

**PROSPECTING & GEOCHEMICAL REPORT  
YMIP 00-085(a): Nadaleen River Area**

Tanner Claims 1-8 ( YC02343-YC02350)

NTS 106 C/03

Latitude: 64°03'N

Longitude: 133°16'W

Mayo Mining District, Yukon

Report of work performed in  
August 2000  
by Anne Bordeleau

Claims owned by Anne Bordeleau  
Whitehorse, YT

January 20 2001

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## **Summary**

The area of interest in the vicinity of Mt. Ferrell, YT, and including the newly staked Tanner property, was investigated for Ag/Pb/Zn following the identification of a highly gossanous first-order stream draining northward into the Nadaleen River and supported by encouraging anomalous returns for the area during a regional geochemical stream sediment survey (GSC, 1991).

The Tanner claims were staked after the identification of several E-W trending barite showings from the headwaters of the stream to a second equally gossanous one 2km E. Intensive rock and soil sampling of the area, including a 35-sample soil grid established on claims 1 and 2, was carried out to help define these anomalies. Altogether, 72 samples were collected.

High Ba concentrations were discovered on 3 separate killzones and gossans. Gossanous areas also returned elevated As, Mn, V and Fe values. Zn values were anomalous in the 95<sup>th</sup> to 98<sup>th</sup> percentile in the creek flowing downstream from the easternmost killzone and gossan. While no surface Zn showing or other sulphide mineralizations were identified to support the presence of gossanous zones, a deep underlaying mineralized layer in the favourable Earn Group could perhaps be defined with a proposed EM/mag survey.

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## **Introduction**

This report was prepared in partial requirement of the Yukon Mining Incentive Program grant #00-085 agreement.

Exploration work consisted of prospecting and geochemical sampling in the Nadaleen River area (NTS 106C/03) in the hope of discovering Ag/Pb/Zn mineralization for which the region is known and of explaining the presence of extensive gossans in the area.

## **Location and Access**

The area of interest (Appendix I), including the Tanner claims, is located in the Nadaleen Range, Southern Werneck Mountains, 110km NE of Mayo, YT. Mt. Ferrell is situated 4km N of the actual claims. The claims are found on NTS map sheet 106 C/03, in the Mayo Mining District and centered at Longitude 133°16' W and 64°03' N.

The site may be accessed by helicopter or by fixed wing to the Rackla Airstrip from which a 16km hike to the area is possible

## **Physiography and Vegetation**

The topography of the Nadaleen River area is characterized by valleys at approximately 3000ft and summits reaching 4500ft to 6000ft. The tree-line generally occurs at 4500ft. Steep hillsides are subject to frequent avalanches. Although frost and snowfalls can occur any day of the year, summers are generally hot and dry, with temperatures in the mid-20°C in July. The atypically cool and wet summer of 2000 left deep snow accumulations on N and W facing slopes and at the bottom of avalanche sites. The exploration season is usually limited to July and August, both because of elevation, which precipitates snow accumulation and retards the melt, and because of the obvious danger of avalanches.

The area immediate to the Tanner claims is representative of the alpine tundra with resin and dwarf birch (*Betula* sps.) as well as dwarf willows (*Salix* sps.). Fir (*Abies lasiocarpa*) is common in subalpine areas down to approximately 3700ft where it is replaced entirely by spruce (*Picea glauca*).

Creeks and wet areas sites are lined by willow (*Salix* sps.), alder (*Alnus* sps.) and resin birch (*Betula glandulosa*) thickets.

## **Property**

The Tanner claims (Fig. 1), are located in NTS 106 C/03, Mayo Mining District, centered at 133°16'W and 64°03'N. The following claims (Table 1) have been recorded in the name of Anne Bordeleau:

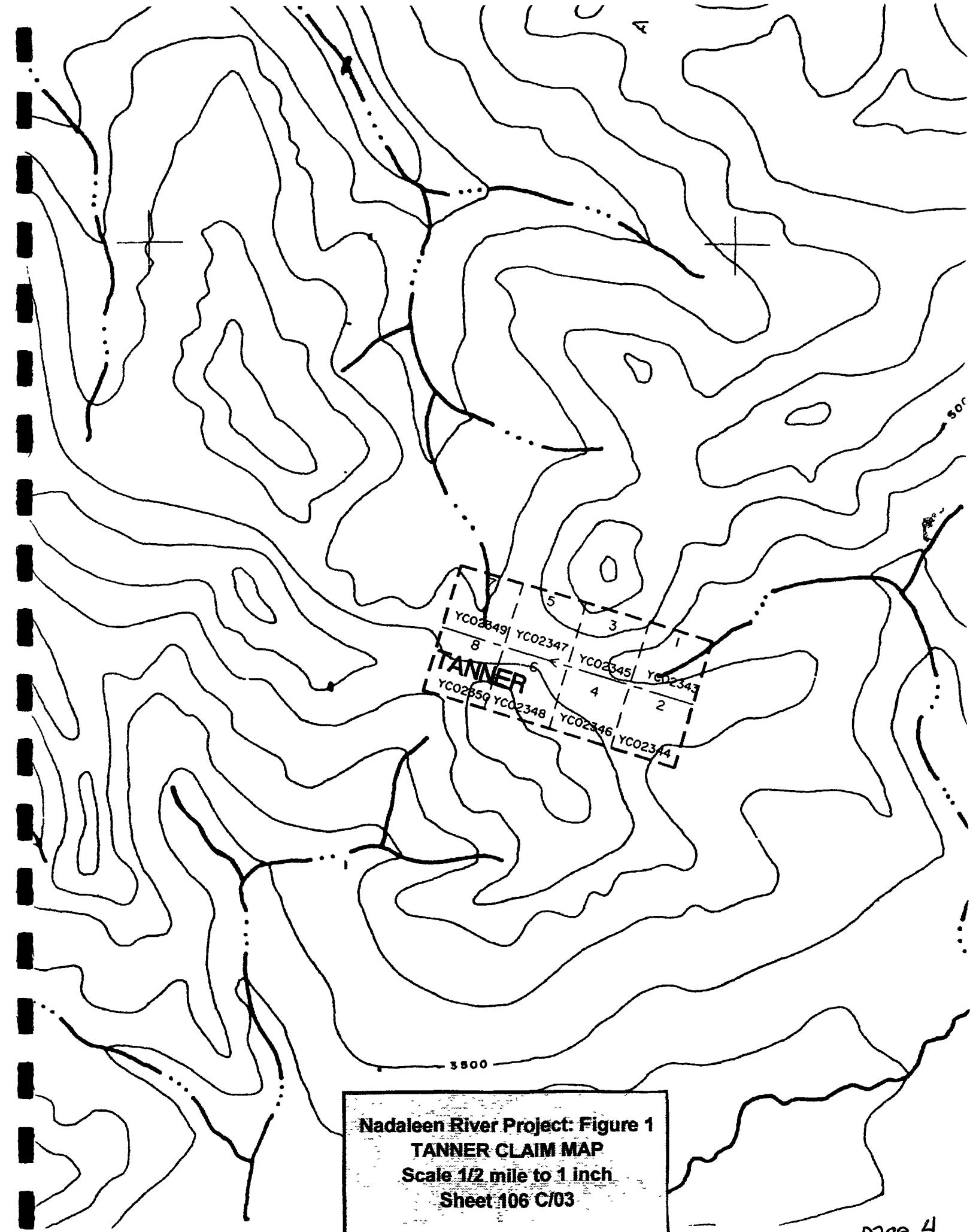


Table 1 Claim Status

Claim Name	Record No.	# of Claims	Claim Sheet	Expiry Date
Tanner 1-8	YC02343-YC02350	8	106 C/03	10/08/2001

### History

The area underlying the Tanner claims had not previously been staked

However, 10 Tell claims (YB18115) were staked in 1991 by Kennecott Canada Inc. to cover a ferricrete gossan and killzone beside the Stewart River, at 133°09'W and 64°00'N, 6km South of the Tanner group

And, 7km to the North, at 64°09'22"N and 133°21'15"W, 624 Craig claims were staked by McIntyre Mining Ltd in 1976 to cover a Mississippi-Valley Type deposit. In the same year, McIntyre entered in joint venture with Can Superior. In 1982 part of the Craig was transferred to SEREM, then to Cheni Gold Mines Ltd. And then to SEREM Quebec in 1989. Manson Creek Resources optioned to earn 60% interest in the property from Falconbridge in 1998 and staked an additional 159 NAD claims (YB98288).

### Geology

#### I Regional

Structures in the Nadaleen Range are dominated and subparallel with the Dawson Thrust where, according to Carlson (1992), paleozoic strata are thrust over the Pretorozoic to early Cambrian "Grit Unit", also known as the Hyland Group, and the Precambrian is in turn thrust over Paleozoic shelf assemblage

Underlain by the Selwyn Basin tectono-stratigraphic province, the region's basement is constructed of Hyland Group green, maroon and buff siltstones, conglomerate, sandstone quartzite and limestone. Younger rocks belong to the 530-390 million year old Ordovician to Silurian Road River shale, conglomerate, limestone and the 390-325 million year old Devonian to mid-Mississippian Earr Group shale and conglomerate (Geoprocess File, 1995), which is widespread throughout the basin

Carne and Cathro indicated in 1982 that two ages of sediment hosted or SEDEX Pb/Zn/Ag deposits were known to occur within the basin

#### II Local

Intense foliation occurs within the area of interest, making identification of the original bedding difficult

The southernmost portion of the property is characterized by exposed Earn Group grey-weathering chert pebble conglomerate, (See Appendix I, Geology Map) probably derived from submarine fan complexes. The northernmost area consists of coarse sandstones and argillaceous limestones. More centrally, along an EW axis, are Earn Group gun-blue weathering siliceous shales, with lesser maroon and green weathering shales likely of the Hyland Group.

Carlson (1992) noted that baritic Pb/Zn/Ag sulphide deposits appeared to be restricted to Earn Group siliceous shale facies and Lower Earn Group turbiditic fan complexes in the Selwyn Basin. Three barite showings were located along a 1.5km EW margin of precisely these formations on the property.

### **Prospecting and Geochemical Survey Results & Discussion**

Three new barite occurrences were discovered with Ba ranging from 29.67% to 56.75%. All anomalous samples originated from readily identifiable NW trending killzones over a distance of 1.5km.

Killzone 1, to the East (See Appendix I for photos of all zones) is a 25X75m ferricrete with an adjacent slow-seeping gossanous baritic limestone, partially zinc-moss covered. High Ba-bearing rocks, R-11 (29.67%), R-15 (39.48%), R-22(38.66%) and R-26 (36.75%), were found both on the W slopes of the ferricrete and at the source of the gossanous seep. Of particular interest was sample R-26 which boasted the only Hg anomaly of the program (1942ppm) and contained minor visible cinnabar.

Stream sediment samples downstream from the gossan ran in the 95<sup>th</sup> to 98<sup>th</sup> percentile compared to a 2103-sample GSC geochemical survey program (1991).

Killzone 2 was host not only to baritic limestone but to bedded barite potentially belonging to the Earn Group. This 30m long killzone was immediately overlaid by a 295° striking fault-like ledge, 5m wide. Three soil samples obtained at depths of 1 to 4 feet failed to produce any significant Ba results, while rocks R-03 (53.65%), R-04 (44.79%), R-23 (56.75%) from the killzone itself were anomalous.

Finally, the smaller, 8X10m Killzone 3, to the West, also produced high Ba returns with R-10 (40.12%) and R-19 (39.43%).

A 35-sample soil grid at 25m spacing over a 200X250m area encompassing Killzone 1 returned elevated Ba, Fe, Mn, As and V values, but only moderate Zn values (103 to 514ppm over the ferricrete and gossan).

A narrow, 200m long stream covered with snow-white precipitate returned Cu values in the 95<sup>th</sup> percentile for the area (110ppm) and 11% Al. High aluminum content here and in other gossans could be related to clays from intrusive-related alterations or from weathering (R. Hulstein, 2001, personal communication).

### **Conclusion and Recommendations**

While no sulphide mineralization was discovered on the Tanner property or the outlying project area, the presence at depth of such a mineralized zone should not be excluded.

Possible mineralization could be identified and delineated by an EM/mag survey. Water sampling could be implemented on gossanous streams to verify whether pH and alkalinity affect possible underlying mineral dissolution.

The discovery of 3 apparently related, new SEDEX barite showings in the Selwyn Basin is interesting though not entirely unexpected. While not being of immediate priority due to its remote location, further defining the showings and locating actual sulphide mineralization would certainly increase the value of the property.

## References

- Blusson, S., 1974. Drafts of five geological maps of Northern Selwyn basin (Operation Stewart), Yukon and District of Mackenzie, NWT (includes NTS 106A, B, C and 105N, O). GSC Open File 205.
- Carlson, G G., 1992. Geological and Geochemical Evaluation of the Tell 1 to 10 Claims, Ortell Mountain Area, Mayo Mining District, NTS 105 N/14, 106 C/03.
- Carne, R.C. and Cathro, R.J., 1982. Sedimentary exhalative (Sedex zinc-lead-silver deposits, northern Canadian Cordillera; CIM Bulletin, Vol. 75, No. 840, pp. 66-78.
- Geological Survey of Canada, 1985. Regional Stream Sediment & Water Geochemical Reconnaissance Data-NTS 106-D, parts of 106C, 106E, 106F. GSC Open File 2175.
- Hughes, O.L., 1989. Surficial Geology of Northern Yukon Territory and Northwestern district of MacKenzie, Geological Survey of Canada, Paper 69-36.
- Indian and Northern Affairs, 1997. Yukon Minfile 106-C Nadaleen, Exploration and Geological Services, Yukon, Indian and Northern Affairs Canada
- Yukon Chamber of Mines, 1996. Yukon MINEX CD-ROM.

**Statement of Qualifications**

I, Anne Bordeleau, hereby certify that:

1. I am a prospector and geological assistant and have earned my living as such since 1994, for myself and various exploration companies in the Northwest Territories, Nunavut, Alberta and the Yukon.
2. I have completed the Advanced Prospecting Course at the Yukon Chamber of Mines in 1998.

Respectfully submitted,



Anne Bordeleau

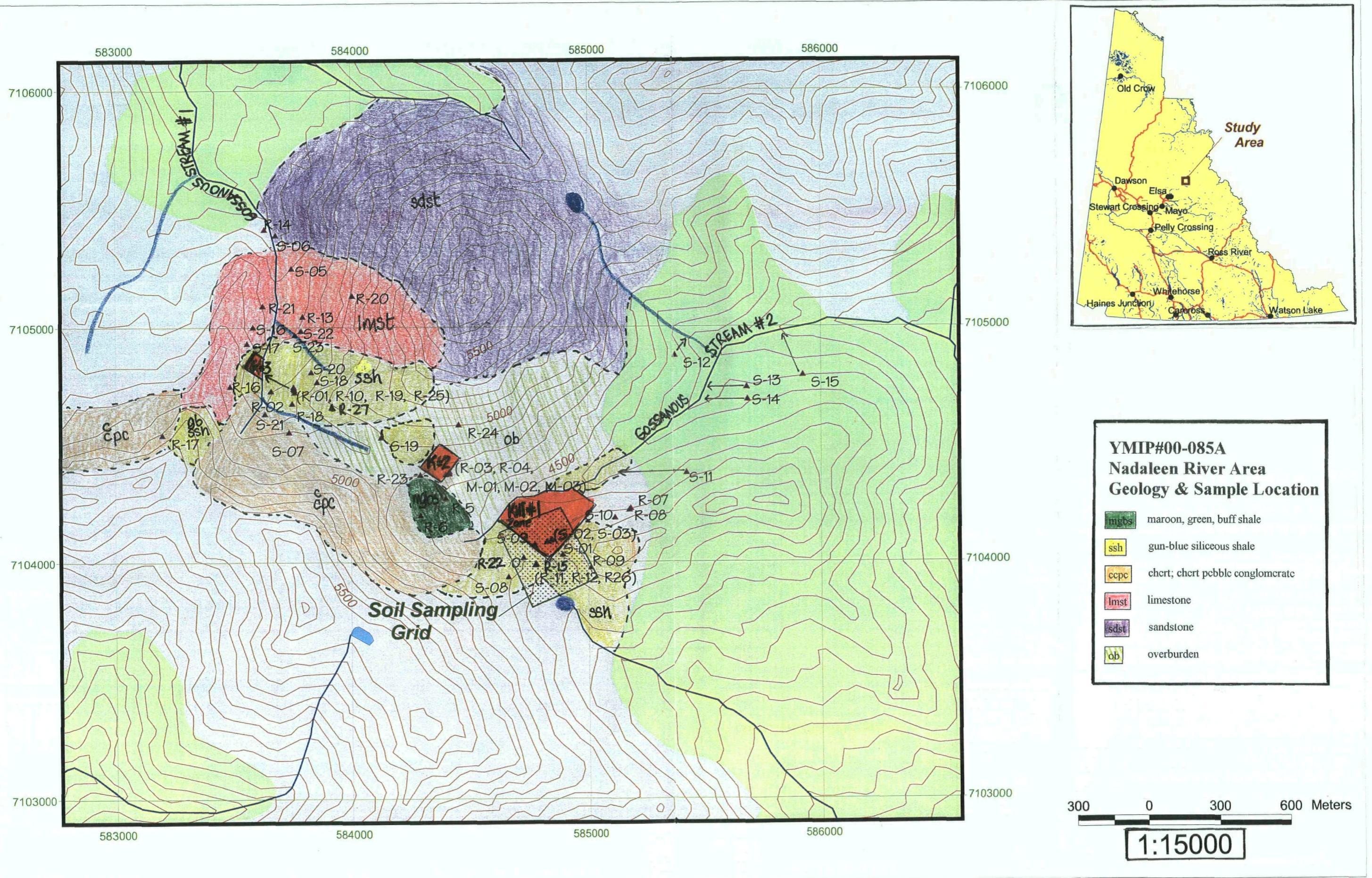
January 20 2001.

## **Statement of Costs**

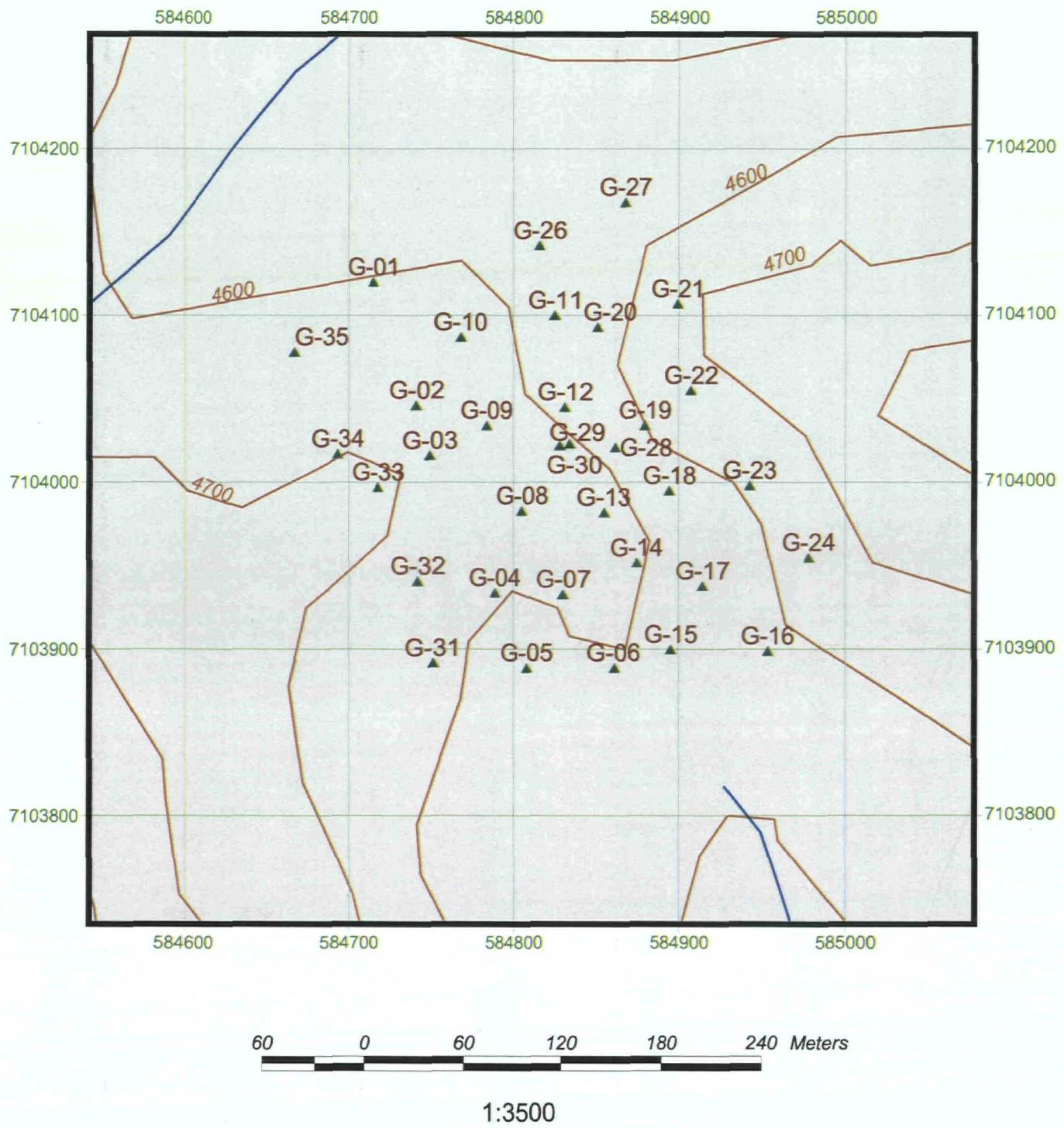
Analytical Services (NAL)	\$ 1081.24
Helicopter Travel (TransNorth Helicopter)	\$ 2264.12
Labour (Field Assistant: Ron Berdahl), 7 days @ \$150.00	\$ 1050.00
Radio Rentals (Aurum Géological Consultants Inc.)	\$ 160.50
Daily Living Expenses, 28 persondays @ \$35.00	\$ 980.00
Travel Whitehorse-Mayo-Whitehorse, 900km @ \$0.42	\$ 378.00
Total	\$ 5913.86

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**APPENDIX I**  
**Geology and Sample Location Map**  
**Soil Sampling Grid**  
**Project Photographs**



# YMPIP-OO-085a: Soil Sampling Grid



**YMIP00-085a: Nadaleen River Area  
Project Photographs**



Photo 1: Killzone 1, location of samples R-11 & R-26 (26.67% & 36.75% Ba)



Photo 2: Killzone 2, location of samples R-03, R-04 & R-23 (53.65%, 44.79% & 56.75% Ba)



Photo 3: Killzone 3, location of samples R-10 & R-19 (40.12% & 39.93%)

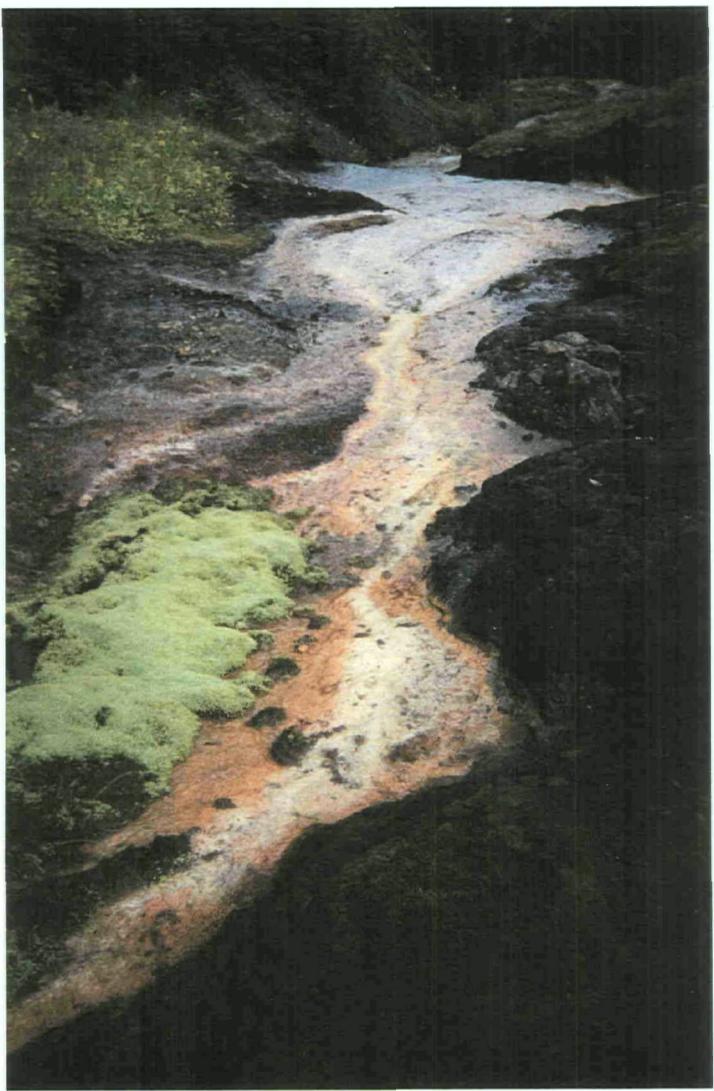


Photo 4: Stream #1 with Zn-moss



Photo 5: Gossan at Killzone 1

**YMIP00-085a: Nadaleen River Area  
Project Photographs**

**APPENDIX II**  
Sample Description  
2000 Assay Results

## Sample Description

1 of 3

SAMPLE	TYPE	DESCRIPTION	UTM
R-01	rock	sulph. smelling, brittle float, vuggy qtzte	583751E 7104740N
R-02	rock	sulph. smelling, qtzt float w/ altered infills	583658E 7104729N
R-03	rock	barite, gr-wh, zebra pattern, outcrop	584411E 7104377N
R-04	rock	barite, w/ vuggy qtzte, float	584396N 7104374N
R-05	rock	float sil. shale w/ slight sulfur smell, float	584400E 7104350N
R-06	rock	black chert, very silicified, float	584286E 7104198N
R-07	rock	qtzte w/ blue shale & poss. sphal., br, NW str, dip 75, outcr.	585180E 7104230N
R-08	rock	limonitic qtz in blue shale, float	585175E 7104224N
R-09	rock	porpheritic qtzte w/ 5-10% py	585011E 7103978N
R-10	rock	ba float	583751E 7104748N
R-11	rock	heavy dolomitic grey/white outcrop over carb. shale	584784E 7103993N
R-12	rock	bleached carb. shale	584780E 7103989N
R-13	rock	qtzte w/ altered vugs, red	583791E 7105047N
R-14	rock	bedded sopy shale, phyllite? br w/ red staining	583632E 7105416N
R-15	rock	carb. shale w/ ba, heavy	584784E 7103993N
R-16	rock	sil. dol. w/ red staining	583485E 7104750N
R-17	rock	cherty outcrop w/ small sulphide veinlets	583204E 7104544N
R-18	rock	yellow spew fom carb. shale	583747E 7104677N
R-19	rock	dk-gr ba float	583757E 7104735N
R-20	rock	calc-like veining on dlmt, heavy, br, 10X3m outcrop	584005E 7105134N
R-21	rock	Qtzte vein w/ gal? in sil. sdst w/ red staining	583684E 7105091N
R-22	rock	ba @ stream 5m above, float	584731E 7104020N
R-23	rock	ba-cobble on 15X10m scree w/ 3%ba, 2% sdst, shale 95 %	584288E 7104373N
R-24	rock	sdst w/ red staining	584453E 7104585N
R-25	rock	carb. shale some red stained	583757E 7104725N
R-26	rock	qtzte flost w/ sulph smell, minor visible Gal & red (hg??)	584782E 7103988N
R-27	rock	carb. shale from E mountain ridge	583900E 7104700N
S-01	soil	soft gossan, org. encrusted, yel/wh/red, surface	584891E 7104033N
S-02	soil	red gossan, 16" depth	584848E 7104099N
S-03	soil	mixture of org., blue shaly sed., red gossan	584831E 7104090N
S-04	soil	at 12" depth from scree top, rusty soil, lots shle fragment	584831E 7104090N
S-05	moss mat	z-moss roots, very red	583744E 7105252N
S-06	soil	red soil on stream's edge	583678E 7105392N
S-07	soil	pulverised carb. shale with grey/red tint	583732E 7104555N
S-08	str. sed.	maroon, mostly maroon shale debris	584663E 7103938N
S-09	str. sed.	red, fine org. in sil. shale fines	584777E 7104075N
S-10	str. sed.	gr-br, schist/shale debris	585115E 7104191N
S-11	str. sed.	gr-br, schist/shale debris	585426E 7104382N
S-12	str. sed.	gr, silt/sand	585375E 7104879N
S-13	str. sed.	br, shale debris, silt	585680E 7104743N

## Sample Description

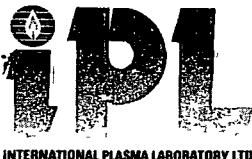
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SAMPLE	TYPE	DESCRIPTION	UTM
S-14	str. sed.	gr-br, shale debris, silt, sand	585685E 7104691N
S-15	str. sed.	gr, fine shale, sand, silt	585920E 7104794N
S-16	soil	accreted red/ora. dirt @ 12" depth, 15m from shl. scree	583585E 7105001N
S-17	str. sed.	red/or. soil @ 25cm	583560E 7104931N
S-18	soil	dry, white ppt, @ 24" depth	583854E 7104768N
S-19	soil	bleached soil @ 10cm, in red dirt overlaid by carb. shale	584122E 7104532N
S-20	ppt	dry, white ppt on strams edge, powdery, looks like h2o/zn	583828E 7104810N
S-21	str. sed.	mixture maroon shale/sdst/qtzte in streambed	583633E 7104632N
S-22	str. sed.	sed. from surface of orange/white ppt. on stream bottom	583786E 7104986N
S-23	soil	soil from white ppt on carb. shale slope 2x2m, on str. edge	583759E 7104969N
M-01	soil	ochre silt @12", top of killzone 2	584413E 7104386N
M-02	soil	greyish-yellow clay/silt @48" depth, slight sulph. smell	584411E 7104380N
M-03	soil	same as above, 1m E @ 54" depth	584409E 7104382N
G-01	soil	br, w/ shale layer @ 20" depth, silt	584714E 7104119N
G-02	soil	v.dk.br @24", 10% org, 90% silt	584740E 7104045N
G-03	soil	chl. shale pebs throughout, removed, @ 24"	584748E 7104015N
G-04	soil	maroon coloured, 20" depth, silt	584787E 7103933N
G-05	soil	br, w/ shale layer @ 20" depth, silt	584807E 7103888N
G-06	soil	gr-br, 35" depth., heavy soliflx., silty	584859E 7103888N
G-07	soil	br, @40", laced w/ shale	584829E 7103932N
G-08	soil	lt. br., @ 15", on ba hill, near hg sample	584804E 7103982N
G-09	soil	reddish-br silt @ 25"	584782E 7104033N
G-10	soil	br, @ 20", silt	584766E 7104086N
G-11	soil	red, @ 15", 5m from chlor. shale outcrop	584824E 7104099N
G-12	soil	red-br, @ 8", w/ qtzte & chl. shale pebs	584830E 7104044N
G-13	soil	between 2 ba showings, @ 20", br	584853E 7103981N
G-14	soil	br w/ sparse orange, crumbled ferricrete, @10"	584873E 7103951N
G-15	soil	br w/ orange banding, @ 20"	584894E 7103899N
G-16	lake sed	silt w/ carb shale pebs, @ 10"	584952E 7103898N
G-17	soil	grey silt w/ carb.shale pebs, @ 8"	584913E 7103937N
G-18	soil	from talus of mudboils, 30% silt @ 15%	584893E 7103994N
G-19	soil	ferricrete @ strm, red/blk, @ 10"	584878E 7104033N
G-20	soil	ferricrete @ strm, red, @ 10", w/ accr. ferric pebs remov.	584849E 7104092N
G-21	soil	red br., 20" deep, 10m from gossan, w/ znmoss at surface	584898E 7104106N
G-22	soil	gr br soil @ 24", qtzte pebs in sample	584906E 7104054N
G-23	soil	br gr, sdst floats around, @ 10", sm. sil. pebs thr.out	584941E 7103997N
G-24	soil	gr, @ 25" 5m from carb. shale hill	584977E 7103954N
G-25	soil	dk gr, silt w/ carb. shale pebs throughout	585009E 7106907N
G-26	soil	br w/ chl shale pebs, @ 12", org @ surface	584815E 7104141N

## Sample Description

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SAMPLE	TYPE	DESCRIPTION	UTM
G-27	soil	red br., 20" deep, forested area	584366E 7104167N
G-28	soil	red/orange from under moss mats @ ferricrete	584860E 7104020N
G-29	soil	dk br, carb. shale pebs throughout	584833E 7104022N
G-30	soil	br, some shale pebs, @ 10"	584827E 7104021N
G-31	soil	small mudboil, br silt @ 25", w/ chl. pebs thr.out	584750E 7103891N
G-32	soil	wet ground, br gr @ 28", few pebs,	584741E 7103940N
G-33	soil	gr br soil @ 14", w/ overgrown mudboils, w/ shale t.o.	584717E 7103996N
G-34	soil	br, 24" depth, sml. pebs qtzte, shale & sdst	584692E 7104016N
G-35	soil	br silt w/ shale or phyllite pebs @ 20"	584666E 7104077N



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[116611:54:39:00092500]

78 Samples Out: Sep 25, 2000 In: Sep 11, 2000

#	CODE	AMOUNT	TYPE	PREPARATION DESCRIPTION	NS=No Sample	Rep=Replicate	PULP	REJECT
							12M/Dis	00M/Dis
<b>Analytical Summary</b>								
	##	Code	Method	Units	Description	Element	Limit Low	Limit High
01	0721	ICP	ppm	Ag ICP		Silver	0.1	99.9
02	0711	ICP	ppm	Cu ICP		Copper	1	20000
03	0714	ICP	ppm	Pb ICP		Lead	2	20000
04	0730	ICP	ppm	Zn ICP		Zinc	1	20000
05	0703	ICP	ppm	As ICP		Arsenic	5	9999
06	0702	ICP	ppm	Sb ICP		Antimony	5	999
07	0732	ICP	ppm	Hg ICP		Mercury	3	9999
08	0717	ICP	ppm	Mo ICP		Molydenum	1	999
09	0747	ICP	ppm	Tl ICP (Incomplete Digestion)		Thallium	10	999
10	0705	ICP	ppm	B1 ICP		Bismuth	2	9999
11	0707	ICP	ppm	Cd ICP		Cadmium	0.1	99.9
12	0710	ICP	ppm	Co ICP		Cobalt	1	9999
13	0718	ICP	ppm	N1 ICP		Nickel	1	9999
14	0704	ICP	ppm	Ba ICP (Incomplete Digestion)		Barium	2	9999
15	0727	ICP	ppm	W ICP (Incomplete Digestion)		Tungsten	5	999
16	0709	ICP	ppm	Cr ICP (Incomplete Digestion)		Chromium	1	9999
17	0729	ICP	ppm	V ICP		Vanadium	2	9999
18	0716	ICP	ppm	Mn ICP		Manganese	1	9999
19	0713	ICP	ppm	La ICP (Incomplete Digestion)		Lanthanum	2	9999
20	0723	ICP	ppm	Sr ICP (Incomplete Digestion)		Strontium	1	9999
21	0731	ICP	ppm	Zr ICP		Zirconium	1	9999
22	0736	ICP	ppm	Sc ICP		Scandium	1	9999
23	0726	ICP	%	T1 ICP (Incomplete Digestion)		Titanium	0.01	1.00
24	0701	ICP	%	Al ICP (Incomplete Digestion)		Aluminum	0.01	9.99
25	0708	ICP	%	Ca ICP (Incomplete Digestion)		Calcium	0.01	9.99
26	0712	ICP	%	Fe ICP		Iron	0.01	9.99
27	0715	ICP	%	Mg ICP (Incomplete Digestion)		Magnesium	0.01	9.99
28	0720	ICP	%	K ICP (Incomplete Digestion)		Potassium	0.01	9.99
29	0722	ICP	%	Na ICP (Incomplete Digestion)		Sodium	0.01	5.00
30	0719	ICP	%	P ICP		Phosphorus	0.01	5.00

EN=Envelope # RT=Report Style CC=Copies IN=Invoices Fx=Fax(1=Yes 0=No)

DL=Download 3D=3 1/2 Disk EM=E-Mail BT=BBS Type BL=BBS(1=Yes 0=No)

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## **78 Samples**

Out: Sep 25, 200  
In : Sep 11, 200

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Section 1 of 1

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti ‰	Al ‰	Ca ‰	Fe ‰	Mg ‰	K ‰	Na ‰	P ‰	
G - 01	# <	43	34	101	67	5	<	30	<	<	2.4	9	22	402	<	22	73	192	9	16	1	1	0.02	1.03	0.02	4.78	0.15	0.04	0.01	0.08	
G - 02	P 0.4	136	49	144	10	<	<	15	<	<	1.5	43	48	553	<	24	76	3365	25	89	2	3	0.01	1.78	0.15	4.60	0.37	0.22	0.01	0.19	
G - 03	P <	29	25	92	<	<	<	4	<	<	1.6	13	24	762	<	29	69	526	12	10	1	1	0.02	1.88	0.05	3.71	0.36	0.04	0.01	0.04	
G - 04	P <	34	33	70	21	<	<	12	<	<	1.2	11	19	293	<	22	47	297	10	22	1	1	0.01	1.10	0.03	4.03	0.18	0.04	0.01	0.06	
G - 05	P <	26	25	69	<	<	<	3	<	<	1.0	10	20	99	<	21	42	293	11	13	1	1	0.01	1.31	0.04	3.26	0.23	0.05	0.01	0.05	
G - 06	P 0.3	18	29	43	20	<	<	13	<	<	0.6	5	13	185	<	11	28	190	7	17	1	2	0.01	0.68	0.04	1.99	0.16	0.04	0.01	0.03	
G - 07	P 0.3	28	27	65	9	<	<	12	<	<	1.0	9	18	295	<	20	64	420	10	17	1	1	0.01	1.08	0.03	3.28	0.21	0.08	0.01	0.08	
G - 08	P 0.3	45	31	105	38	<	<	7	<	<	1.9	18	38	1290	<	26	63	544	9	19	1	2	0.01	1.51	0.03	3.95	0.33	0.04	0.01	0.06	
G - 09	P 0.1	21	16	69	<	<	<	4	<	<	1.4	10	21	499	<	23	67	410	10	9	1	1	0.03	1.27	0.04	3.78	0.21	0.04	0.01	0.05	
G - 10	P <	19	18	67	<	<	<	3	<	<	1.1	9	14	162	<	22	67	786	11	8	1	<	0.02	1.01	0.03	2.89	0.10	0.05	0.01	0.07	
G - 11	P 3.4	144	38	514	145	<	<	30	<	<	1.2	158	89	361	<	28	83	4620	4	18	12	8	0.01	3.60	0.03	13%	0.21	0.04	0.01	0.14	
G - 12	P 0.2	37	33	93	<	<	<	4	<	<	1.3	16	30	119	<	26	49	603	10	12	1	1	0.02	1.46	0.04	4.11	0.31	0.04	0.01	0.05	
G - 13	P 0.1	18	35	47	99	<	<	8	<	<	0.7	6	14	1048	<	19	100	200	10	14	<	1	0.02	0.91	0.03	2.94	0.11	0.04	0.01	0.06	
G - 14	P <	38	28	90	<	<	<	3	<	<	1.3	19	37	196	<	24	41	673	11	12	1	2	0.02	1.53	0.08	3.49	0.39	0.05	0.01	0.05	
G - 15	P 0.3	35	28	70	9	<	<	6	<	<	1.4	12	19	128	<	21	41	430	9	17	1	1	0.01	1.00	0.03	3.66	0.14	0.05	0.02	0.06	
G - 16	P 8.5	10	24	16	142	6	<	14	<	<	0.4	2	5	428	<	8	49	50	11	36	<	<	0.01	0.51	0.02	1.01	0.07	0.07	0.01	0.05	
G - 17	P 2.8	10	35	18	277	<	<	5	7	<	<	0.6	5	5	523	<	13	80	193	13	94	1	1	<	0.44	0.01	1.39	0.05	0.05	0.01	0.05
G - 18	P 0.8	34	36	147	270	<	<	13	<	<	1.5	22	46	224	<	34	81	1023	11	18	2	3	0.03	2.03	0.07	3.94	0.58	0.10	0.02	0.06	
G - 19	P 0.5	33	34	74	1.1%	<	<	57	<	<	<	13	13	73	<	357	4332	36	<	8	12	4	<	2.84	0.01	22%	0.01	0.01	0.01	3.32	
G - 20	P 0.6	25	49	279	6651	<	<	34	<	<	10.8	17	23	100	<	93	3913	12	<	4	15	2	0.01	0.97	<	27%	0.01	0.01	0.01	0.59	
G - 21	P 0.3	55	35	223	1741	<	<	20	<	<	<	30	27	147	<	59	888	835	6	10	7	4	0.01	1.94	0.03	18%	0.16	0.04	0.01	0.34	
G - 22	P 0.2	17	20	71	42	<	<	3	<	<	0.9	7	20	194	<	30	65	313	13	14	1	1	0.02	1.70	0.07	2.85	0.38	0.06	0.01	0.07	
G - 23	P 0.6	14	23	45	70	<	<	10	<	<	0.5	5	11	466	<	22	56	250	10	13	1	1	0.02	1.14	0.05	2.14	0.20	0.08	0.01	0.07	
G - 24	P 1.0	7	28	19	243	5	<	19	<	<	0.6	2	4	548	<	6	33	46	12	20	1	<	0.01	0.40	0.01	1.42	0.06	0.09	0.01	0.03	
G - 25	P 0.8	3	22	1	140	5	<	8	<	<	0.3	1	2	1029	<	1	12	4	9	27	17	<	<	< 0.07	<	0.32	0.01	0.04	0.01	0.01	
G - 26	P 0.2	21	21	77	<	<	<	2	<	<	1.2	9	16	203	<	23	52	943	9	9	1	<	0.01	1.40	0.05	3.42	0.19	0.06	0.01	0.10	
G - 27	P 0.1	33	23	68	6	<	<	2	<	<	1.1	12	22	95	<	24	58	1036	8	8	1	<	0.01	1.19	0.04	3.56	0.25	0.05	0.01	0.09	
G - 28	P 0.3	24	46	172	142	<	<	9	<	<	9.3	15	29	51	<	3	429	6	<	4	11	1	<	0.42	0.01	25%	0.01	0.01	0.01	0.10	
G - 29	P 0.7	42	29	224	948	<	<	21	<	<	2.0	7	38	230	<	43	297	232	8	42	1	2	0.01	1.62	0.03	3.77	0.14	0.04	0.01	0.21	
G - 30	P 0.1	40	23	103	34	<	<	4	<	<	1.6	16	30	136	<	29	71	472	11	13	1	2	0.02	1.71	0.07	3.77	0.45	0.05	0.01	0.06	
G - 31	P 0.2	26	21	68	<	<	<	2	<	<	1.0	14	21	127	<	23	41	1486	8	9	1	1	0.01	1.22	0.05	3.03	0.25	0.05	0.01	0.10	
G - 32	P <	17	22	96	<	<	<	2	<	<	0.7	10	25	472	<	28	47	392	13	13	1	2	0.02	1.70	0.14	2.74	0.53	0.05	0.01	0.06	
G - 33	P <	20	27	50	<	<	<	3	<	<	0.7	5	10	208	<	16	37	176	8	13	<	1	0.01	0.85	0.03	2.89	0.15	0.04	0.01	0.07	
G - 34	P <	39	32	107	<	<	<	4	<	<	1.8	15	35	241	<	28	48	546	11	11	1	2	0.02	1.79	0.07	3.83	0.43	0.05	0.01	0.05	
G - 35	P 0.1	25	26	90	32	<	<	7	<	<	1.5	10	19	240	<	28	55	378	10	9	1	1	0.02	1.72	0.05	3.42	0.35	0.05	0.01	0.06	
M - 01	P 0.2	48	44	131	32	<	<	2	<	<	1.1	10	27	217	<	6	36	268	6	13	5	3	<	0.34	0.01	7.14	0.02	0.04	0.01	0.04	
M - 02	P 0.6	7	39	15	19	<	<	7	<	<	0.7	2	5	59	<	2	32	62	3	10	7	1	<	0.12	<	3.11	0.01	0.40	0.02	0.03	
M - 03	P 1.1	6	75	4	30	12	<	2	<	<	0.5	<	3	154	<	3	111	13	5	27	8	1	<	0.13	<	2.04	<	0.23	0.01	0.03	
S - 01	P 0.4	24	30	47	1.8%	<	<	49	<	<	<	13	14	89	<	7	335	6514	18	<	6	12	1	<	3.17	0.01	21%	<	0.01	0.01	3.36



**CERTIFICATE OF ANALYSIS**  
**iPL 00I1166**

INTERNATIONAL PLASMA LABORATORY LTD.

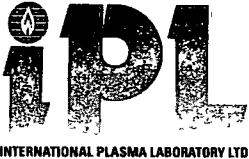
Client : Northern Analytical Laboratories  
Project: W.O. 00131

**78 Samples**  
78=Pulp

Out: Sep 25, 2000 Page 2 of 2  
In : Sep 11, 2000 Section 1 of 1

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %	
S - 02	P 1.0	33	19	353	7352	<	<	77	<	<	<	12	<	38	<	84	4299	67	<	3	9	3	< 6.90	0.01	19%	0.01	0.01	0.01	0.19		
S - 03	P 2.4	45	44	263	1196	<	<	6	71	<	<	1.4	7	21	386	<	164	1162	80	8	21	8	5	0.03	2.15	0.03	13%	0.15	0.04	0.01	0.23
S - 04	P 0.4	67	32	149	255	<	<	31	<	<	<	1.5	10	27	1471	<	22	101	468	5	9	1	3	0.01	0.65	0.02	4.83	0.10	0.03	0.01	0.05
S - 05	P 1.3	46	34	87	234	<	<	14	<	<	<	11	2	32	<	156	1037	64	<	16	8	2	< 1.06	0.01	20%	0.06	0.04	0.01	0.53		
S - 06	P 0.7	53	32	271	401	<	<	9	<	<	<	7.0	18	52	81	<	104	1501	142	<	28	10	<	< 1.38	0.32	22%	0.06	0.02	0.01	0.60	
S - 07	P 2.5	37	66	68	98	8	<	36	<	<	<	1.1	8	16	744	<	23	110	287	11	78	1	2	0.01	0.67	0.02	4.16	0.11	0.07	0.02	0.11
S - 08	P 0.2	70	22	136	<	<	<	5	<	<	<	1.6	21	42	265	<	27	41	1097	7	46	1	3	< 0.86	0.29	4.09	0.31	0.07	0.02	0.08	
S - 09	P 0.3	35	26	146	19	<	<	10	<	<	<	2.1	17	18	51	<	8	44	463	<	10	9	1	< 1.07	0.04	21%	0.07	0.04	0.01	0.10	
S - 10	P <	74	26	622	279	<	<	8	<	<	<	2.6	45	92	517	<	23	143	1567	7	41	4	3	0.01	2.18	0.26	8.12	0.25	0.07	0.01	0.15
S - 11	P 0.2	73	23	1116	151	<	<	6	<	<	<	3.5	59	140	688	<	21	86	1600	8	49	5	3	0.01	3.05	0.46	7.19	0.28	0.06	0.01	0.15
S - 12	P 0.3	28	46	57	<	<	<	1	<	<	<	0.8	13	29	140	<	9	15	458	13	24	2	2	< 0.51	0.63	2.59	0.14	0.07	0.01	0.07	
S - 13	P 0.3	34	55	73	<	<	<	1	<	<	<	1.0	14	30	189	<	11	14	601	9	33	3	2	< 0.69	0.67	2.80	0.28	0.06	0.01	0.07	
S - 14	P 0.2	62	24	754	87	<	<	5	<	<	<	3.0	43	117	612	<	20	68	1393	8	39	4	3	0.01	1.90	0.43	5.59	0.32	0.05	0.01	0.11
S - 15	P 0.2	56	25	835	58	<	<	3	<	<	<	3.7	44	131	650	<	19	56	1085	8	46	4	3	< 1.81	0.61	4.84	0.35	0.06	0.01	0.10	
S - 16	P <	12	41	20	5	<	<	7	1	<	<	0.9	9	17	330	<	185	5	575	6	4	1	1	< 0.28	0.04	2.49	0.02	0.04	0.01	0.02	
S - 17	P 0.1	20	129	58	<	<	<	4	<	<	<	1.0	7	15	166	<	23	59	257	8	10	1	1	0.01	1.39	0.03	3.44	0.19	0.04	0.01	0.03
S - 18	P 1.9	72	120	281	22	<	<	10	<	<	<	4.4	15	85	152	<	18	60	653	6	33	3	3	0.01	2.70	0.09	3.82	0.14	0.06	0.02	0.09
S - 19	P 0.6	60	23	239	399	<	<	48	<	<	<	1.3	8	54	862	<	24	173	87	7	20	6	5	0.01	0.56	< 4.69	0.02	0.03	0.01	0.06	
S - 20	P 1.5	110	16	134	<	<	<	5	<	<	<	3.1	11	28	13	<	12	27	450	5	12	9	3	< 11%	0.02	1.66	0.08	0.07	0.02	0.05	
S - 21	P 0.4	40	25	77	<	<	<	5	<	<	<	1.0	7	23	564	<	23	35	390	7	21	1	2	< 0.99	0.20	2.59	0.22	0.07	0.01	0.08	
S - 22	P 0.1	46	30	113	17	<	<	3	<	<	<	1.5	18	42	198	<	19	75	510	6	9	3	2	< 0.69	0.03	4.78	0.22	0.03	0.01	0.07	
R - 01	P <	19	21	56	705	<	<	7	<	<	<	7	9	22	<	98	1076	17	<	90	4	< 0.01	0.24	0.01	15%	0.01	1.31	0.01	0.48		
R - 02	P <	13	10	46	10	<	<	1	<	<	<	0.5	7	11	427	<	183	18	701	<	5	< 1	< 0.16	< 1.05	0.05	0.03	0.01	0.01			
R - 05	P <	5	12	9	<	<	<	1	<	<	<	2	0.5	1	4	1203	<	149	4	111	<	30	3	1	< 0.07	2.83	0.51	1.09	0.04	0.01	0.01
R - 06	P <	11	14	21	<	<	<	1	<	<	<	0.7	5	10	1631	<	201	3	246	3	7	3	1	< 0.07	0.14	1.35	0.06	0.03	0.01	0.01	
R - 07	P <	21	5	38	<	<	<	2	<	<	<	0.5	5	12	502	<	345	6	1008	<	3	1	1	< 0.43	0.02	1.52	0.17	0.02	0.02	0.01	
R - 08	P <	37	25	134	<	<	<	3	<	<	<	2.3	16	36	1537	<	108	23	6080	2	9	4	7	< 2.46	0.71	5.65	0.99	0.02	0.01	0.01	
R - 09	P <	37	32	29	<	<	<	2	<	<	<	0.9	10	26	12	<	129	7	201	<	7	6	2	< 0.30	0.04	5.29	0.05	0.07	0.01	0.02	
R - 12	P 0.1	5	6	2	6	<	<	3	<	<	<	0.1	1	1	1258	<	21	42	13	<	35	4	4	< 0.16	< 0.08	< 0.03	0.01	<	< 0.03	0.01	
R - 13	P <	12	8	58	<	<	<	2	<	<	<	0.9	4	14	1244	<	139	4	988	3	50	2	1	< 0.09	3.01	2.49	0.12	0.04	0.01	0.01	
R - 14	P <	15	14	21	<	<	<	1	<	<	<	0.6	7	19	1496	<	97	6	396	3	40	3	3	< 0.16	2.42	1.84	0.70	0.08	0.01	0.02	
R - 16	P <	3	5	28	<	<	<	3	<	<	<	0.1	4	14	1544	<	57	9	835	2	70	4	2	< 0.08	12%	3.59	1.84	0.02	0.01	<	
R - 17	P <	16	2	16	<	<	<	1	<	<	<	0.4	4	13	1510	<	82	10	484	2	5	1	1	< 0.35	0.11	0.59	0.31	0.02	0.01	0.01	
R - 18	P 3.0	4	13	12	463	7	<	38	<	<	<	2	12	67	<	218	241	24	11	163	4	14	14	< 0.90	0.10	6.51	0.06	0.20	0.01	2.95	
R - 20	P <	1	<	2	<	<	<	4	<	<	<	1	1	1616	<	11	3	757	<	70	6	<	< 0.04	38%	0.61	0.10	0.01	0.01	0.02		
R - 21	P <	5	10	43	<	<	<	1	<	<	<	0.3	2	6	1224	<	142	2	274	<	8	2	<	< 0.05	1.05	0.48	0.03	0.02	0.01	0.01	
R - 24	P <	7	9	21	<	<	<	1	<	<	<	0.6	7	13	1088	<	99	8	596	3	10	7	1	< 0.11	0.14	2.71	0.05	0.06	0.01	<	
R - 25	P 0.5	4	10	3	15	<	<	3	<	<	<	1	2	1887	<	17	74	9	3	8	6	1	< 0.21	0.03	0.14	0.02	0.09	0.01	0.01		
R - 27	P 0.4	2	14	2	6	<	<	9	<	<	<	0.2	1	1	416	<	20	11	27	5	3	9	<	< 0.18	0.01	0.25	0.02	0.10	0.01	<	

No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck max 1000 %Estimate %NS=>Sample Ref



Northern Analytical Laboratories

Project : W.O. 00131  
 Shipper : Norm Smith  
 Shipment: PO#: 176746  
 Analysis:  
 ICP(Multi-Acid)30 in ppm

Comment:

## Document Distribution

1 Northern Analytical Laboratories  
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## CERTIFICATE OF ANALYSIS

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[116515:27:37:00092600]

9 Samples

Out: Sep 26, 2000 In: Sep 11, 2000

CODE B31100	AMOUNT 9	TYPE Pulp	PREPARATION DESCRIPTION Pulp received as it is, no sample prep.	PULP		REJECT
				NS=No Sample	Rep=Replicate	12M/Dis
<b>Analytical Summary</b>						
#	Code	Method	Units	Description	Element	Limit
01	0751	ICPM	ppm	A1 ICP(Multi-Acid)	Aluminum	100
02	0752	ICPM	ppm	Sb ICP(Multi-Acid)	Antimony	5
03	0753	ICPM	ppm	As ICP(Multi-Acid)	Arsenic	5
04	0754	ICPM	ppm	Ba ICP(Multi-Acid)	Barium	2
05	0755	ICPM	ppm	Bi ICP(Multi-Acid)	Bismuth	2
06	0757	ICPM	ppm	Cd ICP(Multi-Acid)	Cadmium	0.1
07	0758	ICPM	ppm	Ca ICP(Multi-Acid)	Calcium	100
08	0759	ICPM	ppm	Cr ICP(Multi-Acid)	Chromium	1
09	0760	ICPM	ppm	Co ICP(Multi-Acid)	Cobalt	1
10	0761	ICPM	ppm	Cu ICP(Multi-Acid)	Copper	1
11	0762	ICPM	ppm	Fe ICP(Multi-Acid)	Iron	100
12	0763	ICPM	ppm	La ICP(Multi-Acid)	Lanthanum	2
13	0764	ICPM	ppm	Pb ICP(Multi-Acid)	Lead	2
14	0765	ICPM	ppm	Mg ICP(Multi-Acid)	Magnesium	100
15	0766	ICPM	ppm	Mn ICP(Multi-Acid)	Manganese	1
16	0782	ICPM	ppm	Hg ICP(Multi-Acid)	Mercury	3
17	0767	ICPM	ppm	Mo ICP(Multi-Acid)	Molybdenum	1
18	0768	ICPM	ppm	Ni ICP(Multi-Acid)	Nickel	1
19	0769	ICPM	ppm	P ICP(Multi-Acid)	Phosphorus	100
20	0770	ICPM	ppm	K ICP(Multi-Acid)	Potassium	100
21	0786	ICPM	ppm	Sc ICP(Multi-Acid)	Scandium	1
22	0771	ICPM	ppm	Ag ICP(Multi-Acid)	Silver	0.1
23	0772	ICPM	ppm	Na ICP(Multi-Acid)	Sodium	100
24	0773	ICPM	ppm	Sr ICP(Multi-Acid)	Strontium	1
25	0797	ICPM	ppm	Tl ICP(Multi-Acid)	Thallium	2
26	0776	ICPM	ppm	Tl ICP(Multi-Acid)	Titanium	100
27	0777	ICPM	ppm	W ICP(Multi-Acid)	Tungsten	5
28	0779	ICPM	ppm	V ICP(Multi-Acid)	Vanadium	2
29	0780	ICPM	ppm	Zn ICP(Multi-Acid)	Zinc	1
30	0781	ICPM	ppm	Zr ICP(Multi-Acid)	Zirconium	1

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\* Our liability is limited solely to the analytical cost of these analyses.

PC Certified Assayor David Chiu



## **CERTIFICATE OF ANALYSIS**

**INTERNATIONAL PLASMA LABORATORY LTD.**

Client : Northern Analytical Laboratories  
Project: W.O. 00131 →

## 9 Samples

[116515:27:37:00092600]

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Vancouver, B C  
Canada V5Y 3E1  
Phone (604) 879-7878  
Fax (604) 879-7898

Out: Sep 26, 2000 Page 1 of 1  
In : Sep 11, 2000 Section 1 of 1

Sample Name	A1 ppm	Sb ppm	As ppm	Ba ppm	B1 ppm	Cd ppm	Ca ppm	Cr ppm	Co ppm	Cu ppm	Fe ppm	La ppm	Pb ppm	Mg ppm	Mn ppm	Hg ppm	Mo ppm	Ni ppm	P ppm	K ppm	Sc ppm	Ag ppm	Na ppm	Sr ppm	Tl ppm	T1 ppm	W ppm	V ppm	Zn ppm	Zr ppm		
R - 03	P	1354	<	<	6095	<	1.7	7460	3	3	6	1142	<	6	4677	24	<	2	2	<	187	<	<	<	196	<	<	<	44	24	2	
R - 04	P	1723	<	8	5807	<	9.5	6220	23	5	28	3805	<	5	3856	98	<	1	19	<	168	<	<	<	127	331	<	<	33	141	3	
R - 10	P	10353	<	6	5939	<	0.2	<	12	3	2	542	3	7	130	30	<	1	2	<	522	<	<	<	309	247	<	463	<	129	5	15
R - 11	P	5985	<	<	8525	<	0.3	<	71	4	3	1013	<	5	<	14	<	1	3	190	220	<	<	<	187	86	<	168	<	9	10	7
R - 15	P	17810	<	12	4613	<	0.4	409	23	4	4	1532	5	17	868	13	<	3	2	<	4064	2	<	<	480	227	<	951	<	309	5	23
R - 19	P	11883	<	5	5991	<	<	110	13	3	2	881	3	7	<	6	<	1	2	359	422	<	<	<	430	172	<	526	<	118	5	17
R - 22	P	7363	<	<	8249	<	0.3	264	64	4	2	959	2	5	<	12	<	1	2	291	131	<	<	<	222	109	<	213	<	19	17	8
R - 23	P	1233	<	<	5772	<	0.7	2557	5	2	4	524	<	5	1406	17	<	4	<	172	<	<	<	101	268	<	<	<	46	29	2	
R - 26	P	13494	<	10	6675	<	0.8	<	37	4	5	775	3	7	366	6	1942	2	<	154	1643	1	<	<	452	81	<	600	<	266	6	16



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Whitehorse, Yukon  
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E-mail: NAL@hypertech.yk.ca

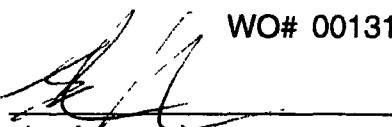
27/11/2000

Certificate of Analysis

# of pages (not including this page): 1

Anne Bordeleau

WO# 00131a

Certified by   
Justin Lemphers (Senior Assayer)

Date Received: 14/11/2000

**SAMPLE PREPARATION:**

Code	Samples	Type	Preparation Description (All wet samples are dried first.)
p	9	pulp	No further preparation

**ANALYTICAL METHODS SUMMARY:**

Symbol	Units	Element	Method (A:assay) (G:geochem)	Fusion/Digestion	Lower Limit	Upper Limit

1000ppb = 1ppm = 1g/mt = 0.0001% = 0.029166oz/ton



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**Northern Analytical Laboratories**

Project : W.O. 00131

Shipper : Norm Smith

Shipment: PO#: 176746

**Analysis:**

Re Job#001165

Ba(Fusion)ICP

**Comment:****CERTIFICATE OF ANALYSIS****iPL 00K1541**

2036 Columbia Street

Vancouver, B.C.

Canada V5Y 3E1

Phone (604) 879-7878

Fax (604) 879-7898

Email ipl@direct.ca

[154113:36:30:00112100]

**9 Samples**

Out: Nov 21, 2000 In: Nov 14, 2000

CODE	AMOUNT	TYPE	PREPARATION DESCRIPTION	PULP	REJECT
B31100	9	Pulp	Pulp received as it is, no sample prep.	12M/D1s	00M/D1s
				NS=No Sample	Rep=Replicate

**Analytical Summary**

##	Code	Method	Units	Description	Element	Limit	Limit
01	0104	AsyFus	%	Ba by Fusion/Gravimetric in %	Barium	0.01	100.00

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Phone (604) 879-7878  
Fax (604) 879-7898  
Email ipl@direct.ca9 Samples  
9=PulpOut: Nov 21, 2000  
[154113:36.30:00112100] In : Nov 14, 2000Page 1 of 1  
Section 1 of 1

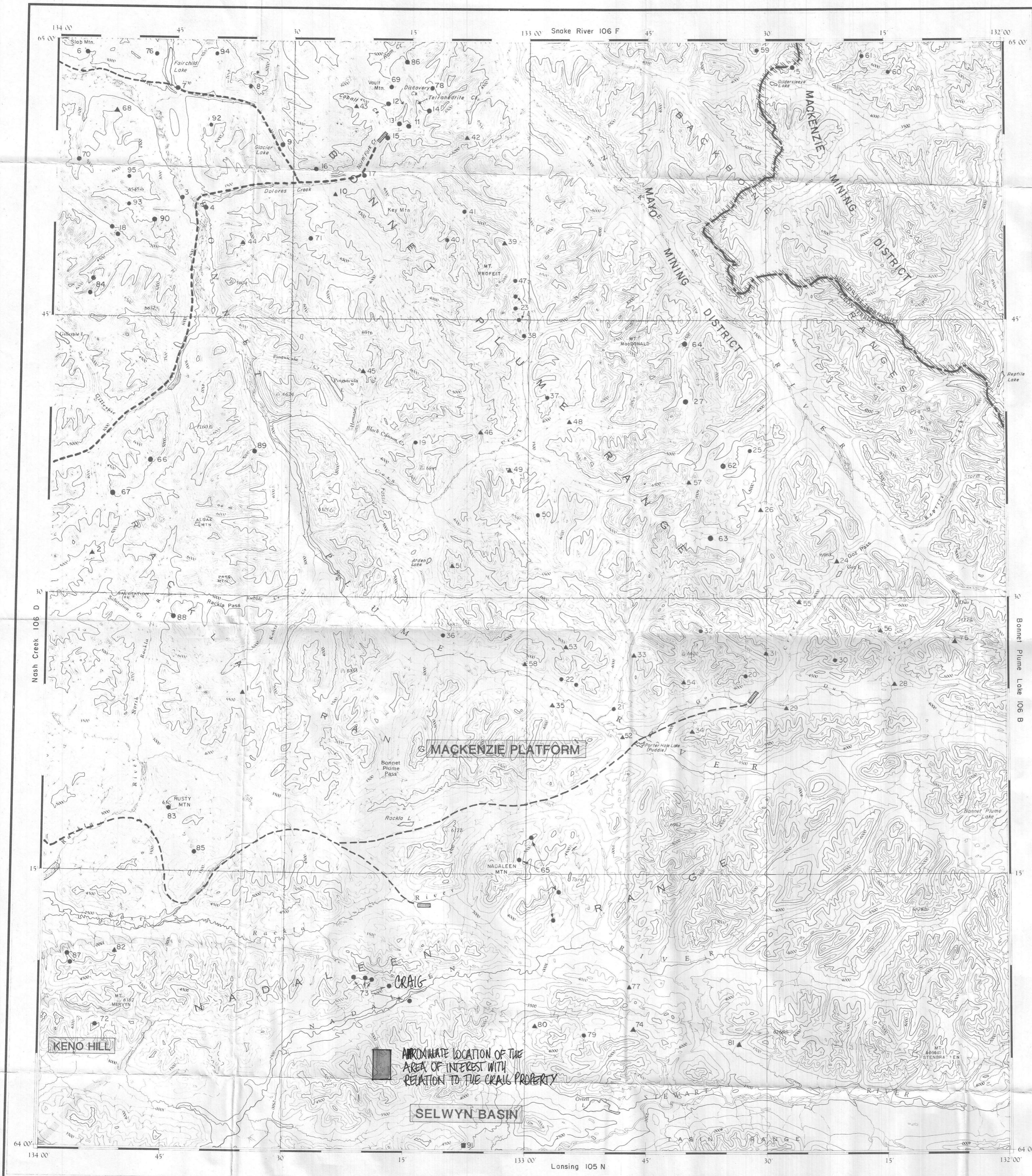
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R - 04	Pulp	44.79
R - 10	Pulp	40.12
R - 11	Pulp	29.67
R - 15	Pulp	39.48
R - 19	Pulp	38.93
R - 22	Pulp	38.66
R - 23	Pulp	56.75
R - 26	Pulp	36.75

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[REDACTED]

**REFERENCE**

- Highway .....
- Tote trail.....
- Winter trail.....
- Airstrip (length if known).....
- Historic site or recreation area.....
- Mining district boundary.....
- Territorial boundary.....
- Microwave tower.....

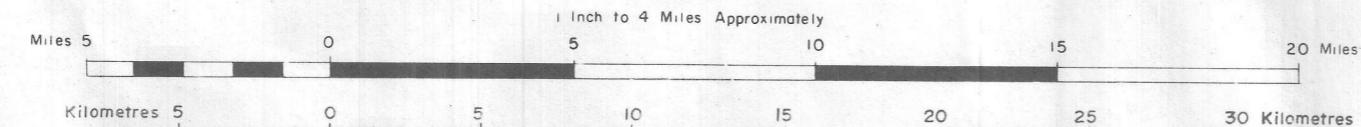
YUKON MINFILE

REVISED TO AUGUST, 1992

# 106 C

## NADALEEN RIVER

SCALE 1:250,000

**ACCURACY OF LOCATION**

- Within 1/2 mile .....
- 1/2 to 2 miles .....
- Less than 2 miles .....

**CLASSIFICATION OF DEPOSITS**

Vein .....	Vein	Form .....	Formation
Skn .....	Skarn	Vol .....	Volcanogenic
Ppy .....	Porphyry	CBL .....	Copper in basic lava
Mag .....	Magmatic	Un .....	Uncertain
Placer occurrences			

These classifications are discussed at the beginning of the metals index

2-20  
\$2.002000-085  
part 1



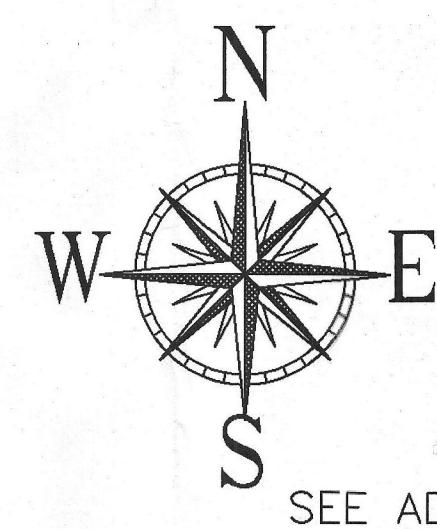
## NOTICE

THIS MAP IS ISSUED AS A PRELIMINARY GUIDE FOR WHICH THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT WILL ACCEPT NO RESPONSIBILITY FOR ANY ERRORS, INACCURACIES OR OMISSIONS WHATSOEVER.

MAYO MINING DISTRICT

NOVEMBER 19, 1999

## SHEET 106C-3


SCALE  $\frac{1}{8}$  MILE TO 1 INCH  
FT 1500 0 1500 3000 4500 6000 7500 9000 10500 FT

SEE ADJACENT MAP SHEET(S) EDGES  
FOR ADJOINING MINERAL CLAIMS  
NOT SHOWN ON THIS MAP

106C-5	106C-6	106C-7
106C-4	106C-3	106C-2
105N-13	105N-14	105N-15

NND = FIRST NATION OF NACHO NYAK DUN

Note Entry on certain lands is withdrawn from staking  
in cross-hatched areas to facilitate the settlement  
of Native Land Claims without prejudice to Existing  
Surface and Subsurface Rights.



## **Summary**

The Kirkland Creek area (115 H/09) platinum project was initiated in an attempt to locate a source of platinum group metals (PGM) in the area around Florence Creek where PGMs have been found in placer deposits. In 1991, S.B. Ballantyne et al. presented microprobe analysis and scanning electron microscope (SEM) images of 12 PGM grains from Florence Creek. Preliminary conclusions from grain and inclusion analyses suggested that Cu sulfides, Fe and silicates in host rocks may be associated with a potential source of platinum group element (PGE) enrichment.

With reference to this, up-ice magnetite showings as well as magnetic highs defined in a 1966 GSC aeromagnetic survey were investigated in the fall of 2000. A total of 8 claims into two groups (CATHCART and PORC-EPIC), in proximity or covering these anomalies, were staked in October 2000. While no potential PGE sources have yet been identified, work is on-going and reconnaissance prospecting is being extended to cover the Florence Creek area itself (115 H/16).

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## Introduction

This report was prepared in partial requirement of the Yukon Mining Incentive Program grant #00-085 agreement.

Exploration work consisted of prospecting and geochemical sampling in the Kirkland Creek area (NTS 115H/09) in search of possible PGE sources for Florence Creek placer PGMs identified by Ballantyne (1991).

## Location and Access

The Kirkland Creek Area project with its Cathcart and Porc-Epic claims, is located in the Whitehorse Mining District at latitude 61°37'N and longitude 136°11'W, on NTS map sheet 115 H/09. Work is also now in progress closer to Florence Creek on NTS map sheet 115 H/16. The area lies approximately 25 air miles SW of Carmacks (Fig. 1).

While helicopter accessible year round, various ATV and snowmobile friendly trails and bush roads lead to different sections of the area.

One such access, leading to Florence Creek from the North, is a trail off the Mt. Nansen Rd. just outside of Carmacks. Stretching over 25 sinuous miles, the trail crosses several creeks and challenging variations in elevation, especially when unbroken in the winter. A series of ponds and swampy terrain approximately 2 miles north of Florence Creek over at least a half mile of trail, further complicate winter access with overflow.

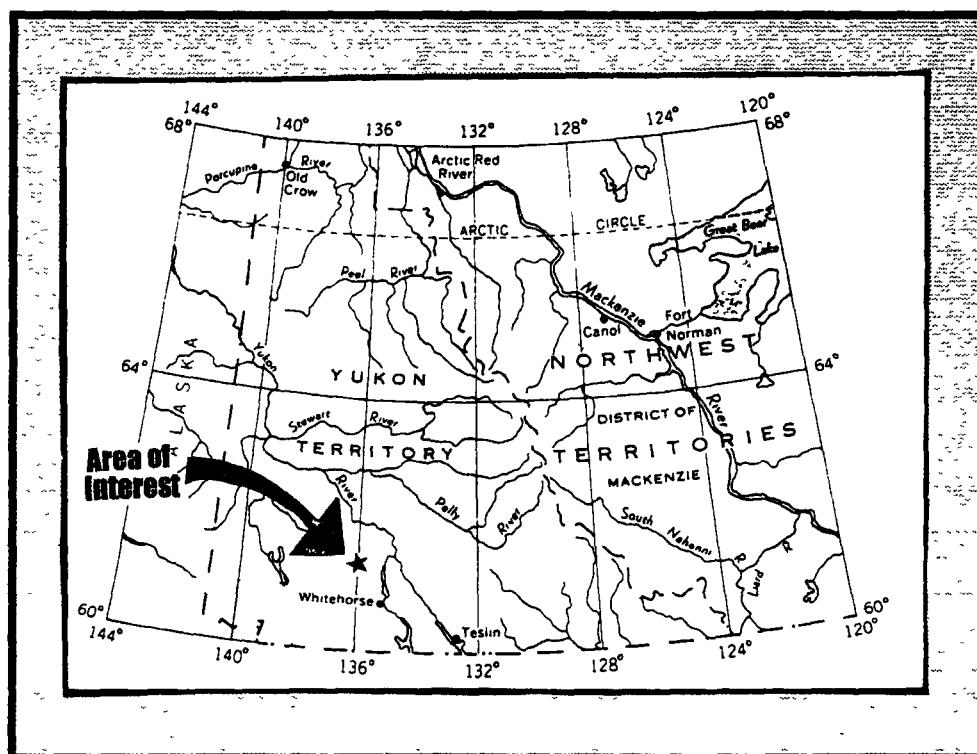


Figure 1. Project Location

Another road, this one to the southern portion of the project area, leaves the Klondike Highway 2km north of the Twin Lakes Campground. This road was built in 1965 to access the Mack Copper claims where the Cathcart claims now stand. While the crossings at Klusha Creek and the Nordenskiold River are gone, this bush road is easily negotiable by ATV or snowmobile.

### **Physiography and Vegetation**

The Kirkland Creek area is comprised of low ridges, approximately 4000ft high, cut by canyons often around 500ft deep. The otherwise moderate relief is characteristic of the closed spruce-hardwood forest of boreal regions: mature aspen and cottonwood (*Populus* sps.), paper birch (*Betula papyrifera*), white spruce (*Picea glauca*) and some lodgepole pine (*Pinus contorta*). Creeks and wetter sites are vegetated by willow (*Salix* sps.), alder (*Alnus* sps.) and resin birch (*Betula glandulosa*) thickets. South-facing, sandy slopes are home to aspen (*Populus* sp.), juniper (*Juniperus* sps.) and cinquefoil (*Potentilla* sps.).

Some of the rare outcrops in the area bear evidence of NW glacial movement in the form of striations. Approximately 80% of the ground explored so far is covered by overburden.

### **Property**

The Cathcart and Porc-Epic claims (Fig. 2), are located in NTS 115 H/09, Whitehorse Mining District, centered at 61°37'N and 136°11'W. The following claims (Table 1) have been recorded in the name of Ron Berdahl:

Table 1: Claim Status

Claim Name	Record No.	# of Claims	Claim Sheet	Expiry Date
CATHCART 1-4	YC18893 to YC18896	4	115 H/09	02/10/2001
PORC-EPIC 1-4	YC18897 to YC18900	4	115 H/09	02/10/2001

### **History**

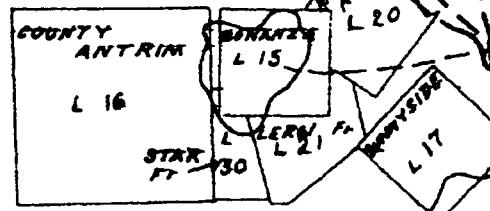
#### **I Porc-Epic Claims**

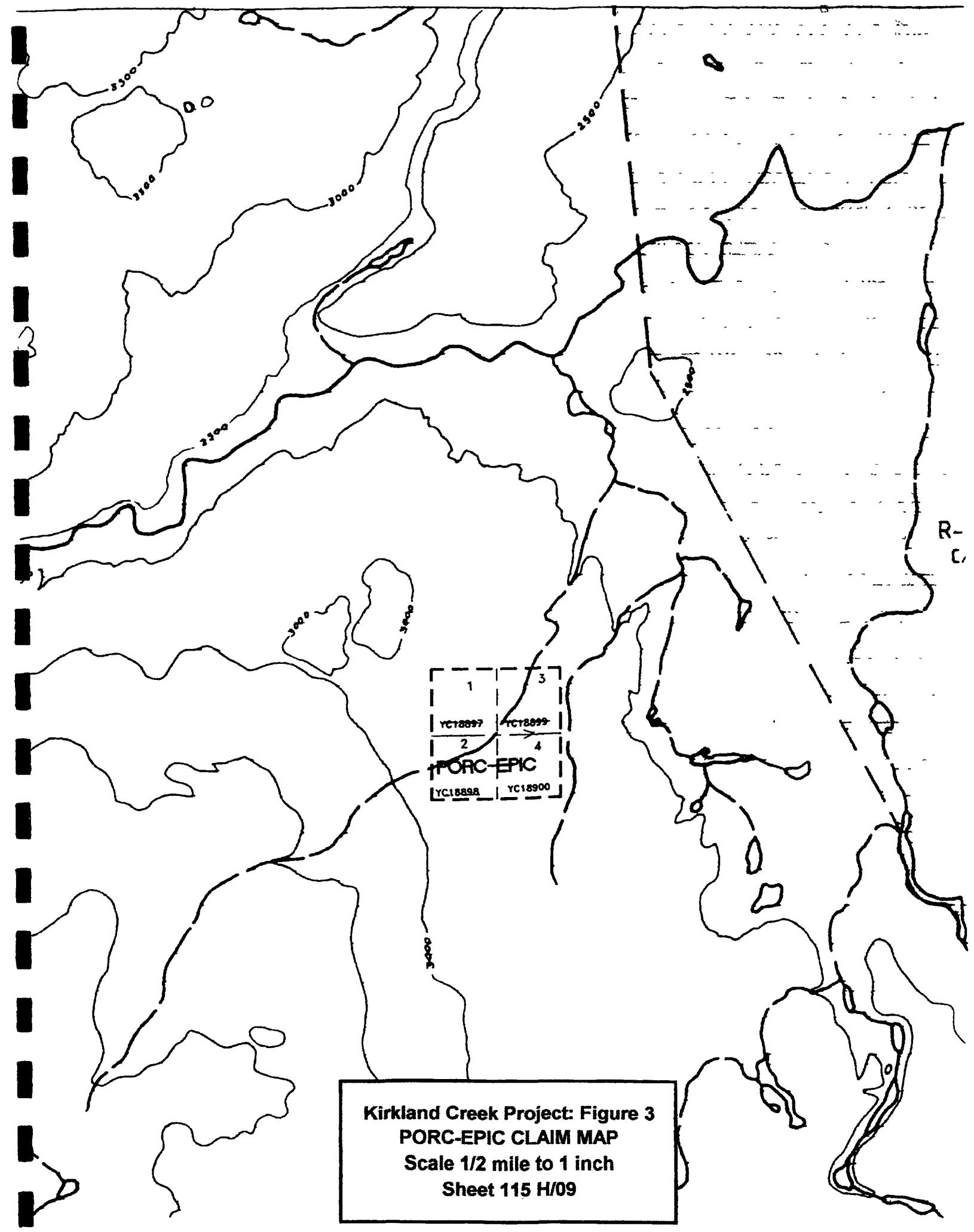
The Porc-Epic claims were previously staked as 3 blocks of AH claims (Y1169) in November 1966 by Empress Mining Ltd, following the release of GSC aeromagnetic data and reconnaissance geochemistry. The major metal commodity was copper. The claims overlaid a small 200 gamma anomaly underlain by Mt Nansen volcanics (Minfile 115H-006)

#### **II Cathcart Claims**

The area adjacent to the Cathcart claims was staked as the Ranch, Eaglenest, Bear, etc, by H J Kline in 1904 and restaked by Mack Brothers who had drilled there prior to 1908. Six of these

**Kirkland Creek Project: Figure 2**  
**CATHCART CLAIM MAP**  
Scale 1/2 mile to 1 inch  
Sheet 115 H/09





claims were leased by I. Goulter around 1910 and, while apparently idle until the mid-40's, when they were staked by a J.A. Smith as the Coppermine. They were later optioned to Newmont in 1960, along with Mac, Extension and Rust claims which had been restaked by G. Dickson that year. The leases were optioned again in 1964 by Arctic Mining & Exploration who staked the Saan claims (90944) and conducted a mag survey. Arctic also staked the Grace, Emily, Joyce, etc claims (91679) and built the winter road which was used to access the present day Cathcart claims, and drilled 4 holes totaling 262m. Alice Lake Mining Ltd. restaked the area surrounding the lease as Joe and Hg claims (Y3135) in 1966 and conducted trenching and a geochemical survey. These were later restaked as Saan claims again (Y38271) by D. McLean in 1969 and Alp claims (Y61109) in 1971 by Arsenault and Ass. Finally, in 1972, the area was explored by South Yukon joint Venture and transferred to BA Copper Mining Ltd. In 1975 who drilled just over 300m.

## Geology

### I. Regional

According to Tempelman-Kluit (1974), the area is underlain by porphyritic quartz monzonite granitoid rocks and by hornblende granodiorite, especially near Florence Creek. Massive green volcanics in the form of epidotized basalts are also predominant of the few outcrops visible in the area which is otherwise thickly covered by glacial and glaciofluvial deposits. Studies by Hughes (1989) have shown that these deposits were of McConnell age. One other rock type, identified just north of the Cathcart claims, is an approximately 200m long eroding outcrop consisting of conglomerate. Thought to be a remnant of Jurassic Laberge Group or Tertiary Carmacks Group (Cathro, 1972), its sandy matrix binds together green volcanics, basalt-like cobbles and chert and quartz pebbles.

### II. Local

Few characteristically dark-green, metavolcanic outcrops typify the Cathcart and Porc-Epic claims. A conservative estimate of 80% overburden coverage is adequate for the area and is probably underlain by Triassic Mt. Nansen volcanics.

## Prospecting and Geochemical Survey Results and Discussion

The 2000 sampling and prospecting program failed to identify a potential source for PGEs in the Kirkland Creek area. The highest running sample for any element excluding Fe, was R-09, (3.0% Cu), a pyritized malachite float that also returned the highest Au result (1282 ppb), but only 15 ppb Pt. The highest Pt (31 ppb) result was D-06, a soil sample collected 600m NE of the Cathcart claims and returning 224 ppm Cu. D-08, a soil sample from the scree below the conglomerate, returned the only noticeable value for Mo (353 ppb). The highest Pd result (33 ppb) belonged to R-002 which also returned the only Bi (1647 ppm) content. Correlation ( $n=21$ ) is practically nil for Cu:Pt (-0.01), Cu:Pd (-0.13), Fe:Pt (-0.28), Fe:Pd (-0.83), Au:Pt (0.04), and Au:Pd (-0.03). None of the Porc-Epic claim area samples returned favourable results for any element.

Syenite stock on leased claims were not investigated but may be similar in geology to the Maple Leaf Property in BC (BC MEM, 2000) where Pt is associated with chalcopyrite. The Galore Creek alkalic Cu/Au porphyry in BC is hosted in multi-aged syenite, some of which have bornite-rich subzones. Galore Creek is found in Stikinia Terrane as is much of the Kirkland Creek area.

Ballantyne (1991) resolved that inclusions in Pt/Fe grains potentially point to the source of Florence Creek placer PGMs, to comprise all Fe/Cu showings, especially those with bornite. None of the latter were discovered in 2000.

Bill Lebarge's work (personnel communication, 2001) at Florence creek suggests the presence of a local PGE source, since pan contents from the creek are 50% ultramafic, while the creek bed itself is granitic. While the 2000 prospecting program did not determine a source of PGE in magnetite skarn or malachite showings, this confirmation of a probable local origin encourages future exploration plans.

### **Conclusion and Recommendation**

The gravels at Florence Creek yield large amounts of magnetite with fine gold and Pt/Pd grains. No obvious source exists *in situ*. The Kirkland Creek area project's initial goal was to examine up-ice Cu/Fe skarn and magnetic highs as potential sources of PGEs. Preliminary work has not led to the discovery of Pt/Pd in even the most obvious skarn area, traditionally known as Mack Copper.

The investigation has however pointed to several new sites warranting further exploration:

- ⇒ Cu/Fe skarns with an emphasis on sampling chalcopyrite-rich specimens
- ⇒ Unstaked magnetic high SE of Florence Creek
- ⇒ Alkalic intrusives with Cu signatures, as in the Franklin camp and the one near Mack Copper
- ⇒ The magnetic highs between Kirkland Creek and Florence Creek, specifically targetting pyroxene-rich/ultramafic zones.
- ⇒ The creek at the Porc-Epic claims should also be panned for PGEs as its geochemical and magnetic signatures are similar to the tributary of Florence Creek which yields PGE.

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- Hughes, O.L., 1989. *Surficial Geology: Little Buffalo Lake, Yukon Territory*, Geological Survey of Canada, Map 23-1987, Scale 1:100 000.
- Templeman-Kluit, D.J., 1974. *Reconnaissance geology of Aishihik Lake, Snag and Part of Stewart River Map Areas, West Central Yukon*, Geological Survey of Canada, Paper 73-41.
- Yukon Minfile 115 H-006

**Statement of Qualifications**

I, Anne Bordeleau, hereby certify that:

1. I am a prospector and geological assistant and have earned my living as such since 1994, for myself and various exploration companies in the Northwest Territories, Nunavut, Alberta and the Yukon.
2. I have completed the Advanced Prospecting Course at the Yukon Chamber of Mines in 1998.

Respectfully submitted,



Anne Bordeleau

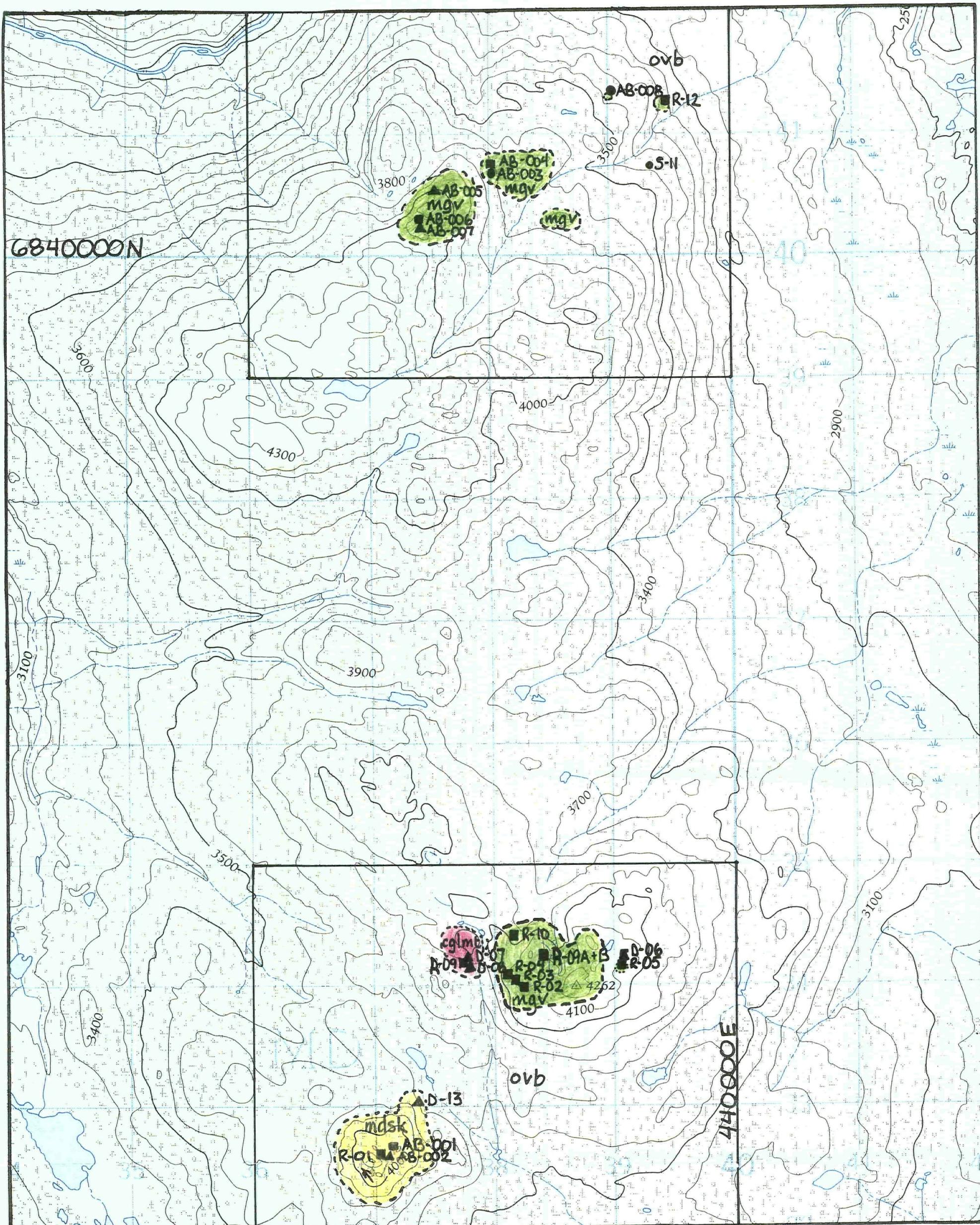
January 20 2001.

## **Statement of Costs**

Analytical Services (NAL)	\$ 935 00
Helicopter Travel (TransNorth Helicopter)	\$ 1429 52
Labour (Field Assistant Ron Berdahl), 8 days @ \$150 00	\$ 1200 00
Daily Living Expenses 16 persondays @ \$35 00	\$ 560 00
Total	\$ 4124 52

---

**APPENDIX I**  
Geology and Sample Location Map



YMIP#00-085b  
**KIRKLAND CREEK AREA**  
**GEOLOGY & SAMPLE LOCATION MAP**  
**115 H/09**  
**Scale: 1: 25 000**

**Geology Legend**

- [red square] cglmt conglomerate, Lebarge or Carmacks Group
- [green square] mgy massive green volcanics
- [yellow square] mdsk magnetite-diopside skarn
- [black square] ovb McConnell age glaciofluvial deposit
- [black arrow] glacial striae

**Sample Legend**

- Rock
- Soil
- ▲ Stream Sediment

**APPENDIX II**  
Sample Description  
2000 Assay Results

Sample #	Type	Description	UTM
AB-001	rock	outcrop, magnetite, red-stained	437187E 6832679N
AB-002	soil	brown, @ 20cm depth, silt size.	437162E 6832675N
AB-003	str.sed.	brown silt & clay w/ coarser white sand of light density	438062E 6840713N
AB-004	rock	grst outcrop w/ disseminated py & yellow limonization	438025E 6840737N
AB-005	soil	reddish brown, on small 5X%m kill zone, @ 20cm	437573E 6840552N
AB-006	rock	greenstone float w/ pyrite & silver/grey mineral, on kill zone	437421E 6840350N
AB-007	soil	red/orange on 7X15m killzone, @ 20cm depth	437425E 6840342N
AB-008	str.sed	sed from W-springing stream, beige/brown w/ magnetite	439014E 6841320N
R-00-H9-01	rock	rusty volc. outcrop,w/ pyrrh, almost skarn-like, magnetic	437165E 6832670N
R-00-H9-02	rock	qtzte w/ py, ap?	438262E 6833996N
R-00-H9-03	rock	gst w/ minor py & major apy	438189E 6834025N
R-00-H9-04	rock	limonitic rock, vuggy volc., float from old cat trench	438192E 6834050N
R-00-H9-05	rock	basalt-like outcrop	439102E 6834229N
D-00-H9-06	soil	red soil, @ 30cm depth, 25% sand, 75% silt	439108E 6834234N
D-00-H9-07	soil	from top of cglmt. killzone, strike: 312, 25 cm deep	437780E 6834258N
D-00-H9-08	soil	below cglmt. @ scree, sandy soil, light orange/yellowish	437799E 6834247N
R-00-H9-09	rock	conglomerate outcrop	437790E 6834240N
R-00-H9-09A	rock	pyritized float, Cu-rich, from trench	438401E 6834250N
R-00-H9-09B	rock	float w/ minor azurite, malachite, from trench	438412E 6834199N
R-00-H9-10	rock	magn. skarn w/ mal & hemat. from outcrop	438151E 6834410N
S-00-H9-11	str.sed.	seep w/ sand & magnetite	440391E 6840754N
R-00-H9-12	rock	very hard green apharytic outcrop w/ chalc & py	439452E 6841312N
D-00-H9-13	soil	magnetic dirt, over a 5m length	437402E 6835052N



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Canada V5Y 3E1  
Phone (604) 879-7878  
Fax (604) 879-7898  
Email ipl@direct.ca  
[137517:17:04:00102500]

**60 Samples**

Out: Oct 25, 2000 In: Oct 12, 2000

CODE B31100	AMOUNT 60	TYPE Pulp	PREPARATION DESCRIPTION Pulp received as it is, no sample prep.			PULP	REJECT
				NS=No Sample	Rep=Replicate	12M/Dis	00M/Dis
<b>Analytical Summary</b>							
##	Code	Method	Units	Description	Element	Limit Low	Limit High
01	0721	ICP	ppm	Ag ICP	Silver	0.1	99.9
02	0711	ICP	ppm	Cu ICP	Copper	1	20000
03	0714	ICP	ppm	Pb ICP	Lead	2	20000
04	0730	ICP	ppm	Zn ICP	Zinc	1	20000
05	0703	ICP	ppm	As ICP	Arsenic	5	9999
06	0702	ICP	ppm	Sb ICP	Antimony	5	999
07	0732	ICP	ppm	Hg ICP	Mercury	3	9999
08	0717	ICP	ppm	Mo ICP	Molybdenum	1	999
09	0747	ICP	ppm	Tl ICP (Incomplete Digestion)	Thallium	10	999
10	0705	ICP	ppm	B1 ICP	Bismuth	2	9999
11	0707	ICP	ppm	Cd ICP	Cadmium	0.1	99.9
12	0710	ICP	ppm	Co ICP	Cobalt	1	9999
13	0718	ICP	ppm	Ni ICP	Nickel	1	9999
14	0704	ICP	ppm	Ba ICP (Incomplete Digestion)	Barium	2	9999
15	0727	ICP	ppm	W ICP (Incomplete Digestion)	Tungsten	5	999
16	0709	ICP	ppm	Cr ICP (Incomplete Digestion)	Chromium	1	9999
17	0729	ICP	ppm	V ICP	Vanadium	2	9999
18	0716	ICP	ppm	Mn ICP	Manganese	1	9999
19	0713	ICP	ppm	La ICP (Incomplete Digestion)	Lanthanum	2	9999
20	0723	ICP	ppm	Sr ICP (Incomplete Digestion)	Strontium	1	9999
21	0731	ICP	ppm	Zr ICP	Zirconium	1	9999
22	0736	ICP	ppm	Sc ICP	Scandium	1	9999
23	0726	ICP	%	T1 ICP (Incomplete Digestion)	Titanium	0.01	1.00
24	0701	ICP	%	Al ICP (Incomplete Digestion)	Aluminum	0.01	9.99
25	0708	ICP	%	Ca ICP (Incomplete Digestion)	Calcium	0.01	9.99
26	0712	ICP	%	Fe ICP	Iron	0.01	9.99
27	0715	ICP	%	Mg ICP (Incomplete Digestion)	Magnesium	0.01	9.99
28	0720	ICP	%	K ICP (Incomplete Digestion)	Potassium	0.01	9.99
29	0722	ICP	%	Na ICP (Incomplete Digestion)	Sodium	0.01	5.00
30	0719	ICP	%	P ICP	Phosphorus	0.01	5.00

EN=Envelope # RT=Report Style CC=Copies IN=Invoices Fx=Fax(1=Yes 0=No)

DL=Download 3D=3½ Disk EM=E-Mail BT=BBS Type BL=BBS(1=Yes 0=No)

\* Our liability is limited solely to the analytical cost of these analyses

Totals 1=Copy 1=Invoice 0=3½ Disk

ID=C030901

BC Certified Assayer: David Chiu



## CERTIFICATE OF ANALYSIS

iPL 00J1375



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INTERNATIONAL PLASMA LABORATORY LTD

Client : Northern Analytical Laboratories  
 Project: W0#00159

**60 Samples**  
 60=Pulp

Out: Oct 25, 2000  
 In : Oct 12, 2000

Page 1 of 2  
 Section 1 of 1

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %

AB008 ? P < 13 8 49 < < < 1 < < 0.7 8 7 83 < 15 49 227 9 43 2 4 0.06 0.99 0.79 1.70 0.40 0.05 0.04 0.08

AB001 P 1.4 295 28 43 < < < 7 < < < 23 45 30 < 24 292 67 < 4 13 < 0.01 0.15 0.07 26% 0.04 0.03 0.02 0.06

Min Limit	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Max Reported*	99.9	20000	20000	20000	9999	9999	9999	9999	9999	9999	99.9	9999	9999	9999	9999	9999	9999	9999	9999	9999	1.00	9.99	9.99	9.99	9.99	9.99	5.00	5.00
Method	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	

\*No Test Ins=Insufficient Sample Del=Delay Max=No Estimate Rec=ReCheck m=x1000 %=Estimate % NS=No Sample P=Pulp



## CERTIFICATE OF ANALYSIS

iPL 00J1375



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INTERNATIONAL PLASMA LABORATORY LTD

Client : Northern Analytical Laboratories  
Project: WO#00159

## **60 Samples**

[137517·17·04·00102500]

Out: Oct 25, 2000  
In : Oct 12, 2000

Page 2 of 2  
Section 1 of 1

Sample Name	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	B1 ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %	Na %	P %
AB002	P 0.4	90	11	71	<	<	<	22	<	<	0.2	15	14	220	5	23	115	994	7	33	3	5	0.05	2.08	0.53	8.55	0.54	0.06	0.03	0.06
AB003	P < 8	2	13	<	<	<	<	<	<	<	0.2	3	5	63	<	3	17	155	4	38	1	<	0.04	0.32	0.84	0.56	0.13	0.02	0.05	0.09
AB004	P 0.1	231	9	92	<	<	<	4	<	<	1.4	35	15	10	<	40	138	986	<	47	15	7	0.31	2.53	2.94	5.19	1.27	0.02	0.02	0.10
AB005	P < 23	13	38	<	<	<	<	2	<	<	0.6	10	16	130	<	22	67	226	6	30	2	3	0.07	1.79	0.53	2.41	0.44	0.04	0.04	0.02
AB006	P 0.2	269	8	115	<	<	<	4	<	<	1.2	49	24	33	<	46	170	1346	3	16	8	10	0.16	2.54	1.19	6.75	1.41	0.03	0.05	0.13
AB007	P 0.1	145	11	72	210	<	<	3	<	<	0.8	22	19	64	<	21	145	644	9	25	5	17	0.02	2.32	0.32	5.48	0.59	0.03	0.03	0.02
R-00-H9-01	P 0.2	199	6	75	37	<	<	9	<	<	1.0	24	27	35	<	70	85	182	5	110	5	5	0.13	2.62	1.92	3.24	0.23	0.10	0.39	0.10
R-00-H9-02	P 9.4	591	49	77	<	<	<	16	<	1647	<	47	28	16	103	30	139	332	<	36	9	5	0.12	1.09	0.41	15%	0.33	0.07	0.17	0.10
R-00-H9-03	P 1.2	258	9	50	<	<	<	8	<	<	0.1	76	16	13	<	34	103	474	<	45	4	7	0.09	2.10	0.75	8.53	0.92	0.07	0.15	0.07
R-00-H9-04	P 7.2	1264	300	4275	274	<	<	11	<	<	4.9	32	33	44	<	12	246	1204	<	10	14	18	<	1.11	0.06	23%	0.25	0.07	0.02	0.05
R-00-H9-05	P 0.3	23	113	74	<	<	<	2	<	<	0.8	9	16	151	<	42	38	88	38	86	4	5	0.14	0.98	0.88	2.19	0.14	0.10	0.09	0.21
R-00-H9-06	P 0.1	224	19	74	<	<	<	4	<	<	<	17	28	149	<	26	87	249	25	78	7	9	0.05	3.49	0.59	5.13	0.52	0.09	0.04	0.05
R-00-H9-07	P < 19	12	79	<	<	<	<	17	<	<	0.9	14	16	199	<	33	72	411	15	48	12	8	0.09	2.12	0.47	4.04	0.48	0.06	0.03	0.04
R-00-H9-08	P 0.2	32	16	193	170	<	<	353	<	<	0.1	46	46	163	<	46	120	1061	22	81	16	15	0.05	1.83	0.64	8.30	0.26	0.17	0.03	0.11
R-00-H9-09	P 1.3	2539	29	80	<	<	<	9	<	<	3.3	82	56	20	<	16	122	348	<	4	11	<	0.01	0.37	0.24	25%	0.14	0.03	0.02	0.09
R-00-H9-09A	P 59.2	3.0%	39	228	<	<	<	8	<	<	<	124	96	14	9	47	165	1531	<	8	8	2	0.01	1.26	2.37	19%	0.63	0.06	0.02	0.09
R-00-H9-09B	P 24.8	9199	30	97	<	<	<	5	<	<	5.1	96	76	19	<	18	137	506	<	5	12	<	0.01	0.56	0.48	25%	0.25	0.03	0.02	0.05
R-00-H9-10	P 14.6	3060	31	61	<	<	<	7	<	<	1.8	29	31	17	<	18	175	435	<	5	11	<	0.01	0.53	0.25	24%	0.20	0.03	0.02	0.04
R-00-H9-11	P < 28	2	32	<	<	<	<	1	<	<	0.5	7	10	74	<	12	37	203	6	35	2	2	0.06	0.81	0.65	1.47	0.33	0.04	0.03	0.06
R-00-H9-12	P 0.2	51	7	107	20	<	<	147	<	<	1.0	10	15	68	<	33	30	118	22	58	2	5	0.06	0.69	0.62	1.81	0.11	0.14	0.06	0.13
R-00-H9-13	P 0.5	88	34	59	<	<	<	14	<	<	<	35	30	69	<	17	81	1226	4	30	5	6	0.01	1.32	0.91	15%	0.34	0.06	0.03	0.07



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E-mail: NAL@hypertech.yk.ca

20/10/2000

Certificate of Analysis

# of pages (not including this page): 2

Ron Berdahl

WO# 00159

Certified by \_\_\_\_\_  
Justin Lemphers (Senior Assayer)

Date Received: 05/10/2000

SAMPLE PREPARATION:					
Code	Samples	Type	Preparation Description (All wet samples are dried first.)		
r	25	rock	Crush to -10 mesh; riffle split 200g; pulverize to -100 mesh		
s	22	soil	Screen -80 mesh		
r	13	rock	Crush to -10 mesh; riffle split 200g; pulverize to -200 mesh		

ANALYTICAL METHODS SUMMARY:						
Symbol	Units	Element	Method (A:assay) (G:geochem)	Fusion/Digestion	Lower Limit	Upper Limit
Au	ppb	Gold	G: FA/AAS	15g FA / aqua regia	5	7000
Au 30g	ppb	Gold	G: FA/AAS	30g FA / aqua regia	5	7000
Pt 30g	ppb	Platinum	G: FA/AAS	30g FA / aqua regia	5	7000
Pd 30g	ppb	Palladium	G: FA/AAS	30g FA / aqua regia	5	7000

AAS = atomic absorption spectrophotometry

FA = fire assay

1000ppb = 1ppm = 1g/mt = 0.0001% = 0.029166oz/ton



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20/10/2000

Certificate of Analysis

Page 1

Ron Berdahl

WO# 00159

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

Sample #	Au ppb	Au 30g ppb	Pt 30g ppb	Pd 30g ppb
s AB008				



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20/10/2000

Certificate of Analysis

Page 2

Ron Berdahl

WO# 00159

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

Sample #	Au ppb	Au 30g ppb	Pt 30g ppb	Pd 30g ppb
AB001	31	<5	<5	
AB002	13	<5	<5	
AB003	<5	19	<5	
AB004	<5	17	8	
AB005	<5	6	5	
AB006	41	18	18	
AB007	<5	15	6	
R-00-H9-01	<5	22	12	
R-00-H9-02	124	14	33	
R-00-H9-03	90	5	6	
R-00-H9-04	595	13	10	
R-00-H9-05	<5	10	<5	
D-00-H9-06	20	31	<5	
D-00-H9-07	<5	15	<5	
D-00-H9-08	<5	12	<5	
R-00-H9-09	22	8	12	
R-00-H9-09A	1282	15	<5	
R-00-H9-09B	348	13	5	
R-00-H9-10	186	17	<5	
S-00-H9-11	<5	14	<5	
R-00-H9-12	<5	16	<5	
D-00-H9-13	36	<5	<5	

**YMIPO0-085b  
Kirkland Creek Area  
115 H/09**

**Field Diary**

**Anne Bordeleau  
January 20 2001**

Florence Ck.

19 SEPT 2000

AB-001 ✓ Rock

MAGN, RED STAINED, HEAVY; OUTCROP; 43°7'18.7"E

68°32'6.7"N

AB-002 ✓ Soil

BR; 43°7'16.2"E 68°32'6.75"N; 20cm depth

POST 1 CATHCART 1 SW 1500'L SEPT 20 2000 RSB/RODHL

POST 1 CATHCART 2 SW 1500'R SEPT 20 2000 RSB  
43°7'9.3"E 68°33'32"N

POST 2 CATHCART 3 SEPT 20 2000 RSB

POST 2 CATHCART 4 SEPT 20 2000 RSB

POST 1 CATHCART 3 SEPT 20 2000 RSB

POST 1 CATHCART 4 SEPT 20 2000 RSB

43°8'25.7"E 68°33'6.29"N

Y 3323 POST 1 C 43°8'18.5"E 68°33'8.38"N

Y 3325 POST 1

R-00-H9-02 ✓

43°8'26.2"E 68°33'9.96"N

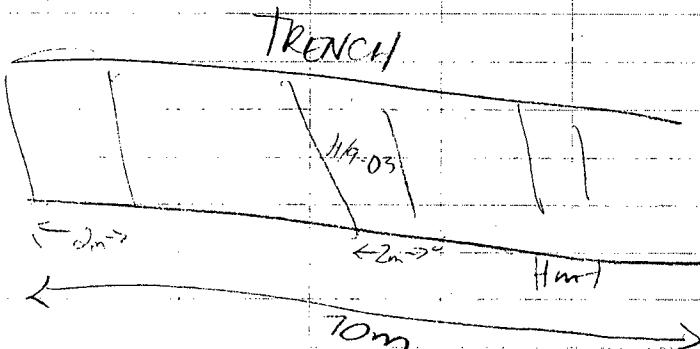


R-00-H9-03

✓ 438189E Green w/ pyrocl. /APy  
6834025N "2m WIDE"

R-00-H9-04 ✓ 20m N OF 03

LIMONITIC ROCK, RED,



R-00H9-05 ✓

@438102E 6834229N

BASALT-LIKE?? FROM OUTCROP?

D-00H9-06 ✓

RED SOIL, 6" DEPTH

SAME AS R-00H9-05

D-00H9-07 ✓

FROM KILLZONE, STRIKING 312°. 30m long X 8m wide  
ON TOP OF CGLMNT ( SAME AS -08 )

NO. 312

D-00H9-08 ✓

FROM SCREE @ 437799E 6834247N Below

CGLMNT → 80m LONG X 12m HIGH

: MOSTLY BASALTS IN YELLOWISH MATRIX.

FROM SMALL PEBBLES TO COBBLES SEVERAL METERS WIDE.

R-00H9-09 ✓

CONGLOMERATE, SAMPLED FOR MATRIX ANALYSIS ( SAME AS ABOVE )

437267E 6833514N Y9882, Posit 1  
Y9883 Posit 1

21 SEPT 2000

CRT OUTCROP @ 438098E 6840674N. E 1106 mH

[AB-003] STREAMBED

438062E 6840713N

BR SILT + CLAY w/ COARSER WHITE\* SAND-SIZE MATERIAL

\* VERY LIGHT IN INTENSITY.

[AB-004] ✓

438025E 6840737N GRST OUTCROP w/ DISSEMI-

NATED PY & LIMONITIC WEATHERED SECTIONS  
( SAMPLED BOTH GRST + LIM )

(ACC)  
Sept 21 - WP: 49 - Bonanza claims

Kline m.

WP 49 → claim line

somewhere near second m.  
showing line very high - running ~50°  
- Post No. 1 16 H 4 TAG Y11183

100' E, 100' R G step up? Oct ???

green volc. phosphitic w/ black/grn & tan

epigenetic + magnetic

lots of breccia

- crack in ravine w/ sharp  $\leftarrow$  NE  $\rightarrow$  Bend Flats

WP 50 - 0440391

6840754

claims by Joe Sude Oct 24, 1966 - AH  
on claim line near post #1 17 + 18

soil w/ gravel - some magnetite

S-00-H9-0-#11

very v. hard @ creek - grn mag.  
very small pieces

② 0439452 } v. hard qtz aplite  
6841312 } w/ minor anal.  
stilbite / pyrite ?

NO. 312

SEPT 22 2000

POST 2 PORC-EPIC 1

" " " 2

POST 1 " " 3 1500' L E } 6841468N  
" " " 4 1500' R E }

POST 2 " " 3 } 440562 E  
" " " 4 } 6841405N

CATUCART



R-00-H9-10 → Mag. Strom w/ cu

+ hematite in interc. adj. to

Hogback may. Survey post - east

of Bonanza showing

R-00-H9-9 } A pyrite rich

B like 9 = can ride hematite  
min A344fe

364 147 R-00-H9-1, 2, 3, 4, 5, 6, 7, 8, 9, 10 - 12

R-00-H9-13 - 2 m soil

across N. end of Bonanza stn

Conglomerate  
As. P?

NO. 312

**YMIP00-085a  
Nadaleen River Area  
106 C/03**

**Field Diary**

**Anne Bordeleau  
January 20 2001**

Aug. 3-10 White

waypoint at camp 0583764

Moss → 7104931

→ Dad Dick  
1995

Aug 6<sup>th</sup> ~ around with

42

GPS @ "Investor Loop"

43

46

@ fault ~ 310° - variety of ex 48

grn pyg → fluorite? 40141

possible volcanics

shale vert @ 310° (gray shale)

w/ pyrite or volc juxtaposed

Around with various ex type

qbs, brecciated Dolomite

shale (brown)

@ Pass (#3 sample coh) vertical

maroon shales strike NW (310°)

juxtapose limestone (dolomite) (on north)

"pass," "fault" low areas" are

of tan ammonitic w/ shale or

shale — contacts

R-13 - laminated black

shale @ Barite

(between post 1 + 2 - near  
Hg show)

Hg Bar shale

Say 9 - downstream from camp  
and ft 4"+

gtz w/ black amorphous  
brittle mineral - coal like -  
mineral green gtz like mineral  
also minor red shale  
→ has brown streak  
iridescent in sashivers on gtz

R-14 Barite

© 1998 J. J. Gaskins Corp., Inc. 98424-107

NO. 312

lots of small well formed  
veins - very white gtz

→ often limonite - could be  
source of high As/Hg ??? in  
RBS data

- 105N - orange soil in orange sulfide  
stone between gtz rich (var) dolostone

R-08 - limonite gtz vein  
(swell) in blue shale

- mid upper creek - shale  
vert strike NW -

possible metal association  
limonite grey.

(Also gtz w/ possible ZnS  
@ same site (not in this  
sample))

R-09 - fist size porphyritic  
gtz (?) w/ 5-10% pyrite  
(cavities?) semi-crushed

light orange colored @

585011 7102978

AUG 01 2000

## WHITEHORSE → MAYO! TRAVEL

AUG 02 2000

o CAMP SET-UP. PROSPECT TO WATERFALL 1 (S OF CAMP)

FOUND HEAVY GREY/WHITE ROCK, STR. SULFUR SMELL ON W SIDE

AUG 05 2000 o GOAL: INSPECT S SIDE OF "E" MOUNTAIN

**[ROI]** - FERRICITE 3m S CHECK STRONG SULPHIDE  
 SMELL. VERY BRITTLE, 20% ORGANIC  
<sup>Cu, Ni, Fe, Mn</sup>

YELLOW, BLACK, RED. DISPLACED PEGS WITH  
 VUGGY QUARTZ WITH LEACHED OUT SULPHIDE ???

583751E 7104740N

- o [ROI] 1. STRONG SULPHIDE SMELLING QUARTZ VEIN FLORT  
 w/ CRYSTALS, VUGS + ALTERED INFILL  
 2. QUARTZ, CHLORITE CRYSTAL + MARMOON SULFIDE  
 10% OTHER METALLIC SILVER? MID?

**[ROI]** BARITE-LIKE? HEAVY, SULFUR SMELLING GREY, WHITE,  
 SOME "ZEBRA ED". FLOAT FRONT TALLUS 30m  
 LONG. PICTURE OF ZONE: # 2d (30 x 6.5m)

584411E 7104377N

**[ROI]** BARITE-LIKE? HEAVY, SULFUR SMELL, w/ VUGGY QZ/  
 BARITE CONTACT FROM W EDGE OF ZONE. FRONT  
 7104374N 584396E

NOTE: o THE TOP EDGE OF THE ROI-ROI4 ZONE IS A LEDGE FAULT.  
 LIKE @ 290° PERHAPS DEFINES THIS BARITE SHOWING.  
 25m LONG

**YMIPO0-085a  
Nadaleen River Area  
106 C/03**

**Field Diary**

**Anne Bordeleau  
January 20 2001**

- HEAVY SOLIFLUTION @  $\approx$  584250E, 7104700N  $\approx$  TREE LINE = LARGE "RICE PATTY" TYPE BOILS w/ 95% SCHIST CLAST - MAROON/GREEN SHALE +  $\approx$  5% DOLOMitic COBBLES. BOILS APROX 5m CIRC. EACH. VERY SOUPY.

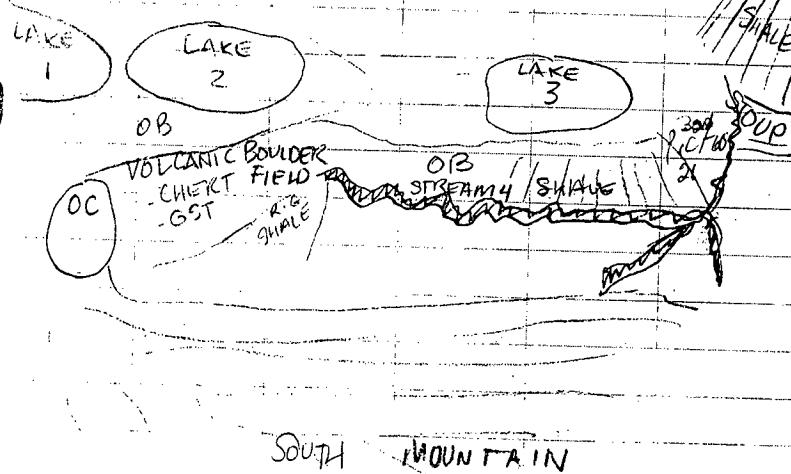
- BLACK SILICIFIED SHALE, DIP 16° STRIKE 220° OUTCROP 5m x 2m WIDE. REST OF RIDGE IS BROKEN UP SHALE.

AUG 07. 2000

GOAL: INSPECT SHALE @ LAKE 1 & 2; INVESTIGATE "SOUP" C STREAM 4.

LAKE 1: SEVERAL FLOATS OF SILICIFIED SHALE BROKEN; SUGGEST SULFUR OMELL.

BETWEEN LAKE 2 & 3: VOLCANIC BOWERFIELD: CHERT + GREEN STONE ALSO FOUND BLACK, V. SILICIFIED, CHERT-BREAKING-PATTERED ROCK (SAMPLED SH. PIECE "cherty")???



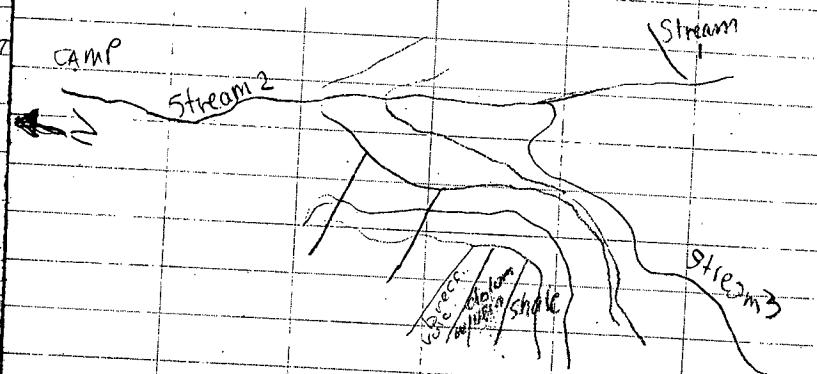
AUG 06 2000

: MAPPING E OUTCROPS FROM STREAM - "E MOUNTAIN"  
& CONTOUR E MOUNTAIN

DOLOMitic/LIM OUTCROP CONCAVE @ 584066E

710517N

OUTCROP ABOVE STREAM 1 #2: BRECCIATED DOLOMitic FLOATS FROM SUMMIT. CHERTY SOUNDING ROCKS? VOLC?  
ALSO SMALL OUTCROP 5m x 10m H. HILLIS-VEINED (RIZZI?)  
DOLOMitic & CONTACT w/ MAROON SHALE



- @ CONTACT, RED ALTERATION w/ SOME BLACK STAINING (Mn). NO OXIDE. PERHAPS Fe LEACHING.

- SHISTOSITY (MAR-GREEN SHALE) @ 585073E 710499N

- OUTCROP 15 x 25 m ALL OTHER AREA IS OVERBURDEN W/ VEGETATION. STRIKE 190 A/D 75°

- OUTCROP: PIC #23. 585070E 7104815N DOLOMITE w/ (RIZZI) VEINING "ZEBRAED".

DIP 60 STRIKE 32°. WHITE + MAROON SHALE (VERY WAXY)  
584636E 710390N

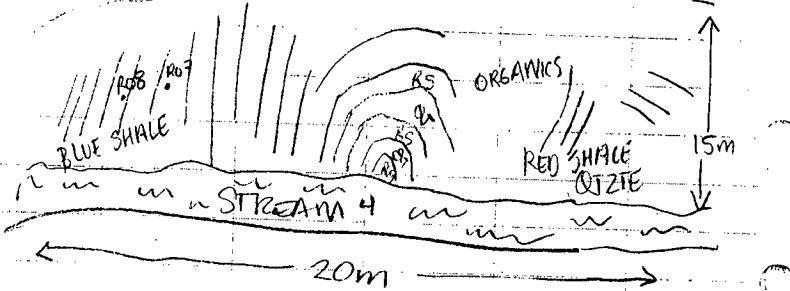
PIC 19: GOSSAN E OF EAST MIN. ALSO OVERLOOKING SHALE (CARBONACEOUS) UNIT - SCREE ON E SLOPE AND TWO SMALL SHALE STREES ON SUB-STREAM (STREAM 4), ORI MOUNTAIN. MAINLY SILICIOUS - DOLOMITE - QTZITE - MAROON/GWHITE SHALE. MUCH SOLIFLUVION.

[R07] 585180E 7104230

QTZITE W/ BLUE SHALE & POSSIBLE SPH. STRONG SULFUR SMELL, BR NW STRIKE DIP 75°

[R08] SAME COORD. AS R07. FLOAT. LIMONITIC QTZ W/ CHLORITE IN BLUE SHALE @ STREAM 4 E. BANK NW STRIKE 80° DIP

PIC #11 FOLD RED SHALE / QTZITE BENDING AT SAME LOCATION AS R07 / R08. (SEE SKETCH BELOW)



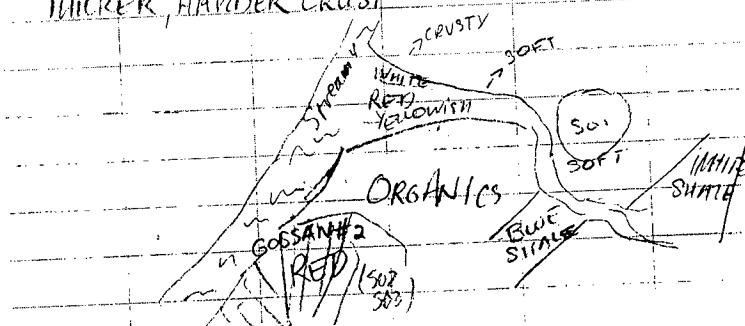
NO. 312

NEW GOSSAN DISCOVERED! YELLOW, WHITE, RED

→ 584891E 7104033N → VERY SOFT GOSSANOUS

SOIL W/ ORGANICS ENCRUSTED SAMPLE S01

THICKER, HARDER CRUST



→ SAMPLE S02 C. GOSSAN #2, 584842E 710409N

VERY RED GOSSANOUS SOIL 6m FROM STREAM 4  
16" DEEP. PIC #7. → 10IN LAYER SOFT THAN CRUSTY

→ SAMPLE S03, MIDDLE OF GOSSAN #2, 17m SE FROM  
MIXTURE OF BLUE SHALY SED, RED GOSSAN & ORGANICS.

→ SAMPLE R-10 583751E 7104748N  
BARITE-LIKE? SULFUR SMELL, FG AT

AUG 08 2006

STAKING DAY!

(1° CARBONATE HILL  
ACROSS CANYON)

→ 584784E 7103993 [SAMPLE R-11] HEAVY DOLOMITIC  
GREY / WHITE OUTCROP W/ DEFINITE SULFUR SMELL.  
OUTCROPPING OVER BLEACHED CARBONACEOUS SHALE  
SCREE 12m X 15m

→ SAME UTM AS R-11. [R-12] BLEACHED CARB. SHALE  
FROM SAME SCREE AS ABOVE

→ [304] SAME ° AS R-11, R-12. RUSTY SOIL, DUG OUT @ 12" FROM SCREE TOP. LOTS OF SHALE W/ RUSTY LAYERS.

ALSO: 2 BLOCKS OF BEDDED BARITE. WRITTEN "BEDDED BARITE @ R-11."

→ [R-15] CARB. BAR. SHALE. SAME ° AS R-12. HEAVY (#CHANGE BECAUSE NOT LOGGED)

TANNER CLAIM 1 1500' R NW AUG 8 2000 R.S.B. POST 1  
" 2 1500' L NW AUG 8 2000 R.S.B. POST 1  
(585071 E 7103880 N)

TANNER CLAIM 1 " " POST 2  
CLAIM 2 " " POST 2  
CLAIM 3 1500' R NW " POST 1  
" 4 1500' L NW " POST 1  
(584660 E 7104039 N)

TANNER CLAIM 3 " " POST 2  
CLAIM 4 " " POST 2  
CLAIM 5 1500' R NW " POST 1  
CLAIM 6 1500' L NW " POST 1  
(584239 E 7104236 N)

NO. 312

TANNER	CLAIM 5	AUG 8 2000 R.S.B. POST 2
	CLAIM 6	" POST 2
	CLAIM 7 1500' R NW	" R.S.BERDAHL POST 1
	CLAIM 8 1500' L NW	" " POST 1 (583821 E 7104436 N)

TANNER	CLAIM 7	AUG 8 2000 R.S.B. POST 2
	CLAIM 8	" " POST 2 (583404 E 7104632 N)

AUG 09 2000 (1 BULL MOUSE ON HILL ACROSS CAMP)

→ R-13 RAN DOWNSTREAM CHECK OUT ON CROPS, ETC

→ [R-13] 583191 E 7105047 N QUARTZITE W/ ALTERED  
LUGS, RED.

→ [305] 583744 E 7105252 N NOSS MAT, 2 MOSS ROOTS  
VERY RED

STREAM GOES FROM LIGHT ORANGE TO WHITER YELLOW SHADE  
e 710522 N 583774 E WHITE PPT. MORE PRONOUNCED  
ON E SLOPE. VEGETATION: (AVALANCHE ZONE) 2-MOSS  
SCARCE WILLOW. SOIL ORANGE/RED TO OVER 24' DEEP.

→ [306] 583478 E 7105392 N RED SOIL ON SHORE (W)  
(STREAM WHITE (1-2 mm) THAN RED UNDERNEATH)

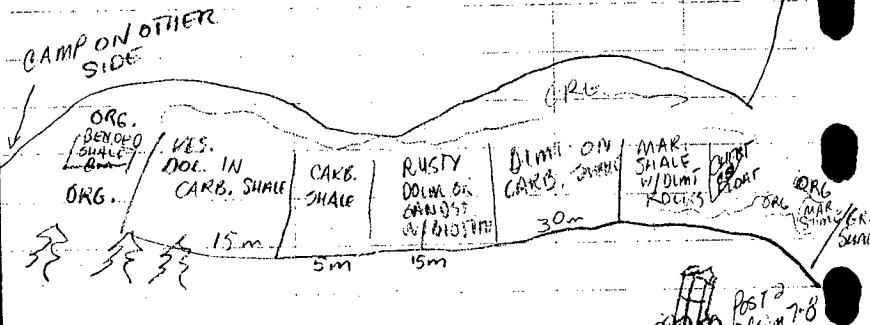
R-14] 583632E 7105416N BEDDED SHAPE SHALE  
LIKE BR W/ RED STAINING. DIP VARIED STRIKE: NW  
Pic #5. HEAVILY FOLDED IN ALL DIRECTIONS?  
"PHYLLITE?"

AUG 10 2000)

MAP + PROSPECT FROM N TO S, THE N SIDE OF THE HILL WHERE CAMP SITS, TOWARDS + PAST CLAIM 7+8, POST 2.

• @ 583579E 7104765N BENDED CARB. SHALE  
DIP: 16° STRIKE 330° BENDS @ 0.5cm SPACING,  
FINE, SILICIFIED. REST OF SLOPE SHALE SCREE  
OUTCROP 8m LONG X 2m HIGH

• VESICULAR DLMT OR VOLC? W/ QUARTZ VEINING OVER 15M WIDE SCREE @ 583499E 7104716N  
15% COVERED W/ BLACK STAINING. DLMT SITS IN FINE (SANDGRAIN SIZE) SHALE-LIKE DEBRIS (BLACK).  
• OVER NEXT 5m, LANDSLIDE OF FINE CARB. SHALE.



• @ 583485E 7104705N SAMPLE [R-16] SIL. DLMT W/ RED

NO. 312

STAINING OR SANDSTONE ?? SCREE MADE UP OF 75% OF THIS.  
TOOK SAMPLE TO TRY & IDENTIFY THIS ROCK ?? MAY NOT ANALYZE.

- SILC. DLMT W/ RED STAINING OVER 15M, THEN 35M OF PLAIN GREY/WHITE DLMT. ROCKS ON CARB. SHALE.
- MAROON SHALE W/ 10% DLMT COBBLES ON SCREE OVER NEXT 200M, STARTING @ 583458E 7104665N
- @ 583389E 7104604N, CHERT IN FLOAT (75%) OVER 20m. NO OUTCROP VISIBLE (UNDER SNOW). ALSO COARSE SANDST. (5%)
- @ 583277E 7104574N START CHL. & CARB. SHALE SCREE OVER 50m. SLOPE VERY UNSTABLE DUE TO RAIN!
- 50m OF PHYLLITE BOULDERS, NO ALTERATION, NO OUTCROP, VERY UNSTABLE (ENDS) @ 583204E 7104544N
- SAME AS ABOVE CHERTY (?) OUTCROP [R-17]: 3M. SULPHIDE VEINLETS, SULFUR SMELL

(AUG 11 2000) (4 CARIBOUS ACROSS CAMP) (VERY RAINY) A.M.

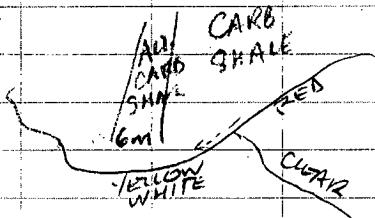
• GOAL: PROSPECT BAKITE DEPOSIT ON CLAIMS 1 + 2

• ON CLAIM 2, SCREE SLOPE (584948E 7103838N) CARBONAC. SHALE W/ RED ALTER. FLOATS OF SANDST. DLMT. W/ MN STAINING

BACK TO STREAM 2: ALTERATION IN THE STREAM (RED)

BEGINS EXACTLY @ 583778E 7104537N, ON N SLOPE. ENTIRE SLOPE ABOVE IS CARB. SHALE, BROKEN/PULVERIZED. THE RED COATING IS ≈ 1mm THICK ON SHALE IN STREAMBED

STREAMBED TURNS FROM RED TO WHITER YELLOW  
@ CONFLUENCE OF SM. CREEK (S) 583732E 710455N



- 5-07 PULV. CARB. SHALE WITH GRAY/RED TINT, ABOVE  
AREA WHERE STREAM TURNS YELLOW  
- PIC 1 YELLOW SPW ON STREAM 2 583747E 7104677N  
IN CARB. SHALE SCREE → R-18

- R-19 583752E 7104735N DARK GREY BARITE FLOAT  
@ TOP OF BIG WATERFALLS (BSL PICTURE). V. STRONG  
SULPHIDE SMELL.

(AUG 12 2000)

FOG + RAIN

1 - GRIZZLY SINGLE ACCROSS CAMP

GOAL: STREAM SAMPLE STEWART RIVER DRAINAGE  
STREAMS @ CLAIMS 1 + 2, AND PROSPECT ASSOCIATED  
OUTCROPS.

SAMPLE #	SAMPLE	CONTENT	STREAM	UTM
	SAMPLE	SAMPLE	WIDTH (m)	COORDINATES
→ S-08	MAKOON	MOSTLY MAKOON SHALE DEBRIS	1	584663E 710393N
→ S-09	RED	FINE ORG. THROUGHOUT SIL. SHALE	1	584777E 710407N

NOTES: FERRICRETTE KILL ZONE STRIKE: DIP UNAV. ALL SHIST,  
SILT ARE ACCRETED (PREVIOUSLY SAMPLED)

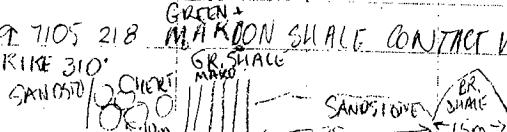
→ S-10	GR-BRN	SHIST/SHALE DEBRIS	0.5	585115E 710419N
→ S-11	GR-BK	"	1	585426E 710428N

(AUG 13 2000)

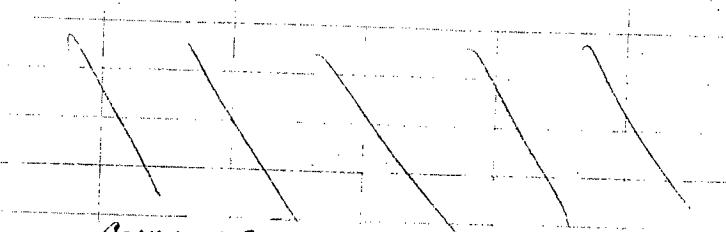
COMPLETELY SOAKED IN, RAIN + CLOUD ALL DAY  
GOAL: TO SAMPLE INT. FERRICRETTE NE DRAINAGE & PROSPECT  
ASSOCIATED OUTCROPS.

① 585 284E 710510N SHALE OUTCROP 15m W DIAM. SLIGHTLY  
DIP 80° STRIKE 310°

② 585 349 7105 218 GREEN +  
MAKOON SHALE CONTACT W/ SANDSTONE  
DIP 90° STRIKE 310°



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COMMENTS

- [S-08] → STREAMBED: 35% MAKOON SHALE, 65% SIL. SH. W/ QUARTZITE VEN. +  
@ 12m N. OF S-08 ALT SCREE (RED) 10m H DMT  
[S-08] OUTCROP 8m H X 10m W SPAR. DOL.?  
[S-09] → SB: 50% GR + MAR. SHALE QUARTZITE, SANDSTONE; BED  
SLIGHTLY PPT. RED.

J. L. DABLING CORE, TACOMA, WA 98424-1617  
www.jlenthintherain.com

[S-10] → SB SAME AS S-08

[S-10] SB SAME AS S-10, FOR OUTCROP DETAILS, SEE R-07

AUG 13 2000 (cont'd) THEN CLOUDY OVER 10m W

③ 585 435E 710525N, SANDST W/ MULT. QTR. QUARTZITE VEN (1" W)  
DIR 30° STRIKE 200°

④ 585 318E 710503N BR. SHALE OUTCROP DIP: 19° STRIKE  
360°, SLIGHTLY ALTERED RED, 10m LONG X 2m THICK, OVERLOOKS  
HILLTOP 50° STEEP, 25m HIGH, 50m LONG

© 585 293 E 7105029 SMALL SANDSTONE TALUS 20' X 45' H  
W/ MANG STAINING, SOME MICA (5%) THROUGHOUT

STREAM SEDS.

SAMPLE	COLOUR	CONTENT	STREAM WIDTH	COORDINATES
S-12	GREY	SILT/SAND SDST PETBS	10cm	585375 E 7104879N
S-13	BK	SHALE REBBS SILT 10% ORG.	0.5m	585680 E 7104793N
S-14	GR-BK	SHALE REBBS SILT 15% SILT	1.3 m	585685 E 7104691N
S-15	GR	FINE SHALE, SAND 15% ORG.	2m	585720 E 7104794N

R-20 584005E 7105134N CALC. LIKE VEINING ON DIRT.  
VERY HEAVY SULFUR SMELL. OUTCROP 10m →,  
3m ↓

AUG 14 2000  
VERY HARD RAIN, DAY+ NIGHT, COMPLETELY SOAKED IN, GUSTY WINDS, COLD. SUN FOR 10 minutes.  
GOAL: ORGAN. SAMPLES, DRAW UP MAPS OF TRAVERSE;  
P.M. PROSPECT WNW RIDGE FROM CAMP. (~300m)

→ S-16 ACCRETED RED/ORGANIC SOIL; ENV. 15 SDST AND 15m SW,  
RED SILICE SCREE; SAMPLE IS SILICIOUS 583085 E 7105001  
~ 12' DEEP

NO. 312

S13  
S13  
S12

### COMMENTS

[J-12] AREA WHERE STREAM STARTS RUNNING ON STEEP SLOPE 38°  
© 50' ST. 270° QUARTZITE 25m ALONG STREAM DUE TO DROPPING  
5m H. 585508 7104786

[S-13] 58: MIXED QTZITE, GR SHALE, SDST COBBLES

[S-14] ON KILL ZONE/STREAM, SHALE REBS W/ 80% SDST / QTZITE

[S-15] BANDST. 80%, 20%, SHALE

J. J. CARLINS CCSP, TACOMA, WA 98411  
www.jjcarlins.com

© 2000 JJ Carlins

→ S-17 FLOATS AROUND 95% SDST, 5% MAROON SHALE: SOIL  
TOP 5cm MAROON, 5cm LOWER BK + REDDISH ORANGE  
© 25cm, SAMPLED @ 25cm. 583560 E 7104931N

→ R-21 583624 E 710509 N QTZITE VEIN W/ Ga<sup>3+</sup>, Mn(BK); ALT. RED ©  
5cm OUTER RIM. AFTER PINK GR SIL. SDST, WITH  
QTZITE VEIN. METAL SHEET IN QTZITE → + RED  
STAINING.

LOTS OF PTARMIGAN  
2 CARIBOU ON BACK RIDGE

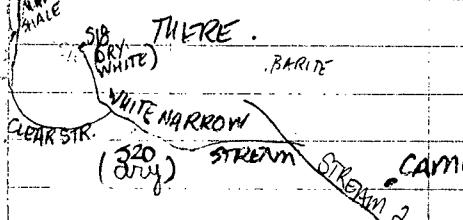
0°, OVERCAST, W/ SHORT SUNNY BREAKS

AUG 15 2000  
GOAL: CONDUCT SOIL SAMPLING OVER A 200 X 250m CLAIM SPAC.

GRID COVERING BARITE SHOWING AND

KILL ZONE ON CLAIMS 1 + 2. (MAYBE INFILL)

SAMPLE ANOMALOUS AREAS BETWEEN CAMP +



TAKEN @ 24" + W/AUGER 583854 7104768N. A FINE WHITE PPT COVERS SURFACE. NO OUTCROP PRESENT BESIDES CARB. SHALE RIDGE, 150m S. SOIL GREY WITH SHALE REDS + SOFT. 5% ORC.

→ MARLON SHALE DIP 68° STRIKE 288°. STREAM MAYBE CONTACT  
BETWEEN MAR + CARB. SHALE? SE3927E 7104737N

→ CARB. + HALE (W/ SOME RED STAINING) STRIKE 392 & 18.62°

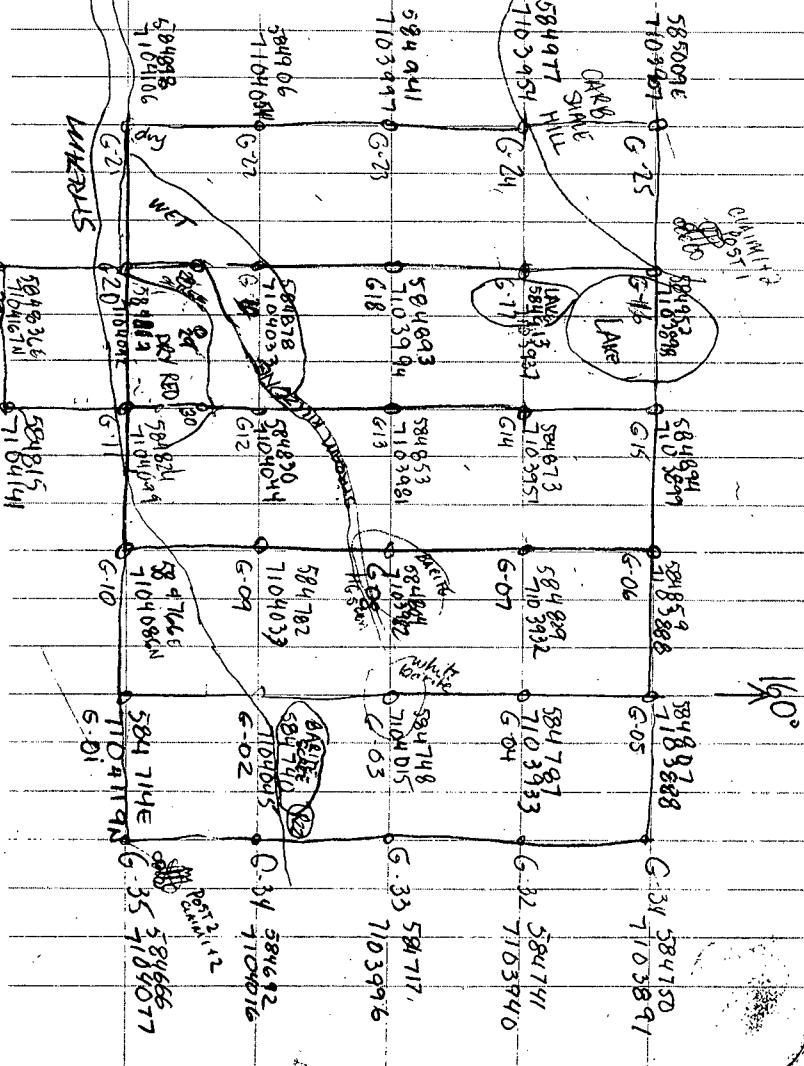
ON S. SIDE OF STREAM ≈ 35m @ TOP OF HILL

584020 7104713; LAST REMAINING 100m TO TOP

OF RIDGE MIX VEG + SNOW & OUTCROP.

(584709 - 7104094)

SOIL GRID @ CLAIM 1 + 2



G-01 SHALE LAYER 2cm THICK @ 20", BR. EXCEPT FOR HOLE (GR)  
NO OUTCROP

G-02 VERY DR. BR. 8' FROM STREAM 10% ORG, NO PEBBS @ 24"

G-03 @ 24" DEEP; CHL SHALE PEBBS TAKEN OUT

G-04 @ 20" DEEP; MAROON COLOUR, SILTY, THEN @ 25" CARB. SHALE SEDS.

G-05 @ 28" DEEP; BR. THAN GR w/ CARB. SILTY FLAKES @ 18" +

G-06 @ 35" DEPTH, GR-BR, THAN GREY OVER 3" @ 32" +; MIDDLE  
OF MUD BOIL, + SOLIFLX; SOME RED STAINED SOST LOB @ SURFACE

G-07 @ 40" (HIT GOSSEN HOLE); BR; SOME GR @ 22-30"; GOSSEN  
HOLE DUG OUTS = SOIL, SHL, MAR! CARB. SHALE; NO OUTCROP

G-08 @ 15", LOTS OF PEBBS! LGT BR. 1m FROM HG? ON BA HILL (HILL ~6m  
HIGH X 35m CIRC) SOME BA PEBBS + SOST QTZITE + SHL

G-09 @ 25" DEPTH; REDDISH BR SILT w/ SOME MAR. SHALE PEBBS

G-10 @ 20" DEPTH; BR 5% ORG; SOME QTZITE PEBBS

G-11 @ 15" DEPTH; RFD; CHL SHALE OUTCROP 5m DIP @ 85:90 STRIKE 288

VERY MIXED DIP



G-26 @ 12" DEPTL; BR w/ CHL. SHALE PEBBS; ALL ORG/VEG. ON SURFACE  
NO OUTCROP; 1 sm. QTZITE PEBB, RUSTY, REMOVED; FORESTED

G-27 REDDISH BR. W/ SM. QTZITE PEBBS MARL; 10" DEEP;  
NO OUTCROP; FORESTED

G-12 @ 8" DEPTH; REDDISH BRN. W/ SM. CRIZITE + CHL SHALE ABB

G-13 @ 20" DEPTH; VEG. COVERED; 10m N, THE STREAM LEAVING TO  
KILL ZONE STARTS; BEGINS IN BETWEEN BOTH BARITE HILLS; BR.

G-14 @ 10" DEPTH, BR w/ SPARSE ORANGE, CRUMBLED FERRICRETE.  
MUD BOILS = 2" DIAM EACH. SLIGHT SOLIFLX

G-15 @ 20" DEPTH; BR w/ ORANGE BANDING; 2m. SOST. PEBBS + CHL SHALE

G-16 @ 10" DEPTH, IN WATER (LAKE) SILTY w/ CARB. SHALE PEBBS; AT  
BASE OF HILL (BROKEN CARB. SILicate SCREE) WHERE POST 12 KEE

G-17 @ 8" DEPTH, GR; W/ OADS. SHALE PEBBS

G-18 @ 15" DEPTH; TALLUS OF MUD BOILS; 30% MAR. SHALE; 30% RED-  
STAINED SOST; 30% SILT; 10% QTZITE

G-19 FERRICRETE @ STREAM; STREAM 2m W; RED w/ BLACK; 10" DEEP

G-20 " @ MAIN STREAM; RED; 10" DEPTH; FERRICRETE "BOULDERS"  
ALL AROUND.

AUG 16 2000 OVERCAST, LIGHT FLURRIES, 0-2°C

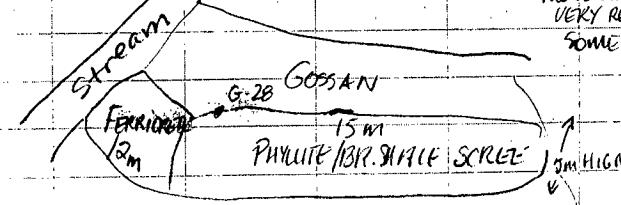
GOAL: COMPLETE SOIL GRID @ CLAIMS 1 + 2; START  
TRENCH @ BARITE SHOWING ON CLAIM 3.  
ROCK SAMPLE IN BETWEEN 1 + 3 ??

G-30 584819 E 7104075. BR; SOME SH PEBBS; 10" DEPTL.  
fairy ring? ring of vegetation

G-29 DK BR. CARB. SH. PEBBS TANOLIMENT; 584819 7104053.

G-28 @ EDGE OF WET GOSSAN + BR. SHALE / PHYLLOLITE SCREE; 15m LONG/6m H.

584880E 7104671N SOME RUST ON PHYLLOLITE, SAMPLE UNDEK  
MOSS MATS, VERY RED/orange  
SOME ORGS!



G-21	Red + BR. SILT; 20" DEEP; 10m N OF GOSSAN; VEG. ZZ MOSS + SALMONBERRY (ACID SOIL??)	
G-22	GR/BR SOIL; 24" DEEP; SOST IN VICINITY; QUARTZ PEBS IN SAMPLE	
G-23	BR-GR; SOST FORMS AROUND; 10" DEPTH; NO OUTCROP; SM. SIL. PEBS THRUOUT. FROM 45CM WIDE MUD BOIL	
G-24	25" DEPTH, GR; 5m AWAY FROM BASE OF CARB. SH. HILL WHERE POST 1, CLAIM 1 & 2 IS;	
G-25	DR. GR; CARB. SHALE PEBS THRUOUT; 1/2 WAY UP TO CLAIM POSTS	
G-31	BR; 25" DEEP; SM. CHL. SH + MAR. SHALE PEBS THRUOUT; 10% ORGANICS; SM. MUDBOILS, VEGETATED IN RICE PATTY FORM. DOWN SLOPE	
G-32	VERY WET GROUND; BR GR SILT; FEW PEBS; NO OUTCROP; 28" DE.	
G-33	GR-BR; w/ CARB. SHALE T.O., SOME SOST ON SCREE; DEPTH 14"; BOTTOM OF A VEG. SCREE SLOPE w/ OVERGROWN MUDBOILS.	
G-34	BR; 24" DEPTH; SM. PEBS OF MAR. SHALE, SOST, & QUARTZ.	
R-22	BA @ STREAM, 5m ABOVE, STRONG SULFUR SMELL; FROM 584731E 7104020N	
G-35	BR; SM. PEBS PHYL ORE SH; 20" DEPTH	
S-19	SOIL SAMPLE TAKEN ON TOP OF RIDGE OF CARB. SHALE, SOMEWHAT BLEACHED; SAMPLE FROM RED-STAINED AREA @ 10cm DEPTH @ 584122 7104532	
NO. 312	S-20 @ 583828 7104810; SAMPLED THE PPT ON STREAM'S EDGES, WHITE; LOOKS LIKE HYDROZINCITE?	
AUG 17 2000	Cloudy w/ sunny breaks. $\approx 5^{\circ}\text{C}$	
TRY & FIND SOURCE OF BARIUM ON CLAIM 3.	SCREE IS 30 X 65m; OUTER EDGES APPEAR TO BE MIXED SOST, 50% RED-STAINED; LEDGE ABOVE IS 30m LONG X 10m WIDE, LARGE MUDBOIL, 1.5m ↗, WILL BE DUG OUT & IF NECESSARY A LARGER TRENCH WILL BE DUG FROM THAT; OVERBURDEN MAY BE TOO HIGH, THOUGH, SO SOIL SAMPLES WILL BE TAKEN @ VARIOUS DEPTHS; A SECOND MUDBOIL WILL THEN BE DUG FOR SIMILAR PURPOSE.	
SCREE/KILL ZONE HAS LITTLE OR NO VEG (<5%) WHERE BA MAKES UP 75%+ OF FLOAT; VEG. INCREASES AS BA:CARB. SH. DECREASES, BELOW 65m FROM TOP WHERE SCREE CONTINUES FOR AN EXTRA 15m BUT WITH BA DECREASING TO $\approx 5\%$ OR LESS. VEG. INCLUDES MOSSBERRY + CASSIOPIA.	MUDBOIL I	584413E 7104386N
M-01	@ 12" DEPTH; OCHRE-COLOURED SILT; SM. CHL + MAR. SHALE PEBS;	
M-02	@ 4" DEPTH; ?TOP OF OUTCROP?? GREYISH-YELLOW, SLIGHTLY	

SULPHIDE SMELL; NO PEBS; VERY FINE CLAY/SILT

M-03

SAME AS ABOVE; 1M E OF M-02. ≈ 4.5' DEPTY

AUG 18 2000:

i. SAME AS 17TH; PROSPECT IN BETWEEN CAMP + BARITE FOLLOWING

3-21 STREAM RUNNING NE FROM CAMP RIDGE; MIXTURE  
MAN. SHALE; SDST; QTZTE; @ 583633 E 7104632 N.  
→ SAMPLE "O LAKE 1": @ 584044 E 7104414 N IN CARB. SHALE SCREE

R-23 SMALL SCREE SLOPE 15x10m 95% CARB. SHALE; 3% BA  
COBBLES; 2% SDST. FLOATS; BA-COBBLE; STRONG  
SULFUR SMELL, HEAVY 584228 E 7104373 N

PROSPECTED FROM M-03 TO TOP: ALL SILICIOUS DUNIT  
+ SDST.

R-24 - SDST W/ RED STAINING (TRY & SEE IF IT RUNS!)  
584453. 7104585

AUG 19 2000

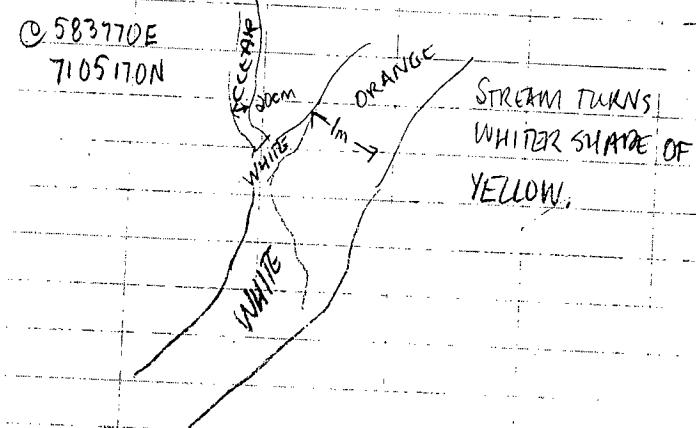
i. PROSPECT + SAMPLE STREAM 1/2 MILE N CAMP + SOURCE

NO. 312

5-22] 583786 7104986; SM PILE OF SAND/SILT, COLLECTED  
IN EDDY IN MIDDLE OF STREAM; STREAM 1.2M WIDE;  
EDD. SITTING ON TOP OF ORANGE/WHITE PPT.  
60% SAND 30% SILT 5% SHALE PEBS 5% RUSTY PPT

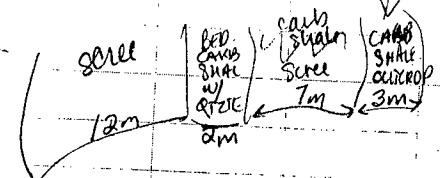
© 583770E

7105170N



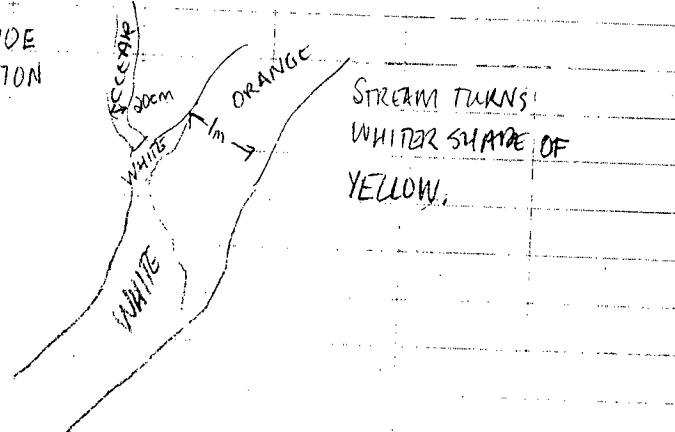
R-25 CARB. SUMMIT @ 583757 7104725 STRIKE 318

DIP: 64°; SOME STAINED RED; OUTCROP 3m x  
5m

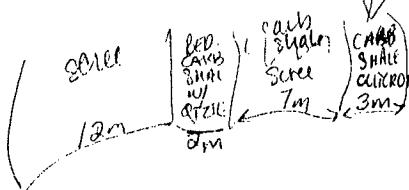


R-22] SB 3786 710498C : SM PILE OF SAND/SILT, COLLECTED IN EDG. IN MIDDLE OF STREAM; STREAM 1.2m WIDE;  
SED. SITTING ON TOP OF ORANGE/WHITE PPT.  
60% SAND 30% SILT 5% SMALL COBS 5% RUSTY PPT.

© 583770E  
7105170N



R-25] CARB. SUMP @ 583757 710472S STRIKE 318  
DIP: 64°; SOME STAINED RED; OUTROP 3m x  
5mh



SULPHIDE SMELL; NO PEBS, VERY FINE CLAY/SILT

M-03

SAME AS ABOVE, 1M E OF M-02. ~ 4.5' DEPSY

AUG 18 2000]

: SAME AS 17H; PROSPECT IN BETWEEN CAMP + BARITE  
FOLLOWING

R-21

STREAM RUNNING NE FROM CAMP RIDGE; MIXTURE  
MAN. SHAPE; SDST; QTZITE; © 583633E 7104632N  
→ SAMPLE "C LAKE 1": © 584044E 7104414N IN CARB. SHALE SCREE

R-23

SMALL SCREE SLOPE 15x10m 95% CARB. SHALE; 3% BA  
COBBLES; 2% SDST. FLOATS; BA-COBBLE; STRONG  
SULFUR SMELL, HEAVY 584288E 7104373N

PROSPECTED FROM M-03 TO TOP: ALL SILICIOUS DUNLT  
+ SDST.

R-24]

- SDST. W/ RED STAINING (TRY & SEE IF IT RUNS!)  
584453 710458S

AUG 19 2000]

: PROSPECT + SAMPLE STREAM 1/2 MILE N W/CAMP + SOURCE

R-05 ??? / R-06 ???

R-26 C R-11. QUARTZ FLOAT W/ ENPHASE S-MERS,  
MINOR VISIBLE GA + RED? CINNABAR?

R-27 CARB. SAMPLE FROM E MOUNTAIN  
RIDGE

ROCKS

R-01 TO R-27

R-03, R-04, R-10, R-11, R-15, R-19, R-22, R-23

R-26

SOIL

G-01 to G-35

M-01 to M-02

S-01 to S-23

NORTHERN ANALYTICAL LAB

105 COPPER RD

667-6900