AR2012-018

2011 Assessment Report for

Licenses 08998

Held by Clear Lake Resources Inc.

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1.0 Summary

License 08998 is 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 2011 work program focused on collecting roadway spectrometer data, rock, soil and sluice samples. First pass work included a roadway spectrometer survey as well as a roadway rock outcrop sampling program. Phase 2 work included the collection of 30 soil samples, 1 rock sample and 3 heavy metal concentrate samples.

Spectrometer results were generally poor as no strong anomalies were observed, possibly due to the fact that there are not a lot of access roads on the property.

Soil samples showed several strong (over 800 uncorrected ppm Y) Y anomalies, two of which were located within close proximity.

Positive Au anomalies (over 20 uncorrected ppm Au) were observed at 3 of the soil sites.

The one rock sample showed elevated but not enriched REE indicators. No positive results for Au or Au indicators were observed.

Heavy metal concentrate examples were generally disappointing as no visible gold was observed and only one size fraction (-80 mesh) showed anomalous Au results with the XRF analyzer.

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 silicified basalts of the Diamond Brook Formation which overlies the Byers Brook Formation (MacHattie, 2011). As such, prospecting was completed for gold in the upper layers of the Byers Brook Formation and along the Diamond Brook Formation contact.

License 08998 covers some basaltic flows within the Byers Brook Formation Rhyolites. As such, this licence show more promise for an epithermal gold discovery than a REE discovery, but potential for both is still apparent.

The 2011 work program included a full spectrometer survey of all roadways as well as collection of rock, soil and sluice samples. 3 sluice samples specifically targeting gold were also completed on the property.

Prospecting was greatly assisted by the use of two important tools, an Olympus Innovx portable DP-6000 X-ray fluorescence analyzer (XRF) and a Radiation Solutions RS-230 Spectrometer. The XRF was used to analyze rocks and soil samples for Au and REE indicators (See Table 2 below), while the spectrometer was used to look for elevated radiometrics (Thorium), which are known indicators of REE mineralization (MacHattie, 2010). 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, results must be evaluated for anomalies rather than assuming absolute values.

3.0 Location and Access

Licence 08998 is located in Colchester County, NS, approximately 22 km NNW of the town of Truro. The property 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. See figure 1 on page 3 for location map of the licence.

License 08998 Location Map

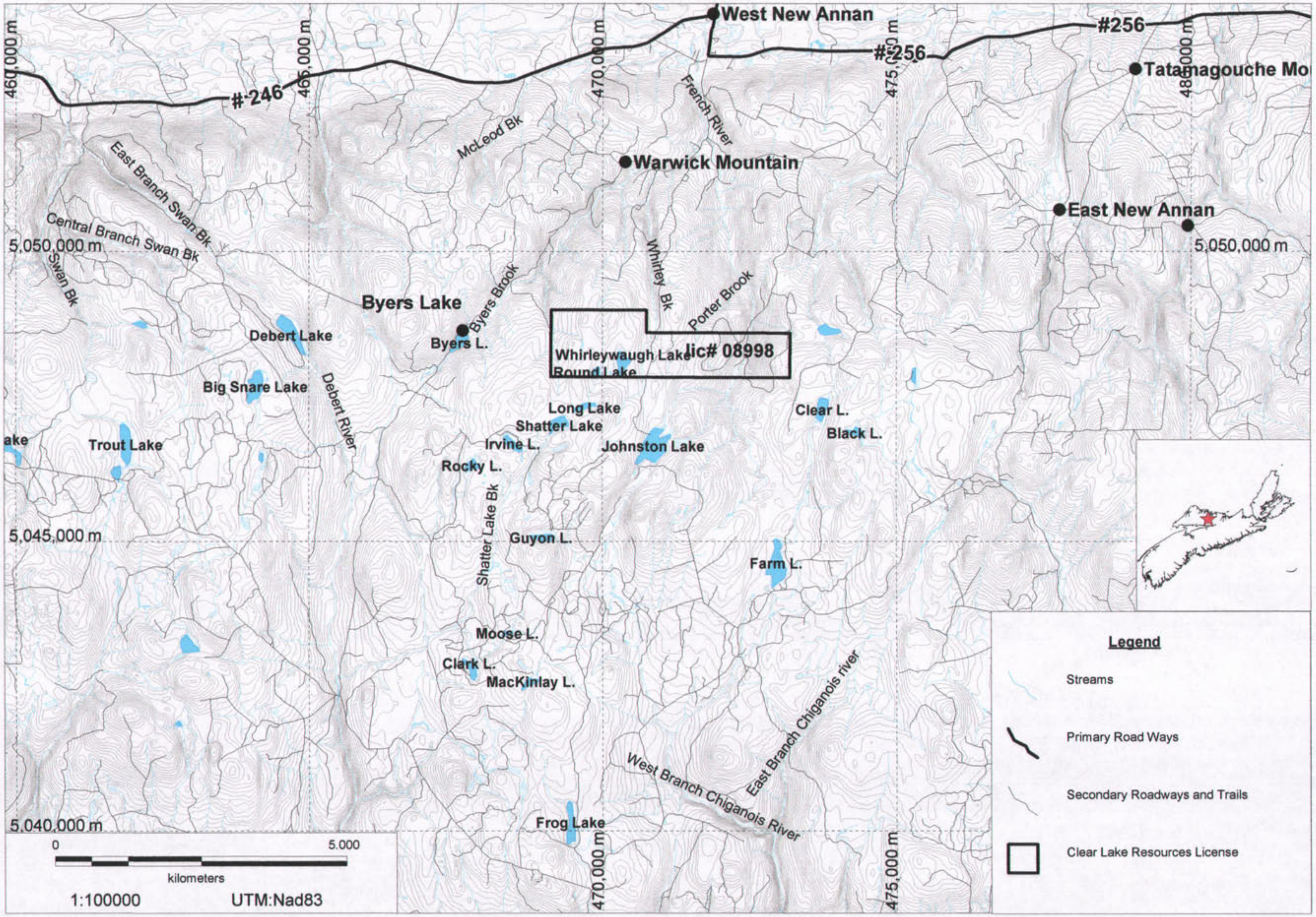

Figure 1

4.0 License Tabulation

License 08998 is composed of 24 claims. A detailed breakdown of the claims is listed in Table 1 below.

Table 1-Tabulation of Exploration License 08998 claims and tracts

License #	NTS Map Sheet	Tract	Claims	Date of issue
08998	11E/11B	77	EFDC	02/02/2010
08998	11E/11B	78	ABCDEFGH	02/02/2010
08998	11E/11B	79	ABCDEFGH MLKJ	02/02/2010

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. Unfortunately, Gulf's work was focused to the west of licence 08998.

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 plate 1. 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 east to west 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).

Locally, the geology is approximately equal parts basalt and rhyolite flows of the Byers Brook Formation.

Licence 08998 Regional Geology

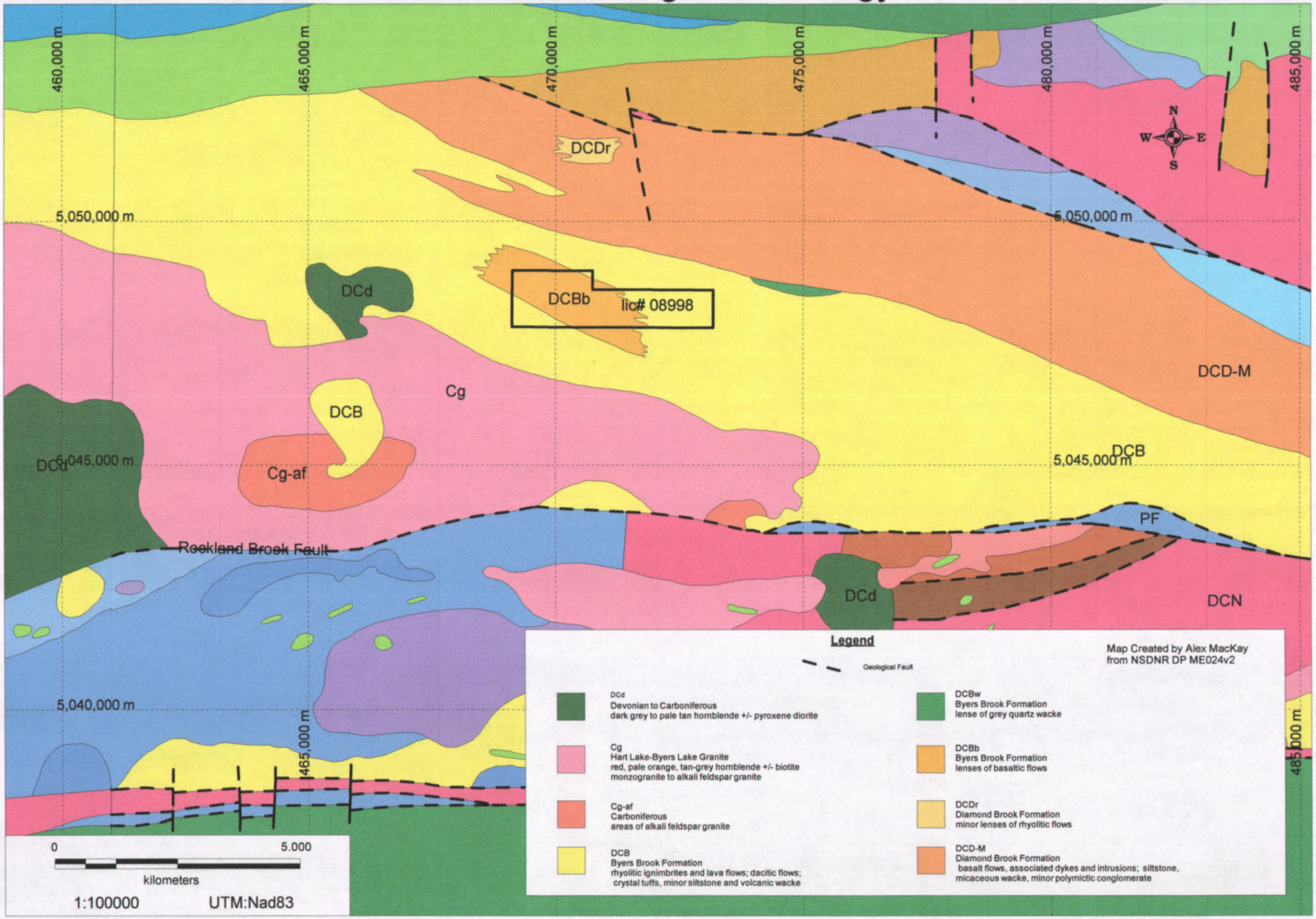

Figure 2

7.0 Work Performed

Work performed included Rare Earth element and Au prospecting, a spectrometer survey as well as rock, soil and sluice sampling. Analyses were completed in house using an Olympus Innovx DP-6000 portable XRF analyzer. As the analyzer is not capable of analyzing for rare earth elements, REE indicators must be used. A similar situation exists for gold, with the exception that gold is detectable by the analyzer provided the analyzer is pointed at a location of rock containing gold mineralization, therefore gold indicators were used. See Table 2 below for REE and Au indicators in the Cobequids.

Table 2-REE and Au indicator elements used

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

The first phase of the project was to prospect and spectrometer survey all roads and trails. The spectrometer survey was completed using a Radiation Solutions RS-230 spectrometer in survey mode. The instrument was mounted at waist height (approximately 1m) on the side of the truck or an ATV. The instrument was connected via bluetooth to a Holux-M-241 wireless GPS logger. The instrument was set to record total counts per second readings every 1 sec and a GPS location every 5 seconds; therefore 5 readings were collected for every location. The five results were then downloaded to a computer, averaged and plotted on to a map (See Map 1 in Appendix D). The spectrometer survey was conducted to identify radiometric anomalies, specifically thorium, as it has been established as an indicator for rare earth mineralization (MacHattie, 2010).

Several field traverses and the collection of soil samples were also completed on the property as well as additional spectrometer data. Traverse locations were selected based on thorium anomalies identified in the roadway spectrometer survey. Spectrometer data was collected with the instrument carried via shoulder strap, at about 1m height above the ground, a similar height to the roadway survey.

Soil samples were collected at 25 meter intervals using a 1 ½" Swedish Auger. Locations were recorded with a Garmin 60CSx hand held GPS receiver. Approximately, ½ Kg samples were collected and put into plastic Ziploc bags. Samples were then brought back to the lab and dried in an enclosed air tight drying room with a dehumidifier. Samples generally took 3-4 days to dry completely. After drying, samples were sieved with a 1/16" sieve to remove pebbles and rock chips, as pebbles and chips can give false XRF anomalies in soil samples. Material coarser than 1/16" was discarded while finer material was put back in to the sample bag. Dry, screened samples were then XRF'd.

XRF scanning procedure included scanning the soil sample through the Ziploc bag with the analyzer set to 3 beam soil mode for 15 seconds. The machine was set to export ppm values for elements of interest which were; REE indicators yttrium (Y), zirconium (Zr), niobium (Nb) and thorium (Th). Also of interest were the results for gold (Au) and gold indicators arsenic (As), antimony (Sb), lead (Pb) and zinc (Zn).

Currently, the ppm values are considered to be uncorrected ppm values as no known samples are available to generate correction factors to produce absolute results.

Rock samples were collected where interesting features such as elevated CPS values, rusty gossan, sulfide or REE style mineralization, or atypical textures were observed. Ideally, this was outcrop but samples were also collected from boulders exhibiting such features. Approximately, 1-2 kg of material was collected from each site and is stored for future reference. Notes and GPS locations were recorded at the time of collection. GPS locations were recorded with a Garmin 60CSX GPS receiver (See Appendix B for locations and descriptions). Rocks were analyzed with the XRF analyzer by selecting a fresh face on the sample displaying the interesting feature sought on the sample. The XRF analyzer was set to the same settings as for the soil samples; 3 beam soil analysis mode for 15 seconds per beam exporting uncorrected ppm values for Y, Zr, Nb, Th, Au, As, Sb, Pb and Zn.

The sluice sampling procedure began with the collection of heavy mineral concentrates from stream sediments using a Keene Engineering A52 sluice box. In total, 3 sluice samples were collected. Set up procedure included setting the sluice box in the river adjacent to a large gravel bar along the river bank. Ten 3 gallon buckets of material were collected and 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 bagged, tagged and transported back to the lab for further processing.

The first step back at the lab was to dry the samples. 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 are listed in Table 3.

Table 3-Sieve Sizes Used

Size	Tyler Equilivalent	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

Figure 3-Sample Test Vial

The 10 mesh sieve was used primarily to remove the coarsest material. Material from size fractions -10+16, -16 +42, -42 +60, -60 +80 and -80 was collected and 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 (see figure 4). The XRF analyzer was set to 3 beam soil analysis mode for 15 seconds per beam. The vials were placed upside down in a test stand so that X-ray beam went through the thin plastic cover as opposed to the thicker plastic of the container. The analyzer was set to export ppm values for gold. At this point units are referred to as uncorrected ppm values, as no known samples were available to generate correction factors which are necessary to generate absolute values.

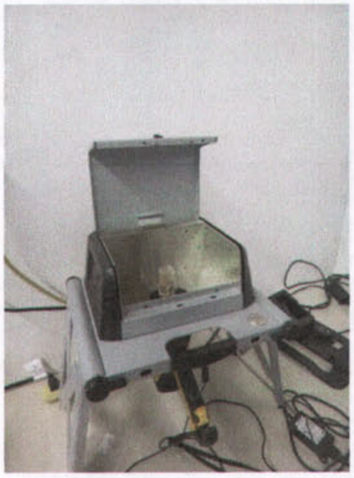
Figure 4-Portable XRF in test stand

Upon completion of XRF analyses samples were inspected for visible gold grains. As there was not enough material from each sample fraction to utilize the Wilfley Table, each fraction was carefully hand panned. The resulting heavies 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. Only gold grains passing this test are included in results.

8.0 Results of Work

No real strong anomalies were discovered as part of the spectrometer survey. As such the standard approach of returning to radiometric anomalous areas to complete soil sampling could not be completed. Therefore the soil sampling area was chosen in the center of the property at an easily accessible location.

Soil results for REE indicators are plotted on Map 3 in Appendix E. Soil sample locations are identified by sample number and plotted on Map 2. Using a background value of 500 uncorrected ppm Y, and determining that a strong positive anomaly is anything over 800 uncorrected ppm Y, 5 strong Y anomalies were observed (see Map 3). Of particular interest are samples CLS-808 and 824 which tested for 1055 and 2497 uncorrected ppm Y.

Soil results for Au were also interesting as 3 sites produced positive Au anomalies. For the purposes of this work program anything over 20 uncorrected ppm Au is identified as an anomaly. These sites were CLS-805, 806 and 827 which produced results of 20, 48 and 38 uncorrected ppm Au respectively.

The one rock sample collected from the property produced elevated numbers for all of the REE indicators, but based on the authors experience with other rocks in the area the REE indicator results are elevated but not enriched. No positive anomalies were observed for Au and Au indicators

Results for the sluice samples were disappointing as no visible gold grains were observed. Only one anomaly was observed with the XRF Analyzer (Site 1, -80 fraction). XRF results for sluice site 3 were corrupted. See Table 4 below for a tabulated list of sluice results.

Table 4-Sluice gold grain counts and XRF results

Tyler Mesh fraction	Arsenopyrite	Iron Minerals	Visible Gold Grains	XRF Results Uncorrected ppm Au	Notes
Site 1, X=470822m, Y=5048544m (UTM, Nad83)					
-10+16	None	Hematite + Magnetite	0	-12	Light coloured (clear to white to pale green) minerals, some are magnetic.
-16+42	None	Hematite + Magnetite	0	19	Light coloured (clear to white to pale green) minerals, some are magnetic.
-42+60	Very minor gold coloured	Black sand, 90% magnetic	0	9	Light coloured (clear to white to pale green) minerals, some are magnetic.
-60+80	Very minor gold coloured	Black sand, 90% magnetic	0	19	Light coloured (clear to white to pale green) minerals, some are magnetic.
-80	Minor gold coloured	Minor Black sand, 90% magnetic	0	33	Light coloured (clear to white to pale green) minerals, some are magnetic.
Site 2, X=470793m, Y=5048450m (UTM, Nad83)					
-10+16	None	Hematite + Magnetite	0	-61	Light coloured (clear to white to pale green) minerals, some are magnetic.
-16+42	None	Hematite + Magnetite	0	-13	Light coloured (clear to white to pale green) minerals, some are magnetic.
-42+60	Very minor gold coloured	Minor Black sand, 90% magnetic	0	-8	Light coloured (clear to white to pale green) minerals, some are magnetic.
-60+80	Very minor gold coloured	Abundant Black sand, 90% magnetic	0	19	Light coloured (clear to white to pale green) minerals, some are magnetic.
-80	Minor gold coloured	Black sand, 90% magnetic	0	-2	Light coloured (clear to white to pale green) minerals, some are magnetic.
Site 3, X=470771m, Y=5048407m (UTM, Nad83)					
-10+16	None	Hematite + Magnetite	0	N/A	Light coloured (clear to white to pale green) minerals, some are magnetic.
-16+42	None	Hematite + Magnetite	0	N/A	Light coloured (clear to white to pale green) minerals, some are magnetic.
-42+60	Very minor gold coloured	Black sand, 90% magnetic	0	N/A	Light coloured (clear to white to pale green) minerals, some are magnetic.
-60+80	Very minor gold coloured	Abundant Black sand, 90% magnetic	0	N/A	Light coloured (clear to white to pale green) minerals, some are magnetic.
-80	Minor gold coloured	Black sand, 90% magnetic	0	N/A	Light coloured (clear to white to pale green) minerals, some are magnetic.

9.0 Conclusions and Recommendations

The 2011 work program produced some interesting results which warrant follow-up work in the 2012 work program.

Further analysis of the 2011 data should be completed.

10.0 References

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11.0 Statement of Qualifications

I, S. Alex Mackay of Westville, Nova Scotia do hereby swear to be a qualified author for Nova Scotia exploration assessment reports. Qualifications stem from degrees obtained from Dalhousie University of Halifax, Nova Scotia Canada.

-BSc. Earth Science & Physics (2008)

-Dip. of Engineering (2003)

In addition to degree qualifications, I have 3+ years of professional work experience including report writing, as well as Au and REE exploration experience in Nova Scotia and abroad.

Alex MacKay (BSc.)

Appendix A

Raw Spectrometer Data

With Nad83 UTM Coordinates

Average	x	y	Average	x	y	Average	x	y	Average	x	y
197.6	469232	5047948	246.6	469955	5048446	182.8	469251	5047865	177.6	469884	5048654
197.2	469239	5047927	251	469966	5048424	206.2	469250	5047860	226.6	469891	5048632
163	469238	5047935	233.6	469972	5048409	204.2	469251	5047857	219.4	469898	5048604
173.4	469235	5047939	187.2	469968	5048391	202.4	469252	5047852	250.2	469901	5048581
159.6	469235	5047942	175.6	469951	5048375	191.6	469253	5047846	266.8	469907	5048562
180.2	469233	5047942	167.8	469940	5048368	204.6	469254	5047840	238	469919	5048544
174	469233	5047942	189	469911	5048350	155	469257	5047880	219.4	469928	5048523
197	469233	5047942	195	469890	5048336	156.2	469257	5047885	233	469936	5048501
213	469235	5047944	198.4	469869	5048320	148	469256	5047888	224.2	469942	5048481
207	469234	5047945	175.8	469853	5048308	158.2	469255	5047894	149.4	470762	5047882
196.2	469233	5047946	171.8	469831	5048290	171.8	469255	5047835	108.2	470822	5048068
210.2	469232	5047947	163	469810	5048270	187.6	469263	5047832	108.4	470818	5048060
238.6	469231	5047947	207.8	469794	5048256	184.8	469264	5047838	117.4	470814	5048052
212.4	469231	5047947	224.8	469768	5048233	189.6	469264	5047840	121.8	470811	5048042
207.6	469231	5047947	193.4	469749	5048217	192.2	469263	5047862	92.8	470806	5048035
242	469232	5047947	219.2	469819	5048839	210	469265	5047848	104.6	470804	5048027
225.2	469233	5047947	242.4	469818	5048847	212.4	469265	5047852	92.6	470799	5048017
235	469232	5047947	220.4	469815	5048855	189	469265	5047857	97.4	470795	5048006
222.4	469231	5047948	203.4	469814	5048862	207.8	469264	5047861	79.2	470793	5047994
216.2	469232	5047948	215.4	469816	5048870	199.2	469263	5047862	113.8	470789	5047982
216.6	469232	5047948	219.2	469819	5048879	178.8	469262	5047864	138.6	470786	5047968
200.8	469232	5047948	201.8	469821	5048888	162.8	469259	5047870	143	470781	5047955
225.2	469232	5047948	212.6	469826	5048897	145.8	469259	5047874	144.6	470778	5047943
199.8	469232	5047946	211.2	469827	5048907	252.4	469505	5047836	165	470774	5047931
207.4	469232	5047945	239.8	469829	5048917	205.2	469511	5047849	135.8	470772	5047921
210.8	469232	5047945	204.6	469831	5048928	216.8	469520	5047861	148.8	470767	5047908
211.4	469232	5047946	168.4	469835	5048943	235	469531	5047869	146.8	470764	5047896
207.6	469232	5047945	157.8	469839	5048956	195.8	469528	5047876	147	470760	5047871
192.4	469232	5047945	192.2	469841	5048969	209.4	469513	5047864	141.8	470760	5047860
158	469232	5047942	188.6	469840	5048982	235.2	469504	5047847	128.6	470756	5047849
183.6	469230	5047938	162.8	469837	5048973	210.4	469619	5047948	108.8	470752	5047842
241.8	469231	5047934	204	469832	5048946	216	469542	5047878	118.8	470746	5047830
187.6	469232	5047929	197.4	469826	5048920	212	469557	5047888	106.2	470826	5048074
157.2	469235	5047924	205	469820	5048898	264.2	469574	5047898	109.2	470830	5048258
161.4	469252	5047909	185	469813	5048876	241	469587	5047910	120	470830	5048248
161.6	469253	5047906	194	469810	5048855	216.6	469599	5047922	141	470832	5048238
172.4	469252	5047908	150.2	469814	5048831	203	469607	5047932	155.6	470831	5048224
171.6	469250	5047903	149.6	469824	5048820	247	469632	5047965	160.6	470832	5048209
148.8	469250	5047903	165.8	469866	5048733	216.6	469643	5047979	130.4	470831	5048194
167	469250	5047903	206.6	469884	5048669	218.6	469655	5047996	127.6	470831	5048174
176.4	469250	5047903	192.6	469879	5048683	296	469669	5048012	149.4	470831	5048156
170.8	469250	5047903	209	469875	5048696	247.6	469684	5048028	131.8	470834	5048139
164.8	469250	5047905	155.6	469870	5048708	244	469693	5048040	125.4	470837	5048123
162.2	469251	5047908	125.8	469868	5048720	202.8	469698	5048049	114.8	470838	5048108
169.4	469252	5047908	164.8	469865	5048742	202	469704	5048062	118.8	470838	5048101
171.4	469252	5047908	181	469864	5048752	202.4	469709	5048080	127	470839	5048101
173.8	469252	5047908	174.2	469863	5048761	269.6	469706	5048103	128.8	470839	5048101
155	469252	5047908	161	469862	5048766	274.8	469702	5048120	123.4	470839	5048102
154	469252	5047908	160.2	469858	5048774	274.2	469699	5048132	123	470839	5048101
170.6	469253	5047908	155.2	469851	5048783	294.8	469696	5048143	124.6	470839	5048101
168.2	469253	5047908	157.2	469842	5048794	273.6	469696	5048151	140.4	470839	5048101
158	469253	5047908	154.8	469832	5048803	281.6	469699	5048160	129	470839	5048101
171	469254	5047908	159	469827	5048812	257.2	469705	5048170	107	470839	5048101
160.4	469254	5047907	164.6	469824	5048818	245.8	469716	5048180	119.4	470839	5048101
161.4	469253	5047906	154.6	469823	5048820	211.6	469730	5048192	126.4	470839	5048101
177.6	469253	5047906	150.4	469823	5048820	197.6	469745	5048205	125.8	470839	5048101

175.4	469252	5047907	154.2	469824	5048820	234.8	469729	5048201	130.2	470839	5048101
171.4	469252	5047907	160	469824	5048819	243.4	469712	5048185	127.6	470839	5048101
163.6	469248	5047914	160	469824	5048820	274	469696	5048166	127.8	470839	5048101
204	469246	5047917	147.6	469824	5048820	271.4	469692	5048147	119	470839	5048101
212.4	469241	5047920	157.4	469824	5048820	239.2	469694	5048131	115.8	470839	5048101
168.6	469239	5047917	162.4	469824	5048820	232.8	469698	5048116	109.2	470836	5048095
147.6	469241	5047913	157.8	469824	5048820	182	469701	5048097	101.8	470831	5048087
151	469243	5047910	158.2	469824	5048820	202.6	469701	5048074	111.8	470828	5048081
170.4	469244	5047906	154.2	469824	5048820	224	469695	5048051	146	470832	5048298
177.4	469244	5047901	149	469824	5048820	265.2	469684	5048035	119.2	470850	5048428
172.6	469250	5047902	157.8	469824	5048820	251.2	469673	5048021	134.8	470868	5048466
163.2	469255	5047896	158	469823	5048823	199.4	469660	5048007	153.2	470863	5048454
156.4	469252	5047901	161	469822	5048828	231.8	469649	5047993	154.4	470859	5048447
167.2	469251	5047902	181.6	469821	5048834	214	469636	5047976	134	470854	5048438
171.6	469251	5047902	151.4	469824	5048809	194.4	469622	5047958	115.4	470845	5048418
161.8	469251	5047902	144.2	469841	5048789	201.8	469606	5047939	113.8	470839	5048408
187.2	469251	5047902	166.8	469858	5048768	243.2	469590	5047920	132.4	470832	5048398
163.8	469251	5047902	139.2	469867	5048743	212	469569	5047902	146.2	470827	5048386
168	469251	5047902	143.4	469869	5048724	198.8	469548	5047887	131.8	470825	5048375
166.4	469250	5047902	174.2	469869	5048705	233	469945	5048475	149.6	470825	5048362
171	469250	5047902	193.2	469874	5048690	252.2	469761	5048220	161.4	470828	5048347
152	469250	5047902	148.8	469878	5048673	197.2	469776	5048232	160.6	470828	5048337
162.2	469249	5047902	256	469942	5048485	186.4	469789	5048245	140.4	470829	5048323
165.2	469249	5047902	262.6	469938	5048498	178.4	469806	5048261	136.4	470830	5048309
159.6	469250	5047902	248.8	469932	5048511	173.4	469823	5048276	141	470830	5048285
167	469250	5047902	260	469927	5048526	193.2	469844	5048293	140.2	470831	5048271
172.2	469250	5047902	260	469924	5048537	222	469862	5048307	99.6	470909	5048592
166	469250	5047902	268.4	469917	5048548	200.6	469878	5048320	101.6	470908	5048584
180.8	469250	5047903	258.2	469913	5048555	192.2	469894	5048333	117	470906	5048575
165.8	469250	5047903	269.8	469907	5048562	197	469907	5048342	134.4	470903	5048564
167.4	469250	5047903	274.6	469906	5048566	176.4	469925	5048355	111.8	470903	5048553
173.6	469250	5047902	269	469906	5048566	197.2	469947	5048370	110.8	470900	5048542
168	469250	5047902	279.2	469905	5048569	187.8	469962	5048381	116.2	470896	5048531
171.4	469250	5047902	235.4	469903	5048576	214.4	469975	5048392	112.4	470892	5048518
174.4	469250	5047902	220.4	469902	5048584	228	469978	5048398	112	470886	5048507
158.4	469250	5047902	244.2	469899	5048591	235.6	469977	5048399	109.4	470881	5048495
169.6	469243	5047897	238.2	469896	5048599	258.4	469977	5048402	134	470877	5048485
173	469244	5047891	245	469894	5048608	269	469974	5048410	126.6	470873	5048475
163.2	469245	5047885	234.2	469892	5048619	264.4	469968	5048418	254	469952	5048452
200.2	469247	5047879	197.6	469889	5048629	256	469962	5048428	231	469950	5048461
198.2	469248	5047875	179.2	469889	5048638	233	469957	5048441	239.4	469949	5048462
159.8	469250	5047867	161	469887	5048651						

Appendix B

Station Locations and uncorrected Rock XRF Results

Results as presented are uncorrected. Manufacturers of the XRF analyzer recommend testing known samples and generating correction factors for each element. Currently, such samples are unavailable so results can only be used to look for anomalous values rather than absolute ppm values. Negative values indicate values below detection limits.

Station	X_NAD83	Y_NAD83	Notes	Y	Y +/-	Nb	Nb +/-	Zr	Zr +/-	Th	Th +/-
WW-01	470756	5047851	grey rhyolite subcrop with pyrite boulder	4006	142	7103	583	2373	109	486	258

Station	X_NAD83	Y_NAD83	Notes	Au	Au +/-	As	As +/-	Sb	Sb +/-	Pb	Pb +/-	Zn	Zn +/-
WW-01	470756	5047851	grey rhyolite subcrop with pyrite boulder	2	20	3	5	-2	35	38	7	105	11

Appendix C

XRF Results on Dry Soil Samples

Results as presented are uncorrected. Manufacturers of the XRF analyzer recommend testing known samples and generating correction factors for each element. Currently, such samples are unavailable so results can only be used to look for anomalous values rather than absolute ppm values. As such, results presented are just values rather than having the ppm distinction. Negative values indicate values below detection limits.

CLS #	X_NAD83	Y_NAD83	Y	Y +/-	Nb	Nb +/-	Zr	Zr +/-	Th	Th +/-	Au	Au +/-	As	As +/-	Sb	Sb +/-	Pb	Pb +/-	Zn	Zn +/-
800	470850	5048299	881	65	3899	336	1016	42	230	166	9	17	2	4	-20	26	30	5	40	7
801	470874	5048299	509	60	3778	329	612	27	80	151	15	16	2	4	-17	27	46	6	52	7
802	470900	5048300	604	61	2862	299	662	29	335	162	3	16	-1	4	-17	27	55	6	48	7
803	470926	5048300	522	58	2380	264	537	24	39	137	19	17	1	5	-8	25	55	6	58	7
804	470949	5048300	1055	70	3290	308	447	20	66	139	6	16	5	4	-10	25	48	6	60	8
805	470976	5048299	478	62	2676	299	708	32	100	158	20	19	10	5	-13	27	59	7	72	8
806	471000	5048299	470	58	2584	279	625	27	118	146	48	19	5	4	48	26	37	6	62	7
807	471026	5048299	489	60	2743	295	718	32	117	154	-11	16	9	5	-28	27	44	6	59	8
808	471050	5048300	418	61	3460	297	624	26	132	141	15	16	7	4	0	24	35	5	37	6
809	471075	5048300	549	59	2653	281	502	22	399	156	11	15	-3	4	31	24	67	7	58	7
810	471104	5048301	333	56	2519	268	507	23	-119	129	11	17	2	5	-28	27	53	6	49	7
811	471125	5048300	628	65	4792	375	664	29	80	157	-26	14	8	4	-15	27	35	6	63	8
812	471151	5048301	402	58	3009	301	713	31	-25	148	4	15	3	4	-11	27	37	6	69	8
813	471175	5048300	486	59	2684	293	479	22	321	156	17	18	9	4	-15	27	36	6	49	7
814	471200	5048300	669	66	3864	347	865	38	134	165	22	18	10	5	23	28	42	6	38	7
815	471200	5048250	870	69	3899	353	1228	50	654	194	11	17	1	4	14	26	40	6	62	8
816	471176	5048249	667	61	2872	267	648	27	-77	128	11	17	3	4	25	23	35	6	49	7
817	471148	5048250	488	59	2237	266	627	28	59	143	-2	16	4	4	-20	26	48	6	78	8
818	471125	5048250	597	61	4202	318	677	28	-230	127	2	16	9	4	24	24	37	6	58	7
819	471100	5048249	298	60	2660	269	696	29	-92	133	14	17	4	4	-11	25	47	6	62	8
820	471075	5048250	495	58	3873	323	423	19	378	153	16	15	1	4	39	25	56	6	62	7
821	471050	5048250	512	63	6538	438	613	27	211	162	4	15	6	4	29	27	41	6	50	7
822	471025	5048250	643	67	3690	346	812	36	101	165	-21	15	2	5	-27	27	46	7	43	7
823	471001	5048249	511	69	3782	332	713	31	154	158	30	18	-3	4	0	27	52	6	36	6
824	470975	5048250	2497	88	3662	317	291	14	169	133	-11	16	16	7	30	22	184	10	63	7
825	470950	5048249	639	67	3432	336	738	33	555	180	-6	17	0	5	31	27	72	7	39	7
826	470925	5048250	593	61	2125	273	521	24	383	160	-4	17	10	5	-33	27	45	6	67	8
827	470900	5048250	955	71	4450	355	1158	47	148	167	38	19	2	4	14	26	40	6	53	7
828	470875	5048250	486	58	5207	372	548	24	287	155	5	15	2	4	-24	25	43	6	57	7
829	470850	5048249	529	59	2431	267	596	26	56	141	12	16	0	5	4	25	64	7	54	7

APPENDIX D

XRF Analyzer Specs and Theory

DELTA
Dynamic XRF

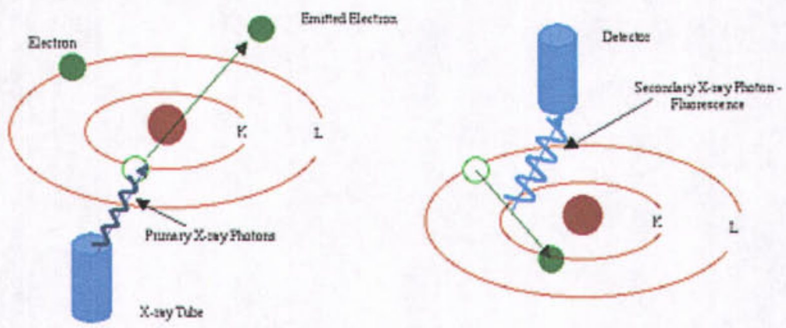
X-Ray Fluorescence (XRF) Spectrometry

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.

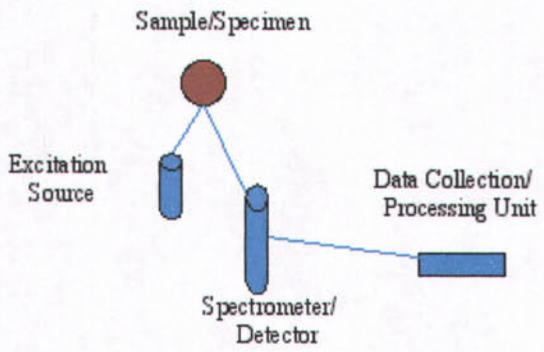
Aqueous elemental analysis instrument techniques typically require destructive and time-consuming specimen preparation, often using concentrated acids or other hazardous materials. Not only is the sample destroyed, waste streams are generated during the analysis process that need to be disposed of, many 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.

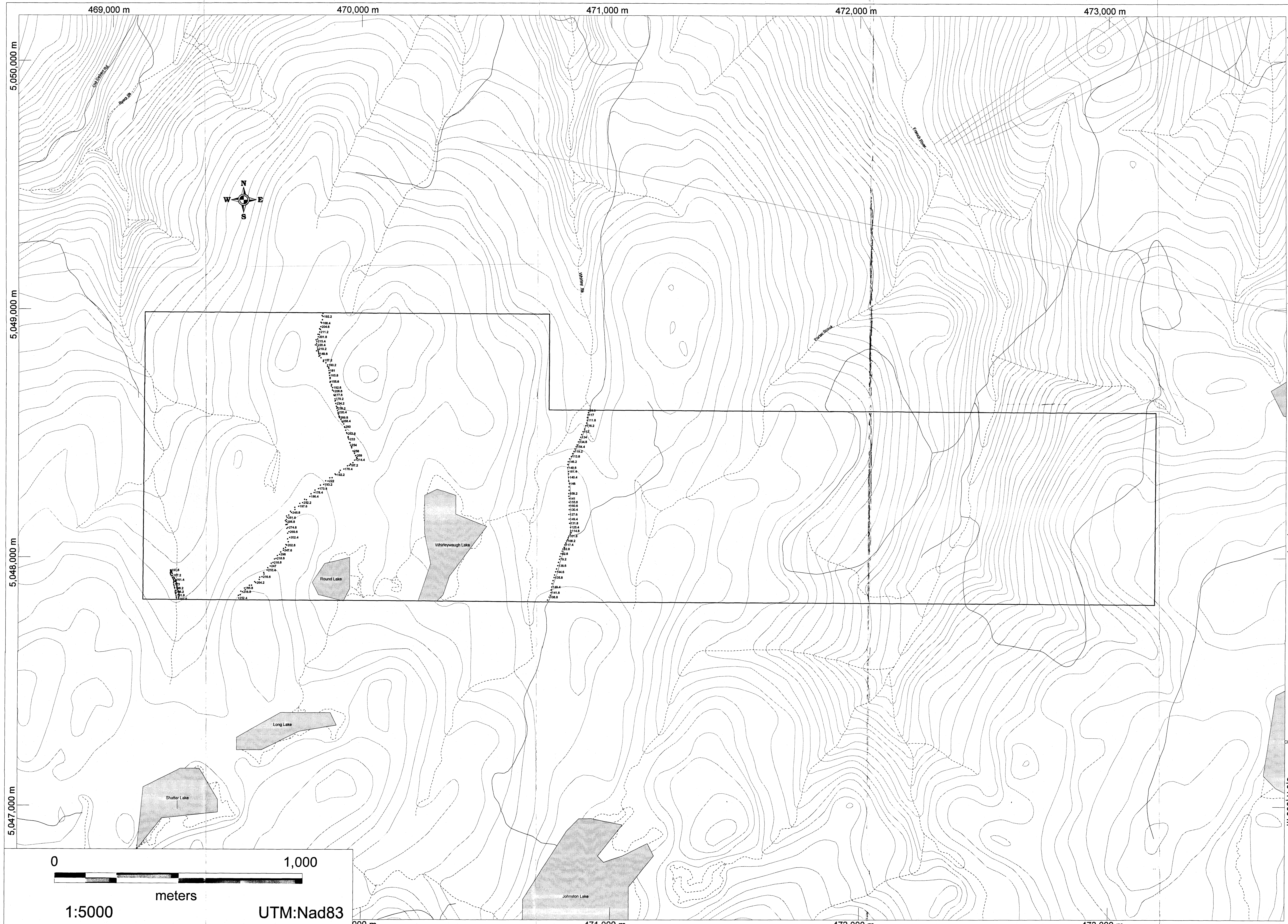
The Innov-X Handheld XRF for elemental analysis meets EPA Method 6200 for metals in soil, NIOSH Method 7702 for lead in air filters, and OSHA Methods OSSA1 and OSS1 for lead in air filters and dust wipes. The 8 RCRA Metals and Priority Pollutant Metals are easily monitored on-site with the Innov-X Handheld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

Maps

Map 1-License 08998 Spectrometer Survey Results



<u>Legend</u>

Spectrometer Readings (Average Total Counts/sec)*

Local Roads and Trails

Contour Lines

License Boundary

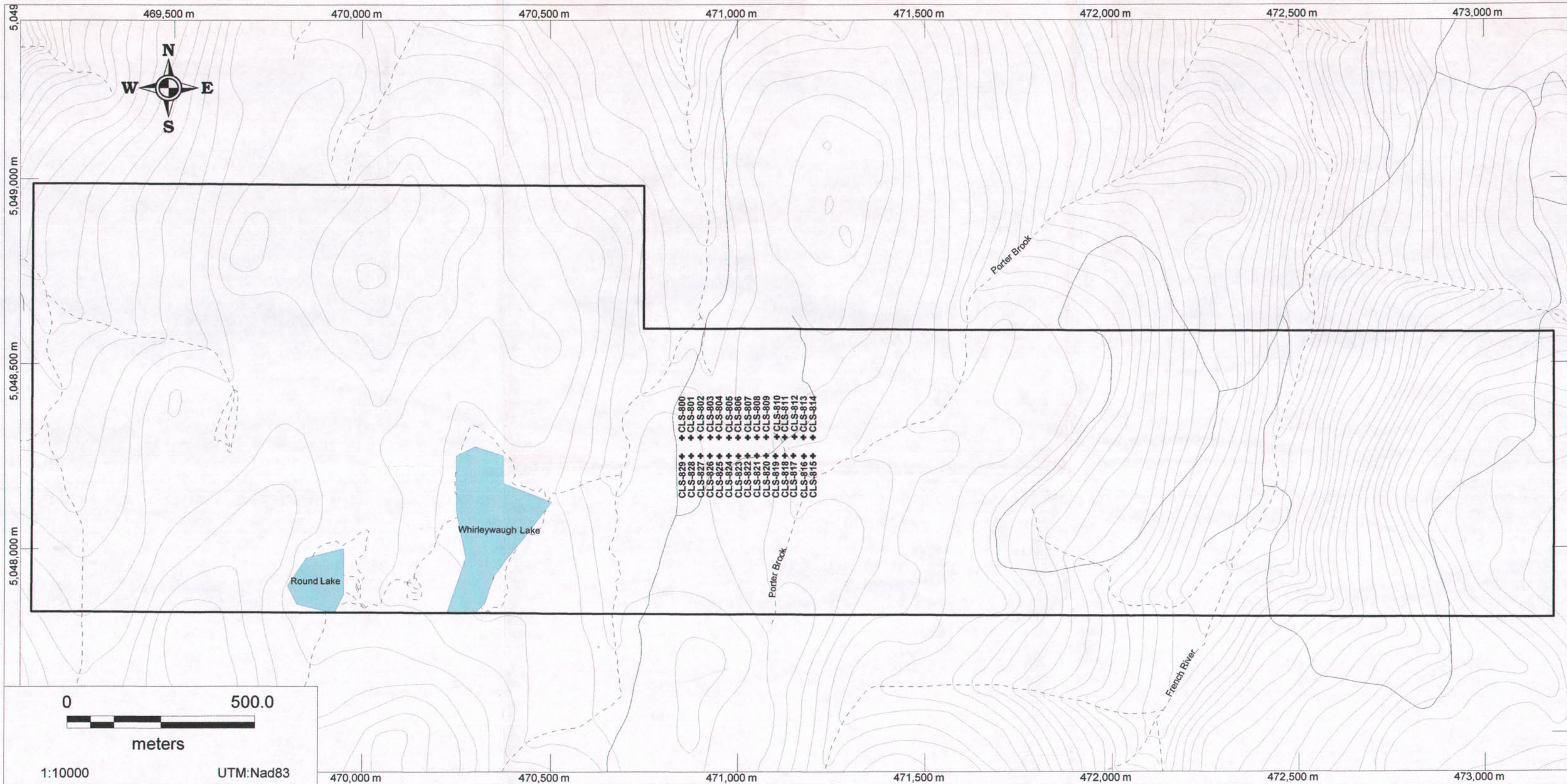
Streams

*Only select data is plotted due to dense dat points, a full list of readings is available in Appendix A

Map created by Alex MacKay
Base Layers from NSDNR

AR2012-018

Map 2- Soil Sample locations for Licence 08998



Legend

✚ Soil Sample Location (with soil Sample #)

License Boundary

Local Roads and Trails

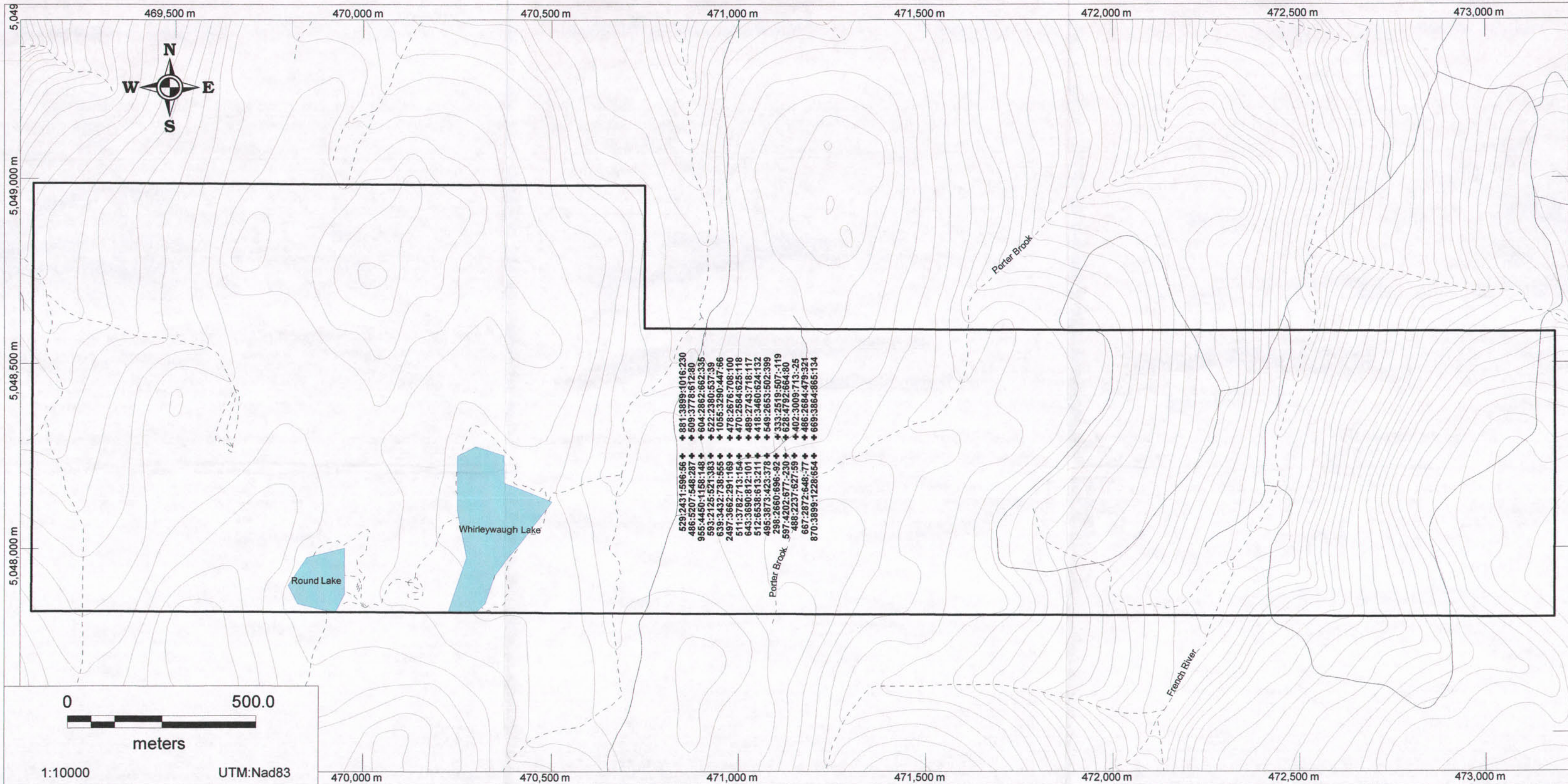
Contour Lines

Streams

AR 2012-018

Map Created by Alex MacKay
base layers from NSDNR

Map 3- Soil Sample Results for REE Indicators (Y:Nb:Zr:Th) Licence 08998



Legend

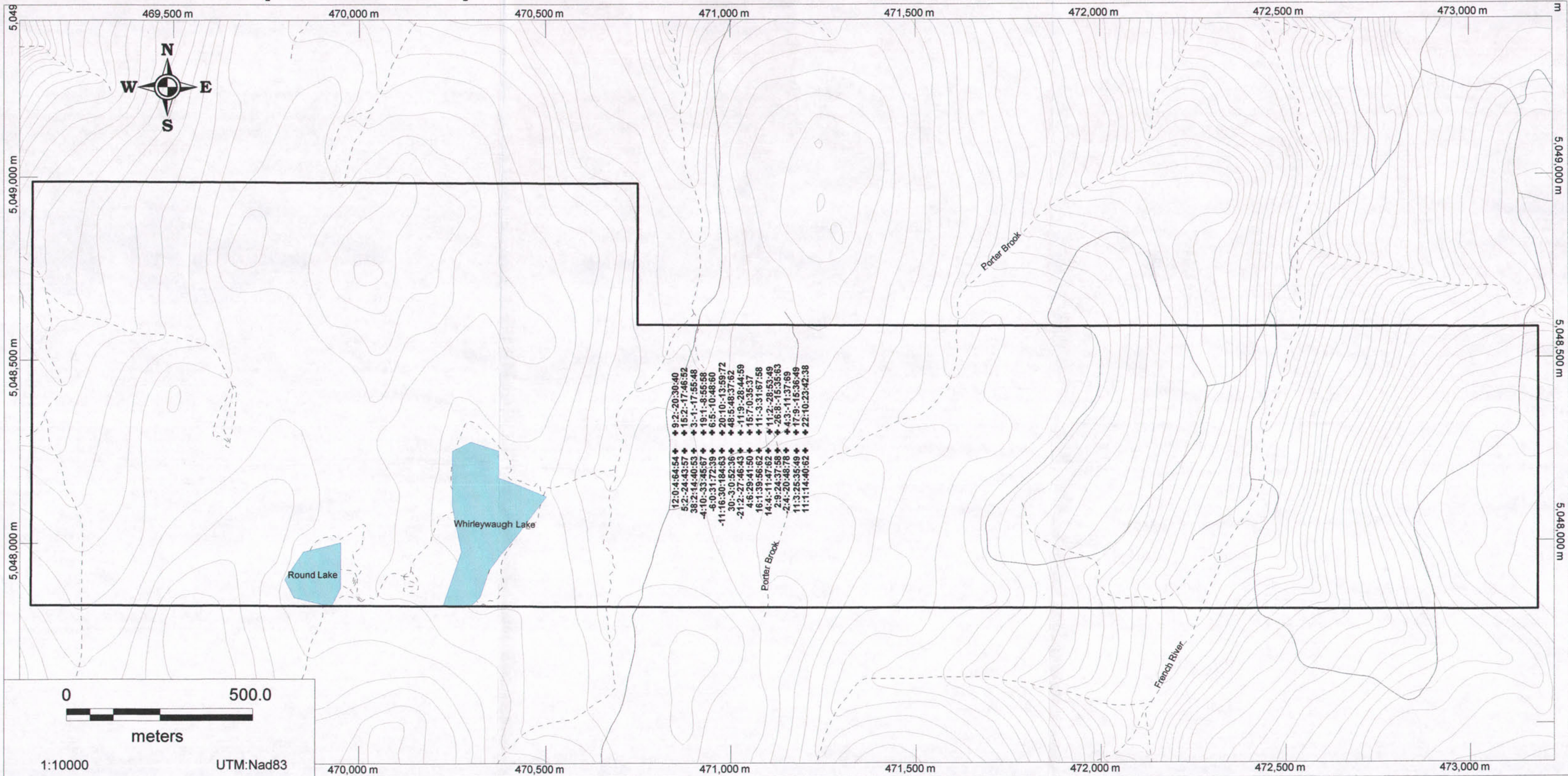
- ✚ Soil Sample Location with Uncorrected Dry XRF ppm Results (Y:Nb:Zr:Th)*
- Local Roads and Trails
- Contour Lines
- License Boundary
- Streams

*negative numbers indicate below limit of detection

AR2012-018

Map Created by Alex MacKay
base layers from NSDNR

Map 4- Soil Sample Results for Au and Au Indicators for Licence 08998



Legend

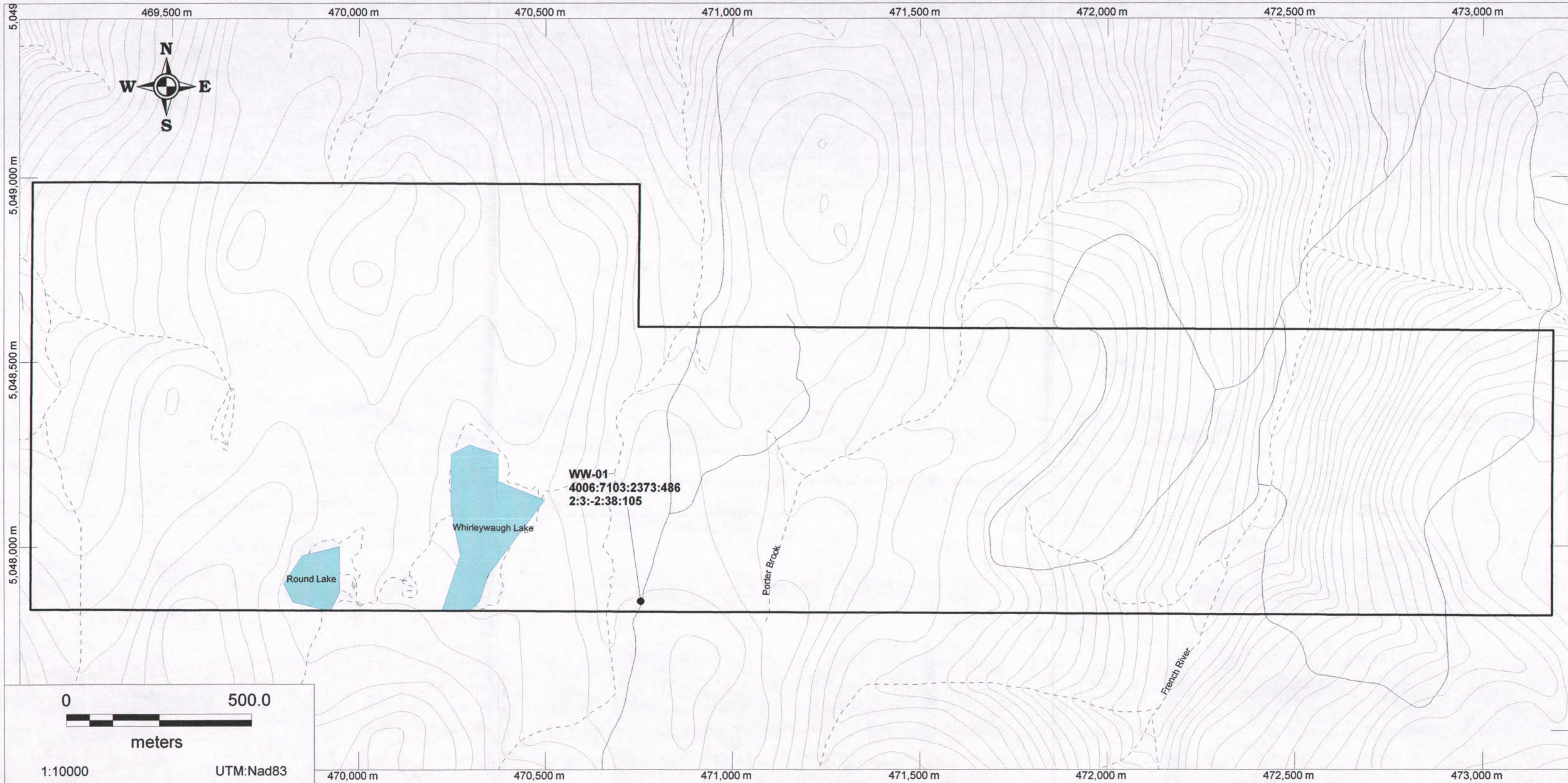
- ✚ Soil Sample Location with Uncorrected Dry XRF ppm Results (Au:As:Sb:Pb:Zn)*
- Local Roads and Trails
- Contour Lines
- License Boundary
- Streams

*negative numbers indicate below detection limit

AR2012-018

Map Created by Alex MacKay
base layers from NSDNR

Map 5- Rock Sample Locations and Results on Licence 08998



Legend

● Station Location with Rock XRF Results in uncorrected PPM (Y:Nb:Zr:Th) (Au:As:Sb:Pb:Zn)*

License Boundary

Local Roads and Trails

Contour Lines

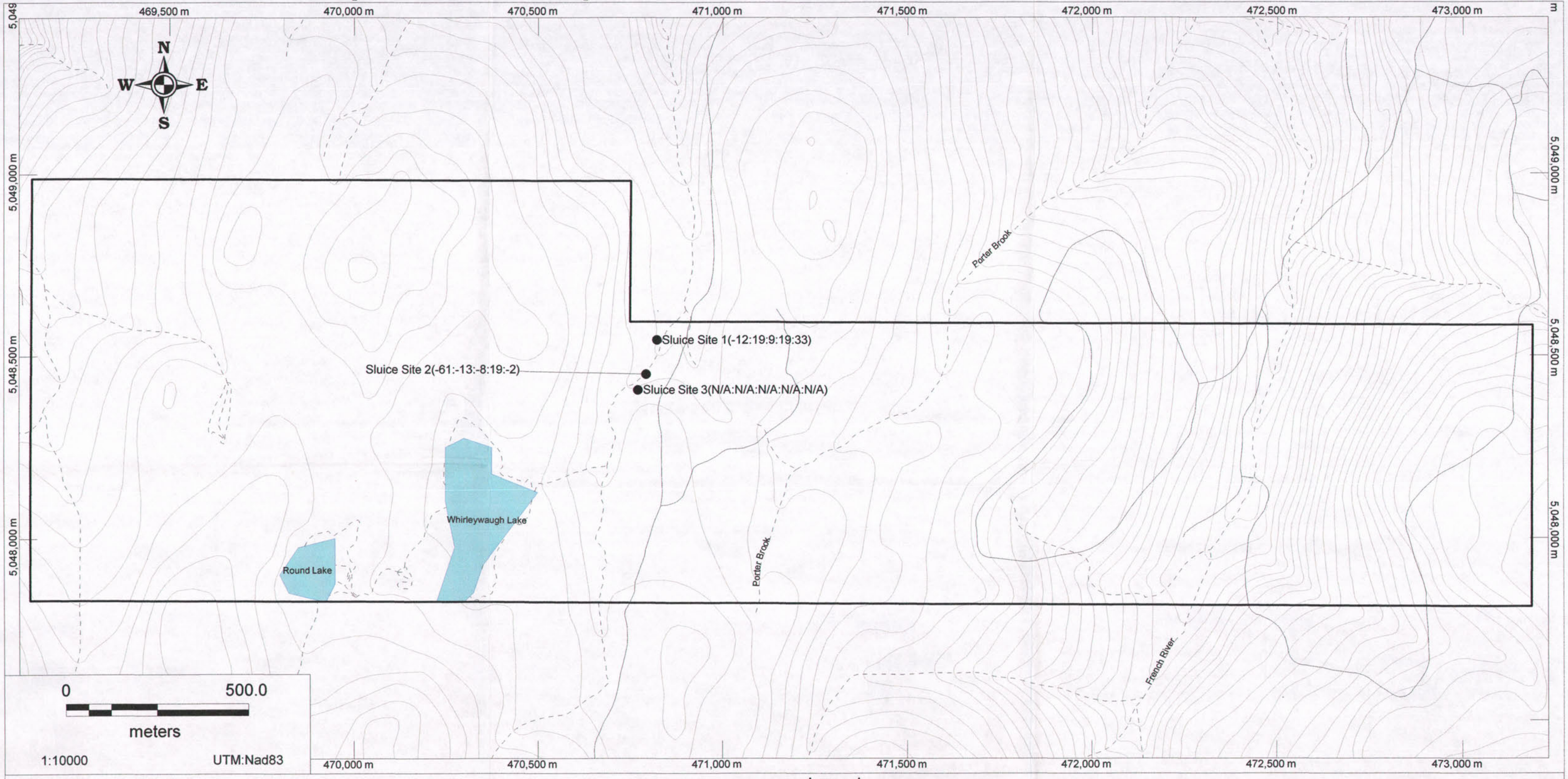
Streams

*negative numbers indicate below detection limit

AR2012-018

Map Created by Alex MacKay
base layers from NSDNR

Map 6- Sluice Sample Locations and Au results for Licence 08998



Legend

- Sluice Site Locations with XRF Results in uncorrected ppm units * (Au-10+16Mesh, -16+42,-42+60,-60+80,-80)
- License 09387 Boundary
- Local Roads and Trails
- Contour Lines
- Streams and Tributaries
  - *-Named water courses identified others are unnamed tributaries*

*negative numbers indicate below detection limits
*XRF results are unavailable for Site 3, data was corrupted

AR2012-018

Map Created by Alex MacKay
base layers from NSDNR

FINAL

NOVA SCOTIA
Natural Resources

Map 11E11B
Refs.

Form 10 - Statement of Assessment Work Expenditure

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

PLEASE SEE ATTACHED EXPENSES

(Complete as necessary to substantiate the total claimed.)
Re: Licence No. 08998 Date of issue FEB 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	____ #	
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) (i) Rock	____ samples	
(ii) Core	____ samples	
(iii) Chips	____ samples	
(c) (i) Soil	____ samples	
(ii) 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		6552.50
Overhead costs 10% OVERHEAD		655.25
12. Secretarial services		
13. Drafting services		
14. Office expenses (rent, heat, light, etc.)		
15. Field supplies		
16. Compensation paid to landowners		
17. Legal fees		
18. Other (describe)		
Subtotal		
Grand total		7,207.75

DNRMPT JAN 17 '12 14:46

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
ALEX MACKAY	FAIRVIEW HALIFAX	DEC 18,19, 2011
LINDSAY ALLEN	11 RIVER RD TERENCE BAY RIVER	NOV 5, 26 DEC 4, 2011
ROB KRIENKE	WASAMILL DR HALIFAX	NOV 5, 26 DEC 4, 2011

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

Dated at HALIFAX in the Province of NS on JAN 17, 2012

Name and address of licensee: CLEAR LAKE RESOURCES INC.
11 RIVER RD, TERENCE BAY RIVER NS B3T 1X2

Signature [signature]

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