BRITISH COLUMBIA

PROSPECTORS ASSISTANCE PROGRAM

MINISTRY OF ENERGY AND MINES

GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR:	1998/99
REPORT #:	PAP 98-39
NAME:	GRANT CROOKER

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 Grant Crooker Reference Number 97/98 P89

LOCATION/COMMODITIES

Project Area (as listed in Part A) Hedley MINFILE No. if applicable 92H-SE-173

Location of Project Area NTS 92H-1E, 8E Lat 49 15 50 Long 120 13 15

Description of Location and Access located 15 kilometres southwest of Hedley in southern BC. Access is via Sterling Creek logging road, 8 kilometres west of Hedley.

Main Commodities Searched For Au, Ag, Zn, Pb, Cu

Known Mineral Occurrences in Project Area Rodgers Showing

WORK PERFORMED

1. Conventional Prospecting (area) 110 hectares
2. Geological Mapping (hectares/scale) 110 hectares, 1:5,000, 1:2,500
3. Geochemical (type and no. of samples) 304 soils, 34 silts, 69 rocks
4. Geophysical (type and line km) 12.81 magnetics, 11.5 VLF-EM
5. Physical Work (type and amount)
6. Drilling (no. holes, size, depth in m, total m)
7. Other (specify) grid, 13.65 line kms

SIGNIFICANT RESULTS

Commodities Zn, Pb, Cu, Ag Claim Name Cap 2

Location (show on map) Lat 49 15 30 Long 120 13 15 Elevation 1650 m

Best assay/sample type select (093) 1.57% Zn, 760 ppm Pb, 879 ppm Cu, 8.8 ppm Ag
select (100) 5960 ppm Zn, 5710 ppm Pb, 4.4 ppm Ag

Description of mineralization, host rocks, anomalies The property is underlain by Late Triassic Whistle and Stemwinder formations of the Nicola Group that have been intruded bt Late Triassic Hedley intrusions and Mid-Jurassic Cahill Creek pluton. Sphalerite, galena and chalcopyrite occur as disseminations and along fractures in grey to green calc-silicate skarns. The mineralization has been traced over a 100 metre strike length in outcrop and float. A number of Zn-Pb-Ag-Cu-As soil geochemical anomalies have been found, many coinciding with magnetic highs interpreted to be Hedley intrusive dykes.

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.*

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

on the

CAP 1 and 2 MINERAL CLAIMS

Hedley Area
Similkameen Mining Division

92H-1E, 8E
(49° 14' 50" North Latitude, 120° 13' 15" West Longitude)

for

GRANT F. CROOKER
Box 404
Keremeos, B.C.
V0X 1N0
(Owner and Operator)

by

GRANT F. CROOKER, P.Geo.,
GFC CONSULTANTS INC.

August 1998

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1.0 SUMMARY

The Cap property is located 15 kilometres southwest of Hedley BC in the Hedley Gold Camp (production 2.5 million ounces) of southern British Columbia. The property consists of two four-post mineral claims covering 40 units in the Similkameen Mining Division. Grant F. Crooker of Keremeos, BC is the owner and operator of the property.

Access to the claims is via Highway 3, turning west onto the Sterling Creek forest access road 8 kilometres west of Hedley and proceeding 18 kilometres to the property boundary. The Sterling Creek road is an all weather, two wheel drive road that passes along the eastern boundary of the property. A number of old roads and cat trails provide access to all areas of the property.

The Hedley Gold Camp has a long tradition of mining. Placer mining was first carried out in the Hedley area in the 1860's and 1870's. The interest in placer mining led to the discovery of gold on Nickel Plate Mountain in the 1890's, with the first claims being staked in 1896. The two major producers in the district were the Nickel Plate and Hedley Mascot mines. Production from the district up to 1986 was approximately 51 million grams (1.6 million ounces) of gold. Almost all of the production was from the period 1905 to 1955.

In the 1970's exploration renewed in the Hedley district. Most of the activity concentrated on properties on Nickel Plate Mountain, however exploration was carried out on the south side of the Similkameen River. The most important property in the camp is the Nickel Plate Mine (Homestake Mining). The gold mineralization is skarn hosted and ore reserves in 1987 were in the order of 9,900,000 tons grading 0.088 ounces gold per ton. The mine ceased production in July of 1986.

The Cap property is located on the south side of the Similkameen River. Historically, properties on the south side of the Similkameen River were related to carbonate vein systems and associated shear zones as opposed to skarn related mineralization at the Nickel Plate Mine. Recent geological data by Ray (1986/1987) have indicated that similar gold environments exist on the south side of the Similkameen River.

Golden Cadillac Resources Ltd. established a grid over the area of the Cap 2 claim during 1983 and 1984, and carried out soil geochemical sampling, magnetic surveying, prospecting and geological mapping over the grid. Nine multi-element soil geochemical anomalies (Ag, Pb, Zn, Cu, Au) and a number of north trending magnetic highs were delineated by the survey. The magnetic highs have been interpreted to be related to the Hedley intrusions, the most important mineralizing unit within the Hedley gold camp.

The work by Golden Cadillac also found one showing, named the Rodgers showing. Calc-silicate, "skarn" mineralization was found at two locations, with anomalous zinc (1.18%), lead (210 ppm), copper (1180 ppm) and silver (9.1 ppm) values. The highest gold value was 60 ppb.

The 1998 program consisted of extending grid lines south of the Golden Cadillac grid area, as well as reestablishing some grid lines on the Golden Cadillac grid area to confirm and relocate their geochemical and geophysical anomalies. Stream sediment sampling, soil geochemical sampling, magnetic and VLF-EM surveying, prospecting and geological mapping were carried out over the property.

The 1998 work program demonstrated favourable rock units for skarn type mineralization exist on the Cap property. Multi-element soil geochemical anomalies (Ag, Zn, Pb, Cu, As) were delineated, occurring coincidentally with narrow magnetic highs that have been interpreted as Hedley intrusive dykes. Rock sampling at the Rodgers showing confirmed the anomalous zinc, lead, copper and zinc values, and extended the mineralization over a strike length of 100 metres.

The skarn mineralization found on the Cap property to date is related to base metals with weakly anomalous silver. This is different than the gold found with the skarn mineralization at Nickel Plate Mountain, and the tungsten found with the skarn mineralization at Mount Riordan.

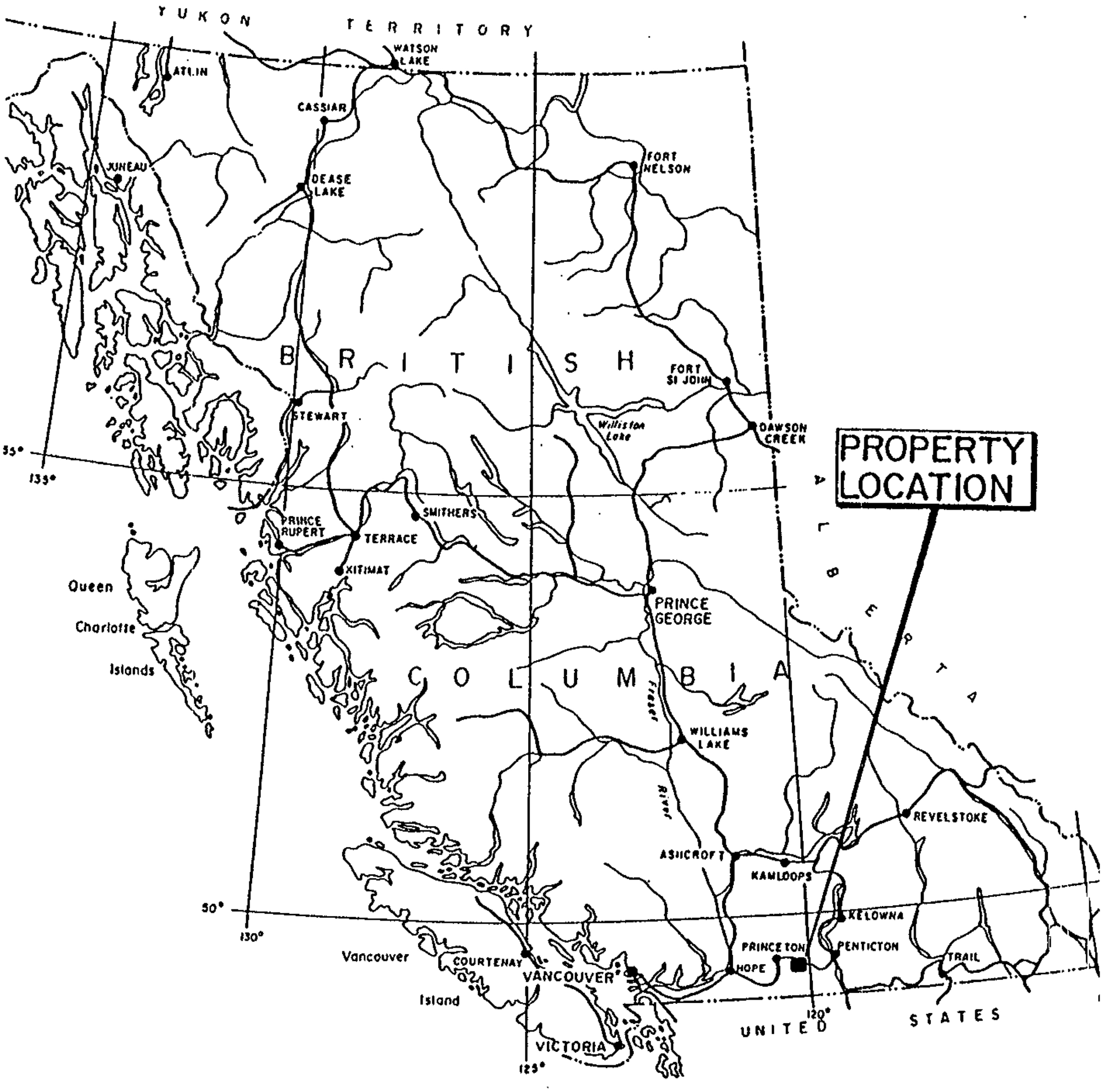
Four target areas (Targets 1 - 4, Figure 13.0) have been outlined on the Cap property, using a combination of geological, geochemical and geophysical parameters. Additional work is warranted on the property, with the following recommendations:

-complete the grid over the remainder of the property
-conduct geological mapping, prospecting, soil sampling and Mag/VLF surveying over the grid
-conduct an I.P. survey over the four target areas
-conduct trenching over target areas and I.P. anomalies

Respectfully Submitted,

PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
G. F. CROOKER

Grant F. Crooker, P.Geo.,
Consulting Geologist



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PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
G. F. CROOKER

GRANT F. CROOKER

CAP PROJECT (NTS 92H-1E, 8E)
SIMILKAMEEN M. D., B.C.

LOCATION MAP

DATE: August, 1998	FIGURE: 1.0
SCALE: 0 100 200 KILOMETRES	

2.0 INTRODUCTION

2.1 GENERAL

Field work was carried out on the Cap claims from September of 1997 through August of 1998. Grant F. Crooker, P.Geo., conducted the exploration program.

The work program consisted of stream sediment sampling, establishing and reestablishing flagged grid lines, magnetic and VLF-EM geophysical surveying, soil geochemical sampling, prospecting, geological mapping and rock sampling.

A $ 7,500.00 Prospectors Assistance Grant provided the funding for the work program.

2.2 LOCATION AND ACCESS

The property (Figure 1.0) is located 15 kilometres southwest of Hedley in southern British Columbia. It lies between 49° 13' 35" and 49° 15' 45" north latitude and 120° 12' 10" and 120° 14' 20" west longitude (NTS 92H-1E, 8E).

Access to the claims is via Highway 3, turning west onto the Sterling Creek forest access road 8 kilometres west of Hedley and proceeding 18 kilometres to the property boundary. The Sterling Creek road is an all weather, two wheel drive road that passes along the eastern boundary of the property. A number of old roads and cat trails provide access to all areas.

2.3 PHYSIOGRAPHY

The property is located along the eastern edge of the Cascade Mountains. Elevation varies from 1615 to 1920 metres above sea level and topography varies from flat to steep. Outcrop is sparse over much of the property with the best exposures in the creek bottoms, ridges and along road cuts. Pettigrew Creek flows easterly through the central portion of the claims and then flows northerly along the eastern boundary. Pettigrew Creek contains a substantial flow of water all year round.

Vegetation consists of a forest cover of pine, fir, spruce and aspen trees. Large areas of the property were clear cut logged 20 or more years ago and many of these areas have been replanted, spaced and pruned. Some areas are covered by dead fall making traversing difficult and slow.

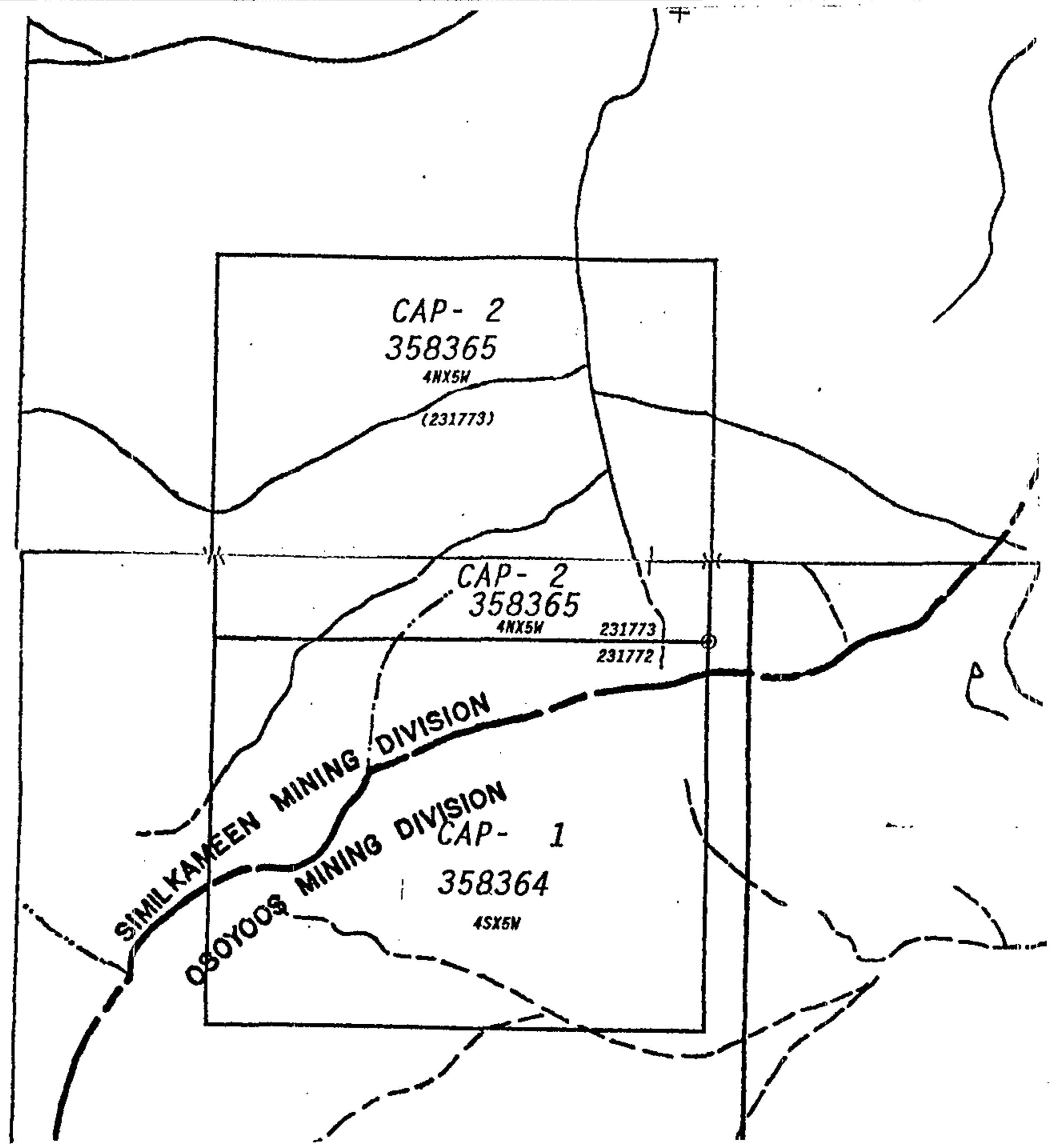
2.4 PROPERTY AND CLAIM STATUS

The Cap claims (Figure 2.0) are owned by Grant Crooker of Box 404, Keremeos, BC. The property consists of two four-post mineral claims covering 40 units in the Similkameen Mining Division.

TABLE 1.0 - CLAIM DATA

Claim	Units	Mining Division	Tenure Number	Record Date m/d/y	Expiry Date m/d/y
Cap 1	20	Similkameen	358364	08/08/97	08/08/04*
Cap 2	20	Similkameen	358365	08/09/97	08/09/04*

* Upon acceptance of this report



GRANT F. CROOKER

CAP PROJECT (NTS 92H-1E, 8E)
SIMILKAMEEN M. D., B.C.

CLAIM MAP

DATE: August, 1998 | FIGURE: 2.0

SCALE: 0 500 1000 METRES

PROFESSIONAL GEOSCIENTIST — PROVINCE OF BRITISH COLUMBIA — G. F. CROOKER

2.5 AREA AND PROPERTY HISTORY

Placer mining was first carried out in the Hedley area in the 1860's and 1870's. The interest in placer mining led to the discovery of gold on Nickel Plate Mountain in the 1890's, with the first claims being staked in 1896. Many showings were found within the Hedley Gold Camp, both on Nickel Plate Mountain and the surrounding area. The two major producers in the district were the Nickel Plate and Hedley Mascot mines. Production from the district up to 1986 was approximately 51 million grams (1.6 million ounces). Almost all of this production occurred in the period from 1905 to 1955.

In the 1970's exploration renewed in the Hedley district. Most of the activity concentrated on properties on Nickel Plate Mountain, however exploration was carried out on the south side of the Similkameen River.

The most important property in the camp is the Nickel Plate Mine (Homestake Mining). The gold mineralization is skarn hosted and ore reserves in 1987 were in the order of 9,900,000 tons grading 0.088 ounces gold per ton. The property commenced production in August 1987 with a milling rate of 2,700 tons per day using open pit mining methods. The mine ceased production in July of 1996.

A number of gold properties are located on the south side of the Similkameen River, as is the Cap property. Properties on the south side of the Similkameen River have been traditionally thought of as related to quartz-carbonate vein systems and associated shear zones, as opposed to skarn-related mineralization at the Nickel Plate Mine. Recent geological data by Ray (1986/87) have indicated that similar gold environments exist on the south side of the Similkameen River.

The area covered by the Cap 2 mineral claim was formerly covered by the Rodgers 2 mineral claim (20 units). Golden Cadillac Resources Ltd. carried out exploration programs on the Rodgers 2 mineral claim in 1983 and 1984. A compilation of this work is presented on Figure 3.0. The 1983 work program consisted of establishing a north-south baseline through the centre of the claim and establishing cross lines at 150 metre intervals. Stations were established every 25 metres along the grid lines and magnetic surveying, soil geochemical sampling and geological mapping were carried out over the grid. Magnetic readings were taken every 25 metres (32.9 kilometres), with soil samples (636) collected every 50 metres. The soil samples were analysed for gold, lead, zinc, silver and copper.

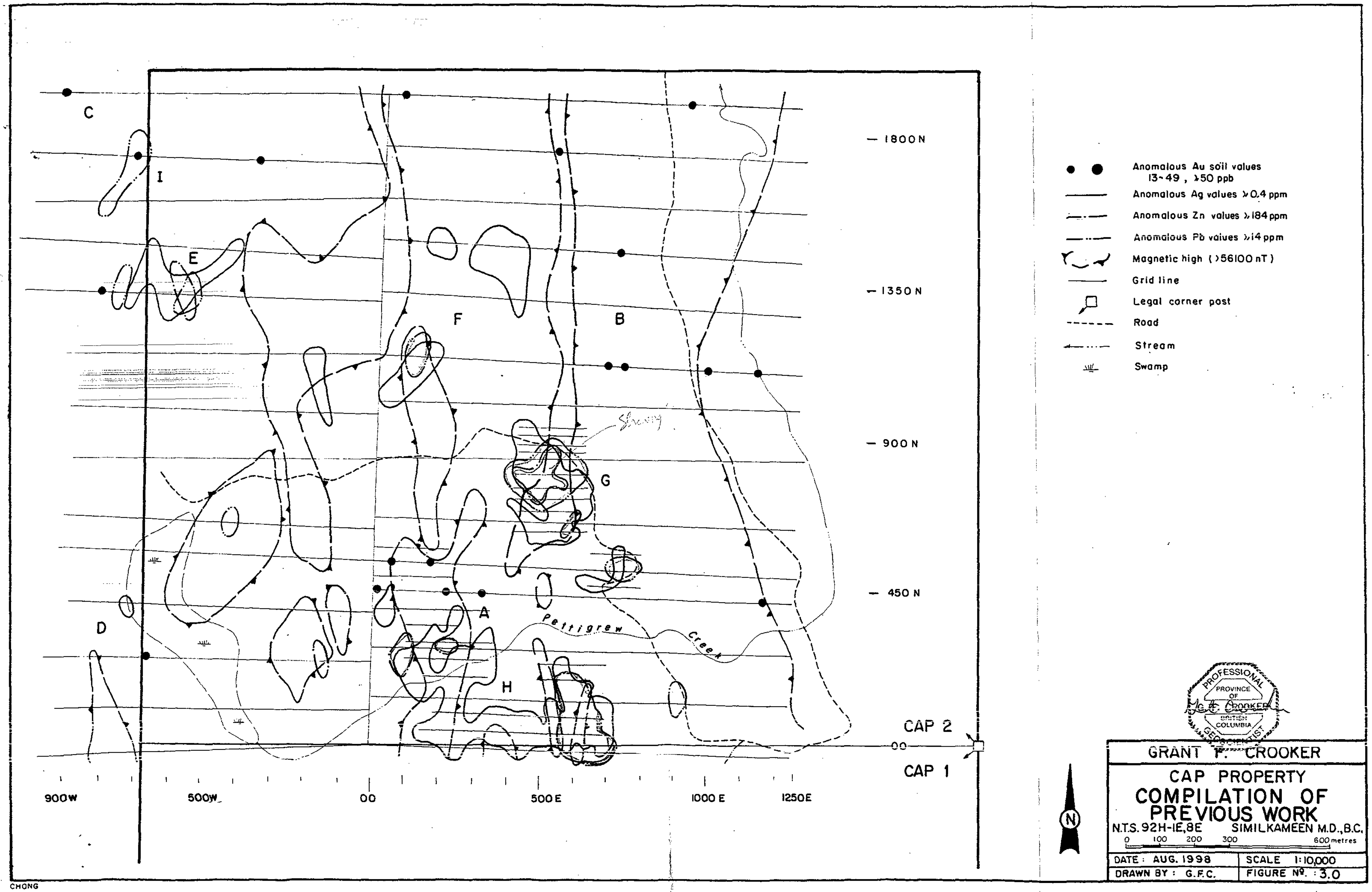
The magnetic survey (Figure 3.0) indicated three long, narrow magnetic highs striking northerly across the property. Golden Cadillac interpreted these magnetic highs to be caused by basalt or andesite flows within the Nicola volcanic rocks. The 1998 work program indicates these magnetic highs are related to dykes that have been interpreted to be related to the Hedley intrusive suite.

The background and anomalous soil geochemical values were determined by statistical methods and are shown in Table 2.0.

TABLE 2.0 - 1983 ANOMALOUS SOIL GEOCHEMICAL VALUES

ELEMENTS	VALUES			
		RANGE	BACKGROUND	ANOMALOUS
Au	ppb	<5 - 90	5	13
Ag	ppm	<0.1 - 1.0	0.1	0.4
Cu	ppm	3 - 78	16	41
Pb	ppm	1 - 337	7	14
Zn	ppm	9 - 780	66	184

ppb - parts per billion, ppm - parts per million


C
I
E
F
B
G
A
H
D
Pettigrew Creek
1800 N
1350 N
900 N
450 N
CAP 2
00
CAP 1
900W
500W
00
500E
1000 E
1250E
Anomalous Au soil values 13-49 , ≥50 ppb
Anomalous Ag values ≥0.4 ppm
Anomalous Zn values ≥184 ppm
Anomalous Pb values ≥14 ppm
Magnetic high (>56100 nT)
Grid line
Legal corner post
Road
Stream
Swamp
N
PROFESSIONAL
PROVINCE OF
BRITISH COLUMBIA
GEOSCIENTIST
GRANT F. CROOKER
CAP PROPERTY
COMPILATION OF PREVIOUS WORK
N.T.S. 92H-1E,8E
SIMILKAMEEN M.D., B.C.
0 100 200 300 600 metres
DATE : AUG. 1998
SCALE 1:10,000
DRAWN BY : G.F.C.
FIGURE Nº. : 3.0
CHONG

Nine soil geochemical anomalies (labelled "A" through "I", Figure 3.0) were considered significant. The soil geochemical anomalies consisted of as few as one or two values. Gold values were generally low and sporadic, and did not correlate with the silver, lead, zinc or copper values. A brief description of each anomaly is given below. The anomalous values are arranged according to which element is most dominant and arranged in decreasing order of abundance.

A: Anomaly A covers an area 600 metres by 200 metres. The northern portion of the anomaly consists of five anomalous gold values ranging from 15 to 35 ppb with no other anomalous elements. The southern portion of the anomaly consists of scattered anomalous silver, lead and zinc values. The anomaly occurs over and adjacent to a north trending magnetic high within altered sedimentary rocks and is open to the south.

B: Anomaly B covers an area 100 metres by 350 metres and consists of three anomalous gold values ranging from 30 to 40 ppb. One silver value within the area of the anomaly gave a weakly anomalous value of 0.5 ppm. The anomaly occurs 100 to 150 metres down slope from a northerly trending magnetic high, in an area covered by glacial till.

C: Anomaly C consists of a single gold value of 90 ppb, and no other elements are anomalous. The anomaly occurs in an area of sedimentary rocks with thin glacial cover.

D: Anomaly D covers an area 150 metres by 100 metres and consists of a 20 ppb gold value on one line, and an anomalous silver value of 0.7 ppm on the next line to the north. The anomaly occurs on the west side of a swamp and is therefore open to the east. The anomaly is underlain by altered sedimentary rocks and glacial till.

E: Anomaly E covers an area 300 metres by 150 metres and consists of four anomalous silver values. Two lead values and one zinc value are also anomalous. The anomaly is underlain by altered sedimentary rocks.

F: Anomaly F covers an area 600 metres by 500 metres and consists of scattered, moderately anomalous silver values. Lead and zinc values are also weakly anomalous. The anomaly occurs over and adjacent to a northerly trending magnetic high and is underlain by glacial till.

G: Anomaly G covers an area 200 metres by 150 metres and consists of anomalous silver, lead and zinc values. The anomaly occurs over a northerly trending magnetic high and is underlain by altered sedimentary rocks.

H: Anomaly H covers an area approximately 400 metres by 200 metres and is open to the south. The anomaly consists of a large area of anomalous silver values, with a smaller area of anomalous lead and zinc values. This is the most interesting of the soil geochemical anomalies in terms of size and high values. It contains the highest silver (1.0 ppm), zinc (780 ppm) and copper (60 ppm) values. The anomaly is associated with two northerly trending magnetic highs and is underlain by altered sedimentary rocks.

I: Anomaly I covers an area 150 metres square and consists of anomalous lead values with one anomalous gold value of 15 ppb. The area is underlain by a porphyritic body.

During October of 1984 Golden Cadillac Resources conducted a follow-up exploration program on the Rodgers 2 mineral claim. This work consisted of establishing grid lines at 50 metre spacing on soil geochemical anomalies A and H, and 25 metre spacing on anomaly G. Soil samples were collected at 25 metre intervals on all lines, and the samples were analysed for gold, silver, lead, zinc, copper and arsenic.

Geological mapping and rock sampling were also carried out on anomaly G.

The results of the detailed soil geochemical sampling on anomalies A, G and H are discussed below using the same labelling system as the 1983 program.

A: The fill-in soil sampling did not yield any anomalous gold values. The southern portion of the anomaly consists of a broad silver anomaly with scattered zinc and copper values. The anomaly is open to the south.

G: The fill-in up soil sampling gave strongly anomalous lead, zinc and silver values, and minor copper and arsenic values. The prospecting located several small showings of calc-silicate rocks with weakly to moderately anomalous zinc, lead, copper and silver values. Zinc values ranged up to 1.18%. The skarn mineralization did not yield anomalous gold values, but two samples of argillite with pyrite gave 20 and 60 ppb gold. The skarn mineralization occurs adjacent to a mafic dyke.

H: The fill-in soil sampling gave moderately anomalous silver values over the entire anomaly, with strongly anomalous zinc values in the eastern portion. Copper and arsenic gave a few scattered anomalous values, while gold and lead gave no anomalous values. The anomaly is open to the south.

No additional documented work was found on the Golden Cadillac property. However the 1983 and 1984 work programs gave encouraging results. A number of single and multi-element soil geochemical anomalies were delineated. Silver, arsenic and lead gave the strongest geochemical responses, while gold and copper gave weak geochemical responses. Skarn mineralization was located at anomaly G, with weakly to moderately anomalous zinc, lead, silver and copper values. The skarn mineralisation appears to be related to mafic dykes that are related to the Hedley intrusive suite. These dykes are probably the cause of the northerly trending, relatively narrow magnetic highs.

The Rodgers 2 mineral claim is described under Minfile Number 092H-SE-173.

G.E. Ray et al of the Geological Survey Branch conducted geological mapping in the Hedley District during the period 1985 to 1987 (scale 1:20,000). This fieldwork included the area of the Cap mineral claims and showed this area to be partially underlain by the Stemwinder Formation and Copperfield breccia of the Whistle Formation. This is a unique package of rocks in the upper Pettigrew Creek area that is mainly underlain by Whistle Formation. While the lower portion of the Whistle Formation is considered to be favourable for skarn mineralization, the lower portion of the Stemwinder Formation is considered to be a more favourable host unit. Ray also noted scattered occurrences of skarn in the vicinity of the Cap mineral claims.

3.0 EXPLORATION PROCEDURE

The 1998 work program consisted of establishing grid lines, magnetic and VLF-EM geophysical surveying, soil geochemical sampling, prospecting, geological mapping and rock sampling. The grid established by Golden Cadillac Resources Ltd. In 1983 has been obliterated over the past 15 years and the grid must be reestablished.

3.1 GRID PARAMETERS

-baseline direction north-south
-survey lines perpendicular to baseline
-survey line separation 25, 100 and 200 metres
-survey station spacing 12.5 and 25 metres
-stations marked with flagging and metal tags with grid coordinates
-survey total - 13.65 kilometres flagged grid lines
-declination 21 degrees

3.2 GEOCHEMICAL SURVEY PARAMETERS

-survey line separation 25, 100 and 200 metres
-survey station spacing 25 metres
-survey totals - 351 soil samples
- 69 rock samples
- 34 silt samples
-304 soil samples analysed by 32 element ICP and for gold (30 gram pulp)
-34 silt samples analysed by 32 element ICP and for gold (30 gram pulp)
-69 rock samples analysed by 32 element ICP and for gold (30 gram pulp)
-soil sample depth 10 to 25 centimetres
-soil sample taken from brown or orange B horizon
-silt samples collected from active portion of stream
-silt samples sieved to -20 mesh in the field

All samples were sent to Chemex Labs Ltd., 212 Brooksbank Avenue, North Vancouver BC, V7J 2C1 for analysis. Laboratory technique for silt and soil samples consisted of preparing samples by drying at 95° C and sieving to minus 80 mesh. Rock samples were crushed and split, with one split ring ground to minus 150 mesh. Thirty-two element ICP and gold (fire assay, atomic adsorption finish) analyses were then carried out on all samples.

The silt geochemical data was plotted on Figure 7.0 and the soil geochemical data was plotted on Figures 8.0 (Au, Ag), 9.0 (Pb, Zn) and 10.0 (As, Cu). The rock geochemical data was plotted on Figures 5.0 and 6.0. All certificates of analysis are listed in appendix I.

3.3 GEOPHYSICAL SURVEY PARAMETERS

3.3.1 TOTAL FIELD MAGNETIC SURVEY

-survey line separation 25, 100 and 200 metres
-survey station spacing 12.5 and 25 metres
-survey total - 12.8 kilometres
-measured total magnetic field in nanoteslas
-instrument - Scintrex MP-2 magnetometer
-instrument accuracy ± 1 nanotesla
-operator faced north for all readings

Readings were taken along the baseline to obtain standard readings for all baseline stations. All loops ran off the baseline were then corrected to these standard values by the straight line method.

The total field magnetic contours were plotted on Figure 11.0 and the data listed in Appendix II.

3.3.2 VLF-EM SURVEY

-survey line separation 25, 100 and 200 metres
-survey station spacing 12.5 and 25 metres
-survey total - 11.5 kilometres
-transmitting station - Seattle - 24.8 KHz
-direction faced - southeasterly
-instrument - Geonics EM-16
-in-phase (dip angle) and-out-of-phase (quadrature) components measured in percent

The VLF-EM profiles are plotted on Figure 12.0 and the data listed in Appendix II.

4.0 GEOLOGY AND MINERALIZATION

4.1 REGIONAL GEOLOGY

The Hedley Gold Camp is located within the Intermontane Belt of the Canadian Cordillera. The oldest rocks in the area belong to the Apex Mountain Group and occur in the southeastern part of the camp. The Apex Mountain Group consists of a deformed package of cherts, argillites, greenstones, tuffaceous siltstones and minor limestones. The complex and supercrustal rocks further west are separated by either intrusive rocks or major faults. The area between Winters and Whistle creeks is largely underlain by sedimentary and volcaniclastic rocks of the Upper Triassic Nicola Group and the Lower Cretaceous Spences Bridge Group.

Mapping by Ray and Dawson divides the Nicola Group into three distinct stratigraphic packages. The oldest, the Peachland Creek Formation, comprises massive, mafic quartz-bearing andesitic to basaltic ash tuff and minor chert-pebble conglomerate. This previously unrecognized basal unit is poorly exposed in the Hedley district, but has been identified in several localities. The Peachland Creek Formation is stratigraphically overlain by a 100 to 700 metre thick sedimentary sequence in which a series of east-to-west facies changes are recognized. This sequence progressively thickens westward and the facies changes probably reflect deposition across the tectonically controlled margin of a northwesterly deepening Late Triassic marine basin.

The eastern most and most proximal facies, called the French Mine Formation has a maximum thickness of 150 metres and comprises massive to bedded limestone interlayered with thinner units of calcareous siltstone, chert-pebble conglomerate, tuff, limestone-boulder conglomerate and limestone breccia. This formation hosts the auriferous skarn mineralization at the French and Good Hope mines.

Further west, rocks stratigraphically equivalent to the French Mine Formation are represented by the Hedley Formation that hosts the gold-bearing skarn at the Nickel Plate mine. The Hedley Formation is 400 to 500 metres thick and characterized by thinly bedded, turbiditic calcareous siltstone and units of pure to gritty, massive to bedded limestone that reach 75 metres in thickness and several kilometres in strike length. The formation includes lesser amounts of argillite, conglomerate and bedded tuff; locally the lowermost portion includes minor chert-pebble conglomerate.

The western most, more distal facies is represented by the Stemwinder Formation that is at least 700 metres thick and characterized by a sequence of black, organic-rich, thinly bedded calcareous argillite and turbiditic siltstone, minor amounts of siliceous fine-grained tuff and impure limestone beds. The Stemwinder Formation hosts the gold occurrences at Banbury (vein) and Peggy (skarn).

The sedimentary rocks of the French Mine, Hedley and Stemwinder formations pass stratigraphically upward into the Whistle Formation that is probably Late Triassic in age. The formation is 700 to 1200 metres thick and distinguishable from the underlying rocks by a general lack of limestone and a predominance of andesitic volcaniclastic material. The Whistle Formation is host to the Canty (skarn and stock work) and Banbury/Gold Hill (vein) gold occurrences.

The base of the Whistle Formation is marked by the Copperfield breccia, a limestone-boulder conglomerate that forms the most distinctive and important stratigraphic marker horizon in the district. The breccia is well developed west of Hedley where it forms a northerly trending, steeply dipping unit that is traceable for over 15 kilometres along strike. The same breccia outcrops in small areas within up faulted slices along Pettigrew Creek to the south, and as outliers near Nickel Plate and Lookout Mountain to the east.

The Whistle Formation is overlain by volcaniclastic rocks that may belong to the Early Cretaceous Spences Bridge Group. These rocks are not recognized as being gold bearing in the district.

Three suites of plutonic rocks are recognized in the area. The oldest, the Hedley intrusions is probably Early Jurassic in age and is economically important. It forms major stocks up to 1.5 kilometres in diameter and swarms of thin sills and dykes up to 200 metres in thickness and over 1 kilometre in length. The sills and dykes are coarse-grained and massive diorites and quartz diorites with minor gabbro, while the stocks range from gabbro through granodiorite to quartz monzonite. When unaltered they are dark coloured, commonly contain minor disseminations of pyrite and pyrrhotite and are often rusty weathered. In contrast, the skarn-altered diorite intrusions are usually pale coloured and bleached.

The Hedley intrusive suite intrudes the Upper Triassic rocks over a broad area. Varying degrees of sulphide bearing calcic skarn alteration are developed within and adjacent to many of these intrusions, particularly the dykes and sills. This plutonic suite is genetically related to the skarn-hosted gold mineralization in the district including that at the Nickel Plate, Hedley Mascot, French and Good Hope mines, and gold occurrences at Banbury, Gold Hill, Peggy and Canty. The Hedley intrusive suite consists of four stocks known as Toronto, Stemwinder, Banbury and Pettigrew.

The second plutonic suite is the Early Jurassic? Similkameen intrusions that comprises coarse-grained, massive, biotite hornblende granodiorite to quartz monzodiorite. It generally forms large bodies, for example, the Bromley batholith, and Cahill Creek pluton that separates the Nicola Group rocks from the highly deformed Apex Mountain complex.

The third and youngest intrusive suite includes two rock types that are possibly coeval and related to the formation of the dacitic volcaniclastic rocks within the Spences Bridge Group. One of these, the Verde Creek stock comprises a fine to medium grained, massive leucocratic microgranite that contains minor biotite. The other type is represented by fine-grained, leucocratic, felsic quartz porphyry.

4.2 HEDLEY DISTRICT GOLD DEPOSITS

The gold occurrences and deposits within the Hedley area are spatially associated with dioritic bodies of the Hedley intrusions. The gold mineralization can be broadly divided into skarn-related and vein-related types.

The skarn-related mineralization is the most widespread and economically important, and is characterized by the gold being intimately associated with variable quantities of sulphide bearing garnet-pyroxene-carbonate skarn alteration. The gold tends to be associated with sulphides, particularly arsenopyrite, pyrrhotite and chalcopyrite, and in lesser amounts with pyrite, gersdorffite (NiAsS), sphalerite, magnetite and cobalt minerals. Trace minerals include galena, native bismuth, electrum, tetrahedrite and molybdenite. This type of mineralization is found at the Nickel Plate, French, Good Hope, Peggy and Canty deposits.

Geochemical studies by Ray (1987) based on analyses of over 300 samples from various ore zones in the Nickel Plate deposits, showed the following correlation coefficients:

High		Medium		Low	
Au:Bi	0.84	Au:Co	0.58	Au:Cu	0.17
Ag:Cu	0.84	Au:As	0:46		
Bi:Co	0.62	Au:Ag	0.46		

Ray states that the strong positive correlation between gold and bismuth reflects the close association of native gold with hedleytite, while the moderate positive correlation between gold, cobalt and arsenic confirms observed association of gold, arsenopyrite and gersdorffite. The high positive correlation between silver and copper may indicate that some silver occurs as a lattice constituent in the chalcopyrite and/or in association with tetrahedrite (Cu-Sb sulphide often contains Zn, Pd, Hg, Co, Ni and Ag replacing Cu). The gold and silver values are relatively independent of each other despite the presence of electrum, and there is generally a low correlation between gold and copper.

TABLE 3.0
HEDLEY DISTRICT GEOLOGICAL HISTORY
(After Ray et al)

1.0 BASIN GEOLOGICAL DEVELOPMENT

1.1 Deposition of Triassic mafic extrusive rocks of the Peachland Creek Formation.

1.2 Late Triassic deposition of the Hedley and French Mine and Stemwinder formations (sedimentary rocks with calcareous units).

1.3 Sudden collapse of the basin resulting in the widespread deposition of the Whistle Formation (volcanic rocks with tuffaceous units) and the deposition of the Copperfield limestone conglomerate and breccia along the sedimentary basin margins.

2.0 GOLD MINERALIZING EVENTS

2.1 Following lithification of the Nicola Group rocks, two distinct phases of folding took place that are related to mineralization.

2.2 Phase one resulted in a major, north-northeasterly striking, easterly overturned asymmetric anticline which is the dominant structure in the Hedley district. The largest of these is the Cahill Creek fracture zone and Bradshaw fault.

2.3 Phase two is economically important as it took place during the emplacement of the Hedley intrusions and partly controlled the late-magmatic auriferous skarn mineralization. It produced the small-scale northwesterly striking, gently plunging fold structures that are an ore control at the Nickel Plate mine. They also controlled the emplacement of the Hedley intrusive dykes and the Banbury, Stemwinder, Toronto and Pettigrew stocks.

3.0 POST MINERALIZING EVENTS

3.1 Emplacement of the Hedley intrusions was shortly followed by intrusion of the Cahill Creek pluton.

3.2 Deposition of the Early Cretaceous Spences Bridge Group and related quartz porphyries followed a period of uplift and erosion.

3.3 Post-Early Cretaceous phase of regional thrust faulting.

3.4 *Re-activation of the Bradshaw fault and Cahill Creek fracture zone, as well as some faulting along* Whistle and Pettigrew creeks occurred in more recent geological time.

The skarn-related mineralization is generally stratabound and follows calcareous tuffs, thinly-bedded limestones and limey argillites within the upper portions of the French Mine and Hedley formations and lower portions of the Stemwinder and Whistle formations. Swarms of diorite sills and dykes of the Hedley intrusions have intruded the favourable beds and altered them by contact hydrothermal contact to hornfels. Both the intrusions and sediments were subsequently overprinted with the skarn alteration.

The vein-related mineralization is characterized by gold and sulphides hosted in higher level, fracture-filled quartz-carbonate vein and stock work systems. This type of mineralization occurs at the Banbury and Gold Hill properties.

Table 3.0 after Ray et al summarizes the geological history of the Hedley District.

4.3 CLAIM GEOLOGY

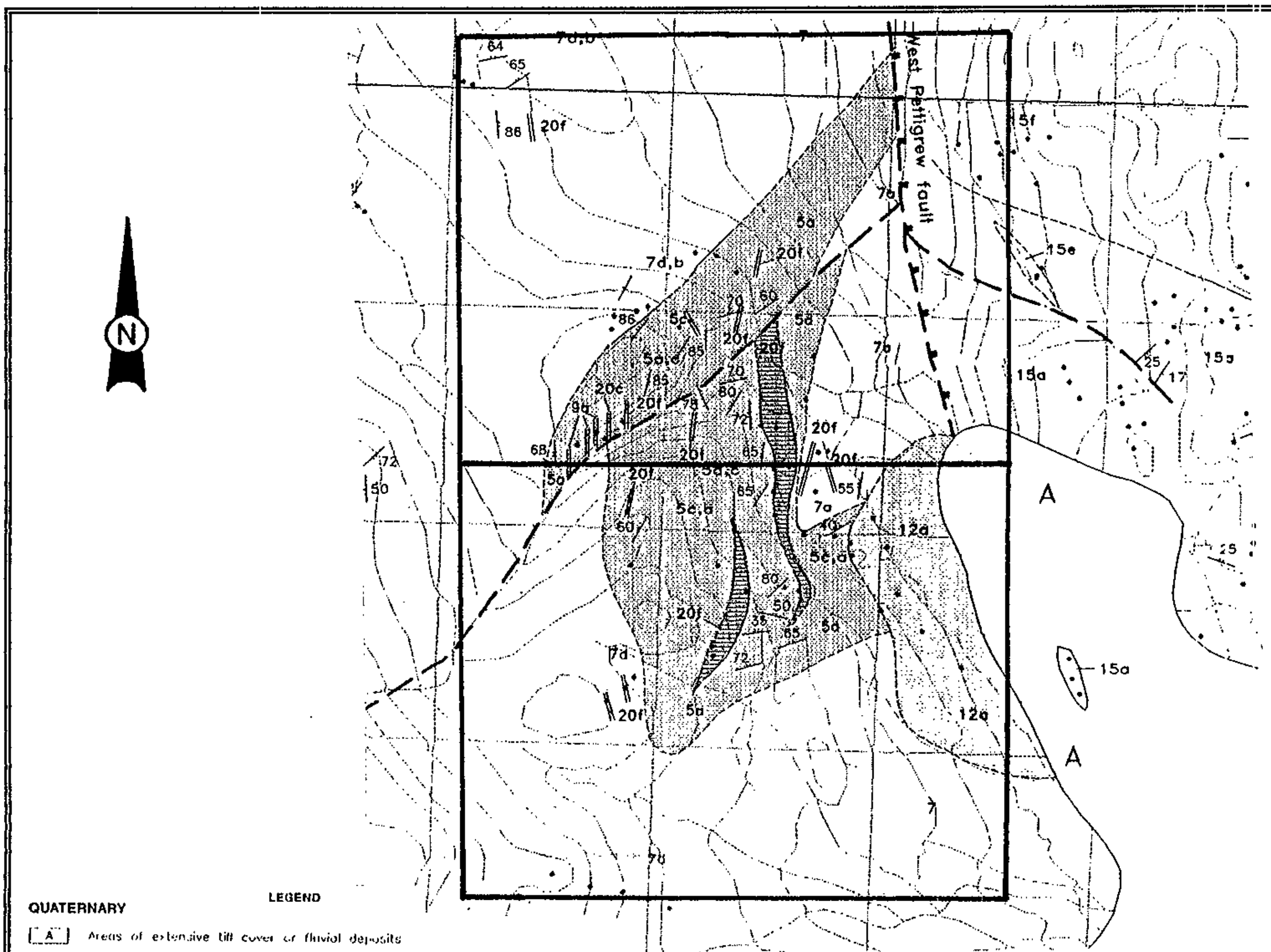
The area of the Cap claims was mapped by Ray and Dawson of the Geological Survey Branch during the 1980's and the geology displayed in Bulletin 87, The Geology and Mineral Deposits of the Hedley Gold Skarn District, Southern British Columbia (January 1994). This geology is displayed on Figure 4.0. Geological mapping carried out during the 1998 field program is displayed on Figures 5.0 and 6.0. The rock units and nomenclature of Ray have been used to provide continuity of information.

The area mapped by the 1998 work program shows sedimentary rocks of the Stemwinder Formation to be the oldest on the property. This unit (Unit 5) occurs in the western portion of the grid area and consists of argillite (Unit 5a) and limestone (Unit 5c). The basal unit of the Whistle Formation, the Copperfield breccia (Unit 7a), lies to the east of the Stemwinder Formation. Numerous mafic dykes of the Hedley intrusions (Unit 9a) intrude the sedimentary rocks. A small stock of quartz diorite of the Cahill Creek Pluton (Unit 12a) intrudes the Whistle Formation along the eastern boundary of the claims. Dykes of feldspar porphyry (Unit 20f) intrude the older units. The structural relationships of the various sedimentary units are not known at this time. A brief description of each rock unit is given below.

Unit 5 (Stemwinder Formation): The oldest unit consists of sedimentary rocks of the Stemwinder Formation that have been divided into argillite (Unit 5a) and limestone (Unit 5c). The argillite is generally black, thinly bedded and fractured with pyrite occurring along the fractures. Weathered surfaces are usually rusty due to weathering of the pyrite. The limestone is generally light blue in colour and forms beds from a few metres to 100 metres in thickness. In many locations the argillite and limestone form narrow, alternating interbeds a few centimetres thick.

Unit 7 (Whistle Formation): The Copperfield breccia (Unit 7a) forms the basal unit of the Whistle Formation and marks the boundary of the Stemwinder and Whistle sequences. This unit varies from clast to matrix supported and is composed of rounded to angular limestone clasts up to 1 metre in width.

Unit 9 (Hedley Intrusions): The Hedley intrusions (Unit 9a) occur as dykes and/or sills in a number of areas of the property. They generally have a north-south strike, are within a few degrees of vertical and vary from less than 1 metre to 25 metres in width. In several locations the dykes occur as a swarm over 25 to 100 metres. They are generally fine grained, dark coloured and of dioritic or gabbroic composition. Fine grained, black hornblende laths occur within a light coloured feldspar matrix.



LEGEND

QUATERNARY

[A] Areas of extensive till cover or fluvial deposits

ASSORTED AGES
MINOR INTRUSIONS:

[20] 20a, rhyodacite-dacite with garnet phenocrysts (represents either intrusions or volcanic flows in Skwel Peken Formation); 20b, aplite (commonly related to the Cahill Creek and Lookout Ridge plutons; may be related to Quartz Porphyry Unit 14), 20c, basalt to andesite; 20d, granite to quartz monzonite (commonly related to Cahill Creek and Lookout Ridge plutons); 20e, granodiorite; 20f, feldspar (± quartz, hornblende) porphyry; 20g, diorite to gabbro; 20h, quartz vein

MID JURASSIC
SKWEL PEKEN FORMATION

[15] 15a, quartz-feldspar crystal ash and lapilli tuff; 15b, lapilli tuff and minor tuff breccia; 15c, maroon coloured tuff with fiamme; 15d, tuffaceous siltstone, dust tuff, minor argillite and pebble conglomerate; 15e, andesite ash and lapilli tuff; 15f, feldspar crystal andesite ash and lapilli tuff (15a–15e=lower member; 15f=upper member)

CAHILL CREEK PLUTON

[12] 12a, quartz monzodiorite and granodiorite; 12b, diorite to quartz diorite

LATE TRIASSIC

HEDLEY INTRUSIONS

[9] (includes the Stemwinder, Aberdeen, Toronto, Banbury, Pettigrew and Larcan stocks): 9a, hornblende porphyritic diorite and gabbro; 9b, equigranular diorite and gabbro; 9c, mafic diorite and gabbro (>50% mafics); 9d, quartz diorite and quartz gabbro.

LATE TRIASSIC
WHISTLE FORMATION

[7] 7a, limestone boulder breccia (Copperfield breccia), 7b, siltstone; 7c, argillite; 7d, andesitic and basaltic ash tuff; 7e, lapilli tuff; 7f, tuff breccia, 7g, thin limestone beds

STEMWINDER FORMATION

[5] 5a, argillite ± thin limestone beds; 5b, siltstone ± thin limestone beds; 5c, limestone; 5d, andesitic ash tuff.

SYMBOLS

Geological boundaries (defined, assumed)
Bedding, Tops known (inclined, overturned)
Bedding, Tops unknown (inclined, vertical)
Trace of syncline
Plunge of minor fold axis
Faults, ticks indicate downthrown side
Microfossil locality with sample number (see appendix 2 for details)
Limestone sampled for microfossils without success
Uranium-lead (zircon) isotopic age locality with age (see appendices 1A to 1G for details)
Massive, nonbedded or unfoliated outcrop
Mineralized outcrop (arsenopyrite, chalcopyrite, magnetite, malachite, pyrite, pyrrhotite, scheelite)
Location of mineral property with number listed

GEOLOGY AFTER G.E. RAY, B.C.M.M. 1987.

GRANT F. CROOKER

CAP PROJECT (NTS 92H-1E, 8E)
SIMILKAMEEN M. D., B.C.

GEOLOGY

DATE: August, 1998 FIGURE: 4.0

SCALE: 0 500 1000 METRES 1:30,000

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Unit 12 (Cahill Creek Pluton): The Cahill Creek Pluton (Unit 12a) is a medium grained biotite±hornblende granodiorite. Numerous narrow, irregular dykes and sills cut the country rock adjacent to the intrusion. The dykes and sills are generally less than 10 metres in width.

Unit 20 (Feldspar porphyry): The feldspar porphyry (Unit 20f) occurs as dykes over most of the property. Feldspar phenocrysts up to 1 centimetre in diameter occur in a fine grained, white or grey matrix with varying amounts of hornblende and quartz. The dykes generally strike north-south and vary from 1 metre to 25 metres in width.

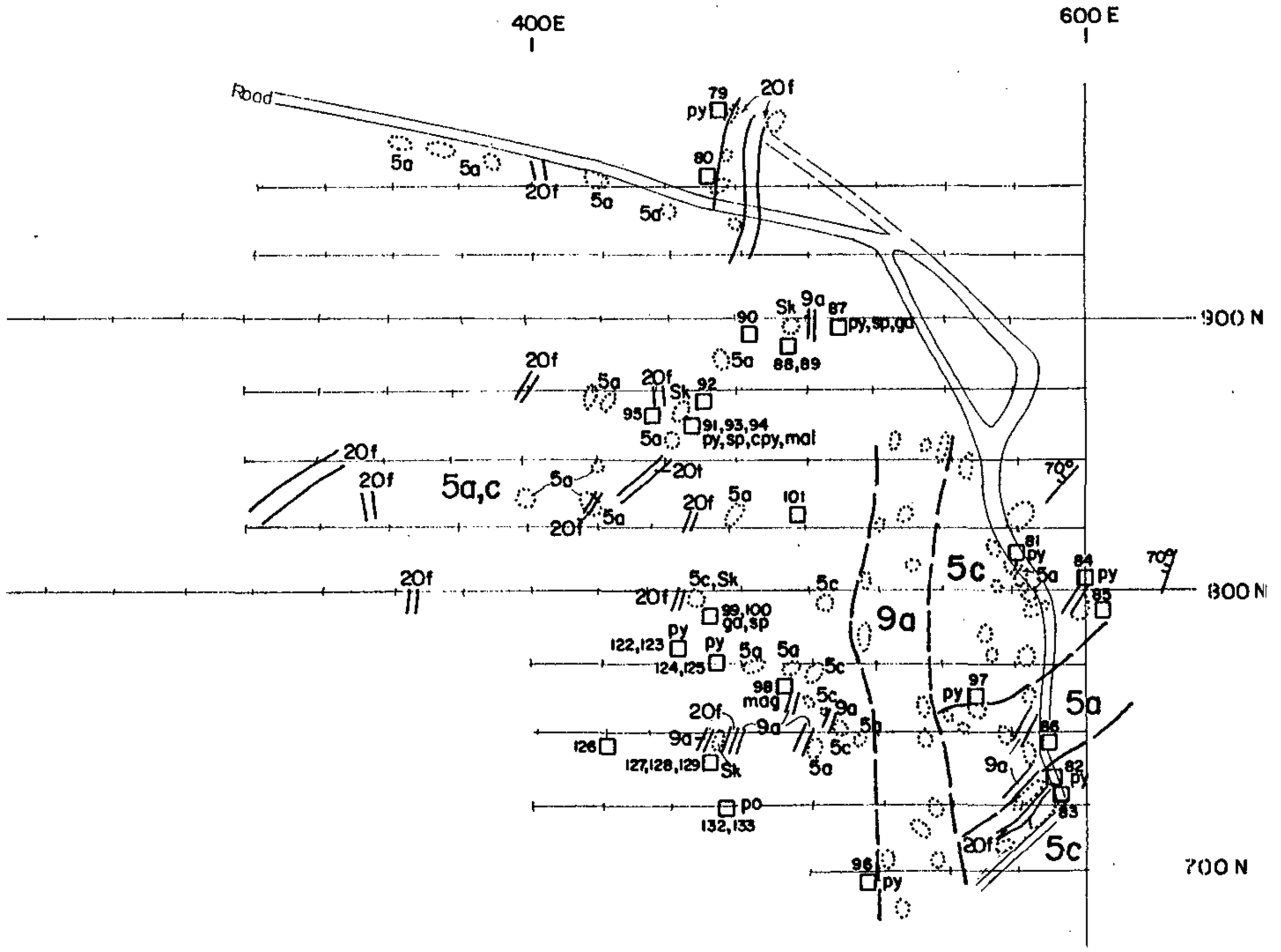
4.4 MINERALIZATION

Sixty-nine rock samples were collected from various areas of the property during the 1998 work program. The most significant mineralization found to date is at the Rodgers showing (Figures 5.0 and 6.0), where two rubbly outcrops of calc-silicate skarn, limestone and calcite give strongly anomalous lead and zinc values, and weakly anomalous copper and silver values. The two largest outcrops are located at 900N and 510E and 865N and 470E, with scattered skarn float found as far south as 800N and 450E. To date the mineralization has been traced over a strike length of 100 metres, with the zone open to the north and south where it is covered by overburden. The Rogers showing is spatially related to a 25 metre wide dyke of Hedley intrusive that outcrops 25 to 50 metres east of the showing. Narrow dykes of Hedley intrusive also occur closer to the showing.

Varying concentrations of pyrite, sphalerite, galena, chalcopyrite and malachite occur as disseminations and along fractures with fine grained brown garnets in an indistinct grey and green, calc-silicate ground mass. A select sample of the material (sample 093) gave 1.57% zinc, 760 ppm lead, 879 ppm copper and 8.8 ppm silver. A number of other samples (088 - 091, 094, 095, 099-101) gave weakly to strongly anomalous zinc, lead, copper and silver values. Gold is not anomalous in any of the samples. The skarn mineralization at the Rodgers showing is anomalous in base metals, as opposed to that at Nickel Plate Mountain which is a gold skarn.

A number of rock samples of irregularly shaped, pyritic, silicified and/or hornfels altered zones in Copperfield breccia were collected. Three of the samples (109, 136, 138) gave weakly anomalous gold values ranging from 50 to 70 ppb, and weakly anomalous silver values ranging from 1.8 to 3.0 ppm. A number of other samples gave weakly anomalous silver values ranging from 1.0 to 2.2 ppm, and weakly anomalous zinc values ranging from 250 to 458 ppm. This mineralization is spatially related to the Cahill Creek Pluton that intrudes the Copperfield breccia from the east.

Four rock samples 102 - 105) were collected from the area of coincidental silver, zinc and copper soil geochemical anomalies between 050S and 150S at 650E. These samples of weakly silicified limestone and/or hornfelsed argillite gave weakly anomalous silver (1.2 - 1.4 ppm), copper (73 - 106 ppm) and zinc values (220 - 698 ppm). The soil geochemical anomaly is related to a magnetic high, interpreted to be a Hedley intrusive dyke, that intrudes narrow interbeds of argillite and limestone.



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GEOSCIENTIST

For legend & sample plan see Fig. 5.0

N

GRANT F. CROOKER

CAP PROPERTY
GEOLOGY
RODGERS SHOWING

N.T.S. 92H-1E,8E SIMILKAMEEN M.D., B.C.

0 50 100 150 metres

DATE : AUG. 1998	SCALE 1:2500
DRAWN BY : G.F.C.	FIGURE Nº. : 6.0

CHONG

5.0 GEOCHEMISTRY

5.1 SILT GEOCHEMISTRY

Thirty-four stream sediment samples were collected from the major and minor drainages on the Cap property. The sample locations are shown on Figure 7.0, along with the geochemical results for gold, arsenic and zinc. Background and anomalous values are shown in Table 4.0.

TABLE 4.0 - ANOMALOUS SILT GEOCHEMICAL VALUES

ELEMENTS	VALUES			
		RANGE	BACKGROUND	ANOMALOUS
Au	ppb	<5 - 100	5	15
Ag	ppm	<0.2 - 0.2	0.2	0.4
Cu	ppm	4 - 25	11	17
As	ppm	<2 - 26	8	12
Pb	ppm	<2 - 50	5	8
Zn	ppm	24 - 106	59	88
ppb - parts per billion, ppm - parts per million				

Three of the samples gave weakly to moderately anomalous gold values (06 - 90 ppb, 07 - 100 ppb and 62 - 15 ppb). The three samples were all collected from the central portion of the Cap 2 claim, although they are from separate drainages. Samples 06 and 62 were taken from minor drainages while 07 was taken from Pettigrew Creek. This area is covered by thick accumulations of overburden and no cause is evident for the anomalous samples.

Five of the samples (01, 05, 76 - 78) collected from the upper reaches of Pettigrew Creek gave weakly anomalous arsenic and zinc values. This anomaly appears to be caused by the known showing and soil geochemical anomalies on the property.

5.2 SOIL GEOCHEMISTRY

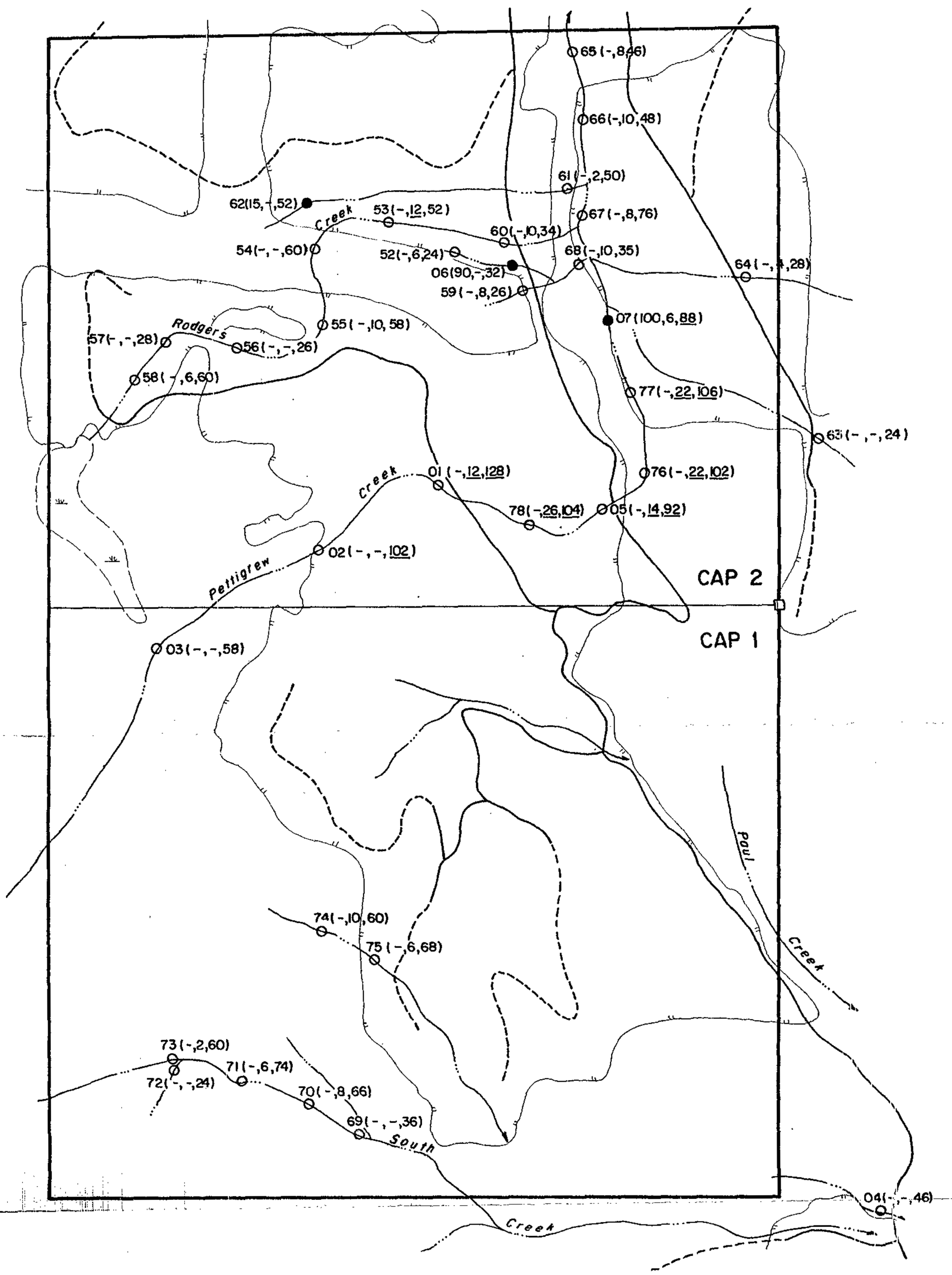
Background and anomalous values are given in Table 5.0.

TABLE 5.0 - ANOMALOUS SOIL GEOCHEMICAL VALUES

ELEMENTS	VALUES			
		RANGE	BACKGROUND	ANOMALOUS
Au	ppb	<5 - 80	5	15
Ag	ppm	<0.2 -2.0	0.2	0.4
Cu	ppm	2 - 105	16	24
As	ppm	<2 - 158	8	12
Pb	ppm	<2 - 80	9.5	14
Zn	ppm	42 - 1225	163	243
ppb - parts per billion, ppm - parts per million				

Gold

Gold values ranged from <5 to 80 ppb (Figure 8.0) with background established at 5 ppb and anomalous values 15 ppb and greater. No broad gold soil geochemical anomalies were outlined by the survey. The highest gold values were single station anomalies at line 200S and 1025E (80 ppb) and line 100N and 675E (55 ppb). Clustering of gold values in the 10 to 20 ppb range occur at several locations on the grid.



○ Silt sample location

07(100,6,88) Sample Nº. (Au ppb, As ppm, Zn ppm)
(Au <5, As < 2, are shown as -)

Anomalous silt sample

● Au > 10 ppb

As > 12 ppm

Zn > 88 ppm

Legal corner post

Clearcut

Two wheel drive road

Cat trail, 4 wheel drive road

Stream

Swamp

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N

GRANT F. CROOKER

CAP PROPERTY

STREAM SEDIMENT SAMPLING

N.T.S. 92H-1E,8E SIMILKAMEEN M.D., B.C.

0 200 400 800 metres

DATE: AUG. 1998	SCALE 1:15,000
DRAWN BY: G.F.C.	FIGURE Nº.: 7.0

Silver

Silver values ranged from <0.2 to 2.0 ppm (Figure 8.0) with background established at 0.2 ppm and anomalous values 0.4 ppm and greater. Four weak to moderate soil geochemical anomalies were outlined.

Anomaly Ag-1 is a strong, two sample anomaly occurring on line 900N at 475E and 500E. The value of 2.0 ppm was the highest value from the survey. The anomaly is located near the Rodgers showing and coincidental zinc and lead occur with the silver anomaly. A Hedley dyke (expressed magnetically by magnetic high E) occurs immediately east of the anomaly.

Anomaly Ag-2 consists of three small, weak to moderate anomalies occurring on line 100S between 950E and 1200E and line 200S between 950E and 1025E. Gold shows a clustering of 10 ppb values with one value of 80 ppb, but no other elements are anomalous.

Anomaly Ag-3 is a weak, five sample anomaly occurring on line 100S at 775E and line 200S between 750E and 825E. Gold shows a clustering on 10 to 15 ppb values, and arsenic is also weakly anomalous.

Anomaly Ag-4 is a weak to moderate anomaly extending from line 100S between 575E and 700E to line 400S at 625E. Zinc and copper are coincidentally anomalous with the silver. Northerly trending magnetic highs B and C that have been interpreted to be Hedley dykes occur coincidentally with the multi-element soil geochemical anomaly.

Lead

Lead values ranged from <2 to 50 ppm (Figure 9.0) with background established at 9.4 ppm and anomalous values 14 ppm and greater. Four weak to moderate soil geochemical anomalies were outlined.

Anomaly Pb-1 is a weak to moderate anomaly extending from line 900N and 500E to line 775N and 450E. The anomaly is the soil geochemical expression of the Rodgers showing and is associated with a Hedley dyke. Moderately anomalous silver and zinc occur coincidentally with the lead.

Anomaly Pb-2 is a moderate, three sample anomaly extending from line 100N between 950E and 975E to line 100S at 950E. Silver is coincidentally weakly to moderately anomalous at the south end of the anomaly.

Anomaly Pb-3 is a weak anomaly extending from line 300N at 525E to line 100N between 400E and 500E. No other elements are coincidentally anomalous with the lead, but three magnetic highs that have been interpreted to be Hedley dykes are associated with the anomaly.

Anomaly Pb-4 is a weak anomaly on line 300N between 000E and 225E. The anomaly is associated with a swarm of Hedley dykes that are expressed magnetically by magnetic high A. Silver, zinc, copper and arsenic are coincidentally anomalous with the lead.

Zinc

Zinc values ranged from 42 to 1225 ppm (Figure 9.0) with background established at 163 ppm and anomalous values 243 ppm and greater. Three, weak to moderate soil geochemical anomalies were outlined.

Anomaly Zn-1 is a moderate, three sample anomaly extending from line 900N at 500E to line 800N between 475E and 500E. The anomaly is the soil geochemical expression of the Rodgers showing and is associated with a Hedley dyke. Moderately anomalous silver and lead occur coincidentally with the zinc.

Anomaly Zn-2 is a weak to strong anomaly extending from line 100S between 575E and 675E to line 400S between 675E and 700E. The highest zinc value of 1225 ppm occurs within this anomaly. Silver and copper are coincidentally anomalous with zinc. Northerly trending magnetic highs B and C that have been interpreted to be Hedley dykes occur coincidentally with the multi-element soil geochemical anomaly.

Anomaly Zn-3 is a weak to moderate anomaly on line 300N between 000E and 225E. Silver, lead copper and arsenic are coincidentally anomalous with the zinc. The multi-element anomaly is associated with a swarm of Hedley dykes that are expressed magnetically by magnetic high A.

Arsenic

Arsenic values ranged from <2 to 158 ppm (Figure 10.0) with background established at 8 ppm and anomalous values 12 ppm and greater. Two weak to moderate soil geochemical values were outlined.

Anomaly As-1 is a weak, three sample anomaly extending from line 200S between 750E and 775E to line 300S at 800E. Gold shows a clustering of 10 to 15 ppb values, and silver is also weakly anomalous.

Anomaly As-2 is a weak to moderate anomaly extending from line 300N between 075E and 250E to line 100N between 075E and 175E. The anomaly is associated with a swarm of Hedley dykes that are expressed magnetically by magnetic high A. Silver, lead, zinc and copper are coincidentally anomalous with arsenic on line 300N, and copper is coincidentally anomalous with arsenic on line 100N.

Copper

Copper values ranged from 2 to 105 ppm (Figure 10.0) with background established at 16 ppm and anomalous values 24 ppm and greater. Two weak soil geochemical values were outlined.

Anomaly Cu-1 is a weak anomaly extending from line 100N between 550E and 650E to line 100S between 625E and 675E. Silver and zinc are coincidentally anomalous with the copper. Northerly trending magnetic highs B and C that have been interpreted to be Hedley dykes occur coincidentally with the multi-element soil geochemical anomaly.

Anomaly Cu-2 is a weak anomaly extending from line 300N between 050E and 250E to line 100N between 100E and 200E. Silver, lead, zinc and silver are coincidentally anomalous with copper on line 300N, and arsenic is coincidentally anomalous with copper on line 100N. The anomaly is associated with a swarm of Hedley dykes that are expressed magnetically by magnetic high A.

6.0 GEOPHYSICS

6.1 MAGNETIC SURVEY

A total of 12.8 kilometres of total field magnetic survey was carried out over the grid during 1998. Survey lines were spaced at 25, 100 and 200 metre intervals, with station spacing at 12.5 and 25 metre intervals. Total field magnetic contours are displayed on Figure 11.0, with significant magnetic features labelled on Figure 13.0.

The magnetic data can generally be divided into two zones of magnetism. The first is a zone of background magnetism with values ranging from 55,900 nT to 56,100 nT that covers the majority of the grid area. Rocks under laying these areas are believed to be intrusive rocks of the Cahill intrusion, as well as sedimentary rocks of the Stemwinder and Whistle formations.

The second zone of magnetism consists of magnetic highs with values ranging from 56,100 nT to 57,500 nT. The zones of high magnetism have two modes of occurrence, the first consists of a broad magnetic high labelled MH-E on Figure 13.0. The second consists of narrow, linear, northerly trending magnetic highs, the largest of which are labelled MH-A through MH-D on Figure 13.0.

The broad magnetic high labelled MH-E occurs in an area covered by a thick accumulation of glacial till cover and no cause is obvious for the magnetic high. It may be caused by volcanic rocks of the Skwel Peken Formation that have been mapped to the east of Pettigrew Creek. There is also a possibility that a small stock of Hedley intrusive rocks may be causing the magnetic high.

The four most prominent of the narrow, linear, northerly trending magnetic highs have been labelled MH-A through MH-D. Geological mapping has shown MH-A and MH-B to be caused by mafic dykes of the Hedley intrusive suite, and all of the magnetic highs have been interpreted to be caused by Hedley dykes.

Magnetic high MH-A has a strike length of 700 metres (from line 400S between 125E and 325E to line 300N between 100E and 200E) and varies in width from 100 to 200 metres. The same magnetic high probably extends to lines 800N and 900N, and is open to the north and south. It also occurs coincidentally with lead, zinc, copper and arsenic soil geochemical anomalies on lines 100N and 300N. A swarm of Hedley dykes have been mapped within the magnetic high and appear to be the causing the magnetic high.

Magnetic high MH-B has a strike length of 500 metres (from line 400S between 500E and 550E to line 100N at 525E) and varies in width from 25 metres to 75 metres. This magnetic high occurs along the east flank of coincidental silver, zinc and copper soil geochemical anomalies. Outcrop is sparse over the anomaly, but several narrow Hedley dykes were mapped within the magnetic high.

Magnetic high MH-C has a strike length of 450 metres (from line 200S between 625E and 650E to line 100N between 600E and 625E) and varies in width from 25 to 50 metres. Coincidental silver, zinc and copper soil geochemical anomalies occur over the magnetic high. Outcrop is sparse over the anomaly, but several narrow Hedley dykes were mapped within the magnetic high.

Magnetic high MH-D has a strike length of 150 metres (from line 800N between 525E and 550E to line 950E between 500E and 575E) and varies in width from 25 to 75 metres. The magnetic high is open to the north and south. Coincidental silver, lead and zinc soil geochemical anomalies occur along the western flank of the magnetic high, as does the Rodgers showing. A 25 metre wide Hedley dyke underlies the magnetic high and appears to be the cause of the anomaly.

6.2 VLF-EM SURVEY

A total of 11.5 kilometres of VLF-EM survey was carried out over the grid during 1998. Survey lines were spaced at 25, 100 and 200 metre intervals with station spacing at 12.5 and 25 metre intervals. VLF-EM profiles show a weak to strong response to conductivity as displayed on Figure 12.0. Topographic bias, due to up and down slope VLF instrument orientation is minimal on the survey grid. Topographic bias in rugged terrain can produce profile that resemble real conductors although they are usually broad and follow topographic contours.

A number of north to northeast trending conductors were delineated by the survey. The five most significant conductor systems have been labelled A through E on Figures 12.0 and 13.0.

Conductor system A is a moderate, northeast trending conductor system that extends from line 800N and 425E to 950N and 575E. No cause is apparent for the conductor, although it passes some 25 metres east of the Rodgers showing.

Conductor system B is a weak to moderate, northeast trending conductor system that extends from line 800N and 350E to line 925N at 400E. The conductor occurs coincidentally with a weak magnetic high and may be related to a Hedley dyke.

Conductor system C is a moderate to strong, northeast trending conductor system that extends from line 400S and 925E to line 100S and 1075E. The conductor approximates the mapped contact on the Cahill intrusion and Copperfield breccia, and may represent the change in rock type.

Conductor system D is a moderate to strong, north to northeasterly trending conductor system that extends from line 400S and 400E to line 300N and 675E. The conductor cuts across several magnetic highs and coincidental silver, zinc and copper soil geochemical anomalies occur along part of the conductor system. No cause is apparent for the conductor.

Conductor system E is a weak, north trending conductor system that extends from line 100N and 100E to line 300N and 100E. The conductor occurs along the western flank of magnetic high MH-E and occurs coincidentally with lead, zinc. copper and arsenic soil geochemical anomalies. The conductor appears to be delineating a swarm of Hedley dykes.

7.0 EXPLORATION TARGET AREAS

The development of the exploration target areas on the Cap property is an incorporation of geological, geochemical and geophysical data. Four exploration target areas have been developed (Figure 13.0) and classified in Table 6.0.

TABLE 6.0 - EXPLORATION TARGET AREAS

TARGETS		EXPLORATION INDICATORS					EXPLORATION EVALUATION		
ID	AREA (KM^2)	GEOLOGY	GEOCHEMISTRY			GEOPHYSICS	PROGRAM STAGE I	RATING	PRIORITY
			SILTS	SOILS	ROCKS	RESPONSE			
T-1	0175	Stemwinder Fm Hedley Intrusive		Au: W Ag: M Pb, Zn: S	Au: N Ag: W - M Zn, Pb: S	MagH CS	G, GC, GP, IP, TR	High	First
T-2	0.385	Copperfield Bx Stemwinder Fm Cahill Pluton	Au: N Ag: N As, Zn: W	Au: :W Ag: W - M As: W	Au: W Ag: W Zn, As: W	MagLo CS	G, GC, GP, IP	Medium	First
T-3	0.21	Copperfield Bx Stemwinder Fm Hedley Intrusive	Au: N Ag: N As, Zn: W	Au: W Ag: W - M Zn: S As: W	Au: N Ag: W Zn: W - M Cu, Pb: W	MagH Cs	G, GC, GP, IP, TR	High	Second
T-4	0.14	Stemwinder Fm Hedley Intrusive	Au: N Ag: N As, Zn: W	Au: N Ag: W Zn: W - M As, Cu, Pb: W	Au: N Ag: N	MagH MagC MCS	G, GC, GP, IP	Medium	Second

GEOLOGY	GEOCHEMISTRY	GEOPHYSICS	PROGRAM	RATING	PRIORITY
Whistle Fm Copperfield breccia Stemwinder Fm Hedley Intrusive Cahill Pluton Skarn Silicification cpy - chalcopyrite ga - galena sp - sphalerite py - pyrite	W - Weak M - Moderate S - Strong N - None Au - gold Ag - silver Pb - lead Zn - zinc Cu - copper As - arsenic P - Pathfinders	MagH - Magnetic High MagLo - Magnetic Low MagC - Magnetic Conductor MCS - Multi Conductor Systems CS - Conductor System	G - Geology GC - Geochemistry GP - Mag/VLF IP - IP Survey TR - Trenching RC - Rotary Drilling CR - Core Drilling	I-High II-Medium III-Low	First Second Third

8.0 CONCLUSIONS

8.1 A number of positive conclusions can be drawn from the past and present work programs on the Cap claims. The 1998 program was successful in delineating four target areas with coincidental multi-element soil geochemical anomalies, magnetic highs and favourable geological units for the formation of skarn mineralization.

8.2 The stream sediment sampling was successful with two areas yielding anomalous samples. The first area, in the central portion of the Cap 2 claim gave three samples (06 - 90 ppb, 07 - 100 ppb, 62 - 15 ppb) with weakly to moderately anomalous gold values. No other elements were anomalous with the gold. The area is covered by thick accumulations of overburden and no cause is evident for the anomaly. The second area, in the upper reaches of Pettigrew Creek gave five samples (01, 05, 76 - 78) with weakly anomalous arsenic and zinc values. This anomaly appears to be caused by the known showing and soil geochemical anomalies on the property.

8.3 The soil geochemical response was favourable with four areas (Targets 1 - 4) giving multi-element (Ag, Zn, Pb, Cu, As) soil geochemical anomalies. In all but one case (Target 2) the soil geochemical anomalies occur coincidentally with magnetic highs that have been interpreted to be Hedley intrusive dykes, or mapped as Hedley dykes. The small, weak to moderate multi-element soil geochemical anomaly at target 1 is related to the Rodgers showing.

T-1

8.4 The magnetic survey was successful in defining a number of significant magnetic features. A number of narrow, north trending magnetic highs occur over the property, and these have been interpreted to be dykes of the Hedley intrusive suite. Geological mapping has shown these magnetic highs to be individual Hedley dykes up to 25 metres in width, or swarms of Hedley dykes varying from 1 to 10 metres in width. Many of the magnetic highs occur coincidentally with multi-element soil geochemical anomalies, and one is spatially related to the Rodgers showing.

8.5 Geological mapping has shown the property to be underlain by rock units favourable for the formation of Hedley type gold deposits. The Stemwinder Formation is considered a favourable host unit, and the dykes of the Hedley intrusive suite are genetically and spatially related to the gold mineralization.

8.6 Prospecting has indicated the skarn mineralization at the Rodgers showing to be scattered over a strike length of 100 metres, and open to the north and south where it is covered by overburden. The mineralization consists of varying concentrations of pyrite, sphalerite, galena and chalcopyrite occurring along fractures and as disseminations in an indistinct, grey and green, calc-silicate ground mass.

8.7 Rock samples taken at the Rodgers showing yielded weakly to moderately anomalous zinc (1.57%), lead (5980 ppm), copper (679 ppm) and silver (8.8 ppm) values. None of the samples were anomalous for gold.

8.8 Three rock samples of pyritic, silicified and/or hornfelsed Copperfield breccia gave weakly anomalous gold (50 - 70 ppb) and silver (1.8 - 3.0 ppm) values. This type of mineralization may be similar to the uppermost alteration zone at the Nickel Plate Mine, referred to as the" upper siliceous beds". At the Nickel Plate, this type of alteration consists of mainly fine grained intergrowths of quartz and pyroxene, with lesser orthoclase, epidote, biotite and carbonate. Veins and vuggy masses of chalcedonic breccia are locally abundant, and many outcrops have a cherty appearance. This siliceous replacement alteration extends from the Hedley Formation up into the overlying Copperfield breccia. A somewhat similar situation may exist on the Cap claims, with the silicified Copperfield breccia representing a siliceous "cap" above the unexposed, main skarn envelope.

9.0 RECOMMENDATIONS

The 1998 exploration program yielded positive results and further work is warranted on the property. The exploration program should be conducted as follows:

-complete the grid over the remainder of the property
-conduct geological mapping, prospecting, soil sampling and Mag/VLF surveying over the grid
-conduct an I.P. survey over the four target areas
-conduct trenching over target areas and I.P. anomalies

Respectfully submitted,

Grant F. Crooker, P.Geo.,
Consulting Geologist
October 13, 1998

10.0 REFERENCES

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11.0 CERTIFICATE OF QUALIFICATIONS

I, Grant F. Crooker, of Upper Bench Road, PO Box 404, Keremeos, British Columbia, Canada, V0X 1N0 do certify that:

I am a Consulting Geologist registered with the Association of Professional Engineers and Geoscientists of the Province of British Columbia (Registration No. 18961);

I am a Fellow of the Geological Association of Canada (Registration No. 3758) and I am a Member of the Canadian Institute of Mining and Metallurgy and Petroleum;

I am a graduate (1972) of the University of British Columbia with a Bachelor of Science degree (B.Sc.) from the Faculty of Science having completed the Major program in geology;

I have practised my profession as a geologist for over 20 years, and since 1980, I have been practising as a consulting geologist and, in this capacity, have examined and reported on numerous mineral properties in North and South America;

I have based this report on field examinations within the area of interest and on a review of the available technical and geological data;

I am the owner of the Cap 1 and 2 mineral claims;

Respectfully submitted,

PROVINCE OF G. F. CROOKER BRITISH COLUMBIA

Grant F. Crooker, P.Geo.,
GFC Consultants Inc.

Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources
GEOLOGICAL SURVEY BRANCH

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)]	TOTAL COST
Geological, Geochemical and Geophysical	29,228.19

AUTHOR(S) Grant F. Crooker SIGNATURE(S) [signature]

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) KAM98-0400788-198, May 11, 1998 YEAR OF WORK 1997-98

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S) 3122597, August 6, 1998

PROPERTY NAME Cap (formerly Rodgers 2)

CLAIM NAME(S) (on which work was done) Cap 1, 2

COMMODITIES SOUGHT Au, Ag, Zm, Pb, Cu

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN 92H-SE-173

MINING DIVISION Similkameen NTS 92H 1E, 8E

LATITUDE 49 ° 14 ' 50 " LONGITUDE 120 ° 13 ' 15 " (at centre of work)

OWNER(S)
1) Grant F. Crooker 2)

MAILING ADDRESS
Box 404
Keremeos, BC
V0X 1N0

OPERATOR(S) [who paid for the work]
1) Grant F. Crooker 2)

MAILING ADDRESS
Box 404
Keremeos, BC
V0X 1N0

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
The property is underlain by Late Triassic Whistle and Stemwinder formations of the nicola Group that have been intruded by Late Triassic Hedley intrusions and Mid-Jurassic Cahill Creek pluton. Cala-silicate skarns of unknown size occur at the Rodgers showing near the contact of limestones with dykes of Hedley? intrusions. Anomalous zinc, lead and copper values occur within the skarn.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS Mark, D (1985) Geochemical/Geological Report within the Rodgers 2 Claim for Golden Cadillac Res. AR# 13,819

(OVER)

APPENDIX I

CERTIFICATES OF ANALYSIS

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

CERTIFICATE A9821142

(LOY) -

Project: CAP
P.O. # : 23

Samples submitted to our lab in Vancouver, BC.
This report was printed on 15-JUN-98.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
201	102	Dry, sieve to -80 mesh
229	102	ICP - AQ Digestion charge
* NOTE	1:	

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	102	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	102	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	102	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	102	As ppm: 32 element, soil & rock	ICP-AES	2	10000
2121	102	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	102	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	102	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	102	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	102	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	102	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	102	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	102	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	102	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	102	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	102	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	102	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	102	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	102	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	102	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	102	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	102	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	102	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	102	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	102	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
2141	102	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	102	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	102	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	102	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	102	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	102	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	102	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	102	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	102	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

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Page Number : 1-A
Total Pages : 1
Certificate Date: 23-SEP-97
Invoice No. : 19742782
P.O. Number :
Account : LOY

Project : CAP
Comments: CC:GRANT CROOKER

CERTIFICATE OF ANALYSIS A9742782

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
1230227058969001	301	229	< 5	< 0.2	2.54	12	100	< 0.5	< 2	1.26	< 0.5	8	28	25	3.41	< 10	2	0.06	10	0.53	1405
1230191858709002	301	229	< 5	< 0.2	1.70	< 2	70	< 0.5	< 2	0.98	< 0.5	7	21	24	2.72	< 10	< 1	0.04	< 10	0.41	1080
1230149358471003	301	229	< 5	< 0.2	1.54	< 2	60	< 0.5	< 2	0.57	< 0.5	7	15	15	2.08	< 10	< 1	0.05	10	0.43	590
1230402556475004	301	229	< 5	< 0.2	1.29	< 2	80	< 0.5	< 2	0.48	< 0.5	4	12	7	1.50	< 10	< 1	0.03	< 10	0.32	935
1230290058825005	301	229	< 5	< 0.2	1.50	14	60	< 0.5	< 2	0.74	< 0.5	7	20	14	3.25	< 10	< 1	0.06	< 10	0.49	555
1230271059650006	301	229	90	< 0.2	0.54	10	30	< 0.5	< 2	0.32	< 0.5	4	14	7	3.42	< 10	< 1	0.03	< 10	0.19	615
1230295059510007	301	229	100	0.2	1.53	6	70	< 0.5	< 2	0.70	< 0.5	8	16	15	2.61	< 10	< 1	0.07	< 10	0.52	565

CERTIFICATION:________________________

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Page Number : 1-B
Total Pages : 1
Certificate Date: 23-SEP-97
Invoice No. : 19742782
P.O. Number :
Account : LOY

Project : CAP
Comments: CC:GRANT CROOKER

CERTIFICATE OF ANALYSIS A9742782

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
1230227058969001	201	229	3	0.02	25	770	12	< 2	4	168	0.09	< 10	< 10	75	< 10	128
1230191858709002	201	229	2	0.02	22	640	8	< 2	3	134	0.09	< 10	< 10	56	< 10	102
1230149358471003	201	229	< 1	0.02	12	530	10	< 2	3	60	0.09	< 10	< 10	57	< 10	58
1230402556475004	201	229	2	0.01	8	290	2	< 2	2	39	0.07	< 10	< 10	32	< 10	46
1230290058825005	201	229	< 1	< 0.01	13	620	8	< 2	3	74	0.13	< 10	< 10	84	< 10	92
1230271059650006	201	229	1	< 0.01	4	460	4	< 2	1	19	0.08	< 10	< 10	89	< 10	32
1230295059510007	201	229	< 1	0.01	11	570	6	< 2	4	71	0.10	< 10	< 10	60	< 10	88

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CERTIFICATE OF ANALYSIS A9821143

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
123-052	201	229	< 5	< 0.2	0.76	6	50	< 0.5	< 2	0.30	< 0.5	5	7	6	1.18	< 10	< 1	0.04	< 10	0.21	520
123-053	201	229	< 5	< 0.2	1.53	12	80	< 0.5	< 2	0.45	< 0.5	5	14	14	1.91	< 10	< 1	0.06	< 10	0.49	415
123-054	201	229	< 5	< 0.2	1.78	< 2	90	< 0.5	< 2	0.50	< 0.5	7	15	20	2.20	< 10	< 1	0.07	< 10	0.51	480
123-055	201	229	< 5	< 0.2	1.97	10	60	< 0.5	< 2	0.42	< 0.5	8	14	14	3.02	< 10	< 1	0.05	< 10	0.36	1085
123-056	201	229	< 5	< 0.2	1.04	< 2	40	< 0.5	< 2	0.37	< 0.5	3	7	7	1.27	< 10	< 1	0.03	< 10	0.23	655
123-057	201	229	< 5	< 0.2	0.99	< 2	40	< 0.5	< 2	0.34	< 0.5	4	7	6	1.52	< 10	< 1	0.02	< 10	0.23	815
123-058	201	229	< 5	< 0.2	1.41	6	40	< 0.5	< 2	0.31	< 0.5	5	9	10	2.06	< 10	< 1	0.03	< 10	0.26	855
123-059	201	229	< 5	< 0.2	0.75	8	30	< 0.5	< 2	0.40	< 0.5	4	7	4	1.18	< 10	< 1	0.04	< 10	0.23	230
123-060	201	229	< 5	< 0.2	1.04	10	60	< 0.5	< 2	0.35	< 0.5	5	10	8	1.71	< 10	< 1	0.06	< 10	0.33	690
123-061	201	229	< 5	< 0.2	0.82	2	50	< 0.5	< 2	0.27	< 0.5	3	8	5	1.54	< 10	< 1	0.07	< 10	0.26	345
123-062	201	229	15	< 0.2	0.94	< 2	30	< 0.5	< 2	0.39	< 0.5	5	11	8	1.49	< 10	< 1	0.04	< 10	0.33	265
123-063	201	229	< 5	< 0.2	0.95	< 2	40	< 0.5	< 2	0.36	< 0.5	4	7	3	1.65	< 10	< 1	0.04	< 10	0.26	260
123-064	201	229	< 5	< 0.2	1.26	4	50	< 0.5	< 2	0.47	< 0.5	5	10	5	2.16	< 10	< 1	0.05	< 10	0.30	340
123-065	201	229	< 5	< 0.2	1.17	8	50	< 0.5	< 2	0.60	< 0.5	5	11	8	1.37	< 10	< 1	0.05	< 10	0.37	215
123-066	201	229	< 5	< 0.2	1.12	10	50	< 0.5	< 2	0.59	< 0.5	5	11	9	1.58	< 10	< 1	0.05	< 10	0.38	360
123-067	201	229	< 5	< 0.2	1.49	8	70	< 0.5	< 2	0.69	< 0.5	8	18	13	2.36	< 10	< 1	0.08	< 10	0.49	610
123-068	201	229	< 5	< 0.2	0.95	10	60	< 0.5	< 2	0.44	< 0.5	6	10	8	1.79	< 10	< 1	0.06	< 10	0.31	585
123-069	201	229	< 5	< 0.2	1.15	< 2	40	< 0.5	< 2	0.42	< 0.5	3	13	7	1.20	< 10	< 1	0.03	< 10	0.27	250
123-070	201	229	< 5	0.2	1.41	8	80	< 0.5	< 2	0.39	< 0.5	4	19	8	1.33	< 10	< 1	0.03	< 10	0.37	380
123-071	201	229	< 5	< 0.2	1.62	6	80	< 0.5	< 2	0.45	0.5	6	34	12	1.76	< 10	< 1	0.04	< 10	0.57	450
123-072	201	229	< 5	< 0.2	0.72	< 2	40	< 0.5	< 2	0.25	< 0.5	1	7	4	0.59	< 10	< 1	0.02	< 10	0.19	135
123-073	201	229	< 5	< 0.2	1.23	2	90	< 0.5	< 2	0.33	< 0.5	6	13	16	1.80	< 10	< 1	0.05	< 10	0.34	475
123-074	201	229	< 5	< 0.2	1.44	10	50	< 0.5	< 2	0.78	0.5	6	18	13	2.07	< 10	1	0.05	< 10	0.35	385
123-075	201	229	< 5	< 0.2	1.91	6	70	< 0.5	< 2	0.84	0.5	7	27	21	2.32	< 10	< 1	0.08	< 10	0.52	340
123-076	201	229	< 5	< 0.2	1.75	22	70	< 0.5	< 2	0.85	< 0.5	8	20	15	3.14	< 10	< 1	0.08	10	0.55	615
123-077	201	229	< 5	< 0.2	1.98	22	80	< 0.5	< 2	0.90	< 0.5	9	21	17	3.15	< 10	< 1	0.10	10	0.63	730
123-078	201	229	< 5	< 0.2	1.89	26	80	< 0.5	< 2	0.85	0.5	8	22	18	3.15	< 10	< 1	0.09	10	0.58	795

CERTIFICATION: Hart Bichler

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##

CERTIFICATE OF ANALYSIS A9821143

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
123-052	201	229	1	0.01	4	290	4	2	2	24	0.07	< 10	< 10	33	< 10	24
123-053	201	229	2	0.01	9	280	2	2	4	45	0.12	< 10	< 10	51	< 10	52
123-054	201	229	< 1	0.01	10	370	4	2	4	45	0.13	< 10	< 10	54	< 10	60
123-055	201	229	3	0.01	8	320	6	2	3	34	0.13	< 10	< 10	84	< 10	58
123-056	201	229	1	0.01	4	230	2	< 2	2	26	0.09	< 10	< 10	34	< 10	26
123-057	201	229	2	0.01	4	190	2	< 2	2	24	0.09	< 10	< 10	39	< 10	28
123-058	201	229	1	0.01	6	280	6	< 2	2	23	0.11	< 10	< 10	45	< 10	60
123-059	201	229	< 1	0.01	3	360	4	< 2	2	27	0.08	< 10	< 10	27	< 10	26
123-060	201	229	1	0.01	5	310	2	< 2	3	28	0.10	< 10	< 10	41	< 10	34
123-061	201	229	< 1	0.01	5	300	2	< 2	1	17	0.09	< 10	< 10	39	< 10	50
123-062	201	229	1	0.01	6	360	< 2	< 2	3	26	0.10	< 10	< 10	46	< 10	52
123-063	201	229	< 1	0.03	3	90	4	2	2	24	0.12	< 10	< 10	43	< 10	24
123-064	201	229	< 1	0.03	4	150	4	4	3	31	0.13	< 10	< 10	54	< 10	28
123-065	201	229	< 1	0.01	6	460	4	< 2	3	44	0.10	< 10	< 10	36	< 10	66
123-066	201	229	< 1	0.01	6	460	3	< 2	3	48	0.10	< 10	< 10	39	< 10	48
123-067	201	229	1	0.01	10	540	6	< 2	4	65	0.12	< 10	< 10	54	< 10	76
123-068	201	229	< 1	0.01	5	420	6	2	3	34	0.09	< 10	< 10	42	< 10	36
123-069	201	229	1	0.02	7	120	4	2	2	26	0.10	< 10	< 10	32	< 10	50
123-070	201	229	< 1	0.03	11	310	2	4	3	26	0.08	< 10	< 10	35	< 10	66
123-071	201	229	1	0.04	18	290	6	< 2	3	25	0.09	< 10	< 10	47	< 10	74
123-072	201	229	< 1	0.01	5	240	2	2	1	16	0.06	< 10	< 10	16	< 10	24
123-073	201	229	1	< 0.01	10	250	6	< 2	3	22	0.09	< 10	< 10	45	< 10	60
123-074	201	229	< 1	0.02	11	270	6	< 2	3	61	0.14	< 10	< 10	57	< 10	64
123-075	201	229	1	0.01	15	440	8	2	4	73	0.14	< 10	< 10	60	< 10	68
123-076	201	229	< 1	0.01	13	640	6	< 2	4	86	0.14	< 10	< 10	76	< 10	102
123-077	201	229	1	0.01	13	700	8	< 2	4	102	0.14	< 10	< 10	73	< 10	106
123-078	201	229	1	0.01	16	680	10	< 2	4	96	0.12	< 10	< 10	76	< 10	104

CERTIFICATION: Hart Bichler

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CERTIFICATE OF ANALYSIS A9821142

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
100# 000E	201	229	5	0.4	2.33	< 2	80	< 0.5	< 2	0.27	1.5	6	16	11	1.87	< 10	< 1	0.04	< 10	0.16	305
100# 025E	201	229	5	0.4	2.61	6	120	0.5	< 2	0.36	0.5	7	17	14	2.39	< 10	1	0.06	< 10	0.33	370
100# 050E	201	229	< 5	0.2	3.23	6	110	0.5	< 2	0.33	< 0.5	7	18	18	2.37	< 10	< 1	0.06	< 10	0.24	210
100# 075E	201	229	< 5	0.2	2.40	6	140	< 0.5	< 2	0.31	0.5	7	17	17	2.07	< 10	< 1	0.05	< 10	0.25	430
100# 100E	201	229	< 5	0.4	2.35	< 2	100	< 0.5	< 2	0.20	0.5	5	11	13	1.73	< 10	< 1	0.04	< 10	0.14	765
100# 125E	201	229	< 5	0.2	2.64	6	100	0.5	< 2	0.33	1.5	9	17	15	2.40	< 10	1	0.05	< 10	0.25	770
100# 150E	201	229	10	0.2	2.49	8	80	0.5	< 2	0.37	1.5	9	16	16	2.52	< 10	< 1	0.04	< 10	0.20	490
100# 175E	201	229	< 5	0.2	3.08	4	110	0.5	< 2	0.24	< 0.5	6	18	15	2.34	< 10	< 1	0.04	< 10	0.29	305
100# 200E	201	229	5	< 0.2	2.79	8	90	0.5	< 2	0.28	< 0.5	8	18	16	2.39	< 10	< 1	0.04	< 10	0.31	555
100# 225E	201	229	5	< 0.2	2.04	8	70	< 0.5	< 2	0.34	< 0.5	7	17	12	2.34	< 10	< 1	0.04	< 10	0.22	1000
100# 250E	201	229	5	0.2	2.76	2	90	0.5	< 2	0.25	< 0.5	7	17	16	2.31	< 10	< 1	0.04	< 10	0.22	310
100# 275E	201	229	5	0.2	2.27	< 2	80	< 0.5	< 2	0.18	< 0.5	5	11	7	1.87	< 10	< 1	0.04	< 10	0.14	195
100# 300E	201	229	< 5	0.4	2.25	10	60	< 0.5	< 2	0.52	< 0.5	4	12	10	1.41	< 10	< 1	0.03	< 10	0.13	450
100# 325E	201	229	10	0.2	3.10	< 2	70	0.5	< 2	0.12	< 0.5	5	10	10	1.95	< 10	< 1	0.03	< 10	0.13	565
100# 350E	201	229	5	< 0.2	3.19	6	150	0.5	< 2	0.38	0.5	12	15	26	3.19	10	< 1	0.04	< 10	0.21	1255
100# 375E	201	229	10	0.2	3.24	6	120	0.5	< 2	0.37	< 0.5	10	15	17	2.64	10	< 1	0.04	< 10	0.26	740
100# 400E	201	229	< 5	< 0.2	2.99	6	120	0.5	< 2	0.33	< 0.5	7	18	18	2.39	< 10	< 1	0.03	< 10	0.33	520
100# 425E	201	229	< 5	< 0.2	3.56	6	110	< 0.5	< 2	0.69	0.5	8	18	13	2.48	< 10	< 1	0.05	< 10	0.44	915
100# 450E	201	229	10	< 0.2	2.70	6	150	0.5	< 2	0.70	< 0.5	7	15	14	2.21	< 10	< 1	0.06	< 10	0.27	1260
100# 475E	201	229	< 5	0.2	2.80	8	110	0.5	< 2	0.28	< 0.5	8	16	15	2.29	< 10	< 1	0.03	< 10	0.23	525
100# 500E	201	229	< 5	0.2	2.88	6	120	0.5	< 2	0.27	0.5	8	15	13	2.21	< 10	< 1	0.04	< 10	0.20	330
100# 525E	201	229	< 5	0.2	2.58	< 2	110	< 0.5	< 2	0.21	0.5	6	13	10	1.84	< 10	< 1	0.03	< 10	0.14	460
100# 550E	201	229	10	0.2	2.92	8	110	0.5	< 2	0.36	< 0.5	8	20	13	2.13	< 10	< 1	0.03	< 10	0.21	110
100# 575E	201	229	< 5	0.4	3.06	8	80	0.5	< 2	0.61	1.5	9	22	16	2.52	< 10	1	0.03	< 10	0.26	160
100# 600E	201	229	< 5	0.8	3.48	16	100	0.5	< 2	0.58	2.0	9	19	16	3.07	< 10	1	0.03	< 10	0.14	175
100# 625E	201	229	15	1.0	2.55	6	80	0.5	< 2	0.89	3.5	11	36	32	3.78	< 10	< 1	0.04	< 10	0.07	255
100# 650E	201	229	< 5	1.0	3.83	6	210	0.5	< 2	0.40	3.5	8	18	30	3.05	10	< 1	0.05	< 10	0.18	145
100# 675E	201	229	< 5	1.4	3.21	22	140	0.5	< 2	0.98	7.0	21	31	105	8.20	10	< 1	0.11	< 10	1.19	785
100# 700E	201	229	< 5	0.8	3.39	< 2	40	0.5	< 2	0.10	0.5	4	8	7	1.92	< 10	< 1	0.03	< 10	0.06	115
100# 725E	201	229	< 5	0.2	2.75	< 2	40	< 0.5	< 2	0.10	< 0.5	4	9	5	1.92	< 10	< 1	0.03	< 10	0.09	210
100# 750E	201	229	< 5	0.2	3.97	< 2	80	0.5	< 2	0.06	< 0.5	4	7	7	1.67	< 10	< 1	0.02	< 10	0.08	315
100# 775E	201	229	< 5	0.2	2.67	< 2	40	< 0.5	< 2	0.05	< 0.5	4	6	5	1.69	< 10	< 1	0.01	< 10	0.06	455
100# 800E	201	229	< 5	< 0.2	1.48	< 2	30	< 0.5	< 2	0.08	< 0.5	1	5	2	1.29	< 10	< 1	0.03	< 10	0.05	85
100# 825E	201	229	10	0.4	3.80	< 2	50	0.5	< 2	0.11	< 0.5	4	10	7	1.89	< 10	< 1	0.03	< 10	0.09	75
100# 850E	201	229	< 5	0.2	1.39	2	60	< 0.5	< 2	0.20	< 0.5	3	7	5	1.34	< 10	< 1	0.03	< 10	0.08	260
100# 875E	201	229	< 5	0.8	3.82	< 2	40	0.5	< 2	0.14	< 0.5	3	11	7	2.00	< 10	< 1	0.04	< 10	0.10	100
100# 900E	201	229	< 5	0.2	2.51	< 2	90	< 0.5	< 2	0.16	< 0.5	4	10	7	1.67	< 10	< 1	0.06	< 10	0.14	150
100# 925E	201	229	< 5	0.2	2.81	6	70	< 0.5	< 2	0.16	< 0.5	4	11	6	2.04	< 10	1	0.03	< 10	0.13	130
100# 950E	201	229	10	1.4	1.96	8	70	< 0.5	< 2	0.24	< 0.5	10	15	17	2.31	< 10	< 1	0.03	< 10	0.29	140
100# 975E	201	229	< 5	0.4	2.64	4	80	0.5	< 2	0.15	< 0.5	5	10	8	1.92	< 10	< 1	0.04	< 10	0.12	150

CERTIFICATION: [signature]

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CERTIFICATE OF ANALYSIS A9821142

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
100# 000E	201	229	3	0.02	15	490	8	< 2	2	51	0.12	< 10	< 10	54	< 10	174
100# 025E	201	229	3	0.03	22	540	6	< 2	3	78	0.12	< 10	< 10	58	< 10	178
100# 050E	201	229	2	0.01	21	850	8	< 2	3	56	0.12	< 10	< 10	53	< 10	146
100# 075E	201	229	2	0.01	17	790	8	< 2	3	57	0.10	< 10	< 10	53	< 10	136
100# 100E	201	229	2	0.01	12	1180	6	< 2	2	36	0.10	< 10	< 10	40	< 10	118
100# 125E	201	229	2	0.01	20	800	8	< 2	3	61	0.12	< 10	< 10	57	< 10	190
100# 150E	201	229	2	0.01	22	610	6	< 2	3	65	0.12	< 10	< 10	59	< 10	212
100# 175E	201	229	2	0.01	16	810	8	< 2	3	37	0.14	< 10	< 10	59	< 10	114
100# 200E	201	229	2	0.01	18	1080	8	< 2	3	44	0.13	< 10	< 10	54	< 10	120
100# 225E	201	229	1	0.01	18	430	8	< 2	3	50	0.12	< 10	< 10	57	< 10	106
100# 250E	201	229	2	0.01	20	540	8	< 2	3	44	0.14	< 10	< 10	57	< 10	124
100# 275E	201	229	1	0.01	9	920	8	< 2	1	32	0.12	< 10	< 10	46	< 10	128
100# 300E	201	229	3	0.05	12	270	6	< 2	2	80	0.10	< 10	< 10	35	< 10	86
100# 325E	201	229	1	0.01	8	930	8	< 2	2	17	0.13	< 10	< 10	43	< 10	80
100# 350E	201	229	1	0.02	44	810	6	< 2	3	101	0.12	< 10	< 10	52	< 10	106
100# 375E	201	229	1	0.03	24	680	8	< 2	3	69	0.14	< 10	< 10	53	< 10	126
100# 400E	201	229	1	0.03	19	890	10	< 2	3	98	0.12	< 10	< 10	50	< 10	128
100# 425E	201	229	1	0.03	17	910	10	< 2	4	121	0.11	< 10	< 10	53	< 10	110
100# 450E	201	229	1	0.02	17	840	10	< 2	3	131	0.11	< 10	< 10	43	< 10	108
100# 475E	201	229	1	0.01	23	660	8	< 2	3	83	0.12	< 10	< 10	49	< 10	104
100# 500E	201	229	1	0.01	24	650	8	< 2	2	87	0.12	< 10	< 10	46	< 10	198
100# 525E	201	229	1	0.02	14	900	6	< 2	3	35	0.11	< 10	< 10	41	< 10	148
100# 550E	201	229	3	0.01	19	270	8	< 2	3	54	0.13	< 10	< 10	50	< 10	114
100# 575E	201	229	3	0.01	29	740	8	< 2	3	134	0.11	< 10	< 10	55	< 10	314
100# 600E	201	229	3	0.03	37	660	8	< 2	3	165	0.11	< 10	< 10	56	< 10	330
100# 625E	201	229	6	0.02	62	520	6	< 2	3	153	0.14	< 10	< 10	120	< 10	658
100# 650E	201	229	5	0.03	56	390	6	< 2	3	122	0.13	< 10	< 10	96	< 10	1325
100# 675E	201	229	9	0.02	102	680	14	< 2	4	405	0.14	< 10	< 10	129	< 10	872
100# 700E	201	229	3	0.01	7	830	8	< 2	1	10	0.11	< 10	< 10	41	< 10	130
100# 725E	201	229	1	0.02	6	1350	6	< 2	1	11	0.11	< 10	< 10	42	< 10	124
100# 750E	201	229	1	0.01	7	1300	8	< 2	2	8	0.12	< 10	< 10	33	< 10	110
100# 775E	201	229	1	0.01	4	800	4	< 2	1	4	0.10	< 10	< 10	39	< 10	52
100# 800E	201	229	< 1	0.01	2	350	4	< 2	< 1	7	0.09	< 10	< 10	36	< 10	42
100# 825E	201	229	1	0.01	8	680	8	< 2	1	11	0.11	< 10	< 10	40	< 10	62
100# 850E	201	229	1	0.01	5	360	6	< 2	1	18	0.11	< 10	< 10	37	< 10	64
100# 875E	201	229	2	0.02	7	1260	8	< 2	1	15	0.13	< 10	< 10	48	< 10	70
100# 900E	201	229	1	0.02	8	540	6	< 2	1	36	0.11	< 10	< 10	41	< 10	78
100# 925E	201	229	1	0.02	6	860	6	< 2	2	15	0.11	< 10	< 10	53	< 10	64
100# 950E	201	229	3	0.01	23	410	42	< 2	3	19	0.15	< 10	< 10	62	< 10	132
100# 975E	201	229	1	0.02	9	710	8	< 2	2	14	0.12	< 10	< 10	46	< 10	66

CERTIFICATION: [signature]

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CERTIFICATE OF ANALYSIS A9821142

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
100N 1000E	201 229	< 5	< 0.2	2.31	20	90	< 0.5	< 2	0.21	< 0.5	6	15	10	2.18	< 10	< 1	0.04	< 10	0.24	325
100N 1025E	201 229	10	0.4	2.89	6	100	0.5	< 2	0.24	< 0.5	8	15	12	2.08	< 10	< 1	0.05	< 10	0.24	365
100N 1050E	201 229	10	0.6	2.35	6	70	< 0.5	< 2	0.13	< 0.5	6	11	13	2.18	< 10	1	0.03	< 10	0.15	225
100N 1075E	201 229	10	0.2	2.27	< 2	40	< 0.5	< 2	0.08	< 0.5	4	7	5	1.58	< 10	< 1	0.02	< 10	0.09	490
100N 1100E	201 229	< 5	0.2	2.21	2	50	< 0.5	< 2	0.15	< 0.5	4	9	6	1.84	< 10	< 1	0.03	< 10	0.12	135
100N 1125E	201 229	< 5	0.2	4.14	14	60	0.5	< 2	0.20	< 0.5	4	10	9	2.34	10	< 1	0.03	< 10	0.14	80
100N 1150E	201 229	< 5	0.6	3.93	< 2	40	0.5	< 2	0.05	< 0.5	3	7	4	1.80	< 10	< 1	0.04	< 10	0.05	90
100N 1175E	201 229	< 5	0.4	4.00	< 2	80	0.5	< 2	0.08	< 0.5	5	8	7	1.85	< 10	< 1	0.03	< 10	0.08	1130
100N 1200E	201 229	5	0.2	2.80	< 2	80	< 0.5	< 2	0.21	< 0.5	5	11	10	1.77	10	< 1	0.06	< 10	0.17	1070
100N 1225E	201 229	< 5	0.4	3.95	< 2	90	0.5	< 2	0.13	< 0.5	6	10	10	1.94	10	< 1	0.04	< 10	0.13	860
100N 1250E	201 229	< 5	0.2	2.47	< 2	70	< 0.5	< 2	0.15	< 0.5	5	13	7	2.11	< 10	< 1	0.04	< 10	0.17	615
200N 000E	201 229	< 5	0.4	2.69	6	120	0.5	< 2	0.38	0.5	6	18	18	2.20	< 10	< 1	0.05	< 10	0.22	310
200N 025E	201 229	< 5	0.2	2.29	4	80	< 0.5	< 2	0.20	0.5	6	15	13	1.89	< 10	< 1	0.04	< 10	0.15	300
200N 050E	201 229	< 5	0.2	1.97	2	70	< 0.5	< 2	0.28	0.5	5	12	8	1.93	< 10	< 1	0.04	< 10	0.14	180
200N 075E	201 229	< 5	0.2	3.00	6	210	0.5	< 2	0.46	0.5	8	24	22	2.53	< 10	< 1	0.08	< 10	0.37	345
200N 100E	201 229	10	0.2	3.17	6	180	0.5	< 2	1.11	1.0	12	42	42	3.21	< 10	< 1	0.08	10	0.68	1170
200N 125E	201 229	< 5	< 0.2	2.96	8	150	0.5	< 2	0.45	< 0.5	9	24	18	2.81	< 10	< 1	0.06	< 10	0.39	375
200N 150E	201 229	5	0.2	3.91	22	180	0.5	< 2	0.84	0.5	16	43	65	4.62	< 10	< 1	0.06	20	0.60	785
200N 175E	201 229	5	0.2	1.97	2	70	< 0.5	< 2	0.63	< 0.5	7	16	13	2.15	< 10	< 1	0.04	< 10	0.22	875
200N 200E	201 229	5	0.2	4.15	10	110	0.5	< 2	0.43	< 0.5	7	16	15	2.37	< 10	1	0.05	< 10	0.40	340
200N 225E	201 229	15	0.2	3.04	6	90	0.5	< 2	0.27	< 0.5	8	18	13	2.45	< 10	< 1	0.03	< 10	0.32	615
200N 250E	201 229	10	< 0.2	2.49	14	70	0.5	< 2	0.54	< 0.5	8	24	22	2.61	< 10	< 1	0.04	< 10	0.36	430
200N 275E	201 229	5	0.2	1.89	6	40	< 0.5	< 2	0.22	< 0.5	4	10	6	1.42	< 10	< 1	0.03	< 10	0.10	125
200N 300E	201 229	10	0.2	1.97	12	50	< 0.5	< 2	0.96	0.5	7	14	11	1.92	< 10	< 1	0.03	< 10	0.13	410
200N 325E	201 229	< 5	0.2	2.27	4	60	< 0.5	< 2	0.25	< 0.5	5	12	8	1.59	< 10	< 1	0.03	< 10	0.14	215
200N 350E	201 229	< 5	0.2	2.54	8	70	< 0.5	< 2	0.35	0.5	7	17	16	2.28	< 10	< 1	0.04	< 10	0.23	270
200N 375E	201 229	10	0.2	3.88	2	90	0.5	< 2	0.31	< 0.5	7	19	13	2.60	10	< 1	0.03	< 10	0.28	140
200N 400E	201 229	< 5	0.2	2.56	6	70	0.5	< 2	0.21	< 0.5	6	14	10	2.13	< 10	< 1	0.03	< 10	0.20	200
200N 425E	201 229	10	0.2	2.78	8	100	0.5	< 2	0.34	< 0.5	9	21	15	2.46	< 10	1	0.04	< 10	0.32	210
200N 450E	201 229	< 5	0.4	3.32	10	150	0.5	< 2	0.56	< 0.5	10	23	22	2.88	< 10	< 1	0.03	< 10	0.36	280
200N 475E	201 229	< 5	0.2	2.60	8	90	0.5	< 2	0.41	< 0.5	8	17	16	2.44	< 10	< 1	0.04	< 10	0.20	465
200N 500E	201 229	5	0.2	2.93	8	130	0.5	< 2	0.56	1.0	12	25	24	3.02	< 10	< 1	0.04	< 10	0.35	370
200N 525E	201 229	20	1.0	4.02	10	100	0.5	< 2	0.36	0.5	11	24	26	3.15	10	1	0.03	< 10	0.28	205
200N 550E	201 229	5	0.4	3.68	12	110	0.5	< 2	0.40	0.5	15	21	21	3.81	10	< 1	0.04	< 10	0.26	495
200N 575E	201 229	< 5	0.4	3.11	8	130	0.5	< 2	0.69	1.5	11	26	28	3.02	< 10	< 1	0.04	< 10	0.33	300
200N 600E	201 229	< 5	0.2	2.70	2	90	< 0.5	< 2	0.36	1.5	10	21	15	2.63	10	< 1	0.04	< 10	0.27	350
200N 625E	201 229	< 5	0.2	1.87	2	40	< 0.5	< 2	0.27	0.5	4	10	6	1.68	< 10	< 1	0.04	< 10	0.12	130
200N 650E	201 229	< 5	0.4	2.84	8	80	< 0.5	< 2	0.60	4.0	7	22	15	2.39	< 10	< 1	0.04	< 10	0.20	685
200N 675E	201 229	< 5	0.4	1.88	4	50	< 0.5	< 2	0.17	0.5	3	9	6	1.63	< 10	< 1	0.02	< 10	0.08	80
200N 700E	201 229	< 5	0.8	2.70	6	80	0.5	< 2	0.25	2.0	5	13	11	2.15	< 10	< 1	0.03	< 10	0.13	235

CERTIFICATION: ____________

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

CERTIFICATE OF ANALYSIS A9821142

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
100N 1000E	201 229	1	0.01	13	540	6	< 2	3	15	0.14	< 10	< 10	60	< 10	94
100N 1025E	201 229	1	0.01	19	810	8	< 2	3	13	0.12	< 10	< 10	48	< 10	168
100N 1050E	201 229	1	0.01	11	790	6	< 2	2	11	0.11	< 10	< 10	47	< 10	108
100N 1075E	201 229	1	0.01	6	930	6	< 2	1	7	0.09	< 10	< 10	37	< 10	96
100N 1100E	201 229	1	0.02	8	440	6	< 2	1	12	0.10	< 10	< 10	45	< 10	68
100N 1125E	201 229	2	0.01	7	1290	6	< 2	1	20	0.13	< 10	< 10	45	< 10	64
100N 1150E	201 229	2	0.01	4	1050	6	< 2	1	4	0.11	< 10	< 10	37	< 10	56
100N 1175E	201 229	2	0.01	6	1630	8	< 2	2	10	0.12	< 10	< 10	38	< 10	86
100N 1200E	201 229	1	0.01	10	920	6	< 2	2	22	0.12	< 10	< 10	40	< 10	106
100N 1225E	201 229	2	0.03	10	1020	6	< 2	3	15	0.14	< 10	< 10	41	< 10	108
100N 1250E	201 229	2	0.01	11	770	8	< 2	2	14	0.13	< 10	< 10	54	< 10	114
200N 000E	201 229	2	0.01	20	520	8	< 2	3	73	0.13	< 10	< 10	53	< 10	166
200N 025E	201 229	2	0.01	15	780	8	< 2	2	40	0.11	< 10	< 10	44	< 10	116
200N 050E	201 229	2	0.01	11	420	8	< 2	2	39	0.12	< 10	< 10	50	< 10	114
200N 075E	201 229	3	0.01	28	370	8	< 2	4	95	0.14	< 10	< 10	68	< 10	126
200N 100E	201 229	2	0.02	42	360	12	< 2	7	185	0.15	< 10	< 10	84	< 10	162
200N 125E	201 229	1	0.01	28	360	8	< 2	4	99	0.14	< 10	< 10	69	< 10	156
200N 150E	201 229	3	0.06	65	350	10	< 2	14	364	0.16	< 10	< 10	94	< 10	166
200N 175E	201 229	2	0.01	14	1040	6	< 2	2	83	0.10	< 10	< 10	47	< 10	132
200N 200E	201 229	2	0.01	17	950	10	< 2	4	75	0.13	< 10	< 10	42	< 10	76
200N 225E	201 229	1	0.01	18	1180	10	< 2	3	59	0.12	< 10	< 10	49	< 10	104
200N 250E	201 229	2	0.03	26	480	6	< 2	4	116	0.12	< 10	< 10	52	< 10	104
200N 275E	201 229	3	0.03	8	260	6	< 2	1	35	0.09	< 10	< 10	31	< 10	98
200N 300E	201 229	2	0.05	21	500	6	< 2	3	166	0.08	< 10	< 10	36	< 10	168
200N 325E	201 229	2	0.01	11	640	4	< 2	2	40	0.10	< 10	< 10	39	< 10	116
200N 350E	201 229	1	0.01	22	560	6	< 2	3	65	0.12	< 10	< 10	56	< 10	126
200N 375E	201 229	2	0.03	22	590	8	< 2	3	106	0.14	< 10	< 10	53	< 10	98
200N 400E	201 229	1	0.02	13	680	8	< 2	2	48	0.12	< 10	< 10	49	< 10	90
200N 425E	201 229	1	0.01	24	750	8	< 2	3	85	0.13	< 10	< 10	58	< 10	126
200N 450E	201 229	2	0.03	35	450	8	< 2	5	200	0.14	< 10	< 10	60	< 10	96
200N 475E	201 229	1	0.03	24	680	8	< 2	3	160	0.12	< 10	< 10	50	< 10	100
200N 500E	201 229	2	0.02	41	480	10	< 2	5	221	0.13	< 10	< 10	68	< 10	174
200N 525E	201 229	3	0.02	40	790	8	< 2	4	116	0.14	< 10	< 10	69	< 10	174
200N 550E	201 229	2	0.02	35	770	8	< 2	3	116	0.15	< 10	< 10	73	< 10	152
200N 575E	201 229	3	0.04	41	470	8	< 2	4	173	0.16	< 10	< 10	74	< 10	234
200N 600E	201 229	2	0.02	30	530	8	< 2	3	84	0.14	< 10	< 10	68	< 10	290
200N 625E	201 229	1	0.02	8	480	8	< 2	1	28	0.12	< 10	< 10	48	< 10	200
200N 650E	201 229	2	0.03	40	240	8	< 2	4	96	0.13	< 10	< 10	66	< 10	540
200N 675E	201 229	1	0.02	8	180	2	< 2	1	28	0.10	< 10	< 10	49	< 10	216
200N 700E	201 229	2	0.01	17	1110	12	< 2	2	39	0.10	< 10	< 10	45	< 10	210

CERTIFICATION: ____________

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

##

Certificate Date: 15-JUN-98
Invoice No. :19821142
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9821142

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
200N 725E	201	229	< 5	0.2	2.98	6	60	< 0.5	< 2	0.39	0.5	4	9	5	2.03	< 10	< 1	0.02	< 10	0.12	170
200N 750E	201	229	15	0.4	4.24	12	190	0.5	< 2	0.99	2.0	19	13	23	3.30	< 10	< 1	0.04	< 10	0.23	135
200N 775E	201	229	5	0.6	3.36	14	50	< 0.5	< 2	0.28	3.0	6	15	13	2.99	< 10	< 1	0.03	< 10	0.32	80
200N 800E	201	229	10	0.4	3.19	< 2	50	< 0.5	< 2	0.13	< 0.5	4	10	6	1.65	< 10	< 1	0.03	< 10	0.11	80
200N 825E	201	229	20	0.4	2.85	12	150	0.5	< 2	1.54	1.0	7	16	22	3.52	< 10	< 1	0.03	10	0.28	225
200N 850E	201	229	5	< 0.2	2.75	8	80	0.5	< 2	0.70	0.5	7	17	9	2.41	< 10	< 1	0.02	< 10	0.29	160
200N 875E	201	229	< 5	0.2	3.71	< 2	40	0.5	< 2	0.07	< 0.5	4	8	8	1.83	< 10	< 1	0.02	< 10	0.10	120
200N 900E	201	229	< 5	0.2	3.27	< 2	60	< 0.5	< 2	0.08	< 0.5	5	8	8	1.73	< 10	< 1	0.03	< 10	0.12	555
200N 925E	201	229	< 5	0.2	3.64	< 2	50	0.5	< 2	0.07	< 0.5	4	8	8	1.70	< 10	< 1	0.01	< 10	0.11	360
200N 950E	201	229	< 5	0.2	2.74	6	140	< 0.5	< 2	0.26	< 0.5	7	14	11	1.94	< 10	< 1	0.04	< 10	0.24	140
200N 975E	201	229	< 5	0.4	3.08	8	110	< 0.5	< 2	0.19	< 0.5	7	15	11	2.14	< 10	< 1	0.04	< 10	0.24	225
200N 1000E	201	229	10	< 0.2	3.09	14	120	< 0.5	< 2	0.56	< 0.5	6	29	22	2.29	< 10	< 1	0.04	< 10	0.59	170
200N 1025E	201	229	80	0.6	2.81	8	90	< 0.5	< 2	0.27	< 0.5	5	15	14	2.01	< 10	< 1	0.04	< 10	0.26	250
200N 1050E	201	229	10	0.2	1.94	6	60	< 0.5	< 2	0.66	< 0.5	5	9	7	1.68	< 10	< 1	0.04	< 10	0.12	455
200N 1075E	201	229	< 5	0.2	2.20	8	60	< 0.5	< 2	0.17	< 0.5	5	11	7	1.66	< 10	< 1	0.03	< 10	0.16	305
200N 1100E	201	229	20	0.2	2.12	8	70	< 0.5	< 2	0.21	< 0.5	6	11	9	1.71	< 10	< 1	0.05	< 10	0.18	240
200N 1125E	201	229	< 5	0.2	2.87	< 2	40	< 0.5	< 2	0.06	< 0.5	4	9	5	1.64	< 10	< 1	0.02	< 10	0.08	125
200N 1150E	201	229	< 5	< 0.2	3.02	12	30	< 0.5	< 2	0.07	< 0.5	3	8	5	1.77	< 10	< 1	0.02	< 10	0.08	60
200N 1175E	201	229	20	< 0.2	2.06	< 2	30	< 0.5	< 2	0.05	< 0.5	2	6	6	1.80	< 10	< 1	0.01	< 10	0.06	90
200N 1200E	201	229	10	< 0.2	2.73	< 2	50	< 0.5	< 2	0.06	< 0.5	3	6	5	1.53	< 10	< 1	0.02	< 10	0.06	545
200N 1225E	201	229	< 5	< 0.2	3.35	4	40	< 0.5	< 2	0.08	< 0.5	3	7	5	1.86	< 10	< 1	0.01	< 10	0.07	60
200N 1250E	201	229	< 5	0.2	4.09	14	50	0.5	< 2	0.09	< 0.5	4	10	8	2.27	< 10	< 1	0.01	< 10	0.09	105

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

##

Certificate Date: 15-JUN-98
Invoice No. :19821142
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9821142

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
200N 725E	201	229	1	0.02	7	1330	10	< 2	1	40	0.10	< 10	< 10	36	< 10	192
200N 750E	201	229	1	0.02	46	220	14	< 2	3	527	0.13	< 10	< 10	30	< 10	198
200N 775E	201	229	6	0.01	35	1270	8	< 2	1	57	0.09	< 10	< 10	88	< 10	1035
200N 800E	201	229	< 1	0.02	8	1470	6	< 2	1	16	0.09	< 10	< 10	32	< 10	158
200N 825E	201	229	5	0.02	27	3960	8	< 2	4	57	0.07	< 10	< 10	37	< 10	68
200N 850E	201	229	1	0.01	18	1040	6	< 2	3	30	0.10	< 10	< 10	44	< 10	82
200N 875E	201	229	2	0.01	6	1390	8	< 2	1	7	0.11	< 10	< 10	33	< 10	124
200N 900E	201	229	< 1	0.02	6	1070	6	< 2	1	9	0.12	< 10	< 10	34	< 10	88
200N 925E	201	229	< 1	0.02	6	990	4	< 2	2	10	0.11	< 10	< 10	34	< 10	88
200N 950E	201	229	1	0.01	14	450	6	< 2	3	26	0.12	< 10	< 10	42	< 10	96
200N 975E	201	229	2	0.01	12	1120	10	< 2	3	17	0.12	< 10	< 10	45	< 10	116
200N 1000E	201	229	< 1	< 0.01	14	240	8	< 2	6	60	0.25	< 10	< 10	70	< 10	66
200N 1025E	201	229	< 1	0.01	18	910	6	< 2	3	23	0.11	< 10	< 10	43	< 10	158
200N 1050E	201	229	< 1	0.01	9	2120	4	< 2	1	46	0.09	< 10	< 10	35	< 10	114
200N 1075E	201	229	< 1	0.01	9	910	6	< 2	1	15	0.09	< 10	< 10	38	< 10	102
200N 1100E	201	229	< 1	0.01	8	690	4	< 2	2	16	0.09	< 10	< 10	37	< 10	90
200N 1125E	201	229	2	0.01	4	920	6	< 2	1	7	0.09	< 10	< 10	32	< 10	92
200N 1150E	201	229	1	0.02	5	710	8	< 2	1	9	0.10	< 10	< 10	37	< 10	46
200N 1175E	201	229	1	0.01	3	710	4	< 2	< 1	5	0.09	< 10	< 10	41	< 10	56
200N 1200E	201	229	1	0.01	3	1180	6	< 2	1	8	0.09	< 10	< 10	33	< 10	88
200N 1225E	201	229	1	0.01	4	950	6	< 2	1	8	0.10	< 10	< 10	37	< 10	48
200N 1250E	201	229	3	0.01	8	990	6	< 2	1	11	0.11	< 10	< 10	38	< 10	54

CERTIFICATION: [signature]

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##

Certificate Date: 14-JUL-98
Invoice No. :19823853
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9823853

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
300S 550E	201	229	< 5	0.2	3.23	22	60	< 0.5	< 2	0.61	< 0.5	10	25	15	3.31	< 10	< 1	0.04	< 10	0.27	195
300S 575E	201	229	< 5	0.4	2.27	10	60	< 0.5	< 2	0.25	1.5	6	12	10	2.03	< 10	< 1	0.03	< 10	0.14	195
300S 600E	201	229	< 5	0.6	2.45	24	60	< 0.5	< 2	0.55	4.5	7	13	22	1.95	< 10	< 1	0.03	< 10	0.16	780
300S 625E	201	229	< 5	< 0.2	2.25	16	60	< 0.5	< 2	0.48	1.5	9	17	13	2.07	< 10	< 1	0.03	< 10	0.22	230
300S 650E	201	229	10	0.6	3.68	14	230	< 0.5	< 2	0.58	2.5	15	25	39	3.28	10	< 1	0.07	< 10	1.38	390
300S 675E	201	229	< 5	< 0.2	1.69	6	50	< 0.5	< 2	0.20	0.5	4	7	7	1.70	< 10	< 1	0.04	< 10	0.15	170
300S 700E	201	229	< 5	0.6	2.06	18	60	< 0.5	< 2	0.37	1.0	4	7	14	1.53	< 10	< 1	0.04	< 10	0.12	405
300S 725E	201	229	< 5	0.2	2.14	10	70	< 0.5	< 2	0.63	0.5	5	11	14	1.60	< 10	< 1	0.07	< 10	0.16	385
300S 750E	201	229	< 5	0.2	2.32	8	50	< 0.5	< 2	0.25	0.5	5	9	8	1.65	< 10	< 1	0.04	< 10	0.11	235
300S 775E	201	229	< 5	< 0.2	1.42	10	50	< 0.5	< 2	0.73	1.0	5	16	14	1.47	< 10	< 1	0.05	< 10	0.20	365
300S 800E	201	229	< 5	0.2	2.10	12	50	< 0.5	< 2	0.43	1.0	4	10	10	1.43	< 10	< 1	0.05	< 10	0.13	375
300S 825E	201	229	< 5	< 0.2	2.16	6	60	< 0.5	< 2	0.54	< 0.5	3	10	5	1.59	< 10	< 1	0.05	< 10	0.36	130
300S 850E	201	229	5	0.2	4.02	10	70	0.5	< 2	0.27	0.5	11	19	28	2.94	< 10	< 1	0.03	< 10	0.75	185
400S 550E	201	229	< 5	< 0.2	2.31	10	120	< 0.5	< 2	0.36	< 0.5	7	22	17	2.03	< 10	< 1	0.04	< 10	0.29	265
400S 575E	201	229	5	< 0.2	1.36	10	50	< 0.5	< 2	0.17	< 0.5	3	13	6	1.55	< 10	< 1	0.03	< 10	0.21	120
400S 600E	201	229	< 5	0.2	2.45	10	40	< 0.5	< 2	0.19	< 0.5	5	9	7	1.77	< 10	< 1	0.04	< 10	0.13	230
400S 625E	201	229	35	0.4	2.71	8	110	< 0.5	< 2	0.23	< 0.5	7	16	11	1.87	< 10	< 1	0.03	< 10	0.24	235
400S 650E	201	229	< 5	< 0.2	2.44	10	70	< 0.5	< 2	0.24	0.5	8	15	11	2.05	< 10	< 1	0.04	< 10	0.21	240
400S 675E	201	229	10	< 0.2	2.49	10	90	< 0.5	< 2	0.37	1.0	8	19	15	2.10	< 10	< 1	0.03	< 10	0.22	240
400S 700E	201	229	< 5	< 0.2	2.41	10	80	< 0.5	< 2	0.50	0.5	9	20	15	2.27	< 10	< 1	0.05	< 10	0.27	395
400S 725E	201	229	< 5	0.2	2.39	10	100	< 0.5	< 2	0.92	0.5	9	16	21	2.46	< 10	< 1	0.04	< 10	0.53	400
400S 750E	201	229	< 5	< 0.2	2.46	8	70	< 0.5	< 2	0.31	< 0.5	6	12	12	2.00	< 10	< 1	0.04	< 10	0.23	340
400S 775E	201	229	< 5	0.2	2.86	10	70	< 0.5	< 2	0.25	1.5	7	11	9	1.97	< 10	< 1	0.03	< 10	0.14	245
400S 800E	201	229	< 5	0.2	2.97	10	70	0.5	< 2	0.16	0.5	6	9	10	1.73	< 10	< 1	0.03	< 10	0.10	275
400S 825E	201	229	< 5	0.2	2.17	8	50	< 0.5	< 2	0.22	0.5	5	7	7	1.60	< 10	< 1	0.02	< 10	0.09	180
400S 850E	201	229	< 5	0.2	2.88	10	80	< 0.5	< 2	0.14	< 0.5	6	13	9	1.96	< 10	< 1	0.04	< 10	0.17	105
800N 300E	201	229	< 5	< 0.2	2.02	6	60	< 0.5	< 2	0.19	< 0.5	4	5	6	1.51	< 10	< 1	0.03	< 10	0.11	390
800N 325E	201	229	10	0.2	2.54	8	80	< 0.5	< 2	0.31	< 0.5	8	12	16	2.29	< 10	< 1	0.04	< 10	0.19	210
800N 350E	201	229	< 5	< 0.2	2.43	8	90	< 0.5	< 2	0.23	< 0.5	5	7	10	1.81	< 10	< 1	0.04	< 10	0.15	405
800N 375E	201	229	< 5	< 0.2	2.90	6	110	< 0.5	< 2	0.23	0.5	5	9	14	1.97	< 10	< 1	0.04	< 10	0.19	370
800N 400E	201	229	< 5	0.2	2.54	8	110	< 0.5	< 2	0.35	0.5	7	14	18	1.99	< 10	< 1	0.07	< 10	0.31	200
800N 425E	201	229	< 5	< 0.2	2.12	6	80	< 0.5	< 2	0.21	< 0.5	6	10	11	1.69	< 10	1	0.05	< 10	0.18	355
800N 450E	201	229	< 5	< 0.2	2.03	6	100	< 0.5	< 2	0.30	< 0.5	6	14	13	1.67	< 10	< 1	0.05	< 10	0.26	255
800N 475E	201	229	< 5	< 0.2	3.86	10	60	0.5	< 2	0.32	2.0	9	8	10	2.16	< 10	< 1	0.04	< 10	0.15	610
800N 500E	201	229	< 5	< 0.2	3.27	10	90	0.5	< 2	0.27	1.5	10	10	14	2.11	< 10	< 1	0.05	< 10	0.23	495
800N 525E	201	229	< 5	< 0.2	3.43	14	150	0.5	< 2	0.61	< 0.5	10	13	16	2.65	< 10	< 1	0.06	< 10	0.36	330
800N 550E	201	229	< 5	< 0.2	3.10	8	120	< 0.5	< 2	0.31	< 0.5	7	22	16	2.31	< 10	< 1	0.04	< 10	0.48	530
800N 575E	201	229	< 5	< 0.2	2.37	10	90	< 0.5	< 2	0.47	< 0.5	7	8	9	1.99	< 10	< 1	0.06	< 10	0.15	680
800N 600E	201	229	< 5	< 0.2	2.14	10	50	< 0.5	< 2	0.20	< 0.5	7	7	8	2.20	< 10	< 1	0.02	< 10	0.11	590
900N 300E	201	229	< 5	< 0.2	2.52	6	50	< 0.5	< 2	0.10	< 0.5	6	5	7	1.59	< 10	< 1	0.03	< 10	0.10	290

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

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##

Certificate Date: 14-JUL-98
Invoice No. :19823853
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9823853

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
300S 550E	201	229	2	0.01	31	790	6	< 2	3	133	0.13	< 10	< 10	63	< 10	214
300S 575E	201	229	1	0.02	16	530	8	< 2	1	52	0.11	< 10	< 10	49	< 10	258
300S 600E	201	229	3	0.04	47	380	10	< 2	2	98	0.10	< 10	< 10	47	< 10	422
300S 625E	201	229	3	0.02	22	730	8	< 2	3	82	0.11	< 10	< 10	48	< 10	210
300S 650E	201	229	4	0.03	36	510	10	< 2	11	131	0.18	< 10	< 10	103	< 10	694
300S 675E	201	229	3	0.02	5	720	2	< 2	1	20	0.10	< 10	< 10	40	< 10	122
300S 700E	201	229	2	0.03	14	610	10	< 2	1	45	0.08	< 10	< 10	31	< 10	206
300S 725E	201	229	3	0.02	11	840	6	2	2	87	0.09	< 10	< 10	38	< 10	152
300S 750E	201	229	2	0.02	8	930	8	< 2	1	38	0.09	< 10	< 10	38	< 10	118
300S 775E	201	229	1	0.06	9	210	6	< 2	3	88	0.08	< 10	< 10	31	< 10	86
300S 800E	201	229	1	0.04	9	490	2	< 2	1	54	0.08	< 10	< 10	30	< 10	106
300S 825E	201	229	< 1	0.01	5	900	2	< 2	1	45	0.10	< 10	< 10	37	< 10	62
300S 850E	201	229	1	0.03	24	800	10	< 2	4	39	0.12	< 10	< 10	50	< 10	128
400S 550E	201	229	2	0.01	16	440	10	< 2	4	72	0.12	< 10	< 10	48	< 10	86
400S 575E	201	229	1	0.01	7	360	6	< 2	2	22	0.11	< 10	< 10	44	< 10	92
400S 600E	201	229	3	0.01	7	970	8	< 2	1	29	0.11	< 10	< 10	42	< 10	100
400S 625E	201	229	2	0.02	21	680	8	< 2	2	37	0.13	< 10	< 10	67	< 10	160
400S 650E	201	229	2	0.03	17	670	6	< 2	2	49	0.11	< 10	< 10	53	< 10	132
400S 675E	201	229	3	0.02	24	770	8	2	3	68	0.12	< 10	< 10	55	< 10	244
400S 700E	201	229	2	0.01	28	610	6	< 2	3	67	0.13	< 10	< 10	68	< 10	266
400S 725E	201	229	1	0.04	20	460	10	< 2	4	102	0.13	< 10	< 10	47	< 10	84
400S 750E	201	229	1	0.02	13	640	6	< 2	2	41	0.11	< 10	< 10	42	< 10	130
400S 775E	201	229	3	0.03	19	910	10	< 2	1	39	0.11	< 10	< 10	43	< 10	222
400S 800E	201	229	2	0.03	13	800	6	< 2	3	32	0.11	< 10	< 10	39	< 10	166
400S 825E	201	229	1	0.03	8	810	2	< 2	1	31	0.10	< 10	< 10	38	< 10	120
400S 850E	201	229	2	0.01	16	740	8	< 2	2	21	0.11	< 10	< 10	43	< 10	130
800N 300E	201	229	1	0.01	4	640	8	< 2	1	18	0.09	< 10	< 10	32	< 10	62
800N 325E	201	229	1	0.01	23	340	8	< 2	2	43	0.11	< 10	< 10	43	< 10	70
800N 350E	201	229	1	0.03	8	360	14	< 2	1	29	0.12	< 10	< 10	37	< 10	90
800N 375E	201	229	2	0.03	9	420	8	< 2	2	24	0.12	< 10	< 10	36	< 10	198
800N 400E	201	229	2	0.01	13	520	6	< 2	4	28	0.14	< 10	< 10	44	< 10	194
800N 425E	201	229	1	0.03	7	830	6	< 2	3	20	0.11	< 10	< 10	37	< 10	88
800N 450E	201	229	1	0.01	11	380	6	< 2	3	27	0.13	< 10	< 10	40	< 10	112
800N 475E	201	229	2	0.03	13	1310	80	< 2	3	20	0.12	< 10	< 10	36	< 10	360
800N 500E	201	229	2	0.02	14	670	46	< 2	3	22	0.12	< 10	< 10	39	< 10	312
800N 525E	201	229	1	0.02	21	500	16	< 2	3	102	0.12	< 10	< 10	36	< 10	110
800N 550E	201	229	1	0.03	13	1060	10	< 2	4	38	0.12	< 10	< 10	51	< 10	82
800N 575E	201	229	1	0.03	11	860	6	< 2	1	45	0.11	< 10	< 10	37	< 10	90
800N 600E	201	229	< 1	0.02	7	650	4	< 2	1	19	0.11	< 10	< 10	40	< 10	106
900N 300E	201	229	1	0.02	3	740	6	< 2	1	10	0.11	< 10	< 10	36	< 10	46

CERTIFICATION: Hart Bichler

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Certificate Date: 14-JUL-98
Invoice No. :19823853
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9823853

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
900N 325E	201	229	< 5	0.2	2.33	8	90	< 0.5	< 2	0.15	< 0.5	8	9	12	1.75	< 10	< 1	0.03	< 10	0.16	120
900N 350E	201	229	< 5	< 0.2	3.54	10	40	0.5	< 2	0.05	< 0.5	5	7	7	1.85	< 10	< 1	0.03	< 10	0.09	100
900N 375E	201	229	< 5	< 0.2	1.36	4	60	< 0.5	< 2	0.22	< 0.5	4	8	5	1.30	< 10	< 1	0.05	< 10	0.11	135
900N 400E	201	229	< 5	0.2	2.64	8	70	< 0.5	< 2	0.16	< 0.5	9	10	15	2.08	< 10	< 1	0.05	< 10	0.20	230
900N 425E	201	229	10	0.2	2.56	8	100	< 0.5	< 2	0.23	< 0.5	7	9	17	1.91	< 10	< 1	0.04	< 10	0.29	395
900N 450E	201	229	< 5	< 0.2	1.66	4	50	< 0.5	< 2	0.10	< 0.5	7	7	7	2.01	< 10	1	0.02	< 10	0.10	730
900N 475E	201	229	< 5	0.4	2.69	8	60	< 0.5	< 2	0.13	0.5	6	7	8	1.89	< 10	< 1	0.03	< 10	0.11	840
900N 500E	201	229	< 5	2.0	3.26	8	80	0.5	< 2	0.20	3.0	6	7	17	1.75	< 10	< 1	0.03	< 10	0.14	540
900N 525E	201	229	< 5	< 0.2	2.94	6	80	< 0.5	< 2	0.30	< 0.5	6	9	7	2.16	10	< 1	0.03	< 10	0.14	260
575E 725N	201	229	< 5	< 0.2	1.95	20	70	< 0.5	< 2	1.71	< 0.5	20	10	29	6.87	< 10	< 1	0.04	10	0.28	780
575E 738N	201	229	< 5	0.4	3.01	34	190	< 0.5	< 2	0.45	< 0.5	13	15	31	3.75	10	< 1	0.07	< 10	0.57	310
575E 750N	201	229	< 5	0.2	2.23	10	80	< 0.5	< 2	0.12	< 0.5	6	7	8	2.07	< 10	< 1	0.04	< 10	0.18	210
575E 763N	201	229	< 5	0.2	1.62	12	90	< 0.5	< 2	0.13	< 0.5	7	11	10	2.01	< 10	< 1	0.04	< 10	0.15	970
575E 775N	201	229	< 5	0.4	2.83	12	170	< 0.5	< 2	0.32	< 0.5	11	16	29	2.98	< 10	< 1	0.09	< 10	0.65	470

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Certificate Date: 14-JUL-98
Invoice No. :19823853
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9823853

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
900N 325E	201	229	1	0.01	9	530	4	< 2	1	16	0.10	< 10	< 10	38	< 10	66
900N 350E	201	229	2	0.01	5	1460	6	< 2	1	7	0.10	< 10	< 10	34	< 10	52
900N 375E	201	229	1	0.01	4	550	4	< 2	1	15	0.09	< 10	< 10	32	< 10	46
900N 400E	201	229	3	0.01	21	560	4	< 2	3	25	0.11	< 10	< 10	39	< 10	140
900N 425E	201	229	1	0.01	18	470	12	< 2	3	53	0.11	< 10	< 10	38	< 10	138
900N 450E	201	229	1	0.02	10	350	6	< 2	1	9	0.12	< 10	< 10	48	< 10	98
900N 475E	201	229	4	0.03	5	590	6	< 2	1	15	0.10	< 10	< 10	39	< 10	134
900N 500E	201	229	3	0.03	9	530	76	< 2	3	29	0.11	< 10	< 10	32	< 10	778
900N 525E	201	229	2	0.02	10	430	12	< 2	1	21	0.13	< 10	< 10	44	< 10	92
575E 725N	201	229	3	0.01	17	390	< 2	< 2	6	110	0.15	< 10	< 10	61	< 10	112
575E 738N	201	229	3	0.01	29	320	12	< 2	4	77	0.11	< 10	< 10	52	< 10	182
575E 750N	201	229	4	0.02	12	370	10	< 2	1	37	0.10	< 10	< 10	39	< 10	128
575E 763N	201	229	1	0.01	19	350	6	< 2	1	44	0.09	< 10	< 10	40	< 10	126
575E 775N	201	229	1	0.02	27	460	6	2	7	97	0.15	< 10	< 10	77	< 10	186

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Certificate Date: 03-AUG-98
Invoice No. : 19826084
P.O. Number : 23
Account : LOY

CERTIFICATE OF ANALYSIS A9826084

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
100N 000	201	229	5	< 0.2	2.57	16	70	0.5	< 2	1.44	0.5	12	22	29	3.78	< 10	< 1	0.03	< 10	0.32	895
100N 025E	201	229	< 5	< 0.2	3.06	4	70	0.5	< 2	0.38	0.5	10	21	19	3.28	10	< 1	0.03	< 10	0.32	345
100N 050E	201	229	< 5	< 0.2	2.57	8	90	0.5	< 2	0.31	0.5	8	18	18	2.63	< 10	< 1	0.03	< 10	0.25	555
100N 075E	201	229	< 5	< 0.2	2.38	10	90	< 0.5	< 2	0.39	< 0.5	8	17	19	2.51	< 10	< 1	0.03	< 10	0.26	720
100N 100E	201	229	< 5	< 0.2	3.21	20	140	0.5	< 2	0.47	0.5	12	31	32	3.46	10	< 1	0.04	10	0.49	555
100N 125E	201	229	< 5	0.2	2.85	14	100	0.5	< 2	0.61	0.5	8	21	19	2.42	< 10	< 1	0.04	< 10	0.29	455
100N 150E	201	229	< 5	< 0.2	2.56	22	90	0.5	< 2	0.38	< 0.5	9	19	20	2.76	< 10	< 1	0.03	< 10	0.26	575
100N 175E	201	229	< 5	< 0.2	2.63	28	70	0.5	< 2	0.30	0.5	10	24	24	3.11	< 10	< 1	0.03	< 10	0.26	645
100N 200E	201	229	< 5	< 0.2	2.60	8	110	0.5	< 2	0.43	0.5	13	20	28	3.79	< 10	< 1	0.04	< 10	0.32	1480
100N 225E	201	229	< 5	< 0.2	2.17	8	90	< 0.5	< 2	0.28	0.5	7	16	19	2.15	< 10	< 1	0.03	< 10	0.21	820
100N 250E	201	229	< 5	< 0.2	2.13	6	70	< 0.5	< 2	0.23	< 0.5	7	19	18	2.25	< 10	< 1	0.04	< 10	0.25	545
100N 275E	201	229	< 5	< 0.2	2.48	6	40	< 0.5	< 2	0.11	< 0.5	5	9	9	1.76	< 10	< 1	0.02	< 10	0.09	285
100N 300E	201	229	< 5	< 0.2	2.14	8	70	< 0.5	< 2	0.29	0.5	7	16	13	2.34	< 10	< 1	0.03	< 10	0.24	190
100N 325E	201	229	< 5	< 0.2	2.28	6	60	< 0.5	< 2	0.26	0.5	9	20	14	2.68	< 10	< 1	0.02	< 10	0.11	150
100N 350E	201	229	< 5	< 0.2	2.35	8	150	< 0.5	< 2	0.76	1.0	8	18	14	2.11	< 10	< 1	0.05	< 10	0.21	740
100N 375E	201	229	< 5	< 0.2	2.91	8	120	0.5	< 2	0.56	0.5	14	16	31	3.48	< 10	< 1	0.03	< 10	0.18	1165
100N 400E	201	229	< 5	0.6	2.54	6	80	< 0.5	< 2	0.64	0.5	6	9	11	2.11	< 10	< 1	0.03	< 10	0.16	680
100N 425E	201	229	10	0.6	3.45	14	130	0.5	< 2	1.04	< 0.5	15	16	44	3.24	< 10	< 1	0.05	10	0.23	885
100N 450E	201	229	< 5	< 0.2	3.14	8	120	0.5	< 2	0.60	< 0.5	7	9	17	2.39	< 10	< 1	0.04	< 10	0.24	540
100N 475E	201	229	10	< 0.2	3.95	8	140	0.5	< 2	0.66	0.5	10	13	25	3.35	< 10	< 1	0.03	10	0.19	800
100N 500E	201	229	5	1.2	4.25	8	140	0.5	< 2	0.71	0.5	15	17	49	4.01	< 10	< 1	0.06	10	0.21	555
100N 525E	201	229	10	< 0.2	2.91	8	50	0.5	< 2	0.22	< 0.5	6	11	10	2.25	< 10	< 1	0.04	< 10	0.17	300
100N 550E	201	229	10	< 0.2	3.34	8	90	0.5	< 2	0.75	0.5	19	12	30	4.55	< 10	< 1	0.03	< 10	0.14	480
100N 575E	201	229	15	0.4	2.81	14	70	0.5	< 2	0.48	1.5	19	16	33	3.75	< 10	< 1	0.03	< 10	0.14	375
100N 600E	201	229	< 5	< 0.2	1.53	6	40	< 0.5	< 2	0.17	1.0	5	8	6	1.70	< 10	< 1	0.01	< 10	0.07	515
100N 625E	201	229	< 5	0.4	3.65	22	100	0.5	< 2	0.98	6.0	24	36	68	4.84	< 10	< 1	0.04	< 10	2.21	540
100N 650E	201	229	< 5	0.2	2.88	8	90	0.5	< 2	0.54	5.0	18	19	38	4.26	< 10	< 1	0.04	< 10	0.19	900
100N 675E	201	229	< 5	< 0.2	2.78	12	120	< 0.5	< 2	0.32	1.0	8	19	15	2.46	< 10	< 1	0.05	< 10	0.28	220
100N 700E	201	229	< 5	1.2	2.80	8	120	< 0.5	< 2	0.30	< 0.5	5	15	11	2.04	< 10	1	0.04	< 10	0.27	160
100N 725E	201	229	< 5	< 0.2	2.68	8	130	< 0.5	< 2	0.31	< 0.5	6	17	11	2.04	< 10	< 1	0.04	< 10	0.27	250
100N 750E	201	229	< 5	< 0.2	3.40	8	100	0.5	< 2	0.18	< 0.5	6	14	10	2.10	< 10	< 1	0.04	< 10	0.20	335
100N 775E	201	229	< 5	< 0.2	3.58	8	80	0.5	< 2	0.14	0.5	7	12	8	2.10	< 10	< 1	0.04	< 10	0.20	770
100N 800E	201	229	5	0.2	3.16	14	200	< 0.5	< 2	0.19	< 0.5	9	14	17	2.59	< 10	< 1	0.04	< 10	0.42	195
100N 825E	201	229	< 5	0.2	3.55	16	160	0.5	< 2	0.24	1.5	25	39	58	3.69	< 10	< 1	0.09	< 10	0.65	340
100N 850E	201	229	< 5	< 0.2	2.11	4	60	< 0.5	< 2	0.13	0.5	6	9	7	1.78	< 10	< 1	0.03	< 10	0.10	655
100N 875E	201	229	< 5	< 0.2	3.52	10	70	0.5	< 2	0.10	0.5	6	8	6	1.75	< 10	< 1	0.03	< 10	0.09	320
100N 900E	201	229	< 5	0.2	3.04	20	350	< 0.5	< 2	0.36	0.5	25	10	55	3.88	10	< 1	0.12	< 10	1.14	365
100N 925E	201	229	< 5	< 0.2	1.59	8	60	< 0.5	< 2	0.24	< 0.5	5	9	5	1.67	< 10	< 1	0.03	< 10	0.11	230
100N 950E	201	229	< 5	< 0.2	2.20	12	60	< 0.5	< 2	0.20	0.5	7	10	9	1.94	< 10	< 1	0.03	< 10	0.16	130
100N 975E	201	229	15	0.2	2.57	14	140	0.5	< 2	0.57	0.5	8	20	29	2.40	< 10	< 1	0.08	10	0.52	395

CERTIFICATION: [signature]

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Certificate Date: 03-AUG-98
Invoice No. : 19826084
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Account : LOY

CERTIFICATE OF ANALYSIS A9826084

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
100N 000	201	229	2	0.15	55	890	12	< 2	3	453	0.09	< 10	< 10	50	< 10	150
100N 025E	201	229	1	0.04	35	470	12	< 2	3	89	0.13	< 10	< 10	61	< 10	146
100N 050E	201	229	1	0.03	24	690	10	< 2	3	80	0.12	< 10	< 10	53	< 10	138
100N 075E	201	229	1	0.03	20	690	10	< 2	3	117	0.12	< 10	< 10	52	< 10	112
100N 100E	201	229	3	0.04	40	690	12	< 2	6	201	0.14	< 10	< 10	70	< 10	144
100N 125E	201	229	2	0.02	21	820	12	< 2	3	104	0.14	< 10	< 10	59	< 10	138
100N 150E	201	229	2	0.01	26	620	10	< 2	3	81	0.12	< 10	< 10	55	< 10	124
100N 175E	201	229	2	0.02	30	830	12	< 2	3	95	0.13	< 10	< 10	61	< 10	144
100N 200E	201	229	3	0.01	46	870	10	< 2	3	109	0.12	< 10	< 10	63	< 10	206
100N 225E	201	229	2	0.01	19	630	8	< 2	3	46	0.11	< 10	< 10	49	< 10	142
100N 250E	201	229	3	< 0.01	21	910	10	< 2	3	39	0.09	< 10	< 10	49	< 10	108
100N 275E	201	229	1	0.01	10	980	8	< 2	1	16	0.11	< 10	< 10	38	< 10	92
100N 300E	201	229	1	< 0.01	21	640	8	< 2	2	56	0.11	< 10	< 10	52	< 10	206
100N 325E	201	229	3	0.01	23	500	8	< 2	2	64	0.12	< 10	< 10	68	< 10	200
100N 350E	201	229	1	0.01	22	1120	8	< 2	3	129	0.11	< 10	< 10	48	< 10	174
100N 375E	201	229	2	0.02	47	900	10	< 2	4	173	0.12	< 10	< 10	51	< 10	176
100N 400E	201	229	1	0.03	16	850	14	< 2	1	129	0.11	< 10	< 10	37	< 10	142
100N 425E	201	229	2	0.05	53	1270	20	< 2	4	370	0.08	< 10	< 10	29	< 10	124
100N 450E	201	229	1	0.04	22	870	16	< 2	2	183	0.11	< 10	< 10	31	< 10	90
100N 475E	201	229	2	0.05	38	1170	20	< 2	3	295	0.11	< 10	< 10	34	< 10	118
100N 500E	201	229	3	0.02	60	1190	18	< 2	4	487	0.11	< 10	< 10	38	< 10	178
100N 525E	201	229	1	0.01	12	820	10	< 2	1	68	0.11	< 10	< 10	41	< 10	94
100N 550E	201	229	3	0.02	50	960	12	< 2	2	539	0.11	< 10	< 10	42	< 10	142
100N 575E	201	229	3	0.01	59	830	10	< 2	3	115	0.11	< 10	< 10	54	< 10	258
100N 600E	201	229	1	0.01	9	620	6	< 2	< 1	28	0.08	< 10	< 10	44	< 10	132
100N 625E	201	229	6	0.01	141	590	10	< 2	2	250	0.11	< 10	< 10	92	< 10	1080
100N 650E	201	229	5	0.01	74	600	12	< 2	3	167	0.10	< 10	< 10	66	< 10	540
100N 675E	201	229	3	0.01	30	250	10	< 2	3	70	0.13	< 10	< 10	62	< 10	384
100N 700E	201	229	1	0.01	13	150	12	< 2	3	37	0.14	< 10	< 10	51	< 10	80
100N 725E	201	229	1	0.01	14	260	14	< 2	3	47	0.14	< 10	< 10	52	< 10	88
100N 750E	201	229	2	0.01	13	1550	12	< 2	2	20	0.13	< 10	< 10	43	< 10	164
100N 775E	201	229	2	0.01	12	1270	10	< 2	2	13	0.14	< 10	< 10	46	< 10	164
100N 800E	201	229	1	0.01	16	630	10	< 2	5	27	0.15	< 10	< 10	66	< 10	96
100N 825E	201	229	4	< 0.01	65	960	18	< 2	8	45	0.21	< 10	< 10	132	< 10	216
100N 850E	201	229	1	0.01	7	1460	10	< 2	1	11	0.10	< 10	< 10	39	< 10	130
100N 875E	201	229	2	0.01	8	2020	10	< 2	1	9	0.12	< 10	< 10	34	< 10	128
100N 900E	201	229	2	0.03	23	510	16	< 2	11	45	0.23	< 10	< 10	108	< 10	138
100N 925E	201	229	1	0.02	7	1170	8	< 2	1	18	0.09	< 10	< 10	41	< 10	90
100N 950E	201	229	1	0.01	16	820	50	< 2	1	19	0.12	< 10	< 10	40	< 10	180
100N 975E	201	229	2	0.01	18	1040	16	< 2	4	90	0.11	< 10	< 10	58	< 10	120

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Chemex Labs Ltd.

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Certificate Date: 03-AUG-98
Invoice No. :19826084
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9826084

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
300N 000	201 229	< 5	0.2	3.67	44	100	0.5	< 2	0.43	2.0	8	32	31	3.96	10	< 1	0.06	< 10	0.40	295
300N 025E	201 229	< 5	< 0.2	3.34	22	130	0.5	< 2	0.49	2.5	7	21	22	2.60	< 10	< 1	0.04	< 10	0.38	465
300N 050E	201 229	< 5	1.0	3.82	6	250	0.5	< 2	0.37	3.0	8	18	25	2.50	10	< 1	0.07	< 10	0.36	340
300N 075E	201 229	< 5	< 0.2	2.75	18	170	0.5	< 2	0.82	33.5	13	23	50	3.40	< 10	< 1	0.17	< 10	0.49	1430
300N 100E	201 229	< 5	< 0.2	2.57	8	110	0.5	< 2	1.83	2.0	15	25	66	3.76	< 10	< 1	0.27	< 10	0.40	1845
300N 125E	201 229	< 5	0.6	1.99	20	80	0.5	< 2	6.51	2.5	28	20	105	4.91	< 10	< 1	0.19	< 10	0.47	2320
300N 150E	201 229	< 5	0.6	2.26	24	80	0.5	< 2	7.50	2.0	29	20	87	5.00	< 10	< 1	0.11	10	0.58	1860
300N 175E	201 229	< 5	< 0.2	2.46	14	140	0.5	< 2	1.59	1.5	17	24	70	3.93	< 10	< 1	0.14	10	0.43	2010
300N 200E	201 229	< 5	< 0.2	2.54	16	100	0.5	< 2	1.59	1.5	23	29	102	4.24	< 10	< 1	0.19	< 10	0.67	1890
300N 225E	201 229	< 5	< 0.2	2.56	16	130	0.5	< 2	1.14	1.5	19	27	65	4.03	< 10	< 1	0.20	10	0.36	2430
300N 250E	201 229	< 5	< 0.2	2.24	14	100	< 0.5	< 2	0.56	0.5	13	14	34	2.71	< 10	< 1	0.08	< 10	0.38	1160
300N 275E	201 229	< 5	< 0.2	2.73	8	110	0.5	< 2	0.35	0.5	8	18	22	2.21	< 10	< 1	0.10	< 10	0.26	700
300N 300E	201 229	< 5	< 0.2	2.01	6	50	< 0.5	< 2	0.25	< 0.5	6	12	11	2.00	< 10	< 1	0.03	< 10	0.16	520
300N 325E	201 229	10	< 0.2	2.38	8	80	< 0.5	< 2	0.40	0.5	9	18	20	2.76	< 10	< 1	0.05	< 10	0.25	980
300N 350E	201 229	< 5	< 0.2	2.86	8	70	< 0.5	< 2	0.29	0.5	11	17	16	2.94	< 10	< 1	0.01	< 10	0.22	535
300N 375E	201 229	< 5	< 0.2	2.35	8	60	< 0.5	< 2	0.39	0.5	7	11	13	2.14	< 10	< 1	0.03	< 10	0.13	235
300N 400E	201 229	10	< 0.2	2.53	8	130	< 0.5	< 2	1.19	0.5	13	17	33	3.55	< 10	< 1	0.04	< 10	0.30	1080
300N 425E	201 229	< 5	< 0.2	2.79	8	70	0.5	< 2	0.40	< 0.5	11	11	13	3.45	< 10	< 1	0.02	< 10	0.09	360
300N 450E	201 229	10	< 0.2	3.24	6	160	0.5	< 2	0.84	0.5	15	25	30	4.00	< 10	1	0.04	10	0.27	1770
300N 475E	201 229	< 5	< 0.2	3.52	8	80	0.5	< 2	0.37	0.5	12	12	23	3.18	< 10	< 1	0.05	< 10	0.13	475
300N 500E	201 229	< 5	< 0.2	2.43	6	80	< 0.5	< 2	0.14	< 0.5	4	7	9	1.69	< 10	< 1	0.03	< 10	0.09	890
300N 525E	201 229	10	< 0.2	3.26	8	100	0.5	< 2	1.21	0.5	20	7	19	3.30	< 10	< 1	0.03	10	0.52	470
300N 550E	201 229	< 5	< 0.2	2.64	6	80	< 0.5	< 2	0.90	< 0.5	8	7	6	2.11	< 10	< 1	0.04	< 10	0.10	600
300N 575E	201 229	< 5	< 0.2	3.05	6	60	0.5	< 2	0.09	< 0.5	4	7	8	1.67	< 10	< 1	0.03	< 10	0.10	210
300N 600E	201 229	< 5	< 0.2	2.97	8	80	< 0.5	< 2	0.11	< 0.5	4	9	9	1.71	< 10	< 1	0.04	< 10	0.18	425
300N 625E	201 229	5	< 0.2	2.22	< 2	50	< 0.5	< 2	0.07	< 0.5	5	7	6	1.59	< 10	< 1	0.03	< 10	0.10	280
300N 650E	201 229	< 5	< 0.2	2.39	4	60	< 0.5	< 2	0.13	< 0.5	4	7	6	1.78	< 10	< 1	0.03	< 10	0.10	180
300N 675E	201 229	55	< 0.2	3.70	6	70	0.5	< 2	0.09	< 0.5	4	9	10	1.82	< 10	< 1	0.03	< 10	0.12	130
300N 700E	201 229	10	< 0.2	4.07	6	50	0.5	< 2	0.09	< 0.5	5	8	5	1.97	< 10	< 1	0.02	< 10	0.08	225
300N 725E	201 229	10	< 0.2	1.96	6	100	< 0.5	< 2	0.13	< 0.5	5	11	9	1.68	< 10	< 1	0.03	< 10	0.17	120
300N 750E	201 229	5	< 0.2	3.04	6	50	0.5	< 2	0.06	< 0.5	3	6	4	1.62	< 10	< 1	0.02	< 10	0.06	210
300N 775E	201 229	< 5	< 0.2	2.56	8	80	< 0.5	< 2	0.21	< 0.5	4	9	10	1.80	< 10	< 1	0.03	< 10	0.14	300
300N 800E	201 229	20	< 0.2	2.42	6	60	< 0.5	< 2	0.15	< 0.5	4	10	5	1.60	< 10	< 1	0.03	< 10	0.10	245
300N 825E	201 229	< 5	< 0.2	1.78	8	110	< 0.5	< 2	0.33	< 0.5	5	16	10	1.59	< 10	< 1	0.03	< 10	0.24	140

CERTIFICATION: [signature]

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Certificate Date: 03-AUG-98
Invoice No. :19826084
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9826084

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
300N 000	201 229	7	0.01	36	660	14	< 2	3	70	0.13	< 10	< 10	100	< 10	456
300N 025E	201 229	4	< 0.01	31	420	16	< 2	4	52	0.14	< 10	< 10	96	< 10	640
300N 050E	201 229	6	0.01	33	390	14	< 2	3	45	0.15	< 10	< 10	71	< 10	510
300N 075E	201 229	11	< 0.01	59	540	32	< 2	6	130	0.12	< 10	< 10	161	< 10	1860
300N 100E	201 229	2	0.03	65	930	12	< 2	5	343	0.09	< 10	< 20	58	< 10	260
300N 125E	201 229	2	0.01	110	1260	20	< 2	4	821	0.06	< 10	< 10	48	< 10	356
300N 150E	201 229	2	0.04	101	1160	18	< 2	4	977	0.07	< 10	< 10	55	< 10	336
300N 175E	201 229	2	0.05	65	1400	14	< 2	4	301	0.07	< 10	< 10	56	< 10	230
300N 200E	201 229	3	0.02	72	1520	14	< 2	5	210	0.08	< 10	< 10	55	< 10	242
300N 225E	201 229	2	0.03	68	1310	14	< 2	5	209	0.08	< 10	< 10	54	< 10	278
300N 250E	201 229	2	0.03	32	710	10	< 2	4	110	0.08	< 10	< 10	47	< 10	160
300N 275E	201 229	1	0.01	23	1280	10	< 2	3	56	0.09	< 10	< 10	35	< 10	194
300N 300E	201 229	1	0.02	17	1510	8	< 2	1	41	0.08	< 10	< 10	36	< 10	150
300N 325E	201 229	1	0.02	32	1850	10	< 2	3	77	0.08	< 10	< 10	42	< 10	254
300N 350E	201 229	1	0.02	28	870	8	< 2	3	108	0.11	< 10	< 10	49	< 10	174
300N 375E	201 229	1	0.03	20	500	6	< 2	1	78	0.10	< 10	< 10	38	< 10	130
300N 400E	201 229	2	0.03	45	720	10	< 2	3	383	0.09	< 10	< 10	44	< 10	126
300N 425E	201 229	1	0.03	34	650	10	< 2	1	146	0.11	< 10	< 10	38	< 10	126
300N 450E	201 229	3	0.03	60	800	12	< 2	4	416	0.12	< 10	< 10	61	< 10	172
300N 475E	201 229	2	0.01	54	980	12	< 2	1	111	0.11	< 10	< 10	38	< 10	218
300N 500E	201 229	1	0.03	9	1290	8	< 2	1	19	0.10	< 10	< 10	35	< 10	78
300N 525E	201 229	1	0.03	24	610	14	< 2	4	214	0.11	< 10	< 10	50	< 10	66
300N 550E	201 229	1	0.03	17	440	12	< 2	1	208	0.10	< 10	< 10	32	< 10	40
300N 575E	201 229	1	0.02	8	780	8	< 2	1	12	0.12	< 10	< 10	34	< 10	88
300N 600E	201 229	1	0.01	8	640	8	< 2	1	12	0.12	< 10	< 10	35	< 10	86
300N 625E	201 229	1	0.01	7	840	8	< 2	1	9	0.11	< 10	< 10	32	< 10	96
300N 650E	201 229	1	0.02	5	650	6	< 2	1	10	0.11	< 10	< 10	41	< 10	62
300N 675E	201 229	1	0.03	7	820	8	< 2	2	12	0.12	< 10	< 10	35	< 10	68
300N 700E	201 229	1	0.02	5	1610	10	< 2	2	8	0.11	< 10	< 20	36	< 10	96
300N 725E	201 229	1	0.02	10	330	8	< 2	1	17	0.11	< 10	< 10	40	< 10	88
300N 750E	201 229	1	0.03	4	1090	8	< 2	1	6	0.10	< 10	< 10	34	< 10	66
300N 775E	201 229	1	0.02	8	950	8	< 2	1	22	0.11	< 10	< 10	39	< 10	72
300N 800E	201 229	1	0.02	7	1190	6	< 2	1	15	0.10	< 10	< 10	36	< 10	98
300N 825E	201 229	1	0.01	10	280	8	< 2	3	43	0.12	< 10	< 10	42	< 10	76

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CERTIFICATE OF ANALYSIS A9827423

SAMPLE	PREP CODE	Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
300S 000E	201 229	< 5	< 0.2	2.96	< 2	100	< 0.5	< 2	0.32	0.5	6	16	13	2.00	< 10	< 1	0.06	< 10	0.19	265
300S 025E	201 229	< 5	0.2	2.68	< 2	90	< 0.5	< 2	0.36	< 0.5	7	18	17	2.08	< 10	< 1	0.05	< 10	0.22	260
300S 050E	201 229	< 5	< 0.2	2.49	< 2	70	< 0.5	< 2	0.26	< 0.5	5	11	7	1.76	< 10	1	0.03	< 10	0.12	335
300S 075E	201 229	< 5	< 0.2	3.13	6	110	0.5	< 2	0.34	< 0.5	9	24	22	2.76	< 10	1	0.04	< 10	0.27	315
300S 100E	201 229	< 5	< 0.2	2.52	< 2	90	< 0.5	< 2	0.35	< 0.5	7	15	11	1.85	< 10	< 1	0.05	< 10	0.19	480
300S 125E	201 229	< 5	< 0.2	2.96	4	150	0.5	< 2	0.40	< 0.5	9	21	18	2.28	< 10	1	0.04	< 10	0.34	455
300S 150E	201 229	< 5	< 0.2	2.30	< 2	70	< 0.5	< 2	0.35	< 0.5	7	19	14	2.32	< 10	< 1	0.04	< 10	0.30	630
300S 175E	201 229	< 5	0.2	3.21	< 2	70	0.5	< 2	0.33	< 0.5	12	15	19	2.61	< 10	< 1	0.03	< 10	0.18	795
300S 200E	201 229	< 5	< 0.2	2.72	2	80	< 0.5	< 2	0.34	< 0.5	9	17	17	2.62	< 10	< 1	0.03	< 10	0.18	605
300S 225E	201 229	< 5	< 0.2	2.63	< 2	80	< 0.5	< 2	0.18	< 0.5	8	14	10	2.20	< 10	< 1	0.03	< 10	0.21	500
300S 250E	201 229	< 5	< 0.2	3.20	< 2	100	0.5	< 2	0.27	< 0.5	9	24	17	2.52	< 10	< 1	0.04	< 10	0.37	395
300S 275E	201 229	< 5	< 0.2	2.73	8	80	< 0.5	< 2	0.49	< 0.5	9	25	23	2.65	< 10	< 1	0.03	< 10	0.45	380
300S 300E	201 229	< 5	< 0.2	2.28	< 2	80	< 0.5	< 2	0.31	0.5	7	18	15	2.09	< 10	< 1	0.03	< 10	0.26	260
300S 325E	201 229	< 5	< 0.2	2.58	< 2	70	< 0.5	< 2	0.19	< 0.5	6	16	9	2.27	< 10	< 1	0.03	< 10	0.27	120
300S 350E	201 229	< 5	< 0.2	3.04	4	50	0.5	< 2	0.26	< 0.5	7	17	9	2.46	< 10	< 1	0.03	< 10	0.25	255
300S 375E	201 229	< 5	< 0.2	3.50	< 2	70	0.5	< 2	0.38	0.5	7	16	14	2.31	< 10	< 1	0.03	< 10	0.82	410
300S 400E	201 229	< 5	< 0.2	2.85	< 2	80	< 0.5	< 2	0.28	< 0.5	8	19	19	2.39	< 10	< 1	0.03	< 10	0.39	480
300S 425E	201 229	< 5	< 0.2	2.43	< 2	80	< 0.5	< 2	0.24	< 0.5	7	15	10	1.98	< 10	1	0.04	< 10	0.22	635
300S 450E	201 229	< 5	0.2	2.74	10	90	< 0.5	< 2	0.37	< 0.5	8	18	19	2.36	< 10	< 1	0.04	< 10	0.25	505
300S 475E	201 229	< 5	< 0.2	3.05	< 2	70	< 0.5	< 2	0.22	< 0.5	8	14	10	2.15	< 10	< 1	0.03	< 10	0.32	230
300S 500E	201 229	< 5	< 0.2	2.66	6	120	< 0.5	< 2	0.63	< 0.5	10	28	21	2.72	< 10	< 1	0.05	< 10	0.33	195
300S 525E	201 229	< 5	0.2	2.20	< 2	50	< 0.5	< 2	0.21	< 0.5	7	12	8	2.15	< 10	< 1	0.04	< 10	0.13	465
300S 875E	201 229	< 5	0.8	3.79	8	130	0.5	< 2	1.02	0.5	19	16	41	4.12	< 10	< 1	0.05	< 10	0.60	475
300S 900E	201 229	< 5	< 0.2	1.84	< 2	60	< 0.5	< 2	0.36	0.5	5	8	12	1.71	< 10	< 1	0.03	< 10	0.12	110
300S 925E	201 229	10	< 0.2	2.64	10	200	0.5	< 2	2.66	3.5	11	15	25	2.80	< 10	< 1	0.12	< 10	1.38	885
300S 950E	201 229	< 5	< 0.2	2.16	< 2	160	< 0.5	< 2	0.40	0.5	7	10	13	1.88	< 10	< 1	0.04	< 10	0.29	1015
300S 975E	201 229	< 5	0.2	2.06	< 2	130	< 0.5	< 2	0.45	0.5	6	14	13	1.92	< 10	< 1	0.07	< 10	0.57	380
300S 1000E	201 229	< 5	0.2	1.85	< 2	110	< 0.5	< 2	0.14	< 0.5	4	8	7	1.57	< 10	1	0.03	< 10	0.15	415
300S 1025E	201 229	< 5	0.2	2.19	< 2	50	< 0.5	< 2	0.18	< 0.5	6	10	5	1.76	< 10	< 1	0.03	< 10	0.15	105
300S 1050E	201 229	10	0.2	1.57	< 2	80	< 0.5	2	0.45	< 0.5	6	9	7	1.26	< 10	< 1	0.03	< 10	0.11	150
300S 1075E	201 229	< 5	0.2	2.66	< 2	70	< 0.5	< 2	0.18	0.5	7	17	10	2.03	< 10	< 1	0.03	< 10	0.20	140
300S 1100E	201 229	< 5	< 0.2	2.36	8	70	< 0.5	< 2	0.22	< 0.5	5	9	7	1.68	< 10	< 1	0.06	< 10	0.12	230
300S 1125E	201 229	< 5	< 0.2	2.48	< 2	40	< 0.5	< 2	0.11	< 0.5	5	8	6	1.75	< 10	< 1	0.05	< 10	0.12	465
300S 1150E	201 229	5	0.2	1.96	6	30	< 0.5	< 2	0.06	< 0.5	3	5	4	1.27	< 10	1	0.03	< 10	0.05	215
300S 1175E	201 229	< 5	< 0.2	2.37	6	80	< 0.5	< 2	0.15	< 0.5	6	10	9	1.64	< 10	< 1	0.04	< 10	0.17	100
300S 1200E	201 229	< 5	< 0.2	1.37	< 2	50	< 0.5	< 2	0.15	< 0.5	4	7	4	1.59	< 10	< 1	0.03	< 10	0.11	810
300S 1225E	201 229	< 5	< 0.2	3.26	158	140	< 0.5	< 2	0.22	< 0.5	5	12	10	2.46	< 10	< 1	0.04	< 10	0.13	445
300S 1250E	201 229	< 5	< 0.2	3.85	< 2	60	0.5	< 2	0.06	< 0.5	5	6	4	1.92	< 10	2	0.03	< 10	0.06	690
400S 200E	201 229	< 5	< 0.2	2.34	< 2	80	< 0.5	< 2	0.30	< 0.5	7	17	17	2.19	< 10	< 1	0.03	< 10	0.29	545
400S 225E	201 229	< 5	< 0.2	2.12	< 2	60	< 0.5	< 2	0.25	< 0.5	7	14	13	1.82	< 10	< 1	0.04	< 10	0.22	360

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CERTIFICATE OF ANALYSIS A9827423

SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
300S 000E	201 229	1	0.02	15	1080	10	< 2	3	53	0.11	< 10	< 10	43	< 10	126
300S 025E	201 229	2	0.01	18	960	8	< 2	3	61	0.11	< 10	< 10	51	< 10	108
300S 050E	201 229	1	0.02	12	920	8	< 2	1	42	0.10	< 10	< 10	40	< 10	118
300S 075E	201 229	< 1	0.03	29	400	8	< 2	4	106	0.14	< 10	< 10	61	< 10	114
300S 100E	201 229	1	0.02	16	1270	8	< 2	3	56	0.10	< 10	< 10	40	< 10	128
300S 125E	201 229	1	0.03	22	750	8	4	4	91	0.12	< 10	< 10	50	< 10	126
300S 150E	201 229	< 1	0.02	17	1050	8	< 2	3	72	0.11	< 10	< 10	50	< 10	104
300S 175E	201 229	1	0.03	28	880	8	< 2	3	86	0.11	< 10	< 10	45	< 10	124
300S 200E	201 229	1	0.02	25	930	8	< 2	3	69	0.11	< 10	< 10	47	< 10	112
300S 225E	201 229	< 1	0.01	14	820	10	< 2	2	33	0.11	< 10	< 10	45	< 10	94
300S 250E	201 229	< 1	0.02	21	970	10	< 2	3	60	0.12	< 10	< 10	49	< 10	94
300S 275E	201 229	1	0.03	26	630	8	< 2	4	109	0.13	< 10	< 10	58	< 10	120
300S 300E	201 229	1	0.02	19	480	8	< 2	3	58	0.11	< 10	< 10	48	< 10	110
300S 325E	201 229	2	0.01	14	650	8	< 2	2	34	0.13	< 10	< 10	57	< 10	108
300S 350E	201 229	1	0.02	18	790	10	< 2	1	82	0.11	< 10	< 10	49	< 10	156
300S 375E	201 229	< 1	0.04	15	990	6	< 2	3	82	0.13	< 10	< 10	43	< 10	124
300S 400E	201 229	1	0.03	25	1000	8	< 2	3	70	0.12	< 10	< 10	51	< 10	124
300S 425E	201 229	< 1	0.02	16	1040	8	< 2	2	50	0.11	< 10	< 10	44	< 10	122
300S 450E	201 229	1	0.03	21	690	8	< 2	4	132	0.12	< 10	< 10	50	< 10	116
300S 475E	201 229	1	0.03	18	590	8	< 2	2	43	0.12	< 10	< 10	49	< 10	128
300S 500E	201 229	1	0.01	34	250	8	< 2	4	180	0.15	< 10	< 10	71	< 10	100
300S 525E	201 229	< 1	0.03	13	890	4	< 2	1	36	0.11	< 10	< 10	46	< 10	116
300S 875E	201 229	1	0.03	26	1200	12	< 2	8	175	0.12	< 10	< 10	74	< 10	160
300S 900E	201 229	< 1	0.03	10	350	6	< 2	1	39	0.08	< 10	< 10	36	< 10	130
300S 925E	201 229	< 1	0.01	11	1390	24	2	5	236	0.01	< 10	< 10	34	< 10	196
300S 950E	201 229	< 1	0.02	13	1000	8	< 2	3	68	0.06	< 10	< 10	37	< 10	164
300S 975E	201 229	1	0.01	14	350	10	2	3	60	0.09	< 10	< 10	43	< 10	128
300S 1000E	201 229	1	0.02	8	490	6	< 2	1	16	0.10	< 10	< 10	37	< 10	102
300S 1025E	201 229	1	0.01	11	530	8	< 2	1	17	0.10	< 10	< 10	42	< 10	120
300S 1050E	201 229	1	0.01	15	660	6	< 2	1	25	0.07	< 10	< 10	26	< 10	92
300S 1075E	201 229	1	0.01	19	300	8	< 2	2	27	0.11	< 10	< 10	57	< 10	142
300S 1100E	201 229	1	0.02	9	1040	4	< 2	1	17	0.10	< 10	< 10	38	< 10	126
300S 1125E	201 229	< 1	0.02	7	1060	6	< 2	1	12	0.09	< 10	< 10	38	< 10	116
300S 1150E	201 229	1	0.02	3	790	6	< 2	1	5	0.08	< 10	< 10	31	< 10	58
300S 1175E	201 229	< 1	0.01	11	490	2	< 2	1	18	0.09	< 10	< 10	36	< 10	62
300S 1200E	201 229	1	0.01	5	830	6	< 2	1	12	0.09	< 10	< 10	41	< 10	84
300S 1225E	201 229	2	0.02	10	290	8	2	2	38	0.08	< 10	< 10	48	< 10	100
300S 1250E	201 229	1	0.01	4	1020	6	< 2	2	6	0.10	< 10	< 10	33	< 10	70
400S 200E	201 229	< 1	0.01	17	950	6	< 2	3	52	0.09	< 10	< 10	44	< 10	88
400S 225E	201 229	< 1	0.01	14	910	12	< 2	2	40	0.08	< 10	< 10	38	< 10	80

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Certificate Date: 15-AUG-98
Invoice No. : I9827423
P.O. Number :
Account :LOY

CERTIFICATE OF ANALYSIS A9827423

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
400S 250E	201	229	< 5	< 0.2	2.92	< 2	80	0.5	< 2	0.20	< 0.5	7	17	11	2.12	< 10	< 1	0.02	< 10	0.31	235
400S 275E	201	229	< 5	< 0.2	2.54	8	80	< 0.5	< 2	0.18	0.5	6	14	11	1.87	< 10	3	0.03	< 10	0.20	320
400S 300E	201	229	< 5	< 0.2	2.54	12	100	< 0.5	< 2	0.29	0.5	7	18	10	1.87	< 10	< 1	0.03	< 10	0.21	450
400S 325E	201	229	< 5	< 0.2	2.69	< 2	80	< 0.5	< 2	0.21	0.5	7	16	9	1.90	< 10	< 1	0.03	< 10	0.22	460
400S 350E	201	229	< 5	0.2	2.65	< 2	40	< 0.5	< 2	0.11	< 0.5	5	9	5	1.70	< 10	< 1	0.03	< 10	0.10	245
400S 375E	201	229	< 5	0.2	3.28	< 2	80	0.5	< 2	0.20	0.5	6	13	15	1.89	< 10	< 1	0.04	< 10	0.18	220
400S 400E	201	229	< 5	< 0.2	1.93	< 2	40	< 0.5	< 2	0.11	< 0.5	4	9	5	1.57	< 10	< 1	0.02	< 10	0.10	125
400S 425E	201	229	< 5	< 0.2	1.24	< 2	60	< 0.5	< 2	0.33	< 0.5	3	13	10	1.32	< 10	< 1	0.03	< 10	0.18	145
400S 450E	201	229	< 5	0.2	2.34	< 2	80	< 0.5	< 2	0.16	< 0.5	6	12	9	1.73	< 10	< 1	0.06	< 10	0.16	320
400S 475E	201	229	10	0.6	2.65	< 2	60	< 0.5	< 2	0.18	0.5	8	14	16	2.23	< 10	< 1	0.03	< 10	0.15	235
400S 500E	201	229	10	0.2	2.61	10	100	0.5	< 2	0.16	< 0.5	12	29	27	2.91	< 10	< 1	0.03	< 10	0.34	250
400S 525E	201	229	15	< 0.2	2.04	< 2	80	< 0.5	< 2	0.21	< 0.5	6	18	14	1.93	< 10	< 1	0.03	< 10	0.23	215
725N 400E	201	229	< 5	< 0.2	3.35	6	80	0.5	< 2	0.14	< 0.5	5	8	11	1.77	< 10	< 1	0.04	< 10	0.17	180
725N 425E	201	229	15	< 0.2	2.03	28	70	< 0.5	< 2	0.10	< 0.5	8	14	15	2.88	< 10	< 1	0.04	< 10	0.24	545
725N 450E	201	229	< 5	< 0.2	3.11	2	60	< 0.5	< 2	0.18	< 0.5	14	9	12	3.25	< 10	< 1	0.03	< 10	0.15	720
725N 475E	201	229	< 5	< 0.2	2.30	< 2	170	< 0.5	< 2	0.29	< 0.5	7	15	17	2.19	< 10	< 1	0.06	< 10	0.29	290
725N 500E	201	229	5	< 0.2	2.12	< 2	70	< 0.5	< 2	0.22	< 0.5	7	9	8	2.17	< 10	< 1	0.04	< 10	0.17	505
725N 525E	201	229	< 5	0.2	1.31	< 2	60	< 0.5	< 2	0.24	< 0.5	7	8	6	1.76	< 10	< 1	0.05	< 10	0.10	1375
725N 550E	201	229	< 5	0.2	2.96	< 2	130	< 0.5	< 2	0.36	< 0.5	10	28	16	2.45	< 10	1	0.05	< 10	0.53	595
750N 400E	201	229	5	0.2	2.51	< 2	100	< 0.5	< 2	0.29	< 0.5	6	10	13	1.72	< 10	< 1	0.05	< 10	0.22	555
750N 425E	201	229	5	< 0.2	2.45	< 2	100	< 0.5	< 2	0.27	0.5	6	10	11	1.87	< 10	< 1	0.05	< 10	0.20	650
750N 450E	201	229	< 5	< 0.2	2.17	< 2	60	< 0.5	< 2	0.19	< 0.5	6	9	6	1.73	< 10	< 1	0.04	< 10	0.14	750
750N 475E	201	229	5	< 0.2	2.86	< 2	90	0.5	< 2	0.19	< 0.5	12	17	18	2.41	< 10	< 1	0.03	< 10	0.29	390
750N 500E	201	229	< 5	< 0.2	2.16	4	90	< 0.5	< 2	0.25	< 0.5	9	12	15	2.34	< 10	< 1	0.06	< 10	0.23	860
750N 525E	201	229	5	< 0.2	2.83	< 2	80	0.5	< 2	0.19	< 0.5	7	11	11	2.10	< 10	< 1	0.04	< 10	0.17	410
750N 550E	201	229	10	< 0.2	2.57	< 2	90	< 0.5	< 2	0.29	< 0.5	14	29	21	2.99	< 10	< 1	0.05	< 10	0.50	345
775N 400E	201	229	5	< 0.2	2.28	< 2	80	< 0.5	< 2	0.13	< 0.5	5	8	10	1.44	< 10	< 1	0.04	< 10	0.14	195
775N 425E	201	229	10	< 0.2	2.82	< 2	70	< 0.5	< 2	0.20	0.5	7	12	12	1.90	< 10	< 1	0.04	< 10	0.21	345
775N 450E	201	229	10	< 0.2	2.91	< 2	210	< 0.5	< 2	0.34	< 0.5	5	8	12	1.69	< 10	< 1	0.05	< 10	0.41	695
775N 475E	201	229	5	< 0.2	2.50	< 2	40	< 0.5	< 2	0.15	< 0.5	9	9	11	2.44	< 10	< 1	0.03	< 10	0.15	680
775N 500E	201	229	< 5	< 0.2	2.74	< 2	90	0.5	< 2	0.49	0.5	15	14	20	3.02	< 10	< 1	0.05	< 10	0.23	1075
775N 525E	201	229	< 5	< 0.2	2.58	< 2	140	0.5	< 2	0.98	< 0.5	12	23	39	3.93	< 10	< 1	0.08	10	0.37	940
775N 550E	201	229	< 5	< 0.2	2.16	< 2	110	< 0.5	< 2	0.24	< 0.5	8	16	18	2.39	< 10	< 1	0.05	< 10	0.30	235
775N 575E	201	229	< 5	< 0.2	2.17	6	90	< 0.5	< 2	0.12	< 0.5	6	9	6	1.87	< 10	< 1	0.03	< 10	0.13	670

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CERTIFICATE OF ANALYSIS A9827423

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
400S 250E	201	229	< 1	0.03	14	540	6	< 2	3	36	0.12	< 10	< 10	47	< 10	76
400S 275E	201	229	< 1	0.02	16	820	8	2	2	33	0.11	< 10	< 10	43	< 10	116
400S 300E	201	229	2	0.03	18	470	4	< 2	2	49	0.10	< 10	< 10	46	< 10	142
400S 325E	201	229	1	0.02	17	900	6	< 2	2	33	0.11	< 10	< 10	46	< 10	156
400S 350E	201	229	< 1	0.02	8	1490	8	< 2	1	16	0.10	< 10	< 10	36	< 10	106
400S 375E	201	229	< 1	0.02	14	1220	8	< 2	3	39	0.10	< 10	< 10	40	< 10	168
400S 400E	201	229	1	0.01	7	980	6	< 2	1	16	0.09	< 10	< 10	37	< 10	92
400S 425E	201	229	1	0.01	7	120	6	< 2	3	43	0.09	< 10	< 10	33	< 10	46
400S 450E	201	229	1	0.01	12	770	4	< 2	2	22	0.09	< 10	< 10	39	< 10	102
400S 475E	201	229	1	0.02	20	860	8	< 2	2	38	0.11	< 10	< 10	50	< 10	164
400S 500E	201	229	1	0.01	30	910	10	< 2	4	52	0.12	< 10	< 10	64	< 10	136
400S 525E	201	229	1	0.01	16	480	6	< 2	3	39	0.08	< 10	< 10	45	< 10	94
725N 400E	201	229	1	0.01	10	590	10	< 2	2	17	0.11	< 10	< 10	30	< 10	74
725N 425E	201	229	1	< 0.01	15	680	8	< 2	2	24	0.10	< 10	< 10	61	< 10	146
725N 450E	201	229	1	0.01	12	590	20	< 2	2	14	0.11	< 10	< 10	55	< 10	158
725N 475E	201	229	1	0.01	15	280	6	< 2	4	41	0.12	< 10	< 10	47	< 10	100
725N 500E	201	229	1	0.03	15	410	6	< 2	1	26	0.11	< 10	< 10	42	< 10	146
725N 525E	201	229	< 1	0.03	11	410	12	< 2	1	26	0.09	< 10	< 10	37	< 10	130
725N 550E	201	229	< 1	0.01	21	1290	10	< 2	4	47	0.13	< 10	< 10	57	< 10	168
750N 400E	201	229	1	0.01	13	620	20	< 2	3	30	0.10	< 10	< 10	36	< 10	132
750N 425E	201	229	< 1	0.01	9	710	10	< 2	2	24	0.11	< 10	< 10	43	< 10	114
750N 450E	201	229	< 1	0.01	10	750	8	2	1	14	0.10	< 10	< 10	40	< 10	110
750N 475E	201	229	1	0.01	26	410	10	< 2	3	24	0.13	< 10	< 10	49	< 10	114
750N 500E	201	229	1	0.02	16	570	6	< 2	3	24	0.10	< 10	< 10	45	< 10	134
750N 525E	201	229	< 1	0.03	16	850	6	< 2	2	23	0.10	< 10	< 10	36	< 10	110
750N 550E	201	229	1	0.01	30	550	8	< 2	4	70	0.14	< 10	< 10	67	< 10	116
775N 400E	201	229	< 1	0.02	8	830	4	< 2	2	12	0.09	< 10	< 10	29	< 10	82
775N 425E	201	229	1	0.01	11	930	12	2	2	18	0.10	< 10	< 10	43	< 10	122
775N 450E	201	229	1	0.01	9	450	8	< 2	2	31	0.10	< 10	< 10	29	< 10	98
775N 475E	201	229	1	0.01	11	630	6	2	1	13	0.11	< 10	< 10	45	< 10	186
775N 500E	201	229	1	0.02	27	730	8	2	4	33	0.11	< 10	< 10	54	< 10	198
775N 525E	201	229	1	0.03	45	590	14	< 2	6	140	0.11	< 10	< 10	49	< 10	148
775N 550E	201	229	< 1	0.01	19	480	12	2	3	38	0.09	< 10	< 10	45	< 10	104
775N 575E	201	229	1	0.01	13	520	10	< 2	1	25	0.09	< 10	< 10	38	< 10	132

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CERTIFICATE A9823855

Project: CAP
P.O. # : 23

Samples submitted to our lab in Vancouver, BC.
This report was printed on 14-JUL-98.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	32	Geochem ring to approx 150 mesh
226	32	0-3 Kg crush and split
3202	32	Rock - save entire reject
229	32	ICP - AQ Digestion charge
* NOTE	1:	

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	32	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	32	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	32	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	32	As ppm: 32 element, soil & rock	ICP-AES	2	10000
2121	32	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	32	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	32	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	32	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	32	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	32	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	32	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	32	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	32	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	32	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	32	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	32	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	32	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	32	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	32	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	32	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	32	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	32	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	32	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	32	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
2141	32	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	32	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	32	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	32	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	32	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	32	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	32	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	32	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	32	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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Certificate Date: 14-JUL-98
Invoice No. :19823855
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9823855

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
123079	205	226	< 5	0.4	2.59	26	140	< 0.5	< 2	1.31	< 0.5	17	63	34	3.49	< 10	< 1	0.40	< 10	1.00	270
123080	205	226	< 5	0.2	3.33	< 2	230	< 0.5	< 2	2.09	< 0.5	13	46	38	2.68	< 10	< 1	0.20	< 10	0.45	205
123081	205	226	5	0.6	2.76	< 2	300	< 0.5	< 2	4.09	< 0.5	8	50	44	2.17	< 10	< 1	0.34	< 10	1.50	115
123082	205	226	5	0.2	3.92	< 2	120	< 0.5	< 2	5.14	< 0.5	24	46	35	6.26	10	< 1	0.43	< 10	0.86	400
123083	205	226	< 5	< 0.2	1.34	12	60	< 0.5	2	5.05	< 0.5	16	30	24	3.83	< 10	< 1	0.11	< 10	0.37	415
123084	205	226	< 5	< 0.2	2.19	< 2	40	< 0.5	< 2	4.06	< 0.5	9	49	25	2.28	< 10	< 1	0.09	< 10	0.21	350
123085	205	226	< 5	0.2	2.72	< 2	50	< 0.5	< 2	12.85	< 0.5	6	14	15	1.96	< 10	< 1	0.09	< 10	0.21	500
123086	205	226	< 5	< 0.2	0.95	< 2	80	< 0.5	< 2	2.85	< 0.5	3	66	9	0.95	< 10	< 1	0.04	< 10	0.39	205
123087	205	226	< 5	0.2	1.73	< 2	10	< 0.5	2	11.20	0.5	2	42	8	2.41	< 10	< 1	0.01	< 10	0.71	3590
123088	205	226	< 5	2.6	0.91	< 2	20	< 0.5	4	7.35	53.5	5	21	205	4.39	< 10	< 1	0.02	< 10	0.37	5970
123089	205	226	< 5	4.0	0.62	< 2	10	< 0.5	6	10.30	34.5	3	25	206	5.94	< 10	< 1	0.01	< 10	0.39	6780
123090	205	226	< 5	1.4	1.58	< 2	70	< 0.5	2	5.49	33.5	1	18	49	3.48	< 10	< 1	0.03	< 10	0.73	9330
123091	205	226	< 5	0.6	2.83	< 2	30	0.5	< 2	7.20	116.0	9	33	12	5.40	< 10	< 1	0.04	< 10	1.40	>10000
123092	205	226	< 5	< 0.2	2.42	< 2	10	0.5	< 2	6.38	< 0.5	1	19	< 1	4.09	< 10	< 1	0.05	< 10	1.53	9540
123093	205	226	< 5	8.8	2.51	< 2	30	0.5	8	7.92	204	14	27	679	4.54	< 10	< 1	0.11	< 10	0.97	7090
123094	205	226	< 5	3.6	1.99	< 2	10	0.5	2	7.24	5.5	11	19	450	5.62	< 10	< 1	0.04	< 10	1.07	7290
123095	205	226	< 5	< 0.2	1.49	< 2	50	< 0.5	< 2	1.83	3.5	< 1	68	7	1.57	< 10	< 1	0.19	< 10	0.86	2550
123096	205	226	< 5	0.6	2.30	< 2	30	< 0.5	2	2.94	1.0	17	42	23	3.76	< 10	< 1	0.11	< 10	0.58	265
123097	205	226	< 5	0.2	2.80	8	110	< 0.5	< 2	0.59	< 0.5	16	71	102	3.73	< 10	< 1	0.66	< 10	2.38	375
123098	205	226	< 5	< 0.2	1.42	< 2	30	< 0.5	2	0.83	< 0.5	17	14	33	4.98	< 10	< 1	0.07	< 10	0.92	365
123099	205	226	< 5	0.6	2.35	2	20	0.5	< 2	6.05	11.0	10	55	102	4.61	< 10	< 1	0.01	< 10	0.51	1030
123100	205	226	< 5	4.4	2.82	< 2	40	0.5	< 2	5.44	63.5	4	33	1	3.12	< 10	< 1	0.18	10	1.03	4420
123101	205	226	< 5	1.4	2.20	< 2	10	0.5	< 2	9.89	58.5	10	36	38	3.64	< 10	< 1	0.01	< 10	0.96	5870
123102	205	226	10	1.2	2.00	2	60	< 0.5	< 2	2.58	3.5	6	88	73	2.05	< 10	< 1	0.12	< 10	0.28	135
123103	205	226	10	1.4	2.09	< 2	120	< 0.5	< 2	2.88	15.5	9	103	96	2.25	< 10	< 1	0.10	< 10	0.14	90
123104	205	226	10	0.8	2.32	< 2	60	< 0.5	< 2	7.74	9.0	5	30	47	1.17	< 10	< 1	0.06	< 10	0.06	255
123105	205	226	10	1.4	1.32	< 2	30	< 0.5	< 2	9.16	16.0	10	50	106	1.99	< 10	< 1	0.03	10	0.03	205
123106	205	226	10	1.2	2.33	24	60	< 0.5	< 2	3.84	4.5	9	125	60	2.59	< 10	< 1	0.13	10	0.20	80
123107	205	226	< 5	0.8	1.78	< 2	90	< 0.5	< 2	5.87	1.0	10	96	81	1.81	< 10	< 1	0.26	10	0.47	115
123108	205	226	< 5	1.0	1.68	10	90	< 0.5	< 2	1.94	0.5	14	154	80	2.92	< 10	< 1	0.13	< 10	0.66	125
123109	205	226	70	1.8	1.76	16	50	< 0.5	< 2	6.28	9.0	10	79	81	2.59	< 10	1	0.04	10	0.12	260
123110	205	226	5	1.0	2.47	12	110	< 0.5	< 2	6.44	11.5	7	72	63	1.75	< 10	< 1	0.06	10	0.34	315

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Certificate Date: 14-JUL-98
Invoice No. :19823855
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9823855

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
123079	205	226	1	0.22	13	900	< 2	< 2	4	125	0.26	< 10	< 10	108	< 10	52
123080	205	226	< 1	0.30	12	950	< 2	< 2	1	191	0.23	< 10	< 10	56	< 10	64
123081	205	226	3	0.15	30	630	< 2	< 2	1	981	0.15	< 10	10	27	< 10	28
123082	205	226	4	0.10	23	1010	6	2	7	351	0.31	< 10	< 10	117	< 20	142
123083	205	226	1	0.07	8	760	< 2	< 2	7	257	0.21	< 10	< 10	101	< 10	56
123084	205	226	< 1	0.13	9	1000	< 2	2	2	180	0.12	< 10	10	30	< 10	40
123085	205	226	< 1	0.23	5	780	< 2	< 2	< 1	780	0.09	< 10	10	12	< 10	25
123086	205	226	1	0.11	6	210	6	2	1	225	0.07	< 10	< 10	12	< 10	62
123087	205	226	< 1	< 0.01	10	390	126	2	2	502	0.08	< 10	10	23	< 10	132
123088	205	226	< 1	< 0.01	6	140	376	2	1	105	0.06	< 10	< 10	15	< 10	4220
123089	205	226	< 1	< 0.01	1	90	568	2	1	123	0.03	< 10	10	12	< 10	2510
123090	205	226	< 1	< 0.01	3	180	230	< 2	1	111	0.07	< 10	10	9	< 10	2070
123091	205	226	18	< 0.01	42	280	44	2	4	297	0.09	< 10	10	118	< 10	7530
123092	205	226	1	< 0.01	8	210	< 2	2	4	196	0.10	< 10	< 10	22	< 20	160
123093	205	226	2	< 0.01	17	800	760	< 2	6	430	0.14	< 10	10	37	< 20	>10000
123094	205	226	1	< 0.01	14	570	76	2	6	220	0.17	< 10	< 10	63	< 10	468
123095	205	226	1	0.08	3	150	4	2	1	111	0.03	< 10	< 10	10	< 10	388
123096	205	226	4	0.04	12	930	6	2	5	62	0.23	< 10	< 10	85	< 10	96
123097	205	226	< 1	0.06	11	550	< 2	< 2	22	118	0.21	< 10	< 10	190	< 10	40
123098	205	226	1	0.04	1	830	2	< 2	4	47	0.34	< 10	< 10	111	< 10	48
123099	205	226	2	0.01	9	630	444	< 2	9	131	0.20	< 10	< 10	110	< 10	706
123100	205	226	1	< 0.01	4	340	5710	< 2	2	264	0.08	< 10	< 10	29	< 10	5960
123101	205	226	< 1	< 0.01	17	3130	2000	< 2	6	348	0.06	< 10	10	58	< 10	3720
123102	205	226	19	0.13	44	670	20	2	2	910	0.13	< 10	10	109	< 10	220
123103	205	226	25	0.07	56	730	6	2	3	328	0.14	< 10	< 10	177	< 10	698
123104	205	226	11	0.29	34	620	18	< 2	1	886	0.09	< 10	10	43	< 10	344
123105	205	226	36	0.14	90	1110	< 2	< 2	1	432	0.08	< 10	10	94	< 10	580
123106	205	226	16	0.05	58	1620	12	< 2	3	331	0.14	< 10	< 10	122	< 10	238
123107	205	226	5	0.09	41	1520	< 2	< 2	1	161	0.15	< 20	< 10	78	< 10	42
123108	205	226	1	0.05	47	780	2	< 2	5	57	0.25	< 10	< 10	76	< 10	118
123109	205	226	17	0.09	66	1130	2	< 2	1	336	0.13	< 10	< 10	70	< 10	416
123110	205	226	13	0.11	47	950	6	< 2	1	401	0.12	< 10	10	77	< 10	458

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##

Certificate Date: 03-AUG-98
Invoice No. : I9826086
P.O. Number : 23
Account : LOY

CERTIFICATE OF ANALYSIS A9826086

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %
123 111	205	226	< 5	0.4	1.72	18	30	< 0.5	< 2	4.70
123 112	205	226	< 5	0.4	0.61	2	20	< 0.5	< 2	>15.00
123 113	205	226	< 5	< 0.2	3.88	92	180	< 0.5	< 2	1.41
123 114	205	226	< 5	0.8	2.53	6	90	< 0.5	< 2	11.35
123 115	205	226	< 5	2.0	3.47	26	30	0.5	< 2	8.81
123 116	205	226	< 5	0.2	0.16	< 2	10	< 0.5	< 2	>15.00
123 117	205	226	15	2.2	2.06	16	60	< 0.5	< 2	5.02
123 118	205	226	< 5	1.2	1.07	8	100	< 0.5	< 2	2.27
123 119	205	226	10	1.0	1.84	16	120	< 0.5	< 2	2.74
123 120	205	226	< 5	0.4	1.81	24	80	< 0.5	< 2	1.27
123 121	205	226	10	0.8	2.30	26	50	< 0.5	< 2	1.03

SAMPLE	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
123 111	2.0	8	82	58	3.02	< 10	< 1	0.03	< 10	0.08	160
123 112	< 0.5	3	19	12	0.86	< 10	1	0.03	< 10	0.12	375
123 113	< 0.5	13	55	15	3.71	< 10	1	0.32	< 10	1.94	495
123 114	5.5	5	60	54	1.79	< 10	< 1	0.05	10	0.07	370
123 115	< 0.5	9	50	56	2.40	< 10	1	0.05	< 10	0.08	365
123 116	< 0.5	1	10	7	1.20	< 10	1	< 0.01	< 10	0.26	885
123 117	5.5	9	70	89	2.42	< 10	< 1	0.04	< 10	0.05	215
123 118	0.5	3	93	39	1.32	< 10	< 1	0.13	< 10	0.18	115
123 119	< 0.5	3	85	61	1.29	< 10	< 1	0.25	10	0.47	140
123 120	1.5	8	109	55	2.59	< 10	< 1	0.16	< 10	0.65	180
123 121	1.5	11	163	93	4.11	< 10	< 1	0.17	< 10	0.76	370

CERTIFICATION: [signature]

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##

Certificate Date: 03-AUG-98
Invoice No. : I9826086
P.O. Number : 23
Account : LOY

CERTIFICATE OF ANALYSIS A9826086

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
123 111	205	226	20	0.04	31	980	10	< 2	4	493	0.13	< 10	< 10	112	< 10	162
123 112	205	226	< 1	0.03	13	570	10	< 2	< 1	2680	0.03	< 10	< 10	11	< 10	42
123 113	205	226	2	0.24	8	620	6	< 2	8	210	0.15	< 10	< 10	86	< 10	48
123 114	205	226	8	0.12	36	930	16	< 2	1	1010	0.10	< 10	< 10	56	< 10	250
123 115	205	226	4	0.25	42	640	16	< 2	1	2260	0.10	< 10	< 10	30	< 10	40
123 116	205	226	< 1	< 0.01	5	270	10	< 2	< 1	4180	0.01	< 10	< 10	7	< 10	6
123 117	205	226	17	0.25	55	1050	16	< 2	1	559	0.10	< 10	< 10	48	< 10	286
123 118	205	226	6	0.08	17	720	8	< 2	3	220	0.12	< 10	< 10	37	< 10	44
123 119	205	226	3	0.06	13	1200	10	< 2	3	140	0.12	< 10	< 10	42	< 10	30
123 120	205	226	44	0.11	49	600	12	< 2	4	43	0.18	< 10	< 10	178	< 10	112
123 121	205	226	6	0.10	43	410	6	< 2	5	40	0.15	< 10	< 10	130	< 10	116

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CERTIFICATE OF ANALYSIS A9827422

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm
123 122	205	226	< 5	< 0.2	1.99	< 2	350	< 0.5	2	6.32	1.0	11	36	16	2.03	< 10	1	0.05	< 10	0.65	1565
123 123	205	226	< 5	< 0.2	2.55	< 2	130	< 0.5	< 2	3.52	1.5	21	56	23	2.99	< 10	< 1	0.07	< 10	0.71	1855
123 124	205	226	< 5	< 0.2	4.59	< 2	30	< 0.5	< 2	7.29	4.0	18	28	26	3.11	10	1	0.01	< 10	0.20	810
123 125	205	226	< 5	0.2	5.06	< 2	20	< 0.5	< 2	7.94	2.0	16	36	25	2.71	10	< 1	0.01	< 10	0.14	680
123 126	205	226	< 5	< 0.2	0.55	< 2	10	< 0.5	< 2	0.14	< 0.5	2	129	4	0.67	< 10	< 1	0.03	< 10	0.24	135
123 127	205	226	< 5	< 0.2	3.56	< 2	40	< 0.5	< 2	6.64	2.5	10	54	19	1.61	< 10	< 1	0.06	< 10	0.38	615
123 128	205	226	< 5	0.4	2.99	< 2	30	< 0.5	< 2	1.96	< 0.5	12	93	63	3.12	< 10	< 1	0.21	10	0.63	190
123 129	205	226	< 5	< 0.2	2.35	< 2	70	< 0.5	< 2	1.88	< 0.5	24	108	26	3.36	< 10	< 1	0.09	10	2.28	400
123 130	205	226	< 5	0.2	2.62	8	60	< 0.5	< 2	5.66	< 0.5	6	95	46	2.14	< 10	< 1	0.23	< 10	0.37	245
123 131	205	226	< 5	0.6	2.31	10	130	< 0.5	< 2	1.70	0.5	7	129	61	3.21	< 10	< 1	0.29	< 10	0.46	170
123 132	205	226	10	0.8	3.98	< 2	10	0.5	< 2	12.90	< 0.5	27	45	85	3.41	< 10	2	0.01	10	0.05	750
123 133	205	226	5	0.2	2.25	< 2	10	< 0.5	< 2	>15.00	0.5	7	19	36	1.73	< 10	1	0.05	< 10	0.04	1265
123 134	205	226	5	0.4	3.65	12	110	0.5	< 2	8.71	2.5	8	53	46	1.71	< 10	< 1	0.14	10	0.17	255
123 135	205	226	10	0.6	2.36	20	360	< 0.5	< 2	2.60	0.5	6	85	80	2.27	< 20	< 1	0.53	10	0.76	105
123 136	205	226	60	2.4	2.12	66	120	< 0.5	< 2	1.40	0.5	12	137	56	3.10	< 10	< 1	0.43	< 10	0.95	160
123 137	205	226	10	1.2	3.68	16	150	0.5	< 2	7.48	< 0.5	8	54	86	1.36	< 10	< 1	0.14	10	0.20	160
123 138	205	226	50	3.0	4.42	74	80	< 0.5	< 2	3.20	< 0.5	23	45	128	4.04	10	1	0.39	< 10	0.63	275
123 139	205	226	20	0.8	1.21	10	40	< 0.5	< 2	1.98	0.5	7	110	71	1.59	< 10	< 1	0.08	10	0.06	30
123 140	205	226	< 5	0.8	2.52	8	80	< 0.5	< 2	5.06	5.5	8	54	45	1.17	< 10	1	0.07	10	0.24	470
123 141	205	226	< 5	0.6	1.70	< 2	70	< 0.5	< 2	1.60	0.5	7	108	78	1.94	< 10	< 1	0.13	10	0.45	95
123 142	205	226	10	0.8	1.94	2	230	< 0.5	< 2	1.54	< 0.5	6	118	44	1.84	< 10	1	0.21	< 10	0.70	120
123 143	205	226	< 5	0.6	1.85	< 2	60	< 0.5	< 2	8.35	< 0.5	4	49	35	0.85	< 10	< 1	0.06	< 10	0.16	190
123 144	205	226	< 5	< 0.2	2.18	< 2	70	< 0.5	< 2	8.75	< 0.5	1	36	10	0.40	< 10	< 1	0.09	< 10	0.10	225
123 145	205	226	< 5	0.6	2.71	< 2	60	< 0.5	< 2	10.80	< 0.5	8	43	57	1.54	< 10	< 1	0.13	< 10	0.16	490
123 146	205	226	5	1.0	1.65	< 2	40	< 0.5	< 2	2.03	0.5	3	69	43	1.25	< 10	< 1	0.11	< 10	0.26	95
123 147	205	226	< 5	0.8	2.45	< 2	40	< 0.5	< 2	12.60	0.5	2	35	17	0.26	< 10	< 1	0.03	10	0.04	645

CERTIFICATION: Hart Bichler

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CERTIFICATE OF ANALYSIS A9827422

SAMPLE	PREP CODE		Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
123 122	205	226	< 1	< 0.01	7	780	154	< 2	4	331	0.18	< 10	< 10	53	< 10	158
123 123	205	226	2	< 0.01	11	990	22	< 2	9	97	0.19	< 10	< 10	92	< 10	136
123 124	205	226	< 1	< 0.01	10	1010	14	< 2	4	158	0.20	< 10	< 10	50	< 10	250
123 125	205	226	2	0.01	10	830	6	< 2	3	135	0.21	< 10	< 10	45	< 10	176
123 126	205	226	< 1	0.06	3	120	4	< 2	1	23	< 0.01	< 10	< 10	8	< 10	18
123 127	205	226	< 1	0.03	11	1060	10	< 2	4	227	0.15	< 10	< 10	46	< 10	198
123 128	205	226	2	0.27	31	620	6	2	4	229	0.22	< 10	< 10	56	< 10	76
123 129	205	226	2	0.20	105	1230	< 2	< 2	6	192	0.25	< 10	< 10	83	< 10	54
123 130	205	226	3	0.28	35	420	10	< 2	4	758	0.17	< 10	< 10	67	< 10	126
123 131	205	226	4	0.19	30	430	12	< 2	8	527	0.21	< 10	< 10	118	< 10	100
123 132	205	226	1	0.04	45	1270	8	< 2	1	126	0.11	< 10	< 10	30	< 10	50
123 133	205	226	< 1	0.23	38	1030	6	< 2	< 1	252	0.08	< 10	< 10	14	< 10	40
123 134	205	226	17	0.11	46	2690	< 2	< 2	< 1	670	0.13	< 10	10	89	< 10	64
123 135	205	226	6	0.11	20	1190	6	< 2	7	158	0.15	< 10	< 10	69	< 10	42
123 136	205	226	3	0.10	33	760	12	2	7	124	0.26	< 10	< 10	96	< 10	52
123 137	205	226	8	0.21	34	1760	2	2	1	577	0.15	< 10	< 10	44	< 10	36
123 138	205	226	2	0.24	9	470	18	4	7	186	0.20	< 10	< 10	114	< 10	38
123 139	205	226	9	0.03	33	990	6	< 2	1	39	0.18	< 10	< 10	57	< 10	26
123 140	205	226	7	0.13	49	1310	6	< 2	1	389	0.10	< 10	< 10	32	< 10	250
123 141	205	226	5	0.11	41	690	6	< 2	4	110	0.15	< 10	< 10	31	< 10	64
123 142	205	226	1	0.06	17	560	2	< 2	7	44	0.11	< 10	< 10	48	< 10	42
123 143	205	226	1	0.07	20	1360	6	< 2	1	617	0.07	< 10	10	19	< 10	32
123 144	205	226	1	0.31	11	1500	6	< 2	< 1	1555	0.06	< 10	< 10	9	< 10	26
123 145	205	226	< 1	0.16	29	930	2	< 2	1	1130	0.11	< 10	10	28	< 10	28
123 146	205	226	3	0.09	20	1050	8	< 2	1	137	0.10	< 10	< 10	21	< 10	28
123 147	205	226	< 1	0.05	18	1700	< 2	< 2	< 1	478	0.05	< 10	< 10	7	< 10	16

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

A9824603

CERTIFICATE	A9824603

Project: CAP
P.O. # : 23

Samples submitted to our lab in Vancouver, BC.
This report was printed on 15-JUL-98.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

**

Page Number :1
Total Pages :1
Certificate Date: 15-JUL-98
Invoice No. :19824603
P.O. Number :23
Account :LOY

CERTIFICATE OF ANALYSIS A9824603

SAMPLE	PREP CODE		Zn %
123093	244	--	1.57

CERTIFICATION: [signature]

OVERLIMITS from A9823855

APPENDIX II

MAGNETIC AND VLF-EM DATA

Grant F. Crooker

Line and Station: +=Northing/Easting
-=Southing/Westing

Area: Cap Claims
Grid: Cap
Date: July 1998

File Name: CPmavl01

Instrument Type:
Scintrex MP-2:
Geonics EM-16:
Station:
Data Types: #1
#2
#3

Details:
Corrected Total Field Magnetic Values
In-Phase and Quadrature Values
Seattle, Facing Easterly
Corrected Total Field Magnetic Values
VLF-EM In Phase Values (percent)
VLF-EM Quadrature Values (percent)

N/S	E/W	#1	#2	#3
line 950				
950	300	55983	7	-7
950	312.5	55984	8	-5
950	325	55989	13	-5
950	337.5	56005	13	-1
950	350	56010	18	1
950	362.5	56076	17	-1
950	375	56084	16	-6
950	387.5	56056	11	-4
950	400	56257	9	-4
950	412.5	56093	8	-4
950	425	56142	7	-6
950	437.5	56113	6	-4
950	450	56158	10	-8
950	462.5	56128	10	-6
950	475	56077	13	-7
950	487.5	56130	10	-6
950	500	56226	10	-6
950	512.5	56262	7	-6
950	525	56438	10	-6
950	537.5	56388	11	-5
950	550	56372	11	-3
950	562.5	56332	12	-4
950	575	56209	7	-5
950	587.5	56081	7	-7
950	600	56028	5	-7
line 925				
925	300	56080	14	-5
925	312.5	56062	15	-3
925	325	55995	17	-2
925	337.5	55983	19	1
925	350	56011	22	2
925	362.5	56009	17	-2
925	375	56036	12	-1
925	387.5	56030	13	-3
925	400	56155	9	-5
925	412.5	56089	5	1
925	425	56063	6	-8
925	437.5	56263	5	-6
925	450	56079	8	-8
925	462.5	56008	7	-8
925	475	56037	12	-8
925	487.5	56075	12	-7
925	500	56276	13	-6
925	512.5	56571	17	-8
925	525	56624	19	-4
925	537.5	56451	17	-4
925	550	56367	9	-7
925	562.5	56311	7	-7
925	575	56057	7	-8
925	587.5	56147	7	-7
925	600	56019	6	-7
line 900				
900	000	56051	3	4
900	025	56042	3	4
900	050	56058	5	6
900	075	56123	3	2
900	100	56193	3	-2
900	125	56208	5	-3
900	150	56383	6	-2
900	175	56623	8	-6
900	200	56694	13	-5
900	225	56193	11	-6
900	250	56058	12	-7
900	275	56001	17	-4
900	300	56023	20	-1
900	312.5	56027		
900	325	56010	21	1
900	337.5	56069		
900	350	56043	18	-2
900	362.5	56036		
900	375	56047	14	-5
900	387.5	55995		
900	400	56123	7	-9
900	412.5	55979	7	-8
900	425	56007	10	-8
900	437.5	56105	14	-8
900	450	56092	11	-7
900	462.5	55984	15	-4
900	475	56027	16	-3
900	487.5	56105	15	-4
900	500	56283	16	-1
900	512.5	56284	14	-3
900	525	56233	0	-8
900	537.5	56171	0	-9
900	550	56220	3	-9
900	562.5	56178	6	-8
900	575	56007	6	-7
900	587.5	55991	7	0
900	600	55984	7	-12
900	625	56057	6	-8
900	650	55940	8	-8
900	675	55947	12	-5
900	700	55976	12	-4
900	725	55972	6	0
900	750	56083	-2	-3
900	775	56057	-1	-2
900	800	56048	0	-2
900	825	56019	6	-2
900	850	56031	4	-2
900	875	56063	3	-3
900	900	56116	7	-2
900	925	56123	12	2
900	950	56123	-1	-2
900	975	56145	1	0
900	1000	56221	5	1
900	1025	56254	6	8
900	1050	56383	1	4
900	1075	56395	-4	2
900	1100	56485	0	0
900	1125	56594	0	-2
900	1150	56740	7	-2
900	1175	56900	7	2
900	1200	57046	8	-1
900	1225	57369	10	1
900	1250	57552	9	4
line 875				
875	300	56034	22	1
875	312.5	56055	20	2
875	325	56077	18	0

875	337.5	56101	15	-2
875	350	56150	15	-1
875	362.5	56092	13	-4
875	375	56044	11	-6
875	387.5	56107	11	-8
875	400	56091	14	-9
875	412.5	56020	12	-7
875	425	56027	15	-8
875	437.5	56028	15	-6
875	450	56015	18	-6
875	462.5	55993	20	-3
875	475	56016	19	0
875	487.5	56043	13	-4
875	500	56086	8	-6
875	512.5	56069	6	-8
875	525	56233	3	-8
875	537.5	56214	3	-7
875	550	56436	5	-8
875	562.5	55979	7	-8
875	575	55955	5	-7
875	587.5	55980	5	-10
875	600	56010	7	-10
line 850				
850	300	56019	27	1
850	312.5	56063	23	0
850	325	56074	20	-1
850	337.5	56149	20	-1
850	350	56179	15	-2
850	362.5	56203	17	-3
850	375	56133	12	-5
850	387.5	56380	12	-7
850	400	56143	16	-7
850	412.5	55951	20	-6
850	425	56016	22	-5
850	437.5	56009	19	-7
850	450	55984	18	-4
850	462.5	55971	17	-2
850	475	55987	7	-5
850	487.5	55984	4	-5
850	500	56012	4	-5
850	512.5	56053	3	-4
850	525	56106	3	-4
850	537.5	56441	7	-4
850	550	56445	10	-4
850	562.5	55870	10	-6
850	575	55938	5	-12
850	587.5	56027	12	-13
850	600	56032	12	-10
line 825				
825	300	56013	21	-1
825	312.5	56015	19	0
825	325	56148	20	-3
825	337.5	56638	18	-3
825	350	56338	19	-3
825	362.5	56201	15	-4
825	375	56101	16	-3
825	387.5	56076	19	0
825	400	56034	18	-6
825	412.5	56005	19	-2
825	425	55995	19	-1
825	437.5	55960	17	0
825	450	55945	11	-2
825	462.5	55944	7	-2
825	475	55952	3	-4
825	487.5	55977	5	-3
825	500	56009	2	-3
825	512.5	56086	3	-2
825	525	56098	3	0
825	537.5	56377	11	-2
825	550	56271	8	-4
825	562.5	55957	6	-11
825	575	55987	14	-12
825	587.5	56023	21	-11
825	600	56003	17	-9
line 800				
800	000	56001	10	-5
800	025	56153	12	0
800	050	56156	17	-6
800	075	56146	18	-4
800	100	56040	22	-3
800	125	55782	27	2
800	150	56071	22	-2
800	175	56066	21	-10
800	200	56090	35	-8
800	225	56696	24	-3
800	250	56165	24	-3
800	275	56212	23	-7
800	300	56037	22	-1
800	325	56197	24	-7
800	350	56020	22	-4
800	375	56006	20	-4
800	400	55971	20	-3
800	412.5	55937	20	-2
800	425	55970	13	-5
800	437.5	55949	16	-7
800	450	55883	4	-6
800	462.5	55897	5	-6
800	475	55901	8	-5
800	487.5	55939	6	3
800	500	55957	15	-3
800	512.5	56045	2	-3
800	525	56109	7	-4
800	537.5	56058	4	-9
800	550	56197	13	-17
800	562.5	55931	16	-18
800	575	56047	24	-12
800	587.5	55961	30	-8
800	600	56020	32	-8
800	625	55916	34	-7
800	650	55992	17	-7
800	675	55955	15	-6
800	700	55968	9	-3
800	725	56014	3	-2
800	750	55993	-1	-5
800	775	56031	8	-2
800	800	56031	14	-3
800	825	56054	14	-3
800	850	56034	6	0
800	875	56057	8	1
800	900	56115	0	2
800	925	56113	-3	1
800	950	56079	-5	0
800	975	56102	-6	-2
800	1000	56163	-1	1
800	1025	56184	-1	4
800	1050	56200	-1	2
800	1075	56296	-3	-1
800	1100	56390	-3	-2
800	1125	56149	1	-1
800	1150	56482	9	0
800	1175	56532	14	0
800	1200	56649	13	-2
800	1225	56771	12	-3
800	1250	56961	12	-3
line 300				
300	000	55963	-12	-6
300	025	55987	-19	-12
300	050	55984	-15	-5
300	075	56061	-22	-11
300	100	56155	-24	-10

300	125	56506	-39	-19
300	150	56152	-29	-19
300	175	56307	-21	-19
300	200	56016	-16	-20
300	225	55823	-8	-19
300	250	56045	1	-10
300	275	56006	-30	-7
300	300	55978	-29	-2
300	325	55840	-11	10
300	350	55830	4	32
300	375	55861	9	26
300	400	55858	15	26
300	425	56133	9	17
300	450	56205	-7	5
300	475	56215	-19	-1
300	500	55891	-10	-3
300	525	55951	6	-3
300	550	55954	11	1
300	575	55959	13	0
300	600	55868	10	1
300	625	55787	12	2
300	650	55817	-1	8
300	675	55868	-23	12
300	700	56049	-37	15
300	725	55963	-31	18
300	750	55945	-36	13
300	775	55896	-40	8
300	800	55972	-40	14
300	825	55966	-31	16
300	850	55937	-28	10
300	875	56004	-28	14
300	900	55999	-24	24
300	925	55968	-9	13
300	950	55935	-7	10
300	975	55930	-2	7
300	1000	55863	2	6
300	1025	55914	5	4
300	1050	55834	15	3
300	1075	55966	22	7
300	1100	55879	15	5
300	1125	55942	15	4
300	1150	55956	11	2
300	1175	56019	8	1
300	1200	56086	6	0
300	1225	56055	9	4
300	1250	56128	9	4
line 100				
100	000	55999	50	8
100	025	55907	41	8
100	050	56056	46	6
100	075	56006	32	4
100	100	56032	39	12
100	125	56248	20	5
100	150	56300	19	6
100	175	56297	19	8
100	200	56412	16	2
100	225	56087	14	0
100	250	56114	9	0
100	275	56168	14	-2
100	300	56184	15	2
100	325	56064	24	8
100	350	55978	7	3
100	375	56066	-5	-3
100	400	55907	-10	-8
100	425	55000	-1	-6
100	450	56023	0	-5
100	475	55987	1	-4
100	500	55960	2	-6
100	525	56207	7	-3
100	550	55911	5	0
100	575	56066	-2	-2
100	600	56404	-13	-2
100	625	56056	-19	-2
100	650	55587	-25	-3
100	675	55793	-21	1
100	700	55812	-13	1
100	725	55927	-10	2
100	750	56024	-8	-2
100	775	56061	-4	-3
100	800	55934	-2	-2
100	825	55814	0	-3
100	850	55967	5	-4
100	875	55976	-9	-4
100	900	56141	8	3
100	925	56064	11	-8
100	950	56112	20	-2
100	975	55981	20	-3
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100	1025	56055	19	-3
100	1050	55938	18	-6
100	1075	55979	19	-5
100	1100	55930	17	-1
100	1125	55925	12	-1
100	1150	55982	12	1
100	1175	55985	3	4
100	1200	55983	-10	6
100	1225	56064	-17	6
100	1250	56128	-8	-10
line -100				
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-100	025	56009	15	6
-100	050	56022	14	-3
-100	075	56107	11	-2
-100	100	56206	6	4
-100	125	56232	-2	1
-100	150	56279	-10	-5
-100	175	56362	-11	-7
-100	200	56270	-10	-3
-100	225	55395	-13	-9
-100	250	56002	-12	-8
-100	275	56064	-5	-4
-100	300	55986	3	-1
-100	325	56118	1	0
-100	350	55973	-6	-7
-100	375	57146	-8	-9
-100	400	55892	-9	-15
-100	425	56058	-4	-12
-100	450	55869	-5	-10
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-100	500	56133	-7	-8
-100	525	56452	-4	-5
-100	550	56187	-1	2
-100	575	56102	-15	4
-100	600	56235	-22	-2
-100	625	56062	-21	-8
-100	650	55869	-8	-9
-100	675	56090	-2	-10
-100	700	56129	6	-12
-100	725	56139	Q6	-12
-100	750	55696	15	-13
-100	775	55776	21	-10
-100	800	55813	24	-6
-100	825	55819	27	-4
-100	850	55805	35	-2
-100	875	55884	42	1
-100	900	55936	30	-7
-100	925	55925	16	-12
-100	950	55987	19	-13
-100	975	55988	19	-10
-100	1000	55946	19	-9

-100	1025	56009	22	-7
-100	1050	56185	27	-8
-100	1075	55874	22	-5
-100	1100	55827	12	-9
-100	1125	55856	15	-5
-100	1150	55924	14	3
-100	1175	55902	-3	4
-100	1200	55946	-9	2
-100	1225	55982	-7	1
-100	1250	56041	-4	2
line -200				
-200	000	55956	13	2
-200	025	55977	8	-1
-200	050	56002	8	2
-200	075	56042	-3	-2
-200	100	56251	-5	-2
-200	125	56233	-9	-3
-200	150	56281	-16	-5
-200	175	56549	-19	-8
-200	200	56280	-15	-8
-200	225	56055	-9	-6
-200	250	55908	-5	-5
-200	275	56103	-3	-7
-200	300	56062	-3	-4
-200	325	56291	5	-6
-200	350	55775	-11	-6
-200	375	56022	-4	-12
-200	400	55905	-3	-15
-200	425	55830	-1	-10
-200	450	56020	-5	-10
-200	475	56290	-3	-5
-200	500	57073	-6	-3
-200	525	56622	-3	-1
-200	550	56091	-5	2
-200	575	55712	-11	-6
-200	600	56052	-10	-7
-200	625	56205	-4	-3
-200	650	56112	-4	-5
-200	675	55894	-2	-3
-200	700	56129	22	-16
-200	725	55964	29	-9
-200	750	55887	24	-12
-200	775	55920	18	-14
-200	800	55858	0	-17
-200	825	55863	9	-16
-200	850	55892	20	-9
-200	875	55943	23	-4
-200	900	55809	22	-5
-200	925	55891	7	-17
-200	950	55981	14	-14
-200	975	56048	17	-8
-200	1000	56034	17	-4
-200	1025	55912	18	-2
-200	1050	55861	11	-2
-200	1075	55848	8	-3
-200	1100	55873	11	3
-200	1125	55886	5	5
-200	1150	55891	-10	2
-200	1175	55903	-12	3
-200	1200	55927	-12	4
-200	1225	55925	-12	3
-200	1250	55956	-9	2
line -300				
-300	000	55939	10	0
-300	025	55930	5	0
-300	050	56051	1	3
-300	075	55789	-4	-2
-300	100	56052	-1	-3
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-300	175	56364	-22	-10
-300	200	56287	-12	-14
-300	225	56302	-5	-4
-300	250	56035	0	-11
-300	275	55961	-2	-17
-300	300	55931	4	-4
-300	325	56203	8	-11
-300	350	56012	10	-2
-300	375	55855	10	-8
-300	400	55972	10	-3
-300	425	55962	5	-4
-300	450	56007	-1	-3
-300	475	56121	-9	0
-300	500	56321	-15	0
-300	525	56467	-19	-1
-300	550	56627	-13	5
-300	575	55893	-13	-6
-300	600	56018	-15	-3
-300	625	55960	-14	-4
-300	650	55912	-10	-5
-300	675	55836	-1	-3
-300	700	55784	9	11
-300	725	55801	8	-4
-300	750	55842	1	-5
-300	775	55833	-10	-5
-300	800	55863	-25	-16
-300	825	55917	-19	-22
-300	850	55963	-8	-16
-300	875	55954	-2	-12
-300	900	55999	6	-14
-300	925	55821	15	-12
-300	950	55842	19	-5
-300	975	55931	15	-2
-300	1000	55954	6	-3
-300	1025	55906	2	-4
-300	1050	55928	3	-3
-300	1075	55893	3	-1
-300	1100	55894	1	0
-300	1125	55886	-4	2
-300	1150	55892	-6	3
-300	1175	55939	-4	3
-300	1200	55923	-4	2
-300	1225	55930	-2	2
-300	1250	55928	-7	2
line -400				
-400	000	55939	-2	4
-400	025	55947	-9	-2
-400	050	55993	-8	-2
-400	075	56005	-1	-2
-400	100	55759	-7	-6
-400	125	56149	-3	-7
-400	150	56193	0	-6
-400	175	56180	1	-3
-400	200	56323	3	-5
-400	225	56118	1	-6
-400	250	56260	0	-9
-400	275	56130	4	-5
-400	300	56354	6	0
-400	325	56116	10	2
-400	350	56034	9	2
-400	375	56089	-2	4
-400	400	56000	-9	2
-400	425	56019	-25	2
-400	450	56063	-26	2
-400	475	56059	-23	3
-400	500	56257	-19	3
-400	525	56321	0	3
-400	550	56396	-14	0
-400	575	55959	7	0
-400	600	55941	8	-2

-400	625	55905	4	-2
-400	650	55862	3	-3
-400	675	55894	-1	-8
-400	700	55919	-9	-11
-400	725	55881	-3	-13
-400	750	55897	4	-10
-400	775	55888	12	-10
-400	800	55867	14	-16
-400	825	55970	26	-15
-400	850	56039	26	-13
-400	875	55927	33	-10
-400	900	55878	22	-6
-400	925	55873	10	-2
-400	950	55849	-11	-1
-400	975	55891	-15	1
-400	1000	55911	-11	-2
-400	1025	55897	-8	-2
-400	1050	55922	-1	2
-400	1075	55906	0	3
-400	1100	55883	-5	2
-400	1125	55884	-10	1
-400	1150	55888	-2	4
-400	1175	55876	-5	3
-400	1200	55881	-12	1
-400	1225	55909	-14	-1
-400	1250	55912	-12	-1
baseline 1250				
1250	1000	57305		
1250	975	57264		
1250	950	57500		
1250	925	57601		
1250	900	57552		
1250	875	57099		
1250	850	57109		
1250	825	57048		
1250	800	56981		
1250	775	56799		
1250	750	56798		
1250	725	56657		
1250	700	56527		
1250	675	56483		
1250	650	56403		
1250	625	56313		
1250	600	56321		
1250	575	56391		
1250	550	56316		
1250	525	56253		
1250	500	56230		
1250	475	56209		
1250	450	56098		
1250	425	55964		
1250	400	56081		
1250	375	56134		
1250	350	56104		
1250	325	56144		
1250	300	56128		
1250	275	56075		
1250	250	56077		
1250	225	56090		
1250	200	56059		
1250	175	56141		
1250	150	56135		
1250	125	56117		
1250	100	56084		
1250	075	56121		
1250	050	56102		
1250	025	56067		
1250	000	56076		
1250	-025	56093		
1250	-050	56057		

1250	-075	56024
1250	-100	56041
1250	-125	56050
1250	-150	56017
1250	-175	55975
1250	-200	55956
1250	-225	55955
1250	-250	55934
1250	-275	55921
1250	-300	55928
1250	-325	55929
1250	-350	55925
1250	-375	55929
1250	-400	55912

APPENDIX III

GEOPHYSICAL EQUIPMENT SPECIFICATIONS

MP-2 PROTON PRECESSION MAGNETOMETER

Resolution:	1 gamma
Total Field Accuracy:	± gamma over full operating range
Range:	20,000 to 100,000 gammas in 25 overlapping steps.
Internal Measuring Program:	A reading appears 1.5 seconds after depression of Operate Switch & remains displayed for 2.2 secs. Recycling feature permits automatic repetitive readings at 3.7 sec. intervals.
External Trigger:	External trigger input permits use of sampling intervals longer than 3.7 seconds.
Display:	5 digit LED readout displaying total magnetic field in gammas or normalized battery voltage.
Data Output:	Multiplied precession frequency and gate time outputs for base station recording using interfacing optionally available from Scintrex.
Gradient Tolerance:	Up to 5,000 gammas/meter.
Power Source:	8 size D cells ≈25,000 readings at 25° C under reasonable conditions.
Sensor:	Omnidirectional, shielded, noise-cancelling dual coil, optimized for high gradient tolerance.
Harness:	Complete for operation with staff or back pack sensor.
Operating Temperature Range:	-35 to +60° C.
Size:	Console, 8 x 16 x 25 cm; Sensor, 8 x 15 cm; Staff 30 x 66 cm;
Weights:	Console, 1.8 kg; Sensor, 1.3 kg; Staff, 0.6 kg;
Manufacturer:	Scintrex 222 Snidercroft Road Concord, Ontario

GEONICS LIMITED
VLF EM 16

Source of Primary Field	VLF transmitting stations
Transmitting Stations Used:	Any desired station frequency can be supplied with the instrument in the form of plug-in tuning units. Two tuning units can be plugged in at one time. A switch selects either station.
Operating Frequency Range:	About 15-25 Hz.
Parameters Measured:	1- The vertical in-phase component (tangent of the tilt angle of the polarization ellipsoid). 2- The vertical out-of-phase (quad -rature) component (the short axis of the polarization ellipsoid compared to the long axis).
Method of Reading:	In-phase from a mechanical inclinometer and quadrature from a calibrated dial. Nulling by audio tone
Scale Range:	In-phase ± 150%; quadrature ±40%
Readability:	±1%
Operating Temperature Range:	-40 to 50° C.
Operating Controls:	ON-OFF switch, battery testing push button, station selector, switch, volume control, quadrature dial ±40%, inclinometer ± 150%
Power Supply:	6 size AA alkaline cells ≈200 hrs.
Dimensions:	42 x 14 x 9 cm (16 x 5.5 x 3.5 in)
Weight:	1.6 kg. (3.5 lbs)
Instrument Supplied With:	Monotonic speaker, carrying case, manual of operation, 3 station selector plug-in tuning units (additional frequencies are optional) set of batteries.
Manufacturer:	Geonics Limited 1745 Meyerside Drive/Unit 8 Mississauga, Ontatio L5T 1C5

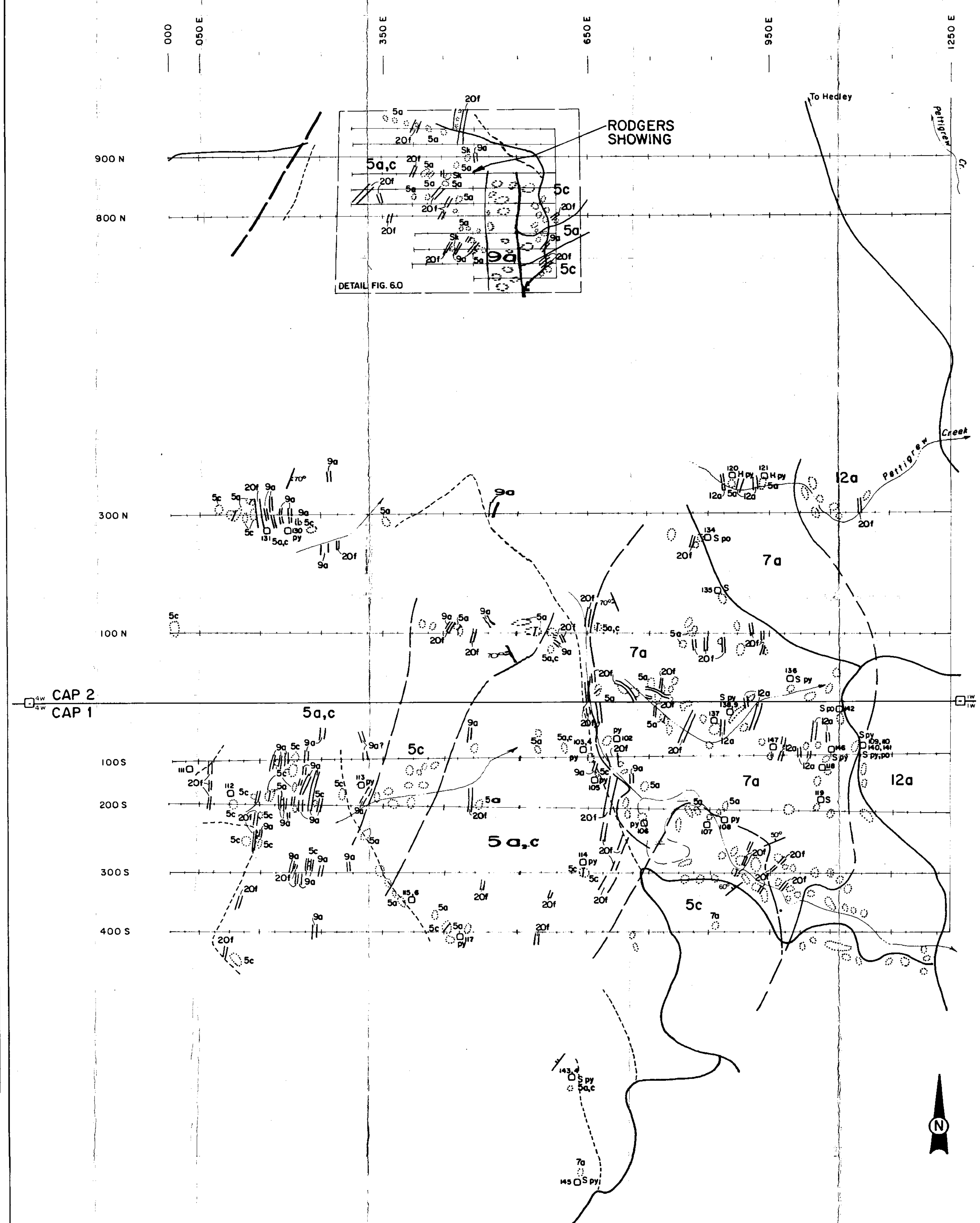
APPENDIX IV

ROCK SAMPLE DESCRIPTIONS

Sample No.	Width cm	Au ppb	Ag ppm	As ppm	Cu ppm	Pb ppm	Zn ppm	Description
079	grab	<5	0.4	26	34	<2	52	grey-black, feldspar porphyry dyke? 1-5% pyrite
080	grab	<5	0.2	<2	38	<2	64	light grey-black siliceous dyke? Locally to 20% pyrite
081	grab	5	0.6	<2	44	<2	28	dark grey-green sugary textured dyke, 1% pyrite along margin
082	grab	5	0.2	<2	35	6	142	grey siliceous dyke, 1-5% pyrite
083	grab	<5	<0,2	12	24	<2	56	dark grey-green limestone, sugary textured, 5% pyrite, altered?
084	grab	<5	<0.2	<2	25	<2	40	grey siliceous dyke, 1-5% pyrite
085	grab	<5	0.2	<2	15	<2	28	reddish altered limestone, 1 mm fractures with calcite, near dyke
086	grab	<5	<0.2	<2	9	6	62	grey-white hornfelsed argillite, silicified, 1% fine grained sulphides
087	float	<5	0.2	<2	8	126	132	white, grey, green skarn, minor white calcite, limestone
088	grab	<5	2.6	<2	205	376	4220	pale green, grey skarn, white calcite, black 1% sphalerite, pyrite,
089	grab	<5	4.0	<2	206	568	2510	grey, green skarn, calcite, ½% sphalerite, trace galena, pyrite
090	grab	<5	1.4	<2	49	230	2070	green skarn, brown garnet, white calcite, ½% sphalerite, limonite
091	float	<5	0.6	<2	12	44	7530	green skarn, brown garnet, white calcite, limonite along fractures
092	float	<5	<0.2	<2	<1	<2	160	green skarn, minor white calcite, no sulphides
093	select	<5	8.8	<2	679	760	1.57%	grey, white skarn, 1% sphalerite, trace chalcopyrite, limonite
094	grab	<5	3.6	<2	450	76	468	boulders, grey, green skarn, 1% pyrite, trace chalcopyrite, limonite
095	grab	<5	<0.2	<2	7	4	388	grey, bleached, hornfeled argillite, rusty fractures
096	grab	<5	0.6	<2	23	6	94	grey siliceous dyke? 1-10% pyrite, minor, orange limestone
097	grab	<5	0.2	8	102	<2	40	grey, hornfelsed argillite, 1-5% pyrite on fractures, minor calcite
098	grab	<5	<0.2	<2	33	2	48	grey, green, fine grained dyke, 3-5% magnetite, Hedley dyke
099	float	<5	0.6	2	102	444	706	weak skarn, white calcite, limonite, trace sphalerite on fractures
100	select	<5	4.4	<2	1	5710	5960	light grey skarn, white calcite, orange limonite
101	float	<5	1.4	<2	38	2000	3720	dark grey, weak skarn, white calcite
102	grab	10	1.2	2	73	20	220	rusty, glassy, hornfelsed argillite, 1-2% pyrite
103	grab	10	1.4	<2	96	6	698	rusty, weakly hornfelsed argillite, calcite on fractures, trace pyrite
104	float	10	0.8	<2	47	18	344	silicified limestone, to 5% pyrite locally
105	float	10	1.4	<2	106	<2	580	silicified limestone, minor argillite, trace to 5% pyrite locally
106	grab	10	1.2	24	60	12	238	rusty argillite, 2% pyrite
107	grab	<5	0.8	<2	81	<2	42	silicified Copperfield breccia, minor argillite, 1% pyrite
108	grab	<5	1.0	10	80	2	118	gey-black, hornfelsed argillite, silicified, to 5% pyrite locally
109	grab	70	1.8	16	81	2	416	white, dark grey, rusty, Copperfield breccia, silicified, 2% pyrite
110	grab	5	1.0	12	63	6	458	grey, white, rusty, Copperfield breccia, silicified, 2% pyrite
111	grab	<5	0.4	18	58	10	162	black limestone, rusty argillite, 2-4 mm calcite veinlets, 2% pyrite
112	*grab*	<5	*0.4*	2	12	10	42	*grey-black limestone, 1-5 mm white calcite veinlets, rusty fractures*
113	grab	<5	<0.2	92	15	6	48	green, grey hornblende dyke, 1-2% pyrite, Hedley dyke?
114	grab	<5	0.8	6	54	16	250	rusty argillite, silicified limestone, 1-10% pyrite
115	float	<5	2.0	26	56	16	40	silicified limestone, glassy argillite, fractures with calcite, pyrite
116	float	<5	0.2	<2	7	10	6	limestone cut by veinlets of black calcite
117	float	15	2.2	16	89	16	286	hornfelsed argillite, limestone, calcite veinlets, 2-4% pyrite
118	grab	<5	1.2	8	39	8	44	light-dark grey silicified? Copperfield breccia, trace pyrite
119	grab	10	1.0	16	61	10	30	light grey silicified? Copperfield breccia, rusty

120	grab	<5	0.4	24	55	12	112	glassy, hornfelsed argillite, rusty, 1-3% pyrite
121	grab	10	0.8	26	93	6	114	glassy, hornfelsed argillite, rusty, 1-3% pyrite
122	grab	<5	<0.2	<2	16	154	158	weak skarn, stronger on fractures, 1-4% pyrite black sulphide?
123	grab	<5	<0.2	<2	23	22	136	grey, green skarn, rusty fractures, brown garnet
124	grab	<5	<0.2	<2	26	14	250	minor grey skarn, 5-10% pyrite,
125	grab	<5	0.2	<2	25	6	176	grey skarn, silicification, 2-5% pyrite, weak green alteration
126	float	<5	<0.2	<2	4	4	18	argillite with quartz veinlets, rusty fractures
127	grab	<5	<0.2	<2	19	10	198	minor green skarn, white calcite, to 5% pyrite
128	grab	<5	0.4	<2	63	6	76	hornfelsed argillite, some silicification, to 5% pyrite
129	grab	<5	<0.2	<2	26	<2	54	bleached, Hedley dyke, rusty on weathered surface
130	grab	<5	0.2	8	46	10	126	rusty argillite, 1-2% pyrite, minor unaltered limestone
131	grab	<5	0.6	10	61	12	100	rusty argillite, 1-3% pyrite, minor unaltered limestone
132	grab	10	0.8	<2	85	8	50	silicified limestone, trace to 5% pyrrhotite, trace of chalcopyrite?
133	grab	5	0.2	<2	36	6	40	selective silicification of limestone, 2-5% pyrrhotite on fractures
134	grab	5	0.4	12	46	<2	64	white, silicified Copperfield breccia, irregular, 1% pyrrhotite
135	grab	10	0.6	10	80	6	42	dark grey siloicified Copperfield breccia, rusty
136	grab	60	2.4	66	56	12	52	dark grey silicified Copperfield breccia, 1-4% pyrite, irregular
137	float	10	1.2	16	85	2	36	grey silicified skarn? minor green, 1-4% pyrite, white calcite
138	grab	50	3.0	74	128	18	38	grey silicified skarn? 2-4% pyrite, trace pale pink alteration
139	grab	20	0.8	10	71	6	26	grey-black silicified skarn? White calcite, 1-4% pyrite
140	grab	<5	0.8	8	45	6	250	grey silicified Copperfield breccia, calcite, trace pyrite, pyrrhotite
141	grab	<5	0.6	<2	78	6	64	grey-black silicified skarn? Copperfield breccia ,1-4% pyrrhotite
142	grab	10	0.8	2	44	2	42	grey silicified skarn, Copperfield breccia, 10% pyrrhotite
143	grab	<5	0.6	<2	35	6	32	grey skarn? Narrow argillite beds, 1/2% pyrite
144	grab	<5	<0.2	<2	10	6	26	white calcite, grey silicified zones, trace sulphides
145	grab	<5	0.6	<2	57	2	28	minor argillite and white marble, grey silicification, trace sulphides
146	grab	5	1.0	<2	43	8	28	grey silicified skarn, Copperfield breccia, pyrite on fractures
147	grab	<5	0.8	<2	17	<2	16	grey silicified skarn, Copperfield breccia, pyrite on fractures

Sample No.	Width cm	Au ppb	Ag ppm	As ppm	Cu ppm	Pb ppm	Zn ppm	Description
079	grab	<5	0.4	26	34	<2	52	grey-black, feldspar porphyry dyke? 1-5% pyrite
080	grab	<5	0.2	<2	38	<2	64	light grey-black siliceous dyke? Locally to 20% pyrite
081	grab	5	0.6	<2	44	<2	28	dark grey-green sugary textured dyke, 1% pyrite along margin
082	grab	5	0.2	<2	35	6	142	grey siliceous dyke, 1-5% pyrite
083	grab	<5	<0,2	12	24	<2	56	dark grey-green limestone, sugary textured, 5% pyrite, altered?
084	grab	<5	<0.2	<2	25	<2	40	grey siliceous dyke, 1-5% pyrite
085	grab	<5	0.2	<2	15	<2	28	reddish altered limestone, 1 mm fractures with calcite, near dyke
086	grab	<5	<0.2	<2	9	6	62	grey-white hornfelsed argillite, silicified, 1% fine grained sulphides
087	float	<5	0.2	<2	8	126	132	white, grey, green skarn, minor white calcite, limestone
088	grab	<5	2.6	<2	205	376	4220	pale green, grey skarn, white calcite, black 1% sphalerite, pyrite,
089	grab	<5	4.0	<2	206	568	2510	grey, green skarn, calcite, ½% sphalerite, trace galena, pyrite
090	grab	<5	1.4	<2	49	238	2070	green skarn, brown garnet, white calcite, ½% sphalerite, limonite
091	float	<5	0.6	<2	12	44	7530	green skarn, brown garnet, white calcite, limonite along fractures
092	float	<5	<0.2	<2	<1	<2	160	green skarn, minor white calcite, no sulphides
093	select	<5	8.6	<2	679	760	1.57%	grey, white skarn, 1% sphalerite, trace chalcopyrite, limonite
094	grab	<5	3.6	<2	450	76	468	boulders, grey, green skarn, 1% pyrite, trace chalcopyrite, limonite
095	grab	<5	<0.2	<2	7	4	388	grey, bleached, hornfeled argillite, rusty fractures
096	grab	<5	0.6	<2	23	6	94	grey siliceous dyke? 1-10% pyrite, minor, orange limestone
097	grab	<5	0.2	8	102	<2	40	grey, hornfelsed argillite, 1-5% pyrite on fractures, minor calcite
098	grab	<5	<0.2	<2	33	2	48	grey, green, fine grained dyke, 3-5% magnetite, Hedley dyke
099	float	<5	0.6	2	102	444	706	weak skarn, white calcite, limonite, trace sphalerite on fractures
100	select	<5	4.4	<2	1	5710	5960	light grey skarn, white calcite, orange limonite
101	float	<5	1.4	<2	38	2000	3720	dark grey, weak skarn, white calcite
102	grab	10	1.2	2	73	20	220	rusty, glassy, hornfelsed argillite, 1-2% pyrite
103	grab	10	1.4	<2	98	6	698	rusty, weakly hornfelsed argillite, calcite on fractures, trace pyrite
104	float	10	0.8	<2	47	18	344	silicified limestone, to 5% pyrite locally
105	float	10	1.4	<2	108	<2	580	silicified limestone, minor argillite, trace to 5% pyrite locally
106	grab	10	1.2	24	60	12	238	rusty argillite, 2% pyrite
107	grab	<5	0.8	<2	81	<2	42	silicified Copperfield breccia, minor argillite, 1% pyrite
108	grab	<5	1.0	10	80	2	118	grey-black, hornfelsed argillite, silicified, to 5% pyrite locally
109	grab	70	1.8	16	81	2	416	white, dark grey, rusty, Copperfield breccia, silicified, 2% pyrite
110	grab	5	1.0	12	63	6	458	grey, white, rusty, Copperfield breccia, silicified, 2% pyrite
111	grab	<5	0.4	18	58	10	162	black limestone, rusty argillite, 2-4 mm calcite veinlets, 2% pyrite
112	grab	<5	0.4	2	12	10	42	grey-black limestone, 1-5 mm white calcite veinlets, rusty fractures
113	grab	<5	<0.2	92	15	6	48	green, grey hornblende dyke, 1-2% pyrite, Hedley dyke?
114	grab	<5	0.8	6	54	16	250	rusty argillite, silicified limestone, 1-10% pyrite
115	float	<5	2.0	26	56	16	40	silicified limestone, glassy argillite, fractures with calcite, pyrite
116	float	<5	0.2	<2	7	10	6	limestone cut by veinlets of black calcite
117	float	15	2.2	16	89	16	266	hornfelsed argillite, limestone, calcite veinlets, 2-4% pyrite
118	grab	<5	1.2	8	39	8	44	light-dark grey silicified? Copperfield breccia, trace pyrite
119	grab	10	1.0	16	61	10	30	light grey silicified? Copperfield breccia, rusty
120	grab	<5	0.4	24	55	12	112	glassy, hornfelsed argillite, rusty, 1-3% pyrite
121	grab	10	0.8	26	93	6	114	glassy, hornfelsed argillite, rusty, 1-3% pyrite
122	grab	<5	<0.2	<2	16	154	158	weak skarn, stronger on fractures, 1-4% pyrite black sulphide?
123	grab	<5	<0.2	<2	23	22	136	grey, green skarn, rusty fractures, brown garnet
124	grab	<5	<0.2	<2	26	14	250	minor grey skarn, 5-10% pyrite,
125	grab	<5	0.2	<2	25	6	176	grey skarn, silicification, 2-5% pyrite, weak green alteration
126	float	<5	<0.2	<2	4	4	18	argillite with quartz veinlets, rusty fractures
127	grab	<5	<0.2	<2	19	10	198	minor green skarn, white calcite, to 5% pyrite
128	grab	<5	0.4	<2	63	6	76	hornfelsed argillite, some silicification, to 5% pyrite
129	grab	<5	<0.2	<2	26	<2	54	bleached, Hedley dyke, rusty on weathered surface
130	grab	<5	0 2	8	46	10	126	rusty argillite, 1-2% pyrite, minor unaltered limestone
131	grab	<5	0.6	10	61	12	100	rusty argillite, 1-3% pyrite, minor unaltered limestone
132	grab	10	0.6	<2	85	8	50	silicified limestone, trace to 5% pyrrhotite, trace of chalcopyrite?
133	grab	5	0.2	<2	36	6	40	selective silicification of limestone, 2-5% pyrrhotite on fractures
134	grab	5	0.4	12	46	<2	64	white, silicified Copperfield breccia, irregular, 1% pyrrhotite
135	grab	10	0.6	10	80	6	42	dark grey siloicified Copperfield breccia, rusty
136	grab	60	2.4	66	56	12	52	dark grey silicified Copperfield breccia, 1-4% pyrite, irregular
137	float	10	1.2	18	85	2	36	grey silicified skarn? minor green, 1-4% pyrite, white calcite
138	grab	50	3.0	74	128	18	38	grey silicified skarn? 2-4% pyrite, trace pale pink alteration
139	grab	20	0.8	10	71	6	26	grey-black silicified skarn? White calcite, 1-4% pyrite
140	grab	<5	0.8	8	45	6	250	grey silicified Copperfield breccia, calcite, trace pyrite, pyrrhotite
141	grab	<5	0.6	<2	78	6	64	grey-black silicified skarn? Copperfield breccia ,1-4% pyrrhotite
142	grab	10	0.8	2	44	2	42	grey silicified skarn, Copperfield breccia, 10% pyrrhotite
143	grab	<5	0.8	<2	35	6	32	grey skarn? Narrow argillite beds, 1/2% pyrite
144	grab	<5	<0.2	<2	10	6	26	white calcite, grey silicified zones, trace sulphides
145	grab	<5	0.6	<2	57	2	28	minor argillite and white marble, grey silicification, trace sulphides
146	grab	5	1.0	<2	43	8	28	grey silicified skarn, Copperfield breccia, pyrite on fractures
147	grab	<5	0.8	<2	17	<2	16	grey silicified skarn, Copperfield breccia, pyrite on fractures



ASSORTED AGES
Minor Intrusions

20	20f Feldspar (± quartz, hornblende) porphyry
MID. JURASSIC Cahill Creek Pluton	
12	12a Quartz monzonite
LATE TRIASSIC Hedley Intrusions	
9	9a Hornblende porphyritic diorite and gabbro
Whistle Formation	
7	7a Limestone boulder breccia (Copperfield breccia)
Stemwinder Formation	
5	5a Argillite; 5c Limestone

- Dyke
- Outcrop
- Geological boundary (defined, assumed)
- Fault
- Bedding, top unknown (inclined, vertical)
- □117 Rock sample location & Nº.

Sk	Calc-silicate skarn
S	Silicified
H	Hornfels
mal	Malachite
cpy	Chalcopyrite
sp	Sphalerite
ga	Galena
po	Pyrrhotite
py	Pyrite
mag	Magnetite

- Boundary claim post
- Grid line
- Road
- Cat trail, overgrown road
- Creek
- Swamp

PROFESSIONAL GEOSCIENTIST PROVINCE OF BRITISH COLUMBIA G.F. CROOKER

GRANT F. CROOKER

CAP PROPERTY

CLAIM GEOLOGY

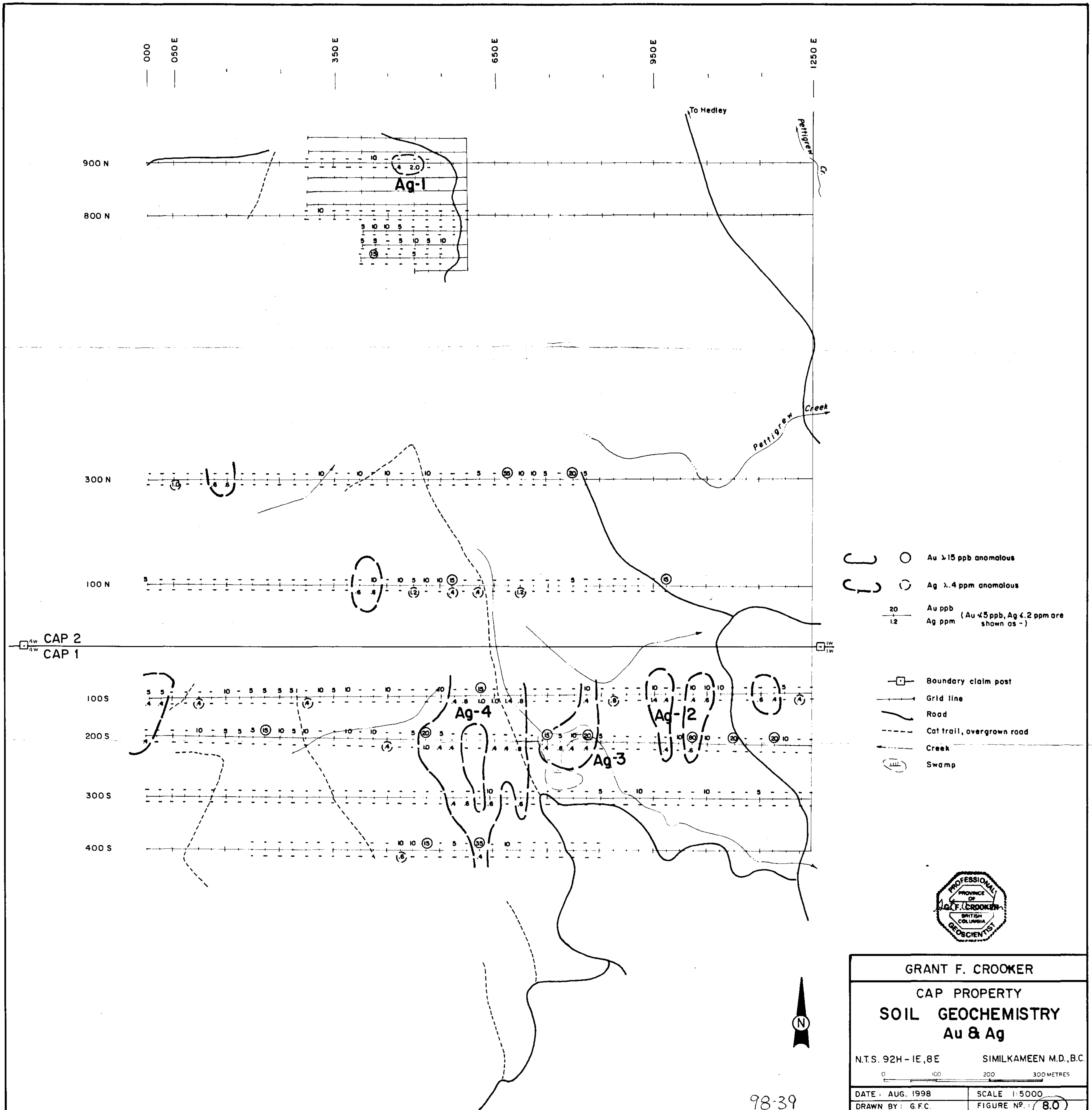
N.T.S. 92H-1E,8E SIMILKAMEEN M.D., B.C.

0 100 200 300 METRES

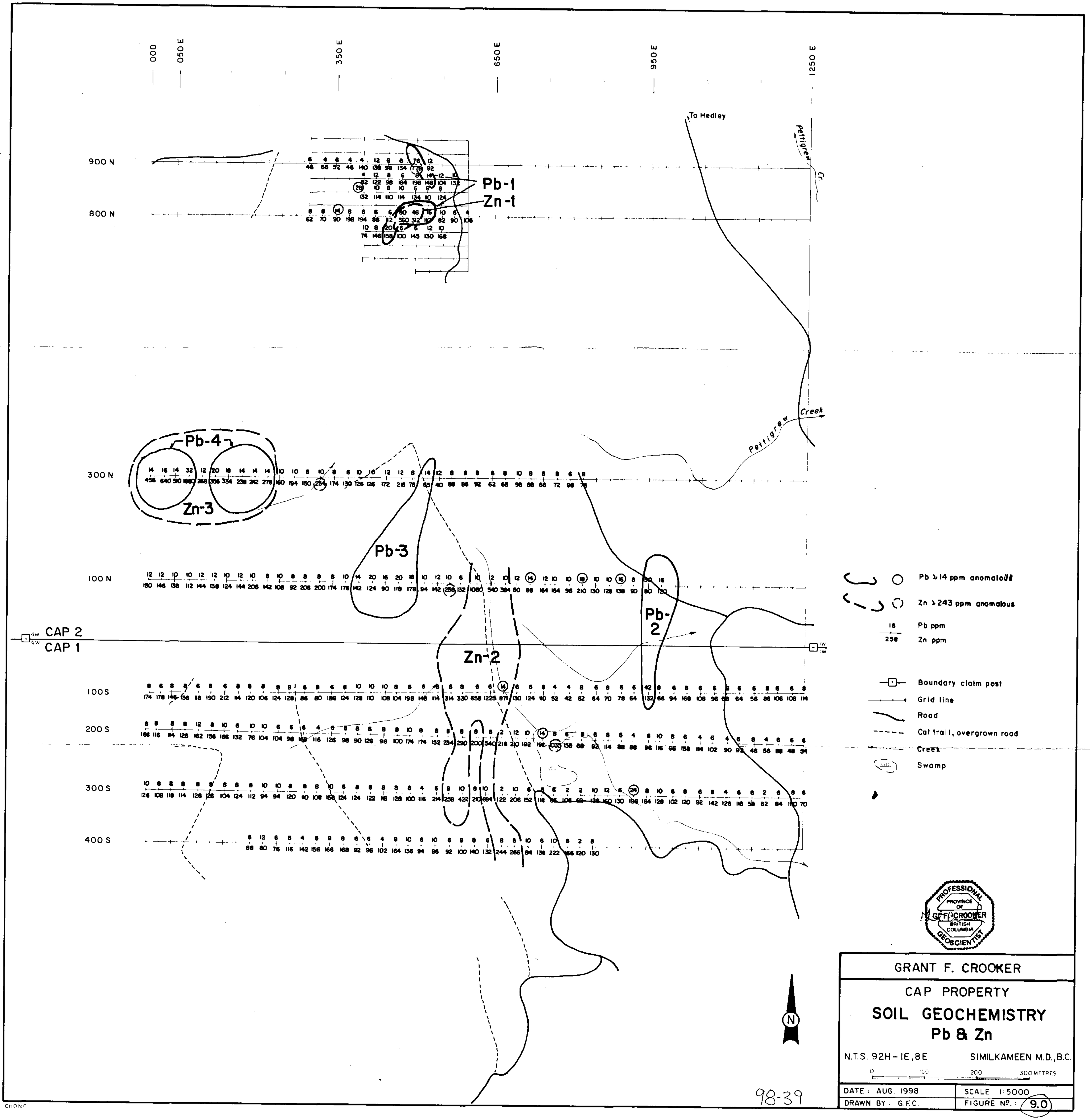
DATE: AUG. 1998 SCALE 1:5000

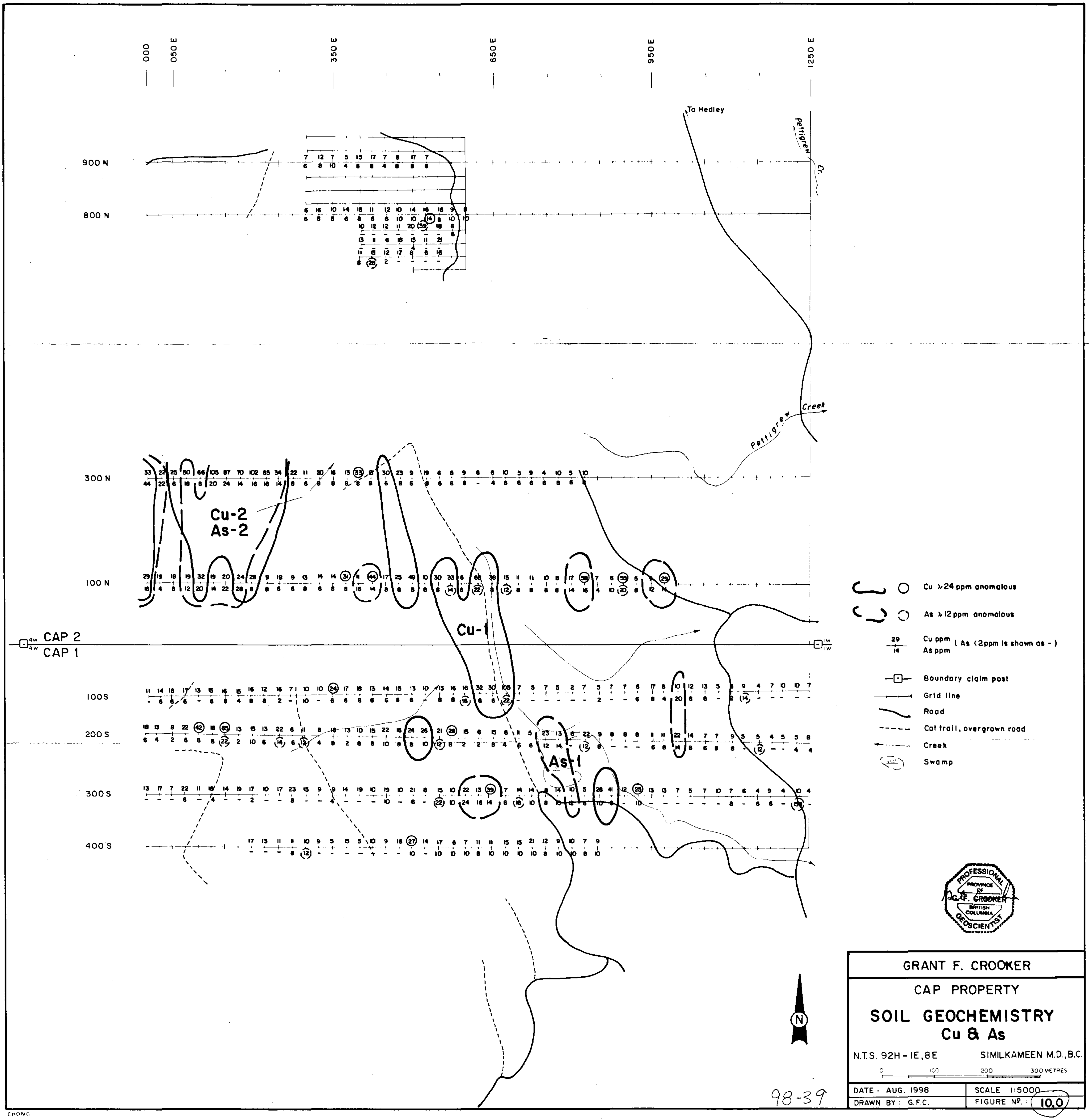
DRAWN BY: G.F.C. FIGURE Nº.: 5.0

CHONG

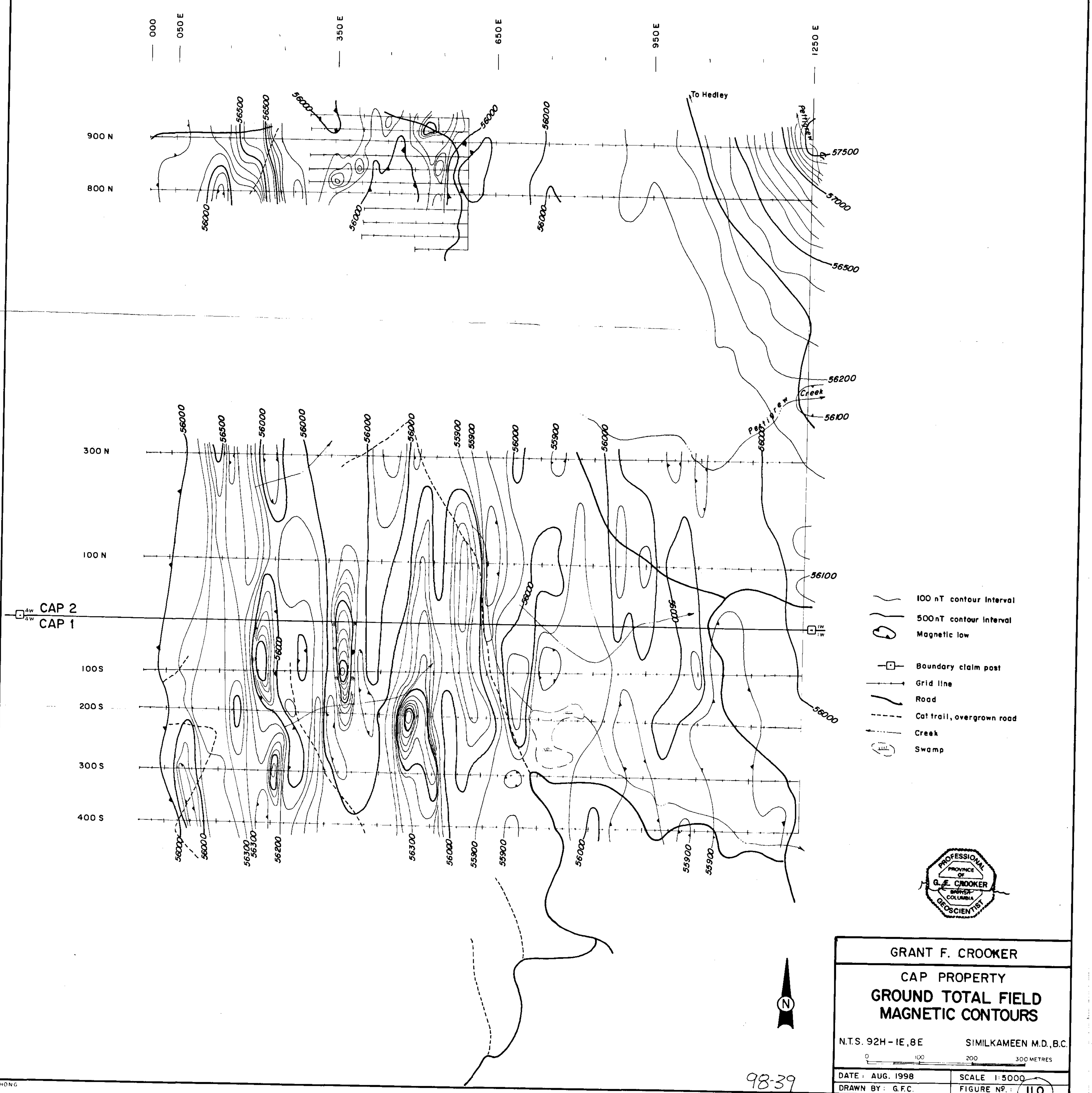


000
050 E
350 E
650 E
950 E
1250 E
To Hedley
Pettigrew Cr.
Pettigrew Creek
900 N
800 N
300 N
100 N
CAP 2
CAP 1
100 S
200 S
300 S
400 S
Ag-1
Ag-2
Ag-3
Ag-4
Au ≥15 ppb anomalous
Ag ≥.4 ppm anomalous
Au ppb
Ag ppm
(Au <5 ppb, Ag <.2 ppm are shown as –)
Boundary claim post
Grid line
Road
Cat trail, overgrown road
Creek
Swamp
PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
G. F. CROOKER
GRANT F. CROOKER
CAP PROPERTY
SOIL GEOCHEMISTRY
Au & Ag
N.T.S. 92H – 1E, 8E
SIMILKAMEEN M.D., B.C.
0 100 200 300 METRES
DATE: AUG. 1998
SCALE 1:5000
DRAWN BY: G.F.C.
FIGURE Nº.: 8.0
98-39


000
050 E
350 E
650 E
950 E
1250 E
900 N
800 N
300 N
100 N
100 S
200 S
300 S
400 S
CAP 2
CAP 1
4W
1W
To Hedley
Pettigrew Cr.
Pettigrew Creek
Pb-1
Zn-1
Pb-2
Pb-3
Pb-4
Zn-2
Zn-3
Pb ≥ 14 ppm anomalous
Zn ≥ 243 ppm anomalous
Pb ppm
Zn ppm
Boundary claim post
Grid line
Road
Cat trail, overgrown road
Creek
Swamp
PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
G. F. CROOKER
GRANT F. CROOKER
CAP PROPERTY
SOIL GEOCHEMISTRY
Pb & Zn
N.T.S. 92H - 1E, 8E
SIMILKAMEEN M.D., B.C.
0
200
300 METRES
DATE: AUG. 1998
SCALE 1:5000
DRAWN BY: G.F.C.
FIGURE Nº.: 9.0
98-39



000
050 E
350 E
650 E
950 E
1250 E
To Hedley
Pettigrew Cr.
Pettigrew Creek
900 N
800 N
300 N
100 N
100 S
200 S
300 S
400 S
CAP 2
CAP 1
Cu-2
As-2
Cu-1
As-1
Cu ≥ 24 ppm anomalous
As ≥ 12 ppm anomalous
29/14 Cu ppm / As ppm (As <2ppm is shown as -)
Boundary claim post
Grid line
Road
Cat trail, overgrown road
Creek
Swamp
PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
G. F. CROOKER
GRANT F. CROOKER
CAP PROPERTY
SOIL GEOCHEMISTRY
Cu & As
N.T.S. 92H-1E,8E
SIMILKAMEEN M.D., B.C.
0 100 200 300 METRES
DATE: AUG. 1998
SCALE 1:5000
DRAWN BY: G.F.C.
FIGURE No.: 10.0
98-39
CHONG



GRANT F. CROOKER

CAP PROPERTY

GROUND TOTAL FIELD MAGNETIC CONTOURS

N.T.S. 92H - 1E, 8E — SIMILKAMEEN M.D., B.C.

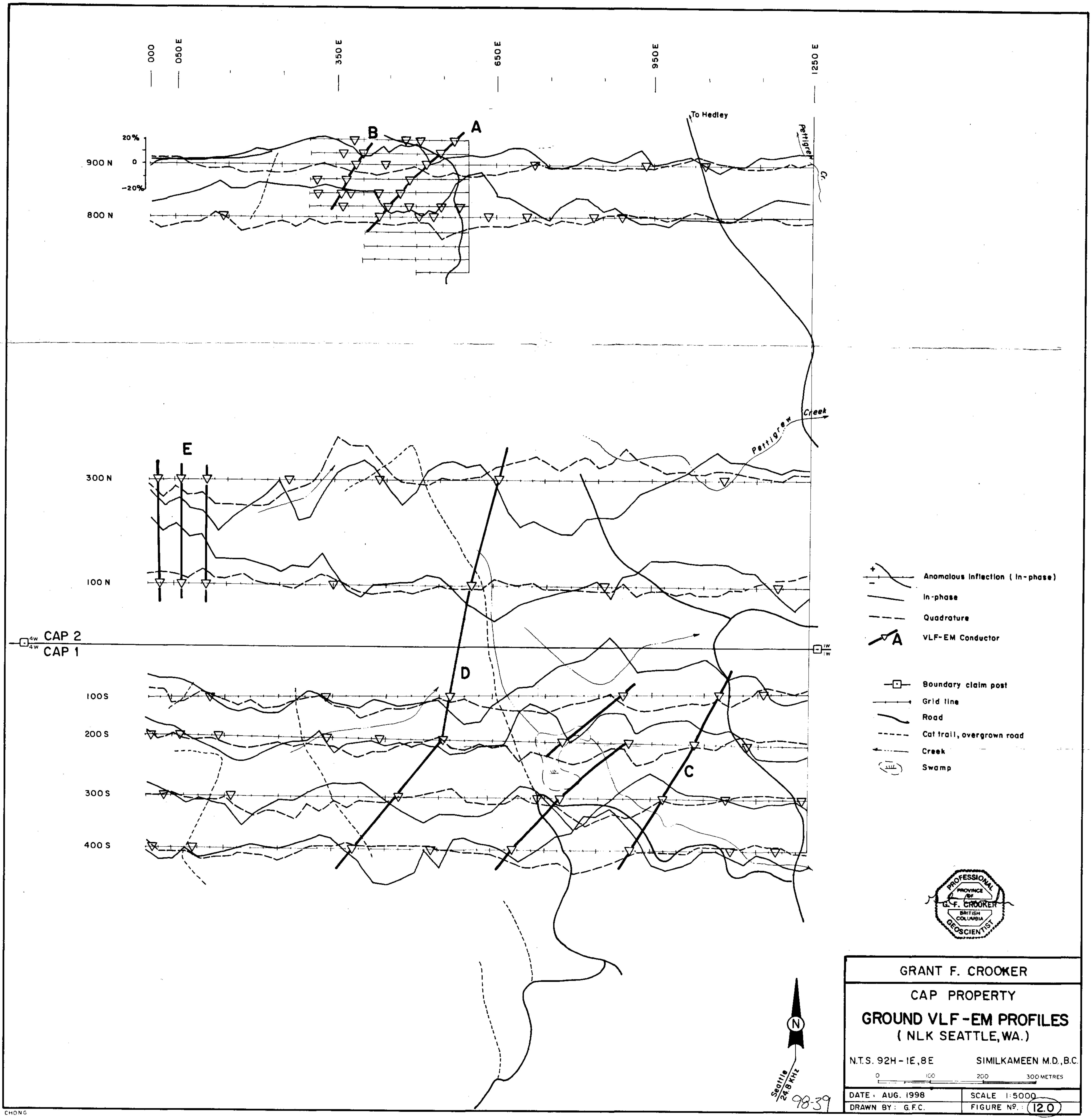
0 100 200 300 METRES

DATE: AUG. 1998 — SCALE 1:5000

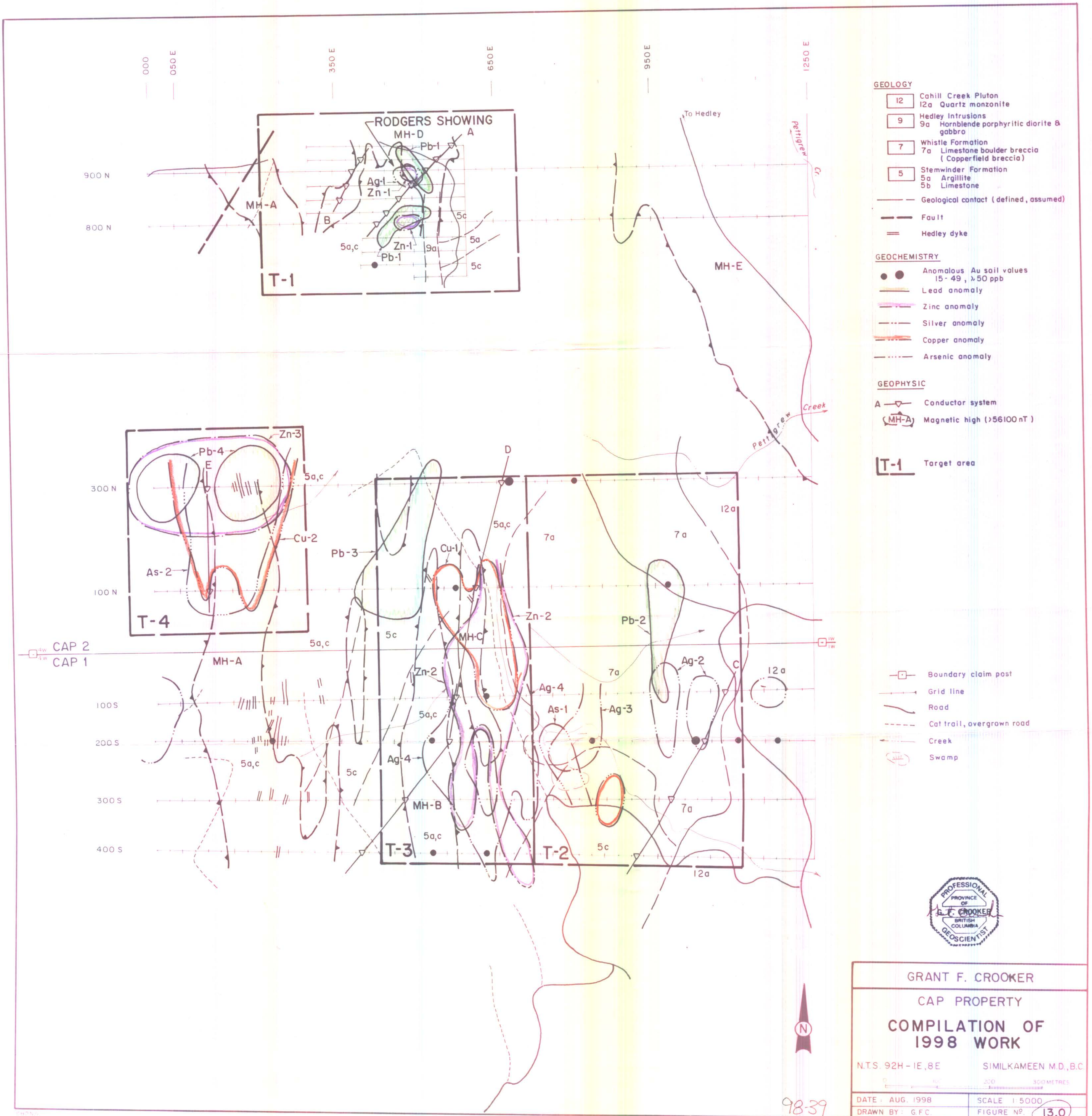
DRAWN BY: G.F.C. — FIGURE No.: 11.0

98-39

CHONG



000
050 E
350 E
650 E
950 E
1250 E
To Hedley
Pettigrew Cr.
Pettigrew Creek
20%
0
-20%
900 N
800 N
300 N
100 N
CAP 2
CAP 1
100 S
200 S
300 S
400 S
A
B
C
D
E
Anomalous inflection (in-phase)
In-phase
Quadrature
VLF-EM Conductor
Boundary claim post
Grid line
Road
Cat trail, overgrown road
Creek
Swamp
PROFESSIONAL
PROVINCE OF
G. F. CROOKER
BRITISH COLUMBIA
GEOSCIENTIST
N
Seattle 24.8 KHz
98-39
GRANT F. CROOKER
CAP PROPERTY
GROUND VLF-EM PROFILES
(NLK SEATTLE, WA.)
N.T.S. 92H-1E,8E
SIMILKAMEEN M.D., B.C.
0
100
200
300 METRES
DATE: AUG. 1998
SCALE 1:5000
DRAWN BY: G.F.C.
FIGURE No.: 12.0
CHONG



000
050 E
350 E
650 E
950 E
1250 E
900 N
800 N
300 N
100 N
100 S
200 S
300 S
400 S
RODGERS SHOWING
MH-D
Pb-1
A
Ag-1
Zn-1
MH-A
B
5c
5a
5a,c
Zn-1
Pb-1
9a
T-1
To Hedley
Pettigrew Cr.
MH-E
Pettigrew Creek
Zn-3
Pb-4
E
5a,c
Cu-2
As-2
T-4
D
12a
5a,c
7a
7a
Cu-1
Pb-3
Zn-2
Pb-2
MH-C
5c
5a,c
CAP 2
CAP 1
MH-A
Ag-2
C
12a
7a
Zn-2
Ag-4
As-1
Ag-3
5a,c
5c
Ag-4
MH-B
7a
5a,c
5c
T-3
T-2
12a
GEOLOGY
12 Cahill Creek Pluton
12a Quartz monzonite
9 Hedley Intrusions
9a Hornblende porphyritic diorite & gabbro
7 Whistle Formation
7a Limestone boulder breccia (Copperfield breccia)
5 Stemwinder Formation
5a Argillite
5b Limestone
Geological contact (defined, assumed)
Fault
Hedley dyke
GEOCHEMISTRY
Anomalous Au soil values 15 - 49, ≥50 ppb
Lead anomaly
Zinc anomaly
Silver anomaly
Copper anomaly
Arsenic anomaly
GEOPHYSIC
Conductor system
Magnetic high (>56100 nT)
T-1 Target area
Boundary claim post
Grid line
Road
Cat trail, overgrown road
Creek
Swamp
PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
G. F. CROOKER
N
GRANT F. CROOKER
CAP PROPERTY
COMPILATION OF 1998 WORK
N.T.S. 92H - 1E, 8E
SIMILKAMEEN M.D., B.C.
300 METRES
98-39
DATE: AUG. 1998
SCALE 1:5000
DRAWN BY: G.F.C.
FIGURE No. 13.0