MINI Rec	RAL TITLES BRANCH
	FEB 0 3 1999
L.I.#	
File.	VANCOUVER, B.C.

Geochemical Report

Approval Number SMI-98-0200556-146

On Field Work Done

Between June 22 and August 31, 1998

On

The Tac Mineral Claims

Located South of Matzehtzal Mountain

Omineca Mining Division, B. C.

NTS Map 93 L/9 Zone 9

Grid Coordinates 60 55 250 North

6 83 800 South

Latitude 54 deg. 36 min.

Longitude 126 deg. 09 min.

Owner Steve Bell

Ву

Steve Bell

January 1999

# GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

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#### Introduction

The following is a record of the exploration work performed on the Tac mineral claims between June 22 and August 31 1998. The property may host poly metallic veins as indicated by mineralized float and a strong hydromorphic zinc, lead and copper geochemical anomaly.

### (i) <u>Position/Physiography</u>

The claims are located on the southern flank of Matzehtzel mountain in the Nechako plateau region 19 km. north east of Topley B. C. This plateau region consists of a collection of mountains and plains which generally vary between 1200 and 1500 meters in elevation. Ice has overrode the entire area and has produced a glaciated topography in both bedrock and till. Glacial drift is widespread. The glacial history is complex and the Quaternary geology complicated. Recent work by Levson (1997) suggests that an ice divide may have occurred over the project location spreading ice both to the east and west during the last glaciation.

The claims surround a small unnamed sub alpine lake which is referred to as lake 2044 in this report. Local elevations vary between 1550 m and 1650 m.

(A)

The south west corner of the claim group is located at:

Latitude 54 deg. 36 min.

Longitude 126 deg. 09 min.

On NTS map 93 L/9 Zone 9 at grid coordinates:

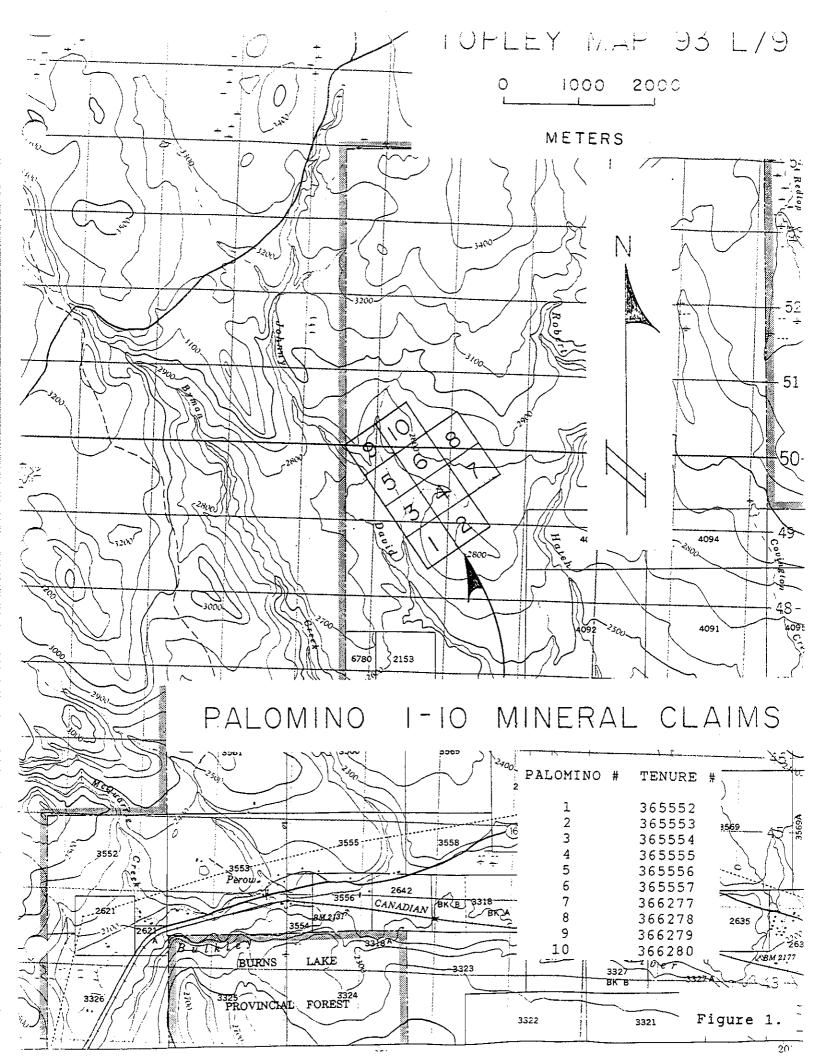
60 55 250 North

6 83 800 South

See figure (1) for map sheet location.

(ii) Access

Access is by motor vehicle and hiking. From Houston via. highway 16 turn north at Topley and travel toward Granilse. Turn east on to the Holmes forest service road stopping at the transmission line. The distance by vehicle from Houston is 48 km. Leave vehicle here and travel east by hiking to lake 2044. Hiking distance is 7.7 km.



#### (iii) <u>Exploration History</u>

Bed rock exposures in the area were examined by early prospectors who radiated out from the Topley Richfield discovery 8 km to the south west. Weak copper mineralization was found associated with andesitic dykes cutting Topley intrusive rocks (Minister of Mines Annual report 1932).

In 1986 results of a regional geochemical reconnaissance survey (GSC open file 1361) which included lake sediments was released. A center lake sediment taken from lake 2044 was anomalous in Zn, Pb, Ag and Cd.

In october 1997 a follow up geochemical survey was conducted by S. Bell about lake 2044. The survey tested drainages leading to the lake. Sediments from two streams entering the lake had anomalous levels of Zn, Pb, Cu and Cd. A Western source direction was indicated.

In November 1997 claims were staked by S. Bell to cover the most anomalous drainages about lake 2044.

In January 1998 results of a regional lake sediment survey of the Babine porphyry belt were released (GS B. C. open file 1997-17). Lake 2044 was featured as having the highest single sediment zinc concentration and the second highest lead concentration. Silver, gold and cadmium were also anomalous.

In 1998 a large scale geochemical survey was conducted by S. Bell over the Tac claim group. Soils near the lake were tested and a detailed survey of the most anomalous drainage was performed.

The following is a compilation of previous claims located near or on the Tac 1-15 claim group. The information was derived from the public record or taken from old claim posts found in the field. There are no records of assessment recorded for these is locations.

- (a) In 1972 W. R. Bacon recorded the Mat claim group north of Lake 2044. (Forfeiture in 1973)
- (b) In 1973 W. R. Bacon recorded the Chek claim group west of Lake 2044. (Forfeiture in 1974)
- (c) In 1984 Canamax Resources located a 20 unit claim north-east of lake 2044. (Not recorded)
- (e) In 1986 Bishop Resources Development Ltd. staked 175 units of claims Between Nez Lake and Matzehtzal mountain. (Forfeiture 1997)
- (f) In November 1997 S. Bell staked Tac 1-6 claims.
- (g) In July 1998 S. Bell staked Tac 7-15 claims

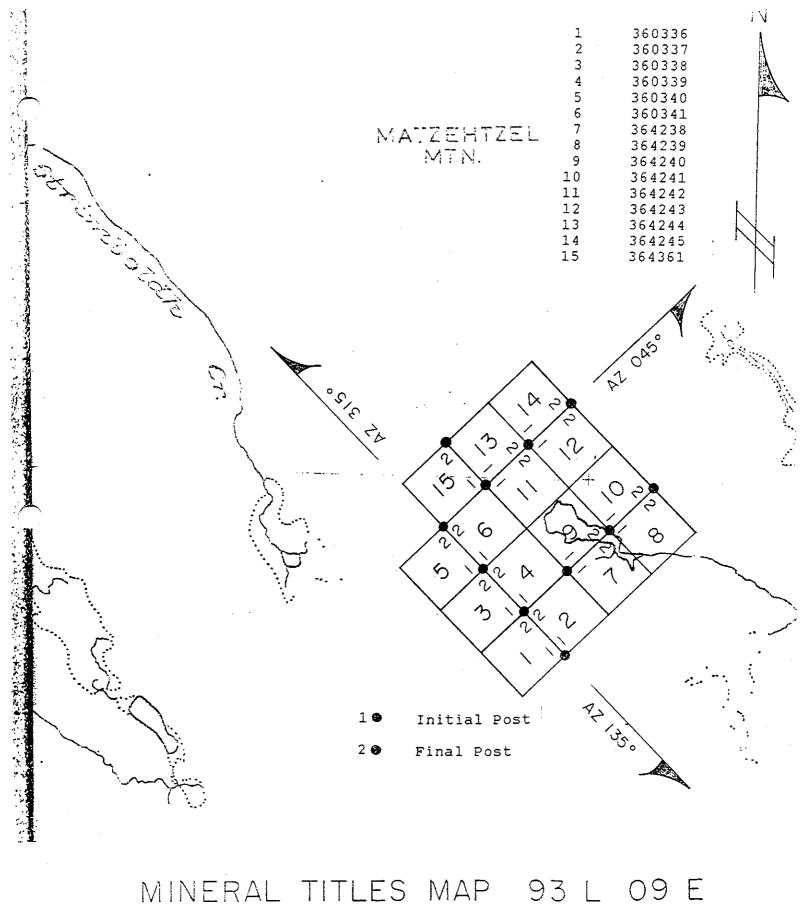
### (iv)

### Claims and Ownership

The Tac property consists of 15 one unit claims which are owned and operated by S. Bell of Houston B. C.

<u>Cla</u>	im Name	Tenure #
Tac	1	360336
Tac	2	360337
Tac	3	360338
Tac	4	360339
Tac	5	360340
Tac	6	360341
Tac	7	364238
Tac	8	364239
Tac	9	364240
Tac	10	364241
Tac	11	364242
Tac	12	364243
Tac	13	364244
Tac	14	364245
Tac	15	364361

See figure (2) for claim post locations.



MINERAL TITLES MAP 93 L 09 E meters

500 0 500 1000 1500 2000

Figure 2.

### (v) <u>Economic Assessment</u>

Geochemical data indicates the presence of underlying base metal mineralization. The batholitic Topley intrusive and near by volcanic Hazelton group rocks are the likely hosts.

### <u>Summary of work</u>

In 1998 a geochemical survey was conducted over the Tac claim group where 221 samples where taken from specific locations and analyzed for base metal and pathfinder elements. Sample locations are indicated on fig. 4 and fig. 5. Samples were also taken from drainages within the vicinity of the Tac claims over similar terrain and provides some background. A reconnaissance survey tested the soils about lake 2044 on a widely spaced grid and a detailed survey tested the most anomalous drainage.

### (C) <u>Geochemical</u> <u>Survey</u>

#### (i) Soil Development

(B)

The soil overlies glacial till and locally derived colluvium. At higher elevations it is very thin and poorly developed with little accumulation of organic matter.

In low areas east of lake 2044 a blanket of fluvial material consisting of sandy gravels which mask underlying sediments or bed rock. Considerable areas north and south of the lake are covered by muskeg. A blue grey layer of clay is found under the muskeg at an average depth of about 2m. The clay is poorly developed and often contains angular rock fragments. This suggests that the the clay may be derived from underlying bedrock. The lake bottom sediments near shore are washed gravels with abundant rock fragments.

#### (ii) Drainage Pattern

The drainage pattern about lake 2044 is very well defined. There are two principle drainages which feed the lake and one exit stream. The streams occupy linear topographic lineaments which intersect beneath the lake. The first stream enters the lake from the north west and decants a swampy area north of the lake. Its headwaters are located on Tac 13. The second stream flows from the high ground west of the lake. Its head waters eminate from a seep which drains the pile of till overlying Tac 5 and Tac 6. Lake 2044 is about 600 m long and 7m deep. It is drained by St. Pierre creek which flows from the lake to the south east.

#### (iii) Geochemical Target

The survey was designed to test for structurally controlled polymetallic vein - stockwork or breccia type base metal mineralization. Sample sites were selected based upon the following model and assumptions.

- (a) Mineralization is spatially associated with structural breaks which appear as topographic lineaments on air photos.
- (b) Mineralization is related to intrusive rocks and their contacts with Hazelton group volcanic rocks underlying the claims.

- (c) The target is a residual anomaly in till which overlies mineralization. The anomaly is probably very small and subtle.
- (d) The dispersal pathways of metals related to mineralization begin at the residual anomaly and lead down slope to the lake via. the drainage.
- (e) A large easily detectable dispersal train in till probably does not exist here in the sub alpine due to the complex mixing of tills in the vicinity of an ice divide. Tills which overlie the claims are not locally derived but originate 100's of meters up ice. Anomalous material from mineralized zones would have been diluted and displaced by this till to lower elevations off the claim group.

#### (iv) Sample Sites

- (a) Sample sites were chosen to test a topographic lineament which runs through lake 2044 at azimuth 135 deg. This is a swampy area and the upper clay layer which directly underlies the muskeg was tested.
- (b) The contact between Topley intrusive rocks and Hazelton volcanics was investigated on Tac 3 and Tac 4 with conventional soil samples taken from the "c" horizon at depths between 50 and 70 cm.

- (c) A dispersion pathway was followed by a detailed sampling of the most anomalous drainage (fig. 5). Here stream samples were taken. Clays were targeted in order to get a uniform sample from each site and to avoid sampling local material that had sloughed off banks into the stream.
- (d) A series of deep test pits were dug in till to test the soil profile and to obtain unoxidised till samples over a topographic lineament which strikes at 100 deg and runs through  $2+00~N~\chi$  1+100~E.

#### (v) Survey control

Grid lines were prepared using compass and hip chain to locate sample sites. These were tied in to claim lines and checked for accuracy with an air photo. Sample sites were marked with red flagging. The flagging was labelled with the grid coordinates and sample number. (see fig. 3 for grid coordinates) (vi) Sampling Procedure

A dutch soil sampler with a stony auger and 1.2 m extension was used to test clays beneath muskeg at depths up to 2m.

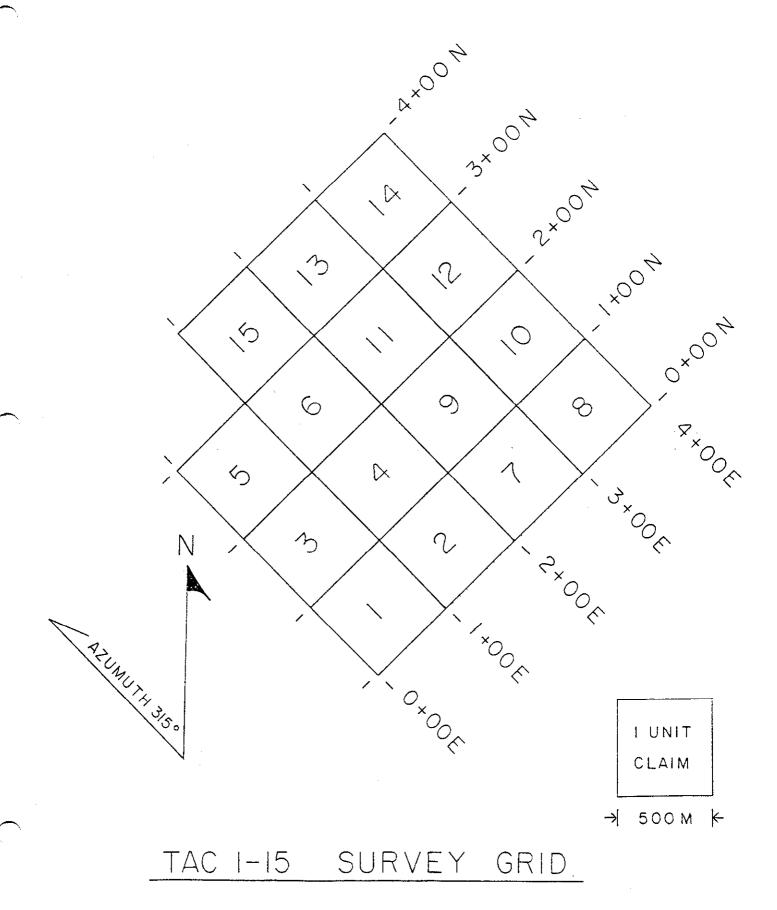


Figure 3.

A short handeled shovel was used to dig 50cm to 70 cm holes to test the "c" horizon obtaining a conventional soil sample.

A pick and shovel was used to pick (1.0 m  $\times$  1.8 m  $\times$  2 m) sample holes in till to test the soil profile and obtain a deep till sample.

Samples were put in 4" x 7" kraft paper bags. Each bag was filled to ensure adequate sample material. Samples were transported from the field to Smithers B.C. for sample preparation at Mineral Environments Laboratory. Here the samples were dried and screened. A minus 80 mesh fraction sub sample was sent to Vancouver. At the Vancouver lab ICP analysis was performed to detect 12 pathfinder elements including Zn, Pb, Cu and Ag.

Careful notes were recorded at each site regarding the soil types, depth, ground slope etc.

#### Observations

R. W. Boyle (GSC Bull. 280) states that the average abundances of Zn, Pb and Cu in normal soils and glacial materials are as follows.

Zinc 75 p.p.m

Lead 15 p.p.m

Copper 20 p.p.m

15 samples taken from two back ground locations north of the project area have average metal values as follows.

Zinc 104 p.p.m

Lead 11 p.p.m

Copper 28 p.p.m

The average abundances of these metals in background areas taken in similar terrain as the project area compare favorably with averages as stated by Boyle.

Therefore values 2-3 times the average abundance as stated by Boyle will be considered to be anomalous for the project area.

#### Specific Sites

(a) No anomaly was detected in the swampy areas tested. The average metal content of sediments sampled in or close to the swampy areas are as follows. (Average of 37 samples primarily upper clay layer below muskeg).

Zinc 105 p.p.m

Lead 16 p.p.m

No significant enrichment above average values for clays in the swampy locations tested is observed.

(b) Samples from Tac 3 and Tac 4 tested soils in the vicinity of an Igneous/Volcanic contact. This contact is not exposed but is inferred to strike south - west near line 1+200 N.

Samples average as follows. (Average of 19 "C" horizon soils).

Zinc 94 p.p.m

Lead 15 p.p.m

No enrichment above average values for soils in the vicinity of this contact is observed.

(c) A detailed survey of stream sediments tested the most anomalous tributary which drains high ground to the west of lake 2044. The clay rich stream sediments are consistently anomalous from the headwaters to the lake. Sandy soils from a dry gulch above the headwaters are also anomalous. Highest values observed are as follows.

Zinc 7130 p.p.m

Lead 1625 p.p.m

Copper 1272 p.p.m

Two separate stream sediments taken from this drainage during an initial reconnaissance were also anomalous. These samples did not target clays but were conventional silt samples. The average of the two silt samples is as follows.

Zinc 2226 p.p.m

Lead 206 p.p.m

Copper 150 p.p.m

Similar results were obtained from clay tested in the vicinity of these silts.

(d) The soil profile was tested near the headwaters of the anomalous stream by digging sample pits. The pits are located on Tac 4 in a pile of till which is dissected by two branches of the stream. The till also overlies a topographic lineament which strikes at 100 deg. (See field notes in appendix for profiles).

The profiles indicate a marked enrichment of Zn and Pb in the upper soil horizons. In the till there is a subtle increase in Zn with depth. The till is primarily a mixture of rounded cobbles supported in a matrix of clay rich sandy gravel. The cobbles are both Topley intrusives and volcanic Telkwa formation.

- (e) During the grid preparation and selection of sample sites a piece of sulfide bearing float was found at 0+400 N x 1+100 E. The float is a felsic intrusive rock dominated by pink feldspars. It hosts a stockwork of quartz veins. Galena appears as 5 mm cubic crystals and is associated with minor chalcopyrite. On exposed surfaces the galena has weathered to a white oxide. The underlying bedrock here is green andesite and tuffs.
- (f) At 1+00 N x 1+420 E a greenish brown tuff outcrops. It weathers brown and might be slightly pyritic. Flow structure indicates a strike of 275 deg. with a dip of 25 deg. to the north west. Joint surfaces strike at 225 deg. and dip at 70-75 deg.

#### Conclusions

Anomalous metals are detected in the principle drainage west of lake 2044. The anomalous metals can be traced over a distance of 1800m to the exit stream of the lake where they measure over 500 p.p.m. zinc. A significant dispersal pathway is indicated which extends from a dry gulch located at  $2+100 \text{ N} \times 1+150 \text{ E}$  to the exit stream at  $0+100 \text{ N} \times 3+100 \text{ E}$ .

The anomaly is poly metallic rich in Zn, Pb, Cu and Cd. The The sediments become progressively richer in metals as the headwaters are approached. In appears to be the most mobile followed by Pb and then Cu.

Soil samples adjacent to the stream do not indicate a body of till as a source of anomalous metals. The source appears to be close to the head waters west of the lake on Tac 5 and Tac 6. The till here is slightly enriched in zinc at depth but elevated levels of lead and copper are confined to the upper soil horizons.

Hydromorphic dispersion processes appear to dominate. Mobile metals are migrating with ground water from a well drained site on Tac 5 and Tac 6. The ground water moves from high ground along the bedrock surface under the till until it emerges from a seep at 2+00 N x 1+025 E. The seep probably acts as a geochemical barrier where a change occurs in the chemical environment. The surface stream environment is more oxidizing and may be less acidic than the seepage area. This would reduce the mobility of the metals and give rise to an anomaly in the stream.

A rock type with a high metal content can mimic mineralization by producing an anomaly. In this scenario normal weathering of such bedrock releases trace metals which fixate or adsorb onto the stream sediments resulting in an anomaly. In these cases however the hydromorphic dispersion would be expected to be relatively weaker and less extensive than the one observed. This is due to the fact that rock forming minerals are usually more stable than ore minerals and sulphides are not present to lower the pH and increase the mobility of metals in solution. A litmus paper test of water near the seep indicates an acidic environment (pH 4.75) as one would expect to find near weathering sulphides.

In conclusion the geochemical anomaly and the discovery of sulphide bearing float indicate the presence of near by mineralization.

### Recommendations

There are numerous outcrop which should be mapped first to determine the relative position of the contact between the Jurassic Topley intrusion and the Telkwa formation volcanic rocks. A ground based geophysical survey should be conducted to detect sulphides in the anomalous area as indicated by the geochemistry. Since the contact areas represent favorable sites for sulphide mineralization the geophysical survey should also include traverses across them.

## Statement of work 1998

	<u>Date</u>	Activity	Hours
1	June 22	Reconnaissance survey 6 samples	15
	June 24	Samples to Smithers	2
2	June 29	Ground search for mineralization / Float	12
3	July 3	Preliminary survey to locate sample sites	12
4	July 6	Establish grid lines Tac 1 - Tac 6	14
	Total work	Tac 1 - 6 claims previous to July 9/98	55
5	July 9	Stake Tac 7 - 15 claims	
6	July 12	Samples 9 each	13
7	July 14	Samples 10 each	14
8	July 16	Samples 11 each	13
9	July 18	Samples 10 each	14
10	July 20	Samples 22 each	15
11	July 22	Samples 20 each	16
	July 23	Samples to Smithers	2
12	July 25	Samples 21 each	16
13	July 28	Samples 17 each	16
14	July 31	Samples 16 each	15
15	Aug 3	Samples 16 each	16
	Aug 4	Samples to Smithers	2
16	Aug 6	Samples 5 each 10	
17	Aug 15	Samples 10 each	13
18	Aug 17	Samples 7 each	12
19	Aug 19	Samples 10 each	14
20	Aug 21	Samples 7 each	12
21	Aug 23	Samples 8 each	14
22	Aug 25	Samples 10 each	15
	Aug 26	Samples to Smithers	2
23	Aug 31	Samples 6 each	15
	Total work	July 10 - Aug 31 Hours	259
	Total work	Tac 1 -15 claims Hours	314

	Itemized cost statement period June 22 to	July 6
(1)	Labor 55 Hours @ \$30/hr.	\$1,650.00
(2)	Analytical services	\$43.34
(3)	Supplies	\$31.28
(4)	Vehicle 475 km @ \$.118/km	\$56.05
Per	iod totals June 22 to July 6	\$1780.67
	Itemized cost statement period July 12 to	Aug 31
(1)	Labor 259 Hours @ \$30/hr.	\$7,770.00
(2)	Analytical services	\$1,601.53
(3)	Supplies	\$147.33
(4)	Vehicle 2245 km @ \$.118/km	\$264.91
Per	iod totals July 12 to Aug 31	\$9783.77
•		
	Itemized cost statement (total project)	
(1)	Labor 314 Hours @ \$30/hr.	\$9,420.00
(2)	Analytical services	\$1,644.87
(3)	Supplies	\$178.61
(4)	Vehicle 2720 km @ \$.118/km	\$320.96
(5)	Report writing	\$600.00
Pro	ject total cost Tac 1-15	\$12,164.44

This is to certify that I, Stephen Bell have graduated from Queen's University, Kingston, Ontario with the degree of Bachelor of Science, Mining Engineering on May 25 1985.

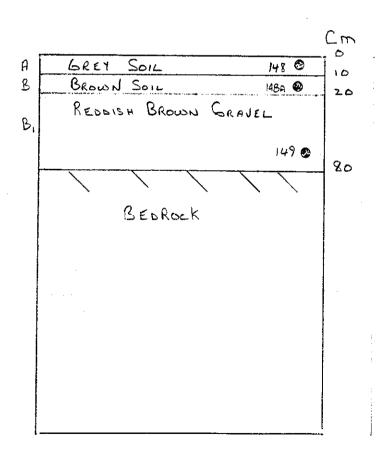
In 1989, I completed two years training in the department of Geological Engineering at Queen's University.

I have been employed in the mineral industry as a Mining Engineer and have a variety of experience working in various geology departments. I am now an independent Prospector.

<u>Period</u>	Employer	<u>Position</u>	
1985 - 1987	-Randfontein Estates Gold Mines	Junior Engineer	
	-Rustenberg Platinum Mines	Junior Engineer	
	-Atok Platinum Mines	Junior Engineer	
1987	-Noranda Mines Geco Div.	Junior Engineer	
1988	-Teck Corona	Junior Engineer	
1990 - 1994	-J.S Redpath Limited	Project Engineer	
	-Mining Contracting		
1997	Self	Prospector	
1998	self	Prospector	

# APPENDIX

	1+450N 1+020E		P. P. M				. ~
I.D.	DEPTH CM	TYPE	ZN	Pb	Cu	Ag	۸ ا
148	5	A	772	76	50	10.2	
148 A	15	В	1240	74	63	20.2	2
149	75	В	741	36	42	40.2	Z
							1
-							



	1+450N	1+000 E		P.P.M			
I.D.	DEPTHCM	TYPE	ZN	РЬ	Cu	Ag	Mc
165	10	A	125	12	17	10,2	2
166	20	B	134	16	12	10,2	2_
167	40	β,	140	20	12	۷۵.2	<u> </u>
168	100	B <sub>2</sub>	539,	52	37	Lo.2	2
169	200	_	156	28	28	46.2	12
* 124	50	B,	145	22	//		1

				<u>C</u> m		PM 2N
A	6RE7	165	<b>©</b>	15	1	°
В	BROWN SOIL	166	<b>©</b>	30		
β,	REDDISH BROWN GRAVEL	167 124	<b>©</b> *	60		
B.	Yellow BROWN GRAVE		· 🚱	120		
C	GREY CLAYRICH TIL	<u>-</u>				
	TILL	169	•	200.		

\* PREJIOUS SAMPLE

PLOTTED ON FIG. 5

	1+4151	1+000 N		P.R.	Μ		
I.D.	DEPTHEM	TYPE	ZN	Ph	Cu	Ag	N
170	10	L	1594	72	124	0.6	_   4
171	45	CLAY	4476	194	494	۵۰8	
172	120	_	375	2.2	39	2012	2
* 122	60	_	1902	72	61		

			Cw	,	SPFW Z.N	
A	GREY BLACK SOIL	170 🕖	0 5		ž.	
CLAY	CLAY RICH BLACK S	D1L	40			
د	BROWNISH - GREY CLAY RICH TILL	122 ● 💥	60			/
WET		172 🔊	120	/		
	TILL					

\* · PREVIOUS SAMPLE

	1+400N	1+400N 1+025E		P.P.M			
I.D.	DEPTH CM	TUPE	ZN	Pb	Cu	Ag	Mo
173	4-	A	58	8	ID	0.2	2.
174	15	В	100	14	10	0.2	2
175	30	В	223	32	34	20:2	2
176	45	Bz	201	14	24	40,2	42
177	200	<u>_</u>	371	18	40	40,2	2
* 146	70	B/C	96	12	22		

				~ 0 CW	
A	GRET	173	€	Î 8	<u> </u>
В	BROWN	174	<b>@</b>	18	
β,	REDDISH BRO	OWN GR. 175	Ø	40	
Bz	Yewow BRO	wn 6R, 176	<b>③</b>	50	
		146	●*	70	
۵	BROWNISH-GR CLAY RICH				man and the second control of the second con
(WET)	// / ,	177	•	200	

\* @ PREVIOUS SAMPLE

Mo

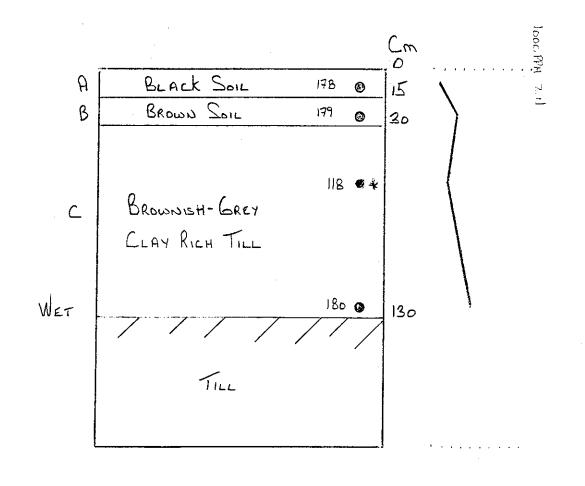
2

2

2

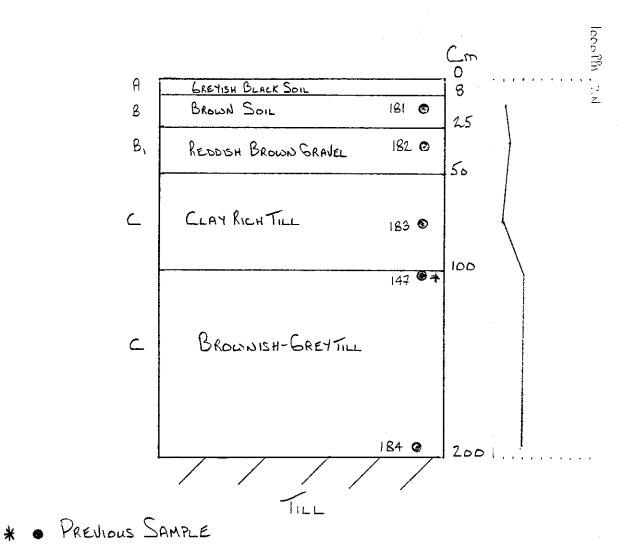
# SOIL PROFILE 5

	1+350N 1+050E .		P.P.N				
I.b.	DEPTH	TYPE CM	21	Pb	Cu	Ag	
178	10	A	53	8	5	0.2	
179	25	В	130	8	13	20,2	
180	130	۷	377	14	26	20.2	
<b>*</b> 118.	60	В	131	12	2/		



\* PREVIOUS SAMPLE

	1+400N	+050E	P.P.M.				_
I.D.	DEPTHCM	TYPE	ZN	Pb .	Lu	Ag	Mo
181	15	В	100	12_	11	1.0	2
182	35	Bi	157	20	2.3	0.2	2.
183	75	C	92	16	20	L0.2	42
184	200	_	278	30	40	40.2	2
* 147	100	ں	362	12_	15		







File No. 14675-20 Mine No. 0200556

Steve Bell, Comp 31 Site 5 SS2, Houston, B.C. VOJ 1Z0

Dear Steve Bell:

RE: Tac Mineral Property
Omineca Mining Division

Your Notice of Work dated June 24, 1998, on the above mineral property has been received and reviewed pursuant to Section 10 of the *Mines Act*.

Since the proposed disturbance is non-mechanical, a *Mines Act* permit will not be required for this particular program. If at a later date a camp and/or mechanical disturbances are required as part of your exploration program(s), then a new Notice of Work for a *Mines Act* permit shall be applied for at the appropriate Ministry of Energy and Mines - Mines Branch office.

You are authorized to proceed with the proposed program under Approval number SMI-98-0200556-146.

This approval applies only to the requirements under Section 10 of the *Mines Act*. Other legislation may be applicable to the operation and the necessary approvals under that legislation are required to be attained by the explorationist.

Please find enclosed a Notice of Completion of Work Form. This information is to be used by the Regional Geologist to monitor the level of exploration activity in the Northwest Region. The information provided is also a valuable component of mineral resource data that is presented to land use planning tables and future explorationists. Thank you for your co-operation.

Yours truly,

Bruce Graff, P. Eng.,
District Manager/Engineer

Northwest Region

BAG/emb



SPECIALISTS IN MINERAL ENVIRONMENTS CHEMISTS - ASSAYERS - ANALYSTS - GEOCHEMISTS

VANCOUVER OFFICE: 8282 SHERBROOKE STREET VANCOUVER, B.C. CANDA VSX 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

SMITHERS LAB: 3176 TATLOW ROAD SMITHERS, E.C., CANADA VOJ 2NO TEL (604) 847-3004 FAX (604) 847-3005

# ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK: PROCEDURE FOR SAMPLE PREPARATION

- a.) The soil and stream sediment samples are dried at 60 Celsius. The sample is then screened by 80 mesh sieve to obtain the -80 mesh fraction for analysis.
- b.) The rock and core samples are dried at 60 Celsius and when dry are crushed in a jaw crusher. The 1/4 inch output of the jaw crusher is put through a secondary roll crusher to reduce it to -1/8 inch. The whole sample is then riffled on a Jones Riffle down to a statistically representative 300 gram sub-sample. This sub-sample is then pulverized on a ring pulverizer to 95% minus 150 mesh rolled and bagged for analysis. The remaining reject from the Jones Riffle is bagged and stored.



SPECIALISTS IN MINERAL ENVIRONMENTS CHEMISTS + ASSAYERS + ANALYSTS + CEOCHEMISTS

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Quality Assaying for over 25 Years

# ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK: PROCEDURE FOR TRACE ELEMENT ICP

Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sn, Sr, Th, Ti, U, W, Zn.

0.50 grams for the sample pulp is digested for 2 hours with an 1:3:4 HNO<sub>3</sub>:HCl:H<sub>2</sub>0 mixture. After cooling, the sample is diluted to standard volume.

The solutions are analyzed by computer operated Perkin Elmer Optima 3000, Inductively Coupled Plasma Spectrophotometers.



**VANCOUVER OFFICE:** 

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Quality Assaying for over 25 Years

#### Geochemical Analysis Certificate

8S-0050-SG5

Company:

MR. STEVE BELL

Aug-07-98

Project:

**TAC** 

Attn:

STEVE BELL

We hereby certify the following Geochemical Analysis of 2 SOIL samples submitted Jul-23-98 by STEVE BELL.

Sample Name	Au-fire PPB	
1+300N 1+150E	10	
1+300N 1+100E	9	

Certified by \_\_\_\_\_\_\_



**VANCOUVER OFFICE:** 

8282 SHERBROOKE STREET VANCOUVER, BC. CANADA V5X 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

#### SMITHERS LAB:

3176 TATLOW ROAD SMITHERS, BC, CANADA VOJ 2NO TELEPHONE (250) 847-3004 FAX (250) 847-3005

#### Quality Assaying for over 25 Years

#### INVOICE

TO: STEVE BELL

BOX 1238

HOUSTON, B.C.

VOJ 1Z0

INVOICE No 00037180

PAGE No 1

DATE 07/03/98

ACCOUNT B114

ATTENTION: STEVE BELL

PROJECT:

FILE No: 8S-0030

QTY DESCRIPTION

5 SAMPLE PREP - SOIL

5 ICP - 12 ELEMENTS

UNIT PRICE

AMOUNT

1.80

9.00

6.30 31.50

SUB TOTAL

40.50

GST REGISTRATION # R100294743

\* TOTAL \*

2.84 43.34

THESE ARE PROFESSIONAL SERVICES AND ARE PAYABLE WHEN RENDERED.
PLEASE REMIT ONE COPY OF THIS INVOICE WITH PAYMENT TO VANCOUVER OFFICE

Attention: Steve Bell

Sample: SOIL

Project:

#### Mineral Environger its Laboratories

8282 Sherbrooke St., Vancouver, B.C., V5X 4E8

Tel (604) 327-3436 Fax (604) 327-3423

Report No

Date

Jul-02-98

#### **MULTI-ELEMENT ICP ANALYSIS**

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Ba ppm	Cd ppm	Cu ppm	Fe %	K %	Mo Ni ppm ppm		Zn ppm
MAT 1	<0.2	10	230	2	18	3.32	0.05	2	3 14 <5	176
MAT 2	0.8	10	540	1	37	3.09	0.07	2 1	2 18 <5	107
MAT 3	0.6	10	470	14	196	3.04	0.10	4	1 86 <5	457
TAC 16	0.2	5	630	39	87	3.94	0.06	6	4 194 <5	2579
TAC 17	0.2	15	610	2	44	3.55	0.12	6	6 62 <5	252

A .5 gm sample is digested with 10 ml 3:1 HCl/HNO3 at 95c for 2 hours and diluted to 25ml with D.l.H20.



**VANCOUVER OFFICE:** 

8282 SHERBROOKE STREET VANCOUVER, BC, CANADA V5X 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

#### SMITHERS LAB:

3176 TATLOW ROAD SMITHERS, BC, CANADA VOJ 2NO TELEPHONE (250) 847-3004 FAX (250) 847-3005

#### Quality Assaying for over 25 Years

#### INVOICE

TO: STEVE BELL

SS-2 SITE-5 COMP-31

HOUSTON, B.C.

V0J 1Z0

INVOICE No 00037560

PAGE No 1 DATE 08/11/98

ACCOUNT B114

ATTENTION: STEVE BELL

PROJECT: TAC

FILE No: 8S-0050

QTY DESCRIPTION	UNIT PRICE	AMOUNT
82 SAMPLE PREP - SOIL	1.50	123.00
2 GEOCHEM - AU FIRE	7.50	15.00
82 ICP - 12 ELEMENTS	5.36	439.52

SUB TOTAL

577.52

GST REGISTRATION # R100294743 \* TOTAL \*

40.43

617.95



Attention: STEVE BELL

Project: TAC Sample: SOIL

#### Mineral Environg ts Laboratories

8282 Sherbrooke St., Vancouver, B.C., V5X 4E8

Tel (604) 327-3436 Fax (604) 327-3423

Report No

<sup>)</sup>8S0050

Date

Jul-29-98

#### **MULTI-ELEMENT ICP ANALYSIS**

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Bi ppm		Du pm	Fe %	Mo ppm	Pb ppm	Sc ppm	Sr ppm	Y ppm	Zn ppm
4+00N 2+000E	<0.2	5	<5	<b>1</b>	66	2.76	2	8	6 1	60	6	446
4+00N 2+050E	<0.2	10	<5	1	91	3.08	<2	1	2 4	29	ģ	284
4+00N 2+100E	<0.2	5	<5	<1	14	2.77	<2	1	0 3	23	6	73
4+00N 2+200E	<0.2	20	<5	<b>&lt;1</b> ,:	36	3.76	4	1	4	25	9	282
3+430N 2+270E	<0.2	10	<5	<1	21	3.42	2	1	8 2	31	5	144
			Standard Commence	200								
3+360N 2+350E	<0.2	15	<5	<b>&lt;1</b>	26	4.03		2	4 👙 🔙 🧦 💮 '5'	35	8	117
3+300N 2+420E	<0.2	10	< 5	<1	22	2.95	4	1	2 5	35	12	77
3+230N 3+000E	<0.2	5	<5	<1	18	2.72	6	1	4 5	40	17	116
3+200N 3+040E	0.4	15	<5	1	110	3.24	16	2	2 13	77	76	147
3+150N 3+070E	<0.2	5	<5	<1	15	1.81	4	2	0 5	38	15	83
					***							
3+080N 3+130E	<0.2	10	<5	1	69	2.41	4	1	4 9	61	43	115
3+000N 3+180E	<0.2	15	<5	1."	70	3.22	10	2	8 4	62	52	122
2+420N 3+160E	<0.2	10	<5	1	37	3.71	8	3	0 10	49	25	165
3+000N 3+100E	<0.2	5	<5	<1	13	2.18	6	1	4	39	10	82
3+000N 2+480E	<0.2	10	<5	<1	8	4.97	2	2	0 1	23	2	90
	194		jaja katanjaja k	4 <b>5</b> . 5.	N,		- Ferrandi asida		JAPANA SAL		1000 美国第二	
3+080N 3+040E	<0.2	10.	<5	<b>&lt;1</b>	15	2.87	<2	1	8	24	4	98
3+140N 2+460E	<0.2	5	<5	<1	16	2.41	<2	1		22	4	117
3+210N 2+400E	<0.2	10	<5	<1	20	3.31	<2	2	4	25	3	135
3+330N 2+280E	<0.2	15	<5	<1	38	4.71	14	2	8 7	41	10	176
3+400N 2+100E	<0.2	10	<5	<1	19	2.98	<2	10	6 2	35	4	186
			in the first section of the section	light.		,						
3+400N 2+150E	<0.2	10	<5	<b>&lt;1</b> (1)	20	3.03	<2	10	0 5	34	11	77
3+400N 2+200E	<0.2	5	<5	<1	.7	3.30	2	13	2 1	26	5	111
3+300N 2+150E	<0.2	10	<5	<1	14	2.94	<2	1-	4	28	4	127
3+200N 2+150E	<0.2	5	<5	<1	9	3.03	<2	14	- 1 利用・技術の関 - Ha ・ Jの質	31	3	110
3+100N 2+150E	<0.2	5	<5	<1	14	2.61	<2	14	8 2	21	3.	106
3+000N 2+150E	<0.2	5	<5	1	36	3.94	2	2:	2 4	23	4	759
2+400N 2+150E	<0.2	10	<5	2	56	5.32	2	38	8 🖟 🦠 🦠 🗓	43	19	1027
2+300N 2+150E	<0.2	5	<5	<1	11	3.35	<2	20	0	22	3	142
2+200N 2+150E	<0.2	5	<b>&lt;</b> 5	1	47	2.91	<2	42	2 4	41	15	258
2+100N 2+150E	<0.2	10	<5	<1	23	3.09	2	10	5 3	34	12	112
			Market Barrier Market	*					그들 눈쪽 전체를 다		4.5	

A .5 gm sample is digested with 10 ml 3:1 HCl/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.

MR. STEVE BELL
Attention: STEVE BELL

Mineral Environm 's Laboratories

8282 Sherbrooke St., Vancouver, B.C., V5X 4E8

Tel (604) 327-3436 Fax (604) 327-3423

Report No

Date

\* 8S0050

Jul-29-98

Project: TAC Sample: SOIL

#### MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Bi ppm	Cd ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sc ppm	Sr ppm	Y ppm	Zn ppm
2+000N 2+100E	<0.2	5	<5	<1	19	2.29	<2	12	3	23	8	123
+400N 2+100E	<0.2	5	<5	<1	19	3.05	<2	18	4	34	12	97
L+300N 2+100E	<0.2	15	<5	<1	34	5.11	6	50	2	68	15	203
L+200N 2+100E	<0.2	15	<5	1	43	4.06	2	44 .	6	29	25	569
L+200N Z+000E	<0.2	10	<5	<1	21	3.56	<2	36	2	16	4	189
+250 N		25			200	2.04						
2+025N 2+000E	<0.2	25	<b>&lt;</b> 5	37	208	3.86	20	656	4	50	71	3568
+300N 2+000E	<0.2	10	<b>&lt;</b> 5	<1	26	3.64	<2	24	4	24	9	154
+400N 2+000E	<0.2	5	<b>&lt;</b> 5	<1	10	2.59	<2	8 ^	2	31	4	95
2+000N 2+000E	<0.2	10	<5	<1	16	3.19	<2	10 .	2	23	. 6	96
t+100N 2+000E	<0.2	10	<5	<b>&lt;1</b> 1.	19	3.23	<2	16	3	21		111
+100N 2+000E	<0.2	5	<5	<1	14	3.25	<2	14	2	16	4	107
+100N 2+100E	<0.2	10	<5	<1	12	3.07	2	24	3	22	8	113
+100N 2+200E	<0.2	5	<5	<1	20	1.35	<2	16		22	.8	294
+000N 2+300E	<0.2	5	<5	<1	35	1.57	2	14	5	33	9	111
+400N 2+360E	<0.2	<5	<5	3	40	1.84	<2	24	<b>7</b>	35	10	129
+280N 2+315E	<0.2	5	<5	<1	12	2.95	<2	12	6	37	10	144
+200N 2+400E	<0.2	5	<5	<1	23	2.54	<2	18	4	75	8	99
+340N 2+250E	<0.2	10	<b>₹</b> 5	<1	22	3.22	2	14	4 ( ) A	22	12	77
+420N 2+180E	<0.2	5	<b>&lt;</b> 5	<1	26	3,69	2	18	6	38	13	123
+000N 2+200E	<0.2	5	<5	<1	20	1.34	<2	16		22	26	51
+100N							<u>-</u>		Çalığı			
+000N 1+100E	<0.2	10	<5 <5	<1	17	3.16	6	16	(\$) je. i ± 🥞	26	9	82
+000N 2+000E	<0.2	5	11.0	<1		1.68	4	8		17	2	58
+100N 1+400E	<0.2	10	<b>&lt;</b> 5 <b>&lt;</b> 5	<1	16	3.32	<b>&lt;2</b>	22		19	4	108
+200N 1+400E	<0.2	5	and the second second	<1	16	2.68	<2 <2	34	3	20	6	93
+200N 1+450E	<0.2	5	<5	<1	26	3.55	<2	40 : "	4	22	4	161
+200N 1+350E	<0.2	10	<5	<1	9	4.22	<2	22	1	14	4	93
+240N 1+400E	<0.2	5	<5	<1	11	2.56	. 2	20	3	22	13	163
+300N 1+400E	<0.2	10	<5	<1	16	3.44	<2	18	3	25	7	105
+300N 1+450E	<0.2	10	<5	<1	12	3.52	<2	12	1	33	4	121
+230N 1+450E	<0.2	15	<5	5	111	3.95	6	256	3	54	44	2313

A .5 gm sample is digested with 10 ml 3:1 HCI/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.

Attention: STEVE BELL

Project: TAC Sample: SOIL Mineral Environr Staboratories 8282 Sherbrooke St., Vancouver, B.C., V5X 4E8

Tel (604) 327-3436 Fax (604) 327-3423

Report No

Date

Jul-29-98

#### **MULTI-ELEMENT ICP ANALYSIS**

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Bi p <u>p</u> m	Cd ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sc ppm	Sr ppm	Y ppm	Zn ppm
1+300N 1+350E	<0.2	10	<5	<1	12	3.60	<2	16	1	26	5	109
1+400N 1+300E	<0.2	5	<5	<1.	13	3.04	2	24	2	27	5	103
1+300N 1+300E	<0.2	5	<5	<1	17	2.52	<2	30 👾	3	24	8	131
1+300N 1+250E	<0.2	10	<5	<1	18	3.12	<2	24	2	22	8	117
1+250N 1+250E	<0.2	5	<5	2	28	2.49	<2	40		46	18	233
1+ ZSON 1+300E 1+300N 1+250E-	<0.2	5	<5	1	15	2.39	<2	32 .	1	26	8	129
1+200N 1+300E	<0.2	5	<5	<1 %	20	3.11	<2	26	4	20	4	129
1+200N 1+250E	<0.2	5	<5 <5 <5	<1	18	3.10	<2	26	3	19	4	114
1+100N 1+300E	<0.2	5	<5	<1 .	15	2,73	2	18	4	32	10	87
1+100N 1+200E	<0.2	5	<5	<1	8	3.12		12	1	16	3	88
1+200N 1+000E	<0.2	<5	<5	<1	15	. 1.59	2	12	4	27	7	77
1+200N 1+200E	<0.2	5	<5	<1	18	2.94	<2	22	4	20	4	114
1+255N 1+350E	0.2	20	<5	2	101	4.89	10	240	7	40	86	1509
1+200N 1+150E	<0.2	15	<5	<1	50	3.94	2	18	4	40	28	101
1+250N 1+200E	<0.2	15	<5	31	184	4.11	8	158	13	49	83	3099
							Carallet Agents	44.5				
1+250N 1+150E	0.2	35	<5	7	85	4.48	30	86	10	85	95	294
1+300N 1+200E	<0.2	15	<5	<1	24	3.67	<2	18	3	24	7	119
1+300N 1+150E	0.2	30	5	27	948	6.79	20	1624	18	64	140	7023
1+300N <del>1+100E</del> 1+075	E 0.8	10	<5	21	386	3.94	4	260	16	80	110	3742
1+300N 1+000E	<0.2	10	<5	<1	19	3.17	<2	14	3	14	4	97
		į.	<b>&lt;</b> 5				<b>&lt;2</b>	į.				-
1+300N 0+400E	<0.2	5	1.00	,8	55	3.16		32	9	39	19	691
1+250N 0+400E	<0.2	5 : -	<5	<1	21	1.84	<2	12	5	41	11	77

A .5 gm sample is digested with 10 ml 3:1 HCI/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.



#### **VANCOUVER OFFICE:**

8282 SHERBROOKE STREET VANCOUVER, BC, CANADA V5X 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

#### **SMITHERS LAB:**

3176 TATLOW ROAD SMITHERS, BC, CANADA VOJ 2NO TELEPHONE (250) 847-3004 FAX (250) 847-3005

## Quality Assaying for over 25 Years

#### INVOICE

TO: STEVE BELL

SS-2 SITE-5 COMP-31

HOUSTON, B.C.

V0J 1Z0

**INVOICE No 00037622** 

PAGE No 1 DATE 08/13/98

ACCOUNT B114

ATTENTION: STEVE BELL

PROJECT: TAC

FILE No: 8S-0058

QTY DESCRIPTION

70 SAMPLE PREP - SOIL

70 ICP - 12 ELEMENTS

UNIT PRICE

AMOUNT

1.50 5.36 105.00 375.20

SUB TOTAL

480.20

GST REGISTRATION # R100294743

33.61 513.81

\* TOTAL \*

# MR. STEVE LELL

Attention: Steve Bell

Project: TAC Sample: SOIL Mineral Environgeryts Laboratories

8282 Sherbrooke St., Vancouver, B.C., V5X 4E8
Tel (604) 327-3436 Fax (604) 327-3423

Report No

<sup>1</sup>8S0058

Date

Aug-10-98

#### **MULTI-ELEMENT ICP ANALYSIS**

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Cd ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sc Sr ppm ppm	W ppm	Y ppm	Zn ppm
0+000N 3+100E	<0.2	5	<1	13	2.85	<2	8	3 13	<10	3	90
0+000N 3+200E	<0.2	5	<1	11	2.83	<2	20	2 14	<10	3	71
0+100N 3+100E	<0.2	15	3	54	3.25	8	28	11 53	<10	36	514
0+100N 3+200E	<0.2	5	<1	14	2.76	<2	14	7 30	<10	13	95
0+130N 2+470E	<0.2	15	<1	78	3.49	<2 .	14	6 38	<10	14	100
0+200N 3+100E	<0.2	10	<1	19	3.06	<2	. 8	4 27	<10	9	71
0+200N 3+200E	0.2	10	<1	64	4.22	<2	20	10 45	<10	17	186
0+280N 3+000E	<0.2	10	<1	16	2.93	<2	10	4 15	<10	8	68
0+300N 3+100E	<0.2	10	<1	18	3.05	<2	16	3 24 17	<10	5	98
0+300N 3+200E	<0.2	5	<1	12	2.71	<2	12	3 14	<10	. 4	93
0+340N 2+440E	<0.2	5	<1	34	3.59	<2	8	6 62	<10	12	102
0+400N 0+200E	<0.2	10	<1	10	3.30	2 :	14	3 18	<10	4	93
0+400N 0+300E	<0.2	5	<1	11 %	2.74	2	8	3	<10	6	93 81
0+400N 0+400E	<0.2	10	<1	13	3.03	2 1.	.12	4 24	<10	8	83
0+400N 3+000E	<0.2	5	<1	14	2.37	<2	12	4 32	<10	7	91
	in the								120		71
0+400N 3+100E	<0.2	10	<1	12	2.77	<2	10	3 19	<10	4	72
0+400N 3+200E	<0.2	5	<1	10	3.48	<2	10	3 20	<10	4	97
1+000N 0+100E	<0,2	10	<1	13	3.01	<2	12	3	<10	4	76
1+000N 0+200E	<0.2	5	<1	9	2.78	<2	10	2 15	<10	3	72
1+000N 0+300E	<0.2	10	<1	26	2.68	2	14	3 22	<10	9	92
1+000N 0+400E	<0.2	10	<1	15	3.53	<2	24	3 15	<10	5	135
1+000N 1+000E	<0.2	10	<1	16	3.65	10	10	4 34	<10	13	102
1+000N 3+000E	<0.2	5	<1	24	4.94	<2	16	6 42	<10	12	95
1+000N 3+100E	<0.2	10	<1	9	2,92	<2	10	2 22	<10	5	73
1+000N 3+200E	0.2	10	<1	47	3.77	6	20	12 56	<10	31	137
1+100N 0+100E	<0.2	10	<1	17	3,10	<2	16	3 14	<10	5	93
1+100N 0+200E	<0.2	5	<1	17	2.48	<2	16	2 25	<10	7	124
1+100N 0+300E	<0.2	5	<1	20	2.92	2	38	3 22	<10	11	113
1+100N 0+400E	<0.2	10	<1	13	2.96	2	12	2 24	<10	4	95
1+100N 1+000E	<0.2	10	<1	12	2.85	6	14	2 26	<10	5	78

A .5 gm sample is digested with 10 ml 3:1 HCI/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.

Signed: £Le

## MR. STEVE LELL

Attention: Steve Bell

Project: TAC Sample: SOIL

### Mineral Environgrapts Laboratories

8282 Sherbrooke St., Van Juver, B.C., V5X 4E8

Tel (604) 327-3436 Fax (604) 327-3423

Report No

<sup>2</sup>8S0058

Date

Aug-10-98

#### MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Cd ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sc ppm	Sr ppm	W ppm	Y ppm	Zn ppm
1+100N 1+100E	<0	2	<5 <1	1	0.36	<2	4	1	13	<10	1	8
1+150N 0+100E	<0	2	10 i	54	3.14	2	46	9	40	<10	47	172
1+150N 1+000E	<0	2	10 <1	13	3.31	2	20	3	23	<10	5	101
1+150N 1+050E	<0	2	15 <1	27	3.08	2	24	5	- 31	<10	47	103
1+150N 1+100E	<0	2	10 <1	13	3.72	<2	12	3 .	19	<10	3	95
1+200N 0+100E	<0	2	5 1	25	2.81	<2	28	3 ′	23	<10	14	320
1+200N 0+200E	<0.	2	15 1	16	6.48	10	28	8	23	<10	28	355
1+200N 0+300E	. 0	2	10 · 1	75	3.98	<2.	34	14.	49	<10	65	222
1+200N 1+025E	<0	2	5 <1	19	1.83	2	10	4 🕌	38	<10	11	75
1+200N 1+050E	<0	Ż	25 <1	66	7.92	4	8	20	24	<10	21	156
							44.7					
1+200N 1+075E	<0.	2	<5 <1	21	3.41	2	20	4	19	<10	8	218
1+200N 1+100E	<0.	2	10 <1	29	3.47	<2	20	6	30	<10	8	117
1+200N 1+150E DOPL	ICATE <0.	2	5 <1	15	2.12	2	10	4	21	<10	11	58
1+200N D+400E	<0.	2	5 <1	15	2.78	<2	10	3	20	<10	5	77
1+215N 1+100E	<0.	Ż	10 <1	54	4.57	2	100	8	33	<10	17	389
			-					1,3				
1+230N 1+125E	<0.	2	5 1	22	3,76	8	16	6 ∴	45	<10	38	191
1+245N 1+185E	0.	2	10 1	62	4.22	2	40	15	65	<10	97	446
1+250N D+300E	<0.	2	5 2	22	2.78	<2	14	6	25	<10	13	483
1+300N 1+100E	<0.	2	20 <1	25	3.92	2	80	3	19	<10	7	204
1+350N 0+450E	<0.	2	5 <1	13	2.77	<2	6	3	22	<10	. 5	111
1+350N 0+475E	<0.	_	10 41	22	2.72	-3	•				_	
1+350N 0+475E 1+350N 1+000E	<0.		10 <1 10 <1	32 22	3.73 3.63	<2 <2	8	4.	15	<10	3	106
1+350N 1+000E	<0.		10 <1 25 8	218	5.03 6.01		10 682		15	<10	3	144
1+350N 1+025E 1+350N 1+050E	<0.		65 6 10 <1	216	3,39	10 <2	12	15	60	10	93	3670
1+350N 1+050E	<0.		10 4	75	3.60	10	12 70	4	24	<10	5	131
1+330N 1+0/3C	νο.	2	10 4	/3	3.00	10	70	6	29	<10	22	1024
1+350N 1+090E	0.		25 14	564	3.47	16	1528	14	47	10	84	5172
1+400N 0+495E	<0.		15 24	225	8.08	24	1272	13	63	10	78	3880
1+400N 1+025E	<0.	2	l0 <1	22	3.26	<2	12	4	20	<10	6	96
1+400N 1+050E	<0.	2 .	LO <1	15	3.08	<2	12	3	16	<10	4	302
1+400N 1+070E	0.	2	30 11	1072	5.42	10	1274	25	52	10	163	7130

A .5 gm sample is digested with 10 ml 3:1 HCI/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.

Signed: ZCCr

MR. STEVL JELL

Attention: Steve Bell

Project: TAC Sample: SOIL Mineral Envirog puts Laboratories

8282 Sherbrooke St., Vancouver, B.C., V5X 4E8

Tel (604) 327-3436 Fax (604) 327-3423

Report No

8S0058

Date

Aug-10-98

#### MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Cd ppm	Cu ppm	Fe %	Mo ppm	Pb ppm	Sc ppm	Sr ppm	W ppm	Y ppm	Zn ppm
1+415N 1+000E	<0.2	10	. 4	81	3.99	2	72	7	35	<10		
1+450N O+470E	0.6	10	4	333	3.84	2	686	, 19			28	1902
1+450N 1+000E	<0.2	10	<1	11	3.52	<2		19	70	10	118	3579
1+450N 1+030E	0.2	15					22	2	19	<10	4	145
			11	389	4.43	8	518	15	58	10	63	6058
2+000N 0+440E	<0.2	30	22	237	5.59	22	714	12	60	10	62	2783
2+000N 1+025E	0.8	15	26	449	4.14	12	860	13	53	10	85	5151
2+100N 1+000E	<0.2	15	.<1	21	3.32	<2	12	3	13		-	
2+100N 1+140E	<0.2	10	1	142	3,43	6				<10		223
2+450N 1+000E	<0.2		- :			•	86	6	18	<10	33	833
		3	1	38	2.68	2	14	7	33	<10	12	134
2+470N 1+100E	<0.2	5	6	38	3.42	4	44	5	31	<10	17	950

A .5 gm sample is digested with 10 ml 3:1 HCI/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.

Signed: Fll



**VANCOUVER OFFICE:** 

8282 SHERBROOKE STREET VANCOUVER, BC, CANADA V5X 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

#### **SMITHERS LAB:**

**3176 TATLOW ROAD** SMITHERS, BC, CANADA VOJ 2NO TELEPHONE (250) 847-3004 FAX (250) 847-3005

#### Quality Assaying for over 25 Years

#### INVOICE

TO: STEVE BELL

SS-2 SITE-5 COMP-31

HOUSTON, B.C.

V0J 1Z0

INVOICE No 00037815

PAGE No 1 DATE 09/03/98

ACCOUNT B114

ATTENTION: STEVE BELL

PROJECT: TAC

FILE No: 8S-0076

QTY DESCRIPTION

38 SAMPLE PREP - SOIL 38 ICP - 12 ELEMENTS

UNIT PRICE

AMOUNT

1.50

57.00

5.36

203.68

SUB TOTAL

260.68

GST REGISTRATION # R100294743

18.25 278.93

\* TOTAL \*

# MR. STEVE BELL

Attention: Steve Bell

Project: TAC Sample: SOIL Mineral Environments Laboratories

8282 Sherbrooke St., Va.Louver, B.C., V5X 4E8

Tel (604) 327-3436 Fax (604) 327-3423

Report No

8S0076

Date

Sep-02-98

#### **MULTI-ELEMENT ICP ANALYSIS**

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Ba ppm	Cd ppm	Cu ppm	Fe %	Mn ppm	Mo Pb ppm ppm	Sb Y ppm ppm	Zn ppm
	40.7	5	320	4	50	2.63	1220	4 76	<b>&lt;</b> 5	772
1+450N 1+020E (5)	<0.2 <0.2	5	240	2	63	3.55	535	2 74	<5	1240
1+450N 1+020E (15)	<0.2	15	120	1	42	3.54	1040	2 36	<5	741
1+450N 1+020E (75)	<0.2	10	250	<1	31	3.95	645	<2 12	<5	114
2+000N 1+000E	<0.2	15	230	5	100	3.85	990	2 64	<5 12	1243
2+000N 1+050E	₹0.2	13	230	J						
2+015N 0+415E	<0.2	5	140	2 .	34	2.91	790	<2 66	<b>&lt;</b> 5	714
2+020N 0+425E	<0.2	60	620	24	496	6.86	2255	24 566	<5 <b>12</b> 5	1
2+020N 1+050E	<0.2	10	430	8 🚈	182	4.86	1860	10 410	<5	3008
2+040N 0+415E	0.2	15	320	6	101	2.99	485	8 104	<5 3	1347
2+040N 1+095E	<0.2	5	160	3	93	2.89	335	2	<5	672
2101011 210332	77.7			4.						
2+050N 0+390E	<0.2	25	320	4	145	4.54	1105	6 172	5 34	2546
2+050N 0+450E	<0.2	10	110	<1	21	3.54	515	<2 14	<b>&lt;</b> 5	344
2+050N 1+000E	<0.2	10	110	2	38	3.62	730	2 60	<b>&lt;</b> 5	
2+050N 1+050E	<0.2	10	180	<1 <sup>7</sup>	22	3.67	660	<2 10	<b>&lt;</b> 5	
2+075N 1+130E	<0.2	10	130	3 .	298	3.07	765	2 550	<5 3	1173
			1444 2014 - 144 Te				STATE			
1+450N 1+000E (10)	<0.2	5	250	1	12	2.08	775	2 12	<5	
2+125N 1+140E	<0.2	15	340	4	290	3.96	970	2	<5	1
2+175N 1+140E	<0.2	15	80	<i< td=""><td>22</td><td>3.92</td><td>395</td><td>2</td><td>&lt;5</td><td></td></i<>	22	3.92	395	2	<5	
2+025N 1+140E 2+225 N	<0.2	10	140	<1	26	3.16	710	<2 68	<5	
1+450N 1+000E (20)	<0.2	5	140	1	12	4.10	240	2 16	<5	134
, ,			4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -							
1+450N 1+000E (40)	<0.2	10	100	<1	12	3.81	405	<2 20	<5 °	
1+450N 1+000E (100)	<0.2	20	180	1	37	4.26	1090	2 52	<5 14	
1+450N 1+000E (200)	<0.2	10	270	<1	28	3.59	1010	<2 28	<5	
1+415N 1+000E (10)	0.6	5	44.15	6	124	2.61	340	4 72	<5 7	
1+415N 1+000E (45)	0.8	20	850	16	494	5.96	1460	4 194	<5 89	
1+415N 1+000E (120)	<0.2	5	270	3.	39	2.92	1150	2 22	<5 1:	
1+400N 1+025E (4)	0.2	<5		3	10	1.70	200	2 8	<5	• •
1+400N 1+025E (15)	0.2	5		2	10	3.55	170	2 14	<5	100
1+400N 1+025E (30)	<0.2	20		1	34	5.36	805	2 32	<5 1	
1+400N 1+025E (45)	<0.2	10	200	<1	24	3.56	475	<2 14	<5	201
• • • • • • • • • • • • • • • • • • • •			4.1				and the second second			

A .5 gm sample is digested with 10 ml 3:1 HCI/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.

Signed: Signed:

# MR. STEVE BELL Attention: Steve Bell

Project: TAC

Sample: SOIL

Mineral Enviror nts Laboratories

8282 Sherbrooke St., Vancouver, B.C., V5X 4E8

Tel (604) 327-3436 Fax (604) 327-3423

Report No

Date

8S0076

Sep-02-98

#### **MULTI-ELEMENT ICP ANALYSIS**

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Ba ppm	Cd ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Pb ppm	Sb ppm	Y ppm	Zn ppm
1+400N 1+025E (200)	<0.2	10	250	2	40	3.47	970	2 .	18	<5	13	371
1+350N 1+050E (10)	0.2	<5	160	1	5	1.30	70	2	8	<5	1	53
1+350N 1+050E (25)	<0.2	10	140	<1	13	3.78	375	2	8	<5	4	130
1+350N 1+050E (130)	<0.2	5	210	2	26	3.13	615	2	14	<5	7	377
1+400N 1+050E (15)	1.0	5	130	1	11	3.09	235	2	12	<5	2	100
1+400N 1+050E (35)	0.2	10	110	i	23	3.63	230	2	20	<5	3	157
1+400N 1+050E (75)	<0.2	5	180	<1	20	3.02	785	<2	16	<5	6	92
1+400N 1+050E (200)	<0.2	5	180	i	40	2.84	805	2 -	30	<5	12	278

A .5 gm sample is digested with 10 ml 3:1 HCI/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.



#### **VANCOUVER OFFICE:**

8282 SHERBROOKE STREET VANCOUVER, BC, CANADA V5X 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

#### **SMITHERS LAB:**

3176 TATLOW ROAD SMITHERS. BC, CANADA VOJ 2NO TELEPHONE (250) 847-3004 FAX (250) 847-3005

## Quality Assaying for over 25 Years

#### INVOICE

TO: STEVE BELL

SS-2 SITE-5 COMP-31

HOUSTON, B.C.

V0J 1Z0

**INVOICE No 00037901** 

PAGE No 1 DATE 09/17/98

ACCOUNT B114

ATTENTION: STEVE BELL

PROJECT: TAC

FILE No: 85-0082

QTY DESCRIPTION	UNIT PRICE	AMOUNT
10 SAMPLE PREP - SOIL	1.50	15.00
10 ICP - 12 ELEMENTS	5.36	53.60
10 GEOCHEM - AU FIRE	7.50	75.00



#### **VANCOUVER OFFICE:**

8282 SHERBROOKE STREET VANCOUVER, BC; CANADA V5X 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

#### **SMITHERS LAB:**

3176 TATLOW ROAD SMITHERS, BC, CANADA VOJ 2NO TELEPHONE (250) 847-3004 FAX (250) 847-3005

#### Quality Assaying for over 25 Years

CREDIT NOTE

TO: STEVE BELL

SS-2 SITE-5 COMP-31

HOUSTON, B.C.

V0J 1Z0

INVOICE No 00037901

PAGE No 1

DATE 09/25/98

ACCOUNT B114

ATTENTION: STEVE BELL

PROJECT: TAC

FILE No: 85-0082

QTY DESCRIPTION

UNIT PRICE

AMOUNT

1 CREDIT FOR OVERCHARGE ON 37901

\*(10 GEOCHEM - AU FIRE)

\*(7.50 EACH)

75.00

75.00

SUB TOTAL

75.00

GST REGISTRATION # R100294743
\* TOTAL \*

5.25

80.25



Mineral Environ pts Laboratories 8282 Sherbrooke St., Vancouver, B.C., V5X 4E8 Tel (604) 327-3436 Fax (604) 327-3423

Report No

8S0082

Sep-1:

#### **MULTI-ELEMENT ICP ANALYSIS**

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Ba ppm	Cd ppm	Cu ppm	Fe %	Mn ppm	Mo ppm	Pb ppm	Sb ppm	Y ppm	Zn ppm
2+150N 0+360E	<0.2	10	120	<1	20	3.42	625	<2	10	<b>&lt;5</b> .	3	92
1+400N 1+150E	<0.2	5	100	<1	9	3.14	320	<2	12	<5	2	116
2+075N 1+140E	<0.2	5	110	<1	15	3.90	605	<2	12	<5	4	156
2+050N 1+150E	<0.2	10	120	<1	16	3.60	350	2	36	<5	3,	219
んメ+100N 1+100E	<0.2	5 ·	90	<1	13	3.32	490	2	8	<5	· · · · · · · · · · · 3	109
	4.4		salah di sa				e ja forsk k					
1+400N 1+100E	<0.2	10	80	<1	13	2.93	340	<2	36	<5		145
1+350N 1+150E	<0.2	5 .	130	<1	12	3.02	410	<2	- 40	<5	4	157
2+000N 1+100E	<0.2	5 -	80	<1	• 9	3.24	280	2	12	<b>&lt;</b> 5	3	125
1+450N 1+100E	<0.2	10	100	<1	13	3.05	375	<2	18	<5	4	112
2+000N 1+150E	<0.2	5 ]	120	<1	18	3.32	300	2:	70	<5	4	166
			1965				A 199		4. Miles 2.4 ftm		5-64 SP& (11-1)	

A .5 gm sample is digested with 10 ml 3:1 HCI/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.



#### **VANCOUVER OFFICE:**

8282 SHERBROOKE STREET VANCOUVER, BC, CANADA V5X 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

#### **SMITHERS LAB:**

3176 TATLOW ROAD SMITHERS. BC. CANADA VOJ 2NO TELEPHONE (250) 847-3004 FAX (250) 847-3005

#### Quality Assaying for over 25 Years

#### INVOICE

TO: STEVE BELL

SS-2 SITE-5 COMP-31

HOUSTON, B.C.

V0J 1Z0

**INVOICE No 00037902** 

PAGE No 1

DATE 09/17/98

ACCOUNT B114

ATTENTION: STEVE BELL

PROJECT: LAKE 2043

FILE No: 8S-0083

QTY DESCRIPTION	UNIT PRICE	AMOUNT
9 SAMPLE PREP - SOIL	1.50	13.50
9 ICP - 12 ELEMENTS	5.36	48.24
9 GEOCHEM - AU FIRE	7.50	67.50

SUB TOTAL

129.24

GST REGISTRATION # R100294743

\* TOTAL \*

9.05 138.29

THESE ARE PROFESSIONAL SERVICES AND ARE PAYABLE WHEN RENDERED.
PLEASE REMIT ONE COPY OF THIS INVOICE WITH PAYMENT TO VANCOUVER OFFICE



**VANCOUVER OFFICE:** 

8282 SHERBROOKE STREET VANCOUVER, BC, CANADA V5X 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

**SMITHERS LAB:** 

3176 TATLOW ROAD SMITHERS, BC, CANADA VOJ 2NO TELEPHONE (250) 847-3004 FAX (250) 847-3005

#### Quality Assaying for over 25 Years

#### CREDIT NOTE

TO: STEVE BELL

SS-2 SITE-5 COMP-31

HOUSTON, B.C.

V0J 1Z0

**INVOICE No 00037902** 

PAGE No 1

DATE 09/25/98

FILE No: 8S-0083

ACCOUNT B114

ATTENTION: STEVE BELL

PROJECT: LAKE 2043

QTY DESCRIPTION

AMOUNT

1 CREDIT FOR OVERCHARGE ON 37902

\*(9 GEOCHEM - AU FIRE)

\*(7.50 EACH)

67.50

UNIT PRICE

67.50

SUB TOTAL 67.50

GST REGISTRATION # R100294743

4.73

\* TOTAL \* 72.23

Attention: Steve Bell

Project: LAKE 2043

Sample: SOIL

Mineral Envirgments Laboratories

8282 Sherbrooke St., ancouver, B.C., V5X 4E8

Tel (604) 327-3436 Fax (604) 327-3423

Date

Sep-15-98

#### **MULTI-ELEMENT ICP ANALYSIS**

Aqua Regia Digestion

Page 1 of 1

Sample Number	Ag ppm	As Ba ppm ppm	Cd Cu ppm ppm	Fe Mn % ppm	Mo Pb ppm ppm	Sb ppm	Y ppm	Zn ppm
2043-1	<0.2	5 390	<b>1</b>	4.18 460	8 12	<5	25	216
2043-2	<0.2	10 120	<1 13	3.49 570	<2 12	<5	8	75
2043-3	<0.2	10 120	<1 11	3.02 520	2 10	<5	8	58
2043-4	<0.2	5 100	<1 13	2.64 230	<2	<5	3	63
2043-5	<0.2	5 170	<1 22	3.01 495	<2 10	<5	13	62
2043-6	0.4	5 470	2 126	1.65 235	2 - 8	<5	49	41
2043-7	<0.2	10 350	<1 36	3.25 790	2 10	<5 ⊹	14	90
2043-8	<0.2	5 210	<1 20	4.17 530	2 12	<5	10	117
2043-9	<0.2	10 350	<1 22	4.03 370	2 12	<5	13	112

BACKGROUND SAMPLES TAKEN NEAR LAKE 2043

LOCATION AT BRID COOR. 60 65 500 N

A .5 gm sample is digested with 10 ml 3:1 HCl/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.



**VANCOUVER OFFICE:** 

8282 SHERBROOKE STREET VANCOUVER, BC, CANADA V5X 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

#### **SMITHERS LAB:**

3176 TATLOW ROAD SMITHERS, BC, CANADA VOJ 2NO TELEPHONE (250) 847-3004 FAX (250) 847-3005

#### Quality Assaying for over 25 Years

#### INVOICE

TO: STEVE BELL

SS-2 SITE-5 COMP-31 HOUSTON, B.C.

V0J 1Z0

INVOICE No 00038221

PAGE No DATE 11/10/98

ACCOUNT B114

ATTENTION: STEVE BELL

PROJECT: MAT

FILE No: 8S-0107

QTY DESCRIPTION	UNIT PRICE	AMOUNT
7 SAMPLE PREP - SOIL	1.50	10.50
7 GEOCHEM - AU FIRE	7.50	52.50
7 ICP - 12 ELEMENTS	5.36	37.52

100.52 SUB TOTAL GST REGISTRATION # R100294743 7.04 107.56

TOTAL \*



#### **VANCOUVER OFFICE:**

8282 SHERBROOKE STREET VANCOUVER, BC, CANADA V5X 4E8 TELEPHONE (604) 327-3436 FAX (604) 327-3423

#### **SMITHERS LAB:**

3176 TATLOW ROAD SMITHERS, BC, CANADA VOJ 2NO TELEPHONE (250) 847-3004 FAX (250) 847-3005

#### Quality Assaying for over 25 Years

#### CREDIT NOTE

TO: STEVE BELL

SS-2 SITE-5 COMP-31 HOUSTON, B.C.

VOJ 1Z0

INVOICE No 00038221

PAGE No

DATE 11/24/98

ACCOUNT B114

ATTENTION: STEVE BELL

PROJECT: MAT

FILE No: 8S-0107

QTY DESCRIPTION

1 GEOCHEM - AU FIRE

UNIT PRICE

AMOUNT

52.50

52.50

SUB TOTAL

52.50

GST REGISTRATION # R100294743

\* TOTAL \*

3.68 56.18

THESE ARE PROFESSIONAL SERVICES AND ARE PAYABLE WHEN RENDERED. PLEASE REMIT ONE COPY OF THIS INVOICE WITH PAYMENT TO VANCOUVER OFFICE

Attention: Steve Bell

Project: MAT Sample: SOIL Mineral Envir ( )ents Laboratories

8282 Sherbrooke St., Vancouver, B.C., V5X 4E8

Tel (604) 327-3436 Fax (604) 327-3423

Report No

: 8S0107 SJ

Date

Nov-06-98

#### MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Ba ppm	Cd ppm	Cu ppm	Fe %	K %		vi om	Pb ppm	Sb ppm	Zn ppm
MAT 4	<0.2	5	390	્ર <1 ં	40	3.20	0.14	10 - 10	21	24	<5	145
MAT 5	<0.2	5	310	<1	20	3.65	0.11	4	16	14	<5	138
MAT 6	<0.2	10	210	<1	17	3.00	0.07	<b>2</b> :::[[]]:::	15	10	<5	100
MAT 7	<0.2	5 <sup>1.</sup>	360	1	40	2.43	0.13	2	20	14	<5	154
MAT 8	<0.2	5	220	1	15	2.97	0.08	12	15	10	<5	99
			1944, 1891		Photogram in the		1,24		dia a			
MAT 9	<0.2	5	210	1	12	2.93	0.06	8	12	8	<5	116
STRIM 1	<0.2	<5	120	<1	4	2.66	0.03	<2	17	. 4	<5	87

BACK GROUND SAMPLES TAKEN NEAR LAKE LOCATED AT

GRID COOR.

60 59 400 N 6 82 500 E

A .5 gm sample is digested with 10 ml 3:1 HCI/HNO3 at 95c for 2 hours and diluted to 25ml with D.I.H20.

