

**AR 2012-093**

**2012 Assessment Report for Sugarloaf Resources Inc.**

**Licenses 09712, 09713, 09722, 09723, 09725 & 09726**

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**DUPLICATE AVAILABLE**

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## 1.0 Summary

A group of 6 licences referred to as the Sugarloaf northern block, lie in the basalts of the Diamond Brook Formation in the Cobequid Highlands of Nova Scotia, a formation which is thought to be part of an epithermal gold system.

The 2012 work program focused on a stream sediment sampling program. 67 stream sediments were sluiced, bagged, dried and sieved to different size fractions. The four finest fractions were analyzed by portable handheld XRF for gold and then subsequently hand panned. Panned concentrates were observed through a binocular microscope and gold grains were counted, with additional notes recorded about other heavy minerals observed.

Gold was visually observed through panning in 20 of the 67 stream sediment samples. Observed gold grains did not correlate well with gold in stream sediment portable XRF results or with other heavy minerals observed.

19 rock samples were also collected during the course of the stream sediment sampling program. Portable XRF results of the rock samples were positive for gold in 12 of the rock samples. Two small positive Zn anomalies were also observed in the rock XRF data.

Observed gold grains occurred in several clusters on the property which should be followed up with more field work in the next work program.

## 2.0 Introduction

The Sugarloaf northern block is composed of licenses 09712, 09725, 09722, 09713, 09723, and 09726 which are located in the Cobequid Highlands area of Nova Scotia and are the basis of this report.

Since 1986-87, when Au anomalies were detected in the Northern Nova Scotia Regional Stream Sediment sampling program (OFR 89-007), companies have been trying to source the Au anomalies. The 2012 Sugarloaf work program was focused on this as well.

Prospecting on the northern block consisted of rock sample and stream sediment collection. Analyses of the samples were completed using an Olympus Innovx portable DP-6000 X-ray fluorescence analyzer as well as panning for heavy minerals. The XRF was used to analyze for Au and Au indicators. 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

The licenses are located in Colchester County, Nova Scotia. Access to the property is gained by taking Exit 11 off Highway 104 and proceeding north on Highway #4. Head east at Junction 246, which merges with Hwy 256 in West New Annan, continuing east out of West New Annan the western most licences can be accessed via several roads heading south. Access to the eastern licences is more easily gained by continuing east on Hwy 256 and turning south at junction 311. The eastern licences can be accessed by several access roads south of Hwy 311. See Figure 1 on the following page for precise licence locations.

# Sugarloaf Licences Location Map

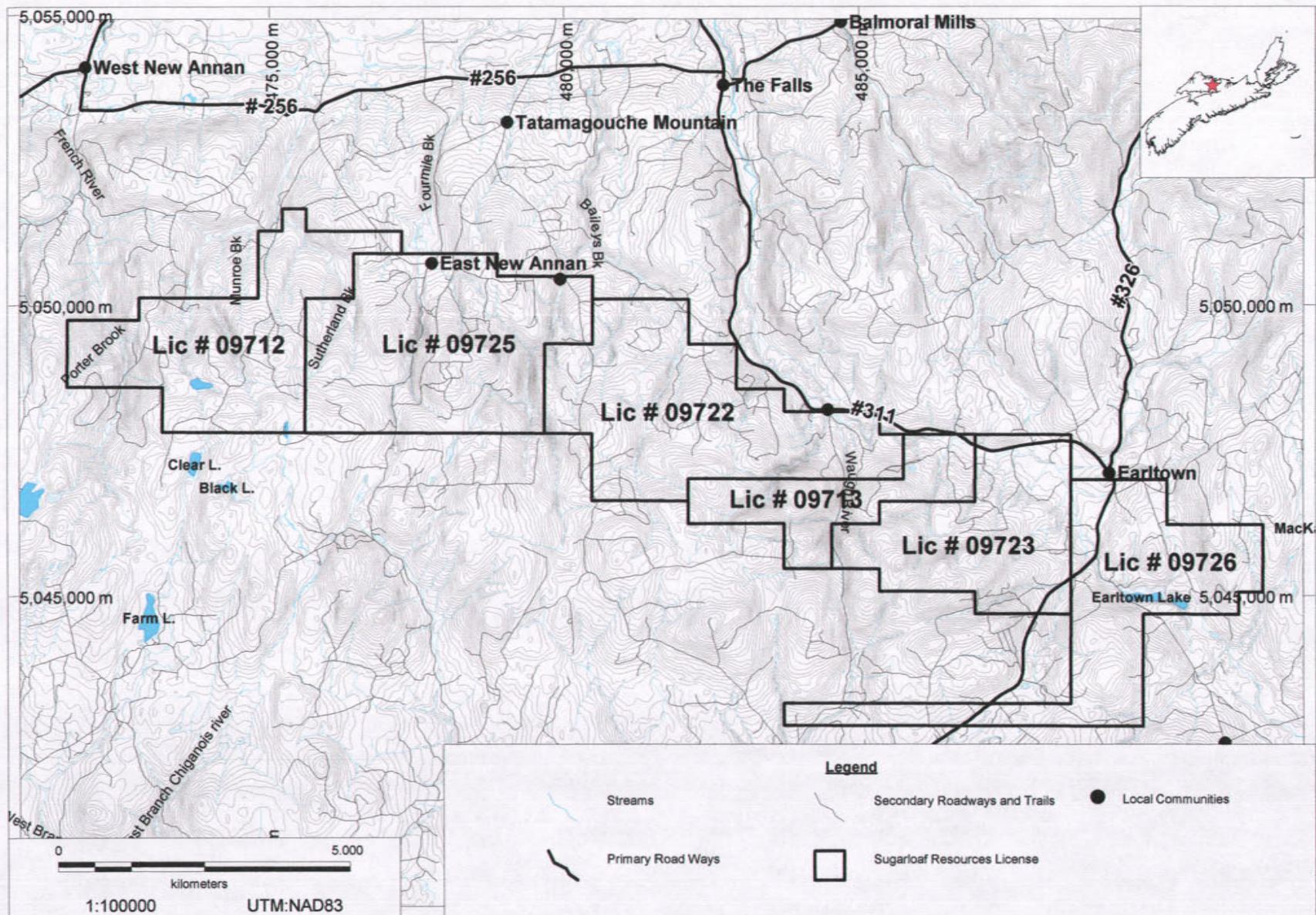


Figure 1

#### 4.0 License Tabulation

Table 1-Claims List

License #	NTS Map Sheet	Tract	Claims	Anniversary Date
09712	11E/11B	76	ABCD EFGH JKLM NOPQ	May 4th, 2012
09712	11E/11B	77	AB GH JKLM NOPQ	May 4th, 2012
09712	11E/11B	78	JK PQ	May 4th, 2012
09712	11E/11B	91	AB	May 4th, 2012
09712	11E/11B	92	ABCD FGH	May 4th, 2012
09712	11E/11B	93	ABCD EFGH JK PQ	May 4th, 2012
09712	11E/11B	94	LM NO	May 4th, 2012
09712	11E/11B	99	ABCD	May 4th, 2012
09712	11E/11B	100	AB H	May 4th, 2012
09725	11E/11B	73	CD EF LM NO	May 11th, 2012
09725	11E/11B	74	ABCD EFGH JKLM NOPQ	May 11th, 2012
09725	11E/11B	75	ABCD EFGH JKLM NOPQ	May 11th, 2012
09725	11E/11B	94	ABCD EFGH JK PQ	May 11th, 2012
09725	11E/11B	95	ABCD EFGH JKLM NOPQ	May 11th, 2012
09725	11E/11B	96	ABCD EFGH JKLM	May 11th, 2012
09722	11E/11B	73	AB GH JK PQ	May 11th, 2012
09722	11E/11A	61	EFGH JKLM NOPQ	May 11th, 2012
09722	11E/11A	62	JKLM NOPQ	May 11th, 2012
09722	11E/11A	63	JKLM NOPQ	May 11th, 2012
09722	11E/11A	64	MN	May 11th, 2012
09722	11E/11A	82	ABCD	May 11th, 2012
09722	11E/11A	83	ABCD EFGH LM NO	May 11th, 2012
09722	11E/11A	84	ABCD EFGH JKLM NOPQ	May 11th, 2012
09722	11E/11A	85	ABCD EFGH	May 11th, 2012
09713	11E/11A	58	MN NO	May 4th, 2012
09713	11E/11A	62	ABCD EFGH	May 4th, 2012
09713	11E/11A	63	ABCD EFGH	May 4th, 2012
09713	11E/11A	64	EFGH JKL OPQ	May 4th, 2012
09723	11E/11A	56	ABCD EFGH JKLM NOPQ	May 11th, 2012
09723	11E/11A	57	EFGH JKLM NOPQ	May 11th, 2012
09723	11E/11A	58	JKPQ	May 11th, 2012
09723	11E/11A	64	ABCD	May 11th, 2012
09723	11E/11A	65	ABCD EFGH JKLM NOPQ	May 11th, 2012
09726	11E/11A	31	NOP	May 11th, 2012



09726	11E/11A	32	NOPQ	May 11th, 2012
09726	11E/11A	33	NOPQ	May 11th, 2012
09726	11E/11A	34	NOPQ	May 11th, 2012
09726	11E/11A	42	BCD EFG KLM NOP	May 11th, 2012
09726	11E/11A	54	BCD EFGH JKLM NOPQ	May 11th, 2012
09726	11E/11A	55	ABCD EFGH JKLM NOPQ	May 11th, 2012
09726	11E/11A	66	ABCD EFGH	May 11th, 2012

## 5.0 Previous Work

Several exploration programs have been conducted in the Cobequids over the years for both base and precious metals as well as for nuclear fuels. Past work was briefly reviewed in conjunction with the 2012 work program, but a through compilation of historic work should be undertaken.

During the late 1970's Gulf Minerals Canada Ltd. carried out an extensive exploration program for Uranium and base metals 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 VLF-EM- magnetometer (Downey, 1978). Unfortunately, Gulf's work was focused to the south and west of the Sargarloaf northern block of licenses.

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

In 1990 Seabright conducted a regional exploration program focused on epithermal and/or structurally controlled gold mineralization in the Cobequids. Seabright collected 77 stream sediment samples, 196 soil samples and 57 rock samples. Several of which showed positive Au anomalies using -200 mesh, hence reinforcing anomalies discovered by Mills in 1989.

In 1994 Ecum Secum Enterprises also attempted to source the Au anomalies of Mills, 1989 and Seabright. 30 stream sediment and 33 rock samples were collected. Ecum Secum obtained their best results in alteration zones in rhyolite and cherty sediments along the contact of the Byers Brook Formation and the overlying Diamond Brook Formation (Black, 1994).

In 2004 Cobequid Gold Corporation Ltd. (CGC) once again attempted to source the Au anomalies by prospecting brooks and silt sampling. CGC analyzed the -60 mesh fraction as opposed to the -200 mesh fraction by Seabright and was unable to reproduce Au anomalies.

# Sugarloaf Resources Licences Regional Geology

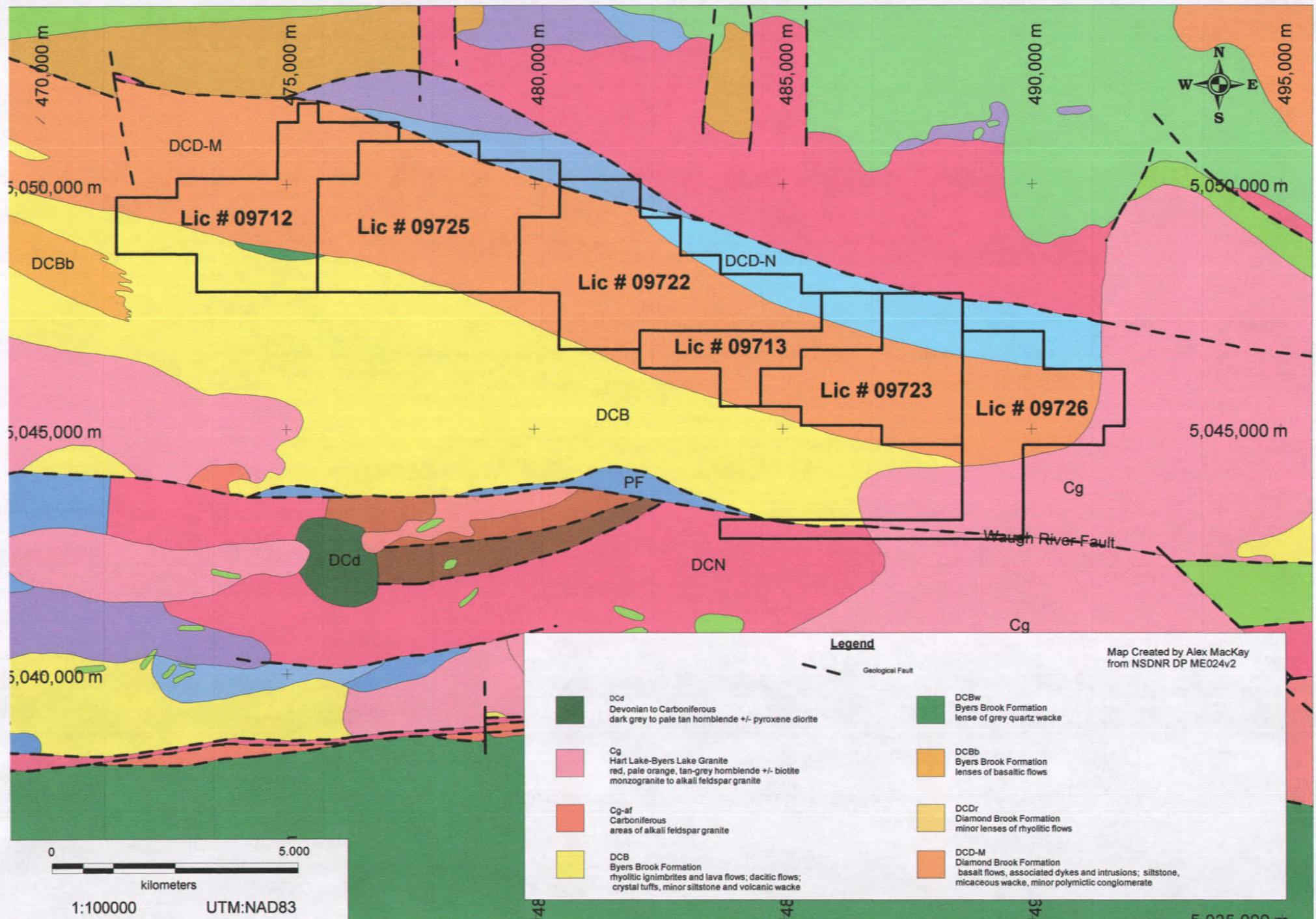


Figure 2

## 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 sediments 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).

The Sugarloaf northern block geology is largely that of the Diamond Brook Formation. See Figure 2.

## 7.0 Work Performed

Work performed included prospecting, as well as rock and stream sediment sample collection. Historic reports were also collected, perused and stored for later thorough compilation.

The main work program was to collect heavy mineral concentrates from stream sediments using a Keene Engineering A52 sluice box. In total, 67 sluice samples were collected. Set up procedure included setting sluice box in the river 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 200lbs (10 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.

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 available in table 2.

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





Figure 3-Sample Test Vial

The 12 mesh sieve was used primarily to remove the coarsest material. +12 and +18 material was inspected and retained for later analysis. Material from size fractions, -18 +45, -45 +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.

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 of the 268 fractions (67 samples x 4 fractions) were 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. Notes regarding other heavy minerals such as Fe-oxides and sulfides were also recorded and tabulated (See Appendix A-Stream Sediment Table of Results).



Figure 4-Portable XRF in test stand

19 rock samples from outcrop locations observed during the stream sediment sampling program were collected. Rocks were analyzed with the Innovx DP-6000 for Au and Au indicators; arsenic (As), antimony (Sb), lead (Pb) and zinc (Zn), as suggested by MacHattie, 2011. Samples were collected from sites displaying interesting features such as faulting, rusty gossan, sulfide mineralization, or where atypical textures were observed. Approximately, 1-2kg 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 A-Rock Tabulated Results). XRF scanning procedure included selecting a fresh face on the sample displaying the interesting feature sought on the sample and spot analyzing there. The analyzer was set to the 3 beam soil analysis mode for 15 seconds per beam exporting uncorrected ppm values for Au, and Au indicators: As, Sb, Pb, and Zn.

## 8.0 Results Discussion

Gold grain counts provided some interesting results as gold was observed in 20 of 67 stream sediment samples, most commonly in the -80 fraction. Several other minerals observed were also noted in hopes of finding some correlation with the Au results. Other minerals included, arsenopyrite, specular hematite, hematite, pyrite, as well as some notes on light and dark coloured minerals observed in the panned results. No correlation trends were observed. The full table of results from the panning is located in Appendix A-Stream Sediment Table of Results.



Gold observed in the panned samples occurred in several groups, See Map 7 in Appendix B. The best results were observed in several samples in a tributary of the Waugh River. The best gold results of the whole project occurred in this area in sample SLS-12-061 in the -80 fraction, in which 17 gold grains were observed. Other smaller Au clusters were observed at Fourmile Brook, in unnamed tributaries to Munroe Brook and in an unnamed tributary to Sutherland Brook.

XRFing of sluice sample fractions did produce some gold numbers, but unfortunately XRF results did not correlate very well with the results of gold grain counts. See Stream Sediment Table of Results in Appendix A for tabulated results; see Appendix B, Maps 1-6 for stream sample locations by licence and Map 7 for plotted observed gold grain locations.

12 of the 19 rock samples collected showed positive results for gold when analyzed with the XRF. The only other significance to come out of the rock sampling program was two slight positive anomalies in the Zn results at stations SLR-12- 20 and SLR-12-24. Rock XRF results are tabled in Appendix A-Rock Sample Tabulated Results and plotted on Map 8 in Appendix B.

## 9.0 Conclusions and Recommendations

Observed gold clusters seem to occur around the contact between the Byers Brook and Diamond Brook Formation. Therefore, at least qualitatively, the 2012 Sugarloaf work program concurs with past work efforts that this contact is the most probable source of the Cobequids gold anomalies. Further work should include digitizing and plotting historic stream anomalies more thoroughly to more quantitatively compare with the 2012 results.

Future work programs for gold should also include mapping and rock sampling of outcrops in the vicinity of the positive gold anomalies identified in the 2012 stream sampling program.

## 10.0 References

Black D.L. 1994: Work Report on the French River Claim Group EL# 01452; Ecum Secum Enterprises; Nova Scotia Dept of Mines and Energy; Assessment Report 95-071

Donahoe, H.V., Wallace, P.I. 1982 Geological Map of the Cobequid Highlands, Nova Scotia, Nova Scotia Dept. of Mines and Energy; Map 82-7

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

Hogg, D. 1990: 1990 Exploration Program on General Licenses 15248, 15258, 15259, 15260, 15261 and 15516 Nuttby Mountain Colchester County, Nova Scotia NTS:11E/11; Seabright Explorations Incorporated; Nova Scotia Dept. of Mines and Energy; Assessment Report 90-165

Hudgins, A 2004: Work Report Concerning Prospecting, Geological and geochemical Surveys in Exploration Licence Numbers 04901 and 04900A Respectively, Held by Cobequid Gold Corporation LTD. in the French River Property, Colchester County, Nova Scotia; Cobequid Gold Corp.; Nova Scotia Dept. of Mines and Energy; Assessment Report 2004-092

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 carboniferous 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.

## 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.

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Alex MacKay

Appendix A  
Data Tables

## Rock Sample Tabulated XRF Results

Page 1 of 1

Sample #	Easting	Northing	Outcrop	Description	Au	Au +/-	As	As +/-	Sb	Sb +/-	Pb	Pb +/-	Zn	Zn +/-
SLR-12-03	474190	5048357	yes	rhyolite/basalt/wacke? Some quartz veining	42	18	13	4	-2	29	20	5	43	6
SLR-12-04	474568	5048669	yes	dark grey basalt	2	17	2	3	1	29	3	6	134	10
SLR-12-14	474971	5051246	yes	fault zone (follows river?) Mylonetized dark grey /black with small quartz & calcite veining. Limestone float boulders	28	17	3	3	-19	32	-14	4	39	6
SLR-12-15	475027	5051238	yes	fault zone.Dark mylonetized rock	-17	18	5	3	8	35	-13	5	54	9
SLR-12-16	475017	5051254	yes	fault zone.Dark mylonetized rock	-17	16	8	3	-16	30	-2	5	32	7
SLR-12-20	477409	5048764	yes	dark grey basalt	-9	16	1	3	-39	30	1	6	1210	32
SLR-12-23	477515	5049360	yes	dark grey basalt, mylonetized and fractured	14	22	7	4	-7	38	-25	6	27	8
SLR-12-24	477596	5049627	yes	dark grey basalt, mylonetized and fractured	-4	25	40	8	-19	37	50	10	2124	59
SLR-12-26	478239	5049903	yes	Dark grey wacke	11	15	3	3	-22	29	-8	4	18	5
SLR-12-34	482262	5047621	yes	dark grey basalt	-4	15	-1	3	47	28	14	5	165	11
SLR-12-45	486605	5042719	yes	subcrop, sandstone/siltstone/mudstone/wacke	21	14	7	3	-17	24	1	4	70	7
SLR-12-47	484760	5043071	yes	Dark grey / black siltstone / wacke	19	14	10	3	15	26	22	4	167	9
SLR-12-48	484495	5043051	yes	sandstone?	25	15	8	3	-55	25	3	4	124	8
SLR-12-59	480312	5047817	yes	subcrop of basalt/wacke?	-13	20	5	4	-15	36	-2	7	479	22
SLR-12-61	484779	5046817	yes	dark mafic intrusive?	26	21	13	4	70	33	-2	6	168	12
SLR-12-62	484710	5046416	yes	dark mafic intrusive/	11	19	10	4	-21	31	5	6	167	12
SLR-12-68	483456	5048232	yes	mixed wacke + basalt?	59	36	12	6	25	47	-27	10	198	20
SLR-12-69	483160	5047639	yes	basalt + wacke?	-12	23	17	4	-49	42	-45	6	73	11
SLR-12-70	482634	5048726	yes	basalt + faulting + slickensides + mylonetization	7	26	20	5	49	39	-33	8	131	15

Sample ID	Mesh Size	GPS Location		Watercourse		Natural Trap	Adjacent Rock		Other Materials Noted							Gold					
		Easting	Northing	Width	Depth		outcrop	Description	AsPy	Specular Hm	Hm	Py	Black Sand		Light Colour Minerals	(Y/N)	# Units	Size (mm)	Description	XRF	
													%	% Magnetic						Au	Au +/-
SLS-12-1	-18, +45 (+45)	473926	5048060	1m	4"	1 m	no	float mainly vesicular basalt	0	yes	yes	yes	50%	90%	minor epidote plus minor garnet		0			-1	13
	-45 to +60 (+60)						0		yes	yes	no	50%	90%	minor epidote plus minor garnet		0			7	14	
	-60 to +80(+80)						0		yes	yes	no	80%	90%	minor epidote plus minor garnet		0			-10	13	
	-80				boulder		0		yes	yes	yes	80%	90%	minor epidote plus minor garnet	y	1	0.2	nugget: good condition	-3	13	
SLS-12-2	-18, +45 (+45)	474184	5048257	1m	3"	1m boulder	no	float mainly pinkish grey rhyolite/basalt	0	yes	yes	no	40%	80%	very minor epidote		0			-1	13
	-45 to +60 (+60)						0		yes	yes	no	40%	80%	very minor epidote		0			-18	11	
	-60 to +80(+80)						0		yes	yes	no	40%	80%	very minor epidote + very minor garnet		0			13	12	
	-80						0		yes	yes	no	40%	80%	very minor epidote	y	2	0.05, 0.02	flakes good condtion	21	14	
SLS-12-3	-18, +45 (+45)	474190	5048357	1.5m	6"	2m boulder	yes	rhyolite/basalt/wacke? Some quartz veining	0	yes	yes	no	10%	80%	very minor epidote		0			17	15
	-45 to +60 (+60)						0		yes	yes	no	20%	80%	very minor epidote		0			17	13	
	-60 to +80(+80)						0		yes	yes	no	10%	80%	very minor epidote + very minor garnet		0			-15	11	
	-80						2		yes	yes	no	50%	90%	very minor epidote + very minor garnet		0			24	16	
SLS-12-4	-18, +45 (+45)	474568	5048669	1.5m	4"	O/C ledge	yes	dark grey basalt	0	yes	yes	no	20%	80%			0			4	13
	-45 to +60 (+60)						1		yes	yes	no	25%	80%	very minor epidote + very minor garnet		0			-1	13	
	-60 to +80(+80)						2		yes	yes	no	30%	80%	very minor epidote + very mlnor garnet		0			5	14	
	-80						5		yes	yes	no	35%	90%	very minor epidote + very minor garnet		0			0	14	
SLS-12-5	-18, +45 (+45)	474563	5048724	3m wide stream	12"	large tree	no	float mainly dark grey basalt	0	yes	yes	no	30%	50%	very minor epidote + very minor garnet		0			0	13
	-45 to +60 (+60)						0	yes	yes	no	30%	60%	very minor epidote + very minor garnet		0			10	13		
	-60 to +80(+80)				root	0	yes	yes	no	25%	80%	very minor epidote + very minor garnet		0			1	12			
	-80					0	yes	yes	no	50%	90%	very minor epidote + very minor garnet		0			-4	12			
SLS-12-6	-18, +45 (+45)	474610	5048797	2m wide	6"	1m boulder	no	float mainly dark grey basalt	0	yes	yes	no	15%	50%	very minor epidote + very minor garnet		0			0	14
	-45 to +60 (+60)							1	yes	yes	no	20%	50%	very minor epidote + very minor garnet		0			-30	11	
	-60 to +80(+80)							0	yes	yes	no	30%	80%	very minor epidote + very minor garnet		0			9	13	
	-80							0	yes	yes	no	70%	80%	very minor epidote + very minor garnet		0			9	13	
SLS-12-7	-18, +45 (+45)	473520	5049824	1.5 wide	6"	1.6m boulder	no	float mainly dark grey basalt	0	yes	yes	no	20%	60%	very minor epidote		0			-11	13
	-45 to +60 (+60)							0	yes	yes	no	20%	50%	very minor epidote		0			9	14	
	-60 to +80(+80)							0	yes	yes	no	20%	40%	very minor epidote		0			1	12	
	-80							0							y	1	0.2	nugget: fairly rounded	34	14	
SLS-12-8	-18, +45 (+45)	473498	5049881	1m	3"	1m boulder	no	mainly dark grey vesicular basalt	0	yes	yes	no	30%	60%	no epidote , no garnet		0			32	17
	-45 to +60 (+60)							0	yes	yes	no	30%	60%	very minor epidote		0			-2	14	
	-60 to +80(+80)							0	yes	yes	no	50%	60%	very minor epidote + very minor garnet		0			1	13	
	-80							0	yes	yes	no	70%	80%	very minor epidote + very minor garnet		0			-13	13	
SLS-12-9	-18, +45 (+45)	473563	5049918	1.5m	9"	1m boulder	no	float mainly dark grey basalt	0	yes	yes	no	20%	60%	very minor epidote + very minor garnet		0			12	17
	-45 to +60 (+60)							0	yes	yes	no	25%	50%	very minor epidote + very minor garnet		0			9	13	
	-60 to +80(+80)							0	yes	yes	no	20%	30%	very minor epidote + very minor garnet		0			19	12	
	-80							0	yes	yes	no	25%	50%	very minor epidote + very minor garnet		0			19	14	
SLS-12-10	-18, +45 (+45)	473581	5049976	0.8m	3"	gravel bar		float very mixed												8	14
	on bend					no	0		yes	yes	no	10%	50%	very minor epidote + very minor garnet		0			29	13	
	-45 to +60 (+60)						0		yes	yes	no	20%	60%	very minor epidote + very minor garnet		0			-4	11	
	-60 to +80(+80)						0		yes	yes	no	50%	60%	very minor epidote + very minor garnet		0			5	12	
SLS-12-11	-18, +45 (+45)	473607	5050057	1.5m	9"	gravel bar on bend	no	float very mixed	0	yes	yes	no	20%	60%	very minor epidote + very minor garnet		0			-11	13
	-45 to +60 (+60)							5	yes	yes	yes	40%	60%	very minor epidote + very minor garnet		0			2	13	
	-60 to +80(+80)							0	yes	yes	yes	50%	60%	very minor epidote + very minor garnet		0			9	12	
	-80							0	yes	yes	yes	80%	80%	very mlnor epidote + very minor garnet	y	1	0.05	flake: good condition	-1	12	
SLS-12-12	-18, +45 (+45)	473671	5050052	2m	12"	gravel bar	no	float very mixed	0	yes	yes	no	20%	50%	minor epidote		0			21	14
	-45 to +60 (+60)					on bend		1	yes	yes	yes	40%	60%	very minor epidote + very minor garnet		0			22	12	
	-60 to +80(+80)						0	yes	yes	yes	60%	70%	very minor epidote + very minor garnet		0			-6	10		
	-80						0	yes	yes	yes	80%	90%	very minor epidote + very minor garnet		0			2	12		

Sample ID	Mesh Size	GPS Location		Watercourse		Natural Trap	Adjacent Rock		Other Materials Noted						Gold											
		Easting	Northing	Width	Depth		outcrop	Description	AsPy	Specular Hm	Hm	Py	Black Sand		Light Colour Minerals	(Y/N)	# Units	Size (mm)	Description	XRF						
													%	% Magnetic						Au	Au +/-					
SLS-12-13	-18, +45 (+45)	473675	5049978	2m	12"	gravel bar		float very mixed												2	13					
	-45 to +60 (+60)					on bend	no			0	yes	yes	no	20%	50%	very minor epidote		0				2	11			
	-60 to +80(+80)								1	yes	yes	yes	30%	80%	very minor epidote + very minor garnet		0				5	11				
	-80								?	yes	yes	yes	80%	80%	very minor epidote + very minor garnet		0				14	12				
SLS-12-14	-18, +45 (+45)	474971	5051246	3m	24'	1.5m	yes	fault zone (follows river?) Mylonetized dark grey /black with small quartz & calcite veining. Limestone float boulders	0	yes	yes	yes	35%	60%	very minor epidote + very minor garnet		0			-10	13					
	-45 to +60 (+60)								0	yes	yes	no	50%	60%	very minor epidote + very minor garnet		0				3	12				
	-60 to +80(+80)																						nugget: fairly rounded	13	12	
																										-80
SLS-12-15	-18, +45 (+45)	475027	5051238	1.5m	6"	1m boulder	yes		fault zone.Dark mylonetized rock	0	yes	yes	yes	30%	50%	very minor epidote + very minor garnet		0			-2	11				
	-45 to +60 (+60)													1	yes	yes	yes	45%	70%	very minor epidote + very minor garnet		0			13	11
	-60 to +80(+80)													0	yes	yes	yes	60%	70%	very minor epidote + very minor garnet		0			11	11
	-80												0	yes	yes	no	80%	80%	very minor epidote + very minor garnet	y	5	1@ 0.2, 1@ 0.1, 3@0.05	good condition	10	12	
SLS-12-16	-18, +45 (+45)	475017	5051254	3m	18"	1m boulder	yes	fault zone.Dark mylonetized rock	0	yes	yes	yes	35%	60%	very minor epidote + very minor garnet		0			-18	12					
	-45 to +60 (+60)								0	yes	yes	no	50%	70%	very minor epidote + very minor garnet		0			-1	12					
	-60 to +80(+80)											1	yes	yes	yes	60%	70%	very minor epidote + very minor garnet		0			3	11		
	-80												0	yes	yes	no	80%	70%	very minor epidote + very minor garnet	y	1	0.05	good condition	4	12	
SLS-12-17	-18, +45 (+45)	477176	5047870	1.5m	4"	0.6m	no	float very mixed	0	yes	yes	yes	20%	60%	very minor epidote		0			17	13					
	-45 to +60 (+60)												0	yes	yes	no	20%	50%	very minor epidote		0			52	14	
	-60 to +80(+80)					boulder						0	yes	yes	yes	70%	70%	very minor epidte + very minor garnet		0			17	12		
	-80												0	yes	yes	yes	90%	70%	very minor epidte + very minor garnet		0			-3	11	
SLS-12-18	-18, +45 (+45)	477101	5048180	1.5m	6"	0.6m bolder	no	float very mixed	0	no	yes	no	20%	60%	minor epidote		0			-8	12					
	-45 to +60 (+60)								0	no	yes	no	20%	60%	very minor epidote		0			-2	11					
	-60 to +80(+80)								0	yes	yes	no	25%	80%	very minor epidte + very minor garnet		0			2	11					
	-80								0	yes	yes	no	80%	80%	very minor epidte + very minor garnet		0			4	12					
SLS-12-19	-18, +45 (+45)	477141	5048618	2m	12"	0.5m boulder	no	float very mixed	3	yes	yes	yes	30%	60%	minor epidote		0			22	13					
	-45 to +60 (+60)								2	yes	yes	yes	30%	60%	minor epidote + very minor garnet		0			9	12					
	-60 to +80(+80)								4	yes	yes	yes	60%	80%	minor epidote + very minor garnet		0			10	11					
	-80								0	yes	yes	yes	60%	80%	minor epidote + very minor garnet		0			25	12					
SLS-12-20	-18, +45 (+45)	477409	5048764	1.5m	3"	1.2m	yes	dark grey basalt	0	yes	yes	no	25%	50%	minor epidote		0			3	15					
	-45 to +60 (+60)												0	yes	yes	no	20%	60%	minor epidote + very minor garnet	y	1	0.1	flake: good condition to slightly curled	-3	12	
	-60 to +80(+80)					boulder						2	yes	yes	yes	40%	80%	minor epidote + very minor garnet		0			0	12		
	-80												0	yes	yes	yes	70%	80%	minor epidote + very minor garnet	y	2	0.1	nuggets: good condition	3	12	
SLS-12-21	-18, +45 (+45)	477390	5048812	2m	12"	1m bolder	no	float mainly dark grey basalt	2	yes	yes	yes	20%	40%	minor epidote + very minor garnet		0			0	13					
	-45 to +60 (+60)								0	yes	yes	yes	30%	60%	minor epidote + very minor garnet		0			21	13					
	-60 to +80(+80)												0	yes	yes	yes	40%	70%	minor epidote + very minor garnet	y	1	0.2	nugget: flake/nugget, fairly rounded	-3	11	
	-80								0	yes	yes	yes	60%	80%	minor epidote + very minor garnet		0			-2	12					
SLS-12-22	-18, +45 (+45)	477427	5049215	3m	9 - 12"	1m boulder	no	float very mixed	0	yes	yes	no	20%	40%	minor epidote + very minor garnet		0			7	13					
	-45 to +60 (+60)								0	yes	yes	yes	25%	80%	minor epidote + very minor garnet		0			1	11					
	-60 to +80(+80)								0	yes	yes	yes	30%	80%	minor epidote + very minor garnet		0			0	11					
	-80								0	yes	yes	yes	80%	90%	minor epidote + very minor garnet	y	1	0.1	nugget: slightly rounded	8	12					

Sample ID	Mesh Size	GPS Location		Watercourse		Natural Trap	Adjacent Rock		Other Materials Noted						Gold						
		Easting	Northing	Width	Depth		outcrop	Description	AsPy	Specular Hm	Hm	Py	Black Sand		Light Colour Minerals	(Y/N)	# Units	Size (mm)	Description	XRF	
													%	% Magnetic						Au	Au +/-
SLS-12-23	-18, +45 (+45)					gravel bar		dark grey basalt, mylonetized and fractured													
	-45 to +60 (+60)					on bend	yes		1	yes	yes	no	20%	60%	very minor epidote	y	1	0.05	thin flake: good condition	-11	12
	-60 to +80(+80)								1	yes	yes	yes	20%	70%	very minor epidote + very minor garnet		0			7	12
	-80								0	yes	yes	yes	40%	70%	very minor epidote + very minor garnet		0			-9	11
								0	yes	yes	yes	90%	90%	very minor epidote + very minor garnet		0			-8	11	
SLS-12-24	-18, +45 (+45)					1m boulder		dark grey basalt, mylonetized and fractured													
	-45 to +60 (+60)						yes		0	yes	yes	no	25%	6%	very minor epidote		0			14	14
	-60 to +80(+80)								0	yes	yes	yes	30%	60%	very minor epidote + very minor garnet		0			19	12
	-80								0	yes	yes	yes	70%	60%	very minor epidote + very minor garnet		0			14	11
								0	yes	yes	yes	80%	80%	very minor epidote + very minor garnet		0			-11	11	
SLS-12-25	-18, +45 (+45)					1m boulder		float mainly dark grey basalt													
	-45 to +60 (+60)						no		0	yes	yes	yes	10%	50%	very minor epidote		0			-6	12
	-60 to +80(+80)								0	yes	yes	yes	10%	60%	very minor epidote + very minor garnet		0			8	12
	-80								4	yes	yes	yes	60%	70%	very minor epidote + very minor garnet		0			14	12
								0	yes	yes	yes	70%	90%	very minor epidote + very minor garnet		0			4	11	
SLS-12-26	-18, +45 (+45)					crack in outcrop		Dark grey wacke													
	-45 to +60 (+60)						yes		0	yes	yes	no	20%	50%	very minor epidote		0			11	14
	-60 to +80(+80)								0	yes	yes	yes	30%	60%	very minor epidote + very minor garnet		0			2	12
	-80								2	yes	yes	yes	50%	60%	very minor epidote + very minor garnet		0			11	12
								0	yes	yes	yes	60%	70%	very minor epidote + very minor garnet		0			12	12	
SLS-12-27	-18, +45 (+45)					gravel bar behind stump		float very mixed													
	-45 to +60 (+60)						no		1	yes	yes	yes	20%	50%	minor epidote		0			-4	12
	-60 to +80(+80)								1	yes	yes	yes	10%	50%	negligible epidote + negligible garnet		0			20	13
	-80								1	yes	yes	yes	10%	70%	negligible epidote + negligible garnet		0			8	12
								0	yes	yes	yes	25%	80%	negligible epidote + negligible garnet		0			6	12	
SLS-12-28	-18, +45 (+45)					0.5m boulder		float very mixed													
	-45 to +60 (+60)						no		6	yes	yes	yes	30%	60%	elevated quartz with wall rock inclusions, minor epidote + very minor garnet		0			14	14
	-60 to +80(+80)								2	yes	yes	yes	30%	80%	abundent epidote minor garnet		0			-1	13
	-80								3	yes	yes	yes	50%	70%	very minor epidote + very minor garnet		0			-5	17
								0	yes	yes	yes	60%	80%	very minor epidote + very minor garnet		0			-6	18	
SLS-12-29	-18, +45 (+45)					3 x 0.5m boulder		float very mixed													
	-45 to +60 (+60)						no		8	no	yes	yes	40%	50%	very minor epidote + very minor garnet		0			2	18
	-60 to +80(+80)								2	no	yes	yes	30%	60%	very minor epidote + very minor garnet		0			-18	14
	-80								2	yes	yes	yes	70%	60%	very minor epidote + very minor garnet		0			-1	16
								0	yes	yes	yes	70%	80%	very minor epidote + very minor garnet		0			3	19	
SLS-12-30	-18, +45 (+45)					.05m boulder		float very mixed													
	-45 to +60 (+60)						no		9	yes	yes	no	20%	60%	elevated quartz with wall rock inclusions, minor epidote + very minor garnet		0			-10	16
	-60 to +80(+80)								2	yes	yes	yes	25%	60%	minor epidote + very minor garnet		0			-3	17
	-80								4	yes	yes	yes	30%	70%	very minor epidote + very minor garnet		0			-4	15
								0	yes	yes	yes	60%	90%	very minor epidote + very minor garnet	y	1	0.025	nugget fairly rounded flat	5	17	
SLS-12-31	-18, +45 (+45)					2x 0.5m boulders		float mainly dark grey basqalt													
	-45 to +60 (+60)						no		6	yes	yes	yes	20%	50%	elevated quartz with wall rock inclusions, minor epidote + very minor garnet		0			16	19
	-60 to +80(+80)								2	yes	yes	yes	20%	50%	very minor epidote + very minor garnet		0			3	16
	-80								2	yes	yes	yes	50%	50%	very minor epidote + very minor garnet		0			15	18
								0	no	yes	yes	70%	80%	very minor epidote + very minor garnet		0			-6	17	
SLS-12-32	-18, +45 (+45)					0.8m boulder		float mainly basaly													
	-45 to +60 (+60)						no		1	no	yes	yes	5%	60%	very minor epidote		0			13	18
	-60 to +80(+80)								0	no	yes	no	5%	80%	very minor epidote		0			-4	19
	-80								0	yes	yes	yes	5%	90%	minor epidote + very minor garnet		0			-5	17
								0	yes	yes	yes	20%	90%	minor epidote + very minor garnet		0			-4	16	
SLS-12-33	-18, +45 (+45)					0.5m boulder		float mainly dark grey basalt													
	-45 to +60 (+60)						no		2	no	yes	yes	5%	60%	very minor epidote		0			21	21
	-60 to +80(+80)								1	no	yes	no	5%	70%	very minor epidote		0			1	17
	-80								0	no	yes	no	10%	70%	minor epidote + very minor garnet		0			26	19
								2	yes	yes	yes	20%	80%	minor epidote + very minor garnet		0			11	18	



## Stream Sediment Table of Results

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Sample ID	Mesh Size	GPS Location		Watercourse		Natural Trap	outcrop	Adjacent Rock Description	AsPy	Other Materials Noted						Gold					
		Easting	Northing	Width	Depth					Specular Hm	Hm	Py	Black Sand		Light Colour Minerals	(Y/N)	# Units	Size (mm)	Description	XRF	
													%	% Magnetic						Au	Au +/-
SLS-12-34	-18, +45 (+45)	482262	5047621	0.5m	3"	0.5m boulder	yes	dark grey basalt	2	no	yes	yes	5%	60%	very minor epidote		0			1	15
	-45 to +60 (+60)								0	no	yes	no	5%	70%	very minor epidote		0			17	17
	-60 to +80(+80)								0	no	yes	no	15%	70%	minor epidote + very minor garnet		0			-11	15
	-80								0	yes	yes	yes	25%	80%	minor epidote + very minor garnet		0			-19	14
SLS-12-35	-18, +45 (+45)	481968	5049893	5m	12"	0.6m boulder on gravel bar	no	float very mixed	1	yes	yes	yes	10%	60%	elevated quartz with wall rock inclusions, minor epidote		0			39	23
	-45 to +60 (+60)								1	yes	yes	yes	10%	70%			0			-21	15
	-60 to +80(+80)								0	yes	yes	yes	20%	70%		very minor epidote	0			15	18
	-80								1	yes	yes	yes	40%	70%		minor garnet	0			9	19
SLS-12-36	-18, +45 (+45)	480507	5049134	1.5m	6"	2x0.5m boulders	no	float very mixed	10	no	yes	no	10%	60%	very minor epidote		0			33	22
	-45 to +60 (+60)								1	yes	yes	yes	40%	70%	very minor epidote		0			-2	19
	-60 to +80(+80)								1	yes	yes	yes	50%	70%	very minor epidote		0			17	20
	-80								1	yes	yes	yes	40%	80%	very minor epidote		0			11	19
SLS-12-37	-18, +45 (+45)	481040	5046989	1m	4"	1m boulder	no	float mainly dark grey basalt	1	no	yes	no	5%	70%	very minor epidote		0			-12	22
	-45 to +60 (+60)								0	no	yes	no	5%	80%	very minor epidote		0			25	23
	-60 to +80(+80)								0	no	yes	no	20%	80%	very minor epidote		0			-9	20
	-80								0	yes	yes	yes	70%	80%	very minor epidote		0			28	23
SLS-12-38	-18, +45 (+45)	491297	5044647	0.6m	3"	1.0m boulder	no	float mainly dark mafic intrusive + granite	0	yes	yes	yes	5%	70%	minor epidote		0			25	17
	-45 to +60 (+60)								0	yes	yes	yes	30%	70%	minor epidote		0			7	16
	-60 to +80(+80)								0	yes	yes	yes	70%	80%	very minor epidote		0			18	16
	-80								0	yes	yes	yes	90%	80%	very minor epidote = minor garnet		0			-12	14
SLS-12-39	-18, +45 (+45)	487148	5047246	1.5m	4"	0.8m boulder	no	float mixed. Quartz + sericitized + rusty gossan noted	2	yes	yes	yes	30%	60%	very minor epidote + very minor garnet		0			28	18
	-45 to +60 (+60)								0	yes	yes	yes	40%	60%	very minor epidote + very minor garnet		0			-20	13
	-60 to +80(+80)								0	yes	yes	yes	70%	70%	very minor epidote + very minor garnet		0			-10	14
	-80								0	yes	yes	yes	70%	70%	minor garnet		0			5	16
SLS-12-40	-18, +45 (+45)	487259	5047155	1m	3"	0.5m boulder	no	float mixed. Quartz + sericitized + rusty gossan noted	6	no	yes	yes	20%	60%	very minor epidote + very minor garnet		0			-1	16
	-45 to +60 (+60)								2	yes	yes	yes	30%	60%	very minor epidote + very minor garnet		0			-7	13
	-60 to +80(+80)								0	yes	yes	yes	70%	70%	very minor epidote + very minor garnet		0			18	15
	-80								0	yes	yes	yes	70%	80%	very minor epidote + very minor garnet		0			-16	14
SLS-12-41	-18, +45 (+45)	487168	5047469	1.5m	4"	2x0.5m boulders	no	float mixed. Quartz + sericitized + rusty gossan noted	4	yes	yes	yes	20%	60%	very minor epidote + minor garnet		0			13	16
	-45 to +60 (+60)								2	yes	yes	yes	30%	60%	minor epidote + minor garnet		0			12	15
	-60 to +80(+80)								1	yes	yes	yes	70%	70%	minor epidote + minor garnet		0			12	15
	-80								0	yes	yes	no	70%	70%	minor garnet		0			27	17
SLS-12-42	-18, +45 (+45)	486525	5047489	3m	6"	0.5m boulder	no	float very mixed	0	yes	yes	yes	30%	50%	elevated quartz / quartz carbonate with wall rock inclusions, very minor epidote, very minor garnet very minor epidote + very minor garnet		0			19	19
	-45 to +60 (+60)								1	yes	yes	yes	60%	70%			0			-13	14
	-60 to +80(+80)								0	yes	yes	yes	80%	80%			0			2	15
	-80								0	yes	yes	yes	70%	80%			0			-16	15
SLS-12-43	-18, +45 (+45)	487550	5042879	1.5m	4"	0.4m boulder	no	float very mixed	0	yes	yes	yes	50%	70%	elevated quartz / quartz carbonate with wall rock inclusions, very minor epidote, very minor garnet very minor epidote + very minor garnet very minor epidote + very minor garnet		0			29	18
	-45 to +60 (+60)								0	yes	yes	yes	50%	70%			0			17	17
	-60 to +80(+80)								1	yes	yes	yes	60%	70%			0			5	16
	-80								2	yes	yes	yes	60%	70%			0			-14	16
SLS-12-44	-18, +45 (+45)	487069	5043018	0.5m	2"	0.5m boulder	no	float very mixed	0	yes	yes	yes	20%	70%	elevated quartz / quartz carbonate with wall rock inclusions, very minor epidote, very minor garnet very minor epidote + very minor garnet very minor epidote + very minor garnet		0			-11	15
	-45 to +60 (+60)								0	yes	yes	yes	30%	70%			0			22	18
	-60 to +80(+80)								1	yes	yes	yes	30%	70%			0			-5	16
	-80								0	yes	yes	yes	30%	80%			0			49	20

Sample ID	Mesh Size	GPS Location		Watercourse		Natural Trap	Adjacent Rock		Other Materials Noted						Gold						
		Easting	Northing	Width	Depth		outcrop	Description	AsPy	Specular Hm	Hm	Py	Black Sand		Light Colour Minerals	(Y/N)	# Units	Size (mm)	Description	XRF	
													%	% Magnetic						Au	Au +/-
SLS-12-45	-18, +45 (+45)	486605	5042719	1m	3"	2m boulder	yes	subcrop, sandstone/siltstone/mudstone/wacke	0	yes	yes	yes	5%	70%	elevated quartz / quartz carbonate with wall rock Inclusions, very minor epidote, very minor garnet		0			25	18
	-45 to +60 (+60)								0	yes	yes	yes	50%	70%			0			1	15
	-60 to +80(+80)								0	yes	yes	yes	60%	70%			0			13	16
	-80								0	yes	yes	yes	80%	90%	very minor epidote + very minor garnet		0			-4	16
SLS-12-46	-18, +45 (+45)	484805	5043093	0.8m	3"	0.5m boulder	no	float mainly siltstone / wacke	0	yes	yes	yes	5%	60%	elevated quartz / quartz carbonate with wall rock Inclusions, very minor epidote, very minor garnet		0			3	16
	-45 to +60 (+60)								0	yes	yes	yes	5%	60%	muscovite, elevated quartz / quartz carbonate , very		0			6	16
	-60 to +80(+80)								0	yes	yes	yes	40%	70%	minor epidote, very minor garnet		0			16	17
	-80								0	yes	yes	yes	50%	90%	very minor epidote + very minor garnet	y	2	1@0.3x0.05, 1@0.05 nugget	pristine	23	17
SLS-12-47	-18, +45 (+45)	484760	5043071	2.5m	4"	o/crop	yes	Dark grey / black siltstone / wacke	1	yes	yes	yes	30%	30%	very minor quartz carbonate, increase phyllite, very minor epidote, very minor garnet		0			-2	18
	-45 to +60 (+60)								2	yes	yes	yes	30%	50%			0			30	21
	-60 to +80(+80)								4	yes	yes	yes	30%	60%			0			-21	17
	-80								>10	yes	yes	yes	60%	90%	very minor epidote + very minor garnet		0 ?		possible ultrafine gold?	17	20
SLS-12-48	-18, +45 (+45)	484495	5043051	1m	2"	o/crop	yes	sandstone?	0	yes	yes	yes	1%	50%	mainly phyllite, negligible epidote, negligible garnet		0			12	16
	-45 to +60 (+60)					ledge			1	yes	yes	yes	2%	60%	mainly phyllite, negligible epidote, negligible garnet		0			-1	16
	-60 to +80(+80)								0	yes	yes	yes	30%	60%	minor epidote, negligible garnet		0			20	17
	-80								2	yes	yes	yes	40%	80%	minor epidote, negligible garnet		0 ?		possible ultrafine gold?	16	19
SLS-12-49	-18, +45 (+45)	484260	5042756	3m	9"	1m boulder	no	float very mixed	1	negligible	negligible	negligible	0.5%	50%	very minor epidote, negligible garnet		0			2	16
	-45 to +60 (+60)								0	negligible	negligible	negligible	2%	70%	negligible epidote, negligible garnet		0			2	17
	-60 to +80(+80)								0	negligible	negligible	negligible	15%	70%	negligible epidote, negligible garnet		0			30	18
	-80								1	yes	yes	yes	40%	80%	negligible epidote, negligible garnet		0			-3	16
SLS-12-50	-18, +45 (+45)	489361	5042927	0.6m	2"	0.8mboulder	no	south of Rockland Brook fault? Float is Bass River Complex?	0	negligible	negligible	negligible	1%	50%	minor epidote + negligible garnet		0			5	17
	-45 to +60 (+60)								0	negligible	negligible	negligible	1%	50%	very minor epidote		0			-10	15
	-60 to +80(+80)								0	negligible	negligible	negligible	25%	70%	very minor epidote		0			13	16
	-80								0	yes	yes	yes	50%	70%	negligible epidote and garnet		0			-25	13
SLS-12-51	-18, +45 (+45)	489687	5042880	1m	4"	bottom small pool	no	south of Rockland Brook fault? Float is Bass River Complex?	0	yes	yes	yes	0.5%	50%	phyllite + quartz with muscovite, elevated epidote		0			-5	16
	-45 to +60 (+60)					downstream of rock			0	yes	yes	yes	1%	60%	phyllite + quartz with muscovite, elevated epidote		?	gold coloured balls	Braze? Spatter?	-11	16
	-60 to +80(+80)					ledge No			0	yes	yes	yes	1%	50%	elevated epidote		?	2 1/2 balls gold coloured	Braze? Spatter?	0	16
	-80					o/crop			0	yes	yes	yes	20%	50%	very minor epidote		0			-11	15
SLS-12-52	-18, +45 (+45)	488393	5043153	1.5m	6"	under	no	south of Rockland Brook fault? Float is Bass River Complex?	0	yes	yes	no	0.5%	50%	minor epidote + minor garnet		0			-8	17
	-45 to +60 (+60)					boulder in			0	yes	yes	yes	2%	50%	elevated epidote + very minor garnet		0			-3	17
	-60 to +80(+80)								1	yes	yes	yes	20%	80%	elevated epidote + very minor garnet		0			0	16
	-80					rocky stream bed			0	yes	yes	yes	30%	80%	elevated epidote + very minor garnet		0		possible 2 very small Au?	-29	16
SLS-12-53	-18, +45 (+45)	490645	5045167	0.6m	2"	0.5m boulder	no	float very mixed	0	yes	yes	yes	5%	50%	minor epidote		0			4	17
	-45 to +60 (+60)								0	yes	yes	yes	20%	50%	minor epidote		0			-15	15
	-60 to +80(+80)								0	yes	yes	yes	30%	60%	minor epidote + very minor garnet		0			5	18
	-80								0	yes	yes	no	35%	80%	minor epidote + very minor garnet		0			3	17
SLS-12-54	-18, +45 (+45)	488815	5045468	4m	12"	2m boulder	no	float very mixed	0	yes	yes	yes	20%	70%	very minor epidote + minor garnet		0			8	17
	-45 to +60 (+60)								0	yes	yes	yes	50%	70%	very minor epidote + very minor garnet		0			-5	15
	-60 to +80(+80)								0	yes	yes	yes	80%	70%	very minor epidote + very minor garnet		0			1	16
	-80								0	yes	yes	yes	80%	80%	very minor epidote + very minor garnet		0			8	17
SLS-12-55	-18, +45 (+45)	488606	5045284	3m	12"	1m boulder	no	float very mixed	2	yes	yes	yes	10%	50%	very minor epidote + very minor garnet		0			-16	15
	-45 to +60 (+60)								0	yes	yes	yes	30%	70%	very minor epidote + very minor garnet		0			-10	16
	-60 to +80(+80)								0	yes	yes	yes	30%	70%	very minor epidote + very minor garnet		0			-19	13
	-80								0	yes	yes	yes	30%	80%	very minor epidote + very minor garnet		0			-10	15

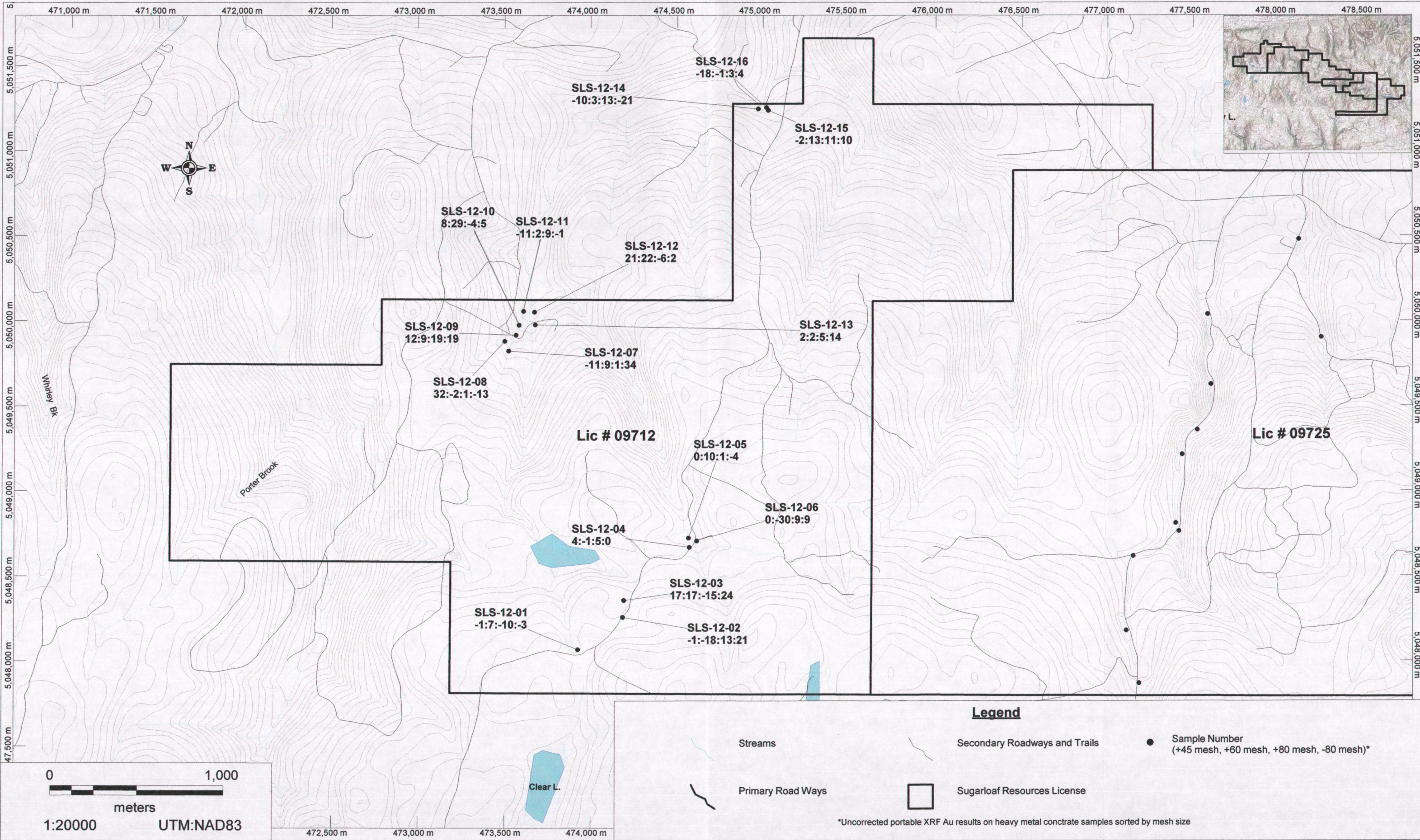
Sample ID	Mesh Size	GPS Location		Watercourse		Natural Trap	Adjacent Rock		Other Materials Noted						Gold							
		Easting	Northing	Width	Depth		outcrop	Description	AsPy	Specular Hm	Hm	Py	Black Sand		Light Colour Minerals	(Y/N)	# Units	Size (mm)	Description	XRF		
													%	% Magnetic						Au	Au +/-	
SLS-12-56	-18, +45 (+45)	488606	5045284	3m	12"	1m boulder	no	float very mixed	0	yes	yes	yes	20%	60%	very minor epidote + very minor garnet		0			20	19	
	-45 to +60 (+60)									0	yes	yes	yes	30%	70%	very minor epidote + very minor garnet		0			-8	16
	-60 to +80(+80)									0	yes	yes	yes	60%	70%	very minor epidote + very minor garnet		0			10	17
	-80									0	yes	yes	yes	60%	80%	very minor epidote + very minor garnet		0			29	18
SLS-12-57	-18, +45 (+45)	488439	5046245	1m	4"	1m boulder	no	float very mixed	0	yes	yes	yes	15%	50%	very minor epidote + very minor garnet		0			3	17	
	-45 to +60 (+60)									0	yes	yes	yes	30%	70%	very minor epidote + very minor garnet		0			31	18
	-60 to +80(+80)									0	yes	yes	yes	30%	70%	very minor epidote + very minor garnet		0			21	17
	-80									0	yes	yes	yes	60%	90%	very minor epidote + very minor garnet		0			47	18
SLS-12-58	-18, +45 (+45)	484195	5047980	1m	2"	0.3m boulders	no	predominant float purplish sandstone	1	yes	yes	yes	40%	60%	minor epidote + very minor garnet		0			6	17	
	-45 to +60 (+60)									1	yes	yes	yes	50%	70%	minor epidote + very minor garnet		0			15	16
	-60 to +80(+80)									0	yes	yes	yes	70%	70%	minor epidote + very minor garnet		0			20	16
	-80									0	yes	yes	yes	70%	70%	minor epidote + very minor garnet		0		possible ultrafine gold?	26	18
SLS-12-59	-18, +45 (+45)	480312	5047817	0.5m	2"	0.5m	yes	subcrop of basalt/wacke?	0	yes	yes	yes	40%	70%	very minor epidote		0			-12	18	
	-45 to +60 (+60)						boulder			0	yes	yes	yes	20%	70%	very minor epidote + very minor garnet		0			-17	18
	-60 to +80(+80)								0	yes	yes	yes	40%	80%	very minor epidote + very minor garnet		0			12	19	
	-80								0	yes	yes	yes	60%	60%	very minor epidote + very minor garnet		0			16	19	
SLS-12-60	-18, +45 (+45)	484779	5046842	3m	12"	1m boulder	no	float very mixed	1	yes	yes	yes	20%	50%	very minor epidote + very minor garnet		0			5	13	
	-45 to +60 (+60)									0	yes	yes	yes	40%	60%	very minor epidote + very minor garnet		0			18	18
	-60 to +80(+80)									0	yes	yes	yes	50%	70%	very minor epidote + very minor garnet		0			-14	16
	-80									0	yes	yes	yes	70%	80%	very minor epidote + very minor garnet		0			21	19
SLS-12-61	-18, +45 (+45)	484779	5046817	3m	12"	1m boulder	yes	dark mafic intrusive?	0	yes	yes	yes	30%	50%	very minor epidote + very minor garnet		0			28	20	
	-45 to +60 (+60)									0	yes	yes	yes	50%	70%	very minor epidote + very minor garnet	y	1	0.05	flake: semi-rounded	-18	16
	-60 to +80(+80)									0	yes	yes	yes	60%	60%	very minor epidote + very minor garnet		0			3	15
	-80									0	yes	yes	yes	60%	70%	very minor epidote + very minor garnet	y	17	0.01 or less	flakes & nuggets	28	19
SLS-12-62	-18, +45 (+45)	484710	5046416	3m	12"	0.5m	yes	dark mafic intrusive/	0	yes	yes	yes	20%	50%	very minor epidote + very minor garnet		0			53	21	
	-45 to +60 (+60)						boulder			0	yes	yes	yes	30%	60%	very minor epidote + very minor garnet		0			43	20
	-60 to +80(+80)							3	yes	yes	yes	35%	70%	very minor epidote + very minor garnet		0			-4	17		
	-80										0	yes	yes	yes	45%	85%	very minor epidote + very minor garnet	y	9	0.01 or less	flakes: pristine	-4
SLS-12-63	-18, +45 (+45)	484736	5046371	2m	6"	0.5m boulder	no	float mainly dark mafic intrusive	0	yes	yes	yes	20%	60%	very minor epidote + very minor garnet		0			10	18	
	-45 to +60 (+60)									2	yes	yes	yes	25%	60%	very minor epidote + very minor garnet		0			-6	16
	-60 to +80(+80)									0	yes	yes	yes	30%	60%	very minor epidote + very minor garnet		0			-17	15
	-80									1	yes	yes	yes	40%	80%	very minor epidote + very minor garnet	y	1	0.01 or less	flake pristine	13	18
SLS-12-64	-18, +45 (+45)	484615	5046266	1.2m	3"	1.5m boulder	no	float very mixed	0	yes	yes	yes	1%	60%	very minor epidote + negligible garnet		0			13	20	
	-45 to +60 (+60)									0	yes	yes	yes	2%	60%	very minor epidote + negligible garnet		0			5	18
	-60 to +80(+80)									0	yes	yes	yes	30%	60%	very minor epidote + negligible garnet		0			-13	15
	-80									0	yes	yes	yes	50%	70%	very minor epidote + negligible garnet	y	5	0.01 or less	flakes: pristine	28	20
SLS-12-65	-18, +45 (+45)	484629	5046201	3m	9"	1m boulder	no	float mainly darl basalt + mafic. Increased quartz + whitish / rusty silicified cobbles (fairly angular shape)	0	yes	yes	yes	1%	50%	very minor epidote + negligible garnet		0			-13	18	
	-45 to +60 (+60)									0	yes	yes	yes	5%	50%	very minor epidote + negligible garnet		0			5	19
	-60 to +80(+80)									0	yes	yes	yes	25%	60%	very minor epidote + negligible garnet	y	1	0.01 or less	flake: pristine	-7	15
	-80									0	yes	yes	yes	50%	90%	very minor epidote + negligible garnet	y	2	0.01 or less	flake pristine	45	21
SLS-12-66	-18, +45 (+45)	484613	5045721	2m	9"	1m boulder	no	float mixed but increasing rusty silicified cobbles - approaching outcrop to south?	0	yes	yes	yes	2%	60%	negligible epidote + negligible garnet		0			-7	17	
	-45 to +60 (+60)									0	yes	yes	yes	10%	60%	negligible epidote + negligible garnet		0			1	17
	-60 to +80(+80)									0	yes	yes	yes	40%	70%	negligible epidote + negligible garnet		0			4	18
	-80									0	yes	yes	yes	40%	70%	negligible epidote + negligible garnet	y	1	0.01 or less	flake	-7	18
SLS-12-67	-18, +45 (+45)	484560	5045959	3m	9"	1m boulder	no	float mainly basalt	0	yes	yes	yes	15%	60%	negligible epidote + negligible garnet		0			10	19	
	-45 to +60 (+60)									0	yes	yes	yes	20%	70%	minor epidote + minor garnet		0			-17	15
	-60 to +80(+80)									0	yes	yes	yes	60%	70%	minor epidote + minor garnet		0			32	20
	-80									0	yes	yes	yes	70%	80%	very minor epidote + very minor garnet	y	2	0.05	flakes	-1	18

## Appendix B

### Maps



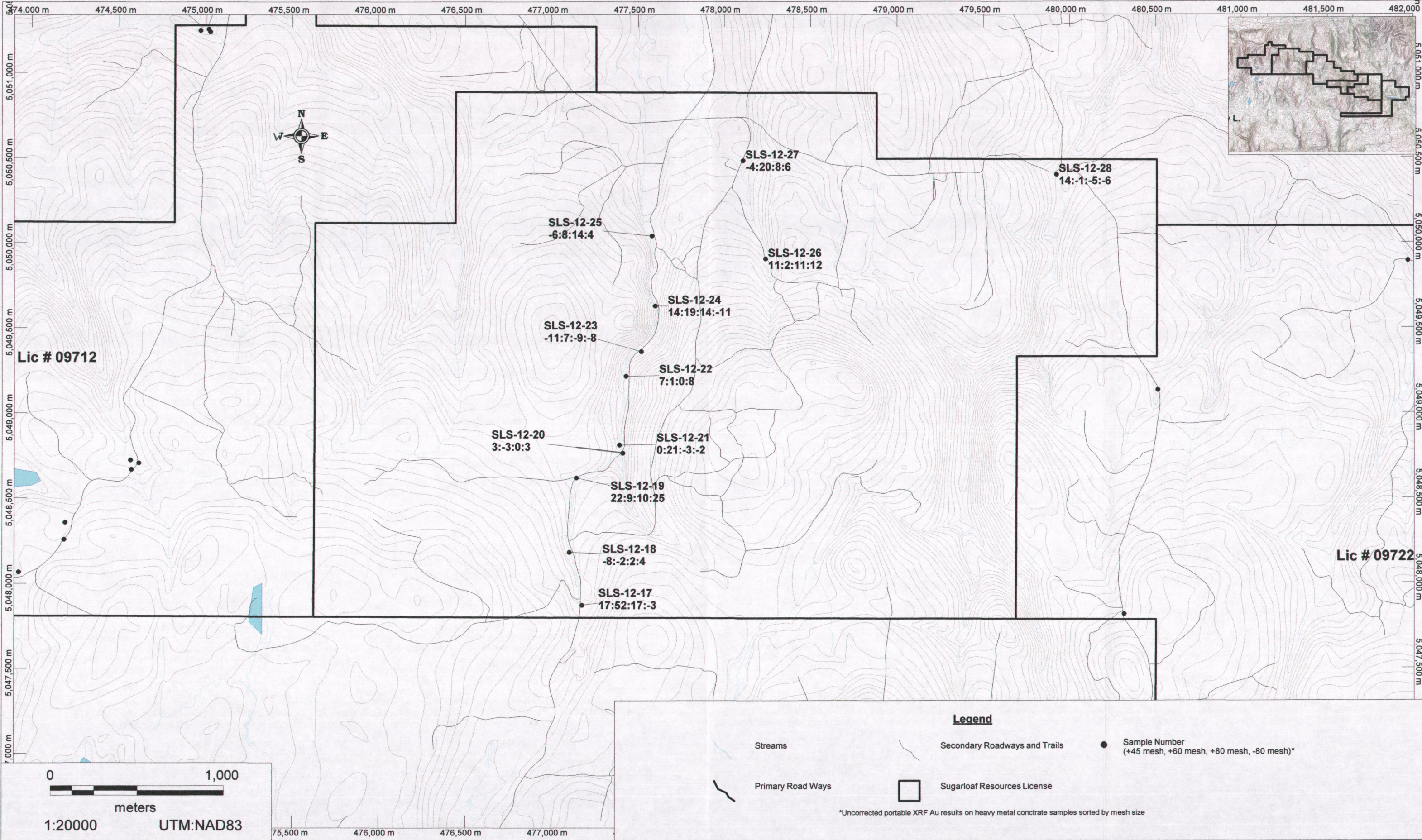
# Licence 09712 XRF Results on Heavy Metal Concentrate Samples



Map 1



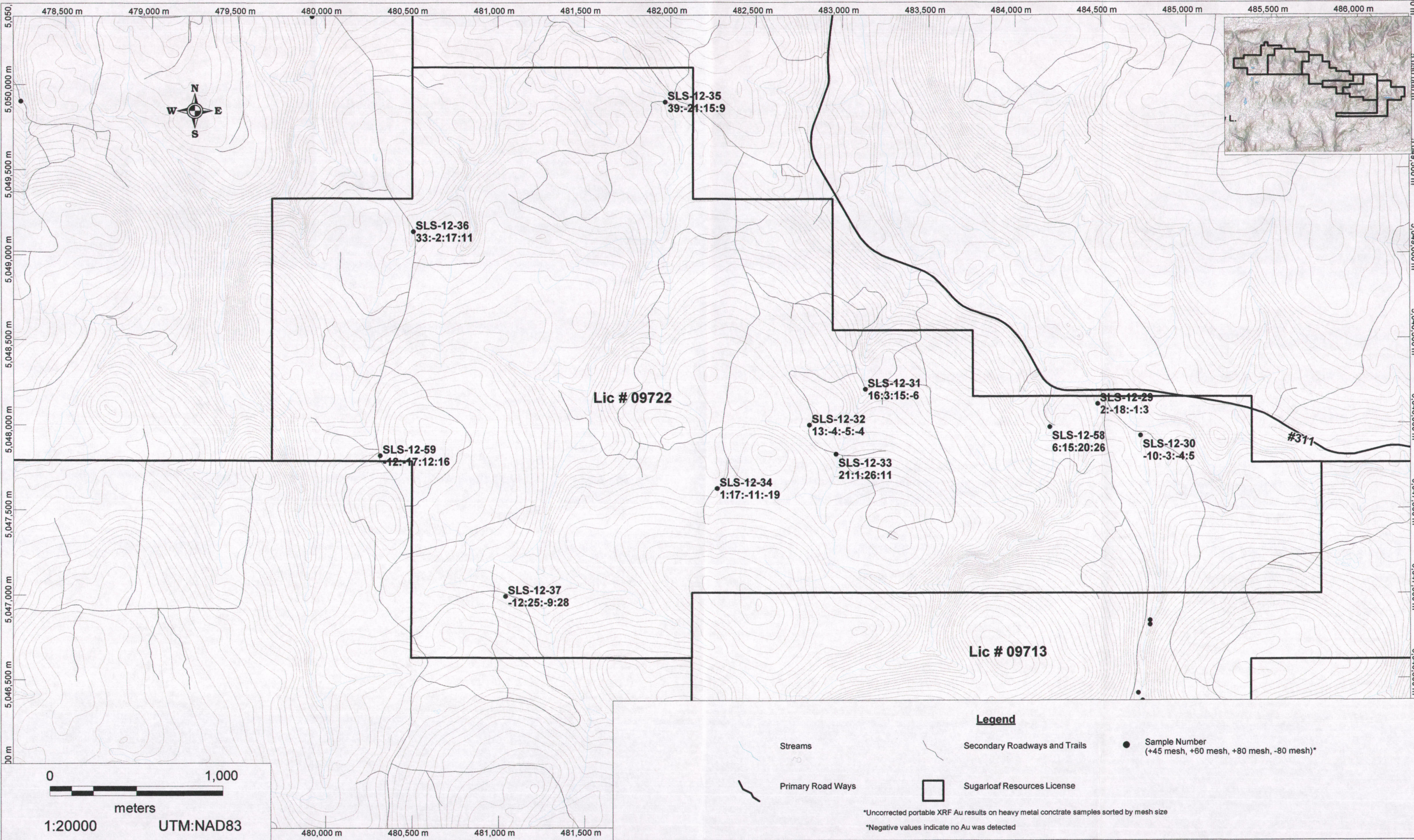
# Licence 09725 XRF Results on Heavy Metal Concentrate Samples



Map 2



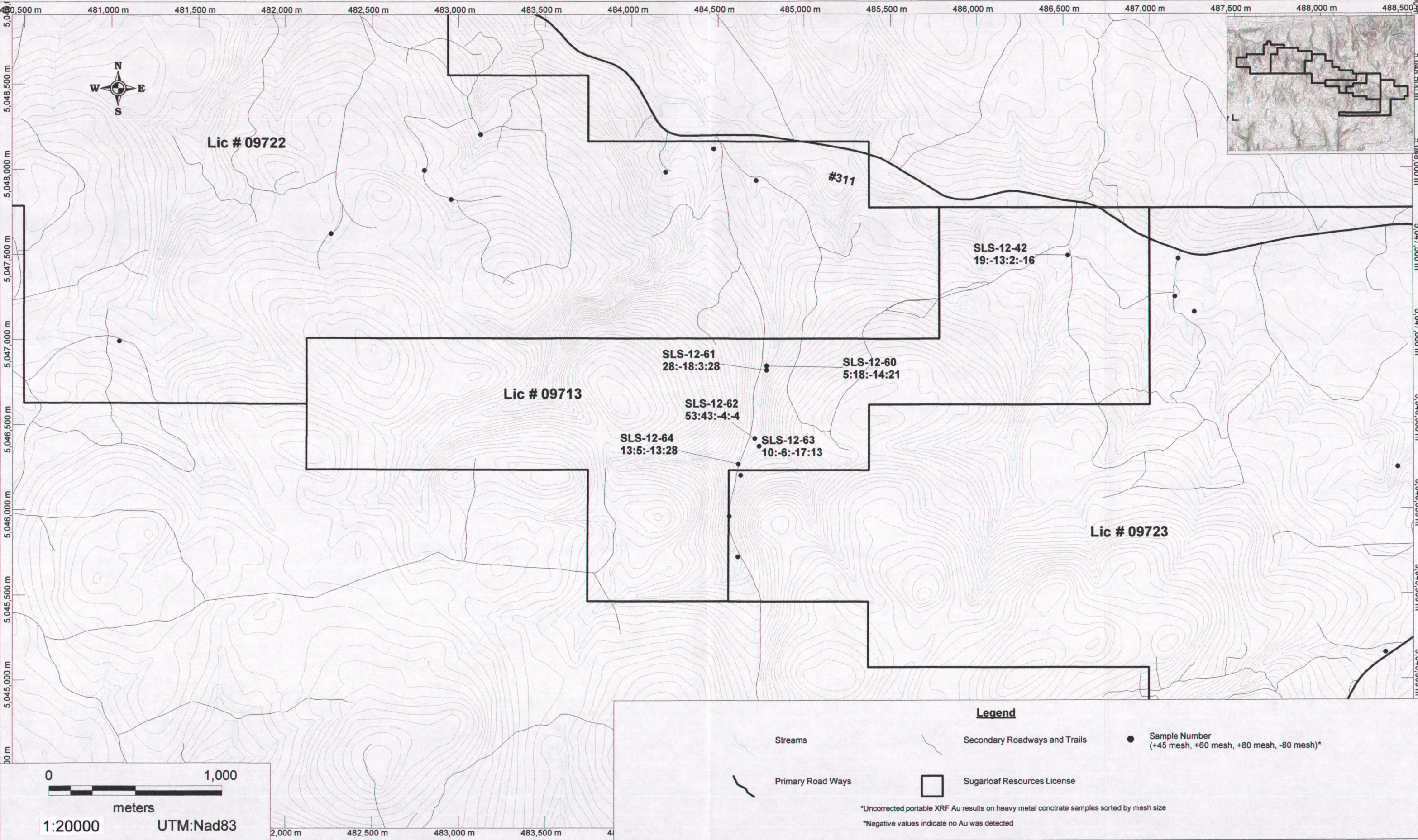
# Licence 09722 XRF Results on Heavy Metal Concentrate Samples



\*Uncorrected portable XRF Au results on heavy metal concntrate samples sorted by mesh size  
\*Negative values indicate no Au was detected



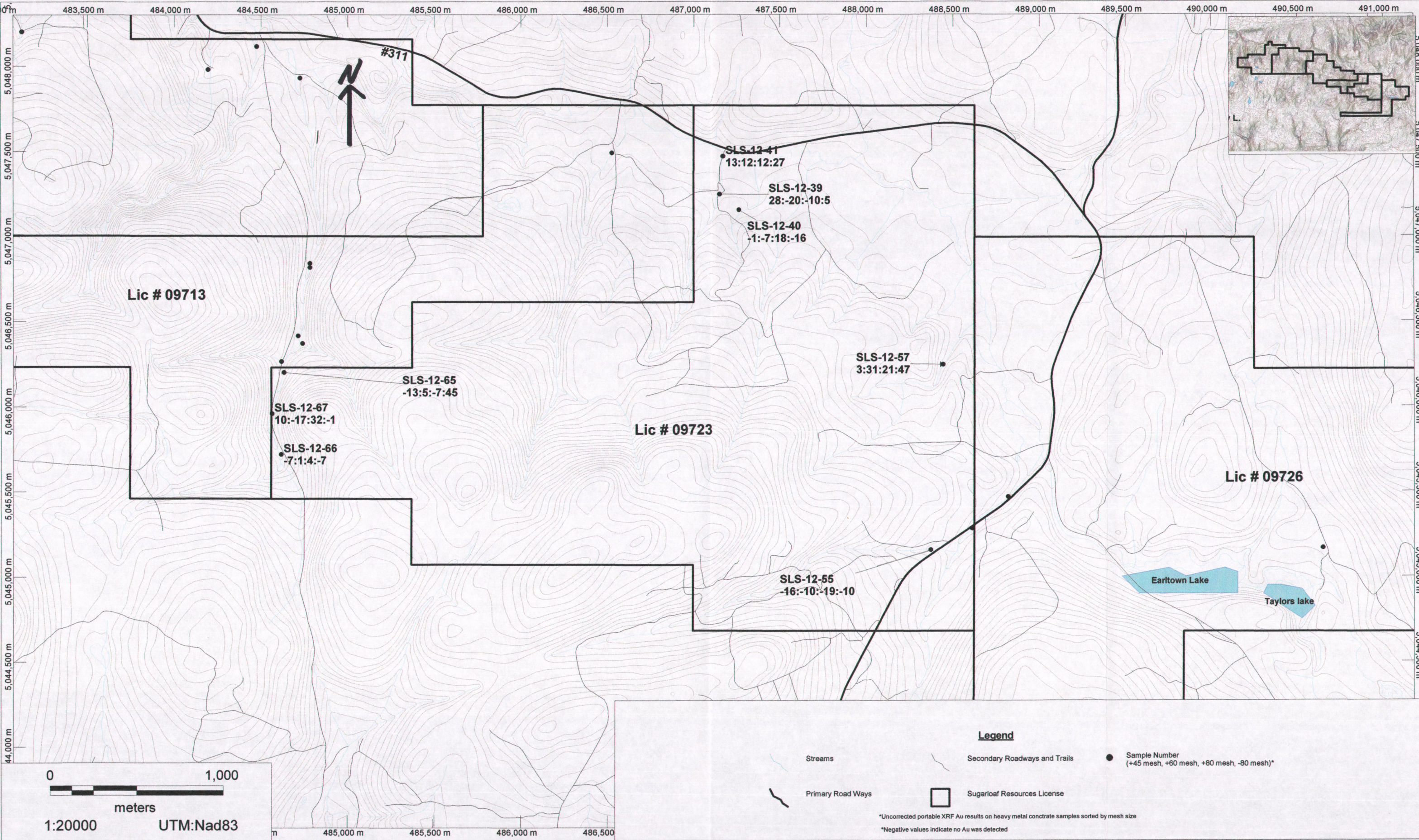
# Sugarloaf 09713 XRF Results on Heavy Metal Concentrate Samples



Map 4



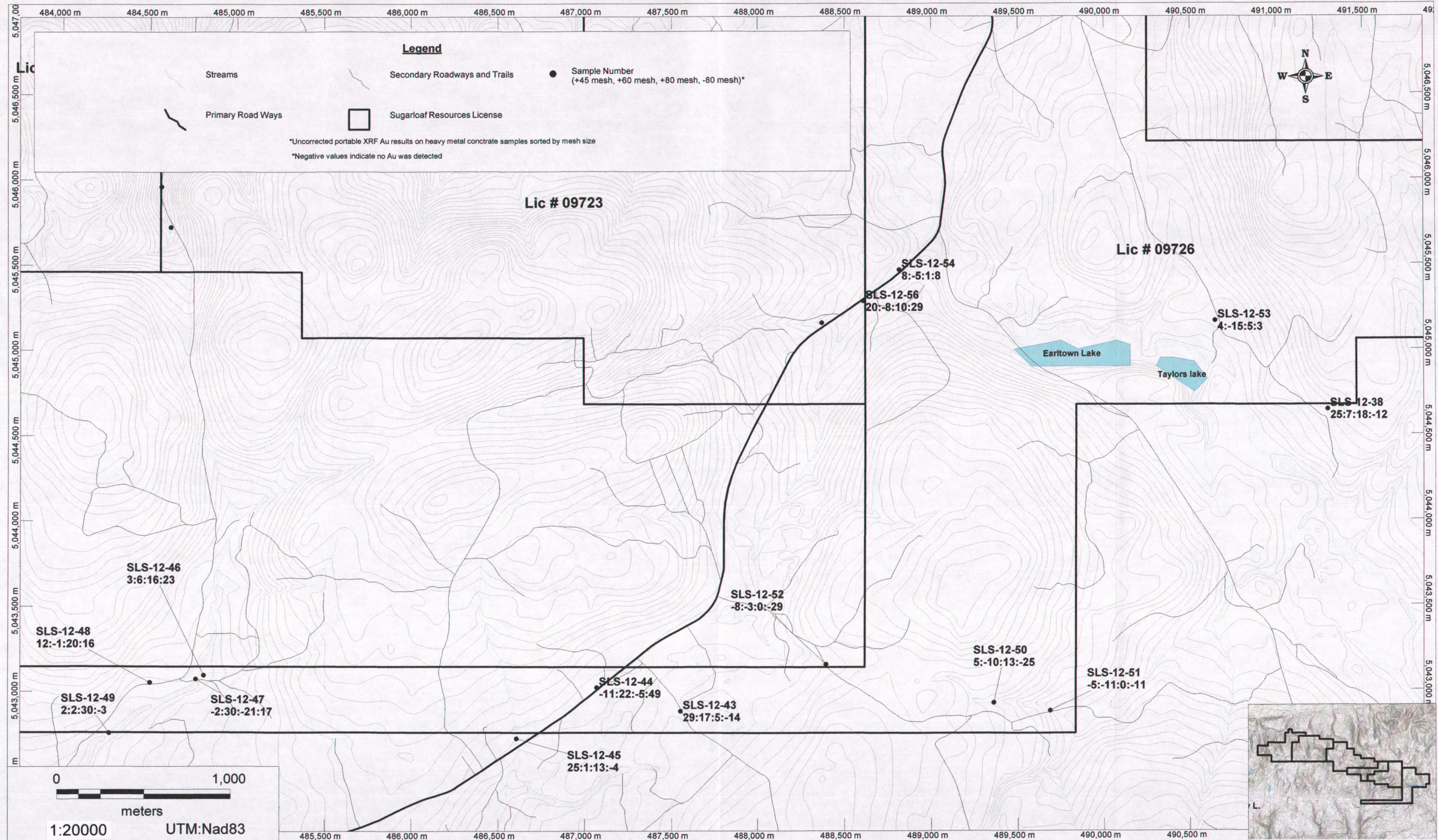
Licence 09723 XRF Results on Heavy metal Concentrate Samples



Map 5

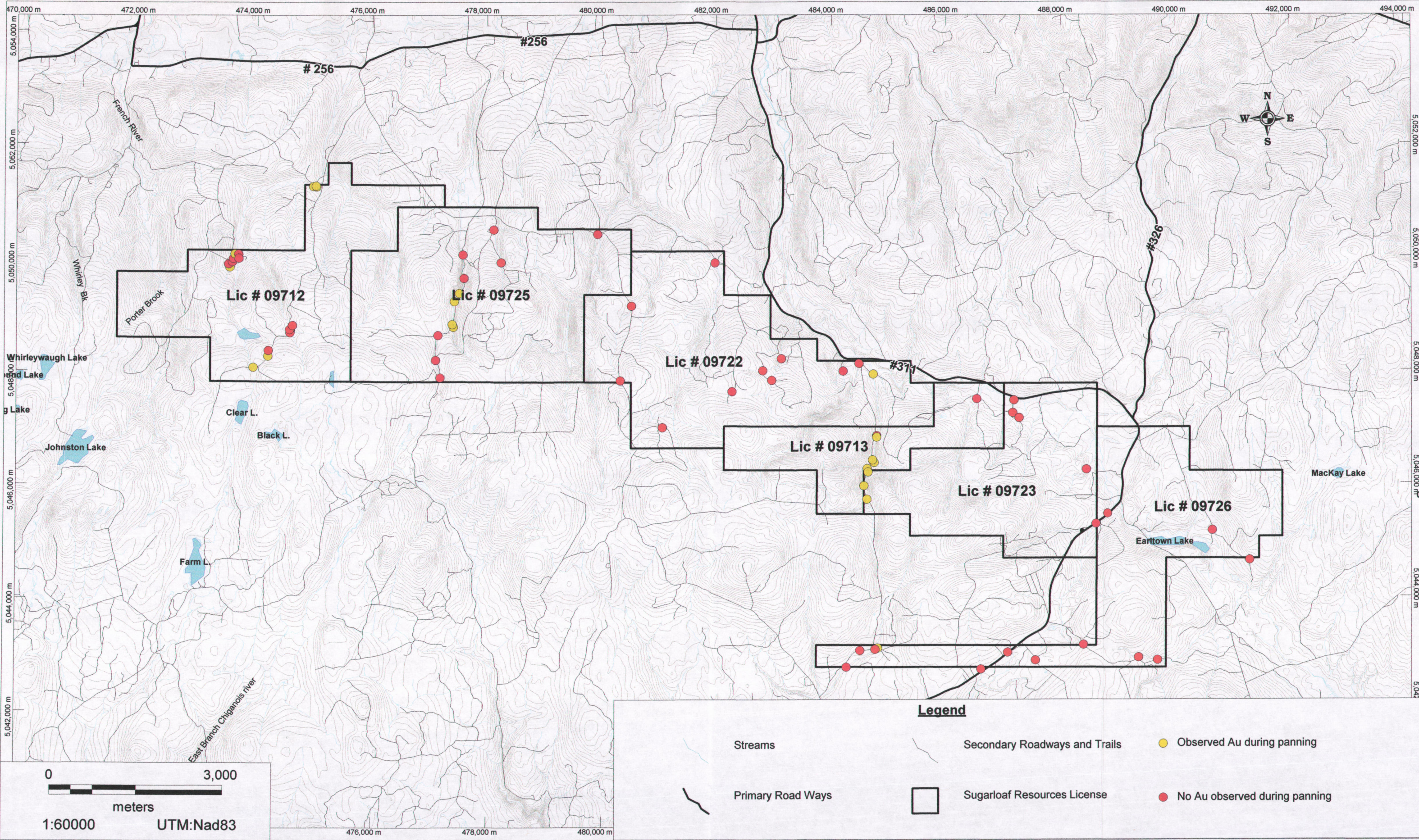


# Licence 09726 XRF Results on Heavy Metal Concentrate Samples



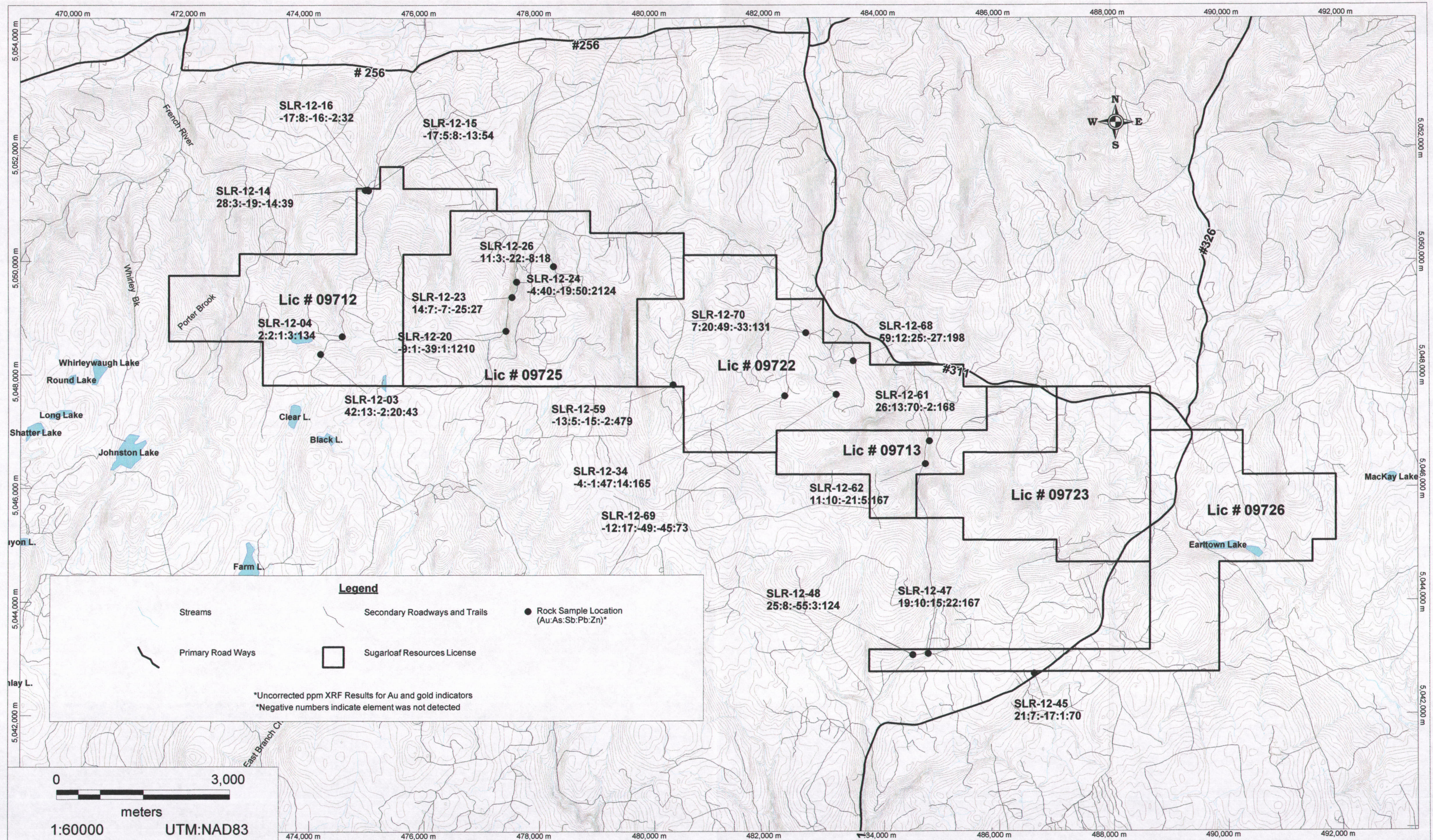


# Sugarloaf Observed Au During Panning Location Map 7





# Sugarloaf 2012 Rock Sample Locations with XRF Results



Map 8



## APPENDIX C

### XRF Analyzer Specs and Theory

**DELTA**  
Dynamic XRF



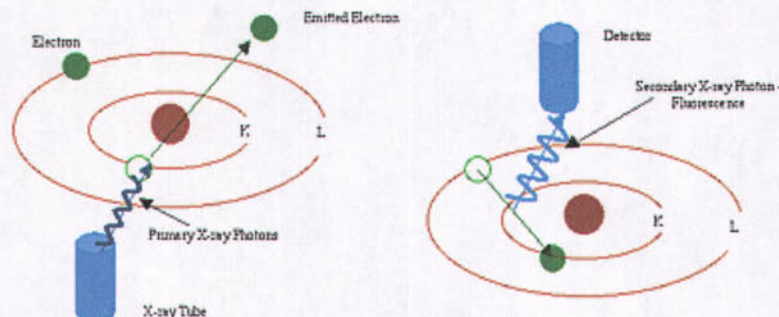
# X-Ray Fluorescence (XRF) Spectrometry

## 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 ( $\lambda$ ) 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  $\lambda$  is the characteristic wavelength of the photon.

Energies are inversely proportional to the wavelengths; they are characteristic for each element. For example the  $K\alpha$  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.

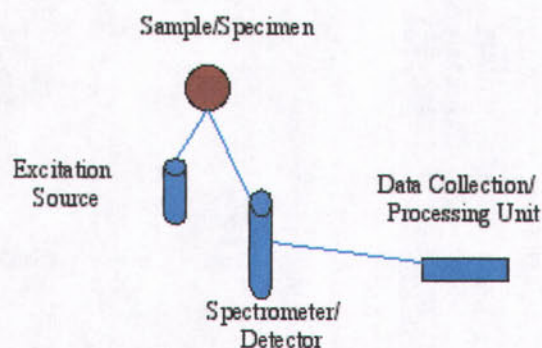
All elemental analysis techniques experience interferences, both chemical and physical in nature, and must be corrected or compensated for in order to achieve adequate analytical results. Most aqueous instrument techniques for elemental analysis suffer from interferences that are corrected for by extensive 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 non-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<sup>st</sup> 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, 200 $\mu$ A (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.

PLEASE SEE ATTACHED SPREADSHEET

**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. 09712 Date of issue MAY 4, 2011

Type of Work		Amount Spent
1. Prospecting	_____ days	
2. Geological mapping	_____ days	
3. Trenching/stripping/refilling	_____ m <sup>2</sup> / _____ m <sup>3</sup>	
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) Rock	_____ samples	
(i) Rock	_____ samples	
(ii) Core	_____ samples	
(iii) Chips	_____ samples	
(c) Soil	_____ samples	
(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		
Overhead costs		
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		20,583.45

PLEASE SEE ATTACHED SPREADSHEET

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

[illegible]

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

Dated at HALIFAX in the Province of NOVA SCOTIA on JUNE 18, 2012.

Name and address of licensee: SUGAR LOAF RESOURCES INC  
549 WASHMILL LAKE DR, SUITE 513, HALIFAX, NS B3S 0R6

Signature LAC

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



PLEASE SEE ATTACHED SPREADSHEET

Map 11E 11A

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. 09713 Date of issue MAY 4, 2011

Type of Work		Amount Spent
1. Prospecting	_____ days	
2. Geological mapping	_____ days	
3. Trenching/stripping/refilling	_____ m <sup>2</sup> / _____ m <sup>3</sup>	
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)		
<b>Subtotal</b>		
<b>Overhead costs</b>		
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) * PLEASE SEE ATTACHED SPREADSHEET		
<b>Subtotal</b>		
<b>Grand total</b>		<u>7,630.66</u>

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

[illegible]

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

Dated at HALIFAX in the Province of NOVA SCOTIA on JUNE 18 2012

Name and address of licensee: SUGARLOAF RESOURCES INC  
549 WASHMILL LAKE DR, SUITE 513, HALIFAX NS B3S 0B6

Signature L. Allen

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



**NOVA SCOTIA**  
Natural Resources

Map 11E11A + 11E11B  
Refs. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\* PLEASE SEE ATTACHED SPREADSHEET

**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. 09722 Date of issue MAY 11, 2011

Type of Work		Amount Spent
1. Prospecting	_____ days	
2. Geological mapping	_____ days	
3. Trenching/stripping/refilling	_____ m <sup>2</sup> / _____ m <sup>3</sup>	
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.	_____ / _____ m	
(g) Sealing (# holes)	_____ days	
11. Other (describe)	_____ #	
<b>Subtotal</b>		
<b>Overhead costs</b>		
12. Secretarial services		
13. Drafting services		

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

[illegible]

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

Dated at HALIFAX in the Province of NOVA SCOTIA on JUNE 18, 2012.

Name and address of licensee: SUGARLOAF RESOURCES INC  
549 WASHMILL LAKE DR, SUITE 513, HALIFAX, NS B3S 0B6

Signature L. Allen

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

FINAL EL 09723



\* PLEASE SEE ATTACHED SPREADSHEET

Map: 11E11A  
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. 09723 Date of issue MAY 11, 2011

Type of Work		Amount Spent
1. Prospecting		
2. Geological mapping	_____ days	
3. Trenching/stripping/refilling	_____ days	
4. Assaying & whole rock analysis	_____ m <sup>2</sup> / _____ m <sup>3</sup>	
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.	_____ / _____ m	
(g) Sealing (# holes)	_____ days	
11. Other (describe)		
Subtotal		
Overhead costs		
12. Secretarial services		
13. Drafting services		
14. Office supplies		

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

[illegible]

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

Dated at HALIFAX in the Province of NOVA SCOTIA on JUNE 18, 2012.

Name and address of licensee: SUGARLOAF RESOURCES INC  
549 WASHMILL LAKE DR, SUITE 513, HALIFAX NS B3S 0B6

Signature L. Allen

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

**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. 09725 Date of issue MAY 11, 2011

Type of Work		Amount Spent
1. Prospecting	_____ days	
2. Geological mapping	_____ days	
3. Trenching/stripping/refilling	_____ m <sup>2</sup> / _____ m <sup>3</sup>	
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		
Overhead costs		
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		16,421.82

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

[illegible]

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 Authorised 1

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

Dated at HALIFAX in the Province of NOVA SCOTIA on JUNE 18, 2012.

Name and address of licensee: SUGARLOAF RESOURCES INC  
549 WASHMILL LAKE DR, SUITE 513, HALIFAX, NS B3S 0B6

Signature L. Allen

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



**Natural Resources**

\* PLEASE SEE ATTACHED SPREADSHEET

**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: License No. \_\_\_\_\_

Re: Licence No. 09726 Date of issue MAY 11, 2012

Type of Work		Amount Spent
1. Prospecting	_____ days	
2. Geological mapping	_____ days	
3. Trenching/stripping/refilling	_____ m <sup>2</sup> / _____ m <sup>3</sup>	
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	
Overhead costs:		
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)		
* PLEASE SEE ATTACHED SPREADSHEET		
	Subtotal	
	Grand total	17,571.45

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

[illegible]

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

Dated at HALIFAX in the Province of NOVA SCOTIA on JUNE 18, 2012.

Name and address of licensee: SUGARLOAF RESOURCES INC.  
549 WASHMILL LAKE DR, SUITE 513, HALIFAX NS B3S 0B6

Signature L. Allen

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