2013 Joint Assessment Report for Clear Lake Resources Inc.

Licenses 08997 & 08998

Submitted by: L.Allen

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1.0 Summary

Licenses 08997 and 08998 are located in a mafic-felsic volcanic and plutonic suite of rocks in the Cobequid highlands. Recent discoveries of anomalous REE indicator minerals (Th, Zr, Y, Nb) in such rocks as well as the recent discovery of epithermal gold in the region (MacHattie, 2011) make this area a strong candidate for discovery of either type of deposit.

The 2012 work program focused on heavy mineral concentrates from stream sediments via sluice box collection, as well as the collection of rock samples and spectrometer total counts per second(CPS).

Sluice samples were dried, sieved, XRF'd and panned. 8 gold flakes were observed in the finest (-80) fraction of sample CLR-12-010. Small Pb and Zn anomalies were observed on licence 08998 in the sluice XRF results.

Rock CPS values ranged from 150 for the mafics and up to 600 for granite and rhyolite outcrops. Small Zn anomalies were once again observed on licence 08998 and Rock Sample #9 showed elevated Y, Nb and Zr but not thorium.

2.0 Introduction

Rare earth element (REE) mineralization has been discovered in the Cobequid Highlands (MacHattie, 2010a). As such, regional exploration of the Hart Lake-Byers Lake granite body and overlying Byers Brook Formation is warranted.

Epithermal gold mineralization has also recently been discovered in basalts of the Diamond Brook Formation which overlays the Byers Brook Formation (MacHattie, 2011). As such, prospecting for Au was also completed.

License 08998 covers some basaltic flows within the Byers Brook Formation Rhyolites. License 08997 is geologically situated near the eastern extent of the Hart Lake-Byers Lake granite with the southern portion of the licence extending across the Rockland Brook Fault (see figure 2).

The 2012 work program focused on completing a first pass stream sluice sampling program on licence 08997 and second pass sluicing on licence 08998. Several rock samples were also collected during the course of the program.

Stream sluice samples were dried and sieved to various size fractions. Finer fractions (-18,-45,-60,-80,-140) were analyzed with a portable XRF analyzer and then hand panned and visually inspected for gold grains and other heavy minerals.

XRF analyses of the samples were completed using an Olympus Innovx portable DP-6000 X-ray fluorescence analyzer. The XRF was used to export REE and Au indicators. Epithermal Au indicators used were arsenic (As), antimony (Sb), lead (Pb) and zinc (Zn)(2011, MacHattie). REE indicators used were yttirium (Y), thorium (Th) zirconium (Zr) and niobium (Nb). XRF results at this point remain uncorrected due to the lack of a known set of assayed reference samples to analyze and generate XRF correction factors. Due to this, XRF results must be evaluated for anomalies rather than assuming absolute values.

A Radiation Solutions RS-230 Spectrometer was also used in conjunction with the stream sampling program to record rock outcrop radiometric total counts per second (CPS).

3.0 Location and Access

The properties are located in Colchester County, NS, approximately 22 km NNW of the town of Truro. Licence 08998 is accessible from the north via a local logging road. Access is gained via Warwick Mountain Road off highway 246. At UTM X=470961 Y=5051408 (NAD 83) on Warwick Mountain Road take an unnamed logging road which proceeds south onto and through license 08998.

Best access to license 08997 is from the south via Upper Belmont Road which is accessed by taking Exit 13 off of Highway 104, proceeding north on McElmon Road for approximately 1 km, and veering right onto Plains Road. Follow Plains Road for several kilometers until the junction with Belmont Road, then turn left onto Belmont Road and proceed for several km's through the community of Belmont until you get to Upper Belmont Road. It will be a dirt road to the right in the community of Staples Brook. Several trails provided further access to the property.

Clear Lake Resources Licences 08997 and 08998 Location Map

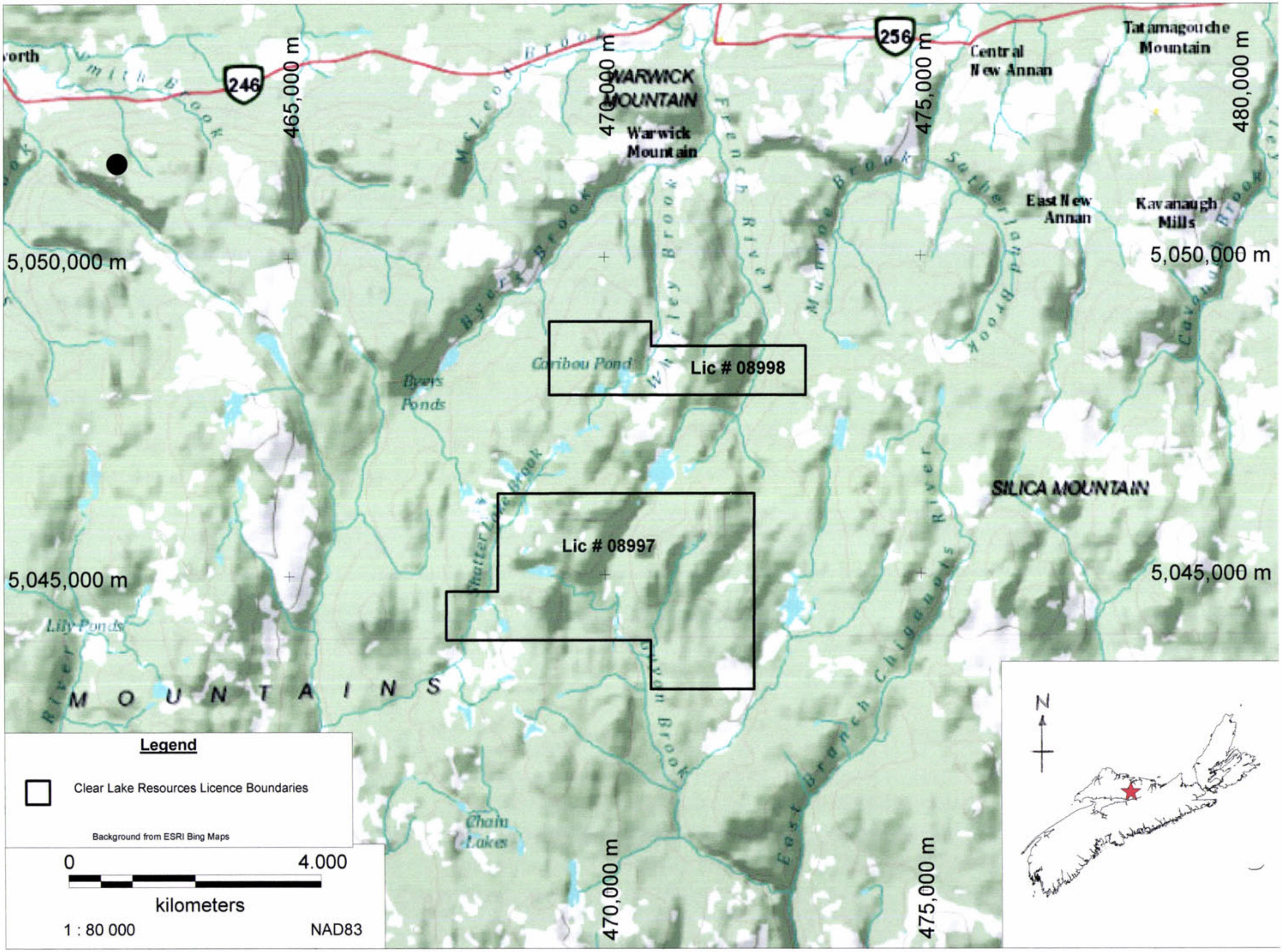


Figure 1

4.0 License Tabulation

Table 1-Tabulation of Exploration License 08997 and 08998 claims and tracts

License #	NTS Map Sheet	Tract	Claims	Date of Renewal
08997	11E/11B	41	JKLMNOPQ	02/02/2013
08997	11E/11B	42	JKLMNOPQ	02/02/2013
08997	11E/11B	43	ABCDEFGH JKLMNOPQ	02/02/2013
08997	11E/11B	54	ABCDEFGH JKLMNOPQ	02/02/2013
08997	11E/11B	55	ABCDEFGH JKLMNOPQ	02/02/2013
08997	11E/11B	56	ABGHJKPQ	02/02/2013
08998	11E/11B	77	EFDC	02/02/2013
08998	11E/11B	78	ABCDEFGH	02/02/2013
08998	11E/11B	79	ABCDEFGH MLKJ	02/02/2013

5.0 Previous Work

During the late 1970's and early 1980's Gulf Minerals Canada Ltd. carried out an extensive exploration program for Uranium in the Cobequid highlands. Gulf's program included geological mapping, soil and rock sampling, trenching, and drilling. Gulf also carried out ground and airborne gamma ray spectrometry surveys as well as a VLF-EM- magnetometer survey.

In 1989 NS Mines and Energy collected regional stream sediment, fines and heavy metal concentrates over northern Nova Scotia. Several Au anomalies were reported in the Cobequid Highlands (Mills, 1989).

6.0 Local and Regional Geology

Regional geology of the area is dominated by four Late Devonian-Early Carboniferous mafic-felsic volcanic and plutonic units as shown in figure 2. This suite of rocks is bound to the north by unconformably overlying late Carboniferous rocks of the Cumberland Basin and to the south by the Rockland Brook fault (RBF) (MacHattie, 2010a). From west to east the units are: the Folly Lake gabbro-diorite (DCd), the Hart Lake-Byers Lake granite (Cg), the Byers Brook Formation (DCB) and the Diamond Brook Formation (DCD-M).

Licence 08997 is mostly Cg while 08998 is equal parts DCB and basalt.

Clear Lake Resources Licences 08997 and 08998 Regional Geology Map

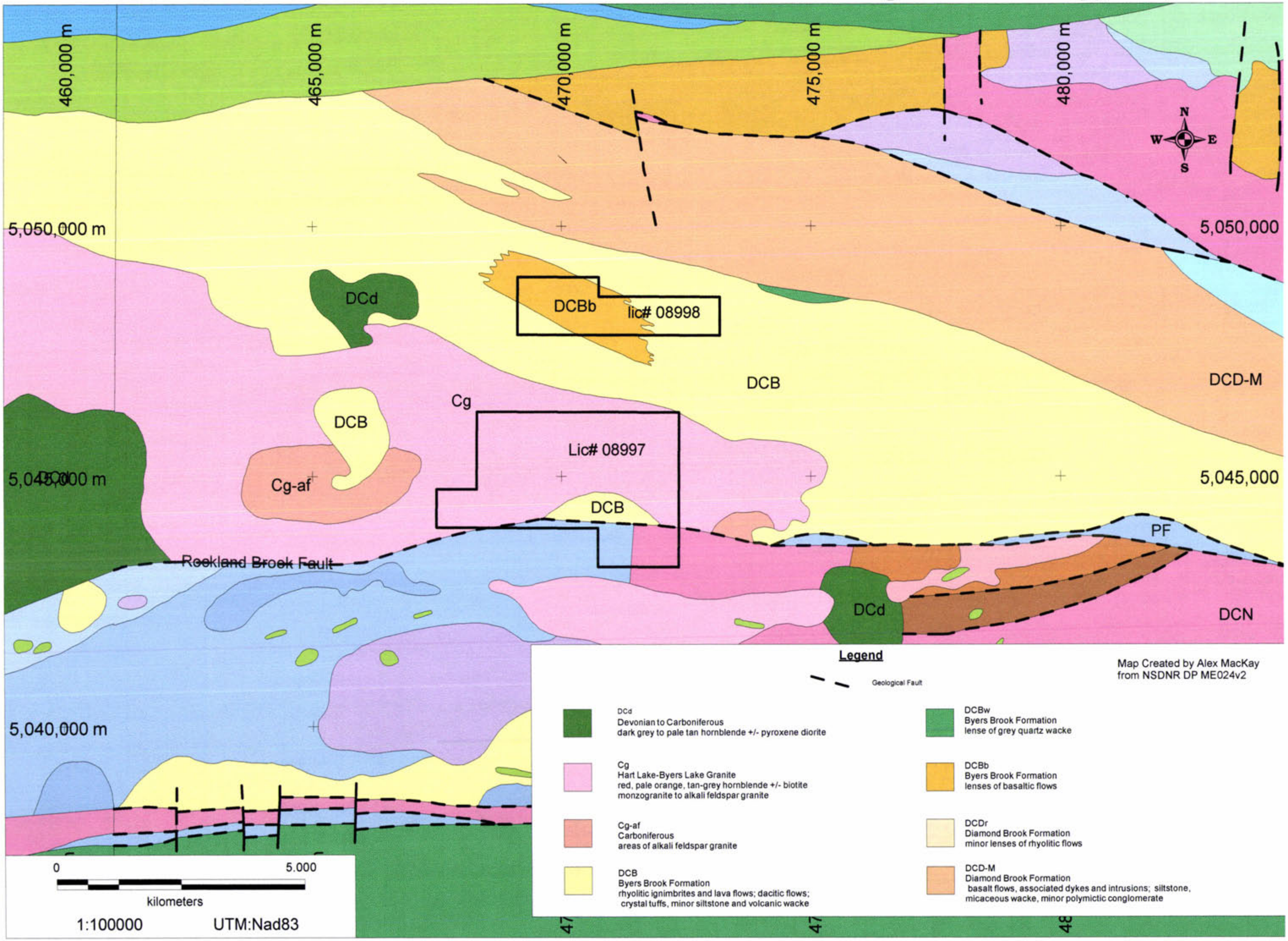


Figure 2

7.0 Work Performed

The work program focused on the collection of heavy mineral concentrates from stream sediments using a Keene Engineering A52 sluice box. In total, 15 sluice samples were collected; 6 on license 08998 and 9 on license 08997. Set up procedure included setting sluice box in the river or stream in the vicinity of a natural trap, such as large boulders, gravel bars or rock ledges. Material from the trap was shoveled into two gallon buckets and passed through the sluice. Approximately 100lbs (5 buckets x 20lbs/bucket) of material was fed through a ¼" screen emptying directly into the sluice. +¼" material was inspected for mineralization and discarded. Upon completion, the sluice box was carefully removed from the river and the concentrated heavy minerals were collected in a plastic sample bag, which was then tagged and transported back to the lab for further processing.

Upon returning to the lab sluice samples were dried and sieved before completing analysis. This was done by putting the samples in an enclosed air tight drying room with a dehumidifier. Samples generally took 3-4 days to dry completely. When the sample was dry, the sample was classified by size fraction. This was accomplished using a Ro-tap testing sieve shaker. Sieve sizes used are displayed in table 2. Part way through the program an additional sieve, the -140 fraction, was added to the sieve shaker. This was done to make the panning of the finest fraction easier as the finer fractions would consist of more consistent grain sizes, and hence yield better panning results.

Table 2-Sieve Sizes Used

Size	Tyler Equivalent	US Sieve #
1.7mm	10 mesh	No. 12
1.00mm	16 mesh	No. 18
355μm	42 mesh	No. 45
250μm	60 mesh	No. 60
180μm	80 mesh	No. 80
104 μm	150 mesh	No. 140


Figure 3-Sample Test Vial

The No. 12 and 18 sieves were used primarily to remove the coarsest material. These fractions were inspected and retained for later analysis. Material from finer size fractions was collected with some material being put into 3.5cm diameter plastic vials. Vials were fitted with a thin plastic cover retained by a rubber band (see figure 3). The vials were then analyzed with an Olympus Innovx DP-6000 portable XRF fitted to an Innovx test stand. The analyzer was set to export epithermal gold indicators Zn, As, Pb and Sb as well as REE indicators Y, Nb, Zr and Th. XRF results can be seen in Appendix A and plotted results can be seen on Maps 1 thru 4 in Appendix C.

Table 3-REE and Au indicator Elements

Commodity Sought	Indicator Elements	Reference
Rare Earth Elements	(Y, Nb, Zr, Th)	MacHattie, 2010b
Gold	(As, Sb, Pb, Zn)	MacHattie, 2011

Figure 4-Portable XRF in test stand

Upon completion of XRF analyses the five finest fractions (-18,-45,-60,-80,-140) were inspected for visible gold grains. As there was not enough material from each sample fraction to utilize the Wilfley Table, each sample was carefully hand panned. The resulting heavy minerals were inspected under a binocular microscope for visible gold grains. Any visible gold was subjected to a 'smear test' which involved crushing and smearing gold grains on the bottom of a hard plastic pan using a dental pick under the microscope. Notes regarding other heavy minerals such as Fe-oxides and sulfides were also recorded and tabulated (See Appendix A-Stream Sediment Panning Results).

While at the sluice site time was spend observing for outcrop, if outcrop was available, a CPS reading from the Radiation Solutions RS-230 spectrometer was recorded and a rock sample was collected. If only float and no outcrop was present around the sluice site, notes were recorded about the float, but generally no sample was taken. 14 rock samples and CPS readings were collected (2 on 08998 and 12 on 08997). Sampling involved collecting approximately 1-2kg of material and recording a basic description. Rock samples were analyzed with the portable XRF on a selected fresh face of the sample.

8.0 Results of Work

Gold was visually observed in 1 of the 15 sluice samples. In sample CLR-12-010, 8 slightly rounded gold flakes were observed in the finest fraction. A full table of panning results is available in Appendix A.

XRF results on the sluice fractions indicated some above average values for Pb and Zn on licence 08998 and some small Nb positive anomalies in samples CLR-12-249 and 253. No correlations were observed between observed visible gold and XRF gold indicator results. All sluice XRF results are tabled in Appendix A and plotted on maps 1 and 2 in Appendix C

8 outcrop and 6 float samples were collected. The eight outcrop sites also had a CPS reading taken with the spectrometer. CPS Values ranged from 150 for the mafics up to 600 for granite and rhyolite outcrops. Small Zn anomalies were again observed on licence 08998 , Rock #9 showed elevated Y, Nb and Zr but not thorium. These rock samples are stored for future reference and XRF analysis. See Rock Sample XRF Results and Descriptions in Appendix A for details.

9.0 Conclusions and Recommendations

Gold

The 8 gold flakes observed on licence 08998 are of interest and should be followed up with detailed local prospecting.

REE's

Additional sluice sampling should be carried out on licence 08997 especially around the inlier of BBF within the granite (See figure 2).

10.0 References

Downey, N. 1978: Cobequid Project, exploration program 1977-78 on parts of 11E/11A, B, C and D; Gulf minerals Exploration Limite; Nova Scotia Department of Mines; Assessment Report ME 11E/11B 54-D-16(02).

Gower, D.P. 1988: Geology and genesis of uranium mineralization in subaerial felsic volcanic rocks of the Byers Brook Formation and the comagmatic Hart Lake granite, Wentworth area, Cobequid Highlands, Nova Scotia; unpublished M.Sc. thesis, Memorial University of Newfoundland, p. 1-358.

Mills, R.F. 1989, Geochemical Analyses of Bulk Stream Sediment Samples From Northern Nova Scotia; Nova Scotia Department of Mines and Energy, Open File Release 89-007

MacHattie, T.G. and O'Reilly, G.A. 2009a: Timing of Iron Oxide-Copper-Gold (IOCG) Mineralization and Alteration along the Cobequid Chedabucto Fault Zone ; *in* Mineral Resources Branch, Report of Activities 2008; Nova Scotia Department of Natural Resources, Report ME 2009-1, p. 63-69.

MacHattie, T.G. and O'Reilly, G.A. 2009b: Field and Geochemical Evidence for Contemporaneous Mafic Magmatism and Iron Oxide-Copper-Gold (IOCG) Mineralization and Alteration along the Cobequid-Chedabucto Fault Zone; *in* Mineral Resources Branch, Report of Activities 2008; Nova Scotia Department of Natural Resources, Report ME 2009-1, p. 71-83.

MacHattie, T.G., 2010a: Magmatism, Alteration and Polymetallic mineralization in Late Devonian 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 ME 2010-1, p. 65-75.

MacHattie, T.G., 2010b: Nature of Rare Earth Element Mineralization in the Northeastern Cobequid Highlands; *in* Mineral Resources Branch, Geology Matters 2010: Program with Abstracts; Nova Scotia Department of Natural Resources, Report ME 2010-2, p. 2.

MacHattie, T.G., 2011: Volcanic Stratigraphy and nature of Epithermal-style Gold mineralization in Upper Devonian-Lower carboniferious Rocks of the Northeastern Cobequid Highlands, Nova Scotia; *in* Mineral Resources Branch, Geology Matters 2011: Program with Abstracts; Nova Scotia Department of Natural Resources, Report ME 2011-2, p. 14.

O'Reilly, G.A., 2010: The Oxford Tripoli Company Diatomite Mine at East New Annan; *in* Mineral Resources Branch, Nova Scotia Minerals Update Autumn 2010; Nova Scotia Department of Natural Resources v. 27-4, p. 5.

Pe-Piper, G., Murphy, J.B. and Turner, D.S. 1989:Petrology, geochemistry and tectonic setting of some Carboniferous plutons of the eastern Cobequid Hills; Atlantic Geology, v. 25, p. 37-49.

Pe-Piper, G., Piper, D.J.W 2002: A synopsis of the geology of the Cobequid Highlands, Nova Scotia; Atlantic Geology, v. 38, p.145-160.

11.0 Statement of Qualifications

Lindsay John Allen
Elk Exploration Ltd
11 River Rd, Terence Bay River, NS
B3T 1X2

Prospector ID #760

25 years Prospecting Experience
Completed DNR Basic Prospecting Course 1986
Completed DNR Advanced Prospecting Course 1987
DNR Due Diligence Course
Red Cross Emergency First Aid/CPR
Boulder Buster Certification
Inexperienced Miner
Level 2 Handheld XRF Certification

APPENDIX A

Sluice Results Table

Stream Sediment Panning Results

Sample #			Licence #	Fractions (US Mesh)					Other Materials Noted	Iron (Fe)			Black Sand			Gold			
CLR-12-	Easting	Northing		-18 to +45	-45 to +60	-60 to +80	-80	-140	Arsenopyrite (AsPy)	Specular Hematite	Regular Hemitite	Iron Pyrite (FeS)	%	% Magnetic	Light Colour Minerals (v/m-very minor, m-minor, avg-average)	(Y/N)	# Units	Size (mm)	Description
010	470833	5048555	08998	x					0	n	y	n	40	90	mainly quartz	n			
					X				0	n	y	n	40	90	vm garnet	n			
						X			0	n	y	y	50	60	increased epidote and garnet	n			
							X		0	n	n	n	40	70	mainly quartz	y	8	8 @ 0.05mm,	slightly rounded
116	469172	5048645	08998	x					0	n	n	n	15	70	mostly quartz	n			
					X				0	n	n	n	25	75	vm epidote	n			
						X			0	y	n	y	40	80	mostly quartz	n			
							X		0	n	n	y	60	90	mostly quartz	n			
								X	0	n	n	n	70	95	mostly quartz	n			
117	469184	5048626	08998	x					0	y	n	n	60	80	mostly quartz	n			
					X				0	y	n	n	50	80	m epidote	n			
						X			0	y	n	n	50	85	m epidote	n			
							X		0	y	n	n	50	85	vm epidote	n			
								X	0	n	n	n	50	90	mostly quartz	n			
118	469191	5048645	08998	x					0	n	n	y	10	80	vm epidote	n			
					X				0	n	y	n	20	80	vm epidote	n			
						X			0	n	n	n	15	80	mostly quartz	n			
							X		0	n	n	n	80	90	mostly quartz	n			
								X	0	n	n	n	50	95	mostly quartz	n			
119	469158	5048329	08998	x					0	n	n	n	10	70	mostly quartz	n			
					X				0	n	n	n	20	70	mostly quartz	n			
						X			0	n	n	n	25	80	mostly quartz	n			
							X		0	n	n	n	25	80	mostly quartz	n			
								X	0	n	n	n	40	90	mostly quartz	n			
120	469166	5048355	08998	x					0	n	y	n	10	60	vm garnet, vm epidote	n			
					X				0	n	y	n	10	60	vm epidote	n			
						X			0	n	n	n	30	80	mostly quartz	n			
							X		0	n	n	n	40	80	mostly quartz	n			
								X	0	n	n	n	40	90	mostly quartz	n			
247	471487	5044669	08997	X					0	y	y	n	25%	50%	negligible, mostly quartz	n			
					X				0	y	y	n	60%	80%	negligible, mostly quartz	n			
						X			0	y	y	n	70%	85%	negligible, mostly quartz	n			
							X		0	y	n	n	80%	85%	negligible, mostly quartz	n			
								X	0	y	n	n	80%	85%	negligible, mostly quartz	n			
248	471550	5044768	08997	X					1	y	y	n	40%	80%	v/m epidote, mostly quartz	n			
					X				0	y	y	n	50%	70%	v/m epidote, mostly quartz	n			
						X			0	y	y	n	80%	90%	v/m epidote, mostly quartz	n			
							X		0	y	y	n	80%	80%	v/m epidote, v/m garnet	n			
								X	0	y	y	n	80%	80%	v/m epidote, v/m garnet	n			

Stream Sediment Panning Results

Sample #			Licence #	Fractions (US Mesh)					Other Materials Noted							Gold			
										Iron (Fe)			Black Sand						
CLR-12-	Easting	Northing		-18 to +45	-45 to +60	-60 to +80	-80	-140	Arsenopyrite (AsPy)	Specular Hematite	Regular Hemitite	Iron Pyrite (FeS)	%	% Magnetic	Light Colour Minerals (v/m-very minor, m-minor, avg-average)	(Y/N)	# Units	Size (mm)	Description
249	471227	5045156	08997	X					1	n	y	n	25%	90%	v/m epidote, v/m muscovite	n			
					X				0	n	y	n	40%	90%	negligible, mostly quartz	n			
						X			0	n	y	n	50%	90%	negligible, mostly quartz	n			
							X		0	y	y	n	80%	80%	negligible, mostly quartz	n			
								X	0	y	y	n	80%	80%	negligible, mostly quartz	n			
250	469662	5044059	08997	X					0	n	y	n	20%	50%	negligible, mostly quartz	n			
					X				0	n	y	n	50%	90%	negligible, mostly quartz	n			
						X			0	n	y	n	50%	95%	negligible, mostly quartz	n			
							X		0	y	y	n	50%	85%	negligible, mostly quartz	n			
								X	0	y	y	n	50%	85%	negligible, mostly quartz	n			
251	469625	5044347	08997	X					0	y	n	n	10%	50%	m epidote, v/m muscovite, mainly quartz	n			
					X				0	n	y	n	40%	50%	m epidote, v/m muscovite, mainly quartz	n			
						X			0	n	y	n	55%	95%	m epidote, mainly quartz	n			
							X		0	y	y	n	70%	65%	m epidote, mainly quartz	n			
								X	0	y	y	n	70%	65%	m epidote, mainly quartz	n			
252	469800	5044711	08997	X					0	y	y	n	20%	70%	negligible, mostly quartz	n			
					X				0	y	y	n	30%	90%	v/m garnet, m muscovite, v/m epidote	n			
						X			0	y	y	n	50%	90%	v/m garnet, m muscovite, v/m epidote	n			
							X		0	y	y	n	60%	80%	negligible, mostly quartz	n			
								X	0	y	y	n	60%	80%	negligible, mostly quartz	n			
253	469430	5045217	08997	X					0	y	y	n	25%	80%	negligible, mostly quartz	n			
					X				0	y	n	n	40%	80%	negligible, mostly quartz	n			
						X			0	y	n	n	60%	80%	negligible, mostly quartz	n			
							X		0	y	y	n	80%	60%	negligible, mostly quartz	n			
								X	0	y	y	n	80%	70%	negligible, mostly quartz	n			
254	470070	5044486	08997	X					0	y	n	n	30%	70%	negligible, mostly quartz	n			
					X				0	y	y	n	55%	70%	negligible, mostly quartz	n			
						X			0	y	y	n	45%	80%	negligible, mostly quartz	n			
							X		0	n	y	n	50%	60%	negligible, mostly quartz	n			
								X	0	n	y	n	50%	60%	negligible, mostly quartz	n			
255	470151	5044504	08997	X					0	n	y	n	60%	70%	negligible, mostly quartz	n			
					X				0	n	y	n	55%	75%	negligible, mostly quartz	n			
						X			0	n	y	n	45%	80%	negligible, mostly quartz	n			
							X		0	n	y	n	50%	85%	v/m epidote, mostly quartz	n			
								X	0	n	y	n	50%	85%	v/m epidote, mostly quartz	n			

Sluice Fractions XRF Results
(All units of uncorrected ppm)

Sample CLR-12	As+45	Sb+45	Pb+45	Zn+45	Y+45	Th+45	Zr+45	Nb+45	As+60	Sb+60	Pb+60	Zn+60	Y+60	Th+60	Zr+60	Nb+60	As+80	Sb+80	Pb+80	Zn+80	Y+80
010	8	0	87	250	588	27	349	1431	16	0	78	234	587	0	340	1641	14	5	62	164	479
116	1	16	49	206	1105	110	720	2597	1	21	10	110	600	0	340	2148	3	0	39	153	851
117	0	8	62	238	1226	249	905	3228	2	0	66	167	791	201	584	2328	17	0	72	196	740
118	0	40	36	153	858	227	633	2007	4	0	36	112	827	0	490	1743	7	0	24	110	819
119	8	31	102	414	960	27	589	2832	6	13	128	527	1001	233	447	2032	15	28	105	508	882
120	14	0	110	268	1004	295	550	2493	3	0	91	280	1082	285	494	2359	4	0	82	239	702
247	7	0	26	57	268	45	326	1282	3	0	32	55	245	122	258	906	9	0	64	65	388
248	1	0	26	55	457	116	267	1302	2	3	21	56	443	167	220	1183	5	0	25	43	322
249	3	0	24	6	144	91	101	1253	6	10	44	21	335	96	178	1810	8	0	53	24	497
250	17	0	112	81	389	212	295	1137	7	0	74	64	311	29	166	996	15	0	166	78	297
251	2	14	58	37	226	85	346	1519	0	0	96	90	249	280	333	1448	0	0	77	77	358
252	5	0	66	153	399	216	212	1381	3	0	38	100	336	158	182	1062	1	0	47	79	385
253	0	0	28	13	238	91	285	1055	1	5	28	28	231	128	212	1477	1.6	0	17	29	536
254	15	0	94	251	1099	182	387	2175	10	0	130	333	1082	152	340	1988	12	21	127	346	1580
255	11	8	88	428	1019	140	670	2663	7	32	77	332	1161	212	343	2355	17	0	81	346	1245
Average	6.1	7.8	64.5	174.0	665.3	140.9	442.3	1890.3	4.7	5.6	63.3	167.3	618.7	137.5	328.5	1698.4	8.6	3.6	69.4	163.8	672.1

NF means No Fraction was Sieved

Sluice Fractions XRF Results
(All units of uncorrected ppm)
2 of 3

Sample CLR-12	Th+80	Zr+80	Nb+80	As_neg80	Sb_neg80	Pb_neg80	Zn_neg80	Y_neg80	Th_neg80	Zr_neg80	Nb_neg80	As_neg140	Sb_neg140	Pb_neg140	Zn_neg14
010	437	209	2388	33	12	113	458	1685	219	3769	8189	NF	NF	NF	NF
116	1	460	2259	4	0	71	211	724	7	430	2185	14	24	242	421
117	333	529	1731	19	1	102	279	833	1	428	1985	11	0	349	507
118	324	465	2332	7	5	34	115	703	70	371	1877	11	0	86	212
119	249	334	1968	13	30	178	745	1203	259	359	1773	6	0	231	844
120	0	386	2119	8	22	121	421	858	67	387	1650	7	17	171	503
247	71	262	1220	4	0	80	72	338	55	224	1154	18	10	216	122
248	91	246	1280	3	0	30	61	432	90	201	1255	9	3	39	92
249	334	179	4427	12	20	82	54	782	403	459	4667	15	11	97	59
250	33	213	986	22	5	191	84	294	0	204	1207	19	17	314	115
251	156	279	1417	4	0	74	84	375	173	305	1979	0	0	121	137
252	29	250	1457	2	0	53	74	485	99	454	1849	12	0	207	127
253	540	184	2034	0	0	27	30	359	321	452	2635	5	0	54	92
254	170	291	2189	8	0	158	396	1680	313	268	1990	6	4	189	437
255	216	309	1830	15	0	139	597	2034	145	291	1627	11	0	155	488
Average	198.9	306.4	1975.8	10.3	6.3	96.9	245.4	852.3	148.1	573.5	2401.5	10.3	6.1	176.5	296.9

NF means No Fraction was Sieved

Sluice Fractions XRF Results
(All units of uncorrected ppm)

Sample CLR-12	Y_neg140	Th_neg140	Zr_neg140	Nb_neg140
010	NF	NF	NF	NF
116	933	176	648	2248
117	1225	73	699	2416
118	829	141	687	2378
119	1684	178	496	2310
120	1194	154	601	2131
247	824	0	719	1446
248	572	169	783	1829
249	1154	995	1167	6805
250	515	12	561	1716
251	538	164	1059	2219
252	1021	227	913	2555
253	893	394	2321	5665
254	1869	406	808	2794
255	3060	244	317	1343
Average	1165.1	238.1	841.4	2703.9

NF means No Fraction was Sieved

Rock Sample XRF Results and Descriptions
(All units of uncorrected ppm)

Rock #	As	Sb	Zn	Pb	Y	Nb	Zr	Th	CPS	Type	Description
1	10	73	362	5	1019	1846	468	437	150	O/C	dark grey to black mafic intrusive
2	0	0	141	20	2926	5374	1582	485		float	mafic intrusive plus flow banded ryholi
3	9	0	29	16	2190	1630	81	333	600	O/C	red ryhotic granite
4	3	0	22	23	784	4039	181	342	400	O/C	pinkish-grey rhyolite
5	3	0	48	22	479	1358	220	577	500	O/C	pinkish-grey med-grained granitic
6	1	0	23	12	488	2385	364	708	600	O/C	dk grey ryholite near mafic intrusion
7	0	0	81	35	537	3351	551	474	475	O/C	dk grey ryholite near mafic intrusion
8	11	0	23	28	1131	2638	442	518	380	O/C	pinkish grey rhyolite intrudes mafic
9	9	0	102	12	3109	4448	1739	374		float	pink/purple rhyolite
10	2	0	35	4	697	2250	79	217		float	granite with mafics
11	5	13	38	29	861	3060	254	565		float	granite with mafics
12	6	0	21	4	470	2916	140	381		float	red granite with mafics
13	9	0	30	15	997	2236	293	417	350	O/C	light beige / grey granitic
14	0	27	48	29	538	2847	311	568		float	Pink sugary granite
Average	4.9	8.1	71.6	18.1	1159.0	2884.1	478.9	456.9			

APPENDIX B

XRF Analyzer Specs and Theory

DELTA
Dynamic XRF

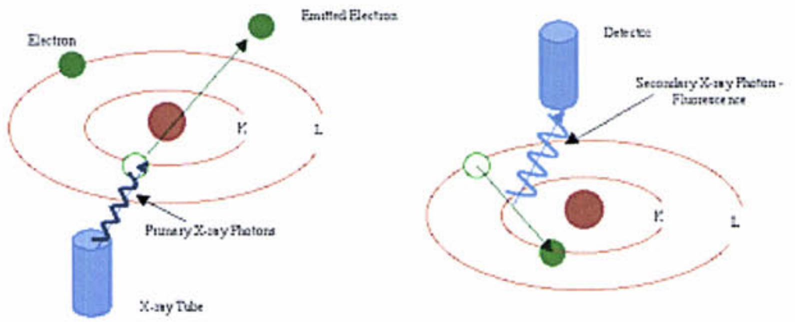
X-Ray Fluorescence (XRF) Spectrometry

BASIC THEORY

Although more popularly known for its diagnostic use in the medical field, the use of x-rays forms the basis of many other powerful measurement techniques, including X-ray Fluorescence (XRF) Spectrometry.

XRF Spectrometry is used to identify elements in a substance and quantify the amount of those elements present to ultimately determine the elemental composition of a material. An element is identified by its characteristic X-ray emission wavelength (λ) or energy (E). The amount of an element present is quantified by measuring the intensity (I) of its characteristic emission.

All atoms have a fixed number of electrons (negatively charged particles) arranged in orbitals around the nucleus. Energy Dispersive (ED) XRF and Wavelength Dispersive (WD) XRF Spectrometry typically utilize activity in the first three electron orbitals, the K, L, and M lines, where K is closest to the nucleus.



In XRF Spectrometry, high-energy primary X-ray photons are emitted from a source (X-ray tube) and strike the sample. The primary photons from the X-ray tube have enough energy to knock electrons out of the innermost, K or L, orbitals. When this occurs, the atoms become ions, which are unstable. An electron from an outer orbital, L or M, will move into the newly vacant space at the inner orbital to regain stability. As the electron from the outer orbital moves into the inner orbital space, it emits an energy known as a secondary X-ray photon. This phenomenon is called fluorescence. The secondary X-ray produced is characteristic of a specific element. The energy (E) of the emitted fluorescent X-ray photon is determined by the difference in energies between the initial and final orbitals of the individual transitions.

This is described by the formula

$$E=hc\lambda^{-1}$$

where h is Planck's constant; c is the velocity of light; and λ is the characteristic wavelength of the photon.

Energies are inversely proportional to the wavelengths; they are characteristic for each element. For example the Kα energy for Iron (Fe) is about 6.4keV. Typical spectra for EDXRF Spectrometry appear as a plot of Energy (E) versus the Intensity (I).

Elemental Analysis

XRF Spectrometry is the choice of many analysts for elemental analysis. XRF Spectrometry easily and quickly identifies and quantifies elements over a wide dynamic concentration range, from PPM levels up to virtually 100% by weight. XRF Spectrometry does not destroy the sample and requires little, if any, sample preparation. It has a very fast overall analysis turnaround time. These factors lead to a significant reduction in the per sample analytical cost when compared to other elemental analysis techniques.

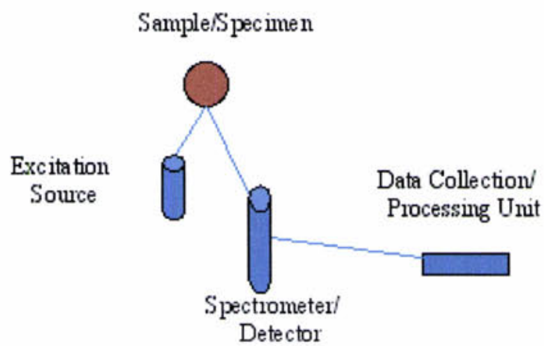
Aqueous elemental analysis instrument techniques typically require destructive and time-consuming specimen preparation, often using concentrated acids or other hazardous materials. Not only is the sample destroyed, waste streams are generated during the analysis process that need to be disposed of, many of which are hazardous. These aqueous elemental analysis techniques often take twenty minutes to several hours for sample preparation and analysis time. All of these factors lead to a relatively high cost per sample. However, if PPB and lower elemental concentrations are the primary measurement need, aqueous instrument elemental analysis techniques are necessary.

All elemental analysis techniques experience interferences, both chemical and physical in nature, and must be corrected or compensated for in order to achieve adequate analytical results. Most aqueous instrument techniques for elemental analysis suffer from interferences that are corrected for by extensive and complex sample preparation techniques, instrumentation modifications or enhancements, and by mathematical corrections in the system's software. In XRF Spectrometry, the primary interference is from other specific elements in a substance that can influence (matrix effects) the analysis of the element(s) of interest. However, these interferences are well known and documented; and, instrumentation advancements and mathematical corrections in the system's software easily and quickly correct for them. In certain cases, the geometry of the sample can affect XRF analysis, but this is easily compensated for by selecting the optimum sampling area, grinding or polishing the sample, or by pressing a pellet or making glass beads.

Quantitative elemental analysis for XRF Spectrometry is typically performed using Empirical Methods (calibration curves using standards similar in property to the unknown) or Fundamental Parameters (FP). FP is frequently preferred because it allows elemental analysis to be performed without standards or calibration curves. This enables the analyst to use the system immediately, without having to spend additional time setting up individual calibration curves for the various elements and materials of interest. The capabilities of modern computers allow the use of this no-standard mathematical analysis, FP, accompanied by stored libraries of known materials, to determine not only the elemental composition of an unknown material quickly and easily, but even to identify the unknown material itself.

Spectrometers

Innov-X Systems utilizes the EDXRF Spectrometer technique for its mechanical simplicity and excellent adaptation to portable field use. An EDXRF system typically has three major components: an excitation source, a spectrometer/detector, and a data collection/processing unit. The ease of use, rapid analysis time, lower initial purchase price and substantially lower long-term maintenance costs of EDXRF Spectrometers have led to having more systems in use today worldwide than WDXRF Spectrometer systems. Handheld, field portable EDXRF units can be taken directly to the sample as opposed to bringing the sample to the analyzer and configuring it to fit in an analysis chamber. Innov-X Systems portable, handheld EDXRF units solve real 21 st century application problems: solving crimes, analyzing alloys, exposing pollution, preserving history, searching for WMD's, conserving art treasures, and a myriad of other elemental field-oriented analyses.



The Deltas' Cutting-edge features include:

- Exceptional speed and sample throughput due to state-of-the-art electronics, a floating point processor, and redesigned analytical geometry

- Ruggedized, weather and dustproof industrialized LEXAN housing – no PDA or movable screen – provides superior reliability

- Significant improvement in LODs and light element analysis resulting from the DELTA's unique 4W, 200μA (max) x-ray tube

- Advanced integrated technology including an accelerometer, barometer, true hot-swap battery capabilities, and other innovations
- Icon-driven UI via bright, Blanview ™ color touchscreen
    - brightens in sunlight – easy to read in all environments
- Available with fully integrated camera and X-ray spot collimation
    - crisp accurate sample images that can be archived into memory
    - small spot collimation for focusing the beam to a 3mm diameter spot.

Innov-X has reinvented on-site analysis with the DELTA line; a new breed of handheld XRF. We've redesigned our analyzers from the ground up to create instruments that are both analytically superior AND rugged enough for virtually any environment. The DELTA analyzers feature the very latest in large area silicon drift detector technology, and unique 4W, 200μA (max) x-ray tubes for maximized accuracy and precision.

DELTA analyzers are also fully industrialized tools, and offer unsurpassed testing speed; yielding significantly increased productivity and throughput for operators. Take hundreds more tests per day with the DELTA analyzer. Smart on the inside. Tough on the outside. **No compromises**.

The DELTA line of analyzers feature our signature upgradeability. Customers may purchase a value-leading **Classic** model and upgrade to the analytically best **Premium** model at any time as analytical needs change - all with the same hardware platform and intuitive, friendly user interface.

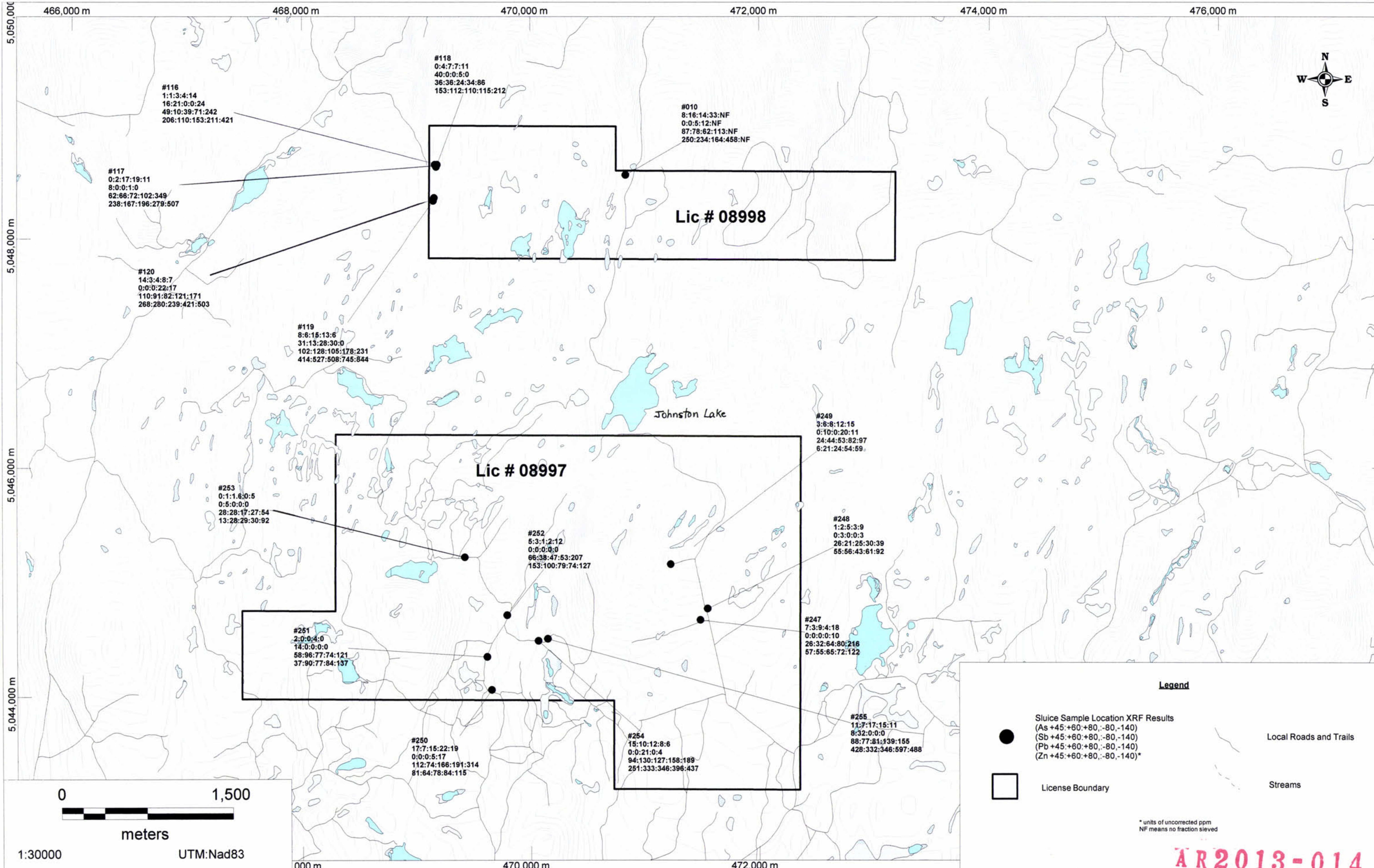
The Innov-X Handheld XRF for elemental analysis meets EPA Method 6200 for metals in soil, NIOSH Method 7702 for lead in air filters, and OSHA Methods OSSA1 and OSS1 for lead in air filters and dust wipes. The 8 RCRA Metals and Priority Pollutant Metals are easily monitored on-site with the Innov-X Handheld XRF.

The Innov-X Systems Materials Testing & Mining Analyzers include standard hardware and accessories. Capabilities available include Fundamental Parameters, Empirical Analysis, linear or quadratic calibration modes, LEAP for Light Element Analysis, and Single or Multi element analysis capability.

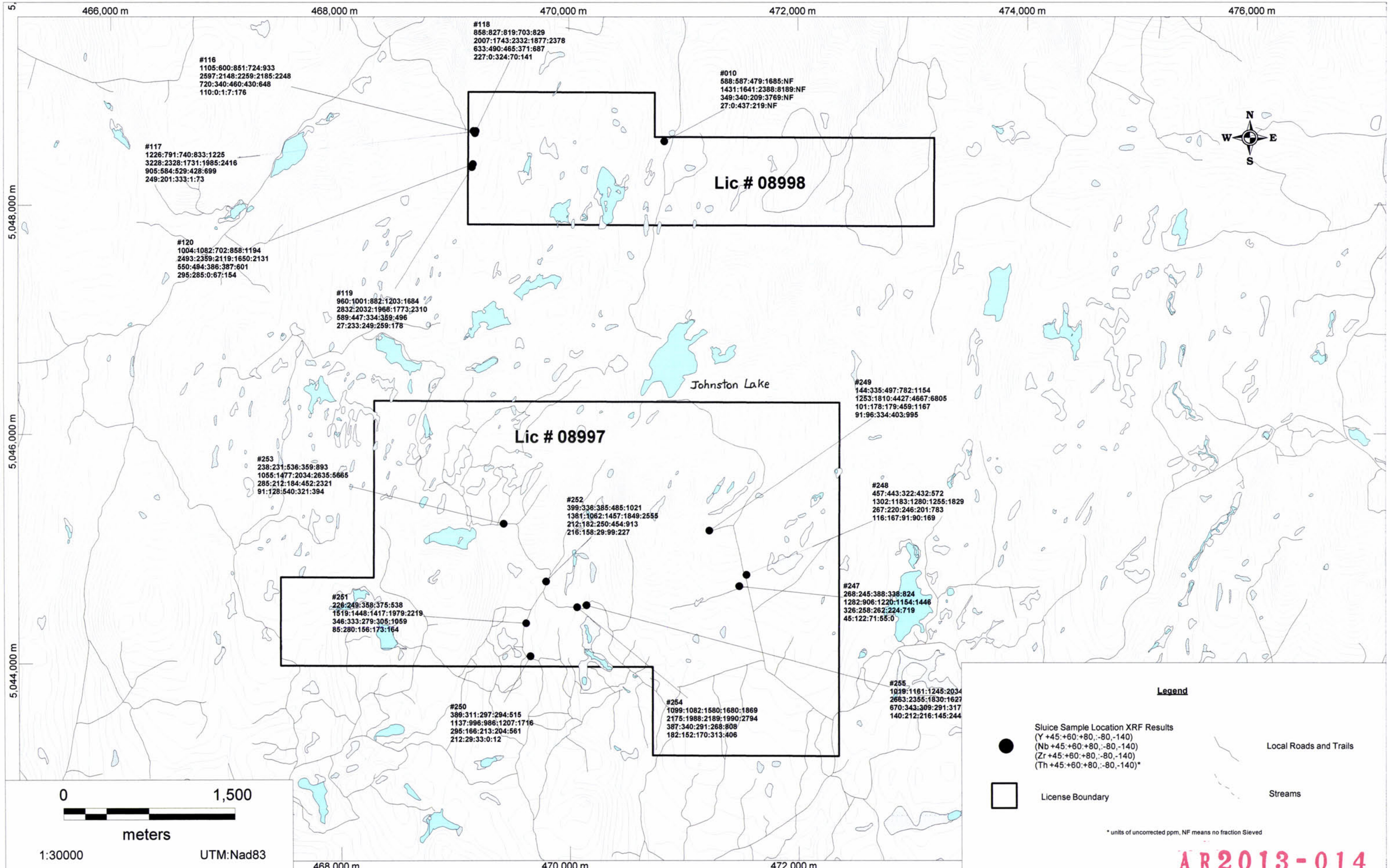
Appendix C

Maps

Map 1- XRF Results for Au Indicators (As,Sb, Pb, Zn) in Sluice Fractions

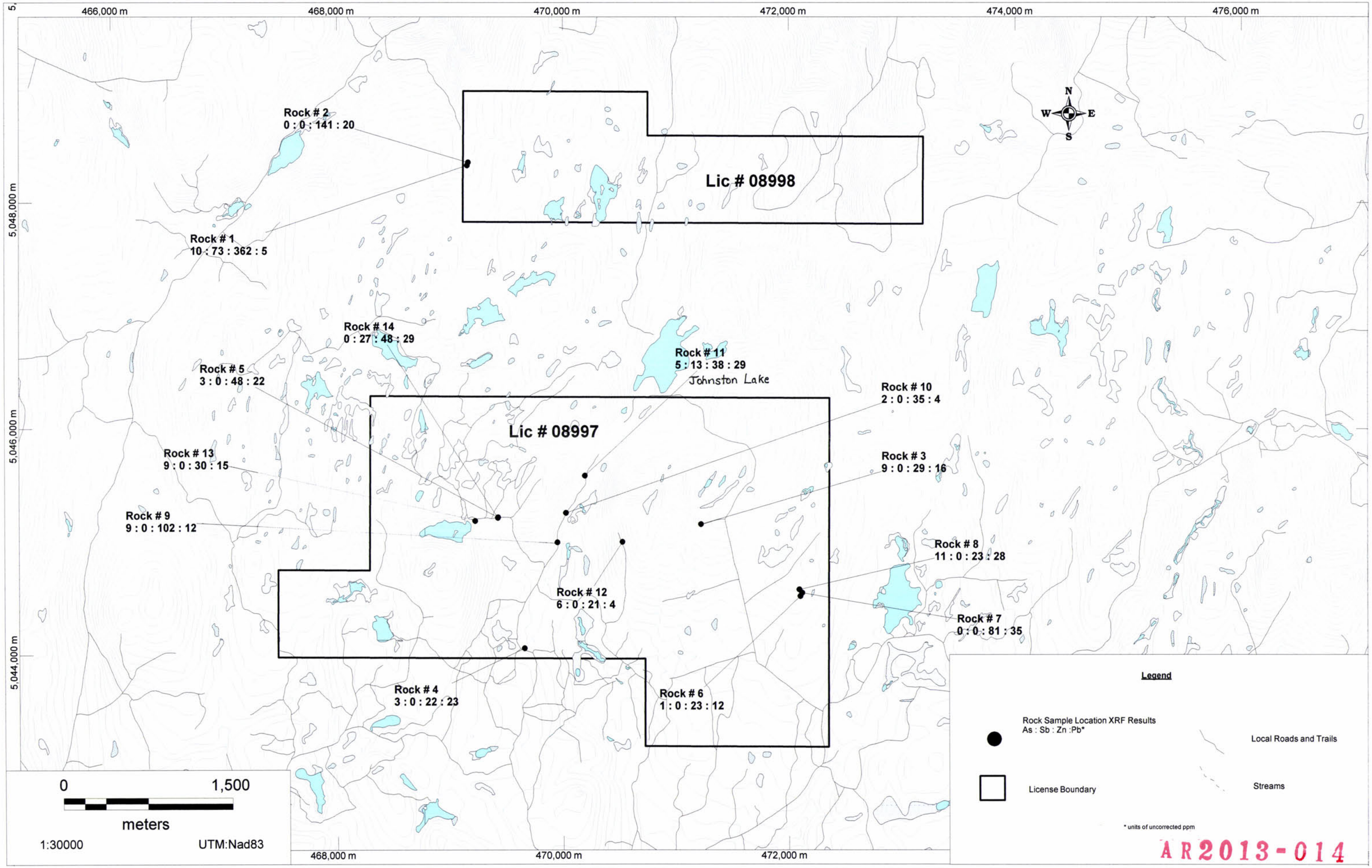


Map 2- XRF Results for REE Indicators (Y,Nb, Zr, Th) in Sluice Fractions



AR2013-014

Map 3- XRF Results for Au Indicators (As,Sb, Zn, Pb) in Rocks



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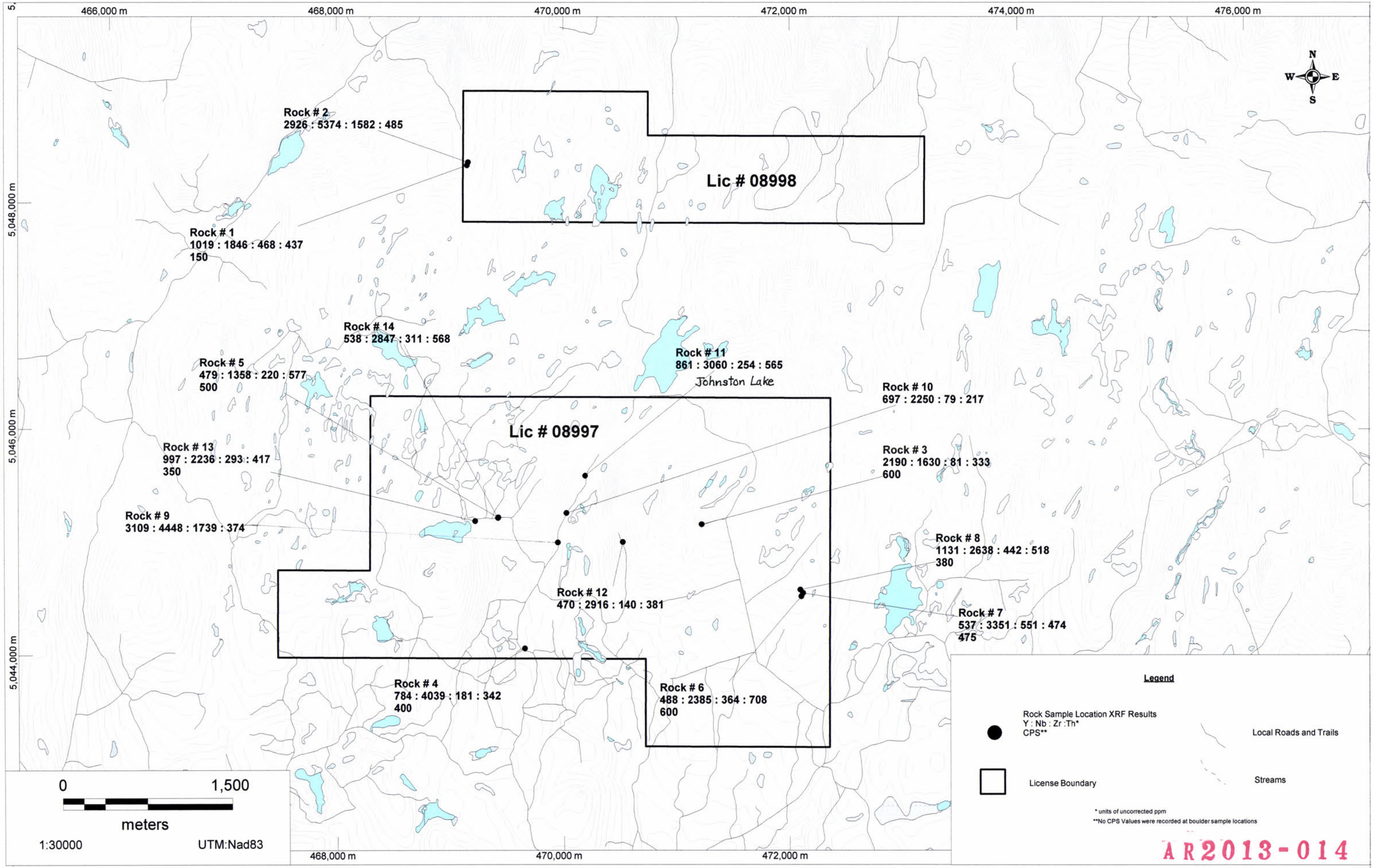
Map 4- XRF Results for REE Indicators (Y,Nb, Zr, Th) and CPS in Rocks



AR2013-014

NOVA SCOTIA
Natural Resources

Map 11E 11B
Refs.

Form 10 - Statement of Assessment Work Expenditure

(pursuant to the *Mineral Resources Act*, S.N.S. 1990, c. 18, s. 43(1))

(Complete as necessary to substantiate the total claimed.)

Re: Licence No. 08997 Date of issue February 2, 2010

Type of Work		Amount Spent
1. Prospecting	4 days	1,400
2. Geological mapping	days	
3. Trenching/stripping/refilling	m^2 / m^3	
4. Assaying & whole rock analysis	#	
5. Other laboratory	57 #	6,863
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	DNRMPT FEB04'13 15:11	
(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	63 samples	
(b) (i) Rock	12 samples	
(ii) Core	samples	
(iii) Chips	samples	
(c) (i) Soil	samples	
(ii) Overburden	samples	
(d) Gas	samples	
(e) Biogeochemistry	samples	
(f) Sample collection	11.5 days	4,325
(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) Hotel, Mileage, Spectrometer, Food, Chainsaw, ATV		4,950
Subtotal		17,538
Overhead costs		
12. Secretarial services		
13. Drafting services		
14. Office expenses (rent, heat, light, etc.)		1,793
15. Field supplies		390
16. Compensation paid to landowners		
17. Legal fees		
18. Other (describe)		
Subtotal		2,183
Grand total		19,721

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

Name	Address	Dates Worked
Lindsay Allen	Terence Bay, Nova Scotia	August 18, 19, 25, 26, September 1, 2, 8, 9
Robert Krienke	Halifax, Nova Scotia	August 18, 19, 25, 26, September 1, 2, 8, 9
Alex MacKay	Dartmouth, Nova Scotia	August 26, September 1

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 President I am duly authorized to make this certification.
(position in company or licensee)

Dated at Halifax in the Province of Nova Scotia on January 29, 2013.

Name and address of licensee: Clear Lake Resources

11River Road, Tenrence Bay River, Nova Scotia, B3T 1X2

Signature L. Allen.

For further information, contact the Registrar of Mineral and Petroleum Titles at 1-902-424-4068.

NOVA SCOTIA
Natural Resources

Map 11E 11B
Refs.

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

(Complete as necessary to substantiate the total claimed.)
Re: Licence No. 08998 Date of issue February 2, 2010

Type of Work		Amount Spent
1. Prospecting	____ days	
2. Geological mapping	____ days	
3. Trenching/stripping/refilling	____ m^2 / ____ m^3	
4. Assaying & whole rock analysis	____ #	
5. Other laboratory	31 #	4,154
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	41 samples	
(b) (i) Rock	2 samples	
(ii) Core	____ samples	
(iii) Chips	____ samples	
(c) (i) Soil	____ samples	
(ii) Overburden	____ samples	
(d) Gas	____ samples	
(e) Biogeochemistry	____ samples	
(f) Sample collection	8 days	3,000
(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) Hotel, Mileage, Spectrometer, Food, Chainsaw, ATV		2,648
Subtotal		9,802
Overhead costs		
12. Secretarial services		
13. Drafting services		
14. Office expenses (rent, heat, light, etc.)		1,001
15. Field supplies		205
16. Compensation paid to landowners		
17. Legal fees		
18. Other (describe)		
Subtotal		1,206
Grand total		11,008

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

Name	Address	Dates Worked
Lindsay Allen	Terence Bay, Nova Scotia	September 8, 9, 15, 22, 23
Robert Krienke	Halifax, Nova Scotia	September 8, 9, 15, 22, 23
Alex MacKay	Dartmouth, Nova Scotia	September 15, 29

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 President I am duly authorized to make this certification.
(position in company or licensee)

Dated at Halifax in the Province of Nova Scotia on January 29, 2013.

Name and address of licensee: Clear Lake Resources

11River Road, Tenrence Bay River, Nova Scotia, B3T 1X2

Signature [signature]

For further information, contact the Registrar of Mineral and Petroleum Titles at 1-902-424-4068.