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1995 GEOCHEMICAL SOIL SURVEY

ON

MOUNTAIN LION CLAIM GREENWOOD MINING DIVISION

FILMED



GEOLOGICAL BRANCH ASSESSMENT REPORT

23,636

GEOCHEMICAL SOIL SURVEY 1995 PROGRAM

Mineral Claims : Mountain Lion - Lot 144S

G.H. Fraction - Lot 932S

Mining Division: Greenwood

NTS Map: 82 E/9

Latitude: 049° 34' 30"

Longitude: 118° 22' 00"

Owner of Claims: R.J. Ronaghan

Operator of Claims: R.J. Ronaghan

Author of Report: G.C. Johnston

Date Submitted: November 14, 1994

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Introduction

Abstract:

These properties and others associated with the Franklin Mining Camp were examined by Andrew G. Larson, on commission by the British Columbia Government circa 1914, to ascertain the feasability of extending the existing railway. At this time the area was vigorously being explored for gold. The Union Mine was born from this activity.

A prospecting report was filed on March 24, 1977 by T.E. Lisle on the adjacent Gloucester claim group. The area was again geologically investigated in 1987 and 1988 by Myra Keep of the University of British Columbia. Other miscellaneous regional geological/geophysical reports on the area have been compiled by the B.C. Minister of Mines and the Geological Survey of Canada.

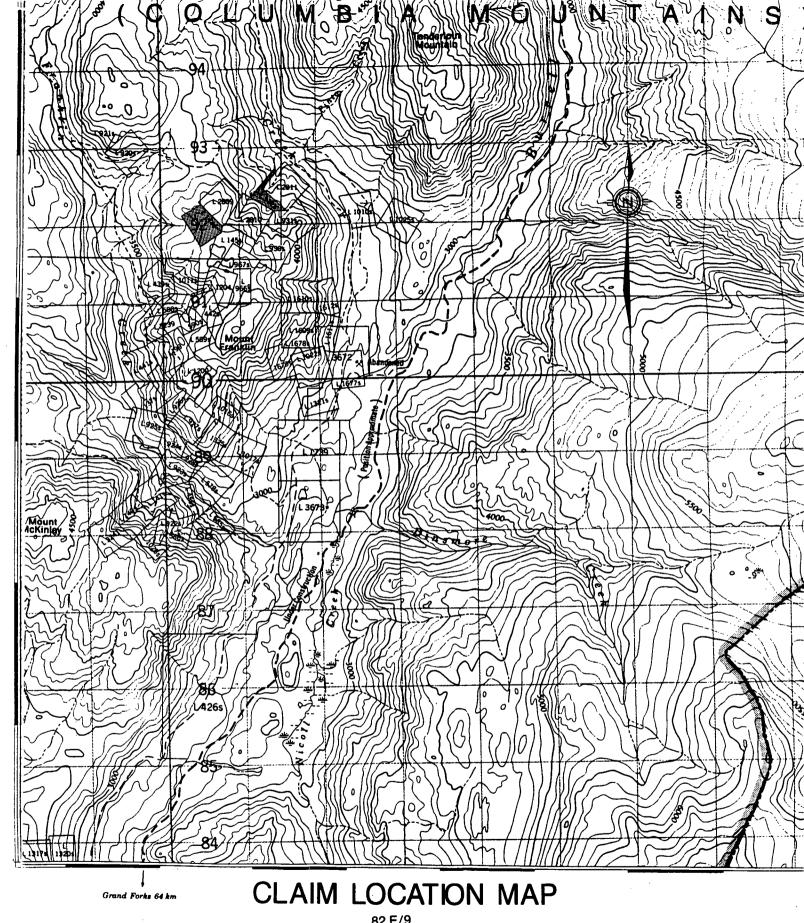
In 1984 the Mountain Lion (Lot 144S) and G.H. Fraction (Lot 932S) claims were acquired by R.J. Ronaghan of Beaumont, Alberta. A geological surface reconnaissance program was carried out in May and June of 1984, and a report was subsequently filed by R. Ronaghan and M. Rogan.

On September 20th and 21st of 1994, G. Johnston and R. Ronaghan visited the two claims. Three traverses across the Mountain Lion claim were run and soil samples taken for geochemical analysis. The results of that program are presented in the following report.

Location and Access:

The Mountain Lion and G.H. Fraction claims (latitude 049° 34' 30" and longitude 118° 22' 00") are 70 kilometres north of the town of Grand Forks, B.C. The claims are situated on the northern flank of Mount Franklin near the crest. The North Forks Road, and the Gloucester Creek Forestry Road which runs off it, provide access to the claims. The first 45 km. of the North Forks Road is paved, with the remaining 25 km. to the forestry road being an all weather gravel surface. The forestry road provides a bridge crossing for the Burrell Creek and recently reconditioned exploration trails in the area allow direct access to the top of the mountain and the Mountain Lion claim (Fig. 1).

Ascent is gradual from Grand Forks, at an approximate elevation of 500 metres above sea level, to the base of Mount Franklin at 920 m. From this point the grade becomes steep, rising to 1430 m. at the top of the mountain. The G.H. Fraction claim is 600 metres to the east at an elevation of 1125 m.



82 E/9 EDITION 2

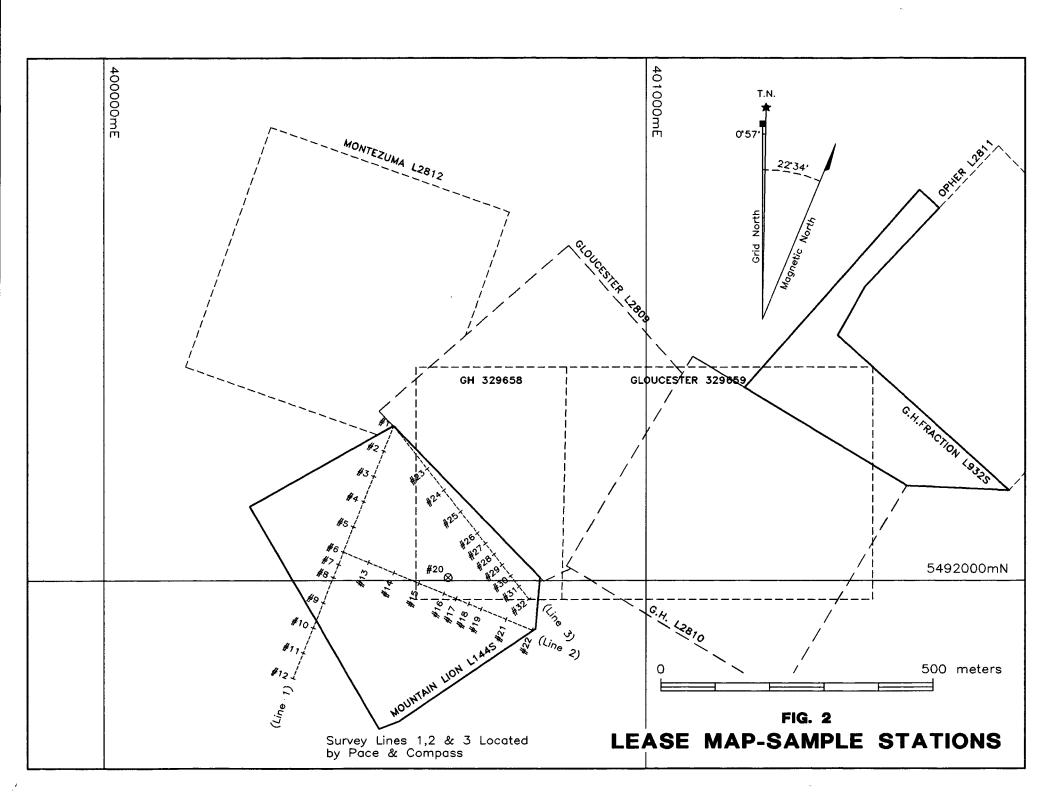
BURRELL CREEK

Scale 1:50,000 Échelle

Miles 1 2 3 Milles

Metres 1000 0 1000 2000 3000 4000 Mètres

FIG. 1



General Geology:

Mesozoic granites and the Franklin Group of sediments have regionally been intruded by a central core of alkalic syenite. The Mountain Lion property was mapped as being predominantly border facies syenite, adjacent to a more plagic rich granodiorite or monzonite on Gloucester Claims L2809 & L2810, to the northeast. Observations in the field noted a slight increase in mafic content; from 10%-15% at the northern limit (station 1) to approximately 25%-30% at the eastern most point of the Mountain Lion Claim (station 22). The more mafic rocks also had distinctly visible, oriented plagioclase laths, 0.5 to 1 centimetres long.

A discontinuous lenticular shaped pyroxenite zone had been identified by R. Ronaghan at the southeast corner of the lease. A gossan exposure in a test pit at station 20, adjacent to the road cut, appeared to be the remnants of this mineralized pyroxenite. Bordering this unit to the south, and striking roughly northeast, R.Ronaghan interpreted a mineralized contact zone between the Franklin Group sediments and the intrusives. Numerous trenches and adits have been excavated along this contact. Pyrite, chalcopyrite and malachite were commonly observed at these test sites.

To analyze the mineralization on the Mountain Lion Claim, and possibly better define its location, three lines were run across the property. Soil samples for geochemical analysis taken at regular intervals. Thirty-two samples were gathered and tested for gold, silver, copper, lead, zinc and platinum (Fig. 2).

1994 - Geochemical Soil Survey:

Field Work:

The point of origin of Line 1 (Stn.1) was set at the north claim post/cairn for the Mountain Lion Claim L144S, verified by its proximity to the south claim post/cairn of the Montezuma Claim L2812, which was also located (Fig. 2). Line 1, bearing Az. 202° was paced off 500 metres. Twelve soil samples were taken along this line with a maximum spaced interval of 50 metres, except where otherwise indicated. Stn. 5 was situated at the base of a 10 to 15 metre topographic rise. Stn. 7 was on the south side of this same ridge on the edge of a steep embankment. This ridge appeared to be the contact zone between granodiorite and the later stage syenite intrusive. The strike of this outcrop ridge had a bearing of azimuth 135°, and was easily visible on air photographs.

Line 2 originated at Stn. 6 on Line 1 and had a bearing azimuth of 112°. Stn. 13 was located on the edge of the ridge traversed in Line 1. Nine samples were taken along this line using the same procedures as those used on Line 1. One sample (Stn. 20) of gossan material was extracted from a small test pit located near Stn. 16. The subcrop material in the pit was a highly weathered, mineralized pyroxenite.

Line 3, started from Stn. 1 on Line 1, at a bearing azimuth of 142°. The first sample (Stn. 23) was taken 103 metres from the start point and samples every 50 metres after that were taken, except where noted (Tables 1,2 and 3). A total of ten soil samples were gathered along Line 3.

The sampling procedure at each station involved hand excavating to bedrock and extracting a sample from the 'C' horizon adjacent to subcrop. These samples, approximately 100 grams in weight, were sealed in Kraft bags and sent to Loring Laboratories Ltd. of Calgary, Alberta for analysis (Appendix A - Certificate of Analysis).

Laboratory Procedures:

For Copper, Lead, Zinc and Silver

Sample preparation:

- samples are placed in a dryer overnight at 105° C.
- all samples are sieved through an 80 mesh nylon screen
- the minus 80 mesh is placed in pre-marked sample bags for analysis. The plus 80 portion is discarded.

Sample Dissolution:

- 1/2 gram samples are weighed and transferred to test tubes.
- one ml. of water is added, then three mls. of hydrochloric (concentrated) and one ml. nitric acid (concentrated) are added.
- the test tubes are then placed into a hot water bath at 100° C and digested for three hours with occasional shaking to ensure complete digestion.
- the test tubes are removed from the water bath and allowed to cool.
- the test tubes are bulked to exactly 10 mls, corked and shook.
- all samples are then allowed to settle until clear.
- the clear solutions are then aspirated through the atomic absorption spectrophotometer with appropriate standards to obtain the metal content.

Detection Limits and Precision:

ELEMENT	DETECTION LIMIT	PRECISION @ 100 ppm LEVEL
Copper	1 ppm	+- 2 ppm
Lead	2 ppm	+- 4 ppm
Zinc	1 ppm	+- 2 ppm
Silver	0.2 ppm	+- 1 ppm

For Platinum and Gold Analysis: Fire Assay/AA

- weigh 100 grams of sample into fire assay crucible with appropriate amount of fluxes and flour, and mix.
- add palladium inquart
- place crucible in assay furnace and fuse for 40 minutes.
- pour samples, remove slag and then cupel buttons.
- place beads in test tubes and dissolve with agua regia.
- after dissolution is complete, make to appropriate volume and run against similarly prepared standards on AA.

Results:

Gold:

- trace showings only at Stns. 1, 4, 20 and 28

Platinum:

- no showings

Lead:

- the samples appear to be mostly low value, random scatter except for an anomaly at Stn. 7

Silver:

- the distribution of values is random with only a minor anomaly at Stn. 7

Zinc:

- there is a progression from north to south of increasing values from +- 30 to +- 100 ppm on the Mountain Lion Claim

Copper:

- in general there appears to be a subtle rise in Cu values between Stns. 4 thru 10, and 13 to 15
- a significant anomaly appears at Stns. 27 & 28
- the sample taken from Stn. 20 was a gossan material and had a very high Cu reading

LINE No. 1 (Origin at North Corner of Mountain Lion Claim - Bearing 202°)							
Station	Distance From Origin	Depth to Subcrop	Sample Colour	Sample Texture	Description		
1		22.86 cm	dark brown	humus	humic, slightly silty, no discernable soil horizons		
2	50 m	30.48 cm	dark brown	humus	similar to above except slightly more silty texture with less humic material		
3	100 m	17.78 cm	med. brown	sandy/ loam	alder rootlets throughout sample, top 2.54 cm. slightly darker due to greater humus content		
4	150 m	40.64 cm	light brown	silty/ loam	top 5.1 cm. white ash material, station in heavily wooded area and adjacent to dozer trench - 300 metres long, .5 to 1 m deep (down to bedrock) at Az 105°		
5	200 m	48.26 cm	light brown	silty/ loam	identical to sample No. 4, station in drainage pattern at base of 15 m embankment		
6	250 m	15.24 cm	med. brown	silty/ humus	rootlets throughout sample, station on top of embankment		
7	275 m	45.72 cm	med. brown	silty/ humus	similar to station No. 6, top 3.8 cm. slightly darker coloration with rootlets throughout, station on southern edge of embankment with sharp drop off		
8	300 m	17.78 cm	sand/ grey	silty/ loam	on south side of steep embankment, dense rootlets form fibrous mesh		
9	350 m	35.56 cm	med. brown	silty/ loam	top 6.35 cm. dark brown-black humus, rootlets throughout, station in talus from embankment		
10	400 m	33.02 cm	buff/lt. brown	silty/ loam	top 2.54 cm. a white ash material, station in wooded area		
11	450 m	12.70 cm	ochre	silty/ loam	2.54 cm. of white ash at surface, station in heavily wooded area, very few rootlets, highly weathered brown-grey fractured subcrop		
12	500 m	27.94 cm	grey	gravely/ loam	no apparent 'A' or 'B' horizons, 1.27 cm. of moss at surface, station located on small knoll south of draw at base of embankment amongst 25.4 cm. larch & pine		

Sample descriptions of colour and texture based upon field observations.

Table 1 - Line 1 Traverse

LINE	LINE No. 2 (Origin at Station No. 6 of Line No. 1 - Bearing 112°)							
Station	Distance From Origin	Depth to Subcrop	Sample Colour	Sample Texture	Description			
. 13	50 m	43.18 cm	ochre	silty/ loam	station on south side of draw in rubble adjacent to subcrop, 3.8 cm. peat - 11.43 cm. silty till - 2.54 cm. white ash above 'C' horizon			
14	100 m	38.10 cm	rust	sandy/ loam	sample horizon in rubble adjacent to subcrop, 3.8 cm. of black-brown humus at surface, station in heavily wooded area			
15	150 m	20.32 cm	light brown	silty/ sand	some rootlets throughout sample, top 5.1 cm. black humus composed of moss and pine needles, 2.54 cm. of white ash above 'C' horizon, lightly wooded- heavy deadfall			
16	200 m	10.16 cm	light brown	silty/ sand	top 1.91 cm. peat, station on outcrop in lightly wooded area adjacent to road			
17	225 m	12.70 cm	light brown	silty/ loam	top 0.64 cm. moss and pine needles, 2.54 cm. of grey silty humus on top of 'C' horizon			
18	250 m	22.86 cm	sand/ brown	silty/ loam	station on side slope among stand of 25.4 cm. pine, 3.8 cm. of black humus at surface			
19	275 m	16.51 cm	sand	sandy/ loam	station in heavy trees on side slope, 5.1 cm. of dark brown humus (moss, leaves, pine needles) at surface, 'C' horizon at rubbly contact of subcrop			
20			rust	silty/ sand	station in old test pit, gossan formation sampled (mineralized pyroxenite), located 30 m from station No. 16 at Az 015°			
21	322 m	39.37 cm	sand	silty/ loam	top 2.54 cm. dark brown-black humus (moss and pine needles), 1.91 cm. of white ash, rootlets throughout 'C' horizon, station on edge of old cat trail			
22	375 m	11.43 cm	light brown	loamy/ sand	top 11.43 cm. woody (rotted logs, peat and pine needles), 2.54 cm. of white ash material, 'C' horizon in rubbly material above subcrop, station in heavily wooded area			

Sample descriptions of colour and texture based upon field observations.

Table 2 - Line 2 Traverse

LINE	LINE No. 3 (Origin at North Corner of Mountain Lion Claim - Bearing 142°)							
Station	Distance From Origin	Depth to Subcrop	Sample Colour	Sample Texture	Description			
23	103 m	40.64 cm	light brown	silty/ loam	top 2.54 cm. dark brown humus (peat & pine needles), 2.54 cm. of white ash on top of 'C' horizon, station in lightly wooded area, minor rootlets throughout			
24	150 m	11.43 cm	dark brown	humus	top 0.64 cm. moss, station in lightly treed area on outcrop			
25	200 m	19.05 cm	med. brown	humus	similar to station No. 24, station off edge of outcrop in stand of 50.8 cm. fir trees, rootlets throughout sample horizon			
26	253 m	29.21 cm	light sand	silty/ loam	station on edge of road, top 5.1 cm. dark brown humus (peat & pine needles), 'C' horizon contains some rootlets			
27	275 m	25.40 cm	med. brown	silty/ loam	station located adjacent to cat trench, sample of 'C' horizon in rubbly zone adjacent to subcrop			
28	300 m	33.02 cm	brown/ grey	silty/ loam	station above an old addit, top 3.8 cm. dark brown humus (rotting trees, peat and pine needles), 5.1 cm. of white/buff coloured ash, 'C' horizon in rubbly zone			
29	325 m	13.97 cm	light brown	silty/ sand	station in light stand of pine, top 1.91 cm. humus (peat & pine needles), 2.54 cm. of white/buff coloured ash, 'C' horizon full of rootlets			
30	350 m	43.18 cm	ochre	silty/ loam	station in deadfall area with growth of 30.48 cm. fir, top 10.16 cm. humus (rotted trees, peat and tree roots)			
31	375 m	31.75 cm	ochre	silty/ loam	identical to sample taken at station No. 30, top 5.1 cm. humus (peat & pine needles), 2.54 cm. of white ash on top of 'C' horizon			
32	400 m	45.72 cm	ochre	silty/ loam	identical to sample taken at station No. 31, top 10.16 cm. humus (rotting trees, peat & pine needles), 3.18 cm. of white ash on top of 'C' horizon			

Sample descriptions of colour and texture based upon field observations.

Table 3 - Line 3 Traverse

Conclusions:

Precious metals (Au & Pt) did not show up in any significant quantities on the Mountain Lion Claim. It has been speculated that there was a tendency for platinum soil anomalies to be associated with areas of high copper concentrations, however this was not evident in this program. Four locations showing gold assays slightly higher than background values did coincide with corresponding highs of copper values.

Stn. 7 showed a slight anomaly of lead and silver. This was near the contact zone between granodiorite and syenite, topographically located at the edge of a steep incline which dropped off to the south. In general, showings of lead and silver were negligible on the Mountain Lion Claim.

A lineation defining slightly higher zinc values, coincident with the mapped occurrence of an altered pyroxenite, appears to be superimposed on the general progression of increasing assay results to the south on the Mountain Lion Claim. Assays for copper also showed a very strong lineation coincident with the pyroxenite.

Increased values of both copper and zinc occurred as trends striking at an azimuth of approximately 100° on the Mountain Lion Claim. This corroborates the position of the intrusive contacts mapped by R. Ronaghan in 1984, assuming that hydrothermal mineralization occurs along these contacts. The highest assay results, however, occur within the pyroxenite. It appears as a lineation bearing 70° from the approximate centre of the Mountain Lion Claim, through station 28, and on to the adjacent GH 329658 (Gloucester L2809) claim.

Itemized Cost Statement:

Personnel Costs (wages for field reconnaissance, drafting & report writing)

	No. of Days	Rate/Day	Total				
	NO. Of Days	nate/Day	i Olai				
R. Ronaghan	4 Sept. 19 to 22	\$350	\$1400.00				
G. Johnston (field & report)	6 Sept. 19 to 22 Nov. 1 & 2	\$450	\$2700.00				
K. Lockley (drafting) Sept. 29	1	\$300	\$300.00				
<u>Accommoda</u>	ation / Meals Allo	<u>owance</u>					
R. Ronaghan	4 Sept. 19 to 22	\$90	\$360.00				
G. Johnston	4 Sept. 19 to 22	\$90	\$360.00				
Laboratory /	<u>Analysis</u>						
Loring Laboratories	s Ltd. (preparatio	on and analysis of 32 soil samples):					
Platinum Ge	emical Analysis ochemical Analy	(\$2.20 per sample) (\$7.50 per sample) rsis (\$9.00 per sample) cal Analyses (\$5.25 per sample)	\$70.40 \$240.00 \$288.00 \$168.00 \$53.65				
Transportation and Miscellaneous Costs							
'-	Fuel (Edmonton / Grand Forks / Claims - and Return) \$170.41 Miscellaneous (Free Miner Licences, Forestry Maps & Air Photos) \$130.56						
TOTAL COSTS:			\$6241.02				

Author's Qualifications:

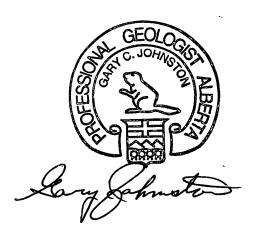
Gary C. Johnston

1971: B.Sc. Geology - University of Manitoba

1971 - 1978 : Senior Geologist - INCO - Thompson, Manitoba

1978 - Present : Chief Geologist - Luscar Ltd. - Edmonton, Alberta

Registered in Alberta with APEGGA as a Professional Geologist (No. 36223)



Bibliography:

Ronaghan, R.J. (1984): 1984 Geological Mapping Program, Mountain Lion and G.H. Fraction, Franklin Mining Camp, *Province of British Columbia, Ministry of Energy, Mines and Petroleum Resources - Mineral Resources Division,* Assessment Report.

Lisle, T.E. (1977): Prospecting Report on the Gloucester Claim Group, Franklin Camp, Greenwood Mining Division, *Province of British, Ministry of Energy, Mines and Petroleum Resources - Mineral Resources Division, Assessment Report 6228.*

Drysdale, C.W. (1915): Geology of the Franklin Mining Camp, British Columbia, Geological Survey of Canada, Memoir 56.

Keep, M. (1988): Geology of the Averill Plutonic Complex, Franklin Mining Camp, *Province of British Columbia, Ministry of Energy, Mines and Petroleum Resources, Mineral Resources Division, Geological Survey Branch,* Paper 1988-1, Geological Field Work 1987.

Appendix A

Certificate of Assay

To: LUSCAR LTD.,	
1600 Oxford Tower,	
<u> 10235 - 101st Stree</u>	t,
Edmonton, Alberta	T5J 3G1



File No. 36908

Date October 12, 1994

Samples Soil

P.O. # L022900

ATTN: Gary Johnston

Certificate of Assay LORING LABORATORIES LTD.

Page # 1

SAMPLE	NO.	PPB Au	PPM Cu	PPM Pb	PPM Zn	PPM Ag	PPB Pt	
Geochemical	Analysis							
Geochemicai	Allatysis							
1		10	50	9	36	0.5	<10	
2		<5	43	28	36	0.9	<10	
3		<5	27	11	42	1.0	<10	
4		10	137	13	75	1.0	<10	
5		5	84	15	52	1.2	<10	
6		<5	52	14	71	1.0	<10	
7		<5	88	115	72	2.1	<10	
8		<5	75	39	69	8.0	<10	
9		<5	75	9	73	0.1	<10	
10		<5	68	10	92	1.0	<10	
11		<5	33	10	108	8.0	<10	
12		<5	45	14	78	0.9	<10	
13		5	62	14	82	0.9	<10	
14		<5	75	16	46	0.9	<10	
15		<5	62	8	67	0.7	<10	
16		<5	47	7	53	8.0	<10	
17		<5	43	14	63	1.1	<10	
18		<5	54	6	56	1.2	<10	
19		<5	74	7	58	1.0	<10	
20		10	1170	8	56	1.5	<10	
21		<5	89	10	68	0.9	<10	
22		<5	35	11	128	1.3	<10	
23		<5	31	7	27	0.9	<10	
24		<5	23	8	41	1.2	<10	
25		<5	21	6	31	0.9	<10	
26		· <5	42	7	30	0.6	<10	
27		<5	418	3	14	0.8	<10	
28		10	128	6	55	0.8	<10	
29		<5	65	3 7	49	0.8	<10	
30		<5	84	7	38	0.9	<10	

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month. Pulps retained one month unless specific arrangements are made in advance.

Su Sern Assayer

To: LUSCAR LTD.,						
1600 Oxford Tower,						
10235 - 101st Street,						
Edmonton, Alberta	T5J 3G1					



File No. <u>36908</u>

Date <u>October 12, 1994</u>

Samples <u>Soil</u>

P.O. # L022900

ATTN: Gary Johnston

Certificate of Assay LORING LABORATORIES LTD.

Page # 2

1 490 11 2								
	SAMPLE NO.	PPB Au	PPM Cu	PPM Pb	PPM Zn	PPM PA	PPB Pt	
	31	<5	79	6	49	0.9	<10	
	32	<5	73	6	48	0.9	<10	

I Hereby Certify that the above results are those assays made by me upon the herein described samples....

Rejects retained one month. Fulps retained one month unless specific arrangements are made in advance.



Appendix B

Location Maps of Assay Results

