	97	< 1	0.9	8.83	2	< 1	< 5
21661	23	0.5	231	0.6	< 1	18	264	209	19.6	3.88	151	< 50	< 1	< 2	< 0.5	1.22	593	52	5	0.8	29.0	2	< 1	< 5
21662	22	0.5	229	2.1	< 1	16	234	439	16.8	4.89	99.1	< 50	< 1	< 2	4.7	2.08	545	55	3	0.6	19.8	1	< 1	< 5
21663	< 2	1.0	693	6.5	4	17	104	1970	9.28	3.70	4.6	< 50	< 1	< 2	< 0.5	0.95	85	66	< 1	0.9	18.9	2	< 1	< 5
21664	< 2	1.1	765	11.3	4	15	107	3410	9.88	3.85	10.4	610	< 1	< 2	< 0.5	0.74	98	66	< 1	0.9	20.0	2	< 1	< 5
21665	< 2	0.5	8	< 0.3	< 1	11	24	31	0.02	6.99	4.0	740	1	< 2	7.4	2.15	12	70	< 1	0.7	3.61	7	< 1	< 5
21666	< 2	< 0.3	13	< 0.3	< 1	10	28	35	0.01	7.34	3.6	510	1	< 2	6.7	2.43	14	67	5	0.9	4.32	7	< 1	< 5
21667	< 2	< 0.3	11	< 0.3	< 1	10	24	31	< 0.01	7.60	25.9	750	1	< 2	5.3	2.54	16	51	2	1.0	3.01	5	< 1	< 5
21668	< 2	< 0.3	7	< 0.3	< 1	11	21	29	0.02	7.25	3.8	560	1	< 2	4.0	2.16	10	49	3	0.7	2.47	6	< 1	< 5

Analyte Symbol	K	Mg	Mn	Na	P	Rb	Sb	Sc	Se	Sr	Ta	Ti	Th	U	V	W	Y	La	Ce	Nd	Sm	Sn	Tb	Yb
Unit Symbol	%	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
Detection Limit	0.01	0.01	1	0.01	0.001	15	0.1	0.1	3	1	0.5	0.01	0.2	0.5	2	1	1	0.5	3	5	0.1	0.01	0.5	0.2
Analysis Method	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA
20041	0.63	0.70	2300	0.46	0.020	47	486	17.8	< 3	89	< 0.5	0.18	< 0.2	< 0.5	125	13	10	4.8	< 3	< 5	1.0	< 0.01	< 0.5	< 0.2
20042	0.29	0.28	689	0.30	0.011	< 15	85.0	6.8	< 3	23	< 0.5	0.08	< 0.2	< 0.5	45	< 1	5	5.4	< 3	< 5	0.9	< 0.01	< 0.5	0.8
20043	0.22	0.39	1090	0.25	0.009	< 15	20.6	4.9	< 3	25	< 0.5	0.08	< 0.2	< 0.5	36	< 1	6	2.4	< 3	< 5	0.6	< 0.01	< 0.5	0.5
20044	0.16	1.34	1160	1.70	0.043	< 15	< 0.1	42.8	< 3	145	< 0.5	0.75	2.3	< 0.5	398	< 1	19	5.1	18	14	2.3	< 0.01	< 0.5	2.8
20045	0.11	2.61	2940	1.79	0.029	< 15	0.2	33.6	< 3	123	< 0.5	0.41	< 0.2	< 0.5	251	10	11	4.1	< 3	< 5	2.8	< 0.01	< 0.5	3.2
21661	0.66	0.61	2550	0.40	0.018	< 15	252	22.3	< 3	70	< 0.5	0.18	< 0.2	< 0.5	129	17	10	4.6	18	< 5	1.1	< 0.01	< 0.5	1.4
21662	0.63	0.77	1650	0.68	0.025	< 15	240	26.7	< 3	123	< 0.5	0.26	2.2	< 0.5	161	18	12	6.2	14	< 5	1.4	< 0.01	< 0.5	1.1
21663	0.65	0.48	2940	0.80	0.024	< 15	0.9	12.8	< 3	73	< 0.5	0.11	3.5	< 0.5	63	< 1	10	11.7	25	9	1.7	< 0.01	< 0.5	1.6
21664	0.93	0.46	2260	0.69	0.024	61	0.1	12.7	5	62	< 0.5	0.13	2.7	< 0.5	66	< 1	9	13.3	26	23	1.9	< 0.01	< 0.5	1.3
21665	1.51	0.73	387	2.93	0.036	89	< 0.1	10.0	< 3	316	< 0.5	0.26	4.8	< 0.5	70	< 1	10	18.7	31	< 5	2.6	< 0.01	< 0.5	1.3
21666	1.21	0.92	488	2.61	0.058	< 15	0.3	11.4	< 3	293	< 0.5	0.21	7.6	< 0.5	64	< 1	13	19.7	38	15	2.9	< 0.01	< 0.5	1.5
21667	1.30	0.80	450	2.93	0.033	< 15	< 0.1	10.7	< 3	310	< 0.5	0.18	4.1	< 0.5	51	< 1	11	14.8	33	12	2.5	< 0.01	< 0.5	1.6
21668	1.50	0.67	332	2.50	0.016	< 15	< 0.1	8.3	< 3	317	< 0.5	0.17	4.4	< 0.5	42	< 1	10	12.5	25	< 5	2.1	< 0.01	< 0.5	1.3

Analyte Symbol	Lu	Mass	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge
Unit Symbol	ppm	g	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.05		2000	5	2	1	1	5	1	0.1	1	1	0.01	0.05	1	0.1	0.1	1	3	3	10	1	1	0.5
Analysis Method	INAA	INAA	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
20041	< 0.05	37.5																						
20042	0.10	33.9																						
20043	0.14	33.0																						
20044	0.51	33.7																						
20045	0.57	27.3																						
21661	0.25	26.8																						
21662	0.33	42.8																						
21663	0.18	27.5																						
21664	0.25	26.1																						
21665	0.22	28.1	4000	161	21	9	2	5	< 1	< 0.1	1	< 1	< 0.01	< 0.05	< 1	1.0	1.0	8	16	11	20	3	1	< 0.5
21666	0.32	35.1	5000	128	17	13	2	< 5	< 1	< 0.1	1	< 1	< 0.01	< 0.05	< 1	1.0	1.0	21	29	11	20	4	1	< 0.5
21667	0.21	35.6	3000	101	7	9	< 1	< 5	< 1	< 0.1	1	< 1	< 0.01	< 0.05	< 1	< 0.1	1.0	7	8	11	10	4	< 1	< 0.5
21668	0.26	33.4	4000	104	8	10	< 1	< 5	< 1	< 0.1	1	< 1	< 0.01	< 0.05	< 1	< 0.1	1.0	4	5	6	40	2	< 1	< 0.5

Analyte Symbol	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.2	0.2	0.1	0.8	0.1	0.8	100	20	0.5	1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
20041																								
20042																								
20043																								
20044																								
20045																								
21661																								
21662																								
21663																								
21664																								
21665	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	5.0	5	< 1	< 0.1	< 0.1	5.0	9.0	2.0	5.0	2.0	< 0.1	2.0	< 0.1	1.0	< 0.1	< 0.1
21666	< 0.2	1.0	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	3.0	4	< 1	< 0.1	< 0.1	2.0	2.0	1.0	1.0	1.0	< 0.1	1.0	< 0.1	1.0	< 0.1	< 0.1
21667	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	4.0	1	< 1	< 0.1	< 0.1	5.0	9.0	2.0	3.0	1.0	< 0.1	1.0	< 0.1	1.0	< 0.1	< 0.1
21668	< 0.2	1.0	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	3.0	1	< 1	< 0.1	< 0.1	4.0	6.0	1.0	2.0	1.0	< 0.1	1.0	< 0.1	< 0.1	< 0.1	< 0.1

Analyte Symbol	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.1	0.1	2	2	100	1	1	1	0.1	1	1	1	1	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
20041															
20042															
20043															
20044															
20045															
21661															
21662															
21663															
21664															
21665	< 0.1	< 0.1	< 0.1	< 2	< 2	< 100	118	45	53	1.0	499	< 1	< 1	< 1	< 1
21666	< 0.1	< 0.1	< 0.1	< 2	2	< 100	417	31	129	2.0	411	< 1	< 1	< 1	< 1
21667	< 0.1	< 0.1	< 0.1	< 2	< 2	< 100	227	16	64	2.0	218	< 1	< 1	< 1	< 1
21668	< 0.1	< 0.1	< 0.1	< 2	2	< 100	28	32	83	1.0	463	< 1	< 1	< 1	< 1

Quality Control

Analyte Symbol	Au	Ag	Cu	Cd	Mo	Pb	Ni	Zn	S	Al	As	Be	Bi	Ca	Co	Cr	Fe	K	Mg	Mn	Na	P	Sc	Sr
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm	ppm	%	%	%	ppm	%	%	ppm	ppm
Detection Limit	2	0.3	1	0.3	1	3	1	1	0.01	0.01	0.5	1	2	0.01	1	2	0.01	0.01	0.01	1	0.01	0.001	0.1	1
Analysis Method	INAA	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	TD-ICP	TD-ICP	INAA	INAA	INAA	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	TD-ICP
GXR-1 Meas		30.4	1180	3.4	13	720	42	719	0.23	1.84		1	1360	0.96				0.04	0.19	910		0.059		321
GXR-1 Cert		31.0	1110	3.30	18.0	730	41.0	760	0.257	3.52		1.22	1380	0.960				0.0500	0.217	852		0.0650		275
GXR-1 Meas		31.0	1120	3.3	13	742	40	740	0.23	2.42		1	1380	0.92				0.04	0.20	921		0.057		295
GXR-1 Cert		31.0	1110	3.30	18.0	730	41.0	760	0.257	3.52		1.22	1380	0.960				0.0500	0.217	852		0.0650		275
DNC-1 Meas		< 0.3	94		< 1	5	240	53	0.05	9.11		< 1	< 2	8.41				0.20	5.18	1120		0.027		151
DNC-1 Cert		0.0270	96.0		0.700	6.30	247	66.0	0.0390	9.69		1.00	0.0200	8.06				0.190	6.06	1150		0.0370		145
DNC-1 Meas		< 0.3	91		< 1	< 3	241	56	0.05	9.46		< 1	< 2	7.91				0.20	5.51	1090		0.026		133
DNC-1 Cert		0.0270	96.0		0.700	6.30	247	66.0	0.0390	9.69		1.00	0.0200	8.06				0.190	6.06	1150		0.0370		145
GXR-4 Meas		3.8	6730	0.6	313	47	46	73	1.86	6.56		3	16	1.24				4.40	1.64	169		0.142		256
GXR-4 Cert		4.00	6520	0.860	310	52.0	42.0	73.0	1.77	7.20		1.90	19.0	1.01				4.01	1.66	155		0.120		221
GXR-4 Meas		3.6	6510	0.5	316	54	50	76	1.81	6.63		3	16	1.17				3.76	1.69	159		0.136		227
GXR-4 Cert		4.00	6520	0.860	310	52.0	42.0	73.0	1.77	7.20		1.90	19.0	1.01				4.01	1.66	155		0.120		221
GXR-2 Meas		16.4	79	4.4	1	674	20	520	0.02	8.42		2	< 2	0.79				1.31	0.65	840		0.062		152
GXR-2 Cert		17.0	76.0	4.10	2.10	690	21.0	530	0.0313	16.5		1.70	0.690	0.930				1.37	0.850	1010		0.105		160
GXR-2 Meas		17.4	78	4.3	< 1	688	18	537	0.02	9.79		2	< 2	0.78				1.34	0.67	908		0.056		132
GXR-2 Cert		17.0	76.0	4.10	2.10	690	21.0	530	0.0313	16.5		1.70	0.690	0.930				1.37	0.850	1010		0.105		160
SDC-1 Meas		< 0.3	30	0.5	< 1	21	36	100	0.07	7.55		4	< 2	1.23				2.91	0.92	966		0.062		197
SDC-1 Cert		0.0410	30.0	0.0800	0.250	25.0	38.0	103	0.0650	8.34		3.00	2.60	1.00				2.72	1.02	883		0.0690		183
SDC-1 Meas		< 0.3	30	< 0.3	< 1	20	34	102	0.07	8.38		3	< 2	1.17				2.77	0.98	872		0.052		179
SDC-1 Cert		0.0410	30.0	0.0800	0.250	25.0	38.0	103	0.0650	8.34		3.00	2.60	1.00				2.72	1.02	883		0.0690		183
SCO-1 Meas		< 0.3	26	0.3	1	26	29	95		6.67		2	< 2	2.13				2.34	1.45	410		0.085		177
SCO-1 Cert		0.134	28.7	0.140	1.37	31.0	27.0	103		7.24		1.84	0.370	1.87				2.30	1.64	410		0.0900		174
SCO-1 Meas		< 0.3	26	< 0.3	< 1	28	28	98		7.17		2	< 2	2.20				2.34	1.61	392		0.081		165
SCO-1 Cert		0.134	28.7	0.140	1.37	31.0	27.0	103		7.24		1.84	0.370	1.87				2.30	1.64	410		0.0900		174
GXR-6 Meas		0.6	66	0.5	2	88	25	119	0.01	7.63		1	< 2	0.16				1.48	0.25	1040		0.033		27
GXR-6 Cert		1.30	66.0	1.00	2.40	101	27.0	118	0.0160	17.7		1.40	0.290	0.180				1.87	0.609	1010		0.0350		35.0
GXR-6 Meas		0.3	67	< 0.3	3	91	25	131	0.02	12.5		1	< 2	0.21				1.85	0.58	1110		0.038		40
GXR-6 Cert		1.30	66.0	1.00	2.40	101	27.0	118	0.0160	17.7		1.40	0.290	0.180				1.87	0.609	1010		0.0350		35.0
TILL-1 Meas																								
TILL-1 Cert																								
SO-2 Meas																								
SO-2 Cert																								
OREAS 13P Meas			2420				1950																	
OREAS 13P Cert			2500				2260																	
OREAS 13P Meas			2450				2090																	
OREAS 13P Cert			2500				2260																	
DMMAS-106 Meas	620										4270				95	167	8.60				0.85		18.1	
DMMAS-106 Cert	599										4060				97	163	8.50				0.82		18.1	
DMMAS-106 Meas	576										4110				103	160	8.54				0.84		17.4	
DMMAS-106 Cert	599										4060				97	163	8.50				0.82		18.1	
Method Blank Method Blank		< 0.3	< 1	< 0.3	< 1	< 3	< 1	< 1	< 0.01	< 0.01		< 1	< 2	< 0.01				< 0.01	< 0.01	< 1		< 0.001		< 1
Method Blank Method Blank		< 0.3	5	< 0.3	< 1	< 3	< 1	< 1	< 0.01	< 0.01		< 1	< 2	< 0.01				< 0.01	< 0.01	16		< 0.001		< 1
Method Blank Method Blank																								
Method Blank Method Blank		< 0.3	< 1	< 0.3	< 1	< 3	1	< 1	< 0.01	< 0.01		< 1	< 2	< 0.01				< 0.01	< 0.01	< 1		< 0.001		< 1

Quality Control

Analyte Symbol	Ti	U	V	W	Y	La	Ce	Sm	Yb	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re	Au	Hg	Th	U
Unit Symbol	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.5	2	1	1	0.5	3	0.1	0.2	2000	5	2	1	1	5	1	0.1	1	1	0.01	0.05	1	0.1	0.1
Analysis Method	TD-ICP	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
GXR-1 Meas			87		38																			
GXR-1 Cert			80.0		32.0																			
GXR-1 Meas			89		32																			
GXR-1 Cert			80.0		32.0																			
DNC-1 Meas	0.29		141		22																			
DNC-1 Cert	0.287		148		18.0																			
DNC-1 Meas	0.27		150		18																			
DNC-1 Cert	0.287		148		18.0																			
GXR-4 Meas			93		21																			
GXR-4 Cert			87.0		14.0																			
GXR-4 Meas			97		17																			
GXR-4 Cert			87.0		14.0																			
GXR-2 Meas			56		14																			
GXR-2 Cert			52.0		17.0																			
GXR-2 Meas			51		14																			
GXR-2 Cert			52.0		17.0																			
SDC-1 Meas	0.64		103		43																			
SDC-1 Cert	0.606		102		40.0																			
SDC-1 Meas	0.23		55		39																			
SDC-1 Cert	0.606		102		40.0																			
SCO-1 Meas	0.36		125		27																			
SCO-1 Cert	0.380		131		26.0																			
SCO-1 Meas	0.27		120		23																			
SCO-1 Cert	0.380		131		26.0																			
GXR-6 Meas			200		7																			
GXR-6 Cert			186		14.0																			
GXR-6 Meas			209		14																			
GXR-6 Cert			186		14.0																			
TILL-1 Meas											494		108	37		23	66.0				< 0.05	< 1	4.0	5.0
TILL-1 Cert											6400.0		99000	18000		2000	7800.0				13	90.0	5600.0	2200.0
SO-2 Meas													30									< 1		
SO-2 Cert													64000									82.0		
OREAS 13P Meas																								
OREAS 13P Cert																								
OREAS 13P Meas																								
OREAS 13P Cert																								
DMMAS-106 Meas		46.4		20		19.0	28	2.8	4.3															
DMMAS-106 Cert		38.1		19		18.6	33	2.9	3.4															
DMMAS-106 Meas		42.0		17		18.3	26	3.2	3.5															
DMMAS-106 Cert		38.1		19		18.6	33	2.9	3.4															
Method Blank Method Blank	< 0.01		< 2		< 1																			
Method Blank Method Blank	< 0.01		< 2		< 1																			
Method Blank Method Blank										< 2000	< 5	< 2	< 1	< 1	< 5	< 1	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	< 0.1	< 0.1
Method Blank Method Blank	< 0.01		< 2		< 1																			

Quality Control

Analyte Symbol	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	1	3	3	10	1	1	0.5	0.2	0.2	0.1	0.8	0.1	0.8	100	20	0.5	1	1	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
GXR-1 Meas																								
GXR-1 Cert																								
GXR-1 Meas																								
GXR-1 Cert																								
DNC-1 Meas																								
DNC-1 Cert																								
DNC-1 Meas																								
DNC-1 Cert																								
GXR-4 Meas																								
GXR-4 Cert																								
GXR-4 Meas																								
GXR-4 Cert																								
GXR-2 Meas																								
GXR-2 Cert																								
GXR-2 Meas																								
GXR-2 Cert																								
SDC-1 Meas																								
SDC-1 Cert																								
SDC-1 Meas																								
SDC-1 Cert																								
SCO-1 Meas																								
SCO-1 Cert																								
SCO-1 Meas																								
SCO-1 Cert																								
GXR-6 Meas																								
GXR-6 Cert																								
GXR-6 Meas																								
GXR-6 Cert																								
TILL-1 Meas	89	29	196	140	14									800	< 20	21.0	13	3	< 0.1	< 0.1	18.0	42.0		21.0
TILL-1 Cert	18000	24000	47000	98000	22000									5990000	65000	38000	502000	10000	13000	700.0	28000	71000		26000
SO-2 Meas	10	30	21	330	3									600	< 20									
SO-2 Cert	9000	8000	7000	124000	21000									8600000	16000									
OREAS 13P Meas																								
OREAS 13P Cert																								
OREAS 13P Meas																								
OREAS 13P Cert																								
DMMAS-106 Meas																								
DMMAS-106 Cert																								
DMMAS-106 Meas																								
DMMAS-106 Cert																								
Method Blank Method Blank																								
Method Blank Method Blank																								
Method Blank Method Blank	< 1	< 3	< 3	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	< 0.5	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank Method Blank																								

Quality Control

Analyte Symbol	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	2	100	1	1	1	0.1	1	1	1	1	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
GXR-1 Meas																						
GXR-1 Cert																						
GXR-1 Meas																						
GXR-1 Cert																						
DNC-1 Meas																						
DNC-1 Cert																						
DNC-1 Meas																						
DNC-1 Cert																						
GXR-4 Meas																						
GXR-4 Cert																						
GXR-4 Meas																						
GXR-4 Cert																						
GXR-2 Meas																						
GXR-2 Cert																						
GXR-2 Meas																						
GXR-2 Cert																						
SDC-1 Meas																						
SDC-1 Cert																						
SDC-1 Meas																						
SDC-1 Cert																						
SCO-1 Meas																						
SCO-1 Cert																						
SCO-1 Meas																						
SCO-1 Cert																						
GXR-6 Meas																						
GXR-6 Cert																						
GXR-6 Meas																						
GXR-6 Cert																						
TILL-1 Meas	6.0	1.0		1.0			2.0		2.0	< 0.1	< 2	< 2	< 100	39400	58	508	1.0	976				
TILL-1 Cert	5900.0	1300.0		1100.0			3600.0		3900.0	600.0	15000	2400.0	13000	1420000	44000	291000	1000.0	702000				
SO-2 Meas														1340	81	197		691				
SO-2 Cert														720000	78000	340000		966000				
OREAS 13P Meas																						
OREAS 13P Cert																						
OREAS 13P Meas																						
OREAS 13P Cert																						
DMMAS-106 Meas																						
DMMAS-106 Cert																						
DMMAS-106 Meas																						
DMMAS-106 Cert																						
Method Blank Method Blank																						
Method Blank Method Blank																						
Method Blank Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 2	< 2	< 100	< 1	< 1	< 1	< 0.1	< 1	< 1	< 1	< 1	< 1
Method Blank Method Blank																						

Final Report
Activation Laboratories

Analyte Symbol	Au	Ag	Cu	Cd	Mo	Pb	Ni	Zn	S	Al	As	Be	Bi	Ca	Co	Cr	Fe	K	Mg	Mn
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	%	ppm	ppm	%	%	%	ppm
Detection Limit	2	0.3	1	0.3	1	3	1	1	0.01	0.01	0.5	1	2	0.01	1	2	0.01	0.01	0.01	1
Analysis Method	INAA	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	TD-ICP	TD-ICP	INAA	INAA	INAA	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas		30.4	1180	3.4	13	720	42	719	0.23	1.84		1	1360	0.96				0.04	0.19	910
GXR-1 Cert		31	1110	3.3	18	730	41	760	0.257	3.52		1.22	1380	0.96				0.05	0.217	852
GXR-1 Meas		31	1120	3.3	13	742	40	740	0.23	2.42		1	1380	0.92				0.04	0.2	921
GXR-1 Cert		31	1110	3.3	18	730	41	760	0.257	3.52		1.22	1380	0.96				0.05	0.217	852
DNC-1 Meas		< 0.3	94		< 1	5	240	53	0.05	9.11		< 1	< 2	8.41				0.2	5.18	1120
DNC-1 Cert		0.027	96		0.7	6.3	247	66	0.039	9.69		1	0.02	8.06				0.19	6.06	1150
DNC-1 Meas		< 0.3	91		< 1	< 3	241	56	0.05	9.46		< 1	< 2	7.91				0.2	5.51	1090
DNC-1 Cert		0.027	96		0.7	6.3	247	66	0.039	9.69		1	0.02	8.06				0.19	6.06	1150
GXR-4 Meas		3.8	6730	0.6	313	47	46	73	1.86	6.56		3	16	1.24				4.4	1.64	169
GXR-4 Cert		4	6520	0.86	310	52	42	73	1.77	7.2		1.9	19	1.01				4.01	1.66	155
GXR-4 Meas		3.6	6510	0.5	316	54	50	76	1.81	6.63		3	16	1.17				3.76	1.69	159
GXR-4 Cert		4	6520	0.86	310	52	42	73	1.77	7.2		1.9	19	1.01				4.01	1.66	155
GXR-2 Meas		16.4	79	4.4	1	674	20	520	0.02	8.42		2	< 2	0.79				1.31	0.65	840
GXR-2 Cert		17	76	4.1	2.1	690	21	530	0.0313	16.5		1.7	0.69	0.93				1.37	0.85	1010
GXR-2 Meas		17.4	78	4.3	< 1	688	18	537	0.02	9.79		2	< 2	0.78				1.34	0.67	908
GXR-2 Cert		17	76	4.1	2.1	690	21	530	0.0313	16.5		1.7	0.69	0.93				1.37	0.85	1010
SDC-1 Meas		< 0.3	30	0.5	< 1	21	36	100	0.07	7.55		4	< 2	1.23				2.91	0.92	966
SDC-1 Cert		0.041	30	0.08	0.25	25	38	103	0.065	8.34		3	2.6	1				2.72	1.02	883
SDC-1 Meas		< 0.3	30	< 0.3	< 1	20	34	102	0.07	8.38		3	< 2	1.17				2.77	0.98	872
SDC-1 Cert		0.041	30	0.08	0.25	25	38	103	0.065	8.34		3	2.6	1				2.72	1.02	883
SCO-1 Meas		< 0.3	26	0.3	1	26	29	95		6.67		2	< 2	2.13				2.34	1.45	410
SCO-1 Cert		0.134	28.7	0.14	1.37	31	27	103		7.24		1.84	0.37	1.87				2.3	1.64	410
SCO-1 Meas		< 0.3	26	< 0.3	< 1	28	28	98		7.17		2	< 2	2.2				2.34	1.61	392
SCO-1 Cert		0.134	28.7	0.14	1.37	31	27	103		7.24		1.84	0.37	1.87				2.3	1.64	410
GXR-6 Meas		0.6	66	0.5	2	88	25	119	0.01	7.63		1	< 2	0.16				1.48	0.25	1040
GXR-6 Cert		1.3	66	1	2.4	101	27	118	0.016	17.7		1.4	0.29	0.18				1.87	0.609	1010
GXR-6 Meas		0.3	67	< 0.3	3	91	25	131	0.02	12.5		1	< 2	0.21				1.85	0.58	1110
GXR-6 Cert		1.3	66	1	2.4	101	27	118	0.016	17.7		1.4	0.29	0.18				1.87	0.609	1010
TILL-1 Meas																				
TILL-1 Cert																				
SO-2 Meas																				
SO-2 Cert																				
OREAS 13P Meas			2420				1950													
OREAS 13P Cert			2500				2260													
OREAS 13P Meas			2450				2090													
OREAS 13P Cert			2500				2260													
DMMAS-106 Meas	620										4270				95	167	8.6			
DMMAS-106 Cert	599										4060				97	163	8.5			
DMMAS-106 Meas	576										4110				103	160	8.54			
DMMAS-106 Cert	599										4060				97	163	8.5			
Method Blank Method Blank		< 0.3	< 1	< 0.3	< 1	< 3	< 1	< 1	< 0.01	< 0.01		< 1	< 2	< 0.01				< 0.01	< 0.01	< 1
Method Blank Method Blank		< 0.3	5	< 0.3	< 1	< 3	< 1	< 1	< 0.01	< 0.01		< 1	< 2	< 0.01				< 0.01	< 0.01	16
Method Blank Method Blank																				
Method Blank Method Blank		< 0.3	< 1	< 0.3	< 1	< 3	1	< 1	< 0.01	< 0.01		< 1	< 2	< 0.01				< 0.01	< 0.01	< 1

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Analyte Symbol	Na	P	Sc	Sr	Ti	U	V	W	Y	La	Ce	Sm	Yb	Cl	Br	I	V	As	Se	Mo
Unit Symbol	%	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.01	0.001	0.1	1	0.01	0.5	2	1	1	0.5	3	0.1	0.2	2000	5	2	1	1	5	1
Analysis Method	INAA	TD-ICP	INAA	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
GXR-1 Meas		0.059		321			87		38											
GXR-1 Cert		0.065		275			80		32											
GXR-1 Meas		0.057		295			89		32											
GXR-1 Cert		0.065		275			80		32											
DNC-1 Meas		0.027		151	0.29		141		22											
DNC-1 Cert		0.037		145	0.287		148		18											
DNC-1 Meas		0.026		133	0.27		150		18											
DNC-1 Cert		0.037		145	0.287		148		18											
GXR-4 Meas		0.142		256			93		21											
GXR-4 Cert		0.12		221			87		14											
GXR-4 Meas		0.136		227			97		17											
GXR-4 Cert		0.12		221			87		14											
GXR-2 Meas		0.062		152			56		14											
GXR-2 Cert		0.105		160			52		17											
GXR-2 Meas		0.056		132			51		14											
GXR-2 Cert		0.105		160			52		17											
SDC-1 Meas		0.062		197	0.64		103		43											
SDC-1 Cert		0.069		183	0.606		102		40											
SDC-1 Meas		0.052		179	0.23		55		39											
SDC-1 Cert		0.069		183	0.606		102		40											
SCO-1 Meas		0.085		177	0.36		125		27											
SCO-1 Cert		0.09		174	0.38		131		26											
SCO-1 Meas		0.081		165	0.27		120		23											
SCO-1 Cert		0.09		174	0.38		131		26											
GXR-6 Meas		0.033		27			200		7											
GXR-6 Cert		0.035		35			186		14											
GXR-6 Meas		0.038		40			209		14											
GXR-6 Cert		0.035		35			186		14											
TILL-1 Meas															494		108	37		23
TILL-1 Cert															6400		99000	18000		2000
SO-2 Meas																	30			
SO-2 Cert																	64000			
OREAS 13P Meas																				
OREAS 13P Cert																				
OREAS 13P Meas																				
OREAS 13P Cert																				
DMMAS-106 Meas	0.85		18.1			46.4		20		19	28	2.8	4.3							
DMMAS-106 Cert	0.82		18.1			38.1		19		18.6	33	2.9	3.4							
DMMAS-106 Meas	0.84		17.4			42		17		18.3	26	3.2	3.5							
DMMAS-106 Cert	0.82		18.1			38.1		19		18.6	33	2.9	3.4							
Method Blank Method Blank		< 0.001		< 1	< 0.01		< 2		< 1											
Method Blank Method Blank		< 0.001		< 1	< 0.01		< 2		< 1											
Method Blank Method Blank														< 2000	< 5	< 2	< 1	< 1	< 5	< 1
Method Blank Method Blank		< 0.001		< 1	< 0.01		< 2		< 1											

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Analyte Symbol	Sb	Te	W	Re	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	1	1	0.01	0.05	1	0.1	0.1	1	3	3	10	1	1	0.5	0.2	0.2
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
GXR-1 Meas																	
GXR-1 Cert																	
GXR-1 Meas																	
GXR-1 Cert																	
DNC-1 Meas																	
DNC-1 Cert																	
DNC-1 Meas																	
DNC-1 Cert																	
GXR-4 Meas																	
GXR-4 Cert																	
GXR-4 Meas																	
GXR-4 Cert																	
GXR-2 Meas																	
GXR-2 Cert																	
GXR-2 Meas																	
GXR-2 Cert																	
SDC-1 Meas																	
SDC-1 Cert																	
SDC-1 Meas																	
SDC-1 Cert																	
SCO-1 Meas																	
SCO-1 Cert																	
SCO-1 Meas																	
SCO-1 Cert																	
GXR-6 Meas																	
GXR-6 Cert																	
GXR-6 Meas																	
GXR-6 Cert																	
TILL-1 Meas	66				< 0.05	< 1	4	5	89	29	196	140	14				
TILL-1 Cert	7800				13	90	5600	2200	18000	24000	47000	98000	22000				
SO-2 Meas						< 1			10	30	21	330	3				
SO-2 Cert						82			9000	8000	7000	124000	21000				
OREAS 13P Meas																	
OREAS 13P Cert																	
OREAS 13P Meas																	
OREAS 13P Cert																	
DMMAS-106 Meas																	
DMMAS-106 Cert																	
DMMAS-106 Meas																	
DMMAS-106 Cert																	
Method Blank Method Blank																	
Method Blank Method Blank																	
Method Blank Method Blank	< 0.1	< 1	< 1	< 0.01	< 0.05	< 1	< 0.1	< 0.1	< 1	< 3	< 3	< 10	< 1	< 1	< 0.5	< 0.2	< 0.2
Method Blank Method Blank																	

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Analyte Symbol	In	Sn	Tl	Bi	Ti	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.8	0.1	0.8	100	20	0.5	1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
GXR-1 Meas																	
GXR-1 Cert																	
GXR-1 Meas																	
GXR-1 Cert																	
DNC-1 Meas																	
DNC-1 Cert																	
DNC-1 Meas																	
DNC-1 Cert																	
GXR-4 Meas																	
GXR-4 Cert																	
GXR-4 Meas																	
GXR-4 Cert																	
GXR-2 Meas																	
GXR-2 Cert																	
GXR-2 Meas																	
GXR-2 Cert																	
SDC-1 Meas																	
SDC-1 Cert																	
SDC-1 Meas																	
SDC-1 Cert																	
SCO-1 Meas																	
SCO-1 Cert																	
SCO-1 Meas																	
SCO-1 Cert																	
GXR-6 Meas																	
GXR-6 Cert																	
GXR-6 Meas																	
GXR-6 Cert																	
TILL-1 Meas					800	< 20	21	13	3	< 0.1	< 0.1	18	42		21	6	1
TILL-1 Cert					5990000	65000	38000	502000	10000	13000	700	28000	71000		26000	5900	1300
SO-2 Meas					600	< 20											
SO-2 Cert					8600000	16000											
OREAS 13P Meas																	
OREAS 13P Cert																	
OREAS 13P Meas																	
OREAS 13P Cert																	
DMMAS-106 Meas																	
DMMAS-106 Cert																	
DMMAS-106 Meas																	
DMMAS-106 Cert																	
Method Blank Method Blank																	
Method Blank Method Blank																	
Method Blank Method Blank	< 0.1	< 0.8	< 0.1	< 0.8	< 100	< 20	< 0.5	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank Method Blank																	

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Analyte Symbol	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2	2	100	1	1	1	0.1	1	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
GXR-1 Meas																	
GXR-1 Cert																	
GXR-1 Meas																	
GXR-1 Cert																	
DNC-1 Meas																	
DNC-1 Cert																	
DNC-1 Meas																	
DNC-1 Cert																	
GXR-4 Meas																	
GXR-4 Cert																	
GXR-4 Meas																	
GXR-4 Cert																	
GXR-2 Meas																	
GXR-2 Cert																	
GXR-2 Meas																	
GXR-2 Cert																	
SDC-1 Meas																	
SDC-1 Cert																	
SDC-1 Meas																	
SDC-1 Cert																	
SCO-1 Meas																	
SCO-1 Cert																	
SCO-1 Meas																	
SCO-1 Cert																	
GXR-6 Meas																	
GXR-6 Cert																	
GXR-6 Meas																	
GXR-6 Cert																	
TILL-1 Meas		1			2		2	< 0.1	< 2	< 2	< 100	39400	58	508	1	976	
TILL-1 Cert		1100			3600		3900	600	15000	2400	13000	1420000	44000	291000	1000	702000	
SO-2 Meas												1340	81	197		691	
SO-2 Cert												720000	78000	340000		966000	
OREAS 13P Meas																	
OREAS 13P Cert																	
OREAS 13P Meas																	
OREAS 13P Cert																	
DMMAS-106 Meas																	
DMMAS-106 Cert																	
DMMAS-106 Meas																	
DMMAS-106 Cert																	
Method Blank Method Blank																	
Method Blank Method Blank																	
Method Blank Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 2	< 2	< 100	< 1	< 1	< 1	< 0.1	< 1	< 1
Method Blank Method Blank																	

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Analyte Symbol	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb
Detection Limit	1	1	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS
GXR-1 Meas			
GXR-1 Cert			
GXR-1 Meas			
GXR-1 Cert			
DNC-1 Meas			
DNC-1 Cert			
DNC-1 Meas			
DNC-1 Cert			
GXR-4 Meas			
GXR-4 Cert			
GXR-4 Meas			
GXR-4 Cert			
GXR-2 Meas			
GXR-2 Cert			
GXR-2 Meas			
GXR-2 Cert			
SDC-1 Meas			
SDC-1 Cert			
SDC-1 Meas			
SDC-1 Cert			
SCO-1 Meas			
SCO-1 Cert			
SCO-1 Meas			
SCO-1 Cert			
GXR-6 Meas			
GXR-6 Cert			
GXR-6 Meas			
GXR-6 Cert			
TILL-1 Meas			
TILL-1 Cert			
SO-2 Meas			
SO-2 Cert			
OREAS 13P Meas			
OREAS 13P Cert			
OREAS 13P Meas			
OREAS 13P Cert			
DMMAS-106 Meas			
DMMAS-106 Cert			
DMMAS-106 Meas			
DMMAS-106 Cert			
Method Blank Method Blank			
Method Blank Method Blank			
Method Blank Method Blank	< 1	< 1	< 1
Method Blank Method Blank			

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Analyte Symbol	Au	Ag	Cu	Cd	Mo	Pb	Ni	Zn	S	Al	As	Ba	Be	Bi	Br	Ca	Co
Unit Symbol	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm
Detection Limit	2	0.3	1	0.3	1	3	1	1	0.01	0.01	0.5	50	1	2	0.5	0.01	1
Analysis Method	INAA	MULT INAA / TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	MULT INAA / TD-ICP	MULT INAA / TD-ICP	TD-ICP	TD-ICP	INAA	INAA	TD-ICP	TD-ICP	INAA	TD-ICP	INAA
20041	22	0.6	378	1.8	< 1	18	254	236	16.2	4.41	161	< 50	< 1	< 2	2.8	1.45	258
20042	39	0.8	328	1.1	< 1	9	180	74	16.3	1.95	177	< 50	< 1	< 2	< 0.5	1.22	147
20043	15	< 0.3	172	0.8	2	< 3	98	83	8.88	1.7	84.9	< 50	< 1	< 2	< 0.5	0.62	58
20044	458	< 0.3	309	0.3	< 1	< 3	19	31	3.71	7.03	< 0.5	< 50	< 1	< 2	< 0.5	2.29	67
20045	< 2	< 0.3	5	0.7	< 1	4	70	81	0.03	6.93	6.9	< 50	< 1	< 2	< 0.5	9.26	44
21661	23	0.5	231	0.6	< 1	18	264	209	19.6	3.88	151	< 50	< 1	< 2	< 0.5	1.22	593
21662	22	0.5	229	2.1	< 1	16	234	439	16.8	4.89	99.1	< 50	< 1	< 2	4.7	2.08	545
21663	< 2	1	693	6.5	4	17	104	1970	9.28	3.7	4.6	< 50	< 1	< 2	< 0.5	0.95	85
21664	< 2	1.1	765	11.3	4	15	107	3410	9.88	3.85	10.4	610	< 1	< 2	< 0.5	0.74	98
21665	< 2	0.5	8	< 0.3	< 1	11	24	31	0.02	6.99	4	740	1	< 2	7.4	2.15	12
21666	< 2	< 0.3	13	< 0.3	< 1	10	28	35	0.01	7.34	3.6	510	1	< 2	6.7	2.43	14
21667	< 2	< 0.3	11	< 0.3	< 1	10	24	31	< 0.01	7.6	25.9	750	1	< 2	5.3	2.54	16
21668	< 2	< 0.3	7	< 0.3	< 1	11	21	29	0.02	7.25	3.8	560	1	< 2	4	2.16	10

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Analyte Symbol	Cr	Cs	Eu	Fe	Hf	Hg	Ir	K	Mg	Mn	Na	P	Rb	Sb	Sc	Se	Sr	Ta	Ti	Th	U	V	W	Y
Unit Symbol	ppm	ppm	ppm	%	ppm	ppm	ppb	%	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	1	0.2	0.01	1	1	5	0.01	0.01	1	0.01	0.001	15	0.1	0.1	3	1	0.5	0.01	0.2	0.5	2	1	1
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	TD-ICP	INAA	TD-ICP
20041	37	5	< 0.2	22.1	1	< 1	< 5	0.63	0.7	2300	0.46	0.02	47	486	17.8	< 3	89	< 0.5	0.18	< 0.2	< 0.5	125	13	10
20042	47	< 1	0.3	35.9	1	< 1	< 5	0.29	0.28	689	0.3	0.011	< 15	85	6.8	< 3	23	< 0.5	0.08	< 0.2	< 0.5	45	< 1	5
20043	46	< 1	< 0.2	14	< 1	< 1	< 5	0.22	0.39	1090	0.25	0.009	< 15	20.6	4.9	< 3	25	< 0.5	0.08	< 0.2	< 0.5	36	< 1	6
20044	25	< 1	< 0.2	10.2	2	< 1	< 5	0.16	1.34	1160	1.7	0.043	< 15	< 0.1	42.8	< 3	145	< 0.5	0.75	2.3	< 0.5	398	< 1	19
20045	97	< 1	0.9	8.83	2	< 1	< 5	0.11	2.61	2940	1.79	0.029	< 15	0.2	33.6	< 3	123	< 0.5	0.41	< 0.2	< 0.5	251	10	11
21661	52	5	0.8	29	2	< 1	< 5	0.66	0.61	2550	0.4	0.018	< 15	252	22.3	< 3	70	< 0.5	0.18	< 0.2	< 0.5	129	17	10
21662	55	3	0.6	19.8	1	< 1	< 5	0.63	0.77	1650	0.68	0.025	< 15	240	26.7	< 3	123	< 0.5	0.26	2.2	< 0.5	161	18	12
21663	66	< 1	0.9	18.9	2	< 1	< 5	0.65	0.48	2940	0.8	0.024	< 15	0.9	12.8	< 3	73	< 0.5	0.11	3.5	< 0.5	63	< 1	10
21664	66	< 1	0.9	20	2	< 1	< 5	0.93	0.46	2260	0.69	0.024	61	0.1	12.7	5	62	< 0.5	0.13	2.7	< 0.5	66	< 1	9
21665	70	< 1	0.7	3.61	7	< 1	< 5	1.51	0.73	387	2.93	0.036	89	< 0.1	10	< 3	316	< 0.5	0.26	4.8	< 0.5	70	< 1	10
21666	67	5	0.9	4.32	7	< 1	< 5	1.21	0.92	488	2.61	0.058	< 15	0.3	11.4	< 3	293	< 0.5	0.21	7.6	< 0.5	64	< 1	13
21667	51	2	1	3.01	5	< 1	< 5	1.3	0.8	450	2.93	0.033	< 15	< 0.1	10.7	< 3	310	< 0.5	0.18	4.1	< 0.5	51	< 1	11
21668	49	3	0.7	2.47	6	< 1	< 5	1.5	0.67	332	2.5	0.016	< 15	< 0.1	8.3	< 3	317	< 0.5	0.17	4.4	< 0.5	42	< 1	10

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Analyte Symbol	La	Ce	Nd	Sm	Sn	Tb	Yb	Lu	Mass	Cl	Br	I	V	As	Se	Mo	Sb	Te	W	Re
Unit Symbol	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	g	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.5	3	5	0.1	0.01	0.5	0.2	0.05		2000	5	2	1	1	5	1	0.1	1	1	0.01
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
20041	4.8	< 3	< 5	1	< 0.01	< 0.5	< 0.2	< 0.05	37.5											
20042	5.4	< 3	< 5	0.9	< 0.01	< 0.5	0.8	0.1	33.9											
20043	2.4	< 3	< 5	0.6	< 0.01	< 0.5	0.5	0.14	33											
20044	5.1	18	14	2.3	< 0.01	< 0.5	2.8	0.51	33.7											
20045	4.1	< 3	< 5	2.8	< 0.01	< 0.5	3.2	0.57	27.3											
21661	4.6	18	< 5	1.1	< 0.01	< 0.5	1.4	0.25	26.8											
21662	6.2	14	< 5	1.4	< 0.01	< 0.5	1.1	0.33	42.8											
21663	11.7	25	9	1.7	< 0.01	< 0.5	1.6	0.18	27.5											
21664	13.3	26	23	1.9	< 0.01	< 0.5	1.3	0.25	26.1											
21665	18.7	31	< 5	2.6	< 0.01	< 0.5	1.3	0.22	28.1	4000	161	21	9	2	5	< 1	< 0.1	1	< 1	< 0.01
21666	19.7	38	15	2.9	< 0.01	< 0.5	1.5	0.32	35.1	5000	128	17	13	2	< 5	< 1	< 0.1	1	< 1	< 0.01
21667	14.8	33	12	2.5	< 0.01	< 0.5	1.6	0.21	35.6	3000	101	7	9	< 1	< 5	< 1	< 0.1	1	< 1	< 0.01
21668	12.5	25	< 5	2.1	< 0.01	< 0.5	1.3	0.26	33.4	4000	104	8	10	< 1	< 5	< 1	< 0.1	1	< 1	< 0.01

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Analyte Symbol	Au	Hg	Th	U	Co	Ni	Cu	Zn	Pb	Ga	Ge	Ag	Cd	In	Sn	Tl	Bi	Ti
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.05	1	0.1	0.1	1	3	3	10	1	1	0.5	0.2	0.2	0.1	0.8	0.1	0.8	100
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
20041																		
20042																		
20043																		
20044																		
20045																		
21661																		
21662																		
21663																		
21664																		
21665	< 0.05	< 1	1	1	8	16	11	20	3	1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100
21666	< 0.05	< 1	1	1	21	29	11	20	4	1	< 0.5	< 0.2	1	< 0.1	< 0.8	< 0.1	< 0.8	< 100
21667	< 0.05	< 1	< 0.1	1	7	8	11	10	4	< 1	< 0.5	< 0.2	< 0.2	< 0.1	< 0.8	< 0.1	< 0.8	< 100
21668	< 0.05	< 1	< 0.1	1	4	5	6	40	2	< 1	< 0.5	< 0.2	1	< 0.1	< 0.8	< 0.1	< 0.8	< 100

Final Report
Activation Laboratories

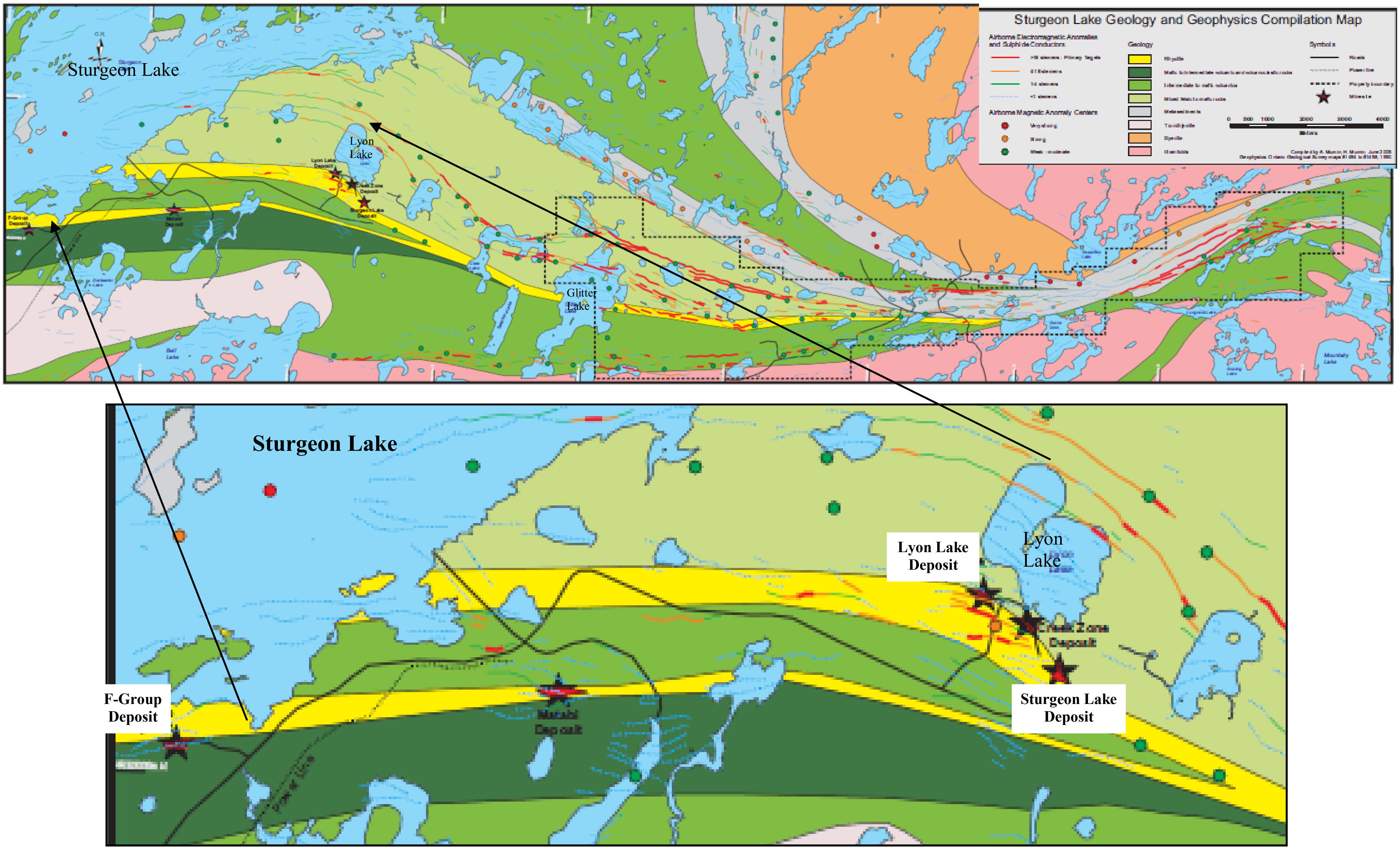
Analyte Symbol	Cr	Y	Zr	Nb	Hf	Ta	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	20	0.5	1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
20041																		
20042																		
20043																		
20044																		
20045																		
21661																		
21662																		
21663																		
21664																		
21665	< 20	5	5	< 1	< 0.1	< 0.1	5	9	2	5	2	< 0.1	2	< 0.1	1	< 0.1	< 0.1	< 0.1
21666	< 20	3	4	< 1	< 0.1	< 0.1	2	2	1	1	1	< 0.1	1	< 0.1	1	< 0.1	< 0.1	< 0.1
21667	< 20	4	1	< 1	< 0.1	< 0.1	5	9	2	3	1	< 0.1	1	< 0.1	1	< 0.1	< 0.1	< 0.1
21668	< 20	3	1	< 1	< 0.1	< 0.1	4	6	1	2	1	< 0.1	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Report: A08-6138 Rev, 1
Report Date: 11/

Final Report
Activation Laboratories

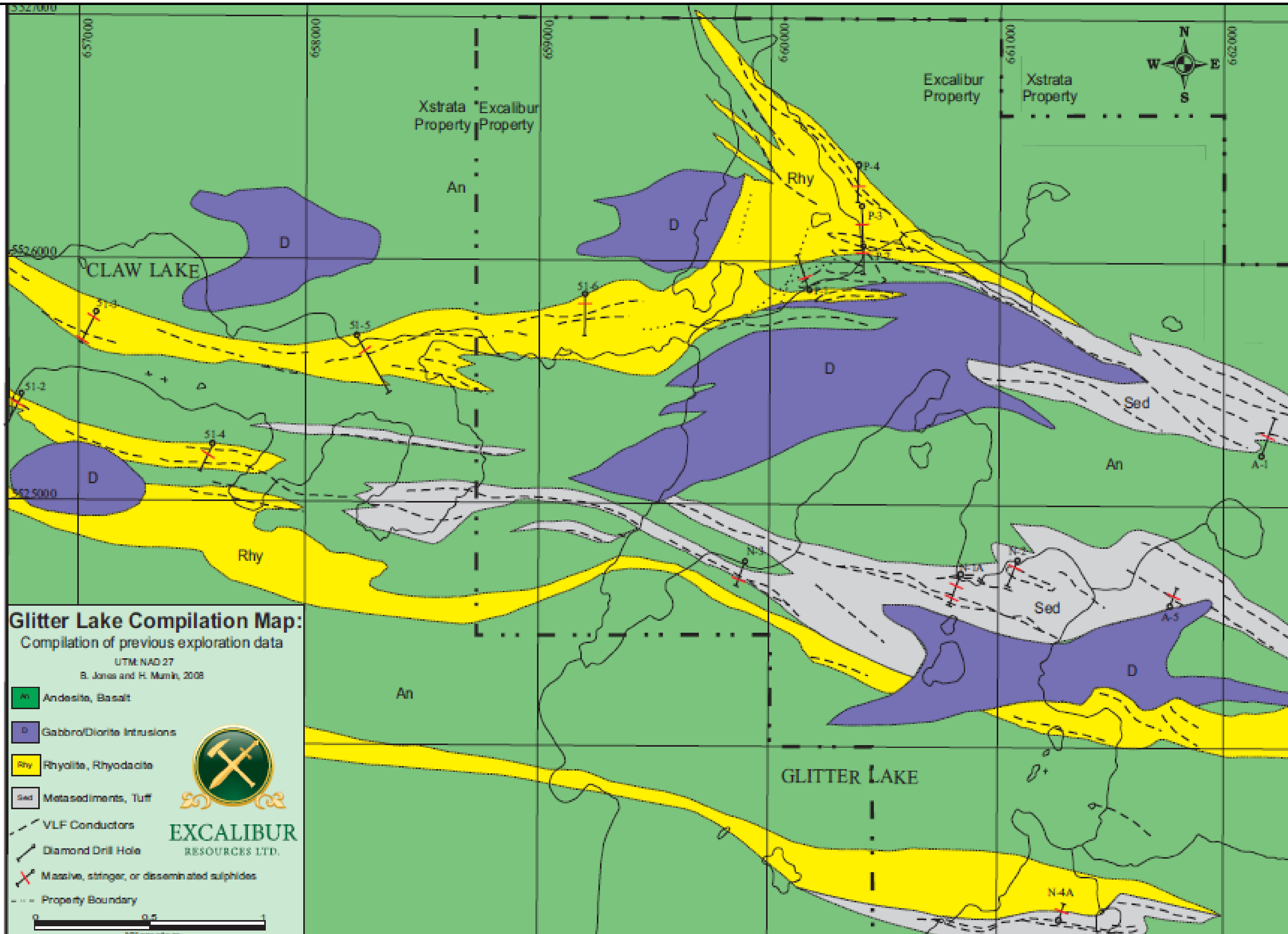
Analyte Symbol	Yb	Lu	Li	Be	Sc	Mn	Rb	Sr	Cs	Ba	Ru	Pd	Os	Pt
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.1	0.1	2	2	100	1	1	1	0.1	1	1	1	1	1
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
20041														
20042														
20043														
20044														
20045														
21661														
21662														
21663														
21664														
21665	< 0.1	< 0.1	< 2	< 2	< 100	118	45	53	1	499	< 1	< 1	< 1	< 1
21666	< 0.1	< 0.1	< 2	2	< 100	417	31	129	2	411	< 1	< 1	< 1	< 1
21667	< 0.1	< 0.1	< 2	< 2	< 100	227	16	64	2	218	< 1	< 1	< 1	< 1
21668	< 0.1	< 0.1	< 2	2	< 100	28	32	83	1	463	< 1	< 1	< 1	< 1

FIGURE G1:
GEOLOGY AND GEOPHYSICAL COMPILATION OF THE STURGEON LAKE PROPERTY AND SURROUNDING AREA, PATRICIA MINING DIVISION, NW ONTARIO



After XBR, 2010

FIGURE G2:
GLITTER LAKE AREA COMPILATION OF GEOLOGY AND HISTORIC EXPLORATION DATA
STURGEON LAKE PROPERTY
PATRICIA MINING DIVISION, NW ONTARIO



After XBR, 2010

FIGURE G3:
CENTRAL WABIGOON REGION WITH STURGEON-SAVANT GREENSTONE BELT

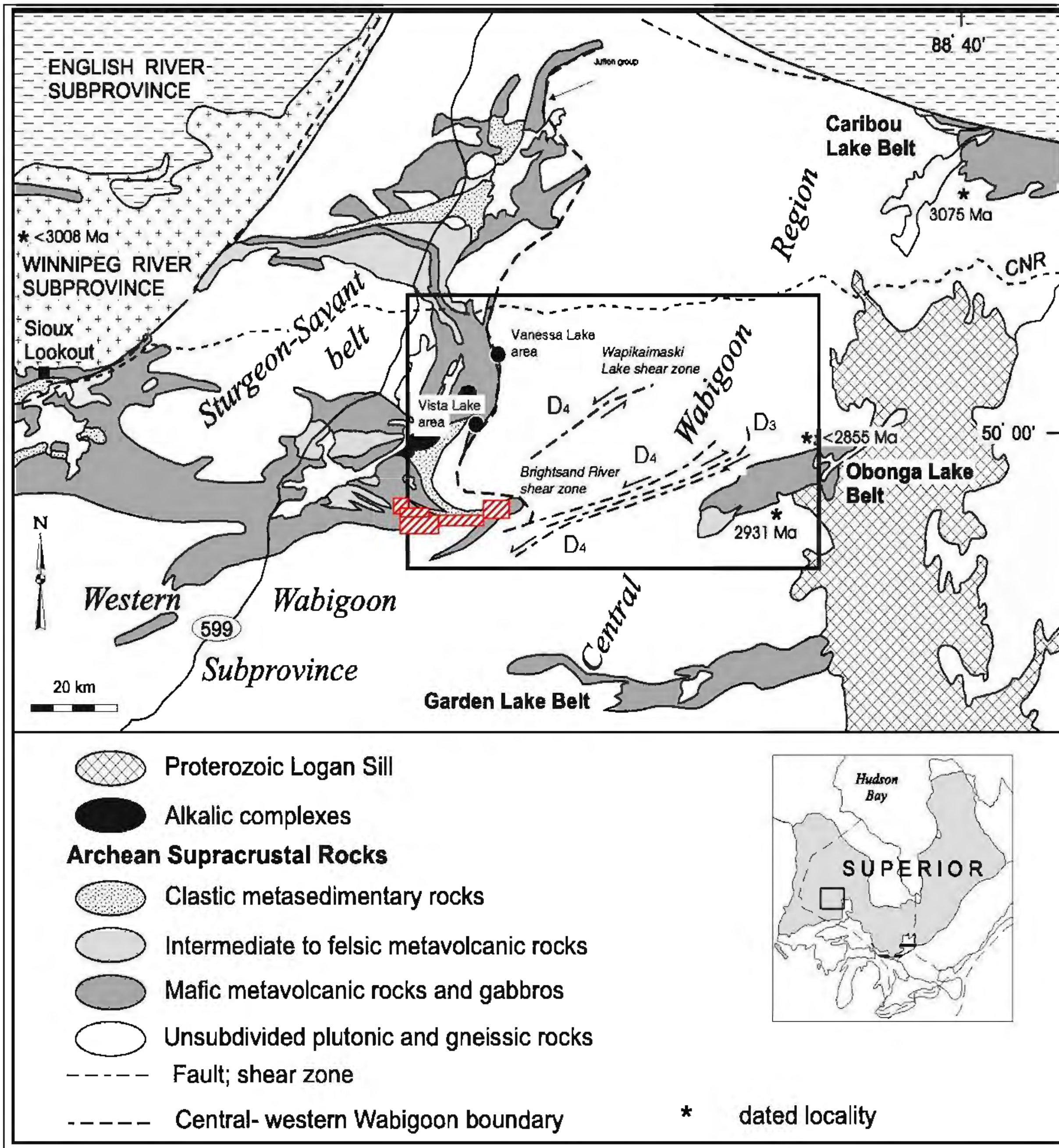
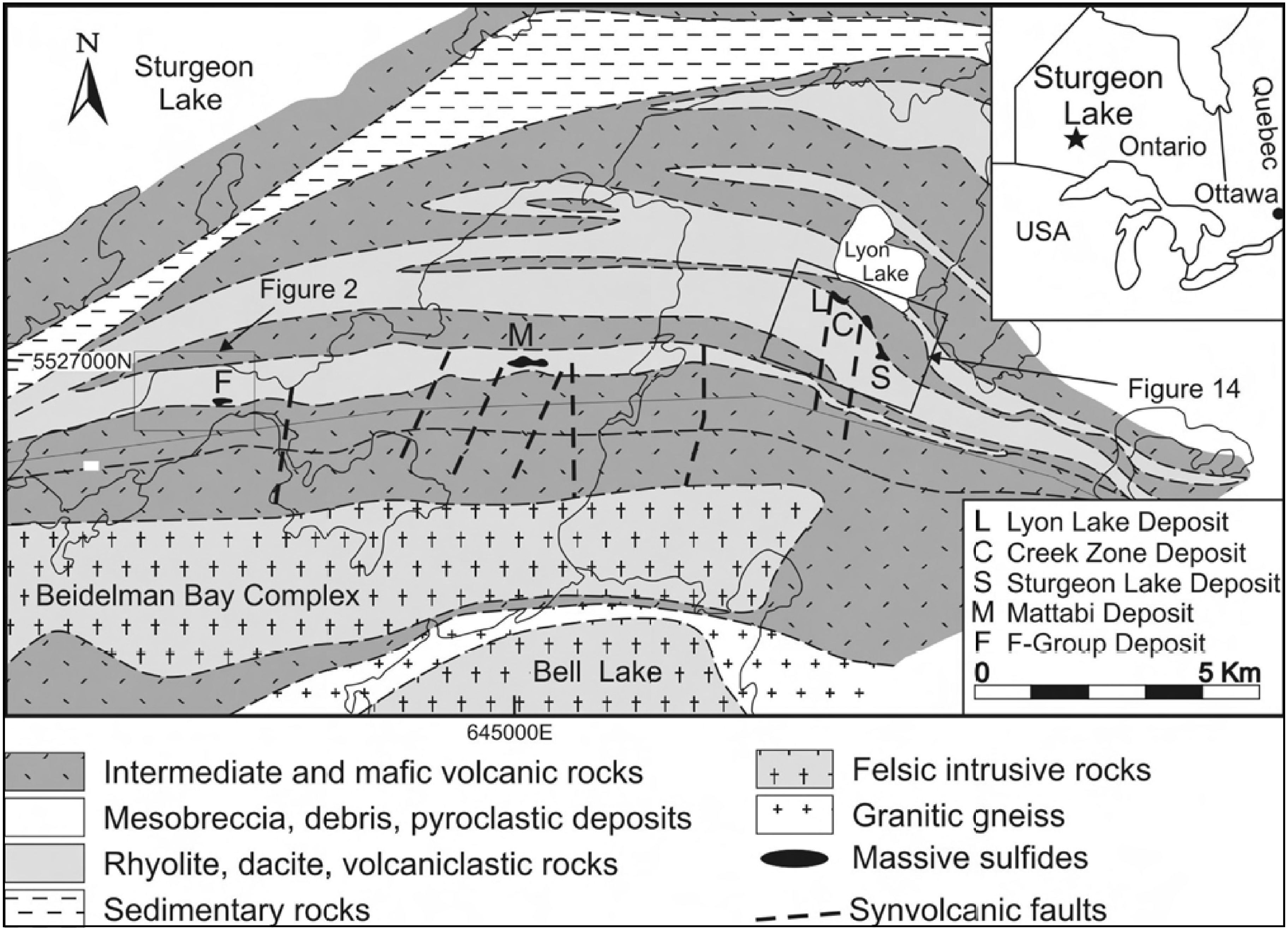


Figure 1. Location map showing the Central Wabigoon Region, flanked to the west by greenstone belts of the Western Wabigoon Subprovince (location of the boundary approximate) (after Sanbom-Barrie and Skulski, 1999)

STURGEON LAKE PROPERTY

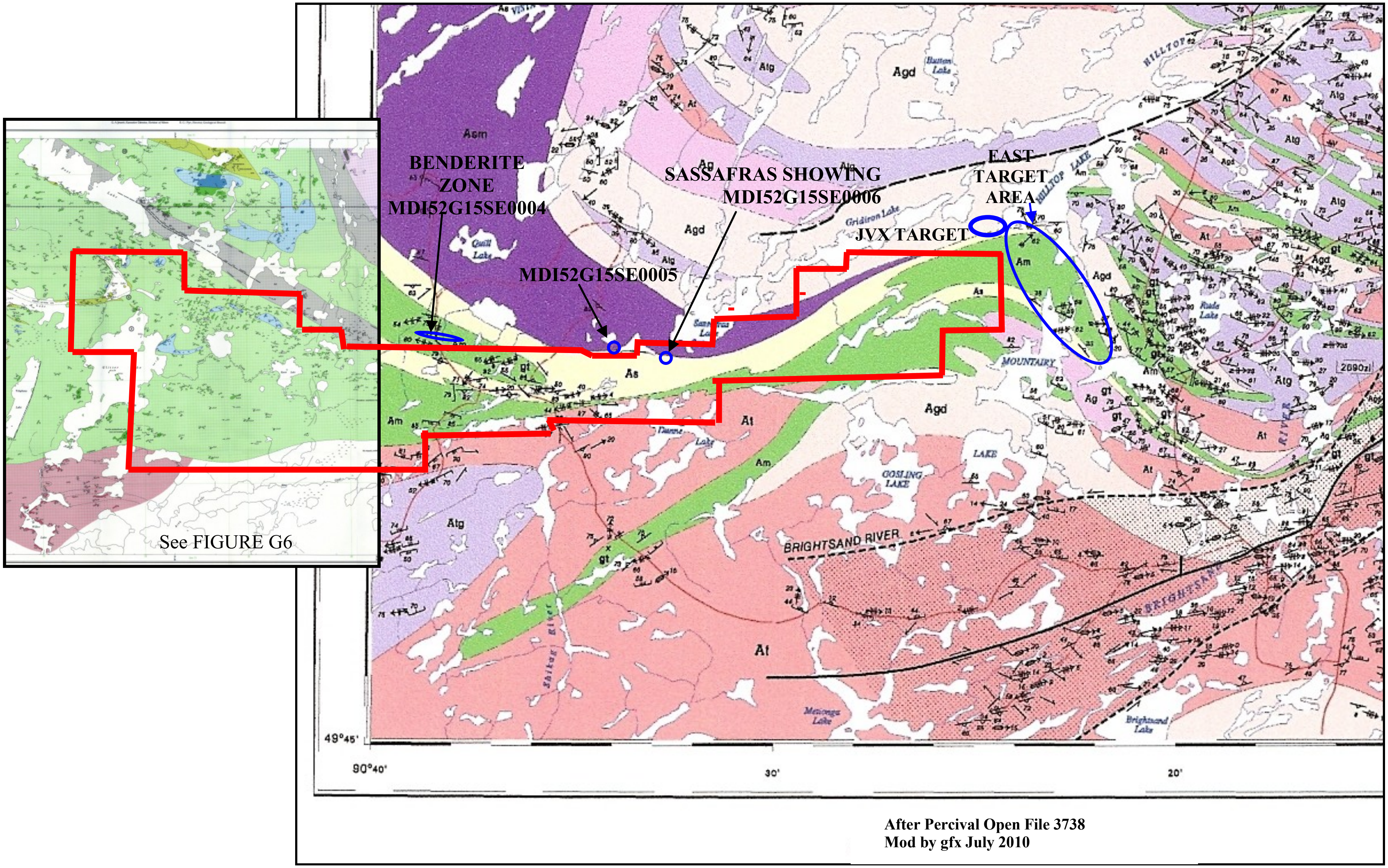
After Percival et al., 1999: Open File 3738
Mod by gfx July 2010

FIGURE G4



Volcanic stratigraphy of the Archean South Sturgeon Lake volcanic pile (after Franklin et al., 1975; Morton et al., 1996, 1999). The Sturgeon Lake caldera-fill complex extends stratigraphically upwards (north) from the base of the mesobreccia, debris, and pyroclastic deposits. The eastern, western, and upper limits of the caldera complex are not defined.

FIGURE G5:
STURGEON LAKE-OBONGA LAKE AREA GEOLOGY 1999



XBR STURGEON LAKE PROPERTY

FIGURE G5A:
LEGEND TO STURGEON LAKE-OBONGA LAKE AREA OF 3738 GEOLOGY 1999

LEGEND

RECENT

	Glacial overburden: till, eskers, moraines, outwash deposits

MESOPROTEROZOIC

Pd	*Diabase: medium- to coarse-grained, massive, brown-weathering diabase sills, dykes, cone sheets (ca. 1100 Ma); forms prominent ridges and hills*

ARCHEAN

Intrusive Rocks

Asm	*Syenite (Vista Lake complex): medium to coarse-grained, massive to weakly foliated hornblende-biotite syenite, monzonite, monzodiorite*
Ag	*Granite: medium- to coarse-grained to pegmatitic or aplitic, massive to weakly foliated biotite ± magnetite granite, granodiorite; varies to leucocratic; occurs as plutons and pegmatite dyke swarms*
Agdp	*Porphyritic granodiorite (2685 Ma): medium-grained, K-feldspar porphyritic or megacrystic, homogeneous, weakly foliated biotite ± hornblende granodiorite; varies to monzodiorite, quartz monzodiorite, quartz diorite, rare diorite and gabbro*
Ad	*Diorite: medium-grained, foliated to migmatitic hornblende-biotite diorite; varies to gabbro, quartz diorite, quartz gabbro (2690 Ma)*
Agd	*Granodiorite (2709 ± 4 Ma): medium- to coarse-grained, homogeneous, foliated biotite granodiorite; locally migmatitic (5-10% leucocratic segregations)*
At	*Tonalite (ca. 2715 - 2690 Ma): medium-grained, homogeneous, foliated biotite ± hornblende tonalite; locally migmatitic (5-10% leucocratic segregations); varies to quartz diorite, trondhjemite; includes some older homogeneous tonalite (2770-2930 Ma)*

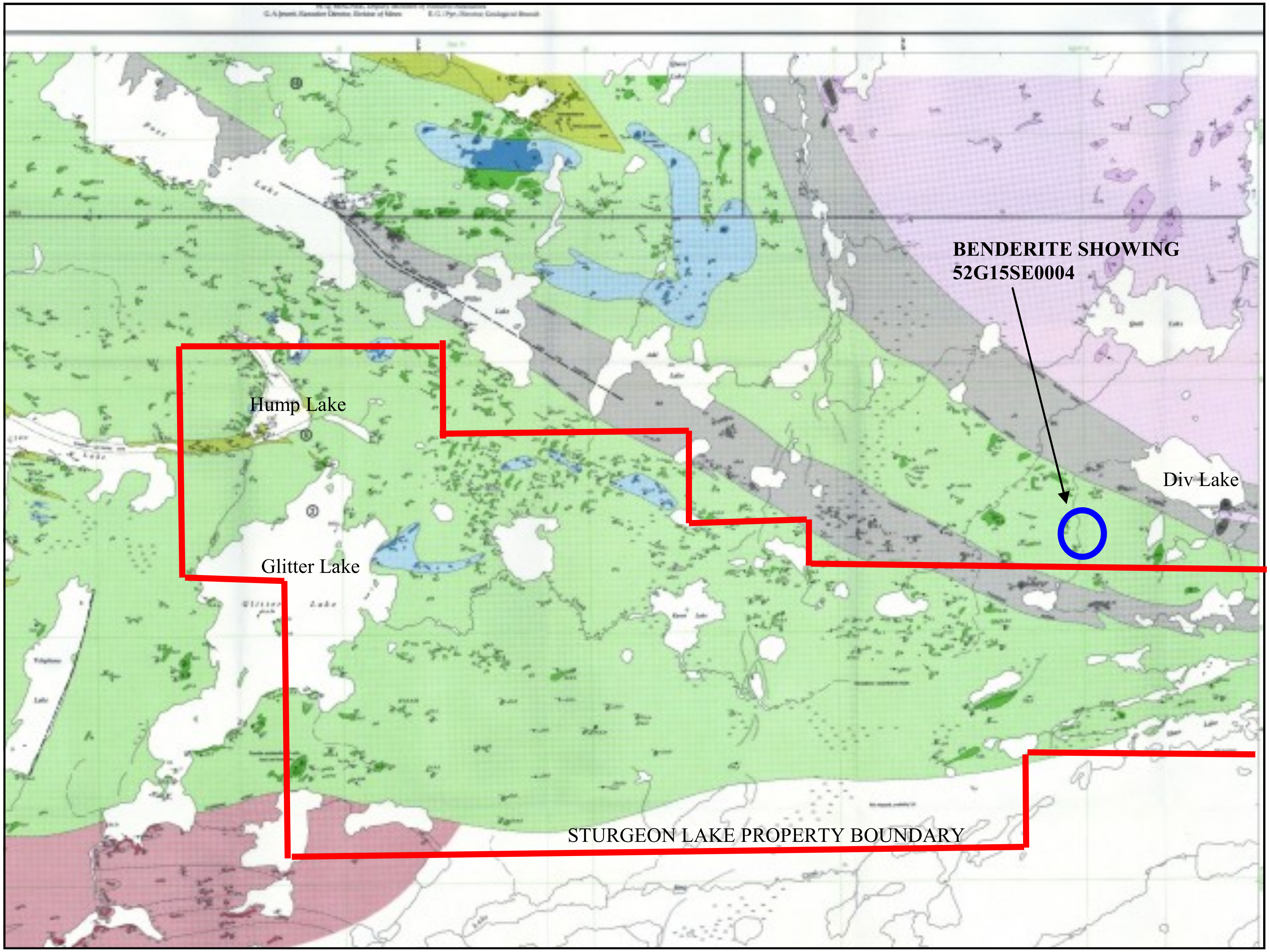
Supracrustal Rocks

As	*Sedimentary rocks: fine- to medium-grained biotite-plagioclase-quartz ± muscovite ± garnet ± sillimanite ± andalusite ± cordierite schist and migmatite, mainly derived from wacke with argillaceous beds; includes some conglomerate, breccia, quartz-rich sandstone and silicate-facies iron formation. Probably includes both stratigraphically high (< 2704 Ma) and low (ca. 2.8 Ga) units*
Avf	*Felsic volcanic rocks (2744-2703 Ma): fine-grained, foliated quartz-feldspar-muscovite-biotite-chlorite schists, derived mainly from homogeneous or feldspar ± quartz porphyritic dacite and rhyolite; includes some andesitic compositions*
Agb	*Gabbroic intrusions: medium-grained, homogeneous to layered, variably foliated gabbro to diorite*
Amu	*Mafic-ultramafic intrusions (2733 Ma): medium-grained, homogeneous to layered, variably foliated gabbro, melagabbro, pyroxenite, peridotite*
Am	*Mafic volcanic rocks (2775-2718 Ma): fine- to medium-grained, foliated hornblende-plagioclase ± chlorite ± epidote ± garnet ± clinopyroxene schist and gneiss, derived from massive and pillowed basalt and andesite; includes some gabbro, diorite and minor felsic volcanic rocks*
Asj	*Quartz-rich metasedimentary rocks (< 2900 Ma): fine- to medium-grained schistose wacke containing up to 65% quartz in a biotitic matrix; includes some lithic wacke, amphibolite*

- - - - - - - - - - - - - - *unconformity?* - - - - - - - - - - - - - -

Atg	*Tonalite gneiss (> 2.87 Ga): layered rock consisting of melanosome of medium-grained biotite tonalite and 5-20% leucosome of medium-grained leucotonalite*

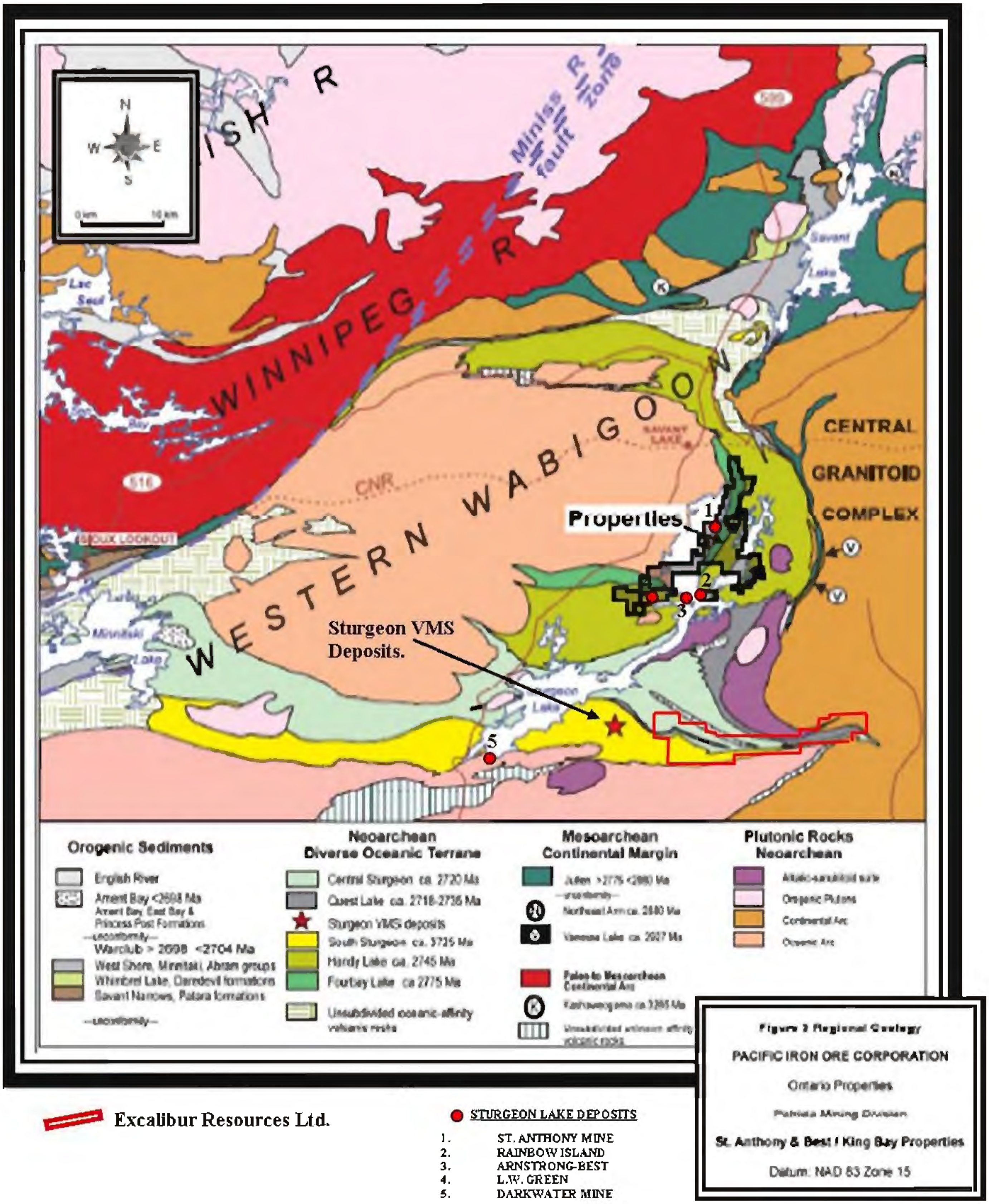
FIGURE G6:
GLITTER LAKE, THUNDERBAY DISTRICT
PARTIAL MAP 2284



Trowell, N.F. 1974: Geology of the Glitter Lake Area, District of Thunder Bay; Ontario Div. Mines, GR120,. Mod. by gfx July 2010

FIGURE G6A
GLITTER LAKE, THUNDERBAY DISTRICT
MAP 2284 LEGEND

FIGURE H1: HISTORIC STURGEON VMS CAMP, GOLD PROPERTIES AND AREA OF EXCALIBUR STURGEON LAKE PROPERTY



Excalibur Resources Ltd.

STURGEON LAKE DEPOSITS

1. ST. ANTHONY MINE
2. RAINBOW ISLAND
3. ARNSTRONG-BEST
4. L.W. GREEN
5. DARKWATER MINE

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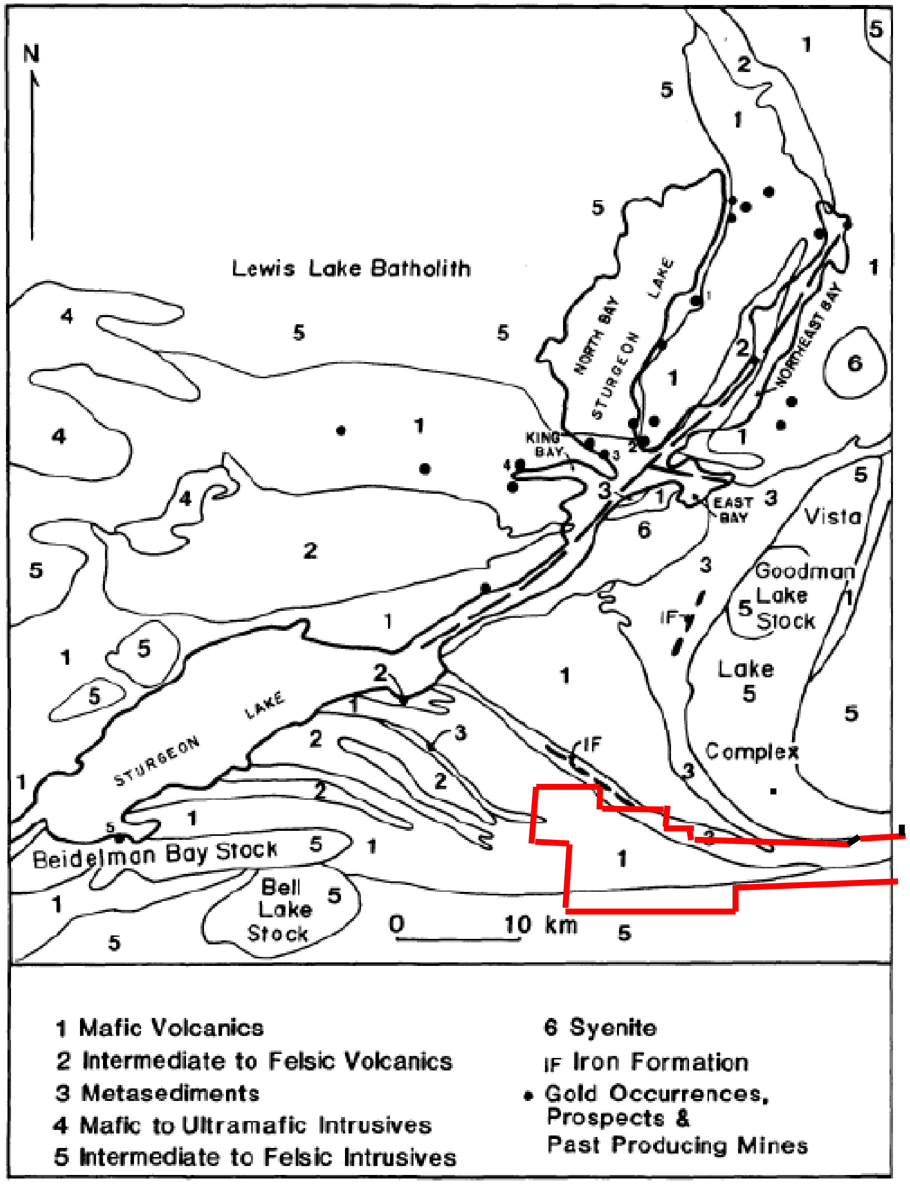
FIGURE H2:
STURGEON LAKE AREA GOLD SHOWINGS AND MINERAL DEPOSITS
PATRICIA MINING DIVISION, NW ONTARIO



After Blackburn et al., 1983

STURGEON LAKE PROPERTY

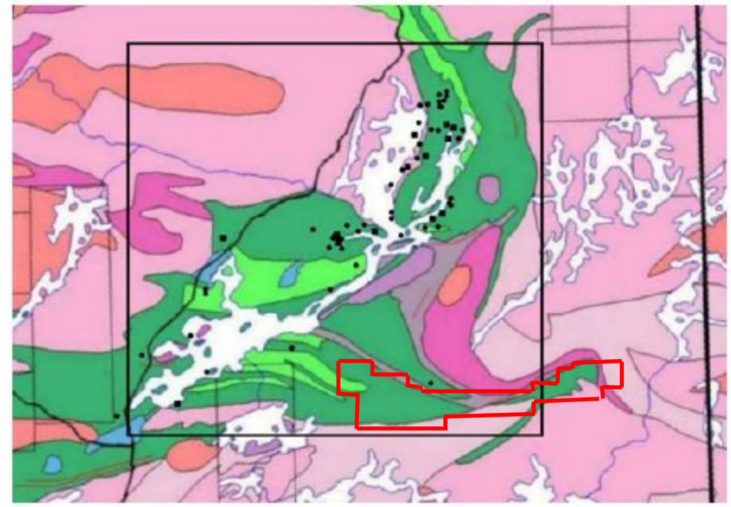


Figure. Geology map illustrating location of gold occurrences

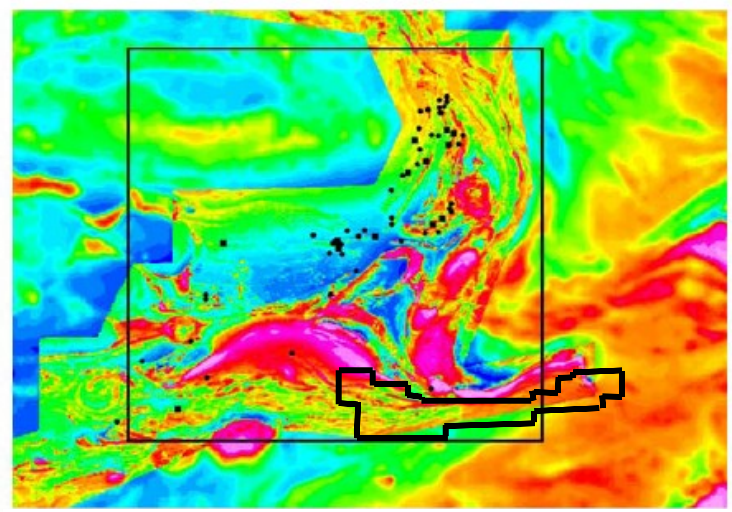


Figure. Airborne magnetic response illustrating location of gold occurrences
Geophysical Data Set 1033a&b Ontario Airborne Geophysical Surveys, Magnetic and Electromagnetic Data, Grid and Profile Data, ASCII Format, Sturgeon Lake-Savant Lake Area; by Ontario Geological Survey. The data are available as ASCII file format on one CD-ROM

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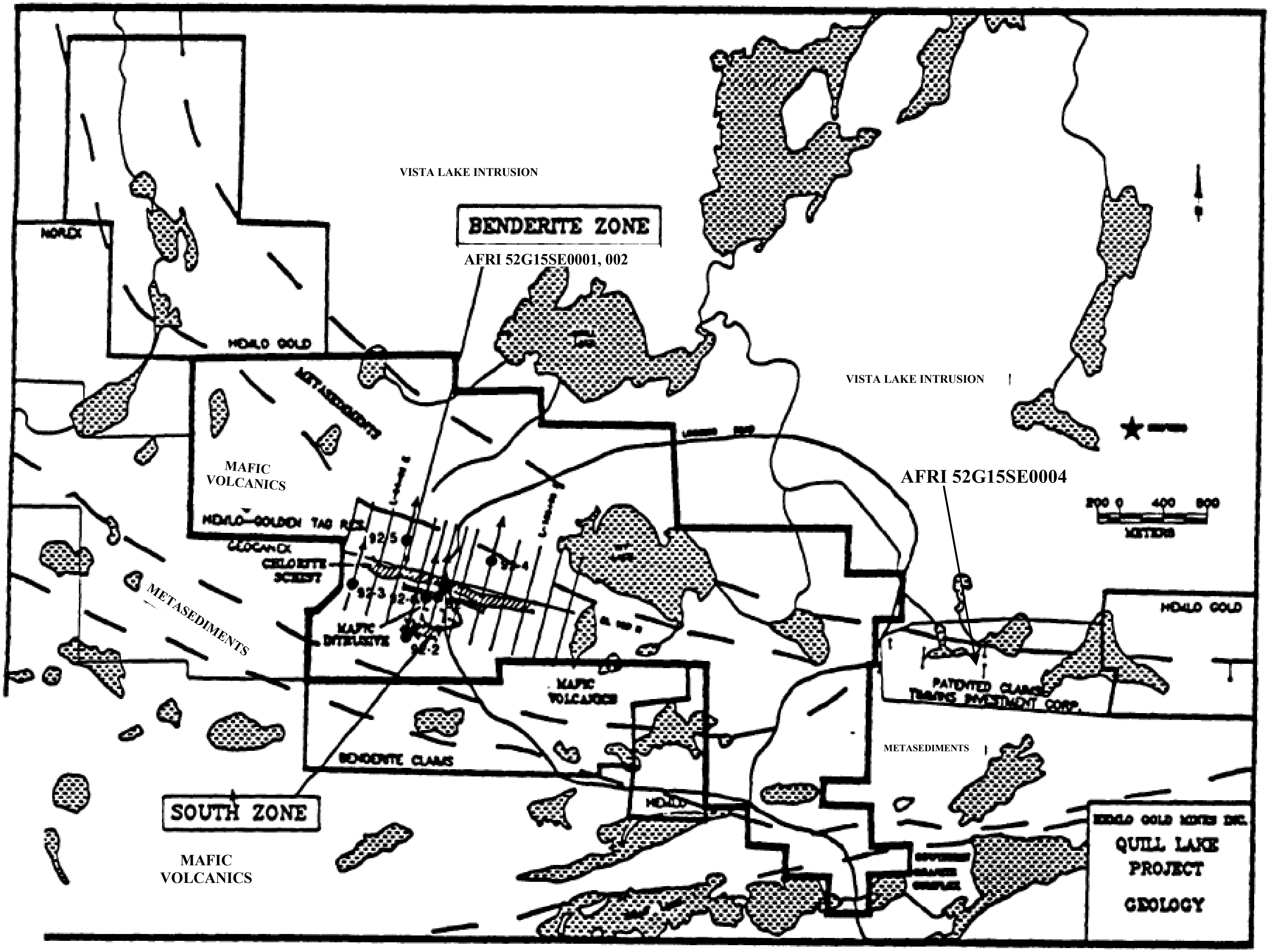
FIGURE H3: BENDERITE ZONE, QUILL LAKE PROJECT GEOLOGY



AFRI 52G15SE0001, 02: HEMLO GOLD MINES

FIGURE P1: STURGEON LAKE PROPERTY CLAIM MAP
43 CLAIMS OWNED 100% BY EXCALIBUR RESOURCES LTD.

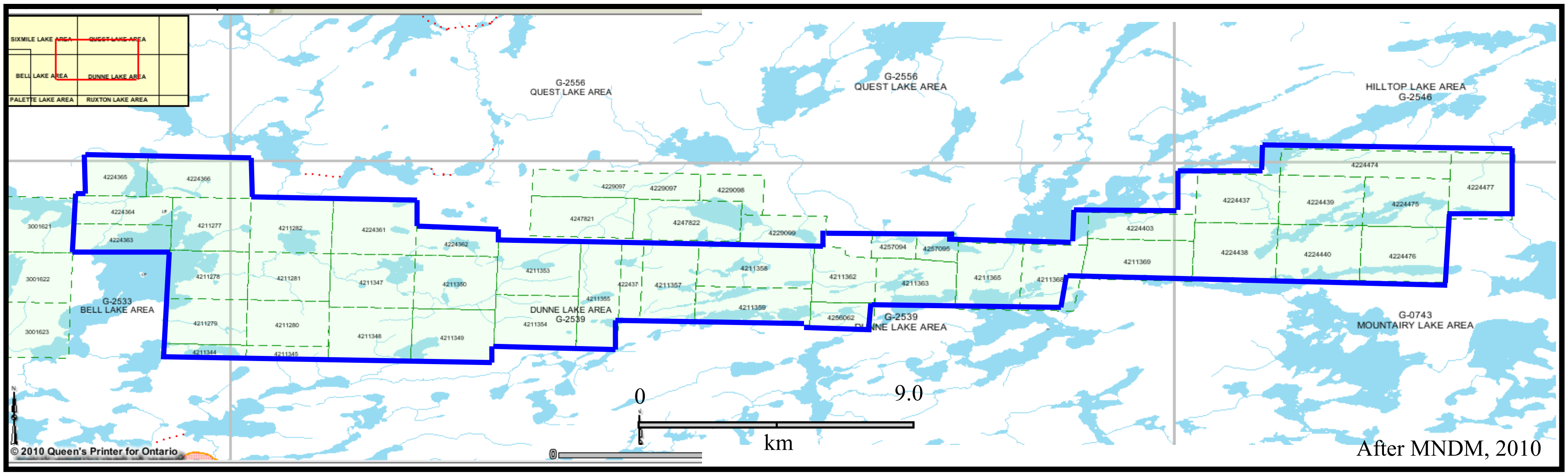


FIGURE P1: STURGEON LAKE PROPERTY CLAIM MAP-WEST HALF
43 CLAIMS OWNED 100% BY EXCALIBUR RESOURCES LTD.

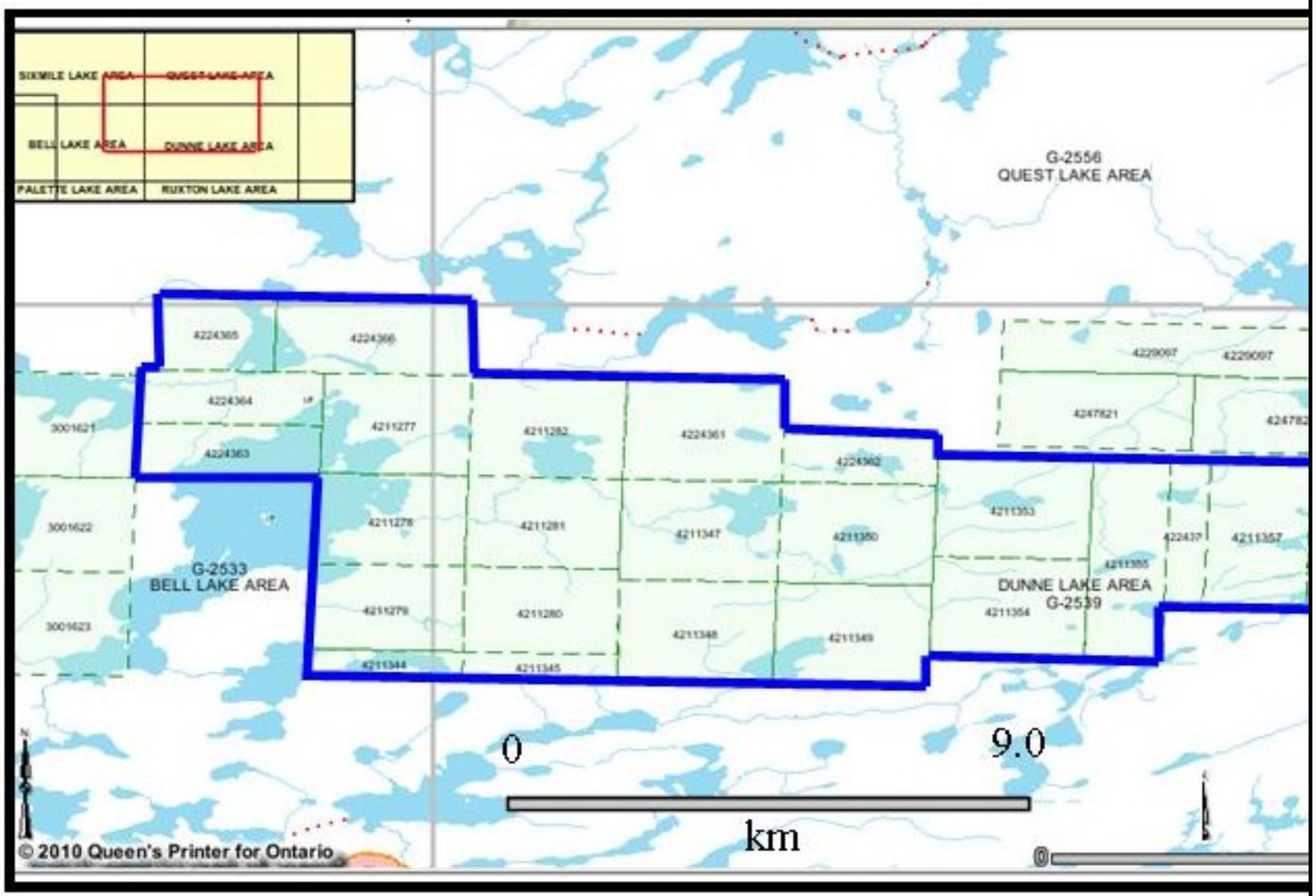


FIGURE P1: STURGEON LAKE PROPERTY CLAIM MAP-EAST HALF
43 CLAIMS OWNED 100% BY EXCALIBUR RESOURCES LTD.

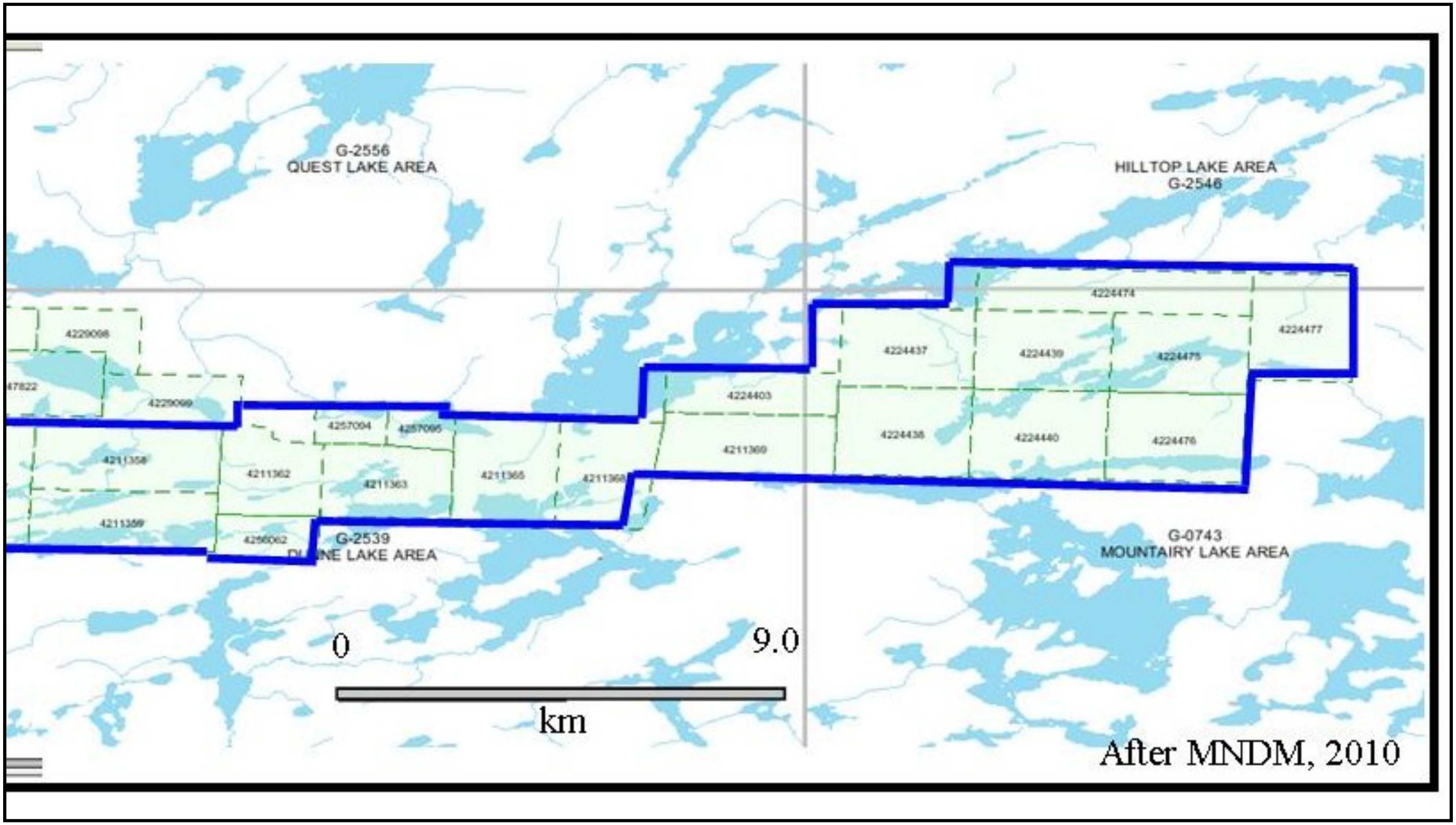


FIGURE 1:
STURGEON LAKE PROPERTY LOCATION MAP
EXCALIBUR RESOURCES LTD.

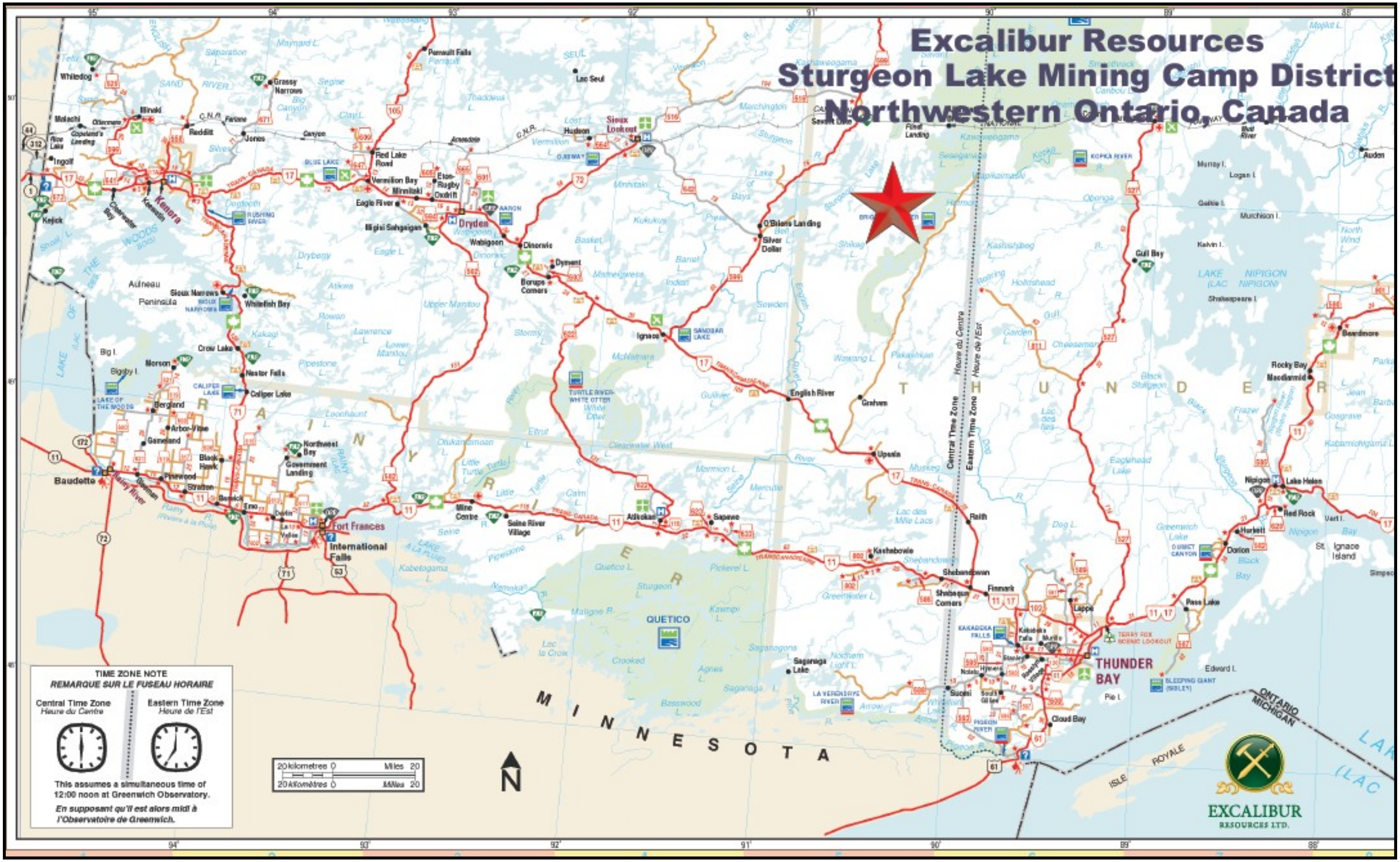
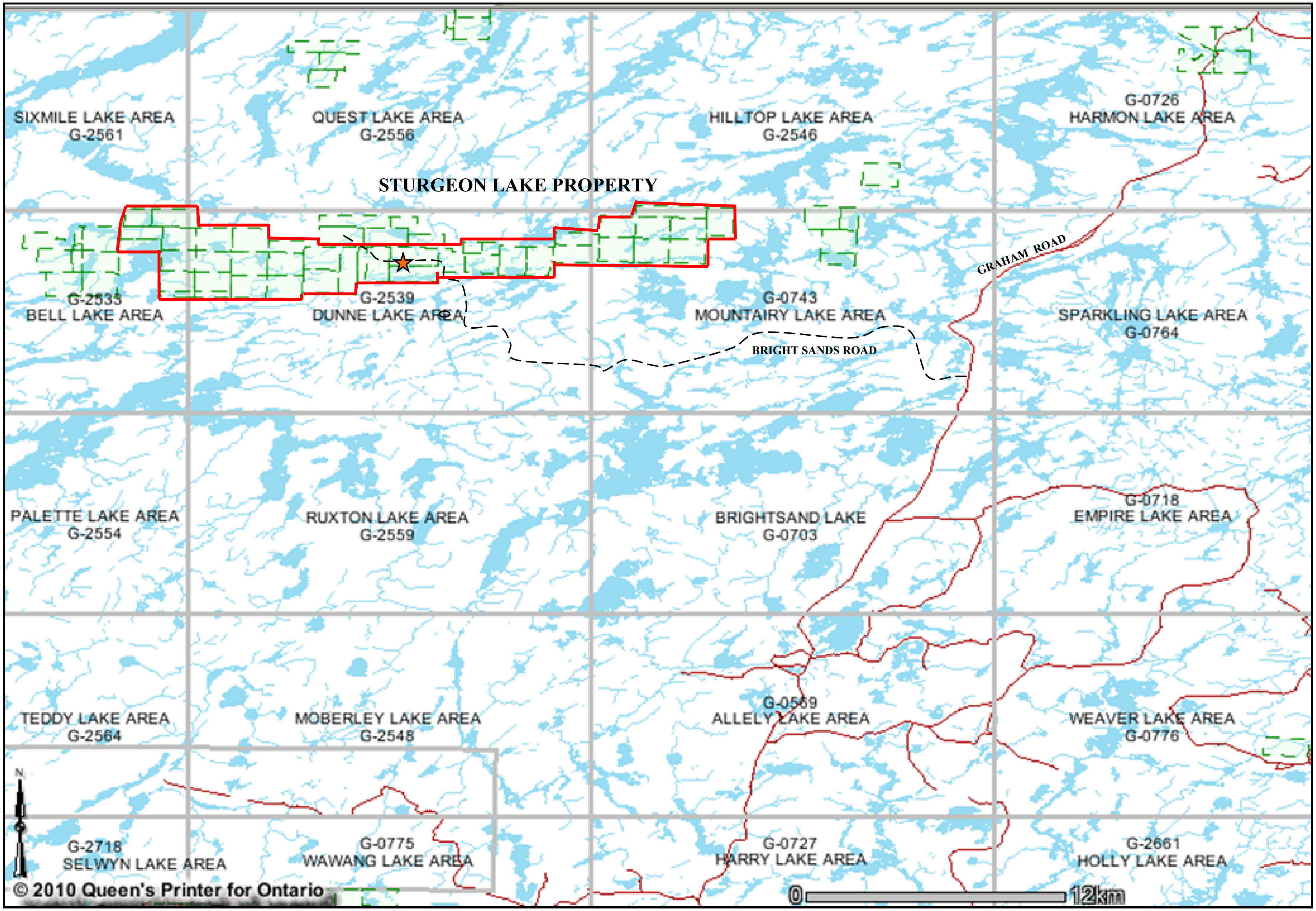


FIGURE 2:
PROPERTY ACCESS VIA GRAHAM AND BRIGHT SANDS ROADS
STURGEON LAKE PROPERTY; BELL, DUNNE AND MOUNTAIRY LAKE AREAS



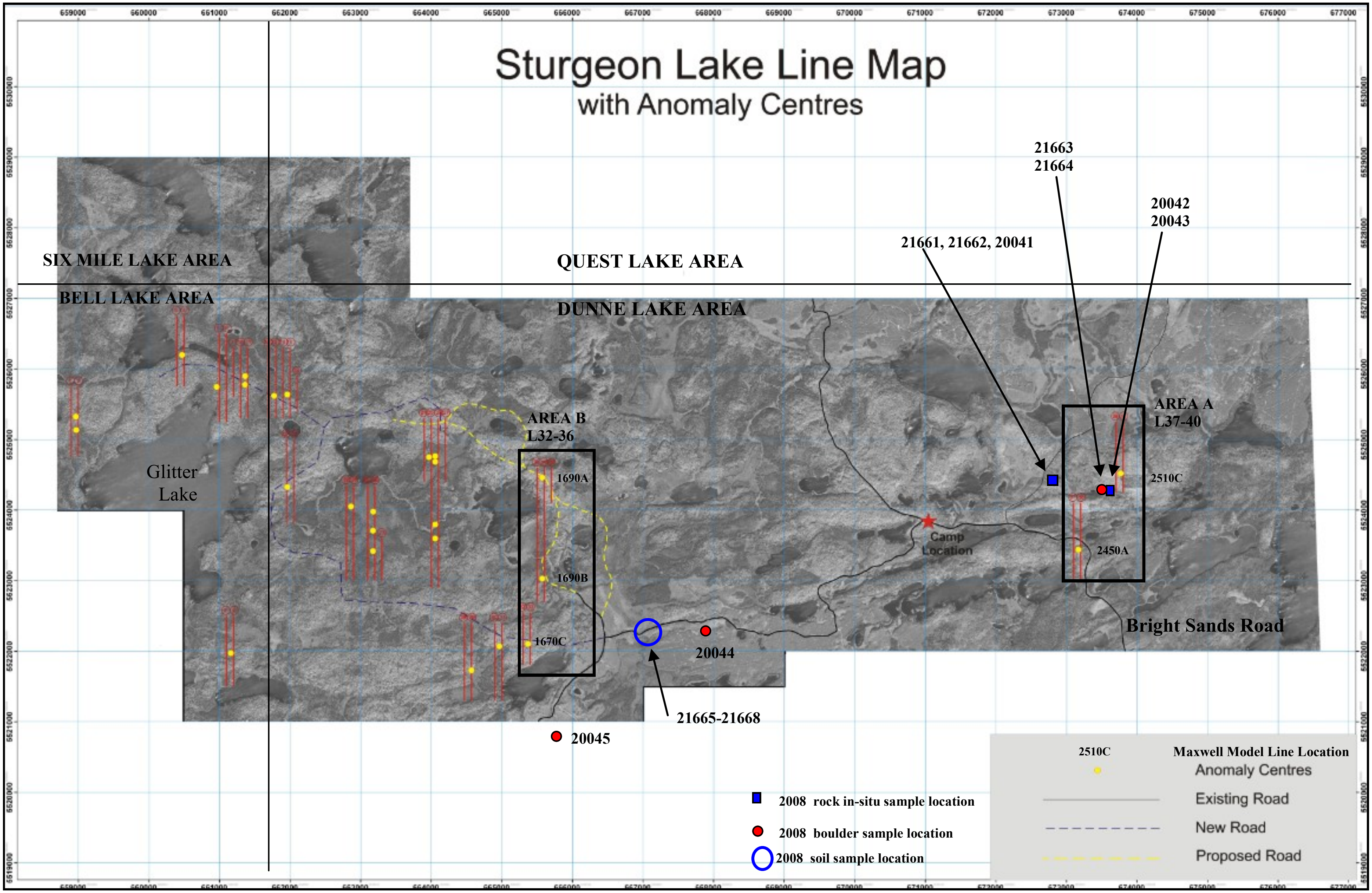
MNDMF; mod. by gfx July 2010

★ Excalibur Sturgeon Lake Camp

Sturgeon Lake Property

BRIGHT SANDS ROAD (Approx. location)

FIGURE 3:
PROPERTY ROADS, PROPOSED TRAILS, CAMP LOCATION & 2008 SAMPLE LOCATIONS
STURGEON LAKE PROPERTY; PATRICIA MINING DIVISION, NW ONTARIO



After XBR 2010, mod. by gfx July 2010

FIGURE 3A:
DETAILED LOCATION OF 2008 SAMPLES ON CLAIMS 4211358 & 4211362

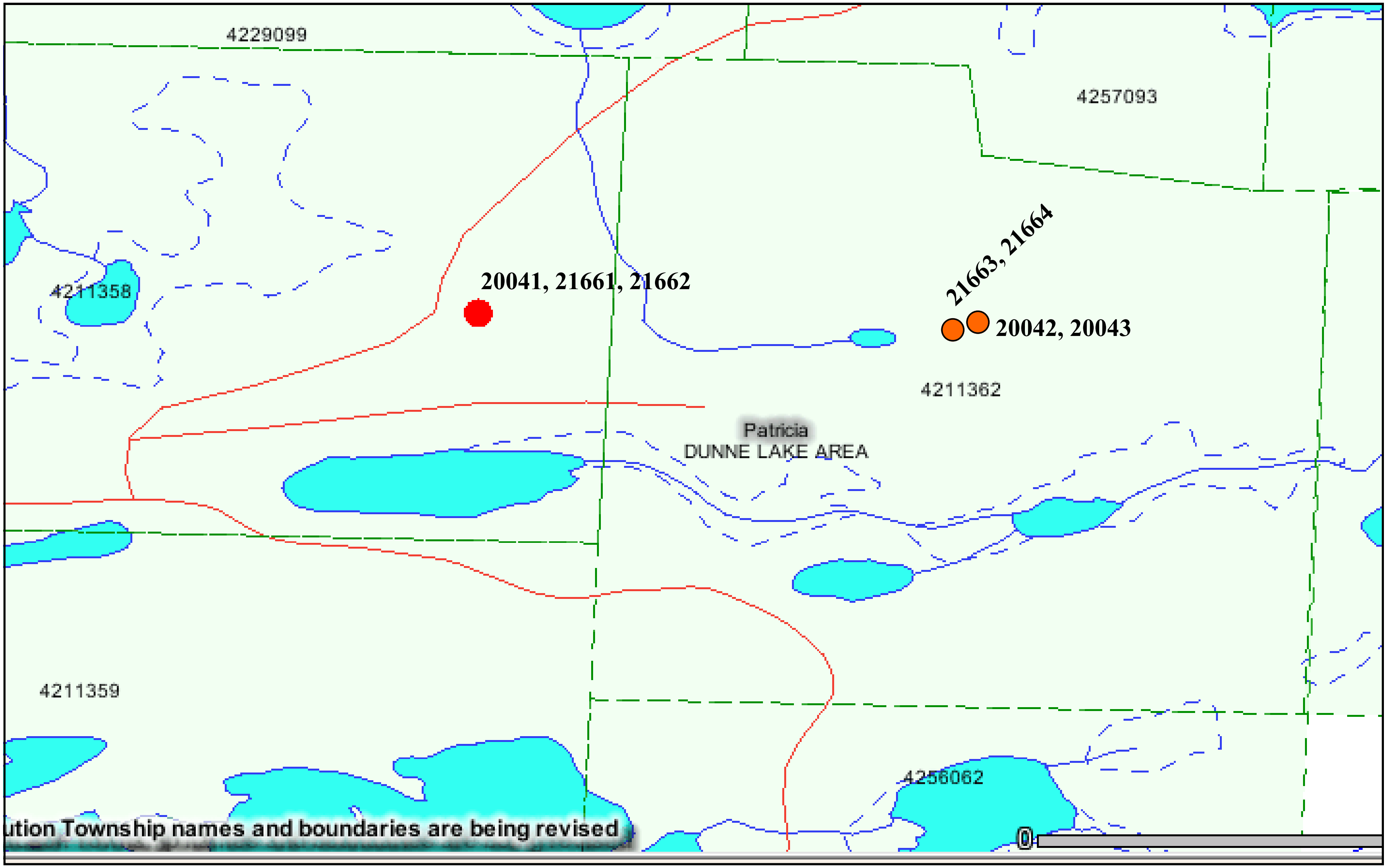
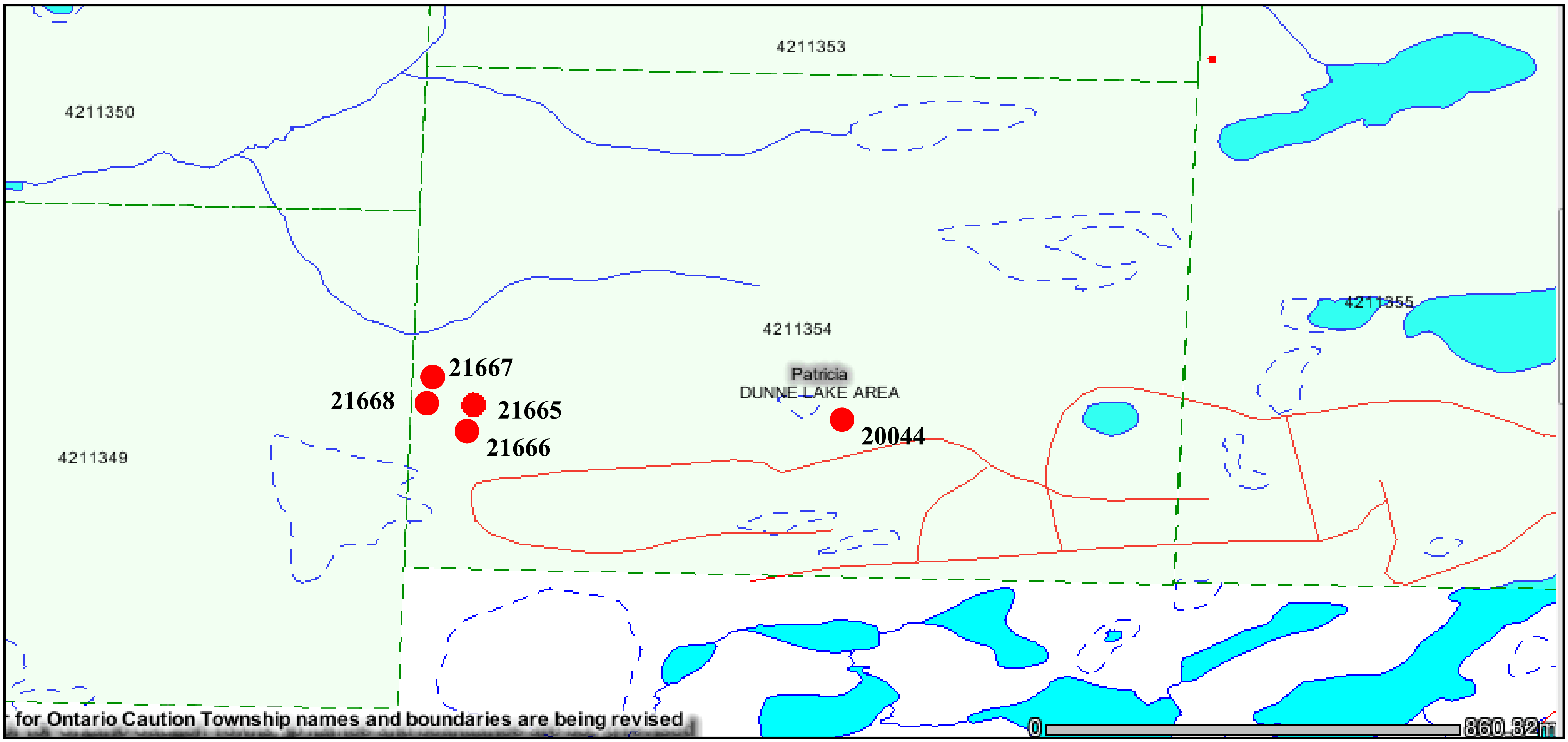
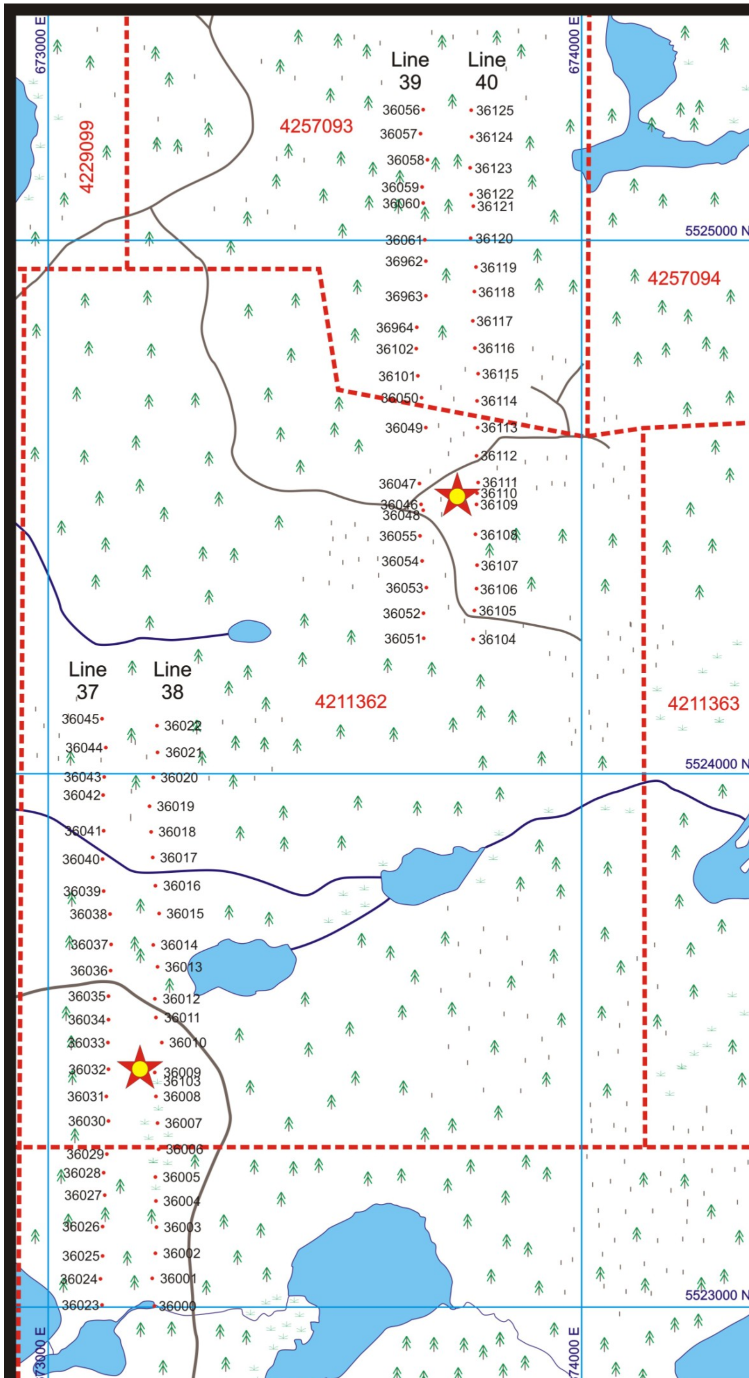


FIGURE 3B:
DETAILED LOCATION OF 2008 SAMPLES ON CLAIM 4211354





Sturgeon Lake Sample Location Map

Lines 37, 38, 39, 40

Compilation by: A. Mumin, 2010
Data collected by: A. Mumin, R. Moody, B. Ohryn, J. Duku, 2010

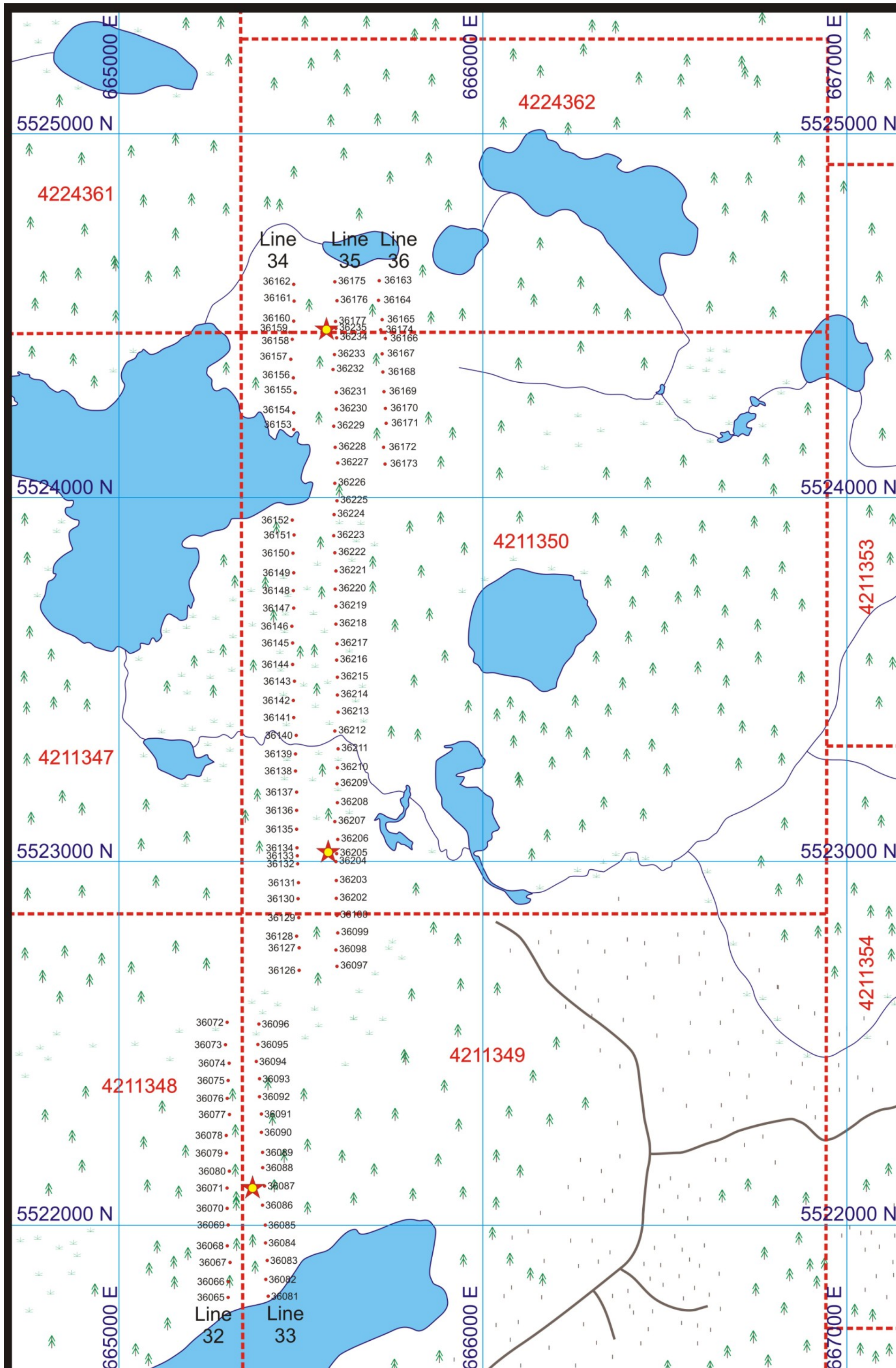
N

0 500
Meters

Legend

Lakes
Creeks/Rivers
Trees
Swamp/Marsh/Muskeg
Forested Area
Road
4211363 Claim Lines / Claim Numbers
36016 Sample Locations / Sample Numbers
VTEM Anomally Centers

FIGURE 4A:
Dunne Lake Area G-2539



Sturgeon Lake Sample Location Map

Lines 32, 33, 34, 35, 36

Compilation by: A. Mumin, 2010
Data collected by: A. Mumin, R. Moody, B. Ohryn, J. Duku, 2010

N

0 500
Meters

Legend

Lakes
Creeks/Rivers
Trees
Swamp/Marsh/Muskeg
Forested Area
Road
4211349 Claim Lines / Claim Numbers
36016 Sample Locations / Sample Numbers
VTEM Anomally Centers

FIGURE 4B:
Dunne Lake Area G-2539

				TABLE S1			*gfx July 22 2010*			
			2008/2010 SAMPLE SUMMARY							
			STURGEON LAKE PROPERTY							
				NO. OF	**NO. OF**		**ACTLABS**	**MT. MORGAN**	**SAMPLE**	**TOTAL**
		AREA &	**TOTAL**	**SGH**	**E LEACH**	**ROCKS**	**SGH**	**ENZYME**	**LOCATIONS &**	**ANALYSES**
	LAB, SAMPLE TYPE & LOC.	**FIGURE REF.**	**SAMPLES**	**ANALYS**	**ANALYS**	**ANALYS**	**INTERPRET**	**INTERPRET**	**MAPPING**	**REC'D**
1> 2010 SOIL SAMPLES: ACTLABS										
	TO EVALUATE MAXWELL MODELED VTEM ANOMALIES									
	LINE 37 (MM L2450A)	A, FIG 4A	23	23	16	16	Append B	Append C	FIGURE 4A	39
	LINE 38 (MM L2450A)	A, FIG 4A	24	24	11	11	Append B	Append C	FIGURE 4A	35
	LINE 39 (MM L2510C)	A, FIG 4A	21	21	14	14	Append B	Append C	FIGURE 4A	35
	LINE 40 (MM L2510C)	A, FIG 4A	22	22	10	10	Append B	Append C	FIGURE 4A	32
			90	**90**	**51**	**51**				
							SUBTOTAL SOILS LINES 37-40:			**141**
2> 2010 SOIL SAMPLES: ACTLABS										
	TO EVALUATE MAXWELL MODELED VTEM ANOMALIES									
	LINE 32 (MM 1670C)	B, FIG 4B	16	16	13	13	Append B	Append C	FIGURE 4B	29
	LINE 33 MM 1670C)	B, FIG 4B	16	16	14	14	Append B	Append C	FIGURE 4B	30
	LINE 34 (MM 1690A, B)	B, FIG 4B	37	37	22	22	Append B	Append C	FIGURE 4B	59
	LINE 35 (MM 1690A, B)	B, FIG 4B	41	41	29	29	Append B	Append C	FIGURE 4B	70
	LINE 36 (MM 1690A)	B, FIG 4B	12	12	12	12	Append B	Append C	FIGURE 4B	24
			122	**122**	**90**	**90**				
							SUBTOTAL SOILS LINES 32-36			**212**
3> 2008 SAMPLES: ACTLABS										
	RECONNAISSANCE SAMPLES NEAR AREA A:									
	SOILS	A	4		4					4
	BOULDERS	A	4			4				4
	ROCK-INSITU	A	5			5				5
			13	**0**	**4**	**9**				
								SUBTOTAL SOILS 2008		**4**
								SUBTOTAL ROCKS 2008		**9**
	*** SGH & ENZYME LEECH Samples Analyzed at ACTLABS, Ancaster, Ontario.**									
					TOTAL SGH ANALYSES:					212
					TOTAL ENZYME LEACH:					141
					TOTAL 2008 SOIL ANALYSES:					4
					TOTAL 2008 ROCK ANALYSES:					9
					GRAND TOTAL ANALYSES:					**366**

22-Jul-10	TABLE P1: STURGEON LAKE PROPERTY CLAIM LIST					
	(compiled from MNDM Active Mining Claim Abstracts)					
					ANNUAL	Jul-10
CLAIM NUMBER	TOWNSHIP/AREA	RECORDED HOLDER	DUE DATE	HA	WORK REQ'D	WORK REQ'D
4211277	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-MAR-13	16	6400	
4211278	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-MAR-13	16	6400	
4211279	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-MAR-13	14	5600	
4211280	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-MAR-13	14	5600	
4211281	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-MAR-13	16	6400	
4211282	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-MAR-13	16	6400	
4211344	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-MAR-13	4	1600	
4211345	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-MAR-13	4	1600	
4211347	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-APR-02	16	6400	
4211348	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-APR-02	16	6400	
4211349	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-APR-02	16	6400	
4211350	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-APR-02	16	6400	
4211353	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-APR-02	16	6400	
4211354	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-APR-02	16	6400	
4211355	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-APR-02	16	6400	
4211357	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUN-16	13	5200	
4211358	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUN-16	15	6000	
4211359	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUN-16	15	6000	
4211362	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUN-16	12	4800	
4211363	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUN-16	16	6400	
4211365	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUN-16	15	6000	
4211368	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUN-16	15	6000	
4211369	MOUNTAIRY LAKE AREA (G-0743)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUN-16	15	6000	
4224361	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2010-JUL-25	16	6400	5254
4224362	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2010-JUL-25	8	3200	2627
4224363	BELL LAKE AREA (G-2533)	EXCALIBUR RESOURCES LTD. (100.00 %)	2010-JUL-25	10	4000	3284
4224364	BELL LAKE AREA (G-2533)	EXCALIBUR RESOURCES LTD. (100.00 %)	2010-JUL-25	14	5600	4597
4224365	SIXMILE LAKE AREA (G-2561)	EXCALIBUR RESOURCES LTD. (100.00 %)	2010-JUL-25	9	3600	2955
4224366	QUEST LAKE AREA (G-2556)	EXCALIBUR RESOURCES LTD. (100.00 %)	2010-JUL-25	15	6000	4925
4224370	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2010-JUL-28	14	5600	4597
4224403	MOUNTAIRY LAKE AREA (G-0743)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUN-16	10	4000	
4224437	MOUNTAIRY LAKE AREA (G-0743)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUL-15	16	6400	
4224438	MOUNTAIRY LAKE AREA (G-0743)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUL-15	16	6400	
4224439	MOUNTAIRY LAKE AREA (G-0743)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUL-15	16	6400	
4224440	MOUNTAIRY LAKE AREA (G-0743)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUL-15	16	6400	
4224474	HILLTOP LAKE AREA (G-2546)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUL-15	16	6400	
4224475	MOUNTAIRY LAKE AREA (G-0743)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUL-15	16	6400	
4224476	MOUNTAIRY LAKE AREA (G-0743)	EXCALIBUR RESOURCES LTD. (100.00 %)	2011-JUL-15	16	6400	
4224477	HILLTOP LAKE AREA (G-2546)	EXCALIBUR RESOURCES LTD. (100.00 %)	2010-JUL-15	15	5075	4000
4257093*	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2012-JUN-02	3	1200	
4257094	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2012-JUN-01	4	1600	
4257095	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2012-JUN-01	4	1600	
4256062	DUNNE LAKE AREA (G-2539)	EXCALIBUR RESOURCES LTD. (100.00 %)	2010-JUL-12	6	2400	
43 CLAIMS OWNED 100% EXCALIBUR RESOURCES LTD.			**HECTARES**	**568**		**$32,239.00**
* Registered but have not appeared on Claim Map G2539 at time of writing.						

TABLE H3D:

EAST SHEET: HISTORIC DRILL HOLE GEOLOGY & CONDUCTORS

STURGEON LAKE PROPERTY

UTM coordinates from sketch maps and from ODHDB (NAD27); See Table H3C

COMPANY	YEAR	ID	MAP ID	MNDM#	AFRI#	LOCATION, JVX REF TARGET; GEN HOLE GEOL.	APPARENT CONDUCTOR OR IP ANOMALY AND HOST	INTERVAL, ASSAYS (Cu, Pb, Zn, Ag, Au)
MEAKIN	**1974**		**EXR-1**	**103047**	**52G16SW9209**	**Gridiron Lake**	mass po in sil, ser amphibolite	73 - 73.5 '
						metavolcanic		NA
MEAKIN	1974		BXR-2	103048		Gridiron Lake		
						metavolcanic, sedimented	po, py stringers in sil sedimented	119 - 171'
						volcanic	volcanic	NA
MEAKIN	1974		BXR-3	103049		Gridiron Lake		
						metavolcanic (graphite	po, py stingers in sedimented	76 - 107 '
						schist interbedded with	volcanic	NA
						andesite), sedimented		
						volcanic		
MEAKIN	1974		AXR-4	103050		Gridiron Lake	graphitic tuff with some	e.g. 82.2 - 82.8'
						metavolcanic (tuff),	mass po, py stingers	NA
						rhyolite, mass sulfs		
MEAKIN	1974		AXR-5	103051		Gridiron Lake	schist with some	e.g. 100.6 - 101.3'
						metavolcanic (schist),	mass po, py stingers	NA
MEAKIN	1974		AXR-6	103052		Gridiron Lake	narrow bands mass po, py	9 - 35'
						sedimented volcanic,		NA
						rhyodacite		
MEAKIN	1974		AXR-7	103053		Gridiron Lake	stringers of po, py	11 -35'
						sedimented volcanic		NA
						(hornblende gneiss)		
MEAKIN	1974		DXR-8	103054		Gridiron Lake	stringers of po, py	e.g. 87.8 - 99.9'
						sedimented volcanic	in garnet, hbld biotite gneiss	NA
						(hornblende gneiss)		

COMPANY	YEAR	ID	MAP ID	MNDM#	AFRI#	LOCATION, JVX REF TARGET;	APPARENT CONDUCTOR OR IP ANOMALY	INTERVAL,
						GEN HOLE GEOL.	AND HOST	ASSAYS
								(Cu, Pb, Zn, Ag, Au)
HEMLO GOLD	**1992**		**HG-1**	**106374**	**52G15SE0001, 02**	**Quill Lake (Div)**	chlorite schist with 1-3% po, py	72.4 -74.1'
					(Benderite)	gabbro, metavolcanics,	locally 10% aspy	1.65 g Au/t over 1.7 m
						metasediments		
HEMLO GOLD	1992		HG-2	106375		Quill Lake	some narrow zones with up to	no significant assays
						gabbro, metavolcanics,	1-3% py, po	
						metasediments, chlorite -		
						carbonate schist		
HEMLO GOLD	1992		HG-3	106376		Quill Lake	some narrow zones with up to	
						gabbro, metavolcanics,	1-3% py, po e.g., shear zone	28.3 - 30 m
						metasediments, chlorite -		e.g., shear zone
						carbonate schist, lean IP,		no significant assays
						banded IP, mafic intrusive		
HEMLO GOLD	1992		HG-4	106377		Quill Lake	sulf zones in sheared diorite	
						diorite, Banded IF	2-5% py, po	20.9 - 22.3 m
							5 -10% py, po	53 - 56.2 m
							30 - 35% py-po	71 - 72 m
								no significant assays
HEMLO GOLD	1992		HG-5	106378		Quill Lake	no significant sulfides	no significant assays
						mafic metavolcanic,		
						mafic intrusive, felsic		
						intrusive		
HEMLO GOLD	1992		HG-6	106379		Quill Lake		68.9 - 70.1 m
						gabbro/diorite,		banded IF
						mafic metavolcanic,		2.05 g Au/t over 1.2 m
						banded IF, metasediment	5 - 10% cpy, 3 - 5% po, py	74.8 - 74.9 m
							5 - 7 % py	98.9 -100.3 m
								no significant assays
NA TIMMINS EXPL	**1957**		**NA-1**	**106380**	**52G15SE0004**	Sassafras Lake NE	IF?	150 - 490'
						tuff, syenite, IF,		NA
						greenstone		

COMPANY	YEAR	ID	MAP ID	MNDM#	AFRI#	LOCATION, JVX REF TARGET;	APPARENT CONDUCTOR OR IP ANOMALY	INTERVAL,
						GEN HOLE GEOL.	AND HOST	ASSAYS
								(Cu, Pb, Zn, Ag, Au)
NA TIMMINS EXPL	1957		NA-2	106381	52G15SE0004	Sassafras Lake NE	IF?	4 interbeds IF
						tuff, syenite, IF		NA
NA TIMMINS EXPL	1957		NA-3	106382	52G15SE0004	Sassafras Lake NE	IF?	41.5 -70'
						tuff, syenite, IF,		88.5 - 89.5'
						diorite		NA
NA TIMMINS EXPL	1957		NA-4	106383	52G15SE0004	Sassafras Lake NE	IF?	various incl. 109..5 - 225'
						diorite, IF, tuff,		NA
						greenstone, IF		
NA TIMMINS EXPL	1957		NA-5	106384	52G15SE0004	Sassafras Lake NE	IF?	80 - 390 '
						diorite, IF, tuff,		NA
						greenstone, IF		
NA TIMMINS EXPL	1957		NA-6	106385	52G15SE0004	Sassafras Lake NE		
						hole lost		
NA TIMMINS EXPL	1957		NA-7	106386	52G15SE0004	Sassafras Lake NE	IF?	375 - 407'
						syenite, IF		470 - 534'
								NA
NA TIMMINS EXPL	1957		NA-8	106387	52G15SE0005	Sassafras Lake	IF?	numerous interbeds
						diorite, IF, tuff, syenite		of IF
								NA
NORBASKA	1971		NB-1	101089	52G16SE0003	Longneck Lake	not obvious	
						granite gneiss,		
						granite pegmatite		
NORBASKA	1971		NB-2	101090	52G16SE0003	Longneck Lake	zones with up to 20% sulfs,	51 - 52'
						granite gneiss,	mainly po, tr cpy,	128 - 130.5'
						granite pegmatite	pentlandite	NA
NORBASKA	1971		NB-3	101091	52G16SE0003	Longneck Lake	sulfide zone	151 - 155'
						granite gneiss,	mainly py, po, tr cpy,	NA
						granite pegmatite	pentlandite	

COMPANY	YEAR	ID	MAP ID	MNDM#	AFRI#	LOCATION, JVX REF TARGET;	APPARENT CONDUCTOR OR IP ANOMALY	INTERVAL,
						GEN HOLE GEOL.	AND HOST	ASSAYS
								(Cu, Pb, Zn, Ag, Au)
NORBASKA	1971		NB-4	101092	52G16SE0003	Longneck Lake	sulfide zone in hbld feld	188 - 227'
						metavolcanics (gneiss)	gneiss, 10% py, po stringers with	NA
							mass po veins	
NORBASKA	1971		NB-5	101093	52G16SE0003	Longneck Lake	graphitic shear zone	155 -158'
						metavolcanics (gneiss);	with 5% py, po	NA
						graphitic shear zone		
NORBASKA	1971		NB-6	101094	52G16SE0003	Longneck Lake	massive sulfides, py, po	247 - 249'
						metavolcanics (gneiss);		NA
						graphitic shear zone	graphitic shear zone	258 - 287'
							with narrow mass stringers	NA
							of py, po	
							mineralized granite gneiss	370 - 378'
							10% sulfides throughout	NA
NORBASKA	1971		NB-7	101095	52G16SE0003	Longneck Lake	sulfidized fault zone?	43 -51'
						metavolcanics (gneiss);		NA

					TABLE H3C:							
		EAST SHEET: HISTORIC DRILL HOLE SPECIFICATIONS FROM										
		UTM coordinates from sketch maps and from ODHDB (NAD27)										
STURGEON LAKE PROPERTY: EAST SHEET												
Company	year	Lake	JVX ID	MNDM#	UTM e	UTM n	az.	dip	length	ovb.	AFRI#	TOTAL FT.
NORBASKA	1971		NB-1	101089	682254.8	5524576	180	-45	91.46	1.52	52G16SE0003	
NORBASKA	1971		NB-2	101090	680984.9	5524473	180	-45	91.46	2.74	52G16SE0003	
NORBASKA	1971		NB-3	101091	680259.2	5524226	180	-45	91.46	2.74	52G16SE0003	
NORBASKA	1971		NB-4	101092	681508.5	5525364	360	-55	93.29	4.57	52G16SE0003	
NORBASKA	1971		NB-5	101093	681508.5	5525500	360	-45	76.22	3.05	52G16SE0003	
NORBASKA	1971		NB-6	101094	681042.6	5525500	360	-45	152.44	2.74	52G16SE0003	
NORBASKA	1971		NB-7	101095	680927.2	5525087	360	-45	106.71	1.83	52G16SE0003	
											TOTAL NORBASKA	703.04
MEAKIN	1974		EXR-1	103047	682613.5	5526118	155	-45	45.12	7.62	52G16SW9209	
MEAKIN	1974		BXR-2	103048	682357.9	5526043	335	-45	60.37	2.13	52G16SW9209	
MEAKIN	1974		BXR-3	103049	682329	5526130	150	-45	32.62	7.62	52G16SW9209	
MEAKIN	1974		AXR-4	103050	681776.51	5526167.11	155	-45	44.51	3.66	52G16SW9209	
MEAKIN	1974		AXR-5	103051	681788.9	5526109	335	-45	33.23	2.74	52G16SW9209	
MEAKIN	1974		AXR-6	103052	681603.3	5525673	335	-45	30.79	2.74	52G16SW9209	
MEAKIN	1974		AXR-7	103053	681681.7	5526076	158	-45	31.2	2.13	52G16SW9209	
MEAKIN	1974		DXR-8	103054	682687.7	5526167	158	-45	45.12	6.4	52G16SW9209	
											TOTAL MEAKIN	322.96
HEMLO GOLD	1992	Div	HG-1	106374	669590.9	5525466	360	-45	121.01	2.13	52G15SE0001,02	
HEMLO GOLD	1992	Div	HG-2	106375	669307.7	5524720	360	-45	142.34	6.71	52G15SE0001,02	
HEMLO GOLD	1992	Div	HG-3	106376	668696	5525297	360	-45	91.74	7.62	52G15SE0001,02	
HEMLO GOLD	1992	Div	HG-4	106377	669088.6	5525829	360	-45	96.62	6.71	52G15SE0001,02	
HEMLO GOLD	1992	Div	HG-5	106378	670053.7	5525886	360	-45	149.96	1.83	52G15SE0001,02	
HEMLO GOLD	1992	Div	HG-6	106379	669524.1	5525402	360	-45	178.31	6.71	52G15SE0001,02	
											TOTAL HEMLO GOLD	779.98
NA TIMMINS EXPL	1957	Sassafras	NA-1	106380	674536.8	5524785	360	-45	184.45	2.44	52G15SE0004	
NA TIMMINS EXPL	1957	Sassafras	NA-2	106381	674536.8	5524780	180	-45	122.56	1.52	52G15SE0004	
NA TIMMINS EXPL	1957	Sassafras	NA-3	106382	674508.5	5524924	360	-45	244.51	11.28	52G15SE0004	
NA TIMMINS EXPL	1957	Sassafras	NA-4	106383	673983.4	5524941	360	-40	187.5	8.08	52G15SE0004	
NA TIMMINS EXPL	1957	Sassafras	NA-5	106384	673983.4	5524936	180	-45	135.37	6.4	52G15SE0004	

NA TIMMINS EXPL	1957	Sassafras	NA-6	106385	673764.3	5525272	180	-45	15.85	**NA**	**52G15SE0004**	
NA TIMMINS EXPL	1957	Sassafras	NA-7	106386	673633.7	5524995	360	-45	213.41	**16.77**	**52G15SE0004**	
NA TIMMINS EXPL	1957	Sassafras	NA-8	106387	676762.2	5524701	360	-45	227.44	**13.72**	**52G15SE0005**	
										TOTAL NA TIMMINS		1331.09
										TOTAL HISTORIC ON EAST SHEET		3137.07
UTM coordinates from from ODHDB (NAD83) Geofine Exploration												

					TABLE H3B:			
		WEST SHEET: HISTORIC DRILL HOLE GEOLOGY & CONDUCTORS						
		UTM coordinates from sketch maps and from ODHDB (NAD83); See Table 3A						
COMPANY	**YEAR**	**ID**	**MAP ID**	**MNDM#**	**AFRI#**	**LOCATION, JVX REF TARGET;**	**APPARENT CONDUCTOR**	**INTERVAL,**
						GEN HOLE GEOL.	**AND HOST**	**ASSAYS**
								(Cu, Pb, Zn, Ag, Au)
BISON	1970	5	M5	106392	52G15NW0179	HUMP LAKE; A1	rhy tuff with grapitic zones	various;
						rhy tuff, graphitic zones		no economic but
								none reported
AMAX	1972	72-1	A1	106369	52G15SE0007	NE GLITTER, B2	mass po veins up to 1'	e.g., 191.7 - 192.8'
						mainly mafic metavol with sulfide	alt seds 50 -60% py	303 - 313'
						sections		NA
AMAX	1972	2	A2	106370	52G15SE0007	NE GLITTER, B2	mass py, po	151 - 152'
						mainly mafic tuffs and interbedded		NA
						slates, locally graphitic and	sulfidized (py) graphitic slate	152 - 166'
						sulfidized		NA
AMAX	1972	3	A3	106371	52G15SE0007	NE GLITTER, C2	sulf, graphitic chert, sil tuff	
						mainly meta tuffs, loc sulfidized,	60-70% py, po	147-150'
						graphitic		NA
							grapitic slate	150 - 153'
								NA
AMAX	1972	4	A4	106372	52G15SE0007	NE GLITTER, C2		
						mainly meta tuffs, loc sulfidized,	sulfidized meta tuffs averg.	168-183'
						graphitic	20 -25% py	NA
AMAX	1972	5	A5	106373	52G15SE0007	NE GLITTER, C2	sulfidized cherty seds	131.5 - 137'
						mainly meta mafic vol	heavy po, minor cpy, tr sphal	NA
MATTAGAMI L MINES	1972	SL-P-72-1	ML1	106520	52G15SW0020	HUMP LAKE; A2	mass sulfs	232 - 243'

COMPANY	YEAR	ID	MAP ID	MNDM#	AFRI#	LOCATION, JVX REF TARGET;	APPARENT CONDUCTOR	INTERVAL,
						GEN HOLE GEOL.	AND HOST	ASSAYS
								(Cu, Pb, Zn, Ag, Au)
						andesiite, rhy tuff, mass sulfs,	60% po, py	mainly nil,
						graphitic tuff, granite		up to 0.05% Cu,
								0.2%Zn
MATTAGAMI L MINES	1972	SL-P-72-2	ML2	106521	52G15SW0020	HUMP LAKE; A2	strat hole;	
						rhy, mass sulfs, graphitic	mass sulfs, py, po	nil
						schist, amphibolite, andesite		72 - 77
							sulf rhy aglom, rhy and graph	gen nil
							interbeds	140 - 176
								gen nil
								up to 200 ppm Cu
MATTAGAMI L MINES	1972	SL-P-72-3	ML3	106522	52G15SW0020	HUMP LAKE; A2	sulf graphitic tuff 10-20% py	350 - 408'
						graphitic tuff, rhy tuff, andesite		mainly nil, up to
								900 ppm Cu
MATTAGAMI L MINES	1972	SL-P-72-4	ML4	106523	52G15SW0020	HUMP LAKE; A2	sulf graphitic tuff 1-5% py	310 - 346'
						andesite, rhy tuff, graphitic		mainly nil
						tuff	sulf graphitic tuff 5-10% py	415 - 427'
								mainly nil
MATTAGAMI L MINES	1970	SL-51-70-5	ML5	106519	52G15SW0020	HUMP LAKE; B1	mass sulfs 75% py, 10% po,	131. 5 - 167.3 '
						dacite, brecciated rhy, mass sulfs,	1 - 2% cpy	mainly nil incl. Cu
						andesite		
MATTAGAMI L MINES	1972	SL-51-72-6	ML6	106524	52G15SW0020	CLAW LAKE; B1E	sulf (mainly po) rhy tuff, graph tuff	NA
						andesite, graph tuff, rhy tuff,		112 - 154'
						diorite, rhy	graph tuff	NA
								426.5 - 478 '

COMPANY	YEAR	ID	MAP ID	MNDM#	AFRI#	LOCATION, JVX REF TARGET;	APPARENT CONDUCTOR	INTERVAL,
						GEN HOLE GEOL.	AND HOST	ASSAYS
								(Cu, Pb, Zn, Ag, Au)
NEWCONEX	1970	1-A	N1		52G15SW0017	GLITTER LAKE NE, C2	sulfide graphitic gneiss	210 - 236'
						hornblende gneiss, qtx porph,	<5 - 50% po	up to 0.03% Cu
						sulf gneiss		0.17% Zn; Tr Au, Ag
								517 - 521'
							sulfide gneiss, up to 15% py	up to 0.03% Cu,
								0.14% Zn
NEWCONEX	1970	2	N2		52G15SW0017	GLITTER LAKE NE, C2	sulf graphitic chert	50 - 66'
						fragmental, sulf, graphitic	10 - 15% po	NA
						chert, qtz hornblende gneiss		
							sulf chert	66 - 83.5'
							15% po, some py, tr cpy	NA
							sulf qtz hbld gneiss	96 - 99.5'
							15 - 20% po	0.04% Cu, 0.06%
								Zn
							sulf qtz gneiss	292 - 304'
							15% po, tr cpy	averg. Grade of
								0.05% Cu, 0.2% Zn
NEWCONEX	1970	3	N3		52G15SW0017	GLITTER LAKE NW, C1	mass sulfs	261.5 - 296'
						amphibolite gneiss, mass sulf,	10 - 50% sulfs, po, minor cpy	up to 0.02% Cu,
						chert		0.08% Zn, 0.01
								oz/t Au, tr Ag
NEWCONEX	1970	4-A	N4	106665	52G15SW0016	qtz hornblende gneiss,	sulf qtz hbld gneiss,	137 -161'
						sulf qtz hbld gneiss,	10 -15% sulfs, po, less py	up to 0.04% Cu,
						sulf graphitic qtz hbld gneiss		0.01 oz/t Au
							sulf graphitic qtz hbld gneiss	165 - 175.5'
							10% sulfs in graphitic seams	0.01%Cu

TABLE H3A:

WEST SHEET: HISTORIC DRILL HOLE SPECIFICATIONS FROM

UTM coordinates from sketch maps and from ODHDB (NAD83)

STURGEON LAKE PROPERTY: WEST SHEET

Company	year	ID	JVX ID	MNDM#	UTM e	UTM n	az.	dip	length	ovb.	AFRI#	TOTAL FT.
BISON	1970	5	M5	106392	659311	5527248	180	-55	166.8	3.1	52G15NW0179	
											TOTAL BISON	166.8
AMAX	1972	72-1	A1	106369	662192	5525695	10	-45	212.5	3.4	52G15SE0007	
AMAX	1972	2	A2	106370	662638	5525342	190	-45	113.4	6.7	52G15SE0007	
AMAX	1972	3	A3	106371	662143	5524958	10	-45	106.7	22.6	52G15SE0007	
AMAX	1972	4	A4	106372	661994	5524834	10	-45	107.3	12.2	52G15SE0007	
AMAX	1972	5	A5	106373	661766	5524565	10	-45	92.4	10.4	52G15SE0007	
											TOTAL AMAX	632.3
MATTAGAMI L MINES	1970	SL-51-70-5	ML5	106519	659160	5526086	150	-45	212.8	9.2	52G15SW0020	
MATTAGAMI L MINES	1972	SL-P-72-1	ML1	106520	660159	5526109	345	-45	209.8	6.4	52G15SW0020	
MATTAGAMI L MINES	1972	SL-P-72-2	ML2	106521	660395	5526282	180	-50	185.1	16.8	52G15SW0020	
MATTAGAMI L MINES	1972	SL-P-72-3	ML3	106522	660395	5526457	180	-50	214.3	7.9	52G15SW0020	
MATTAGAMI L MINES	1972	SL-P-72-4	ML4	106523	660380	5526634	180	-50	200.3	14	52G15SW0020	
MATTAGAMI L MINES	1972	SL-51-72-6	ML6	106524	658194	5525906	180	-50	214.3	2.7	52G15SW0020	
											TOTAL MATTAGAMI	1236.6
NEWCONEX	1970	1-A	N1		660811	5524954	200	-50	207.3	11.6	52G15SW0017	
NEWCONEX	1970	2	N2		661077	5524988	200	-45	129.5	5.8	52G15SW0017	
NEWCONEX	1970	3	N3		659915	5524958	200	-45	106.1	6.4	52G15SW0017	
NEWCONEX	1970	4-A	N4	106665	661267	5523525	20	-60	66.8	9.8	52G15SW0016	
											TOTAL NEWCONEX:	551.1
											TOTAL HISTORIC ON WEST SHEET	1183.4
after JVX, July 2010	UTM coordinates from sketch maps and from ODHDB (NAD83)						Ian Johnson		16-Jul-10			

In the interest of rapid dissemination of the results contained in this Report, some of the data may not have been meticulously checked. Thus, the ODM does not guarantee the accuracy of these figures and suggests the reader check original sources.

TABLE H1:
BASE METAL MASSSIVE SULPHIDE DEPOSITS IN THE STURGEON LAKE REGION OF NORTHWESTERN ONTARIO

OWNER	DEPOSIT NAME	DISCOVERY DATE	DEPOSIT TYPE	CURRENT TONNAGE ESTIMATE (mil. tons)	AVERAGE GRADE					DEVELOPMENT		STRIKE LENGTH (feet)
					Zn (%)	Cu (%)	Pb (%)	Ag (oz/ton)	Au (oz/ton)	Mode	Production (tons/day)	
Mattabi Mines Ltd.	Mattabi	September 1969	Zn-Cu-Pb-Ag-Au	12.8	7.60	0.91	0.84	3.13	0.007	Open Pit	3,000	1,800
Sturgeon Lake Mines Ltd.	Boundary	October 1970	Zn-Cu-Pb-Ag-Au	2.1	10.64	2.98	1.47	6.14	0.02	Open Pit	1,200	1,000
Mattagami Lake Mines Ltd.	Lyon Lake	October 1971	Zn-Cu-Pb-Ag-Au	1.1	6.81	1.03	0.59	2.96	0.007	Under-ground	1,000	1,400
Mattagami Lake Mines Ltd.	Creek	February 1972	Zn-Cu-Pb-Ag-Au	.9	8.84	1.66	0.76	4.71	0.019	Under-ground	-	700
Mattagami Lake Mines Ltd.	Group F	March 1970	Zn-Cu-Ag-Au	-	-	-	-	-	-	-	-	400

After Trowell, N.F. 1983 OGS Report 227
Mod by gfx July 2010

Table H1

TABLE G1

TABLE OF LITHOLOGIC UNITS FOR THE GLITTER LAKE AREA

CENOZOIC

QUATERNARY

Recent and Pleistocene

Glacial drift; gravel, sand, boulders

Unconformity

PRECAMBRIAN

EARLY PRECAMBRIAN (ARCHEAN)

LATE FELSIC TO INTERMEDIATE INTRUSIVE ROCKS

Vista Lake Intrusive Rocks

Syenite, monzonite, syenodiorite, granitic dikes and irregular masses, migmatite

Intrusive Contact

EARLY FELSIC INTRUSIVE AND METAMORPHIC ROCKS

Early Granitic Rocks

Biotite granodiorite, hornblende-biotite granodiorite, hornblende granodiorite, biotite-hornblende granodiorite; granite, quartz diorite, syenite; porphyroblastic biotite granodiorite; porphyroblastic hornblende-biotite granodiorite; aplite, pegmatite veins, dikes, and irregular masses

Migmatite Assemblage

Migmatite; hybrid granitic gneiss

EARLY MAFIC INTRUSIVE ROCKS

Metagabbro, metadiorite; hornblende diorite; (meta)pyroxenite; olivine gabbro

Intrusive Contact

METASEDIMENTS

Arkose; greywacke, siltstone, tuffaceous greywacke; argillite; conglomerate; iron formation

METAVOLCANICS

Felsic to Intermediate Metavolcanics

Felsic lava; tuff to lapillistone; lapillistone to pyroclastic breccia; carbonate-sericite-quartz-(chloritoid) schists; quartz and quartz-feldspar porphyry; chert; graphitic tuff

Mafic to Intermediate Metavolcanics

Volcanic flows, amphibolite, chlorite schist; porphyritic lava; gneissic metavolcanics; tuff, lapillistone, pyroclastic breccia; fragmental units; migmatitic metavolcanics; pillow lava; tuffaceous metasediments; amygdaloidal metavolcanics

Geology of Glitter Lake Area, District of Thunder Bay
By N.F. Trowell; Geological Report 120
Toronto ODM 1974

		TABLE E1			July 28 2010	
		SUMMARY OF EXPENDITURES				
		Sturgeon Lake Property				
EXPENDITURE						
CATEGORY	**CONTRACTOR**	**ACTIVITY**	**DATE**	**NOTES**	**GROSS**	**GST**
Year						
EQUIPMENT & SUPPLIES						
		Safety Equip	13/05/2010	IRL	428.75	20.42
		Map Equip	13/05/2010	Deakin	1512.54	
		Sample/Line Equip	13/05/2010	IRL	3622.64	
		Camp Equip	06/05/2010	ImperialSupplies	1614.93	
		Food/shipping	29/06/2010	Gramma's SM	13445.73	
FIELD CREW WAGES						
2008	H Mumin	recon/sample 5 days @ $800/day	Aug 19-23 2008		4000	0
2009	H Mumin	data compilation 3 days @ $800	May 25-June 9 2009		2400	
2009	A Mumin	data compilation 14 days @ $125	May 25-June 9 2009		17580	
		exp			300	
2010	**Geologists Wages & expenses:**					
	B Ohyrn	mob, staking layout 4.5day @ 225	May 31-June 15 2010		1012.50	0
		map/sample	May 31-June 15 2010		2587.50	0
		mob expenses, hotel, food	May 31-June 15 2010		989.00	0
	R Moody	map, sample 15 days @ $350/day	June 1-15 2010		5250.00	0
	A Mumin	budget, prep, field mob	Apr 24-May 31 2010		5010.00	0
		167 hrs @ $30/hr				
		map, sample 15 days @ $350/day	June 1-15 2010		5250.00	
	J Duku	map, sample 15 days @ $200/day	June 1-15 2010		3000.00	0
SUBSISTANCE/ACCOMMODATION						
2010	Haveman Bros	Camp Install 10% allocation	May-10		1116.441	49.4
2010	Haveman Bros	Camp Rent	May 10-June 10 2010		11164.41	471.33
2010	Haveman Bros	Camp Setup, materials, delivery	June 10-July 10 2010		1002.677	47.112
		10% allocation				
2010	Haveman Bros	Camp Rent	June 10-July 10 2010			
2010	Haveman Bros	Staking/mob 3 man days @ $360	01-Jun-10			
2010	H Stewart	H Stewart 26 days @ $300/day	May 6 - 31	cook/first aid	8190	390
2010	H Stewart	H Stewart 15 days @ $300/day	June 1-June 15	cook/first aid	4725.00	225
2010	LUP	Water well Fee - Camp	May 1 2010		189.00	
2010	Health Unit	Grey water pit - Camp	May 18 2010		200.00	
VEHICLE RENTAL/MILAGE						
		Truck Rental				
		Boat Rental $150/day for 30 day				
2010		Truck Repair	Upsala Garage (8 tires)	12/06/2010	2974.16	
LINECUTTING/GRID RESTORATION/CLAIM MAINTENANCE						
	Haveman Bros	Linecutting				
2010		10 km @ $765/km	June 1 -14	Lines 32-40	8190.00	390
2010	Haveman Bros	rebrush claims 4 @ $360/day	01-Jun-10		1512.00	72
ACCESS/TRAIL INSTALLATION						
2010	ConRod Expl Serv	Road/Trail Construction				
		Scouts 6 man days @ $275/day	June		2402.90	0
		+ food/accom				
GEOPHYSICAL SURVEYS/INTERPRETATION						
	Geotech	Maxwell Model 29 @ $250	April 2010		FILED	
		RDI 90km @ $50	April 2010		FILED	
2010	JVX VTEM Interp		July 8-26		6045.50	695.5
ANALYTICAL						
2010	Actlabs analyses	87 soil samples A10-3207	June 1-15		7150.02	822.57
2010	Actlabs analyses	68 soil samples A10-2995	June 1-15		4861.76	231.51
2010	Actlabs analyses	103 SGH, 78 EL A10-3542	June 1-15		8547.66	983.36
COMPILATION & ASSESSMENT REPORT						
2010	Geofine Exploration	Report, compilation	June 28- July 27		5650.00	650
2010	Geofine Exploration	On-site property review incl mila.	August		1921.00	220
2010	Mount Morgan	Enzyme LeachRe/ Interpretation	19-Jul-10		1950.00	95
		for Samples taken to June 15 10				
		inv # 0271-521				
				TOTAL	**145796.12**	**5363.20**

TABLE 2B

Sturgeon Lake Property Soil Geochemical Surveys - Lines 32-36, Area B

Note: See Section 8.2. of the Report for sampling procedure.

		Line		----GPS NAD 83----			----HORIZON--------		------DRAINAGE------		
Sample #	**Date Taken**	**No**	**Line Station (N)**	**Easting**	**Northing**	**Analysis**	**O/A**	**A/B**	**Slope Dir**	**Slope °**	**Vegetation**
LINES 32 & 33 SOIL GEOCHEM SAMPLES TAKEN JUNE 12-15, 2010											
LINE 32											
36065	10-Jun-10	32	0 + 00	665300	5521801	Enzyme Leech/SGH	5 cm	-	Nil	Nil	alders, birch, spruce, poplar
36066	10-Jun-10	32	0 + 50	665300	5521845	Enzyme Leech/SGH	4 cm	9 cm	180°	03-05°	spruce, poplar, birch, alders
36067	10-Jun-10	32	1 + 00	665305	5521899	Enzyme Leech/SGH	4 cm	14 cm	180°	05°	poplar, birch, spruce, maple, fern, alder
36068	10-Jun-10	32	1 + 50	665298	5521943	Enzyme Leech/SGH	2 cm	6 cm	180°	02°	poplar, spruce, birch, maple, alders
36069	10-Jun-10	32	2 + 00	665300	5522001	Enzyme Leech/SGH	4 cm	10 cm	Nil	Nil	poplar, birch, alders, maple
36070	10-Jun-10	32	2 + 50	665298	5522046	Enzyme Leech/SGH	15 cm	12 cm	Nil	Nil	poplar, spruce, birch, maple, alders
36071	10-Jun-10	32	3 + 00	665298	5522101	Enzyme Leech/SGH	5 cm	18 cm	Nil	Nil	birch, poplar, spruce, maple, alder
36080	10-Jun-10	32	3 + 50	665302	5522149	Enzyme Leech/SGH	4 cm	10 cm	Nil	Nil	poplar, spruce, birch, alders, maple
36079	10-Jun-10	32	4 + 00	665295	5522198	Enzyme Leech/SGH	2 cm	12 cm	Nil	Nil	poplar, birch, maple, alders
36078	10-Jun-10	32	4 + 50	665294	5522247	Enzyme Leech/SGH	4 cm	13 cm	Nil	Nil	poplar, birch, spruce, maple, alder
36077	10-Jun-10	32	5 + 00	665303	5522304	Enzyme Leech/SGH	6 cm	15 cm	270°	02°	poplar, maple, alders
36076	10-Jun-10	32	5 + 50	665299	5522349	Enzyme Leech/SGH	6 cm	11 cm	270°	02°	poplar, maple, alders
36075	10-Jun-10	32	6 + 00	665300	5522398	Enzyme Leech/SGH	4 cm	10 cm	270°	16°	poplar, birch, alders, maple, 1 spruce
36074	10-Jun-10	32	6 + 50	665302	5522445	SGH	-	-	Nil	Nil	spruce, birch, labrador tea, alder, maple
36073	10-Jun-10	32	7 + 00	665293	5522496	SGH	-	-	Nil	Nil	tamarack, spruce, maple, alders
36072	10-Jun-10	32	7 + 50	665299	5522558	SGH	-	-	Nil	Nil	alders, tamerack, spruce, birch, maple
LINE 33											
36081	10-Jun-10	33	0 + 00	665410	5521805	Enzyme Leech/SGH	9 cm	18 cm	270°	03°	balsam, spruce, birch, alders
36082	10-Jun-10	33	0 + 50	665403	5521851	Enzyme Leech/SGH	4 cm	10 cm	270°	14°	birch alders
36083	11-Jun-10	33	1 + 00	665408	5521904	Enzyme Leech/SGH	8 cm	12 cm	180°	03°	maple, poplar, spruce, birch, alders
36084	11-Jun-10	33	1 + 50	665403	5521951	Enzyme Leech/SGH	5 cm	13 cm	Nil	Nil	maple, alders, birch, poplar, spruce
36085	11-Jun-10	33	2 + 00	665401	5522000	Enzyme Leech/SGH	10 cm	16 cm	000°	01°	maple, alders, poplar
36086	11-Jun-10	33	2 + 50	665398	5522055	Enzyme Leech/SGH	7 cm	25 cm	000°	01°	maple, birch, poplars, pine
36087	11-Jun-10	33	3 + 00	665400	5522107	Enzyme Leech/SGH	8 cm	18 cm	Nil	Nil	maple, birch, poplar, spruce
36088	11-Jun-10	33	3 + 50	665396	5522158	Enzyme Leech/SGH	4 cm	12 cm	Nil	Nil	maple, poplar, birch, spruce, alder
36089	11-Jun-10	33	4 + 00	665394	5522201	Enzyme Leech/SGH	9 cm	18 cm	000°	01°	maple, poplar, spruce
36090	11-Jun-10	33	4 + 50	665391	5522254	Enzyme Leech/SGH	3 cm	10 cm	000°	01-02°	alders, maple, birch, poplar, spruce
36091	11-Jun-10	33	5 + 00	665391	5522306	Enzyme Leech/SGH	8 cm	16 cm	180°	01°	maple, poplars, birch, spruce, alders
36092	11-Jun-10	33	5 + 50	665387	5522353	Enzyme Leech/SGH	6 cm	10 cm	000°	02-03°	maple, birch, alders
36093	11-Jun-10	33	6 + 00	665386	5522402	Enzyme Leech/SGH	4 cm	12 cm	000°	03-05°	alders, poplar, spruce, maple, birch
36094	11-Jun-10	33	6 + 50	665378	5522450	Enzyme Leech/SGH	6 cm	10 cm	000°	01°	poplar, pine, maple, spruce
36095	11-Jun-10	33	7 + 00	665381	5522497	SGH	-	-	Nil	Nil	alders, spruce, tamarack
36096	11-Jun-10	33	7 + 50	665384	5522552	SGH	-	-	Nil	Nil	pine, tamarack, alder, lab tea, spruce

After XBR 2010, Table 2B

Red sample # indicates location of VTEM Anomaly

		Line		----GPS NAD 83----			----HORIZON--------		------DRAINAGE------		
Sample #	Date Taken	No	Line Station (N)	Easting	Northing	Analysis	O/A	A/B	Slope Dir	Slope °	Vegetation
LINE 34											
36126	11-Jun-10	34	0 + 00	665495	5522700	Enzyme Leech/SGH	10 cm	14 cm	Nil	Nil	moss, pine
36127	11-Jun-10	34	0 + 50	665495	5522762	Enzyme Leech/SGH	6 cm	16 cm	Nil	Nil	moss, poplar
36128	11-Jun-10	34	1 + 00	665488	5522794	Enzyme Leech/SGH	7 cm	11 cm	Nil	Nil	birch, spruce
36129	11-Jun-10	34	1 + 50	665494	5522845	Enzyme Leech/SGH	5 cm	12 cm	340°	10°	poplars, alders, maple
36130	11-Jun-10	34	2 + 00	665492	5522897	Enzyme Leech/SGH	4 cm	12 cm	340°	18°	poplars, alders, maple
36131	11-Jun-10	34	2 + 50	665493	5522941	Enzyme Leech/SGH	5 cm	8 cm	340°	10°	alders, poplars, spruce
36132	11-Jun-10	34	3 + 00	665491	5522993	Enzyme Leech/SGH	11 cm	15 cm	Nil	Nil	poplars
36133	11-Jun-10	34	3 + 22	665490	5523015	Enzyme Leech/SGH	12 cm	19 cm	Nil	Nil	poplars, pine
36134	11-Jun-10	34	3 + 50	665489	5523037	Enzyme Leech/SGH	5 cm	8 cm	Nil	Nil	spruce
36135	11-Jun-10	34	4 + 00	665488	5523088	Enzyme Leech/SGH	5 cm	9 cm	Nil	Nil	poplars, spruce, willows
36136	11-Jun-10	34	4 + 50	665488	5523104	Enzyme Leech/SGH	2 cm	25 cm	Nil	Nil	spruce, wth lots up willows
36137	11-Jun-10	34	5 + 00	665488	5523190	SGH	-	-	Nil	Nil	willows, spruce
36138	11-Jun-10	34	5 + 50	665485	5523248	SGH	-	-	Nil	Nil	spruce
36139	11-Jun-10	34	6 + 00	665485	5523295	SGH	-	-	Nil	Nil	pine, spruce, moss
36140	11-Jun-10	34	6 + 50	665487	5523346	SGH	-	-	Nil	Nil	spruce, moss
36141	11-Jun-10	34	7 + 00	665480	5523395	SGH	-	-	Nil	Nil	moss, spruce, willows
36142	11-Jun-10	34	7 + 50	665479	5523442	SGH	-	-	Nil	Nil	moss, spruce
36143	11-Jun-10	34	8 + 00	665482	5523495	SGH	-	-	Nil	Nil	moss, labrador tea, spruce
36144	11-Jun-10	34	8 + 50	665477	5523541	SGH	-	-	Nil	Nil	spruce, moss
36145	11-Jun-10	34	9 + 00	665477	5523600	SGH	-	-	Nil	Nil	spruce
36146	11-Jun-10	34	9 + 50	665475	5523646	SGH	-	-	Nil	Nil	spruce, moss
36147	11-Jun-10	34	10 + 00	665480	5523696	SGH	-	-	Nil	Nil	moss, spruce, willows
36148	11-Jun-10	34	10 + 50	665479	5523744	SGH	-	-	Nil	Nil	moss, willows, spruce
36149	11-Jun-10	34	11 + 00	665480	5523793	SGH	-	-	Nil	Nil	alders, swamp grass
36150	11-Jun-10	34	11 + 50	665478	5523847	Enzyme Leech/SGH	7 cm	11 cm	300°	10°	poplars, alders, spruce
36151	11-Jun-10	34	12 + 00	665481	5523897	Enzyme Leech/SGH	4 cm	8 cm	000°	10°	birch, pine, alders
36152	11-Jun-10	34	12 + 50	665476	5523938	Enzyme Leech/SGH	3 cm	10 cm	000°	10°	pine, birch
36153	14-Jun-10	34	15 + 00	665480	5524187	SGH	-	-	345°	15°	spruce
36154	14-Jun-10	34	15 + 50	665480	5524233	Enzyme Leech/SGH	13 cm	22 cm	175°	5°	spruce,birch
36155	14-Jun-10	34	16 + 00	665484	5524288	Enzyme Leech/SGH	7 cm	11 cm	310°	15°	birch, spruce, poplar
36156	14-Jun-10	34	16 + 50	665479	5524329	SGH	-	-	Nil	Nil	spruce, birch, ferns
36157	14-Jun-10	34	17 + 00	665472	5524380	Enzyme Leech/SGH	21 cm	22 cm	180°	30°	maple,birch
36158	14-Jun-10	34	17 + 50	665476	5524435	Enzyme Leech/SGH	7 cm	15 cm	Nil	Nil	maple, birch
36159	14-Jun-10	34	17 + 69	665469	5524454	Enzyme Leech/SGH	4 cm	7 cm	190°	28°	poplar, alder
36160	14-Jun-10	34	18 + 00	665480	5524485	Enzyme Leech/SGH	6 cm	10 cm	280°	5°	alder, birch
36161	14-Jun-10	34	18 + 50	665481	5524540	Enzyme Leech/SGH	3 cm	7 cm	200°	10°	birch, alder
36162	14-Jun-10	34	19 + 00	665480	5524586	Enzyme Leech/SGH	5 cm	22 cm	Nil	Nil	birch, alder, poplars, spruce, maple
LINE 35											
36097	11-Jun-10	35	0 + 00	665599	5522711	Enzyme Leech/SGH	8 cm	12 cm	Nil	Nil	poplar, spruce, labrador tea, pine, mountain ash

After XBR 2010, Table 2B

Red sample # indicates location of VTEM Anomaly

		Line		----GPS NAD 83----			----HORIZON--------		------DRAINAGE------		
Sample #	Date Taken	No	Line Station (N)	Easting	Northing	Analysis	O/A	A/B	Slope Dir	Slope °	Vegetation
36098	11-Jun-10	35	0 + 50	665596	5522756	Enzyme Leech/SGH	6 cm	11 cm	Nil	Nil	spruce, alder, pine
36099	11-Jun-10	35	1 + 00	665601	5522803	Enzyme Leech/SGH	6 cm	11 cm	000°	01°	mountain ash, alders
36100	11-Jun-10	35	1 + 50	665599	5522851	Enzyme Leech/SGH	5 cm	10 cm	000°	01°	maple, spruce, alders
36202	11-Jun-10	35	2 + 00	665597	5522898	Enzyme Leech/SGH	5 cm	10 cm	000°	03-05°	pine, alders, spruce, mountain ash, birch, poplar
36203	11-Jun-10	35	2 + 50	665597	5522947	Enzyme Leech/SGH	10 cm	16 cm	000°	03-05°	Poplar Birch, Alder, Pine
36204	14-Jun-10	35	3 + 00	665596	5522999	Enzyme Leech/SGH	6 cm	14 cm	180°	10°	spruce, jackpine, poplar, mountain ash
36205	14-Jun-10	35	3 + 17	665598	5523021	Enzyme Leech/SGH	6 cm	11 cm	Nil	Nil	Spruce, Poplar, Jackpine
36206	14-Jun-10	35	3 + 50	665601	5523060	Enzyme Leech/SGH	6 cm	11 cm	000°	03°	jackpine, poplar, white spruce
36207	14-Jun-10	35	4 + 00	665593	5523109	SGH	-	-	Nil	Nil	jackpine, spruce, alder
36208	14-Jun-10	35	4 + 50	665600	5523161	SGH	-	-	Nil	Nil	jackpine, spruce, alder, balsam fir
36209	14-Jun-10	35	5 + 00	665599	5523213	SGH	-	-	Nil	Nil	spruce, tamarck, alder
36210	14-Jun-10	35	5 + 50	665600	5523257	SGH	-	-	Nil	Nil	spruce, tamarck, labrador tea
36211	14-Jun-10	35	6 + 00	665602	5523309	Enzyme Leech/SGH	10 cm	15 cm	Nil	Nil	
36212	14-Jun-10	35	6 + 50	665593	5523358	SGH	-	-	Nil	Nil	black spruce, labrador tea
36213	14-Jun-10	35	7 + 00	665602	5523410	SGH	-	-	Nil	Nil	spruce
36214	14-Jun-10	35	7 + 50	665600	5523457	SGH	-	-	Nil	Nil	Spruce, tamarack
36215	14-Jun-10	35	8 + 00	665600	5523506	SGH	-	-	Nil	Nil	Spruce, labradour tea
36216	14-Jun-10	35	8 + 50	665598	5523553	Enzyme Leech/SGH	7 cm	13 cm	Nil	Nil	pine, labrador tea, alder
36217	14-Jun-10	35	9 + 00	665599	5523598	SGH	-	-	Nil	Nil	spruce, alder, labrador tea
36218	14-Jun-10	35	9 + 50	665596	5523652	Enzyme Leech/SGH	11 cm	20 cm	000°	01-02°	labrador tea, spruce, pine, tamarack, wild rose
36219	14-Jun-10	35	10 + 00	665596	5523701	Enzyme Leech/SGH	13 cm	19 cm	180°	03-05°	labrador tea, spruce, poplar, alder
36220	14-Jun-10	35	10 + 50	665594	5523748	Enzyme Leech/SGH	7 cm	16 cm	Nil	Nil	spruce, poplar, pines, willow
36221	14-Jun-10	35	11 + 00	665596	5523798	Enzyme Leech/SGH	11 cm	15 cm	Nil	Nil	poplar, spruce, pine tamarack
36222	14-Jun-10	35	11 + 50	665593	5523848	SGH	-	-	Nil	Nil	labrador tea, spruce, spagnum, pine alder
36223	14-Jun-10	35	12 + 00	665591	5523895	SGH	-	-	Nil	Nil	labrador tea, spruce, alder pine
36224	14-Jun-10	35	12 + 50	665591	5523953	SGH	-	-	Nil	Nil	poplars, spruce, alders
36225	14-Jun-10	35	13 + 00	665599	5523991	Enzyme Leech/SGH	7 cm	10 cm	Nil	Nil	spruce, poplar, birch
36226	14-Jun-10	35	13 + 50	665593	5524039	Enzyme Leech/SGH	3 cm	5 cm	180°	05°	poplar, birch, spruce alder
36227	14-Jun-10	35	14 + 00	665601	5524095	Enzyme Leech/SGH	3 cm	11 cm	180°	03°	poplar, balsum fir, birch, black spruce
36228	14-Jun-10	35	14 + 50	665594	5524138	Enzyme Leech/SGH	4 cm	12 cm	000°	02°	poplar, black spruce, birch, alder
36229	14-Jun-10	35	15 + 00	665590	5524196	Enzyme Leech/SGH	7 cm	16 cm	270°	20°	poplar, birch, spruce, alder
36230	14-Jun-10	35	15 + 50	665597	5524243	Enzyme Leech/SGH	8 cm	12 cm	225°	20°	poplar, birch, alder
36231	14-Jun-10	35	16 + 00	665597	5524289	Enzyme Leech/SGH	9 cm	19 cm	270°	20°	poplar, maple shrub, birch
36232	14-Jun-10	35	16 + 50	665588	5524352	Enzyme Leech/SGH	7 cm	14 cm	270°	20°	maple, birch, poplar, spruce
36233	14-Jun-10	35	17 + 00	665592	5524393	Enzyme Leech/SGH	12 cm	28 cm	270°	10°	maple, poplar, birch, alder
36234	14-Jun-10	35	17 + 50	665598	5524439	Enzyme Leech/SGH	10 cm	32 cm	000°	02°	maple, spruce, poplar, birch, alder
36235	14-Jun-10	35	17 + 75	665596	5524465	Enzyme Leech/SGH	8 cm	13 cm	180°	10°	maple, alder, birch, poplar, spruce
36177	14-Jun-10	35	18 + 00	665595	5524484	Enzyme Leech/SGH	5 cm	17 cm	162°	35°	maple, poplars, alder
36176	14-Jun-10	35	18 + 50	665599	5524541	Enzyme Leech/SGH	3 cm	10 cm	Nil	Nil	maple, alder, birch, spruce
36175	14-Jun-10	35	19 + 00	665593	5524593	Enzyme Leech/SGH	3 cm	10 cm	180°	03°	alder, birch, spruce
LINE 36											

After XBR 2010, Table 2B

Red sample # indicates location of VTEM Anomaly

		Line		----GPS NAD 83----			----HORIZON--------		------DRAINAGE------		
Sample #	Date Taken	No	Line Station (N)	Easting	Northing	Analysis	O/A	A/B	Slope Dir	Slope °	Vegetation
36173	14-Jun-10	36	0 + 00	665731	5524092	Enzyme Leech/SGH	5 cm	8 cm	170°	40°	alder, birch
36172	14-Jun-10	36	0 + 50	665727	5524138	Enzyme Leech/SGH	9 cm	13 cm	205°	30°	alder, birch
36171	14-Jun-10	36	1 + 00	665734	5524204	Enzyme Leech/SGH	6 cm	14 cm	070°	10°	alder, birch
36170	14-Jun-10	36	1 + 50	665732	5524245	Enzyme Leech/SGH	6 cm	10 cm	352°	15°	maple, birch, alder, spruce
36169	14-Jun-10	36	2 + 00	665728	5524291	Enzyme Leech/SGH	12 cm	19 cm	090°	10°	maple, alder, spruce
36168	14-Jun-10	36	2 + 50	665725	5524345	Enzyme Leech/SGH	10 cm	18 cm	090°	30°	alder, maple, poplar
36167	14-Jun-10	36	3 + 00	665723	5524395	Enzyme Leech/SGH	5 cm	8 cm	200°	25°	alder, poplar
36166	14-Jun-10	36	3 + 50	665723	5524437	Enzyme Leech/SGH	2 cm	3 cm	Nil	Nil	birch, spruce, alder
36174	14-Jun-10	36	3 + 74	665719	5524461	Enzyme Leech/SGH	5 cm	14 cm	Nil	Nil	birch, alder
36165	14-Jun-10	36	4 + 00	665723	5524489	Enzyme Leech/SGH	3 cm	14 cm	182°	03°	poplar, birch, alder
36164	14-Jun-10	36	4 + 50	665713	5524542	Enzyme Leech/SGH	7 cm	20 cm	090°	20°	maple, birch, spruce
36163	14-Jun-10	36	5 + 00	665715	5524596	Enzyme Leech/SGH	11 cm	15 cm	300°	50°	maple, poplar, birch, young spruce

After XBR 2010, Table 2B

Red sample # indicates location of VTEM Anomaly

Sturgeon Lake Prope

Note: See Section 8.2. of the Report for sampling procedure.

Sample #	Date Taken	Line No	Line Station (N)	Saturation	Soil Description	Comments
LINES 32 & 33 SOIL GEOCHEM SAMPLES TAKEN JUNE 12-1						
LINE 32						
36065	10-Jun-10	32	0 + 00	moist	reddish-brown, sandy silt	mature forest. Sample may be A horizon only
36066	10-Jun-10	32	0 + 50	moist	sandy silt with pebbles and cobble fragments	mature forest
36067	10-Jun-10	32	1 + 00	moist	reddish silt with cobbles and boulders	mature forest
36068	10-Jun-10	32	1 + 50	moist	reddish brown silt with cobbles-bolders	mature forest
36069	10-Jun-10	32	2 + 00	moist	reddish brown silt with pebbles and cobbles	mature forest
36070	10-Jun-10	32	2 + 50	moist	reddish brown silt with pebbles and cobbles	mature forest
36071	10-Jun-10	32	3 + 00	moist	reddish brown silt with pebbles and cobbles	mature forest, Near Anomaly
36080	10-Jun-10	32	3 + 50	moist	reddish brown silt with pebbles and cobbles	mature forest
36079	10-Jun-10	32	4 + 00	moist	reddish brown silt with pebbles and cobbles	mature forest
36078	10-Jun-10	32	4 + 50	moist	reddish brown silt with pebbles and cobbles	mature forest
36077	10-Jun-10	32	5 + 00	very damp	reddish brown silt with pebbles and cobbles	
36076	10-Jun-10	32	5 + 50	moist	Brown silt with boulders	
36075	10-Jun-10	32	6 + 00	moist	reddish brown silt with pebbles and cobbles	
36074	10-Jun-10	32	6 + 50	very damp	Organic	edge of swamp
36073	10-Jun-10	32	7 + 00	total	Organic	swamp sample
36072	10-Jun-10	32	7 + 50	wet	organic	swamp sample
LINE 33						
36081	10-Jun-10	33	0 + 00	moist	Reddish brown, grey mottled silt with pebbles	edge of a lake
36082	10-Jun-10	33	0 + 50	moist	reddish brownn, sandy silt with pebbles and cobbles	
36083	11-Jun-10	33	1 + 00	moist	reddish brown silt with pebbles cobbles, boulders	
36084	11-Jun-10	33	1 + 50	-	reddish brown silt with pebbles to boulder size rock fragments	
36085	11-Jun-10	33	2 + 00	wet	reddish brown silt with pebbles	
36086	11-Jun-10	33	2 + 50	moist	reddish brwon silt, ± pebbles	
36087	11-Jun-10	33	3 + 00	moist	reddish brwon sandy silt with pebbles and cobbles	Near Anomaly
36088	11-Jun-10	33	3 + 50	moist	reddish brown silt with pebbles and cobbles	
36089	11-Jun-10	33	4 + 00	very moist	reddish brown silt with pbbles and cobbles	
36090	11-Jun-10	33	4 + 50	moist	reddish brown sandy silt with pebbles cobbles and boulders	
36091	11-Jun-10	33	5 + 00	moist	reddish brown sandy silt with pebbles and cobbles	
36092	11-Jun-10	33	5 + 50	moist	reddish brown sandy silt with lots of pebbes, and cobbles	
36093	11-Jun-10	33	6 + 00	-	reddish brown sandy silt with pebbles and cobbles	
36094	11-Jun-10	33	6 + 50	moist	sandy silt, reddish brown	
36095	11-Jun-10	33	7 + 00	wet	O-horizon material	swamp
36096	11-Jun-10	33	7 + 50	wet	O-horizon material	

After XBR 2010, Table 2B

Red sample # indicates location of VTEM Anomaly

Sample #	Date Taken	Line No	Line Station (N)	Saturation	Soil Description	Comments
LINE 34						
36126	11-Jun-10	34	0 + 00	moist	reddish brown with grey, very sandy	
36127	11-Jun-10	34	0 + 50	damp	very sandy, light to orangy-brown	
36128	11-Jun-10	34	1 + 00	damp	light to orangey-brown, very sandy with the occasional pebbles	
36129	11-Jun-10	34	1 + 50	damp	sandy orangey-brown, with some pebbles	
36130	11-Jun-10	34	2 + 00	damp	sandy orangey-brown, with some pebbles	
36131	11-Jun-10	34	2 + 50	damp	sandy orange-brown	
36132	11-Jun-10	34	3 + 00	moisg	reddish-orangish-brown, very sandy	
36133	11-Jun-10	34	3 + 22	moist	sandy silt, orangey light brown	Anomaly
36134	11-Jun-10	34	3 + 50	damp	silty sand	
36135	11-Jun-10	34	4 + 00	damp	pebbly with cobbles, reddish-orange brown, sandy	
36136	11-Jun-10	34	4 + 50	moist	silty clay, grey-brown	
36137	11-Jun-10	34	5 + 00	wet	Peat	
36138	11-Jun-10	34	5 + 50	wet	peat	
36139	11-Jun-10	34	6 + 00	wet	peat	
36140	11-Jun-10	34	6 + 50	wet	peat	
36141	11-Jun-10	34	7 + 00	wet	peat	
36142	11-Jun-10	34	7 + 50	wet	peat	
36143	11-Jun-10	34	8 + 00	wet	peat	
36144	11-Jun-10	34	8 + 50	wet	peat	
36145	11-Jun-10	34	9 + 00	wet	peat	
36146	11-Jun-10	34	9 + 50	moist	peat	
36147	11-Jun-10	34	10 + 00	wet	peat	
36148	11-Jun-10	34	10 + 50	wet	peat with excess wood	
36149	11-Jun-10	34	11 + 00	wet	moss	
36150	11-Jun-10	34	11 + 50	damp	sandy silt, with lots of pebbles and some cobbles	
36151	11-Jun-10	34	12 + 00	moist	reddish-brown silty sand	
36152	11-Jun-10	34	12 + 50	damp	silty reddish-orange-brown with some cobbles	
36153	14-Jun-10	34	15 + 00	moist	O-horizon material (sandy dark)	250 m lake between 36152-36153
36154	14-Jun-10	34	15 + 50	damp	light brown, orangey silt with some cobbles	
36155	14-Jun-10	34	16 + 00	moist	lots of cobbles, sandy, light orangey brown	
36156	14-Jun-10	34	16 + 50	wet	O-horizon material (dark)	located near lake/on lake shore
36157	14-Jun-10	34	17 + 00	damp	light orangey brown, sandy with lots of cobbles	
36158	14-Jun-10	34	17 + 50	damp	light orange brown, sandy with pebbles	
36159	14-Jun-10	34	17 + 69	damp	sandy, orangey to light brown heavily rooted	Anomaly
36160	14-Jun-10	34	18 + 00	damp	light orangey brown, sandy silty, pebbles to cobbles	
36161	14-Jun-10	34	18 + 50	damp	light orangey brown, silty to cobbles	
36162	14-Jun-10	34	19 + 00	dry	reddish brown sandy, full of cobbles	
LINE 35						
36097	11-Jun-10	35	0 + 00	moist	reddish-brown silt	

After XBR 2010, Table 2B

Sample #	Date Taken	Line No	Line Station (N)	Saturation	Soil Description	Comments
36098	11-Jun-10	35	0 + 50	moist	reddish-brown silt	
36099	11-Jun-10	35	1 + 00	moist	reddish-brown sandy	
36100	11-Jun-10	35	1 + 50	moist	sandy silt, reddish brown, mottled	
36202	11-Jun-10	35	2 + 00	moist	grey brown, sandy silt	
36203	11-Jun-10	35	2 + 50	Very wet-total	reddish brown, sandy silt	
36204	14-Jun-10	35	3 + 00	wet	reddish brown silt	
36205	14-Jun-10	35	3 + 17	dry	reddish brown silt	sample taken over anomaly B
36206	14-Jun-10	35	3 + 50	moist	reddish brown silt	
36207	14-Jun-10	35	4 + 00	wet	organic	
36208	14-Jun-10	35	4 + 50	moist	spagnum moss, organic	
36209	14-Jun-10	35	5 + 00	wet	organics	
36210	14-Jun-10	35	5 + 50	wet	organics	
36211	14-Jun-10	35	6 + 00	wet	clay-black-very dark brown	
36212	14-Jun-10	35	6 + 50	wet	organics	
36213	14-Jun-10	35	7 + 00	wet	organics	
36214	14-Jun-10	35	7 + 50	wet	organics	
36215	14-Jun-10	35	8 + 00	wet	O-horizon material	
36216	14-Jun-10	35	8 + 50	moist	sandy silt with pebbles and cobbles	
36217	14-Jun-10	35	9 + 00	wet	O-horizon material	
36218	14-Jun-10	35	9 + 50	damp	reddish brown silt with pebbles, cobbles, and boulders	
36219	14-Jun-10	35	10 + 00	damp	reddish brown sandy silt with pebbles and cobbles	
36220	14-Jun-10	35	10 + 50	moist	reddish brown silt with pebbles	
36221	14-Jun-10	35	11 + 00	damp	reddish brown orangey silt with pebbles, and cobbles	
36222	14-Jun-10	35	11 + 50	wet	O-horizon material	
36223	14-Jun-10	35	12 + 00	wet	O-horizon material	
36224	14-Jun-10	35	12 + 50	wet	O-horizon material	
36225	14-Jun-10	35	13 + 00	moist	reddish brown sandy silt with pebbles	
36226	14-Jun-10	35	13 + 50	damp	sandy silt with pebbles	
36227	14-Jun-10	35	14 + 00	moist	light brown silt with pebbles and cobbles	
36228	14-Jun-10	35	14 + 50	moist	brown silt wit the occasional pebbles	
36229	14-Jun-10	35	15 + 00	moist	sandy silt with pebbless and cobbles	
36230	14-Jun-10	35	15 + 50	moist	brown sandy silt with pebbles, cobbles and boulders	
36231	14-Jun-10	35	16 + 00	moist	sandy silt-brownish	
36232	14-Jun-10	35	16 + 50	moist	brown sandy silt with pebbles and cobbles	
36233	14-Jun-10	35	17 + 00	damp	brown sandy silt with lots of cobbles and boulders (silty cobbles)	
36234	14-Jun-10	35	17 + 50	moist	brown sandy silt	lots of roots
36235	14-Jun-10	35	17 + 75	damp	brown sandy silt with boulders and cobbles	target anomaly a on line 35
36177	14-Jun-10	35	18 + 00	damp	orangey brown, sandy, pebbly, cobbly, bouldery	pebbly, cobbly, bubbly
36176	14-Jun-10	35	18 + 50	damp	orange brown silt	
36175	14-Jun-10	35	19 + 00	damp	sandy silt, light orangey brown	
LINE 36						

After XBR 2010, Table 2B

Red sample # indicates location of VTEM Anomaly

Sample #	Date Taken	Line No	Line Station (N)	Saturation	Soil Description	Comments
36173	14-Jun-10	36	0 + 00	damp	light orange brown, silty with pebbles	
36172	14-Jun-10	36	0 + 50	damp	much boulders, cobbles, roots orange-light brown, silty	
36171	14-Jun-10	36	1 + 00	damp	orange-light brown sandy silt	
36170	14-Jun-10	36	1 + 50	moist	light brown very rocky, sandy	
36169	14-Jun-10	36	2 + 00	damp	silty orange brown	
36168	14-Jun-10	36	2 + 50	damp	light brown, sandy, pebbles, cobbles	
36167	14-Jun-10	36	3 + 00	damp	light orange brown, silty	
36166	14-Jun-10	36	3 + 50	damp	sandy, lots of cobbles, pebbles, boulders orange-light brown	
36174	14-Jun-10	36	3 + 74	damp	light orange-brown silty sand	Anomaly
36165	14-Jun-10	36	4 + 00	damp	sandy with pebbles /boulders reddish brown	
36164	14-Jun-10	36	4 + 50	moist	sandy light brown	
36163	14-Jun-10	36	5 + 00	damp	sandy with pebbles and lots of cobbles/boulders	

After XBR 2010, Table 2B

Red sample # indicates location of VTEM Anomaly

TABLE 2A

Sturgeon Lake Property Soil Geochemical Surveys - Lines 37-40, Area A

Note: See Section 8.2. of the Report for sampling procedure.

		Line		----GPS NAD 83----			----HORIZON--------		------DRAINAGE------		
Sample #	**Date Taken**	**No**	**Line Station (N)**	**Easting**	**Northing**	**Analysis**	**O/A**	**A/B**	**Slope Dir**	**Slope °**	**Vegetation**
LINES 37 & 38 SOIL GEOCHEM SAMPLES TAKEN JUNE 4-6, 2010											
LINE 37											
36023	04-Jun-10	37	0 + 00	673101	5523004	Enzyme Leech/SGH	13 cm	19 cm	182°	05°	black spruce, alders
36024	04-Jun-10	37	0 + 50	673098	5523053	Enzyme Leech/SGH	10 cm	18 cm	177°	15°	pine, spruce
36025	04-Jun-10	37	1 + 00	673102	5523096	Enzyme Leech/SGH	4 cm	13 cm	170°	15°	white spruce, spruce
36026	04-Jun-10	37	1 + 50	673102	5523151	Enzyme Leech/SGH	5 cm	19 cm	Nil	Nil	white spruce, alders
36027	04-Jun-10	37	2 + 00	673106	5523210	SGH	-	-	Nil	Nil	white spruce
36028	04-Jun-10	37	2 + 50	673104	5523252	Enzyme Leech/SGH	8 cm	15 cm	Nil	Nil	spruce
36029	04-Jun-10	37	3 + 00	673110	5523287	Enzyme Leech/SGH	8 cm	13 cm	175°	05°	pine, alders
36030	04-Jun-10	37	3 + 50	673113	5523349	Enzyme Leech/SGH	3 cm	7 cm	200°	15°	pine, poplers
36031	04-Jun-10	37	4 + 00	673109	5523395	Enzyme Leech/SGH	10 cm	14 cm	220°	10°	spruce
36032	04-Jun-10	37	4 + 50	673113	5523446	Enzyme Leech/SGH	7 cm	17 cm	Nil	Nil	birch, spruce
36033	04-Jun-10	37	5 + 00	673112	5523496	Enzyme Leech/SGH	8 cm	20 cm	010°	10°	birch, some white spruce
36034	04-Jun-10	37	5 + 50	673113	5523539	Enzyme Leech/SGH	9 cm	14 cm	141°	10°	birch, pine, spruce, maple alders
36035	04-Jun-10	37	6 + 00	673113	5523583	SGH	10 cm	-	000°	2°	spruce, pine, moss, alders
36036	06-Jun-10	37	6 + 50	673117	5523631	Enzyme Leech/SGH	5 cm	9 cm	190°	10°	pine, alders, spruce
36037	06-Jun-10	37	7 + 00	673118	5523680	Enzyme Leech/SGH	9 cm	19 cm	010°	10°	alders, spruce, moss willow, maple
36038	06-Jun-10	37	7 + 50	673116	5523737	SGH	28 cm	Outcrop	000°	03°	spruce, popler
36039	06-Jun-10	37	8 + 00	673104	5523780	SGH	>30 cm	Water	Nil	Nil	spruce, pine
36040	06-Jun-10	37	8 + 50	673102	5523840	SGH	>40 cm	Water	Nil	Nil	spruce, alder, willow
36041	06-Jun-10	37	9 + 00	673104	5523893	SGH	30 cm	Water	Nil	Nil	willow, spruce, moss, alders and UPS # 3
36042	06-Jun-10	37	9 + 50	673103	5523960	SGH	8 cm	14 cm	Nil	Nil	moss,willow, black spruce, UPS # 3 & 2
36043	06-Jun-10	37	10 + 00	673105	5523994	Enzyme Leech/SGH	7 cm	14 cm	020°	15°	spruce, alders,
36044	06-Jun-10	37	10 +50	673108	5524049	Enzyme Leech/SGH	4 cm	7 cm	160°	30°	popler, spruce
36045	06-Jun-10	37	11 + 00	673101	5524103	Enzyme Leech/SGH	4 cm	7 cm	030°	05°	spruce
LINE 38											
36000	03-Jun-10	38	0 + 00	673199	5523002	Enzyme Leech/SGH	6 cm	20 cm	228°	7°	alders, spruce, balsam, labrador tea, willow
36001	03-Jun-10	38	0 + 50	673195	5523054	Enzyme Leech/SGH	5 cm	6 cm	234°	20°	jack pine, black spruce, popler, balsam
36002	03-Jun-10	38	1 + 00	673201	5523101	Enzyme Leech/SGH	5 cm	8 cm	Nil	Nil	birch, alders
36003	03-Jun-10	38	1 + 50	673203	5523150	Enzyme Leech/SGH	3 cm	14 cm	170°	15°	birch, alders
36004	03-Jun-10	38	2 + 00	673202	5523199	SGH	2 cm	6 cm	Nil	Nil	jack pine, alders
36005	03-Jun-10	38	2 + 50	673201	5523244	SGH	-	-	Nil	Nil	moss, spruce
36006	03-Jun-10	38	3 + 00	673207	5523296	SGH	-	-	Nil	Nil	Moss, spruce

After XBR 2010, Table 2A

Red sample # indicates location of VTEM Anomaly

		Line		----GPS NAD 83----			----HORIZON--------		------DRAINAGE------		
Sample #	Date Taken	No	Line Station (N)	Easting	Northing	Analysis	O/A	A/B	Slope Dir	Slope °	Vegetation
36007	03-Jun-10	38	3 + 50	673205	5523345	SGH	25 cm	water	Nil	Nil	alders, birch
36008	03-Jun-10	38	4 + 00	673202	5523395	SGH	-	-	180°	30°	birch, alders
36009	03-Jun-10	38	4 + 50	673202	5523440	SGH	4 cm	8 cm	000°	10°	alder, white spruce
36103	03-Jun-10	38	4 + 50	673202	5523440	Enzyme Leech/SGH	10 cm	15 cm	010°	10°	alders, white spruce
36010	03-Jun-10	38	5 + 00	673213	5523496	Enzyme Leech/SGH	3 cm	8 cm	000°	45°	spruce, birch
36011	03-Jun-10	38	5 + 50	673202	5523543	SGH	-	-	170°	20°	popler, spruce
36012	03-Jun-10	38	6 + 00	673200	5523578	Enzyme Leech/SGH	3 cm	5 cm	181°	60°	birch, spruce
36013	03-Jun-10	38	6 + 50	673205	5523638	SGH	5 cm	outcrop	Nil	Nil	white spruce
36014	03-Jun-10	38	7 + 00	673197	5523679	SGH	7 cm	outcrop	327°	50°	alder, black pine
36015	03-Jun-10	38	7 + 50	673208	5523738	SGH	30 cm	water	Nil	Nil	moss, pine
36016	03-Jun-10	38	8 + 00	673201	5523790	SGH	-	-	Nil	Nil	swamp moss, black pine
36017	03-Jun-10	38	8 + 50	673196	5523843	SGH	9 cm	14 cm	Nil	Nil	spruce, moss
36018	03-Jun-10	38	9 + 00	673193	5523891	Enzyme Leech/SGH	9 cm	20 cm	Nil	Nil	popler, spruce, pine all young
36019	03-Jun-10	38	9 + 50	673190	5523939	SGH	5 cm	water	Nil	Nil	alderr, black spruce
36020	04-Jun-10	38	10 + 00	673197	5523993	Enzyme Leech/SGH	14 cm	18 cm	190°	10°	poplers
36021	04-Jun-10	38	10 +50	673205	5524040	Enzyme Leech/SGH	4 cm	7 cm	220°	24°	-
36022	04-Jun-10	38	11 + 00	673204	5524090	Enzyme Leech/SGH	4 cm	7 cm	190°	20°	black spruce, pine
LINES 39 & 40 SOIL GEOCHEM SAMPLES TAKEN JUNE 6-10, 2010											
LINE 39											
36051	06-Jun-10	39	0 + 00	673704	5524254	Enzyme Leech/SGH	17 cm	29 cm	220°	05°	spruce, birch, labrador tea, moss
36052	06-Jun-10	39	0 + 50	673703	5524301	Enzyme Leech/SGH	13 cm	30 cm	190°	10°	poplar, spruce, pine
36053	06-Jun-10	39	1 + 00	673709	5524349	Enzyme Leech/SGH	3 cm	8 cm	200°	02°	poplars, pine, spruce, maple
36054	06-Jun-10	39	1 + 50	673701	5524399	Enzyme Leech/SGH	5 cm	22 cm	200°	10°	pine, popler, spruce, willows
36055	06-Jun-10	39	2 + 00	673697	5524446	Enzyme Leech/SGH	6 cm	12 cm	040°	02°	maple, wildroses, pine, spruce, poplar, birch
36046	06-Jun-10	39	2 + 50	673699	5524505	Enzyme Leech/SGH	3 cm	7 cm	180°	10°	UPS #5, spruce alders
36047	06-Jun-10	39	3 + 00	673696	5524544	SGH	8 cm	Outcrop	190°	05°	UPS #5, spruce alders
36048	06-Jun-10	39	3 + 50	673703	5524494	SGH	4 cm	Outcrop	Nil	Nil	pine, UPS #5
36049	06-Jun-10	39	4 + 00	673708	5524649	Enzyme Leech/SGH	12 cm	15 cm	340°	25°	alders, spruce
36050	06-Jun-10	39	4 + 50	673700	5524705	Enzyme Leech/SGH	6 cm	7 cm	340°	25°	alders, spruce
36101	06-Jun-10	39	5 + 00	673693	5524746	Enzyme Leech/SGH	4 cm	7 cm	280°	45°	spruce
36102	06-Jun-10	39	5 + 50	673690	5524797	Enzyme Leech/SGH	19 cm	21 cm	270°	50°	spruce, pine
36064	06-Jun-10	39	6 + 00	673688	5524837	Enzyme Leech/SGH	5 cm	8 cm	000°	10°	maple, poplar, birch, spruce
36063	06-Jun-10	39	6 + 50	673691	5524896	Enzyme Leech/SGH	12 cm	16 cm	180°	10°	spruce, pine, alders
36062	06-Jun-10	39	7 + 00	673708	5524961	Enzyme Leech/SGH	10 cm	20 cm	000°	03°	rasberries, spruce, poplar, maple
36061	06-Jun-10	39	7 + 50	673706	5525001	Enzyme Leech/SGH	10 cm	21 cm	000°	010°	spruce, pine, alders, mountain ash
36060	06-Jun-10	39	8 + 00	673703	5525070	SGH	-	-	Nil	Nil	spruce, labrador tea, moss, alders
36059	06-Jun-10	39	8 + 50	673701	5525100	SGH	-	-	Nil	Nil	spruce, labrador tea, moss
36058	06-Jun-10	39	9 + 00	673711	5525151	SGH	-	-	Nil	Nil	spruce, labrador tea, moss
36057	06-Jun-10	39	9 + 50	673698	5525200	SGH	-	-	Nil	Nil	spruce, labrador tea, moss
36056	06-Jun-10	39	10 + 00	673703	5525245	SGH	-	-	Nil	Nil	alders, spruce, tamarack

After XBR 2010, Table 2A

Red sample # indicates location of VTEM Anomaly

		Line		----GPS NAD 83----			----HORIZON--------		------DRAINAGE------		
Sample #	Date Taken	No	Line Station (N)	Easting	Northing	Analysis	O/A	A/B	Slope Dir	Slope °	Vegetation
LINE 40											
36104	10-Jun-10	40	0 + 00	673800	5524252	Enzyme Leech/SGH	4 cm	8 cm	128°	50°	spruce, poplar
36105	10-Jun-10	40	0 + 50	673799	5524306	Enzyme Leech/SGH	2 cm	6 cm	116°	50°	spruce, poplar, pine
36106	10-Jun-10	40	1 + 00	673803	5524347	SGH	4 cm	boulders	120°	20°	pine, poplar, alder
36107	10-Jun-10	40	1 + 50	673804	5524391	Enzyme Leech/SGH	8 cm	15 cm	180°	18°	maple, poplar, spruce
36108	10-Jun-10	40	2 + 00	673801	5524449	SGH	water/10	water	Nil	Nil	moss, alder
36109	10-Jun-10	40	2 + 50	673803	5524505	Enzyme Leech/SGH	7 cm	14 cm	030°	20°	poplars, pine, spruce
36110	10-Jun-10	40	2+75	673804	5524526	Enzyme Leech/SGH	5 cm	10 cm	180°	10°	poplars, pine
36111	10-Jun-10	40	3 + 00	673806	5524546	Enzyme Leech/SGH	4 cm	9 cm	036°	15°	young poplar, pine, birch
36112	10-Jun-10	40	3 + 50	673803	5524596	SGH	15 cm	Outcrop	270°	10°	young spruce, pine, alder
36113	10-Jun-10	40	4 + 00	673805	5524649	Enzyme Leech/SGH	8 cm	11 cm	Nil	Nil	young spruce, pine
36114	10-Jun-10	40	4 + 50	673804	5524699	SGH	12 cm	Outcrop	320°	12°	young pine, spruce
36115	10-Jun-10	40	5 + 00	673806	5524750	SGH	25 cm	Outcrop	330°	40°	poplar, pine
36116	10-Jun-10	40	5 + 50	673800	5524798	Enzyme Leech/SGH	5 cm	12 cm	330°	30°	alders, poplars, maple, spruce
36117	10-Jun-10	40	6 + 00	673796	5524849	SGH	7 cm	Outcrop	330°	50°	maple, alders
36118	10-Jun-10	40	6 + 50	673799	5524904	Enzyme Leech/SGH	15 cm	20 cm	Nil	Nil	maple, spruce
36119	10-Jun-10	40	7 + 00	673802	5524950	Enzyme Leech/SGH	7 cm	15 cm	Nil	Nil	spruce
36120	10-Jun-10	40	7 + 50	673792	5525004	SGH	10 cm	25 cm	120°	05°	spruce, pine
36121	10-Jun-10	40	8 + 00	673797	5525064	SGH	-	-	Nil	Nil	moss
36122	10-Jun-10	40	8 + 50	673793	5525086	SGH	-	-	Nil	Nil	moss, spruce
36123	10-Jun-10	40	9 + 00	673791	5525136	SGH	-	-	Nil	Nil	moss, spruce, willows
36124	10-Jun-10	40	9 + 50	673794	5525194	SGH	-	-	Nil	Nil	moss, spruce, willows
36125	10-Jun-10	40	10 + 00	673793	5525244	SGH	-	-	Nil	Nil	alders, spruce

After XBR 2010, Table 2A

Red sample # indicates location of VTEM Anomaly

Sturgeon Lake Prop

Note: See Section 8.2. of the Report for sampling procedure.

Sample #	Date Taken	Line No	Line Station (N)	Saturation	Soil Description	Comments
LINES 37 & 38 SOIL GEOCHEM SAMPLES TAKEN JUNE 4-6,						
LINE 37						
36023	04-Jun-10	37	0 + 00	moist	light brown-grey, sandy-silty	
36024	04-Jun-10	37	0 + 50	moderately moist	rusty brown, sandy-silty	
36025	04-Jun-10	37	1 + 00	damp	light orange brown, sandy	
36026	04-Jun-10	37	1 + 50	moderately damp	reddish orange sandy	
36027	04-Jun-10	37	2 + 00	very moist	O-horizon material	Unavoidable tree roots `only o-horizon material`
36028	04-Jun-10	37	2 + 50	moist	light brown, silty	
36029	04-Jun-10	37	3 + 00	moist	rusty red-orange, silty	
36030	04-Jun-10	37	3 + 50	moist	light orange-rusty brown	
36031	04-Jun-10	37	4 + 00	very damp	light brown, sandy silt	
36032	04-Jun-10	37	4 + 50	very wet	reddish brown, very sandy	Anomaly
36033	04-Jun-10	37	5 + 00	very very damp	sandy silt, light brown, pebbles and cobbles	
36034	04-Jun-10	37	5 + 50	very wet	Silty sand with pebbles, dark brown	
36035	04-Jun-10	37	6 + 00	N/A	N/A	moss sample on outcrop, Rain!
36036	06-Jun-10	37	6 + 50	very wet/total	very pebbly	
36037	06-Jun-10	37	7 + 00	fairly damp	sandy silt, greyish-brown	
36038	06-Jun-10	37	7 + 50	total	heavily rooted, peat	Swamp sample
36039	06-Jun-10	37	8 + 00	total	mossy, peat	Swamp sample
36040	06-Jun-10	37	8 + 50	total	mossy peat, sandy, dark	still swamp
36041	06-Jun-10	37	9 + 00	total	Silty moss and peat	
36042	06-Jun-10	37	9 + 50	moist	Mossy, light brown	
36043	06-Jun-10	37	10 + 00	moist	Reddish brown, sandy silt with pebbles and cobbles	Tree's are relatively young, many bolders around
36044	06-Jun-10	37	10 +50	moist	rusty brown, sandy-pebbly	Tree's are relatively young
36045	06-Jun-10	37	11 + 00	-	rusty brown-orange, sandy silt with the occasional pebbles	
LINE 38						
36000	03-Jun-10	38	0 + 00	damp	pebbly sand	forgot to clean out hole, might have shovel trace.
36001	03-Jun-10	38	0 + 50	damp	pebbly sand, few boulders	possibly A-horizon material
36002	03-Jun-10	38	1 + 00	mildly moist	Pebbly sand with cobbles, orangy brown	
36003	03-Jun-10	38	1 + 50	very moist	Sandy pebbly, orangy brown	unknown plant sample # 2
36004	03-Jun-10	38	2 + 00	saturated	silty, mottled gray/brown	
36005	03-Jun-10	38	2 + 50	moderately dry	dry mossy	
36006	03-Jun-10	38	3 + 00	total	none, mud	

After XBR 2010, Table 2A

Red sample # indicates location of VTEM Anomaly

Sample #	Date Taken	Line No	Line Station (N)	Saturation	Soil Description	Comments
36007	03-Jun-10	38	3 + 50	saturated	muddy peat	
36008	03-Jun-10	38	4 + 00	fairly dry	dark brown	soil in fracture of outcrop
36009	03-Jun-10	38	4 + 50	moderaterly moist	sandy, orange brown	Anomaly
36103	03-Jun-10	38	4 + 50	slightly moist	dark-brown, sandy	Anomaly Duplicate
36010	03-Jun-10	38	5 + 00	midly moist	sandy dark brown	
36011	03-Jun-10	38	5 + 50	mild	pebbly gravel-sand	beside road
36012	03-Jun-10	38	6 + 00	minimal	Silty, orange-brown	
36013	03-Jun-10	38	6 + 50	moderately damp	-	
36014	03-Jun-10	38	7 + 00	Slightly damp	dark gray, sandy peat	
36015	03-Jun-10	38	7 + 50	very moist	peat	
36016	03-Jun-10	38	8 + 00	total	peat	
36017	03-Jun-10	38	8 + 50	very damp	grey silty sand, some pebbles, big O	
36018	03-Jun-10	38	9 + 00	mildly moist	orange-brown, sandy with pebbles	
36019	03-Jun-10	38	9 + 50	total	water logged black mud	
36020	04-Jun-10	38	10 + 00	moderately moist	light brown orange	
36021	04-Jun-10	38	10 +50	moderately moist	light orangy brown, sandy with cobbles, and pebbles	
36022	04-Jun-10	38	11 + 00	moderately to slightly moist	light brown sandy	
LINES 39 & 40 SOIL GEOCHEM SAMPLES TAKEN JUNE 6-1						
LINE 39						
36051	06-Jun-10	39	0 + 00	moist	grey, sandy silt, cobbles and boulders	
36052	06-Jun-10	39	0 + 50	moist	dark grey, sandy silt with pebbles, cobbles and boulders	
36053	06-Jun-10	39	1 + 00	dry	silt, sandy lots of cobbles and boulders	
36054	06-Jun-10	39	1 + 50	very mildly moist	reddish brown silt	
36055	06-Jun-10	39	2 + 00	very mildly moist	silty, reddish brown	
36046	06-Jun-10	39	2 + 50	very moist	orange-brown, sandy	sample taken along side gossan stained outcrop
36047	06-Jun-10	39	3 + 00	-	sandy silt, dark-brown-black	Outcrop appears to be greenschist
36048	06-Jun-10	39	3 + 50	-	greyish brown to dark brown	Outcrop appears to be greenschist
36049	06-Jun-10	39	4 + 00	damp	rusty-orange-brown, sandy silt with cobbles/pebbles	
36050	06-Jun-10	39	4 + 50	fairly moist	dark to greyish-brown, silty to sandy	tree's are realatively young
36101	06-Jun-10	39	5 + 00	damp	reddish-greyish brown sandy silt with pebbles	
36102	06-Jun-10	39	5 + 50	very moist	reddish-brown orange-brown silty	
36064	06-Jun-10	39	6 + 00	mild	silt, boulders and cobbles	
36063	06-Jun-10	39	6 + 50	very damp	mottled grey and brown, sandy silt, some pebbles	
36062	06-Jun-10	39	7 + 00	mildly moist	silty, reddish brown, cobbles, boulders, ± pebbles	
36061	06-Jun-10	39	7 + 50	somewhat moist	Silty, light yellowish brown wirth pebbles and cobbles	
36060	06-Jun-10	39	8 + 00	wet	O-horizon material	
36059	06-Jun-10	39	8 + 50	wet	O-horizon material	
36058	06-Jun-10	39	9 + 00	wet	O-horizon material	
36057	06-Jun-10	39	9 + 50	wet	O-horizon material	no soil profil
36056	06-Jun-10	39	10 + 00	-	O-horizon material	wet swampy

After XBR 2010, Table 2A

Red sample # indicates location of VTEM Anomaly

Sample #	Date Taken	Line No	Line Station (N)	Saturation	Soil Description	Comments
LINE 40						
36104	10-Jun-10	40	0 + 00	moist	silty sand, light brown	
36105	10-Jun-10	40	0 + 50	mildly moist	sandy silt, occasional pebbles, light brown	
36106	10-Jun-10	40	1 + 00	moist	organic, dark	ugged, bouldary
36107	10-Jun-10	40	1 + 50	wet	light brown, sandy silt	
36108	10-Jun-10	40	2 + 00	wet	black silty organic-rich material	swamp sample
36109	10-Jun-10	40	2 + 50	dry	light brown sandy, pebbly	
36110	10-Jun-10	40	2+75	damp	oxidized reddish-brown, much fragmented pieces of outcrop	Anomaly
36111	10-Jun-10	40	3 + 00	moist	silty, light brown	
36112	10-Jun-10	40	3 + 50	moist	sandy silty, light brown	
36113	10-Jun-10	40	4 + 00	moist	light brown, silty with sand	somewhat marshy
36114	10-Jun-10	40	4 + 50	wet	peat, heavily rooted	
36115	10-Jun-10	40	5 + 00	moist	many angular cobbles, unsorted light brown, silty clay	very close to outcrop
36116	10-Jun-10	40	5 + 50	moist	dark brown, sily clay	
36117	10-Jun-10	40	6 + 00	damp	dark sandy, mostly tree litter/roots	outcrop appears to be greenschist
36118	10-Jun-10	40	6 + 50	Wet	grey brown sandy	
36119	10-Jun-10	40	7 + 00	damp	light brown/orange silty sand, some pebbles/cobbles	
36120	10-Jun-10	40	7 + 50	moist	sandy with silt light to orangey brown/greyish	
36121	10-Jun-10	40	8 + 00	moist	peat	
36122	10-Jun-10	40	8 + 50	wet	dark brown, peat	marshy
36123	10-Jun-10	40	9 + 00	wet	dark brown peat	marshy
36124	10-Jun-10	40	9 + 50	moist	Peat	
36125	10-Jun-10	40	10 + 00	Very	Peat	

After XBR 2010, Table 2A

Red sample # indicates location of VTEM Anomaly

Report Date: 11/4/2008

TABLE 1A

2008 BOULDER & ROCK ANALYTICAL RESULTS, STURGEON LAKE PROPERTY

RECONNAISSANCE SURVEY

(ANOMALOUS SAMPLES: ENRICHMENT IN RED, DEPLETION IN BLUE)

			MULT INAA /			MULT INAA /	MULT INAA /												
Analysis Method		INAA	TD-ICP	INAA	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	TD-ICP	INAA	TD-ICP	TD-ICP	INAA	INAA	INAA	INAA
Analyte Symbol		Au	Ag	As	Cu	Mo	Pb	Zn	Al	Ba	Be	Bi	Br	Ca	Cd	Co	Cr	Cs	Eu
Unit Symbol		ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Detection Limit		2	0.3	0.5	1	1	3	1	0.01	50	1	2	0.5	0.01	0.3	1	2	1	0.2
Threshold	**TYPE**	**20**	**1**	**40**	**100**	**7**	**20**	**100**	**<5.5**	**<1500**					**1**	**>5**			
SAMPLE NUMBER																			
20041	Grab	22	0.6	161	378	< 1	18	236	4.41	< 50	< 1	< 2	2.8	1.45	1.8	258	37	5	< 0.2
20042	Grab	39	0.8	177	328	< 1	9	74	1.95	< 50	< 1	< 2	< 0.5	1.22	1.1	147	47	< 1	0.3
20043	Grab	15	< 0.3	84.9	172	2	< 3	83	1.7	< 50	< 1	< 2	< 0.5	0.62	0.8	58	46	< 1	< 0.2
20044	Boulder	458	< 0.3	< 0.5	309	< 1	< 3	31	7.03	< 50	< 1	< 2	< 0.5	2.29	0.3	67	25	< 1	< 0.2
20045	Boulder	< 2	< 0.3	6.9	5	< 1	4	81	6.93	< 50	< 1	< 2	< 0.5	9.26	0.7	44	97	< 1	0.9
21661	Grab	23	0.5	151	231	< 1	18	209	3.88	< 50	< 1	< 2	< 0.5	1.22	0.6	593	52	5	0.8
21662	Grab	22	0.5	99.1	229	< 1	16	439	4.89	< 50	< 1	< 2	4.7	2.08	2.1	545	55	3	0.6
21663	Boulder	< 2	1	4.6	693	4	17	1970	3.7	< 50	< 1	< 2	< 0.5	0.95	6.5	85	66	< 1	0.9
21664	Boulder	< 2	1.1	10.4	765	4	15	3410	3.85	610	< 1	< 2	< 0.5	0.74	11.3	98	66	< 1	0.9

After Actlabs; gfx July 2010, Table 1A

Analysis Method	INAA	INAA	INAA	INAA	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	TD-ICP	INAA	TD-ICP	INAA
Analyte Symbol	Fe	Hf	Hg	Ir	K	Mg	Mn	Na	Ni	P	Rb	S	Sb	Sc	Se	Sr	Ta	Ti	Th
Unit Symbol	%	ppm	ppm	ppb	%	%	ppm	%	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm
Detection Limit	0.01	1	1	5	0.01	0.01	1	0.01	1	0.001	15	0.01	0.1	0.1	3	1	0.5	0.01	0.2
Threshold	**4.5**					1	**1200**		**40**			**>1.0**	**7**						
SAMPLE																			
NUMBER																			
20041	22.1	1	< 1	< 5	0.63	0.7	2300	0.46	254	0.02	47	16.2	486	17.8	< 3	89	< 0.5	0.18	< 0.2
20042	35.9	1	< 1	< 5	0.29	0.28	689	0.3	180	0.011	< 15	16.3	85	6.8	< 3	23	< 0.5	0.08	< 0.2
20043	14	< 1	< 1	< 5	0.22	0.39	1090	0.25	98	0.009	< 15	8.88	20.6	4.9	< 3	25	< 0.5	0.08	< 0.2
20044	10.2	2	< 1	< 5	0.16	1.34	1160	1.7	19	0.043	< 15	3.71	< 0.1	42.8	< 3	145	< 0.5	0.75	2.3
20045	8.83	2	< 1	< 5	0.11	2.61	2940	1.79	70	0.029	< 15	0.03	0.2	33.6	< 3	123	< 0.5	0.41	< 0.2
21661	29	2	< 1	< 5	0.66	0.61	2550	0.4	264	0.018	< 15	19.6	252	22.3	< 3	70	< 0.5	0.18	< 0.2
21662	19.8	1	< 1	< 5	0.63	0.77	1650	0.68	234	0.025	< 15	16.8	240	26.7	< 3	123	< 0.5	0.26	2.2
21663	18.9	2	< 1	< 5	0.65	0.48	2940	0.8	104	0.024	< 15	9.28	0.9	12.8	< 3	73	< 0.5	0.11	3.5
21664	20	2	< 1	< 5	0.93	0.46	2260	0.69	107	0.024	61	9.88	0.1	12.7	5	62	< 0.5	0.13	2.7

Analysis Method	INAA	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA	INAA
Analyte Symbol	U	V	W	Y	La	Ce	Nd	Sm	Sn	Tb	Yb	Lu	Mass
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	g
Detection Limit	0.5	2	1	1	0.5	3	5	0.1	0.01	0.5	0.2	0.05	
Threshold													
SAMPLE													
NUMBER													
20041	< 0.5	125	13	10	4.8	< 3	< 5	1	< 0.01	< 0.5	< 0.2	< 0.05	37.5
20042	< 0.5	45	< 1	5	5.4	< 3	< 5	0.9	< 0.01	< 0.5	0.8	0.1	33.9
20043	< 0.5	36	< 1	6	2.4	< 3	< 5	0.6	< 0.01	< 0.5	0.5	0.14	33
20044	< 0.5	398	< 1	19	5.1	18	14	2.3	< 0.01	< 0.5	2.8	0.51	33.7
20045	< 0.5	251	10	11	4.1	< 3	< 5	2.8	< 0.01	< 0.5	3.2	0.57	27.3
21661	< 0.5	129	17	10	4.6	18	< 5	1.1	< 0.01	< 0.5	1.4	0.25	26.8
21662	< 0.5	161	18	12	6.2	14	< 5	1.4	< 0.01	< 0.5	1.1	0.33	42.8
21663	< 0.5	63	< 1	10	11.7	25	9	1.7	< 0.01	< 0.5	1.6	0.18	27.5
21664	< 0.5	66	< 1	9	13.3	26	23	1.9	< 0.01	< 0.5	1.3	0.25	26.1

				TABLE 1	
			2008 ROCK AND SOIL SAMPLE DESCRIPTIONS		
2008 Sturgeon Lake Sample List					
Sample #	**Date**	**Type**	**Easting**	**Northing**	**Description**
20041	Aug-20-08	Grab	672714	5524306	Semi-massive to massive sulphides (Po ± Py, ~>50%, in a Qtz-sandstone pebble conglomerate/breccia. Exposed in a 7-8m wide outcrop.
20042	Aug-21-08	Grab	673562	5524303	Semi-massive to massive sulphides (Po) in pebbly sandstone layer ~6-10" wide.
20043	Aug-21-08	Grab	673562	5524303	Quartz-rich material (vein?) near massive Po. Contains moderate sulphides (Py ± Po)
20044	Aug-22-08	Boulder	667814	5522195	Boulder with ~10-15% Py in fractures. Boulder appears to be metavolcanic. Fe-oxide staining on surface and along fracture surfaces.
20045	Aug-22-08	Boulder	665281	5520670	Tourmaline + Fe-CO3 + Cal + Cpy, possibly from feeder pipe of system, ~1% cpy in blebs.
21661	Aug-20-08	Grab	672714	5524306	Semi-massive sulphides, ~50% Po ± Py matrix cementing Qtz sandstone/pebble/breccia clasts from 7-8 meter wide exposed sulphide zone.
21662	Aug-20-08	Grab	672714	5524306	Semi-massive sulphides, ~50% Po ± Py matrix cementing Qtz sandstone/pebble/breccia clasts from 7-8 meter wide exposed sulphide zone.
21663	Aug-21-08	Boulder	673548	5524299	60kg boulder with ~60% Po + minor Cpy.
21664	Aug-21-08	Boulder	673548	5524299	Sim to 21633, except contains more visible Cpy (45% Po, 0.3% Cpy)
21665	Aug-22-08	Soil	667069	5522237	Upper B-Horizon starting at 16cm (26-34cm). Logged area, all samples from least disturbed ground.
21666	Aug-22-08	Soil	667049	5522261	Upper B-Horizon, 15cm from surface, 15-21cm.
21667	Aug-22-08	Soil	666983	5522271	Upper B-Horizon, 35-40cm from surface.
21668	Aug-22-08	Soil	666984	5522303	Upper B-Horizon, 30-36cm from surface.

after XBR 2008, Table 1

TABLE H2A: BELL LAKE AREA HISTORIC DRILL PROGRAMS

Records Found:
24
Where:
West = -95.28, East = -74.28, North = 56.87, South = 41.33

AFRI File:
52G15SW0001
AFRO ID:
52G15SW0018
Townships / Area Names:
BELL LAKE
Performed For:
STURGEON LAKE MINES LTD
Author(s):
STURGEON LAKE MINES LTD
Claim Holder(s):
STURGEON LAKE MINES LTD
Work Type(s):
GEOCHEMICAL , DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DD RPT 25 BELL L , 83 items , 1978
- Section 200 Items, Maps , GEOL SUR PL WITH DDH LOC , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 4 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SW0002
AFRO ID:
26
Townships / Area Names:
BELL LAKE
Performed For:
NORANDA EXPL CO LTD
Author(s):
NORANDA EXPLORATION CO
Claim Holder(s):
NORANDA EXPL CO LTD
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , RPT ON GEOPH SUR AND DD 1992 GRP 51 SIMAX OPT , 1 items , 1992
- Section 200 Items, Maps , LONGITUDINAL & SURFACE PL STURGEON L PROJ , 1 items
- Section 210 Items, Maps , MAG SUR STURGEON PROJ 1392 , 1 items
- Section 220 Items, Maps , SECTION 16000E SIMAX OPT STURGEON L PROJ , 1 items

- Section 900 Items, Misc , MISCELLANEOUS , 4 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SW0003
AFRO ID:
63.5044
Townships / Area Names:
BELL LAKE, SIXMILE LAKE
Performed For:
NORANDA EXPL CO LTD
Author(s):
G SEIM
Claim Holder(s):
NORANDA EXPL CO LTD
Work Type(s):
ASSAYING AND ANALYSES , DOWNHOLE GEOPHYSICS , DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , 1986 DD SUMMARY PROJ NO 1311 , 319 items , 1987
- Section 200 Items, Maps , BDRX GEOL , 1 items
- Section 210 Items, Maps , GRP 23 SECT 14250E , 1 items
- Section 220 Items, Maps , GRP 23 SECT 15250E , 1 items
- Section 230 Items, Maps , GRP 23 SECT 16000E , 1 items
- Section 240 Items, Maps , GRP 23 SECT 17500E , 1 items
- Section 250 Items, Maps , GRP 23 SECT 18000E , 1 items
- Section 260 Items, Maps , GRP 23 SECT 18500E , 1 items
- Section 270 Items, Maps , GRP 23 SECT 20500E , 1 items
- Section 280 Items, Maps , GRP 51 SECT 10400E , 1 items
- Section 290 Items, Maps , GRP 51 SECT 12400E , 1 items
- Section 300 Items, Maps , GRP 55 SECT 800W , 1 items
- Section 310 Items, Maps , GRP 55 SECT 1800W , 1 items
- Section 320 Items, Maps , GRP 23 VERT LONG SECT , 1 items
- Section 330 Items, Maps , GRP 51 VERT LONG SECT , 1 items
- Section 340 Items, Maps , GRP 55 VERT LONG SECT , 1 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SW0004
AFRO ID:
63.5478
Townships / Area Names:
BELL LAKE, SIXMILE LAKE
Performed For:
DOMINION EXPLORERS , MINNOVA INC
Author(s):
DOMINION EXPLORERS INC
Claim Holder(s):

DOMINION EXPLORERS , MINNOVA INC
Work Type(s):
ASSAYING AND ANALYSES , DOWNHOLE GEOPHYSICS , ELECTROMAGNETIC , GEOCHEMICAL , DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , OM87-2-C-270 RPT ON STURGEON L MINE PROP JOINT VENTURE NOV'87-JUN'88 INTERIM RPT , 122 items , 1988
- Section 200 Items, Maps , 1988 DRILLING DDH LOC PL STURGEON L MINE PROP , 1 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SW0006
AFRO ID:
52G15SW0012B1
Townships / Area Names:
BELL LAKE
Performed For:
MATTAGAMI L MINES LTD
Author(s):
MATTAGAMI LAKE MINES LTD
Claim Holder(s):
MATTAGAMI L MINES LTD
Work Type(s):
ASSAYING AND ANALYSES , DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DD RPT 23 BELL LAKE , 20 items , 1974
- Section 200 Items, Maps , CL LOC PL , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 4 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SW0007
AFRO ID:
52G15SW0010C1
Townships / Area Names:
BELL LAKE
Performed For:
FALCONBRIDGE NICKEL MINES LTD
Author(s):
M NYYSSONEN
Claim Holder(s):
FALCONBRIDGE NICKEL MINES LTD
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DD RPT 24 BELL L , 8 items , 1975

- Section 900 Items, Misc , MISCELLANEOUS , 3 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0008

AFRO ID:

52G15SW0015

Townships / Area Names:

BELL LAKE

Performed For:

NEWCONEX CDN EXPL LTD

Author(s):

NEWCONEX CANADIAN EXPL

Claim Holder(s):

NEWCONEX CDN EXPL LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 22 BELL L , 45 items , 1973
- Section 200 Items, Maps , DDH LOC PL , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 3 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0009

AFRO ID:

52G15SW0011A1

Townships / Area Names:

BELL LAKE

Performed For:

FALCONBRIDGE NICKEL MINES LTD , LYON LAKE MINES LTD

Author(s):

FALCONBRIDGE NICKEL MINES

Claim Holder(s):

LYON LAKE MINES LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 20 BELL LAKE , 9 items , 1972
- Section 900 Items, Misc , MISCELLANEOUS , 1 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0010

AFRO ID:

52G15SW0012A1

Townships / Area Names:

BELL LAKE

Performed For:

G G PLASKETT
Author(s):
G G PLASKETT
Claim Holder(s):
G G PLASKETT
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DDH RPT 16 BELL LAKE , 8 items , 1971
- Section 200 Items, Maps , DDH PL , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 2 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SW0011
AFRO ID:
52G15SW0014
Townships / Area Names:
BELL LAKE
Performed For:
SILVER LINING MINES LTD
Author(s):
SILVER LINING MINES LTD
Claim Holder(s):
SILVER LINING MINES LTD
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , 0DH RPT 13 BELL LAKE , 36 items , 1970
- Section 200 Items, Maps , DDH LOC PL , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 3 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SW0012
AFRO ID:
52G15SW0011D1
Townships / Area Names:
BELL LAKE
Performed For:
ALGOMA STEEL CORP LTD
Author(s):
ALGOMA STEEL CORP LTD
Claim Holder(s):
ALGOMA STEEL CORP LTD
Work Type(s):
DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 18 BELL LAKE , 19 items , 1971
- Section 900 Items, Misc , MISCELLANEOUS , 6 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0013

AFRO ID:

52G15SW0020

Townships / Area Names:

BELL LAKE

Performed For:

NEWCONEX CDN EXPL LTD

Author(s):

NEWCONEX CANADIAN EXPL

Claim Holder(s):

NEWCONEX CDN EXPL LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 21 BELL L , 37 items , 1973
- Section 200 Items, Maps , DDH LOC PL , 1 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0014

AFRO ID:

52G15SW0021

Townships / Area Names:

BELL LAKE

Performed For:

NORANDA EXPL CO LTD

Author(s):

D CROSS

Claim Holder(s):

NORANDA EXPL CO LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 15 BELL L , 15 items , 1970
- Section 900 Items, Misc , MISCELLANEOUS , 4 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0015

AFRO ID:

52G15SW0013

Townships / Area Names:

BELL LAKE

Performed For:
LOUVICOURT GOLDFIELDS CORPORATION LTD
Author(s):
LOUVICOURT GOLDFIELDS LTD
Claim Holder(s):
LOUVICOURT GOLDFIELDS CORPORATION LTD
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DDH RPT 17 BELL LAKE , 13 items , 1971
- Section 200 Items, Maps , DDH LOC PL , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 2 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SW0016
AFRO ID:
52G15SW0010A1
Townships / Area Names:
BELL LAKE
Performed For:
NEWCONEX CAN EXPL LTD
Author(s):
E FERRIS , R KNUTSON
Claim Holder(s):
NEWCONEX CAN EXPL LTD
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DD RPT 12 BELL L , 4 items , 1970
- Section 900 Items, Misc , MISCELLANEOUS , 1 items

Records Found:
24
Where:
West = -95.28, East = -74.28, North = 56.87, South = 41.33

AFRI File:
52G15SW0017
AFRO ID:
52G15SW0011B1
Townships / Area Names:
BELL LAKE
Performed For:
NEWCONEX CAN EXPL LTD
Author(s):
NEWCONEX CANADIAN EXPL
Claim Holder(s):

NEWCONEX CAN EXPL LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 11 BELL LAKE , 15 items , 1970
- Section 900 Items, Misc , MISCELLANEOUS , 2 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0018

AFRO ID:

52G15SW0010B1

Townships / Area Names:

BELL LAKE

Performed For:

MATTAGAMI L MINES LTD

Author(s):

MATTAGAMI LAKE MINES LTD

Claim Holder(s):

MATTAGAMI L MINES LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 19 BELL L , 5 items , 1972
- Section 900 Items, Misc , MISCELLANEOUS , 3 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0019

AFRO ID:

52G15SW0017

Townships / Area Names:

BELL LAKE

Performed For:

FALCONBRIDGE NICKEL MINES LTD

Author(s):

G MEYER

Claim Holder(s):

FALCONBRIDGE NICKEL MINES LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 14 BELL L , 88 items , 1971
- Section 900 Items, Misc , MISCELLANEOUS , 6 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0020

AFRO ID:

52G15SW0016
Townships / Area Names:
BELL LAKE
Performed For:
MATTAGAMI L MINES LTD
Author(s):
P GRIGGS
Claim Holder(s):
MATTAGAMI L MINES LTD
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DD RPT 10 BELL L , 60 items , 1972
- Section 200 Items, Maps , STURGEON L AREA CL LOC MAP , 1 items
- Section 210 Items, Maps , DDH SL-51-70 1/2/3/4/5 SURFACE PL SECT , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 16 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SW0033
AFRO ID:
52G15SW0027
Townships / Area Names:
BELL LAKE, SIXMILE LAKE
Performed For:
CDN JAVELIN LTD
Author(s):
CDN JAVELIN LTD , CRONE GEOPHYSICS LTD
Claim Holder(s):
CANADIAN JAVELIN LIMITED
Work Type(s):
GEOLOGICAL , MAGNETOMETER , OTHER , DIAMOND DRILLING , ELECTROMAGNETIC VERY LOW FREQUENCY
Sections:

- Section 10 Items, Reports , RPT ON AIRBORNE GEOPHY GEOL & DD , 28 items , 1970
- Section 20 Items, Reports , MAG VLF RPT , 4 items , 1970
- Section 200 Items, Maps , CL LOC PL M-2875 , 1 items
- Section 210 Items, Maps , GEOL BASE MAP , 1 items
- Section 220 Items, Maps , SUPPLEMENTAL GEOPH INFORMATION , 1 items
- Section 230 Items, Maps , MAG SUR , 1 items
- Section 240 Items, Maps , EM SUR , 1 items
- Section 250 Items, Maps , SUPPLEMENTAL GEOPH INFORMATION , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 7 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0037

AFRO ID:

W9530-00015

Townships / Area Names:

BELL LAKE

Performed For:

NORANDA MINING AND EXPLORATION INC

Author(s):

A SMITH

Claim Holder(s):

NORANDA MINING AND EXPLORATION INC

Work Type(s):

ASSAYING AND ANALYSES , DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , NORANDA MINING & EXPLORATION INC RPT ON 1993 DIAMOND DRILLING STURGEON LAKE , 56 items , 1993
- Section 200 Items, Maps , BELL LAKE AREA PATRICIA MIN DIV MNR G-2533 , 1 items
- Section 210 Items, Maps , GROUP 51 SECTION 11600E , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 4 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW0050

AFRO ID:

52G15SW0019

Townships / Area Names:

BELL LAKE

Performed For:

ALGOMA STEEL CORP LTD

Author(s):

ALGOMA STEEL CORP LTD

Claim Holder(s):

ALGOMA STEEL CORP LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DDH RPT BELL LAKE , 3 items , 1971
- Section 200 Items, Maps , DDH LOC SKETCH , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 3 items
- Section 999 Items, Misc , MISCELLANEOUS , null items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SW9152

AFRO ID:

52G15SW0019B1

Townships / Area Names:

BELL LAKE
Performed For:
MATTAGAMI LAKE MINES LTD
Author(s):
MATTAGAMI LAKE MINES LTD
Claim Holder(s):
MATTAGAMI L MINES LTD
Work Type(s):
ASSAYING AND ANALYSES , DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DD RPT BELL LAKE , 17 items , 1972

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SW9156
AFRO ID:
2.14828
Townships / Area Names:
BELL LAKE
Performed For:
NORANDA EXPL CO LTD
Author(s):
NORANDA EXPLORATION CO
Claim Holder(s):
NORANDA EXPL CO LTD
Work Type(s):
ELECTROMAGNETIC , GEOCHEMICAL , MAGNETOMETER , DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , RPT ON GEOPH SUR & DD 1992 GRP 51 SIMAX OPT BELL LAKE AREA , 107 items , 1992
- Section 200 Items, Maps , CL LOC PL G-2533 , 1 items
- Section 210 Items, Maps , MAG SUR VALUES STURGEON PROJ , 1 items
- Section 220 Items, Maps , MAG SUR CTRS & INTERP STURGEON PROJ , 1 items
- Section 230 Items, Maps , LONGITUDINAL & SURFACE PL STURGEON L PROJ , 1 items
- Section 240 Items, Maps , REGIONAL GEOL GRP 51/52 STURGEON L , 1 items
- Section 250 Items, Maps , BOREHOLE PEM HOLE H5126 X Y & Z COMPONENTS , 1 items
- Section 260 Items, Maps , BOREHOLE PEM HOLE H5127 X Y & Z COMPONENTS , 1 items
- Section 270 Items, Maps , BOREHOLE PEM HOLE H5128 X Y & Z COMPONENTS , 1 items
- Section 280 Items, Maps , BOREHOLE PEM HOLE HS921 X Y & Z COMPONENTS , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 5 items

TABLE H2B: DUNNE LAKE AREA HISTORIC DRILL PROGRAMS

Records Found: 6
Where:
West = -95.28, East = -74.28, North = 56.87, South = 41.33

VIEW MAP OF SELECTION EXTENT REFINE SEARCH CRITERIA

AFRI File:

52G15SE0001

AFRO ID:

2.14642

Townships / Area Names:

DUNNE LAKE

Performed For:

NORANDA EXPL CO LTD

Author(s):

J GINGERICH , R FELIX

Claim Holder(s):

NORANDA EXPL CO LTD

Work Type(s):

INDUCED POLARISATION , MAGNETOMETER , DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , ROW JAN-FEB 1992 QUILL L PROP , 17 items , 1992
- Section 200 Items, Maps , CL LOC PL G-2539 , 1 items
- Section 210 Items, Maps , MAG SUR CTRS , 1 items
- Section 220 Items, Maps , MAG SUR RDGS , 1 items
- Section 230 Items, Maps , RES SUR , 1 items
- Section 240 Items, Maps , IP CHARGEABILITY RDGS , 1 items
- Section 250 Items, Maps , IP CHARGEABILITY CTRS , 1 items
- Section 260 Items, Maps , GEOCOMP MAP , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 4 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SE0002

AFRO ID:

14

Townships / Area Names:

DUNNE LAKE

Performed For:

HEMLO GOLD MINES INC , NORANDA EXPL CO LTD

Author(s):

HEMLO GOLD MINES INC , NORANDA EXPLORATION CO

Claim Holder(s):

HEMLO GOLD MINES INC , NORANDA EXPL CO LTD

Work Type(s):

ASSAYING AND ANALYSES , DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT NO 14 DUNNE LAKE AREA , 1 items , 1992
- Section 20 Items, Reports , RPT OF WORK JANUARY-FEBRUARY 1992 QUILL L PROP , 73 items , 1992
- Section 900 Items, Misc , MISCELLANEOUS , 3 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SE0004

AFRO ID:

52G15SE0010A1

Townships / Area Names:

DUNNE LAKE

Performed For:

N A TIMMINS EXPL LTD

Author(s):

N A TIMMINS EXPL LTD

Claim Holder(s):

N A TIMMINS EXPL LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 10 DUNNE LAKE , 12 items , 1957

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SE0005

AFRO ID:

52G15SE0010B1

Townships / Area Names:

DUNNE LAKE

Performed For:

N A TIMMINS EXPL LTD

Author(s):

N A TIMMINS EXPL LTD

Claim Holder(s):

N A TIMMINS EXPL LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 11 DUNNE LAKE , 5 items , 1957

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G15SE0006

AFRO ID:

OM92-046

Townships / Area Names:

DUNNE LAKE

Performed For:

HEMLO GOLD MINES INC
Author(s):
R FELIX
Claim Holder(s):
HEMLO GOLD MINES INC
Work Type(s):
ASSAYING AND ANALYSES , COMPILATION AND INTERPRETATION - GROUND GEOPHYSICS , RESISTIVITY , INDUCED POLARISATION , MAGNETOMETER , COMPILATION AND INTERPRETATION - DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , RPT OF WORK QUILL LAKE PROP , 67 items , 1992
- Section 200 Items, Maps , GEOCOMPILATION , 1 items
- Section 210 Items, Maps , MAG SURVEY QUILL LAKE MAP 2 , 1 items
- Section 220 Items, Maps , IP/RESISTIVITY SURVEY (RESISTIVITY) MAP 3 , 1 items
- Section 230 Items, Maps , IP/RESISTIVITY SURVEY (CHARGEABILITY) MAP 4 , 1 items
- Section 240 Items, Maps , GEOCOMPILATION LINE 10000 MAP 5 , 1 items
- Section 250 Items, Maps , GEOCOMPILATION LINE 9800 MAP 6 , 1 items
- Section 260 Items, Maps , GEOCOMPILATION LINE 9200 MAP 7 , 1 items
- Section 270 Items, Maps , GEOCOMPILATION LINE 9600 MAP 8 , 1 items
- Section 280 Items, Maps , GEOCOMPILATION LINE 10400 MAP 9 , 1 items
- Section 290 Items, Maps , GEOCOMPILATION LINE 9900 MAP 10 , 1 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G15SE0007
AFRO ID:
52G15SE0010C1
Townships / Area Names:
DUNNE LAKE
Performed For:
AMAX EXPLORATION INC
Author(s):
AMAX EXPLORATION INC
Claim Holder(s):
AMAX EXPL INC
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DD RPT 13 DUNNE LAKE , 11 items , 1972
- Section 900 Items, Misc , MISCELLANEOUS , 3 items

TABLE H2C: HILLTOP LAKE AREA HISTORIC DRILL PROGRAMS

Records Found:
4
Where:
West = -95.28, East = -74.28, North = 56.87, South = 41.33

VIEW MAP OF SELECTION EXTENT REFINE SEARCH CRITERIA

AFRI File:

42E13NW0004

AFRO ID:

OP93-434

Townships / Area Names:

IRWIN, WATTEN, MCCOMBER, SESEGANAGA LAKE, HILLTOP LAKE, WATTEN EAST, WATTEN WEST

Performed For:

TIMOTHY J TWOMEY

Author(s):

TIMOTHY J TWOMEY

Claim Holder(s):

AUBREY EVELEIGH , DAVID GLIDDON , TIMOTHY J TWOMEY

Work Type(s):

COMPILATION AND INTERPRETATION - AIRBORNE GEOPHYSICS , GEOCHEMICAL , GEOLOGICAL , MAGNETOMETER , OTHER , COMPILATION AND INTERPRETATION - DIAMOND DRILLING , OPEN CUTTING , PROSPECTING BY LICENCE HOLDER ($150 PER DAY) , BEDROCK TRENCHING , RADIOMETRIC , ELECTROMAGNETIC VERY LOW FREQUENCY

Sections:

- Section 10 Items, Reports , RPT ON PROSP TRENCHING GEOL & RAD SURVEYS BEEP-MAT MAG & VLF-EM SURVEYS , 44 items , 1994
- Section 20 Items, Reports , GEOL RPT ON RICE BAY PROP , 23 items , 1994
- Section 30 Items, Reports , RPT ON PROSP GOOSENECK LAKE PROP IRWIN TP , 19 items , 1994
- Section 200 Items, Maps , G-3839 WATTEN TP E HALF & ADJACENT ISLANDS IN RAINY LAKE RAINY RIVER DIST , 1 items
- Section 210 Items, Maps , G-164 IRWIN TP NIPIGON DIST THUNDER BAY MNG DIV , 1 items
- Section 220 Items, Maps , G-2524 SESEGANAGA LAKE AREA IGNACE DIST PATRICIA MNG DIV , 1 items
- Section 230 Items, Maps , G-2546 HILLTOP LAKE AREA IGNACE & THUNDER BAY DIST PATRICIA MNG DIV , 1 items
- Section 240 Items, Maps , GEOL GOOSENECK LAKE PROP IRWIN TP , 1 items
- Section 250 Items, Maps , GEOL RICE BAY PROP WATTEN TP , 1 items
- Section 260 Items, Maps , MAP 3 SEARGEANT PROP SESEGANAGA LAKE COMP MAP , 1 items

- Section 270 Items, Maps , MAP 4 SEARGEANT PROP SESEGANAGA LAKE COMP MAP , 1 items
- Section 280 Items, Maps , SESEGANAGA LAKE PROP GEOL SURVEY , 1 items
- Section 290 Items, Maps , SESEGANAGA LAKE PROP VLF SURVEY , 1 items
- Section 300 Items, Maps , SESEGANAGA LAKE PROP BEEP-MAT SURVEY , 1 items
- Section 310 Items, Maps , SESEGANAGA LAKE PROP MAG SURVEY , 1 items
- Section 320 Items, Maps , SESEGANAGA LAKE PROP SCINTILLOMETER SURVEY , 1 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G16NW0002
AFRO ID:
52G16NW0012
Townships / Area Names:
HILLTOP LAKE
Performed For:
NORANDA EXPL CO LTD
Author(s):
NORANDA EXPLORATION CO
Claim Holder(s):
NORANDA EXPL CO LTD
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DD RPT 13 HILLTOP LAKE , 4 items , 1985
- Section 200 Items, Maps , ANOMALY 16 , 1 items
- Section 210 Items, Maps , ANOMALY 16 N , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 2 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G16NW0180
AFRO ID:
52G16NW0010
Townships / Area Names:
HILLTOP LAKE
Performed For:
NORANDA EXPLORATION CO LTD
Author(s):
NORANDA EXPLORATION CO
Claim Holder(s):
NORANDA EXPLORATION CO LTD
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DDH RPT 10 HILLTOP LAKE , 4 items , 1985

- Section 200 Items, Maps , ANOMALY 14 , 1 items
- Section 210 Items, Maps , ANOMALY 14 SECTION 800E , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 4 items
- Section 999 Items, Misc , MISCELLANEOUS , null items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G16NW0181
AFRO ID:
52G16NW0011
Townships / Area Names:
HILLTOP LAKE
Performed For:
NORANDA EXPLORATION CO LTD
Author(s):
NORANDA EXPLORATION CO
Claim Holder(s):
NORANDA EXPLORATION CO LTD
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DDH RPT 11 HILLTOP LAKE , 3 items , 1985
- Section 200 Items, Maps , HILLTOP 4-84 ANOMALY 1 , 1 items
- Section 210 Items, Maps , ANOMALY 1 SECTION 500W , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 3 items
- Section 999 Items, Misc , MISCELLANEOUS , null items

TABLE H2D: MOUNTAIRY LAKE AREA HISTORIC DRILL PROGRAMS

Records Found:
3
Where:
West = -95.28, East = -74.28, North = 56.87, South = 41.33

VIEW MAP OF SELECTION EXTENT REFINE SEARCH CRITERIA

AFRI File:

52G16SE0003

AFRO ID:

52G16SW0010

Townships / Area Names:

MOUNTAIRY LAKE

Performed For:

NORBASKA MINES LTD

Author(s):

J HAWKE

Claim Holder(s):

NORBASKA MINES LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DD RPT 10 MOUNTAIRY TWP , 20 items , 1971
- Section 200 Items, Maps , EM SUR & DDH LOC PL 1 , 1 items
- Section 210 Items, Maps , EM SUR & DDH LOC PL 2 , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 2 items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:

52G16SW0026

AFRO ID:

52G16SW0011A1

Townships / Area Names:

MOUNTAIRY LAKE

Performed For:

NORANDA EXPLORATION CO LTD

Author(s):

NORANDA EXPLORATION CO

Claim Holder(s):

NORANDA EXPLORATION CO LTD

Work Type(s):

DIAMOND DRILLING

Sections:

- Section 10 Items, Reports , DDH RPT 12 MOUNTAIRY LAKE , 5 items , 1985
- Section 200 Items, Maps , ANOMALY 2 & 17 , 1 items

- Section 210 Items, Maps , ANOMALY 2 SECTION 400W , 1 items
- Section 900 Items, Misc , MISCELLANEOUS , 3 items
- Section 999 Items, Misc , MISCELLANEOUS , null items

VIEW AFRI DIRECTORYVIEW AFRI FILEVIEW AFRI INDEXVIEW MAP

AFRI File:
52G16SW9209
AFRO ID:
11
Townships / Area Names:
MOUNTAIRY LAKE
Performed For:
W MEAKIN
Author(s):
W MEAKIN
Claim Holder(s):
W MEAKIN
Work Type(s):
DIAMOND DRILLING
Sections:

- Section 10 Items, Reports , DD RPT 11 MOUNTAIRY L , 25 items , 1974
- Section 900 Items, Misc , MISCELLANEOUS , 3 items

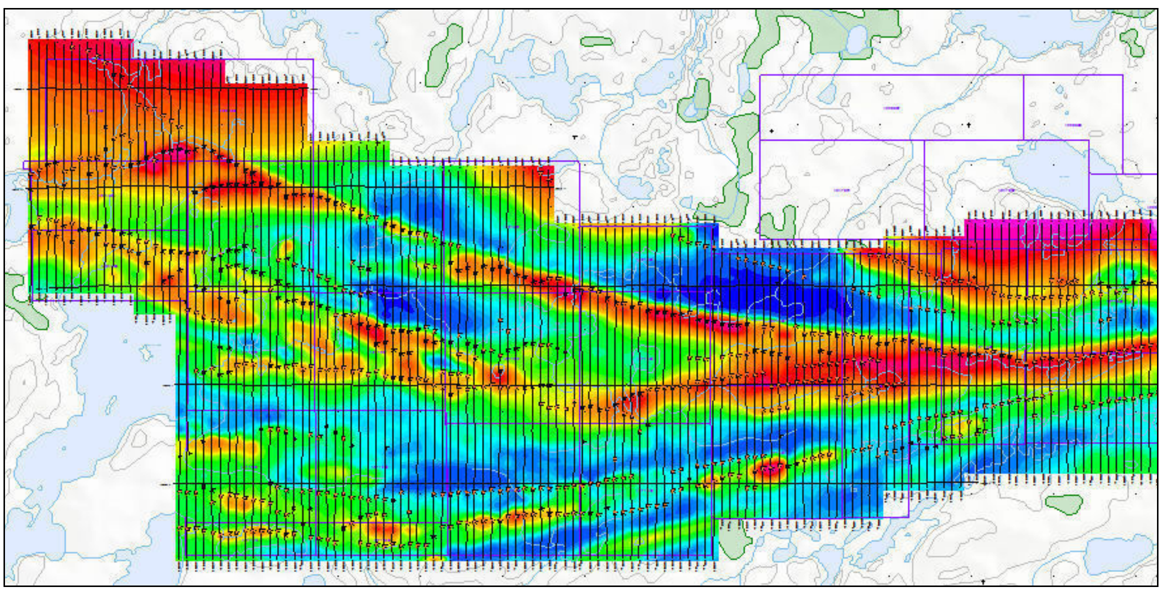
TABLE S2					
Summary of Anomalous Responses - VTEM, SGH and ENZYME LEACH DATA					
	----------Enzyme Leach Response----------			VTEM Anomaly	**SGH Anomaly**
Line	Anomaly	No. of Samples	Location	Location/No.	**Location**
32	Co	3	0+50 to 1+50	3+00 1670C	na
33	nil			3+00 1670C	na
34	Zn+/- Cu, Mo, Sb, Co, Mn	3	11+50 to 12+50	17+69 1690A	na
				3+22 1690B	
35	nil			17+75 1690A	na
36	Zn- REE; Co-Mn	1	3+00; 4+50	3+74 1690B	na
37	Cu, Au	1	6+50	4+50 2450A	none
	Pb; Zn	1	11+00; 11+50		none
38	Zn, Pb, Ni, Co, Mn	1	0+50	4+50 2450A	6+00 str
39	Zn, Co	4	4+00 to 5+50	2+75 2510C	2+75 weak
					5+50 mod
					7+50 str
40	Cu, Pb, Zn, Mo, Sb	1	2+75	2+75 2510C	2+75 weak
	Co	1	4+50		none
	As	1	5+50		none
	Au, Tl, Br	3	2+50 to 3+00	2+75 2510C	2+75 weak

After Fedikow 2010

mod. By gfx 2010, Table S2

GEOPHYSICAL SURVEYS AND CONSULTING

Review of VTEM Survey Results
Glitter Lake Project, Sturgeon Lake Area, Ontario
Excalibur Resources Inc.



Ref. 10-58
July, 2010

Review of VTEM Survey Results
Glitter Lake Project, Sturgeon Lake Area, Ontario

For : Excalibur Resources Inc.
20 Adelaide St. E., Suite 400
Toronto, Ontario M5C 2T6
Ph : 416.987.0298
www.excaliburresources.ca

By : JVX Ltd.
60 West Wilmot Street, Unit 22
Richmond Hill, Ontario L4B 1M6
Phone : 905.731.0972
Fax : 905.731.9312
www.jvx.ca

Ref. 10-58
July, 2010

Summary

A VTEM survey was flown in November, 2009 over the Glitter Lake and Grid Iron Lake Projects area, southeast of Sturgeon Lake, Ontario. The work was done for Excalibur Resources by Geotech (Geotech ref. 9053). Total coverage was 1069 km on north/south lines at 100 m. The VTEM results from the Glitter Lake Project area defined by Geotech's west map sheet have been reviewed.

Results from a regional 1990 Aerodat HEM survey and information from the Ontario Drill Hole Database, the Mineral Deposit Inventory and a regional lake sediment geochemical survey from 2000 have been incorporated into the review. Three possible VMS or VMS/precious metal targets are proposed.

Cover page : Magnetic contours, Glitter Lake Project area

Table of Contents

Figures

Attachments

Maps

The results of this work are presented on 5 maps. One map at 1:50,000 shows the regional geophysical setting based on a 1990 Aerodat HEM/magnetic survey. Current land tenure, drill holes and mineral deposits have been added. Four maps at 1:10,000 cover Geotech's west map sheet and include Geotech's topography, land tenure, flight path and EM anomaly centres. Map types are

- total magnetic intensity
- calculated vertical magnetic gradient
- VTEM Z component B field channel 26 amplitude
- VTEM Z component B field time constant

All 1:10,000 maps include VTEM line segments with Maxwell inversions, conductor labels A to P, diamond drill holes, a gold prospect and five lake sediment gold anomalies. TMI and CVG maps are based on Geotech grids. BF26 amplitude and the B field time constant have been taken from an enlarged VTEM database.

Review of VTEM Survey Results
Glitter Lake Project, Sturgeon Lake Area, Ontario
Excalibur Resources Inc.

A helicopter EM/magnetic survey (VTEM) was flown in November, 2009 over the Glitter Lake Project and Grid Iron Lake Project area (Geotech ref. 9053). Total coverage was 1069 km on north/south lines at 100 m. The survey area is centered centred 185 km northwest of Thunder Bay, Ontario. The VTEM survey is described in appendix 1.

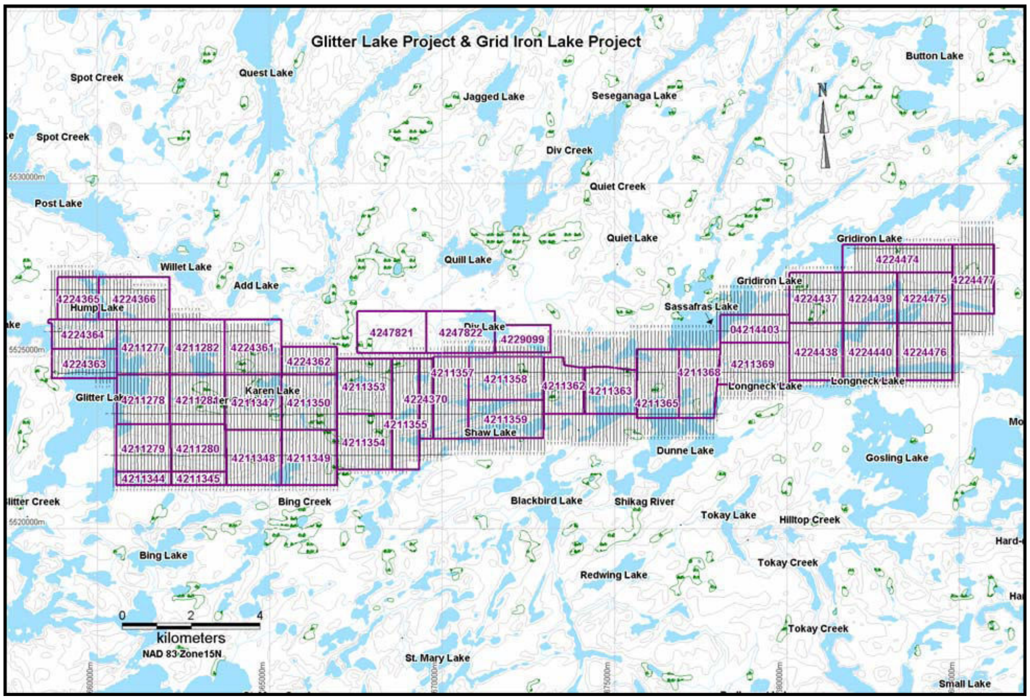


Figure 1. Flight path and claim fabric (from appendix A of the Geotech report)

The results were presented on 2 map sheets / 8 map types at 1:10,000. All maps show EM anomaly centres. Resistivity depth images were prepared for 90 of the 374 flight lines. Maxwell inversion/modelling was done on 23 line segments.

Excalibur Resources has asked for a review of the VTEM results over the west half of the survey area (figure 2). Other sources (Ontario Drill Hole Database, Mineral Deposit Inventory, Lake Sediment Geochemistry, regional gravity, a regional 1990 Aerodat HEM survey) are described in appendix 2. All EM anomaly centres have been grouped into named conductors A to P and these are described in appendix 3. Images of the 5 maps that accompany this report are in appendix 4.

1. Deliverables

The results of this work are contained in this report and derivative maps prepared by JVX. The maps are provided as Geosoft *.map files at the JVX ftp site. There are 5 maps, one at 1:50,000 showing the regional geophysical setting and four at 1:10,000 of the Glitter Lake Project area.

The 1:50,000 compilation map shows EM anomaly centres over magnetic contours from a regional 1990 Aerodat survey (GDS1033). Current land tenure, drill holes and mineral deposits have been added. Drill holes are from the Ontario Drill Hole Database and are shown with the company ID. Mineral deposits are from the Mineral Deposit Inventory and are listed in table 1. Unless otherwise noted, UTM coordinates are NAD83, Z15N.

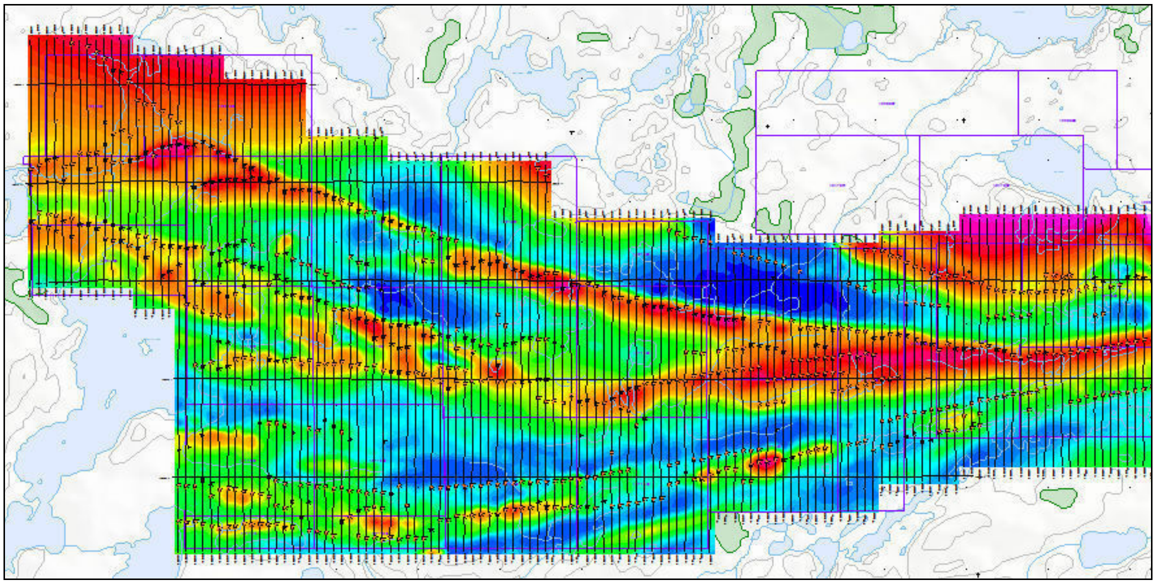


Figure 2. TMI colour grid with EM anomaly centres, west map sheet

MDI #	Name	Principal Commodity	Secondary Commodity	Status	UTM e	UTM n
MDI52G15NE00003	Quest I-74	Cu		Occurrence	661908	5529951
MDI52G15NW00004	Sturgeon Lake Deposit	Cu, Ag, Zn	Au, Pb	Past producing mine without reserves	652091	5527112
MDI52G15NW00006	Creek Zone	Cu, Ag, Zn	Au, Pb	Past producing mine with reserves	651931	5527655
MDI52G15NW00007	Lyon Lake Zone	Cu, Ag, Zn	Au, Pb	Developed prospect with reserves	651556	5528202
MDI52G15NW00008	Narrows Island	Th, U		Discretionary occurrence	654605	5522167
MDI52G15NW00020	Canadex	Cu, Zn	Au, Ag	Occurrence	652024	5529726
MDI52G15NW00027	Lyon Lake – ne	Zn		Occurrence	652710	5528945
MDI52G15NW00030	Lyon Lake – n	Au	Cu, Zn	Occurrence	652210	5530020
MDI52G15SE00004	Div Lake	Au		Prospect	669510	5525620
MDI52G15SE00005	Sassafras Lake – ne	Fe		Occurrence	674506	5525059
MDI52G15SE00006	Sassafras Lake – sw	Fe		Occurrence	673907	5525009
MDI52G15SW00010	Claw Lake	Cu	Au	Prospect	656063	5524697
MDI52G15SW00011	Swamp Lake - se	Cu		Occurrence	655382	5525710

Table 1. Area mineral deposits from MDI2

The 4 maps at 1:10,000 are derived from the west sheet maps from Geotech. Map types are

- total magnetic intensity
- calculated vertical magnetic gradient
- VTEM Z component B field channel 26 (1.953 msec) amplitude
- VTEM Z component B field time constant

All 1:10,000 maps show topography, land tenure from late 2009 or early 2010, flight path and EM anomaly centres as presented by Geotech. Added features are

1. VTEM line segments with Maxwell inversions (see appendix 1)
2. conductor labels A to P (see appendix 3)
3. drill holes with adjustments (see appendix 2)
4. 1 gold prospect (see appendix 2)
5. 5 lake sediment gold anomalies (see appendix 2)

The 5 lake sediment gold anomalies within the west map sheet are from MRD104 and are described in appendix 2. Sample numbers, locations and assays in ppb are listed in table 2.

Sample	UTM e	UTM n	Au (FA)	Au (INAA)
4466	668808	5521180	2.83	5
4441	668710	5527517	-1	3
4406	661465	5521484	1.64	4
4412	664083	5527006	1.7	3
4439	666742	5528082	6	7

Table 2. Lake sediment gold anomalies

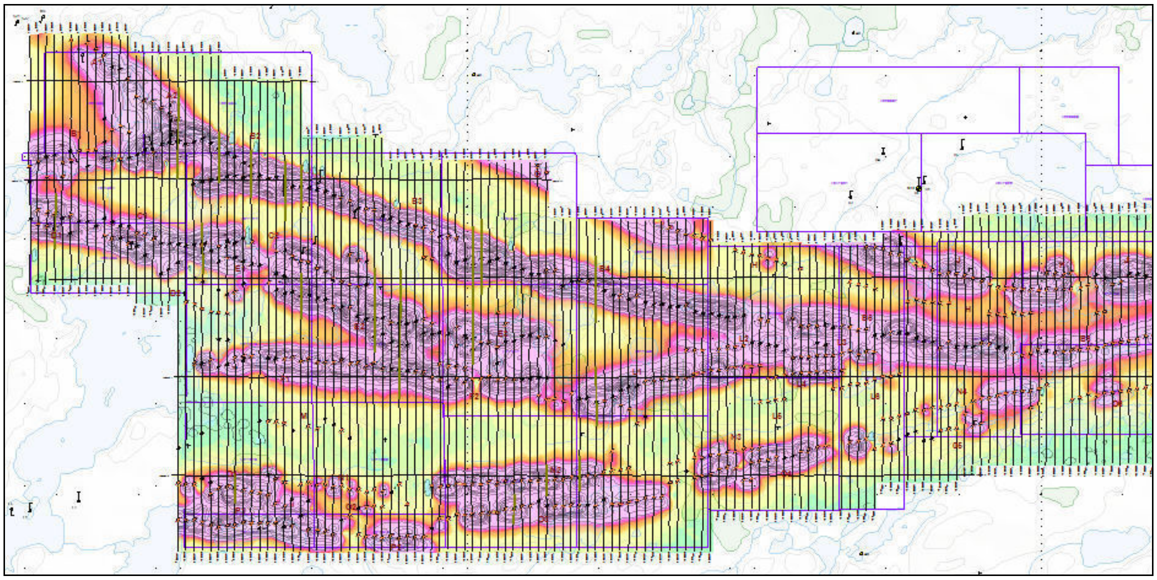


Figure 3. VTEM Z component B field channel 26 amplitude

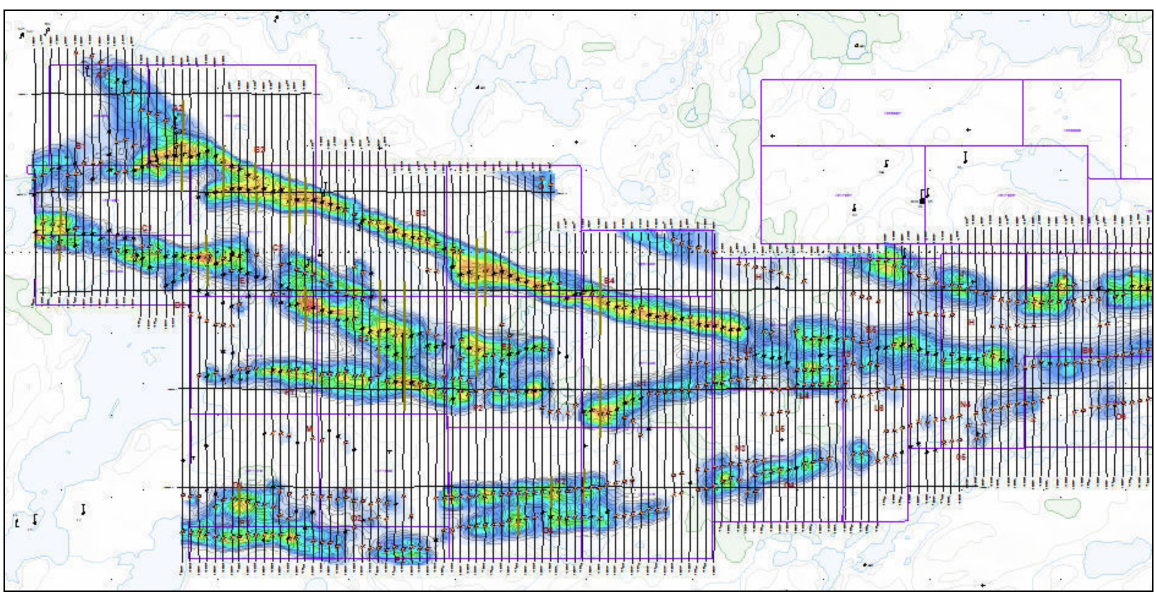


Figure 4. VTEM Z component B field time constant

In other surveys, the VTEM Z component B field channel 26 (1.953 msec) amplitude (BFz26) has been found useful as a simple measure of overall EM anomaly amplitude, clarity and quality. Very high BF26 usually means strong, shallow and flat topped or multiple – a relatively easy drill target. Very low BF26 means, weak, small or at great depth – a difficult drill target. BF26 should have been added to EM anomaly centre annotations. Maps of the B field time constant (TAUbf) were not provided by Geotech. The B field conductance estimate is a simple multiple of the time constant.

The following 9 columns have been added to the original VTEM database.

- Anoms : a number at the EM anomaly centres ('1' at the peak of a flat sheet type response, '2' at the central low of a double peak response – steeply dipping sheet, '3' at the down dip peak – steeply dipping sheet and '4' at the up dip peak - steeply dipping sheet)
- AnConBF, AnConSF : B field and dB/dt conductance estimates at the EM anomaly centre
- TAUsf, TAUbf : dB/dt and B field time constants
- NchanSF, NchanBF : channel number (≤33) of the last of the 4 channels used to calculate time constants
- BFz26 : Z component, B field channel 26 amplitude
- Mag3_1vf : first vertical derivative calculated from the mag3 channel

2. Background

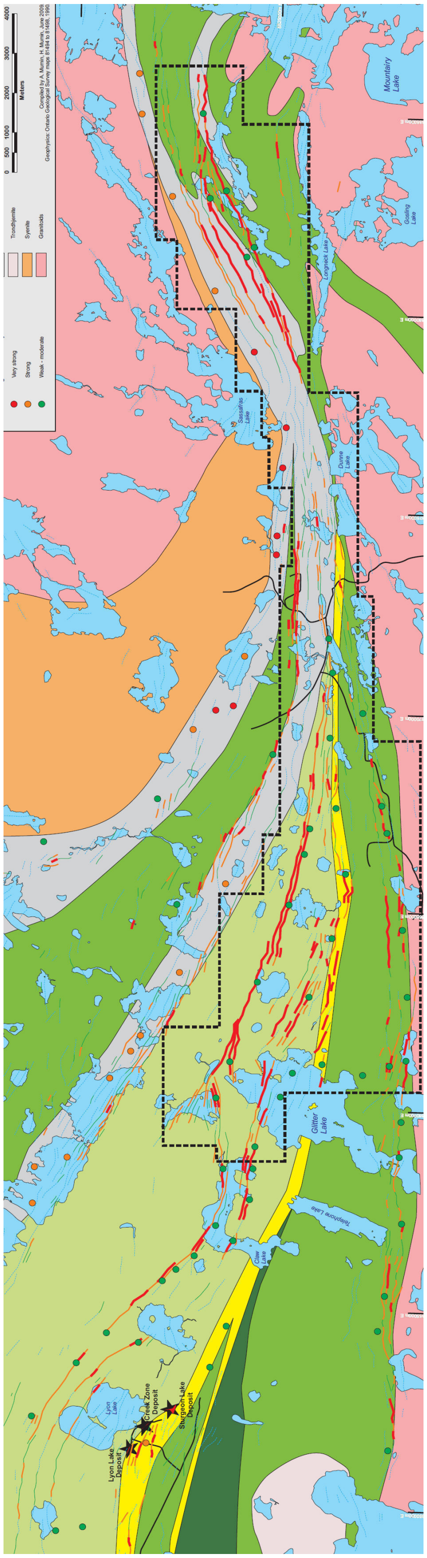
Reading from excaliburresources.com

> Excalibur Resources began staking the Sturgeon Lake property after recognizing that the majority of significant geophysical conductors identified in the Sturgeon Lake camp in a 1990s government survey are located on the property being staked and that the area was never thoroughly explored. Past drilling is minimal to non existent over most of the property. The Company has determined from historical data that surveys undertaken on the west side of the property confirm that identified geophysical conductors are sulphide rich, including the presence of massive sulphide lenses. The Excalibur property contains numerous extensive zones of multiple sub-parallel and stacked sulphide-bearing conductors that cumulatively exceed 100 km of strike length.
>
> In addition, the identified geophysical conductors are located along strike of six mined VMS (Volcanogenic Massive Sulphide) deposits in this mineral belt. The most notable former mines in the area included operations containing high-grade zinc-copper-silver with associated lead and gold. The well-known Mattabi, Lyon Lake and Sturgeon Lake mines operated in proximity and along strike of the Company's current property location. Due to a cyclical downturn in metal prices, the mines terminated production in the 1980's and early 1990's.
>
> VTEM will be used to isolate zones of maximum sulphide accumulation along an approximately 27 kilometre belt within the property. The best VTEM targets will be followed up with detailed ground geological work and state-of-the-art geochemical surveys. Excalibur will review the results of exploration and drill the optimum targets.

Part of the Sturgeon Lake Geology and Geophysics Compilation Map from Excalibur and the 1:50,000 compilation of GDS1033 are shown in figure 5. The former shows the Sturgeon Lake / Creek Zone / Lyon Lake VMS deposits on the north side of a rhyolite unit that continues into the Excalibur claim block through the middle of Glitter Lake. If as shown, it would include VTEM conductors F and L.

From the regional geophysics

- the Sturgeon Lake, Cree Zone and Lyon Lake Zone VMS deposits are on the northeast rim of a distinct 500x1000m, 2000 nT magnetic high. They are not associated with what EM anomaly centres would suggest is a formational conductor.
- the Swamp Lake copper occurrence and the Claw Lake copper/gold prospect 4 to 5 km to the south southeast may be on regional geophysical strike with the Sturgeon Lake / Creek Zone / Lyon Lake deposits. But the geophysical features that define this strike are losing strength. They fade out completely 3 km southeast of Claw Lake.



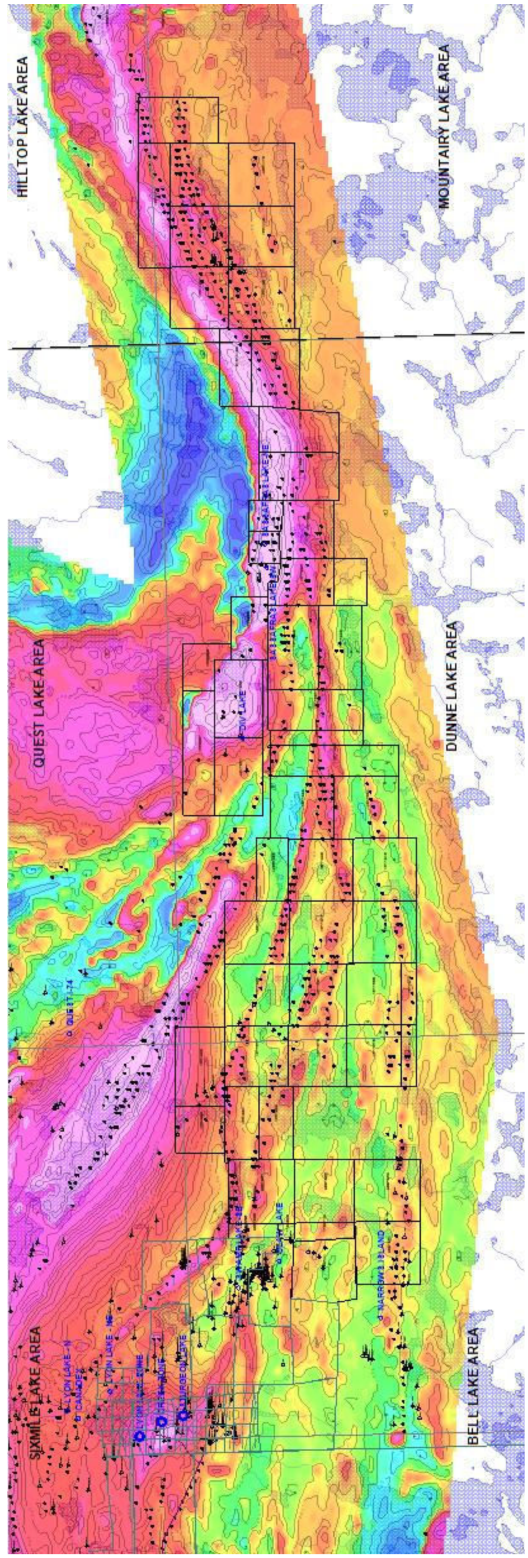


Figure 5. Geological/geophysical compilation from Excalibur (left) and 1:50,000 compilation based on the 1990 Aerodat HEM survey (right)

- the regional geophysical features that connect Sturgeon Lake / Creek Zone / Lyon Lake to Swamp Lake / Claw Lake cannot be traced into the Glitter Lake Project area. Other possibilities are that this horizon re-establishes itself in the Excalibur claim block in the area of conductor F or conductors C,D.
- the Lyon Lake - N Au,Cu,Zn occurrence and possibly the Canadex Cu,Zn,Au,Ag occurrence are on a regional geophysical feature that connects with the main formational conductor running through the north part of the Glitter Lake Project area (conductor B). There is a cluster of 10 Mattagami Lake Mines drill holes on this trend half way between Lyon Lake – N and the Excalibur claim block. Reading from the MDI for the Lyon Lake – N occurrence -

  > In 1981, Mattagami Lake Exploration carried out a diamond drilling program immediately north of Lyon Lake in the Sturgeon Lake base metal camp. The property was known as the Canadex option. Three holes, C-81-1 to C-81-3, totalling 1551 ft were drilled in February, 1981. Drill hole C-81-2 gave assays up to 0.17 ounce gold per ton over 0.95 m. DDH C-81-3, located 190 m to the south, assayed 0.22 % copper and 0.26 % zinc over 0.3 m.
  >
  > The area is underlain by andesite, dacite and rhyolitic breccia, agglomerate and tuff with minor graphitic sediments. All three holes carried trace to minor contents of copper, zinc and lead in stringer to semi-massive sulphide mineralization.

  Reading from the MDI for the Canadex occurrence -

  > In the spring of 1970, Canadex Mines drilled four holes on three claims underlain by mafic to felsic metavolcanics interbedded with mafic to intermediate tuff. Low to trace amounts of copper, zinc, silver and lead were found. Several quartz veins were intersected but no assays were reported. In 1972 Conwest Exploration drilled 3 holes in the area of hole #3 of the 1970 program. Low (0.09-0.21%) zinc values were obtained in this program.
  >
  > In 1981, Mattagami Lake Exploration drilled three holes on three claims on the Canadex option. The second of the holes, C-81-2, intersected a breccia zone at 397 feet with 5% pyrrhotite and 1% pyrite over 3 feet in a sheared, tuffaceous andesite. This intersection assayed 0.17 ounce gold per ton and 0.13 ounce silver per ton with 0.64% lead and 0.03% copper. At 480 feet the drill core contained a 2 foot zone of semi-massive sulphides with minor copper and lead content. The remainder of the core consisted of rhyolite to dacite tuff, agglomerate and breccia.

- the Lyon Lake – NE zinc occurrence is on a regional geophysical feature that may connect with conductors C and D in the Excalibur claim block. From the MDI, Lyon Lake – NE is described as an inch wide vein of sphalerite grading 2.23% Zn in Mattagami Lake Mines ddh SL-23-70-4.
- there is a scatter of weak magnetic highs, EM anomaly centres and 26 drill holes that trends east/west across the bottom of the map area. This feature connects with conductors N, O and P in the Excalibur claim block. Drill holes are by New Territorial Uranium Mines (1970), Louvicourt Goldfield (1971), Noranda (1971) and Sturgeon Lake Mines (1978). The Narrows Island discretionary occurrence is a 1964 surface grab sample from a zone of higher radioactive assays.

As might be judged from the 200 or so drill holes west of Excalibur's claim block, the area was very active in the 1970s. Assessment files hold hundreds of reports on geology, geophysical and geochemical surveys and drilling.

3. Discussion

The Glitter Lake Project area is well populated with bands of strong EM conductors, many of which can be traced over the full width of the claim block. Most have coincident magnetic highs of intermediate amplitudes. Through the results of a regional 1990 Aerodat HEM/magnetic survey, many of these bands can be traced further west into an area of active exploration in the 1970s. Some can be traced back to the base/precious metal occurrences north of Lyon Lake.

Limited drilling by Mattagami Lake Mines, Amax Exploration and Newconex Canadian Exploration in the 1970s tested some of these conductor bands in the northwest part of Excalibur's claim block. All returned multiple zones of graphite with sulphides. Some included zones massive sulphides, usually pyrrhotite and pyrite, occasionally with minor amounts of chalcopyrite. Accumulations of base or precious metals in an amount that would encourage further work were not found.

For the most part, the conductor bands that populate the Glitter Lake Project area are classic formational conductors usually ascribed to graphite / barren iron sulphides. They offer little that might qualify as the classic airborne EM/magnetic expression of an VMS deposit in an Archean greenstone belt. An idealized VMS deposit is often represented in airborne EM/magnetic surveys by a small cluster of moderate to strong EM anomalies with an associated magnetic high of the same dimensions. This distinct EM/magnetic anomaly is not part of a long formational conductor. Higher EM and magnetic amplitudes add value. An irregular EM anomaly form may add value.

Base and/or precious metal deposits associated with or immediate neighbours to a formational conductor are possible but would probably go unnoticed in the airborne results if overpowered by the EM response to a shallow, wide band of multiple zones of graphite. Geochemistry may suggest areas along these formational conductors that warrant a second look.

Despite overbearing formational conductors, three features of possible exploration interest in the Glitter Lake Project area have been identified from the airborne results. Although not fully the classical EM/magnetic expression of many VMS deposits, they have some of the preferred characteristics.

The first and best target is conductor K in claim 4211358 in the northeast part of the area. K is 300 m long near-vertical thin sheet conductor (2240D to 2270D) with a coincident magnetic high to 150 nT (figure 6 left). The best EM anomaly of the 4 is 2250C. 2250C appears to represent a thick sheet conductor at 671175 e, 5524594 n with a steep dip (83°) to the south. Estimated depth is less than 10 m – the EM anomaly is very strong (BF26 > 3.5). Conductance estimates are 57 S dB/dt and 83 S B field. In the Aerodat survey, K is a single EM anomaly with an associated magnetic high.

Some would consider drill testing conductor K without a ground EM/magnetic survey. In this case the drill would set up 50 m south of the conductor, that is at 671175 e, 5524544 n. Azimuth 0°. Inclination -45°. Length to 150 m. Others would do a small HLEM/magnetic survey to confirm and better define the target. The ground survey might consist of 4 lines of HLEM at 100 m (444 and 1777 Hz, 100 m coil separation) and 8 lines of magnetics at 50 m.

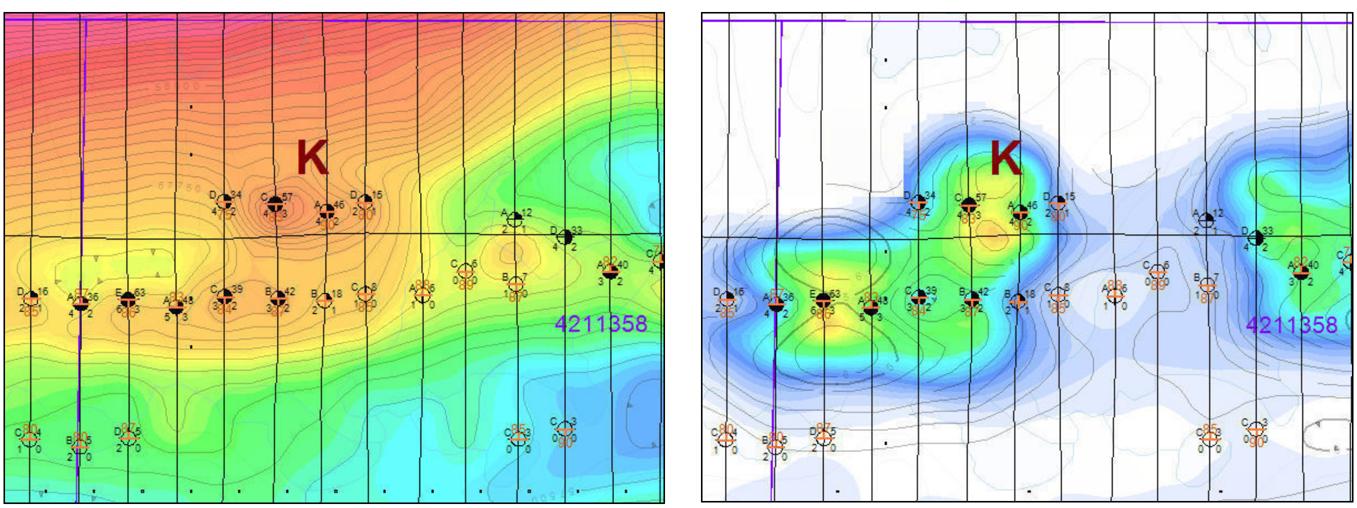


Figure 6. Conductor K. TMI left. B field time constant right

Another possible target is a distinct 1350 nT magnetic high on conductor O4 in claim 4211354. The magnetic anomaly is centered on 1900F (figure 7). The magnetic anomaly is 200 m long and is consistent with a shallow, vertical tabular body. 1900F suggests a thick sheet conductor at 667668 e, 5522315 n with a steep dip (84°) to the north. The high amplitude butterfly EM anomaly (BF26 > 1.4 on the down dip side) of a shallow, strong, near-vertical sheet type conductor is clear from figure 7 right. The depth estimate is less than 10 m. Conductance estimates are 39 S dB/dt and 130 S B field. A break in the conductor on line 1860 and a change on line 1920 suggest the target conductor may be only 300 m long – a good number for VMS.

If drill testing without ground confirmation, the drill could be set up 50 m north of the conductor, that is at 667668 e, 5522365. Azimuth 180°. Dip -45°. Length to 150 m.

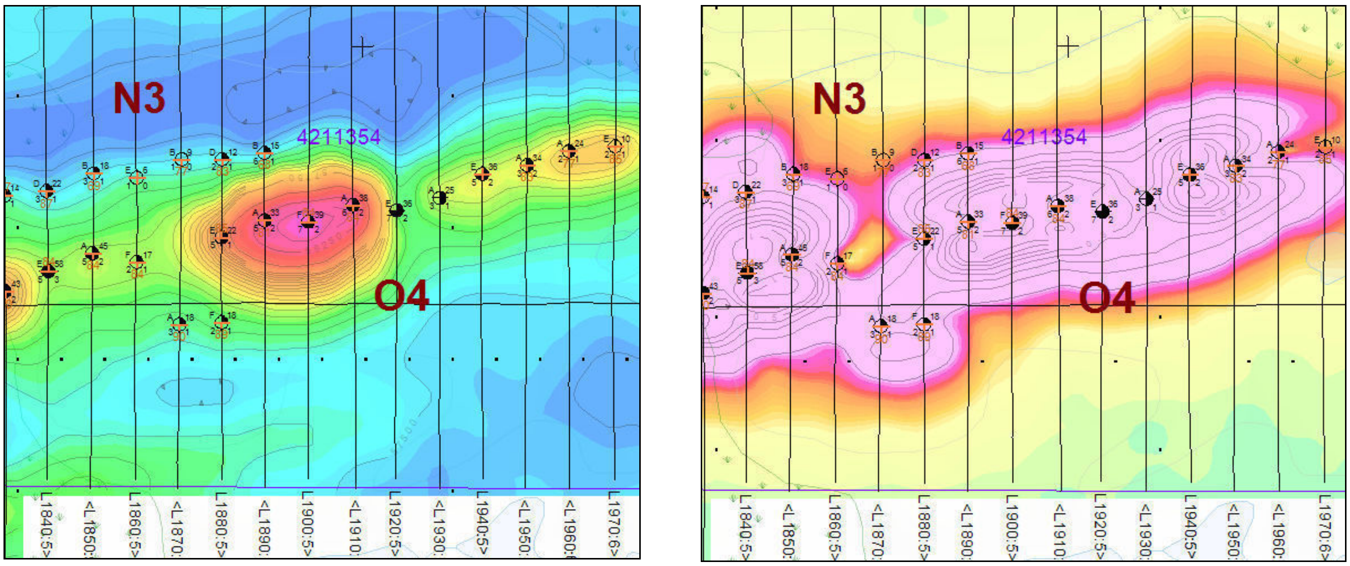


Figure 7. Conductor O4. TMI left. B field channel 26 amplitude (BF26) right

There is a lake sediment gold anomaly 70 m south of 1280A on conductor P1 (figure 8). The gold anomaly is from sample 4406 of MRD104 (appendix 2). The INAA assay of 4 ppb is only marginally anomalous. The fire assay value of 1.64 ppb is not anomalous. The importance of this lake sediment gold anomaly and other regional lake sediment geochemical results from MRD104 in the Glitter Lake Project area could be checked by someone more familiar with minerals exploration geochemistry.

1280A suggests a thick sheet conductor at 661470 e, 5521565 n with a steep dip to the south (76°). Depth from simple models is less than 10 m (BF26 > 2.28 over the down dip side). The dB/dt conductance estimate is 54 S. The peak of a 300 nT magnetic high is 25 m south of the leading edge of the conductor.

1280A is under a small lake and 189 m north or 104 m south of the lake shores (figure 8 right). 1820A would have to be drill tested in the winter. Alternatively, it might be possible to test this target from the north shore by aiming at the neighbouring EM anomaly 1290G that is only 37 m south of the lake's north shore. Lake boundaries on VTEM lines 1280 and 1290 should be checked with a GPS receiver. 1290G represents a shallow, vertical, thick sheet conductor at 661572 e, 5521558 n. To test 1290G, the drill could be set up 50 m north of the target, that is at 661572 e, 5521608 n. Azimuth 180°. Dip -45°. Length to 150 m.

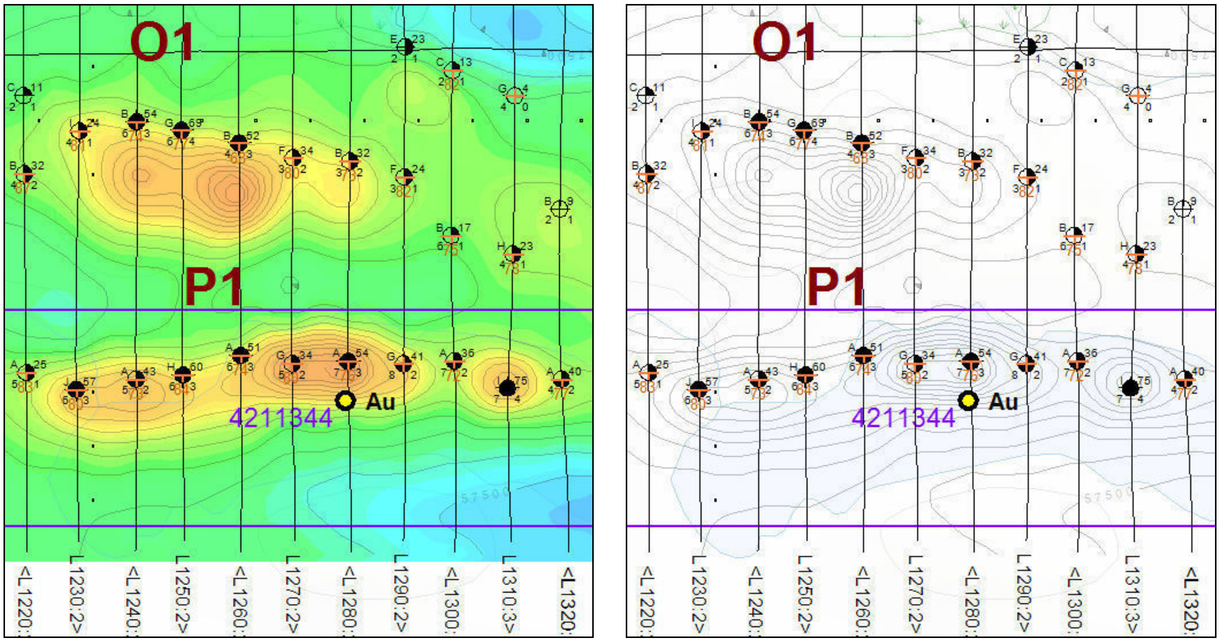


Figure 8. Conductor P1. TMI left. Topography right

4. Conclusions

The VTEM results from the Glitter Lake Project have been reviewed. The review has included a regional compilation based on a 1990 Aerodat HEM/magnetic survey, drill holes from the Ontario Drill Hole Database, mineral deposits from the Mineral Deposit Inventory and anomalous gold values from a regional lake sediment geochemical survey.

The area is well populated with bands of formational conductors that appear to be largely made up of strong, shallow, steeply dipping zones of graphite and iron sulphides. These are powerful EM features that could overpower responses from any nearby VMS deposits. Geochemistry may suggest segments of these formational conductors that are worth a second look.

Three targets are suggested. Two are VMS targets based on the airborne geophysics alone. They are centered on EM anomalies 2250C (conductor K) and 1900F (conductor O4). One is a possible VMS/precious metal target centered on EM anomaly 1280A (conductor P1) defined by a lake sediment gold anomaly.

Ian Johnson, Ph.D., P.Eng.
July 25, 2010

Blaine Webster, B.Sc., P. Geo.

Appendix 1 - VTEM Survey

Helicopter EM/magnetic surveys (VTEM) were flown in November, 2009 over the Glitter Lake Project and Grid Iron Lake Project area (Geotech ref. 9053). Total coverage was 1069 km on north/south lines at 100 m. The survey area is centered centred 185 km northwest of Thunder Bay, Ontario. The survey area is largely within the Bell Lake, Dunne Lake and Mountairy Lake administrative areas. The survey covers 39 claims registered to Excalibur Resources Ltd.

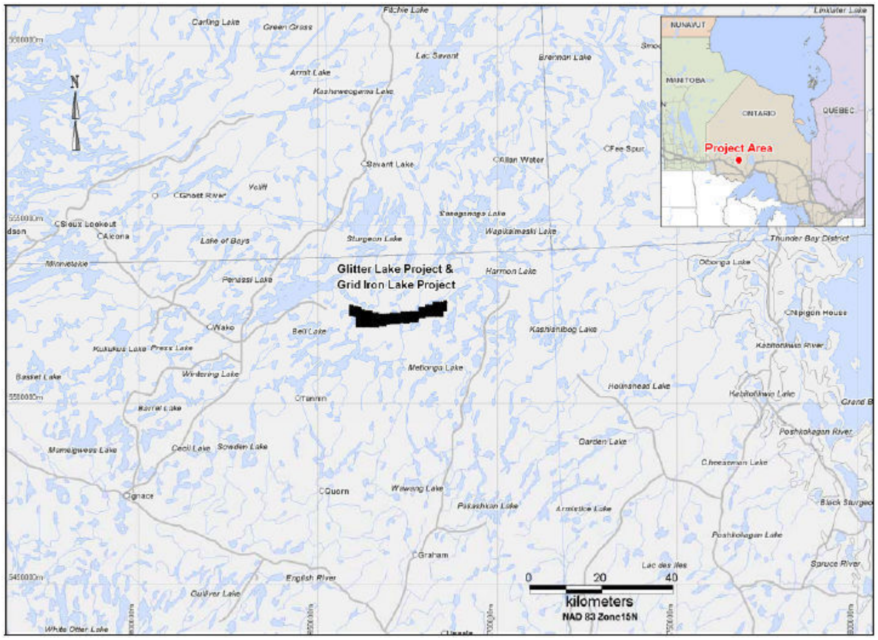


Figure 1. VTEM survey area (from appendix A of the Geotech report)

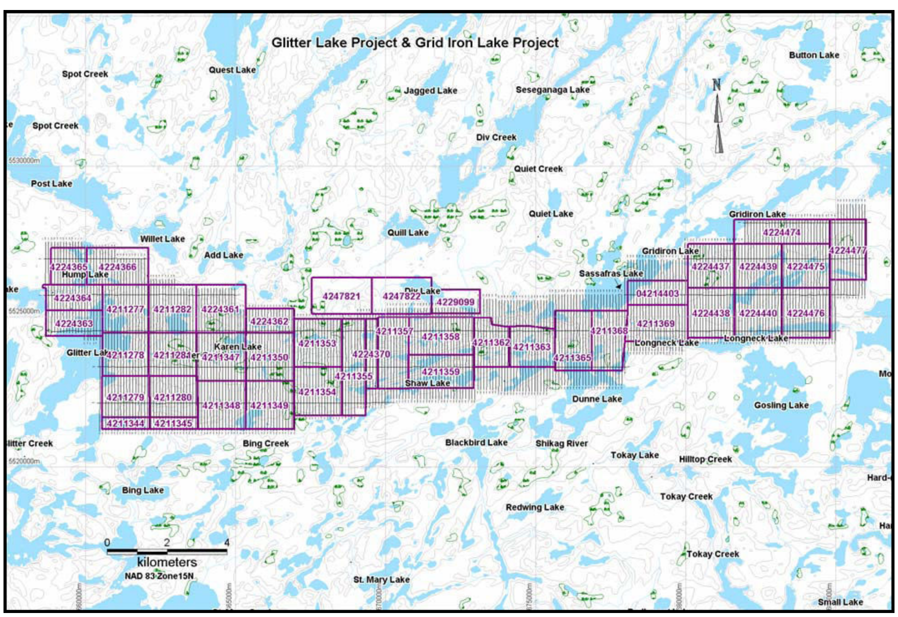


Figure 2. Flight path and claim fabric (from appendix A of the Geotech report)

The VTEM time domain EM system is carried 30 m below the helicopter. The total field magnetometer is carried 13 m below the helicopter. The average EM bird terrain clearance was 43 m. Range was 30 to 64 m. The average magnetometer sensor terrain clearance was 61 m.

The VTEM system measures vertical (Z) component and horizontal along track (X) secondary field decays over 24 gates centered .120 to 6.578 msec after shut off the transmitter current pulse (30 Hz base frequency). Both the time rate of change (dB/dt) and integrated quasi B field decays are measured in each component direction for a total of 4 decays. Sampling is every 0.1 second or 2.2 m at a nominal ground speed of 80 kph. Ancillary systems include differential GPS and a radar altimeter, both sampling at 0.2 seconds.

Vertical component VTEM anomalies over thin and thick sheet conductors are shown in figure 3 taken from appendix E of the Geotech report. X component field VTEM anomalies are cross-overs at the leading edge of the conductor. Depth of exploration in ideal cases is at least 100 m (vertical thin sheet conductor) to 200 m (horizontal thin sheet or flat topped conductor).

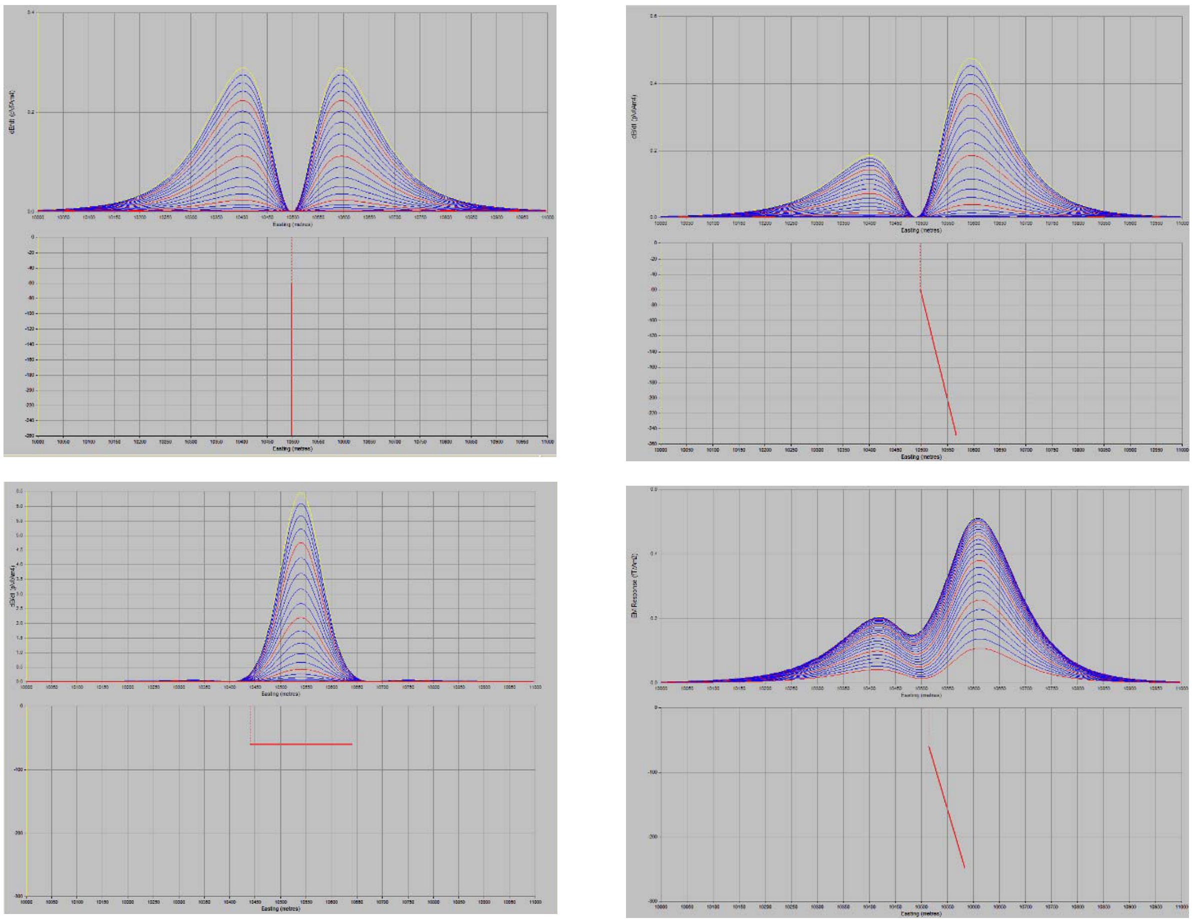


Figure 3. VTEM vertical field EM anomaly forms from a vertical thin sheet conductor (upper left), a dipping thin sheet conductor (upper right), a horizontal thin sheet conductor (lower left) and a dipping thick sheet conductor (lower right).

A vertical thin sheet conductor (upper left) produces a double peak anomaly with the central low over the conductor. The central EM low goes to zero. Any thickness means an elevated central low. Any dip from vertical gives a higher EM peak on the down dip side. The smaller peak on the up dip side is normally lost when the dip is less than 60°. Depth can be inferred from the separation of the two peaks. Dip within ± 30° of vertical can be inferred from the relative strength of the two peaks. A horizontal conductor produces a simple positive EM peak (lower left). The same type of EM anomaly is seen over flat topped or shallow to intermediate dipping conductors. A steeply dipping thick sheet conductor (lower right) produces a combination response.

1. Presentation

The Geotech report is dated January, 2010 and is titled 'Report on a helicopter-borne versatile time domain electromagnetic (VTEM) geophysical survey, Glitter Lake Project and Grid Iron Lake Project, Ignace, Ontario' for Excalibur Resources Ltd., Project 9053. The results were shown on 2 map sheets / 8 map types at 1:10,000. All maps show flight path, EM anomaly centres, topography, claim fabric from late 2009 and UTM coordinates (NAD83, Z15N). Map types are

- total magnetic intensity colour grid + line contours
- calculated vertical magnetic gradient colour grid
- second horizontal derivative colour grid + dB/dt (Z component) line contours
- B field Z component channel 30 at 3.911 msec colour grid
- dB/dt Z component time constant colour grid
- dB/dt, Z component offset profiles
- dB/dt, X component offset profiles
- B field Z component offset profiles

Digital products included the report (*.pdf), maps (Geosoft *.map and *.pdf), grids (Geosoft *.grd) and databases (Geosoft *.gdb).

2. Magnetics

The average total magnetic intensity is 58,267 nT. Range is 56,802 to 94,427 nT. For this place (90.600° west, 49.842°north, 500 m amsl) and time (November 15, 2009), the reference geomagnetic field is defined by amplitude 57,775 nT, inclination 75.5° and declination 2.6° west of north. Total magnetic intensity contours for the west map sheet are shown in figure 4.

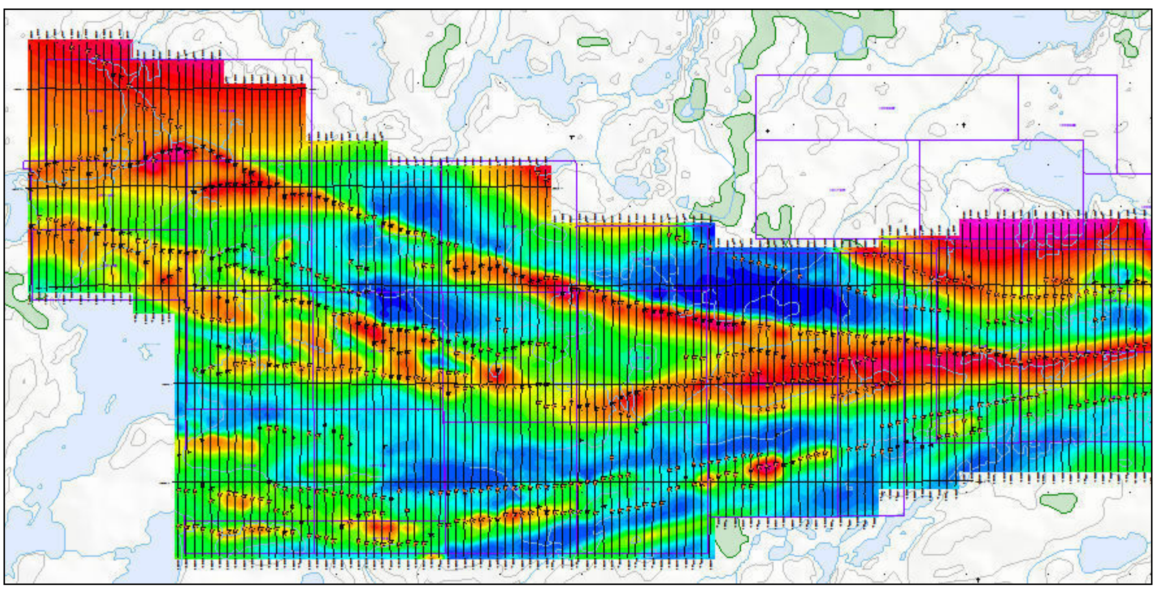


Figure 4. Magnetic colour grid, west map sheet

3. VTEM EM Anomalies

EM anomalies were picked at either

1. the central low of a double peak response characteristic of a steeply dipping thin / thick sheet conductors or
2. the peak of a simple positive response characteristic of horizontal to shallow dipping thin sheet conductors, flat topped conductors and any number of more complicated geometries involving any number of conductors.

A total of 1240 EM anomalies were picked. 836 (67%) in this survey were judged to be double peaks representing steeply dipping thin/thick sheet conductors. The average dip estimate is 82.3°. Range is 54° to 90°.

Conductance estimates are taken from EM decay time constants at the EM peak. The time constant of any VTEM decay is taken from the last 4 channels above a noise threshold. As overall amplitudes increase, the time constant is calculated from later times in the decay. Dummy values are shown if amplitudes are so low that 4 channels above a noise threshold are unavailable. Noise thresholds for many VTEM surveys are 0.015 pV/Am^4 (dB/dt) and 0.035 pV*msec/Am^4 (B). The conductance is a multiple of the time constant. This multiple is around 18.5 and has been taken from forward modeling over a range of conductor geometries and conductance values. Average, minimum and maximum values of the two Z component time constants in msec and the two Z component conductance estimates in Siemens are listed in table 1.

EM anomaly centers are plotted as symbols graded by the B field conductance estimate (figure 5). Annotations include a letter identifier, dB/dt conductance estimate and the dB/dt and B field (Z component) time constants. Dip direction and value are shown where the VTEM EM anomaly supports a steeply dipping thin/thick sheet conductor.

Annotation	Average	Minimum	Maximum
TauSF	1.56	0.06	4.59
CondSF	29.0	1.0	85.4
TauBF	3.63	-	8.44
CondBF	67.5	-	156.9

Table 1. EM anomaly statistics

The easiest follow up and drill targets are isolated high amplitude EM anomalies that represent a steeply dipping thin sheet conductor. Confidence in conductor location, dip, depth and conductance is highest for these anomalies. The most difficult follow up targets are low amplitude EM anomalies that are simple positive peaks – these give only a general indication of location and little idea on conductor form or depth.

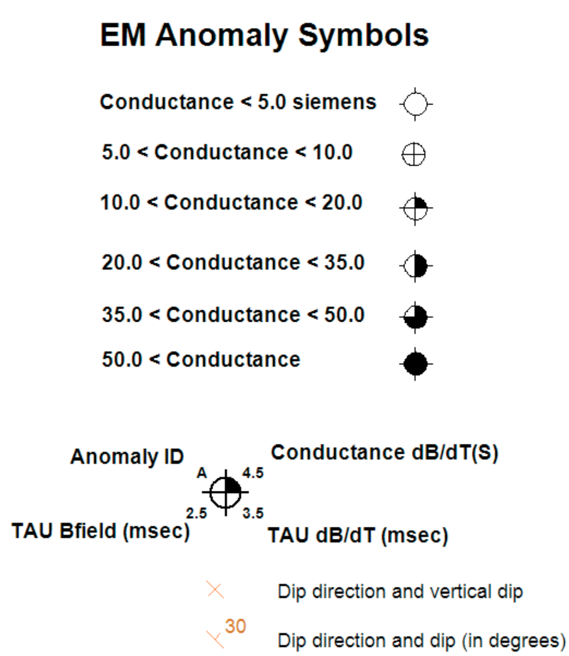


Figure 5. VTEM EM anomaly symbols

<u>Notes</u>

1. EM anomaly centers do not show EM amplitude, an important overall measure of conductor strength and depth. It would be better if Geotech had annotated EM anomalies with the Z component B field channel 26 (1.953 msec) amplitude.

2. In July, 2010, Geotech enlarged the VTEM database to include the following columns

   Anoms : EM anomaly picks.
   AnConSF : dB/dt conductance estimates of the EM anomaly
   AnConBF : B field conductance estimate of the EM anomaly
   TauSF : dB/dt time constant
   TauBF : B field time constant
   NchanSF : dB/dt channel number
   NchanBF : B field channel number

The 'Anoms' column shows

'1' at the peak of a flat sheet type response
'2' at the central low of a double peak response – steeply dipping thin/thick sheet type
'3' at the down dip peak – steeply dipping thin/thck sheet type
'4' at the up dip peak - steeply dipping thin/thick sheet type

Channel number is that of the last of the 4 channels used to calculate time constant. Range is 13 to 33. Dummy values are shown where amplitudes were too low to calculate a time constant.

When looking at VTEM profiles with Geosoft Viewer, the Anoms channel can be displayed by activating Profile – Show Symbols. The time constant and Nchan database channels are continuous and can be displayed in the normal way.

3.. Of the 96 channels of EM data, the Z component B field channel 26 at 1.953 msec is the preferred monitor of overall EM amplitude. BF26 is particularly effective in areas of thick conductive overburden. For shallow, very strong, flat topped conductors of sufficient area, BF26 can be over 5. Anything with the peak BF26 over 0.25 is usually considered shallow, strong and within the range of HLEM. A peak BF26 of 0.01 or less usually means a weak or small or very deep conductor and a difficult drill target.

Geotech had chosen to show BF30 at 3.911 msec in a colour grid. BF26 has been extracted from the B field, Z component array channel in the database and added to the database as a separate channel. A new map showing BF26 has been prepared. The average BF26 is 0.24. Range is 0 to 16.66. This is a high average and implies many shallow, strong, wide conductors.

4. Resistivity Depth Images

Geotech provided resistivity depth images for lines 1000 to 1730 (74 lines) and lines 2400 to 2550 (16 lines). These make up 24% of the survey total of 374 lines. The RDI image for line 1030 is shown in figure 6. The red line in the upper panel is the calculated vertical magnetic gradient. Idealized conductors are sketched on some RDI images.

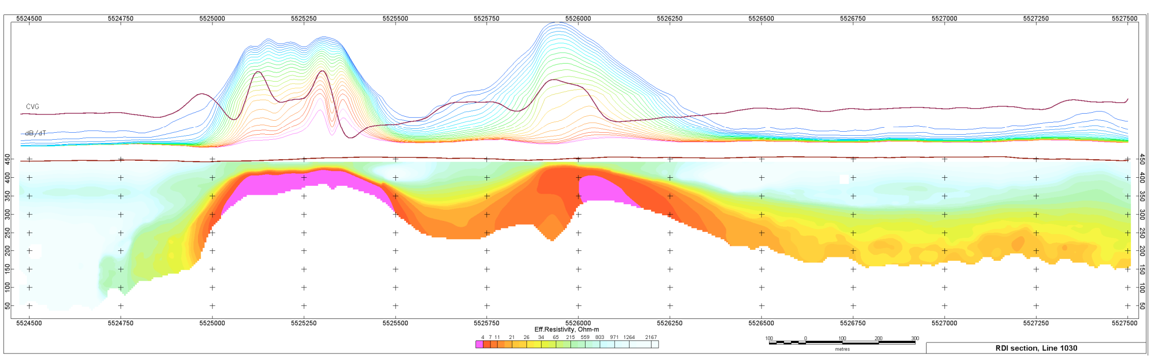


Figure 6. Resistivity depth image for line 1030

5. Maxwell EMIT Inversions

Geotech inverted the VTEM results on 23 line segments on 19 of the 374 lines using the program Maxwell from EMIT (ElectroMagnetic Imaging Technology). Results for part of line 1030 are shown in figures 7 and 8.

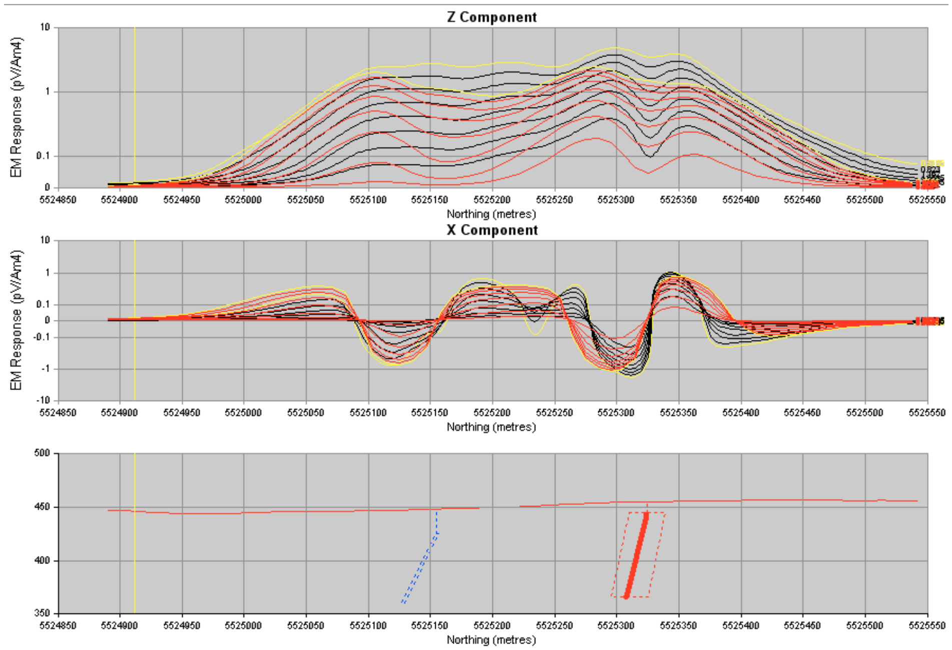


Figure 7. Inversion results for part of line 1030

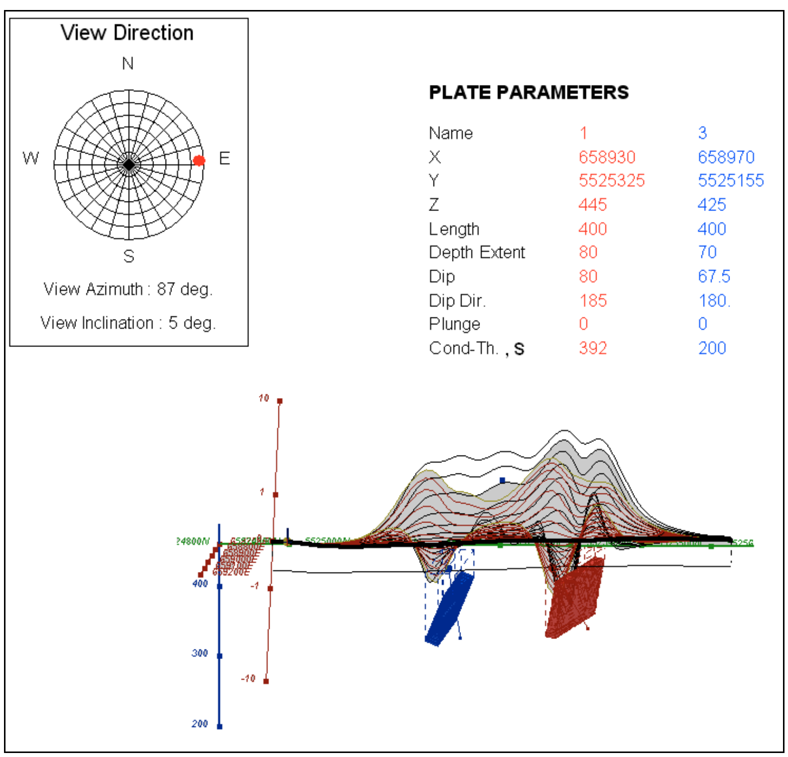


Figure 8. Inversion results for part of line 1030

X, Y and Z are the position of the centre top of the conductor. Z is elevation above mean sea level. Geoetch translates these to depths of 9 m (red target) and 22 m (blue target). VTEM lines and the UTM northing limits of the segments subject to inversion are listed in table 1.

Line	UTM n	UTM n
1030	5524900	5525550
1180	5525750	5526850
1210	5524600	5525200
1230	5525700	5526300
1250	5521800	5522150
1270	5525520	5526080
1310A	5525250	5525950
1310I	5521250	5521950
1330A	5525350	5525900
1330C	5524050	5524580
1420	5523650	5524650
1450bdc	5523080	5524630
1530A	5524350	5525250
1540de	5523500	5524250
1540F	5524250	5525150
1550A	5524350	5525250
1590	5521550	5521900
1630f	5521900	5522250
1670c	5521950	5522350
1690A	5524000	5524800
1690B	5522750	5523450
2450A	5523100	5523650
2510	5524250	5524700

Table 1. VTEM line segments for Maxwell inversion/modelling

Notes

1. Inversion on any line segment starts with vertical thin sheet conductors at the EM anomaly picks. The program then makes adjustments in conductor location (northing, easting and depth of the centre top), dip, depth extent and conductance in order to find a best fit of the theoretical to measured dB/dt Z and X profiles. Strike length and strike direction are based on the conductor in plan and are fixed. Plunge is fixed at 0°.
2. Inverted plate parameters are generally not those that might be taken from the EM anomaly centres. They should be close for isolated, well defined double peak EM anomalies due to steeply dipping thin sheet conductors.
3. Model conductors in figure 8 appear to be 'thick' plates. Plate thickness is not listed in the model parameters and conductivity and thickness cannot be separated from their product. Comparison of conductance estimates from different models is not possible without knowing plate thickness.

Appendix 2 - Drill Holes, Mineral Deposits, Lake Sediment Geochemistry, Regional Gravity and the Aerodat HEM Survey

Diamond drill holes, mineral deposits, lake sediment geochemistry, the regional gravity and the 1990 Aerodat HEM survey are described below. All are from databases and maps available for download from Provincial or Federal sources. Sources are

Ontario Drill Hole Database – MNDMF Data Set 13
OGS Mineral Deposit Inventory Version 2 (MDI2)
OGS Lake Sediment Geochemistry, Miscellaneous Release – Data 104 (MRD104)
National Gravity Grid, Natural Resources Canada, Geoscience Data Repository
OGS Geophysical Data Set 1033 (GDS1033)

The area of interest is the Geotech's west map sheet from the Glitter Lake / Grid Iron Lake VTEM survey. The west map sheet is from 658183 to 672382 east, 5520441 to 5529641 north (NAD83).

1. Diamond Drilling

Drill holes within the area of the west map sheet have been extracted from the Ontario Drill Hole Database and are listed in table 1. Holes in red are within the Excalibur claim block. JVXID is used for presentation on JVX maps. Coordinates are NAD83, Z15N. Ovb. is the casing length in metres. Drill hole lengths are in metres.

Company	year	ID	JVX ID	MNDM#	UTM e	UTM n	az.	dip	length	ovb.	AFRI#
A MOSHER	1972	H-5	AM5	106221	663455	5529559	60	-45	78.4	1.2	52G15NE0035
CANADIAN JAVELIN	1970	JA 1	CJ1	106295	658523	5527656	220	-55	29.0	2.4	52G15NW0151
CANADIAN JAVELIN	1970	JA 2	CJ2	106296	658518	5527656	220	-55	93.6	12.8	52G15NW0151
BISON	1970	1	M1	106297	660193	5528572	220	-45	161.3	1.2	52G15NW0179
BISON	1970	2	M2	106298	659982	5528779	220	-45	155.8	27.4	52G15NW0179
BISON	1970	3	M3	106390	660664	5528972	220	-45	182.9	1.8	52G15NW0179
BISON	1970	4	M4	106391	661633	5527870	220	-55	106.7	7.6	52G15NW0179
BISON	1970	5	M5	106392	659311	5527248	180	-55	166.8	3.1	52G15NW0179
BISON	1970	6	M6	106393	658833	5527713	220	-55	137.8	3.7	52G15NW0179
KENNCO	1970	D-1	KD1	106303	662070	5529188	180	-45	124.7	7.3	52G15NE0034
KENNCO	1970	A-1	KA1	106468	661104	5529637	220	-45	131.7	13.1	52G15NW9270
AMAX	1972	72-1	A1	106369	662192	5525695	10	-45	212.5	3.4	52G15SE0007
AMAX	1972	2	A2	106370	662638	5525342	190	-45	113.4	6.7	52G15SE0007
AMAX	1972	3	A3	106371	662143	5524958	10	-45	106.7	22.6	52G15SE0007
AMAX	1972	4	A4	106372	661994	5524834	10	-45	107.3	12.2	52G15SE0007
AMAX	1972	5	A5	106373	661766	5524565	10	-45	92.4	10.4	52G15SE0007
HEMLO GOLD	1992	92-1	H1	106374	669576	5525686	0	-45	121.0	2.1	52G15SE0002
HEMLO GOLD	1992	92-2	H2	106375	669293	5524940	0	-45	142.3	6.7	52G15SE0002
HEMLO GOLD	1992	92-3	H3	106376	668681	5525517	0	-45	91.7	7.6	52G15SE0002
HEMLO GOLD	1992	92-4	H4	106377	669074	5526049	0	-45	96.6	6.7	52G15SE0002
HEMLO GOLD	1992	92-5	H5	106378	670039	5526106	0	-45	150.0	1.8	52G15SE0002
HEMLO GOLD	1992	92-6	H6	106379	669509	5525622	0	-45	178.3	6.7	52G15SE0002
LOUVICOURT GOLDF	1971	L-1	L1	106476	658671	5521694	0	-45	136.9	1.8	52G15SW0015
LOUVICOURT GOLDF	1971	L-2	L2	106477	659259	5521811	0	-45	152.4	8.8	52G15SW0015
LOUVICOURT GOLDF	1971	L-6	L6	106481	658448	5521719	180	-45	106.7	11.3	52G15SW0015
MATTAGAMI L MINES	1970	SL-51-70-5	ML5	106519	659160	5526086	150	-45	212.8	9.2	52G15SW0020
MATTAGAMI L MINES	1972	SL-P-72-1	ML1	106520	660159	5526109	345	-45	209.8	6.4	52G15SW0020
MATTAGAMI L MINES	1972	SL-P-72-2	ML2	106521	660395	5526282	180	-50	185.1	16.8	52G15SW0020
MATTAGAMI L MINES	1972	SL-P-72-3	ML3	106522	660395	5526457	180	-50	214.3	7.9	52G15SW0020
MATTAGAMI L MINES	1972	SL-P-72-4	ML4	106523	660380	5526634	180	-50	200.3	14.0	52G15SW0020
MATTAGAMI L MINES	1972	SL-51-72-6	ML6	106524	658194	5525906	180	-50	214.3	2.7	52G15SW0020
NORANDA	1978	PL-1-78	NO1	106652	658810	5529049	215	-50	90.9	14.9	52G15NW0040
NEWCONEX	1970	1-A	N1		660811	5524954	200	-50	207.3	11.6	52G15SW0017
NEWCONEX	1970	2	N2		661077	5524988	200	-45	129.5	5.8	52G15SW0017
NEWCONEX	1970	3	N3		659915	5524958	200	-45	106.1	6.4	52G15SW0017
NEWCONEX	1970	4-A	N4	106665	661267	5523525	20	-60	66.8	9.8	52G15SW0016

Table 1. Drill holes

The Drill Hole Database contains information on over 126,000 percussion, overburden, sonic and diamond drill holes. Data include location, company name, company hole number, hole orientation, hole depth, and overburden depth if applicable. The presence of assay results within cutoff values for gold, silver, copper, zinc, lead, nickel and platinum group elements is noted. Source assessment file numbers are captured for cross referencing with the assessment file database (AFRI).

All but Newconex holes 1-A, 2 and 3 are listed in the Ontario Drill Hole Database. These 3 drill holes have been taken from sketch maps that were included with the drilling report. All Mattagami Lake hole have been relocated based on sketch maps with the drilling report.

UTM coordinates in blue have been taken from sketch maps included with drilling reports. These coordinates and those as shown in the ODHDB are listed in table 2. The average distance between drill holes from these two sources is 416 m. Range is 21 to 1221 m.

Company	MNDM#	UTM e	UTM n	UTM e	UTM n	e	n	d
Mattagami L	106519	659160	5526086	658234	5525823	926	263	963
	106520	660159	5526109	660178	5526000	-19	9	21
	106521	660395	5526282	660541	5526362	-146	-80	166
	106522	660395	5526457	660415	5526570	-20	-113	115
	106523	660380	5526634	660313	5526772	67	-138	153
	106524	658194	5525906	659387	5526165	-1193	-259	1221
Newconex	106665	661267	5523525	661070	5523334	197	191	274

Table 2. UTM coordinates from sketch maps and from ODHDB (NAD83)

Drill hole collars are not typically surveyed in - the accuracy as to the location of a drill hole is dependant upon the source document that was submitted to the MNDM. Each original source has a perceived level of accuracy and this is registered as a field within the database. The levels of accuracy are as follows: holes are centered on a mining claim as this is the only information available; hole location derived from sketch maps of mining claim; location derived from digitizing off a 1:50,000 plot of the 1:250,000 Federal Energy Mines and Resources (EMR) maps; location derived from a detailed company map or the location information for the drill hole is from the submitted Report of Work.

Reading from the assessment files -

CANADIAN JAVELIN, 1970, JA 1 (CJ1) and JA 2 (CJ2), 52G15NW0151

JA1 was in gabbro throughout – no sulphides. Re-checked ground EM and found no crossover. JA-2 in andesites. Minor disseminated Py/Po with flecks of chalcopyrite.

BISON PETROLEUM AND MINERALS, 1970, 5 (M5) and 6 (M6), 52G15NW0179

Conductors were identified following airborne EM/mag (McPhar F-400 at 200 m line spacing) and ground EM/mag (Crone Shootback and Ronka EM-16 VLF). M5 encountered slaty carbonaceous graphitic zones and minor disseminated Py/Po. Assays did not indicate commercial quantities of Cu, Zn, Ni, Au or Ag. M6 encountered weak pyrite mineralization - nothing of commercial interest.

AMAX EXPLORATION, 1972, 72-1 (A1), 2 (A2), 3 (A3), 4 (A4) and 5 (A5), 52G15SE0007

A1 intersected numerous stringers and seams of massive Po/Py with traces of chalcopyrite in volcanics. This was followed by 50% sulphides in a contact zone and 2 to 3 m wide bands of graphitic argillite. A2 intersected massive Po/Py followed by graphitic slate. The drill log notes 'several highly conducting graphitic sections from 2" to 9" thick'. A3 intersected heavy Po and Py seams, massive Po/Py (up to 70%) and graphitic slate. A4 intersected Po stringers, heavy Po (average 25%) and graphitic sections. A5 intersected cherty sediments with heavy Po, minor Cp and trace ZnS followed by a highly pyrrhotized graphitic chert .

HEMLO GOLD, 1992, 92-2 (H2), 52G15SE0002

H2 tested an IP anomaly with coincident soil geochemistry and bedrock anomalies (5.52 g Au) 200 m south of the main Benderite showing. It returned 1.1 m of chlorite-carbonate schist with 2 to 3% Py/Po but no significant Au mineralization. Host rocks were mafic volcanics and minor mafic intrusives.

LOUVICOURT GOLDFIELDS, 1971, L-1 (L1), L-2 (L2) and L-6 (L6), 52G15SW0015

L1 intersected massive Po/Py followed by graphitic tuff with 5 to 10% Po/Py. L2 intersected seams and bands of massive Po/Py. L6 intersected graphitic chert with up to 5% sulphides and a 3' section of 70% sulphides. The drill log notes L6 was set to test an EM conductor. A sketch map suggests moving L1 100 m south and L6 100 m north of their Drill Hole Database locations.

MATTAGAMI LAKE MINES, 1970, SL-51-70-5 (ML5), 1972, SL-P-72-1 (ML1), SL-P-72-2 (ML2), SL-P-72-3 (ML3), SL-P-72-4 (ML4) and SL-51-72-6 (ML6), 52G15SW0020

ML5 intersected massive sulphides in volcanics (75% Py, 10% Po, 1-2% Cp) at 46 to 51 m. ML1 intersected massive sulphides from 71 to 74 m, followed by numerous bands of graphitic tuff to eoh at 191 m. ML2 intersected massive sulphides at 22 m and graphitic rhyolite with 5 – 10% sulphides. ML3 intersected many bands of graphitic tuff with varying amounts of sulphides down to 154 m. At one point, graphite is described as disseminated. ML4 intersected graphitic tuff in many bands with 5 to 10% pyrite from 48 to 156 m. ML6 intersected graphitic tuff with up to 10% sulphides in many bands from 29 to 211 m.

NEWCONEX, 1970, 1-A (N1), 2 (N2), 3 (N3) and 4-A (N4), 52G15SW0016 and 52G15SW0017

N1 intersected conductors at 64 to 72 m (massive sulphides with graphite), at 77 m (graphitic sulphide zone with 20% Py) and again at 158 m. The first is described as 'siliceous zone sulphides sheared into bands – partially brecciated cemented with sulphides'. The N2 log shows conductors at 15 to 20 m (graphitic chert with up to 15% sulphides), 20 to 25 m (15% sulphide stringers, very little graphite), at 30 m (seams of 15 to 20% sulphides, mostly pyrrhotite) and at 89 to 93 m (seams of 15%+ sulphides, mostly pyrrhotite). The N3 log shows a conductor from 80 to 90 m including a 3 m section of massive sulphides with minor chalcopyrite. The N4 log shows conductors (graphitic gneiss with up to 10% sulphides) from 42 to 53 m.

Citation

Ontario Geological Survey 2009. Ontario Drill Hole Database: Ontario Geological Survey

2. Mineral Deposits (Mines, Prospect and Occurrences)

The MNDMF Mineral Deposit Inventory Version 2 (MDI2) is a digital geoscience database providing an overview of mineral deposits within the province of Ontario. The full MDI full database contains information on some 19,300 metallic and industrial mineral deposits, as well as some building stone and aggregate sites. Each MDI record provides information on deposit name(s), location, status (e.g., occurrence, prospect, producer, past producer), commodities, character/classification, geological structure, lithology, minerals and mineral alteration, geochemistry, exploration history, and production and reserve data where available. Also included are notes on deposit visits and reference information to more detailed descriptions. There are some 200 commodity types including gold and base metals.

There is only one entry in the Mineral Deposit Inventory within the area of the west map sheet of the Glitter Lake / Grid Iron Lake Projects area. It is a gold prospect from drilling at 669510 e, 5525620 n (NAD83). This is the Benderite showing drill tested by Hemlo Gold Mines in 1992 (AFRI 52G15SE0002). This is in claim 4247821 currently registered to Nebu Resources. Reading from the exploration history –

> 1992 DDH INTERSECTIONS: ASSAYS UP TO 0.065 OPT AU (092-01) AND 0.062 OPT AU (092-06)1957: 7 holes drilled in the Div Lake area by N. A. Timmins Exploration Ltd.1990-91: Prospecting, trenching and sampling of a number of gossans in the Div Lake area by A. Benderite. 1991: Hemlo Gold optioned the property in 1991 and Norex Exploration did reconnaissance geological and prospecting surveys, griding, soil and humus geochemical surveys, trenching and rock geochemistry over the area.1992: Morrisette Drilling Ltd. drilled 6 holes totalling 780 m for Norex Exploration in the spring of 1992.1993: A. Benderite did stripping, trenching and prospecting of the area.

Citation

Ontario Geological Survey 2004. Mineral Deposit Inventory Version 2 (MDI2), October 2004 Release.

3. Lake Sediment Geochemistry

The area of interest is within the area of a 2000 OGS lake sediment geochemical survey. Results are available as MNDMF Miscellaneous Release – Data 194 (MRD104). Open file report number 6087 accompanies the data release. The full MRD database contains the results of the analysis for over 50 elements for 4072 samples. The site number, UTM coordinates (NAD83, Z15N) and the elements Ag, Au, Cu, Ni, Pb, Pd, Pt and Zn for the area of interest are listed in table 3. The table header shows the analysis method, detection threshold and unit. Geochemical results below the detection limit are indicated with minus (-) sign. INF means insufficient sample for analysis.

Site	Easting	Northing	Ag	Au	Au	Cu	Ni	Pb	Pd	Pt	Zn
			MS	FA	INAA	OES	OES	MS	FA	FA	OES
			0.02	1	1	5	5	0.05	0.9	0.5	2
			ppm	ppb	ppb	ppm	ppm	ppm	ppb	ppb	ppm
4467	668358	5520489	0.22	-1	-2	55	30	6.35	1.6	0.6	97
4402	663874	5520591	0.13	1.23	-2	20	17	4.77	-0.9	-0.5	82
4468	667725	5520768	0.09	2.06	-2	15	11	3.98	-0.9	-0.5	41
4405	662038	5520775	0.08	1	-2	22	11	3.23	1	-0.5	71
4466	668808	5521180	-0.02	2.83	5	79	13	4.02	2.26	0.57	32
4465	668439	5521198	0.02	1.68	-2	36	19	4.33	1.68	0.53	85
4368	660266	5521268	-0.02	3.18	-2	32	19	3.38	-0.9	-0.5	73
5843	671963	5521315	0.13	1.58	-2	30	22	4.23	-0.9	-0.5	96
4314	658482	5521378	0.03	1.81	-2	29	21	6.83	-0.9	-0.5	63
4406	661465	5521484	0.08	1.64	4	47	21	5.63	1.29	-0.5	87
4401	665288	5521497	0.04	1.56	-2	29	17	14.25	1.14	-0.5	70
4464	667859	5521516	-0.02	1.3	-2	19	11	4.31	1.01	-0.5	42
4461	670086	5522187	-0.02	1.9	-2	20	14	5.24	-0.9	-0.5	52
4463	668389	5522241	0.08	1	-2	42	14	7.33	3.9	0.5	99
4315	658853	5522330	0.04	1.29	-2	19	21	4.36	-0.9	0.53	60
5833	672042	5522348	-0.02	1.37	-2	22	19	7.78	-0.9	-0.5	69
4462	669230	5522560	0.12	2.2	-2	52	23	6.49	-0.9	-0.5	136
5832	671385	5522829	0.1	-1	INF	61	30	7.18	-0.9	-0.5	136
4459	669790	5522849	-0.02	-1	-2	22	14	4.18	-0.9	-0.5	50
4367	660770	5522951	-0.02	4.35	-2	12	13	3.93	-0.9	0.52	37
4456	666004	5523093	-0.02	1.57	-2	18	14	3.76	1.28	0.52	67
4455	665177	5523262	-0.02	-1	-2	27	18	4.3	1.13	-0.5	91
4458	668965	5523294	-0.02	-1	-2	31	18	2.78	-0.9	-0.5	51
4454	664349	5523455	-0.02	-1	-2	18	7	3.82	-0.9	-0.5	84
4366	661490	5523517	-0.02	INF	-2	10	7	3.32	INF	INF	33
5823	671630	5523546	-0.02	-1	-2	22	16	3.05	-0.9	-0.5	53
5822	670581	5523634	0.05	1	-2	47	24	5.67	1.3	0.8	83
5821	670157	5523650	-0.02	1.34	-2	31	11	3.34	-0.9	-0.5	43
4457	666120	5523665	-0.02	-1	-2	22	8	2.68	-0.9	0.6	61
5816	671700	5524089	-0.02	-1	-2	18	9	3.33	-0.9	-0.5	96
4453	664982	5524127	-0.02	1.91	-2	29	20	3.41	-0.9	-0.5	107
5814	670744	5524132	-0.02	1.78	-2	43	17	3.7	-0.9	-0.5	69
5815	671166	5524172	0.19	2.34	-2	72	21	3.9	1.14	0.51	69
4448	667692	5524236	-0.02	1	-2	25	20	1.85	-0.9	-0.5	75
5813	671474	5524279	-0.02	2.53	-2	52	36	3.45	1.75	0.6	91
4363	660179	5524329	-0.02	3.65	-2	24	25	4.12	1.2	0.64	76
5812	672121	5524332	-0.02	1.17	-2	14	13	4.41	-0.9	-0.5	69

Site	Easting	Northing	Ag	Au	Au	Cu	Ni	Pb	Pd	Pt	Zn
			MS	FA	INAA	OES	OES	MS	FA	FA	OES
			0.02	1	1	5	5	0.05	0.9	0.5	2
			ppm	ppb	ppb	ppm	ppm	ppm	ppb	ppb	ppm
4449	667018	5524353	0.18	2	-2	57	27	5.98	1	0.7	133
4503	669333	5524380	0.17	-1	-2	38	21	2.25	-0.9	-0.5	59
4452	665732	5524678	-0.02	1.7	-2	18	28	2.06	-0.9	-0.5	107
4407	663148	5524703	0.07	2	-2	23	18	5.51	1	0.6	114
4451	666456	5524744	-0.02	-1	-2	21	9	1.78	-0.9	-0.5	46
4364	661174	5524872	-0.02	1.44	-2	21	22	4.7	-0.9	0.52	66
5819	671068	5524960	0.1	1.77	-2	55	12	3.56	0.94	-0.5	56
5817	671413	5525085	0.26	2.91	-2	50	31	3.85	1	0.55	74
4365	662069	5525160	0.05	1.3	-2	58	14	2.09	-0.9	-0.5	60
4408	665056	5525173	0.06	1	-2	40	18	2.82	-0.9	-0.5	80
4321	658489	5525239	0.06	2.34	-2	32	18	8.13	-0.9	0.78	66
5818	670848	5525250	-0.02	1.96	-2	39	15	4	-0.9	-0.5	63
4447	666651	5525552	-0.02	-1	-2	20	12	1.69	-0.9	-0.5	46
4445	665910	5525708	0.02	1.9	-2	30	23	4.38	1.91	0.62	109
4446	666380	5525956	0.02	-1	-2	21	12	5.07	-0.9	-0.5	144
4409	665150	5526074	0.05	2.41	-2	23	18	5.61	0.92	-0.5	64
4361	660933	5526198	-0.02	3.22	-2	32	20	2.92	-0.9	-0.5	66
4362	659963	5526388	-0.02	3.02	-2	30	20	3.76	-0.9	-0.5	89
4442	668342	5526872	-0.02	-1	-2	30	14	2.51	-0.9	-0.5	85
4411	665120	5526879	0.12	1.41	-2	27	24	3.3	-0.9	-0.5	75
5808	671191	5526934	-0.02	1.88	-2	10	10	7.7	-0.9	-0.5	74
4412	664083	5527006	0.04	1.7	3	19	15	4.12	-0.9	-0.5	47
4444	666204	5527018	-0.02	-1	-2	18	11	2.19	-0.9	-0.5	52
4443	667346	5527140	-0.02	-1	-2	11	9	2.99	-0.9	-0.5	120
4357	660109	5527351	0.07	3.34	-2	87	27	6.26	1.05	0.54	142
4441	668710	5527517	-0.02	-1	3	16	17	4.13	-0.9	-0.5	65
4358	661673	5527702	-0.02	2.52	-2	36	24	5.41	1	-0.5	70
4522	670772	5527901	0.17	1.11	-2	20	20	6.49	-0.9	0.58	105
4439	666742	5528082	-0.02	6	7	64	34	7.1	1.6	0.9	98
4413	664681	5528296	0.02	-1	-2	25	9	1.59	-0.9	-0.5	31
4356	660627	5528301	0.02	2.43	-2	31	21	8	-0.9	-0.5	104
4438	666739	5528676	-0.02	2.01	-2	33	24	5.74	1.18	-0.5	98
4325	659730	5529058	0.1	1.53	-2	32	23	4.59	-0.9	-0.5	119
4355	662534	5529066	0.11	1.96	-2	42	18	2.16	1.02	-0.5	87
4354	663267	5529325	0.03	2.01	-2	28	14	2.91	1.16	-0.5	75
4414	664324	5529544	0.03	1	-2	15	9	2.29	1	-0.5	50

Table 3. Lake sediment geochemical samples (from MRD104)

Units, detection limits, statistics and measurement precision for these elements for all 4072 samples are listed in table 4. Gold (INAA) in lake sediment is shown in figure 1. Gold (Fire Assay) results are shown in another plot in appendix D of OFR6087.

The 5 samples within the west map sheet with lake sediment gold (INAA) more than 2.5 are highlighted in red in table 3.

Element	Units	MDL	Median	Min	Max	Precision
Ag	ppm	0.02	0.11	<0.02	4.02	±0.13
Cu	ppm	5	24	<5	520	±4
Ni	ppm	5	20	<5	66	±4
Pb	ppm	0.05	3.97	0.06	233.97	1.14
Zn	ppm	2	74	9	7819	±11
Au (INAA)	ppb	1	1	1	43	±3
Pd	ppb	0.9	0.45	<0.9	17.18	±1.09
Pt	ppb	0.5	0.25	<0.5	8	±0.51

Table 4. Minimum detection limits, statistics and measurement precision

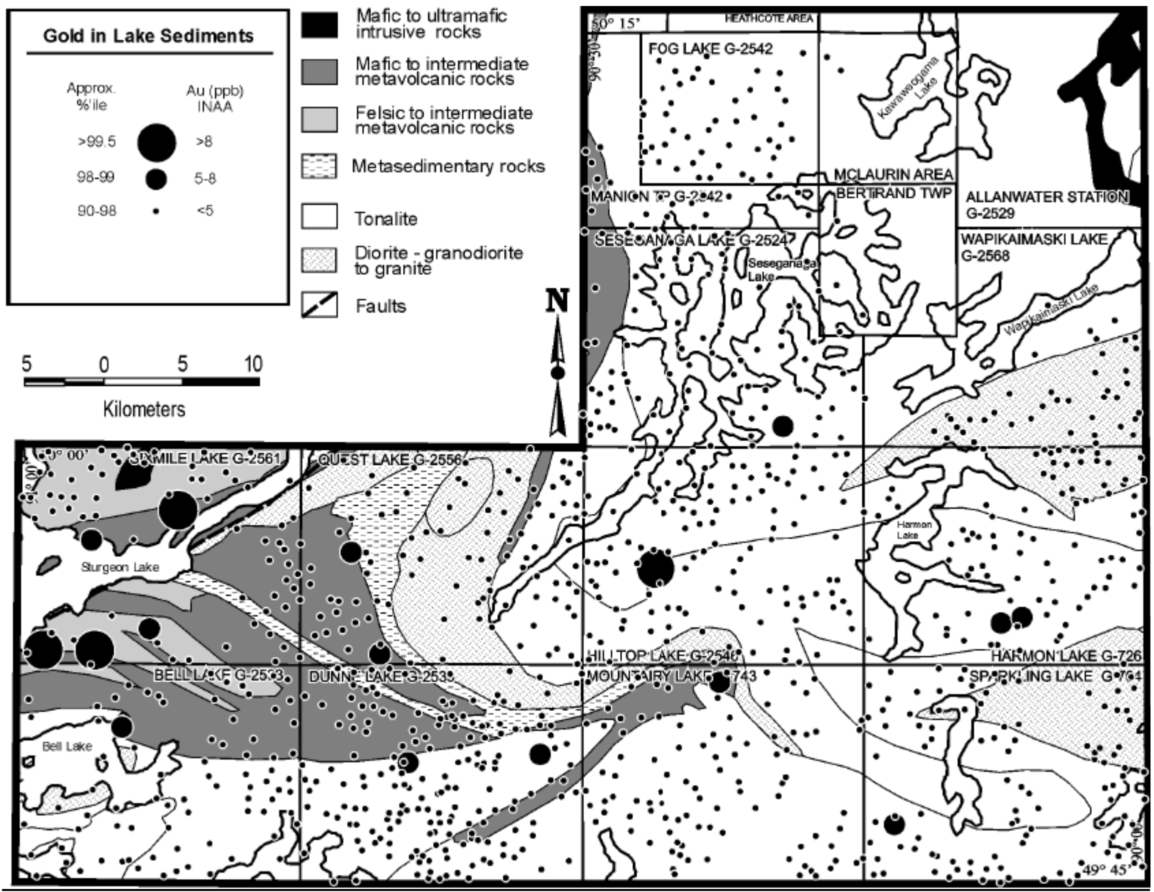


Figure 1. Gold (INAA) in lake sediment, from appendix D of OFR6087

Citation

Jackson, J.E. and Russell D.F. 2002. Lake Sediment Geochemical Data from the Sturgeon Lake-Lake St. Joseph Area; Ontario Geological Survey, Miscellaneous Release - Data 104.

4. Regional Gravity Data

The regional gravity grid is available from the Natural Resources Canada, Geoscience Data Repository. The regional gravity grid is a national 2 km grid of the Bouguer gravity compiled from multiple gravity surveys by the GSC. The Bouguer gravity colour grid over and around the Glitter Lake Project and Grid Iron Lake Project area is shown in figure 2. Gravity observation points, land tenure and drill holes from the Ontario Drill Hole Database have been added.

The data used to compile the nation gravity grid consist of approximately 678,000 gravity observations, including 165,000 on land, acquired between 1944 and 2005. The data spacing ranges from less than 1 km to over 20 km, with an average spacing between 5 and 10 km. Coverage over the area of figure 4 is more detailed – gravity stations are as little as 1 km apart.

All measurements were reduced to the IGSN71 datum. Theoretical gravity values were calculated from the Geodetic Reference System 1980 (GRS80) gravity formula. Bouguer anomalies were calculated using a vertical gravity gradient of 0.3086 $mGal{\cdot}m^{-1}$ and a crustal density of 2.670 $kg{\cdot}m^{-3}$. The data were gridded to a 2 km interval, with a blanking radius of 20 km.

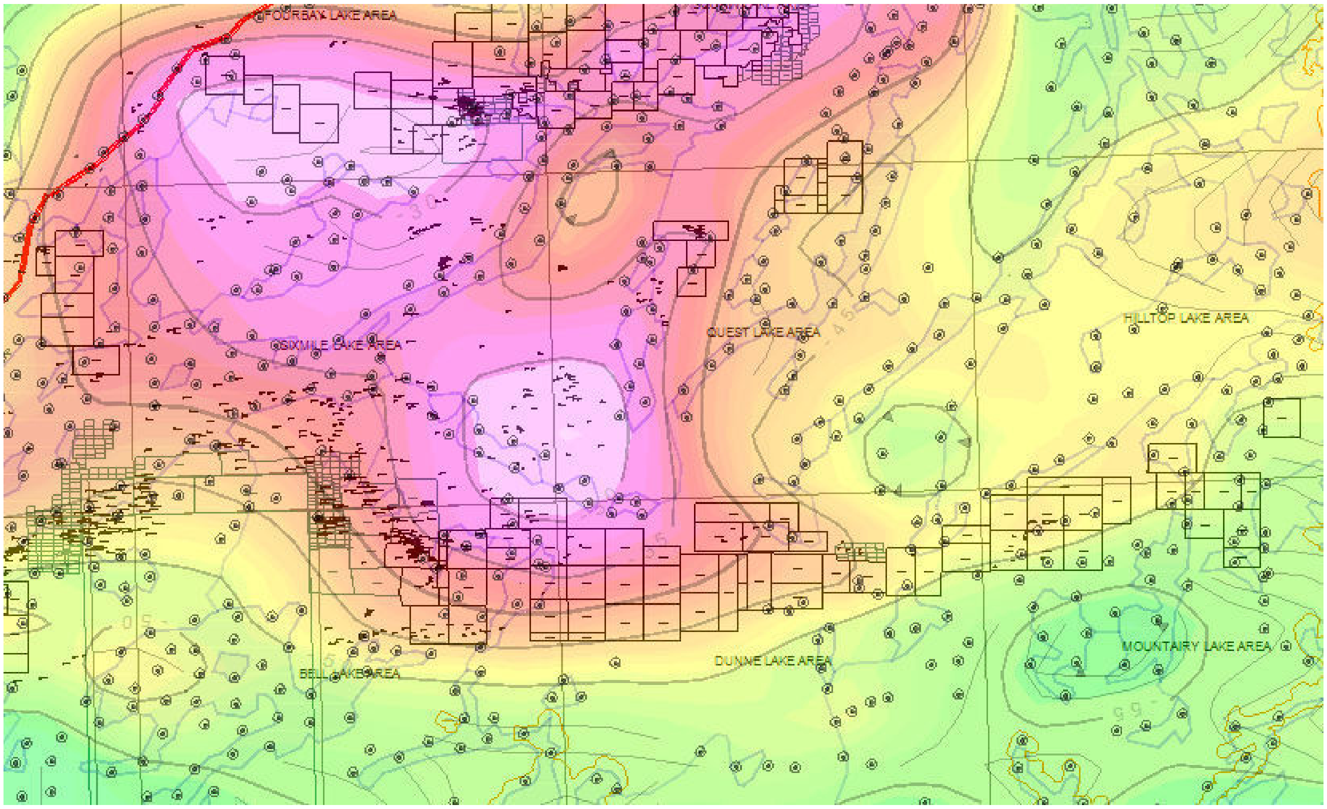


Figure 2. Regional Bouguer gravity contours and stations + LSFN Traditional Territory.

The Geoscience Data Repository holds a Geosoft database of point data – records of all 678,000 observations with columns for latitude and longitude, date and time of the observation, elevation, observed gravity, free air gravity and bouguer gravity. Observation points are available in a map layer.

Copyright

Citations

2009: Canadian Geodetic Information System, Geoscience Data Repository, Geological Survey of Canada, Earth Sciences Sector, Natural Resources Canada, Government of Canada

5. 1991 HEM/magnetic Survey

High resolution airborne magnetic and electromagnetic surveys over major greenstone belts were initiated in 1975 by the Ontario Department of Mines (now OGS). Under this program, more than 35 surveys totalling some 450,000 line km have been flown by different survey contractors. All surveys were flown at a nominal flight line spacing of 200 m. The results of the surveys were published in 1:20,000 maps showing total magnetic field contours and EM anomaly centers.

In 2003, all of these airborne surveys were recompiled to bring results to a common data format, to link and level all total magnetic field data to the master grid for Ontario and to re-pick EM anomalies in a consistent manner. The reprocessed airborne survey results are available from the OGS as numbered Geophysical Data Sets (GDS).

Under this program, the Glitter Lake / Gridiron Lake Projects area and lands to the west and north were flown by Aerodat in 1990 with their 4 frequency HEM system (935 and 4600 Hz coaxial + 4175 and 33000 Hz coplanar), radar navigation and a cesium vapour magnetometer. Total coverage was 21,012 km. The original results were presented on 46 map sheets at 1:20,000 (OGS 81460 to 81505). 7,034 EM anomalies picked with an average conductance of 9.8 S. After re-processing in 2003, the results were released under Geophysical Data Set GDS1033, Savant Lake – Sturgeon Lake.

The magnetic grid and EM anomaly centres from GDS1033 of the Glitter Lake Project and Grid Iron Lake Project area and surrounds are shown in figure 5. EM anomaly centres with conductance estimates less than 2 S are not shown. Claim fabric and drill holes from the Ontario Drill Hole Database have been added.

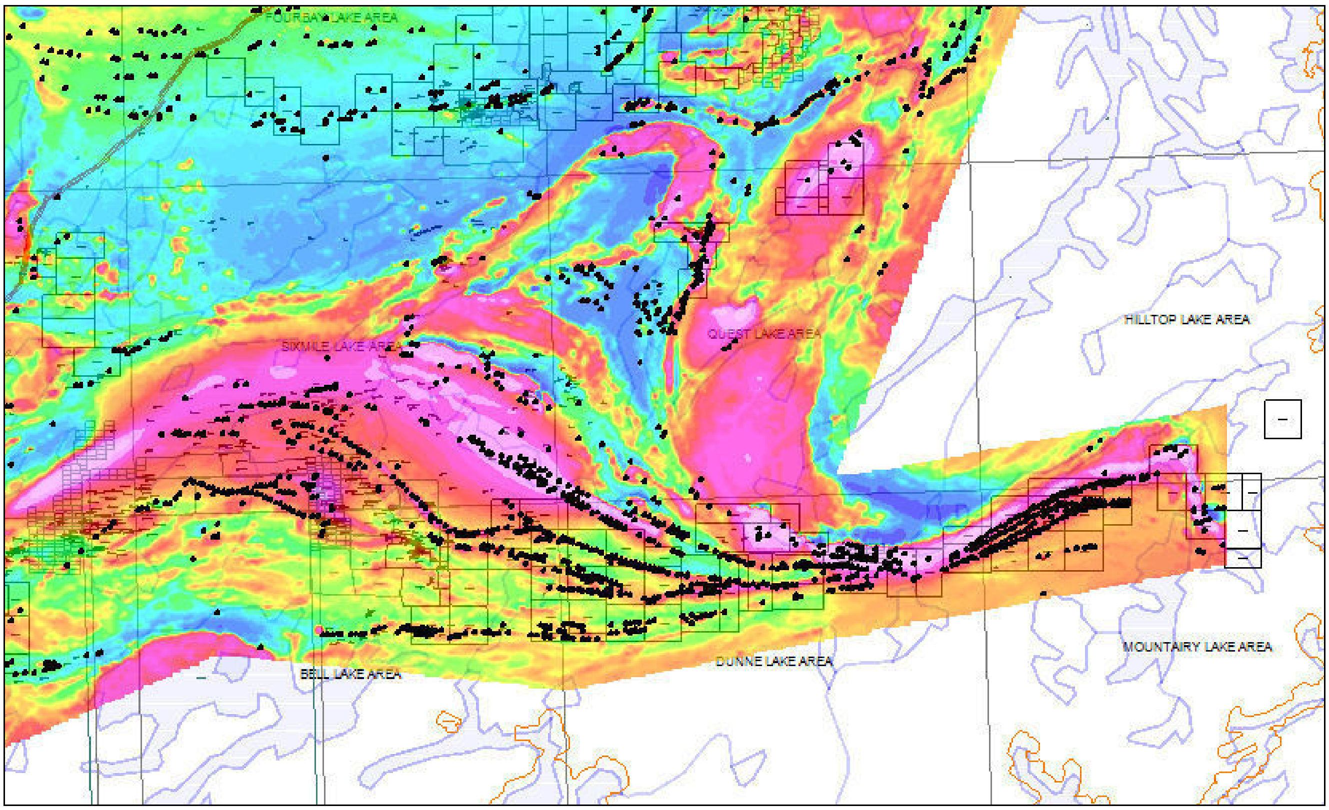


Figure 3. Magnetic grid + HEM anomaly centers (from GDS1033)

Citation

Ontario Geological Survey, 2003, Sturgeon Lake-Savant Lake Area, Ontario airborne magnetic and electromagnetic surveys, processed data and derived products, Archean and Proterozoic “greenstone” belts; Geophysical Data Set 1033 – Revised.

Appendix 3 - VTEM Conductors

EM anomaly strings have been grouped into named conductors A to P. Labelling is in order from northwest to southeast and does not reflect ranking. Some conductors have been further subdivided into conductor sets, such as A1 and A2. Conductor numbers are shown on all 1:10,000 maps. Each conductor set is described below. Lists of EM anomalies that make up each conductor set follow.

For strong, isolated double peak Z component EM anomalies, the anomaly centre is at the leading or upper edge of a steeply dipping thin/thick sheet type conductor. Confidence in conductor location, dip and depth should be highest for EM anomaly centres showing a dip symbol with the dip estimate more than 75°. All other things being equal, these are the easiest drill targets. Confidence in conductor location and geometry decreases as the dip decreases. Conductor number, location, dip and depth under EM anomaly centres with no dip indication are usually speculative – the cause may be flat lying, shallow dipping, flat topped or multiple vertical conductors.

Much depends on EM anomaly form and this is displayed in EM profiles as screen images generated by Oasis Viewer working with the VTEM database. Magnetic, conductance and EM anomaly centre profiles can be added. VTEM interpretation is incomplete without these profiles.

A1,A2 : claims 4224365 and 4224366

This is 1500 m long conductor in the northeast part of the claim block. EM amplitudes range from moderate to strong with the best EM anomalies at the southeast end. BF26 amplitudes of .75 over the down dip side of the conductor support a strong, shallow conductor or conductors. A1,A2 have an associated 10 to 25 nT magnetic high.

A1 was tested by Bison Petroleum and Minerals ddh M5. They intersected graphitic zones with disseminated Po/Py. Assays did not indicate commercial quantities of Cu, Zn, Ni, Au or Ag. Bison ddh M6 and the Canadian Javelin ddh CJ1 and CJ2, northwest of A1, did not intersect any bedrock conductors. A2 was tested by Mattagami Lake Mine ddh ML3 and ML4. ML3 intersected many bands of graphitic tuff with varying amounts of sulphides down to 154 m. ML4 intersected graphitic tuff in many bands with 5 to 10% Py from 48 to 156 m.

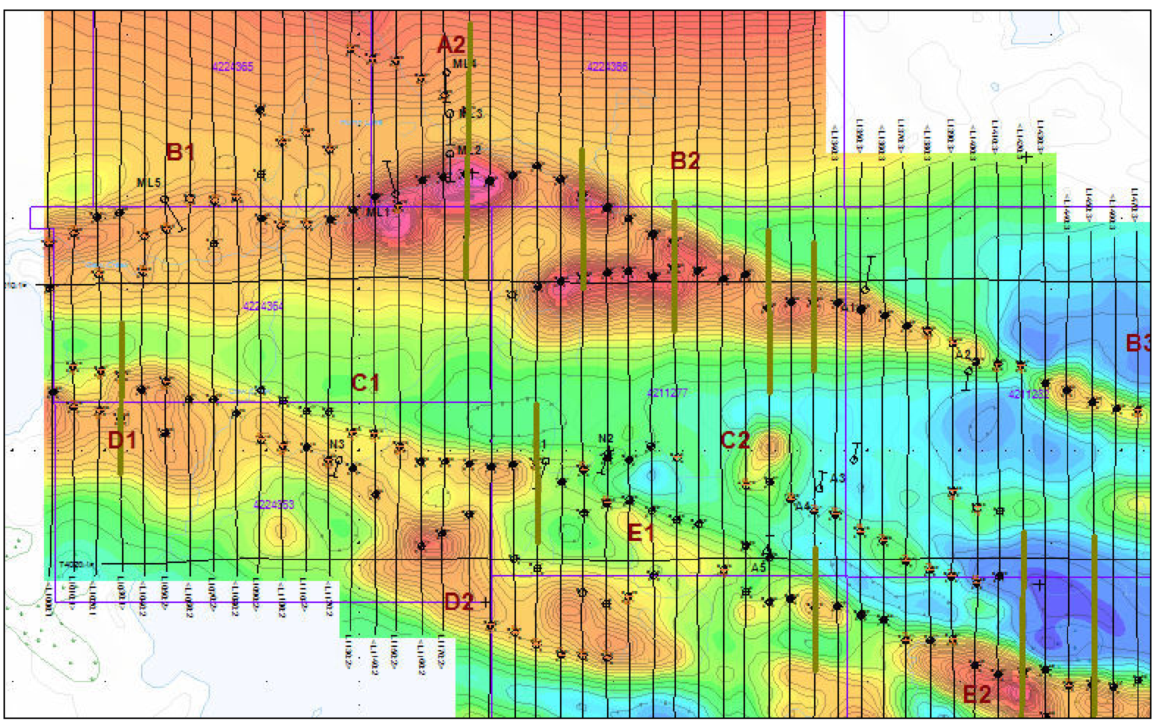


Figure 1. Total magnetic intensity, northwest part

B1, B2, B3, B4, B5, B6 : claims 4224365 to 4211358 and 4211359

This is a 14 km long conductor set that runs across the whole map sheet with few interruptions or changes in direction. Overall EM amplitudes are high to very high and this means strong, shallow and wide. 60% of the EM anomaly centres have no dip indication – these EM anomalies should be simple positive Z component peaks with little indication of conductor form or location. A coincident magnetic high of 250 to 1000 nT is common. Most of B is made up of uniform strings of magnetic and EM anomalies with no highlights that might point to something of exploration interest. The most diverse parts of B are in the northwest (B1 and B2 in figure 1) where there are confined magnetic highs and evidence of structure. This would include a possible fold nose in the middle of B2.

B1 was drill tested by ML5 and probably ML6 (Mattagami Lake Mines, 1970 and 1972). ML5 intersected massive sulphides in volcanics (75% Py, 10% Po, 1-2% Cp) at 46 to 51 m. ML6 intersected graphitic tuff with up to 10% sulphides in many bands from 29 to 211 m.

B2 was drill tested by ML1, ML2 and probably A1 (Amax, 1972). ML1 intersected massive sulphides from 71 to 74 m, followed by numerous bands of graphitic tuff to the eoh at 191 m. ML2 intersected massive sulphides at 22 m and graphitic rhyolite with 5 – 10% sulphides. A1 intersected numerous stringers and seams of massive Po/Py with traces of chalcopyrite in volcanics. This was followed by 50% sulphides in a contact zone and 2 to 3 m wide bands of graphitic argillite.

B3 was probably tested by Amax ddh A2. A2 intersected massive Po/Py followed by graphitic slate. The drill log notes 'several highly conducting graphitic sections from 2" to 9" thick'.

The regional compilation of the 1990 Aerodat HEM survey suggests B1 to B6 is part of a much longer conductor/magnetic high that continues at least 8 km to the northwest over the top of Lyon Lake and through the Lyon Lake – N Au,Cu,Zn occurrence and possibly the Canadex Cu,Zn,Au,Ag occurrence.

C1, C2 : claims 4224363, 4224364, 4211277 and 4211282

C1 and C2 are a collection of 42 EM anomaly centres that describe a number of conductors variably associated with 50 to 200 nT magnetic highs. More than half of the EM anomalies represent steeply dipping thin sheet type conductors. Moderate to high amplitudes suggest shallow – most of the conductors that make up C should have been picked up in the Aerodat survey.

There is a time constant / conductance high in the area of line 1210. This is also the site of Newconex ddh N1 and a Maxwell inversion. N1 intersected conductors at 64 to 72 m (massive sulphides with graphite), at 77 m (graphitic sulphide zone with 20% Py) and again at 158 m. The first is described as 'siliceous zone sulphides sheared into bands – partially brecciated cemented with sulphides'. Newconex N2, 300 m east, intersected conductors at 15 to 20 m (graphitic chert with up to 15% sulphides), 20 to 25 m (15% sulphide stringers, very little graphite), at 30 m (seams of 15 to 20% sulphides, mostly pyrrhotite) and at 89 to 93 m (seams of 15%+ sulphides, mostly pyrrhotite).

C2 may have been intersected by Amax ddh A3 and A4. A3 intersected heavy Po and Py seams, massive Po/Py (up to 70%) and graphitic slate. A4 intersected Po stringers, heavy Po (average 25%) and graphitic sections.

From the regional geophysical compilation based on the Aerodat results, conductors C and D may connect with the Lyon Lake – NE zinc occurrence.

D1, D2 : claims 4224363 and 4211278

Most of D1, D2 is a collected of scattered EM anomalies on magnetic contacts. D1 (1190C to 1240E) is a 400 m long thin sheet conductor with a steep dip to the north. Estimated depth of 1210E is 40 m – this conductor would probably have been missed in the Aerodat survey. This conductor is on a magnetic contact. Low conductance estimates (3 S dB/dt at 1210E) suggest a weak conductor but this may be due in part to low EM anomaly amplitudes.

The area of VTEM anomaly 1120A was tested by Newconex ddh N3. The N3 log shows a conductor from 80 to 90 m including a 3 m section of massive sulphides with minor chalcopyrite.

E1, E2, E3 : claims 4211277, 4211281 and 4211347

The E conductor set is a scatter of some 60 strong EM anomalies over 4 km strike length, loosely arrayed along magnetic contacts. Most of the EM anomalies are simple positive peaks (no dip symbol) so the number, form and location of the conductors is speculative.

There is a time constant high at 1330C (dB/dt conductance estimate 76 S). The EM anomaly suggests a strong, shallow conductor with a shallow to intermediate dip to the north (BF26 peak 6.33). This would put the leading edge of the conductor 50 m south of the EM anomaly centre. 1330C is centred on a 250 nT magnetic high.

The 1330C inversion suggested a thick sheet conductor dipping 10° north at 50 m depth. The conductance estimate is 225 S but this may be without adjustment for a thick sheet conductor model. Given EM anomaly amplitudes, the 50 m depth estimate seems too high.

Amax ddh A5 is 300 m northwest of 1330C. A5 intersected cherty sediments with heavy Po, minor Cp and trace ZnS followed by a highly pyrrhotized graphitic chert .

1420E and F are on either side of a 900 nT magnetic high. The magnetic anomaly is a simple positive peak that suggests a near-vertical tabular source. Geotech has picked 2 EM anomalies without dip estimates but the EM profiles suggest 3 near-vertical thin/thick sheet conductors, non of which is on the magnetic peak. The Maxwell inversion suggests 3 conductors with very shallow dips.

F1, F2 : claims 4211278, 4211281 and 4211347

F is a relatively straight run of strong EM anomalies over more than 4 km. Most of the conductor is associated with a 250 nT magnetic high. Most of the EM anomalies suggest a conductor with a steep dip to the south. F1 was tested with Newconex ddh N4. The N4 log shows conductors (graphitic gneiss with up to 10% sulphides) from 42 to 53 m.

1450D is a very strong (BF26 7.13) positive peak with no information on conductor form or location. The dB/dt conductance estimate is 69 S. Maxwell inversion may have returned a thick sheet at 85 m that dips at 57.5° to the south. The conductance estimate is 510 S.

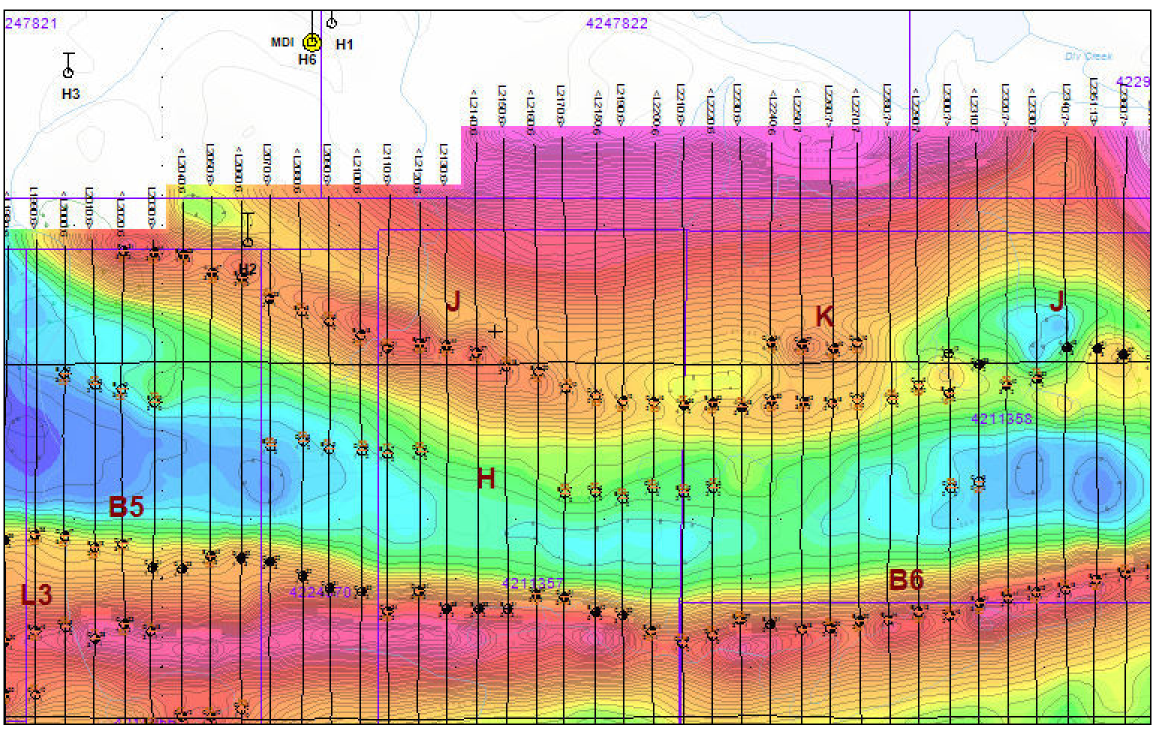


Figure 2. Total magnetic intensity, northeast part

G and H : claims 4224361 to 4211358

The regional geophysical compilation based on the 1990 Aerodat survey suggests that G and H are part of the same long, interrupted conductive horizon. Most conductor segments have a steep dip to the north and are associated with a weak magnetic axis. Conductance estimates are low but this may be due in part to low amplitudes. From simple models, the depth estimate for the cause of 1900A is 35 m. There is a coincident 35 nT magnetic high. Much of conductor H was not seen by the Aerodat HEM system.

J and K : claims 4211355 to 4211358

J is a 1500 m long near-vertical thin sheet conductor with coincident 200 to 800 nT magnetic high. Conductance estimates are modest. In the Aerodat survey, J extends well to the northwest and east into the east map sheet.

K is 300 m long near-vertical thin sheet conductor (2240D to 2270D) with a coincident magnetic high. The best EM anomaly is 2250C at 671175 e, 5524596 n (BF26 3.1 on the down dip side). It appears to be a thick sheet conductor with a steep dip to the south. Estimated depth is less than 10 m. In the Aerodat survey, K is seen as a single point EM anomaly with magnetic high. This may be an interesting VMS target.

L1, L2, L3, L4, L5 and L6 : claims 4211350 to 4211355

This is a series of conductor segments over a strike length of over 4 km. L1, L2, L3 and L4 fall on magnetic contacts. L5 and L6 fall on a magnetic high of the same dimensions. Almost all the EM anomaly centres that make up L suggest a near-vertical thin sheet conductor. EM amplitudes are moderate to high over L1, L2, L3 and L4. EM amplitudes are much lower over L5 and L6. L5 and L6 may have been missed in the Aerodat suvey.

There is a time constant / conductance high at 1690B of L1 (dB/dt conductance 80 S). Geotech has picked one simple EM peak but the EM profiles are more complicated. They show 4 peaks over 150 m that might imply 3 near-vertical conductors over 100 m. These conductors are over a 250 nT magnetic high. High BF26 values (up to 3.2) and EM peak separations suggest shallow. This EM anomaly was subject to Maxwell modelling through which Geotech has interpreted 4 thick plates with intermediate dips at depths of 30 to 110 m. Conductance estimates are 540 to 550 S.

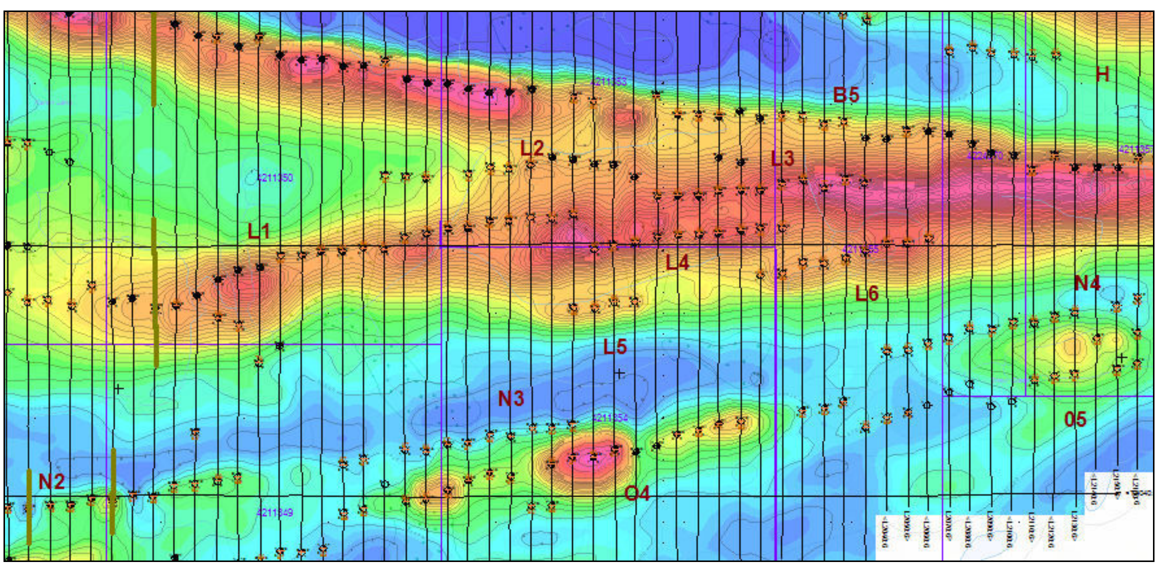


Figure 3. Total magnetic intensity, centre part

As much as conductor K was of exploration interest, L5 and L6 should be considered as well. L5 is a 300 m long conductor (1890C, 1900E, 1910B and 1920D) with a coincident 150 nT magnetic high. Unfortunately, this is an extremely weak conductor with BF26 peaks less than 0.002. Depth estimates are around 30 m. L6 is an 800 m long conductor (1980A to 2060C) with a coincident 200 nT magnetic axis. EM anomaly quality varies – two of the best are 1990D (vertical thin sheet at 10 m depth, BF26 peak 0.02) and 2040C (thin sheet with a very steep dip to the north at 35 m depth, BF26 peak 0.08). Conductance estimates are modest in both cases.

M : claims 4211279 and 4211280

M is a loose alignment of weak EM anomalies associated with a poorly defined 100 nT magnetic high over 1 km strike length. The best EM anomaly in the set is 1300D. Simple models suggest a weak thin sheet conductor at 20 m depth with a 70° dip to the south.

N1, N2, N3, N4 : claims 4211279 to 4211359

N is a series of 1 to 2 km long conductors that is part of a band (N, O and P) that runs across the southern part of the claim block. On the regional geophysical compilation from the Aerodat survey, this band continues to the west for 8 km where there are a number of drill holes from the 1970s. The 3 drill holes (L1, L2 and L6) on the 1:10,000 maps are by Louvicourt Goldfields in the 1970s. L1 intersected massive Po/Py followed by graphitic tuff with 5 to 10% Po/Py. L2 intersected seams and bands of massive Po/Py. L6 intersected graphitic chert with up to 5% sulphides and a 3' section of 70% sulphides. The drill log notes L6 was set to test an EM conductor.

Almost all the EM anomalies that make up conductor set N represent near-vertical thin sheet conductors. N1, N3 and N4 are made up of low to moderate amplitude / time constant EM anomalies. N2 is made up of high amplitude / time constant EM anomalies. N1, N3 and N4 have no clear magnetic expression. N2 is associated with a 50 nT magnetic axis. 1630F and 1670C in N2 were subject to Maxwell inversion/modelling.

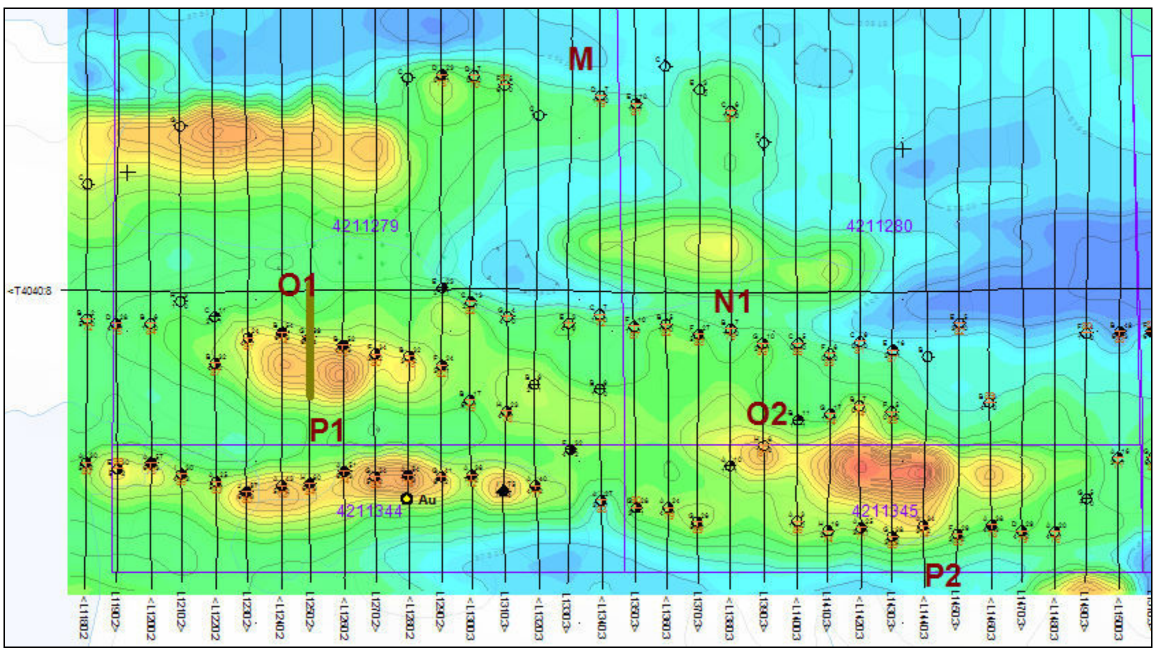


Figure 4. Total magnetic intensity, southeast part

O1, O2, O3, O4, O5, O6 : claims 4211279 to 4211359

Conductor O is part of the band of conductors that runs across the southern part of the claim block. Almost all EM anomalies that make up this conductor set represent near-vertical thin sheet conductors. Amplitudes and conductance estimates are strong for much of O1, O3 and O4 and weak for much of O2, O5 and O6. Parts of O3 and O4 have an associated magnetic high. O1, O2, O5 and O6 have no clear magnetic expression and are good candidates for graphite. 1240G in O1 and 1590E in

O3 were subject to Maxwell inversion/modelling and this may have been because time constants are high at these points.

One unusual feature in conductor O is the 1350 nT magnetic high under 1900F (figure 3). The magnetic anomaly is 200 m long and is consistent with a vertical tabular body. The EM anomaly suggests a thick sheet conductor with a steep dip to the north. The depth estimate is less than 10 m. Conductance estimates are 39 S dB/dt and 130 S B field. BF26 is 1.42 over the down dip peak. 1900F may be of exploration interest.

P1, P2 : claims 4211344 and 4211345

Conductor set P is made up of 30 EM anomalies over a strike length of 3 km. Almost all of the EM anomalies suggest a thin sheet conductor with a steep dip to the south. EM amplitudes and time constants are moderate to high. P1 is associated with a 100 to 300 nT magnetic high. P2 has no clear magnetic expression.

There is a lake sediment gold anomaly 70 m south of 1280A. The gold anomaly is from sample 4406 of a 2000 lake sediment geochemical survey (appendix 2). The INAA assay of 4 ppb is marginally anomalous. The fire assay value of 1.64 ppb does not appear to be anomalous. 1280A suggests a thick sheet conductor with a steep dip to the south (76°). Depth from simple models is less than 10 m. The coincident magnetic high is 300 nT. 1280A is under a small lake and 100 m south of the lake's north shore.

A1, A2							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1050	A	659170	5527439	27	2	1	69°s
1070	A	659364	5527401	36	12	3	61°s
1080	C	659475	5527327	50	17	3	64°s
1090	A	659569	5527249	45	19	3	64°s
1100	E	659673	5527100	59	27	4	
1110	A	659763	5527076	40	18	3	
1120	E	659861	5526970	58	23	4	84°s
1130	A	659966	5526734	50	26	4	88°n
1140	D	660060	5526695	37	24	4	78°s
1150	A	660161	5526686	33	20	4	79°s
1160	D	660271	5526611	46	27	4	72°s
1170	A	660370	5526539	62	28	4	75°s
1180	G	660471	5526470	105	25	4	75°s

B1, B2, B3, B4, B5, B6							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1000	B	658664	5525701	40	10	2	
1000	C	658660	5525893	81	26	4	86°n
1010	A	658768	5525940	61	30	4	80°n
1020	C	658875	5525759	20	9	2	76°n
1020	D	658868	5526011	38	24	4	
1030	A	658965	5526029	42	22	4	
1040	B	659067	5525770	47	19	3	86°n
1040	C	659073	5525928	25	17	3	65°n
1050	B	659168	5525955	16	12	3	60°n
1060	B	659270	5526088	15	9	2	82°s
1070	B	659377	5526079	10	7	2	79°n
1070	C	659374	5525894	57	11	3	
1080	B	659471	5526094	9	7	2	85°n
1090	B	659574	5526473	22	9	2	
1090	C	659576	5526193	9	8	2	
1090	D	659579	5526002	81	36	5	
1100	C	659664	5525971	73	22	4	78°n
1100	D	659669	5526331	27	15	3	79°n
1110	B	659774	5526374	28	16	3	83°n
1110	C	659777	5525975	24	9	2	80°n
1120	C	659878	5525998	86	55	6	

B1, B2, B3, B4, B5, B6							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1120	D	659874	5526299	25	15	3	78°n
1130	B	659976	5526039	89	46	5	
1140	C	660070	5526096	83	63	6	
1150	B	660171	5526059	63	46	5	83°s
1160	C	660275	5526167	124	66	6	
1170	B	660366	5526182	113	63	6	
1180	F	660460	5526196	98	60	6	
1190	A	660566	5526165	97	60	6	
1200	G	660663	5525671	15	2	1	
1200	H	660666	5526190	75	50	5	
1210	A	660770	5526230	93	43	5	
1210	B	660776	5525710	99	43	5	
1220	G	660874	5525731	98	60	6	
1220	H	660872	5526172	114	46	5	
1230	A	660965	5526105	100	61	6	
1230	B	660970	5525751	97	60	6	
1240	I	661074	5525767	97	57	6	
1240	J	661075	5526050	103	61	6	
1250	A	661166	5526003	92	45	5	
1250	B	661166	5525775	90	59	6	
1260	G	661274	5525751	105	60	6	
1260	H	661271	5525936	109	56	6	
1270	A	661362	5525904	100	58	6	
1270	B	661364	5525791	121	65	6	
1280	E	661467	5525777	110	60	6	
1290	A	661576	5525741	103	54	6	
1300	I	661671	5525760	108	54	6	
1310	A	661770	5525618	96	60	6	
1320	G	661871	5525642	109	65	6	
1330	A	661968	5525644	114	63	6	
1340	H	662072	5525638	109	64	6	
1350	A	662174	5525611	122	70	6	
1360	G	662276	5525584	108	62	6	
1370	A	662370	5525539	101	58	6	
1380	G	662461	5525517	75	33	4	86°s
1390	A	662572	5525462	83	29	4	81°n
1400	H	662670	5525381	102	46	5	
1410	A	662764	5525374	112	54	6	83°s
1420	G	662865	5525367	88	57	6	73°s
1430	A	662971	5525290	82	57	6	
1440	F	663064	5525261	112	65	6	
1450	A	663176	5525209	127	62	6	
1460	F	663279	5525181	88	50	5	
1470	A	663371	5525177	89	57	6	84°s
1480	F	663468	5525157	108	68	6	80°s
1490	A	663575	5525104	105	45	5	84°s
1500	F	663667	5525041	112	43	5	
1510	A	663771	5525042	108	66	6	84°s
1520	H	663866	5525017	132	54	6	77°s
1480	E	663470	5524777	108	68	6	86°n
1490	B	663575	5524765	27	7	2	73°n
1510	B	663768	5524819	111	48	5	
1520	G	663870	5524718	93	54	6	
1530	A	663972	5524755	125	67	6	
1540	F	664072	5524692	103	59	6	
1550	A	664172	5524773	149	79	6	
1560	E	664275	5524735	108	64	6	
1570	A	664368	5524764	146	74	6	
1580	F	664467	5524713	123	69	6	
1590	A	664569	5524663	127	65	6	
1600	E	664668	5524637	129	69	6	
1610	A	664779	5524581	115	66	6	
1620	F	664871	5524582	109	60	6	
1630	B	664964	5524626	107	59	6	81°s

Appendix 3 - VTEM Conductors

B1, B2, B3, B4, B5, B6							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1640	E	665074	5524623	93	42	5	70°s
1650	A	665163	5524436	102	60	6	
1660	D	665272	5524489	95	48	5	
1670	A	665369	5524506	99	59	6	78°s
1680	D	665477	5524498	112	62	6	72°s
1690	A	665570	5524462	118	76	6	70°s
1700	D	665670	5524381	110	55	6	*
1710	E	665781	5524327	97	59	6	
1720	A	665869	5524323	105	62	6	81°s
1730	E	665973	5524275	93	57	6	
1740	A	666071	5524324	114	69	6	60°s
1750	D	666170	5524234	104	60	6	
1760	A	666273	5524211	111	64	6	
1770	C	666372	5524214	118	69	6	
1780	B	666473	5524181	105	60	6	
1790	D	666570	5524184	102	48	5	
1800	B	666674	5524209	95	55	6	54°s
1810	E	666778	5524118	123	65	6	
1820	B	666876	5524099	121	65	6	
1830	D	666970	5524098	128	68	6	
1840	A	667071	5524074	113	63	6	
1850	E	667171	5524055	93	60	6	
1860	B	667266	5524057	96	57	6	
1870	E	667375	5524070	87	21	4	
1890	F	667576	5524036	101	26	4	86°s
1900	B	667668	5524015	76	15	3	80°s
1930	D	667968	5524043	66	39	5	77°s
1940	B	668072	5523947	82	38	5	85°n
1950	D	668170	5523951	68	46	5	88°s
1960	E	668269	5523939	90	35	5	85°n
1970	A	668367	5523966	99	36	5	
1980	D	668464	5523931	106	29	4	
1990	A	668568	5523950	72	25	4	86°s
2000	D	668669	5523945	55	17	3	82°s
2010	B	668771	5523906	46	18	3	89°s
2020	D	668866	5523918	50	17	3	77°s
2030	C	668969	5523837	73	21	4	
2040	D	669068	5523832	79	23	4	
2050	B	669165	5523875	69	42	5	83°s
2060	D	669269	5523869	84	52	6	
2070	C	669367	5523856	99	52	6	
2080	C	669478	5523809	79	32	4	
2090	C	669569	5523767	87	31	4	
2100	C	669677	5523755	94	32	4	
2110	C	669765	5523688	90	34	4	89°s
2120	C	669872	5523757	84	31	4	77°s
2130	B	669968	5523697	84	38	5	
2140	B	670077	5523698	84	33	4	
2150	B	670175	5523695	89	31	4	
2160	D	670271	5523746	84	40	5	73°s
2170	C	670366	5523736	96	51	6	77°s
2180	B	670474	5523686	87	42	5	
2190	C	670565	5523675	61	25	4	
2200	B	670662	5523622	33	14	3	87°s
2210	C	670768	5523580	15	8	2	89°n
2220	C	670869	5523606	16	7	2	87°n
2230	B	670965	5523658	60	27	4	89°n
2240	B	671066	5523644	35	21	4	
2250	A	671174	5523627	24	18	3	90°
2260	C	671271	5523630	40	29	4	84°n
2270	B	671370	5523655	31	20	4	84°s
2280	B	671467	5523659	23	14	3	90°
2290	B	671569	5523685	24	13	3	86°s
2300	D	671676	5523673	39	16	3	81°n

Appendix 3 - VTEM Conductors

B1, B2, B3, B4, B5, B6							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
2310	B	671776	5523716	49	21	4	85°s
2320	B	671874	5523731	35	11	3	87°n
2330	B	671970	5523754	40	13	3	89°s
2340	B	672070	5523761	47	18	3	82°n
2351	B	672174	5523795	42	17	3	90°
2360	B	672274	5523815	76	18	3	83°n
2370	B	672368	5523823	91	21	4	83°n

C1, C2							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1010	B	658763	5525363	88	49	5	76°s
1020	B	658884	5525344	89	51	6	80°s
1030	B	658974	5525327	89	64	6	85°s
1040	A	659060	5525262	84	45	5	
1050	C	659166	5525298	79	27	4	85°s
1060	A	659265	5525219	85	21	4	
1070	D	659372	5525220	76	28	4	
1080	A	659470	5525161	106	26	4	
1090	E	659576	5525262	37	7	2	
1100	B	659674	5525214	29	5	2	
1110	D	659774	5525170	40	17	3	
1120	B	659870	5525167	33	7	2	
1130	C	659973	5525079	94	25	4	79°s
1140	B	660068	5525073	81	45	5	72°s
1150	C	660177	5525017	100	45	5	84°s
1160	B	660268	5524951	102	28	4	
1170	C	660374	5524952	112	33	4	
1180	E	660478	5524942	145	53	6	
1190	B	660573	5524927	123	61	6	
1200	F	660666	5524939	136	75	6	
1210	C	660767	5524948	151	85	6	86°s
1220	F	660878	5524863	121	61	6	
1230	C	660972	5524916	96	51	6	87°n
1240	H	661076	5524965	84	51	6	
1250	C	661169	5524959	68	49	5	
1260	F	661264	5525018	37	17	3	
1270	C	661378	5524969	23	6	2	90°
1300	H	661675	5524848	20	13	3	65°n
1310	B	661778	5524864	57	27	4	
1320	F	661870	5524789	66	39	5	83°n
1330	B	661971	5524737	73	41	5	79°n
1340	G	662063	5524722	99	51	6	80°n
1350	B	662172	5524650	96	46	5	66°n
1360	F	662269	5524608	125	28	4	79°n
1370	B	662369	5524519	70	40	5	73°n
1380	F	662471	5524482	92	32	4	79°n
1390	B	662573	5524823	89	33	4	65°s
1390	C	662565	5524455	85	57	6	71°n
1400	F	662674	5524427	90	38	5	85°n
1400	G	662677	5524753	28	15	3	76°s
1410	B	662774	5524736	16	9	2	
1410	C	662772	5524455	111	22	4	

D1, D2							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1000	A	658677	5525252	93	62	6	
1010	C	658767	5525189	88	49	5	79°n
1020	A	658879	5525174	84	28	4	86°s
1030	C	658970	5525138	89	36	5	
1050	D	659161	5525076	107	36	5	
1090	F	659579	5525045	70	19	3	87°n

Appendix 3 - VTEM Conductors

D1, D2							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1100	A	659672	5525021	86	31	4	83°s
1110	E	659774	5525014	92	43	5	
1120	A	659868	5524960	142	53	6	84°s
1130	D	659974	5524922	117	46	5	
1140	A	660072	5524810	102	33	4	
1160	A	660271	5524587	33	17	3	
1170	D	660361	5524641	63	21	4	
1180	D	660478	5524723	80	27	4	
1190	C	660570	5524245	123	61	6	73°s
1200	D	660677	5524211	136	2	1	81°n
1200	E	660672	5524532		1	1	
1210	D	660773	5524488	16	7	2	
1210	E	660768	5524159	16	3	1	80°n
1220	E	660876	5524116	41	24	4	77°n
1230	E	660967	5524384			1	
1230	F	660968	5524111	81	3	1	85°n
1240	E	661074	5524102	18	2	1	78°n
1240	F	661070	5524337	18	8	2	
1250	E	661167	5524368	33	20	4	63°s
1260	D	661276	5524461	35	8	2	

E1, E2, E3							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1230	D	660973	5524728	81	17	3	
1240	G	661073	5524772	92	38	5	81°n
1250	D	661170	5524784	100	40	5	
1260	E	661267	5524739	99	20	3	
1270	D	661375	5524700	71	16	3	
1280	D	661470	5524683	28	10	2	
1290	B	661579	5524484	22	16	3	75°s
1300	F	661676	5524387	58	9	2	
1300	G	661676	5524588	36	23	4	
1310	C	661776	5524537	42	20	3	
1310	D	661775	5524346	92	33	4	
1320	E	661868	5524358	73	52	6	
1330	C	661973	5524319	121	76	6	
1340	F	662071	5524326	101	72	6	
1350	C	662174	5524288	93	62	6	
1360	E	662273	5524267	126	63	6	
1370	C	662368	5524179	117	71	6	70°n
1380	E	662474	5524177	77	41	5	
1390	D	662571	5524184	58	31	4	78°s
1400	E	662667	5524070	72	50	6	
1410	D	662767	5524032	79	57	6	
1420	E	662867	5523825	78	31	4	
1420	F	662874	5524043	84	59	6	
1430	B	662972	5524051	92	58	6	
1430	C	662973	5523847	63	33	4	
1440	D	663073	5523753	75	41	5	
1440	E	663072	5523983	81	57	6	84°n
1450	B	663171	5523988	84	56	6	
1450	C	663168	5523711	103	44	5	
1460	D	663267	5523716	53	25	4	
1460	E	663266	5523976	67	35	5	
1470	B	663373	5524007	64	23	4	
1480	C	663466	5523859	70	35	4	
1480	D	663470	5524037	34	12	3	76°s
1490	C	663573	5523984	34	11	3	88°s
1490	D	663571	5523847	85	34	4	
1500	E	663665	5523869	24	9	2	
1510	C	663769	5523848	56	15	3	
1520	E	663869	5523703	118	24	4	81°n

Appendix 3 - VTEM Conductors

E1, E2, E3							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1520	F	663873	5523935	91	48	5	76°s
1530	B	663972	5523831	104	60	6	
1540	D	664068	5523663	95	51	6	83°n
1540	E	664070	5523804	93	64	6	
1550	B	664166	5523741	98	54	6	76°n
1560	D	664268	5523742	105	37	5	81°n
1570	B	664376	5524113	8	6	2	86°n
1570	C	664370	5523687	79	35	4	79°n
1570	D	664367	5523495	89	40	5	
1580	D	664465	5523756	114	40	5	
1580	E	664469	5523982	144	18	3	66°s
1590	B	664569	5523768	144	26	4	
1600	D	664669	5523823	137	32	4	
1610	B	664766	5523837	109	45	5	
1620	E	664871	5523811	92	42	5	87°n
1630	C	664964	5523817	64	15	3	87°s
1640	D	665070	5523769			1	
1650	B	665167	5523722			1	

F1, F2							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1200	C	660676	5523505	11	3	1	82°s
1210	F	660767	5523489	148	35	5	
1220	D	660871	5523535	41	24	4	65°s
1230	G	660967	5523785		3	1	
1230	H	660964	5523450	32	13	3	
1240	C	661074	5523483	63	17	3	
1240	D	661080	5523771		4	1	
1250	F	661170	5523570	96	27	4	71°s
1260	C	661267	5523588	44	18	3	66°s
1270	E	661368	5523582	81	34	4	66°s
1290	C	661572	5523556	141	70	6	
1300	E	661665	5523547	138	61	6	
1310	E	661773	5523553	114	53	6	75°s
1320	D	661866	5523575	108	55	6	67°s
1330	D	661971	5523520	136	54	6	77°s
1340	E	662068	5523561	100	53	6	64°s
1350	D	662177	5523511	72	44	5	70°s
1360	D	662269	5523515	61	35	4	73°s
1370	D	662369	5523511	91	55	6	76°s
1380	D	662467	5523540	82	61	6	62°s
1390	E	662578	5523492	81	44	5	72°s
1400	D	662665	5523510	77	60	6	62°s
1410	E	662767	5523458	59	28	4	75°s
1420	D	662861	5523502	71	34	4	73°s
1430	D	662972	5523439	89	45	5	81°s
1440	C	663071	5523420	93	60	6	
1450	D	663168	5523413	111	69	6	
1460	C	663273	5523408	135	68	6	
1470	C	663374	5523410	122	60	6	82°s
1480	B	663468	5523389	102	55	6	72°s
1490	E	663571	5523326	86	46	5	79°s
1500	C	663669	5523297	88	45	5	79°s
1500	D	663666	5523491	31	16	3	67°s
1510	D	663774	5523464	47	36	5	72°s
1510	E	663770	5523209	60	40	5	
1520	C	663870	5523306	88	62	6	74°s
1520	D	663868	5523470	46	37	5	64°s
1530	C	663972	5523441	54	22	4	81°s
1530	D	663972	5523273	81	42	5	83°s
1540	C	664061	5523301	17	11	3	67°n
1550	C	664169	5523312	42	12	3	89°s

F1, F2							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1560	C	664269	5523336	51	33	4	74°s
1570	E	664372	5523298	58	31	4	85°s
1580	C	664469	5523313	54	27	4	79°s
1590	C	664573	5523301	91	28	4	79°s
1600	C	664671	5523299	88	42	5	
1610	C	664765	5523309	99	70	6	
1620	D	664868	5523324	80	34	4	
1630	D	664965	5523319	44	11	3	

G							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1620	G	664862	5525906	45	27	4	83°s
1630	A	664969	5525818	28	17	3	75°n

H							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1780	A	666467	5525154	43	20	3	84°s
1790	E	666569	5525110	23	18	3	82°s
1800	A	666666	5525057	20	15	3	84°n
1810	F	666773	5525055	16	12	3	80°s
1820	A	666869	5525019	17	12	3	86°s
1830	E	666972	5524996	11	8	2	85°n
1860	A	667270	5524864	6	5	2	85°n
1870	F	667366	5524852	87	4	1	86°s
1880	A	667472	5524817	66	4	1	82°n
1890	G	667573	5524805	12	5	2	79°s
1900	A	667666	5524765	43	12	3	88°n
1910	E	667770	5524747	9	4	1	83°n
1920	A	667868	5524710	61	3	1	84°n
1940	A	668067	5524648	82	4	1	79°s
2000	E	668668	5524496	55	2	1	89°s
2010	A	668773	5524457	46	2	1	87°n
2020	E	668862	5524443	53	2	1	83°s
2030	B	668976	5524398	53	2	1	79°n
2070	B	669370	5524248	16	6	2	86°n
2080	D	669480	5524267	23	8	2	89°n
2090	B	669569	5524240	26	9	2	81°n
2100	D	669678	5524234	18	8	2	85°n
2110	B	669765	5524224	19	7	2	77°n
2120	D	669878	5524232	71	2	1	83°n
2170	B	670369	5524090	12	7	2	82°n
2180	C	670472	5524094	16	6	2	87°n
2190	B	670564	5524073	27	2	1	89°n
2200	C	670667	5524106	21	4	1	80°n
2210	B	670771	5524091	32	5	2	80°n
2220	D	670872	5524109	35	5	1	87°n
2300	C	671678	5524107	7	3	1	85°n
2310	C	671774	5524129	6	3	1	90°

J							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
2020	F	668868	5524912	53	31	4	81°s
2030	A	668974	5524908	53	44	5	82°s
2040	E	669074	5524899	68	58	6	72°s
2050	A	669169	5524838	62	47	5	85°s
2060	E	669272	5524822	46	36	5	79°s
2070	A	669366	5524748	42	23	4	84°n
2080	E	669474	5524706	17	8	2	87°n
2090	A	669567	5524673	21	6	2	89°n

Appendix 3 - VTEM Conductors

J							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
2100	E	669675	5524627	45	18	3	80°s
2110	A	669765	5524582	39	21	4	90°
2120	E	669875	5524599	71	37	5	89°s
2130	A	669967	5524591	64	44	5	87°s
2140	C	670069	5524567	61	27	4	79°s
2150	A	670170	5524521	41	18	3	89°n
2160	E	670279	5524503	41	20	3	82°s
2170	A	670373	5524446	17	10	2	75°n
2180	D	670473	5524423	8	4	1	85°s
2190	A	670565	5524404	27	12	3	84°s
2200	D	670670	5524400	42	16	3	85°s
2210	A	670773	5524389	78	36	5	87°n
2220	E	670871	5524397	107	63	6	86°s
2230	A	670970	5524383	92	48	5	83°n
2240	C	671071	5524404	60	39	5	84°s
2250	B	671181	5524400	62	42	5	87°s
2260	B	671277	5524396	46	18	3	90°s
2270	C	671361	5524409	11	8	2	85°s
2280	A	671480	5524407	11	6	2	88°n
2290	C	671569	5524457	9	6	2	89°s
2300	A	671671	5524564	40	12	3	
2300	B	671673	5524430	14	7	2	87°s
2310	D	671774	5524527	68	33	4	
2320	A	671869	5524456	62	40	5	82°n
2330	C	671972	5524478	67	32	4	79°n
2340	A	672073	5524585	75	48	5	
2351	A	672178	5524581	84	51	6	
2360	A	672266	5524561	95	60	6	
2370	C	672369	5524534	75	44	5	

K							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
2240	D	671069	5524602	67	34	4	75°s
2250	C	671175	5524596	83	57	6	83°s
2260	A	671282	5524581	77	46	5	90°
2270	D	671361	5524601	38	15	3	80°s

L1, L2, L3, L4, L5, L6							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1620	C	664868	5523099	44	12	3	90°
1630	E	664964	5523051	25	10	3	82°n
1640	C	665062	5523065	32	7	2	81°s
1650	C	665176	5523033	27	8	2	82°n
1660	C	665273	5523136	41	4	1	87°s
1670	B	665369	5523055	114	34	4	
1680	C	665465	5523070	134	66	6	
1690	B	665575	5523025	143	80	6	
1700	C	665675	5523036	123	68	6	89°n
1710	D	665774	5523085	127	48	5	
1720	B	665876	5523161	138	50	6	
1720	C	665876	5522977	116	22	4	89°n
1730	C	665976	5522945	13	6	2	87°s
1730	D	665970	5523206	104	37	5	
1740	B	666076	5523220	67	23	4	
1740	C	666070	5522761	14	8	2	79°n
1750	B	666169	5522844	16	6	2	
1750	C	666176	5523277	44	14	3	86°s
1760	B	666276	5523277	93	23	4	90°
1770	B	666368	5523295	95	25	4	89°n
1780	C	666469	5523296	116	27	4	81°n

Appendix 3 - VTEM Conductors

L1, L2, L3, L4, L5, L6							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1790	C	666570	5523312	115	27	4	88°n
1800	C	666674	5523660	34	13	3	87°s
1800	D	666669	5523305	68	30	4	81°n
1810	C	666766	5523366	31	12	3	89°s
1810	D	666772	5523655	30	16	3	77°s
1820	C	666870	5523642	21	12	3	85°n
1820	D	666872	5523380	94	26	4	79°n
1830	C	666976	5523404	97	47	5	87°n
1840	B	667072	5523668	73	17	3	83°s
1840	C	667069	5523406	74	43	5	79°n
1850	C	667175	5523442	55	23	4	86°s
1850	D	667176	5523700	35	9	2	90°
1860	C	667265	5523689	33	13	3	81°n
1860	D	667266	5523441	41	18	3	86°n
1870	C	667368	5523458	27	8	2	90°
1870	D	667368	5523708	38	13	3	85°n
1880	B	667472	5523745	66	24	4	
1880	C	667470	5523451	40	9	2	82°n
1890	C	667574	5523029	35	1	1	88°s
1890	D	667574	5523470	35	7	2	85°n
1890	E	667571	5523734	92	28	4	
1900	C	667673	5523713	99	30	4	
1900	D	667672	5523305	11	5	2	80°n
1900	E	667675	5523023	11	5	2	86°n
1910	B	667767	5523052	7	4	1	88°n
1910	C	667764	5523329	7	4	1	87°s
1910	D	667766	5523709	106	23	4	
1920	B	667865	5523652	61	25	4	
1920	C	667868	5523338	7	5	1	88°n
1920	D	667866	5523057	7	1	1	90°
1930	B	667975	5523366	39	24	4	90°
1930	C	667975	5523558	76	24	4	78°n
1940	C	668073	5523562	105	51	6	82°n
1940	D	668074	5523372	78	27	4	86°n
1950	B	668174	5523375	91	26	4	86°n
1950	C	668170	5523562	82	58	6	78°n
1960	B	668265	5523382	79	33	4	84°n
1960	C	668266	5523583	56	28	4	86°n
1960	D	668266	5523743	74	24	4	
1970	B	668373	5523721	57	20	4	
1970	C	668375	5523586	47	29	4	83°n
1970	D	668374	5523395	78	39	5	85°n
1980	A	668466	5523179	14	11	3	80°n
1980	B	668466	5523408	55	25	4	89°s
1980	C	668466	5523586	52	20	4	87°n
1990	B	668569	5523622	53	16	3	90°
1990	C	668571	5523405	21	10	3	87°n
1990	D	668572	5523193	8	6	2	85°s
2000	B	668669	5523245	24	8	2	88°s
2000	C	668672	5523636	24	8	2	88°n
2010	C	668772	5523596	53	28	4	77°n
2010	D	668768	5523238	53	2	1	80°n
2020	B	668875	5523264	73	1	1	86°s
2020	C	668872	5523645	73	33	4	83°s
2030	D	668963	5523622	48	18	3	74°n
2030	E	668967	5523298	48	1	1	80°n
2040	C	669069	5523331	20	12	3	87°n
2050	C	669168	5523332	16	10	3	88°n
2060	C	669270	5523357	13	5	1	85°n

M							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1180	C	660479	5522456			1	

Appendix 3 - VTEM Conductors

M							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1210	G	660765	5522635			1	
1280	C	661469	5522784			1	
1290	D	661574	5522794	43	23	4	78°s
1300	D	661674	5522791	9	7	2	70°s
1310	F	661769	5522761	114	5	1	87°n
1320	C	661875	5522669			1	
1340	D	662065	5522730	18	7	2	79°s
1350	E	662175	5522705	27	10	3	81°s
1360	C	662265	5522820			1	
1370	E	662371	5522748		3	1	
1380	C	662468	5522681	16	6	2	81°s
1390	F	662569	5522583			1	

N1, N2, N3, N4							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1290	E	661576	5522135	43	23	4	
1300	C	661663	5522092	34	13	3	82°s
1310	G	661778	5522045	82	4	1	90°
1330	E	661967	5522025	79	3	1	90°
1340	C	662062	5522052	18	7	2	72°s
1350	F	662168	5522015	27	10	3	87°s
1360	B	662268	5522023	19	5	1	82°s
1370	F	662368	5521992	93	27	4	83°s
1380	B	662467	5522008	16	7	2	76°s
1390	G	662566	5521963	37	10	3	89°s
1400	C	662676	5521964	8	5	1	86°s
1410	F	662773	5521931	7	6	2	88°s
1420	C	662867	5521969	8	6	2	81°s
1430	E	662968	5521942	30	16	3	87°s
1440	B	663076	5521922			1	
1450	E	663175	5522026	49	5	1	82°s
1490	F	663568	5521995	15	4	1	80°n
1500	B	663671	5522000	105	49	5	83°s
1510	F	663770	5521999	115	52	6	89°n
1520	B	663865	5522025	79	25	4	77°s
1530	E	663971	5522010	34	21	4	80°n
1540	B	664060	5522029	72	30	4	85°s
1550	D	664166	5522017	116	70	6	84°n
1560	B	664267	5522063	155	42	5	83°s
1570	F	664369	5522039	105	24	4	86°s
1580	B	664466	5522063	40	16	3	87°s
1590	D	664573	5522063	88	39	5	86°s
1600	B	664667	5522074	102	48	5	77°s
1610	D	664771	5522057	125	37	5	88°n
1620	B	664868	5522077	124	38	5	85°s
1630	F	664970	5522063	123	68	6	90°
1640	B	665075	5522085	69	41	5	79°s
1650	D	665172	5522084	57	24	4	88°s
1660	B	665271	5522115	63	21	4	82°s
1670	C	665369	5522102	73	50	6	89°n
1680	B	665468	5522135	79	35	4	81°s
1690	C	665564	5522125	50	26	4	89°s
1700	B	665663	5522177	35	11	3	80°s
1710	B	665764	5522186	22	10	2	82°s
1710	C	665766	5522434	17	9	2	83°s
1720	D	665873	5522197	99	3	1	88°n
1730	B	665968	5522220	10	5	1	88°s
1780	D	666473	5522275	116	3	1	87°n
1790	B	666571	5522306	115	1	1	87°s
1810	B	666769	5522346	11	7	2	87°n
1820	E	666868	5522339	24	13	3	89°n
1830	B	666971	5522372	25	14	3	87°n
1840	D	667067	5522382	52	22	4	87°s
1850	B	667175	5522423	57	18	3	69°s

N1, N2, N3, N4							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1860	E	667274	5522413	11	6	2	90°
1870	B	667377	5522455	17	9	2	77°s
1880	D	667470	5522455	32	12	3	83°s
1890	B	667568	5522470	110	15	3	68°s
2040	B	669071	5522816	9	5	1	89°n
2050	D	669172	5522821	31	2	1	87°n
2060	B	669266	5522859	13	2	1	89°s
2070	D	669365	5522885	99	3	1	80°s
2080	B	669466	5522924	5	4	1	88°n
2090	D	669574	5522925	21	13	3	87°s
2100	B	669674	5522961	94	2	1	83°s
2110	D	669774	5522953	90	4	1	86°n
2120	B	669872	5522989	84	2	1	86°s
2130	C	669968	5523000	84	3	1	86°n
2150	C	670168	5523039	7	4	1	88°s
2160	C	670268	5523077	29	12	3	85°s
2170	D	670369	5523075	54	10	3	86°s
2180	A	670470	5523102	68	13	3	87°s
2190	D	670568	5523122	46	10	2	84°n
2200	A	670673	5523147	65	19	3	83°s
2210	D	670774	5523153	47	14	3	89°n
2220	B	670869	5523164	84	25	4	84°s
2230	C	670971	5523186	15	5	2	80°n
2240	A	671068	5523235	35	2	1	88°s

O1, O2, O3, O4, O5, O6							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1180	B	660477	5522039	95	2	1	72°s
1190	D	660567	5522025	73	28	4	75°s
1200	B	660673	5522025	23	6	2	84°s
1210	H	660767	5522093	14	3	1	
1220	B	660874	5521901	74	32	4	87°s
1220	C	660872	5522046	33	11	3	
1230	I	660975	5521980	68	24	4	81°s
1240	B	661081	5521997	106	54	6	74°s
1250	G	661163	5521982	107	69	6	77°s
1260	B	661270	5521958	76	52	6	68°s
1270	F	661369	5521931	57	34	4	80°s
1280	B	661474	5521925	62	32	4	73°s
1290	F	661574	5521896	59	24	4	82°s
1300	B	661661	5521788	113	17	3	75°s
1310	H	661774	5521754	82	23	4	78°s
1320	B	661860	5521837	31	9	2	
1340	B	662063	5521822	26	9	2	
1380	A	662466	5521585	26	10	3	
1390	H	662570	5521648	21	8	2	81°s
1400	B	662675	5521726	15	11	3	
1410	G	662775	5521745	24	17	3	74°s
1420	B	662865	5521770	8	7	2	74°s
1430	F	662965	5521752	7	5	1	85°s
1460	B	663267	5521780	76	3	1	89°n
1500	A	663665	5521610	35	17	3	71°s
1510	G	663773	5521609	115	4	1	84°s
1520	A	663869	5521652	79	25	4	89°n
1530	F	663971	5521646	79	23	4	88°n
1540	A	664059	5521662	131	29	4	88°s
1550	E	664170	5521674	102	39	5	87°s
1560	A	664272	5521679	47	17	3	88°s
1570	G	664372	5521676	55	22	4	85°n
1580	A	664466	5521731	71	37	5	84°s
1590	E	664573	5521731	89	55	6	84°s
1600	A	664668	5521755	88	34	4	81°s

Appendix 3 - VTEM Conductors

O1, O2, O3, O4, O5, O6							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1610	E	664772	5521759	35	15	3	90°
1620	A	664874	5521818	56	20	4	
1630	G	664973	5521762	94	47	5	
1640	A	665076	5521760	98	31	4	88°s
1650	E	665171	5521751	89	36	5	86°n
1660	A	665268	5521775	83	38	5	81°s
1670	D	665364	5521770	87	41	5	85°s
1680	A	665468	5521770	72	22	4	
1690	D	665566	5521751	65	30	4	87°n
1700	A	665668	5521832	86	27	4	
1710	A	665767	5521774	52	12	3	86°n
1720	E	665867	5521777	99	15	3	79°n
1730	A	665972	5521809	110	12	3	88°s
1740	D	666078	5521814	92	23	4	86°n
1750	A	666172	5521863	94	26	4	81°s
1760	C	666275	5521857	114	12	3	90°
1770	A	666376	5521876	108	17	3	85°s
1780	E	666475	5522047	116	3	1	88°s
1790	A	666570	5522066	115	1	1	82°s
1800	E	666673	5522182			1	
1810	A	666772	5522100	16	9	2	82°n
1820	F	666868	5522111	31	16	3	90°
1830	A	666971	5522154	82	43	5	80°s
1840	E	667071	5522199	102	58	6	84°n
1850	A	667172	5522240	92	45	5	84°s
1860	F	667274	5522221	40	17	3	84°s
1870	A	667372	5522079	48	18	3	90°s
1880	E	667469	5522277	99	22	4	85°n
1880	F	667469	5522083	46	18	3	89°s
1890	A	667568	5522315	89	33	4	81°s
1900	F	667668	5522312	130	39	5	84°n
1910	A	667771	5522351	117	38	5	84°s
1920	E	667871	5522338	127	36	5	
1930	A	667970	5522367	56	25	4	
1940	E	668068	5522421	94	36	5	90°
1950	A	668171	5522441	60	34	4	83°s
1960	A	668267	5522473	45	24	4	77°s
1970	E	668373	5522484	36	10	2	85°s
2000	A	668666	5522537	33	23	4	80°s
2010	E	668772	5522548	49	31	4	82°s
2020	A	668862	5522580	40	17	3	67°s
2030	F	668969	5522453	48	1	1	90°
2040	A	669070	5522506	9	5	1	89°s
2050	E	669172	5522528	31	7	2	74°s
2060	A	669262	5522560			1	
2070	E	669367	5522624		4	1	
2080	A	669465	5522662		2	1	
2090	E	669568	5522554			1	
2100	A	669667	5522578		2	1	
2110	E	669776	5522677	90	2	1	88°n
2120	A	669871	5522702	84	2	1	87°s
2130	D	669968	5522711	84	2	1	87°s
2140	A	670073	5522884	26	12	3	85°s
2150	D	670170	5522737	45	15	3	88°s
2160	A	670264	5522765	34	13	3	85°s
2160	B	670267	5522910	12	7	2	89°s
2220	A	670871	5522958	84	3	1	85°s
2270	A	671375	5523053	31	20	4	90°
2280	C	671476	5523068	23	2	1	84°n
2290	A	671573	5523114	12	7	2	76°n
2300	E	671673	5523104	21	11	3	90°
2310	A	671772	5523136	26	12	3	90°
2320	C	671871	5523134	52	12	3	89°n
2330	A	671971	5523154	12	5	1	90°

Appendix 3 - VTEM Conductors

O1, O2, O3, O4, O5, O6							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
2340	C	672072	5523166	7	4	1	86°s
2351	C	672166	5523190	42	3	1	82°s
2360	C	672273	5523209	76	18	3	88°s
2370	A	672369	5523244	11	5	2	86°s

P1, P2							
Line	**ID**	**UTM e**	**UTM n**	**ConBF**	**ConSF**	**Grade**	**Dip**
1180	A	660475	5521595	95	30	4	80°s
1190	E	660572	5521575	97	30	4	86°n
1200	A	660676	5521594	116	57	6	78°s
1210	I	660769	5521560	72	30	4	86°s
1220	A	660877	5521535	101	25	4	83°s
1230	J	660970	5521504	110	57	6	80°s
1240	A	661080	5521523	90	43	5	73°s
1250	H	661166	5521531	111	60	6	84°s
1260	A	661273	5521567	106	51	6	74°s
1270	G	661367	5521552	97	34	4	80°s
1280	A	661470	5521556	124	54	6	76°s
1290	G	661572	5521551	157	41	5	90°
1300	A	661666	5521556	122	36	5	72°s
1310	I	661764	5521506	135	75	6	
1320	A	661864	5521523	66	40	5	77°s
1330	F	661972	5521635	79	32	4	
1340	A	662067	5521478	53	27	4	83°s
1350	G	662176	5521455	51	28	4	90°
1360	A	662275	5521456	68	24	4	79°s
1370	G	662365	5521412	84	26	4	89°s
1400	A	662674	5521413	15	3	1	86°s
1410	H	662768	5521384	35	16	3	74°s
1420	A	662870	5521393	63	25	4	71°s
1430	G	662967	5521366	57	28	4	86°s
1440	A	663064	5521400	57	34	4	74°s
1450	F	663169	5521373	49	29	4	83°s
1460	A	663275	5521401	76	38	5	78°s
1470	D	663367	5521383	83	29	4	79°s
1480	A	663470	5521381	79	20	3	76°s
1490	G	663568	5521483	22	5	2	

Appendix 1 - Map Images

Images of the 5 maps provided with this report are below. They are

- total magnetic intensity from the VTEM survey
- calculated vertical magnetic gradient from the VTEM survey
- Z component B field channel 26 amplitude (BFz26) from the VTEM survey
- B field time constant (TAUbf) from the VTEM survey
- regional compilation based on the 1990 Aerodat HEM survey (GDS1033)

Map surrounds, title block and legend are not shown.

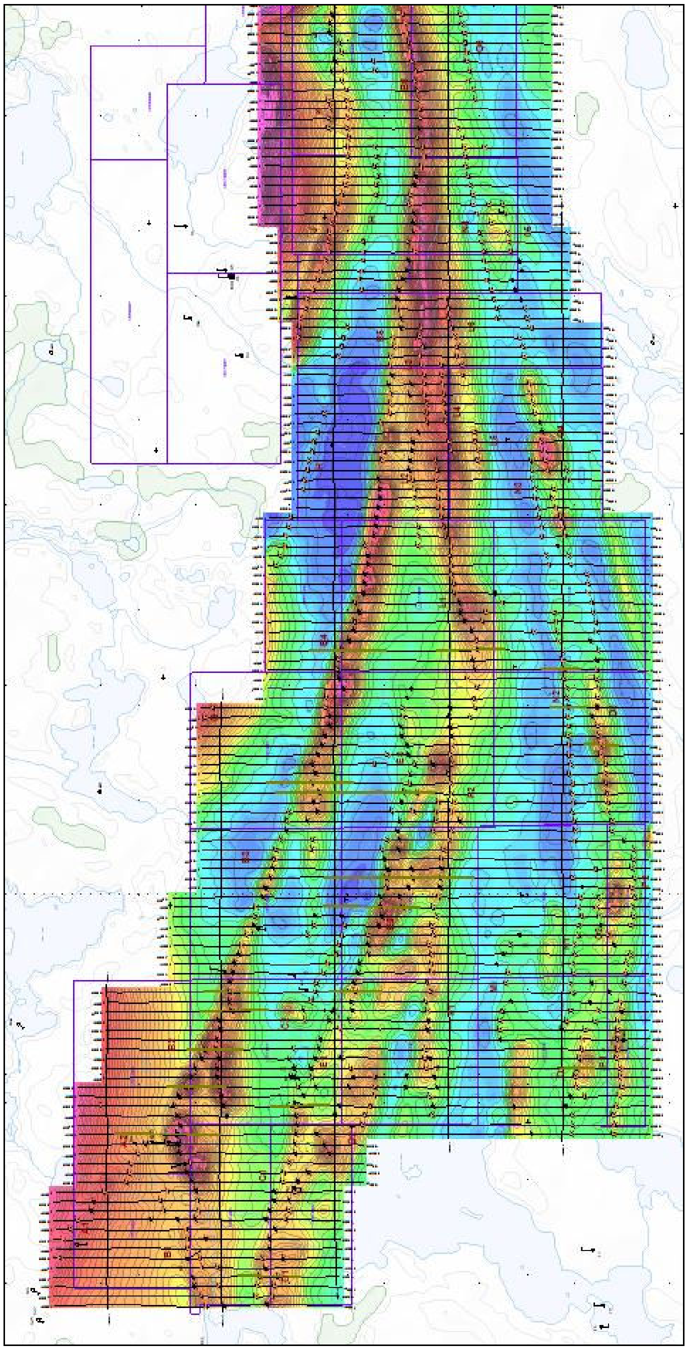


Figure 1. Total magnetic intensity

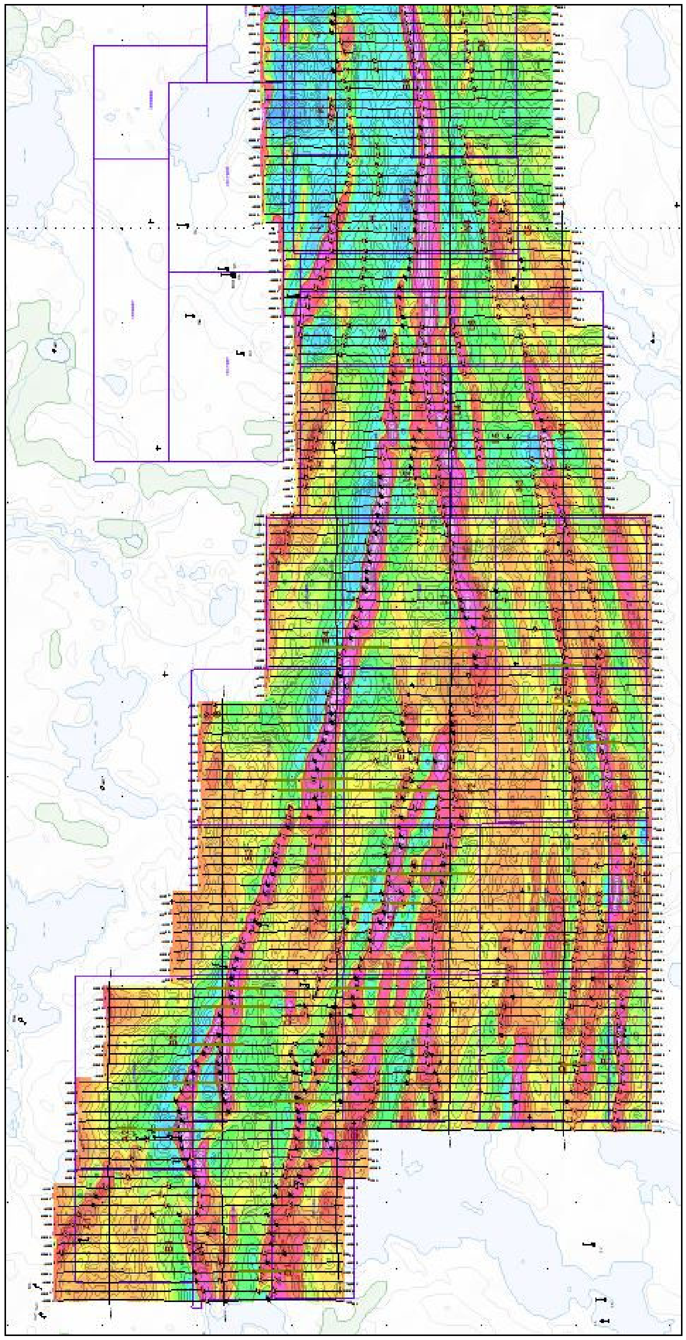


Figure 2. Vertical magnetic gradient

Appendix 4 - Map Images

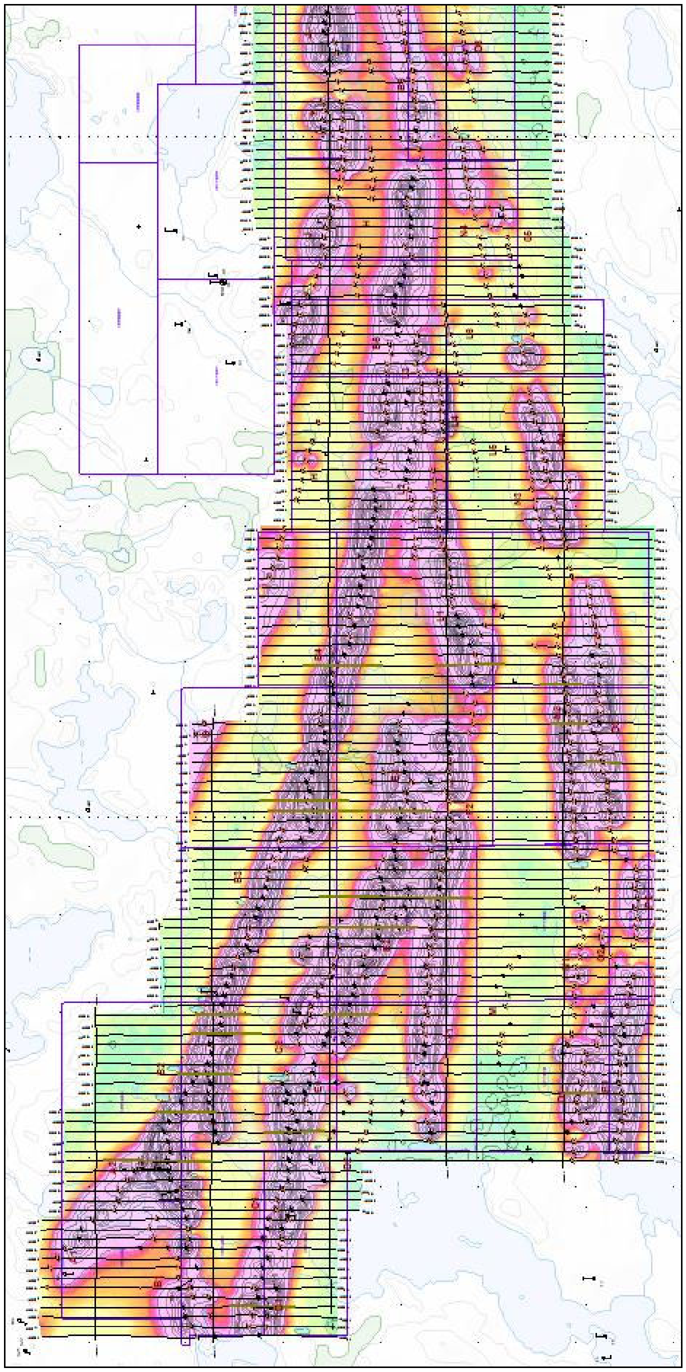


Figure 3. VTEM Z component B field channel 26 amplitude

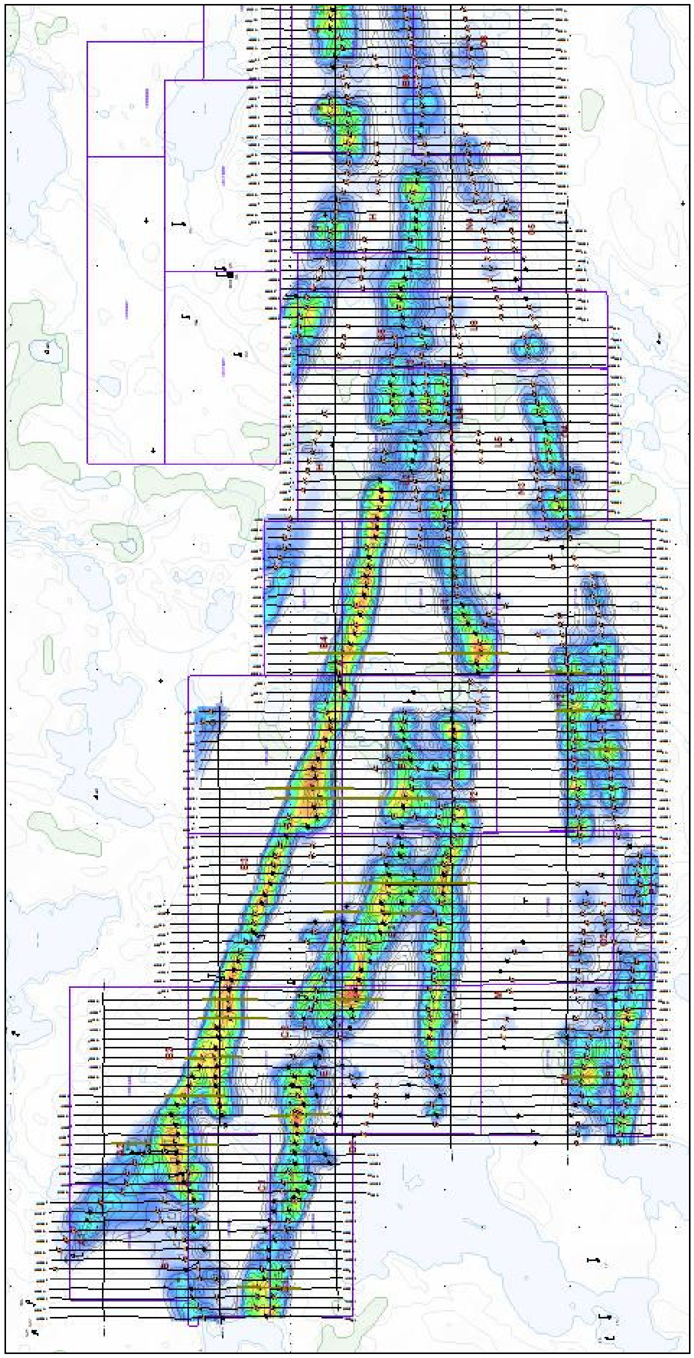


Figure 4. VTEM Z component B field time constant

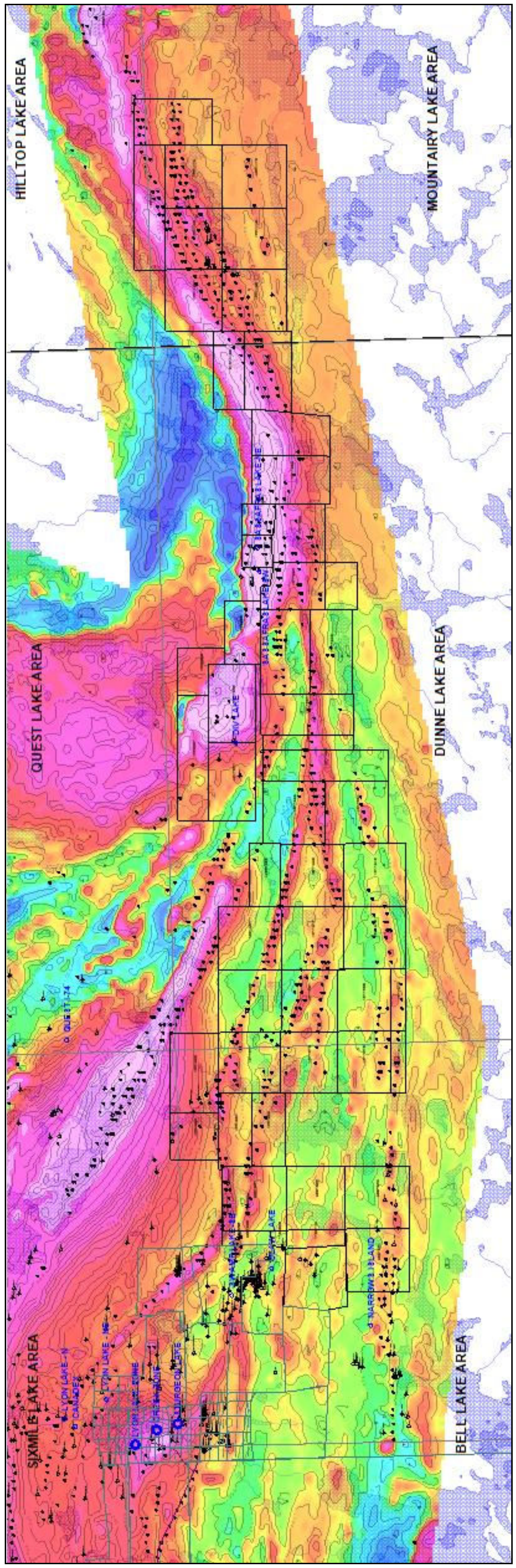


Figure 5. Regional compilation based on the 1990 Aerodat survey

SGH – SOIL GAS HYDROCARBON
Predictive Geochemistry

for

EXCALIBUR RESOURCES LTD.

"STURGEON LAKE SURVEY"

"LINES 39-40"

June 30, 2010

** Dale Sutherland, Eric Hoffman*

Activation Laboratories Ltd

(* - author)

EVALUATION OF SGH "SOIL SAMPLE" DATA

EXPLORATION FOR: "*VMS*" TARGETS

Workorder: A10-3207

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SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY - OVERVIEW

SGH is a deep penetrating geochemistry that involves the analysis of surficial samples from over potential mineral or petroleum targets. The analysis involves the testing for 162 hydrocarbon compounds in the C5-C17 carbon series range applicable to a wide variety of sample types. SGH has been successful for delineating targets found at over 500 metres in depth. Samples of various media have been successfully analyzed such as soil (any horizon), drill core, rock, peat, lake-bottom sediments and even snow. The SGH analysis incorporates a very weak leach, essentially aqueous, that only extracts the surficial bound hydrocarbon compounds and those compounds in interstitial spaces around the sample particles. These are the hydrocarbons that have been mobilized from the target depth. SGH is unique and should not be confused with other hydrocarbon tests or traditional analyses that measure C1 (Methane) to C5 (Pentane) or other gases. SGH is also different from soil hydrocarbon tests that thermally extract or desorb all of the hydrocarbons from the whole soil sample. This test is less specific as it does not separate the hydrocarbons and thus does not identify or measure the responses as precisely. These tests also do not use a forensic approach to identification. The hydrocarbons in the SGH extract are separated by high resolution capillary column gas chromatography to isolate, confirm, and measure the presence of only the individual hydrocarbons that have been found to be of interest from initial research and development and from performance testing in two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

Over the past 14 years of research, Activation Laboratories Ltd. has developed an in-depth understanding of the unique SGH signatures associated with different commodity targets. Using a forensic approach we have developed target signatures or templates for identification, and the understanding of the expected geochromatography that is exhibited by each class of SGH compounds. In 2004 we began to include an SGH interpretation report delivered with the data to enable our clients to realize the complete value and understanding of the SGH results in the shortest time frame and provide the benefit from past research sponsored by Actlabs, CAMIRO, OMET and other projects.

SGH has attracted the attention of a large number of Exploration companies. In the above mentioned research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 400 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were selected since other inorganic geochemistries were unsuccessful at illustrating anomalies related to the target.

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SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW

Although Actlabs was only provided with the samples and their coordinates, SGH was able to locate the blind mineralization with exceptional accuracy in 9 of the 10 surveys. SGH has recently been very successful in exploration and discovery of unknown targets e.g. Golden Band Resources drilled an SGH anomaly and discovered a significant vein containing "visible" gold. (www.goldenbandresources.com)

Sample Type and Survey Design: It is highly recommended that a ***minimum*** of 50 sample "locations" is preferred to obtain enough samples into background areas on both sides of small suspected targets (wet gas plays, Kimberlite pipes, Uranium Breccia pipes, veins, etc.). SGH is not interpreted in the same way as inorganic based geochemistries. SGH must have enough samples over both the target and background areas in order to fully study the dispersion patterns or geochromatography of the SGH classes of compounds. Based on our minimum recommendation of at least 50 sample locations we further suggest that all samples be evenly spaced with about one-third of the samples over the target and one-third on each side of the target in order for SGH to be used for exploration. Targets other than gas plays, pipes, dykes or veins usually require additional samples to represent both the target and background areas.

SGH has been shown to be very robust to the use of different sample types even "within" the same survey or transect. Research has illustrated that it is far more important to the ultimate interpretation of the results to take a complete sample transect or grid than to skip samples due to different sample media. The most ideal natural sample is still believed to be soil from the "Upper B-Horizon", however excellent results can also be obtained from other soil horizons, humus, peat, lake-bottom sediments, and even snow. The sampling design is suggested to use evenly spaced samples from 15 metres to 200 metres and line spacing from 50 metres to 500 metres depending on the size and type of target. A 4:1 ratio is suggested, however, larger orientation surveys have also been successful. Ideally even large grids should have one-third of the samples over the target and two-thirds of the samples into anticipated background areas. This will allow the proper assessment of the SGH geochromatographic vectoring and background site signature levels with minimal bias. Individual samples taken at significant distances from the main survey area to represent background are not of value in the SGH interpretation as SGH results are not background subtracted. Samples can be drip dried in the field and do not need special preservation for shipping and has been specifically designed to avoid common contaminants from sample handling and shipping. SGH has also been shown to be robust to cultural activities even to the point that successful results and interpretation has been obtained from roadside right-of-ways.

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SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW

Sample Preparation and Analysis: Upon receipt at Activation Laboratories the samples are air-dried in isolated and dedicated environmentally controlled rooms set to 40°C. The dried samples are then sieved. In the sieving process, it is important that compressed air is not used to clean the sieves between samples as trace amounts of compressor oils "may" poison the samples and significantly affect some target signatures. At Activation Laboratories a vacuum is used to clean the sieve between each sample. The -60 mesh sieve fraction (<250 microns, although different mesh sizes can be used at the preference of the exploration geologist) is collected and packaged in a Kraft paper envelope and transported from our sample preparation building to our analytical building on the same street in Ancaster Ontario. Each sample is then extracted, separated by gas chromatography and analyzed by mass spectrometry using customized parameters enabling the highly specific detection of the 162 targeted hydrocarbons at a reporting limit of one part-per-trillion (ppt). This trace level limit of reporting is critical to the detection of these hydrocarbons that, through research, have been found to be related at least in part to the breakdown and release of hydrocarbons from the death phase of microbes directly interacting with a deposit at depth. The hydrocarbon signatures are directly linked to the deposit type which is used as a food source. The hydrocarbons that are mobilized and metabolized by the microbes are released in the death phase of each successive generation. Very few of the hydrocarbons measured are actually due to microbe cell structure, or hydrocarbons present or formed in the genesis of the deposit or from anthropogenic contamination. The results of the SGH analysis is reported in raw data form in an Excel spreadsheet as "semi-quantitative" concentrations without any additional statistical modification.

Mobilized Inorganic Geochemical Anomalies: It is important to note that SGH is essentially "blind" to any inorganic content in samples as only organic compounds as hydrocarbons are measured. Thus inorganic geochemical surface anomalies that have migrated away from the mineral source, and thus may be interpreted and found to be a false target location, is not detected and does not affect SGH results. This fact is of great advantage when comparing the SGH results to inorganic geochemical results. If there is agreement in the location of the anomalies between the organic and inorganic technique, such as Actlabs' Enzyme Leach, a significant increase in confidence in the target location can be realized. If there is no agreement or a shift in the location of the anomalies between the techniques, the inorganic anomaly may have been mobilized in the surficial environment.

The Nugget Effect: As SGH is "blind" to the inorganic content in the survey samples, any concern of a "nugget effect" will not be encountered with SGH data. A "nugget effect" may be of a concern for inorganic geochemistries from surveys over copper, gold, lead, nickel, etc. type targets.

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SOIL GAS HYDROCARBONS (SGH) GEOCHEMISTRY – OVERVIEW

SGH Interpretation Report: All SGH submissions must be accompanied by relative or UTM coordinates so that we may ensure that the sample survey design is appropriate for use with SGH, and to provide an SGH interpretation with the results. In our interpretation procedure, we separate the results into 19 SGH sub-classes. These classes include specific alkanes, alkenes, thiophenes, aromatic, and polyaromatic compounds. Note that none of the SGH hydrocarbons are "gaseous" at room temperature and pressure. The classes are then evaluated in terms of their geochromatography and for coincident compound class anomalies that are unique to different types of mineralization. Actlabs uses a six point scale in assigning a subjective rating of similarity of the SGH signatures found in the submitted survey to signatures previously reviewed and researched from known case studies over the same commodity type. Also factored into this rating is the appropriateness of the survey and amount of data/sample locations that is available for interpretation. This rating scale is described in detail in the following section.

SGH RATING SYSTEM - DESCRIPTION

To date SGH has been found to be successful in the depiction of buried mineralization for Gold, Nickel, VMS, SEDEX, Uranium, Polymetallic, and Copper, as well as for Kimberlites. SGH data has developed into a dual exploration tool. From the interpretation, a vertical projection of the predicted location of the target can be made as well as a statement on the rating of the comparability of the identification of the anticipated target type to that from known case studies, e.g. if the client anticipates the target to be a Gold deposit, what is the rating or comparability that the target is similar to the SGH results over a Gold deposit in Nunavut, shear hosted and sediment hosted deposits in Nevada, or Paleochannel Gold mineralization in Western Australia.

- A rating of "6" is the highest or best rating, and means that the SGH classes most important to describing a Gold related hydrocarbon signature are all present and consistently vector to the same location with well defined anomalies. To obtain this rating there also needs to be other SGH classes that when mapped lend support to the predicted location.
- A rating of "5" means that the SGH classes most important to describing a Gold signature are all present and consistently describe the same location with well defined anomalies. The SGH signatures may not be strong enough to also develop additional supporting classes.
- A rating of "4" means that the SGH classes most important to describing a Gold signature are mostly present describing the location with <u>well</u> defined anomalies. Supporting classes may also be present.

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SGH RATING SYSTEM - DESCRIPTION (continued)

- A rating of "3" means that the SGH classes most important to describing a Gold signature are mostly present and describe the same location with fairly well defined anomalies. Some supporting classes may or may not be present.
- A rating of "2" means that some of the SGH classes most important to describing a Gold signature are present but a predicted location is difficult to determine. Some supporting classes may be present
- A rating of "1" is the lowest rating, and means that one of the SGH classes most important to describing a Gold signature is present but a predicted location is difficult to determine. Supporting classes are also not helpful.
- The SGH rating is directly and significantly affected by the survey design. Small data sets, especially if significantly <50 sample locations, or transects/surveys that are geographically too short will automatically receive a lower rating no matter how impressive an SGH anomaly might be. When there is not enough sample locations to adequately review the SGH class geochromatography, or when the sample spacing is inadequate, or if the spacing is highly variable such that it biases the interpretation of the results, then the confidence in the interpretation of any geochemistry is adversely affected. The SGH rating is not just a rating of the agreement between the SGH pathfinder classes for a particular target type; it is a rating of the overall confidence in the SGH results from this particular survey. The interpretation is only based on the SGH results without any information from other geochemical, geological or geophysical information unless otherwise specified.

SGH RATING SYSTEM – HISTORY & UNDERSTANDING

The subjective SGH rating system has been used since 2004 when Activation Laboratories started providing an SGH Interpretation Report with ever submission for SGH analysis to aid our clients in understanding this organic geochemistry and ensuring that they obtain the best results for their surveys. As explained in the previous section, the SGH rating is not just a rating of how definitive an SGH anomaly is, and is not based just on the map(s) provided in this report. It is a rating of "confidence in the interpreted anomaly" from the combination of (i) are the expected SGH Pathfinder Classes of compounds present from the template for this target type (one Pathfinder Class map is shown in the report, at least three must be present to adequately describe the correct signature for a particular target), (ii) how well do these SGH Pathfinder Classes agree in describing an particular area, (iii) how well does this agreement compare to SGH case studies over known targets of that type, (iv) how well is the interpreted anomaly defined by the survey (i.e. a single

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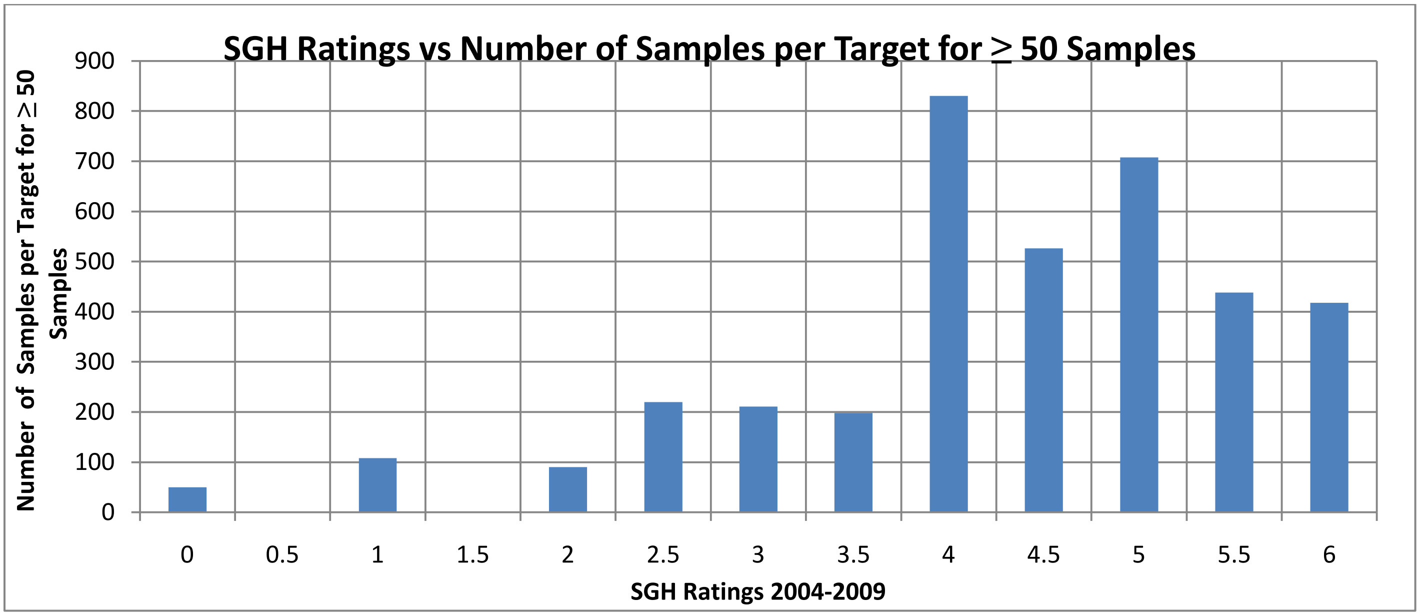
SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)

transect does not provide the same confidence as a complete grid of samples), and (v) is there at least a minimum of 50 sample locations in the survey so that there may be an adequate amount of data to observe the geochromatography of the different SGH Pathfinder Class of compounds.

The question often arises by clients as to the frequency of a rating, e.g. "how often is a rating of 5.0 given in an interpretation". To better understand this we present this review of the history of the SGH rating program since 2004 and some of the underlying situations that can affect the historical rating charts.

Originally it was recommended that a minimum of 35 sample location be used for small target exploration, however it was quite quickly realized that this is often insufficient and at least 50 sample locations were required. In 2007, the rating scale was refined to include increments of 0.5 units rather than just integer values from 0 to 6.

A rating frequency may be biased high as most clients conduct an orientation study over a known target, thus several of these projects result in high ratings. Note that, at this time, the rating is not said to be linked to grade of a deposit or depth to the target. Even in exploration surveys clients tend to submit samples over more promising targets due to knowledge of the geology and prior geochemical or geophysical results. As shown in the following chart, projects with SGH data from 200 or more sample locations have a higher level of confidence in the interpretation as the geochromatography of the SGH Pathfinder Classes of compounds can be more completely observed and reviewed.



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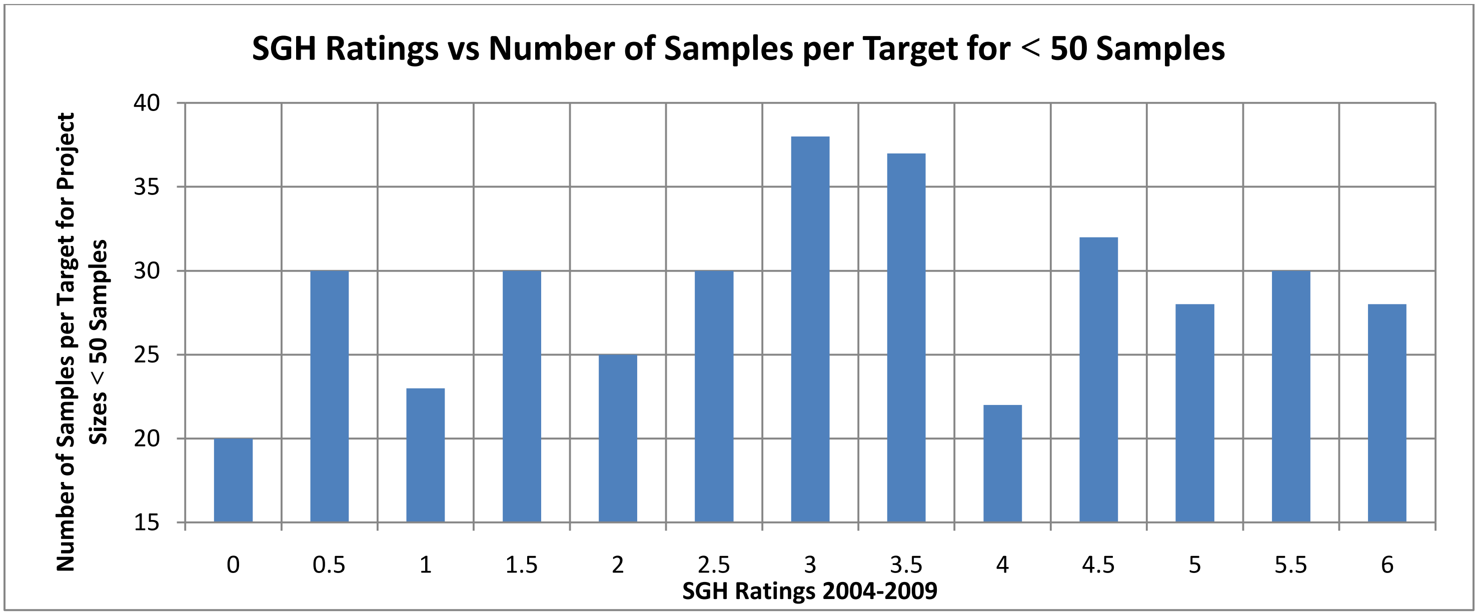
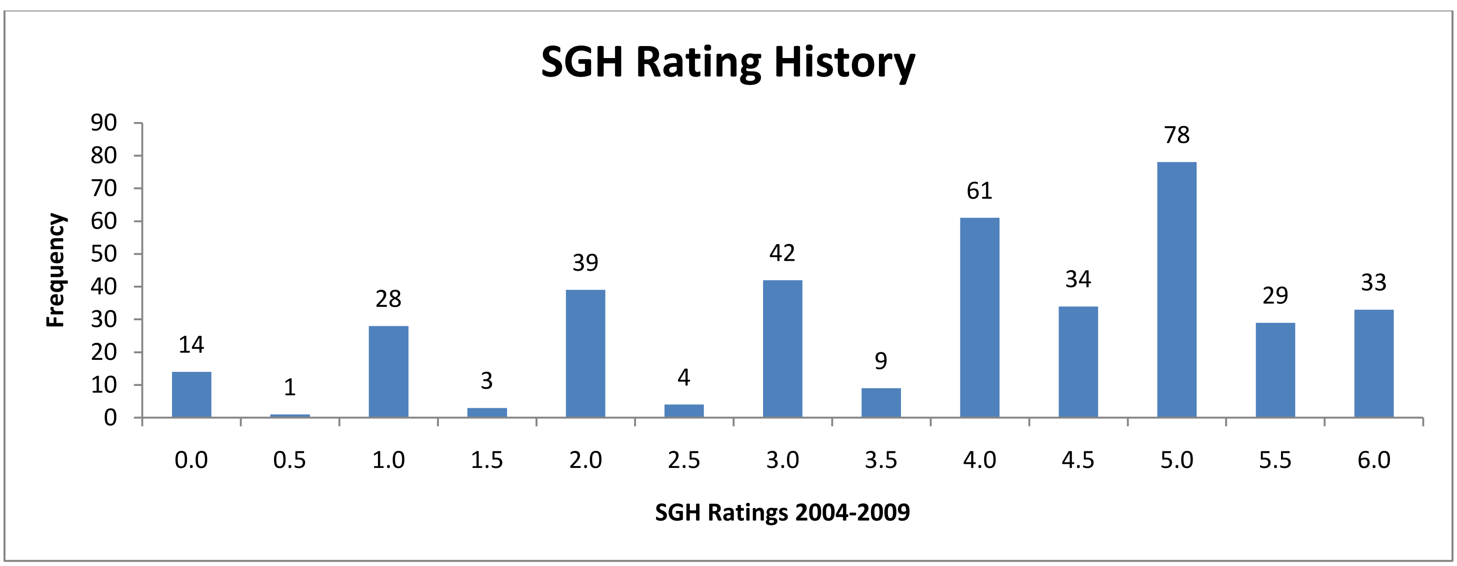
SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)

The rating frequency may be biased low as research projects often include a bare minimum of samples to reduce costs. Research projects may also be over targets known to be difficult to depict with geochemistry. Multiple targets in close vicinity in a survey may result in a low bias as the Pathfinder Class geochromatography is more difficult to deconvelute. Ratings may also be biased low if less than the recommended 50 sample locations is submitted as indicated by the following chart. This chart also illustrates that there is no interpretation bias to a particular rating value.



The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also indicates that the 0.5 increments were less frequent as they started in 2007.



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SGH DATA QUALITY

- **Reporting Limit:** The SGH Excel spreadsheet of results contains the raw unaltered concentrations of the individual SGH compounds in units of "part-per-trillion" (ppt). The reporting of these ultra low levels is vital to the measurement of the small amounts of hydrocarbons now known to be leached/metabolized and subsequently released by dead bacteria that have been interacting with the ore at depth. To ensure that the data has a high level of confidence, a "reporting limit" is used. The reporting limit of 1 ppt actually represents a level of confidence of approximately 5 standard deviations where SGH data is assured to be "real" and non-zero. Thus in SGH the use of a reporting limit automatically removes site variability and there is no need to further background subtract any data as the reporting limit has already filtered out any site background effects. Thus we recommend that all data that is equal to or greater than 2 ppt should be used in any data review. It is important to review all SGH data as low values that may be the centre of halo anomalies and higher values as apical anomalies or as halo ridges are all important.

- **Laboratory Replicate Analysis:** A laboratory replicate is a sample taken randomly from the submitted survey being analyzed and are not unrelated samples taken from some large stockpile of bulk material. In the Organics laboratory an equal portion of this sieved sample, or pulp, is taken and analyzed in the same manner using the Gas Chromatography/Mass Spectrometer. The comparison of laboratory replicate and field duplicate results for chemical tests in the parts-per-million or even parts-per-billion range has typically been done using an absolute "relative percent difference (RPD)" statistic which is an easy proxy for error estimation rather than a more complete analysis of precision as specified by Thompson and Howarth. An RPD statistic is not appropriate for SGH results as the reporting limit for SGH is 1 part-per-trillion. Further, SGH is a semi-quantitative technique and was not designed to have the same level of precision as other less sensitive geochemistry's as it is only used as an exploration tool and not for any assay work. SGH is also designed to cover a wide range of organic compounds with an unprecedented 162 compounds being measured for each sample. In order to analyze such a wide molecular weight range of compounds, sacrifices were made to the variability especially in the low molecular weight range of the SGH analysis. The result is that the first fifteen SGH compounds in the Excel spreadsheet is expected to exhibit more imprecision than the other 147 compounds. An SGH laboratory replicate is a large set of data for comparison even for just a few pairs of analyses. Precision calculations using a Thompson and Howarth approach should only be used for estimating error in individual measurements, and not for describing the average error in a larger data set. In geochemical exploration geochemists seek concentration patterns to interpret and thus rigorous precision in individual samples is not required because the concentrations of many samples are interpreted collectively. For these reasons recent and independent research at Acadia

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SGH DATA QUALITY (continued)

University in Canada promote that a percent Coefficient of Variation (%CV) should be used as a universal measurement of relative error in all geochemical applications. As SGH results are a relatively large data set for nearly all submissions, %CV is a better statistic for use with SGH. By using %CV, the concentration of duplicate pairs is irrelevant because the units of concentration cancel out in the formation of the coefficient of variation ratio. For SGH, the %CV is calculated on all values ≥ 2 ppt. These values are averaged and represent a value for each pair of replicate analysis of the sample. All of the %CV values for the replicates are then averaged to report one %CV value to represent the overall estimate of the relative error in the laboratory sub-sampling from the prepared samples, and any instrumental variability, in the SGH data set for the survey. Actlabs' has successfully addressed the analytical challenge to minimize analytical variability for such a large list of compounds. Thus as SGH is also interpreted as a signature and is solely used for exploration and not assay measurement, the data from SGH is **"fit for purpose"** as a geochemical exploration tool.

- **Historical SGH Precision:** In the general history of geochemistry, studies indicate that a large component of total measurement error is introduced during the collection of the initial sample and in sub-sampling, and that only a subordinate amount of error in the result is introduced during preparation and analysis. A historical record encompassing many projects for SGH, including a wide variety of sample types, geology and geography, shows that the consistency and precision for the analysis of SGH is excellent with an overall precision of 6.8% Coefficient of Variation (%CV). When last calculated, this number has a range having a maximum of 12.4% CV, a minimum of 3.0% CV, with a standard deviation of 1.6%, in a population made up of over 400 targets (over 45,000 samples) interpreted since June of 2004. Again the precision of 6.8% CV included all of the sample types as soil from different horizons, peat, till, humus, lake-bottom sediments, ocean-bottom sediments, and even snow. When field duplicates have been revealed to us, we have found that the precision of the field duplicates are in the range of about 9 to 12 %CV. As SGH is interpreted using a combination of compounds as a chemical "class" or signature, the affect of a few concentrations that may be imprecise in a direct comparison of duplicates is not significant. Further, projects that have been re-sampled at different times or seasons are expected to have different SGH concentrations. The SGH anomalies may not be in exactly the same position or of the same intensity due to variable conditions that may have affected the dispersion of different pathfinder classes. However, the SGH "signature" as to the presence of the specific mix of SGH pathfinder classes will definitely still exist, and will retain the ability to identify the deposit type and vector to the same target location.

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- **<u>LABORATORY MATERIALS BLANK – QUALITY ASSURANCE (LMB-QA):</u>**

The Laboratory Materials Blank Quality Assurance measurements (LMB-QA) shown in the SGH spreadsheet of results are matrix free blanks analyzed for SGH. These blanks are not standard laboratory blanks as they do not accurately reflect an amount expected to be from laboratory handling or laboratory conditions that may be present and affect the sample analysis result. The LMB-QA measurements are a pre-warning system to only detect any contamination originating from laboratory glassware, vials or caps. As there is no substrate to emulate the sample matrix, the full solvating power of the SGH leaching solution, effectively a water leach, is fully directed at the small surface area of the glassware, vials or caps. In a sample analysis the solvating power of the SGH leaching solution is distributed between the large sample surface area (from soil, humus, sediments, peat, till, etc.) and the relatively small contribution from the laboratory materials surfaces. The sample matrix also buffers the solvating or leaching effect in the sample versus the more vigourous leaching of the laboratory materials which do not experience this buffering effect. Thus the level of the LMB-QA reported is biased high relative to the sample concentration and the actual contribution of the laboratory reagents, equipment, handling, etc. to the values in samples is significantly lower. This situation in organic laboratory analysis only occurs at such extremely low part-per-trillion (ppt) measurement levels. This is one of the reasons that SGH uses a reporting limit and not a detection limit. The 1 ppt reporting limit used in the SGH spreadsheet of raw concentration data is 3 to 5 times greater than a detection limit. The reporting limit automatically filters out analytical noise, the actual LMB-QA, and most of the sample survey site background. This has been proven as SGH values of 1 to 3 parts-per-trillion (ppt) have very often illustrated the outline of anomalies directly related to mineral targets. <u>Thus all SGH values greater than or equal to 1 or 2 ppt should be used as reliable values for interpretations.</u>

The LMB-QA values thus should not be used to background subtract any SGH data. The LMB-QA values are only an early warning as a quality assurance procedure to indicate the relative cleanliness of laboratory glassware, vials, caps, and the laboratory water supply at the ppt concentration level. <u>Do not subtract the LMB-QA values from SGH sample data.</u>

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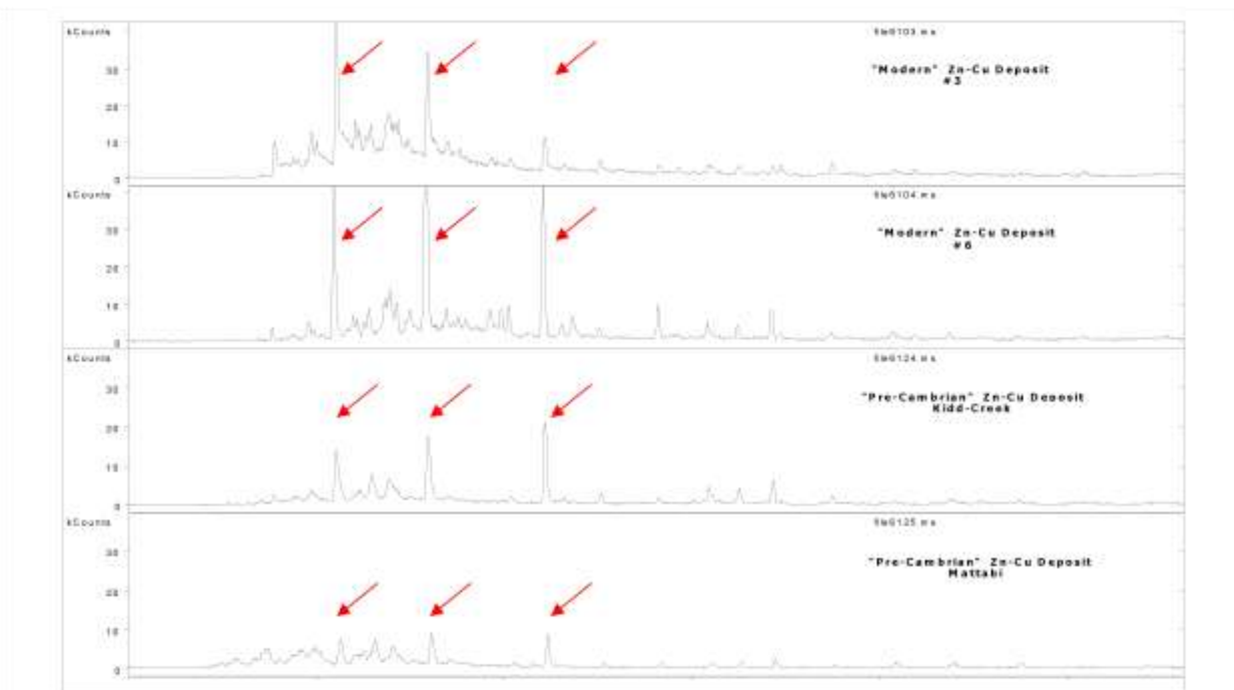
SGH – FORENSIC GEOCHEMICAL SIGNATURES

- One of the first experiments in 1996 in the development of the SGH analysis was to observe if an SGH response could be obtained directly from an ore sample. From office shelf specimens, small rock chips were obtained which were then crushed and milled. The fine pulp obtained was then subjected to the SGH analysis. These shelf specimen samples were from well known Volcanic Massive Sulphide deposits of the Mattabi deposit from the Archean Sturgeon Lake Camp in Northwestern Ontario and from the Kidd Creek Archean volcanic-hosted copper-zinc deposit. Even these specimen samples contain a geochemical record of the hydrocarbons produced by the bacteria that had been feeding on these deposits at depth. As a comparison, SGH analysis were similarly conducted on modern-day VMS ore samples taken from a "black smoker" hydrothermal volcanic vent from the deep sea bed of the Juan de Fuca Ridge where high concentrations of microbial growth was also known to exist. The raw data profiles as GC/MS Total Ion Chromatograms are shown below to illustrate the "visible" portion of the VMS signature obtained from the SGH analysis.



The top two profiles were obtained from two samples of the modern day "black smokers". The third and fourth chromatograms in the above image were obtained from the Pre-Cambrian Zn-Cu Kidd Creek and Mattabi deposits. The red arrows point to three compounds that are a portion of the SGH signature for VMS type deposits. This visible portion of the VMS signature of hydrocarbons can easily be seen in the analysis of each of these four samples.

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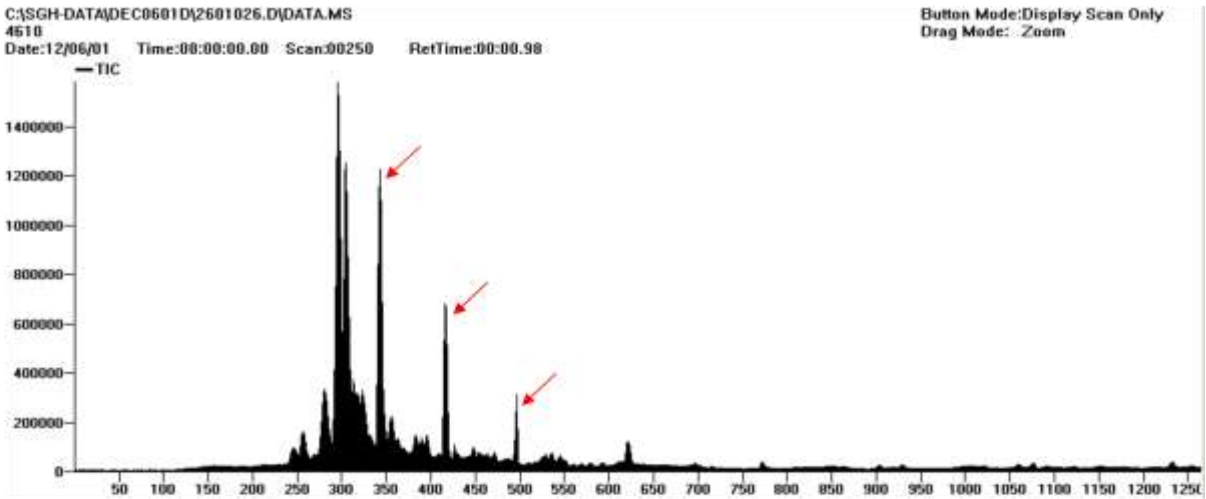
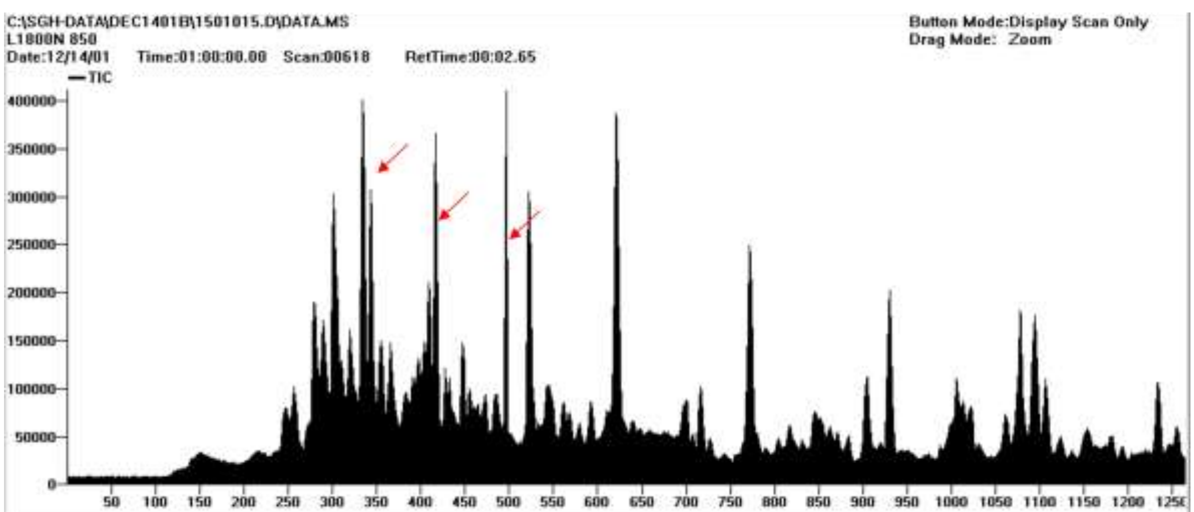
SGH – FORENSIC GEOCHEMICAL SIGNATURES (cont.)

The next question in our early objectives was to see if this SGH signature could also be observed in surficial soil samples that had been taken over VMS deposits. Through our research projects, soil samples were obtained from over the Ruttan Cu-Zn VMS deposit near Leaf Rapids, Manitoba and located in the Paleoproterozoic Rusty Lake greenstone belt. The profile obtained, as observed in the raw GC/MS chromatogram, is shown in this next image below:



The three compounds indicated by the red arrows represent the same visible portion of the VMS signature observed from the modern day black smoker samples and the ore samples taken from the Mattabi and Kidd Creek, even though this soil was taken from over a different VMS deposit in a geographically different area. Is this coincidence? Another soil sample was obtained from Noranda's Gilmour South base-metal occurrence in the Bathurst Mining camp in northern New Brunswick. As shown below, this sample contained a very complex SGH signature, however the visible portion of the VMS signature as indicated by the red arrows is still observed as in the black smoker, Mattabi and Kidd Creek ore samples.



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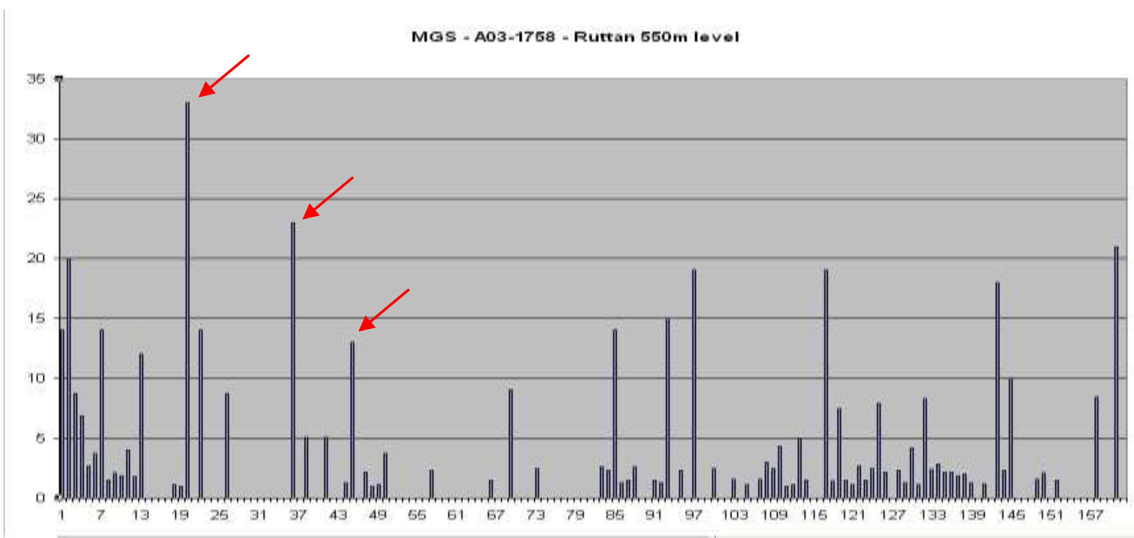
SGH – FORENSIC GEOCHEMICAL SIGNATURES (cont.)

In research conducted by the Ontario Geological Survey, this same portion of the SGH signature was also observed over the VMS deposit at Cross Lake in Ontario. Note that the visible signature shown as the three compounds indicated by the red arrows is only a small portion of the complete SGH VMS signature. The full VMS signature is made up of at least three groups, as three organic chemical classes, that together contain at least 35 of the individual SGH hydrocarbons.

The chromatograms shown on the preceding page from the GC/MS analysis are not used directly in the interpretation of SGH data. As we are only interested in a specific list of 162 hydrocarbons, the mass spectrometer and associated software programs specifically identifies the hydrocarbons of interest, runs calculations using relative responses to a short list of hydrocarbons used as standards, and develops an Excel spreadsheet of semi-quantitative concentration data to represent the sample. Thus the SGH results for a sample, like that observed in ore from the Ruttan, are filtered to obtain the concentrations for the specific 162 hydrocarbons. A simple bar graph drawn from the Excel spreadsheet of the hydrocarbons and their concentrations results in a DNA like **forensic SGH signature** as shown below. The portion discussed hear as the "visible" SGH VMS signature in the GC/MS chromatograms, is again shown by the red arrows.



Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further through the submission and analysis of specific specimen samples that represented a barren pyritic conductor and a barren graphitic conductor.

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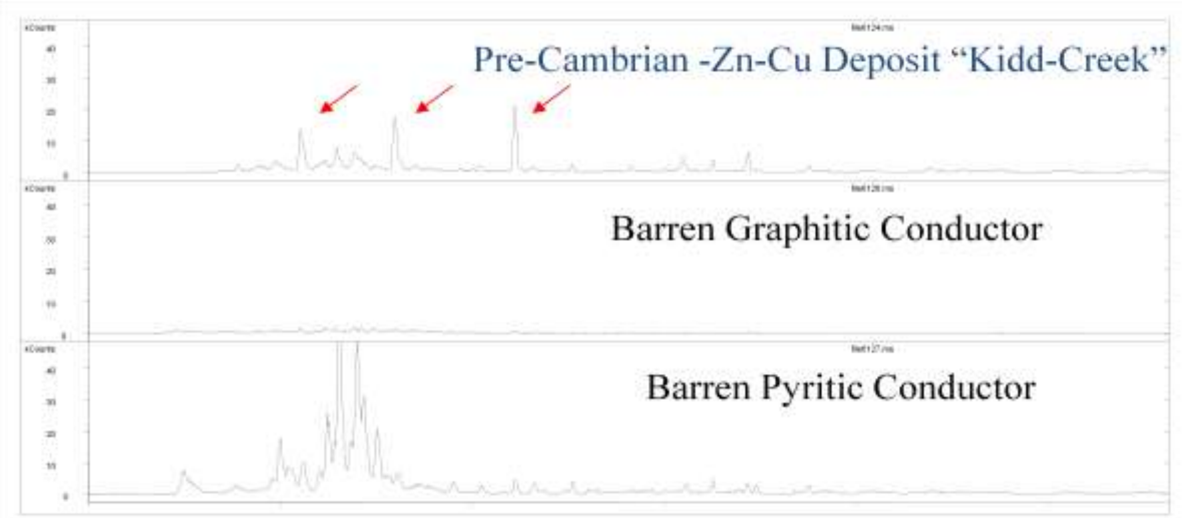
SGH – FORENSIC GEOCHEMICAL SIGNATURES (cont.)

The GC/MS chromatograms from these two specimens are compared to that obtained from the Kidd-Creek ore as shown below. This diagram conclusively shows that the SGH signatures obtained from the two types of barren conductors are completely different than that obtained by SGH over VMS type ore. SGH is thus able to differentiate between ore-bearing conductors and barren conductors as the Forensic SGH Geochemical signature is different.



- SGH has been described by the Ontario Geological Survey of Canada (OGS) as a "REDOX cell locator". Many SGH surveys for Gold and other mineral targets can result in multiple types of anomalies, depending on the class of SGH compounds, even over the same target and in the same set of samples. Thus "Apical", "Nested-Halo", and "Rabbit-Ear" or "Halo" type SGH anomalies are all typically observed from the effect of REDOX cells that have developed over deposits. REDOX cells are also related to the presence of bacteriological activity.

- The VMS template of SGH Pathfinder Classes uses low and medium weight classes of hydrocarbon compounds. Again, at least three Pathfinder Class group maps, associated with the SGH signature for VMS, must be present to begin to be considered for assignment of a good rating. The Pathfinder Class anomalies in these maps must logically concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class, for a specific area. The SGH Pathfinder Class map(s) shown in this report is usually the most diagnostic for the presence of Volcanic Massive Sulphide based mineralization.

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INTERPRETION OF SGH RESULTS – A10-3207
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH SURVEY INTERPRETATION – Lines 39-40

- This report is based on the SGH results from the analysis of a total of 87 soil samples from this submission. This report specifically pertains to just those sample results from Lines 39 and 40. These two lines are north-south trending transects in the Sturgeon Lake survey area having a total of 43 samples. These transects are about 100 metres apart with samples spaced at approximately 50 metres along each. UTM coordinates were provided for mapping of the SGH results for these soil samples. These samples were received by our Thunder Bay lab facility and then shipped to our head Ancaster laboratory where they were subsequently dried and sieved as per the procedure on page 5 of this report.

- The number of samples submitted for this project is barely adequate to use SGH as an exploration tool for Lines 39 & 40. Note that the SGH data is only reviewed for the particular target deposit type requested, in this case for the presence of a VMS based deposit. It is also assumed that there is only one potential target. To obtain the best interpretation the client should indicate if there are possible multiple targets, say from geophysical data. The possibility of multiple targets in "close proximity" should be known due to potential overlap and increased complexity of resulting geochromatographic anomalies which could alter the interpretation. Based on the size of the narrow targets expected in this Sturgeon Lake project, "close proximity" would mean "within 400 metres".

- Note that the associated SGH results are presented in a separate Excel spreadsheet. This raw data is semi-quantitative and is presented in units of pg/g or **parts-per-trillion** (ppt).

- **The overall precision of the SGH analysis for the samples in this SGH survey was excellent** as demonstrated by 3 samples taken from these two sample lines which were used for laboratory replicate analysis. The average Coefficient of Variation (%CV) of the replicate results for the project samples in this submission was 5.2% which represents an excellent level of analytical performance.

INTERPRETION OF SGH RESULTS – A10-3207
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH SURVEY INTERPRETATION – Lines 39-40

- The plan view maps shown on page 19 (and on page 20 in 3D view) are SGH "Pathfinder Class map" for targeting VMS mineralization. Each map represents the simple summation of several individual hydrocarbon compound concentrations that are grouped from within the same organic chemical class. SGH Pathfinder Class maps have been shown to be robust as they are each described using from 4 to 14 (unless otherwise stated) chemically related SGH compounds which are simply summed to create each class map. Thus each map has a higher level of confidence as it is "not" illustrating just one compound response. A legend of the SGH classes appears in the SGH data spreadsheet. The overall SGH interpretation rating (page 21) has even a higher level of confidence as it further relies on the consensus between at least three SGH Pathfinder Classes (other classes not shown) that together make the signature of the target at depth.

- The dotted black oval, applied to the SGH Pathfinder Class maps on page 19, outlines an area where the SGH data predicts the outer boundary of a potential VMS type target. The plan map on the left on page 19 is an SGH Pathfinder Class map for VMS that is expected to exhibit an apical anomaly while the SGH Pathfinder Class map on the right, also an SGH Pathfinder Class map for VMS, is expected to show a corresponding halo anomaly. The dotted black oval has been placed around the apical anomalies on the left hand Pathfinder Class map. These closely spaced apical anomalies have been documented in previous case studies over known VMS deposits, in particular at Cross Lake in research using SGH conducted by OGS. This is in essence what a platform apical response looks like from SGH data. It is interesting that these anomalies are only observed on the western line of this pair of transects. Still these apical anomalies are again nicely supported by the more distal anomalies that appear to define a halo anomaly on the right hand Pathfinder Class map outside of the dotted black oval. This type of confirmation is expected and is part of the SGH signature for over VMS type mineralization. This is also good confirmation of the interpretation of the presence of a REDOX cell which is also often indicative of the presence of buried mineralization and bacteriological activity. Other SGH Pathfinder Class maps (not shown at this price point) also agree on the assignment of this interpretation. These two sample lines appear to be at the very eastern edge of an anomaly, thus there are an insufficient number of samples to completely define this area and there will be no comment on a possible drill target location. This interpretation is based only on this survey and on these SGH results.

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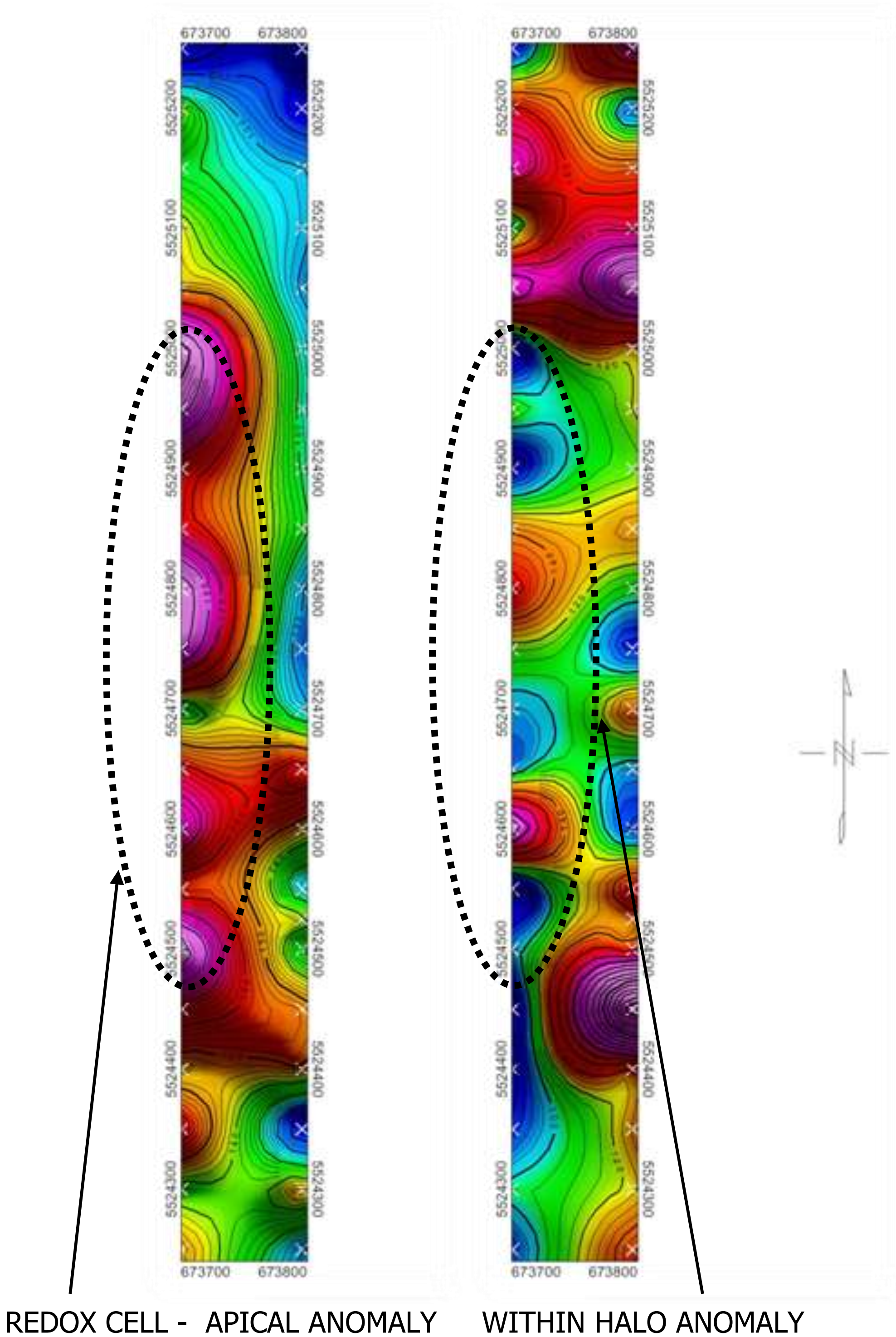
INTERPRETION OF SGH RESULTS – A10-3207
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH "VMS" PATHFINDER CLASS MAPS – Lines 39-40



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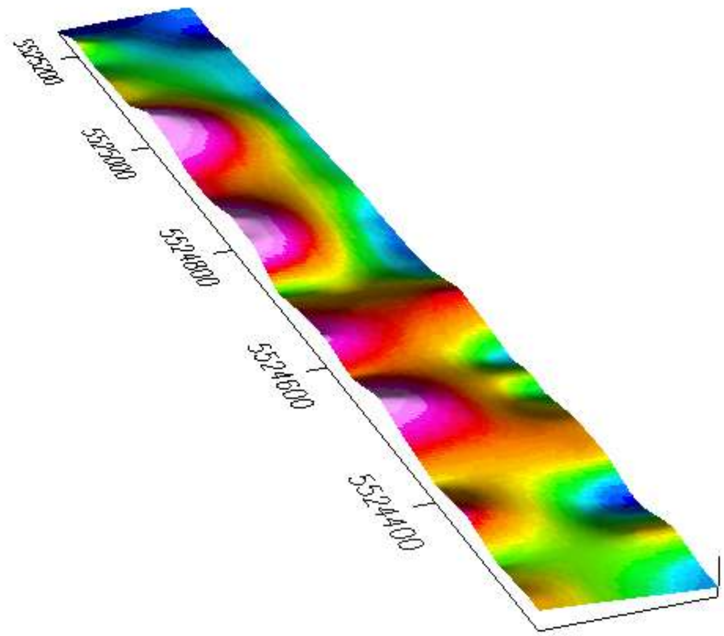
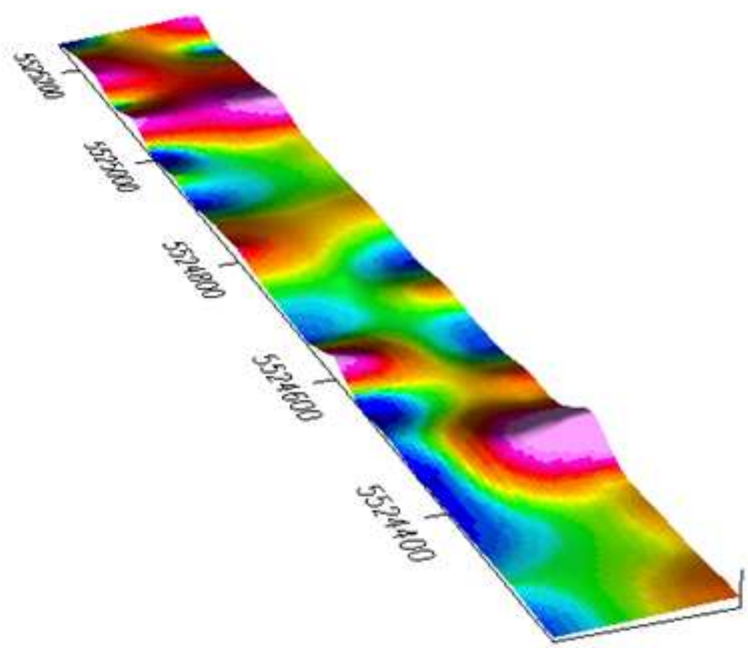
INTERPRETION OF SGH RESULTS – A10-3207
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH "VMS" PATHFINDER CLASS MAP – 3D VIEW – Lines 39-40





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INTERPRETION OF SGH RESULTS – A10-3207
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY.

SGH SURVEY INTERPRETATION RATING – Lines 39-40

- After review of all of the SGH Pathfinder Class maps, the SGH results from these soil samples suggest a **"rating of 3.0"** for the area within the dotted black oval interpretation on the plan view maps for Lines 39-40 on page 19, in relation to the presence of a VMS based target beneath this area. This rating is based on a scale of 6.0 in 0.5 increments, with a value of 6.0 being the best. This rating represents the similarity of these SGH results with case studies over a Volcanic Massive Sulphide (VMS) type target, to the SGH case studies conducted at the Hanson Lake VMS deposit in Saskatchewan, the South Gilmour VMS deposit in New Brunswick and the Cross Lake VMS deposit in Ontario. The degree of confidence in the rating only starts to be "good" at a level of 4.0.

- The SGH VMS template used has been shown to be robust to a wide range of VMS lithology including Kidd Creek, Irish and Kuroko style deposits.

- A value of 1.5 was deducted as the anomaly is on one side of the survey and thus has less data to define it and another 1.5 as other SGH pathfinder classes, not shown in this report, could have agreed on the location of the interpretation within the black dotted oval more clearly.

- The client should use a combination of these SGH results and its report with additional geochemical, geophysical, and geological information to possibly obtain a more confident and precise target location.

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Cautionary Note Regarding Assumptions and Forward Looking Statements

The statements and target rating made in the Soil Gas Hydrocarbon (SGH) interpretive report or in other communications may contain certain forward-looking information related to a target or SGH anomaly.

Statements related to the rating of a target are based on comparison of the SGH signatures derived by Activation Laboratories Ltd. through previous research on known case studies. The rating is not derived from any statistics or other formula. The rating is a subjective value on a scale of 0 to 6 relative to the similarity of the SGH signature reviewed compared to the results of previous scientific research and case studies based on the analysis of surficial samples over known ore bodies. No information on other geochemistries, geophysics, or geology is usually available as additional information for the interpretation and assignment of a rating value unless otherwise stated. The rating does not imply ore grade and is not to be used in mineral resource estimate calculations. References to the rating should be viewed as forward-looking statements to the extent that it involves a subjective comparison to known SGH case studies. As with other geochemistries, the implied rating and anticipated target characteristics may be different than that actually encountered if the target is drilled or the property developed.

Activation Laboratories Ltd. may also make a scientifically based reference in this interpretive report to an area that might be used as a drill target. Usually the nearest sample is identified as an approximation to a “possible drill target” location. This is based only on SGH results and is to be regarded as a guide based on the current state of this science.

Unless stated, Activation Laboratories Ltd. has not physically observed the exploration site and has no prior knowledge of any site description or details. Actlabs makes general recommendations for sampling and shipping of samples. Unless stated, the laboratory does not witness sampling, does not take into consideration the specific sampling procedures used, season, handling, packaging, or shipping methods. The majority of the time, Activation Laboratories Ltd. has had no input into sampling survey design. Where specified Activation Laboratories Ltd. may not have conducted sample preparation procedures as it may have been conducted at the client’s assigned laboratory. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ scientifically which may impact the associated interpretation and target rating from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended.

In general, any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions, future events or performance are not statements of historical fact. These “scientifically based educated theories” should be viewed as "forward-looking statements".

Readers of this interpretive report are cautioned not to place undue reliance on forward-looking information. Forward looking statements are made based on scientific beliefs, estimates and opinions on the date the statements are made and the interpretive report issued. The Company undertakes no obligation to update forward-looking statements or otherwise revise previous reports if these beliefs, estimates and opinions, future scientific developments, other new information, or other circumstances should change that may affect the analytical results, rating, or interpretation.

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Date Submitted: June 17, 2010

Date Analyzed: June 25 - 28, 2010

Interpretation Report: June 30, 2010

Excalibur Resources Ltd.

Excalibur Resources Ltd.,
20 Adelaide St. E., Suite 400,
Toronto, Ontario, Canada. M5C 2T6

Attention: Dr. Jim Kendall, President & CEO

RE: Your Reference: Sturgeon Lake Survey – Lines 39 & 40

CERTIFICATE OF ANALYSIS

87 Soil samples were submitted for analysis via the Actlabs Thunder Bay facility.

These samples were prepared according to our Code S4 procedure.

The following analytical package was requested: Code SGH – Soil Gas Hydrocarbon Geochemistry

REPORT/WORKORDER: A10-3207

Notes:
The SGH – Soil Gas Hydrocarbon Geochemistry is a semi-quantitative analytical procedure to detect and measure 162 hydrocarbon compounds as the organic signature in the sample material collected from a survey area. It is not an assay of mineralization but is a predictive geochemical tool used for exploration. This certificate pertains only to the SGH data presented in the associated Microsoft Excel spreadsheet of results.

The author of this SGH Interpretation Report, Mr. Dale Sutherland, is the creator of the SGH organic geochemistry. He is a Chartered Chemist (C.Chem.) and Forensic Scientist specializing in organic chemistry. He is not a professional geologist or geochemist.

CERTIFIED BY:

D Sutherland

Dale Sutherland, B.Sc.,B.Sc.,B.Ed.,C.Chem.
Forensic Scientist, Organics Manager,
Director of Research
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SGH – SOIL GAS HYDROCARBON
Predictive Geochemistry

for

EXCALIBUR RESOURCES LTD.
"STURGEON LAKE SURVEY"
"LINES 37-38"

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<u>EVALUATION OF SGH "SOIL SAMPLE" DATA</u>

<u>EXPLORATION FOR: "*VMS*" TARGETS</u>

Workorder: A10-2995

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SOIL GAS HYDROCARBON (SGH) GEOCHEMISTRY - OVERVIEW

SGH is a deep penetrating geochemistry that involves the analysis of surficial samples from over potential mineral or petroleum targets. The analysis involves the testing for 162 hydrocarbon compounds in the C5-C17 carbon series range applicable to a wide variety of sample types. SGH has been successful for delineating targets found at over 500 metres in depth. Samples of various media have been successfully analyzed such as soil (any horizon), drill core, rock, peat, lake-bottom sediments and even snow. The SGH analysis incorporates a very weak leach, essentially aqueous, that only extracts the surficial bound hydrocarbon compounds and those compounds in interstitial spaces around the sample particles. These are the hydrocarbons that have been mobilized from the target depth. SGH is unique and should not be confused with other hydrocarbon tests or traditional analyses that measure C1 (Methane) to C5 (Pentane) or other gases. SGH is also different from soil hydrocarbon tests that thermally extract or desorb all of the hydrocarbons from the whole soil sample. This test is less specific as it does not separate the hydrocarbons and thus does not identify or measure the responses as precisely. These tests also do not use a forensic approach to identification. The hydrocarbons in the SGH extract are separated by high resolution capillary column gas chromatography to isolate, confirm, and measure the presence of only the individual hydrocarbons that have been found to be of interest from initial research and development and from performance testing in two Canadian Mining Industry Research Organization (CAMIRO) projects (97E04 and 01E02).

Over the past 14 years of research, Activation Laboratories Ltd. has developed an in-depth understanding of the unique SGH signatures associated with different commodity targets. Using a forensic approach we have developed target signatures or templates for identification, and the understanding of the expected geochromatography that is exhibited by each class of SGH compounds. In 2004 we began to include an SGH interpretation report delivered with the data to enable our clients to realize the complete value and understanding of the SGH results in the shortest time frame and provide the benefit from past research sponsored by Actlabs, CAMIRO, OMET and other projects.

SGH has attracted the attention of a large number of Exploration companies. In the above mentioned research projects the sponsors have included (in no order): Western Mining Corporation, BHP-Billiton, Inco, Noranda, Outokumpu, Xstrata, Cameco, Cominco, Rio Algom, Alberta Geological Survey, Ontario Geological Survey, Manitoba Geological Survey and OMET. Further, beyond this research, Activation Laboratories Ltd. has interpreted the SGH data for over 400 targets from clients since January of 2004. In both CAMIRO research projects over known mineralization and in exploration projects over unknown targets, SGH has performed exceptionally well. As an example, in the first CAMIRO research project that commenced in 1997 (Project 97E04), there were 10 study areas that were submitted blindly to Actlabs. These study sites were selected since other inorganic geochemistries were unsuccessful at illustrating anomalies related to the target.

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Although Actlabs was only provided with the samples and their coordinates, SGH was able to locate the blind mineralization with exceptional accuracy in 9 of the 10 surveys. SGH has recently been very successful in exploration and discovery of unknown targets e.g. Golden Band Resources drilled an SGH anomaly and discovered a significant vein containing "visible" gold. (www.goldenbandresources.com)

Sample Type and Survey Design: It is highly recommended that a ***minimum*** of 50 sample "locations" is preferred to obtain enough samples into background areas on both sides of small suspected targets (wet gas plays, Kimberlite pipes, Uranium Breccia pipes, veins, etc.). SGH is not interpreted in the same way as inorganic based geochemistries. SGH must have enough samples over both the target and background areas in order to fully study the dispersion patterns or geochromatography of the SGH classes of compounds. Based on our minimum recommendation of at least 50 sample locations we further suggest that all samples be evenly spaced with about one-third of the samples over the target and one-third on each side of the target in order for SGH to be used for exploration. Targets other than gas plays, pipes, dykes or veins usually require additional samples to represent both the target and background areas.

SGH has been shown to be very robust to the use of different sample types even "within" the same survey or transect. Research has illustrated that it is far more important to the ultimate interpretation of the results to take a complete sample transect or grid than to skip samples due to different sample media. The most ideal natural sample is still believed to be soil from the "Upper B-Horizon", however excellent results can also be obtained from other soil horizons, humus, peat, lake-bottom sediments, and even snow. The sampling design is suggested to use evenly spaced samples from 15 metres to 200 metres and line spacing from 50 metres to 500 metres depending on the size and type of target. A 4:1 ratio is suggested, however, larger orientation surveys have also been successful. Ideally even large grids should have one-third of the samples over the target and two-thirds of the samples into anticipated background areas. This will allow the proper assessment of the SGH geochromatographic vectoring and background site signature levels with minimal bias. Individual samples taken at significant distances from the main survey area to represent background are not of value in the SGH interpretation as SGH results are not background subtracted. Samples can be drip dried in the field and do not need special preservation for shipping and has been specifically designed to avoid common contaminants from sample handling and shipping. SGH has also been shown to be robust to cultural activities even to the point that successful results and interpretation has been obtained from roadside right-of-ways.

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Sample Preparation and Analysis: Upon receipt at Activation Laboratories the samples are air-dried in isolated and dedicated environmentally controlled rooms set to 40°C. The dried samples are then sieved. In the sieving process, it is important that compressed air is not used to clean the sieves between samples as trace amounts of compressor oils "may" poison the samples and significantly affect some target signatures. At Activation Laboratories a vacuum is used to clean the sieve between each sample. The -60 mesh sieve fraction (<250 microns, although different mesh sizes can be used at the preference of the exploration geologist) is collected and packaged in a Kraft paper envelope and transported from our sample preparation building to our analytical building on the same street in Ancaster Ontario. Each sample is then extracted, separated by gas chromatography and analyzed by mass spectrometry using customized parameters enabling the highly specific detection of the 162 targeted hydrocarbons at a reporting limit of one part-per-trillion (ppt). This trace level limit of reporting is critical to the detection of these hydrocarbons that, through research, have been found to be related at least in part to the breakdown and release of hydrocarbons from the death phase of microbes directly interacting with a deposit at depth. The hydrocarbon signatures are directly linked to the deposit type which is used as a food source. The hydrocarbons that are mobilized and metabolized by the microbes are released in the death phase of each successive generation. Very few of the hydrocarbons measured are actually due to microbe cell structure, or hydrocarbons present or formed in the genesis of the deposit or from anthropogenic contamination. The results of the SGH analysis is reported in raw data form in an Excel spreadsheet as "semi-quantitative" concentrations without any additional statistical modification.

Mobilized Inorganic Geochemical Anomalies: It is important to note that SGH is essentially "blind" to any inorganic content in samples as only organic compounds as hydrocarbons are measured. Thus inorganic geochemical surface anomalies that have migrated away from the mineral source, and thus may be interpreted and found to be a false target location, is not detected and does not affect SGH results. This fact is of great advantage when comparing the SGH results to inorganic geochemical results. If there is agreement in the location of the anomalies between the organic and inorganic technique, such as Actlabs' Enzyme Leach, a significant increase in confidence in the target location can be realized. If there is no agreement or a shift in the location of the anomalies between the techniques, the inorganic anomaly may have been mobilized in the surficial environment.

The Nugget Effect: As SGH is "blind" to the inorganic content in the survey samples, any concern of a "nugget effect" will not be encountered with SGH data. A "nugget effect" may be of a concern for inorganic geochemistries from surveys over copper, gold, lead, nickel, etc. type targets.

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SGH Interpretation Report: All SGH submissions must be accompanied by relative or UTM coordinates so that we may ensure that the sample survey design is appropriate for use with SGH, and to provide an SGH interpretation with the results. In our interpretation procedure, we separate the results into 19 SGH sub-classes. These classes include specific alkanes, alkenes, thiophenes, aromatic, and polyaromatic compounds. Note that none of the SGH hydrocarbons are "gaseous" at room temperature and pressure. The classes are then evaluated in terms of their geochromatography and for coincident compound class anomalies that are unique to different types of mineralization. Actlabs uses a six point scale in assigning a subjective rating of similarity of the SGH signatures found in the submitted survey to signatures previously reviewed and researched from known case studies over the same commodity type. Also factored into this rating is the appropriateness of the survey and amount of data/sample locations that is available for interpretation. This rating scale is described in detail in the following section.

SGH RATING SYSTEM - DESCRIPTION

To date SGH has been found to be successful in the depiction of buried mineralization for Gold, Nickel, VMS, SEDEX, Uranium, Polymetallic, and Copper, as well as for Kimberlites. SGH data has developed into a dual exploration tool. From the interpretation, a vertical projection of the predicted location of the target can be made as well as a statement on the rating of the comparability of the identification of the anticipated target type to that from known case studies, e.g. if the client anticipates the target to be a Gold deposit, what is the rating or comparability that the target is similar to the SGH results over a Gold deposit in Nunavut, shear hosted and sediment hosted deposits in Nevada, or Paleochannel Gold mineralization in Western Australia.

- A rating of "6" is the highest or best rating, and means that the SGH classes most important to describing a Gold related hydrocarbon signature are all present and consistently vector to the same location with well defined anomalies. To obtain this rating there also needs to be other SGH classes that when mapped lend support to the predicted location.
- A rating of "5" means that the SGH classes most important to describing a Gold signature are all present and consistently describe the same location with well defined anomalies. The SGH signatures may not be strong enough to also develop additional supporting classes.
- A rating of "4" means that the SGH classes most important to describing a Gold signature are mostly present describing the location with <u>well</u> defined anomalies. Supporting classes may also be present.

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SGH RATING SYSTEM - DESCRIPTION (continued)

- A rating of "3" means that the SGH classes most important to describing a Gold signature are mostly present and describe the same location with fairly well defined anomalies. Some supporting classes may or may not be present.
- A rating of "2" means that some of the SGH classes most important to describing a Gold signature are present but a predicted location is difficult to determine. Some supporting classes may be present
- A rating of "1" is the lowest rating, and means that one of the SGH classes most important to describing a Gold signature is present but a predicted location is difficult to determine. Supporting classes are also not helpful.
- The SGH rating is directly and significantly affected by the survey design. Small data sets, especially if significantly <50 sample locations, or transects/surveys that are geographically too short will automatically receive a lower rating no matter how impressive an SGH anomaly might be. When there is not enough sample locations to adequately review the SGH class geochromatography, or when the sample spacing is inadequate, or if the spacing is highly variable such that it biases the interpretation of the results, then the confidence in the interpretation of any geochemistry is adversely affected. The SGH rating is not just a rating of the agreement between the SGH pathfinder classes for a particular target type; it is a rating of the overall confidence in the SGH results from this particular survey. The interpretation is only based on the SGH results without any information from other geochemical, geological or geophysical information unless otherwise specified.

SGH RATING SYSTEM – HISTORY & UNDERSTANDING

The subjective SGH rating system has been used since 2004 when Activation Laboratories started providing an SGH Interpretation Report with ever submission for SGH analysis to aid our clients in understanding this organic geochemistry and ensuring that they obtain the best results for their surveys. As explained in the previous section, the SGH rating is not just a rating of how definitive an SGH anomaly is, and is not based just on the map(s) provided in this report. It is a rating of "confidence in the interpreted anomaly" from the combination of (i) are the expected SGH Pathfinder Classes of compounds present from the template for this target type (one Pathfinder Class map is shown in the report, at least three must be present to adequately describe the correct signature for a particular target), (ii) how well do these SGH Pathfinder Classes agree in describing an particular area, (iii) how well does this agreement compare to SGH case studies over known targets of that type, (iv) how well is the interpreted anomaly defined by the survey (i.e. a single

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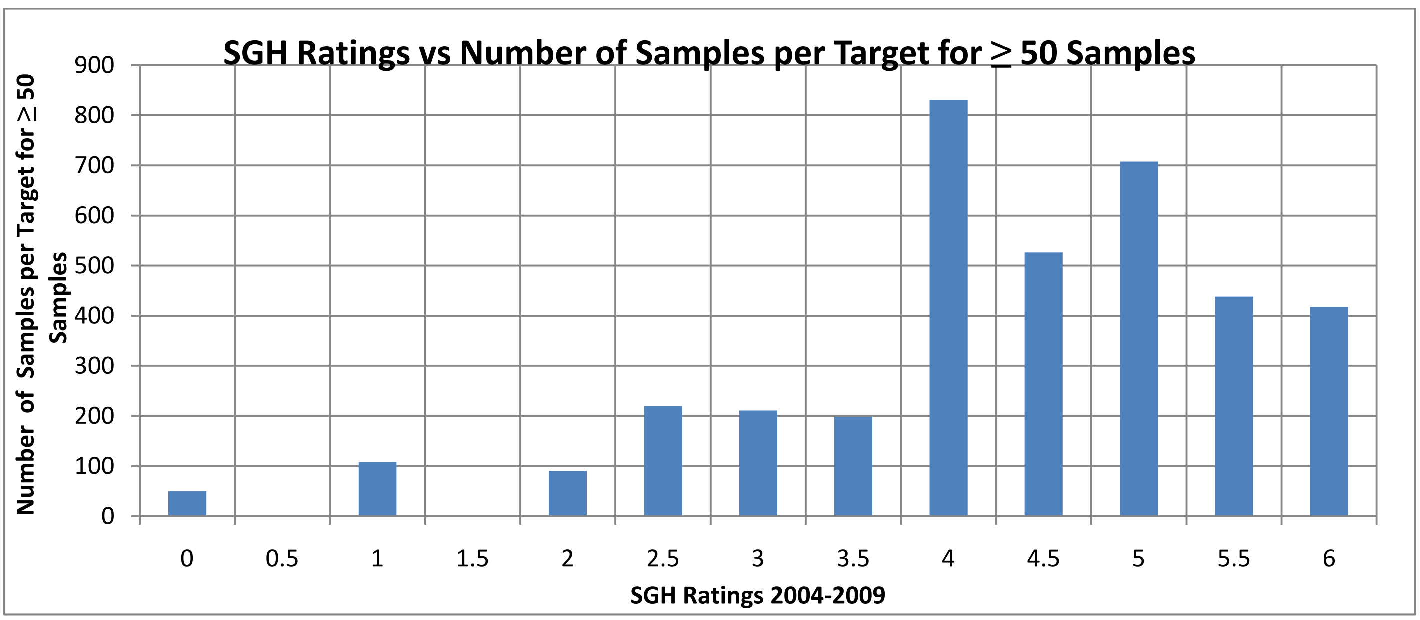
SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)

transect does not provide the same confidence as a complete grid of samples), and (v) is there at least a minimum of 50 sample locations in the survey so that there may be an adequate amount of data to observe the geochromatography of the different SGH Pathfinder Class of compounds.

The question often arises by clients as to the frequency of a rating, e.g. "how often is a rating of 5.0 given in an interpretation". To better understand this we present this review of the history of the SGH rating program since 2004 and some of the underlying situations that can affect the historical rating charts.

Originally it was recommended that a minimum of 35 sample location be used for small target exploration, however it was quite quickly realized that this is often insufficient and at least 50 sample locations were required. In 2007, the rating scale was refined to include increments of 0.5 units rather than just integer values from 0 to 6.

A rating frequency may be biased high as most clients conduct an orientation study over a known target, thus several of these projects result in high ratings. Note that, at this time, the rating is not said to be linked to grade of a deposit or depth to the target. Even in exploration surveys clients tend to submit samples over more promising targets due to knowledge of the geology and prior geochemical or geophysical results. As shown in the following chart, projects with SGH data from 200 or more sample locations have a higher level of confidence in the interpretation as the geochromatography of the SGH Pathfinder Classes of compounds can be more completely observed and reviewed.



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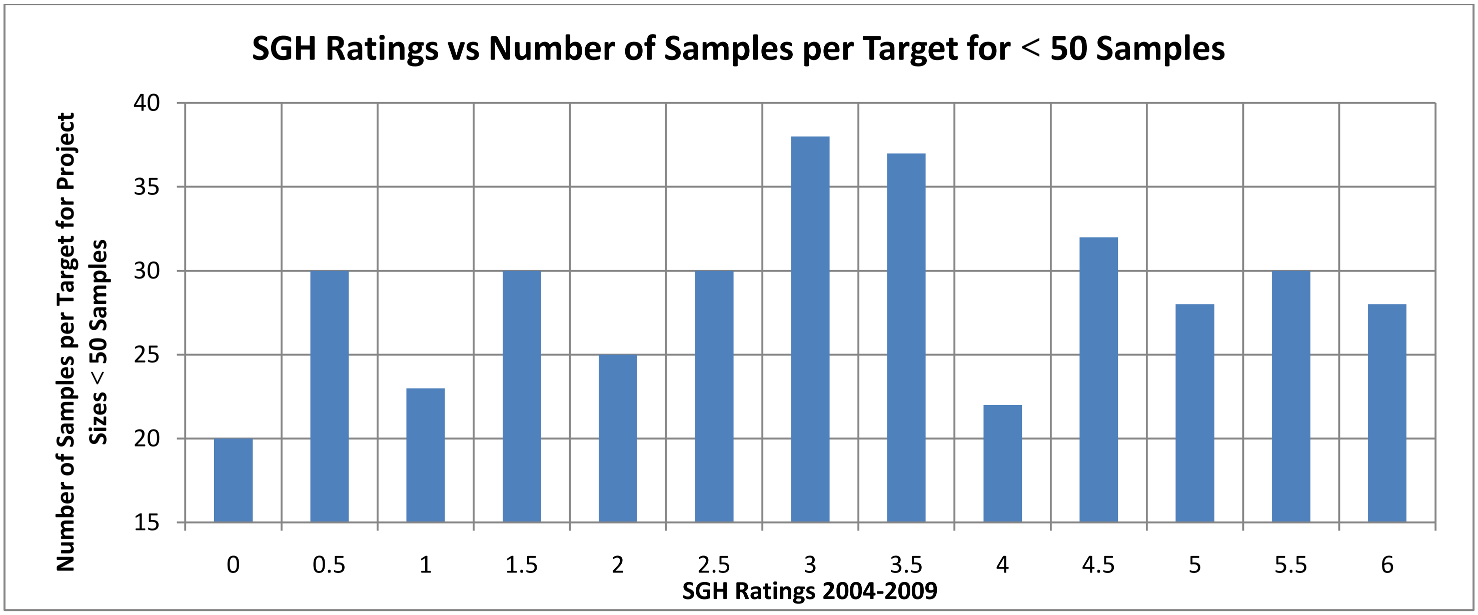
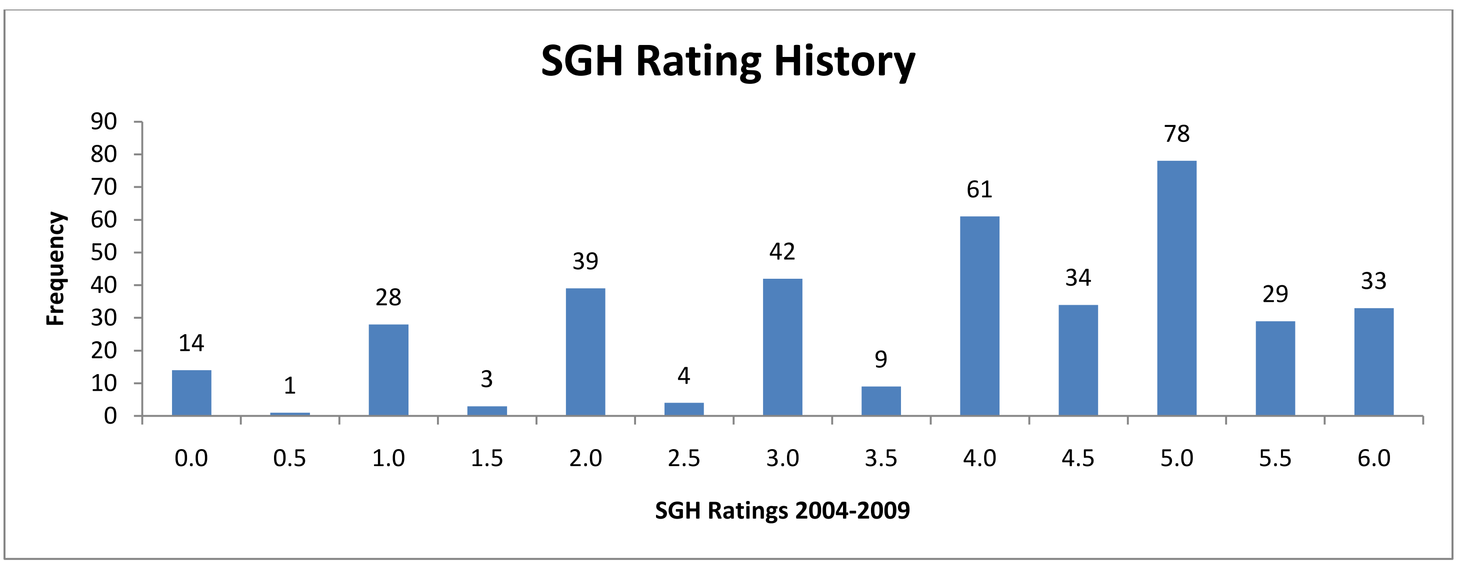
SGH RATING SYSTEM – HISTORY & UNDERSTANDING (cont.)

The rating frequency may be biased low as research projects often include a bare minimum of samples to reduce costs. Research projects may also be over targets known to be difficult to depict with geochemistry. Multiple targets in close vicinity in a survey may result in a low bias as the Pathfinder Class geochromatography is more difficult to deconvelute. Ratings may also be biased low if less than the recommended 50 sample locations is submitted as indicated by the following chart. This chart also illustrates that there is no interpretation bias to a particular rating value.



The overall rating frequency for over 400 targets from January 2004 to December 2009 is shown in the chart below illustrating that surveys over more promising targets are most often submitted for best use of research or exploration dollars. It also indicates that the 0.5 increments were less frequent as they started in 2007.



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SGH DATA QUALITY

- **Reporting Limit:** The SGH Excel spreadsheet of results contains the raw unaltered concentrations of the individual SGH compounds in units of "part-per-trillion" (ppt). The reporting of these ultra low levels is vital to the measurement of the small amounts of hydrocarbons now known to be leached/metabolized and subsequently released by dead bacteria that have been interacting with the ore at depth. To ensure that the data has a high level of confidence, a "reporting limit" is used. The reporting limit of 1 ppt actually represents a level of confidence of approximately 5 standard deviations where SGH data is assured to be "real" and non-zero. Thus in SGH the use of a reporting limit automatically removes site variability and there is no need to further background subtract any data as the reporting limit has already filtered out any site background effects. Thus we recommend that all data that is equal to or greater than 2 ppt should be used in any data review. It is important to review all SGH data as low values that may be the centre of halo anomalies and higher values as apical anomalies or as halo ridges are all important.

- **Laboratory Replicate Analysis:** A laboratory replicate is a sample taken randomly from the submitted survey being analyzed and are not unrelated samples taken from some large stockpile of bulk material. In the Organics laboratory an equal portion of this sieved sample, or pulp, is taken and analyzed in the same manner using the Gas Chromatography/Mass Spectrometer. The comparison of laboratory replicate and field duplicate results for chemical tests in the parts-per-million or even parts-per-billion range has typically been done using an absolute "relative percent difference (RPD)" statistic which is an easy proxy for error estimation rather than a more complete analysis of precision as specified by Thompson and Howarth. An RPD statistic is not appropriate for SGH results as the reporting limit for SGH is 1 part-per-trillion. Further, SGH is a semi-quantitative technique and was not designed to have the same level of precision as other less sensitive geochemistry's as it is only used as an exploration tool and not for any assay work. SGH is also designed to cover a wide range of organic compounds with an unprecedented 162 compounds being measured for each sample. In order to analyze such a wide molecular weight range of compounds, sacrifices were made to the variability especially in the low molecular weight range of the SGH analysis. The result is that the first fifteen SGH compounds in the Excel spreadsheet is expected to exhibit more imprecision than the other 147 compounds. An SGH laboratory replicate is a large set of data for comparison even for just a few pairs of analyses. Precision calculations using a Thompson and Howarth approach should only be used for estimating error in individual measurements, and not for describing the average error in a larger data set. In geochemical exploration geochemists seek concentration patterns to interpret and thus rigorous precision in individual samples is not required because the concentrations of many samples are interpreted collectively. For these reasons recent and independent research at Acadia

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SGH DATA QUALITY (continued)

University in Canada promote that a percent Coefficient of Variation (%CV) should be used as a universal measurement of relative error in all geochemical applications. As SGH results are a relatively large data set for nearly all submissions, %CV is a better statistic for use with SGH. By using %CV, the concentration of duplicate pairs is irrelevant because the units of concentration cancel out in the formation of the coefficient of variation ratio. For SGH, the %CV is calculated on all values ≥ 2 ppt. These values are averaged and represent a value for each pair of replicate analysis of the sample. All of the %CV values for the replicates are then averaged to report one %CV value to represent the overall estimate of the relative error in the laboratory sub-sampling from the prepared samples, and any instrumental variability, in the SGH data set for the survey. Actlabs' has successfully addressed the analytical challenge to minimize analytical variability for such a large list of compounds. Thus as SGH is also interpreted as a signature and is solely used for exploration and not assay measurement, the data from SGH is **"fit for purpose"** as a geochemical exploration tool.

- **Historical SGH Precision:** In the general history of geochemistry, studies indicate that a large component of total measurement error is introduced during the collection of the initial sample and in sub-sampling, and that only a subordinate amount of error in the result is introduced during preparation and analysis. A historical record encompassing many projects for SGH, including a wide variety of sample types, geology and geography, shows that the consistency and precision for the analysis of SGH is excellent with an overall precision of 6.8% Coefficient of Variation (%CV). When last calculated, this number has a range having a maximum of 12.4% CV, a minimum of 3.0% CV, with a standard deviation of 1.6%, in a population made up of over 400 targets (over 45,000 samples) interpreted since June of 2004. Again the precision of 6.8% CV included all of the sample types as soil from different horizons, peat, till, humus, lake-bottom sediments, ocean-bottom sediments, and even snow. When field duplicates have been revealed to us, we have found that the precision of the field duplicates are in the range of about 9 to 12 %CV. As SGH is interpreted using a combination of compounds as a chemical "class" or signature, the affect of a few concentrations that may be imprecise in a direct comparison of duplicates is not significant. Further, projects that have been re-sampled at different times or seasons are expected to have different SGH concentrations. The SGH anomalies may not be in exactly the same position or of the same intensity due to variable conditions that may have affected the dispersion of different pathfinder classes. However, the SGH "signature" as to the presence of the specific mix of SGH pathfinder classes will definitely still exist, and will retain the ability to identify the deposit type and vector to the same target location.

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- **LABORATORY MATERIALS BLANK – QUALITY ASSURANCE (LMB-QA):**

The Laboratory Materials Blank Quality Assurance measurements (LMB-QA) shown in the SGH spreadsheet of results are matrix free blanks analyzed for SGH. These blanks are not standard laboratory blanks as they do not accurately reflect an amount expected to be from laboratory handling or laboratory conditions that may be present and affect the sample analysis result. The LMB-QA measurements are a pre-warning system to only detect any contamination originating from laboratory glassware, vials or caps. As there is no substrate to emulate the sample matrix, the full solvating power of the SGH leaching solution, effectively a water leach, is fully directed at the small surface area of the glassware, vials or caps. In a sample analysis the solvating power of the SGH leaching solution is distributed between the large sample surface area (from soil, humus, sediments, peat, till, etc.) and the relatively small contribution from the laboratory materials surfaces. The sample matrix also buffers the solvating or leaching effect in the sample versus the more vigourous leaching of the laboratory materials which do not experience this buffering effect. Thus the level of the LMB-QA reported is biased high relative to the sample concentration and the actual contribution of the laboratory reagents, equipment, handling, etc. to the values in samples is significantly lower. This situation in organic laboratory analysis only occurs at such extremely low part-per-trillion (ppt) measurement levels. This is one of the reasons that SGH uses a reporting limit and not a detection limit. The 1 ppt reporting limit used in the SGH spreadsheet of raw concentration data is 3 to 5 times greater than a detection limit. The reporting limit automatically filters out analytical noise, the actual LMB-QA, and most of the sample survey site background. This has been proven as SGH values of 1 to 3 parts-per-trillion (ppt) have very often illustrated the outline of anomalies directly related to mineral targets. Thus all SGH values greater than or equal to 1 or 2 ppt should be used as reliable values for interpretations.

The LMB-QA values thus should not be used to background subtract any SGH data. The LMB-QA values are only an early warning as a quality assurance procedure to indicate the relative cleanliness of laboratory glassware, vials, caps, and the laboratory water supply at the ppt concentration level. Do not subtract the LMB-QA values from SGH sample data.

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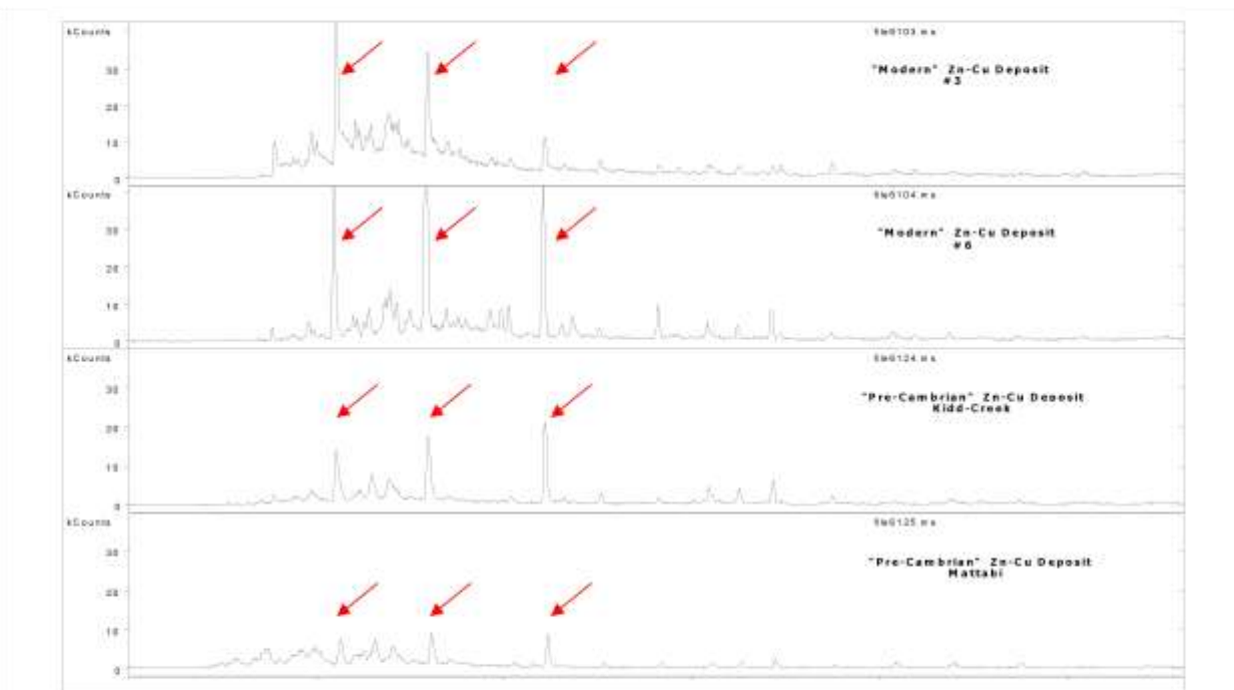
SGH – FORENSIC GEOCHEMICAL SIGNATURES

- One of the first experiments in 1996 in the development of the SGH analysis was to observe if an SGH response could be obtained directly from an ore sample. From office shelf specimens, small rock chips were obtained which were then crushed and milled. The fine pulp obtained was then subjected to the SGH analysis. These shelf specimen samples were from well known Volcanic Massive Sulphide deposits of the Mattabi deposit from the Archean Sturgeon Lake Camp in Northwestern Ontario and from the Kidd Creek Archean volcanic-hosted copper-zinc deposit. Even these specimen samples contain a geochemical record of the hydrocarbons produced by the bacteria that had been feeding on these deposits at depth. As a comparison, SGH analysis were similarly conducted on modern-day VMS ore samples taken from a "black smoker" hydrothermal volcanic vent from the deep sea bed of the Juan de Fuca Ridge where high concentrations of microbial growth was also known to exist. The raw data profiles as GC/MS Total Ion Chromatograms are shown below to illustrate the "visible" portion of the VMS signature obtained from the SGH analysis.



The top two profiles were obtained from two samples of the modern day "black smokers". The third and fourth chromatograms in the above image were obtained from the Pre-Cambrian Zn-Cu Kidd Creek and Mattabi deposits. The red arrows point to three compounds that are a portion of the SGH signature for VMS type deposits. This visible portion of the VMS signature of hydrocarbons can easily be seen in the analysis of each of these four samples.

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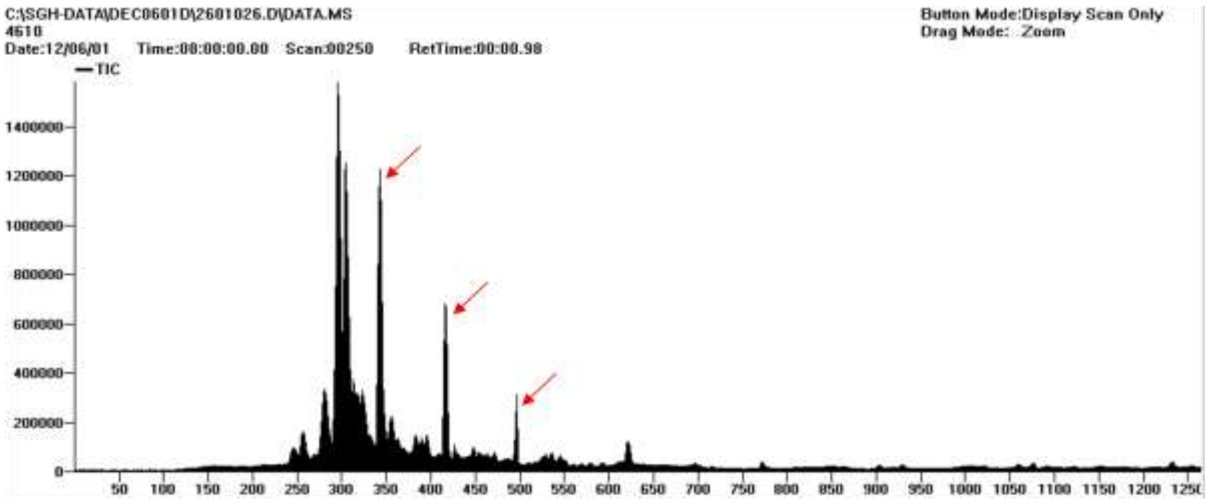
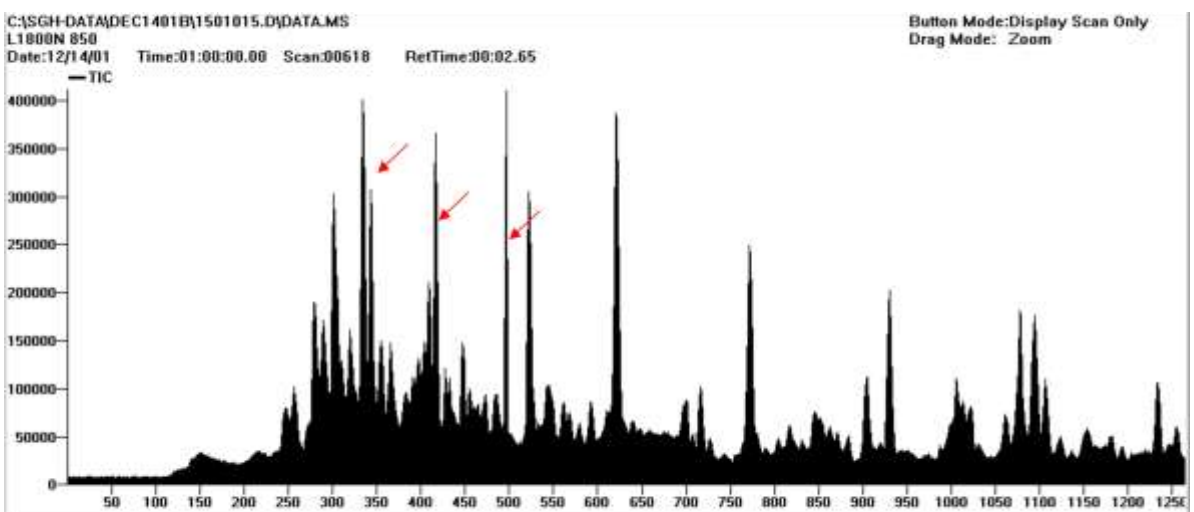
SGH – FORENSIC GEOCHEMICAL SIGNATURES (cont.)

The next question in our early objectives was to see if this SGH signature could also be observed in surficial soil samples that had been taken over VMS deposits. Through our research projects, soil samples were obtained from over the Ruttan Cu-Zn VMS deposit near Leaf Rapids, Manitoba and located in the Paleoproterozoic Rusty Lake greenstone belt. The profile obtained, as observed in the raw GC/MS chromatogram, is shown in this next image below:



The three compounds indicated by the red arrows represent the same visible portion of the VMS signature observed from the modern day black smoker samples and the ore samples taken from the Mattabi and Kidd Creek, even though this soil was taken from over a different VMS deposit in a geographically different area. Is this coincidence? Another soil sample was obtained from Noranda's Gilmour South base-metal occurrence in the Bathurst Mining camp in northern New Brunswick. As shown below, this sample contained a very complex SGH signature, however the visible portion of the VMS signature as indicated by the red arrows is still observed as in the black smoker, Mattabi and Kidd Creek ore samples.



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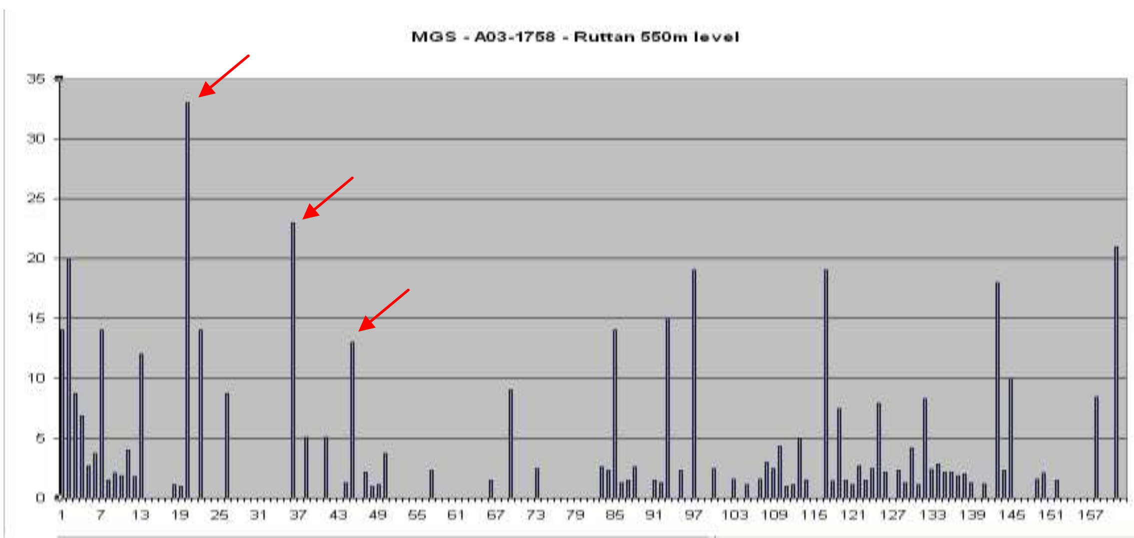
SGH – FORENSIC GEOCHEMICAL SIGNATURES (cont.)

In research conducted by the Ontario Geological Survey, this same portion of the SGH signature was also observed over the VMS deposit at Cross Lake in Ontario. Note that the visible signature shown as the three compounds indicated by the red arrows is only a small portion of the complete SGH VMS signature. The full VMS signature is made up of at least three groups, as three organic chemical classes, that together contain at least 35 of the individual SGH hydrocarbons.

The chromatograms shown on the preceding page from the GC/MS analysis are not used directly in the interpretation of SGH data. As we are only interested in a specific list of 162 hydrocarbons, the mass spectrometer and associated software programs specifically identifies the hydrocarbons of interest, runs calculations using relative responses to a short list of hydrocarbons used as standards, and develops an Excel spreadsheet of semi-quantitative concentration data to represent the sample. Thus the SGH results for a sample, like that observed in ore from the Ruttan, are filtered to obtain the concentrations for the specific 162 hydrocarbons. A simple bar graph drawn from the Excel spreadsheet of the hydrocarbons and their concentrations results in a DNA like **forensic SGH signature** as shown below. The portion discussed hear as the "visible" SGH VMS signature in the GC/MS chromatograms, is again shown by the red arrows.



Through the work done in the SGH CAMIRO research projects, it was observed that the hydrocarbon signature produced by the SGH technique appeared to also be able to be used to differentiate barren from ore-bearing conductors. This was explored further through the submission and analysis of specific specimen samples that represented a barren pyritic conductor and a barren graphitic conductor.

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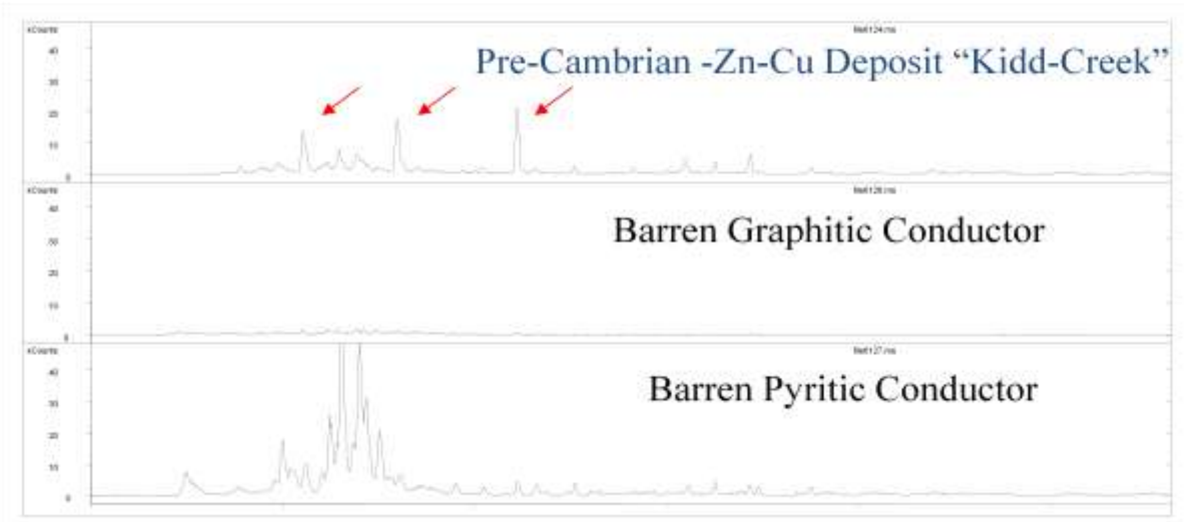
SGH – FORENSIC GEOCHEMICAL SIGNATURES (cont.)

The GC/MS chromatograms from these two specimens are compared to that obtained from the Kidd-Creek ore as shown below. This diagram conclusively shows that the SGH signatures obtained from the two types of barren conductors are completely different than that obtained by SGH over VMS type ore. SGH is thus able to differentiate between ore-bearing conductors and barren conductors as the Forensic SGH Geochemical signature is different.



- SGH has been described by the Ontario Geological Survey of Canada (OGS) as a "REDOX cell locator". Many SGH surveys for Gold and other mineral targets can result in multiple types of anomalies, depending on the class of SGH compounds, even over the same target and in the same set of samples. Thus "Apical", "Nested-Halo", and "Rabbit-Ear" or "Halo" type SGH anomalies are all typically observed from the effect of REDOX cells that have developed over deposits. REDOX cells are also related to the presence of bacteriological activity.

- The VMS template of SGH Pathfinder Classes uses low and medium weight classes of hydrocarbon compounds. Again, at least three Pathfinder Class group maps, associated with the SGH signature for VMS, must be present to begin to be considered for assignment of a good rating. The Pathfinder Class anomalies in these maps must logically concur and support a consistent interpretation in relation to the expected geochromatographic characteristics of the Pathfinder Class, for a specific area. The SGH Pathfinder Class map(s) shown in this report is usually the most diagnostic for the presence of Volcanic Massive Sulphide based mineralization.

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INTERPRETION OF SGH RESULTS – A10-2995
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH SURVEY INTERPRETATION – Lines 37-38

- This report is based on the SGH results from the analysis of a total of 68 soil samples from this survey area. This report specifically pertains to just those sample results from Lines 37 and 38. These two lines are north-south trending transects in the Sturgeon Lake survey area having a total of 47 samples. These transects are about 100 metres apart with samples spaced at approximately 50 metres along each. UTM coordinates were provided for mapping of the SGH results for these soil samples. These samples were received by our Ancaster laboratory and were subsequently dried and sieved as per the procedure on page 5 of this report.

- The number of samples submitted for this project is adequate to use SGH as an exploration tool for Lines 37 & 38. Note that the SGH data is only reviewed for the particular target deposit type requested, in this case for the presence of a VMS based deposit. It is also assumed that there is only one potential target. To obtain the best interpretation the client should indicate if there are possible multiple targets, say from geophysical data. The possibility of multiple targets in "close proximity" should be known due to potential overlap and increased complexity of resulting geochromatographic anomalies which could alter the interpretation.

- Note that the associated SGH results are presented in a separate Excel spreadsheet. This raw data is semi-quantitative and is presented in units of pg/g or **parts-per-trillion** (ppt).

- **The overall precision of the SGH analysis for the samples in this SGH survey was excellent** as demonstrated by 3 samples taken from these two sample lines which were used for laboratory replicate analysis. The average Coefficient of Variation (%CV) of the replicate results for the project samples in this submission was 8.3% which represents an excellent level of analytical performance.

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INTERPRETION OF SGH RESULTS – A10-2995
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH SURVEY INTERPRETATION – Lines 37-38

- The plan view maps shown on page 19 (and on page 20 in 3D view) are SGH "Pathfinder Class map" for targeting VMS mineralization. Each map represents the simple summation of several individual hydrocarbon compound concentrations that are grouped from within the same organic chemical class. SGH Pathfinder Class maps have been shown to be robust as they are each described using from 4 to 14 (unless otherwise stated) chemically related SGH compounds which are simply summed to create each class map. Thus each map has a higher level of confidence as it is "not" illustrating just one compound response. A legend of the SGH classes appears in the SGH data spreadsheet. The overall SGH interpretation rating (page 21) has even a higher level of confidence as it further relies on the consensus between at least three SGH Pathfinder Classes (other classes not shown) that together make the signature of the target at depth.

- The dotted black oval, applied to the SGH Pathfinder Class maps on page 19, outlines an area where the SGH data predicts the outer boundary of a potential VMS type target. The plan map on the left on page 19 is an SGH Pathfinder Class map for VMS that is expected to exhibit an apical anomaly while the SGH Pathfinder Class map on the right is expected to show a corresponding halo anomaly. The dotted black oval around the apical anomaly on the left hand Pathfinder Class map nicely supports the halo anomaly on the right hand Pathfinder Class map at Lines 37-38. This type of confirmation is expected and is part of the SGH signature for over VMS type mineralization. This is also excellent confirmation of the interpretation of the presence of a REDOX cell which is also often indicative of the presence of buried mineralization and bacteriological activity. Other SGH Pathfinder Class maps (not shown) also agree on the assignment of this interpretation. The highest response for the central apical anomaly on the left hand SGH Pathfinder Class map thus represents the most probable location of a vertical projection over the centre of the target at depth, and thus where SGH predicts would be the best vertical drill target (although vertical drilling may not be the ideal method of drilling in this area). This interpretation is based only on this survey and on these SGH results.

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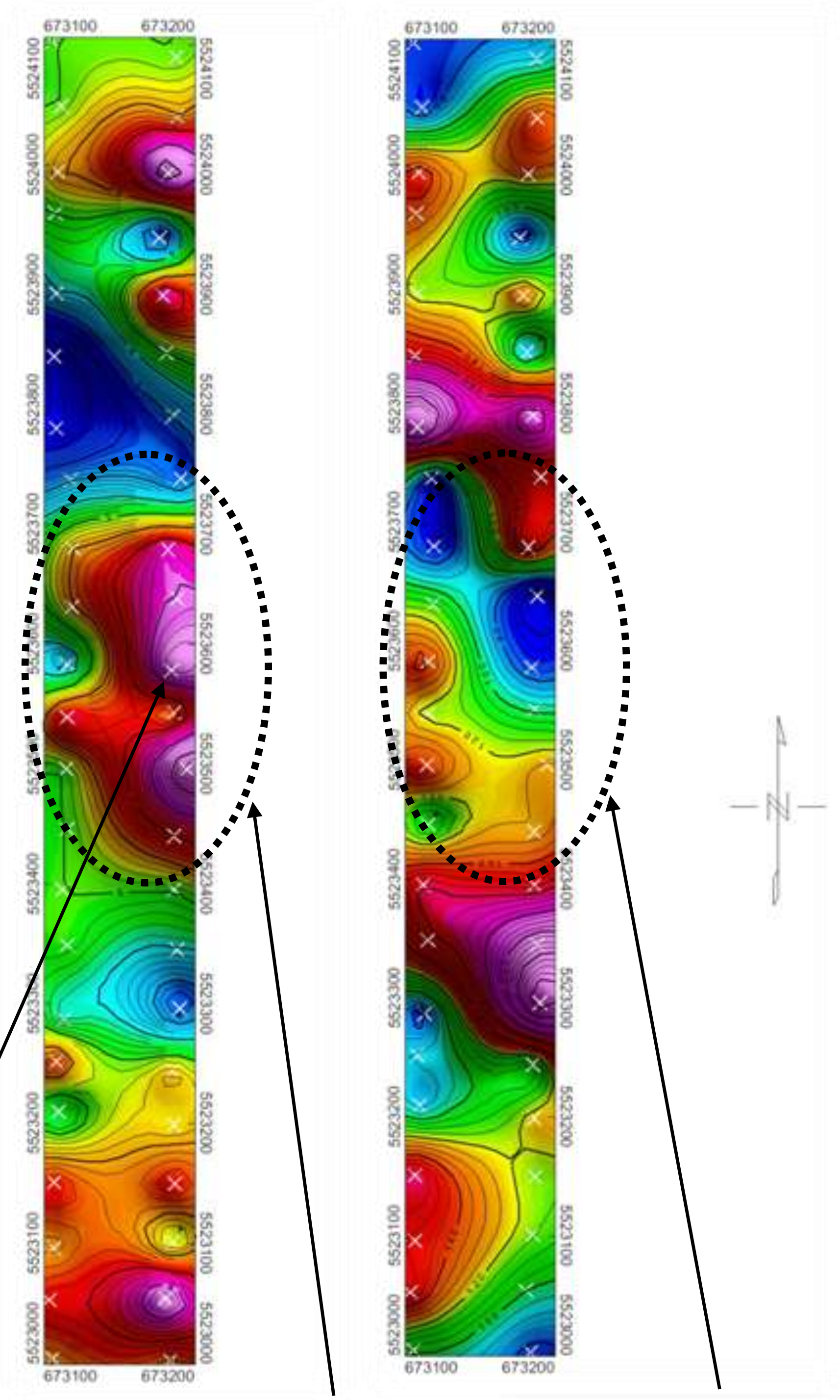
INTERPRETION OF SGH RESULTS – A10-2995
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH "VMS" PATHFINDER CLASS MAPS – Lines 37-38



DRILL TARGET REDOX CELL - APICAL ANOMALY - WITHIN HALO ANOMALY

Results represent only the material tested. Actlabs is not liable for any claim/damage from the use of this report in excess of the test cost. Samples are discarded in 90 days unless requested otherwise. This report is only to be reproduced in full.

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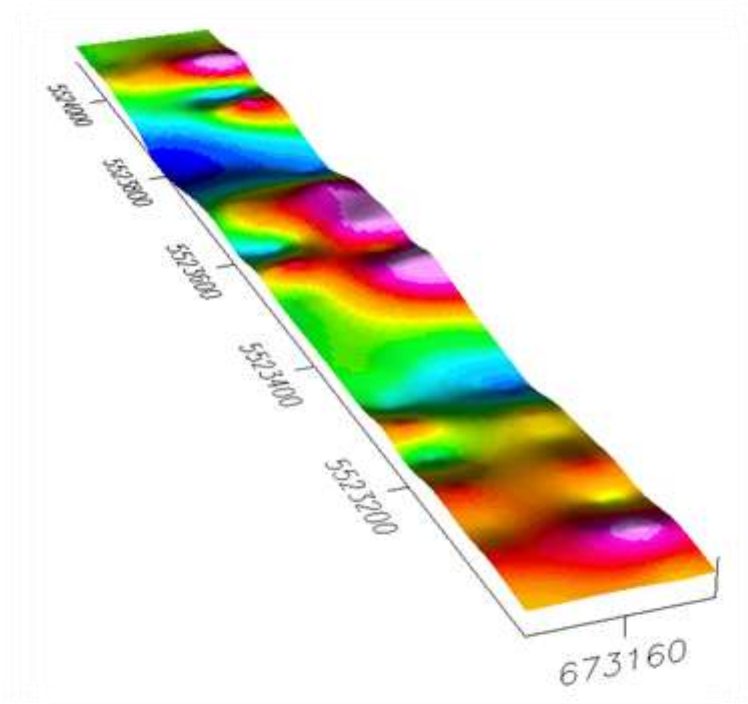
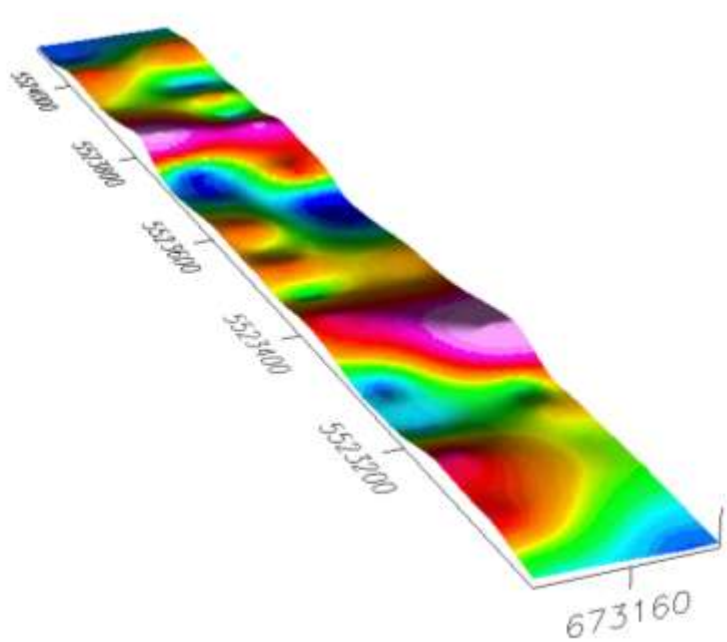
INTERPRETION OF SGH RESULTS – A10-2995
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY

SGH "VMS" PATHFINDER CLASS MAP – 3D VIEW – Lines 37-38





GEOSOFT

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INTERPRETION OF SGH RESULTS – A10-2995
EXCALIBUR RESOURCES LTD. – STURGEON LAKE SURVEY.

SGH SURVEY INTERPRETATION RATING – Lines 37-38

- After review of all of the SGH Pathfinder Class maps, the SGH results from these soil samples suggest a **"rating of 5.0"** for the area within the dotted black oval interpretation on the plan view maps on page 19, in relation to the presence of a VMS based target beneath this survey area. This rating is based on a scale of 6.0 in 0.5 increments, with a value of 6.0 being the best. This rating represents the similarity of these SGH results with case studies over a Volcanic Massive Sulphide (VMS) type target, to the SGH case studies conducted at the Hanson Lake VMS deposit in Saskatchewan, the South Gilmour VMS deposit in New Brunswick and the Cross Lake VMS deposit in Ontario. The degree of confidence in the rating only starts to be "good" at a level of 4.0.

- A value of 1.0 was deducted as the anomalies of other SGH pathfinder classes, not shown in this report, could have agreed in the location of the interpretation within the black dotted oval more clearly.

- The client should use a combination of these SGH results and its report with additional geochemical, geophysical, and geological information to possibly obtain a more confident and precise target location.

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Cautionary Note Regarding Assumptions and Forward Looking Statements

The statements and target rating made in the Soil Gas Hydrocarbon (SGH) interpretive report or in other communications may contain certain forward-looking information related to a target or SGH anomaly.

Statements related to the rating of a target are based on comparison of the SGH signatures derived by Activation Laboratories Ltd. through previous research on known case studies. The rating is not derived from any statistics or other formula. The rating is a subjective value on a scale of 0 to 6 relative to the similarity of the SGH signature reviewed compared to the results of previous scientific research and case studies based on the analysis of surficial samples over known ore bodies. No information on other geochemistries, geophysics, or geology is usually available as additional information for the interpretation and assignment of a rating value unless otherwise stated. The rating does not imply ore grade and is not to be used in mineral resource estimate calculations. References to the rating should be viewed as forward-looking statements to the extent that it involves a subjective comparison to known SGH case studies. As with other geochemistries, the implied rating and anticipated target characteristics may be different than that actually encountered if the target is drilled or the property developed.

Activation Laboratories Ltd. may also make a scientifically based reference in this interpretive report to an area that might be used as a drill target. Usually the nearest sample is identified as an approximation to a "possible drill target" location. This is based only on SGH results and is to be regarded as a guide based on the current state of this science.

Unless stated, Activation Laboratories Ltd. has not physically observed the exploration site and has no prior knowledge of any site description or details. Actlabs makes general recommendations for sampling and shipping of samples. Unless stated, the laboratory does not witness sampling, does not take into consideration the specific sampling procedures used, season, handling, packaging, or shipping methods. The majority of the time, Activation Laboratories Ltd. has had no input into sampling survey design. Where specified Activation Laboratories Ltd. may not have conducted sample preparation procedures as it may have been conducted at the client's assigned laboratory. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ scientifically which may impact the associated interpretation and target rating from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended.

In general, any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions, future events or performance are not statements of historical fact. These "scientifically based educated theories" should be viewed as "forward-looking statements".

Readers of this interpretive report are cautioned not to place undue reliance on forward-looking information. Forward looking statements are made based on scientific beliefs, estimates and opinions on the date the statements are made and the interpretive report issued. The Company undertakes no obligation to update forward-looking statements or otherwise revise previous reports if these beliefs, estimates and opinions, future scientific developments, other new information, or other circumstances should change that may affect the analytical results, rating, or interpretation.

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Date Submitted: June 10, 2010

Date Analyzed: June 22 & 23, 2010

Interpretation Report: June 26, 2010

Excalibur Resources Ltd.

Excalibur Resources Ltd.,
20 Adelaide St. E., Suite 400,
Toronto, Ontario, Canada. M5C 2T6

Attention: Dr. Jim Kendall, President & CEO

RE: Your Reference: Sturgeon Lake Survey

CERTIFICATE OF ANALYSIS

68 Soil samples were submitted for analysis via SGS Labs.

These samples were prepared according to our Code S4 procedure.

The following analytical package was requested: Code SGH – Soil Gas Hydrocarbon Geochemistry

REPORT/WORKORDER: A10-2995

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

Notes:
The SGH – Soil Gas Hydrocarbon Geochemistry is a semi-quantitative analytical procedure to detect and measure 162 hydrocarbon compounds as the organic signature in the sample material collected from a survey area. It is not an assay of mineralization but is a predictive geochemical tool used for exploration. This certificate pertains only to the SGH data presented in the associated Microsoft Excel spreadsheet of results.

The author of this SGH Interpretation Report, Mr. Dale Sutherland, is the creator of the SGH organic geochemistry. He is a Chartered Chemist (C.Chem.) and Forensic Scientist specializing in organic chemistry. He is not a professional geologist or geochemist.

CERTIFIED BY:

D Sutherland

Dale Sutherland, B.Sc.,B.Sc.,B.Ed.,C.Chem.
Forensic Scientist, Organics Manager,
Director of Research
Activation Laboratories Ltd.

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A Review of Enzyme Leach Geochemical Responses, Sturgeon Lake Area, Ontario

By

Mark Fedikow Ph.D. P.Eng. P.Geo. C.P.G.

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50 Dobals Road North

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For

Geofine Exploration Consultants Ltd.

EXECUTIVE SUMMARY

This soil geochemical survey has delineated two base metal anomalies (Lines 34 and 40) which are worthy of exploration follow-up. The premier response occurs between stations 11+50 and 12+50 on line 34 and consists of a Zn, Cu, Mo, Sb, Co and Mn signature. The secondary anomaly occurs on line 40 at station 2+75 and comprises elevated responses for Cu, Pb, Zn, Mo and Sb. The use of a standard grade of enzyme leach is fraught with difficulty since it has difficulty extracting gold from the substrate and the use of *enhanced* grade Enzyme Leach or other partial/selective extraction technologies is recommended. There is limited correspondence between enzyme leach analyses and an SGH anomaly (rank 5 of 6) and limited correspondence between anomalous enzyme leach responses, VTEM geophysical anomalies and SGH anomalies, overall.

Sample collection appears to have been limited by deep organic cover and as such gaps are apparent in the sampling patterns along individual transects. The use of a Dutch auger to penetrate the organic cover and access these samples is strongly recommended. In this way inorganic samples can be collected for enhanced enzyme leach analysis, Soil Gas Hydrocarbons (SGH) or other partial/selective extraction technologies.

There appears to be no consistent relationship between the Mn responses and those for base and precious metals in this survey.

TERMS OF REVIEW

Enzyme Leach geochemical data was received from Geofine Exploration Consultants Ltd. from a survey undertaken by Excalibur Exploration in the Sturgeon Lake area of Ontario. The database combines SGH and Enzyme Leach geochemical analyses for base metal massive sulphide-type mineralization. These surveys were intended to assess airborne electromagnetic and magnetic anomalies for their base and precious metal contents and in so doing focus exploration by differentiating "metal-rich" from "metal-poor" geophysical anomalies.

Sampling was undertaken on lines 32 through 40 however in areas where no suitable Enzyme Leach sample could be collected available sample media was collected for SGH analysis. This results in sampling gaps along the transects where no Enzyme Leach samples were available. Since Enzyme Leach and SGH measure two different forms of geochemical response, data from each survey cannot be directly compared. Areas of anomalous response can have, however both an Enzyme Leach and an SGH anomaly. Results from the SGH survey are compared and contrasted to those for Enzyme Leach.

INTRODUCTION TO THE ENZYME LEACH

The Enzyme Leach is a highly selective analytical extraction used primarily for detecting extremely subtle geochemical anomalies in B-horizon soils. Pattern recognition is the key to proper interpretation of Enzyme Leach data, since anomaly patterns are quite different from conventional geochemical data. Often, the EL signatures of mineralized zones are substantially larger than the sampling pattern implemented with the result that often only partial patterns of response are delineated.

Many ore bodies are buried beneath thick sequences of overburden, lake sediments or younger post-mineralization volcanic and/or sedimentary rocks. In other situations ore bodies or petroleum reservoirs lie deep within rocks that contain no evidence of the resource below. Given geologic time, extremely small amounts of trace elements related to the underlying body can migrate by various mechanisms to near-surface soils, where they would tend to be trapped by various oxide precipitates coating mineral grains in the soil. One of the most effective of these traps is amorphous $Mn0_2$, which is a very small portion of the total manganese oxides in the soil. Amorphous precipitates of $Mn0_2$ are a very effective trap for a wide variety of cations, anions, and polar molecules that migrate to the surface. Because of the efficiency of this trapping material, the locations of Enzyme Leach anomalies are generally independent of the quantity of leachable Mn in the soils. The Enzyme Leach makes use of an enzyme-catalyzed reaction to selectively dissolve the most reactive form of $Mn0_2$ in soils, the amorphous form of the compound. Consequently, a very small portion of the $Mn0_2$ in the samples is dissolved. Because of this selectivity, the background leachable concentrations of many trace elements that are determined are in the low part-per-billion (ppb) range. Thus, the anomalies often have very dramatic contrast above background. Currently Enzyme Leach anomalies can be classified two ways. Morphologically, there are three commonly recognized anomaly forms: 1. halo anomalies; 2. apical anomalies; 3. combination anomalies. Genetically, there are also three classes: A.

oxidation anomalies (sometimes referred to as oxidation halos, where they form a morphological halo); B. diffusion anomalies, which result from the gradual thermodynamic dispersal of a highly concentrated source; C. mechanical/hydromorphic dispersion anomalies.

Oxidation anomalies appear to be caused by very subtle electrochemical cells that develop at the top of reduced bodies in the subsurface. These anomalies are characterized by very high-contrast values for a suite of elements, the "oxidation suite," which includes Cl, Br, I, As, Sb, Mo, W, Re, Se, Te, V, U, and Th. Often, rare-earth elements will accompany the oxidation suite. Base metals can be anomalous in the same soil samples, but usually with lower contrast. Anomalous contrasts are often quite dramatic, in some cases exceeding 50- times background. Oxidation anomalies often take the form of an asymmetrical halo or partial halo around the buried reduced body and that body underlies much of the central low within that halo. They have been found associated with reduced bodies located as much as 2 km below the surface. Generally, the contrast of the anomaly and the number of anomalous elements in the halo decline as the depth of the reduced body increases. They can be associated with any reduced body: porphyry-Cu deposits, base metal massive-sulfide deposits, epithermal-Au deposits, lode-Au deposits, petroleum reservoirs, geothermal systems, barren massive sulfides, barren disseminated pyritic alteration, blocks of barren pyritic shale or black shale isolated as a horse within a fault or occurring as a graben between two normal faults. Any mass of rock that contains more oxidizable material than the surrounding rock has the potential to produce one of these anomalies. The suite of trace elements in the halo often is not indicative of the composition of the source. However, relative differences in some trace elements, and the appearance of some quite rare elements, such as Re, in the anomaly can provide clues about the chemistry of the source. Evidence suggests that volatile halide compounds and halogen gases, which can form at the anodes of electrochemical cells, migrate to the surface along joints and faults in rock and through permeable overburden to form these oxidation anomalies at the surface. Base-metal "rabbit ear" anomalies associated with oxidation suite halos may form as a result of cations being pushed along electrochemical gradients. Electrochemical gradients also appear to produce differentiation patterns for the halogens based on the differing electrode potentials required to oxidize chloride, bromide and iodide. These patterns are seen around some larger mineral deposits and some petroleum reservoirs. A flux of CO_2 generated in the area of the electrochemical cell may act as a carrier to aid in the migration of oxidation suite volatiles to the surface.

Apical anomalies are the most common morphological form of Enzyme Leach anomalies, and most of these are related to faults. Trace elements that are representative of the source are found as an anomaly directly over that source. If the source is a mineral deposit, many of the commodity/pathfinder/alteration trace elements that characterize the source are anomalous at the surface. When an apical anomaly is found associated with a sulfide-rich mineral deposit, it is because something is preventing a strong oxidation halo from forming. The deposit may be too deep for a strong oxidation cell to develop, there may be a barrier, such as permafrost, between the deposit and the surface, or the top of the deposit may have been destroyed by deep weathering. Metals and pathfinder elements enriched in an underlying mineral deposit may be transported to the surface as a consequence of biomethylation of those elements by bacteria. Dimethyl and trimethyl compounds of many elements are highly mobile as gases. Therefore, it is possible that many apical Enzyme Leach anomalies over deep sulfide-rich deposits result from vapor phase transport of trace elements to the surface. Trace elements that characterize the porphyrins in a petroleum reservoir will often form an apical anomaly over the reservoir. Microseepage of hydrocarbons would carry these compounds to the surface. Faults that are mineralized, that intersect mineralization, or that intersect geochemically unusual rocks will produce a linear anomaly at the surface that follows the subcrop of the fault in the subsurface. If a fault passes through or near an oxidation cell, then oxidation suite elements will commonly form a very high-contrast anomaly over the trace of the fault. Supposedly immobile high-field-strength elements, such as Zr, Nb, Hf, Ta and the rare earth elements will often form very high-contrast anomalies over faults in areas where oxidation is going on in the subsurface.

Combination anomalies have characteristics of both apical and oxidation anomalies. They usually are found where there is a weak to moderately strong oxidation cell in the subsurface. As the strength of the oxidation cell increases, the trace elements that characterize the source migrate more and more into the halo anomaly, until the apical anomaly disappears.

A variety of geological situations can complicate Enzyme Leach anomalies, making interpretation more uncertain. Oxidation halos are often irregular in shape, spotty, or highly asymmetrical. Therefore, it would be very easy to misinterpret a pattern, simply because a single traverse passed through the wrong part of an anomalous area. Closely spaced mineralized bodies can produce interference patterns between adjacent oxidation halos. Graphitic host rocks tend to have a strong quenching effect on an oxidation cell; diminishing the contrast of the anomaly and making the source appear to be much deeper than it actually is. Anomaly patterns can shift substantially with time, due to intense weathering of the top of a deposit, changes in the water table, and other factors. Active and relic anomalies in the same areas will complicate the interpretations. Geochemical barriers in the subsurface, such as strongly oxidized sedimentary units, can attenuate or completely block the formation of an Enzyme Leach anomaly.

METHOD OF REVIEW

Data was first examined visually for the presence of any obvious commodity element (Cu, Pb, Zn, Au, and Ag) anomalous/elevated responses and then for responses related to pathfinder elements and associated elements typical of volcanogenic massive sulphide type mineralization. Since the data consists of samples from linear transects rather than from a gridded rectangular array, the presence or absence of Enzyme Leach responses is likely to be manifest as an apical nature rather than the areally more extensive Halo or Combination-type anomalous response.

Where geochemical contrast was noted, data was plotted as single element or multi-element response bar charts along each transect.

Results are described below for individual sampling transects. Two-dimensional plots illustrating the variability of significant element response accompanies each transect.

RESULTS

Analytical Data Quality-Analytical Duplicates

The reproducibility of Enzyme Leach analyses in the Sturgeon Lake dataset was monitored with the use of analytical duplicates. These are samples that are selected and re-analyzed under the same conditions as the remainder of the unknown soil samples. The duplicate pairs, which illustrate the analytical reproducibility, are given in table form below for selected elements.

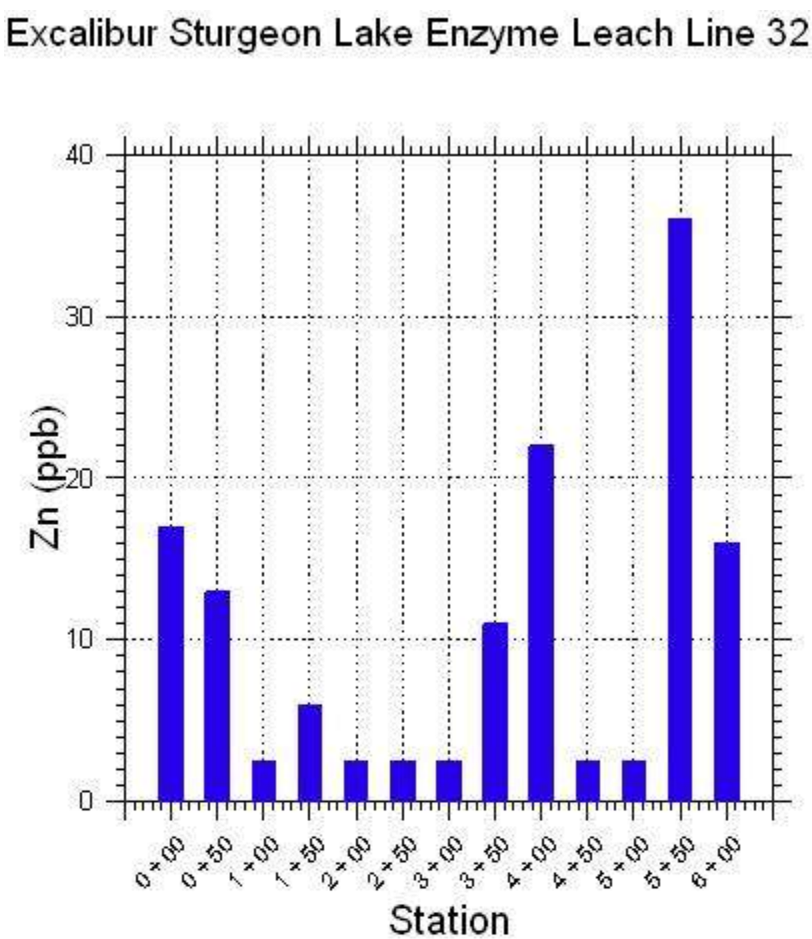
Review of all analytical data indicates good reproducibility over a broad range of concentration for most elements of interest. The results for the commodity and lithologically-sensitive elements indicate excellent reproducibility across a wide range of concentration and this same quality of analytical data is observed for the majority of the EL element suite. Some variability is noted for the elements near the LLD. Occasionally there are duplicate pairs that exhibit variability for select elements but these sample pairs are not indicative of the sample pairs. Overall analytical reproducibility for the Sturgeon Lake EL survey is interpreted to be excellent and not a hindrance to the recognition of anomalous responses at all concentration/contrast levels.

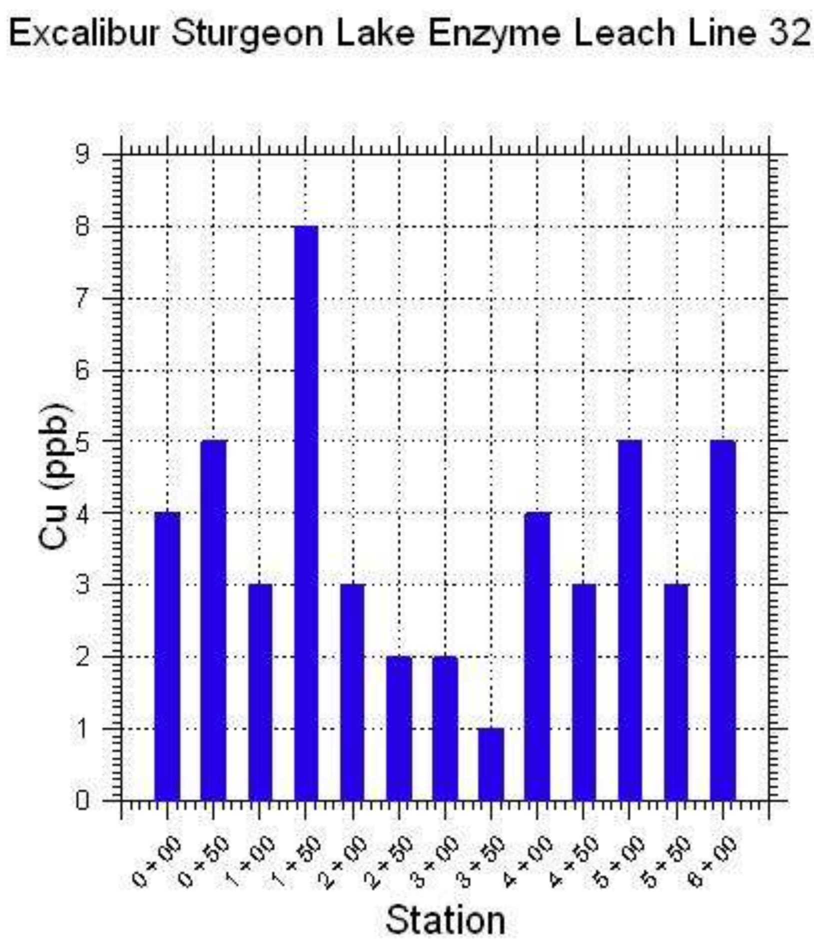
A review of the replicate analyses of the analytical blank ("Method Blank") indicates there are no contaminants being introduced into the sample at the laboratory stage.

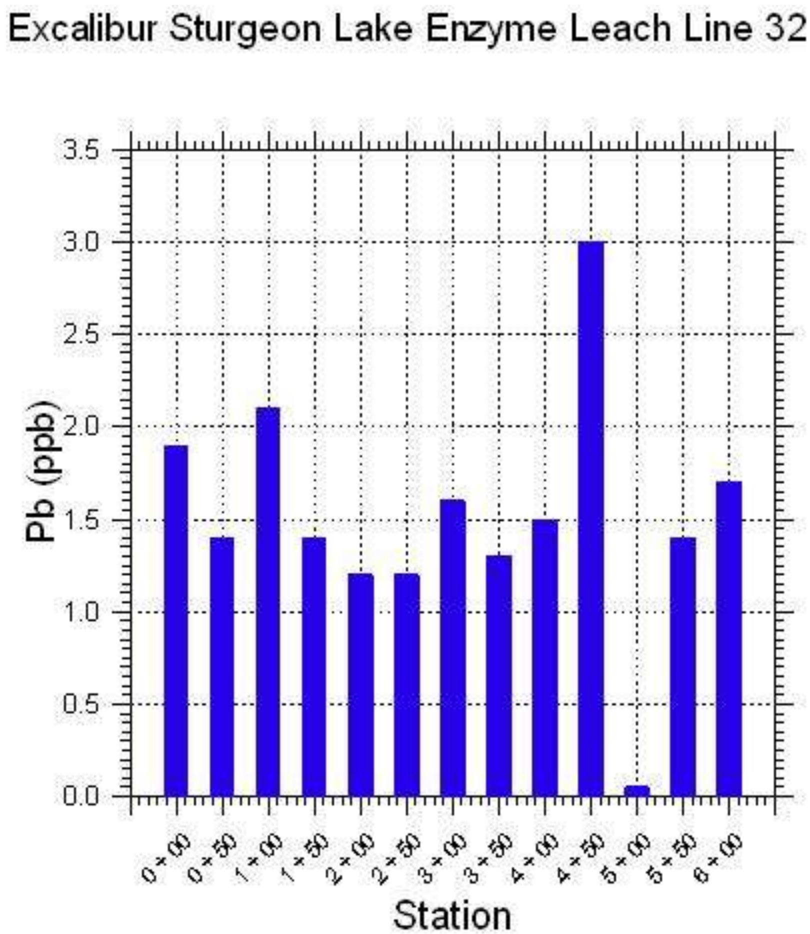
Analyte Symbol	Au	Co	Ni	Cu	Zn	Pb	Ag	La
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit	0.005	0.2	1	1	5	0.1	0.1	0.01
Analysis Method	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS	ENZ-MS
36022 Original	< 0.005	12	17	8	9	< 0.1	< 0.1	4.66
36022 Duplicate	< 0.005	13	18	9	10	< 0.1	< 0.1	4.61
36032 Original	< 0.005	17	39	11	9	1.6	< 0.1	7.72
36032 Duplicate	< 0.005	17	39	11	8	1.2	< 0.1	7.36
36049 Original	0.009	21	28	8	45	1.3	< 0.1	8.67
36049 Duplicate	0.006	22	25	7	47	2.2	< 0.1	8.95
Method Blank Method Blank	< 1000	< 1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1

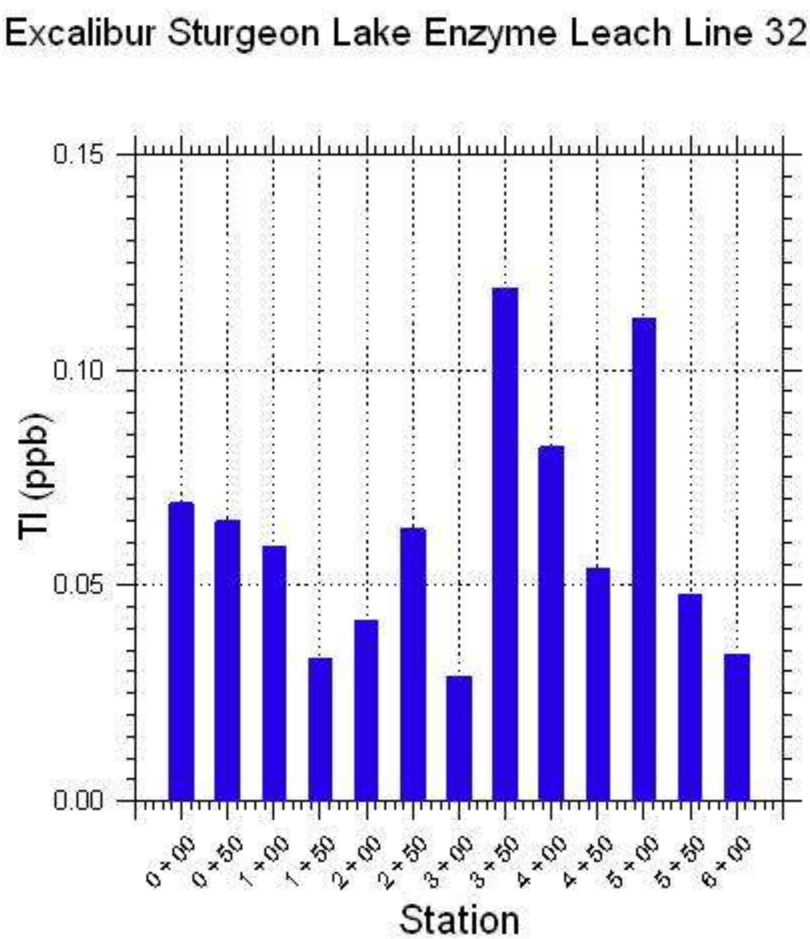
Variability of Element Responses-Lines 32 through 40

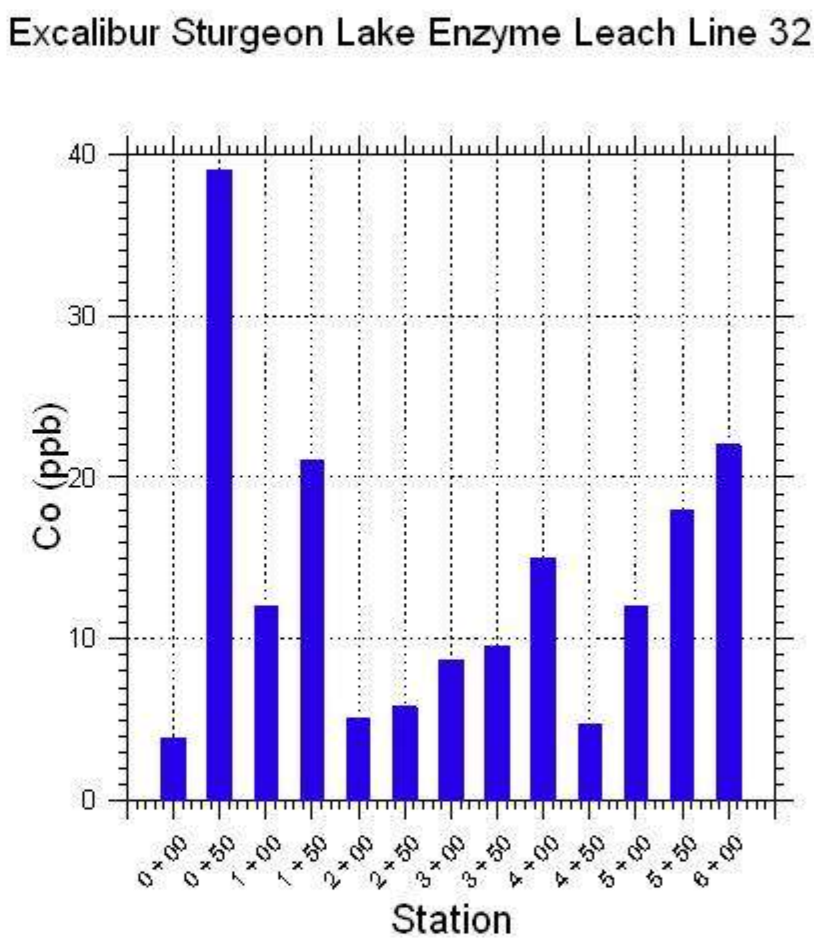
Line 32: Results from this sampling transect are characterized by a lack of focused base and precious metal responses including Cu, Pb, Zn, Au and Ag. There is a modest Co response between station 0+50 and 1+50. The Co response is likely the signature of a mono-mineralic zone of pyrite mineralization or the signature of a mafic lithology (or both). There are no follow-up base and precious metal anomalies on this line. There is no correlation between the Mn content of the soils and the base and precious metal contents on this transect.

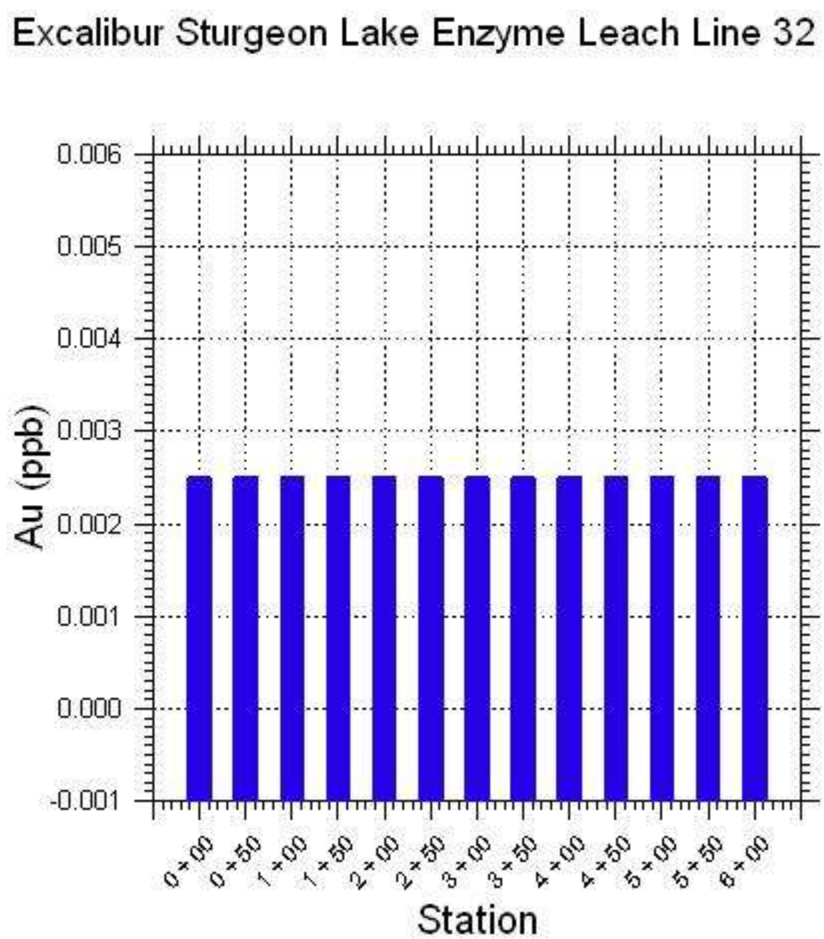


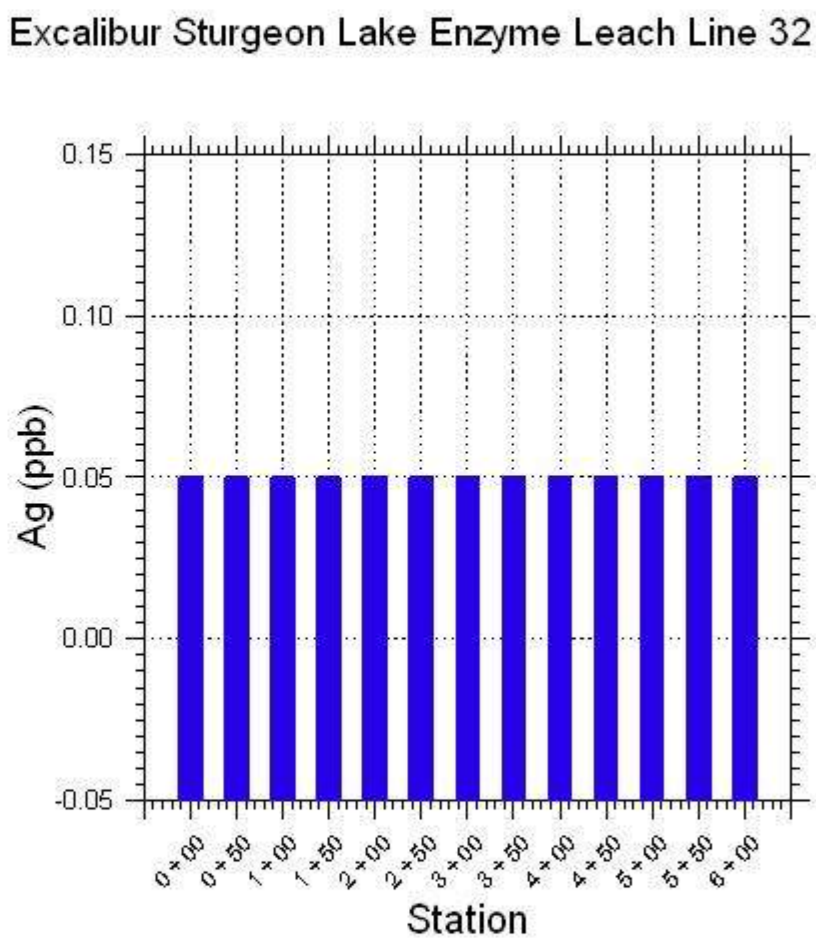

Excalibur Sturgeon Lake Enzyme Leach Line 32
Cu (ppb)
0
1
2
3
4
5
6
7
8
9
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
Station

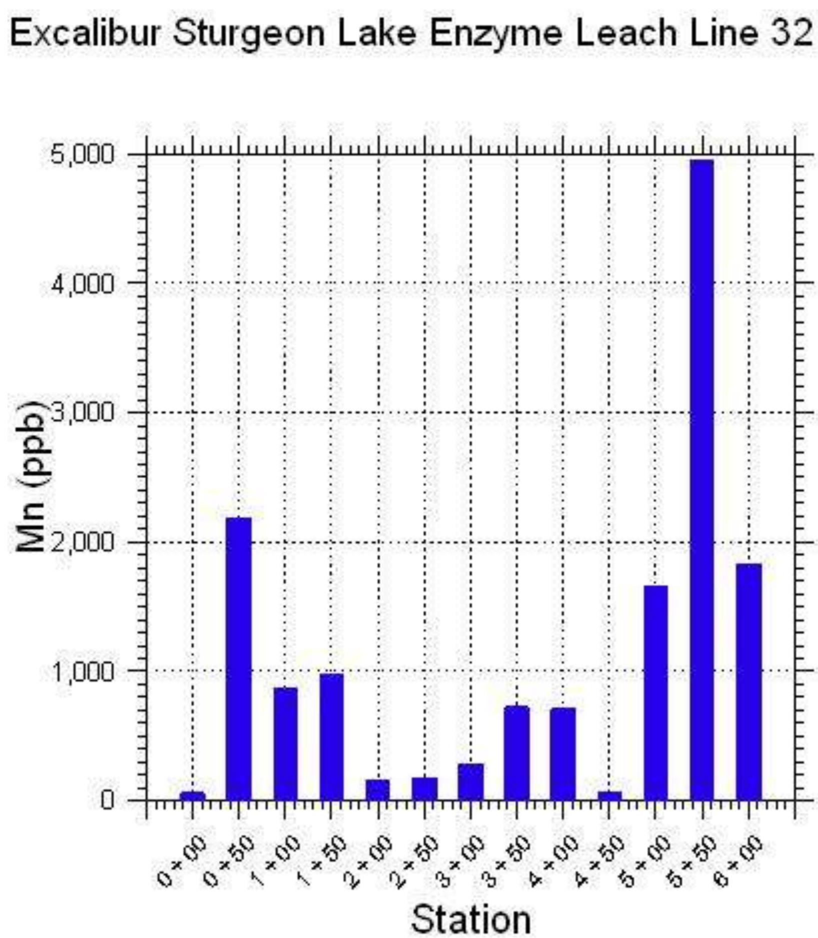

Excalibur Sturgeon Lake Enzyme Leach Line 32
Pb (ppb)
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
Station


Excalibur Sturgeon Lake Enzyme Leach Line 32
0.15
0.10
0.05
0.00
Tl (ppb)
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
Station

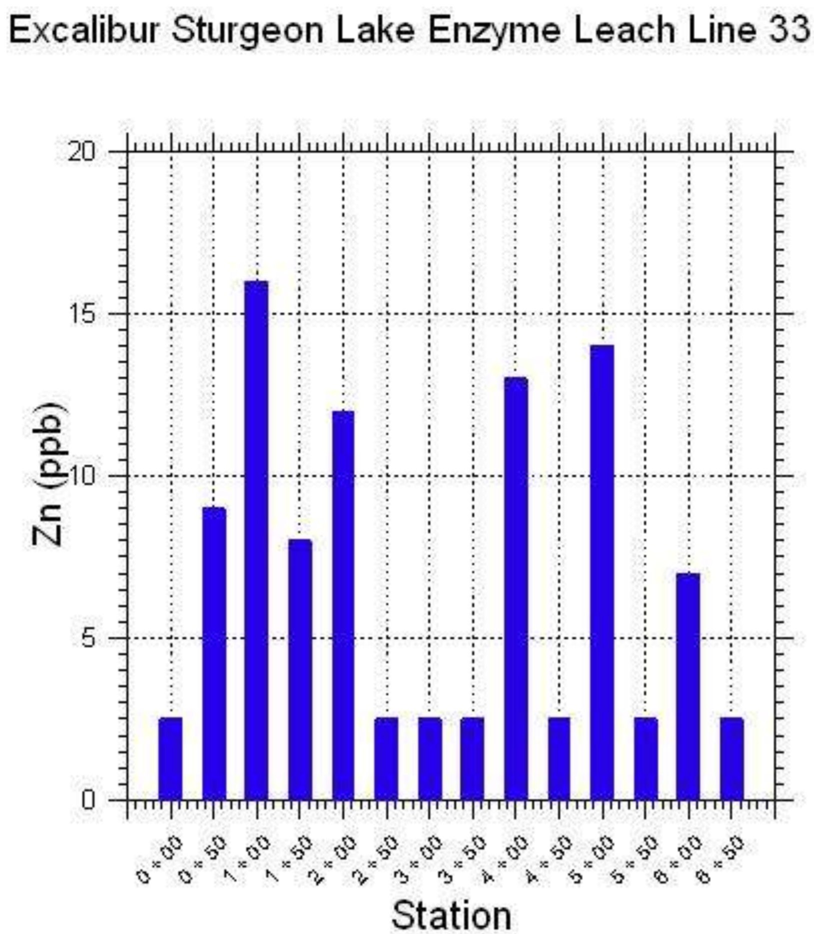

Excalibur Sturgeon Lake Enzyme Leach Line 32
Co (ppb)
0
10
20
30
40
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
Station

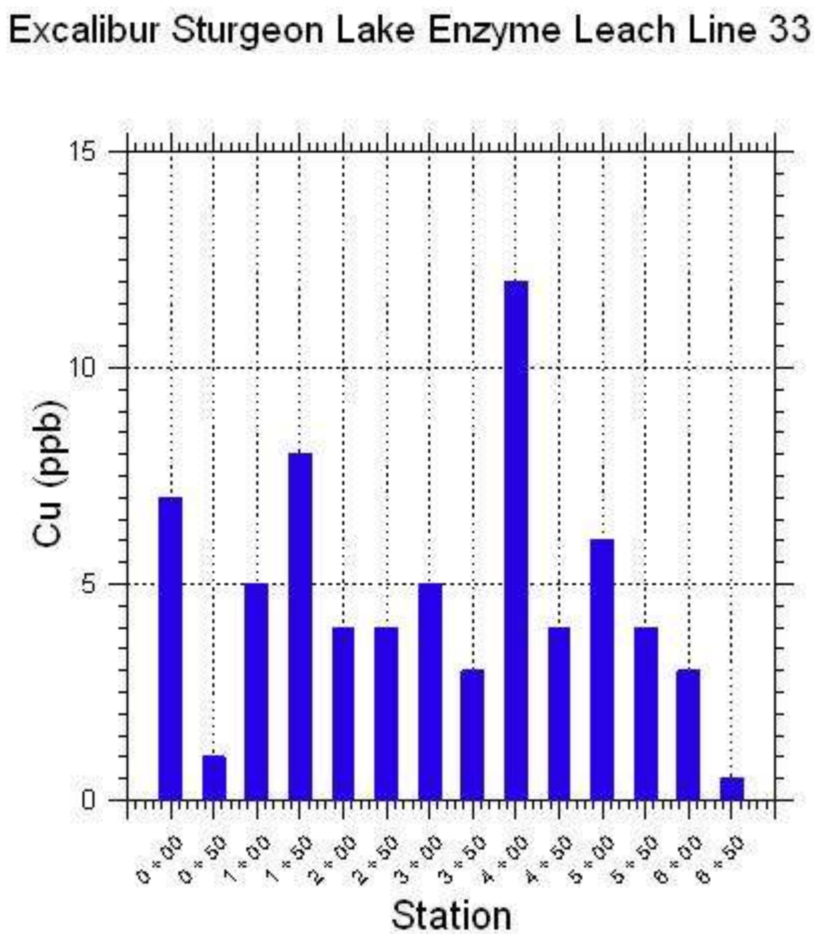

Excalibur Sturgeon Lake Enzyme Leach Line 32
Au (ppb)
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
Station

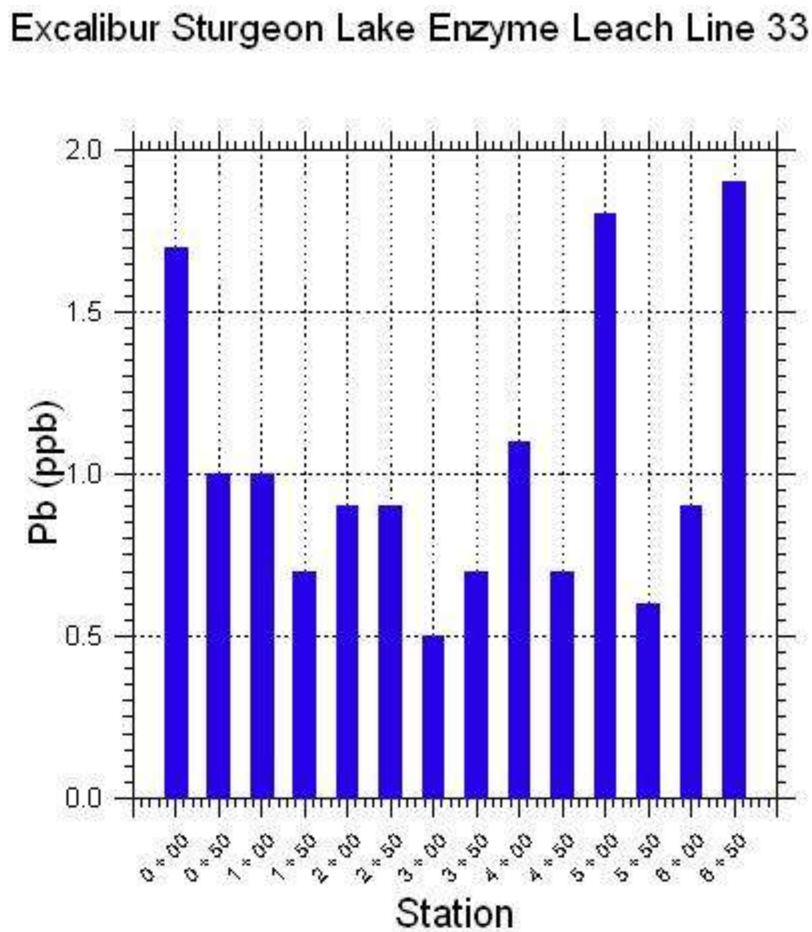

Excalibur Sturgeon Lake Enzyme Leach Line 32
Ag (ppb)
0.15
0.10
0.05
0.00
-0.05
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
Station

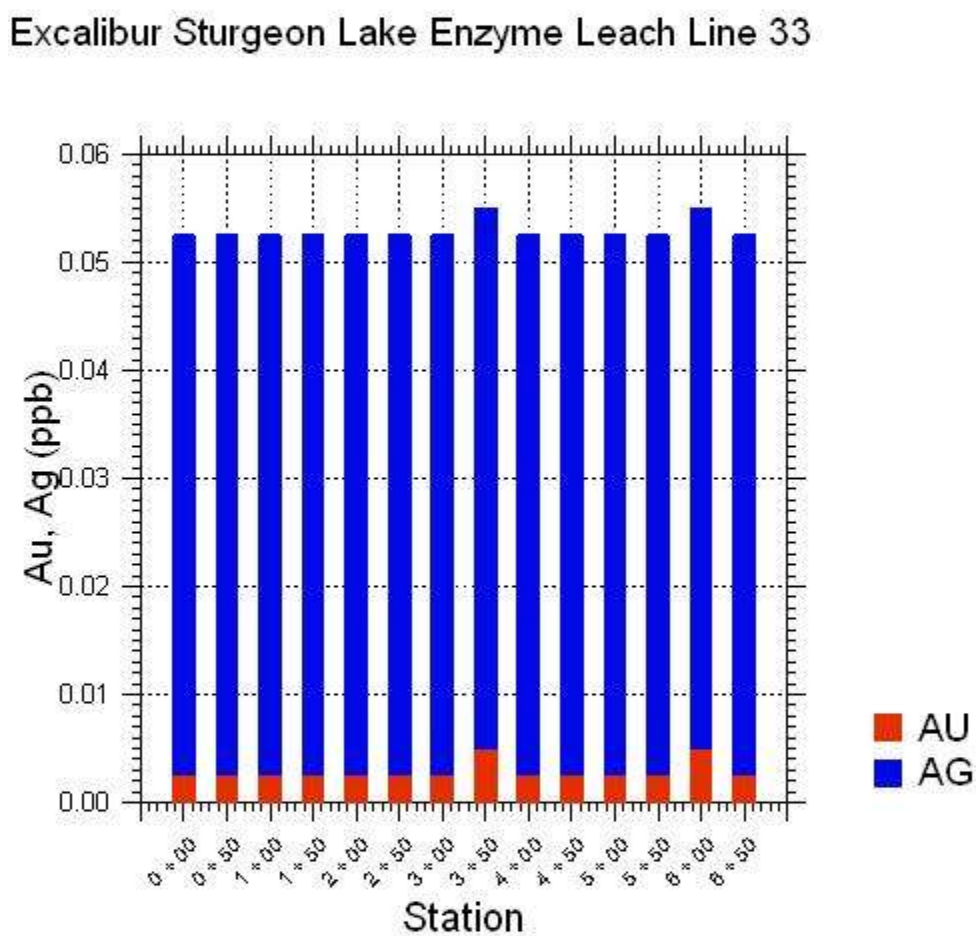

Excalibur Sturgeon Lake Enzyme Leach Line 32
Mn (ppb)
5,000
4,000
3,000
2,000
1,000
0
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
Station

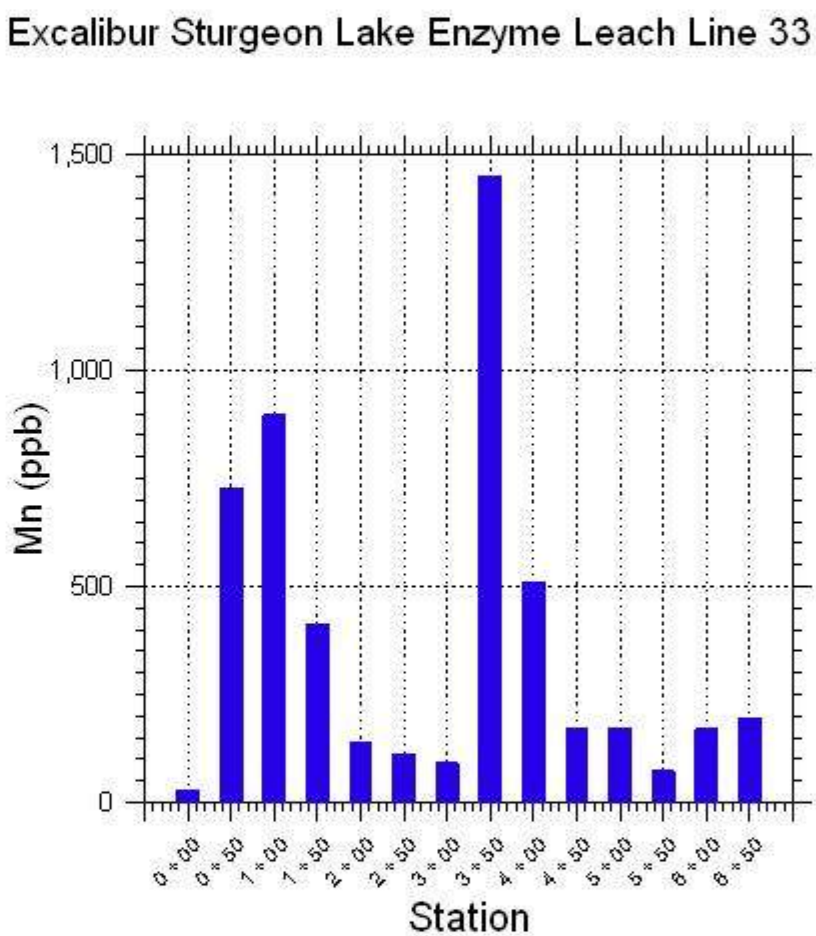
Line 33: Base metal response on this transect is low-contrast and non-definitive of a response to buried or blind base metal mineralization. There is also no pattern of response that might suggest a vector to mineralization. Precious metal responses are essentially all at the lower limit of determination. There appears to be some association between Zn content and Mn content on this transect.




Excalibur Sturgeon Lake Enzyme Leach Line 33
15
10
5
0
Cu (ppb)
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
6+50
Station


Excalibur Sturgeon Lake Enzyme Leach Line 33
Pb (ppb)
2.0
1.5
1.0
0.5
0.0
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
6+50
Station

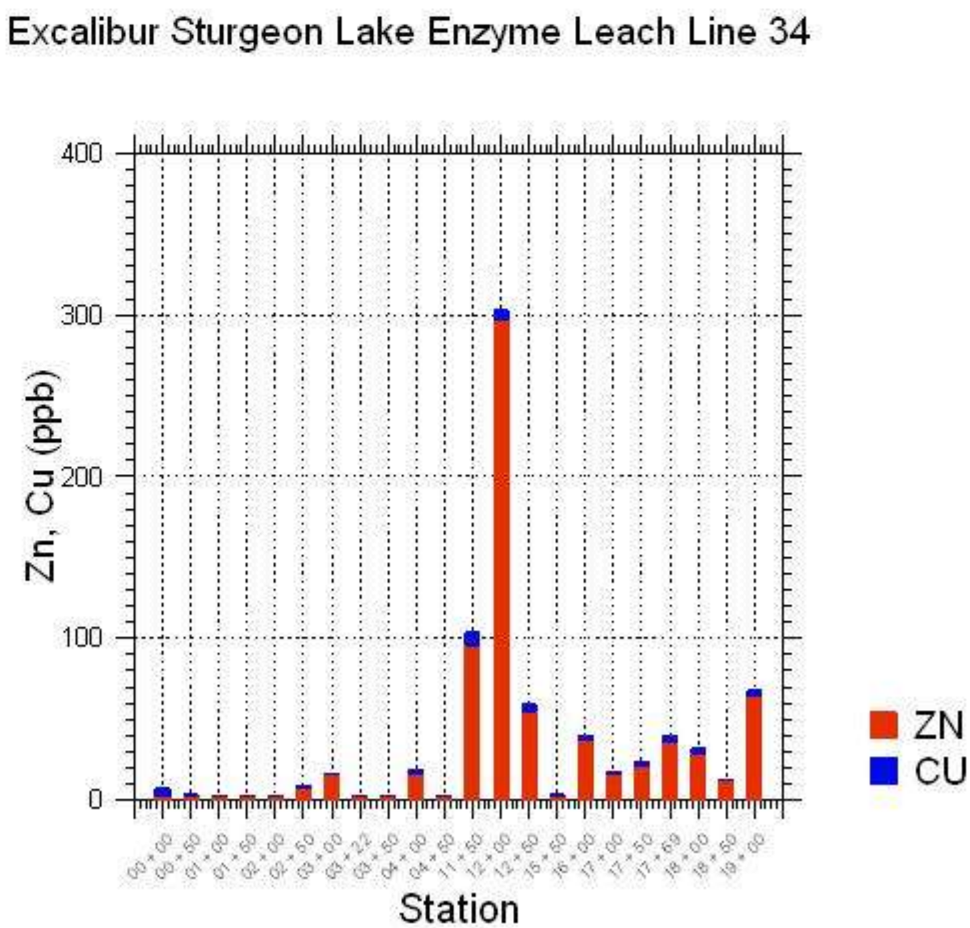

Excalibur Sturgeon Lake Enzyme Leach Line 33
Au, Ag (ppb)
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
6+50
Station
AU
AG

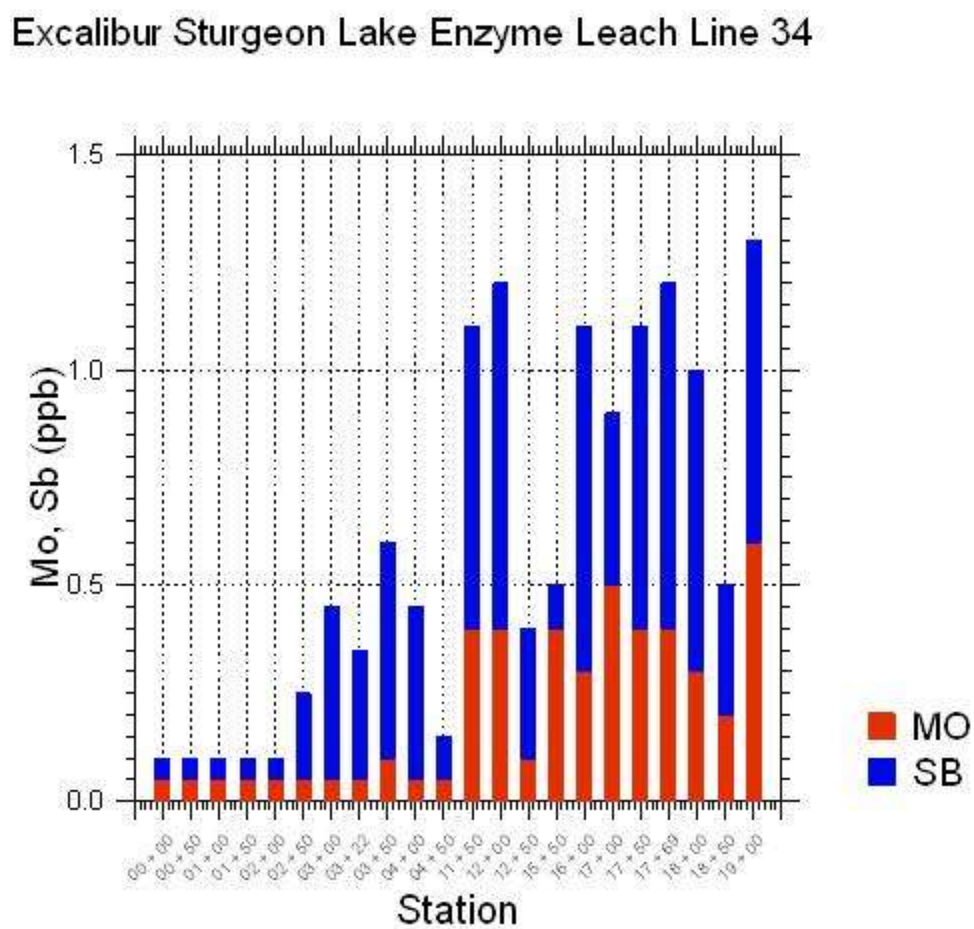


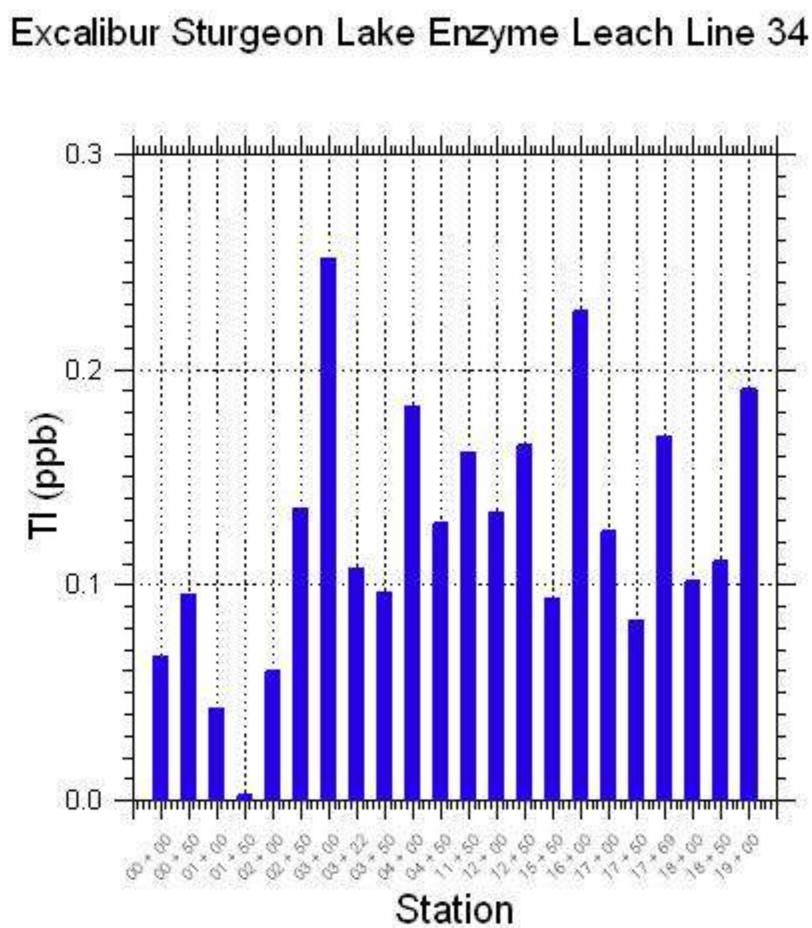
Excalibur Sturgeon Lake Enzyme Leach Line 33
1,500
1,000
500
0
Mn (ppb)
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
4+00
4+50
5+00
5+50
6+00
6+50
Station

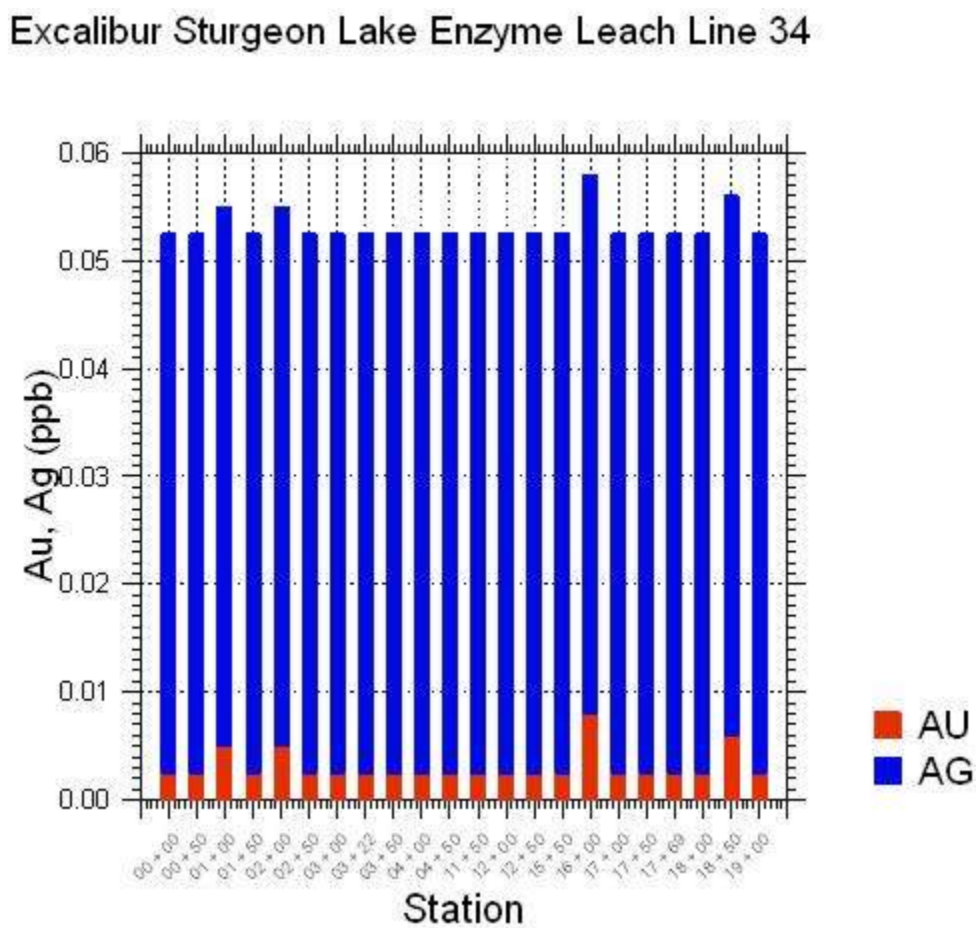
Line 34: A strong and focused base metal anomaly is present on this transect and has other associated element responses as well. The main anomalous response is Zn-rich, with lesser Cu occurring between stations 11+50 and 12+50. A lesser Zn-Cu response occurs between 16+00 and 19+00 on the same transect although this anomaly is very low-contrast. Both Zn-Cu anomalies are coincident with very low-contrast Mo-Sb-Tl anomalies and Ni-Co anomalies.

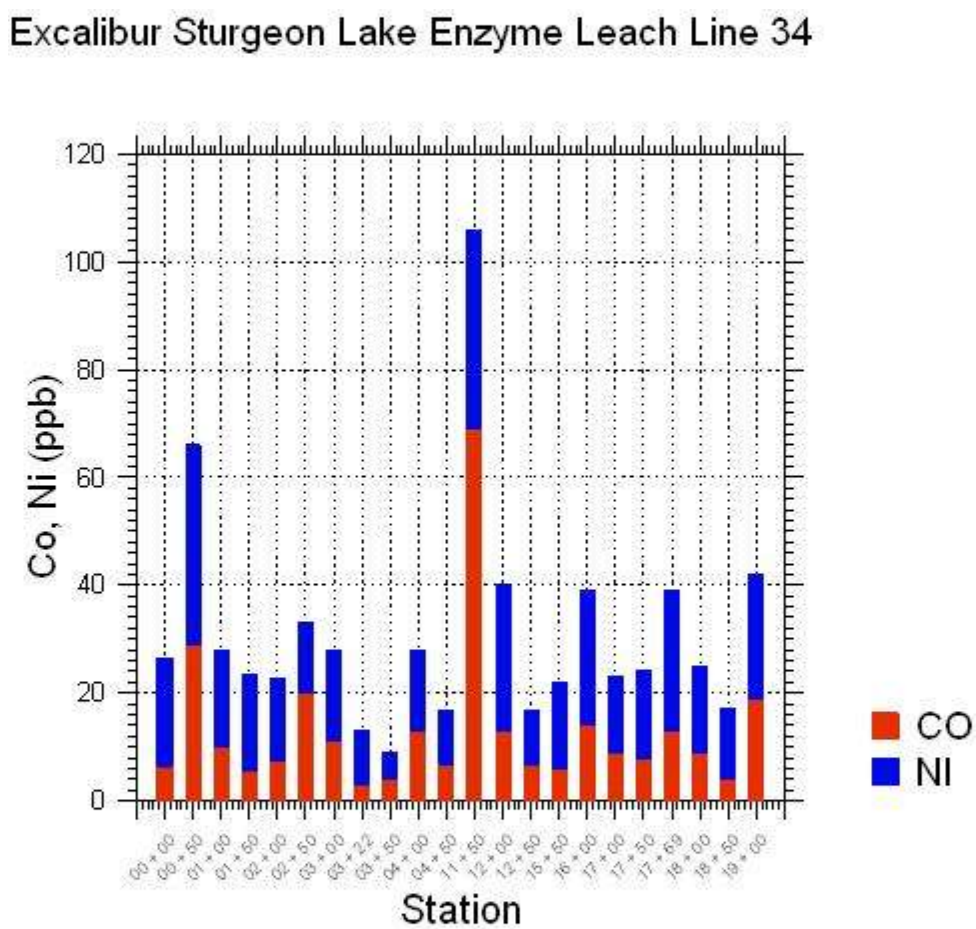
The coincidence between the Ni-Co anomalies and the base metal anomalies suggests the host rocks to mineralization or adjacent to mineralization are likely mafic in bulk chemical composition. The presence of a discrete Ni-Co anomaly at 11+50 with a lesser Zn-Cu association would tend to support this interpretation. There are no precious metal anomalies on this line and Tl contents are non-definitive. There is some correspondence between Mn and Zn-Cu on the line.

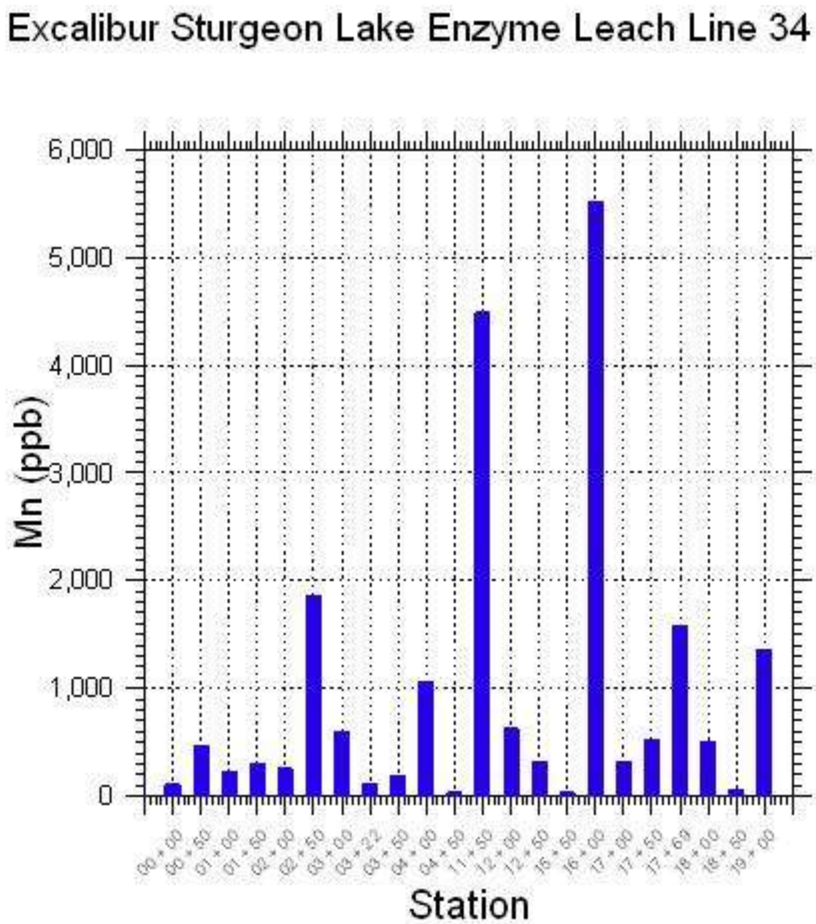



Excalibur Sturgeon Lake Enzyme Leach Line 34
Mo, Sb (ppb)
1.5
1.0
0.5
0.0
00 + 00
00 + 50
01 + 00
01 + 50
02 + 00
02 + 50
03 + 00
03 + 22
03 + 50
04 + 00
04 + 50
11 + 50
12 + 00
12 + 50
16 + 00
17 + 00
17 + 50
18 + 00
Station
MO
SB

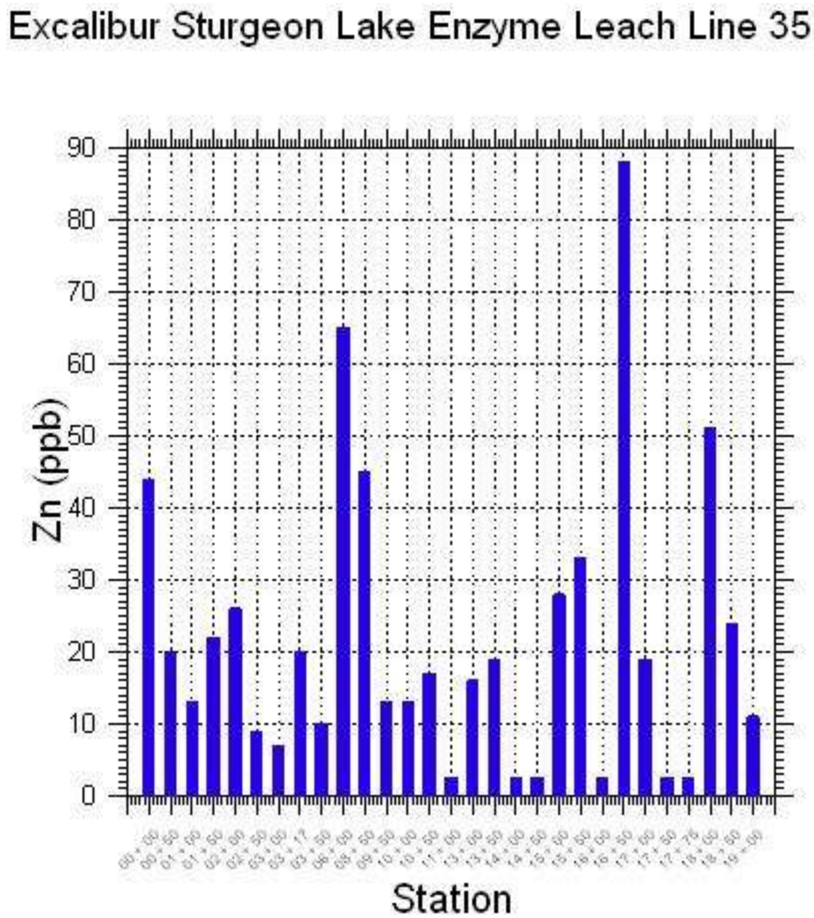

Excalibur Sturgeon Lake Enzyme Leach Line 34
Tl (ppb)
0.3
0.2
0.1
0.0
00 + 00
00 + 50
01 + 00
01 + 50
02 + 00
02 + 50
03 + 00
03 + 22
03 + 50
04 + 00
04 + 50
11 + 50
12 + 00
12 + 50
15 + 50
16 + 00
17 + 00
17 + 50
17 + 69
18 + 00
18 + 50
19 + 00
Station

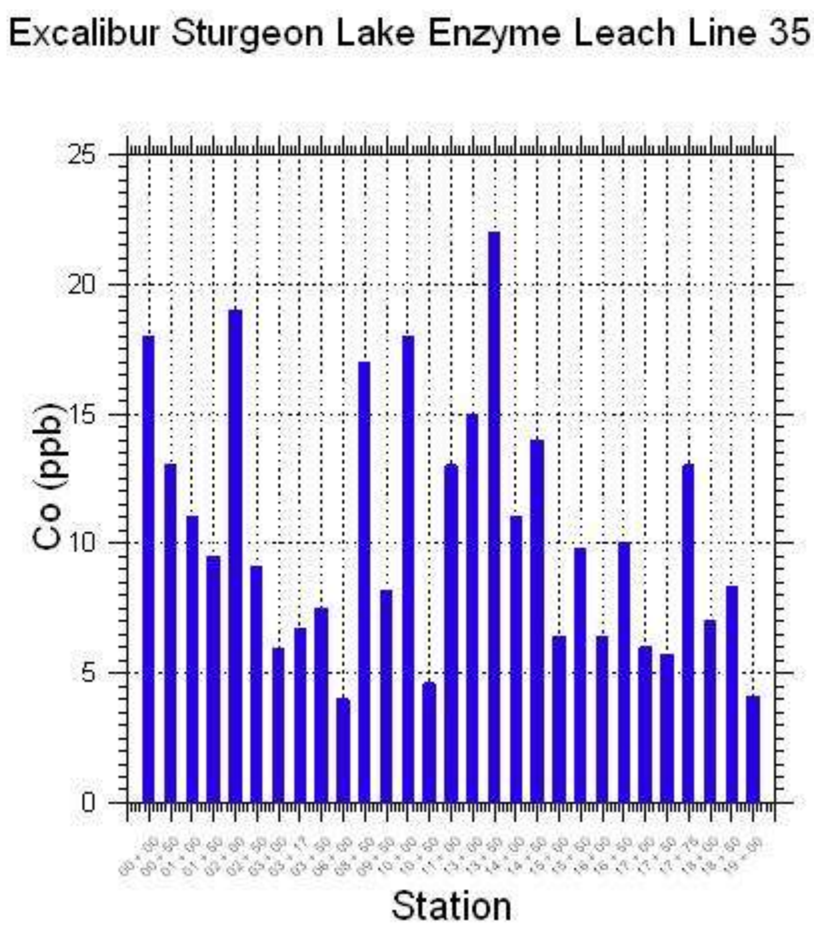

Excalibur Sturgeon Lake Enzyme Leach Line 34
0.06
0.05
0.04
0.03
0.02
0.01
0.00
Au, Ag (ppb)
AU
AG
Station

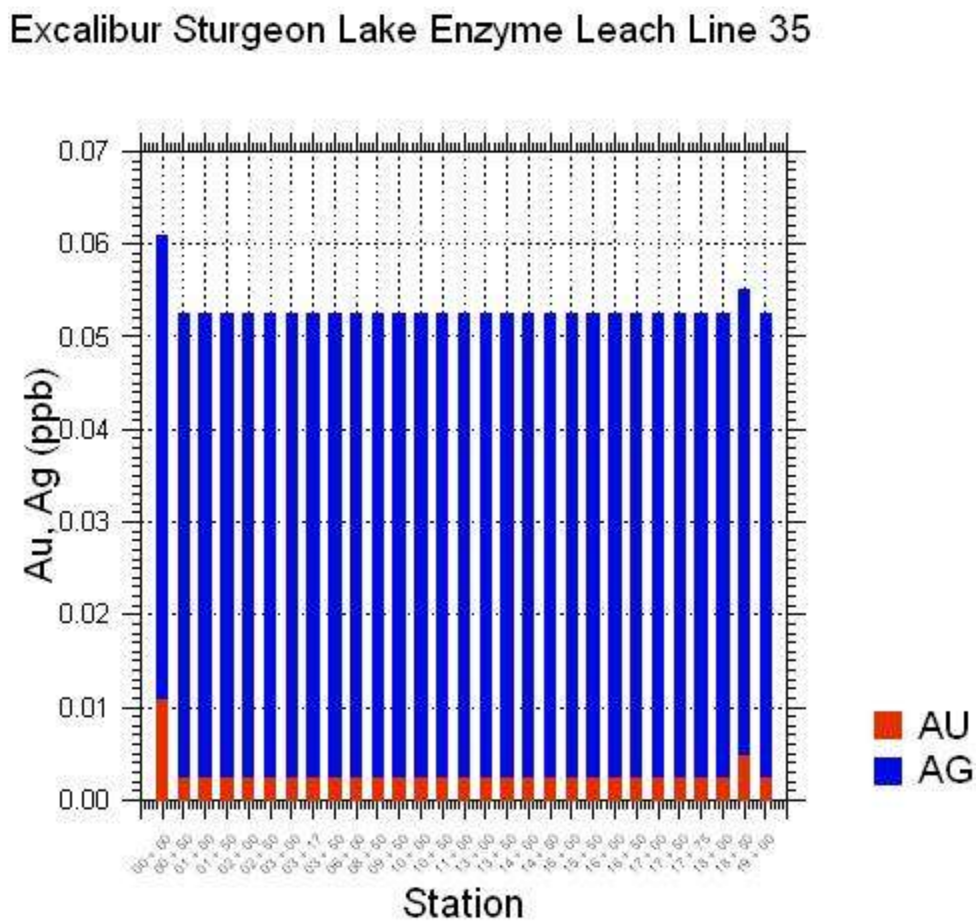

Excalibur Sturgeon Lake Enzyme Leach Line 34
Co, Ni (ppb)
0
20
40
60
80
100
120
00 + 00
00 + 50
01 + 00
01 + 50
02 + 00
02 + 50
03 + 00
03 + 22
03 + 50
04 + 00
04 + 50
11 + 50
12 + 00
12 + 50
15 + 50
16 + 00
17 + 00
17 + 50
17 + 69
18 + 00
18 + 50
19 + 00
Station
CO
NI

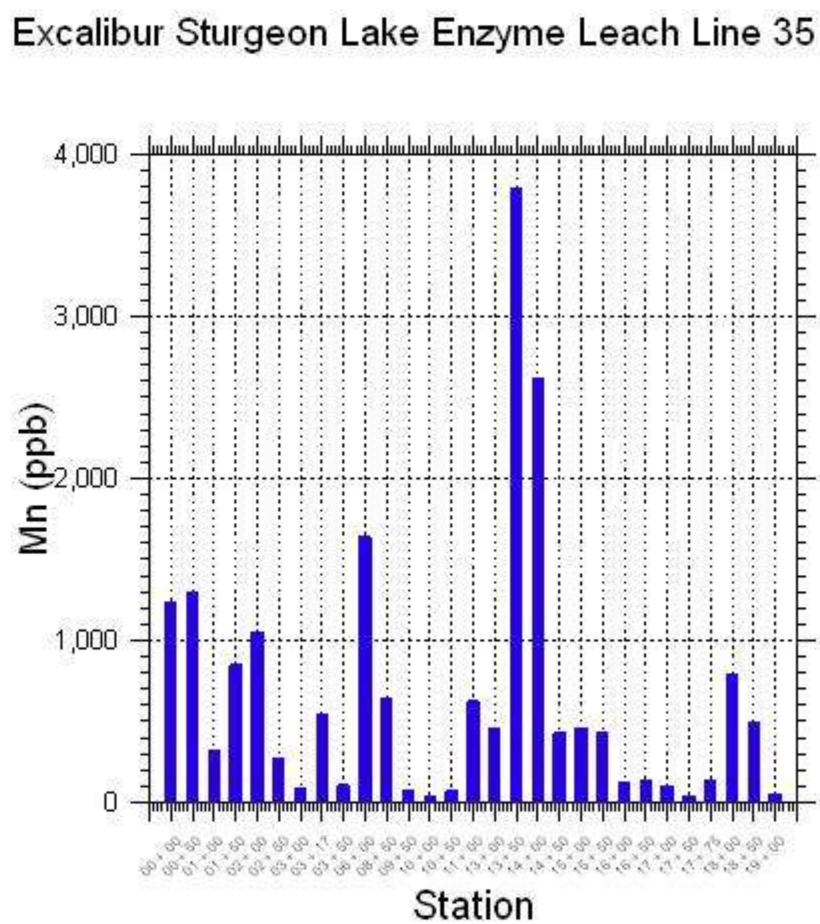

Excalibur Sturgeon Lake Enzyme Leach Line 34
6,000
5,000
4,000
3,000
2,000
1,000
0
Mn (ppb)
00 + 00
00 + 50
01 + 00
01 + 50
02 + 00
02 + 50
03 + 00
03 + 22
03 + 50
04 + 00
04 + 50
11 + 50
12 + 00
12 + 50
15 + 50
16 + 00
17 + 00
17 + 50
17 + 69
18 + 00
18 + 50
19 + 00
Station

Line 35: All elements determined in the enzyme leach analysis of soil samples from line 35 are marked by low-contrast and erratic responses that are interpreted to be non-diagnostic of a signature related to base metal mineralization. The typical pattern of response is demonstrated by the results for Zn. There are no precious metal responses on the transect and there is also no demonstrable association with Mn contents.

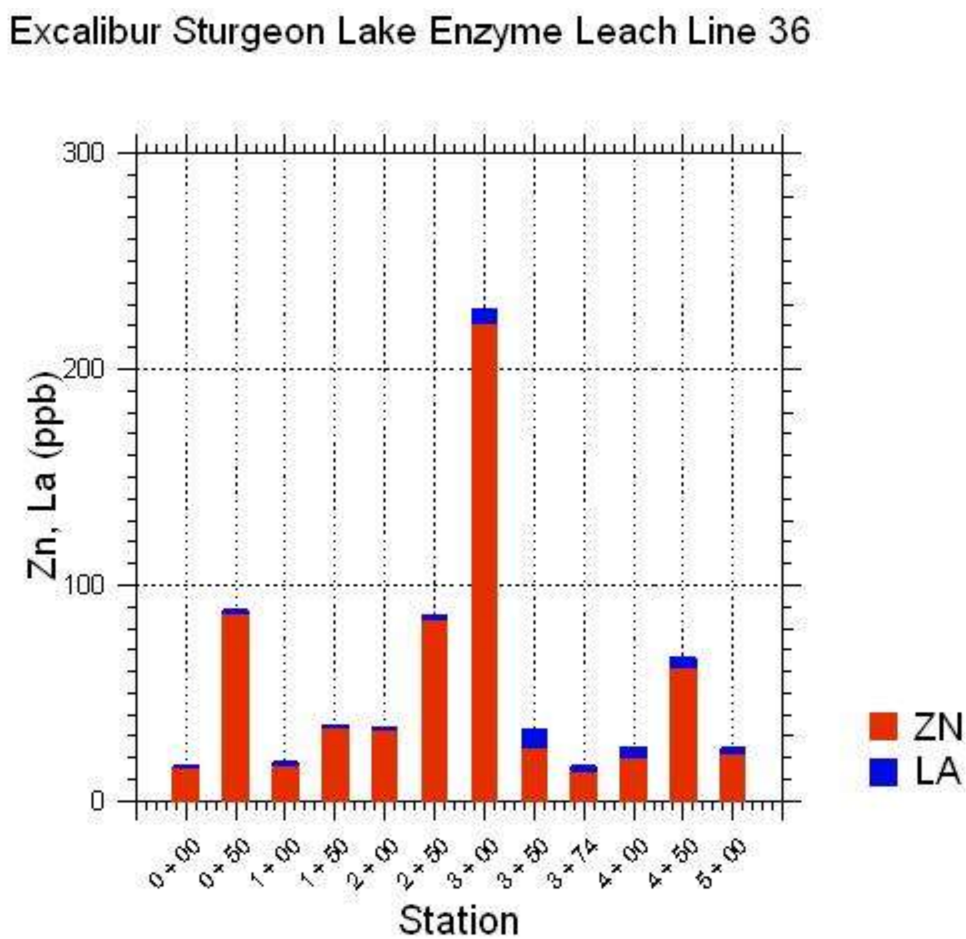


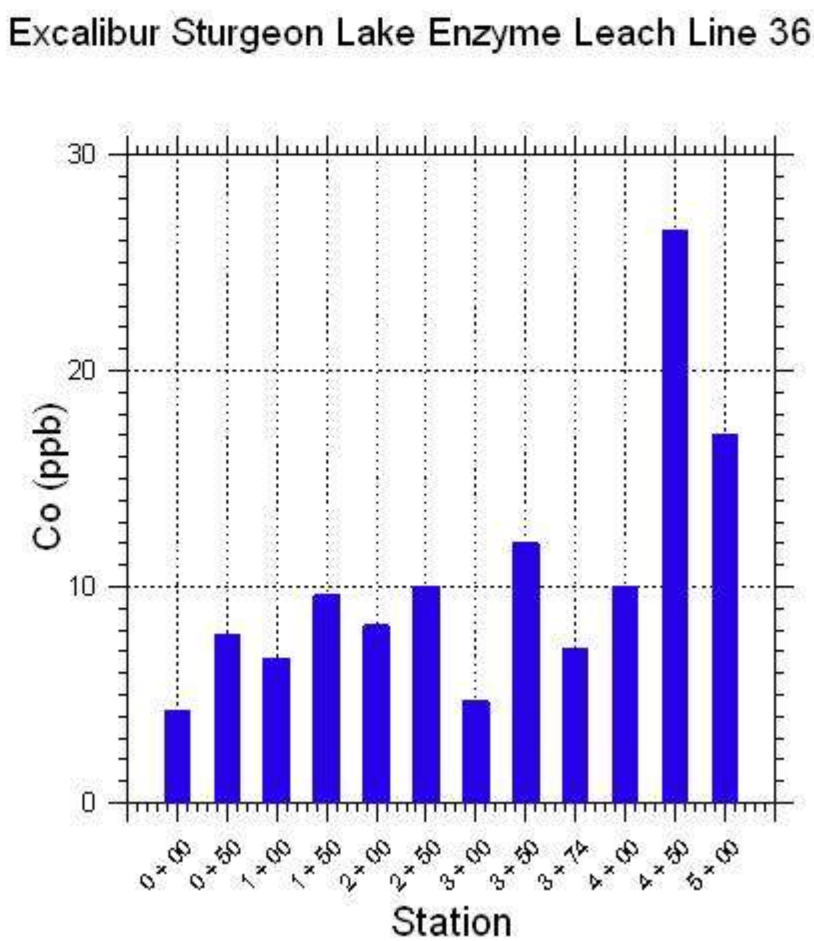

Excalibur Sturgeon Lake Enzyme Leach Line 35
Co (ppb)
25
20
15
10
5
0
Station

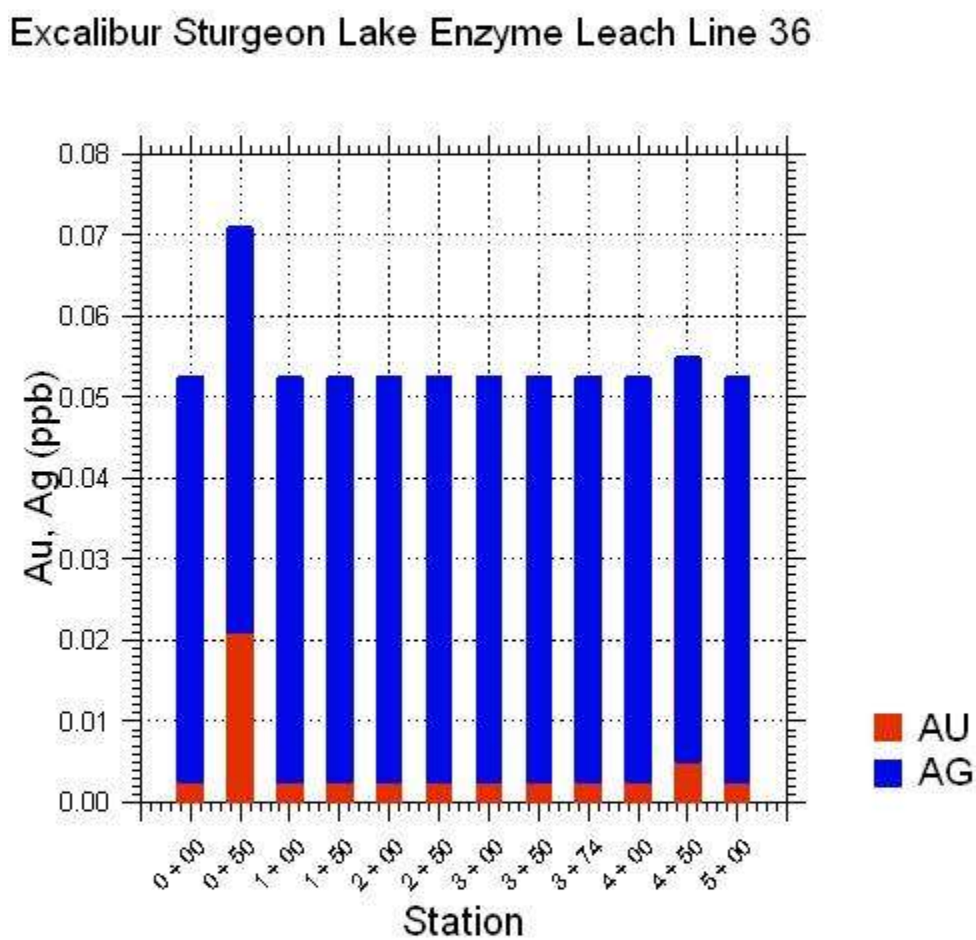

Excalibur Sturgeon Lake Enzyme Leach Line 35
Au, Ag (ppb)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
Station
AU
AG

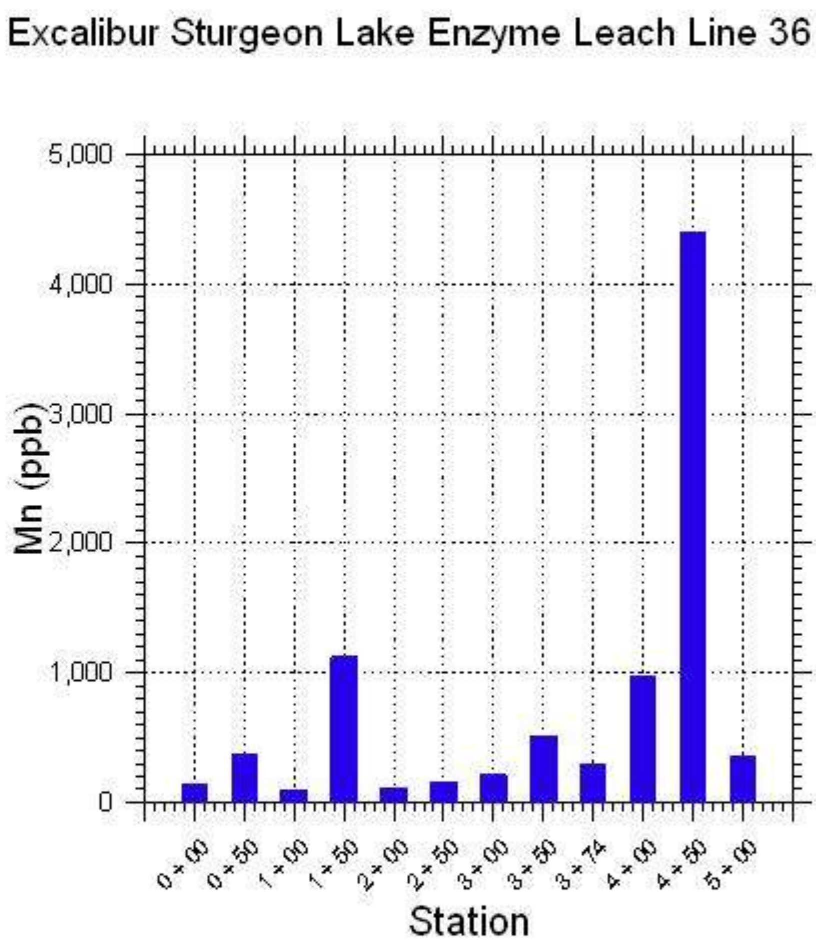

Excalibur Sturgeon Lake Enzyme Leach Line 35
Mn (ppb)
4,000
3,000
2,000
1,000
0
Station

Line 36: There is a modest Zn +/- La (REE) response at station 3+00 on this transect. The anomaly is a one-sample response with a lesser contribution to the anomaly from the rare earth elements. La is presented with Zn to demonstrate this association. There are no other base and/or precious metals anomalies on the transect. The highest Co response is coincident with the highest Mn response at station 4+50.

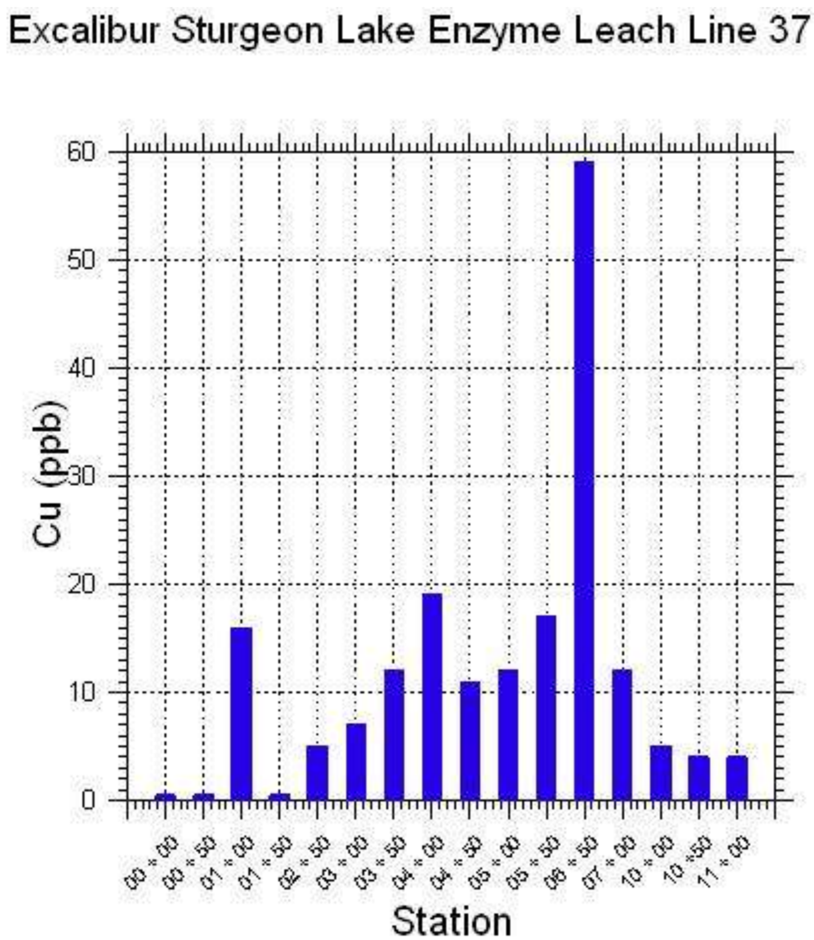


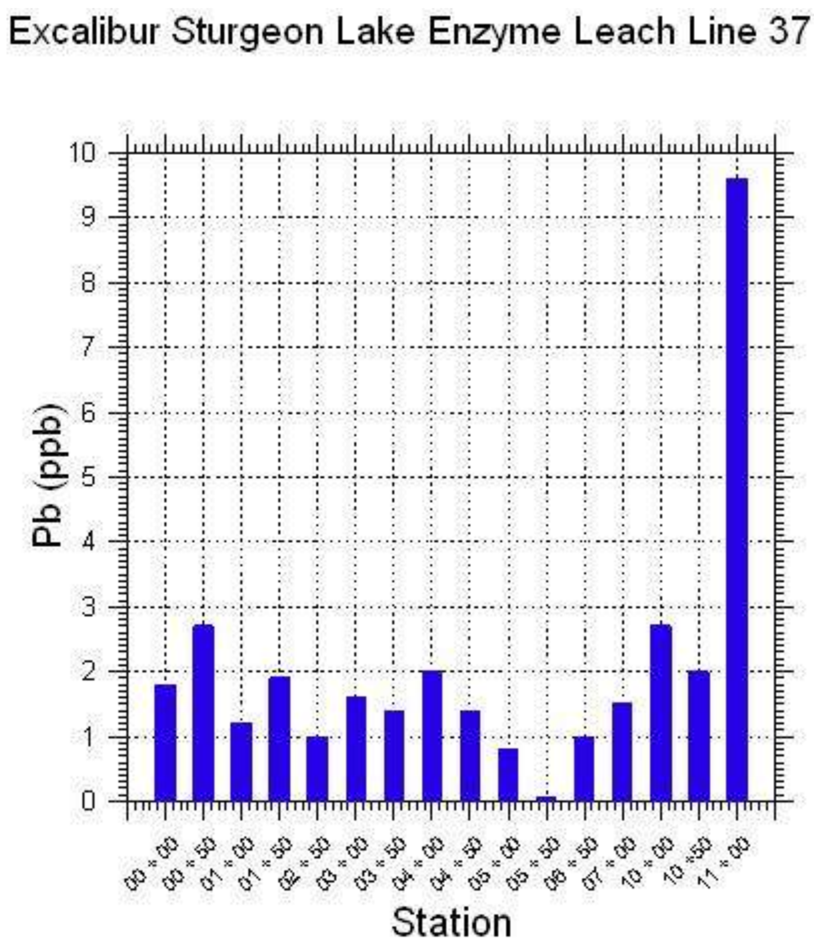

Excalibur Sturgeon Lake Enzyme Leach Line 36
Co (ppb)
Station
0
10
20
30
0 + 00
0 + 50
1 + 00
1 + 50
2 + 00
2 + 50
3 + 00
3 + 50
3 + 74
4 + 00
4 + 50
5 + 00

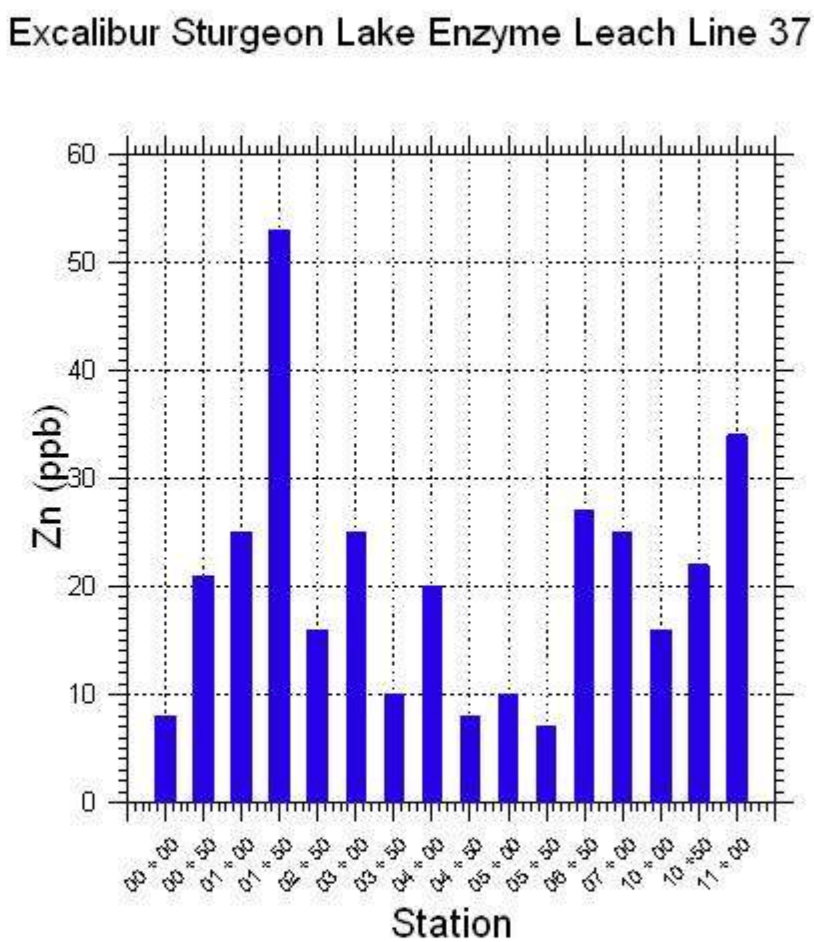

Excalibur Sturgeon Lake Enzyme Leach Line 36
Au, Ag (ppb)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0+00
0+50
1+00
1+50
2+00
2+50
3+00
3+50
3+74
4+00
4+50
5+00
Station
AU
AG

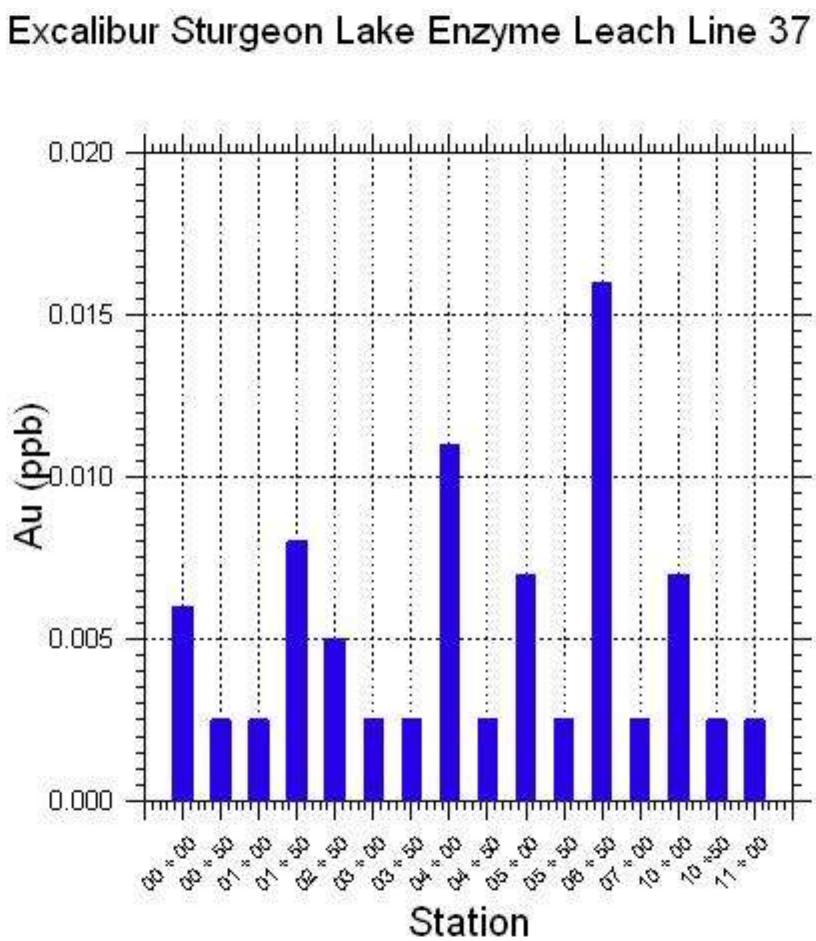

Excalibur Sturgeon Lake Enzyme Leach Line 36
Mn (ppb)
5,000
4,000
3,000
2,000
1,000
0
0 + 00
0 + 50
1 + 00
1 + 50
2 + 00
2 + 50
3 + 00
3 + 50
3 + 74
4 + 00
4 + 50
5 + 00
Station

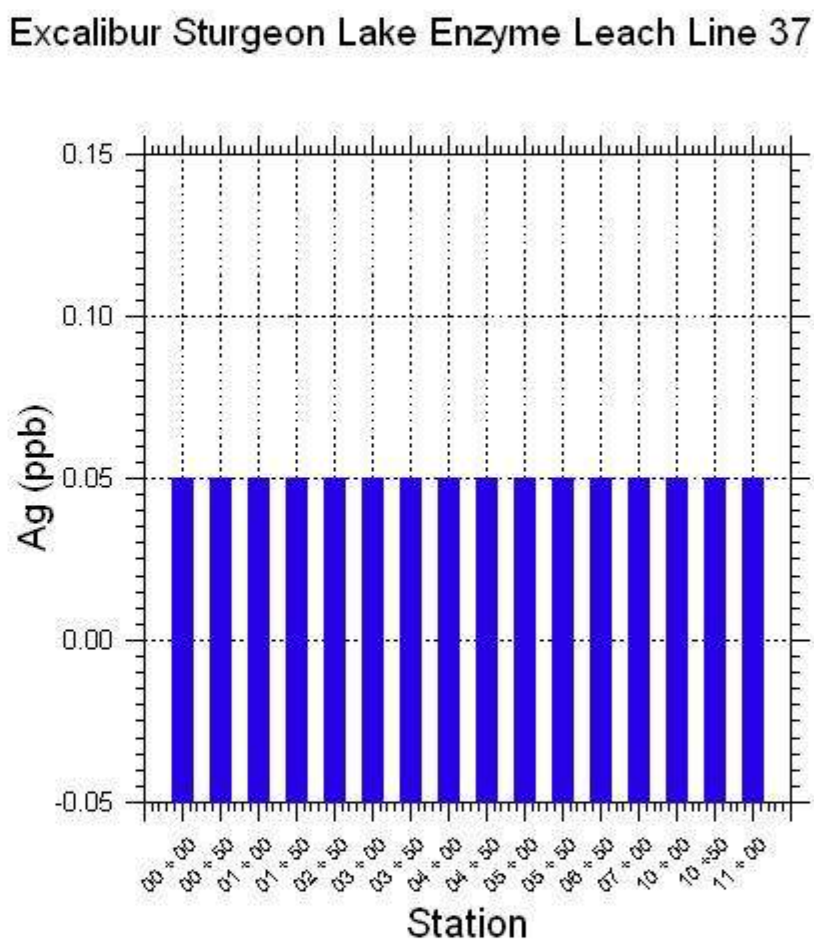
Line 37: A broad Br-I anomaly exists between 2+50 and 4+50 and an adjacent V response between 6+50 and 7+00. There are no significant base and/or precious metal anomalies on the transect. There is a very low-contrast single sample responses for Cu, Pb and Zn at stations 6+50, 11+00 and 1+50, respectively. There is also a very low-contrast Au response that coincides with Cu, V and Mn responses at 6+50. All Ag responses are <LLD. It is possible the Pb single sample response is at the edge of an anomaly building to the east.

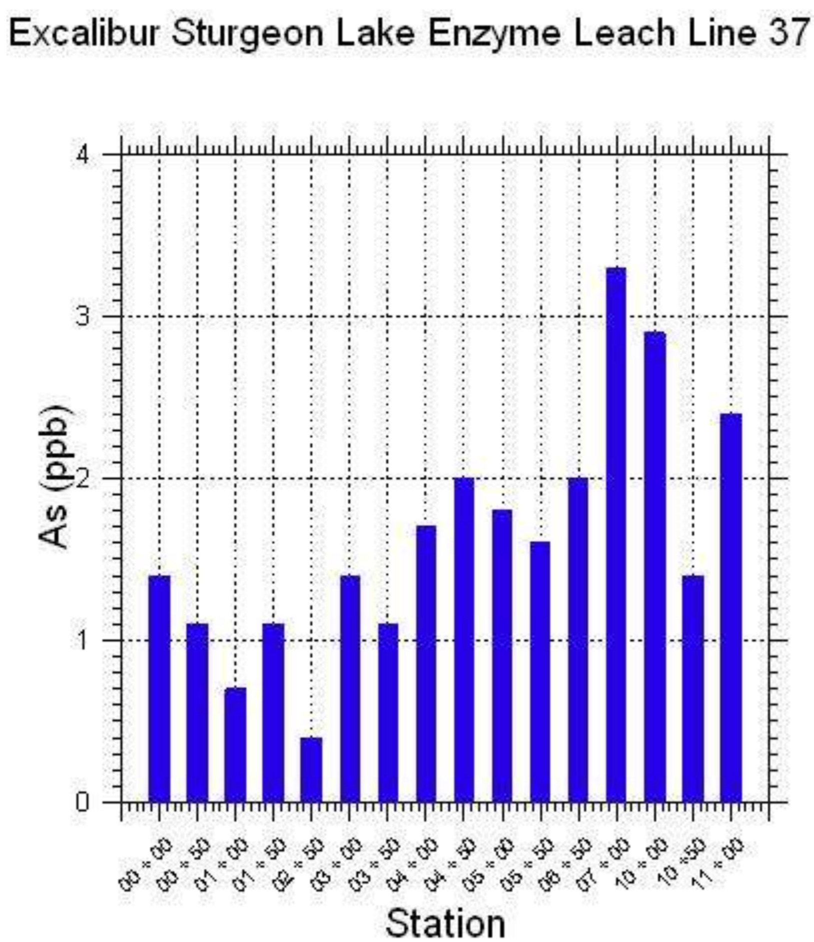


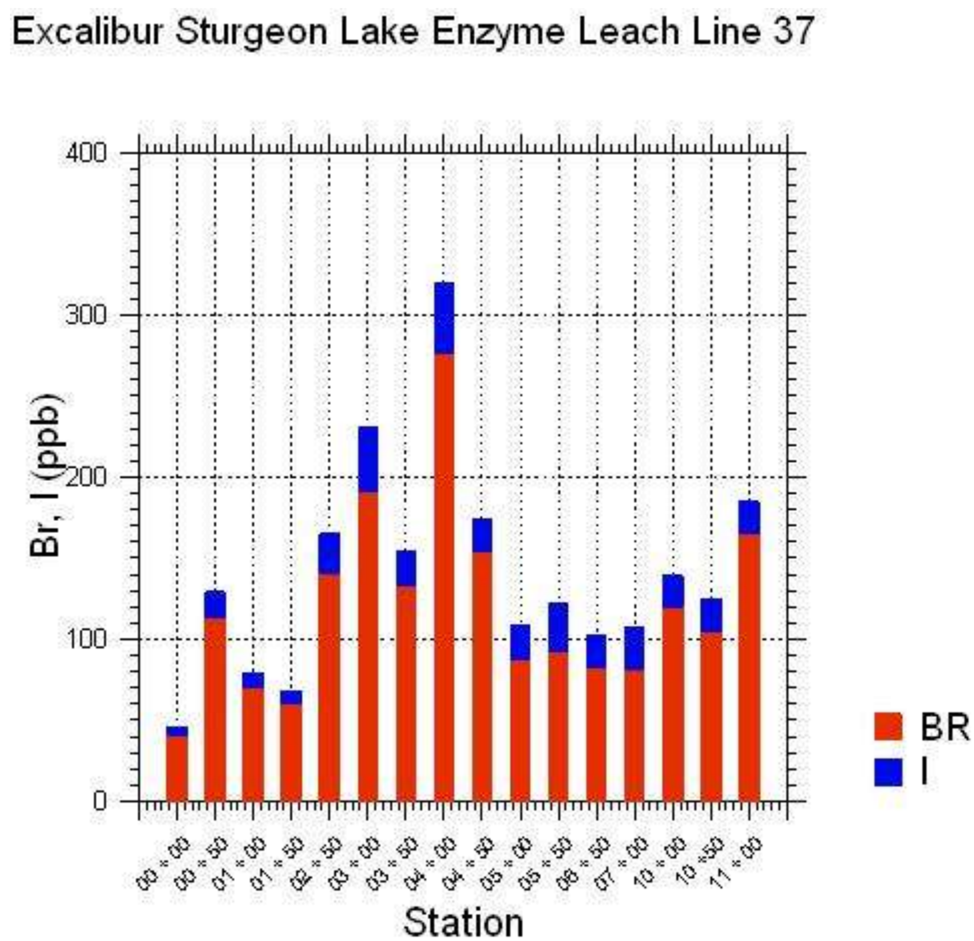

Excalibur Sturgeon Lake Enzyme Leach Line 37
Pb (ppb)
10
9
8
7
6
5
4
3
2
1
0
00 + 00
00 + 50
01 + 00
01 + 50
02 + 50
03 + 00
03 + 50
04 + 00
04 + 50
05 + 00
05 + 50
06 + 50
07 + 00
10 + 00
10 +50
11 + 00
Station

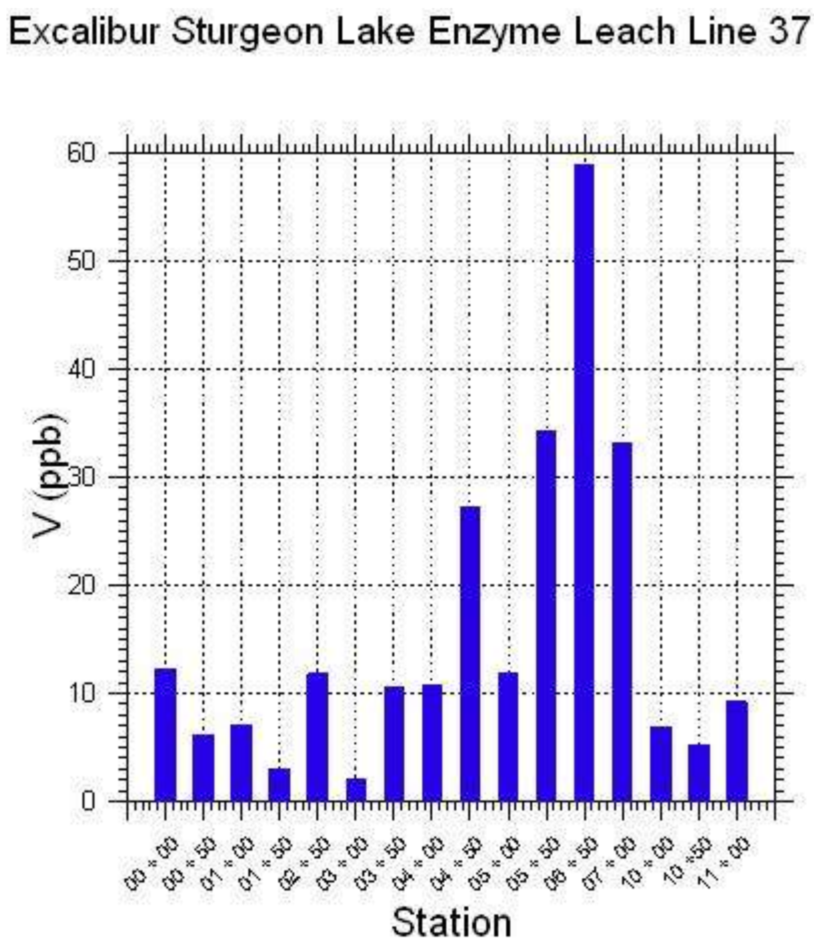

Excalibur Sturgeon Lake Enzyme Leach Line 37
Zn (ppb)
60
50
40
30
20
10
0
00 + 00
00 + 50
01 + 00
01 + 50
02 + 50
03 + 00
03 + 50
04 + 00
04 + 50
05 + 00
05 + 50
06 + 50
07 + 00
10 + 00
10 +50
11 + 00
Station


Excalibur Sturgeon Lake Enzyme Leach Line 37
Au (ppb)
0.020
0.015
0.010
0.005
0.000
00 + 00
00 + 50
01 + 00
01 + 50
02 + 50
03 + 00
03 + 50
04 + 00
04 + 50
05 + 00
05 + 50
06 + 50
07 + 00
10 + 00
10 + 50
11 + 00
Station

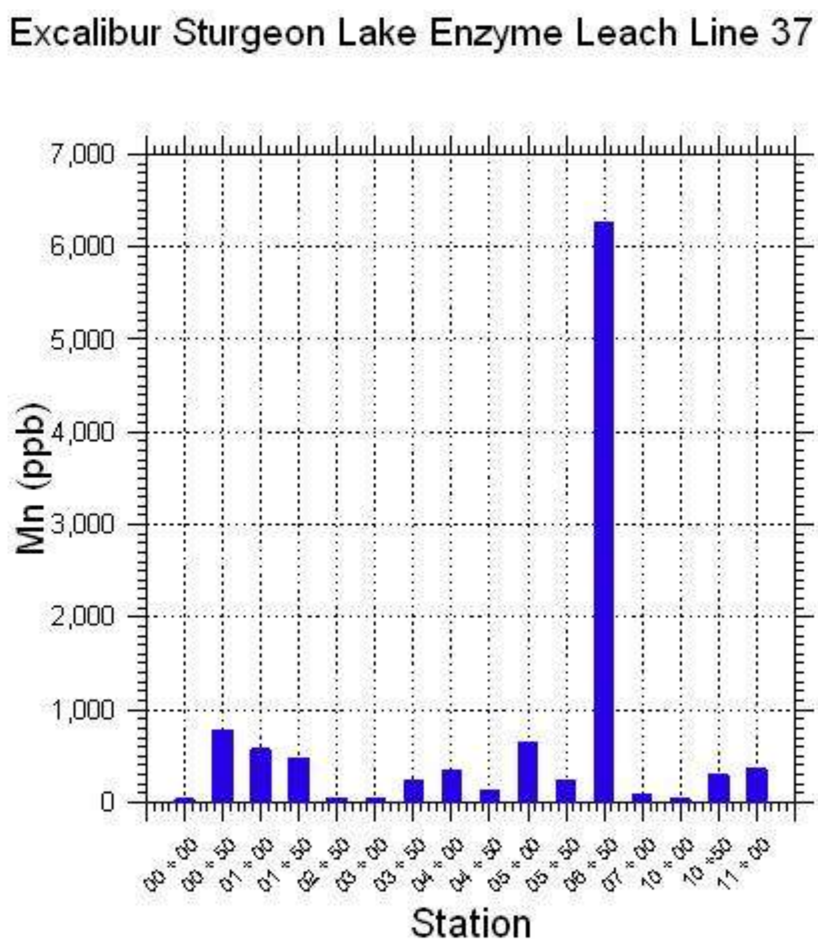

Excalibur Sturgeon Lake Enzyme Leach Line 37
Ag (ppb)
0.15
0.10
0.05
0.00
-0.05
00 + 00
00 + 50
01 + 00
01 + 50
02 + 50
03 + 00
03 + 50
04 + 00
04 + 50
05 + 00
05 + 50
06 + 50
07 + 00
10 + 00
10 +50
11 + 00
Station


Excalibur Sturgeon Lake Enzyme Leach Line 37
As (ppb)
0
1
2
3
4
00 + 00
00 + 50
01 + 00
01 + 50
02 + 50
03 + 00
03 + 50
04 + 00
04 + 50
05 + 00
05 + 50
06 + 50
07 + 00
10 + 00
10 +50
11 + 00
Station

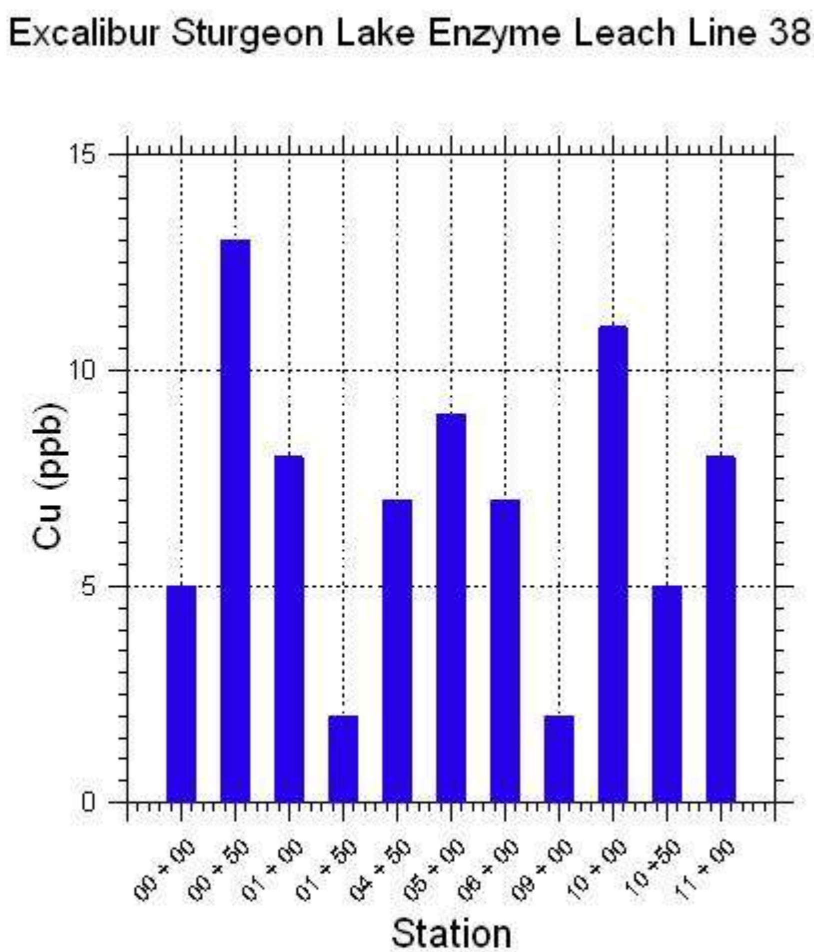

Excalibur Sturgeon Lake Enzyme Leach Line 37
400
300
200
100
0
Br, I (ppb)
00 + 00
00 + 50
01 + 00
01 + 50
02 + 50
03 + 00
03 + 50
04 + 00
04 + 50
05 + 00
05 + 50
06 + 50
07 + 00
10 + 00
10 +50
11 + 00
Station
BR
I

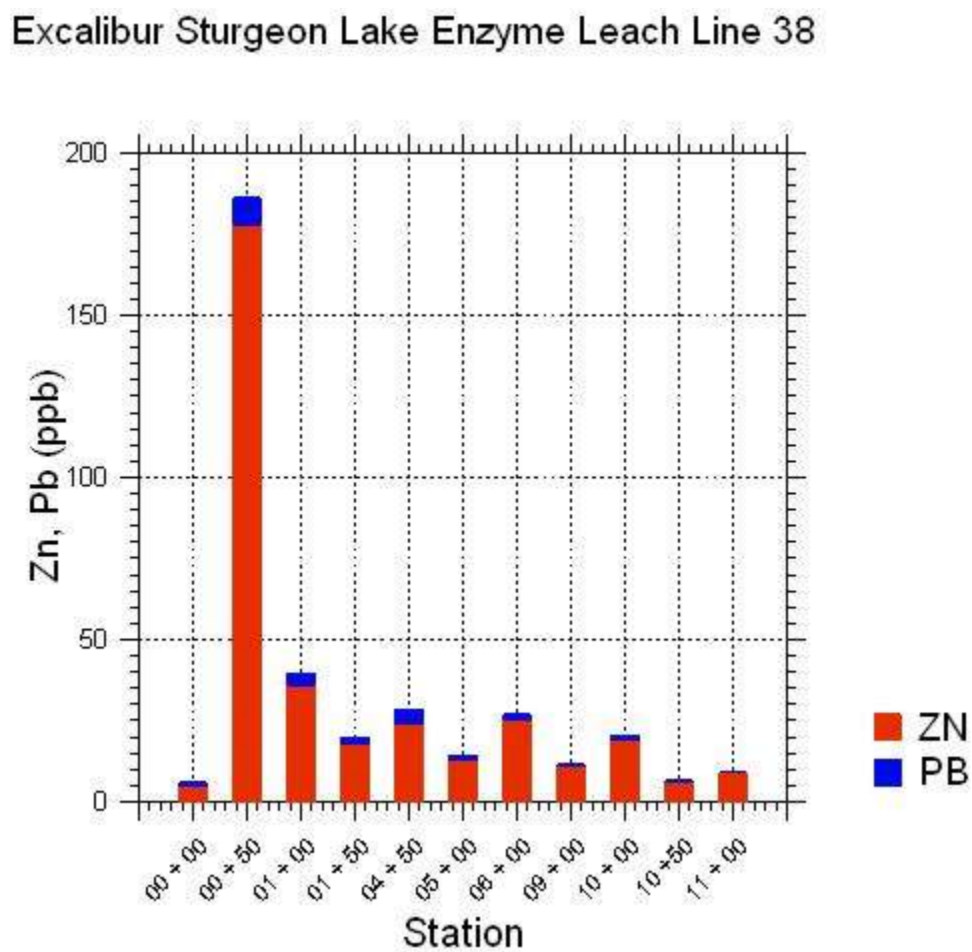


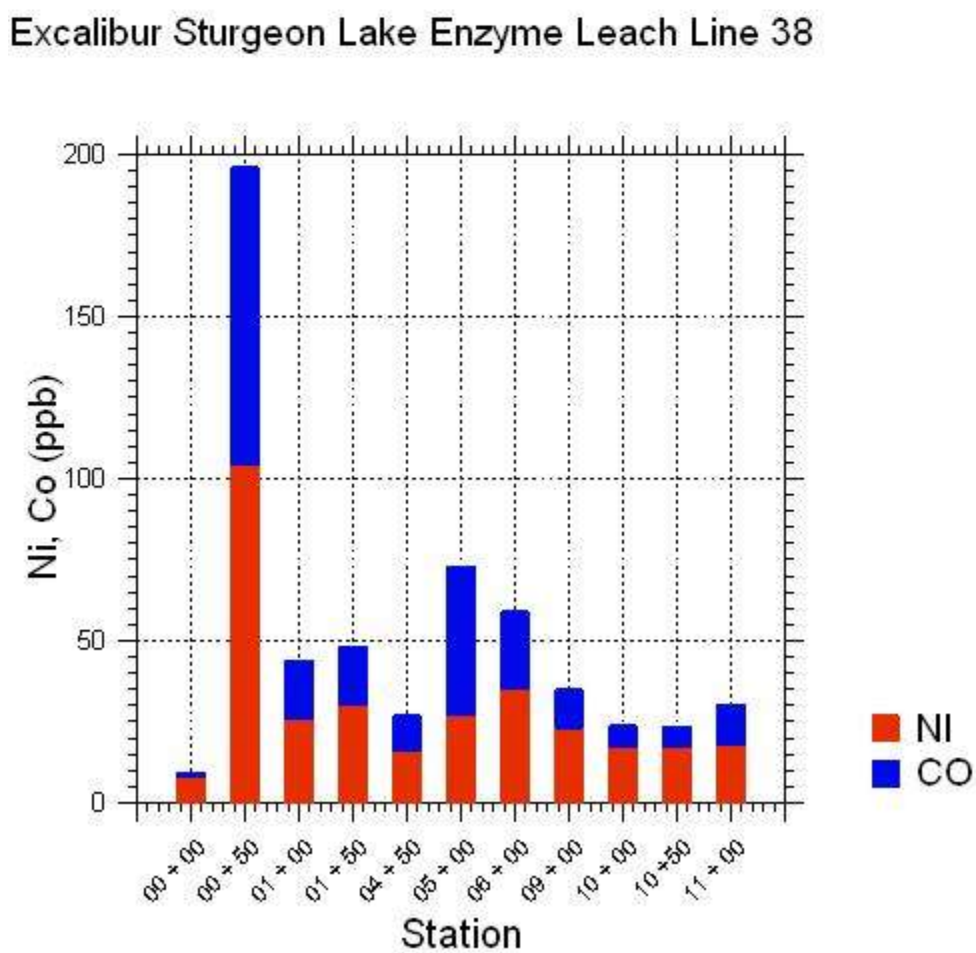
Excalibur Sturgeon Lake Enzyme Leach Line 37
V (ppb)
60
50
40
30
20
10
0
00 + 00
00 + 50
01 + 00
01 + 50
02 + 50
03 + 00
03 + 50
04 + 00
04 + 50
05 + 00
05 + 50
06 + 50
07 + 00
10 + 00
10 +50
11 + 00
Station

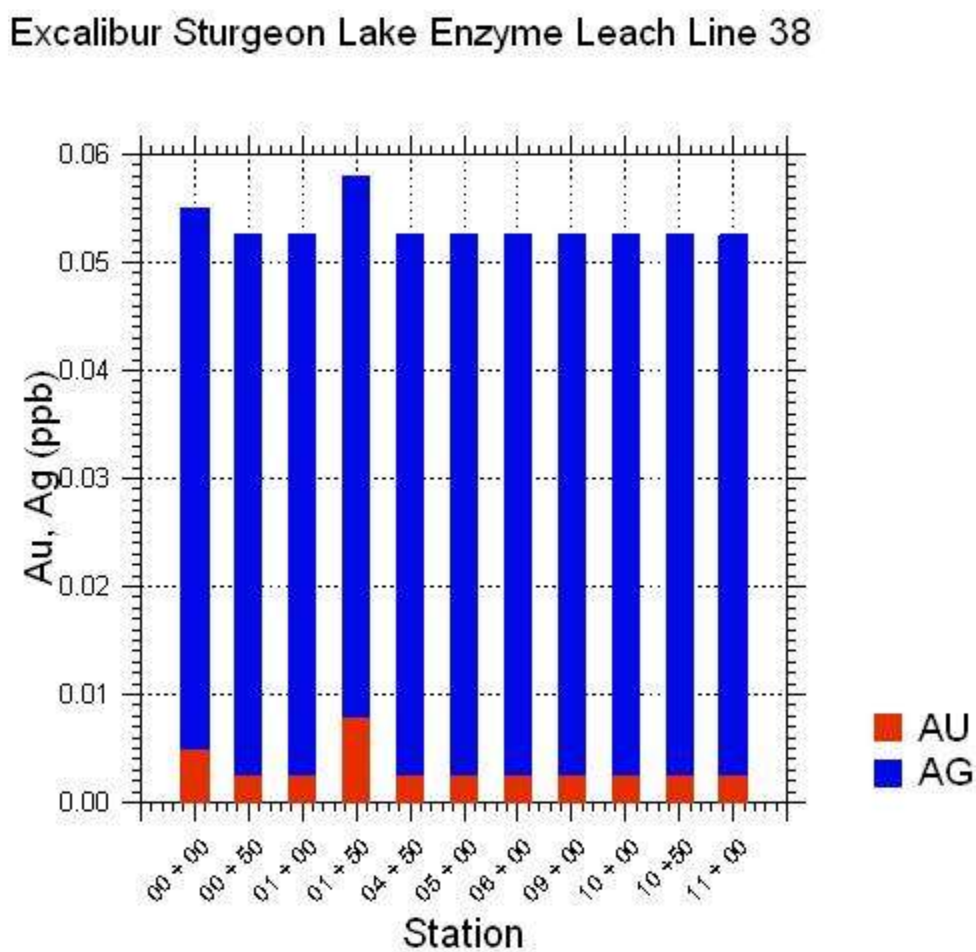

Excalibur Sturgeon Lake Enzyme Leach Line 37
Mn (ppb)
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
00 + 00
00 + 50
01 + 00
01 + 50
02 + 50
03 + 00
03 + 50
04 + 00
04 + 50
05 + 00
05 + 50
06 + 50
07 + 00
10 + 00
10 +50
11 + 00
Station

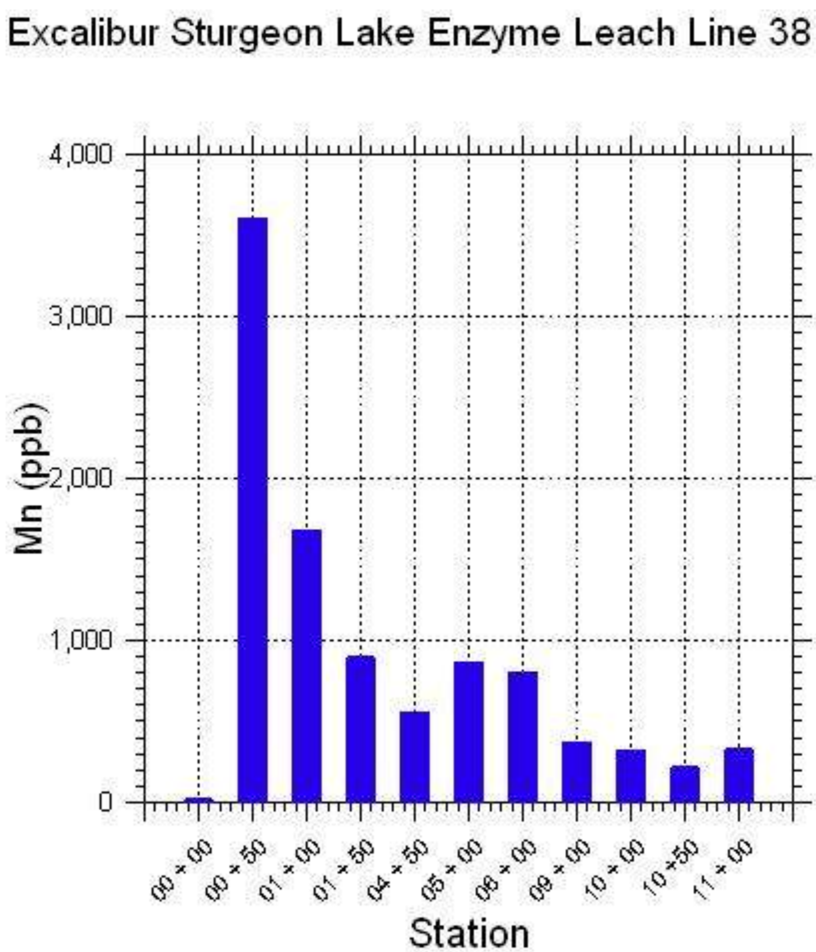
Line 38: There is a single- or two-sample Zn+/-Pb anomaly present on this transect between 0+50 and 1+00. The response is essentially Zn-rich. Elsewhere on the transect low base metal responses are typical. A coincident Ni-Co response is present, suggesting the presence of a mafic lithology and/or associated pyrite mineralization. The highest Mn response (station 0+50) is coincident with the highest responses for Ni, Co, Zn, Pb and Cu.




Excalibur Sturgeon Lake Enzyme Leach Line 38
Zn, Pb (ppb)
200
150
100
50
0
00 + 00
00 + 50
01 + 00
01 + 50
04 + 50
05 + 00
06 + 00
09 + 00
10 + 00
10 +50
11 + 00
Station
ZN
PB

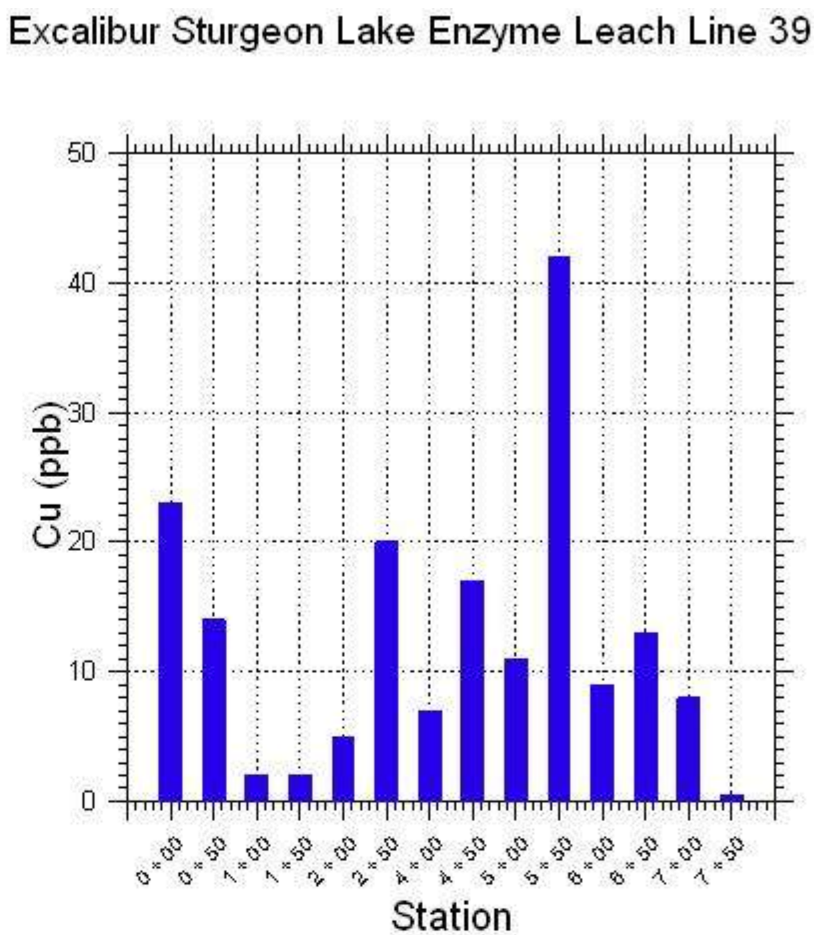

Excalibur Sturgeon Lake Enzyme Leach Line 38
Ni, Co (ppb)
200
150
100
50
0
00 + 00
00 + 50
01 + 00
01 + 50
04 + 50
05 + 00
06 + 00
09 + 00
10 + 00
10 +50
11 + 00
Station
NI
CO

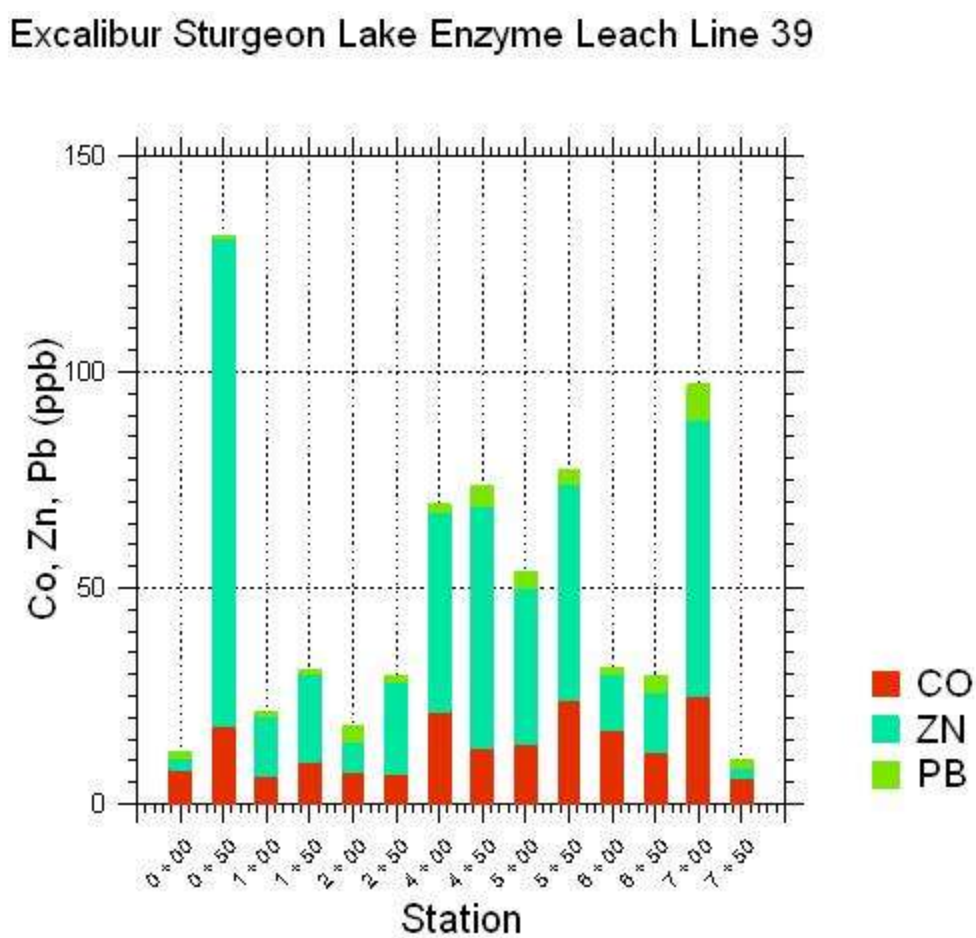

Excalibur Sturgeon Lake Enzyme Leach Line 38
Au, Ag (ppb)
0.06
0.05
0.04
0.03
0.02
0.01
0.00
00 + 00
00 + 50
01 + 00
01 + 50
04 + 50
05 + 00
06 + 00
09 + 00
10 + 00
10 +50
11 + 00
Station
AU
AG

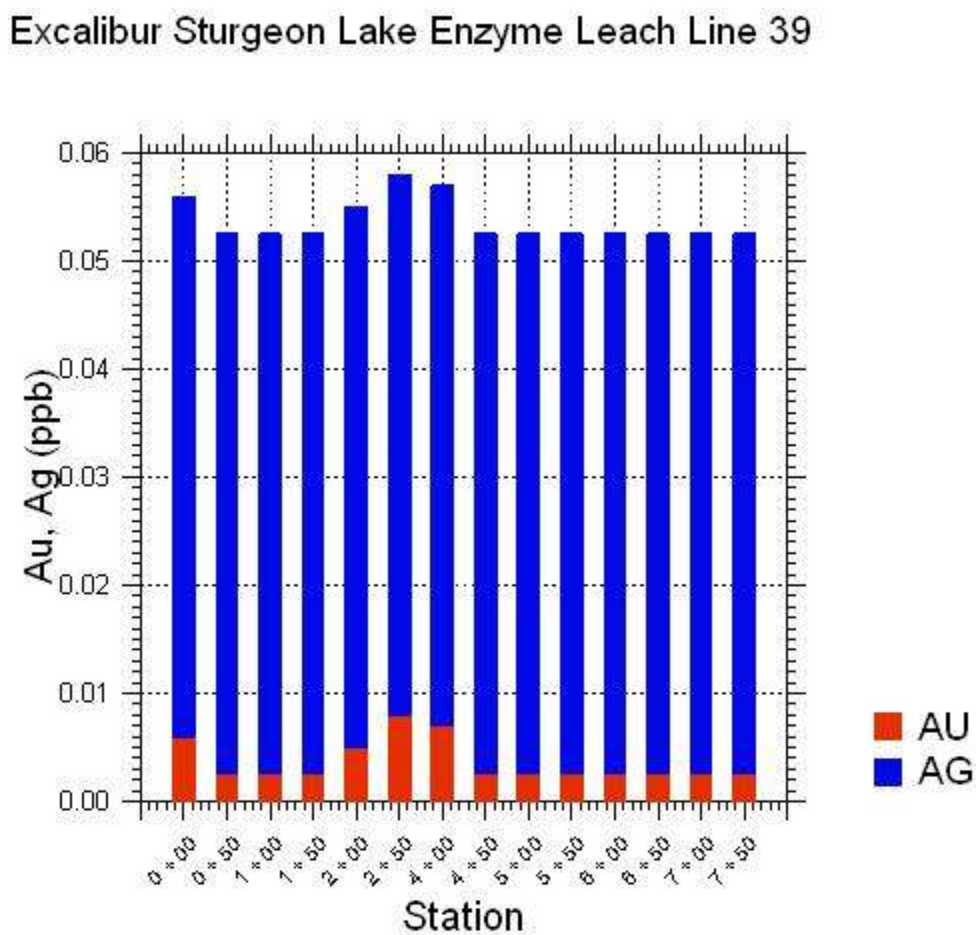

Excalibur Sturgeon Lake Enzyme Leach Line 38
Mn (ppb)
4,000
3,000
2,000
1,000
0
00 + 00
00 + 50
01 + 00
01 + 50
04 + 50
05 + 00
06 + 00
09 + 00
10 + 00
10 +50
11 + 00
Station

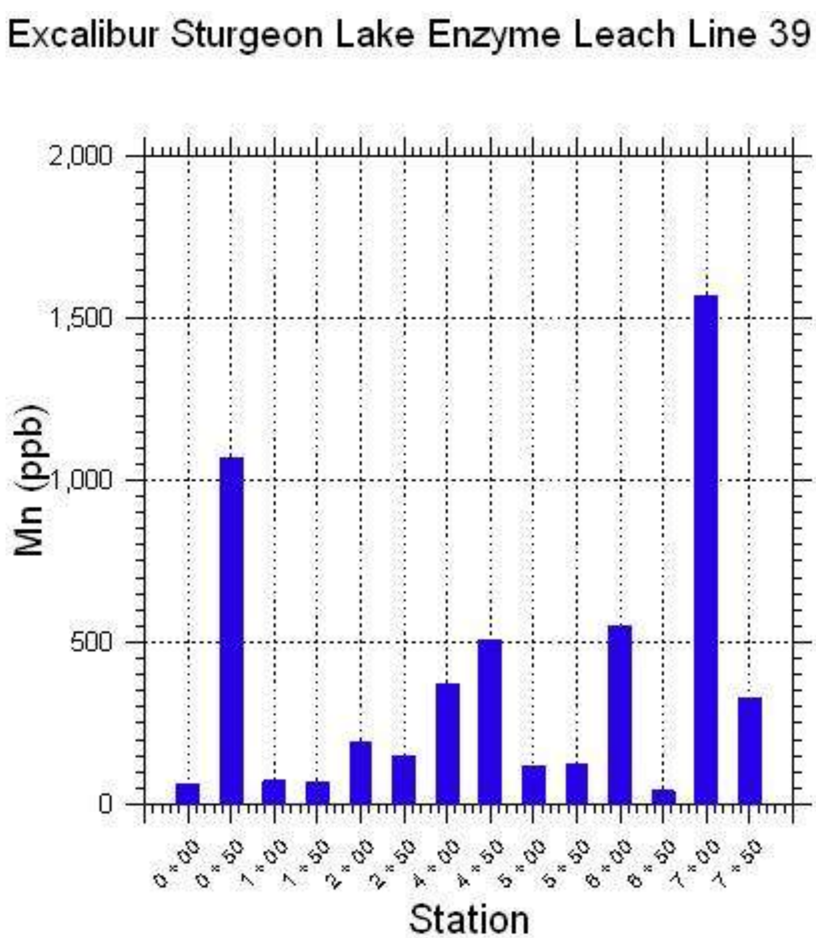
Line 39: Base metal responses from line 39 are primarily Zn-rich with a moderate-contrast Zn response between 4+00 and 5+50. There is some lesser Co associated with the Zn and this is likely the signature of pyrite mineralization associated with sphalerite. Single-sample Zn+/- Pb responses are present at stations 0+50 and 7+00. The highest Mn response along the transect also occurs at station 7+00.

There are no precious metal responses associated with the line 39 soil samples.

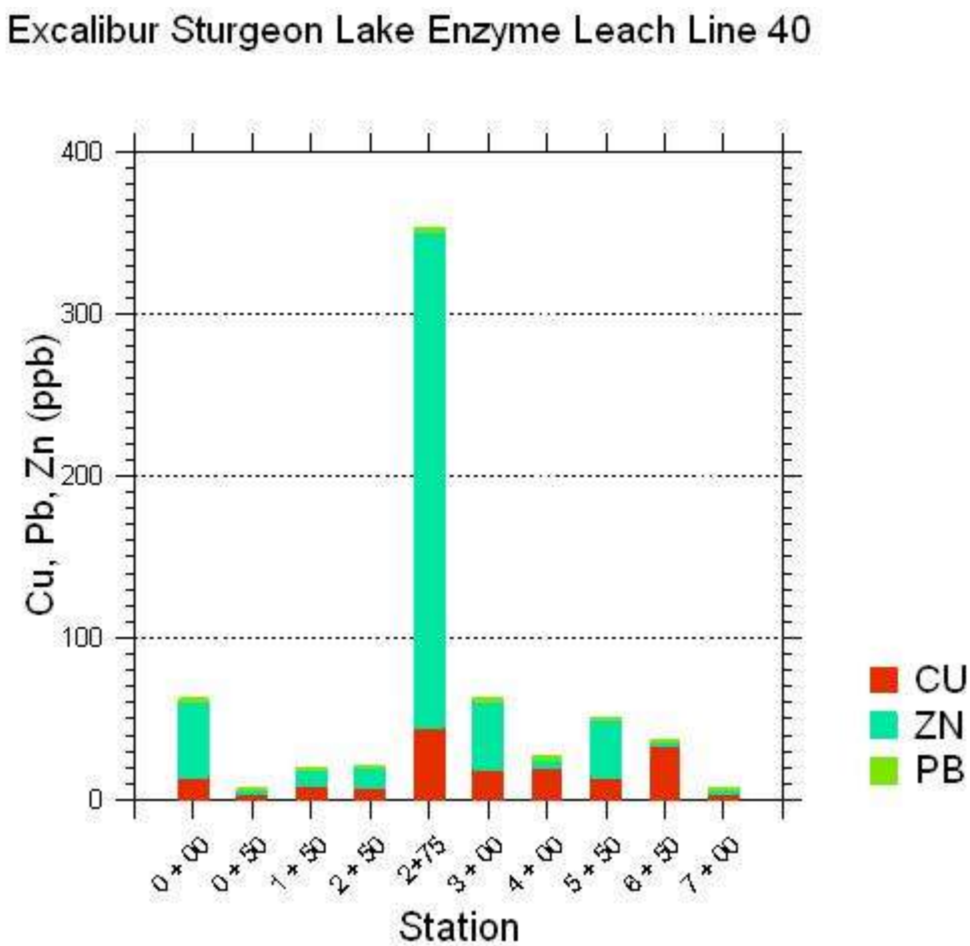


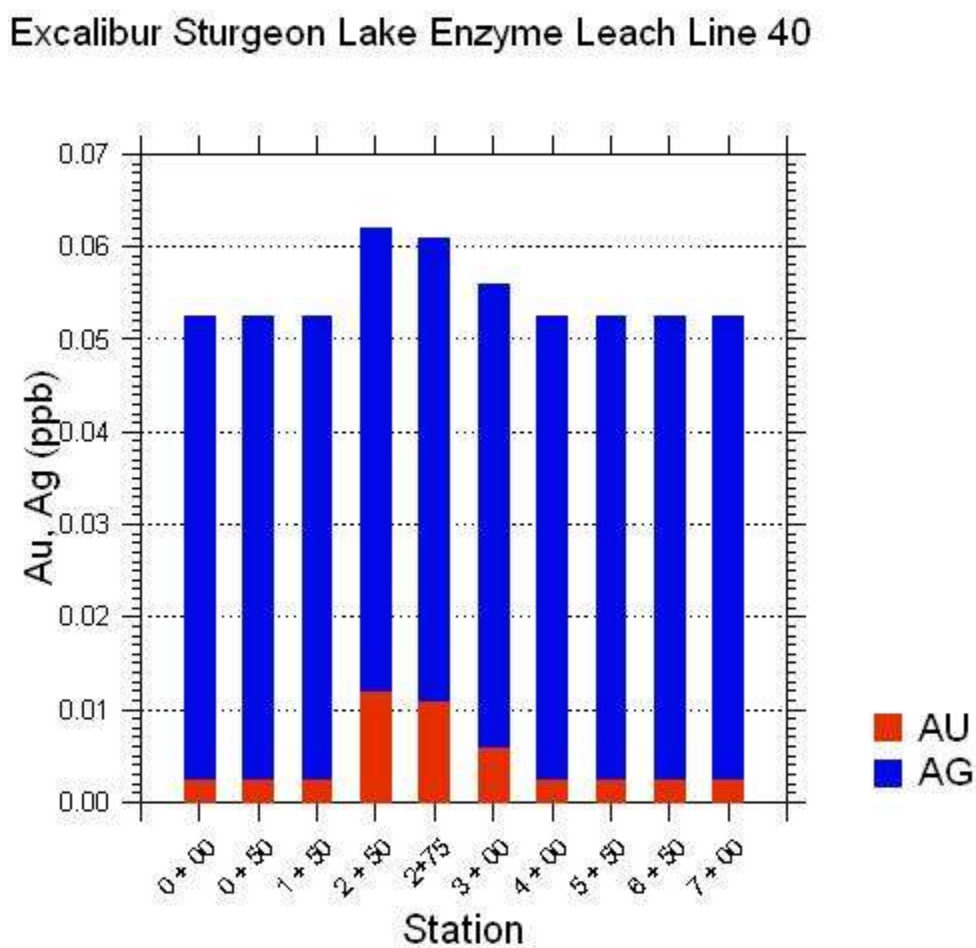

Excalibur Sturgeon Lake Enzyme Leach Line 39
150
100
50
0
Co, Zn, Pb (ppb)
0+00
0+50
1+00
1+50
2+00
2+50
4+00
4+50
5+00
5+50
6+00
6+50
7+00
7+50
Station
CO
ZN
PB

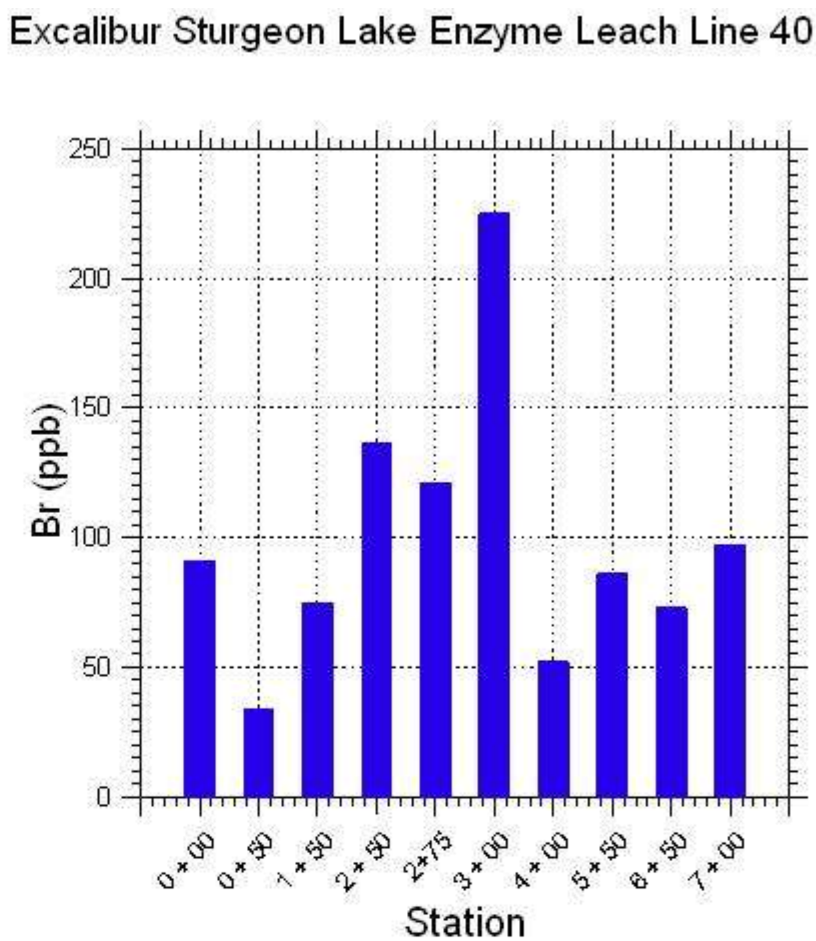

Excalibur Sturgeon Lake Enzyme Leach Line 39
Au, Ag (ppb)
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0+00
0+50
1+00
1+50
2+00
2+50
4+00
4+50
5+00
5+50
6+00
6+50
7+00
7+50
Station
AU
AG

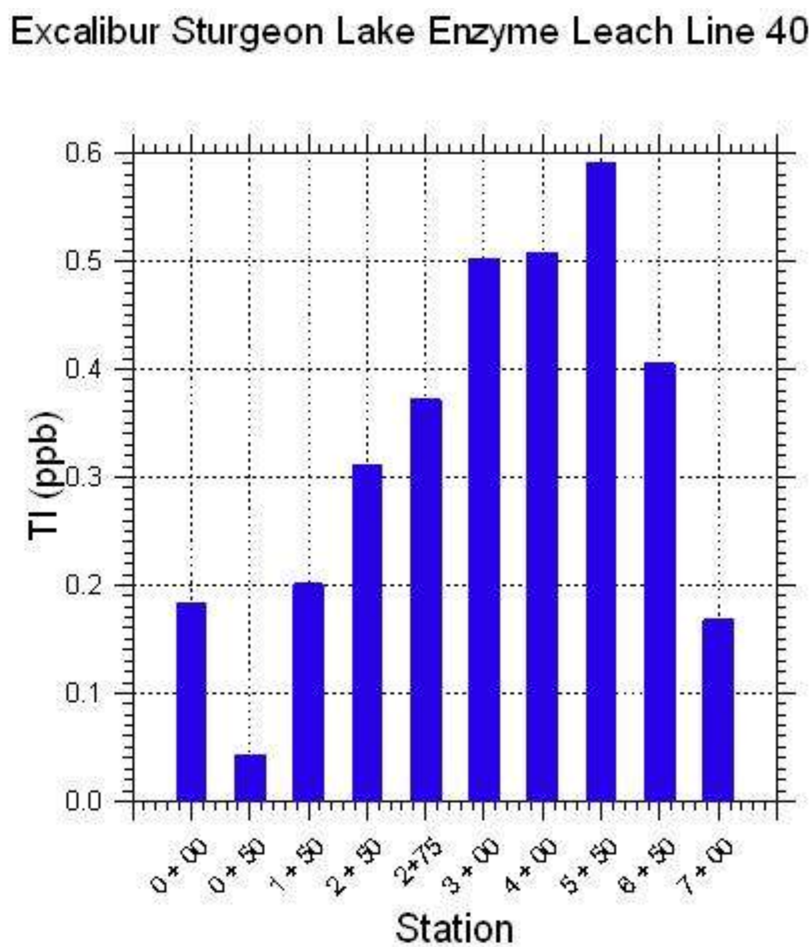

Excalibur Sturgeon Lake Enzyme Leach Line 39
Mn (ppb)
2,000
1,500
1,000
500
0
0+00
0+50
1+00
1+50
2+00
2+50
4+00
4+50
5+00
5+50
6+00
6+50
7+00
7+50
Station

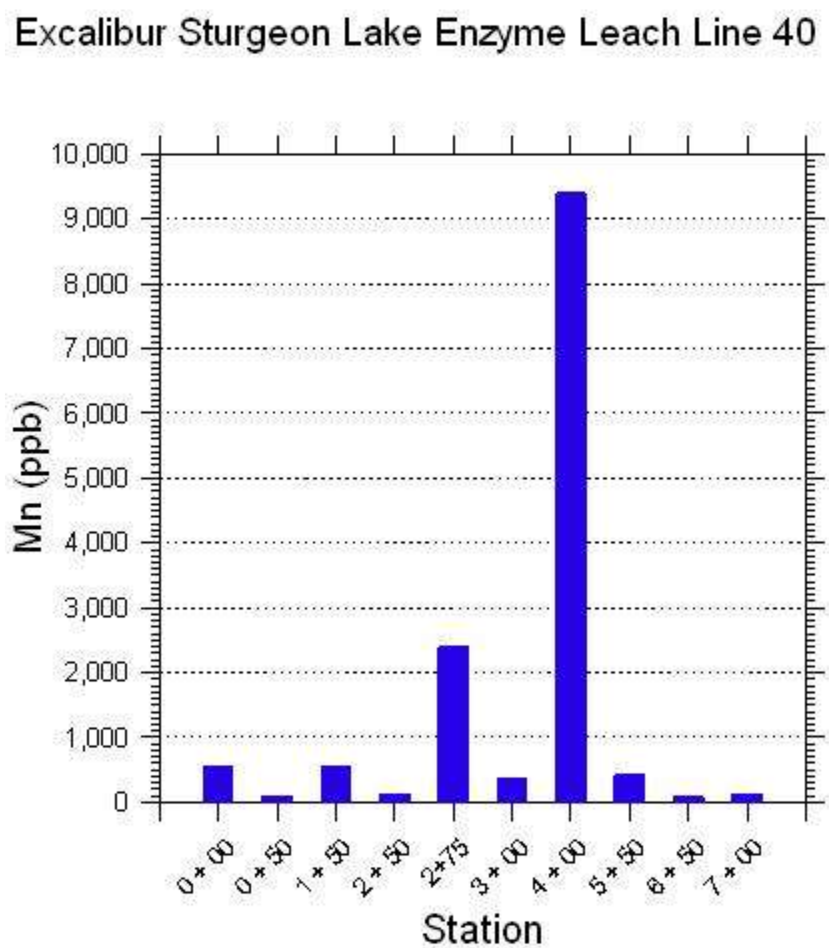
Line 40: A single sample coincident Cu-Pb-Zn-Mo-Sb base metal response occurs at 2+75; there are no additional elevated responses on the remainder of the line. There are also other elements with single sample responses and these include Co at 4+50 and As at 5+50. Of possible interest is a coincident Au-Tl-Br three sample anomaly between 2+50 and 3+00. The Au and Br responses are located at the western edge of a very broad Tl response. There is no association between the base and precious metal anomalies and Mn.




Excalibur Sturgeon Lake Enzyme Leach Line 40
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
Au, Ag (ppb)
0+00
0+50
1+50
2+50
2+75
3+00
4+00
5+50
6+50
7+00
Station
AU
AG


Excalibur Sturgeon Lake Enzyme Leach Line 40
Br (ppb)
250
200
150
100
50
0
0+00
0+50
1+50
2+50
2+75
3+00
4+00
5+50
6+50
7+00
Station


Excalibur Sturgeon Lake Enzyme Leach Line 40
Tl (ppb)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0+00
0+50
1+50
2+50
2+75
3+00
4+00
5+50
6+50
7+00
Station



Excalibur Sturgeon Lake Enzyme Leach Line 40
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Mn (ppb)
0+00
0+50
1+50
2+50
2+75
3+00
4+00
5+50
6+50
7+00
Station

OBSERVATIONS, CONCLUSIONS AND RECOMMENDATIONS

Enzyme Leach

The Enzyme Leach component of the combined Enzyme Leach and SGH geochemical survey in the Sturgeon Lake area has successfully documented the presence of base metal anomalies, albeit at very low contrasts and in many cases as single sample responses. The characteristics of these responses are summarized in Table form below.

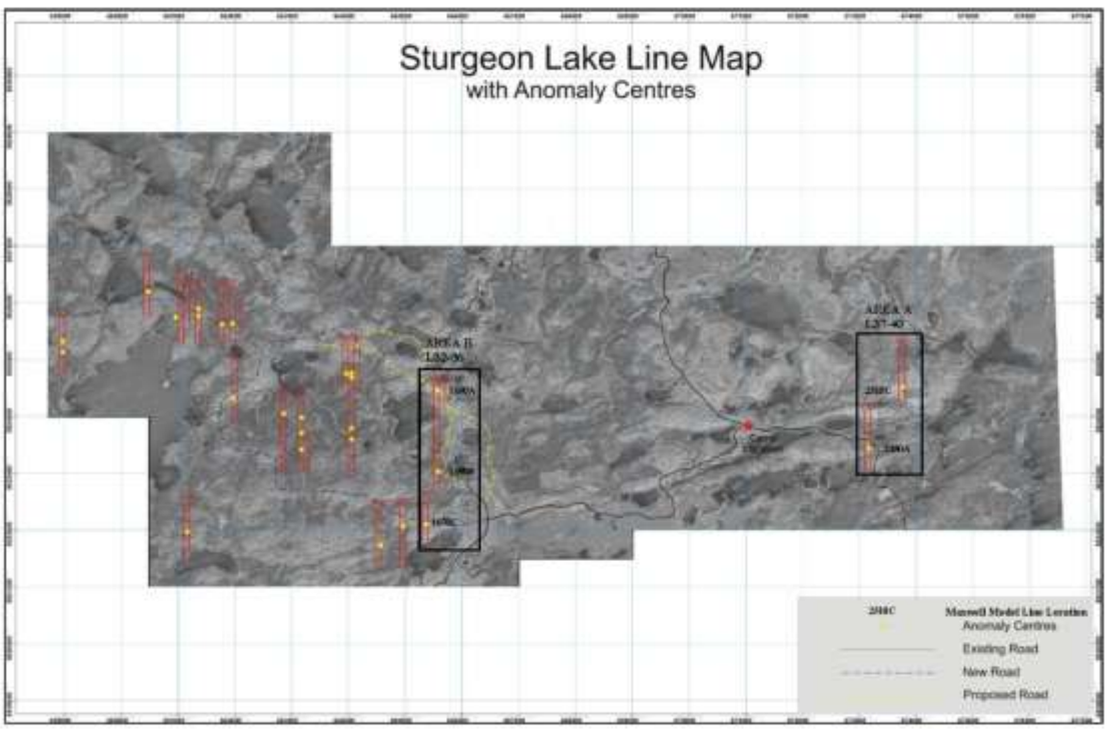
Summary of anomalous responses in Enzyme Leach data, Sturgeon Lake area.				
Line	Anomaly	No. of Samples	Location	
32	Co	3	0+50 to 1+50	
33	nil			
34	Zn+/- Cu, Mo, Sb, Co, Mn	3	11+50 to 12+50	
35	nil			
36	Zn- REE; Co-Mn	1	3+00; 4+50	
37	Cu, Au	1	6+50	
	Pb; Zn	1	11+00;1+50	
38	Zn, Pb, Ni, Co, Mn	1	0+50	
39	Zn, Co	4	4+00 to 5+50	
40	Cu, Pb, Zn, Mo, Sb	1	2+75	
	Co	1	4+50	
	As	1	5+50	
	Au, Tl, Br	3	2+50 to 3+00	

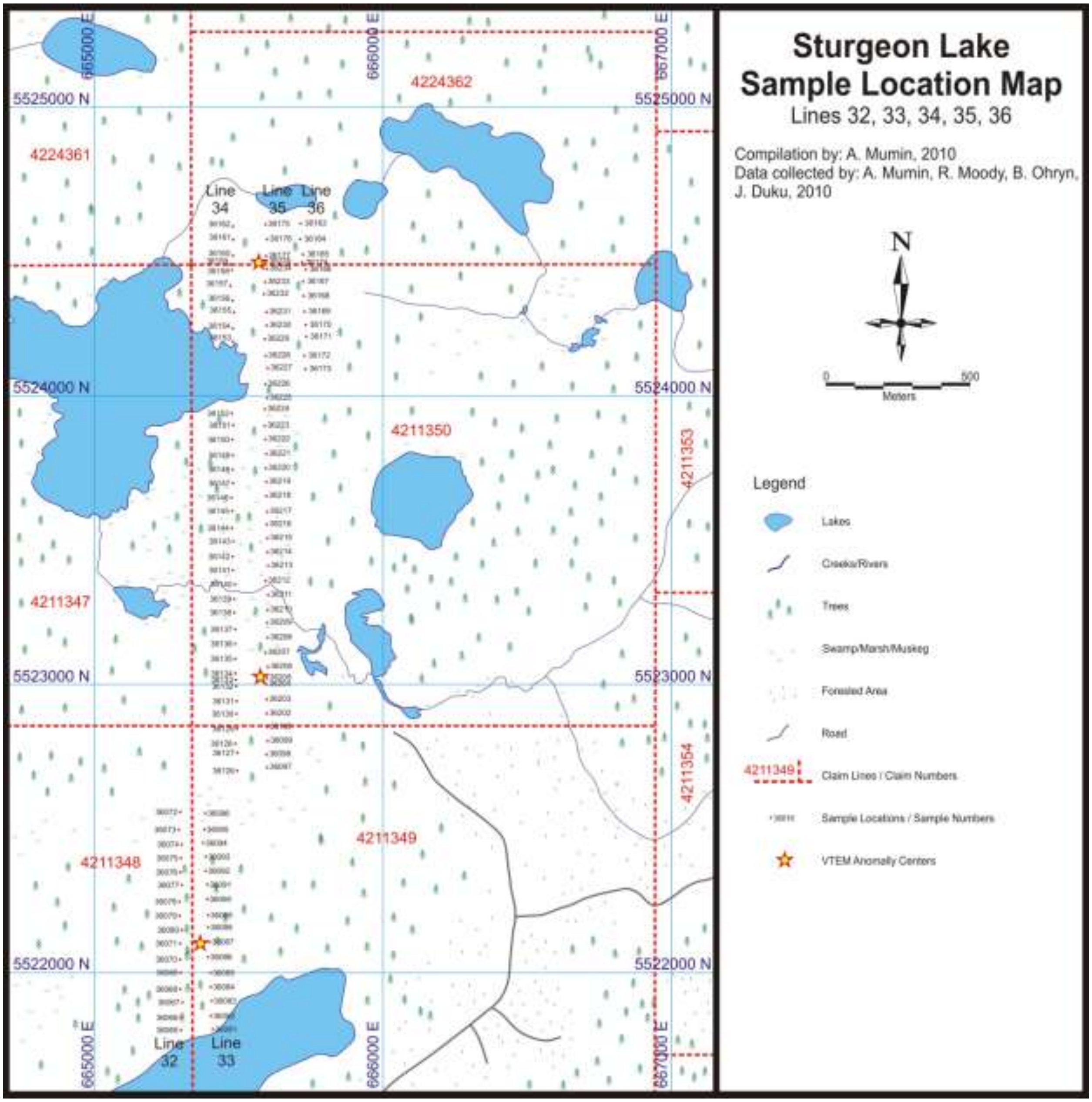
Many of these anomalies are one-sample responses and should not be considered as significant in terms of follow-up exploration. The line 34 anomaly is the priority response in the dataset. It consists of a three sample, 100 m elevated response for the suite Zn-Cu-Mo-Sb-Co suggesting a zone of sulphide mineralization with pyrite in association with mafic lithologies. The secondary anomaly in the survey is located on line 40 where a single sample Cu, Pb, Zn, Mo and Sb anomaly is encapsulated by a three sample Au-Tl-Br anomaly. This is also suggestive of a base metal mineralized signature with associated Au. The Enzyme Leach survey has returned two potential follow-up targets where ground geophysical surveys or diamond drill testing can be focused. Anomalous responses are not recognized on lines 33 and 35.

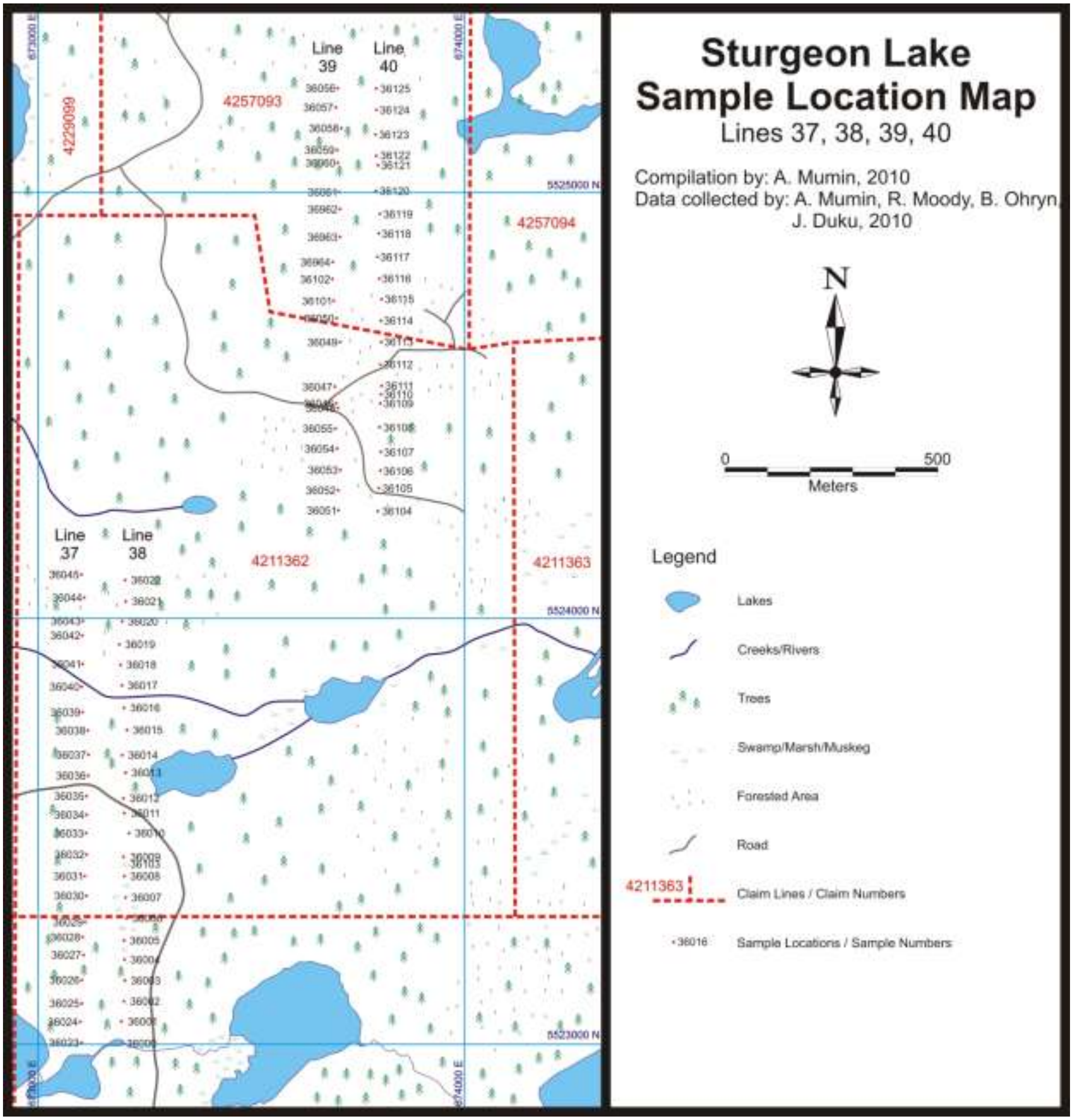
Enzyme Leach and VTEM Anomalies

Integration of a geochemical layer with geophysical survey results built upon a foundation of geology is an important approach to exploration in buried and otherwise covered terrain. The following figures document the locations of VTEM anomalies subsequent to Maxwell Plate modeling in and sample locations for the area of the Enzyme Leach survey.

FIGURE 3:
PROPERTY ROADS, PROPOSED TRAILS AND CAMP LOCATION, STURGEON LAKE PROPERTY
PATRICIA MINING DIVISION, NW ONTARIO




Sturgeon Lake
Sample Location Map
Lines 32, 33, 34, 35, 36
Compilation by: A. Mumin, 2010
Data collected by: A. Mumin, R. Moody, B. Ohryn, J. Duku, 2010
N
0
500
Meters
Legend
Lakes
Creeks/Rivers
Trees
Swamp/Marsh/Muskeg
Forested Area
Road
4211349
Claim Lines / Claim Numbers
Sample Locations / Sample Numbers
VTEM Anomaly Centers
665000 E
666000 E
667000 E
5525000 N
5524000 N
5523000 N
5522000 N
4224361
4224362
4211347
4211348
4211349
4211350
4211353
4211354
Line 34
Line 35
Line 36
Line 32
Line 33



Examination of the locations of VTEM anomaly centers and the locations of enzyme leach anomalies apparently reveals that for the most part very little correspondence exists between these two sets of data. VTEM anomalies on lines 32 and 33 have an association of Co-only in the enzyme leach data suggesting the VTEM anomaly in this area is "pyrite-only" without base and/or precious metals.

Soil Gas Hydrocarbon (SGH) Survey

The SGH survey has successfully delineated a Volcanogenic Massive Sulphide-related anomaly with a ranking of five out of a possible six on lines 37 and 38. A review of the enzyme leach data indicates that in the immediate area of the SGH anomaly there are single sample Cu-Au, Pb and Zn enzyme leach anomalies on line 37. Single sample anomalies are usually accepted with some reticence as they are subject to reproducibility tests to determine whether this anomaly is real or spurious. Nevertheless, in this survey there appears to be some limited correspondence between enzyme leach and SGH, albeit from single sample base metal anomalies.

Multiple Survey Types

An important consideration is the survey expenditures related to undertaking two kinds of geochemical surveys (Enzyme Leach and SGH) when an appropriate enzyme leach sample could not be obtained. This increases expenditures considerably and these costs could be controlled with the expeditious use of an auger to acquire 100% or near 100% sample recovery of inorganic soil samples for enzyme leach analysis. Alternatively the entire survey area could be based on SGH analysis of organic material if this is the only sampling medium that is universally obtainable on the property. Again, the use of an auger could supply inorganic/particulate samples for SGH analysis. Particulate (soil) samples appear to produce the best SGH responses.

The Role of Manganese

The proprietary enzyme leach extraction is a selective extraction focusing on the liberation of elements by the dissolution of amorphous Mn dioxide that mantles individual soil particles. The concern is that those soils with a higher Mn content will trap additional elements rising from buried mineralization as compared to soils that have little amorphous Mn-dioxide.

In this study there are incidents where base metal and associated element anomalies correspond to strongly elevated Mn. However, there are also examples where this is not the case and no correspondence between Mn and base metal anomalies is observed. It would seem that there is insufficient evidence to suggest that such an association is present in the data examined to date.

CONCLUSIONS

1. It is concluded that the Enzyme Leach survey has successfully detected two base metal anomalies (Lines 34 and 40) which are worthy of follow-up. The use of a standard grade of enzyme leach is fraught with difficulty since it has difficulty extracting particulate gold

from the substrate and the use of ***enhanced*** grade Enzyme Leach is recommended for this reason.

2. There is limited correspondence between enzyme leach analyses and an SGH anomaly in the form of a single sample Cu-Au anomaly.
3. There is limited correspondence between anomalous enzyme leach responses, VTEM geophysical anomalies and SGH anomalies.
4. There is limited correspondence between anomalous enzyme leach base and precious metal responses and the Mn component of the soil extracted by enzyme leach.

RECOMMENDATIONS

1. An Enzyme Leach anomalous geochemical response does not indicate the depth to source region nor the grade or tonnage of the source region. As such it is highly recommended that prior to a diamond drill test of the target the area be surveyed with a geophysical method that can be modeled. The determination of the depth to source region can help define the orientation of the drill hole (declination and inclination). Magnetic, electromagnetic and/or induced polarization methods can be used for this purpose. Induced polarization has also had good success in providing an assessment of the chargeability and resistivity characteristics of the source region responsible for the production of EL anomalies.
2. Integration of all available geological, geophysical and geochemical data is recommended prior to drill testing on the Sturgeon Lake property.
3. Future Enzyme Leach soil geochemical surveys on the Sturgeon Lake property or other targets within the same landscape environment must follow the same sampling protocols established for the current survey. The use of a Dutch auger for the purposes of sample collection in terrains characterized by deep organic cover is strongly recommended. In this way 100% or near-100% sample recovery of inorganic soils can be realized and this sample population used for either enzyme leach in exploration terrains where deep organic cover is encountered it is advisable to attempt sample collection with a Dutch auger. This will enable the collection of inorganic soil samples that can then be analyzed by enhanced enzyme leach, Soil Gas Hydrocarbons or another partial/selective extraction.
4. It is strongly recommended that only one type of survey be completed on the property. The expenditures would thus be controlled and interpretation may proceed on the basis of either Enzyme Leach or SGH.

July 23, 2010

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Mount Morgan Resources Ltd.

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