BRITISH COLUMBIA

PROSPECTORS ASSISTANCE PROGRAM

MINISTRY OF ENERGY AND MINES

GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR:	1999/2000
REPORT #:	PAP 99-8
NAME:	STEVE BELL

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
PROSPECTING REPORT FORM (continued)

B. TECHNICAL REPORT

- One technical report to be completed for each project area.
- **Refer to Program Requirements/Regulations 15 to 17, page 6.**
- If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (see section 16) required with this TECHNICAL REPORT.

Name STEVE BELL **Reference Number** 99/2000 P12

LOCATION/COMMODITIES

Project Area (as listed in Part A) GOLD CREEK MINFILE No. if applicable

Location of Project Area NTS 93 L/7 Lat 54° 21' 30" Long 126° 54' 30"

Description of Location and Access LOCATION IS 16.5 Km AT AZIMUTH 254° FROM HOUSTON B.C. ACCESS IS BY MOTOR VEHICLE ON GOLD CREEK F.S.R. CENTER OF LOCATION IS 500M SOUTH OF 4.75 KM MARK

Main Commodities Searched For BASE METALS

Known Mineral Occurrences in Project Area NO MINERAL OCCURRENCES WITHIN 10 Km.

WORK PERFORMED

1. Conventional Prospecting (area) 10 Km^2
2. Geological Mapping (hectares/scale)
3. Geochemical (type and no. of samples) 19 SOIL 2 Rock
4. Geophysical (type and line km)
5. Physical Work (type and amount)
6. Drilling (no. holes, size, depth in m, total m)
7. Other (specify)

SIGNIFICANT RESULTS

Commodities Cu, Pb, Zn Claim Name STARDUST

Location (show on map) Lat. 54° 21' 30" Long 126° 54' 30" Elevation 3,300 feet

Best assay/sample type 2662 P.P.M. Cu IN Rock, 576 PPM Cu, 292 PPM Pb, 637 PPM ZN IN SOILS

Description of mineralization, host rocks, anomalies A POLYMETALLIC SOIL ANOMALY IS ASSOCIATED WITH ARGILLITE NEAR A SEDIMENTARY / VOLCANIC CONTACT SILICIFIED TUFFS WHICH OVERLIE THE ARGILLITE HOST COPPER BEARING QUARTZ / PYRITE STOCKWORK STYLE MINERALIZATION.

Supporting data must be submitted with this TECHNICAL REPORT

Information on this form is confidential for one year from the date of receipt subject to the provisions of the *Freedom of Information Act*.

Technical Report
Prospectors Assistance Program 1999

On Field Work Done

Between June 9 and November 11, 1999

In the Omineca Mining District
NTS Maps 93 L/6, 93 L/7, 93 L/9, 93 L/13, 93 L/15

Submitted by Steve Bell
Reference # 99/2000 P12

January 2000

SH Bell

Duplicate copy sent to Wijdahl for review and retention.

Table of Contents

Introduction

The following is a report of the exploration work performed by the author between June 9 and November 11, 1999. During this period conventional prospecting techniques were used to investigate favorable terrain near Houston B.C. Project locations include the following:

(A) Palomino, Findlay Lake and Robert Hatch

North of minfile occurrence 93 L/19, East of Byman creek, West of Robert Hatch creek and South of Findlay Lake.

NTS map 93 L/9 Topley.

(B) Houston Tommy

North of Houston Tommy creek, East of the Thautil river, West of the Morice river and South of the wildlife reserve.

NTS map 93 L/6 Thautil River and 93 L/7 Houston

(C) Gold Creek

North of Houston Tommy creek, East of the Morice river, West of the wildlife preserve and South of Coffin lake.

NTS map 93 L/7 Houston.

(D) Shelford

Shelford Hills near minfile occurrence 93 E/85.

NTS map 93 E/15 Nadina River.

(E) Other

Matzehtzal mountain, 16 km North West of Topley B.C.

Morice lake, Minfile #93 E11.

Dungate creek, 9 km South East of Houston B.C.

Introduction (Cont.)

The projects are located in a mining district where previous exploration was directed over widespread areas in the search for large porphyry systems. Recent exploration however has been focused on smaller target areas having volcanogenetic massive sulphide potential.

The bulk of the work program was designed to explore for these smaller VMS style deposits at locations having both favorable geology and recently improved access. The VMS locations include Palomino, Houston Tommy, Gold Creek and Morice lake.

An exception is the Shelford location which was explored for precious metal deposits related to felsic subaerial volcanism. Also limited follow up work was performed on the Palomino and Tac claim groups which were staked during the 1998 season. In addition local volcanic rocks were explored for opal and the Port Arthur moly occurrence was visited.

Summary of Work

(A) Palomino, Findlay lake and Robert Hatch

Reconnaissance geophysics and soil geochemistry failed to detect new mineralization at the Palomino location.

(B) Houston Tommy

A reconnaissance self potential survey lead to the discovery of two sedimentary/volcanic contacts which were explored for VMS potential.

(C) Gold Creek

Two sedimentary/volcanic horizons were explored one of which is associated with significant copper mineralization and anomalous Pb/Zn/Cu soil geochemistry.

(D) Shelford

Conventional prospecting did not detect new mineralization. Soil geochemistry was not anomalous.

(E) Matzehtzal mountain

Minor lead mineralization was noted in outcrops near the head of a Zn/Pb/Cu soil anomaly. A test pit revealed weak copper and molybdenum mineralization.

Dungate creek

A potential opal bearing horizon was located near Dungate creek in silicified volcanic rocks.

(A) Fieldwork (Palomino claims)

On the palomino claim group follow up soil geochemistry and reconnaissance self potential testing was done to supplement the project completed in 1998.

Previous soil geochemistry and self potential data indicate the possibility of a North East mineralizing trend. (See fig. 1) Residual soils were tested where this trend crosses the valley of Johnny David creek South of the magnetic anomaly. Here Ten soil samples were collected at uniform depths of 1.0 m, at ten meter intervals. (See fig. 2, samples P070E - P160E)

Two 300m Self potential lines were run to test for the trend in the North East and 1.2 km of reconaissance style SP survey was completed along a logging road to the North and West.

A large chip sample was taken across the quartz feldspar porhyry dyke where exposed on the South bank of Johnny David creek East of the Jack Rabbit Shear zone (Minfile 93 L/19). The sample width is approximately 20 m. (See fig. 3, ICP analysis)

Loose soil and rock was cleared away from the Jack Rabbit shear zone exposing the brow of an adit (circa 1927). A well mineralized sample was taken from the footwall of the shear which contains significant gold (see fig. 4).

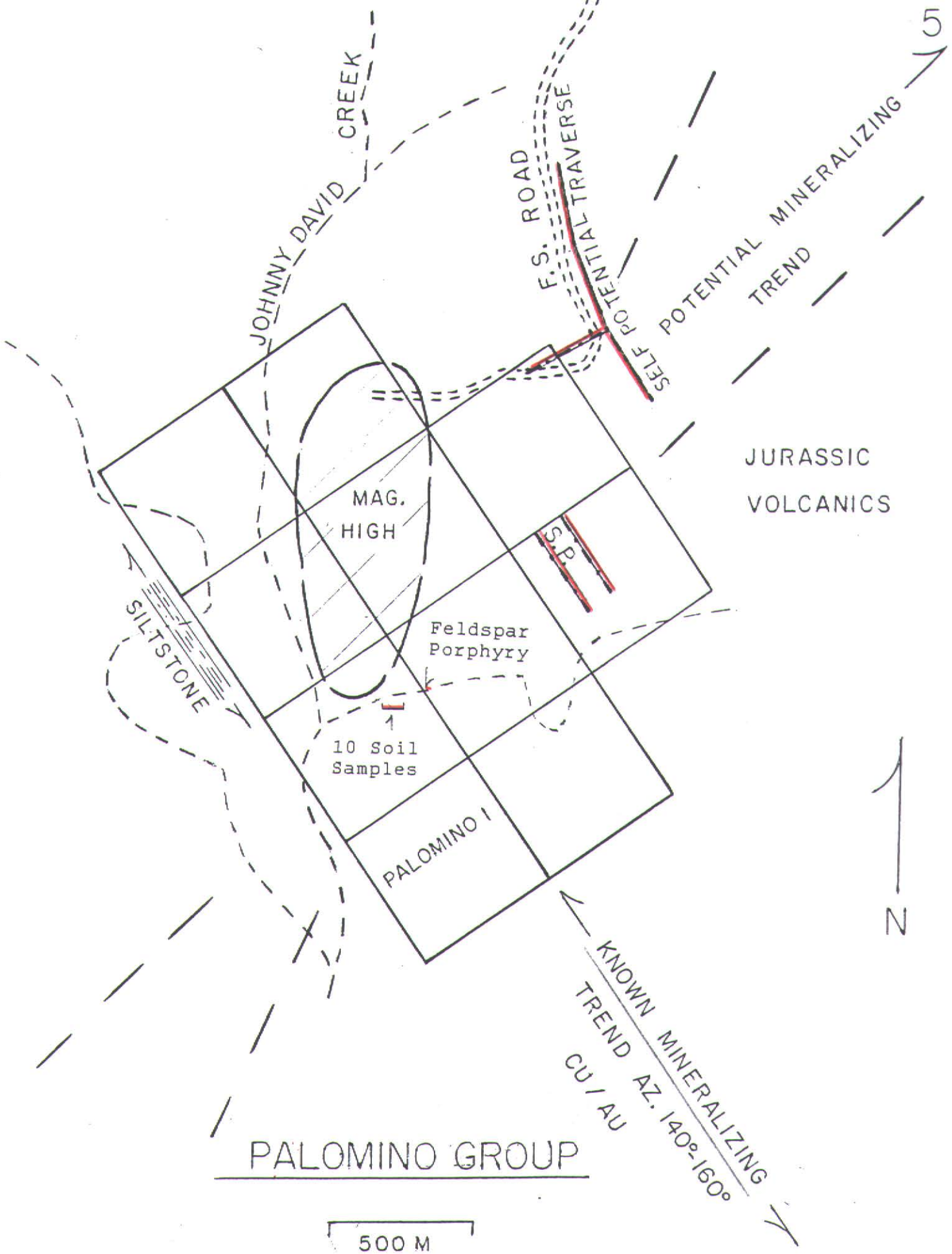

5
JOHNNY DAVID CREEK
F.S. ROAD
POTENTIAL TRAVERSE
POTENTIAL MINERALIZING TREND
JURASSIC VOLCANICS
MAG. HIGH
S.P.
SILTSTONE
Feldspar Porphyry
10 Soil Samples
PALOMINO I
N
KNOWN MINERALIZING TREND AZ. 140°-160°
CU / AU
PALOMINO GROUP
500 M

FIG. 1

TSL Ass: Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Mr.STEVE BELL
Attention: Steve Bell
Project: Palomino
Sample: .

Report No : 9V0241 SJ
Date : Jul-14-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	As ppm	Ba ppm	Ca %	Cd ppm	Cu ppm	Fe %	K %	Mo ppm	Pb ppm	Sb ppm	Zn ppm	Au-fire ppb
P070E	<0.2	5	250	0.61	<1	88	5.16	0.11	6	18	<5	111	5
P080E	<0.2	5	250	0.58	<1	74	4.95	0.10	2	14	<5	105	4
P090E	<0.2	5	250	0.60	<1	63	5.09	0.11	<2	16	<5	106	5
P100E	<0.2	5	220	0.63	<1	61	5.06	0.10	<2	16	<5	113	4
P110E	<0.2	5	220	0.56	<1	52	4.75	0.09	<2	14	<5	104	7
P120E	<0.2	5	240	0.56	<1	80	5.07	0.09	<2	12	<5	95	11
P130E	<0.2	5	260	0.58	<1	77	5.14	0.10	<2	14	<5	102	4
P140E	<0.2	5	240	0.59	<1	75	5.14	0.09	<2	16	<5	103	3
P150E	<0.2	5	280	0.63	<1	82	5.16	0.11	<2	14	<5	112	8
P160E	<0.2	5	240	0.65	<1	56	4.83	0.09	<2	14	<5	116	4

SOIL GEOCHEMISTRY, 10 METER SPACING SEE FIG.1 FOR LINE LOCATION

*Au-fire: 30g fire geochem

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.

FIG. 2

Signed: _____

6

Steve Bell
Attention: Steve Bell
Project:
Sample: rock

TSL Ass Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0261 RJ
Date : Aug-06-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Au-fire ppb
Palomino-QFP	0.6	0.32	20	50	<0.5	<5	0.93	<1	3	214	1064	1.16	0.29	0.12	210	4	0.02	8	390	88	5	1	<10	13	<0.01	11	<10	3	174	3	50

20 m CHIP SAMPLE QUARTZ FELDSPAR PORPHYRY DYKE (FIG. 1)

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.

FIG. 2

Signed:

SAMPLE TAKEN FROM SHEAR ZONE PALOMINO CLAIMS

PYRITE / CHALCOPYRITE VEIN NETWORK IN

ALTERED VOLCANIC FOOTWALL ROCK (32.4 p.p.m. Au)

FIG. 4

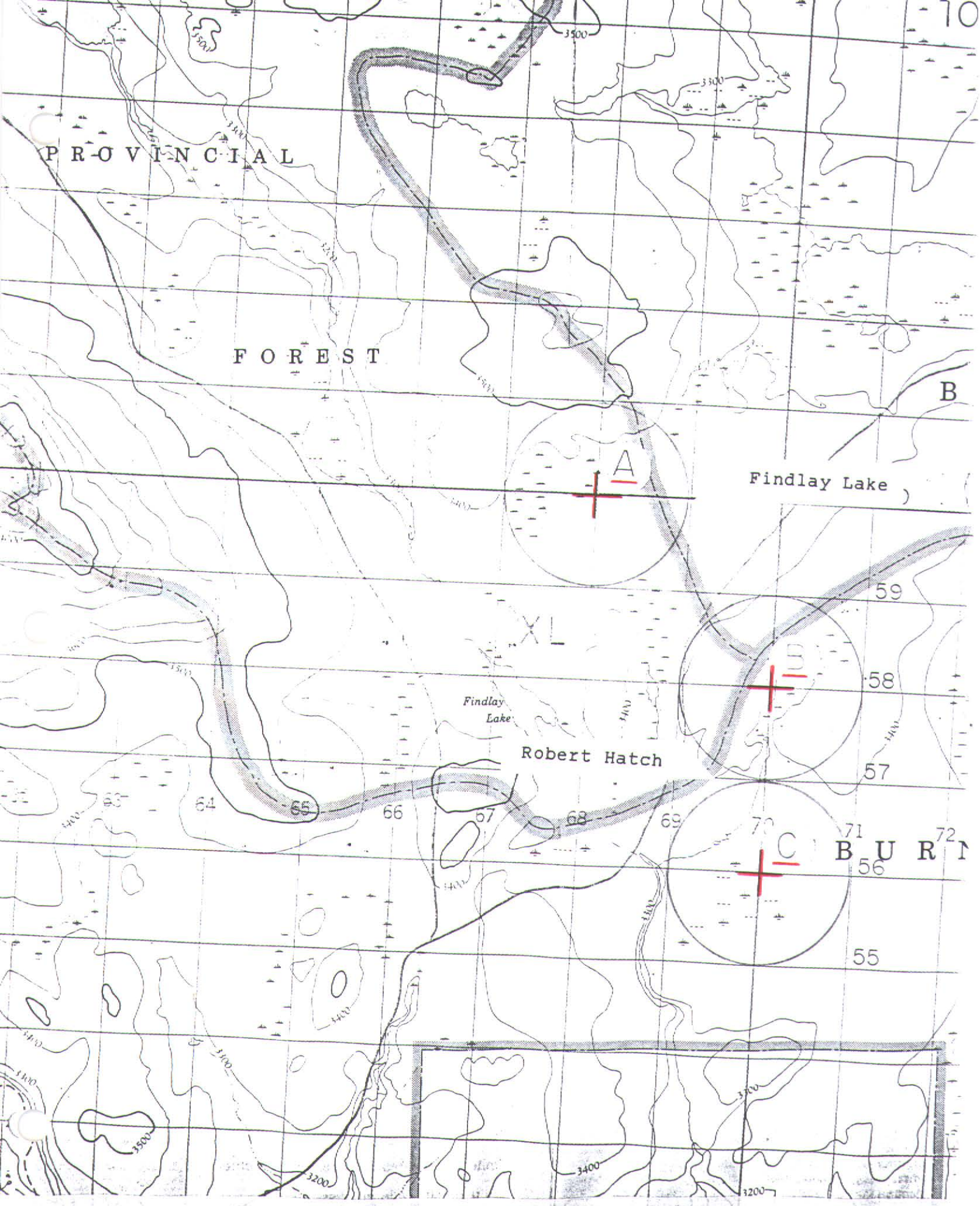
(A) Fieldwork (Findlay Lake and Robert Hatch)

Soil geochemical and self potential surveys were also conducted at Findlay lake and Robert Hatch. (See A,B,C, fig. 5)

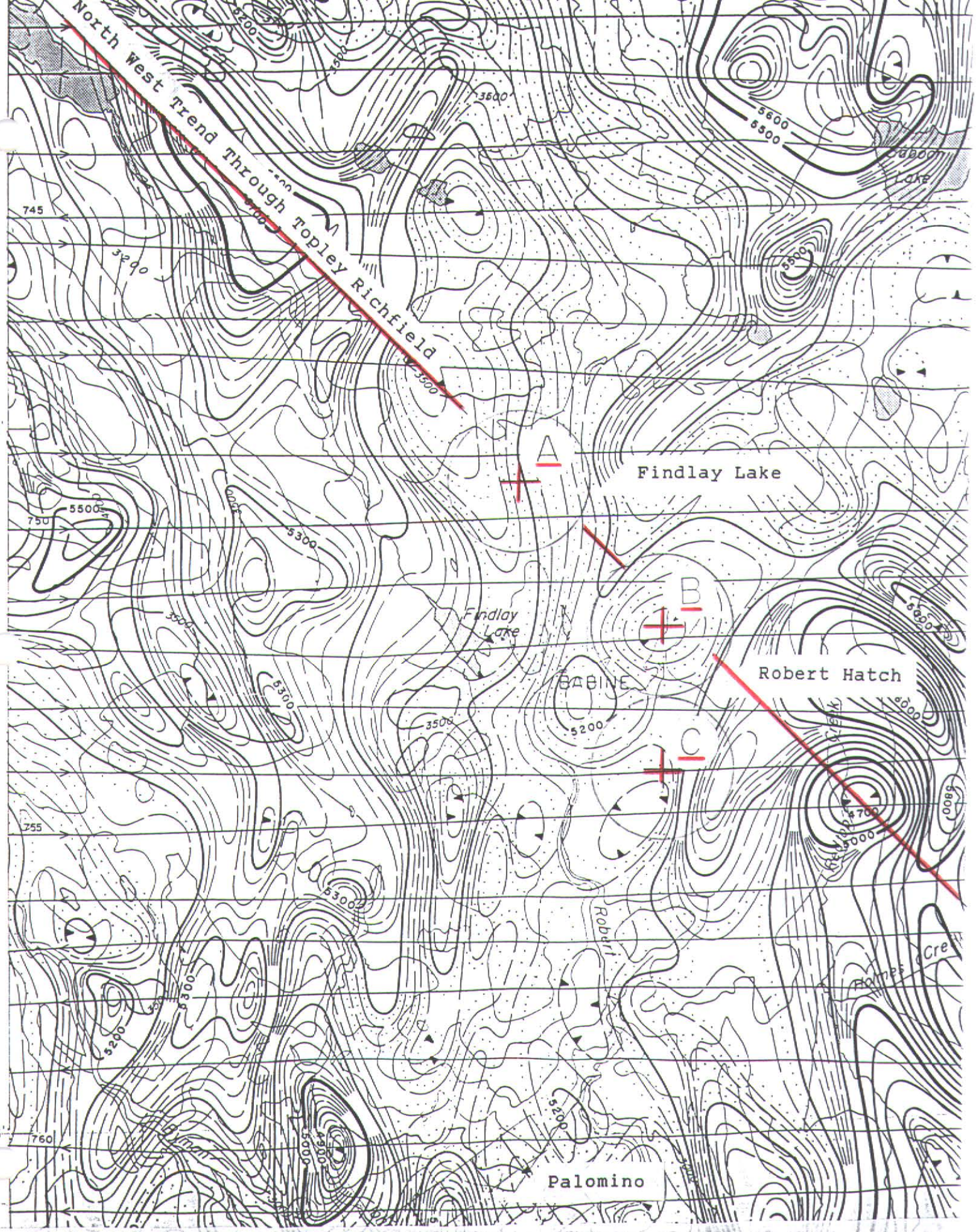
Locations "A", "B" and "C" lie on a North West trend extending from the Topley Richfield deposit to the Len claims (See fig. 6). The Len claims were explored for VMS style mineralization in 1999 by Hudson Bay exploration. Previous operators at Topley Richfield suggest that the deposit there may be VMS related.

The terrain at Findlay lake and Robert Hatch is recessive and swampy. Till is concealed by a blanket of muskeg. Lower magnetic susceptibility and recessive topography could indicate less competent altered rock. On the logging road adjacent to "B" there is an exposure of highly altered and bleached volcanic ? rock.

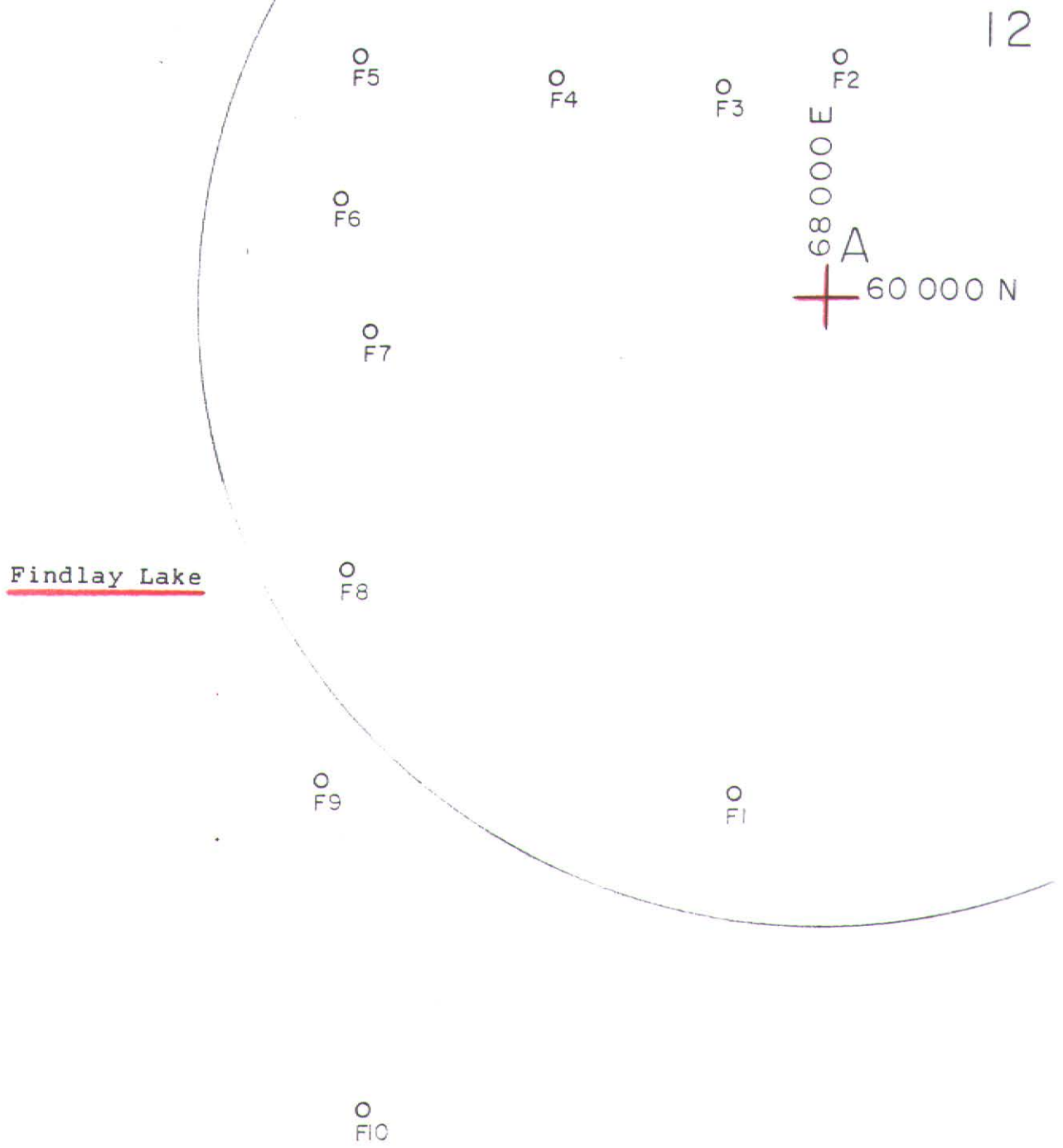
A total of 62 soil samples were taken from these locations and a 0.9 km self potential survey was conducted over the circular magnetic depression at "B". A Dutch soil sampler was used to collect soil samples, beneath muskeg at depths up to 2m. Sample locations are plotted relative to the coordinates at A,B and C found on figures 7,8 and 9.



MAP 93 L/9 TOPLEY FIG.5



MAGNETIC MAP 93 L/9 TOPLEY FIG.6

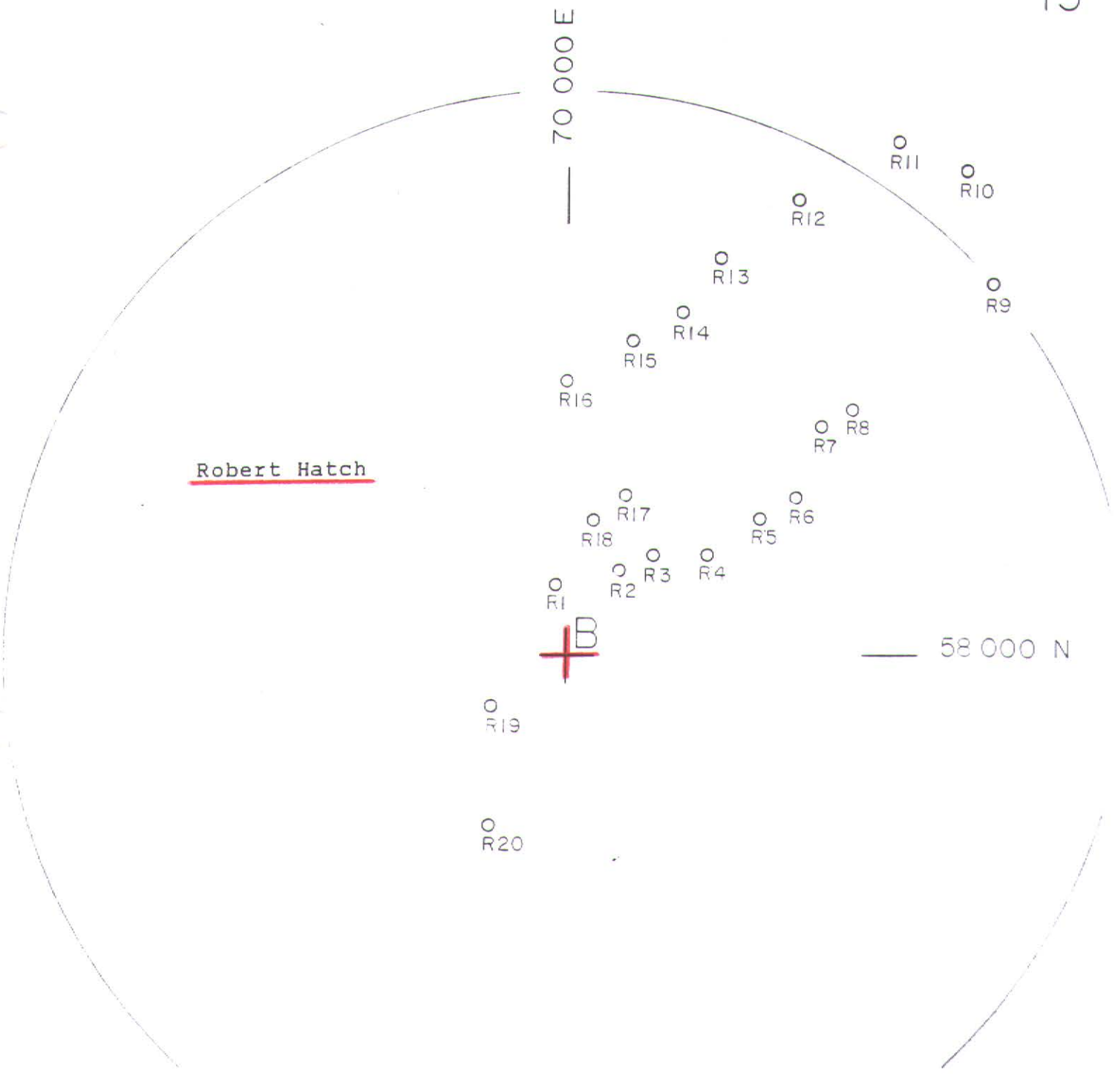


SAMPLE LOCATIONS MAP 93 L/9

SCALE

100M

FIG. 7

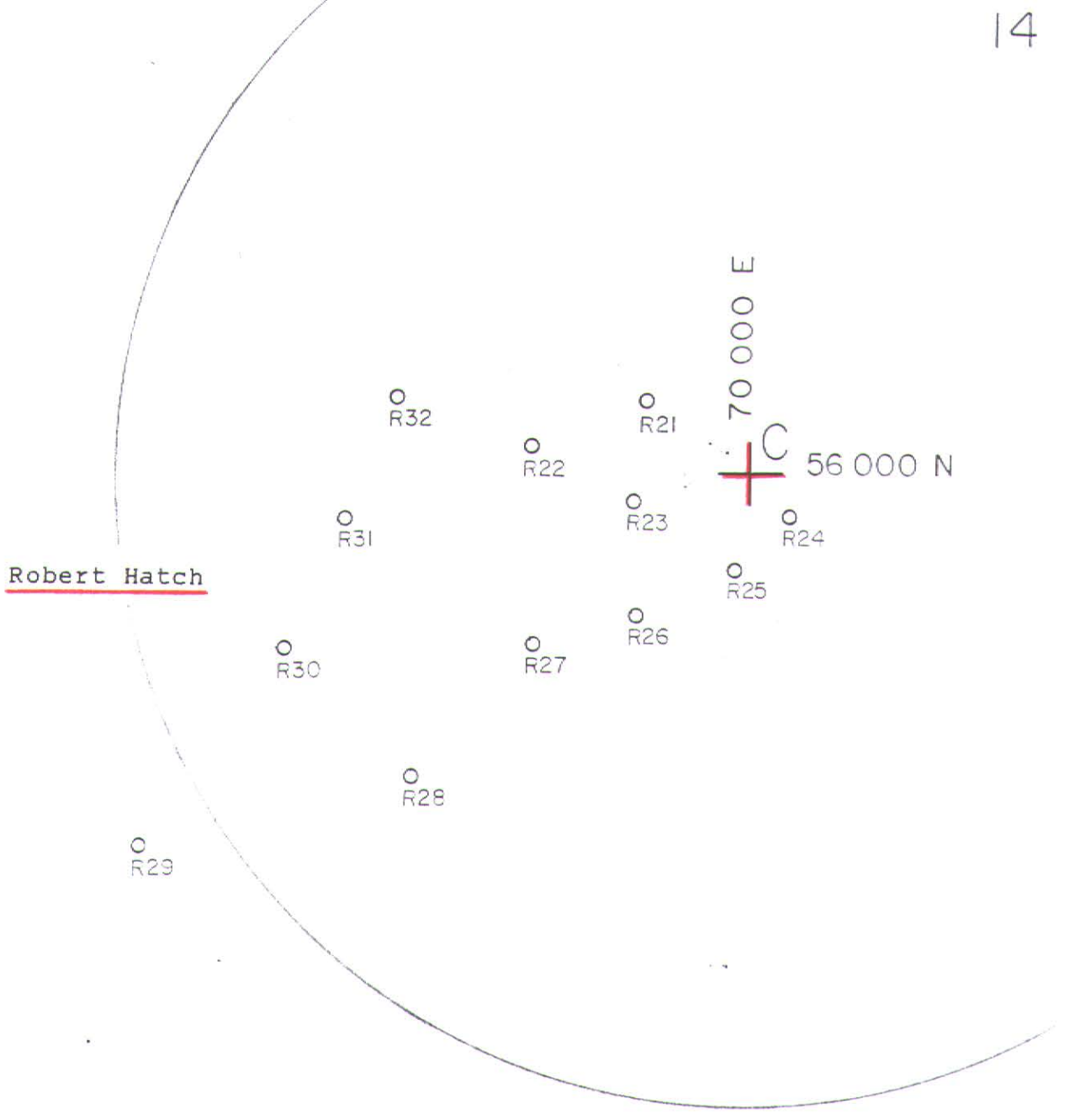


SAMPLE LOCATIONS MAP 93 L/9

SCALE

100M

FIG. 8



SAMPLE LOCATIONS MAP 93 L/9

SCALE

100 M

FIG.9

(A) Observations

No soil anomalies were detected at the Findlay lake or Robert hatch locations. (See ICP results in the appendix). The self potential traverse over the magnetic depression at "B" did not produce anomalous potentials.

Conventional prospecting was hampered beyond the valleys of Byman, Johnny David and Robert Hatch creeks where there is very little out crop. Out crop a few hundred meters North East of the Jack Rabbit shear on the Palomino claims however exhibits a patchy epidote / carbonate / k-feldspar alteration which could be related to undiscovered mineralization.

In preparation for a site visit by a Hudson Bay Exploration geologist debris was stripped to expose the Jack Rabbit shear on one side of Johnny david creek. The stripping exposed narrow replacement and stringer style pyrite/chacopyrite mineralization on the footwall and epithermal calcite/quartz mineralization on the hanging wall side. Three meters of bleached and weathered malacite stained fault breccia and pasty fault gouge occupy the space between HW and FW. Patches of a black sandy material found in this interval could be a decomposed sulphide such as pyrrotite.

A variety of volcanic and sedimentary rocks were noted in the creek valleys. Unfortunately their prospective contacts are not exposed due to extensive overburden.

(A) Observations

The soil geochemistry indicates higher than background values (70 p.p.m. Cu average). This suggests that the underlying or nearby rocks are enriched in copper. (minor chalcopyrite mineralization was noted in bedrock exposures West of the sample line).

Analysis of the quartz feldspar porphyry dyke across a 20 meter width shows elevated values of copper at 1064 p.p.m. and slightly anomalous gold at 50 p.p.b. (Background levels for gold in country rocks tested in the Goosly / Owen lake area are normally less than 15 p.p.b. GSB paper 1990-2)

Anomalous self potentials were not detected across the trend tested to the North East or along the logging road to the North and West.

(A) Conclusions / Recommendations

Residual soils and till tested in the vicinity of Johnny David creek are enriched in copper. This indicates a favorable metallogenetic terrain which could host significant copper and gold mineralization. Patchy epidote, k-feldspar and carbonate noted in outcrop North East of the Quartz feldspar porphyry dyke may be related to undiscovered mineralization.

A geophysical program should be conducted over the entire area to detect potential drill targets.

(B) Fieldwork (Houston Tommy)

At the Houston Tommy location clear cuts were first examined for Hazelton group stratigraphy which hosts VMS style mineralization at several prospects in the Smithers area. Lower to middle Jurassic Nilkitkwa formation rocks are found at higher elevations in the western part of the project location. These rocks represent very prospective terrain to be explored for VMS deposits. Unfortunately proposed legislation designed to protect caribou habitat will prohibit access. Most of the exploration therefor took place at lower elevations outside the wildlife reserve. The main focus was South of the wildlife reserve and North East of the Chisholm Lake porphyry copper prospect. (See fig.10).

Reconnaissance self potential traverses were made in clear cuts over suspected sedimentary / volcanic horizons. Soil, stream and rock samples were taken and conventional prospecting carried out. The Enigma claim group was staked over a Self Potential anomaly which was stripped to reveal a conductive layer.

FIG. 10

PUBLISHED 1969

MAGNETIC MAP 93 L/6 THAUTIL RIVER

(B) Observations

Float and bedrock exposures in a clear cut and creek bed near the 9 km mark on the canyon FSR are impure limestone, sandstone and tuff. The limestone is black in color and commonly contains recrystallized bioclastic debris often in the form of shelly fragments. This may have been a shallow water environment during the Nilkitkwa ? age.

Here a strong self potential anomaly was detected just North of the clear cut (See fig.11). A detailed survey defined an S.P. anomaly which begins at the edge of the clear cut and trends at 340 degrees toward a tributary of Houston Tommy creek (See fig. 11). Self potentials are in the range of -180 to -205 millivolts defining an anomaly 15m x +200m in size.

At the spot indicated by the symbol "ACu" on fig. 11 there is an outcrop of green andesite (See photo on fig. 12) which has undergone some alteration characterized by the development of chlorite and small patches of quartz. Rare disseminations of chalcopyrite are associated with the quartz and malachite stain was noted on some fracture surfaces. At "BCu" large patches of quartz and epidote with minor chalcopyrite appear in andesite near the top of a small hill. At one spot frequent patches of quartz appear like small veins until the moss is stripped off to reveal discontinuous patches of quartz/epidote and minor chalcopyrite.

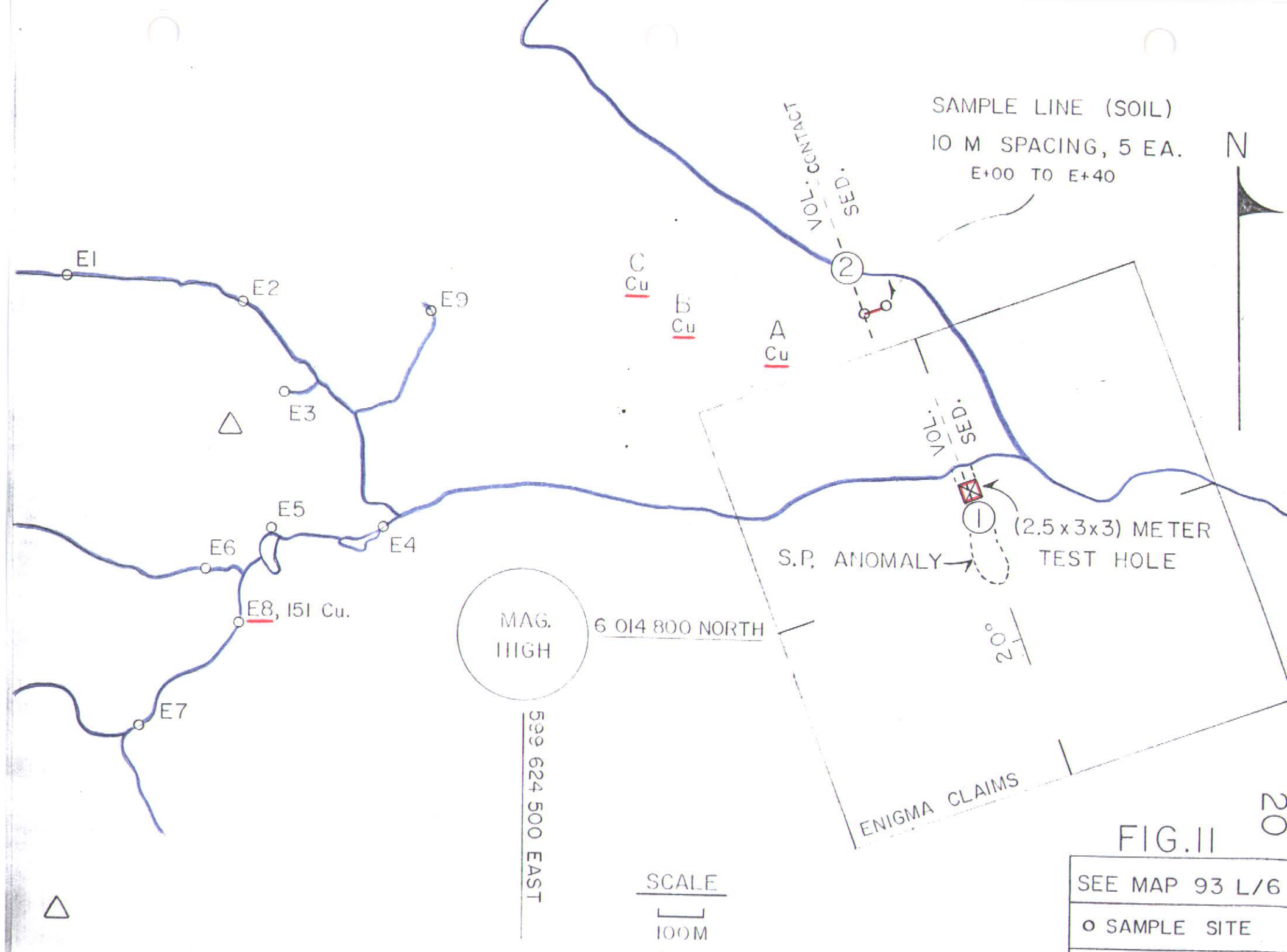
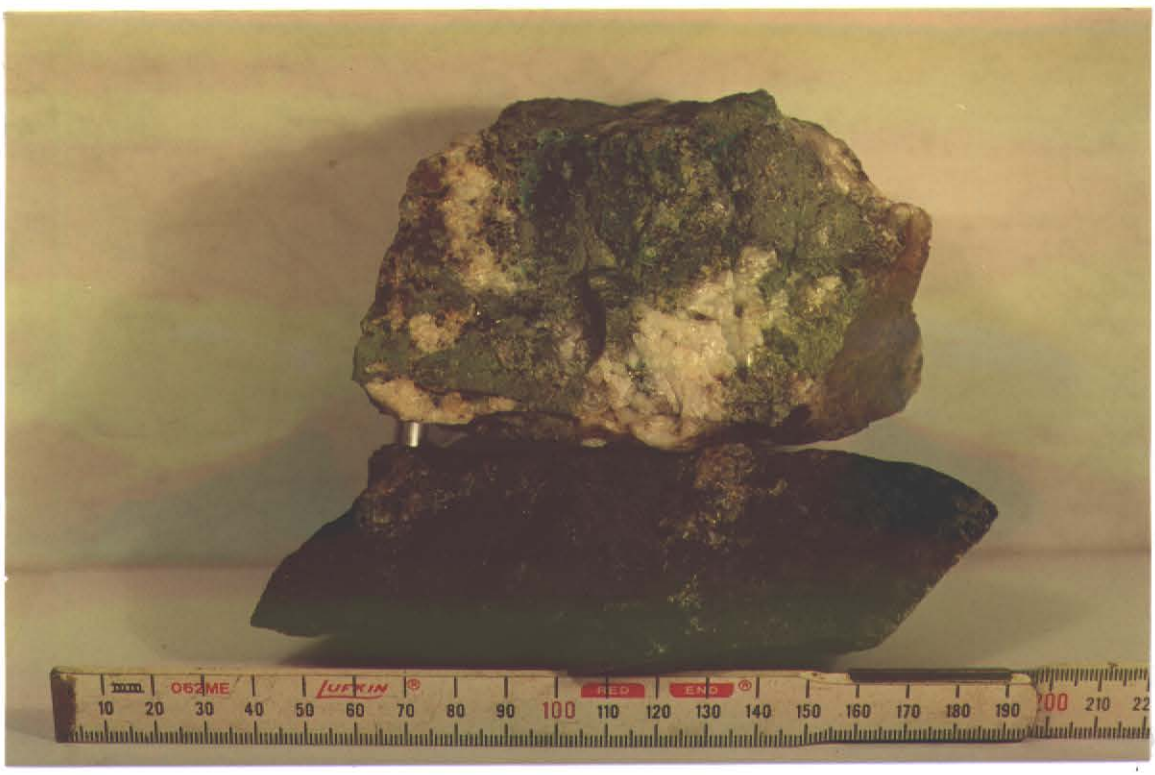


FIG. II

SEE MAP 93 L/6
o SAMPLE SITE
△ QUARTZ / EPIDOTE



B CU

A CU

ALTERED VOLCANIC ROCK WITH MINOR CHALCOPYRITE

A CU —QUARTZ, CHLORITE

B CU —QUARTZ, EPIDOTE

SAMPLE LOCATIONS NEAR ENIGMA CLAIMS SEE FIG.11

FIG.12

(B) Observations cont.

On a ridge at "CCu" small blebs of chalcopyrite and malachite stain were noted in a hard dark green andesite. Here the chalcopyrite appears to have selectively replaced or filled amygdules in the andesite. The mineralization is weak and much rock has to be milled in order to reveal it. South of the hill at "BCu" however some float rock was found with significant chalcopyrite/bornite.

The area about a North trending elliptical magnetic high West of the Enigma claims was investigated for intrusive rocks but none were found. It was theorized that the propylitic volcanic rocks may be related to a mineralizing process associated with a magnetite bearing intrusion. ~~However intrusive rocks could not be found~~ in the vicinity of an ~~elliptical magnetic high 1km east of the Enigma claims~~. A logging road is planned (winter 2000) which will pass by the this mag. anomaly. The drainage west of the mag. high was tested and no anomalous sediments or soils were detected with the exception of sample #E8 which was 151 p.p.m. copper.

Attention was then shifted toward the SP anomaly since quartz/epidote/chlorite alteration can be found in the thermal alteration zone beneath some VMS deposits. The anomaly was stripped to reveal a sedimentary volcanic contact beneath a thin layer of till and 3.5m of fractured andesitic tuff ? (See fig. 13). The contact strikes at 160 degrees and dips 20 degrees toward the South West.

ANDESITE

CONTACT

AZUMITH 160°

TUFF / MUDSTONE

DIP

20° SW

TEST HOLE SHOWING VOL. / SED. HORIZON WITH CONDUCTIVE LAYER AT CONTACT. (ENIGMA CLAIMS) SEE FIG. 11

FIG. 13

(B) Observations cont.

At the contact directly below the andesitic tuff is a 10 cm layer of unconsolidated pelitic sediment. The sediment rests on a 5 cm thick bed of sulphidic tuff. Under the tuff is a silicified carbonaceous mudstone. Fine convolute laminations observed in the mudstone may be the result of bioturbation. A thin layer of pyrolusite ? is found at the top of both the mudstone and sulphidic tuff (See fig. 14). Unfortunately the mudstone was much too hard to pick through and the foot wall was not exposed. Bedrock exposures nearby indicate however that the footwall is comprised of slightly pyritic limy chert and a massive black limestone.

Since no massive sulphide mineralization was uncovered it is thought that the thin beds of pyrolusite and carbon rich mudstone form a conductive sheet which produces a self potential. Samples of the conductive horizon were analyzed to detect tracer elements associated with VMS horizons. A composite sample of the tuff/mudstone however showed only a slight enrichment of arsenic at 195 p.p.m. (Sample E-Tuff). The pelitic sediment at the contact was enriched in arsenic 390 p.p.m., copper 88 p.p.m., lead 70 p.p.m. and zinc 308 p.p.m. The till overlying the contact was high background for copper at 80 p.p.m. (Sample E-Till).

TUFF

CONTACT

MUDSTONE

ROCK SECTION FROM TEST HOLE ENIGMA CLAIMS

SAMPLE TAKEN AT SED. / VOL. CONTACT (FIG.11)

FIG. 14

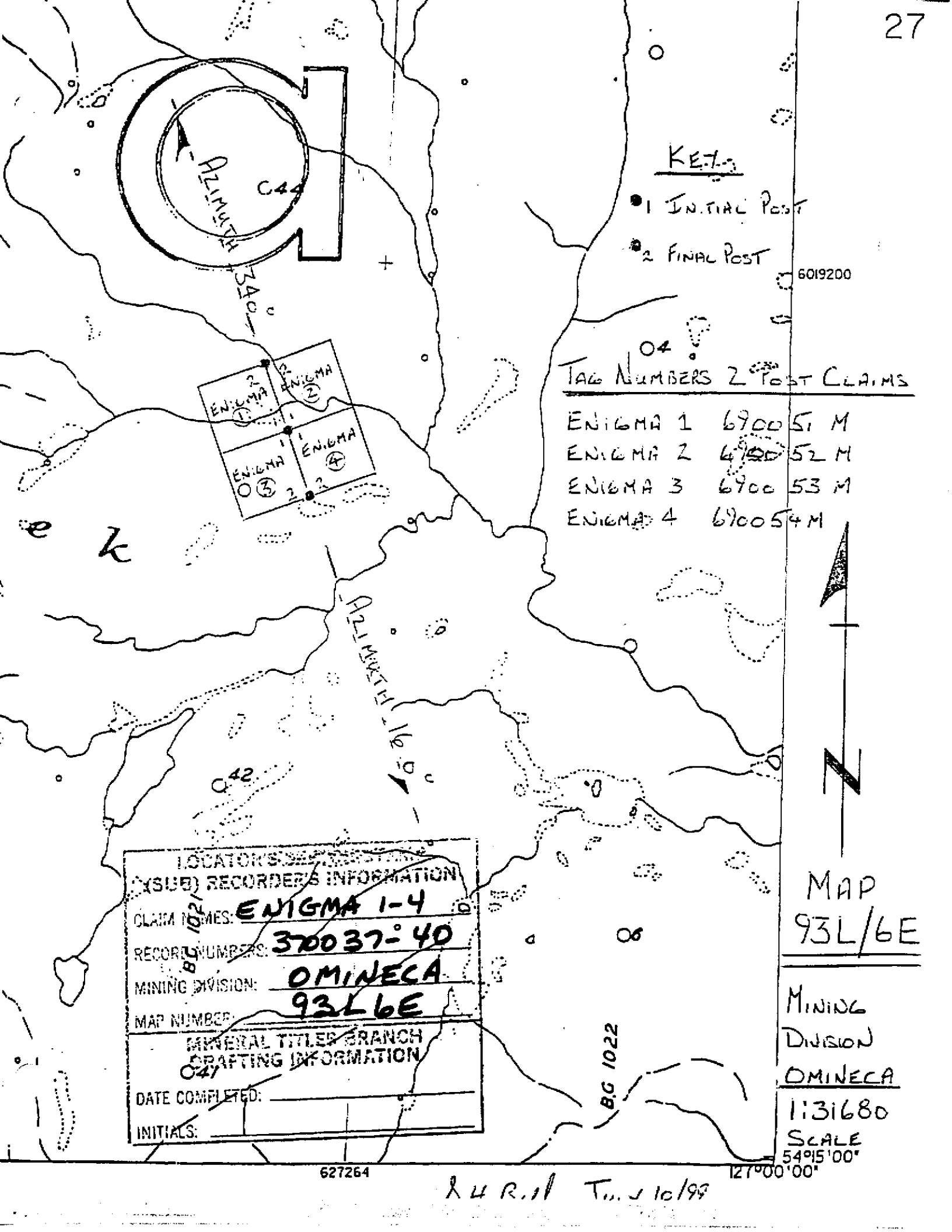
(B) Observations cont.

A second sedimentary / volcanic contact outcrops in a tributary of Houston Tommy creek at "2" on fig. 11. Soil samples were used to investigate the actual contact since it is obscured by drift. Here five B horizon samples were taken E+00 through E+40. No anomaly was detected. The sedimentary rock exposure is a brecciated conglomerate with calcite, barite and jasperoid. The volcanic rock is a green andesite. A sample of the breccia was ground and panned for gold with negative results. ICP analysis of a light brown pyritic tuff ? within this horizon shows slight enrichment of arsenic 145 p.p.m. and moly 136 p.p.m.

(B) Conclusions / Recommendations

VMS style mineralization is not indicated on the Enigma claims since stripping of the SP anomaly did not reveal sulphides and base metal enrichment was not detected in a composite rock sample. The second sedimentary / volcanic horizon North West of the Enigma claims also lacks a base metal signature. The barite and jasperoid here appear to be epithermal rather than chemical precipitates related to a VMS plume.

Alteration observed in Hazelton volcanic rocks may be a regional metamorphic affect or it could be related to undiscovered porphyry style mineralization. Follow up work in the vicinity of the aeromagnetic anomaly is recommended after a planned forestry road has been completed.



KEY

- 1 INITIAL POST
- 2 FINAL POST

TAG NUMBERS 2 POST CLAIMS

ENIGMA 1	690051 M
ENIGMA 2	690052 M
ENIGMA 3	690053 M
ENIGMA 4	690054 M

LOCATION/SKETCH
(SUB) RECORDER'S INFORMATION
CLAIM NAMES: ENIGMA 1-4
RECORD NUMBERS: 370037-40
MINING DIVISION: OMINECA
MAP NUMBER: 93L6E
MINERAL TITLES BRANCH
DRAFTING INFORMATION
DATE COMPLETED:
INITIALS:

MAP
93L/6E

MINING DIVISION
OMINECA

1:31680
SCALE

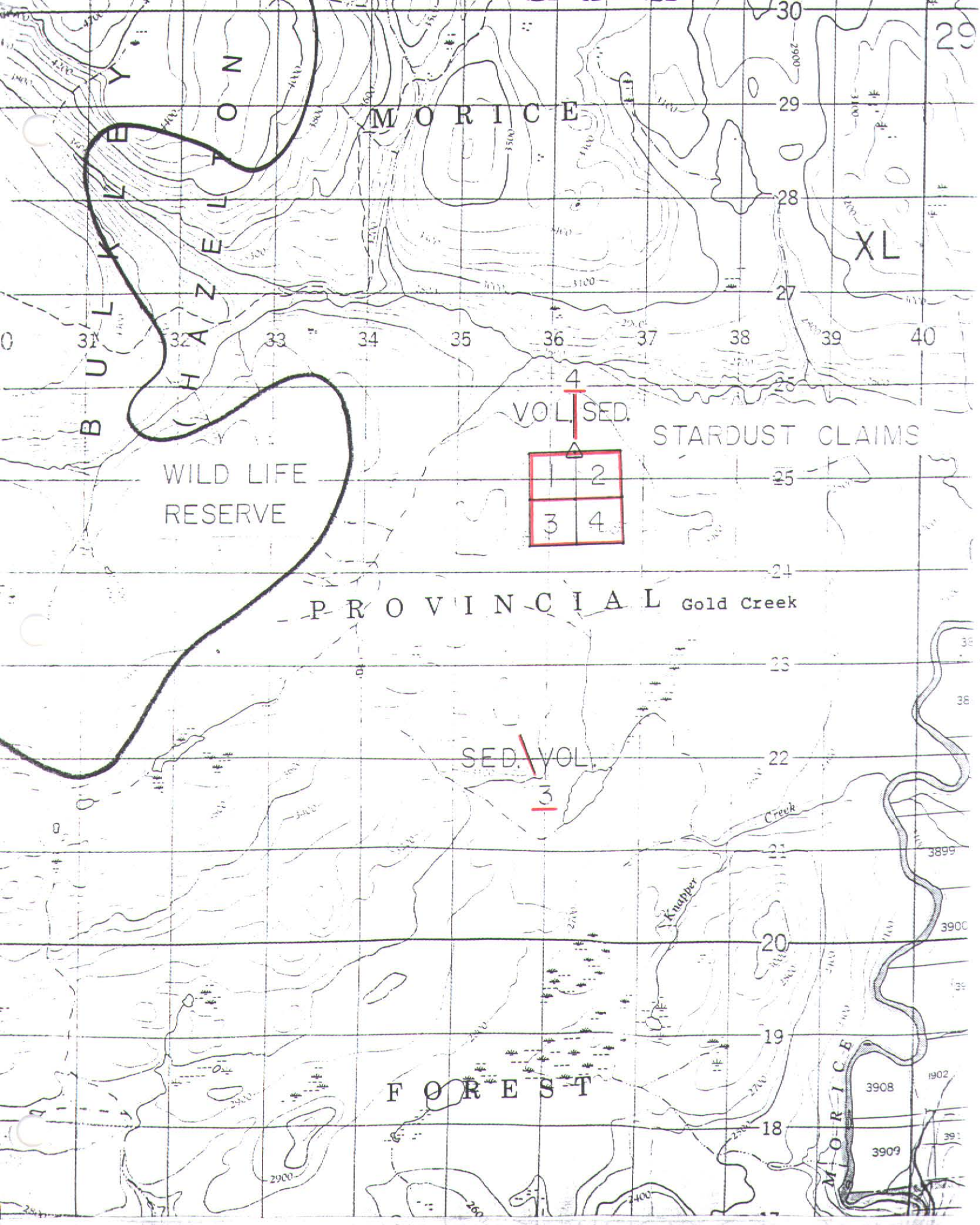
LAR.11 T... J 10/98

(C) Fieldwork (Gold Creek)

This location is interesting since it lies in a corridor between the well mineralized Hazelton mountains and a North trending belt of rocks hosting several VMS prospects. Telkwa formation rocks were examined in this corridor South of Coffin lake and North of Houston Tommy creek between the Wildlife reserve and the Morice/Bulkley rivers. The Stardust claims were staked where geochemistry detected anomalous metals in soils near a sedimentary/volcanic horizon.

(C) Observations

Two volcanic/sedimentary contacts were investigated at locations "3" and "4" on fig. 15. The two contacts may be part of the same horizon which extends from a prominent ridge at "3" to an outcrop on a logging road at "4". At both locations the footwall ? is a black argillite in contact with a rusty green andesitic tuff ? . The beds appear to dip about 20 degrees toward the East. Finely disseminated pyrite was noted in large andesitic boulders beneath a cliff just North of "3" and there are some pods or lenses of calcite/barite in the argillite South West of "3". At "3" limonite/pyrite and malachite stain is associated with a felsite or chert. The small amount of malachite stain however indicates that the horizon contains only slightly anomalous amounts of copper at this location.



MAP 93 L/7 HOUSTON FIG. 15

(C) Observations cond.

The Stardust claims were staked over the contact at "4" after significant amounts of copper were detected in a composite rock sample consisting of ferricrete and pyritic tuff (Sample GW1). This sample was collected from an outcrop exposed in a ditch located on the Gold West forestry road. At the 4.75 km mark an intermediate to basic tuff is exposed in the road bank. The tuff is silicified and well mineralized with a pyrite and quartz stockwork (See fig. 16). Assay results indicate that the ferricrete was probably derived from this tuff (See fig. 17,18)

Soil samples were taken in the vicinity of the mineralized outcrop and the argillite/tuff contact. Sample locations are plotted on fig. 19. The soils about the mineralized outcrop at GW2 are enriched in copper and arsenic (See fig. 20). Over the inferred contact there is a poly metallic soil anomaly (See. Fig. 21). This suggests that there may be additional mineralization not exposed since rock sample GW2 does not contain anomalous lead or zinc.

A bulkley granodiorite ? outcrops on the logging road about 500m west of the Stardust claims. The intrusion is located at "A" on the Aero magnetic map (See fig. 22).The intrusion is highly magnetic but shows no evidence of mineralization. Fracturing and the development of dark green chlorite on joint surfaces in rusty volcanic rocks near the intrusion may be related to its emplacement. Subtle magnetic anomalies South and East of the Stardust claims might indicate other intrusions.

SAMPLE TAKEN FROM STARDUST CLAIMS SEE FIG.19

PYRITE STOCKWORK IN SILICIFIED VOLCANIC

GW 2, (2662 p.p.m. Cu)

FIG.16

Steve Bell
Attention: S. Bell
Project:
Sample: .

TSL Assay Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0351 RJ
Date : Sep-29-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
GW1	0.4	1.08	75	10	<0.5	40	0.21	<1	46	245	1686	11.63	0.03	0.54	270	2	0.04	31	700	24	10	9	<10	2	0.14	69	<10	6	41	16

FIG. 17

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.

Signed: _____

Steve Bell
Attention: Steve Bell
Project: Gold West
Sample: .

TSL Assay Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0370 RJ
Date : Oct-06-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
GW2	1.4	1.91	120	20	<0.5	<5	0.54	<1	95	58	2662	14.13	0.02	1.07	470	6	0.04	39	1780	30	10	10	<10	4	0.12	95	<10	7	133	20

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.

FIG. 18

Signed: _____

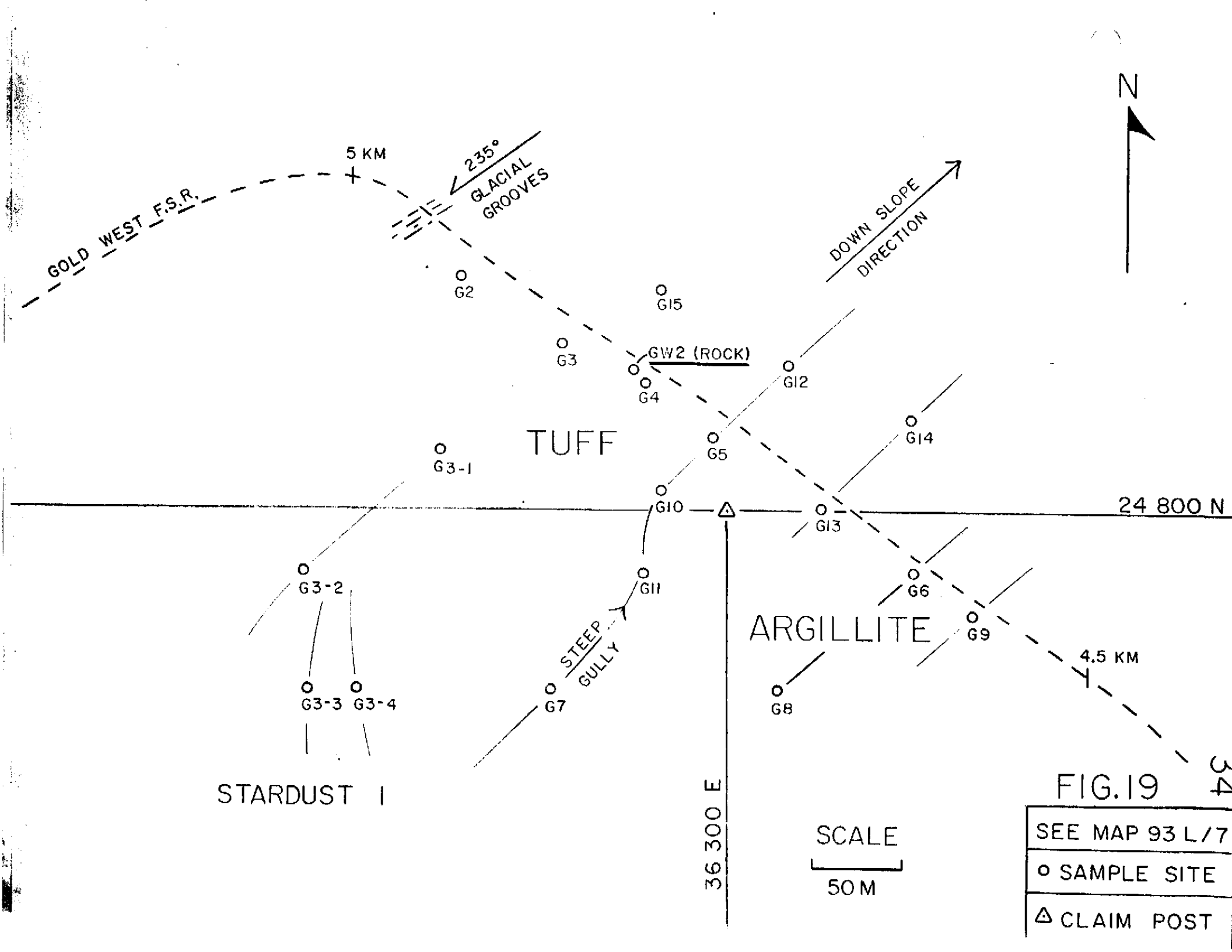

N
5 KM
235°
GLACIAL GROOVES
GOLD WEST F.S.R.
DOWN SLOPE DIRECTION
G2
G15
G3
GW2 (ROCK)
G4
G12
G14
TUFF
G5
G3-1
G10
24 800 N
G13
G3-2
G11
G6
ARGILLITE
G9
STEEP GULLY
4.5 KM
G3-3
G3-4
G7
G8
STARDUST 1
36 300 E
SCALE
50 M
SEE MAP 93 L/7
SAMPLE SITE
CLAIM POST

FIG. 19

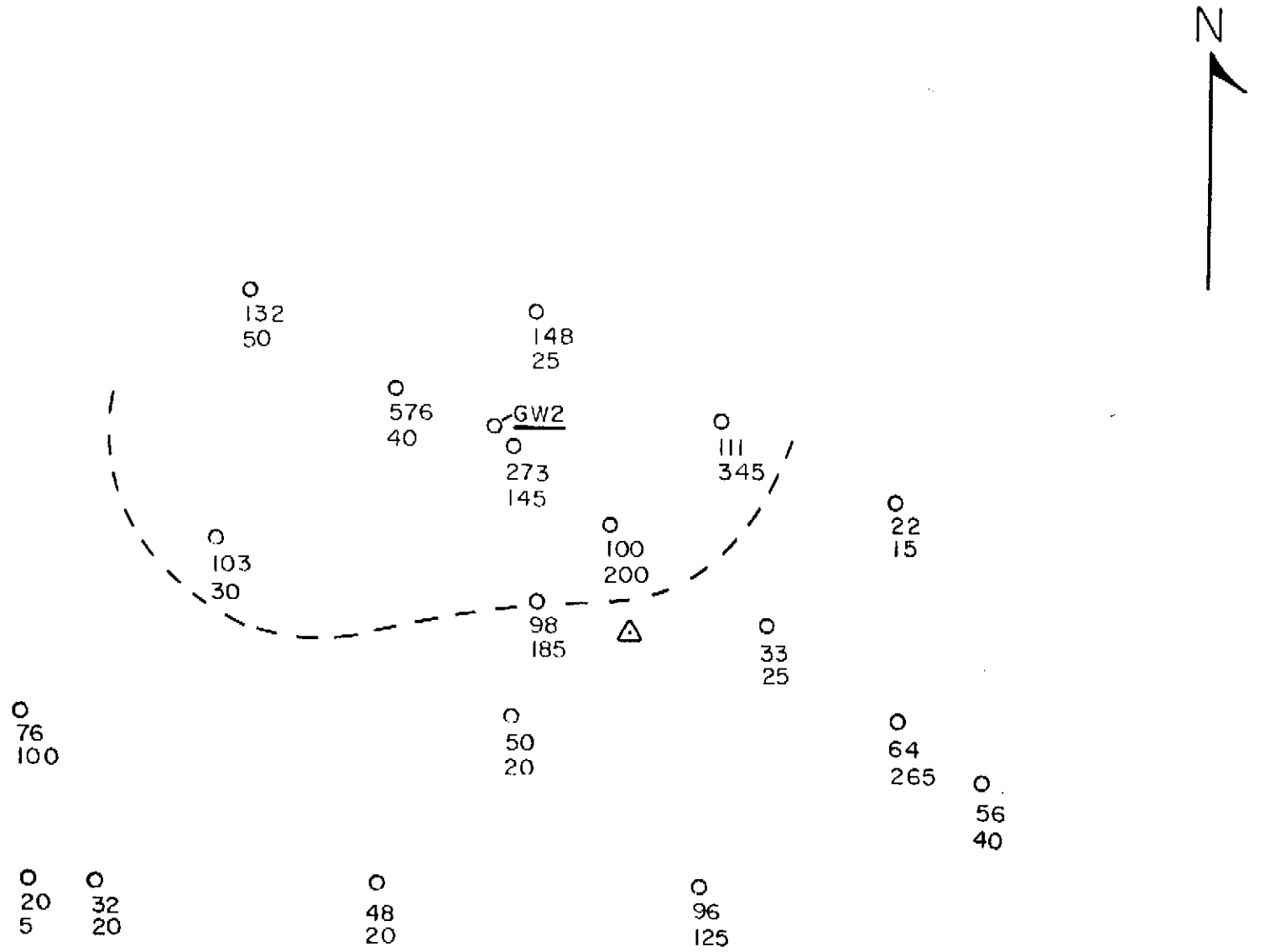


FIG. 20

o P.P.M. CU P.P.M. AS	SCALE 50 M	GEOCHEMISTRY COPPER/ARSENIC o SAMPLE SITE

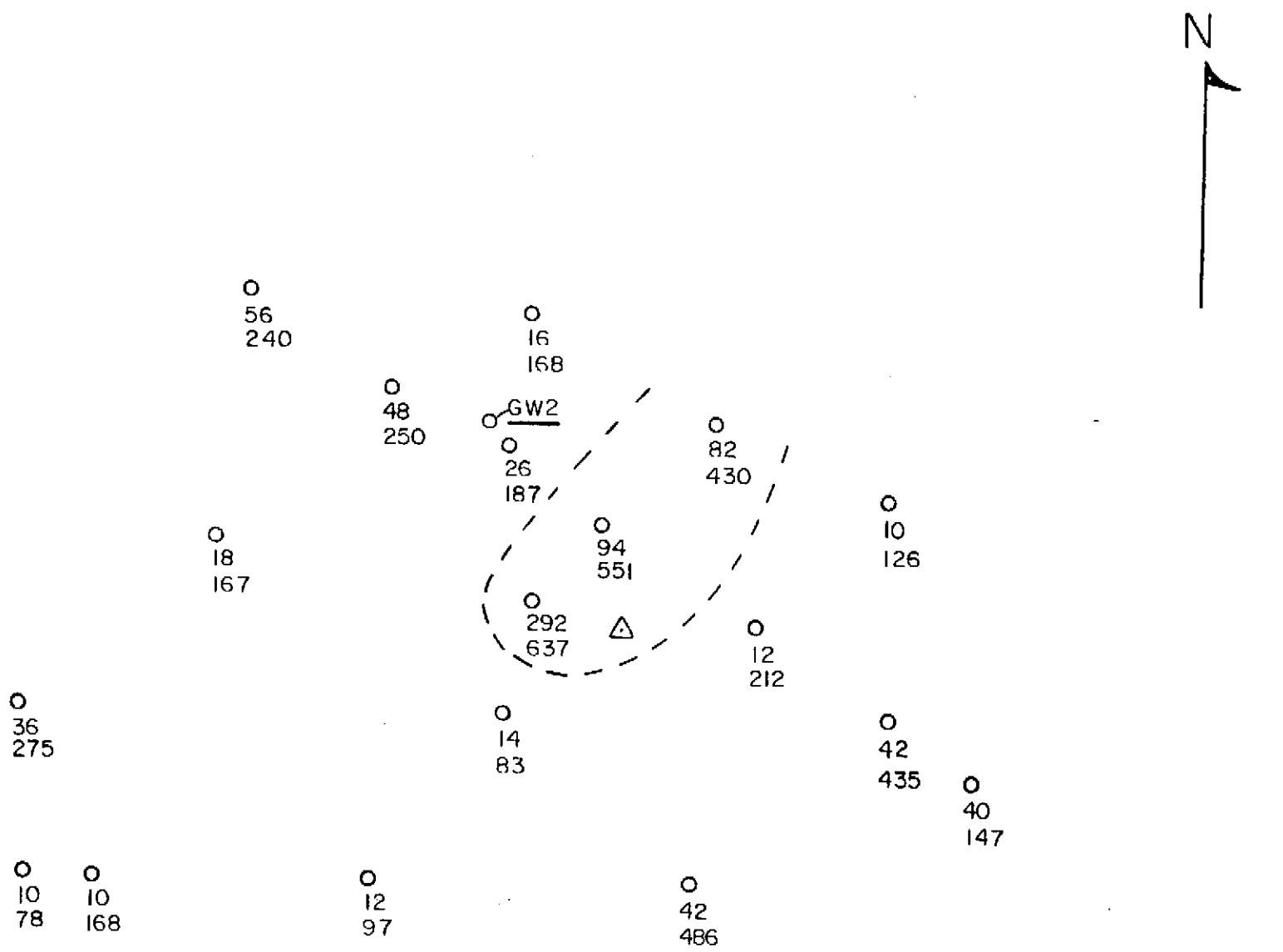

N
56
240
16
168
48
250
GW2
26
187
82
430
18
167
94
551
10
126
292
637
12
212
36
275
14
83
42
435
40
147
10
78
10
168
12
97
42
486
SCALE
50 M
PPM. PB
PPM. ZN
GEOCHEMISTRY
LEAD / ZINC
SAMPLE SITE

FIG.21

MAGNETIC MAP 93 L/7 HOUSTON FIG. 22

(C) Conclusions/Recommendations

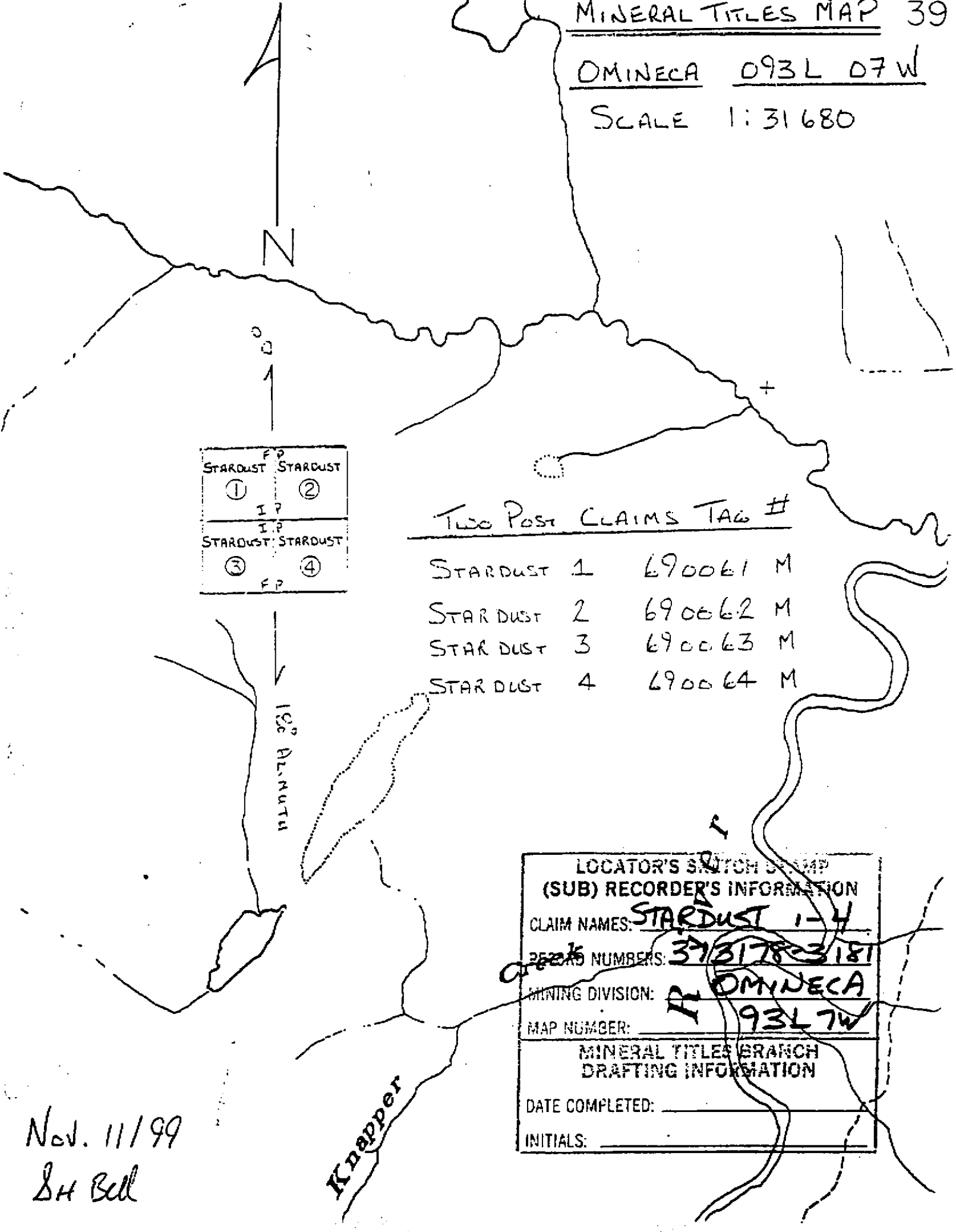
Indications of base metal mineralization on the Stardust claims may be important and more work should be done in order to determine the extent of the surface showing. Mineralization could be porphyry style or take the form of a structurally controlled manto. The poly metallic soil geochemistry might also indicate an underlying epithermal vein. If bedded sulphides are present the prospect could have VMS potential.

The outcrop needs to be mapped and sites chosen where overburden can be stripped to expose the bedrock. The Bulkley intrusion should be delineated with a magnetometer. A self potential survey may then be used to investigate its contacts for associated mineralization.

MINERAL TITLES MAP 39

OMINECA 093L 07W

SCALE 1:31 680



TWO POST CLAIMS TAG

STARDUST	1	690061 M
STAR DUST	2	690062 M
STAR DUST	3	690063 M
STAR DUST	4	690064 M

LOCATOR'S SKETCH MAP
(SUB) RECORDER'S INFORMATION

CLAIM NAMES: STARDUST 1-4

RECORD NUMBERS: 373178-3181

MINING DIVISION: OMINECA

MAP NUMBER: 93L 7W

MINERAL TITLES BRANCH
DRAFTING INFORMATION

DATE COMPLETED:

INITIALS:

Nov. 11/99
SH Bell

(D) Field Work (Shelford)

The shelford hills are located 80 km South of Houston. The project location includes the terrain near minfile location 93 E 85. Exploration targets are upper level epithermal precious metal deposits. Cretaceous age Kalsalka group volcanic rocks were explored where previous exploration has detected mineralization or anomalous geochemistry. Traverses where conducted in the vicinity of minfile 93 E 85 (See fig. 23). Soil samples were taken near a rock Quarry South of Picket hill.

(D) Observations

Minor base metal mineralization was investigated on picket hill by BHP minerals in the 1980's. The rock unit exposed in a recently blasted quarry South of this location is a pyritic Ootsa lake ryholite. Convolute flow banding in the rhyolite suggests that it may be in part intrusive. There are also numerous quartz filled cavities which indicate epithermal activity. Extensive bleaching may be the result of localized venting and steam heating associated with this activity. The rock is slightly anomalous in silver at 5.6 p.p.m. however anomalous base metals were not detected. Mineralizing potential was tested by analyzing samples taken from the drainage near the Quarry. (See fig. 24) No anomalous metals were detected and no mineralization is indicated. Conventional prospecting in the vicinity of Minfile 93 E 85 did not detect any new mineralization.

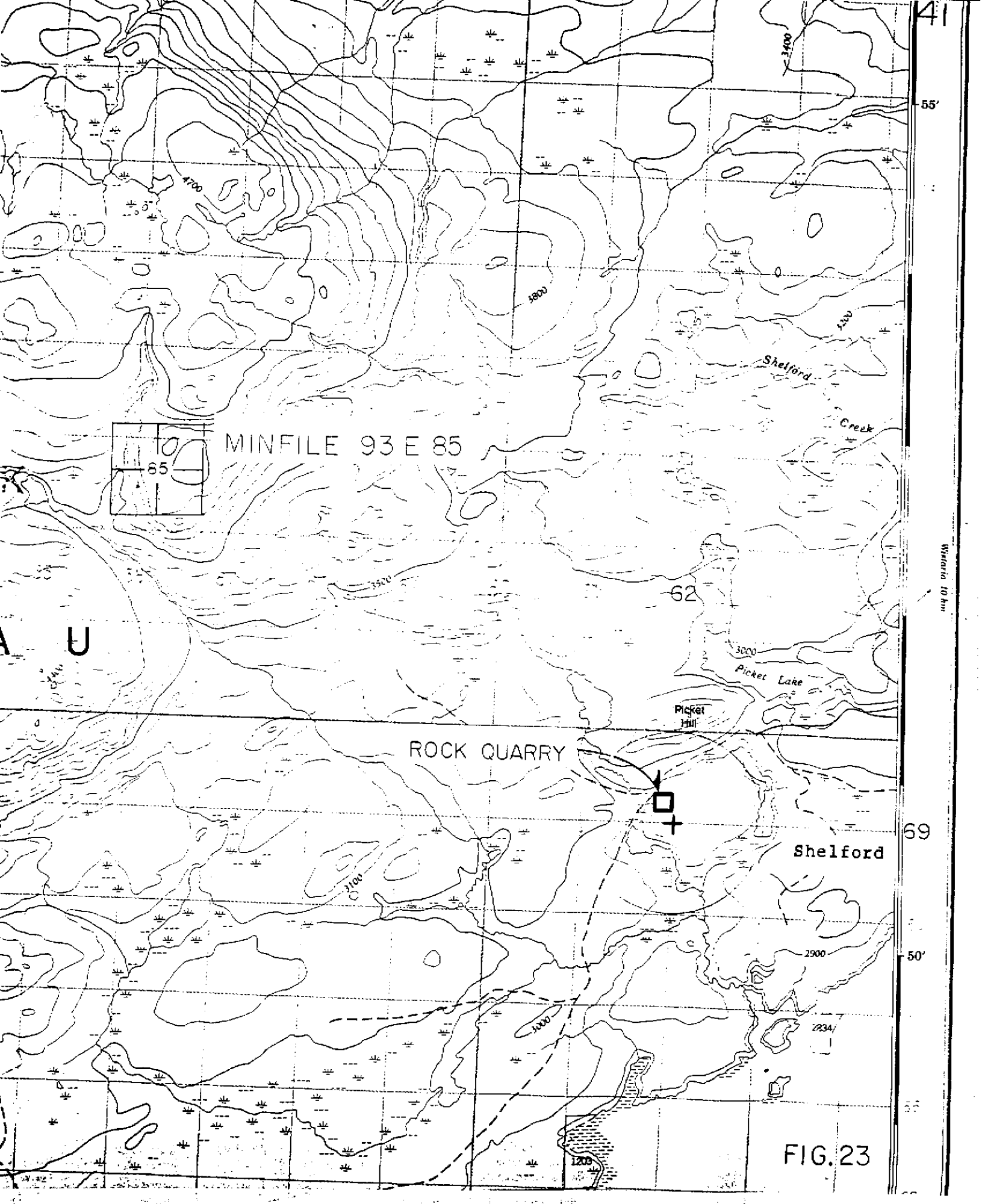
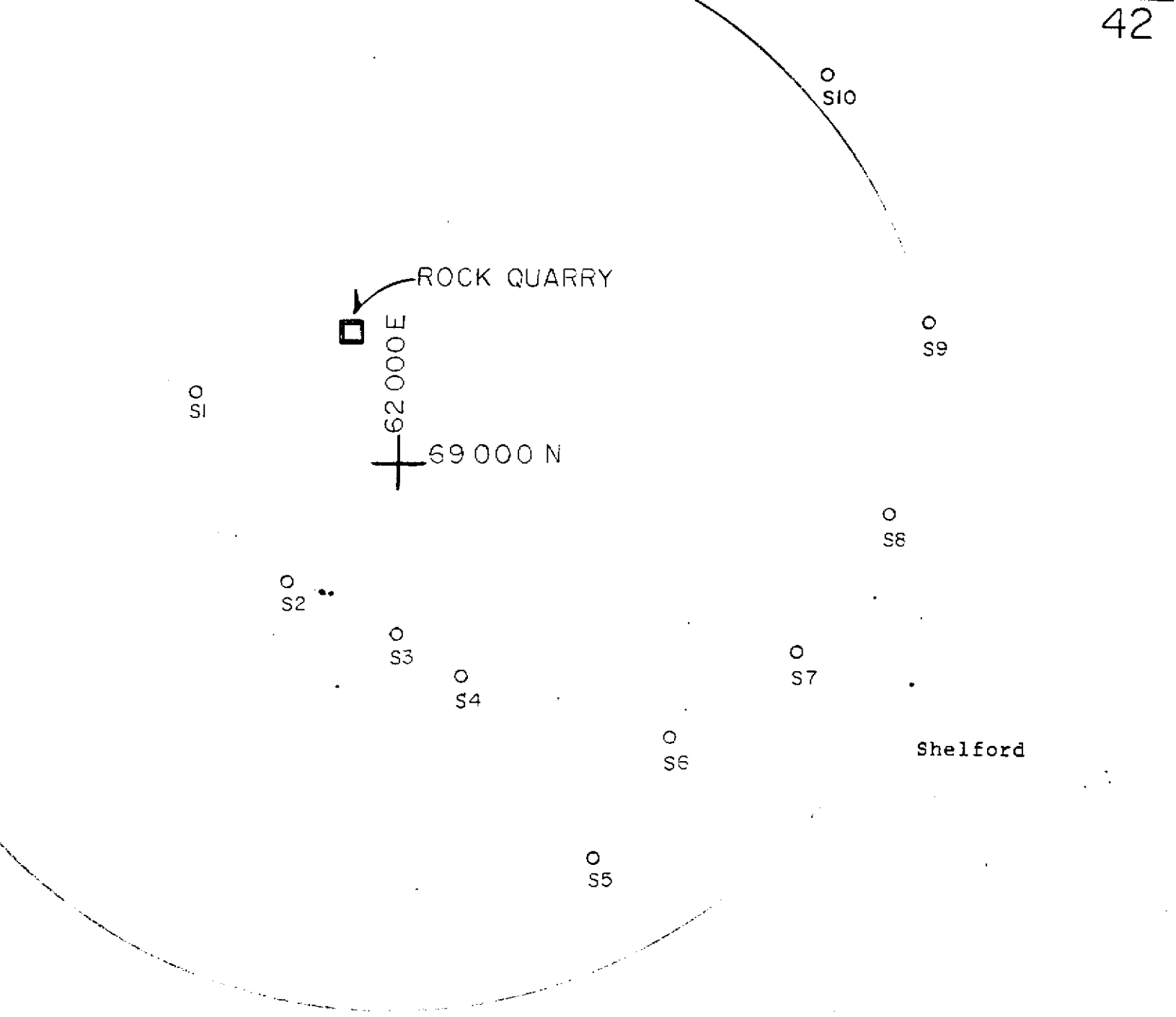


FIG. 23

MAP 93 E/15 NADINA RIVER



SAMPLE LOCATIONS MAP 93 E/15

SCALE

100M

FIG. 24

(D) Conclusions / Recommendations

The area offers good potential for upper level epithermal systems. Previous operators have identified numerous soil anomalies in the vicinity of the old Ford claims at Minfile 93 E 85. The anomalies indicate a metallogenous terrain rich in zinc and lead. There is a good chance that some structure or process has localized the metals near the strongest of these anomalies. Unfortunately there is also extensive overburden and swamp concealing the bedrock at these locations. First deep sampling of the overburden to verify the "B" horizon anomalies is recommended. A vigorous attempt should then be made to expose bedrock at the best of these.

(E) Field work (Other)

Matzehtzal mountain: A test hole was excavated at the head of a poly metallic soil anomaly located on the Tac claim group near Matzehtzal mountain, North of Topley B.C. Minor copper / molybdenum mineralization was uncovered (See fig. 25). A sample taken from a nearby outcrop contained anomalous lead 2574 p.p.m and zinc 2563 p.p.m. but no copper or molybdenum (Sample Tac-Topley). The host rock is Jurassic age Topley granite. Unfortunately mineralization was only observed in the intrusion and not in surrounding volcanic rocks. This reduces the potential for massive sulphides and economic mineralization at this location. However the known mineralization does not necessarily explain the size of the geochemical anomaly. Future work should be designed to detect structures that may have controlled mineralization within the intrusion.

Morice Lake: Several days were spent at Morice lake prospecting in the mountains near the New Moon Minfile occurrence 93 E/11 (See fig. 26). The mineralized system at the New Moon is extensive. Base metals occur largely in a system of veins which have been explored periodically since the early 1970's. Data suggests that VMS style mineralization outcrops under a glacier West of the New Moon. Warmer weather may have reduced the glaciers size creating new bedrock exposures. An attempt was made to access the glacier from the North West side of Morice lake and examine these outcrops.

SAMPLE TAKEN FROM TEST HOLE TAC CLAIMS

QUARTZ STOCKWORK WITH CHALCOPYRITE AND

MOLYDENITE PLUS K-FELDSPAR AND MAGNETITE

FIG. 25

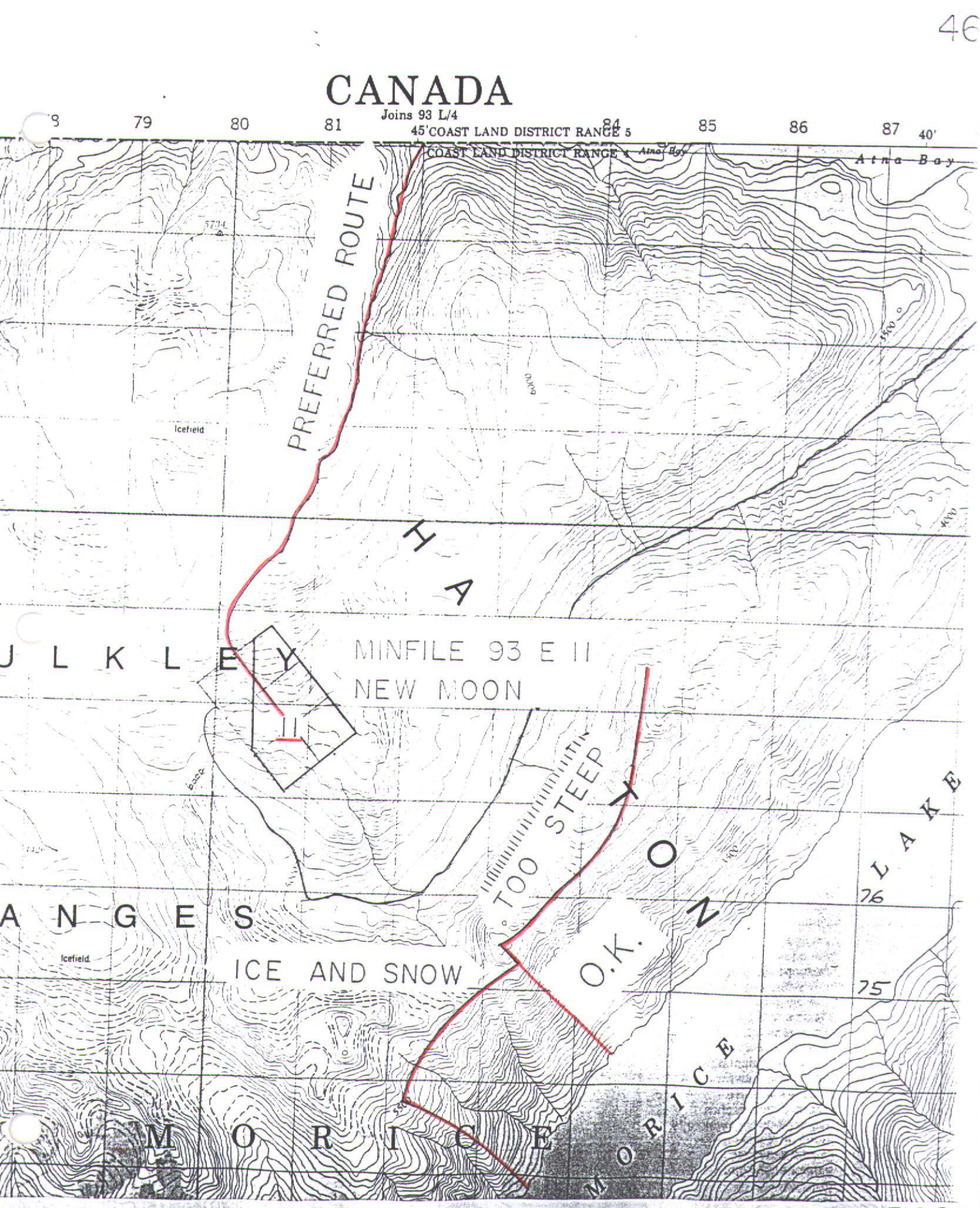


FIG. 2E

MAP 93 E/13 NANIKA LAKE

(E) Field work (Other) cond.

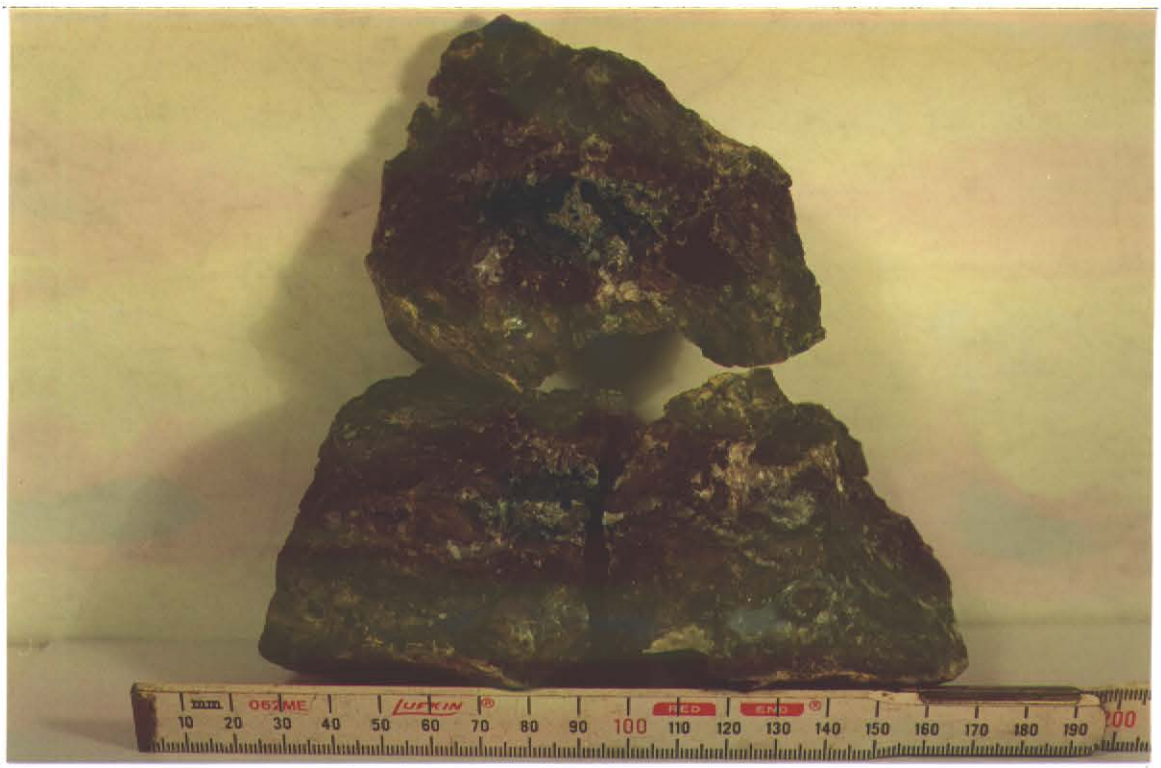
Hiking from the lake shore at 2500 feet to a ridge at the 5500 foot elevation took 3.5 hours. Unfortunately there is a steep valley on the other side of this ridge which was "Too Steep" to descend. Ice and snow west of the ridge was too dangerous to traverse and this approach was abandoned. The preferred route is from Atna Bay to the New Moon a distance of 7km. This route can be traversed in about 8 hours. Unfortunately this leaves no time at the glacier to do any useful work. Since it is not feasible to explore the property from a camp at the base of the mountain the Morice lake location was abandoned in favor of others which have better access.

Dungate Creek: A potential opal bearing horizon was explored near Dungate creek 9 km South East of Houston B.C. Here an outcrop of silicified felsic tuff ? is exposed on the Dungate creek FSR at the 2 km point. The tuff lies at the top of a sequence of upper Cretaceous ? volcanic rocks and is in contact with a bed of gravel. The gravel has been sealed next to the tuff by an overlying pile of Tertiary andesite ? .White agate was noticed in the road bed below the outcrop and may have erroded from the tuff. The gravel is unconsolidated and may have acted as a conduit for circulating fluids which were channeled along the paleosurface silicifying the tuff.

(E) Field work (Other) cond.

Significant silicification and replacement of the tuff by quartz, chalcedony, Jasperoid and opal may have occurred in the tuff at various locations along this horizon. To explore this potential the tuff was followed South along a steep hill for a distance of 3 km. The ledge of tuff outcrops at several locations along the hill. No opal mineralization could be found in any of the outcrops. However opal bearing silicified tuff was found in float rock taken from a testhole excavated downslope of the tuff horizon 1.5 km South of the FSR (See Fig. 27). Chalcedony, jasperoid and opal appear throughout the sample as replacements and open space fillings. Small patches of dark opal display a play of color. It is believed that the source of this float rock is bedrock associated with the silicified horizon.

Opals offer a lucrative target for grassroots prospectors since they can be mined by hand. A small low profile opal mine would attract much less attention than a conventional base metal mine in regard to environmental and land tenure issues. Therefor in the year 2000 season more prospecting time will be dedicated to investigating the opal gemstone potential of locations like Dugate Creek.



SAMPLE TAKEN FROM DUNGATE CREEK AREA

SILICIFIED VOLCANIC WITH CHALCEDONY, CALCITE AND MINOR OPAL.

FIG. 27

APPENDIX

TSL Assay Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Steve Bell
Attention: Steve Bell
Project:
Sample: rock

Report No : 9V0261 RJ
Date : Aug-06-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Au-fire ppb
TAC- Topley	1.4	0.59	<5	250	<0.5	<5	0.69	6	4	220	155	1.55	0.24	0.42	1115	<2	0.02	10	660	2574	5	1	<10	35	0.02	10	<10	4	2563	2	27
Palomino-QFP	0.6	0.32	20	50	<0.5	<5	0.93	<1	3	214	1064	1.16	0.29	0.12	210	4	0.02	8	390	88	5	1	<10	13	<0.01	11	<10	3	174	3	50
Enigma-1	0.4	0.34	145	150	<0.5	<5	0.14	<1	4	392	43	1.89	0.11	0.08	155	136	0.02	9	290	40	5	3	<10	9	0.01	20	<10	3	56	2	31

ENIGMA 1, FROM 2ND SED/VOL. CONTACT NORTH OF ENIGMA CLAIMS FIG. 11

PALOMINO-QFP, QUARTZ FELDSPAR PORPHYRY DYKE PALOMINO CLAIMS FIG. 1

TAC TOPLEY, JURASSIC TOPLEY INTRUSION TAC CLAIMS MATZEHTZAL MT.

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.H2O.

Signed: _____

TSL Assayers Vancouver
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436
Fax: (604) 327-3423

Quality Assaying for over 25 Years

Geochemical Analysis Certificate

9V-0284-RG1

Company: **Mr. Steve Bell**
Project: ENIGMA
Attn: Steve Bell

Aug-27-99

We *hereby certify* the following geochemical analysis of 1 rock sample submitted Aug-19-99 by Steve Bell.

Sample Name	Au ppb
E-TUFF	11

Certified by _____

TSL Assayers Vancouver
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

TSL Assayers Saskatoon
#2 - 302 East 48th Street
Saskatoon, Saskatchewan
S7K 6A4
Tel: (306) 931-1033 Fax: (306) 242-4717

TSL Assayers Swastika
1 Cameron Ave.
Swastika, Ontario
P0K 1T0
Tel: (705) 642-3244 Fax: (705) 642-3300

Mr. Steve Bell
Attention: Steve Bell
Project: ENIGMA
Sample: rock

TSL Assay - Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0284 RJ
Date : Aug-27-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
E-TUFF	0.2	0.45	195	240	0.5	<5	4.00	<1	16	48	30	7.48	0.06	1.12	2265	<2	0.04	9	800	20	10	19	<10	45	<0.01	169	<10	10	124	5

E-TUFF, COMPOSITE SAMPLE ENIGMA CLAIMS TUFF/MUDSTONE FIG. 13

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.

Signed: _____

TSL Assayers Vancouver
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436
Fax: (604) 327-3423

Quality Assaying for over 25 Years

Geochemical Analysis Certificate

9V-0284-SG1

Company: **Mr. Steve Bell**
Project: ENIGMA
Attn: Steve Bell

Aug-27-99

We *hereby certify* the following geochemical analysis of 7 soil samples submitted Aug-19-99 by Steve Bell.

Sample Name	Au ppb
E+00	5
E+10	4
E+20	6
E+30	5
E+40	5
E-Till	10
E-CLAY	20

Certified by _____

TSL Assayers Vancouver
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

TSL Assayers Saskatoon
#2 - 302 East 48th Street
Saskatoon, Saskatchewan
S7K 6A4
Tel: (306) 931-1033 Fax: (306) 242-4717

TSL Assayers Swastika
1 Cameron Ave.
Swastika, Ontario
P0K 1T0
Tel: (705) 642-3244 Fax: (705) 642-3300

Mr. Steve Bell
Attention: Steve Bell
Project: ENIGMA
Sample: soil

TSL Assayers Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0284 SJ
Date : Aug-27-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
E+00	<0.2	2.62	20	210	<0.5	<5	0.28	<1	15	38	45	5.17	0.06	0.87	840	<2	0.01	19	500	14	5	9	<10	21	0.12	119	<10	8	97	8
E+10	<0.2	1.74	15	240	<0.5	<5	0.48	<1	14	38	43	5.29	0.05	0.80	1025	<2	0.02	17	580	12	5	11	<10	29	0.16	132	<10	19	98	7
E+20	<0.2	1.77	15	240	<0.5	<5	0.52	<1	13	38	51	5.21	0.06	0.75	940	<2	0.02	17	520	12	<5	12	<10	31	0.15	124	<10	15	113	7
E+30	<0.2	2.02	10	170	<0.5	<5	0.68	<1	15	41	66	5.60	0.07	0.87	1130	<2	0.02	20	770	14	5	13	<10	43	0.15	129	<10	19	121	10
E+40	<0.2	1.49	5	100	<0.5	<5	0.53	<1	13	38	36	4.91	0.05	0.73	885	<2	0.02	16	550	14	<5	10	<10	36	0.18	124	<10	14	80	6
E-Till	<0.2	1.89	25	220	<0.5	<5	2.45	<1	25	40	80	5.76	0.15	1.12	1855	2	0.03	38	930	24	<5	13	<10	61	0.11	123	<10	16	143	10
E-CLAY	<0.2	0.92	390	370	1.0	15	0.43	<1	37	5	88	>15.00	0.12	0.23	6920	102	0.01	20	610	70	10	21	<10	23	<0.01	150	<10	78	308	12

E-TILL TILL SAMPLE ABOVE SED/VOL CONTACT ENIGMA CLAIMS

E-CLAY CLAY LAYER AT CONTACT BETWEEN FOOTWALL SEDIMENTS AND HANGINGWALL VOLCANIC ROCK.

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.H2O.

Signed: _____

TSL Assayers Vancouver
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436
Fax: (604) 327-3423

Quality Assaying for over 25 Years

Geochemical Analysis Certificate

9V-0351-RG1

Company: **Steve Bell**
Project:
Attn: S. Bell

Sep-29-99

We *hereby certify* the following geochemical analysis of 1 sample submitted Sep-21-99 by S. Bell.

Sample Name	Au PPB
GW1	22

Certified by

TSL Assayers Vancouver
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

TSL Assayers Saskatoon
#2 - 302 East 48th Street
Saskatoon, Saskatchewan
S7K 6A4
Tel: (306) 931-1033 Fax: (306) 242-4717

TSL Assayers Swastika
1 Cameron Ave.
Swastika, Ontario
P0K 1T0
Tel: (705) 642-3244 Fax: (705) 642-3300

TSL Assayers Vancouver
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436
Fax: (604) 327-3423

Quality Assaying for over 25 Years

Geochemical Analysis Certificate

9V-0370-RG1

Company: **Steve Bell**
Project: Gold West
Attn: Steve Bell

Oct-06-99

We *hereby certify* the following geochemical analysis of 1 sample submitted Oct-04-99 by S. Bell.

Sample Name	Au PPB
GW2	29

Certified by _____

TSL Assayers Vancouver
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

TSL Assayers Saskatoon
#2 - 302 East 48th Street
Saskatoon, Saskatchewan
S7K 6A4
Tel: (306) 931-1033 Fax: (306) 242-4717

TSL Assayers Swastika
1 Cameron Ave.
Swastika, Ontario
P0K 1T0
Tel: (705) 642-3244 Fax: (705) 642-3300

TSL Assay Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0370 SJ
Date : Oct-06-99

Steve Bell
Attention: Steve Bell
Project: Gold West
Sample: soil

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
G1	0.2	2.57	10	290	0.5	<5	0.74	1	16	42	42	4.74	0.09	1.01	2465	2	0.01	35	1240	12	5	11	<10	44	0.04	93	<10	26	193	8
G2	0.8	3.87	50	250	1.0	<5	1.16	<1	26	28	132	7.80	0.07	1.76	4135	<2	0.01	23	1230	56	5	33	<10	49	0.06	200	<10	49	240	10
G3	0.2	2.57	40	140	0.5	<5	0.94	<1	20	34	576	5.64	0.08	1.17	2540	2	0.01	30	790	48	5	45	<10	27	0.05	133	<10	104	250	9
G4	0.2	2.32	145	160	0.5	<5	1.11	<1	23	35	273	6.79	0.11	1.26	3350	6	0.01	35	650	26	5	16	<10	21	0.05	131	<10	26	187	7
G5	0.4	1.94	200	190	0.5	<5	1.64	1	19	31	100	5.07	0.08	0.87	6230	6	0.01	40	1970	94	5	11	<10	20	0.03	102	<10	38	551	6
G6	0.2	1.73	265	140	0.5	<5	1.28	<1	16	27	64	5.73	0.14	0.85	3570	6	0.01	30	1830	42	10	9	<10	25	0.03	96	<10	23	435	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.

Signed:

Steve Bell
Attention: S. Bell
Project: Gold West
Sample: soil

TSL Assayers Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0387 SJ
Date : Oct-19-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
G3-1	0.2	1.67	30	110	<0.5	<5	0.55	<1	11	28	103	4.16	0.05	0.69	1120	<2	0.01	24	500	18	<5	6	<10	21	0.05	75	<10	15	167	4
G3-2	<0.2	3.19	100	200	0.5	<5	1.05	<1	25	28	76	8.55	0.08	2.27	3390	<2	0.01	30	1230	36	5	23	<10	31	0.02	230	<10	29	275	11
G3-3	<0.2	1.86	5	180	0.5	<5	0.31	<1	10	26	20	4.02	0.05	0.66	1040	<2	0.01	19	490	10	<5	5	<10	18	0.03	72	<10	8	78	3
G3-4	0.2	2.27	20	290	0.5	<5	0.98	1	11	33	32	4.33	0.09	0.64	2265	2	0.01	26	1050	10	5	14	<10	19	0.03	71	<10	37	168	9
G7	<0.2	1.89	20	180	0.5	<5	0.79	<1	13	32	48	4.49	0.11	0.71	1200	<2	0.02	28	1090	12	5	9	<10	30	0.04	76	<10	20	97	9
G8	0.8	1.71	125	140	0.5	<5	1.55	<1	17	26	96	6.03	0.08	0.53	3080	4	0.01	30	2110	42	5	9	<10	31	0.01	87	<10	29	486	7
G9	0.2	1.94	40	150	0.5	<5	0.66	<1	15	32	56	4.75	0.10	0.79	1495	<2	0.01	26	590	40	5	11	<10	22	0.04	82	<10	19	147	9

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.

Signed:

Steve Bell
Attention: S. Bell
Project: Gold west
Sample: soil

TSL Assay - Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0416 SJ
Date : Oct-29-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
G 10	0.2	2.66	185	190	0.5	<5	1.46	<1	18	34	98	5.98	0.11	1.10	3580	4	0.01	32	1270	292	5	14	<10	25	0.04	108	<10	34	637	7
G 11	<0.2	2.82	20	150	0.5	<5	1.14	<1	17	47	50	5.06	0.08	1.62	2430	<2	0.01	38	1240	14	5	11	<10	18	0.01	109	<10	16	83	6
G 12	<0.2	2.80	345	200	0.5	<5	0.81	<1	23	37	111	7.62	0.16	1.46	4185	8	0.02	44	730	82	10	17	<10	20	0.07	129	<10	38	430	6
G 13	0.8	2.07	25	110	0.5	<5	0.56	<1	10	27	33	4.46	0.07	0.54	740	2	0.01	22	630	12	<5	3	<10	29	0.04	80	<10	6	212	3
G 14	0.2	1.84	15	90	0.5	<5	0.71	1	9	29	22	3.90	0.05	0.63	775	<2	0.01	24	720	10	<5	4	<10	22	0.05	71	<10	6	126	4
G 15	<0.2	3.44	25	270	0.5	<5	1.16	<1	18	38	148	6.07	0.12	1.17	1760	2	0.02	33	960	16	<5	23	<10	36	0.03	125	<10	39	168	9

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.

Signed: _____

TSL ASSAYERS

TSL Assayers Vancouver
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436
Fax: (604) 327-3423

Quality Assaying for over 25 Years

Geochemical Analysis Certificate

9V-0304-SG1

Company: **Steve Bell**
Project: Roundel
Attn: Steve Bell

Sep-02-99

We *hereby certify* the following geochemical analysis of 20 soil samples submitted Aug-26-99 by Steve Bell.

Sample Name	Au PPB
R01	4
R02	3
R03	4
R04	3
R05	6
R06	6
R07	27
R08	4
R09	5
R10	5
R11	5
R12	6
R13	6
R14	3
R15	4
R16	8
R17	5
R18	5
R19	6
R20	5

Certified by _____

TSL Assayers Vancouver
8282 Sherbrooke St.
Vancouver, B.C.
V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

TSL Assayers Saskatoon
#2 - 302 East 48th Street
Saskatoon, Saskatchewan
S7K 6A4
Tel: (306) 931-1033 Fax: (306) 242-4717

TSL Assayers Swastika
1 Cameron Ave.
Swastika, Ontario
P0K 1T0
Tel: (705) 642-3244 Fax: (705) 642-3300

Steve Bell
Attention: Steve Bell
Project: Roundel
Sample: soil

TSL Assay Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0304 SJ
Date : Sep-02-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
R01	<0.2	1.70	<5	330	<0.5	<5	0.61	1	11	37	31	2.77	0.07	0.70	390	<2	0.03	26	980	14	<5	8	<10	43	0.10	79	<10	11	109	9
R02	<0.2	2.39	<5	260	<0.5	<5	0.70	1	20	277	28	3.69	0.06	2.61	800	<2	0.02	93	1170	14	5	9	<10	43	0.15	99	<10	12	322	8
R03	<0.2	2.00	<5	350	<0.5	<5	0.55	<1	15	38	42	3.11	0.08	1.04	605	2	0.02	22	890	16	<5	12	<10	37	0.14	101	<10	17	178	8
R04	<0.2	2.15	<5	280	0.5	<5	0.39	<1	13	41	19	4.18	0.06	0.95	450	<2	0.03	27	590	18	5	8	<10	32	0.10	99	<10	8	131	5
R05	<0.2	1.78	<5	280	<0.5	<5	0.47	<1	12	36	15	3.36	0.06	0.73	355	<2	0.03	23	790	14	<5	7	<10	39	0.10	78	<10	10	94	10
R06	<0.2	1.66	<5	240	<0.5	<5	0.45	<1	12	37	35	3.69	0.07	0.60	330	<2	0.03	26	890	14	<5	9	<10	40	0.11	86	<10	15	89	9
R07	<0.2	1.86	<5	260	0.5	<5	0.40	<1	13	35	26	3.56	0.07	0.65	370	<2	0.02	24	660	18	<5	8	<10	38	0.11	88	<10	12	93	10
R08	<0.2	1.96	<5	290	0.5	<5	0.39	1	11	38	20	3.41	0.06	0.61	305	<2	0.02	23	680	16	<5	8	<10	37	0.09	86	<10	13	107	4
R09	<0.2	1.74	<5	270	<0.5	<5	0.33	<1	12	32	18	3.42	0.05	0.48	580	<2	0.02	20	650	16	<5	6	<10	29	0.11	83	<10	9	93	4
R10	<0.2	2.23	<5	310	0.5	<5	0.42	<1	16	43	43	4.80	0.12	0.76	540	<2	0.02	30	690	18	<5	11	<10	40	0.10	100	<10	16	122	10
R11	<0.2	1.70	<5	220	<0.5	<5	0.46	<1	14	32	17	4.09	0.08	0.66	1160	<2	0.02	22	780	16	<5	7	<10	36	0.12	87	<10	10	88	7
R12	<0.2	1.63	<5	300	<0.5	<5	0.33	<1	11	33	20	3.08	0.05	0.51	280	2	0.02	23	460	16	<5	8	<10	31	0.10	78	<10	13	86	7
R13	<0.2	2.64	5	460	0.5	<5	0.48	<1	14	40	32	4.17	0.07	0.75	440	<2	0.02	32	480	18	<5	11	<10	49	0.08	97	<10	24	117	5
R14	<0.2	1.85	<5	290	0.5	<5	0.32	<1	10	32	16	3.23	0.05	0.51	370	<2	0.02	20	480	14	<5	6	<10	31	0.11	84	<10	8	95	6
R15	<0.2	1.88	<5	230	<0.5	<5	0.31	<1	12	35	11	3.54	0.05	0.64	415	2	0.02	20	620	16	<5	6	<10	28	0.11	89	<10	6	95	4
R16	<0.2	2.21	<5	390	0.5	<5	0.60	<1	14	39	44	3.50	0.08	0.94	510	<2	0.02	29	790	16	<5	12	<10	43	0.10	87	<10	17	157	8
R17	<0.2	2.27	<5	420	0.5	<5	0.64	<1	14	35	35	4.10	0.07	1.05	540	<2	0.03	23	940	16	<5	10	<10	43	0.11	99	<10	14	122	10
R18	<0.2	1.87	<5	440	<0.5	<5	0.70	<1	13	39	19	3.74	0.06	0.88	555	2	0.03	29	990	14	<5	9	<10	41	0.11	87	<10	11	107	8
R19	<0.2	1.48	<5	230	<0.5	<5	1.26	<1	12	36	30	4.88	0.11	0.76	1445	<2	0.03	24	990	16	<5	9	<10	55	0.12	88	<10	13	108	12
R20	<0.2	1.88	45	260	0.5	<5	0.59	<1	24	28	4	>15.00	0.06	0.73	1955	2	0.02	17	3540	32	5	7	<10	35	0.08	144	<10	10	237	11

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.H2O.

Signed: _____

Steve Bell
Attention: S. Bell
Project:
Sample: soil

TSL Assaye ancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0353 SJ
Date : Sep-29-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
F1	<0.2	0.95	5	190	<0.5	<5	1.04	<1	11	29	30	4.28	0.05	0.59	1045	<2	0.02	23	950	16	5	7	<10	42	0.11	72	<10	11	105	9
F2	<0.2	0.85	10	110	<0.5	<5	0.57	<1	10	22	26	3.71	0.03	0.53	695	2	0.02	19	790	12	5	5	<10	26	0.09	62	<10	8	92	8
F3	<0.2	0.84	5	130	<0.5	<5	0.62	<1	10	28	22	3.28	0.04	0.53	670	<2	0.02	19	940	10	5	5	<10	35	0.10	63	<10	8	81	9
F4	<0.2	1.30	<5	270	<0.5	<5	0.47	<1	10	31	25	3.00	0.03	0.59	255	<2	0.02	22	1050	20	5	6	<10	34	0.08	62	<10	9	195	9
F5	<0.2	2.16	<5	330	<0.5	<5	0.71	<1	16	36	23	3.60	0.02	1.28	790	<2	0.02	25	1220	10	5	10	<10	33	0.12	114	<10	14	188	11
F6	<0.2	1.17	<5	200	<0.5	<5	0.38	<1	8	27	18	2.51	0.02	0.42	190	<2	0.02	17	940	10	5	5	<10	27	0.07	56	<10	8	64	9
F7	<0.2	1.46	<5	260	<0.5	<5	0.42	<1	11	27	16	2.31	0.03	0.61	265	<2	0.01	20	940	8	<5	7	<10	27	0.11	62	<10	8	90	5
F8	<0.2	1.03	<5	170	<0.5	<5	0.36	<1	5	21	12	1.32	0.01	0.31	145	<2	0.01	12	840	8	<5	4	<10	27	0.07	35	<10	8	45	1
F9	<0.2	1.25	<5	230	<0.5	<5	0.40	<1	8	26	27	1.77	0.03	0.47	205	<2	0.01	18	800	10	5	5	<10	29	0.07	53	<10	8	81	7
F10	<0.2	1.68	<5	230	<0.5	<5	0.32	<1	8	28	19	2.21	0.03	0.67	290	<2	0.01	16	590	10	<5	7	<10	23	0.04	50	<10	11	107	2
E1	0.2	2.22	20	500	0.5	<5	2.27	1	14	31	68	6.12	0.07	0.66	5865	<2	0.02	18	1380	14	5	11	<10	53	0.03	89	<10	38	187	5
E2	0.2	1.94	15	230	<0.5	<5	1.95	<1	12	31	51	4.99	0.06	0.68	1985	<2	0.02	17	1190	12	5	10	<10	56	0.04	85	<10	25	170	4
E3	<0.2	2.26	15	180	<0.5	<5	0.89	<1	18	50	65	5.12	0.07	0.94	1270	<2	0.02	24	400	14	5	12	<10	40	0.09	113	<10	18	162	5
E4	<0.2	1.72	<5	100	<0.5	<5	0.43	<1	12	34	25	3.53	0.02	0.90	505	<2	0.01	16	380	8	5	6	<10	21	0.12	90	<10	7	102	5
E5	<0.2	2.36	10	130	<0.5	<5	0.78	1	20	79	69	5.41	0.06	1.33	845	<2	0.04	32	520	20	5	13	<10	33	0.15	148	<10	22	256	10
E6	<0.2	1.95	20	370	<0.5	<5	1.19	<1	16	36	45	6.39	0.05	0.87	4435	<2	0.02	20	980	12	5	10	<10	35	0.07	107	<10	23	158	5
E7	<0.2	2.84	45	190	0.5	<5	0.99	<1	21	48	73	6.90	0.12	1.36	950	2	0.02	38	950	18	5	15	<10	45	0.09	128	<10	19	235	11
E8	0.2	6.15	55	140	<0.5	<5	1.75	<1	25	72	151	8.07	0.09	2.71	2645	<2	0.15	36	1000	10	5	27	<10	100	0.28	221	<10	28	176	19
E9	<0.2	2.39	20	320	0.5	<5	1.95	1	14	34	44	5.35	0.06	0.70	5080	<2	0.02	19	1150	14	5	11	<10	45	0.04	84	<10	29	188	5
S1	<0.2	1.67	<5	190	0.5	<5	0.25	<1	7	21	16	2.54	0.04	0.68	320	<2	0.02	13	180	12	5	6	<10	27	0.08	48	<10	10	74	11
S2	<0.2	1.30	<5	100	<0.5	<5	0.22	<1	7	20	12	2.10	0.03	0.51	275	<2	0.02	12	140	8	<5	4	<10	22	0.11	48	<10	10	43	5
S3	<0.2	2.00	<5	210	0.5	<5	0.32	<1	6	27	21	2.23	0.05	0.61	315	<2	0.02	14	210	16	5	9	<10	32	0.07	49	<10	18	60	3
S4	0.2	1.18	15	130	<0.5	<5	0.48	1	12	28	44	2.12	0.09	0.51	365	2	0.02	19	920	56	5	5	<10	32	0.11	61	<10	12	293	12
S5	<0.2	1.51	30	150	<0.5	<5	0.58	<1	14	35	37	4.74	0.07	0.86	455	38	0.03	23	1060	20	5	7	<10	55	0.20	87	<10	12	112	12
S6	<0.2	1.45	<5	150	<0.5	<5	0.42	<1	9	34	18	2.17	0.05	0.59	340	<2	0.02	18	830	12	<5	6	<10	39	0.17	58	<10	8	89	12
S7	<0.2	2.07	5	220	0.5	<5	0.32	<1	7	34	42	1.83	0.03	0.41	215	<2	0.02	18	150	12	<5	9	<10	33	0.10	62	<10	33	45	7
S8	<0.2	1.45	<5	160	<0.5	<5	0.22	<1	9	29	10	2.45	0.02	0.49	265	<2	0.02	14	70	8	<5	6	<10	22	0.10	70	<10	8	41	14
S9	<0.2	1.43	<5	130	<0.5	<5	0.25	<1	8	25	9	2.57	0.02	0.58	305	<2	0.02	14	150	10	<5	4	<10	25	0.12	71	<10	6	41	11
S10	<0.2	1.59	15	160	0.5	<5	0.44	<1	8	25	12	5.15	0.06	0.67	680	2	0.02	14	1260	14	<5	6	<10	35	0.08	85	<10	18	99	5
R21	<0.2	1.77	5	270	<0.5	<5	0.40	1	11	35	30	3.70	0.06	0.69	485	<2	0.02	25	1030	14	<5	7	<10	30	0.11	81	<10	11	117	4

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.

Signed: _____

Steve Bell
Attention: S. Bell
Project:
Sample: soil

TSL Assayers Vancouver
8282 Sherbrooke St., Vancouver, B.C., V5X 4R6
Tel: (604) 327-3436 Fax: (604) 327-3423

Report No : 9V0353 SJ
Date : Sep-29-99

MULTI-ELEMENT ICP ANALYSIS

Aqua Regia Digestion

Sample Number	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	K %	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sn ppm	Sr ppm	Ti %	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
R22	<0.2	1.57	<5	380	0.5	<5	0.41	<1	7	33	39	2.64	0.02	0.46	440	<2	0.01	18	450	12	<5	9	<10	33	0.05	79	<10	20	62	4
R23	<0.2	1.50	<5	270	<0.5	<5	0.50	<1	9	34	35	2.83	0.05	0.57	270	<2	0.02	21	890	10	<5	7	<10	37	0.08	78	<10	11	97	14
R24	0.4	4.11	5	630	1.0	<5	0.69	1	11	53	76	5.22	0.14	0.89	720	<2	0.02	48	1590	14	5	15	<10	64	0.01	86	<10	25	190	12
R25	<0.2	1.81	<5	340	<0.5	<5	0.55	<1	12	37	28	4.19	0.06	0.73	465	<2	0.02	26	1090	12	<5	8	<10	38	0.08	80	<10	12	110	13
R26	<0.2	1.41	5	200	<0.5	<5	0.36	<1	11	32	20	3.34	0.04	0.57	360	<2	0.02	21	800	12	<5	6	<10	26	0.10	72	<10	10	79	8
R27	<0.2	1.85	<5	350	0.5	<5	0.86	1	16	39	50	4.92	0.10	0.97	1155	<2	0.03	35	960	14	5	9	<10	51	0.06	86	<10	13	136	16
R28	<0.2	1.56	<5	240	0.5	<5	0.79	1	14	35	45	4.41	0.08	0.85	920	<2	0.02	30	990	14	<5	8	<10	40	0.07	78	<10	12	120	12
R29	<0.2	1.87	<5	230	<0.5	<5	0.54	<1	10	35	23	2.46	0.04	0.81	550	<2	0.01	21	790	8	<5	7	<10	33	0.06	49	<10	10	124	2
R30	<0.2	1.56	5	310	0.5	<5	1.12	<1	14	35	40	5.71	0.08	0.82	1430	<2	0.02	30	960	14	5	8	<10	47	0.07	81	<10	13	113	14
R31	<0.2	1.19	10	210	<0.5	<5	0.42	<1	12	35	32	4.11	0.06	0.43	765	<2	0.02	23	1040	10	<5	7	<10	33	0.10	74	<10	11	77	11
R32	<0.2	1.82	10	320	0.5	<5	0.60	<1	13	36	40	4.75	0.08	0.70	980	<2	0.02	28	900	10	<5	9	<10	42	0.07	83	<10	14	110	12

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.

Signed: _____