

**A R 2 0 1 2 - 0 1 3**

*Matthew T. Zago  
Brian Cole P.Geo*

**Assessment Report**

**Licence 9474**

**Held By**

**Jim Michaelis**

**Colchester Co., Nova Scotia**

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

**Dartmouth, N.S.**

**DUPLICATE AVAILABLE**

## **Table of Contents**

	<b>Page</b>
1. Summary	1
2. Introduction	2
3. Geology	2
4. Property Description and Location	3
5. Licence Tabulation	5
6. Work Performed	5
7. Results	6
8. Conclusions and Recommendations	12
9. Statement of Qualifications	13
10. References	15

## **List of Tables**

	<b>Page</b>
1 Summarized Licence Tabulation	5
2 Personnel and Contractors Utilized – Prospecting Activity	5
3 Total REE (TREE) Prospecting Results Summary Table	6

## **List of Figures**

	<b>Page</b>
1 Property Location Map	3
2 Exploration Licences and Base Map	4
3 2011 Prospecting Station Locations	7
4 2011 Prospecting Rock Spectrometer Readings	8
5 2011 Prospecting Rocks Sample Locations	9
6 2011 Ce, Nd, Y Assay Results	10

### **List of Appendices**

- I: Expenditures Prospecting Program
- II: Wentworth Prospecting: Rock Sample Locations, Radiometric Readings and Descriptions
- III: Analytical Methods and Procedures
- IV: Analytical ICP/MS Results Table: Prospecting Rock Samples
- V: Analytical Certificates: Prospecting Rock Samples

## **1 SUMMARY**

This assessment report documents the work program completed during the 2011 assessment year with respect to exploration licence 9474 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 West claim block. Spectrometers were used as aids to uncovering areas with higher than background thorium as pathfinders to REE's. A total of 6 samples were sent in to ActLabs of Ancaster Ontario for ICP-MS multi-element analysis.

No significant anomalies were found during the prospecting program, however very little outcrop due to thick overburden hampered the prospecting program.

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 40 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 West 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 in the northern 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 40 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 prevailingly of the hardwood type.

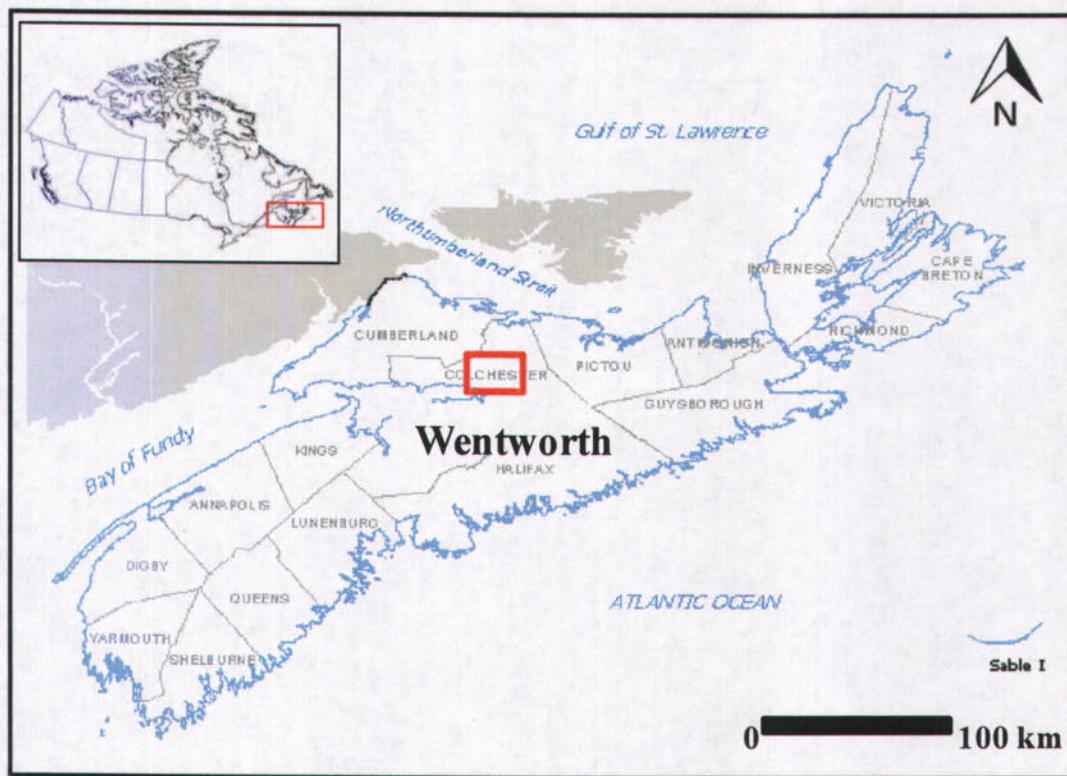


Figure 1: Property Location Map

## 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	9474	11E/11B	61	30/11/2011									X X				X X				4
Jim Michaelis	9474	11E/11B	84	30/11/2011			X X	X X	X X						X X						6
Jim Michaelis	9474	11E/12A	73	30/11/2011					X X	X X	X X	X X	X X	X X	X X	X X	X X				10
Jim Michaelis	9474	11E/12A	74	30/11/2011									X					X X X	X X	X X	4
Jim Michaelis	9474	11E/12A	95	30/11/2011	X X						X X	X X	X X	X X				X X	X X		8
Jim Michaelis	9474	11E/12A	96	30/11/2011			X X								X X						4
Jim Michaelis	9474	11E/12A	98	30/11/2011	X X					X X											4
<b>Total For Property</b>																					40

## 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 6 samples were collected from bedrock and boulders 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**

Name	Address	Involvement	Dates	# of days
Matthew Zago	Thunder Bay, Ontario	Geologist: Prospecting & Report Preparation	November, 2011	16
Eric Greene	Vancouver, British Columbia	Prospecting Geotechnical	November, 2011	13

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). Boulders with high radiometric readings were also investigated.

Prospecting Station Locations (Figure 3) and spectrometer readings (Figure 4) are displayed in map format. Prospecting sample locations (Figure 5), Ce, Nd, and Y assay results (Figure 6) and total rare earth element assay results (Figure 7) 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.

## 7 RESULTS

### 7.1 Prospecting Results

In general, mafic intrusives (gabbro) and extrusives (andesite/basalt) had radiometric readings between 55 and 150 cps. Felsic intrusives (pink granite) and extrusives (rhyolite and tuff) both had ranges from 200 to 600 cps. Thorium readings (ppm) for the felsic rocks ranged from 13 to 44 ppm.

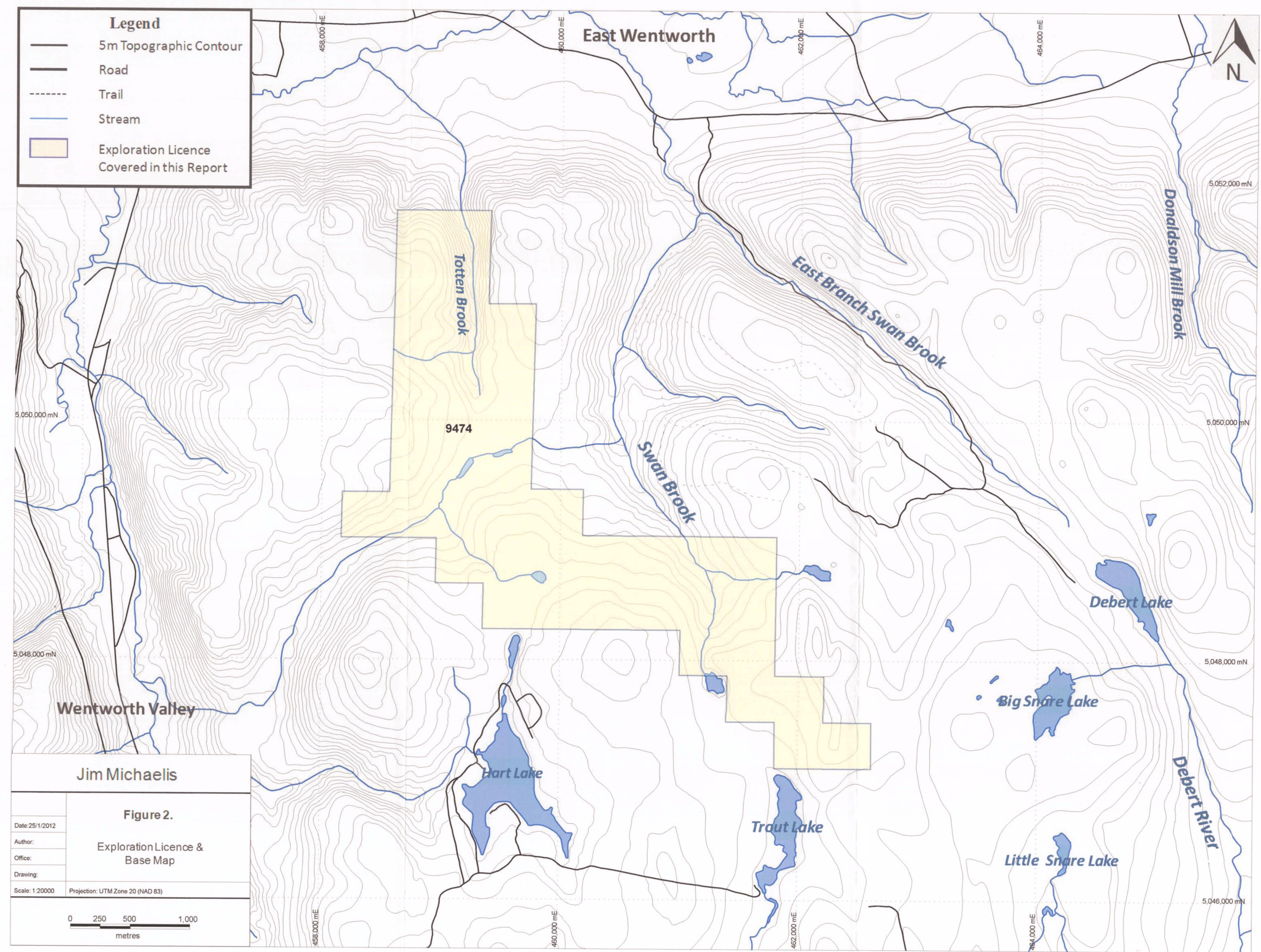
From prospecting no anomalous rare earth element values were found (Table 3), however thick overburden causing a lack of outcrop could have contributed to the negative results.

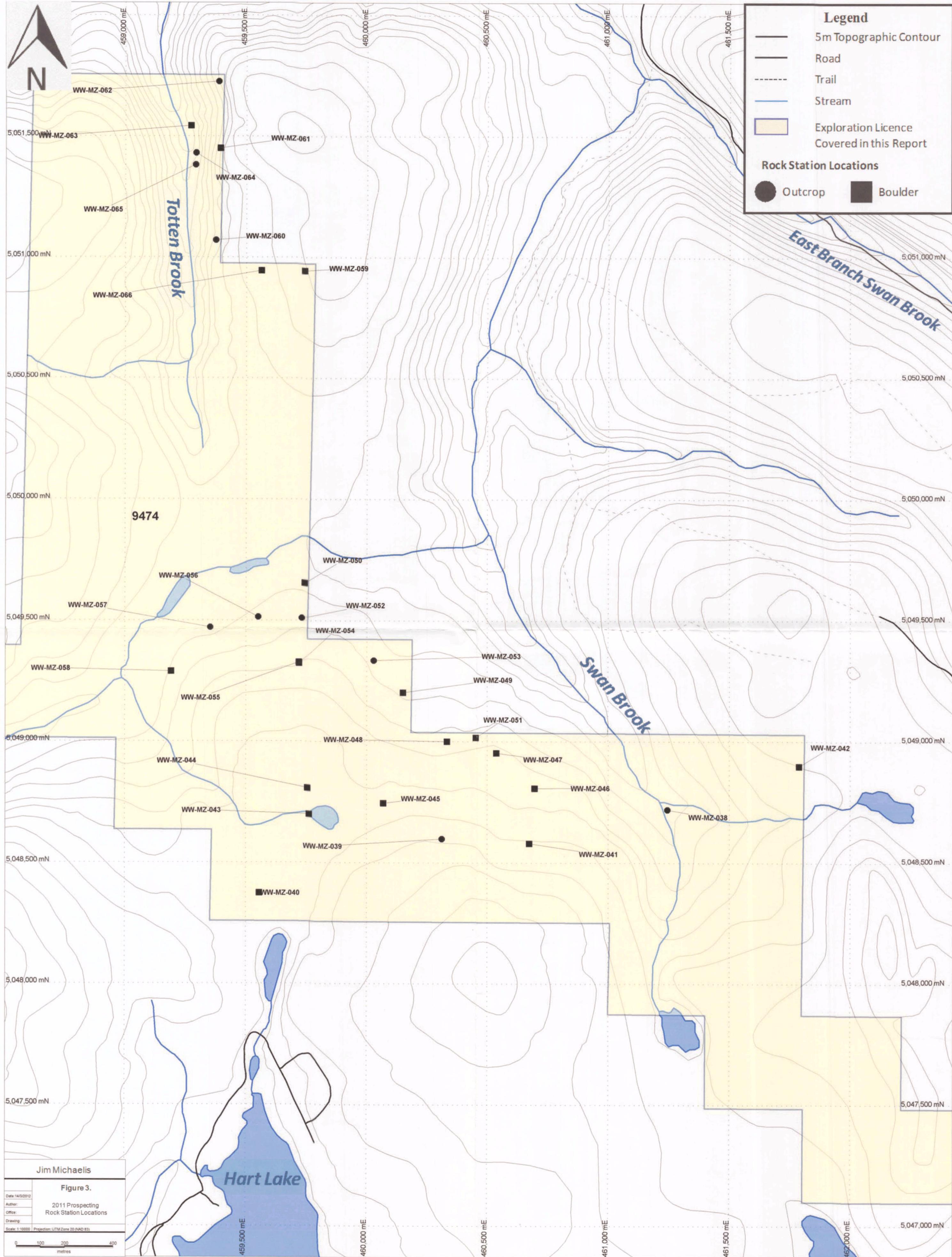
**Table 3. Total REE (TREE) Prospecting Results Summary**

Sample Number	Sc	Y	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	TREE
113117	33.3	24	16	38	18	6	2.1	< 0.5	3.2	0.14	140
113118	3.8	56	48	99	43	6.9	0.8	1.1	8.8	1.25	268
113119	2.7	43	46	113	42	8.4	< 0.1	1.1	7	1.05	264
113120	2.1	42	45	106	39	6.7	< 0.1	1.1	6.7	0.97	250
113121	1.1	21	12	31	17	2.5	< 0.1	< 0.5	4.2	0.59	90
113122	39.8	30	17	42	20	7.2	2.7	< 0.5	3.9	0.25	163

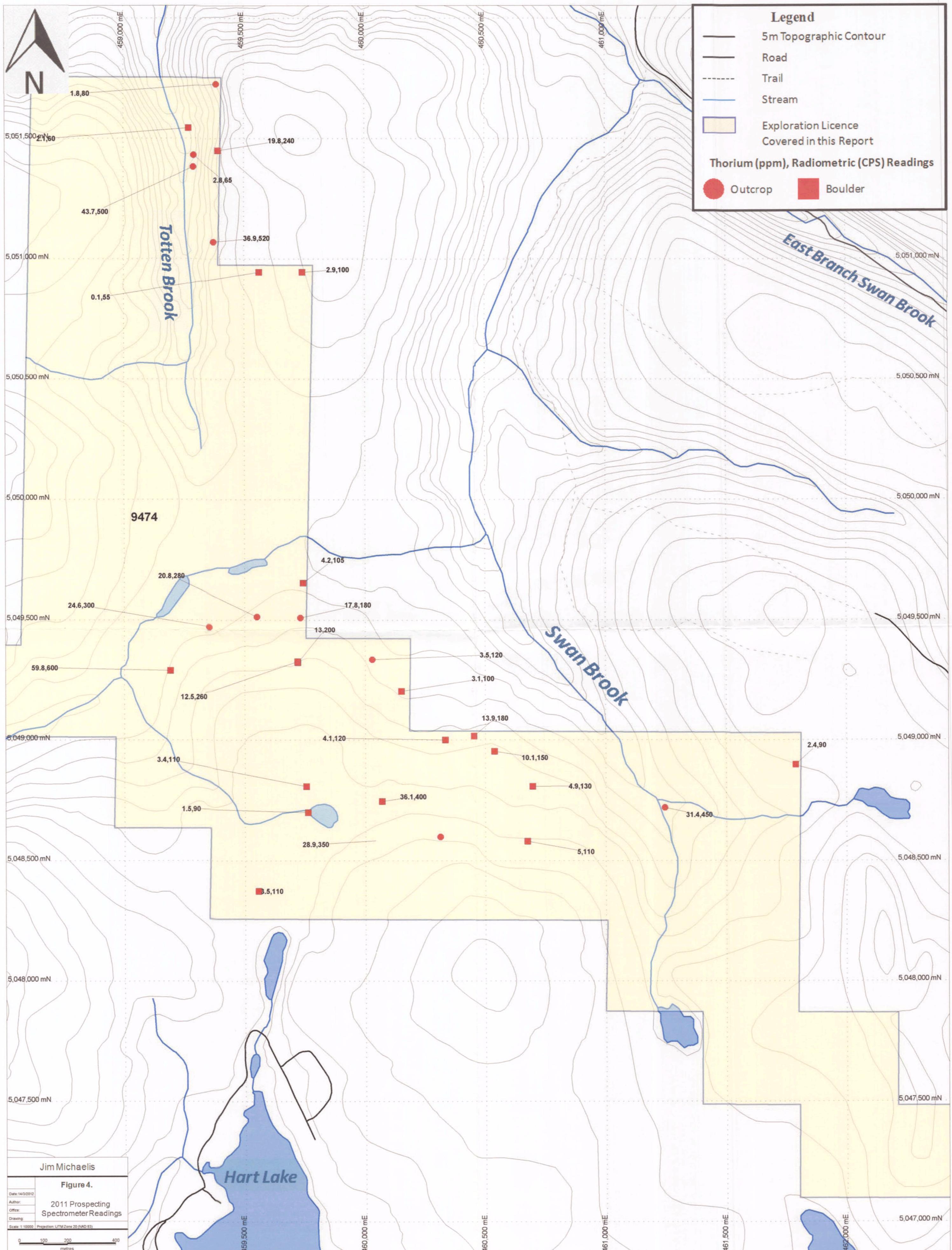
**Legend**

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

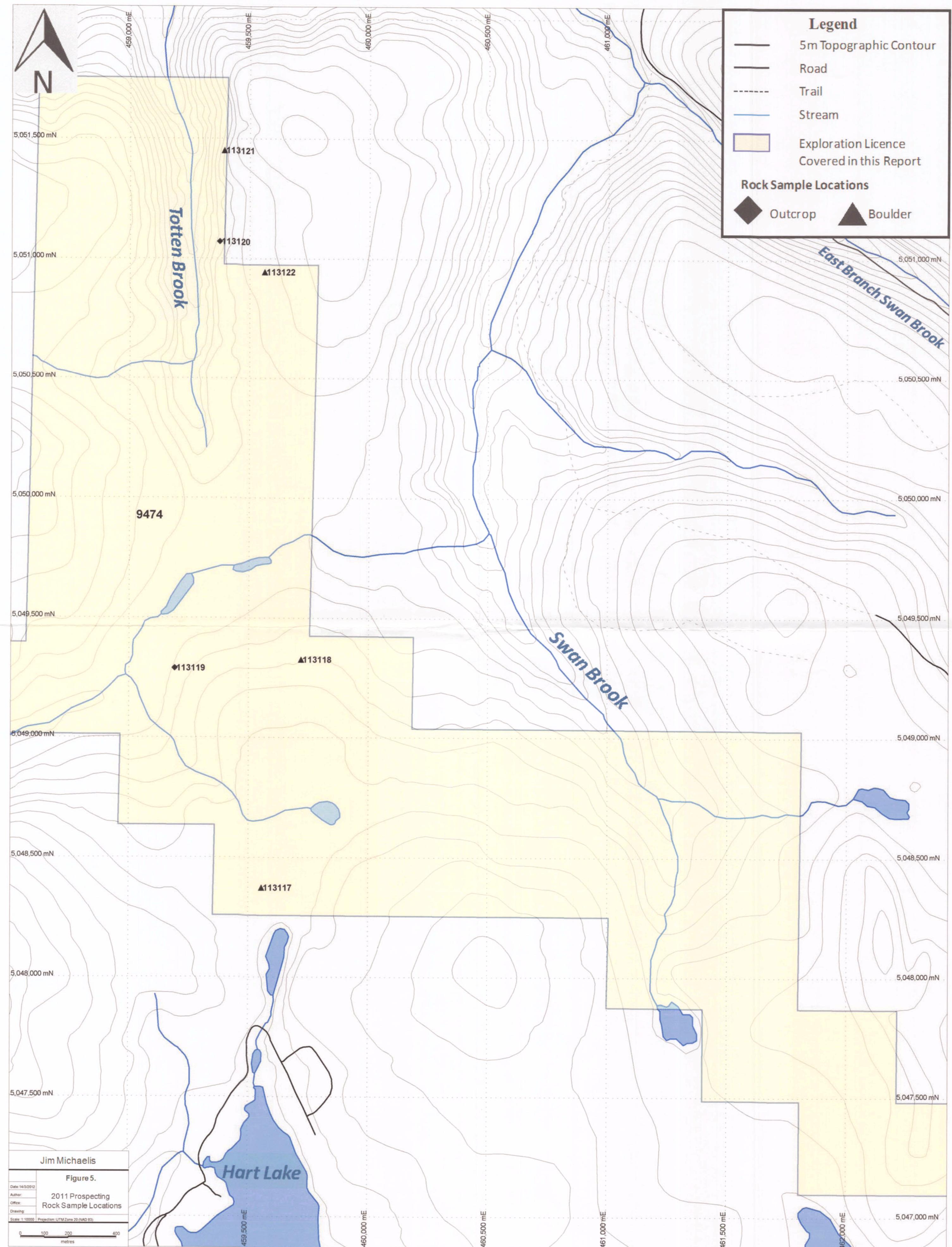


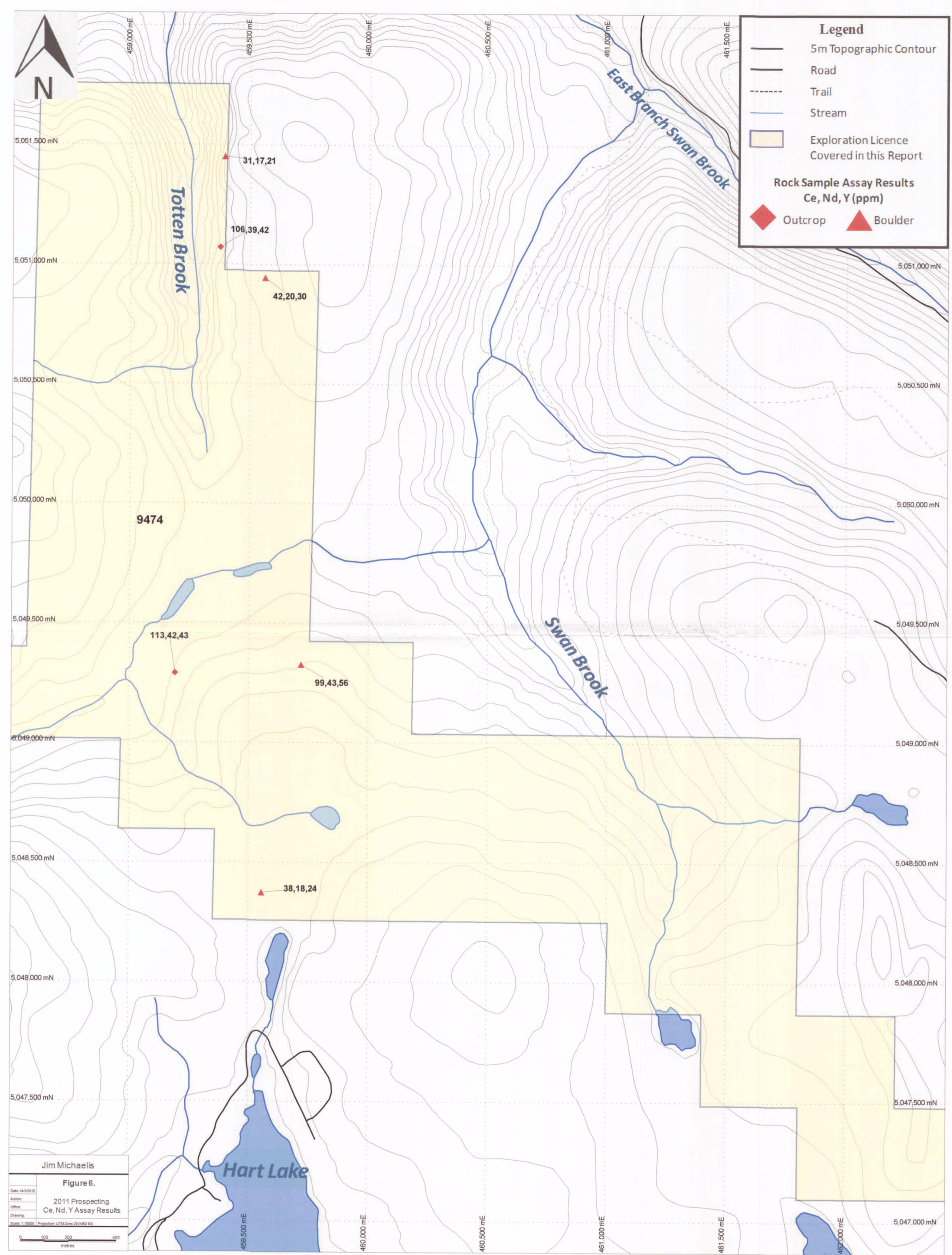


AR 2012 - 013

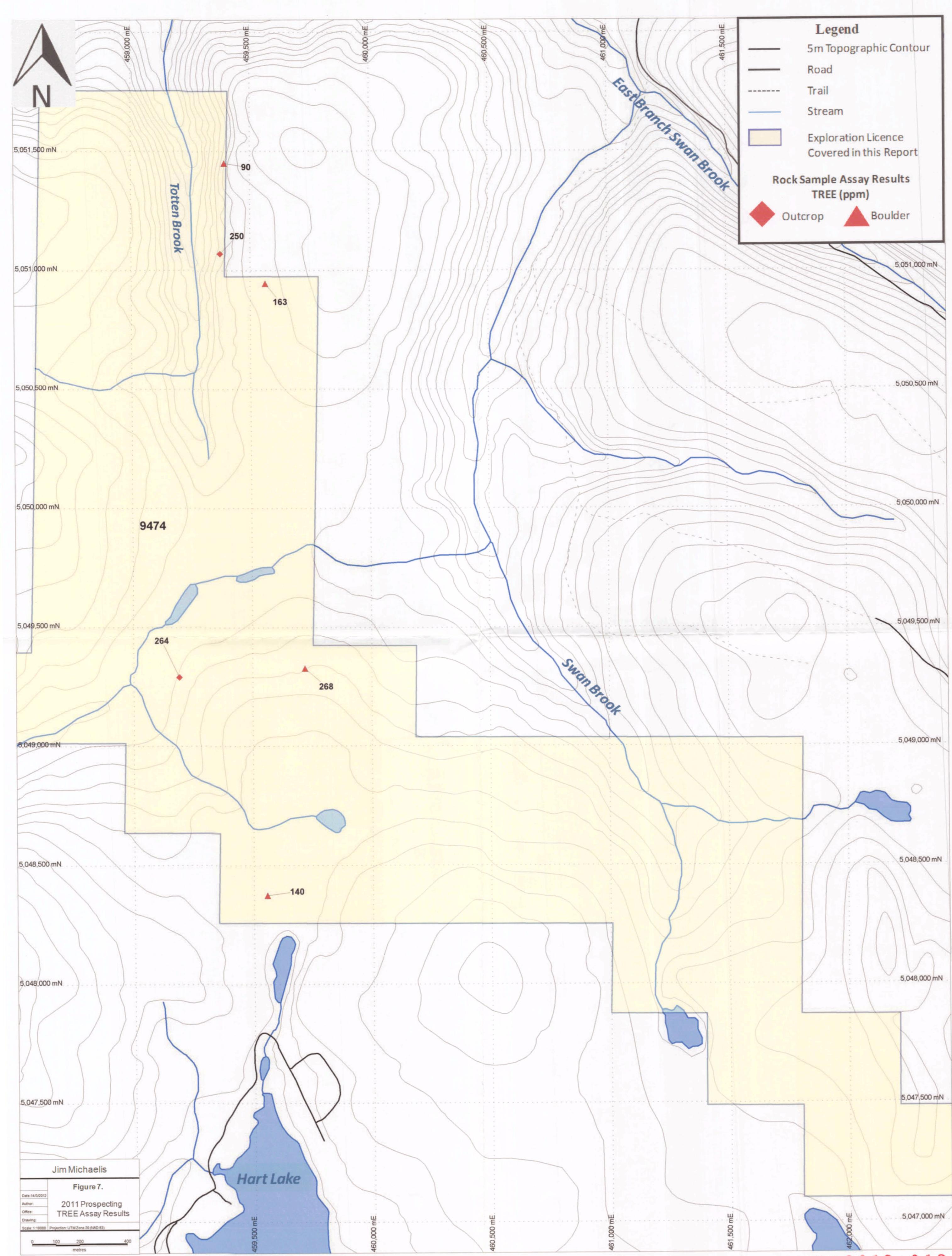


AR 2012-013





AR2012-013



AR 2012-013

## **8 CONCLUSIONS AND RECOMMENDATIONS**

### **8.1 Conclusions**

No anomalous rare earth element, gold or base metal values were found during the prospecting program. Thick overburden throughout the property causing a lack of outcrop could have contributed to the negative results.

### **8.2 Recommendations**

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.

## **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 13<sup>th</sup> to November 20<sup>th</sup>. It is also based on analytical results from ActLabs, Ontario.
- 5) I have no direct interest in the exploration licences reported hereunder.

January 23, 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 23, 2012

Brian L. Cole

P.Geo

**Respectfully submitted,**



**Matthew T. Zago**

**January 23, 2012**

**Brian L. Cole**

**January 23, 2012**

## **10 REFERENCES**

### **Assessment Report 80-009 – Nova Scotia**

1980-81 Gulf Minerals Inc: Cobequid Project: A report on Geological Mapping, Pleistocene Geology, Geochemistry, Prospecting, Reverse Circulation Drilling and Diamond Drilling

**Archer, A.W., Calder, J.H., Gibling, M.R., Naylor, R.N., Reid, D.R. and Wightman, W.G.**  
1995: Trace fossils and agglutinated foraminifera as indicators of marine environments in the classic Carboniferous section at Joggins, Nova Scotia, Canada. Canadian Journal of Earth Sciences, vol. 32, pp. 2027-2039.

### **Browne, G.A., and Plint, G.H.**

1994: Tectonic Event Stratigraphy in a Fluvio-Lacustrine, Strike-Slip Setting: The Boss Point Formation (Westphalian A), Cumberland Basin, Maritime Canada. Journal of Sedimentary Research, Volume 64b.

### **Calder, J.H.,**

1984. Sedimentology studies within the Springhill coalfield, Cumberland County, Nova Scotia, pp. 1-6: in J. Szostak and K.A. Mills (eds.), Report of Activities, 1983; Nova Scotia Department of Mines and Energy, Mineral Development Division, Report 84-1, 341 p.

### **Calder, J.H.**

1998: The Carboniferous evolution of Nova Scotia. In: Lyell: The past is the key to the present. Edited by D.J. Blundell and A.C. Scott. Geological Society of London, Special Publication, 143, pp. 261-302.

### **Cole ,B.**

Tripple Uranium Resources: 2007 Diamond Drilling Work Program – Second Year Assessment Report, Wentworth A Property

### **Davies, S.J. and Gibling, M.R.**

2003: Architecture of coastal and alluvial deposits in an extensional basin: the Carboniferous Joggins Formation of eastern Canada. Sedimentology, vol.50, pp. 415-439.

### **Duff, P. McL. D. and Walton, E.K.,**

1973. "Carboniferous sediments at Joggins, Nova Scotia"; 7th International Congress on Carboniferous Stratigraphy and Geology, Krefeld, 1971, vol. 2, pp. 365-379.

### **Gibling, M.R.**

1995: Upper Paleozoic rocks, Nova Scotia. In: Geology of the Appalachian-Caledonian Orogen in Canada and Greenland. Edited by H. Williams. Geological Survey of Canada, Geology of Canada, no.6 (also Geological Society of America, the Geology of North America, v. I-1), pp. 493-523.

**Kaplan, S.S. and Donahoe, J.,**

1980. Sedimentologic description of part of coal-bearing Carboniferous sequence exposed near Joggins, Nova Scotia, (abstract): American Association of Petroleum Geologists Bulletin, vol. 64, pp. 730-731.

**Keppie, J.D.**

2000: Geological Map of the Province of Nova Scotia. Map ME 2000-001. Scale: 1:500 000. Nova Scotia Department of Natural Resources.

**McHattie T.G.**

2010. Magmatism, Alteration and Polymetallic Mineralization in Late Devoian to Early Carboniferous Felsic Volcanic and Plutonic Rocks of the Eastern Cobequid Highlands; in Mineral Resources Branch, Report of Activities 2009, Nova Scotia Department of Natural Resources, Report 2010-1, p 65-75.

**White, C.E, Horne, R.J., Muir, C., and Hunter, J.**

1998. Preliminary bedrock geology of the Digby map sheet (21A/12), southwestern Nova Scotia. Nova Scotia Department of Natural Resources, Report ME 1998-002.

**APPENDIX I: EXPENDITURES**  
**PROSPECTING PROGRAM**

<b>November 2011 Prospecting - Time Allocation</b>				
	Rate (\$)	9474	General	Total
Zago M.	400	11	5	16
Greene E.	350	11	2	13
		22	7	29

<b>EQUIPMENT RENTAL</b>	<b>Days</b>	<b>\$ / Day</b>	<b>Total Cost</b>
1 GMC Sierra truck	11	100	1100
2 Garmin GPS	11	80	880
1 Panasonic Tough Book	16	75	1200
2 Spectrometers	11	80	880
<b>Total</b>			<b>\$4,060.00</b>

**STATEMENT OF EXPENDITURES - WENTWORTH WEST 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 West	9474	40	22	22	6	100.00	1245.75	1584.41	1100.00	525.86	2960.00	288.90	10950.00	18654.92
General Project Days				7										
		40	29	22	6	100	1245.75	1584.41	1100.00	525.86	2960.00	288.90	10950.00	\$18,654.92

## **APPENDIX II: WENTWORTH EAST PROSPECTING**

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

Station	Sample_ID	NAD_83_East	NAD_83_North	K(%)	U(ppm)	Th(ppm)	CPS	Description
WW-MZ-038		461244	5048720	4.1	6.4	31.4	450	Pink, slightly magnetic hornblende quartz syenite with massive texture. (Subcrop)
WW-MZ-039		460312	5048599	4.2	6.5	28.9	350	Pink, slightly magnetic hornblende quartz syenite with massive texture.
WW-MZ-040	113117	459556	5048374	1.9	1	3.5	110	Mafic intrusive (gabbro to leucogabbro) with intergranular texture, minor alteration (chl) trace Py, magnetic. (Boulder)
WW-MZ-041		460674	5048580	1.8	0	5	110	Mafic intrusive (gabbro to leucogabbro) with intergranular texture, magnetic. (Boulder)
WW-MZ-042		461789	5048898	1.3	0.7	2.4	90	Mafic intrusive (gabbro to leucogabbro) with intergranular texture, magnetic. (Boulder)
WW-MZ-043		459762	5048700	0.9	1.4	1.5	90	Mafic intrusive (gabbro to leucogabbro) with intergranular texture, magnetic. (Boulder)
WW-MZ-044		459755	5048807	1.2	1.5	3.4	110	Mafic intrusive (gabbro to leucogabbro) with intergranular texture, magnetic. (Boulder)
WW-MZ-045		460070	5048746	4.3	5.3	36.1	400	Pink, slightly magnetic hornblende quartz syenite with massive texture. (Boulder)
WW-MZ-046		460696	5048807	1.3	0.1	4.9	130	Mafic intrusive gabbro with intergranular texture (plag + CPX), magnetic. (Boulder)
WW-MZ-047		460538	5048953	1.2	2.5	10.1	150	Dark grey basalt with strong silicification, weakly magnetic. (Boulder)
WW-MZ-048		460333	5049000	1.5	1.8	4.1	120	Mafic intrusive gabbro with intergranular texture (plag + CPX), magnetic. (Boulder)
WW-MZ-049		460151	5049202	1.7	0.4	3.1	100	Mafic intrusive gabbro with porphyritic texture (plag + CPX), magnetic. (Boulder)
WW-MZ-050		459743	5049654	2.4	1.3	4.2	105	Mafic intrusive gabbro with intergranular texture (plag + CPX), magnetic. (Boulder)
WW-MZ-051		460452	5049016	2.6	3.6	13.9	180	Grey rhyolite with strong silicification, weakly magnetic. (Boulder)
WW-MZ-052		459731	5049510	3.6	2.8	17.8	180	Silicified intermediate rhyolite , feldspar phenocrysts and quartzeyes present, non mag.
WW-MZ-053		460029	5049334	1.2	2.5	3.5	120	Dark grey, fg basalt with minor chl alteration, magnetic.

Station	Sample_ID	NAD_83_East	NAD_83_North	K(%)	U(ppm)	Th(ppm)	CPS	Description
WW-MZ-054		459720	5049322	0.6	5	13	200	Grey rhyolite with strong silicification, weakly magnetic. (Boulder)
WW-MZ-055	113118	459719	5049326	3.9	3.8	12.5	260	Large chert fragments within a matrix of fg soft green altered volcanics. Trace pyrite, non mag. Volcanic breccia. (Boulder)
WW-MZ-056		459551	5049515	3.7	6.3	20.8	280	Pink, slightly magnetic hornblende quatrz syenite with massive texture.
WW-MZ-057		459353	5049471	4.3	2.9	24.6	300	Pink, slightly magnetic hornblende quatrz syenite with massive texture.
WW-MZ-058	113119	459191	5049288	7.5	7.7	59.8	600	Pink, slightly magnetic hornblende quatrz syenite with massive texture.
WW-MZ-059		459742	5050945	1.9	1.1	2.9	100	Mafic intrusive (gabbro to leucogabbro) with intergranular texture, magnetic. (Boulder)
WW-MZ-060	113120	459374	5051071	9.7	3.6	36.9	520	Grey-pink rhyolite with strong silicification, non magnetic.
WW-MZ-061	113121	459393	5051450	2.6	7.4	19.8	240	White-green quartite or silica cap. Very rusty throughout. (Boulder)
WW-MZ-062		459386	5051726	1.3	0.4	1.8	80	Fine grained basalt with columnar jointing, magnetic.
WW-MZ-063		459271	5051543	0.9	0.7	2.1	60	Mafic intrusive (gabbro to leucogabbro) with intergranular texture, magnetic. (Boulder)
WW-MZ-064		459292	5051431	1.5	1	2.8	65	Mafic intrusive (gabbro to leucogabbro) with intergranular texture, magnetic.
WW-MZ-065		459290	5051382	5.2	12.4	43.7	500	Grey-pink rhyolite with strong silicification, non magnetic.
WW-MZ-066	113122	459563	5050945	0.6	0.8	0.1	55	Very fg basalt with disseminated Po , magnetic. (Boulder)

### **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 local angular boulder occurrences. Samples were removed from bedrock and large boulders 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 jwa 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

### 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>
<b>SY3</b>	59.51	11.62	6.47	0.32	2.54	8.25	4.17	4.23	0.14	0.52
<b>MRG1</b>	39.43	8.59	17.93	0.17	13.74	14.77	0.73	0.18	3.78	0.07
<b>DNC1</b>	46.91	18.46	9.76	0.15	10.05	11.27	1.99	0.24	0.47	0.07
<b>BIR1</b>	47.78	15.43	11.52	0.17	9.70	13.75	1.86	0.02	0.95	0.02
<b>W2</b>	52.58	15.35	10.72	0.16	6.37	10.98	2.31	0.64	1.05	0.12
<b>G2</b>	68.72	14.95	2.65	0.03	0.71	1.87	4.08	4.48	0.48	0.13
<b>STM1</b>	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

**APPENDIX IV: ANALYTICAL ICP/MS RESULTS TABLE**

**PROSPECTING ROCK SAMPLES**

### Wentworth November 2011 Prospecting Assay Results Table

Sample Number	NAD83_East	NAD83_North	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total
113117	459556	5048374	48.1	16.29	10.85	0.22	5.08	7.92	3.42	1.8	1.933	0.27	2.85	98.75
113118	459719	5049326	75.8	9.85	2.83	0.02	0.25	0.23	0.63	7.01	0.443	0.07	1.25	98.39
113119	459191	5049288	74.03	12.41	2.1	0.03	0.18	0.51	3.57	5.36	0.206	0.03	0.81	99.23
113120	459374	5051071	77.95	10.51	1.46	0.03	0.3	0.35	0.97	7.46	0.081	0.02	0.67	99.81
113121	459393	5051450	84.21	8.95	1	0.01	0.11	0.04	0.08	2.66	0.066	< 0.01	1.73	98.87
113122	459563	5050945	45.07	14.27	14.46	0.22	6.15	8.79	2.85	0.86	2.638	0.36	2.66	98.33

### Wentworth November 2011 Prospecting Assay Results Table

Sample Number	NAD83_East	NAD83_North	Ba	Be	Bi	Br	Cd	Co	Cr	Cs	Cu	Hf	Hg	Ir	Mo	Ni	Pb	Rb	S	Sb	Sc	Se	Sr
113117	459556	5048374	433	1	< 2	< 1	0.6	39	153	3.9	58	3.4	< 1	< 5	< 2	40	38	80	0.1	0	33	< 3	217
113118	459719	5049326	357	2	< 2	< 1	< 0.5	1	21	4.1	9	14.3	< 1	< 5	21	4	100	210	0.2	3	3.8	< 3	44
113119	459191	5049288	119	6	< 2	< 1	< 0.5	3	13	4.1	3	9.2	< 1	< 5	< 2	2	25	210	0	< 0.2	2.7	< 3	26
113120	459374	5051071	195	2	< 2	< 1	< 0.5	1	11	3.1	5	7.4	< 1	< 5	5	1	10	220	0	1	2.1	< 3	53
113121	459393	5051450	34	3	< 2	< 1	< 0.5	< 1	10	2.5	3	6.4	< 1	< 5	12	< 1	12	100	0	1	1.1	< 3	7
113122	459563	5050945	195	< 1	< 2	< 1	0.7	53	118	7.3	72	5.2	< 1	< 5	< 2	61	12	60	0.1	0	40	< 3	323

### Wentworth November 2011 Prospecting Assay Results Table

Sample Number	NAD83_East	NAD83_North	Ta	Th	U	V	W	Y	Zn	Zr	La	Ce	Nd	Sm	Eu	Tb	Yb	Lu	Mass	Au	Ag	As
113117	459556	5048374	< 1	1.5	< 0.5	269	< 3	24	204	129	15.5	38	18	6	2.1	< 0.5	3.2	0.1	1.81	< 5	< 0.5	4
113118	459719	5049326	3	11	3.1	42	6	56	54	537	47.5	99	43	6.9	0.8	1.1	8.8	1.3	1.69	< 5	0.7	73
113119	459191	5049288	4	24	6.7	11	< 3	43	44	241	45.5	113	42	8.4	< 0.1	1.1	7	1.1	1.45	< 5	< 0.5	3
113120	459374	5051071	1	15	2.9	12	< 3	42	47	166	44.9	106	39	6.7	< 0.1	1.1	6.7	1	1.69	< 5	< 0.5	6
113121	459393	5051450	1	12	5.2	9	< 3	21	20	134	12.2	31	17	2.5	< 0.1	< 0.5	4.2	0.6	1.37	< 5	< 0.5	22
113122	459563	5050945	< 1	0.8	< 0.5	359	< 3	30	142	177	17.4	42	20	7.2	2.7	< 0.5	3.9	0.3	1.7	< 5	< 0.5	8

**APPENDIX V: ANALYTICAL CERTIFICATES**

**PROSPECTING ROCK SAMPLES**

**Quality Analysis ...**



**Innovative Technologies**

**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 :**

A handwritten signature in black ink, appearing to read "Emmanuel Eseme".

Emmanuel Eseme , Ph.D.

Quality Control

ISO/IEC 17025



**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](mailto:Ancaster@actlabs.com) ACTLABS GROUP WEBSITE [www.actlabs.com](http://www.actlabs.com)

## Activation Laboratories Ltd.

Report: A11-14047

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CeO	Na2O	K2O	TiO2	P2O5	LOI	Total	Au	Ag	As	Ba	Be	Bi	Br	Cd	Co	Cr	Cs	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	0.01		5	0.6	2	3	1	2	1	0.5	1	1	0.5	1
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	MULT INAA / TD- ICP	INAA	MULT INAA/FUSI CP	FUS-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	INAA	
113101	56.20	13.49	12.88	0.17	3.08	3.14	2.40	0.68	2.876	0.37	4.61	89.86	< 5	< 0.6	174	86	3	5	< 1	< 0.6	41	< 1	3.8	12	
113102	76.15	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	549	3	< 2	< 1	< 0.5	< 1	18	2.7	4	
113103	77.69	9.87	3.58	0.04	0.16	0.14	2.01	4.79	0.295	0.04	1.83	100.3	< 5	3.5	152	42	3	< 2	< 1	< 0.6	< 1	12	1.9	5	
113104	78.87	9.71	4.61	0.05	0.26	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	0.238	0.03	1.55	98.50	< 5	2.8	82	246	3	< 2	< 1	< 0.5	3	18	5.1	5	
113106	61.65	14.79	8.98	0.11	0.80	1.49	0.15	4.44	0.340	0.01	5.19	97.86	< 5	2.4	18	51	11	< 2	< 1	< 0.5	< 1	22	33.8	8	
113107	78.44	9.02	4.31	0.15	0.13	0.28	0.06	2.78	0.212	0.01	2.66	99.00	< 5	6.6	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	5.61	0.226	0.01	1.16	87.64	< 5	5.3	5	57	7	< 2	< 1	< 0.5	3	26	2.5	4	
113109	76.22	9.70	6.28	0.07	0.09	0.28	2.45	4.48	0.225	< 0.01	0.64	89.41	< 5	5.1	7	35	13	< 2	< 1	0.7	< 1	33	2.2	9	
113110	77.31	9.63	3.30	0.03	0.10	0.10	1.06	5.35	0.284	0.01	1.83	88.81	< 5	3.7	45	56	4	< 2	< 1	0.6	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	100.8	< 5	0.8	25	431	4	< 2	< 1	< 0.5	3	< 1	8.4	3	
113112	79.05	8.83	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	76.35	9.44	4.84	0.02	0.07	0.08	0.62	5.80	0.263	0.01	1.28	88.87	< 5	5.2	11	68	6	< 2	< 1	< 0.5	< 1	< 1	4.6	8	
113114	78.45	10.48	3.46	0.06	0.10	0.09	0.06	3.22	0.224	0.01	2.84	89.70	< 5	1.7	17	15	5	< 2	< 1	< 0.5	3	18	13.9	6	
113115	48.31	13.83	14.65	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	6.6		
113116	77.48	10.39	3.83	0.03	0.13	0.24	0.12	6.08	0.234	< 0.01	1.76	100.3	< 5	3.3	7	60	5	< 2	< 1	< 0.5	1	15	7.8	8	
113117	48.10	16.29	10.85	0.22	5.08	7.82	3.42	1.80	1.833	0.27	2.85	88.75	< 5	< 0.5	4	433	1	< 2	< 1	0.6	39	153	3.9		
113118	76.80	9.85	2.83	0.02	0.26	0.23	0.63	7.01	0.443	0.07	1.26	88.39	< 5	0.7	73	357	2	< 2	< 1	< 0.5	1	21	4.1	9	
113119	74.03	12.41	2.10	0.03	0.18	0.61	3.67	5.38	0.206	0.03	0.81	89.23	< 5	< 0.5	3	119	6	< 2	< 1	< 0.5	3	13	4.1	3	
113120	77.95	10.51	1.46	0.03	0.30	0.35	0.97	7.46	0.081	0.02	0.67	89.81	< 5	< 0.5	6	195	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	2.66	0.068	< 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	14.46	0.22	6.16	8.78	2.88	0.88	2.638	0.36	2.68	88.33	< 5	< 0.5	8	195	< 1	< 2	< 1	0.7	53	118	7.3		

## Activation Laboratories Ltd.

Report: A11-14047

Analyte Symbol	Hf	Hg	Ir	Mn	Ni	Pb	Rb	S	Sb	Sc	Se	Sr	Ta	Th	U	V	W	Y	Zn	Zr	Ls	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	ppm
Detection Limit	0.6	1	5	2	1	5	20	0.001	0.2	0.1	3	2	1	0.6	0.6	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	FUS-ICP	INAA	FUS-ICP	TD-ICP	FUS-ICP	INAA	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	356	48	36	121	226	31.2	75	25	9.4
113102	14.8	< 1	< 5	11	< 1	27	170	0.032	1.4	4.7	< 3	56	1	15.1	4.5	8	18	68	73	478	62.9	125	63	13.2
113103	28.6	< 1	< 5	5	1	64	170	0.303	1.6	1.4	< 3	24	4	16.2	3.6	12	10	121	61	1173	86.6	188	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	181	224	1480	80.0	200	107	17.4
113105	29.9	< 1	< 5	3	3	70	230	0.006	1.4	1.8	4	46	4	33.3	11.5	18	< 3	148	103	1108	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	61.8	< 1	< 5	4	< 1	37	180	0.749	3.6	0.7	26	11	8	22.1	3.3	10	< 3	352	343	2679	145	337	230	38.5
113108	63.4	< 1	< 5	< 2	1	35	240	0.070	0.7	0.7	22	28	7	17.7	6.3	< 5	< 3	317	144	2654	184	382	258	40.6
113109	63.3	< 1	< 5	3	2	43	210	0.055	0.7	0.8	37	24	8	22.3	7.9	< 5	< 3	318	333	2643	173	400	238	42.8
113110	31.0	< 1	< 5	< 2	1	51	200	0.195	1.0	0.8	16	30	4	16.2	4.0	8	< 3	123	90	1275	87.8	206	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	66	65	415	64.1	138	51	8.8
113112	57.0	< 1	< 5	< 2	2	19	260	0.309	2.7	0.7	25	18	7	22.8	4.5	5	7	266	109	2434	82.7	223	118	17.5
113113	71.0	< 1	< 5	< 2	< 1	35	310	0.012	2.8	1.0	26	20	10	29.1	6.6	8	11	338	121	3008	84.6	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	14.6
113115	6.4	< 1	< 5	< 2	57	18	110	0.078	1.7	40.7	< 3	373	< 1	1.3	< 0.5	370	< 3	36	169	227	23.1	63	32	9.1
113116	32.3	< 1	< 5	2	2	33	220	0.447	0.8	1.0	< 3	30	8	19.8	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	269	< 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	10.8	3.1	42	6	56	84	537	47.6	89	43	6.9
113119	8.2	< 1	< 5	< 2	2	25	210	0.006	< 0.2	2.7	< 3	26	4	23.8	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	2.8	12	< 3	42	47	166	44.8	106	39	8.7
113121	6.4	< 1	< 5	12	< 1	12	100	0.029	1.0	1.1	< 3	7	1	11.6	6.2	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	4.9	0.49	1.422
113102	1.5	1.5	10.4	1.49	1.767
113103	1.8	2.6	17.5	2.56	1.695
113104	2.1	3.7	22.5	3.32	1.696
113105	1.6	3.6	22.1	3.19	1.555
113106	5.2	11.1	55.8	7.97	1.349
113107	3.2	7.8	43.6	6.10	1.686
113108	3.4	7.5	43.7	6.08	1.681
113109	3.3	7.7	42.9	5.98	1.591
113110	1.4	2.2	19.9	2.89	1.591
113111	1.2	1.5	10.6	1.67	1.263
113112	1.0	5.6	38.1	5.25	1.673
113113	1.7	6.7	47.9	6.58	1.598
113114	< 0.1	3.6	18.2	2.80	1.386
113115	2.8	0.7	4.8	0.38	1.817
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	0.69	1.366
113122	2.7	< 0.5	3.9	0.25	1.696

**Activation Laboratories Ltd.**      Report: A11-14047

Quality Control		Activation Laboratories Ltd.																								
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	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																										
GXR-1 Cert																										
GXR-1 Meas																										
GXR-1 Cert																										
NIST 694 Meas	11.42	1.83	0.76	0.01	0.35	43.28	0.89	0.56	0.119	30.25																
NIST 694 Cert	11.2	1.80	0.780	0.0118	0.330	43.6	0.860	0.510	0.110	30.2																
DNC-1 Meas	47.10	18.56	0.84	0.16	10.04	11.38	1.80	0.23	0.485	0.07																
DNC-1 Cert	47.15	18.34	0.87	0.160	10.13	11.48	1.890	0.234	0.480	0.070																
GBW 07113 Meas	72.37	12.82	3.28	0.14	0.14	0.58	2.43	5.41	0.283	0.05																
GBW 07113 Cert	72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0600																
GXR-4 Meas																										
GXR-4 Cert																										
GXR-4 Meas																										
GXR-4 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																										
W-2a Meas	52.59	15.41	10.79	0.17	6.34	10.87	2.23	0.83	1.080	0.13																
W-2a Cert	52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130																
SY-4 Meas	49.60	20.72	6.46	0.11	0.61	8.00	6.96	1.68	0.288	0.13																
SY-4 Cert	49.9	20.69	6.21	0.108	0.64	8.05	7.10	1.68	0.287	0.131																
BIR-1a Meas	47.46	15.72	11.25	0.17	9.48	13.37	1.78	0.02	0.962	0.02																
BIR-1a Cert	47.96	15.60	11.30	0.176	9.700	13.30	1.82	0.030	0.96	0.021																
DNC-1a Meas																										
DNC-1a Cert																										
DNC-1a Meas																										
DNC-1a Cert																										
DMMAS 114 Meas																	1970	1600	1630		41	97				
DMMAS 114 Cert																	2199	1624	1881		42	84				
113111 Orig																		0.9			< 2	< 0.5		3	4	
113111 Dup																		0.9			< 2	< 0.5		2	4	
113115 Orig	45.88	13.76	14.57	0.34	5.71	7.35	3.11	1.60	2.811	0.61	3.16	98.80						709	1							
113115 Dup	46.74	13.69	14.74	0.34	5.78	7.38	3.21	1.64	2.792	0.61	3.15	100.2						726	1							
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	

**Activation Laboratories Ltd.**      Report: A11-14047

**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	0.6	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	0.265							633				
GXR-1 Cert	41.0	730	0.257							760				
GXR-1 Meas	45	858	0.275							667				
GXR-1 Cert	41.0	730	0.257							760				
NIST 694 Meas						1668								
NIST 694 Cert						1740								
DNC-1 Meas					144		157	16		34				
DNC-1 Cert					144.0		148.0	18.0		38				
GBW 07113 Meas					41		5	48		396				
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	46	62	1.91							80				
GXR-4 Cert	42.0	52.0	1.77							73.0				
SDC-1 Meas	35	22	0.064							108				
SDC-1 Cert	38.0	25.00	0.0650							103.00				
SDC-1 Meas	38	25	0.071							112				
SDC-1 Cert	38.0	25.00	0.0650							103.00				
SCO-1 Meas	28	28	0.073							105				
SCO-1 Cert	27	31.0	0.0630							100				
SCO-1 Meas	29	28	0.080							109				
SCO-1 Cert	27	31.0	0.0630							100				
GXR-6 Meas	27	102	0.017							147				
GXR-6 Cert	27.0	101	0.0160							118				
GXR-6 Meas	28	106	0.022							150				
GXR-6 Cert	27.0	101	0.0160							118				
W-2a Meas				194		280	20			80				
W-2a Cert				180		282	24.0			84.0				
SY-4 Meas				1204		10	121			629				
SY-4 Cert				1191		8.0	119			517				
BIR-1a Meas				107		335	14			16				
BIR-1a Cert				110		310	16			18				
DNC-1a Meas	262									87				
DNC-1a Cert	247									70.0				
DNC-1a Meas	259									64				
DNC-1a Cert	247									70.0				
DMMAS 114 Meas		12.0	7.4		16.9				17.4	33	2.7			
DMMAS 114 Cert		11.2	6.5		17.4				15.1	23.7	2.4			
113111 Orig	< 1	56	0.027							87				
113111 Dup	1	55	0.024							62				
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					

**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 2012

(Complete as necessary to substantiate the total claimed.)

Re: Licence No. 9474 Date of issue November 30th, 2010

Type of Work		Amount Spent
1. Prospecting	22 days	15406.02
2. Geological mapping	_____ days	
3. Trenching/stripping/refilling	_____ m <sup>2</sup> / _____ m <sup>3</sup>	
4. Assaying & whole rock analysis	6 #	288.90
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	30 (22 12 3)
(b) Rock	_____ samples	
(i) Core	_____ samples	
(ii) Chips	_____ samples	
(c) Soil	_____ samples	
(i) Overburden	_____ samples	
(d) Gas	_____ samples	
(e) Biogeochemistry	_____ samples	
(f) Sample collection	_____ samples	
(g) Other	_____ days	
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)		
	Subtotal	15694.92
<b>Overhead costs</b>		
12. Secretarial services		
13. Drafting services		
14. Office expenses (rent, heat, light, etc.)		1756.04
15. Field supplies		1865.49
16. Compensation paid to landowners		
17. Legal fees		
18. Other (describe)		
	Subtotal	3621.53
	Grand total	19316.45

List the names of the persons who conducted the work reported in the previous table and the dates during which the work was performed.

I hereby certify that the information in this form is true and correct, that it has not before been submitted for assessment work credit and that it is the total of all work conducted on the licence during the past licensed year.

As \_\_\_\_\_ I am duly authorized to make this certification.  
*(position in company or licensee)*

Dated at Dartmouth \_\_\_\_\_ in the Province of Nova Scotia on 30 January . 2012

Name and address of licensee: Jim Michaelis

**26 Rodney Road, Dartmouth, NS B2Y3V5**

*a* *A*

Signature *John C.*

For further information, contact the Registrar of Mineral and Petroleum Titles at 1-802-424-4068