

GEOCHEMICAL HEAVY MINERALS ASSESSMENT REPORT

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VANCOUVER, B.C.

on the
LONG ISLAND MINERAL CLAIMS GROUP
Kamloops M.D.

Lat. 51 30'N

Long. 120 27'W

92P/8W

LOG NO: 08/24	RD.
ACTION:	
FILE NO:	

For Owner

Baril Developments Limited

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,239

July, 1990.
Vancouver, B.C.

S. Zastavnikovich
Geochemical Consultant

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GEOCHEMICAL HEAVY MINERALS REPORT ON THE LONG GROUP
Kamloops M.D., Central B.C.

INTRODUCTION & DESCRIPTION

The LONG GROUP of mineral claims contains 56 units and consists of the LONG 1 (20 units), LONG 2 (20 units), and LONG 3 (16 units) mineral claims. The claim group is located on Long Island Lake in South-central B.C., some 20km east of the town of Bridge Lake in the Kamloops Mining Division, on maps 92P/8&9W, Figs. 1&2.

The Long 1&2 mineral claims were staked in May, 1988, while the Long 3 claim was staked in October, 1988. The present status of the claims is as indicated below:

<u>Claim Names</u>	<u>Units</u>	<u>Record No.</u>	<u>Expiry Date *</u>
Long 1	20	7677	May 18, 1991
Long 2	20	7678	May 18, 1991
Long 3	16	8091	Oct. 08, 1990

* Upon approval of this report.

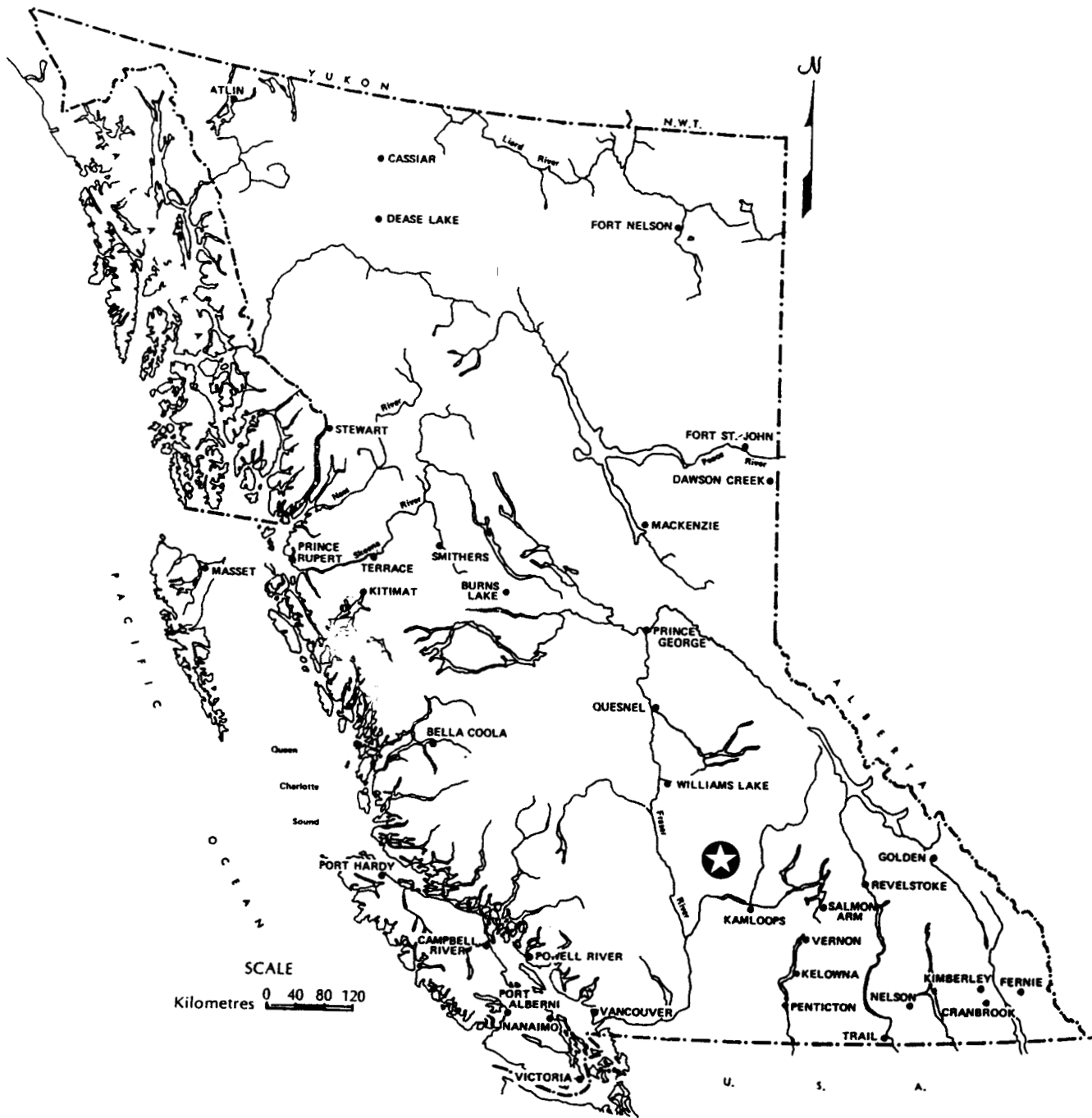
On Sept. 9th-10th and 19-20th, 1989, the writer visited the Long claims to collect stream sediment and soil samples for heavy minerals processing in order to help identify geochemical parameters best suited for geochemical evaluation of the mineral potential of the claims. As outcrops are scarce on the property due to extensive glacial cover, some forty-nine rock samples, mostly float, were collected along the sampling traverses, as described in Appendix I and shown on the geochemical map, Fig. 4, in pocket.

Access to the claim group is 20km east from Bridge Lake via the newly paved Hwy 24 between 100 Mile House and Little Fort, which bisects the property.

PHYSIOGRAPHY

The Long group mineral claims area, located to the south, west and northwest of Long Island Lake, is one of rolling upland in which small lakes and swamps abound and, except for a few sparse hilltops and creek gullies, rock exposures are scattered and poor. The whole claims area is covered by a considerable mantle of glacial drift. As shown on Fig. 4, the elevations on the property range from 5,100' (1,650m) in the north to 3,900' (1,250m) in the south in the Eagle Creek valley, for a total relief of some 400 meters.

Except for Eagle Creek and its main tributary from Cecilia Lake, the drainage network on the claims is poorly developed, and was for the most part dry. Several old and new logging roads traverse the property, as shown on Fig. 4.

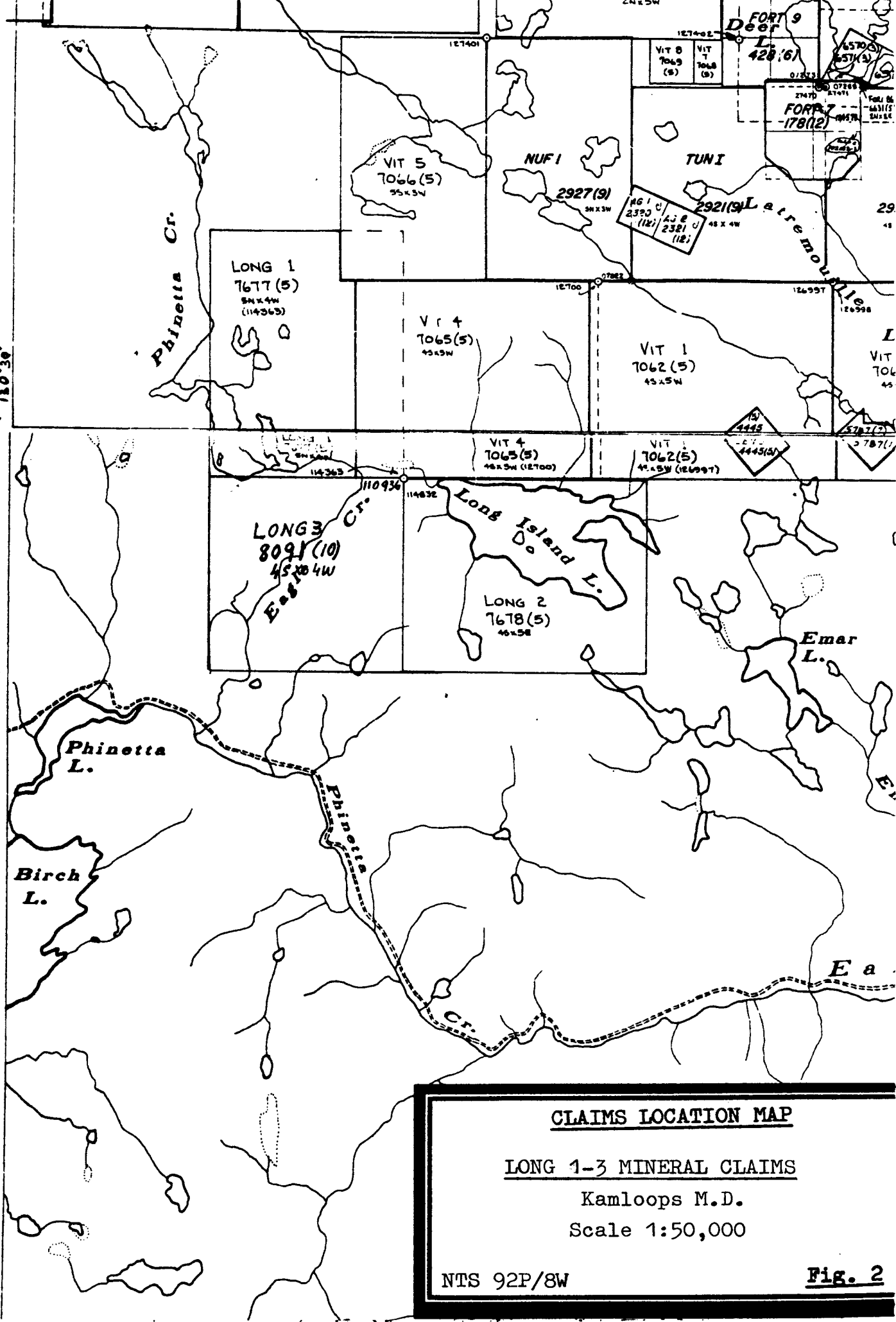


INDEX MAP
LONG MINERAL CLAIMS GROUP
NTS 92P/8W

Fig. 1

M 92P/8W

(FOR PLACER SEE P 92P/8W)



CLAIMS LOCATION MAP

LONG 1-3 MINERAL CLAIMS

Kamloops M.D.

Scale 1:50,000

NTS 92P/8W

Fig. 2

GENERAL GEOLOGY

As indicated on the regional geology map, Fig 3 overleaf, from GEM 1970, p. 307, by V. Preto, the Long group claims straddle an east-west contact between Triassic-Jurassic granodiorites to the south and Triassic Nicola Group metasediments and volcanics to the north. Numerous feldspar porphyry dikes cut the intrusives.

A prominent set of lineaments strikes northwesterly and includes the major lineament shown on the geology map west of Long Island Lake. Moderate alteration has been observed in the granodiorite outcrops near the fault zone.

GEOCHEMICAL SURVEY

Based on the previous season's limited drainage sampling in the claims area (Assmt. Rep. Feb. 1989), which identified the presence of anomalous gold values in the heavy minerals fraction in the Phinetta and Eagle Creek valleys, additional drainage sampling totaling 14 sediment samples was completed in September 1989 along the eastern and western sides of the Long 1 claim in order to intersect the major regional lineament and the east-west intrusive/volcanic contact crossing the claims.

In addition, an east-west line of 10 B-horizon soil samples weighing 1 kg each was collected at 50 m intervals just west of Long Island Lake in an area of previously anomalous gold values in the Eagle Ck. sediments, and in proximity to the intrusive contact, Fig.s 3 and 4.

Due to lack of outcrops on the heavily overburdened slopes, 49 rock samples, mostly float, were collected along the drainage sampling traverses, as shown on the geochemical map, Fig. 4, and described in Appendix I.

The drainage sediment samples and the soil samples were processed for their heavy minerals content and analyzed for 30 trace elements by ICP and for gold by geochemical fire-assay at Min-En Laboratories in N. Vancouver using standard geochemical methods described in Appendix II. For comparison, the regular -80 Mesh fraction was likewise analyzed for both soils and sediments, as were the rock samples. Complete analytical results are directly inscribed on the 1:10,000 scale geochemical sample location map, Fig. 4 in pocket, and are enclosed as Appendix III at the back of the report as well.

Figure 44

GENERALIZED GEOLOGY OF THE AREA BETWEEN
EAKIN CREEK AND WINDY MOUNTAIN

LEGEND

SINEMURIAN TO (?) MIDDLE JURASSIC

- 70 AUGITE PORPHYRY, BRECCIA AND AGGLOMERATE ▲▲▲
- 7a BEDDED ARGILLITE
- 60 INTERBEDDED VOLCANIC SILTSTONE, SANDSTONE AND GRIT, MINOR ARGILLITE
- 6a AUGITE PORPHYRY AGGLOMERATE GRADING UPWARDS INTO POLYMYCTIC COBBLE AND BOULDER CONGLOMERATE

UPPER TRIASSIC OR LOWER JURASSIC

- 5 LEUCOGRANITE TO LEUCOSYENITE PORPHYRY
- GREY MICRODIORITE
- THUYZ BATHOLITH - HORNBLende - BIOTITE QUARTZ DIORITE AND GRANODIORITE, HORNBLende DIORITE

UPPER TRIASSIC (Niola Gp.)

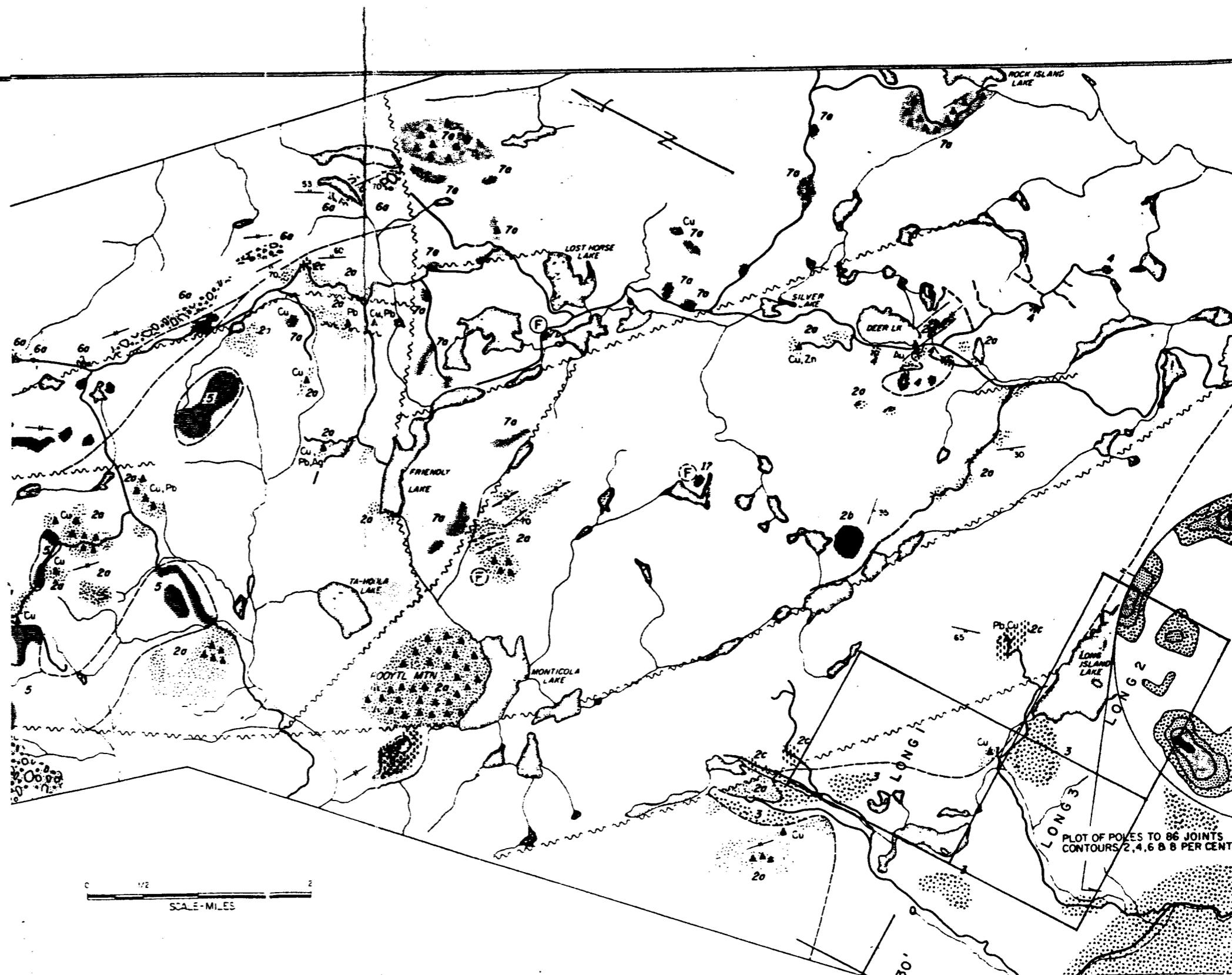
- 20 MASSIVE ANDESITIC FLOWS AND VOLCANIC BRECCIA ▲▲▲
- 2b THIN BEDDED ANDESITIC TUFF
- 2c INTERBEDDED CALCAREOUS ARGILLITE AND SILTSTONE
- 2d GRAY, THIN BEDDED LIMESTONE

PENNSYLVANIAN AND PERMIAN (Cache Ck. Gp.)

- CACHE CREEK GROUP VOLCANIC ARENITE, GREENSTONE, CHERT, ARGILLITE, LIMESTONE, LIMESTONE BRECCIA, MINOR BEDDED TUFF AND CHERT

SYMBOLS

- 70 BEDDING, TOPS NOT KNOWN
- 65 BEDDING, TOPS KNOWN
- 60 SCHISTOSITY
- ~ INFERRED FAULT
- ▲Cu MINERAL OCCURRENCE
- (F) FOSSIL LOCALITY
- (F) FOSSIL LOCALITY TAKEN FROM GSC MAP 3-1966
- ~ ROAD



Geology Map from GEM 1970, p307, by V.Preto

GEOLOGY MAP
LONG LAKE CLAIMS GROUP AREA
Scale 1:63,000

Fig. 3

STREAM SEDIMENT GEOCHEMISTRY

A specially constructed perforated pan and sieve was used for field sieving the drainage sediments in order to provide uniformly sampled material, which enhances the detectability of subtle trace element anomalies.

The analytical results presented on the geochemical sample location map, Fig. 4, indicate good correlation between the ICP trace elements in the -80 Mesh and the Heavy Minerals fractions. Thus the area of SEDs 04/05 in the east is clearly anomalous in trace elements Ag,Cu,Ni,Pb,Zn, and the alteration-related major elements Al,Ca,Fe,K, and Mg. In the western drainage, SEDs 25/26 are highly anomalous in potassium in both fractions, suggesting the presence of alteration minerals nearby.

Gold values in sediments in the regular -80Mesh fraction are present as 170 ppb Au in SED 04, 21ppb Au in SED 05, and 133ppb Au in SED21, 61ppb Au in SED26, and 980ppb Au in SED27. These are only confirmed in the H.M. fraction as 220ppb Au in SED04, and as 140ppb Au in SED21, while additional gold values are present in the heavies as 50ppb Au in SED03, and 55ppb Au in SED24. These discrepancies can best be explained as being caused by the inherent 'nugget effect' present in gold analysis.

Based on the southerly movement of glacial ice in the claims area (Map 1293A, GSC Bull. 196, H.W. Tipper), both of the areas of anomalous geochemistry need to be investigated, particularly to the north and upstream of individual anomalous stream sediment sites.

SOIL GEOCHEMISTRY

As the analytical results in Fig. 4 indicate, soil sample number S104 is by far the most anomalous in both fractions in trace elements Ag,Ba,Ca,Cu,Fe,K,Na,Ni,P,V, and Zn. The neighboring samples are anomalous in gold in the H.M. fraction, with 150ppb Au present to the west, and 100ppb Au to the east. Sample S110 is similarly highly anomalous in trace elements in both fractions, indicating the need for systematic detailed sampling to identify the source of the anomalies.

ROCK GEOCHEMISTRY

To provide direct lithological analytical values, 49 rock samples, mostly float, were collected, due to scarcity of outcrops in the claims area. As shown on the geochemical map, Fig. 4, and described in rock sample notes, Appendix I, siliceous, rusty, and/or sulfide-bearing rock samples were selectively collected where found along the drainage sampling traverses.

The analytical results indicate that the gold values in rocks are associated with the degree of silicification, as in samples RF109, 110, and RF144, and are highest where both sulfides and quartz veins are present, as in sample RF106 yielding 212ppb Au. Conversely, the base metal rich sample number RF139, with 282ppm Cu and 684ppm Zn, which has abundant pyrite but lacks silica, does not contain detectable gold.

The three strongly silicified, but sulfide poor, sedimentary rock float samples RF102, 112, and 149, are strongly anomalous in cadmium and zinc, with up to 36.8ppm Cd and 953ppm Zn, suggesting hydromorphic enrichment in the Fe-Mn precipitates along fractures and shear zones.

Other siliceous float rocks such as samples RF123 and 131 carry anomalous arsenic, with 163ppm As in the latter, which is a good indicator of precious metals enrichment, such as in sample RF106 with 36ppm As and 212ppb Au.

CONCLUSIONS

1. Anomalous levels of gold and trace elements Ag, Ba, Cu, Ni, Pb, and Zn, and of alteration-related elements Al, Ca, Cr, Fe, K, Mg, Mn, and Na are present in both fractions in drainage samples SEDs04/05 on the east side, and similarly in SEDs25/26 on the west side of the Long 1 claim, indicating possible presence of precious metals mineralization and the associated alteration envelope.
2. Similarly anomalous soil sample S104, with adjacent gold values in the H.M. fraction may be indicative of the source of previously identified gold anomaly in the nearby drainage of upper Eagle Creek.
3. Strongly silicified sedimentary rock float samples are anomalous in arsenic, cadmium, silver, copper, and zinc values, and where altered and enriched in sulfides, carry anomalous gold values as well.
4. The bedrock source of the anomalous float samples can be expected to lie upstream and up-ice to the north of the anomalous stream sediments geochemistry.

BIBLIOGRAPHY

Preto, V., GEM B.C., 1970: Geology of the Area Between
Eakin Ck. and Windy Mtn., p.307-312.

Tipper, H.W., GSC Bull. 196, Surficial Geology Map 1293A,
Bonaparte Lake, B.C.

STATEMENT OF EXPENDITURES
Long Group Mineral Claims

Fieldwork -

Salaries, S.Zastavnikovich, Geochemist 3 days @ 275/day	825.00
Lodging, 3 nights	105.00
Food, 3 days @ 30/day	90.00
Travel, 4x4 truck, 3 days @ 40/day	120.00
Gasoline	159.74
Tolls & Mileage, 1420 km @ 10¢	160.20
Field expenses, supplies, maps,	65.00
Sample Delivery	40.00
	1,564.94

Analysis -

73 Samples for 30 element ICP fire Au, -80 Mesh + prep. @ 16.25	1,186.25
17 Samples for 30 element ICP, fire Au, H.M. fraction + H.M. prep.@48.25	820.25
	2,006.50

Report Preparation-

Writing, drafting, filing, 3 days @ 275	825.00
Typing, Maps & Report Reproduction	160.00
Mileage and Parking	35.00
	1,020.00

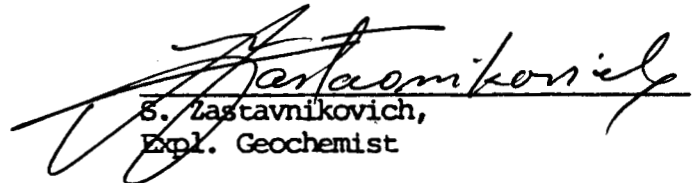
Total Expenditures, \$ 4,591.44

STATEMENT OF QUALIFICATIONS

I.- Sam Zastavnikovich, do hereby certify that:

1. I am a graduate of the University of Alberta with the Degree of B. Ed. in Physical Sciences, 1969.
2. I have been a practicing exploration geochemist with Falconbridge Ltd. of Toronto and Vancouver for thirteen continuous years as:

1969-1975: Field geochemist, international.
1975-1979: Project geologist-geochemist, B. C.
1979-1982: Exploration geochemist, worldwide, where I was engaged in all aspects of geochemical exploration, including research and development of improved sampling techniques, and advanced geochemical interpretation, as well as the writing of final, budget, and assessment reports.
3. I am a voting member of the Association of Exploration Geochemists.
4. I am a consulting geochemist with offices at 5063 - 56th. St., Delta, B. C.


S. Zastavnikovich,
Expl. Geochemist

Appendix I.

Rock Sample Notes, Long Claims:

-Rock float samples, except where noted as outcrop.

- RF101 - calcareous siltstone with rusty fractures, outcrop.
- 102 - very siliceous, fine grained, with Mn on fractures.
- 103 - calcareous siltstone
- 104 - silicified sediment
- 105 - outcrop, shale with 1cm qtz-carbonate vertical veinlets, striking 110°.
- 106 - rusty calcareous sandstone, 2% pyrite, 1mm qtz. veins.
- 107 - outcrop, rusty silicified shale.
- 108 - fractured calcareous shale.
- 109 - outcrop, calcareous siltstone, with 1% dissem. pyrite.
- 110 - same as no. 109.
- 111 - silicified siltstone.
- 112 - very siliceous sediment, rusty fractures.
- 113 - silicified sediment.
- 114 - silicified fine-grained sediment.
- 115 - rusty hornfelsed sandstone.
- 116 - fine-grained siliceous sediment.
- 117 - fine-grained hornfelsed sediment.
- 118 - 2cm wide quartz veinlet.
- 119 - feldspar porphyry.
- 120 - 5 cm quartz vein float.
- 121 - quartz-feldspar-hornblende pegmatite.
- 122 - hornblende diorite.
- 123 - 1-2 mm wide quartz veinlets in calcareous sediment.
- 124 - quartz-feldspar pegmatite.
- 125 - silicified shale with 1% dissem. pyrite.
- 126 - quartz-feldspar-mica pegmatite.
- 127 - dark volcanic sediment?, with 1mm pyrite crystals.
- 128 - siliceous sediment with 1% dissem. pyrite.
- 129 - rusty, silicified shale.
- 130 - rusty, dark, fine-grained sediment.
- 131 - very siliceous sediment.
- 132 - same as no. 130.
- 133 - hornblende diorite.
- 134 - hornfelsed fine-grained sediment.
- 135 - same as 133.
- 136 - hornblende diorite.
- 137 - very rusty 2 cm wide quartz vein float.
- 138 - outcrop, hornblende diorite.
- 139 - siltstone, with 1mm massive pyrite veinlets.
- 140 - bleached intrusive float.
- 141 - rusty, fractured shale.
- 142 - same as no. 141.
- 143 - biotite quartz diorite.
- 144 - altered, bleached, with 1% dissem. pyrite.
- 145 - hornblende porphyry.
- 146 - rusty, siliceous, bleached, with pyrite crystals.
- 147 - rusty, siliceous sediment.
- 148 - dark, fine-grained hornfels.
- RF149 - 1cm wide quartz veinlet in siltstone.

APPENDIX II.

Analytical Procedure - The samples were analyzed by Min-En Laboratories Ltd. of 705 West 15th St., N.Vanc, as follows:

The stream sediments were oven-dried in their original water-resistant kraft paper bags at 95°C and screened to obtain the minus 80 mesh fraction for analysis. The rock samples were crushed and pulverized in a ceramic-plated pulverizer.

A suitable weight of 5.0 or 10.0 grams is pretreated with HNO_3 and HClO_4 mixture.

After pretreatment the samples are digested with Aqua Regia solution, then taken up with 25% HCl to suitable volume and aliquot used for the 26 element ICP trace element analysis.

From the major remaining portion of the sample, Gold is preconcentrated by standard fire assay methods, then extracted with Methyl Iso-Butyl Ketone and analyzed by Atomic Absorption.

For Mercury analysis, 1 gram of sieved material is sintered at 90°C for 4 hours, then digested in HNO_3 and HCl acids mixture, and analyzed by the Hatch and Ott flameless AA method.

MIN-EN Laboratories Ltd.*Specialists in Mineral Environments*Corner 15th Street and Bewicke
705 WEST 15TH STREET
NORTH VANCOUVER, B.C.
CANADA V7M 1T2**ASSESSMENT REPORT FOR:****HEAVY MINERAL SAMPLING AND CONCENTRATIONS**

A large sample is collected from stream sediments or soils big enough to yield a minimum of 0.5 kg of the desired minus fraction. After sieving through any of the sieve mesh sizes they are adapted for the survey. After sieving the samples, the minus fraction is grinded to -80 mesh.

Then 0.4 kg of sample is weighed into a suitable centrifuge containers. The prepared concentrations of liquids are added to obtain a 3.1 specific gravity flotation.

The heavy fractions are then washed cleaned and dried. After drying the samples they are separated. The sink float Heavy Minerals are separated into Magnetic and Non Magnetic fractions and both fractions are weighed. The percent of the Magnetic and non Magnetic fractions are calculated and reported with the analytical data.

The analysis are than carried out in the usual analytical manner by I.C.P. or A.A. method.

APPENDIX III

Analytical Results

COMP: BARAKSO CONSULTANTS
 PROJ: WILLOW
 ATTN: J.BARKSO/S.ZASTAVNIKOVICH

MIN-EN LABS — ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

FILE NO: 0V-0987-SJ1
 DATE: 90/08/07
 * SOIL * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU PPB
S101	.8	19790	1	1	94	.5	4	7360	.1	12	100	27830	1190	28	8430	280	1	170	31	770	11	1	12	1	1	78.1	58	1	1	1	25	2
S102	.5	18080	1	1	84	.5	4	6350	.1	13	66	27940	760	17	7890	324	1	110	32	590	18	1	12	1	1	76.6	71	1	1	1	36	1
S103	1.0	21180	1	1	64	.8	4	5250	.1	19	50	34650	830	20	8460	356	1	90	31	1110	21	1	11	1	1	78.9	189	1	1	1	34	1
S104	2.8	34420	1	1	265	.8	6	8410	.1	19	198	45740	2120	36	9270	467	1	190	58	810	25	1	12	1	1	122.2	132	1	1	1	46	3
S105	1.3	23230	1	1	58	.8	6	6230	.1	16	56	40560	750	20	8260	312	1	110	19	1300	25	1	11	1	1	100.3	154	1	1	1	31	2
S106	1.8	24590	1	1	70	.6	6	8120	.1	14	57	36980	880	20	7780	422	1	170	17	760	20	1	22	1	1	94.7	87	1	1	1	21	2
S107	1.1	19280	1	1	69	.6	4	6920	.1	14	55	33130	660	17	8220	374	1	130	27	490	25	1	19	1	1	85.7	106	1	1	1	38	1
S108	.7	12570	1	1	58	.5	3	6170	.1	11	39	23590	650	13	7450	350	1	100	17	640	24	1	11	1	1	68.3	89	1	1	1	32	3
S109	1.5	22660	1	1	56	.7	4	4260	.1	11	22	28780	440	17	5140	203	1	90	11	1070	20	1	8	1	1	74.4	101	1	1	1	35	1
S110	.6	16260	1	1	55	.8	4	6050	.8	19	80	33540	550	14	7620	604	1	80	32	1310	33	1	13	1	1	76.7	171	2	1	1	42	34
SED 01	1.1	21490	1	1	136	.8	4	8030	.3	15	51	31200	550	22	8050	645	1	140	45	750	19	1	18	1	1	70.9	93	1	1	1	51	1
SED 02	1.0	17160	1	1	94	.6	4	8130	.3	17	75	34020	710	14	10050	742	1	130	41	900	27	1	28	1	1	81.5	109	1	1	1	60	17
SED 03	.9	17880	1	1	87	.8	4	9540	.4	19	86	33730	770	14	11160	776	1	110	46	940	27	1	26	1	1	84.3	93	2	1	1	63	2
SED 04	1.1	20770	1	1	82	.7	5	9690	.1	20	93	39130	730	21	11400	806	1	160	52	820	29	1	25	1	1	95.3	155	1	1	1	74	170
SED 05	1.1	19860	1	1	78	.8	5	9110	.1	19	109	37520	780	19	12040	723	1	140	55	850	34	1	27	1	1	91.2	152	1	1	1	65	21
SED 06	1.0	17300	1	1	72	.7	4	9190	.6	16	73	32740	710	17	10650	614	1	140	68	870	22	1	17	1	1	80.0	99	1	1	1	56	17
SED 07	1.2	14710	1	1	60	.7	5	8120	.1	15	57	31840	570	14	9810	534	1	110	39	840	24	1	15	1	1	79.9	87	2	1	1	57	5
SED 21	1.1	14050	1	1	70	.7	5	8430	.1	15	35	39490	470	15	9990	556	1	90	35	810	24	1	19	1	1	91.2	75	2	1	2	159	133
SED 22	1.0	12830	1	1	73	.4	4	7880	.1	9	13	19330	390	16	9290	226	1	90	28	810	12	1	16	1	1	61.3	61	2	1	1	43	2
SED 23	.8	10260	1	1	59	.2	3	6120	.1	7	8	15500	310	10	8600	211	1	140	16	550	8	1	10	1	1	46.2	35	2	1	1	29	10
SED 24	1.1	15470	1	1	45	.5	4	9930	.1	13	24	27820	500	13	13250	410	1	90	30	1290	14	1	17	1	1	89.4	65	2	1	1	65	1
SED 25	1.1	20010	1	1	135	.6	6	10160	.1	15	47	33020	2460	16	10890	783	1	370	23	1050	18	1	49	1	1	91.5	79	2	1	1	40	1
SED 26	1.2	21380	1	1	142	.8	5	10010	.1	17	84	37370	2770	18	12950	873	1	320	29	1180	18	1	43	1	1	105.0	77	2	1	1	47	61
SED 27	.9	11780	1	1	55	.4	4	7370	.1	12	28	23240	870	14	8480	439	1	120	36	900	16	1	15	1	1	64.9	50	2	1	1	45	980

COMP: BARAKSO CONSULTANTS
 PROJ: WILLOW
 ATTN: J.BARKSO/S.ZASTAVNIKOVICH

MIN-EN LABS — ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 (604)980-5814 OR (604)988-4524

FILE NO: OV-0987-HJ1
 DATE: 90/08/07
 * HEAVY MINERAL * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU PPM	HM %
SED 03	1.0	10030	1	5	26	.1	1	9300	.1	16	48	38880	270	6	6970	373	1	90	16	1410	8	1	16	1	1	88.2	51	1	1	1	105	50	5.03
SED 04	.9	9100	1	5	18	.1	2	6650	.1	17	39	44900	190	6	6530	390	1	80	13	700	10	1	9	1	1	118.7	72	1	1	1	62	220	7.99
SED 05	1.2	11840	1	9	22	.1	2	8600	.1	19	83	52010	270	7	8260	446	1	90	24	970	29	1	15	1	1	103.5	96	1	1	1	81	10	6.67
SED 06	.9	9900	1	4	19	.1	2	6750	.1	13	26	33870	250	7	7900	364	1	100	13	840	2	1	10	1	1	97.1	45	1	1	1	50	5	9.82
SED 07	1.0	10260	1	4	20	.1	3	7510	.1	15	26	37240	260	6	7980	384	1	110	12	910	3	1	11	1	1	106.5	48	1	1	1	64	5	8.58
SED 21	1.1	9930	1	5	21	.1	2	7360	.1	18	36	55890	180	6	7900	420	1	70	8	690	2	1	10	1	1	130.9	48	1	1	2	208	140	14.04
SED 22	.9	8340	1	3	18	.1	3	7400	.1	9	9	20850	140	6	6070	218	1	90	10	1290	3	1	14	1	1	68.0	36	1	1	1	46	5	10.06
SED 23	.6	7670	1	3	16	.1	2	7320	.1	7	11	14200	100	4	5970	196	1	100	7	1380	7	1	12	1	1	44.0	35	1	1	1	26	10	11.38
SED 24	.8	12420	1	4	14	.1	3	9680	.1	11	17	23480	190	7	9590	353	1	110	10	1030	2	1	13	1	1	77.6	39	1	1	1	40	55	11.05
SED 25	.6	8360	1	3	35	.1	2	5650	.1	12	27	29460	850	6	5750	339	1	130	7	740	3	1	9	1	1	70.9	43	1	1	1	48	5	7.80
SED 26	.7	9260	1	4	35	.1	2	6480	.1	14	41	37010	850	6	6590	372	1	130	8	850	2	1	9	1	1	95.9	35	1	1	1	77	10	9.94
SED 27	.7	8360	1	3	17	.1	2	7190	.1	10	16	26160	390	7	6230	291	1	110	6	1270	4	1	9	1	1	86.6	28	1	1	1	50	10	13.86
S101 & S102	.9	10100	1	5	27	.1	2	8110	.1	13	30	34520	350	6	5930	288	1	120	8	1470	6	1	12	1	1	102.5	36	1	1	1	66	150	6.05
S103 & S104	1.6	7900	1	3	42	.1	4	9440	.1	16	41	45190	780	5	4300	314	1	220	2	3350	2	1	6	1	1	185.1	55	1	1	1	32	5	2.56
S105 & S106	1.3	10330	1	6	16	.1	4	7270	.1	19	34	50550	410	9	6540	401	1	160	1	1770	2	1	9	1	1	160.1	56	1	1	1	25	100	5.73
S107 & S108	.9	8970	1	6	16	.1	3	7250	.1	12	18	36800	250	6	5890	288	1	80	2	810	11	1	13	1	1	123.2	47	1	1	1	50	5	8.19
S109 & S110	2.2	10830	1	7	24	.1	2	7280	.1	22	61	57420	330	7	6930	382	1	70	13	1170	9	1	19	1	1	155.6	94	1	1	1	47	5	4.81

COMP: BARAKSO CONSULTANTS

PROJ: WILLOW

ATTN: J.BARKSO/S.ZASTAVNIKOVICH

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

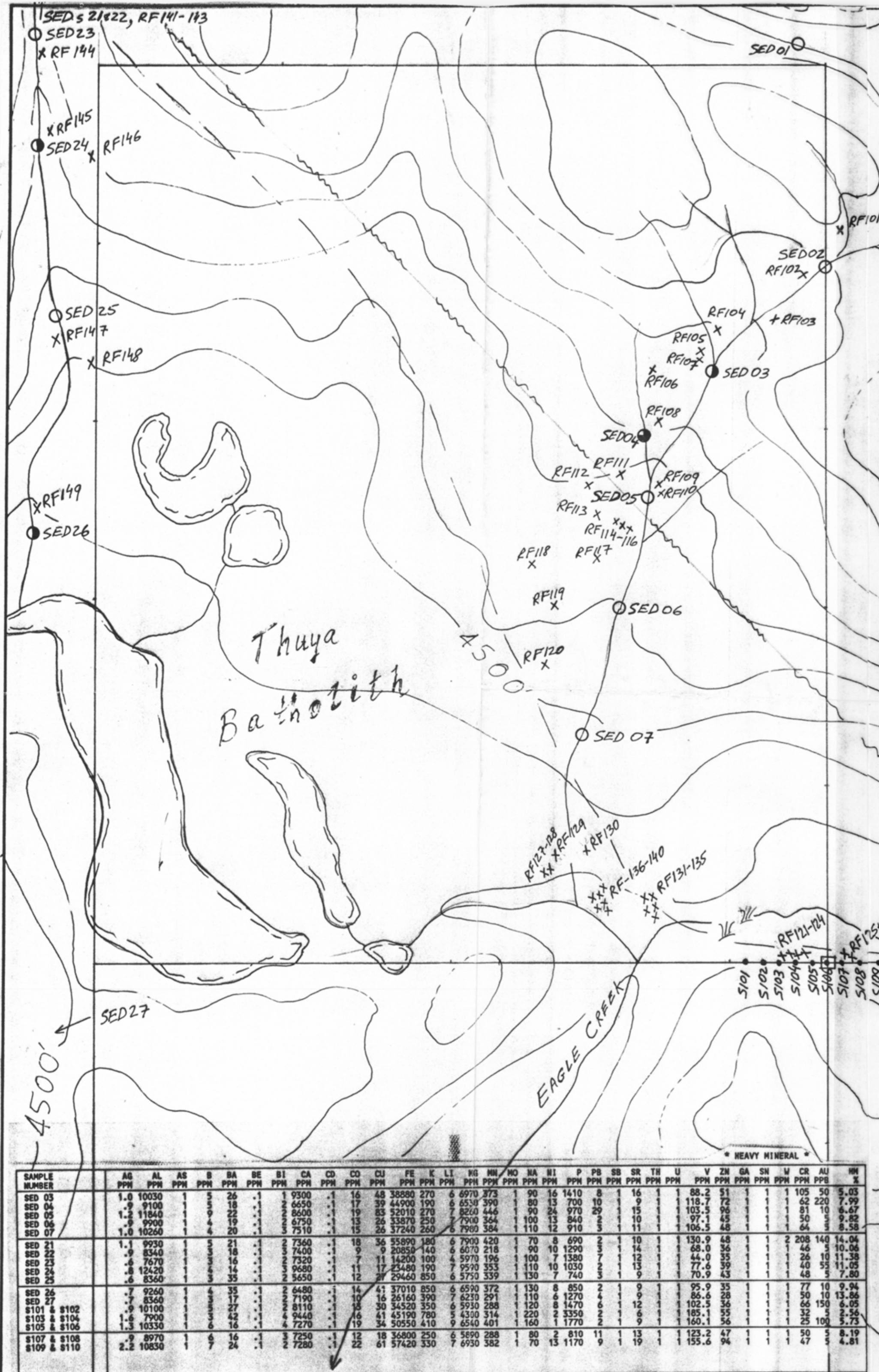
(604)980-5814 OR (604)988-4524

FILE NO: OV-0987-RJ1+2

DATE: 90/08/07

* ROCK * (ACT:57)

SAMPLE NUMBER	AG PPM	AL PPM	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA PPM	CD PPM	CO PPM	CU PPM	FE PPM	K PPM	LI PPM	MG PPM	MN PPM	MO PPM	NA PPM	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	U PPM	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	AU PPM
RF101	2.1	1910	9	24	43	.1	3	50280	.1	8	80	15070	380	1	1100	211	4	210	34	1090	13	1	43	1	1	18.6	50	1	1	1	55	1
RF102	1.6	4790	20	4	13	.1	3	52130	6.8	4	14	7170	480	2	2320	776	2	60	19	670	15	4	24	1	1	28.8	633	1	1	1	31	2
RF103	2.7	1090	35	1	37	.1	3	109930	.1	4	27	9150	180	1	960	456	2	30	16	1010	15	5	350	1	1	8.7	25	6	1	1	13	2
RF104	.3	710	11	1	52	.1	1	9910	.1	4	35	21820	230	1	150	725	1	30	3	320	14	1	10	1	1	7.9	44	1	1	1	80	1
RF105	3.1	9250	19	113	48	.3	5	87800	.1	9	59	19200	1180	18	7820	2027	2	40	31	930	99	2	101	1	1	23.7	300	3	1	1	27	2
RF106	2.0	3550	36	2	39	.8	1	51990	.1	35	49	41590	1360	3	31090	1276	7	30	247	580	15	1	76	1	1	76.6	62	1	1	2	207	212
RF107	1.6	18190	1	3	90	.1	5	7010	.1	17	40	46170	790	47	20180	895	1	300	1	1080	14	1	18	1	1	92.5	39	1	2	1	10	1
RF108	1.9	2710	9	4	41	.1	3	47140	.1	10	64	19080	470	2	1160	287	6	270	35	990	13	1	27	1	1	15.7	35	1	1	1	40	5
RF109	1.9	2900	21	1	36	.1	2	50180	.1	8	56	14140	340	2	1330	249	1	200	30	990	13	1	55	1	1	14.0	33	1	1	1	53	12
RF110	2.0	1700	19	1	20	.1	2	61750	.1	7	49	11930	250	1	710	487	4	260	27	630	15	2	148	1	1	13.2	47	1	1	1	55	9
RF111	1.6	8130	14	3	25	.1	3	21080	.1	12	67	14970	530	6	3390	375	1	180	37	1360	16	1	21	1	1	39.4	75	2	1	1	42	5
RF112	1.8	3950	57	10	12	.1	3	48320	3.1	6	22	8870	250	1	1280	541	2	100	21	1100	70	3	19	1	1	14.7	364	1	1	1	61	1
RF113	1.7	5680	12	1	18	.1	4	21210	.1	11	110	14750	370	1	1840	105	2	280	49	1380	10	1	28	1	1	24.0	29	1	1	1	61	18
RF114	2.0	17530	7	3	209	.1	6	29450	.1	13	95	24590	5770	19	10670	982	1	860	33	1220	12	1	29	1	1	76.0	147	1	1	1	79	16
RF115	1.0	2300	9	1	22	.1	3	8510	.1	8	41	11900	170	2	1190	269	6	380	19	990	6	1	8	1	1	18.9	31	1	1	1	129	3
RF116	1.6	6720	20	1	25	.1	3	20760	.1	7	66	8220	300	1	1950	265	1	160	18	1490	14	1	53	1	1	20.2	23	1	1	1	65	1
RF117	1.4	15820	4	1	140	.1	5	5400	.1	13	117	29330	7120	20	19030	515	2	440	33	660	10	1	5	1	1	89.6	72	2	2	2	132	2
RF118	.9	1230	13	1	71	.1	1	390	.1	2	8	6490	920	1	530	26	4	150	2	50	10	1	3	1	1	6.2	3	1	1	1	126	21
RF119	1.0	9340	7	1	94	.1	4	6900	.1	8	39	21610	3070	9	6480	332	1	740	1	910	14	1	11	1	1	48.8	47	2	1	1	44	1
RF120	.4	1580	11	1	18	.1	2	4080	.1	2	14	8670	210	1	820	130	2	310	4	440	9	1	5	1	1	9.4	12	1	1	1	132	1
RF121	.2	5760	2	4	39	.1	2	4950	.1	5	32	11570	2670	4	3180	182	1	370	4	380	11	1	6	2	1	22.8	15	1	1	1	92	3
RF122	.5	6450	12	1	53	.1	2	4960	.1	5	10	12660	3320	5	3620	182	4	410	3	340	13	1	6	3	1	26.8	19	1	1	1	76	1
RF123	1.1	12210	65	2	52	.3	1	51960	.1	27	126	53460	1070	17	29450	1261	1	190	31	980	14	1	111	1	1	90.9	51	1	1	1	71	2
RF124	.4	2600	15	2	16	.1	2	2900	.1	3	9	6520	720	2	1340	104	3	260	4	150	11	1	4	3	1	8.8	8	1	1	1	132	1
RF125	1.2	4890	8	1	33	.1	3	13160	.1	10	30	23020	680	7	1590	102	4	240	43	1540	11	1	22	1	1	25.4	64	1	1	1	119	1
RF126	.2	2840	15	1	69	.1	1	1780	.1	2	3	2890	1200	3	430	39	1	380	3	60	12	1	6	1	1	1.0	8	1	1	1	84	1
RF127	1.2	20020	1	1	55	.1	5	9370	.1	17	159	44860	1380	14	13650	605	1	190	7	250	9	1	6	1	1	90.1	49	1	1	1	36	2
RF128	1.4	12310	9	1	29	.1	5	13350	.1	7	6	19300	900	12	13740	461	1	220	7	170	8	1	2	1	1	40.5	25	2	1	1	70	1
RF129	1.4	3850	8	1	81	.1	3	9710	.1	10	64	19470	780	1	1070	60	6	260	32	900	12	1	23	1	1	28.0	32	1	1	1	86	1
RF130	2.0	20960	1	4	18	.1	6	40450	.1	25	182	55080	920	14	15640	803	1	250	10	1540	7	1	19	1	1	193.5	50	1	2	1	18	1
RF131	1.0	7080	163	1	35	.1	2	11170	.1	19	9	8010	880	5	3340	172	2	380	47	1140	14	2	12	1	1	25.4	23	2	1	3	43	1
RF132	1.9	25800	1	5	51	.1	7	15250	.1	34	178	69520	650	25	25020	1164	1	330	32	1670	6	1	14	1	1	271.8	63	1	2	5	45	1
RF133	1.6	13140	1	2	75	.1	5	11900	.1	14	153	38870	5500	11	8780	546	3	770	1	2760	13	1	9	1	1	96.7	55	2	1	3	28	2
RF134	1.7	17630	14	4	94	.1	4	16610	.1	14	99	20990	2490	17	5610	430	1	1550	24	1190	12	1	29	1	1	62.9	43	3	1	3	47	1
RF135	1.4	19070	1	1	188	.1	6	9010	.1	12	49	41720	10620	18	11270	680	14	630	1	2130	15	1	16	1	1	107.0	50	3	1	4	38	1
RF136	2.0	13450	1	2	27	.1	6	10190	.1	17	187	41530	2620	10	7840	412	43	380	1	2700	19	1	9	1	1	88.3	67	3	2	4	29	4
RF137	.5	3810	23	1	23	.1	1	1540	.1	4	50	18020	860	3	1940	112	107	130	1	270	11	1	3	1	1	21.4	12	3	1	8	178	1
RF138	1.7	8100	9	1	28	.1	5	8810	.1	11	154	28110	2280	7	4540	298	6	440	1	1690	17	1	7	1	1	55.0	39	5	1	4	50	1
RF139	1.0	19450	30	4	47	.1	3	1020	.1	16	282	79530	1060	29	11320	1072	4	110	40	340	29	1	2	1	1	49.3	684	3	1	4	61	2
RF140	1.5	5490	25	12	31	.1	3	10160	.1	12	217	16960	730	3	1740	87	20	390	38	1420	11	1	23	1	1	23.7	24	2	1	2	39	2
RF141	1.4	10480	23	1	162	.3	1	45440	.1	7	46	15400	1640	13	10080	309	10	140	21	500	22	2	72	1	1	28.6	55	6	1	3	64	1
RF142	1.0	10380	18	1	259	.4	1	4460	.1	8	67	16950	2100	11	7350	148	29	160	28	690	20	1	10	1	1	23.8	58	5	1	3	39	1
RF143	1.7	19880	3	3	108	.1	6	8860	.1	22	85	44060	1730	18	15880	437	1	450	1	850	9	1	14	1	1	141.3	33	2	2	5	30	2
RF144	1.0	3620	13	3	33	.6	1	46740	.1	29	80	59830	2690	1	28220	1660	1	200	20	1340	22	1	50	1	1	51.0	87	1	1	1	5	40
RF145	2.2	26210	1	4	21	.1	7	40540	.1	21	125	40290	4360	13	19230	867	1	400	18	1470	6	1	75	1	1	144.8	44	2	2	4	33	1
RF146	1.0	15600	7	3	90	.6	1	45540	.1	22	76	52710	2210	16	26900	1370	1	290	25	3640	18	1	49	1	1	128.7	70	1	1	2	33	28
RF147	.5	3790	15	2	57	.5	1	30580	.1	14	66	39680	2200	2	4760	1292	1	490	12	1240	17	1	27	1	1	40.3	54	2	1	1	8	1
RF148	1.4	21050	12	1	2047	.2	4	3780	.1	11	33	27030	11440	22	14250	545	1	510	30	240	15	1	12	1	1	71.1	7					



*** ROCK ***

SAMPLE NUMBER	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CJ	FE	K	LI	MG	NI	NO	NA	HI	P	PB	SB	SR	TH	U	V	ZH	GA	SN	U	CR	AU	
RF101	2.1	1910	9	24	43	-1	3	50280	-1	8	80	15070	380	1	1100	211	4	210	35	1090	13	1	43	1	1	1	18.6	50	1	1	1	55	1
RF102	1.6	4790	20	4	13	-1	3	52130	6.8	4	14	7170	480	2	2320	6	2	60	17	670	15	4	24	1	1	1	28.8	633	1	1	1	31	2
RF103	2.7	1090	35	1	37	-1	1	10950	-1	4	27	9150	180	1	960	456	1	30	15	1010	15	5	5	1	1	1	9.9	25	1	1	1	80	1
RF104	3.1	710	11	1	52	-1	1	9910	-1	4	55	21820	230	1	150	725	2	30	3	320	14	2	101	1	1	1	23.7	300	1	1	1	27	2
RF105	2.0	3550	36	2	39	-8	1	51990	-1	35	49	41590	1360	3	31090	1276	7	30	247	580	15	1	76	1	1	1	76.6	42	1	2	207	212	1
RF106	1.6	16190	1	5	90	-1	5	7010	-1	17	40	46170	790	47	20180	895	1	300	1	1080	13	1	19	1	1	1	92.5	39	1	1	1	10	1
RF107	1.9	2710	1	4	41	-1	3	47140	-1	10	64	19080	470	1	1160	287	1	200	10	990	15	1	55	1	1	1	15.7	35	1	1	1	40	1
RF108	1.9	2900	21	1	36	-1	2	50180	-1	7	49	14140	440	1	1330	249	1	200	10	990	15	1	55	1	1	1	14.0	43	1	1	1	35	1
RF109	2.0	1700	19	1	29	-1	2	21750	-1	7	69	11930	250	1	710	487	1	40	31	930	19	2	101	1	1	1	13.2	47	1	1	1	35	1
RF110	1.6	8130	14	3	25	-1	3	21080	-1	12	67	14970	530	6	3390	373	1	180	37	1360	16	1	21	1	1	1	39.4	73	1	1	1	42	1
RF111	1.6	8130	14	3	25	-1	3	21080	-1	12	67	14970	530	6	3390	373	1	180	37	1360	16	1	21	1	1	1	39.4	73	1	1	1	42	1
RF112	1.9	9950	37	10	12	-1	1	48320	3.1	6	22	8870	250	1	1280	541	1	100	21	1100	70	1	28	1	1	1	24.0	50	1	1	1	61	18
RF113	1.9	5680	12	1	18	-1	4	21210	-1	11	110	14750	370	1	1840	105	1	280	49	1350	10	3	19	1	1	1	76.0	147	1	1	1	79	16
RF114	2.0	17530	7	3	209	-1	6	29450	-1	13	95	24590	5770	19	10670	982	1	380	35	1220	12	1	29	1	1	1	18.9	31	1	1	1	129	1
RF115	1.0	2300	9	1	22	-1	3	8510	-1	8	61	11900	170	1	610	130	2	310	4	440	9	1	8	1	1	1	20.2	23	1	1	1	65	2
RF116	1.6	6720	20	1	25	-1	3	20760	-1	17	66	8220	300	1	1950	265	1	160	18	1490	14	1	53	1	1	1	20.2	23	1	1	1	65	2
RF117	1.4	15820	4	1	140	-1	1	390	-1	2	8	6490	920	1	330	26	1	40	190	2	190	10	1	1	1	1	48.8	47	1	1	1	44	1
RF118	1.0	9340	7	1	94	-1	4	6900	-1	8	39	21610	3070	9	6450	332	1	740	14	1	1	1	1	1	1	1	9.4	12	1	1	1	132	1
RF119	1.4	1580	11	1	18	-1	2	4080	-1	2	14	8670	210	1	1070	670	1	210	4	440	9	1	8	1	1	1	9.4	12	1	1	1	132	1
RF120	1.4	1580	11	1	18	-1	2	4080	-1	2	14	8670	210	1	1070	670	1	210	4	440	9	1	8	1	1	1	9.4	12	1	1	1	132	1
RF121	2.2	5760	2	4	39	-1	2	4950	-1	5	32	11570	2670	4	3180	182	1	370	4	360	11	1	6	2	1	1	22.8	15	1	1	1	92	3
RF122	1.5	6450	12	1	55	-1	1	4960	-1	7	6	19300	900	1	10	12660	1320	1	410	3	340	13	1	6	2	1	26.8	19	1	1	1	76	1
RF123	1.1	12210	65	1	16	-1	2	2900	-1	27	126	53460	1070	17	29450	1261	1	190	31	980	14	1	11	1	1	1	90.9	51	1	1	1	132	1
RF124	1.2	2600	15	1	16	-1	2	2900	-1	3	9	6320	720	1	1340	104	1	360	10	150	11	1	22	1	1	1	25.4	64	1	1	1	119	1
RF125	1.2	4890	8	1	33	-1	3	13160	-1	10	30	25020	680	7	1590	102	4	240	43	1340	11	1	1	1	1	1	1	1	1	1	1	1	1
RF126	2.2	2840	15	1	69	-1	1	1780	-1	2	3	2890	1200	3	430	39	1	300	3	60	12	1	6	1	1	1	1.0	8	1	1	1	84	1
RF127	1.2	20020	1	1	55	-1	3	9370	-1	17	199	44860	1380	11	13650	550	1	190	7	170	8	1	1	1	1	1	40.5	25	1	1	1	70	1
RF128	1.4	12310	9	1	81	-1	1	13350	-1	7	6	19300	900	1	10	12660	1320	1	410	3	340	13	1	6	2	1	28.0	19	1	1	1	70	1
RF129	1.4	3850	8	1	81	-1	1	9010	-1	14	64	19470	780	1	1070	60	1	6	260	32	900	12	1	23	1	1	28.0	20	1	1	1	18	1
RF130	2.0	20960	1	4	18	-1	6	40450	-1	25	182	35080	920	14	15640	803	1	250	10	1540	7	1	19	1	1	1	195.5	50	1	1	1	1	1
RF131	1.0	7080	163	1	35	-1	1	11170	-1	19	9	8010	880	5	3340	172	2	380	47	1140	14	2	12	1	1	1	1	1	1	1	1	1	1
RF132	1.0	25800	1	5	51	-1	7	15250	-1	34	178	69520	650	25	25020	1164	1	330	52	1670	6	1	1	1	1	1	96.7	45	1	1	1	3	28
RF133	1.6	13140	1	2	75	-1	1	11900	-1	14	133	38870	3500	1	8780	346	1	1550	24	1190	12	1	29	1	1	1	62.9	55	1	1	1	3	47
RF134	1.7	17630	14	4	94	-1	4	16610	-1	14	49	41720	1620	18	11270	680	14	630	1	2130	15	1	16	1	1	1	107.0	50	1	1	1	4	38
RF135	1.4	19070	1	1	188	-1	1	6	9010	-1	17	16960	730	3	1740	87	20	390	38	1420	11	1	23	1	1	1	23.7	24	1	1	1	2	39
RF136	2.0	13450	23	2	27	-1	6	10190	-1	6	50	18020	860	3	1940	112	107	130	1	270	11	1	3	1	1	1	88.3	67	1	1	1	4	29
RF137	1.7	8100	9	1	28	-1	1	8810	-1	11	154	28110	2280	7	4540	296	6	440	1	1690	17	1	1	1	1	1	55.4	12	1	1	1	1	178
RF138	1.0	19450	30	4	47	-1	3	10220	-1	16	282	79530	1060	29	11320	1072	4	110	40	340	29	1	2	1	1	1	49.3	684	1	1	1	4	61
RF139	1.5	5490	25	12	31	-1	3	10160	-1	12	217	16960	730	3	1740	87	20	390	38	1420	11	1	23	1	1	1	23.7	24	1	1	1	2	39
RF140	1.5	5490	25	12	31	-1	3	10160	-1	12	217	16960	730	3	1740	87	20	390	38	1420	11	1	23	1	1	1	23.7	24	1	1	1	2	39
RF141	1.4	10480	23	1	162	-3	1	45440	-1	7	46	15400	1640	13	10080	309	10	140	21	500	22	2	72	1	1	1	28.6	35	1	1	1	3	64
RF142	1.0	10380	18	1	259	-1	1	4440	-1	8	67	14950	2100	11	7350	148	29	160	28	690	20	1	10	1	1	1	23.8	58	1	1	1	3	39
RF143	1.7	19880	3	1	108	-1	1	8860	-1	22	85	44060	1730	18	15880	437	1	450	50	1340	22	50	1	1	1	1	71.1	70	1	1	1	5	40
RF144	1.0	3620	13	3	33	-6	1	46740	-1	29	80	39830	2690	1	28220	1640	1	200	20	1340	22	50	1	1	1	1	144.8	44	1	1	1	4	33
RF145	2.2	26210	1	4	21	-1	7	40540	-1	21	125	40290	4360	13	19230	867	400	18	1470	6	1	75	1	1	1	1	144.8	44	1	1	1	4	33
RF146	1.0	15600	7	3	90	-6	1	45540	-1	22	76	32710	2210	16	26990	1370	1	290	25	3640	18	1	49	1	1	1	128.7	70	1	1	1	2	38
RF147	1.5	3790	15	2	57	-5	1	30580	-1	14	66	39680	2200	9	4760	192	1	490	12	1240	17	1	27	1	1	1	40.3	54	1				