

**AR 2012-012**

*Matthew T. Zago  
Brian Cole P. Geo*

**Assessment Report**

**Licence 9473**

**Held By**

**Jim Michaelis**

**Colchester Co., Nova Scotia**

**November 30<sup>th</sup>, 2011**

**Dartmouth, N.S.**

**DUPLICATE AVAILABLE**

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## **1 SUMMARY**

**This assessment report documents the work program completed during the 2011 assessment year with respect to exploration licence 9473 held by Jim Michaelis in the Wentworth area of Nova Scotia.**

**During the period covered by this report, a rock sampling and reconnaissance prospecting program was completed across the entire claim block. Attention was focused on prospecting for REE potential within the Wentworth claim block. Spectrometers were used as aids to uncovering areas with higher than background thorium as pathfinders to REE's. A total of 16 samples were sent in to ActLabs for of Ancaster Ontario for ICP-MS multi-element analysis.**

**Elevated total rare earth element concentrations were found in several outcrops on the property. Anomalous silver values were found in various felsic to intermediate extrusive volcanics.**

**Follow up digital compilation is recommended in this area to further understand the complex geology of the Wentworth property.**

## **2 INTRODUCTION**

The recorded holder for all claims is Jim Michaelis, 26 Rodney, Dartmouth, NS, B2Y 3V5. The Wentworth property encompasses one exploration licence consisting of 19 claims. The exploration licence was issued on November 30<sup>th</sup>. 2011

The Wentworth claim block was initially staked by Tripple Uranium Resources Inc. in 2006 based upon multi-metallic mineralization potential discovered by Gulf Minerals Ltd. in the late 1970's and early 1980's.

Tripple Uranium Resources Inc completed 4470.1 line-kms of airborne magnetic and radiometric surveys over the region in 2007, and a 2200.8 metre (10 hole) diamond drilling program in 2008. The potential for Rare Earth Element (REE) mineralization in the area has been the recent exploration focus.

Work by Trevor Mac Hattie, of the Nova Scotia Mines Branch, in the area over the last few years has highlighted the REE potential.

This report summarizes the prospecting and rock sampling work carried out in November 2011 to test the Wentworth claims for REE potential.

## **3 GEOLOGY**

The geology of the Wentworth property in the Cobequid Hills area consists of metamorphosed sediments, granites, and volcanic deposits which range in age from Precambrian to Devonian that are surrounded by easily eroded low-lying Carboniferous sediments.

The majority of the property is overlain by Middle Devonian to Early Carboniferous Fountain Lake Group emplaced with granite and diorite-gabbro plutons. The Fountain Lake Group includes the Byers Brook Formation overlain by the Diamond Brook formation. This group consists mostly of rhyolite and basaltic volcanic rocks with minor tuffaceous clastic rocks.

The Late Carboniferous Cumberland Group is found to the north portion of the property. The group represents deposition in fluvial, alluvial plain, lacustrine, estuarine, and shoreline environments with restricted marine influence, such as a marine gulf setting (Way, 1968; Duff and Walton, 1973; Kaplan and Donahoe, 1980; Calder, 1984; Rust et al., 1984; Browne and Plint, 1994; Archer et al., 1995; Gibling, 1995; Calder, 1998; Davies and Gibling, 2003).

#### 4 PROPERTY DESCRIPTION AND LOCATION

The property is located in Cumberland and Colchester Counties, in northern Nova Scotia approximately 49 km northwest of Truro (Figure 1) consists of one mineral licence and 19 claims (Figure 2). Status of licences in the Wentworth Area is shown in Table 1. Access is afforded by Provincial Secondary Route 4 and highway 246 along with secondary roads, bush trails and logging roads provide easy access to all parts of the property.

The area has contrasting topography being part of the Cobequid Highlands and the Cumberland Pictou Lowlands. The Cobequid Hills were formed by fault movement during the Carboniferous. The crest of the Cobequid Hills is relatively even and undissected with an elevation on average of 275 m except for areas that has been deeply incised by Totten Brook, Swan Brook and East Swan Brook. The Carboniferous Lowlands has an elevation on average of 40 m a.s.l. and consists of gentle hills with sporadic marsh land.

At the base of the northern slopes of the Cobequid Hills vegetation support a mixed forest of hardwoods and red spruce, fir and hemlock, in which softwoods originally predominated. As one ascends the slopes the forest becomes prevailing of the hardwood type.

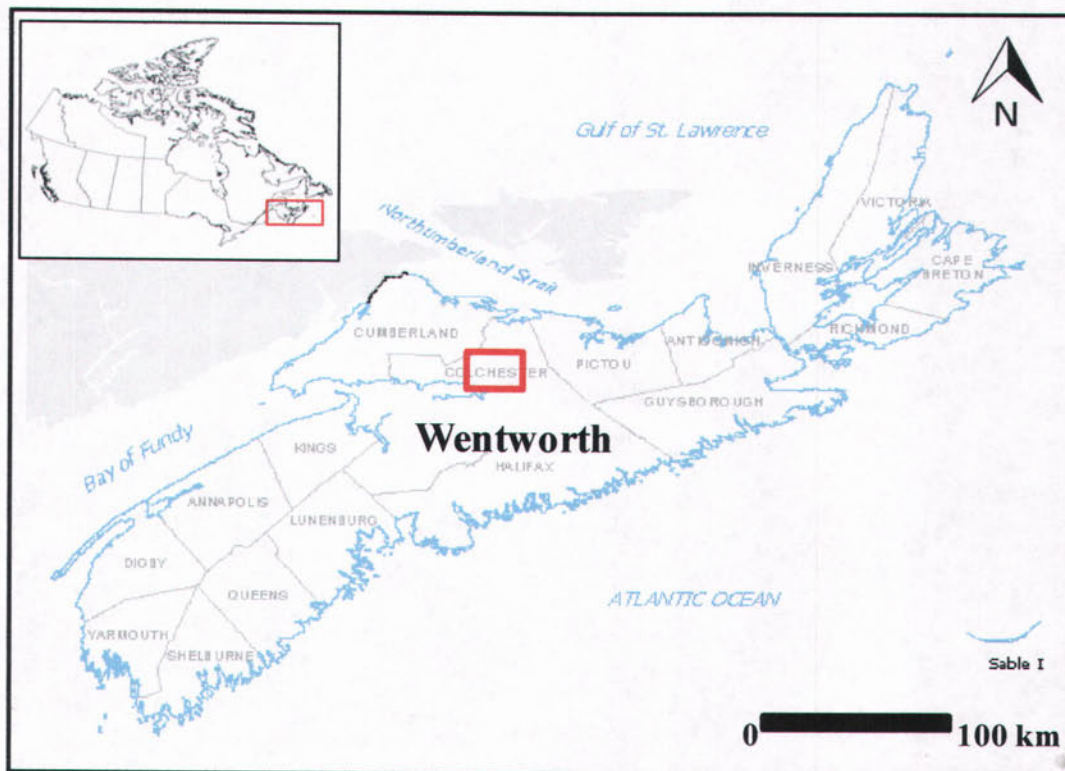
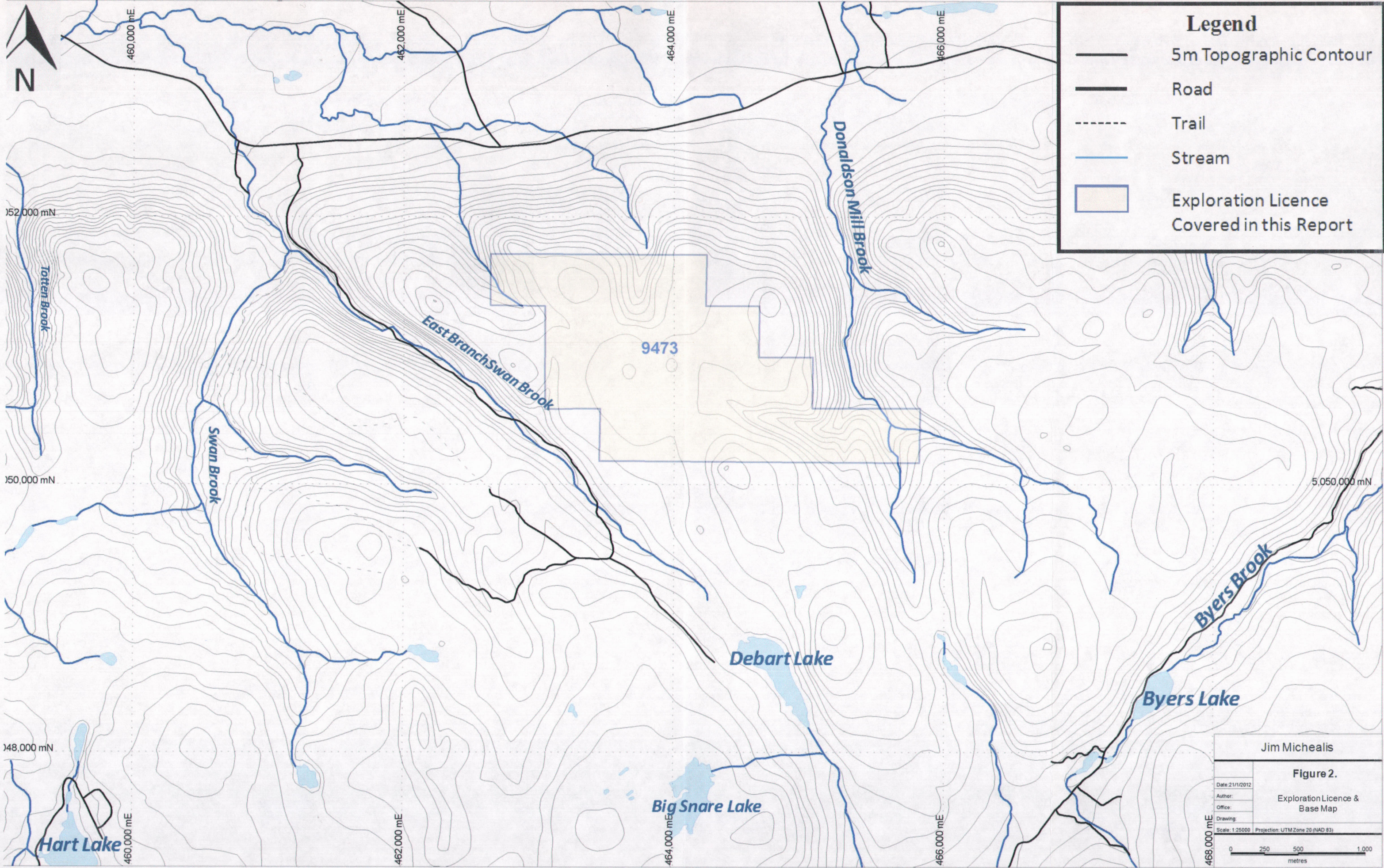


Figure 1: Property Location Map



Jim Michealis	
<b>Figure 2.</b>	
Exploration Licence & Base Map	
Date: 21/1/2012	Author:
Office:	Drawing:
Scale: 1:25000	Projection: UTM Zone 20 (NAD 83)

## 5 LICENCE TABULATION

The exploration licence covered by this report is summarized below:

**Table 1. Summarized Licence Tabulation**

Applicant	License_No	NTS Map Sheet	Tract	License_Date	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	# of Claims
Jim Michaelis	9473	11E/11B	86	30/11/2011									X	X				X	X	X	5
Jim Michaelis	9473	11E/11B	87	30/11/2011									X	X	X	X	X	X			6
Jim Michaelis	9473	11E/11B	106	30/11/2011				X													1
Jim Michaelis	9473	11E/11B	107	30/11/2011	X	X	X		X	X	X	X									7
<b>Total For Property</b>																					<b>19</b>

## 6 WORK PERFORMED

Rock sampling and reconnaissance prospecting program carried out in November of 2011 primarily with the intent to identify REE potential.

### 6.1 Prospecting

During the month of November, 2011, a reconnaissance geological team consisting of two members completed an intermittent prospecting effort utilizing spectrometers as a guide to identifying REE mineralization across the Wentworth license block- see Table 2. The prospecting team operated out of the town of Truro, Nova Scotia, driving each day to the property. A total of 16 samples were collected from bedrock outcrops, and submitted for analysis to Activation Laboratories Ltd. All samples were delivered to the Preparation Lab in Fredericton New Brunswick for sample grinding and preparation prior to shipping to the Activation Laboratory in Ancaster Ontario, where the samples were assayed for a multi-element package "Code 4E - Exploration - INAA, Total Digestion - ICP, Lithium Metaborate/Tetraborate Fusion - ICP" (Appendix IV & V).

**Table 1. Personnel and Contractors Utilized – Prospecting Activity**

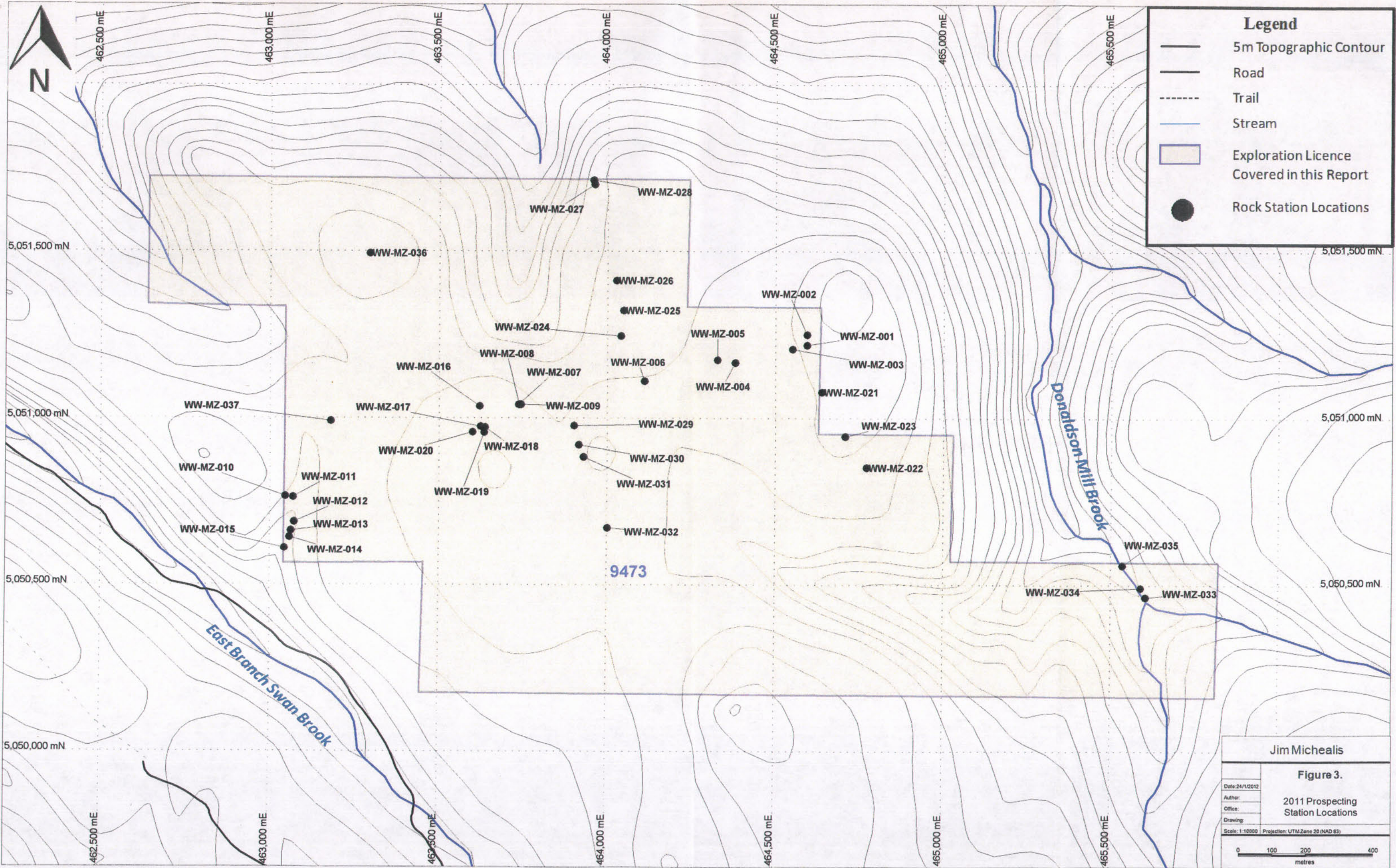
<i>Name</i>	<i>Address</i>	<i>Involvement</i>	<i>Dates</i>	<i># of days</i>
<b>Matthew Zago</b>	Thunder Bay, Ontario	Geologist: Prospecting & Report Preparation	November, 2011	19
<b>Damian Kippenhuck</b>	Port Hope Simpson, Labrador	Prospecting Geotechnical	October, 2011	14



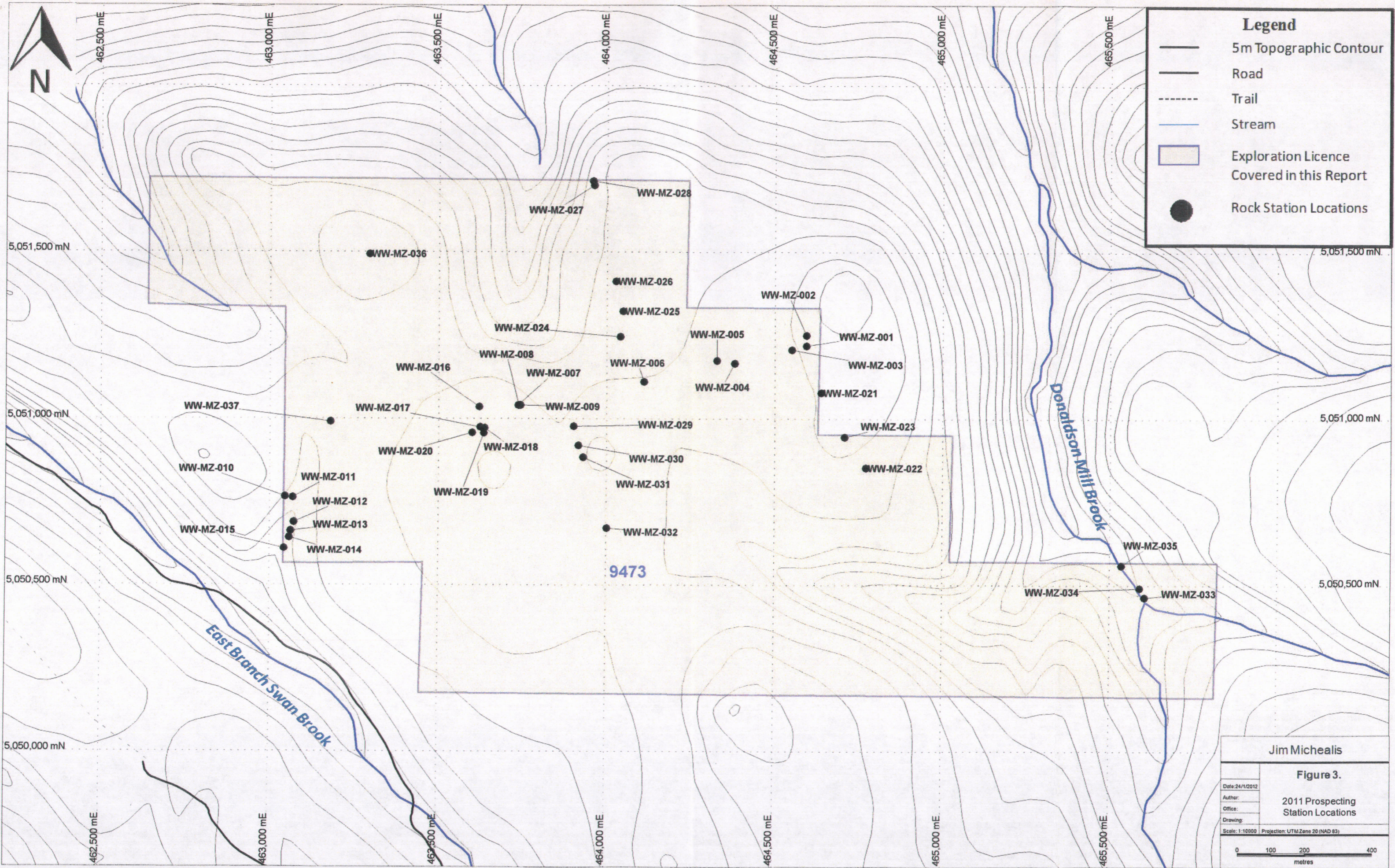
Glacial overburden is thick in the property and outside of recent logging road construction there is limited outcrop. The presence of early season snow with intermittent heavy rains over the Wentworth highlands had an adverse affect on the prospecting effort so that traverses were therefore somewhat limited to roads, trails and to a much lesser extent - streams.

Where outcrop was encountered representative readings were taken with a spectrometer, measuring radiometrics (cps), K (%), U (ppm) and Th (ppm).

Prospecting Station Locations (Figure 3) and Radiometric readings (Figure 4) are displayed in map format. Prospecting sample locations (Figure 5), Ag assay result (Figure 6), Ce, Nd, Y assay results (Figure 7) and total rare earth element (TREE) assay results (Figure 8) are also displayed in map format. Appendix II contains Rock Sample locations (UTM NAD83 – Zone 20), radiometric reading, and descriptions. Appendices IV and V contain ICP/MS assay results and associated certificates.



Jim Michealis	
<b>Figure 3.</b>	
Date: 24/1/2012	2011 Prospecting Station Locations
Author:	
Office:	
Drawing:	
Scale: 1:10000	Projection: UTM Zone 20 (NAD 83)



**Legend**

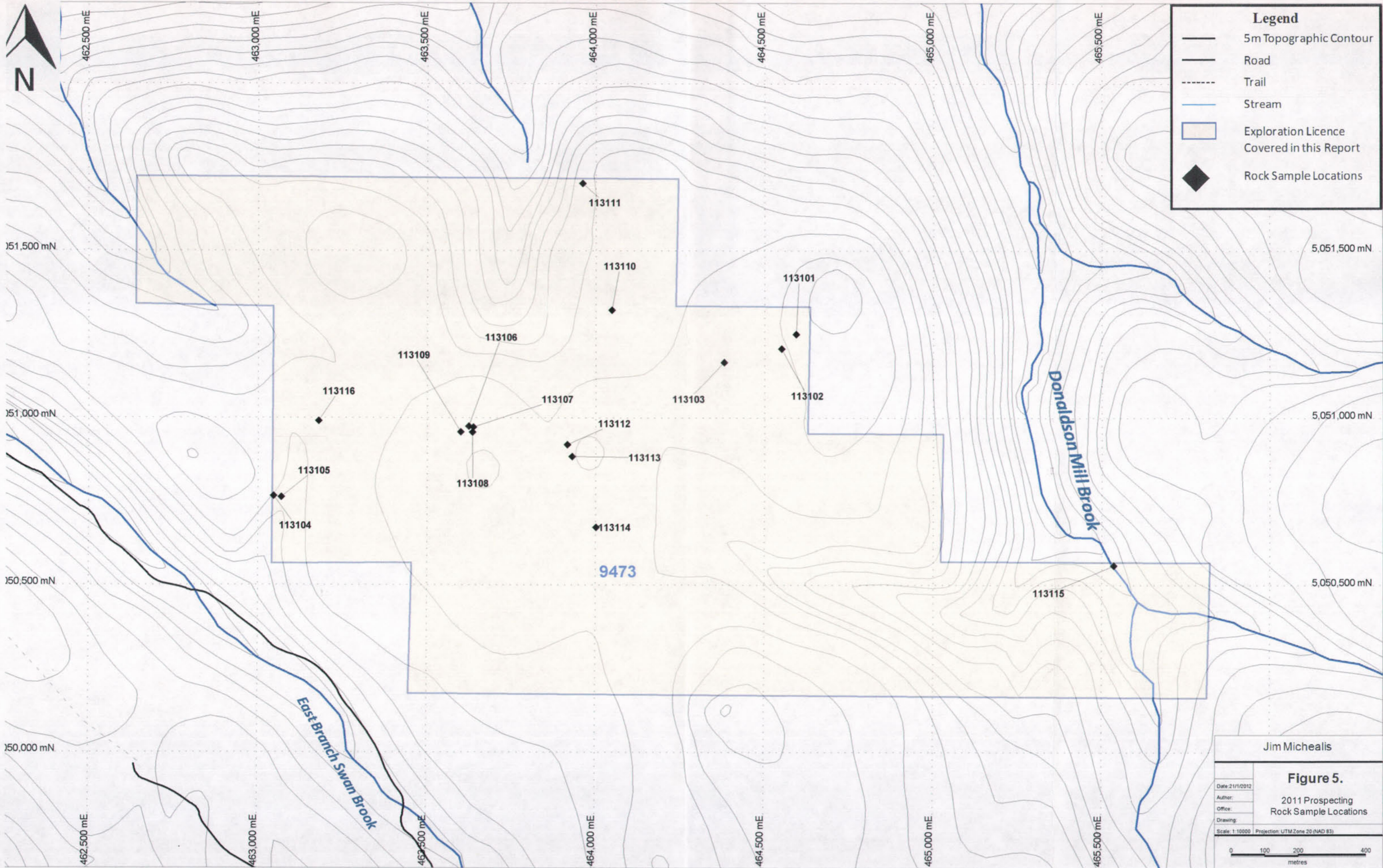
- 5m Topographic Contour
- Road
- Trail
- Stream
- Exploration Licence Covered in this Report
- Rock Station Locations

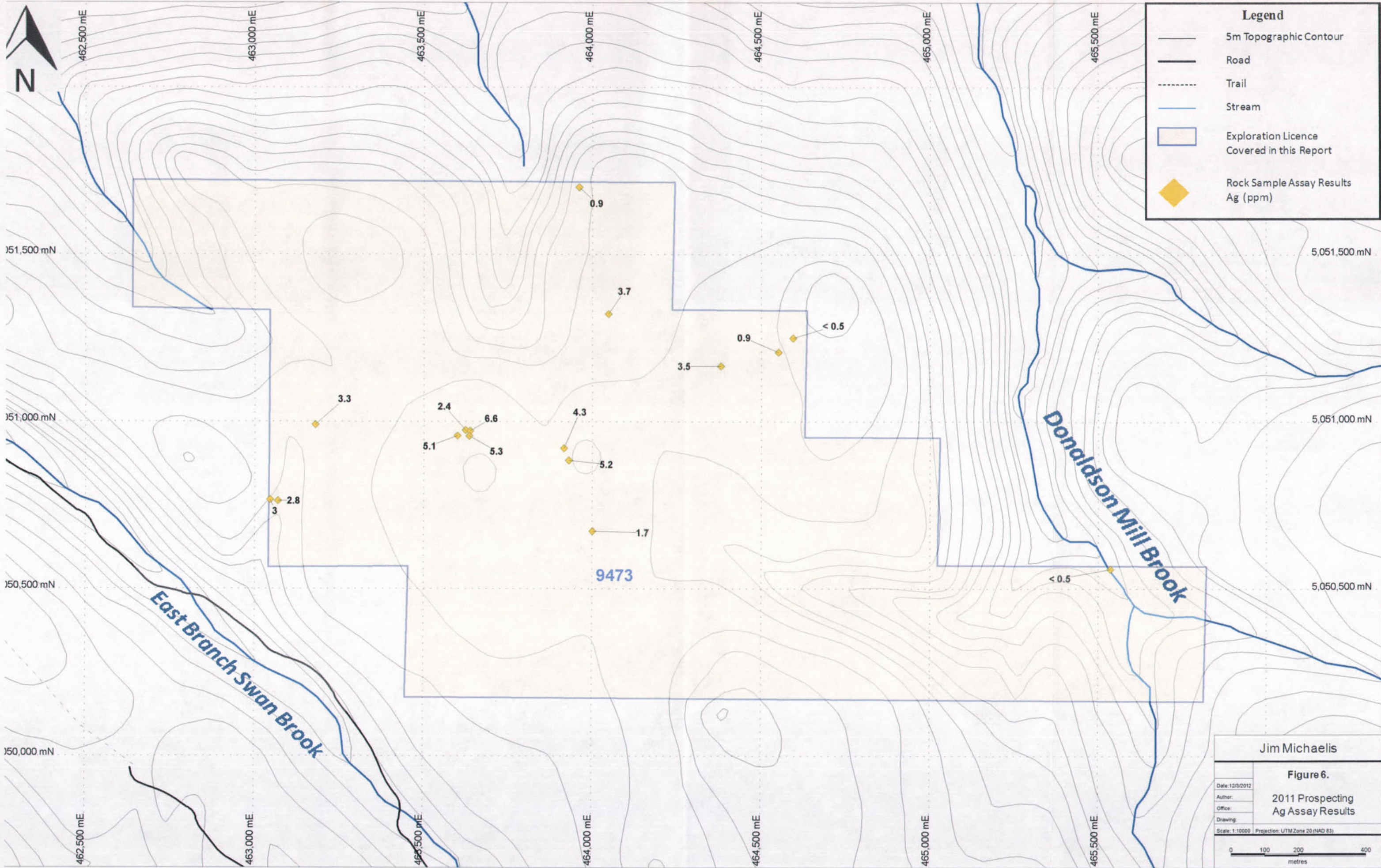
Jim Michealis

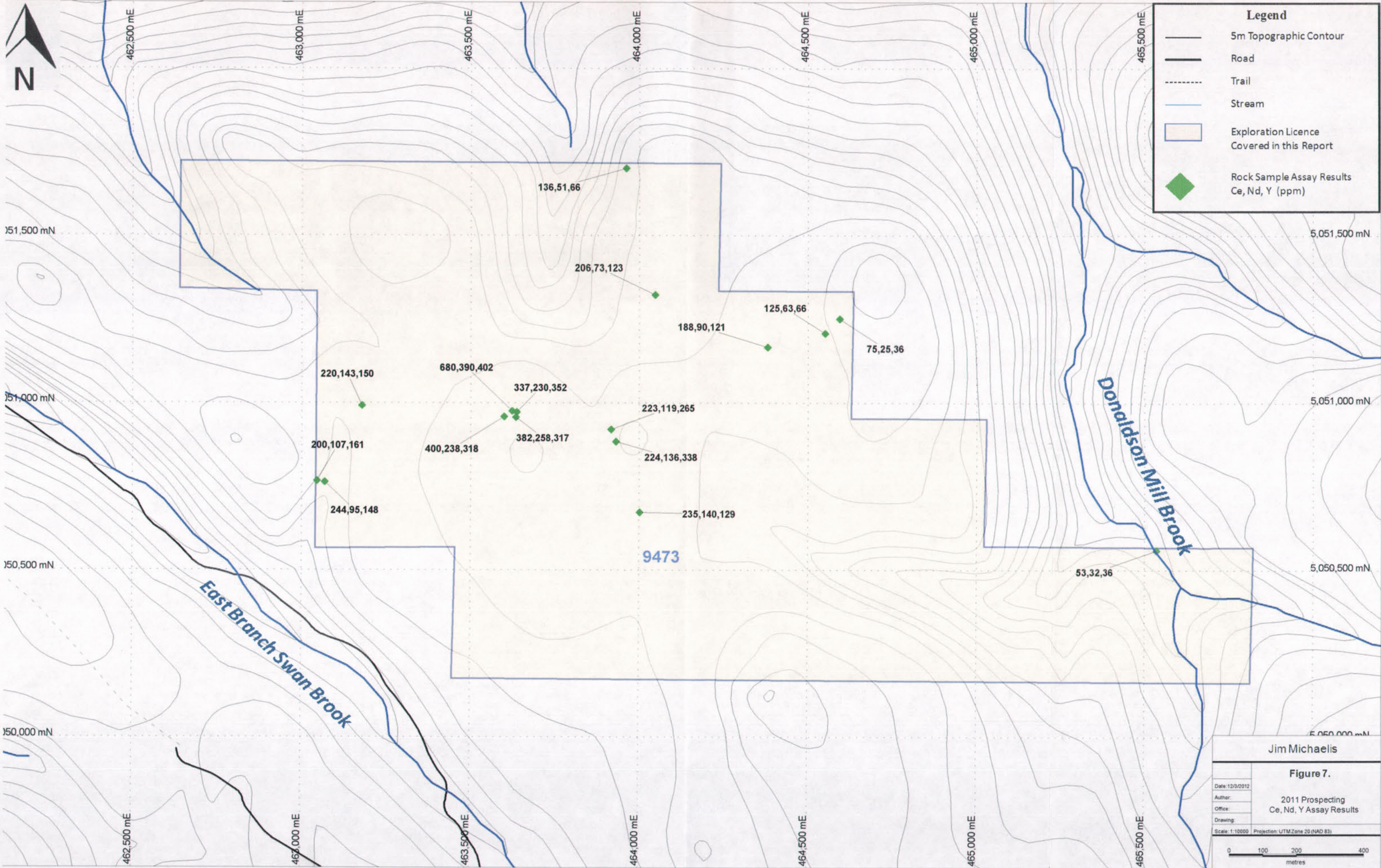
**Figure 3.**  
2011 Prospecting Station Locations

Date: 24/1/2012  
 Author:  
 Office:  
 Drawing:  
 Scale: 1:10000 Projection: UTM Zone 20 (NAD 83)

0 100 200 400 metres







**Legend**

- 5m Topographic Contour
- Road
- Trail
- Stream
- Exploration Licence Covered in this Report
- Rock Sample Assay Results Ce, Nd, Y (ppm)

51,500 mN  
51,000 mN  
50,500 mN  
50,000 mN

462,500 mE  
463,000 mE  
463,500 mE  
464,000 mE  
464,500 mE  
465,000 mE  
465,500 mE

136,51,66  
206,73,123  
188,90,121  
125,63,66  
75,25,36  
220,143,150  
680,390,402  
337,230,352  
223,119,265  
200,107,161  
400,238,318  
382,258,317  
224,136,338  
244,95,148  
235,140,129  
9473  
53,32,36

East Branch Swan Brook  
Donaldson Mill Brook

5,051,500 mN  
5,051,000 mN  
5,050,500 mN  
5,050,000 mN

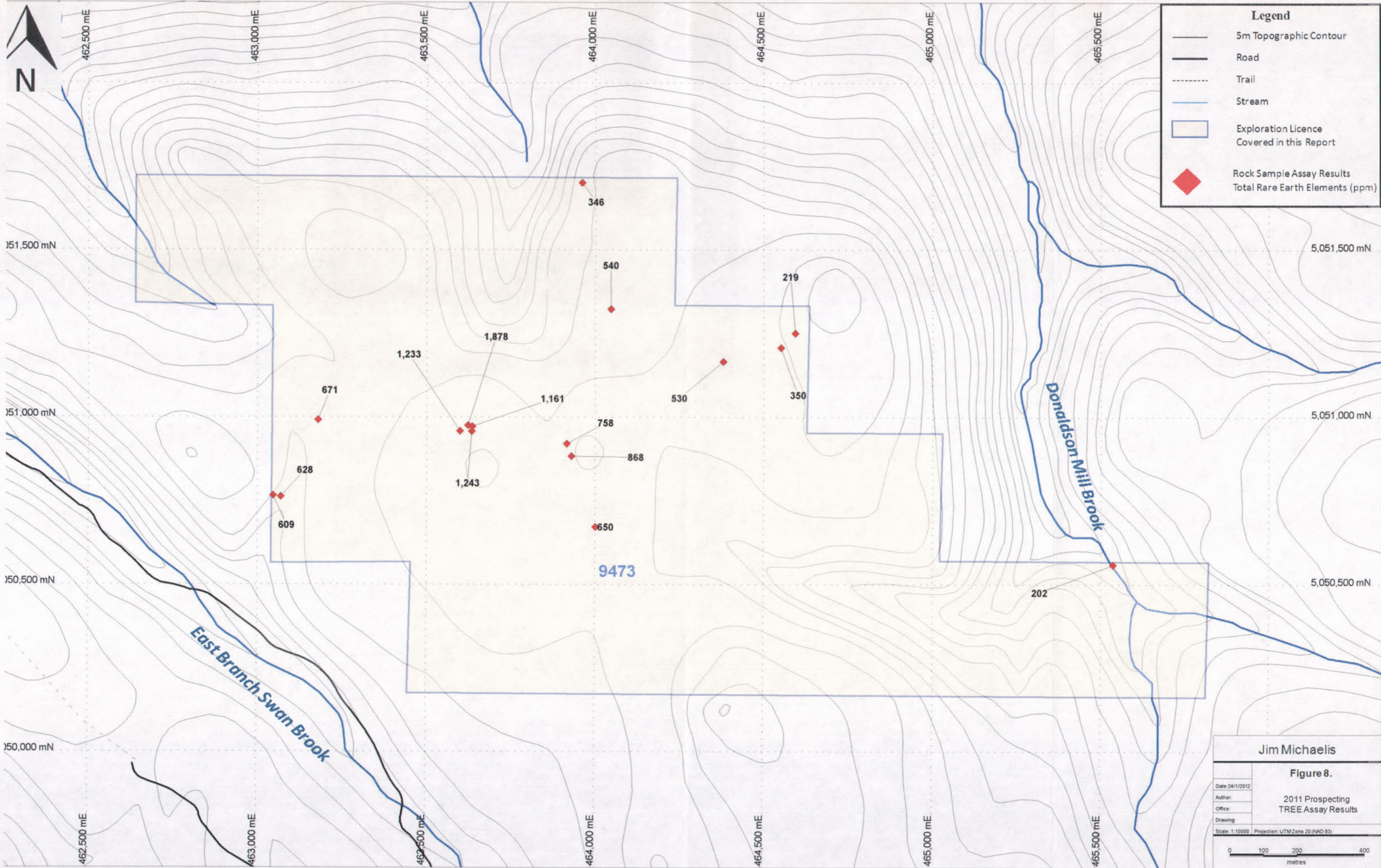
Jim Michaelis

**Figure 7.**

2011 Prospecting  
Ce, Nd, Y Assay Results

Date: 12/3/2012  
Author:  
Office:  
Drawing:  
Scale: 1:10000 Projection: UTM, Zone 28 (NAD 83)

0 100 200 400  
metres



## 7 RESULTS

### 7.1 Prospecting Results

In general, mafic extrusives (andesite/basalt) had radiometric readings between 80 and 120 cps. Felsic intrusives (pink granite) and extrusives (rhyolite, tuff and ignimbrite) both had ranges from 200 to 500 cps with one isolated localized peaks as high as 800 cps. Similarly thorium readings (ppm) for the felsic rocks ranged from 17 to 50 with a localized peak up to 104 ppm.

From prospecting anomalous silver values were found in the felsic to intermediate extrusive volcanic with Ag values ranging from 5.2 – 6.6 ppm. These same rocks with elevated silver values including an altered pelitic metasediment with cubic pyrite had elevated Ce, Nd, and Y along with corresponding elevated TREE levels. These four samples all in the same vicinity had TREE values greater than 1000 ppm (Table 5).

**Table 3. Total REE (TREE) Prospecting Results Summary**

Sample Number	Sc	Y	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	TREE
113101	32.9	36	31.2	75	25	9.4	2.6	1.1	4.9	0.49	219
113102	4.7	66	62.9	125	63	13.2	1.5	1.5	10	1.49	350
113103	1.4	121	86.6	188	90	18.2	1.8	2.6	18	2.56	530
113104	1.9	161	90	200	107	17.4	2.1	3.7	23	3.32	609
113105	1.8	148	88.8	244	95	19.6	1.6	3.6	22	3.19	628
113106	1.1	402	269	680	390	55.4	5.2	11.1	56	7.97	1878
113107	0.7	352	145	337	230	35.5	3.2	7.8	44	6.1	1161
113108	0.7	317	184	382	258	40.6	3.4	7.5	44	6.08	1243
113109	0.8	318	173	400	238	42.9	3.3	7.7	43	5.96	1233
113110	0.8	123	97.8	206	73	13.3	1.4	2.2	20	2.89	540
113111	4.8	66	64.1	136	51	8.9	1.2	1.5	11	1.67	346
113112	0.7	265	82.7	223	119	17.5	1	5.6	38	5.25	758
113113	1	338	84.6	224	136	22	1.7	6.7	48	6.58	868
113114	1	129	106	235	140	14.6	< 0.1	3.6	18	2.8	650
113115	40.7	36	23.1	53	32	9.1	2.8	0.7	4.6	0.38	202
113116	1	150	110	220	143	16.5	1.4	3.4	23	3.25	671



## **8 CONCLUSIONS AND RECOMMENDATIONS**

### **8.1 Conclusions**

Prospecting work shows existence of anomalous silver within felsic to intermediate volcanic, with assay results from samples 113107, 113108, 113109 and 113113 having Ag values of 6.6, 5.3, 5.1 and 5.2 ppm.

Utilizing spectrometers as a guide to identifying REE mineralization shows promise. Four outcrops showing elevated TREE values greater than 1000 ppm were being identified through assay, and each has radiometric reading of 400 or greater cps..

### **8.2 Recommendations**

Additional investigation of appropriate pathfinder related techniques for REE's is recommended before conducting further prospecting efforts in the Wentworth area.

The anomalous silver values should also be taken seriously, as the presence of silver could indicate a polymetallic epithermal mineralization setting.

It is recommended that digital compilation of the past work in the area is important to understanding this property. This includes all previously mapped outcrops, assay results and geophysical data that has been completed on the property.

With proper digital compilation and interpretation it may be possible to correlate anomalous silver values and elevated REEs to structural features visible through previously completed geophysical surveys.

## 9. STATEMENT OF QUALIFICATIONS

I, Matthew T. Zago do hereby certify that:

- 1) I reside at 1430 Goods Road, Thunder Bay ON
- 2) I graduated from the University of Manitoba with a B.Sc.(Hons) in Geology.
- 3) I have worked as an exploration geologist and a geological consultant since 2011.
- 4) This report is based on personal examination by the author in the field from November 4<sup>th</sup> to November 11th. It is also based on analytical results from ActLabs, Ontario.
- 5) I have no direct interest in the exploration licences reported hereunder.

January 20, 2012



Matthew T. Zago  
Consulting Geologist

I, Brian L Cole, certify that:

- 1) I am a professional geoscientist and I have a business address at 3979 Victoria Ave, Vineland, Ontario, L0R 2C0, Canada.
- 2) I graduated with a HBSc in Geology in 1978 and have been actively involved in multi-commodity mineral exploration for over 34 years. I am licence to practice geosciences in Nova Scotia, Ontario, and Newfoundland and Labrador.
- 3) I have not physically visited the property which is the discussed within this report.
- 4) I have no interest, direct or indirect, in either the property or the owner of this property.

January 20, 2012

Brian L. Cole  
P.Geol

**Respectfully submitted,**

A handwritten signature in black ink, appearing to read 'M. Zago'.

**Matthew T. Zago**

**January 23, 2012**

**Brian L. Cole**

**January 23, 2012**

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**APPENDIX I: EXPENDITURES**

**PROSPECTING PROGRAM**

<b>November 2011 Prospecting - Time Allocation</b>				
	<b>Rate (\$)</b>	<b>9473</b>	<b>General</b>	<b>Total</b>
Zago M.	400	14	5	19
Kippenhuck D.	300	14	0	14
		28	5	33

<b>EQUIPMENT RENTAL</b>	<b>Days</b>	<b>\$ / Day</b>	<b>Total Cost</b>
1 GMC Sierra truck	14	100	1400
2 Garmin GPS	14	80	1120
1 Panasonic Tough Book	19	75	1425
2 Spectrometers	14	80	1120
<b>Total</b>			<b>\$5,065.00</b>

STATEMENT OF EXPENDITURES - WENTWORTH EAST PROJECT 2011														
AREA	LICENCE	NUMBER OF CLAIMS	MAN FIELD DAYS	ALLOCATED DAYS	SAMPLES COLLECTED	% of PROJECT	ACCOMODATIONS	FOOD	VEHICLE	FUEL	FIELD EQUIPMENT	ASSAYS	PERSONNEL	TOTAL
Wentworth East	9473	19	28	28	18	100.00	1002.72	1082.72	1400.00	548.25	3665.00	866.70	11800.00	20365.39
General Project Days			5											
		19	33	28	18	100	1002.72	1082.72	1400.00	548.25	3665.00	866.70	11800.00	\$20,365.39



**APPENDIX II: WENTWORTH EAST PROSPECTING**

**ROCK SAMPLE LOCATIONS, RADIOMETRIC READINGS AND  
DESCRIPTIONS**

Station	Sample_ID	Easting	Northing	CPS	K (%)	U (ppm)	Th (ppm)	Description
WW-MZ-001		464594	5051220	130	2.2	2.4	7.1	Dark grey-green, aphanitic basalt. Non-magnetic. Fracturing throughout outcrop trend at Az 280.
WW-MZ-002	113101	464594	5051251	125	1.4	0.3	13.8	Green, very fg-aphanitic vesicular basalt. Sub mm scale carbonate veinlets throughout. Very Trace Py, non-magnetic.
WW-MZ-003	113102	464551	5051208	250	4.3	5.7	26.3	Light grey-pink, rhyolite with an aphanitic matrix with mm scale feldspar phenocrysts. Moderate silicification, disseminated Py throughout, non-magnetic.
WW-MZ-004	113103	464381	5051167	260	3.9	3.6	30.6	Light grey-green, aphanitic rhyolite, strong silicification, disseminated Py, non-magnetic.
WW-MZ-005		464327	5051176	270	3.7	3.3	24.8	Grey-maroon intermediate volcanic with aphanitic matrix and pink mm scale feldspar phenocrysts. Mild silicification and non-magnetic.
WW-MZ-006		464110	5051111	90	1.2	1.7	8.2	Fg-aphanitic dark grey basalt. Magnetic and fresh looking (possible mafic dike). Fracturing Az 180/60.
WW-MZ-007		463736	5051041	100	1.1	0.7	4.3	Fg-aphanitic dark grey basalt. Magnetic, very factured and soft.
WW-MZ-008		463738	5051041	350	2.8	7.4	36.3	Light grey-pink, rhyolite with an aphanitic matrix with mm scale feldspar phenocrysts. Moderate silicification, non-magnetic.
WW-MZ-009		463743	5051041	320	3.5	8.8	33.6	Grey-maroon intermediate volcanic with aphanitic matrix and pink mm scale feldspar phenocrysts. Mild silicification and non-magnetic.
WW-MZ-010	113104	463028	5050754	350	3.5	4.7	40.7	Maroon in colour, aphanitic with lithic fragment, small blebs of sulphides (Py). Non-magnetic.
WW-MZ-011	113105	463069	5050763	520	4	11.8	50.5	Light grey-green, rock is composed of 75% lithic silicified fragments in a soft (dusty matrix). Possible volcanic breccia.
WW-MZ-012		463072	5050689	280	3.8	1.4	23.1	Fine grain, magnetic, maroon-grey basalt with pink feldspar phenocrysts.

Station	Sample_ID	Easting	Northing	CPS	K (%)	U (ppm)	Th (ppm)	Description
WW-MZ-013		463063	5050662	100	1.2	1.2	4.3	Dark grey fg, magnetic basalt with green chl alteration present. Minor veining (act-chl),
WW-MZ-014		463059	5050643	310	5	4.1	31.7	Maroon in colour, aphanitic with lithic fragment, non-magnetic.
WW-MZ-015		463043	5050610	130	2.5	1.4	6.5	Fg-aphanitic dark grey basalt. Magnetic and fresh looking.
WW-MZ-016		463620	5051036	470	4.2	8.3	49.6	Very fg maroon coloured basalt, with altered greenish colour plagioclase phenocrysts. Non-magnetic. Almost vertical strigraphy trending approximately Az 100.
WW-MZ-017	113106	463623	5050975	800	7.6	13.8	103.9	Meta-pelitic sediment wedge with cubic pyrite. Non-magnetic, located below what appears to be a trust fault.
WW-MZ-018	113107	463636	5050972	400	3.9	2.4	45.1	Light grey green intermediate volcanic or rhyolite. Mild silicification. Non-mag, disseminated Py throughout.
WW-MZ-019	113108	463634	5050957	480	7.2	10.3	47.1	Light grey very silicious rhyolite or greywacke. Rusty along exposed surfaces, disseminated Py throughout, non-mag.
WW-MZ-020	113109	463599	5050958	500	5.4	11.5	43.3	Very fg maroon coloured basalt, with very fg disseminated Py, non-magnetic.
WW-MZ-021		464638	5051079	320	4.5	7	20.4	Biotite-Feldspar gneiss, Fol Az 175
WW-MZ-022		464771	5050853	80	0.8	0.1	3	Dark grey-marron, fg, mild silicified basalt, fresh, massive texture.
WW-MZ-023		464708	5050945	260	4.5	3.8	19.6	Dark grey-green, rhyolite or silicified tuff with pink feldspar phenocrysts and rounded quartz eyes, massive texture, non-mag.
WW-MZ-024		464039	5051247	250	3.7	2.9	24.4	Light grey, rhyolite with pink feldspar phenocrysts, non-mag strong silicification.
WW-MZ-025	113110	464047	5051323	300	4.2	6.9	26.7	Light grey, rhyolite with pink feldspar phenocrysts, non-mag strong silicification, very fg cubic Py disseminated throughout.
WW-MZ-026		464026	5051413	200	2	4.4	17	Light grey with greenish tint, non-mag strong silicification.

Station	Sample_ID	Easting	Northing	CPS	K (%)	U (ppm)	Th (ppm)	Description
WW-MZ-027	113111	463939	5051725	270	4.4	1.9	20.4	Large outcrop on hill. Rock is white and very rusty, spherulites range from mm to cm scale. Silicification varies from strong to mild throughout the outcrop.
WW-MZ-028		463957	5051713	330	6.2	5.2	22.8	Light green, silica flooded volcanic tuff with clay alter feldspar phenocrysts.
WW-MZ-029		463901	5050977	320	3.7	5.5	33.2	Light maroon aphanitic rhyolite. Mild silicification, some zones have mm scale feldspar phenocrysts, non mag
WW-MZ-030	113112	463916	5050920	300	3.3	4.1	26.7	Grey-maroon rhyolite, strong silicification, non-magnetic trace Py blebs, rusty fractures.
WW-MZ-031	113113	463930	5050884	350	5.9	4.9	36.3	Grey-maroon rhyolite, strong silicification, non-magnetic trace Py blebs within rusty fractures (Az 15).
WW-MZ-032	113114	464001	5050672	250	4	3.2	20.7	Light grey-green fg silicified tuff or rhyolite with mm scale quartz eyes, disseminated Py along rusty fractures.
WW-MZ-033		465527	5050590	310	5	2.8	31.6	Light maroon aphanitic rhyolite. Mild silicification, mm scale feldspar phenocrysts and quartz eyes present, non mag.
WW-MZ-034		465515	5050602	170	2.5	2.8	6.2	Fg, basalt, minor chl alteration, very blocky fracturing, magnetic.
WW-MZ-035	113115	465431	5050696	100	2	1.8	2.9	Fg, basalt, moderate chl alteration, very blocky fracturing, magnetic, minor disseminated sulphide.
WW-MZ-036		463293	5051493	270	4.6	3.7	18.3	Light green, fg, rhyolite or silicified tuff. Quartz eyes throughout. Minor rust along fractures.
WW-MZ-037	113116	463179	5050991	300	3.4	4.9	28.3	Light green-maroon, fg, rhyolite or silicified tuff. Quartz eyes and disseminated Py throughout. Rust along fractures.

**APPENDIX III: ANALYTICAL METHODS AND PROCEDURES**

## **Sample Collection and Preparations Procedures**

### **Prospecting Rock Sampling Collection**

Rock samples were selected by the field geologist and prospectors from bedrock and removed using a hammer and chisel. The 1 to 3 lbs rock samples were placed in plastic bags along with a sample tag indicating a unique sample number. Each bag was tied with a vinyl cable tie. Samples were shipped to the ActLab sample preparation facility in Fredericton New Brunswick. Final pulps were shipped to ActLab Laboratory in Ancaster Ontario for chemical analysis.

### **Rock Sample Preparation**

All samples were submitted to ActLab Laboratories Ltd. and were prepared to the following specifications:

- 1) Receive samples; lay out on benches, check sample date, order & identification.
- 2) Leave in original plastic bags which are opened and dry in a 60° C drying room.
- 3) Crush each in a jaw crusher to crush to >85% passing -10 mesh.
- 4) Split immediately after crush to obtain 250g sample via rifle splitter.
- 5) Pulverize 250g split to 95% passing -150 mesh. Mill is cleaned with cleaner sand between every sample
- 6) Bag the reject with original sample tag & ActLab label
- 7) Make new pulp from another split of reject for every order over 20 samples. See Quality Control page in Certificate of Analysis (Appendix ...)
- 8) Analysis package used was Code 4E - Exploration - INAA, Total Digestion - ICP, Lithium Metaborate/Tetraborate Fusion – ICP

**APPENDIX IV: ANALYTICAL ICP/MS RESULTS TABLE**  
**PROSPECTING ROCK SAMPLES**

**Wentworth November 2011 Prospecting Assay Results Table**

Sample Number	WGS84_East	WGS84_North	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total
113101	464594	5051251	56.2	13.49	12.98	0.17	3.08	3.14	2.4	0.65	2.876	0.37	4.51	99.86
113102	464551	5051208	76.15	11.94	2.87	0.04	0.12	0.18	2.74	5.2	0.313	0.03	1.33	100.9
113103	464381	5051167	77.69	9.87	3.59	0.04	0.16	0.14	2.01	4.79	0.295	0.04	1.63	100.3
113104	463028	5050754	78.97	9.71	4.61	0.05	0.26	0.13	0.07	3.89	0.278	0.02	2.34	100.3
113105	463069	5050763	78.12	9.23	3.34	0.06	0.44	0.44	0.1	4.94	0.239	0.03	1.55	98.5
113106	463623	5050975	61.65	14.79	8.98	0.11	0.8	1.49	0.15	4.44	0.34	0.01	5.19	97.96
113107	463636	5050972	79.44	9.02	4.31	0.15	0.13	0.26	0.06	2.76	0.212	0.01	2.66	99
113108	463634	5050957	74.77	9.69	4.78	0.17	0.07	0.18	1.06	5.51	0.226	0.01	1.16	97.64
113109	463599	5050958	76.22	9.7	5.26	0.07	0.09	0.29	2.45	4.46	0.225	<0.01	0.64	99.41
113110	464047	5051323	77.31	9.63	3.3	0.03	0.1	0.1	1.06	5.35	0.284	0.01	1.63	98.81
113111	463939	5051725	77.47	12.07	2.27	0.03	0.29	0.16	1.27	4.81	0.215	0.03	2.27	100.9
113112	463916	5050920	79.05	8.93	4.13	0.04	0.06	0.07	0.09	4.9	0.203	<0.01	1.74	99.23
113113	463930	5050884	76.35	9.44	4.84	0.02	0.07	0.08	0.62	5.9	0.253	0.01	1.28	98.87
113114	464001	5050672	79.45	10.48	3.46	0.06	0.1	0.09	0.06	3.22	0.224	0.01	2.54	99.7
113115	465431	5050696	46.31	13.83	14.65	0.34	5.74	7.37	3.16	1.62	2.801	0.51	3.15	99.49
113116	463179	5050991	77.48	10.39	3.83	0.03	0.13	0.24	0.12	6.06	0.234	<0.01	1.76	100.3



### Wentworth November 2011 Prospecting Assay Results Table

Sample Number	WGS84_East	WGS84_North	Ba	Be	Bi	Br	Cd	Co	Cr	Cs	Cu	Hf	Hg	Ir	Mo	Ni	Pb	Rb	S	Sb	Se	Se	Sr
113101	464594	5051251	86	3	5	<1	<0.5	41	<1	3.8	12	5.3	<1	<5	<2	10	8	30	0.02	2.1	32.9	<3	73
113102	464551	5051208	549	3	<2	<1	<0.5	<1	16	2.7	4	14.8	<1	<5	11	<1	27	170	0.03	1.4	4.7	<3	56
113103	464381	5051167	42	3	<2	<1	<0.5	<1	12	1.9	5	28.6	<1	<5	5	1	64	170	0.3	1.6	1.4	<3	24
113104	463028	5050754	107	4	<2	<1	<0.5	3	<1	8.2	17	36.9	<1	<5	7	6	178	210	0.36	3.7	1.9	14	14
113105	463069	5050763	246	3	<2	<1	<0.5	3	18	5.1	5	29.9	<1	<5	3	3	70	230	0.01	1.4	1.8	4	46
113106	463623	5050975	51	11	<2	<1	<0.5	<1	22	33.8	9	99.2	<1	<5	3	<1	80	270	2.81	3.2	1.1	48	20
113107	463636	5050972	22	7	<2	<1	1.1	1	<1	9.7	15	61.8	<1	<5	4	<1	37	180	0.75	3.6	0.7	26	11
113108	463634	5050957	57	7	<2	<1	<0.5	3	26	2.5	4	63.4	<1	<5	<2	1	35	240	0.07	0.7	0.7	22	29
113109	463599	5050958	35	13	<2	<1	0.7	<1	33	2.2	9	63.3	<1	<5	3	2	43	210	0.06	0.7	0.8	37	24
113110	464047	5051323	56	4	<2	<1	0.6	3	16	4.1	10	31	<1	<5	<2	1	51	200	0.2	1	0.8	16	30
113111	463939	5051725	431	4	<2	<1	<0.5	3	<1	8.4	3	14.8	<1	<5	4	<1	55	170	0.03	1.9	4.8	5	53
113112	463916	5050920	53	4	<2	<1	<0.5	<1	<1	6	5	57	<1	<5	<2	2	19	250	0.31	2.7	0.7	25	18
113113	463930	5050884	68	6	<2	<1	<0.5	<1	<1	4.6	8	71	<1	<5	<2	<1	35	310	0.01	2.8	1	25	20
113114	464001	5050672	15	5	<2	<1	<0.5	3	18	13.9	6	31.1	<1	<5	4	<1	240	160	0.28	2.1	1	22	7
113115	465431	5050696	717	1	6	<1	0.8	50	134	5.5	68	6.4	<1	<5	<2	57	18	110	0.08	1.7	40.7	<3	373
113116	463179	5050991	60	5	<2	<1	<0.5	1	15	7.8	8	32.3	<1	<5	2	2	33	220	0.45	0.8	1	<3	30

### Wentworth November 2011 Prospecting Assay Results Table

Sample Number	WGS84_East	WGS84_North	Ta	Th	U	V	W	Y	Zn	Zr	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	Au	Ag	As
113101	464594	5051251	<1	4.7	2.7	355	48	36	121	226	31.2	75	25	9.4	2.6	1.1	4.9	0.49	1.422	<5	<0.5	174
113102	464551	5051208	1	15.1	4.5	8	18	66	73	478	62.9	125	63	13.2	1.5	1.5	10.4	1.49	1.767	<5	0.9	103
113103	464381	5051167	4	16.2	3.6	12	10	121	61	1173	86.6	188	90	18.2	1.8	2.6	17.5	2.56	1.695	<5	3.5	152
113104	463028	5050754	5	24.4	5.3	24	10	161	224	1460	90	200	107	17.4	2.1	3.7	22.5	3.32	1.696	12	3	104
113105	463069	5050763	4	33.3	11.5	18	<3	148	103	1106	88.8	244	95	19.6	1.6	3.6	22.1	3.19	1.555	<5	2.8	82
113106	463623	5050975	12	39.2	4.5	21	7	402	254	3997	269	680	390	55.4	5.2	11.1	55.8	7.97	1.349	<5	2.4	18
113107	463636	5050972	8	22.1	3.3	10	<3	352	343	2679	145	337	230	35.5	3.2	7.8	43.6	6.1	1.686	<5	6.6	77
113108	463634	5050957	7	17.7	6.3	<5	<3	317	144	2654	184	382	258	40.6	3.4	7.5	43.7	6.08	1.681	<5	5.3	5
113109	463599	5050958	8	22.3	7.9	<5	<3	318	333	2643	173	400	238	42.9	3.3	7.7	42.9	5.96	1.591	<5	5.1	7
113110	464047	5051323	4	16.2	4	9	<3	123	90	1275	97.8	206	73	13.3	1.4	2.2	19.9	2.89	1.591	<5	3.7	45
113111	463939	5051725	3	12.1	4.4	11	4	66	65	415	64.1	136	51	8.9	1.2	1.5	10.5	1.67	1.253	<5	0.9	25
113112	463916	5050920	7	22.8	4.5	5	7	265	109	2434	82.7	223	119	17.5	1	5.6	38.1	5.25	1.673	<5	4.3	22
113113	463930	5050884	10	29.1	5.6	9	11	338	121	3006	84.6	224	136	22	1.7	6.7	47.9	6.58	1.596	<5	5.2	11
113114	464001	5050672	4	19.2	4.2	<5	<3	129	178	1208	106	235	140	14.6	<0.1	3.6	18.2	2.8	1.386	<5	1.7	17
113115	465431	5050696	<1	1.3	<0.5	370	<3	36	169	227	23.1	53	32	9.1	2.8	0.7	4.6	0.38	1.617	<5	<0.5	10
113116	463179	5050991	6	19.6	4.5	13	<3	150	127	1349	110	220	143	16.5	1.4	3.4	22.5	3.25	1.53	<5	3.3	7

**APPENDIX V: ANALYTICAL CERTIFICATES**

**PROSPECTING ROCK SAMPLES**



Date Submitted: 25-Nov-11  
Invoice No.: A11-14047  
Invoice Date: 23-Dec-11  
Your Reference: Wentworth

Capella Resources  
108F Trider Cres.  
Dartmouth NS B3B 1R6  
Canada

ATTN: Mr. Neil Downey

CERTIFICATE OF ANALYSIS

22 Rock samples were submitted for analysis.

The following analytical package was requested: Code 4E-Expl (11+) INAA(INAAGEO)/Major Elements Fusion ICP(WRA)/Total Digestion ICP(TOTAL)

REPORT A11-14047

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.

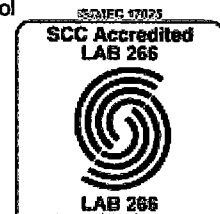
Notes:

Total includes all elements in % oxide to the left of total. Values above the upper limit should be assayed for most accurate values.

CERTIFIED BY :

Emmanuel Esemé , Ph.D.

Quality Control



ACTIVATION LABORATORIES LTD.

1336 Sandhill Drive, Ancaster, Ontario Canada L9G 4V5 TELEPHONE +1.905.648.9611 or +1.888.228.5227 FAX +1.905.648.9613  
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Activation Laboratories Ltd. Report: A11-14047

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Au	Ag	As	Ba	Be	Bi	Br	Cd	Co	Cr	Ce	Cu
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.005	0.01		0.01	5	0.5	2	3	1	2	1	0.5	1	1	0.5	1
Analyte Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	INAA	MULT INAA / TD- ICP	INAA	MULT INAA/FUSI CP	FUS-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	TD-ICP
113101	58.20	13.48	12.88	0.17	3.08	3.14	2.40	0.85	2.878	0.37	4.51	89.86	< 5	< 0.5	174	88	3	6	< 1	< 0.5	41	< 1	3.8	12
113102	78.15	11.94	2.87	0.04	0.12	0.18	2.74	5.20	0.313	0.03	1.33	100.9	< 5	0.9	103	548	3	< 2	< 1	< 0.5	< 1	18	2.7	4
113103	77.89	9.87	3.59	0.04	0.16	0.14	2.01	4.79	0.285	0.04	1.63	100.3	< 5	3.5	152	42	3	< 2	< 1	< 0.5	< 1	12	1.9	5
113104	78.97	8.71	4.81	0.05	0.28	0.13	0.07	3.89	0.278	0.02	2.34	100.3	12	3.0	104	107	4	< 2	< 1	< 0.5	3	< 1	8.2	17
113105	78.12	9.23	3.34	0.06	0.44	0.44	0.10	4.94	0.239	0.03	1.55	88.50	< 5	2.8	82	248	3	< 2	< 1	< 0.5	3	18	5.1	5
113108	81.65	14.79	8.88	0.11	0.80	1.49	0.15	4.44	0.340	0.01	5.19	87.98	< 5	2.4	18	51	11	< 2	< 1	< 0.5	< 1	22	33.8	8
113107	79.44	9.02	4.31	0.16	0.13	0.28	0.08	2.78	0.212	0.01	2.89	99.00	< 5	6.8	77	22	7	< 2	< 1	1.1	1	< 1	9.7	15
113108	74.77	9.69	4.78	0.17	0.07	0.18	1.08	6.51	0.228	0.01	1.18	87.84	< 5	5.3	5	57	7	< 2	< 1	< 0.5	3	28	2.5	4
113109	78.22	9.70	5.28	0.07	0.09	0.29	2.45	4.48	0.225	< 0.01	0.84	89.41	< 5	5.1	7	35	13	< 2	< 1	0.7	< 1	33	2.2	8
113110	77.31	9.63	3.30	0.03	0.10	0.10	1.08	5.35	0.284	0.01	1.63	88.81	< 5	3.7	45	58	4	< 2	< 1	0.8	3	16	4.1	10
113111	77.47	12.07	2.27	0.03	0.29	0.16	1.27	4.81	0.215	0.03	2.27	100.9	< 5	0.9	25	431	4	< 2	< 1	< 0.5	3	< 1	8.4	3
113112	79.05	8.63	4.13	0.04	0.06	0.07	0.09	4.80	0.203	< 0.01	1.74	89.23	< 5	4.3	22	53	4	< 2	< 1	< 0.5	< 1	< 1	6.0	5
113113	78.35	9.44	4.84	0.02	0.07	0.08	0.82	5.90	0.253	0.01	1.28	88.87	< 5	5.2	11	89	6	< 2	< 1	< 0.5	< 1	< 1	4.6	8
113114	79.45	10.48	3.46	0.06	0.10	0.09	0.08	3.22	0.224	0.01	2.54	89.70	< 5	1.7	17	15	5	< 2	< 1	< 0.5	3	18	13.8	8
113115	48.31	13.83	14.85	0.34	5.74	7.37	3.16	1.62	2.801	0.51	3.15	89.49	< 5	< 0.5	10	717	1	6	< 1	0.8	50	134	5.5	88
113116	77.48	10.39	3.83	0.03	0.13	0.24	0.12	6.08	0.234	< 0.01	1.78	100.3	< 5	3.3	7	80	5	< 2	< 1	< 0.5	1	15	7.8	8
113117	48.10	16.28	10.85	0.22	5.08	7.82	3.42	1.80	1.933	0.27	2.85	88.75	< 5	< 0.5	4	433	1	< 2	< 1	0.6	39	153	3.9	58
113118	75.80	9.85	2.83	0.02	0.25	0.23	0.63	7.01	0.443	0.07	1.25	88.39	< 5	0.7	73	357	2	< 2	< 1	< 0.5	1	21	4.1	8
113119	74.03	12.41	2.10	0.03	0.18	0.51	3.57	5.38	0.208	0.03	0.81	89.23	< 5	< 0.5	3	119	6	< 2	< 1	< 0.5	3	13	4.1	3
113120	77.85	10.51	1.48	0.03	0.30	0.35	0.97	7.48	0.051	0.02	0.87	89.81	< 5	< 0.5	6	185	2	< 2	< 1	< 0.5	1	11	3.1	5
113121	84.21	8.85	1.00	0.01	0.11	0.04	0.08	2.88	0.088	< 0.01	1.73	88.87	< 5	< 0.5	22	34	3	< 2	< 1	< 0.5	< 1	10	2.5	3
113122	45.07	14.27	14.48	0.22	6.15	8.79	2.85	0.88	2.838	0.38	2.88	88.33	< 5	< 0.5	8	185	< 1	< 2	< 1	0.7	53	118	7.3	72

Activation Laboratories Ltd. Report: A11-14047

Analyte Symbol	Hf	Hg	Ir	Mo	Ni	Pb	Rb	S	Sb	Sc	Sr	Ta	Th	U	V	W	Y	Zn	Zr	La	Ce	Nd	Sm	
Unit Symbol	ppm	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Detection Limit	0.5	1	5	2	1	5	20	0.001	0.2	0.1	3	2	1	0.5	0.5	5	3	1	1	2	0.2	3	5	0.1
Analysis Method	INAA	INAA	INAA	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	FUS-ICP	INAA	INAA	INAA	FUS-ICP	INAA	FUS-ICP	TD-ICP	FUS-ICP	INAA	INAA	INAA	INAA
113101	5.3	< 1	< 5	< 2	10	8	30	0.021	2.1	32.9	< 3	73	< 1	4.7	2.7	355	48	38	121	228	31.2	75	25	9.4
113102	14.8	< 1	< 5	11	< 1	27	170	0.032	1.4	4.7	< 3	58	1	15.1	4.5	8	18	68	73	478	62.9	125	63	13.2
113103	28.8	< 1	< 5	5	1	64	170	0.303	1.6	1.4	< 3	24	4	16.2	3.6	12	10	121	81	1173	86.6	186	80	18.2
113104	36.9	< 1	< 5	7	6	178	210	0.363	3.7	1.9	14	14	5	24.4	5.3	24	10	161	224	1480	90.0	200	107	17.4
113105	29.9	< 1	< 5	3	3	70	230	0.008	1.4	1.8	4	48	4	33.3	11.5	18	< 3	148	103	1106	88.8	244	95	19.6
113106	99.2	< 1	< 5	3	< 1	80	270	2.81	3.2	1.1	48	20	12	39.2	4.5	21	7	402	254	3997	269	680	390	55.4
113107	81.8	< 1	< 5	4	< 1	37	180	0.749	3.8	0.7	28	11	8	22.1	3.3	10	< 3	352	343	2678	145	337	230	35.5
113108	63.4	< 1	< 5	< 2	1	35	240	0.070	0.7	0.7	22	29	7	17.7	6.3	< 5	< 3	317	144	2654	164	382	258	40.6
113109	83.3	< 1	< 5	3	2	43	210	0.055	0.7	0.8	37	24	8	22.3	7.9	< 5	< 3	318	333	2943	173	400	238	42.9
113110	31.0	< 1	< 5	< 2	1	51	200	0.185	1.0	0.8	16	30	4	16.2	4.0	9	< 3	123	80	1276	97.8	208	73	13.3
113111	14.8	< 1	< 5	4	< 1	55	170	0.026	1.9	4.8	5	53	3	12.1	4.4	11	4	68	85	415	64.1	138	51	8.9
113112	57.0	< 1	< 5	< 2	2	19	260	0.309	2.7	0.7	25	18	7	22.8	4.5	5	7	285	109	2434	82.7	223	119	17.5
113113	71.0	< 1	< 5	< 2	< 1	35	310	0.012	2.8	1.0	25	20	10	29.1	5.8	9	11	338	121	3006	84.8	224	136	22.0
113114	31.1	< 1	< 5	4	< 1	240	160	0.278	2.1	1.0	22	7	4	19.2	4.2	< 5	< 3	129	178	1208	106	235	140	14.8
113115	6.4	< 1	< 5	< 2	57	18	110	0.076	1.7	40.7	< 3	373	< 1	1.3	< 0.5	370	< 3	38	169	227	23.1	53	32	9.1
113116	32.3	< 1	< 5	2	2	33	220	0.447	0.8	1.0	< 3	30	6	19.6	4.5	13	< 3	150	127	1349	110	220	143	16.5
113117	3.4	< 1	< 5	< 2	40	38	80	0.079	0.4	33.3	< 3	217	< 1	1.5	< 0.5	268	< 3	24	204	129	15.5	38	18	6.0
113118	14.3	< 1	< 5	21	4	100	210	0.162	2.9	3.8	< 3	44	3	10.9	3.1	42	6	56	54	637	47.5	89	43	6.9
113119	9.2	< 1	< 5	< 2	2	25	210	0.006	< 0.2	2.7	< 3	26	4	23.6	6.7	11	< 3	43	44	241	45.5	113	42	8.4
113120	7.4	< 1	< 5	5	1	10	220	0.010	0.8	2.1	< 3	53	1	14.7	2.9	12	< 3	42	47	166	44.9	106	39	6.7
113121	6.4	< 1	< 5	12	< 1	12	100	0.029	1.0	1.1	< 3	7	1	11.6	5.2	9	< 3	21	20	134	12.2	31	17	2.5
113122	5.2	< 1	< 5	< 2	61	12	60	0.135	0.4	39.8	< 3	323	< 1	0.8	< 0.5	359	< 3	30	142	177	17.4	42	20	7.2

Analyte Symbol	Eu	Tb	Yb	Lu	Mass
Unit Symbol	ppm	ppm	ppm	ppm	g
Detection Limit	0.1	0.5	0.1	0.05	
Analysis Method	INAA	INAA	INAA	INAA	INAA
113101	2.6	1.1	4.8	0.49	1.422
113102	1.6	1.5	10.4	1.49	1.767
113103	1.8	2.6	17.5	2.56	1.895
113104	2.1	3.7	22.5	3.32	1.698
113105	1.6	3.6	22.1	3.19	1.555
113106	5.2	11.1	55.8	7.97	1.348
113107	3.2	7.8	43.6	6.10	1.666
113108	3.4	7.5	43.7	6.08	1.681
113109	3.3	7.7	42.9	5.86	1.591
113110	1.4	2.2	19.9	2.89	1.591
113111	1.2	1.6	10.5	1.67	1.253
113112	1.0	5.8	38.1	5.25	1.673
113113	1.7	6.7	47.9	6.68	1.596
113114	< 0.1	3.6	18.2	2.60	1.386
113115	2.6	0.7	4.6	0.38	1.617
113116	1.4	3.4	22.5	3.25	1.630
113117	2.1	< 0.5	3.2	0.14	1.806
113118	0.8	1.1	8.8	1.25	1.689
113119	< 0.1	1.1	7.0	1.05	1.446
113120	< 0.1	1.1	6.7	0.97	1.688
113121	< 0.1	< 0.5	4.2	0.59	1.366
113122	2.7	< 0.5	3.9	0.25	1.696

Activation Laboratories Ltd. Report: A11-14047

Quality Control

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Au	Ag	As	Ba	Ba	Be	Bi	Cd	Co	Cr	Cu	Mo	
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.005	0.01		0.01	5	0.5	2	2	50	1	2	0.5	1	1	1	2	
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	INAA	TD-ICP	INAA	FUS-ICP	INAA	FUS-ICP	TD-ICP	TD-ICP	INAA	INAA	TD-ICP	TD-ICP	
GXR-1 Meas														32.8					1440	3.1			1220	18	
GXR-1 Cert														31.0					1380	3.30			1110	18.0	
GXR-1 Meas														33.2					1450	3.8			1230	18	
GXR-1 Cert														31.0					1380	3.30			1110	18.0	
NIST 894 Meas	11.42	1.83	0.78	0.01	0.35	43.29	0.88	0.68	0.119	30.25															
NIST 894 Cert	11.2	1.80	0.790	0.0118	0.330	43.8	0.880	0.510	0.110	30.2															
DNC-1 Meas	47.10	18.58	8.94	0.16	10.04	11.38	1.90	0.23	0.485	0.07						108									
DNC-1 Cert	47.15	18.34	8.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070						118									
GBW 07113 Meas	72.37	12.82	3.28	0.14	0.14	0.58	2.43	5.41	0.283	0.05						498		4							
GBW 07113 Cert	72.8	13.0	3.21	0.140	0.180	0.580	2.57	5.43	0.300	0.0500						508		4.00							
GXR-4 Meas														3.4					12	< 0.5			8180	305	
GXR-4 Cert														4.00					19.0	0.860			8520	310	
GXR-4 Meas														4.4					16	< 0.5			6910	333	
GXR-4 Cert														4.00					19.0	0.880			8520	310	
SDC-1 Meas														< 0.5					< 2	< 0.5			30	< 2	
SDC-1 Cert														0.0410					2.60	0.0800			30.00	0.250	
SDC-1 Meas														< 0.5					< 2	< 0.5			30	< 2	
SDC-1 Cert														0.0410					2.60	0.0800			30.00	0.250	
SCO-1 Meas														< 0.5					< 2	< 0.5			27	< 2	
SCO-1 Cert														0.134					0.37	0.140			29	1.4	
SCO-1 Meas														< 0.5					< 2	< 0.5			29	< 2	
SCO-1 Cert														0.134					0.37	0.140			29	1.4	
GXR-8 Meas														< 0.5					< 2	< 0.5			89	< 2	
GXR-8 Cert														1.30					0.290	1.00			88.0	2.40	
GXR-8 Meas														< 0.5					< 2	< 0.5			73	< 2	
GXR-8 Cert														1.30					0.290	1.00			88.0	2.40	
W-2a Meas	52.59	15.41	10.78	0.17	6.34	10.97	2.23	0.83	1.090	0.13							176								
W-2a Cert	52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.828	1.08	0.130							182			1.30					
SY-4 Meas	49.60	20.72	6.48	0.11	0.51	8.00	8.98	1.68	0.288	0.13							347								
SY-4 Cert	49.8	20.89	8.21	0.108	0.54	8.05	7.10	1.68	0.287	0.131							340								
BIR-1a Meas	47.46	15.72	11.25	0.17	8.48	13.37	1.78	0.02	0.982	0.02							8								
BIR-1a Cert	47.89	15.50	11.30	0.175	8.700	13.30	1.82	0.030	0.98	0.021							8								
DNC-1a Meas																								97	
DNC-1a Cert																								100	
DNC-1a Meas																								89	
DNC-1a Cert																								100	
DMMAS 114 Meas													1970		1800		1530				41	97			
DMMAS 114 Cert													2198		1624		1581				42	84			
113111 Orig														0.9						< 2	< 0.5			3	4
113111 Dup														0.9						< 2	< 0.5			2	4
113115 Orig	45.88	13.78	14.57	0.34	5.71	7.35	3.11	1.80	2.811	0.51	3.15	88.80				709									
113115 Dup	48.74	13.89	14.74	0.34	5.78	7.38	3.21	1.84	2.792	0.51	3.15	100.2				725									
Method Blank														< 0.5						< 2	< 0.5			< 1	< 2
Method Blank														< 0.5						< 2	< 0.5			< 1	< 2
Method Blank														< 0.5						< 2	< 0.5			< 1	< 2



Quality Control															
Analyte Symbol	Ni	Pb	S	Sb	Sc	Sr	U	V	Y	Zn	Zr	La	Ce	Sm	
Unit Symbol	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Detection Limit	1	5	0.001	0.2	0.1	2	0.5	5	1	1	2	0.2	3	0.1	
Analysis Method	TD-ICP	TD-ICP	TD-ICP	INAA	INAA	FUS-ICP	INAA	FUS-ICP	FUS-ICP	TD-ICP	FUS-ICP	INAA	INAA	INAA	
GXR-1 Meas	44	828	0.285							833					
GXR-1 Cert	41.0	730	0.257							780					
GXR-1 Meas	45	858	0.275							887					
GXR-1 Cert	41.0	730	0.257							780					
NIST 884 Meas								1888							
NIST 884 Cert								1740							
DNC-1 Meas						144		157	18		34				
DNC-1 Cert						144.0		148.0	18.0		38				
GBW 07113 Meas						41		5	48		388				
GBW 07113 Cert						43.0		5.00	43.0		403				
GXR-4 Meas	37	43	1.73							72					
GXR-4 Cert	42.0	52.0	1.77							73.0					
GXR-4 Meas	45	52	1.91							80					
GXR-4 Cert	42.0	52.0	1.77							73.0					
SDC-1 Meas	35	22	0.084							109					
SDC-1 Cert	38.0	25.00	0.0850							103.00					
SDC-1 Meas	38	25	0.071							112					
SDC-1 Cert	38.0	25.00	0.0850							103.00					
SCO-1 Meas	28	29	0.073							105					
SCO-1 Cert	27	31.0	0.0830							100					
SCO-1 Meas	29	28	0.080							109					
SCO-1 Cert	27	31.0	0.0830							100					
GXR-8 Meas	27	102	0.017							147					
GXR-8 Cert	27.0	101	0.0180							118					
GXR-8 Meas	28	108	0.022							150					
GXR-8 Cert	27.0	101	0.0180							118					
W-2a Meas						194		280	20		90				
W-2a Cert						190		282	24.0		94.0				
SY-4 Meas						1204		10	121		529				
SY-4 Cert						1191		8.0	118		517				
BIR-1a Meas						107		335	14		15				
BIR-1a Cert						110		310	18		18				
DNC-1a Meas	262									87					
DNC-1a Cert	247									70.0					
DNC-1a Meas	258									84					
DNC-1a Cert	247									70.0					
DMMAS 114 Meas				12.0	7.4		18.8					17.4	33	2.7	
DMMAS 114 Cert				11.2	6.5		17.4					16.1	23.7	2.4	
113111 Orig	< 1	58	0.027							87					
113111 Dup	1	55	0.024							82					
113115 Orig						368		368	38		227				
113115 Dup						377		372	38		228				
Method Blank	< 1	< 5	< 0.001							< 1					
Method Blank	< 1	< 5	0.001							< 1					
Method Blank	< 1	< 5	0.001							< 1					

### Code 4E-exploration

#### INAA Portion

A 1 g aliquot is encapsulated in a polyethylene vial and irradiated with flux wires and an internal standard (1 for 11 samples) at a thermal neutron flux of  $7 \times 10^{12} \text{ n cm}^{-2} \text{ s}^{-1}$ . 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. The standard present is only a check on accuracy and is not used for calibration purposes. From 10-30% of the samples are rechecked by re-measurement. For values exceeding the upper limits, assays are recommended.

One standard is run for every 11 samples. One blank is analyzed per work order. Duplicates are analyzed when samples are provided.

The method is described by Hoffman, E.L., 1992. Instrumental Neutron Activation in Geoanalysis. Journal of Geochemical Exploration, volume 44, pp. 297-319.

#### Total Digestion ICP Portion

A 0.25 g sample aliquot is digested with HClO<sub>4</sub>-HNO<sub>3</sub>-HCl-HF at 200°C to fuming and is then diluted with aqua regia. This leach is partial for magnetite, chromite, barite and other spinels and potentially massive sulphides.

#### Major Elements by Fusion ICP/OES, Trace Elements by ICP/MS

Samples are prepared and analyzed in a batch system. Each batch contains a method reagent blank, certified reference material, and 17% replicates. Samples are mixed with a flux of lithium metaborate and lithium tetraborate and fused in an induction furnace. The molten melt is immediately poured into a solution of 5% nitric acid containing an internal standard, and mixed continuously until completely dissolved (~30 minutes). The samples are then run for major oxides and selected trace elements (Code 4B) on a combination simultaneous/sequential Thermo Jarrell-Ash ENVIRO II ICP.

For the ICP analysis, reagent blanks with and without the lithium borate flux are analyzed, as well as the method reagent blank. Interference correction verification standards are analyzed. Calibration is performed using multiple USGS and CANMET certified reference materials. Two of the standards are used during the analysis for every group of ten samples. This standard brackets the group of samples. The sample solution is also spiked with internal standards and is further diluted and introduced into a Perkin Elmer SCIEX ELAN 6000 ICP/MS using a proprietary sample introduction methodology. Calibration is performed using USGS and CANMET certified reference materials.

#### Code 4E-exploration Fusion ICP

Oxide	Detection Limit
SiO <sub>2</sub>	0.01%
Al <sub>2</sub> O <sub>3</sub>	0.01%
Fe <sub>2</sub> O <sub>3</sub>	0.01%
MgO	0.01%
MnO	0.01%
CaO	0.01%
TiO <sub>2</sub>	0.005%
Na <sub>2</sub> O	0.01%
K <sub>2</sub> O	0.01%
P <sub>2</sub> O <sub>5</sub>	0.01%
Loss on Ignition	0.01%

**Code 4E-exploration Trace Elements and Detection Limits (ppm)**

Element	Detection Limit	Upper Limit	Reported By
Ag	0.5	100,000	
As	2	-	INAA
Au	5 ppb	30,000 ppb	INAA
Ba	3	30,000	
Be	1	10,000	
Bi	2	10,000	
Br	1	-	INAA
Cd	0.5	5,000	
Ce	3	10,000	INAA
Co	1	10,000	INAA
Cr	2	100,000	INAA
Cs	0.5		INAA
Cu	1	10,000	
Eu	0.1	-	INAA
Hf	0.5		INAA
Hg	1	-	
Ir	5 ppb	-	INAA
La	0.2	10,000	INAA
Lu	0.05	-	INAA
Mo	2	10,000	

Element	Detection Limit	Upper Limit	Reported By
Nd	5	10,000	INAA
Ni	1	10,000	
Pb	5	5,000	
Rb	20	-	INAA
S	0.001%	20%	
Sb	0.2	10,000	INAA
Sc	0.1	-	INAA
Se	3	-	INAA
Sm	0.1	10,000	INAA
Sr	2	-	
Ta	1	10,000	INAA
Tb	0.5	-	INAA
Th	0.5	10,000	INAA
U	0.5	10,000	INAA
V	5	-	
W	3	10,000	INAA
Y	1	10,000	
Yb	0.1	-	INAA
Zn	1	10,000	
Zr	2	-	

**Typical ICP Analysis of some USGS and Canmet Standards (%)**

Std.	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	MnO	MgO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	TiO <sub>2</sub>	P <sub>2</sub> O <sub>5</sub>
SY3	59.51	11.62	6.47	0.32	2.54	8.25	4.17	4.23	0.14	0.52
MRG1	39.43	8.59	17.93	0.17	13.74	14.77	0.73	0.18	3.78	0.07
DNC1	46.91	18.46	9.76	0.15	10.05	11.27	1.99	0.24	0.47	0.07
BIR1	47.78	15.43	11.52	0.17	9.70	13.75	1.86	0.02	0.95	0.02
W2	52.58	15.35	10.72	0.16	6.37	10.98	2.31	0.64	1.05	0.12
G2	68.72	14.95	2.65	0.03	0.71	1.87	4.08	4.48	0.48	0.13
STM1	59.64	18.07	5.24	0.22	0.07	1.09	8.87	4.24	0.13	0.1

**Code 4E-exploration Options**

**4E-XRF**

The trace elements analyses are done on pressed powder pellets made from 6 g of sample. Spectral interferences are corrected from pre-calculated interfering factors. Because of the trace level (< 1,000 ppm) of the analytes, only the mass absorptions are corrected for matrix effects. The mass absorption coefficients are derived from measuring the Compton scatter of the Rh-tube (e.g., Nisbet et al., 1979. Fortschr. Miner., volume 57, pp. 264-279). The background and mass absorption corrected intensities are then calculated against the calibrations constructed from 24 international geological reference materials. In general, the limits of detection are between 1 to 5 ppm.

**Option 4E-XRF Elements and Detection Limits (ppm)**

Element	Detection Limit	Upper Limit
Ga	5	10,000
Pb	5	1,000
Sn	5	10,000
Nb	1	10,000
Rb	2	20,000

**Form 10 - Statement of Assessment Work Expenditure**  
(pursuant to the *Mineral Resources Act*, S.N.S. 1990, c. 18, s. 43(1))

FINAL REVISED 30 JANUARY 2011

(Complete as necessary to substantiate the total claimed.)

Re: Licence No. 9473 Date of issue November 30th, 2010

R

Type of Work		Amount Spent
1.	Prospecting	28 days 15833.69
2.	Geological mapping	_____ days
3.	Trenching/stripping/refilling	_____ m <sup>2</sup> / _____ m <sup>3</sup>
4.	Assaying & whole rock analysis	16 # 866.70
5.	Other laboratory	_____ #
6.	Grid:	
	(a) Line cutting	_____ km
	(b) Picket setting	_____ km
	(c) Flagging	_____ km
7.	Geophysical surveys	
	Airborne:	
	(a) EM/VLF	_____ km
	(b) Mag or Grad	_____ km
	(c) Radiometric	_____ km
	(d) Combination	_____ km
	(e) Other _____	_____ km
8.	Geophysical surveys	
	Ground:	
	(a) EM/VLF	_____ km
	(b) Seismic soundings	_____ #
	(c) Magnetic/telluric	_____ km
	(d) IP/resistivity	_____ km
	(e) Gravity	_____ km
	(f) Other _____	_____ km
9.	Geochemical surveys	
	(a) Lake, stream, spring	
	(i) Water	_____ samples
	(ii) Sediments	_____ samples
	(b) Rock	_____ samples
	(i) Core	_____ samples
	(ii) Chips	_____ samples
	(c) Soil	_____ samples
	(i) Overburden	_____ samples
	(d) Gas	_____ samples
	(e) Biogeochemistry	_____ samples
	(f) Sample collection	_____ days
	(g) Other _____	_____
10.	Drilling:	
	(a) Diamond (# holes/m)	_____ / _____ m
	(b) Percussion (# holes/m)	_____ / _____ m
	(c) Rotary (# holes/m)	_____ / _____ m
	(d) Auger (# holes/m)	_____ / _____ m
	(e) Reverse circulation (# holes/m)	_____ / _____ m
	(f) Logging, supervision, etc.	_____ days
	(g) Sealing (# holes)	_____ #
11.	Other (describe)	
	<b>Subtotal</b>	16700.39
<b>Overhead costs</b>		
12.	Secretarial services	
13.	Drafting services	
14.	Office expenses (rent, heat, light, etc.)	2036.53
15.	Field supplies	3665.00
16.	Compensation paid to landowners	
17.	Legal fees	
18.	Other (describe)	
	<b>Subtotal</b>	5701.53
	<b>Grand total</b>	22401.92

