GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

on the

WP 1A, 2, 3, 5A-9A, W 1-4, 5A, 6, 7, 8A, 9-20,
John 1A, 1-12, Van 1, 2, V 1-4, Paul 1, 2
MINERAL CLAIMS

Hedley Area
Similkameen and Osoyoos Mining Divisions

92H-8E
(49° 19' North Latitude, 120° 10' 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.

November 1999

TABLE OF CONTENTS

TABLES

LIST OF FIGURES

APPENDICES

1.0 SUMMARY

The Hedley project is located 3 to 12 kilometres southwest of Hedley BC, in the Hedley Gold Camp (production 2.5 million ounces) of southern British Columbia. The property consists of thirteen four-post and thirty-six two-post mineral claims covering 218 units (4000 hectares) in the Similkameen and Osoyoos Mining Divisions. Grant F. Crooker of Keremeos, BC is the owner and operator of the property.

Access to the project area is provided by the Sterling Creek forest access road that turns west off Highway 3 eight kilometres west of Hedley. The Sterling Creek road accesses the northern and western portions of the project area, the Pole Cutter branch road the central and southern portions, and the Johns Creek branch road the eastern portions. These are all weather, two wheel drive roads.

The Hedley Gold Camp has a long tradition of mining, with placer mining first carried out on Twenty Mile Creek 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 Nickel Plate and Hedley Mascot mines have been the major producers in the district (to 1986 approximately 51 million grams or 1.6 million ounces of gold). Almost all of this production occurred in the period from 1905 to 1955.

In the 1970's exploration renewed in the Hedley Gold Camp with most of the activity on properties on Nickel Plate Mountain. However exploration was also carried out in other areas of the district. The most important property in the camp is the Nickel Plate mine (Homestake Mining) with skarn hosted gold mineralization. Ore reserves in 1987 were in the order of 9,900,000 tons grading 0.088 ounces gold per ton. The Nickel Plate mine resumed production in August 1987 with a milling rate of 2,700 tons per day using open pit mining and conventional cyanide recovery methods. The mine ceased production in July of 1996 with a reported production of 11,000,000 tonnes of ore yielding approximately 25,630,000 grams gold (824,000 ounces).

A number of gold properties are also located on the south side of the Similkameen River. Historically, the properties on the south side of the Similkameen River were 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.

During the period 1986 through 1997, several mining companies optioned the property from the present owner and conducted exploration programs on the WP claims that generally cover an area west of Pettigrew Creek. These work programs consisted of establishing grid lines and carrying out geological mapping, soil silt and rock geochemical sampling and magnetic, electromagnetic and induced polarization geophysical surveying. Four main target areas were developed by these work programs and subsequently tested by a combination of trenching and/or core drilling. Highlights of the core drilling were anomalous gold and high silver and copper values in drill holes WP001 and WP002 from the Camp zone, and strong sulphide mineralization and hornfels alteration in drill hole WP004 from the Pole Cutter zone. A multi-element (Mo-As-Ag) soil geochemical anomaly and a high chargeabilty induced polarization anomaly were also outlined on the East Pettigrew zone.

During 1998 and 1999 much of the area east of Pettigrew Creek came open for staking, including a number of old showings (Gold Mine, Mission and Blitz). These areas were staked (W, John, Van, V and Paul claim groups) and the 1999 work program concentrated on them.

The Mission showing is located in the south central portion of the Van-2 claim and is underlain by medium grained granodiorite of the Cahill Creek pluton. Mineralization (pyrite, arsenopyrite, sphalerite and minor amounts of tetrahedrite and chalcopyrite) is fracture controlled and contained within three principle shear zones (Barnes, Walker and Winkler) that cut the granodiorite. Work programs have included VLF-EM, magnetic and induced polarization geophysical surveying, soil geochemical sampling (arsenic, silver and gold), geological mapping and two phases of diamond drilling (1980 4 drill holes, 1987 3 drill holes).

The BC Minister of Mines Annual Report for 1936 (page D12) reports gold values ranging between 1.4 and 2.7 grams gold per tonne, with one sphalerite rich sample assaying 6.8 grams per tonne. The diamond drilling indicates the mineralized zones persist to a depth of at least 25 metres with the highest gold assay 0.045 ounce per ton over 90 centimetres, with 0.89 ounce silver per ton and 0.05% zinc (Phendler 1980, AR # 9222).

The Blitz showing is located on the John 1-6 claims and was explored by hand trenches, a winze and a shaft in the 1930's. Foxes Resources Ltd carried out a number of exploration programs between 1983 and 1986 including establishing grid lines, VLF-EM and magnetic geophysical surveying, soil geochemical sampling (gold, silver, arsenic, copper and zinc) and geological mapping. The property is mainly underlain by thinly bedded black argillite that has been locally silicified and veined with quartz. Pyrite, pyrrhotite, arsenopyrite and chalcopyrite occur in zones of silicification and quartz veining. The soil geochemical sampling indicated a broad north trending zinc anomaly over the area of old showings, with sporadic silver, arsenic and gold values. Two grab samples of quartz vein with pyrite and arsenopyrite assayed 3.53 and 2.69 grams per tonne gold (Freeze 1986, AR #15,441).

The 1999 program consisted of stream sediment sampling the main drainages on the eastern portion of the project area, geological mapping and magnetic surveying on the East Pettigrew zone, and prospecting and rock sampling over a number of areas including the East Pettigrew zone, Blitz and Mission showings. The following conclusions can be drawn from the 1999 work program.

1.01 Two of the drainages from which stream sediment samples were collected gave anomalous geochemical values. Sampling of Five A Creek (4 samples) and a subsidiary creek (2 samples) draining the southern portion of the Mo-As-Ag soil geochemical anomaly on the East Pettigrew zone confirmed the soil geochemical anomaly. Two of the samples showed elevated gold values of 10 ppb, and others were anomalous for arsenic (4), molybdenum (6) and copper (5). Ten samples were collected from the upper reaches of Johns Creek and they gave the most strongly anomalous results for gold and pathfinder elements of the stream sediment survey. Three of the samples were anomalous for gold (25, 70, 80 ppb), while others were anomalous for silver (1), arsenic (5), copper (1), molybdenum (1), lead (2), antimony (2) and zinc (8).

1.02 Geological mapping, prospecting and rock sampling were carried out over the main grid on the East Pettigrew zone to determine a) the cause of the high chargeability induced polarization anomaly on lines 1700N and 1900N and b) the cause of the multi-element soil geochemical anomaly (Mo-As-Ag) extending from line 000N to 1900N,. There is a general lack of outcrop over the grid. Most of the grid is underlain by siltstone and tuff of the Whistle Formation (often calcareous), although argillite with narrow interbeds of limestone of the Stemwinder Formation are poorly exposed at the south end of the grid. Rock sampling gave weakly anomalous gold (35 ppb) and pathfinder elements, with the highest geochemical values from a cluster of float samples (122, 123, 135) taken around line 1300N and 1900E. The geophysical and geochemical anomalies have not been explained.

1.03 The magnetic survey over the East Pettigrew zone did not delineate zones of higher magnetism over the multi-element (Mo-As-Ag) soil geochemical anomaly or the high chargeability induced polarization anomaly outlined in 1997. This indicates the two anomalies are not associated with magnetic sulphide minerals such as pyrrhotite.

1.04 Geological mapping, prospecting and rock sampling were carried out on the detailed grid of the East Pettigrew zone to determine the cause of the Au-As soil geochemical anomalies. The grid is underlain by siltstone and tuff of the Whistle Formation, although outcrop is sparse. The highest rock geochemical response was from bleached, fractured, and clay altered tuff float with up to 15% limonite filled boxworks (sample 178) that gave 85 ppb gold, 0.8 ppm silver, 340 ppm arsenic and 317 ppm copper. The cause of the geochemical anomalies has not been adequately explained.

1.05 The auriferous quartz veins exposed at the Blitz showing contain the anomalous pathfinder elements arsenic, molybdenum and silver. These pathfinder elements are identical to the Mo-As-Ag soil geochemical anomaly on the East Pettigrew zone, and similar quartz veins and/or shear zones may be causing the soil geochemical anomaly on the East Pettigrew zone.

1.06 The Van showing consists of angular boulders of tuffaceous siltstone, strongly altered to hornfels, with fracturing and 2 to 4% pyrite and pyrrhotite exposed at two logging landings. One sample of float collected from each landing gave weakly anomalous gold (100 ppb, 75 ppb) and pathfinder element (Ag, As, Cd, Mo, Zn) values.

1.07 The Mission showing is located within granodiorite of the Cahill Creek pluton that has been altered to quartz, sericite, kaolinite, chlorite, carbonate and epidote and cut by fractures and quartz veinlets (1 to 50 millimetres wide) generally striking 104° and dipping steeply north.. The mineralization is contained within one principal zone (Barnes, striking 030°, dipping 70° southeast, 240 metres long, 3 to 5 metres wide) and two subsidiary zones (Walker, striking 060° and dipping 80° northwest, 90 metres long and Winkler striking 060° and dipping 85° southeast, 140 metres long). The quartz veinlets make up to 25% of the altered zone and contain varying amounts of pyrite, arsenopyrite and sphalerite. A selects ample (054) of a 5 centimetre wide quartz veinlet containing 10% pyrite, 5% arsenopyrite and 5% sphalerite gave 4.05 grams gold per tonne, 277 grams silver per tonne, 6.03% zinc and > 10,000 ppm arsenic. A one metre chip sample (055) containing 25% quartz veinlets with 5% pyrite, 2% arsenopyrite and 2% sphalerite gave 0.02 gram gold per tonne, 18.2 grams silver per tonne, 1,000 ppm zinc and > 10,000 ppm arsenic.

1.08 The Blitz showing is underlain by thinly bedded argillite and minor limestone of the Stemwinder Formation. Silicified argillite with 1 to 5 % disseminated pyrite are exposed in a number of old trenches. Quartz veins or stockwork with anomalous gold values, striking approximately 007° and dipping moderately west are exposed at three old workings over a strike length of 900 metres. It is not known if they represent en echelon veins, or a single vein with different character along strike. The highest gold values (058-3.35, 062-8.3 grams gold per tonne) with strongly anomalous arsenic (> 10,000 ppm) came from a 10 to 20 centimetre wide quartz vein with pyrite and arsenopyrite exposed in trenches 7 and 8. Four samples (064-066, 069) of a 60 to 140 centimetre wide quartz vein with pyrite exposed at the winze gave weakly anomalous gold values ranging from 105 to 565 ppb with moderately anomalous arsenic (562 to 1010 ppm). At the shaft, a 120 to 140 centimetre wide zone of oxidized quartz stockwork and breccia with weak shearing and fracturing is exposed in the north wall. The quartz veinlets contain up to ½% disseminated pyrite make up 10 to 75% of the zone. Four samples of the quartz stockwork (073-076) gave weakly anomalous gold values ranging from 50 to 90 ppb, while arsenic (70-746 ppm) and molybdenum (40-120 ppm) were both moderately anomalous.

1.09 The strongest soil geochemical response for gold and pathfinder elements from the samples collected at the Blitz showing was at trenches 7 and 8 that expose the auriferous quartz veins. The anomalous values extend to the south to trench 2, while the geochemical response to the north was much weaker. This indicates the quartz vein extends along strike to the south for at least 50 metres, while an extension to the north is unclear.

The following recommendations are made:

1.11 Prospecting be conducted to determine the source of the anomalous (gold and pathfinder elements) *stream sediment samples from Johns Creek.*

1.12 Prospecting and rock sampling be continued over the high chargeability anomaly and multi-element soil geochemical anomaly on the main grid of the East Pettigrew zone to determine their causes.

1.13 Prospecting and rock sampling be continued over the Au-As soil geochemical anomalies on the detailed grid of the East Pettigrew zone to determine their causes. The soil geochemical anomalies easily accessible from the Johns Creek road be trenched.

1.14 A grid be established over the Van showing, and soil geochemical sampling, magnetic and VLF-EM geophysical surveying and geological mapping be carried out to determine the extent of gold mineralization at the showing. If significant geochemical, geophysical or geological targets are developed they be tested by trenching.

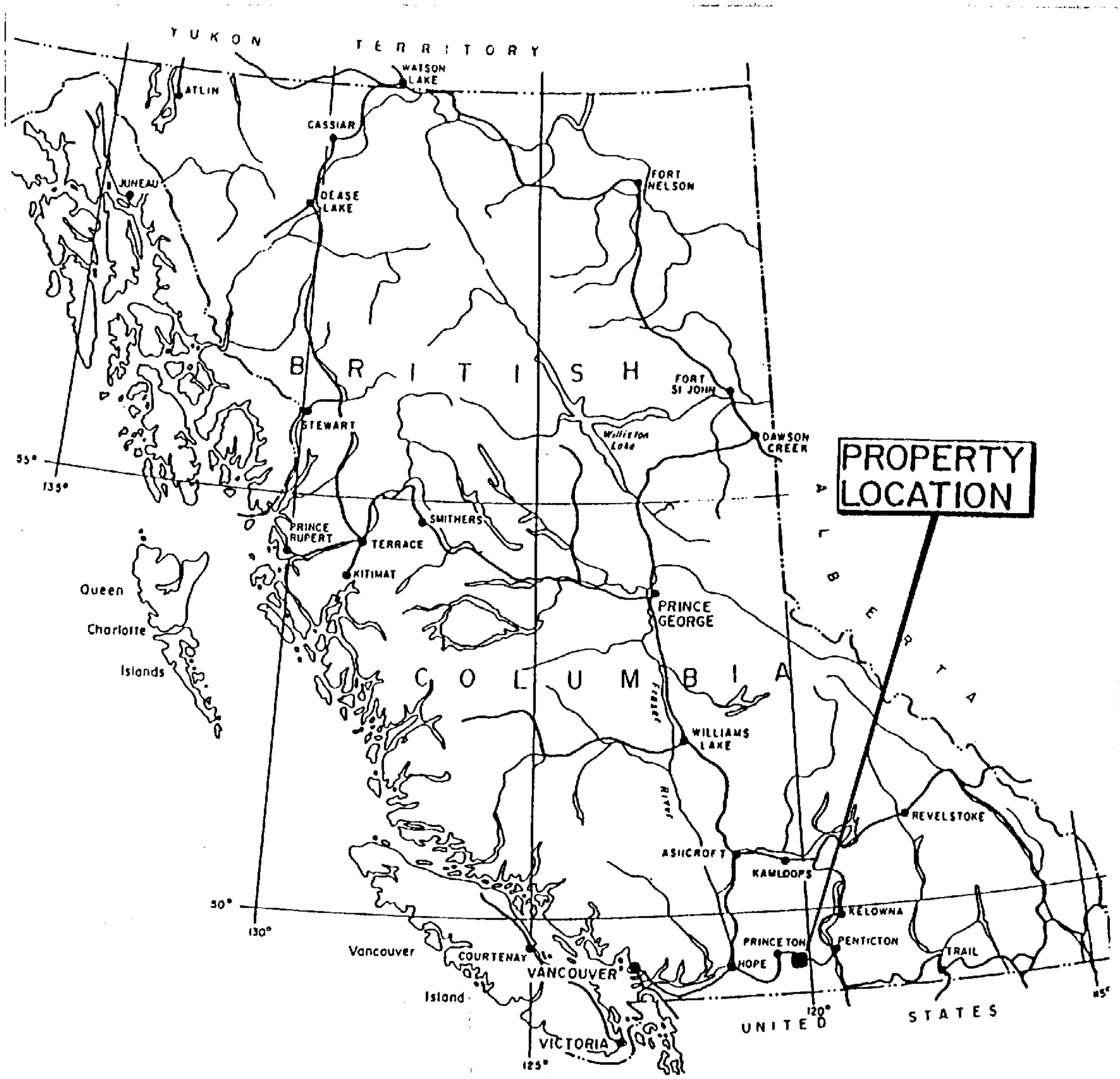
1.15 The Mission showing be evaluated by establishing a grid over the showing and conducting soil geochemical sampling, magnetic and VLF-EM geophysical surveying and geological mapping to develop targets for trenching.

1.16 A new grid be established over the Blitz showings and extended to the east. Soil geochemical sampling, magnetic and VLF-EM geophysical surveying and geological mapping be carried out to develop targets for trenching. Trenching should also be carried out over the showings to develop drill targets.

Respectfully submitted,

PROVINCE OF G. F. CROOKER BRITISH COLUMBIA

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



↑ N

PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
G. F. CROOKER

GRANT F. CROOKER

HEDLEY PROJECT (NTS 92H-8E)
SIMILKAMEEN & OSOYOOS M. DS., B.C.

LOCATION MAP

DATE: OCTOBER, 1999 | FIGURE: 1.0

SCALE: 0 100 200 KILOMETRES

2.0 INTRODUCTION

2.1 GENERAL

Field work was carried out on the Hedley project from October 10 1998 to October 15 1999 by Grant F. Crooker, P.Geo. The work program consisted of stream sediment sampling, magnetic geophysical surveying, soil and rock geochemical sampling, geological mapping and prospecting.

The work program was carried out on the portion of the Hedley project east of Pettigrew Creek. A $ 6,500.00 Prospectors Assistance Grant provided the funding for the work program.

2.2 LOCATION AND ACCESS

The property (Figure 1.0) is located 3 to 12 kilometres southwest of Hedley in southern British Columbia. It lies between 49° 16' and 49° 22' north latitude and 120° 06' and 120° 14' west longitude (NTS 92H-8E).

The main access to the project area is provided by the Sterling Creek forest access road that turns west off Highway 3 eight kilometres west of Hedley. The Sterling Creek road accesses the northern and western portions of the project area, the Pole Cutter branch road the central and southern portions, and the Johns Creek branch road the eastern portions. These are all weather, two wheel drive roads.

A number of old logging roads and cat trails provide access to most areas of the property.

2.3 PHYSIOGRAPHY

The property is located along the eastern edge of the Cascade Mountains and elevation varies from 550 to 2,2024 metres above sea level. Topography varies from gentle to steep, with the steepest areas dropping into the creek bottoms. Outcrop is generally sparse. Pettigrew and Whistle creeks flow northerly through the western and central portions of the property, and Johns Creek flows easterly through the eastern portion of the property. The creeks generally flow all year round.

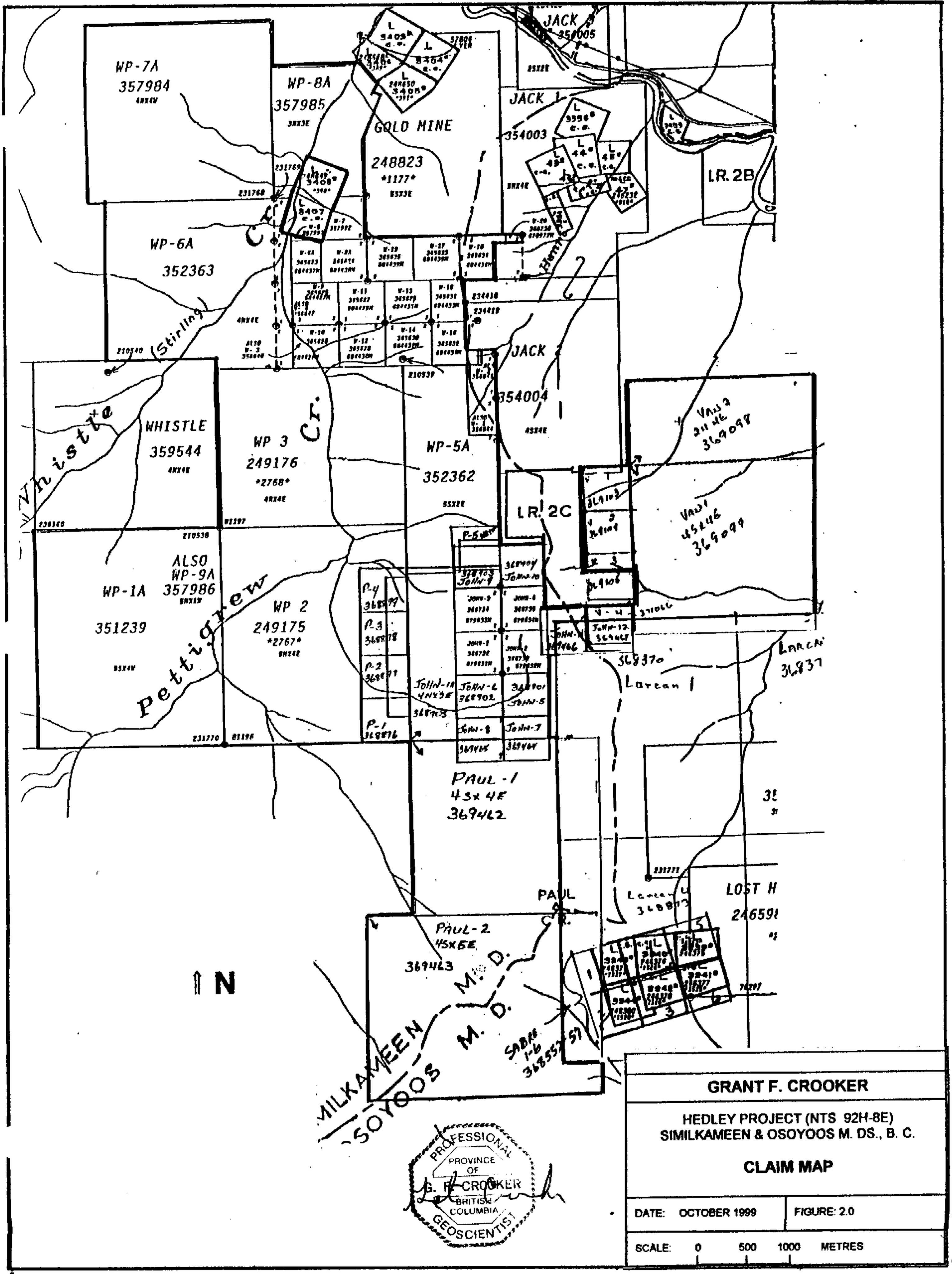
Vegetation varies from open range land to a forest cover of pine, fir, spruce and aspen trees. Many areas of the property were selectively logged 20 or more years ago and clear cutting is being carried out over portions of the property at the present time.

2.4 PROPERTY AND CLAIM STATUS

The property (Figure 2.0) is owned and operated by Grant F. Crooker of Box 404 Keremeos, BC and consists of thirteen four-post and thirty-six two-post mineral claims covering 218 units in the Similkameen and Osoyoos Mining Divisions.

TABLE 1.0 - CLAIM DATA

Claim	Units	Mining Division	Tenure Number	Record Date m/d/y	Expiry Date m/d/y
WP-1A	20	Similkameen	351239	09/22/96	09/22/07
WP-2	20	Similkameen	249175	12/12/86	12/12/07
WP-3	16	Similkameen	249176	12/12/86	12/12/07
WP-5A	10	Similkameen	352362	10/20/96	10/20/07
WP-6A	16	Similkameen	352363	10/22/96	10/22/03
WP-7A	16	Similkameen	357984	07/23/97	07/23/02
WP-8A	9	Similkameen	357985	07/19/97	07/19/02



GRANT F. CROOKER

HEDLEY PROJECT (NTS 92H-8E)
SIMILKAMEEN & OSOYOOS M. DS., B. C.

CLAIM MAP

DATE: OCTOBER 1999 | FIGURE: 2.0

SCALE: 0 500 1000 METRES

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

WP-9A	5	Similkameen	357986	07/29/97	07/29/07
W-1	1	Similkameen	356644	06/03/97	06/03/07
W-2	1	Similkameen	356645	06/03/97	06/03/07
W-3	1	Similkameen	356646	06/17/97	06/17/03
W-4	1	Similkameen	356647	06/17/97	06/17/03
W-5A	1	Similkameen	365623	09/11/98	09/11/03
W-6	1	Similkameen	357991	07/19/97	07/19/03
W-7	1	Similkameen	357992	07/23/97	07/23/03
W-8A	1	Similkameen	365624	09/11/98	09/11/03
W-9	1	Similkameen	365625	09/09/98	09/09/02*
W-10	1	Similkameen	365626	09/09/98	09/09/02*
W-11	1	Similkameen	365627	09/09/98	09/09/02*
W-12	1	Similkameen	365628	09/09/98	09/09/02*
W-13	1	Similkameen	365629	09/09/98	09/09/02*
W-14	1	Similkameen	365630	09/09/98	09/09/02*
W-15	1	Similkameen	365631	09/09/98	09/09/02*
W-16	1	Similkameen	365632	09/09/98	09/09/02*
W-17	1	Similkameen	365633	09/11/98	09/11/02*
W-18	1	Osoyoos	365634	09/11/98	09/11/09*
W-19	1	Similkameen	365635	09/11/98	09/11/02*
W-20	1	Osoyoos	366736	10/27/98	10/27/09*
John-1A	8	Similkameen	368905	04/28/99	04/28/02*
John-1	1	Similkameen	366732	10/26/98	10/26/09*
John-2	1	Similkameen	366733	10/28/98	10/26/09*
John-3	1	Similkameen	366734	10/28/98	10/26/09*
John-4	1	Similkameen	366735	10/28/98	10/26/09*
John-5	1	Similkameen	368901	04/28/99	04/28/10*
John-6	1	Similkameen	368902	04/28/99	04/28/10*
John-7	1	Similkameen	369464	06/01/99	06/01/02*
John-8	1	Similkameen	369465	06/01/99	06/0102*
John-9	1	Similkameen	368903	05/03/99	05/03/02*
John-10	1	Similkameen	368904	05/03/99	05/03/02*
John-11	1	Similkameen	369466	06/01/99	06/01/02*
John-12	1	Osoyoos	369467	06/01/99	06/01/02*
Van-1	16	Osoyoos	369098	05/13/99	05/13/02*
Van-2	8	Osoyoos	369099	05/19/99	05/19/04*
V-1	1	Osoyoos	369103	05/10/99	05/10/02*
V-2	1	Osoyoos	369104	05/10/99	05/10/02*
V-3	1	Osoyoos	369105	05/10/99	05/10/02*
V-4	1	Osoyoos	371066	08/12/00	08/12/02*
Paul-1	16	Similkameen	369462	05/27/99	05/27/02*
Paul-2	20	Similkameen	369463	06/10/99	06/10/02*

* Upon acceptance of this report

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 Gold Camp with most of the activity concentrated on properties on Nickel Plate Mountain. 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 and conventional cyanide gold recovery methods. The mine ceased production in July of 1996 with a reported production of 11,000,000 tonnes of ore yielding approximately 25,630,000 grams gold (824,000 ounces).

A number of gold properties are also located on the south side of the Similkameen River. Historically, the properties on the south side of the Similkameen River were 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.

The Hedley project (Figure 4.0) covers 218 units (4000 hectares) of the Hedley basin (Nicola Group rocks) on the south side of the Similkameen River. Grant F. Crooker owns the claims and is the operator of the project. During the period 1986 through 1996, the present owner conducted a number of exploration programs on the WP claims that generally cover an area west of Pettigrew Creek. These work programs consisted of establishing grid lines and carrying out geological, geochemical and geophysical surveys. A silt sampling program on Pettigrew and Whistle creeks highlighted these exploration programs with heavy metal concentrates returning values to 28000 ppm gold.

Four main target areas were developed by these work programs by a combination of geological, geochemical and geophysical parameters. During 1997 Northpoint Resources Ltd tested these targets by a combination of soil geochemical sampling (2858 samples), induced polarization geophysical surveying (60 kilometres), trenching (16 trenches, 900 lineal metres) or diamond drilling (10 holes, 963.44 metres). The most significant results from the Northpoint program were a multi-element (Mo-As-Ag) soil geochemical anomaly and a high chargeabilty induced polarization anomaly on the East Pettigrew zone, anomalous gold and high silver and copper values in drill holes WP001 and WP002 from the Camp zone, and strong sulphide mineralization and hornfels alteration in drill hole WP004 from the Pole Cutter zone.

During 1998 and 1999 much of the area east of Pettigrew Creek came open for staking, including a number of old showings (Gold Hill, Mission, Blitz) on or near the Hedley project claims. These areas were staked (W, John, Van, V and Paul claim groups) and the 1999 work program concentrated on them. Summary descriptions of these showings, as well as the Snowstorm showing follow.

The Snowstorm showing is located less than 100 metres north of the W-17 claim (Figure 4.0). Documented exploration dates to 1925 and consists of a shaft and a number of old hand dug pits, with a limited amount of bulldozer trenching. Outcrop is sparse over the area, and geology, restricted mostly to the old pits consists of fine grained siliceous sediments and coarser tuffaceous units.

Pits 1 and 2 expose a northwesterly striking shear zone 60 centimetres wide and limonitic. The central part of the zone is bleached, silicified and mineralized with arsenopyrite. It is in part coated with a fine yellow oxide. In Pit 2, a northeasterly striking cross fault, offset by approximately one metre by the northwest striking fault is also partially silicified and has arsenopyrite and the yellow oxide.

In Pit 3, located 30 metres north of Pit 2, a northerly striking shear zone similar in appearance to the shear in Pit 1 and 2 is exposed. This shear may be a faulted segment of the shear exposed in the other pits or a different shear. Pits 4 and 5 expose strong shearing with calcite fragments.

Philex Gold and Energy Corporation collected a number of rock samples from the workings and the results are given in Table 2.0. These results indicate the shear zones contain strongly anomalous gold values over widths of up to 96 centimetres.

TABLE 2.0 - SNOWSTORM SHOWING ROCK GEOCHEMISTRY (JONES 1988)					
SAMPLE NO.	WIDTH M	LOCATION	Au oz/ton	Ag oz/ton	DESCRIPTION
048573	0.75	pit 3	0.110	0.05	shear zone, 15 cm heavy iron oxide, 46 cm iron oxide, weak cerussite, 14 cm yellow gouge
048574	1.52	pit 4	0.004	0.01	shear, massive calcite with scattered limonite fragments
048575	0.15	pit 2	0.354	0.10	slab sulphides on shear surface, coarse pyrite and fine sulphides, grey-green on surface, minor quartz eyes
048576	spec	pit 1 dump	0.136	0.40	oxidized, shattered and bleached, narrow seams red oxide, no sulphides
048578	spec	pit 1 dump	0.496	1.06	cerussite with fine sulphides, may represent 5-7 cm veinlet?
045879	0.38	pit 2	0.124	0.03	bleached shear and iron oxide
045881	0.96	pit 1	0.416	0.49	south wall near base, oxidized shear zone, minor sulphides, cerussite?

The Gold Hill showing is located on the W-18 and W-20 claims (Figure 4.0). The first documented exploration on the Gold Hill showing dates to the middle 1930's and consists of three adits, a shaft, a number of pits and bulldozer trenching. The workings are located within well bedded cherty sediments, argillite and poorly bedded to massive tuffs. Within the sediments are one or more bands or beds of breccia that consist of fragments of wallrock in a calcite-quartz matrix. A fresh, light grey, medium grained hornblende diorite (Hedley intrusive) and at least one fine grained dyke intrude the sediments.

Adits 2 and 3 and the shaft explore a northwesterly striking shear zone in hornblende diorite of Hedley intrusive. Dump material indicates that the shear zone probably contains coarse masses of arsenopyrite in leached vuggy quartz. The shaft at the northwest end of adits 2 and 3 exposes a large mass of crystalline calcite overlain by and in fault contact with hornblende diorite.

To the northwest of the adits and along trend, stripping has exposed a breccia zone consisting of coarse to fine fragments of sediments in a calcite-quartz matrix with locally occurring coarse masses of pyrite. Minor hornblende diorite is also exposed here. Included within and possibly forming the walls of the breccia are beds of fine grained sediments containing conformable bands of calcite 1 to 3 centimetres wide. The old pits indicate there may be more than one horizon of breccia and calcite banding, alternating with tuff.

Adit 1 is 62 metres long and passes beneath adit 3. The first 42 metres of the adit is in fine grained argillaceous sediments and tuffs cut by numerous 330° to 340° striking, steeply dipping limonitic faults. The remaining 20 metres of the adit is in calcite-quartz breccia and conformable bands of calcite, similar to the rocks exposed on surface. The adit ends in these relatively flat lying brecciated and banded rocks. The relationship between the breccia and banding exposed on surface and in adit 1 is not clear, it may represent several beds within the sediments or may be repeated by faulting or folding.

On surface and underground the brecciated rocks in particular and the banded rocks to a lesser extent are well mineralized with coarse masses of pyrite, small blebs of sphalerite, and minor arsenopyrite, chalcopyrite and galena. Philex Gold and Energy Corporation collected a number of rock samples from the workings and the results are given in Table 3.0. These results indicate moderately anomalous gold values in the 0.05 to 0.12 ounce per ton range, with a maximum of 0.258 ounce per ton.

TABLE 3.0 - GOLD HILL SHOWING ROCK GEOCHEMISTRY (JONES 1988)					
SAMPLE NO.	WIDTH M	LOCATION	Au oz/ton	Ag oz/ton	DESCRIPTION
048570	spec	adit 2 dump	0.126	0.48	massive arsenopyrite with quartz
048571	spec	adit 1 dump	0.050	0.10	quartz-calcite breccia with abundant pyrite
048572	spec	adit 2 dump	0.032	0.16	fine grained, oxidized, diorite fragments, arsenopyrite on fractures
048577	spec	adit 1 dump	0.008	0.01	oxidized fines, calcite, dark dyke fragments
048582	1.22	adit 1 dump	0.116	0.65	oxidized area near intrusive-calcite contact, only intrusive
048583	grab	above adit 3	0.03	0.56	oxidized dump material, massive pyrite, arsenopyrite tinted
048584	spec	west adit 3	0.258	0.23	bedded fine grained sediments, calcite bands with pyrite, coarse sphalerite
048585	spec	70 m NW adit 3	0.052	0.08	bleached and sheared fine grained sediments, oxidized, calcite stringers, pyrite

The Mission showing (Figure 4.0) is located in the south central portion of the Van-2 claim and documented exploration predates 1936. The showing is located within an elongate mass of medium grained granodiorite of the Cahill Creek pluton near the contact with argillite, siltstone and limestone of the Stemwinder? Formation. Mineralization is fracture controlled and contained within three principle shear zones (Barnes, Walker and Winkler) that cut the granodiorite.

The Barnes zone is the most significant zone, striking 030° and dipping 70° southeast. This zone has been traced for 240 metres along strike and is between three and five metres wide. The Walker and Winkler appear to be subsidiary zones extending southwest from the Barnes zone. The Walker zone has been traced for 90 metres, strikes 060° and dips 80° northwest, while the Winkler zone has been traced for 140 metres, strikes 060° and dips 85° southeast.

The granodiorite is altered in the shear zones to quartz, sericite, kaolinite, chlorite, carbonate and epidote. Disseminations, bands and lenses of sulphides, with local amounts of white quartz form between a trace and 40% of the altered granodiorite. Mineralization consists of pyrite, arsenopyrite, sphalerite and minor amounts of tetrahedrite and chalcopyrite. The BC Minister of Mines Annual Report for 1936 (page D12) reports gold values ranging between 1.4 and 2.7 grams gold per tonne, with one sphalerite rich sample assaying 6.8 grams per tonne. An arsenopyrite rich sample collected by GE Ray (BC Ministry of Mines Bulletin 87) assayed 3.3 grams gold and 370 grams silver per tonne, 0.18% lead, 2.85% zinc, 19% arsenic, 205 ppm bismuth and 620 ppm antimony.

Austro-Can Explorations Ltd and Agio Resources Ltd conducted VLF-EM, magnetic and induced polarization geophysical surveying, a limited amount of soil geochemical sampling (arsenic, silver and gold) and geological mapping near the showing. Diamond drilling was carried out on the property in 1980 (four drill holes) and 1987 (three drill holes). The four 1980 drill holes tested the Mission showing and intersected bleached and oxidized granodiorite with varying amounts of quartz stringers, pyrite, arsenopyrite and sphalerite. Seventeen sections of core were sent for analysis, and the results given in Table 4.0. The highest gold assay was 0.045 ounce per ton over 90 centimetres, with 0.89 ounce silver per ton and 0.05% zinc (Phendler 1980, AR # 9222).

Two of the 1987 drill holes tested the Mission showing and traced the zone to a depth of 25 metres below surface. The zone is reported to be strong at depth with silicification, propylitic alteration and thin stringers and disseminations of pyrite, arsenopyrite and sphalerite. The third drill hole tested an induced polarization chargeability anomaly along the main road a few hundred metres west of the Mission showing. This drill hole intersected weak pyroxene skarned limestone and argillite with up to 5% pyrite veinlets from 3.04 to 13.71 metres and argillic altered and iron stained tuff with quartz-calcite veinlets and pods with 1-3% pyrite and pyrrhotite from 60.97 to 75.61 metres. No assaying was carried out on these three drill holes.

TABLE 4.0 - MISSION SHOWING 1980 DRILL RESULTS (PHENDLER 1980)					
DRILL HOLE	INTERVAL METRES	WIDTH METRES	Au oz/ton	Ag oz/ton	Zn %
80-1	12.20-12.96	0.76	0.005	0.05	0.62
80-1	18.60-19.21	0.61	0.003	0.09	0.84
80-1	44.21-44.36	0.15	0.009	2.09	2.36
80-2	16.46-16.77	0.31	0.017	0.62	0.19
80-2	52.74-53.05	0.31	0.005	0.32	0.28
80-2	65.40-66.01	0.61	0.009	1.19	1.75
80-3	10.06-11.59	1.53	0.032	0.68	1.05
80-3	11.59-13.11	1.52	0.027	0.25	0.09
80-3	19.36-19.97	0.61	0.015	0.56	7.10
80-3	20.89-21.04	0.15	0.046	1.14	4.90
80-3	45.58-45.73	0.15	0.006	0.13	3.25
80-3	64.24-64.54	0.30	0.005	0.30	0.06
80-3	104.88-105.18	0.30	0.001	0.02	0.02
80-4	5.49-6.40	0.91	0.045	0.89	0.05
80-4	14.94-15.24	0.30	0.008	0.17	4.40
80-4	114.63-114.94	0.31	0.003	0.04	0.03
80-4	127.90-128.66	0.76	0.001	0.02	0.01

The Blitz showing (Figure 4.0) is located on the John 1-6 claims and was initially explored in the 1930's, although no documented information has been found on this work. Approximately 25 hand trenches, a winze and a shaft were excavated on the property.

Thinly bedded black argillite with minor interbedded limestone, tuff and chert underlie the property. The argillites have been locally silicified and veined and flooded with quartz. Pyrite, pyrrhotite, arsenopyrite and chalcopyrite occur in zones of silicification, veining and flooding.

Fox Resources Ltd carried out a number of exploration programs between 1983 and 1986. These programs consisted of establishing grid lines, VLF-EM and magnetic geophysical surveying, soil geochemical sampling (gold, silver, arsenic, copper and zinc) and geological mapping over an area 2500 metres long by 2000 metres wide. The magnetic survey delineated a prominent north trending magnetic high over the area of old showings, while the VLF-EM survey indicated a number of conductors. The soil geochemical sampling indicated a broad north trending zinc anomaly over the area of old showings, with sporadic silver, arsenic and gold values. Two grab samples of quartz vein with pyrite and arsenopyrite assayed 3.53 and 2.69 grams per tonne gold (Freeze 1986, AR #15,441).

3.0 EXPLORATION PROCEDURE

The 1999 exploration program consisted of establishing grid lines, magnetic geophysical surveying, rock, soil and stream sediment geochemical sampling, geological mapping and prospecting. A 1:20,000 base map (Figure 4.0) was also prepared from digital data from the provincial government.

3.1 GRID PARAMETERS

-baseline direction north-south (Blitz)
-survey lines perpendicular to baseline
-survey line separation 100 metres
-survey station spacing 20 metres
-stations marked with flagging or pickets and metal tags with grid coordinates
-survey total - 1.9 kilometres
-declination 21 degrees

3.2 GEOCHEMICAL PARAMETERS

-soil samples collected from old trenches (Blitz)
-station spacing 5 metres
-survey total -43 soil samples
-55 stream sediment samples
-106 rock samples
-soil, rock, stream sediment samples analysed by 32 element ICP and for gold (FA+AA finish)
-soil sample depth 20 to 50 centimetres
-soils samples collected from B horizon, some possible C horizon
-stream sediment samples collected from active portion of stream
-stream sediment 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 soil and stream sediment 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 soil geochemical data is illustrated on Figure 8.0, stream sediment sample locations on Figure 4.0 and rock sample locations on Figures 4.0, 5.0, 6.0 and 7.0. Rock sample descriptions are given in Appendix IV and certificates of analysis for all samples are listed in Appendix I.

3.3 GEOPHYSICAL SURVEY PARAMETERS

-survey line separation 100 metres
-survey spacing 25 metres
-survey total - 20.0 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 are illustrated on Figure 9.0 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 chert, argillite, greenstone, tuffaceous siltstone and minor limestone. 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 Maple Leaf and Pine Knot gold occurrences (vein).

The Chuchuwaya Formation forms a steeply dipping, wedge shaped unit between the Stemwinder and Hedley formations. To the west and east it is bounded respectively by the Chuchuwaya and Bradshaw faults, while to the north it is intruded by the Lookout Ridge Pluton. The formation is a minimum of 1500 metres thick and consists of predominately thinly bedded calcareous siltstone that closely resembles the siltstones of the Hedley Formation. However unlike the Hedley Formation, it does not contain thick or extensive beds of limestone, with the limestone beds seldom exceeding five metres in thickness. The formation also contains minor argillite and some large units of siliceous and tuffaceous argillite. The Chuchuwaya Formation hosts the Peggy gold occurrence (skarn).

The sedimentary rocks of the French Mine, Hedley, Stemwinder and Chuchuwaya 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 stockwork) and 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 conglomerate 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 Nicola Group rocks in the Hedley area are overlain by calcalkaline waterlain tuffs, and derived epiclastic rocks that were formerly correlated with the Cretaceous Spences Bridge Group. They are now thought to represent a newly recognized mid-Jurassic supracrustal succession, the Skwel Peken Formation. It is uncertain at this time whether their contact with the Nicola Group is a thrust or unconformity. The Skwel Peken Formation is exposed as two erosional outliers in the Hedley area. The largest and southernmost outlier is centred on the Skwel Kwel Peken Ridge and the other lies northeast of the Nickel Plate Mine.

Along the western margin of the Hedley Basin, the Whistle Formation is overlain (unconformably?) 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 six stocks known as Toronto, Stemwinder, Aberdeen, Banbury, Larcan and Pettigrew.

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

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 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.

The skarn-related mineralization is generally stratabound and follows calcareous tuff, thinly-bedded limestone and limey argillite within the upper sections of the French Mine and Hedley formations and lower sections 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 metamorphism 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 stockwork systems. This type of mineralization occurs at the Maple Leaf, Pine Knot and Gold Hill gold occurrences.

The Maple Leaf and Pine Knot gold occurrences are located 1000 metres northeast of the W-20 claim. The geology at the Maple Leaf and Pine Knot occurrences consists of northerly striking, steeply dipping sedimentary and tuffaceous rocks that are intruded by two elongate, easterly trending diorite stocks belonging to the Hedley intrusions. They extend over a strike length of 1.3 kilometres and exceed 300 metres in width. The stocks intrude the Upper Triassic succession, crosscutting calcareous siltstone, argillite, and thin limestone of the Stemwinder Formation in the east, a 200 metre thick section of the Copperfield breccia in the centre, and andesitic tuff of the Whistle Formation in the west. Both stocks comprise two rock types, a leucocratic quartz diorite suite and a highly mafic diorite-gabbro suite. The stocks have irregular intrusive contacts that interfinger with the bedded country rocks, and are surrounded by hornfels alteration. Both the stocks and the hornfels alteration are cut by several irregular, northerly trending fracture zones that are filled by steep and shallow-dipping quartz±carbonate vein systems (Maple Leaf and Pine Knot veins). Individual veins are up to 3 metres wide, exceed 100 metres in length and contain mainly glassy to white to pale pink-coloured, strained quartz with lesser amounts of coarse calcite, sporadic visible gold, arsenopyrite, pyrrhotite, pyrite, sphalerite, and chalcopyrite. Locally they are sheared, vuggy and contain angular brecciated clasts of chloritized, silicified country rock. The leucocratic diorite locally contains pockets of intense skarn alteration. The quartz veins crosscut and postdate the skarn alteration.

The Gold Hill gold occurrence is located on the W-20 claim. The Gold Hill mineralization is hosted by a carbonate±quartz vein that cuts andesitic ash and lapilli tuff, and some tuffaceous sediments in the lowest stratigraphic portion of the Whistle Formation. The tuffaceous rocks are intruded by dykes and sills of both fine and coarse grained hornblende porphyritic diorite of the Hedley intrusive suite that locally carry disseminated pyrite and arsenopyrite. Some tuff beds adjacent to one porphyritic diorite body are hornfelsed and sporadically overprinted with early calcite-diopside-pyrite-chalcopyrite skarn alteration. On surface, the Gold Hill vein is comprised of coarse, crystalline, white to pale buff carbonate together with minor quartz and some disseminated pyrite. At depth, the vein contains abundant vuggy quartz vein material similar in appearance to the Maple Leaf and Pine Knot veins. This quartz-rich material contains massive blebs of

TABLE 5.0
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, 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 are 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.

coarse pyrite with traces of arsenopyrite, chalcopyrite, black sphalerite and galena. The sequence of eventsat Gold Hill are interpreted as follows: (1) intrusion of the diorite body and biotite hornfelsing of the country rock, (2) weak skarn alteration with some sulphides, (3) fault brecciation, (4) minor ankerite injection, and (5) injection of the carbonate ± quartz ± sulphide vein with hydrostatic brecciation.

Table 5.0 after Ray et al summarizes the geological history of the Hedley district.

4.3 CLAIM GEOLOGY

The Hedley District 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). Figure 3.0 displays this geology for the Hedley project. The Hedley project is underlain by a variety of rock types including volcanic and sedimentary rocks of the Stemwinder (Unit 5), Whistle (Unit 7) and Skwel Peken (Unit 15) formations, as well as some rocks of uncertain age (Unit 8). Intrusive rocks of the Hedley intrusions (Unit 9) and Cahill Creek pluton (Unit 12) have intruded the sedimentary and volcanic rocks, as have andesite dykes (Unit 20c).

Geological mapping was carried out over the main grid (Figure 6.0, 1:5,000 scale) and detailed grid (Figure 7.0, 1:2,500 scale) on the East Pettigrew zone, as well as along the Johns Creek road north of the East Pettigrew zone (Figure 4.0, scale 1:20,000). A limited amount of geological mapping was also carried out in the old trenches at the Blitz showing (Figure 5.0, scale 1:2,500).

4.3.1 MAIN GRID EAST PETTIGREW ZONE

The main grid (Figure 6.0) is characterized by a general lack of outcrop over most of the area, and where outcrop exists it is often small and poorly exposed. Most of the grid is underlain by siltstone (unit 7b) and andesitic and basaltic ash tuff (Unit 7d) of the Whistle Formation. These units are often calcareous.

The only exception to this is from line 000N to 300N between 1900E and 2300E where argillite with narrow interbeds of limestone of the Stemwinder Formation (Unit 5a) are poorly exposed. One small outcrop of Copperfield breccia (Unit 7a) of the Whistle Formation was also mapped at 025N and 1950E along the western contact of the Stemwinder Formation, indicating one is going up section as one proceeds down hill into Pettigrew Creek. The structures controlling the placement of the Stemwinder Formation within the Whistle Formation have not been recognized at this time.

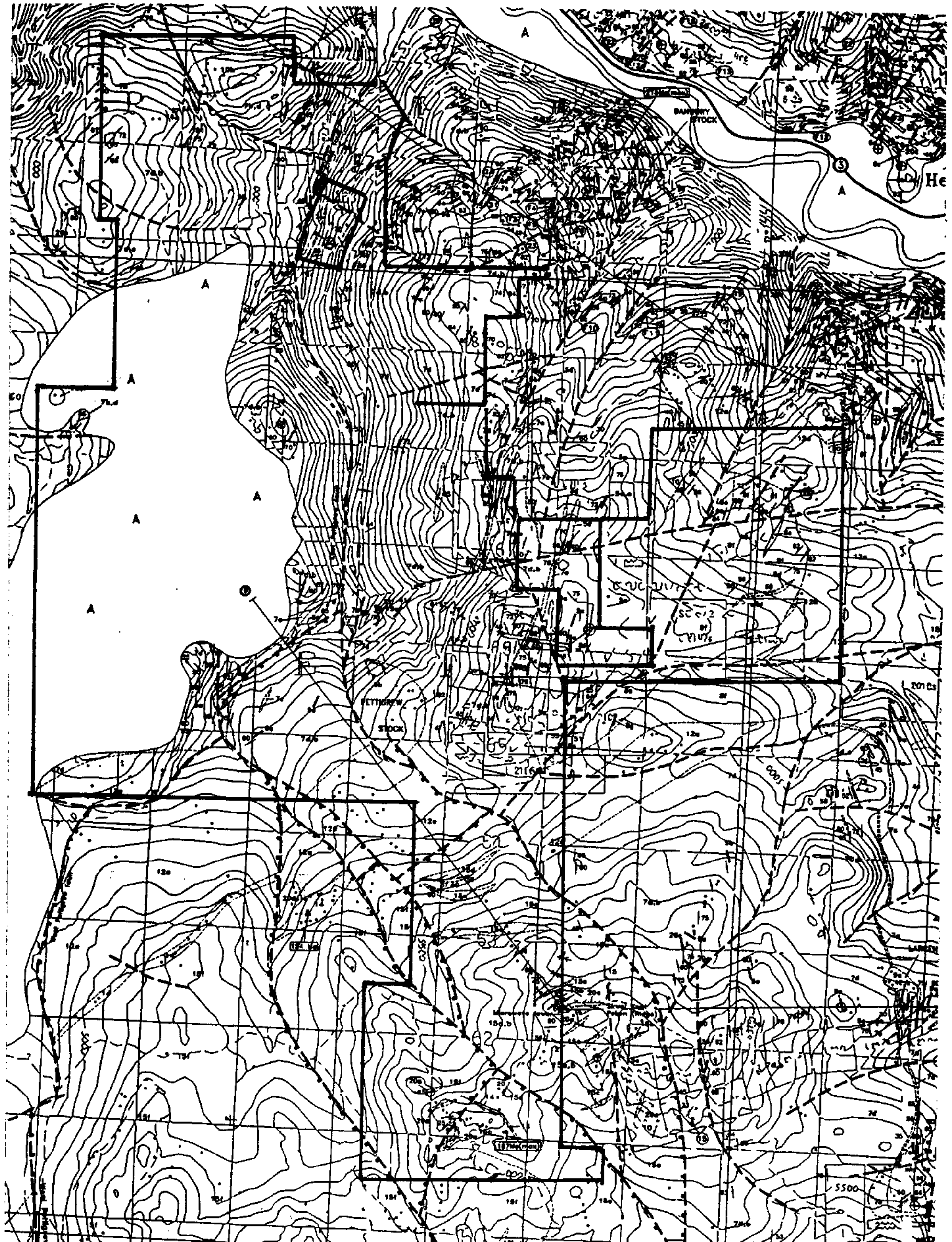
Bedding is generally slightly east of north in the Whistle Formation, with steep dips to the east and west. In the Stemwinder Formation the bedding is similar, striking northerly with moderate to steep dips to the west.

Narrow, 5 to 10 metre wide hornblende porphyry dykes of the Hedley intrusive suite (Unit 9a) were mapped at several locations on the grid. One east-west striking dyke was mapped at 810N and 2525E, and two northerly striking dykes were mapped between lines 000N and 100N at 1950E. An airborne magnetic survey delineated a small magnetic high to the south of line 000N that may be indicating a small stock of Hedley intrusive. The two northerly striking dykes may be indicating the periphery of the stock.

A greenish, 2 to 5 metre wide, northerly striking late mafic dyke (Unit 20c) was mapped at 020N and 1885E near the Hedley dykes.

4.3.2 DETAILED GRID EAST PETTIGREW ZONE

Outcrop is also sparse over the detailed grid (Figure 7.0), with the best exposures in the narrow gullies. The area is underlain by siltstone (Unit 7b) and andesitic and basaltic ash tuff (Unit 7d) of the Whistle Formation.



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 EOCENE
MARRON FORMATION:

[19] 19, andesitic, trachyandesitic and phonolitic volcanic flows

SPRINGBROOK FORMATION

[18] 18, poorly consolidated conglomerate, sandstone, talus, fluvial and lacustrine deposits

EARLY CRETACIOUS
SPENCES BRIDGE GROUP

[17] 17a, andesitic to rhyodacitic flows and minor tuffs; 17b, lahar and minor volcanic breccia; 17c, welded tuff and ignimbrite

VERDE CREEK STOCK

[16] 16, granite and microgranite to quartz monzonite

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)

QUARTZ PORPHYRY

[14] 14, quartz eye felsic intrusion (may be related to units 12, 13 and 20b)

LOOKOUT RIDGE PLUTON

[13] 13a, pink, equigranular to feldspar porphyritic, quartz monzonite to granodiorite; 13b, marginal phase granodiorite to diorite to mafic gabbro

CAHILL CREEK PLUTON

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

EARLY JURASSIC
MOUNT RIORDAN STOCK

[11] 11a, equigranular gabbro, quartz gabbro and diorite; 11b, hornblende porphyritic granodiorite

LATE TRIASSIC
BROMLEY BATHOLITH

[10] 10a, granodiorite; 10b, diorite to quartz diorite

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.

UNCERTAIN AGE
ROCKS OF UNCERTAIN AGE

[8] 8, undifferentiated; 8a, mafic tuffs (probably Whistle Formation); 8b, mafic tuffs; 8c, limestone and/or marble; 8d, polymictic conglomerate; 8e, argillite; 8f, tuffaceous siltstone (possibly Oregon Claims Formation); 8g, limestone, marble and minor chert pebble conglomerate; 8h, limestone breccia and conglomerate; 8i, chert pebble conglomerate; 8j, massive garnetite skarn (8g,h,i and j probably French Mine or Oregon Claims Formations)

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

CHUCHUWAYHA FORMATION

[6] 6a, argillite ± thin limestone beds; 6b, siltstone ± thin limestone beds; 6c, limestone; 6d, siliceous and tuffaceous argillite.

STEMWINDER FORMATION

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

HEDLEY FORMATION

[4] 4a, siltstone; 4b, argillite, 4c, limestone and/or marble; 4d, andesitic ash tuff ± tuffaceous siltstone; 4e, polymictic pebble conglomerate

FRENCH MINE FORMATION

[3] 3a, limestone and/or marble; 3b, limestone conglomerate and breccia; minor chert pebble conglomerate, argillite and mafic tuff

OREGON CLAIMS FORMATION

[2] 2a, basaltic ash tuff and minor basaltic flows, 2b, basaltic tuff with chert and quartz fragments, 2c, bedded mafic ash and dust tuff; 2d, basaltic tuff with large marble blocks; 2e, chert pebble conglomerate; 2f, limestone and/or marble

CONTACT FAULTED OR OCCUPIED BY CAHILL CREEK PLUTON

PALEOZOIC AND TRIASSIC
APEX MOUNTAIN COMPLEX

[1] 1a, siltstone; 1b, argillite; 1c, greenstone; 1d, andesitic to basaltic ash tuff; 1e, limestone; 1f, chert; 1g, gabbro; 1h, limestone boulder conglomerate and breccia

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) (As, Cp, Mt, Ma, Py, Po, Sc)
Location of mineral property with number listed

No.	Property name	*Type	Associated Metallic Elements	Minfile No.
1	Nickel Plate	S	[illegible]	[illegible]
2	Sunnyside	S	[illegible]	[illegible]
3	[illegible]	S	[illegible]	[illegible]
4	[illegible] Fraction	S	[illegible]	[illegible]
5	French (Oregon)	S	[illegible]	[illegible]
6	[illegible]	S	[illegible]	[illegible]
7	Good Hope	S	[illegible]	[illegible]
8	Peggy (Hedley Amalgamated)	S	[illegible]	[illegible]
9	[illegible]	S	Au, Ag, As, Cu	[illegible]
10	Duffy	S	Au, Ag, Cu, As	[illegible]
11	Florence	S	Au, As	[illegible]
12	[illegible]	S	Au, As, Cu	[illegible]
13a	Hedley Tailings [illegible]	T	Au	[illegible]
13b	Hedley Tailings [illegible]	T	Au	[illegible]
13c	Hedley Tailings (No.1)	T	Au	[illegible]
13d	Hedley Tailings (No.2)	T	Au	[illegible]
14	[illegible]	S	Au, Ag, Cu, As	[illegible]
15	Lost Horse	S	Au, As	[illegible]
16	[illegible] (Boundary Zone)	S	Au, As, Cu, Pb, Zn	[illegible]
17	Red Mountain	S	Au, As, Cu, Sb, Co, Bi	[illegible]
18	Red Top	S	Au, As, Cu	[illegible]
19	[illegible]	S	Au, As, Cu	[illegible]
20	[illegible]	S	Au, As, Cu	[illegible]
21	[illegible]	S	Cu, As	[illegible]
22	[illegible]	S	Au, Cu, As	[illegible]
23	Gold Hill	V	Au, Zn, Cu, As, Pb	[illegible]
24	[illegible]	V	Au, As, Zn, Cu	[illegible]
25	[illegible]	U	Au, Ag, Pb, Zn	[illegible]
26	[illegible]	U	Cu, Zn	[illegible]
27a	Pine Knot (Banbury)	V	Au, As, Cu, Zn, Pb	[illegible]
27b	Maple Leaf (Banbury)	V	Au, As, Cu, Zn, Pb	[illegible]
28	[illegible]	V	Au, Ag, As, Cu, Zn, Pb, Bi, Sb	[illegible]
29	Patsy No.1	V	Au, As, Zn, Cu, Ag	[illegible]
30	Patsy No.2	U	Au, Ag, As, Sb	[illegible]
31	Snowstorm	U	Au, As	[illegible]
32	Toronto (Galena)	V	Au, Ag	[illegible]
33	Victoria	V	Au, Ag, As, Cu	[illegible]
34	Bradshaw	V	Au, Ag, Cu, As	[illegible]
35	Hedley Star	V	Au, Ag, Cu, As	[illegible]
36	JJ	S	Cu, Zn, As	[illegible]
37	Mount Riordan (Shamrock, Crystal Peak)	S	Cu, Ag, W, Zn, [illegible]	[illegible]
38	Patricia	S	Cu, W	[illegible]
39	Unnamed	S	Cu, Au, Ag, W	–
40	Unnamed	S	Cu, As	–
41	Unnamed	S	Cu, As	–
42	[illegible]	S	Cu, W, As	[illegible]
43	Golden [illegible]	V	Au, As	[illegible]
44	Golden [illegible] (Creek)	V	[illegible]	[illegible]
46	Golden Zone	V	[illegible]	[illegible]

*S=Skarn V=Vein T=Tailings U=Unknown Type
**The Mount Riordan skarn is also a potential industrial garnet deposit.

PROFESSIONAL PROVINCE OF BRITISH COLUMBIA G. F. CROOKER GEOSCIENTIST

GEOLOGY AFTER G. E. RAY, B. C. M. M., 1994

⇑ N

GRANT F. CROOKER

HEDLEY PROJECT (NTS 92H-8E)
SIMILKAMEEN & OSOYOOS M. DS., B. C.

REGIONAL GEOLOGY

DATE: OCTOBER 1999 | FIGURE: 3.0

SCALE: 0 500 1000 METRES 1:50,000

A 5 to 15? metre wide, northerly striking unit of Copperfield breccia (Unit 7a) has been mapped from line 1700NA and 1540E to line 1940N and 1480E. Pieces of float were also noted 100 metres north along the Johns Creek road. As Whistle Formation siltstone and tuff have been mapped on either side of the Copperfield breccia, it is assumed not to be the basal unit of the Whistle Formation. Ray describes several areas in the Hedley district where there are two breccia units, separated from each other by several hundred metres of coarse tuffaceous sediments. The breccia zone on the detailed grid is believed to be the upper breccia zone, and if so, presents the possibility that one is going down section as one proceeds down hill into Pettigrew Creek. Bedding on the detailed grid is generally northerly to northeasterly with moderate to steep dips to the east.

4.3.3 BLITZ SHOWING

A limited amount of geological mapping was also carried out in the old trenches around the Blitz showing (Figure 5.0). The area is mainly underlain by argillite and minor interbedded limestone of the Stemwinder Formation (Unit 5a). Copperfield breccia was noted in trench 18, and breccia float noted near trench 25. Bedding in the area is northwesterly, with steep dips to the east and west.

A brief description of the rock units is given below.

Unit 5 (Stemwinder Formation): The formation is a sequence of thinly bedded black and organic rich calcareous argillite, with lesser dark grey limestone beds generally less than three metres in thickness (Unit 5a).

Unit 7 (Whistle Formation): The siltstone of Unit 7b contains abundant fine grained tuffaceous material. They are thinly bedded and commonly graded. Individual beds have pale bottoms dominated by plagioclase rich crystal tuff debris, that pass upwards into dark, fine grained argillaceous tops that contain considerable dust tuff material. The siltstone is intercalated with massive to weakly bedded crystal-lithic tuffs (Unit 7d). Towards the base of the formation these units are between 5 and 40 metres thick, while higher in the sequence siltstone gradually becomes less abundant and tuff predominates. Tuffs form pale to dark green outcrops that occasionally contain elongate, dark, lithic fragments up to 75 millimetres in length.

The Copperfield breccia (Unit 7a) is the basal unit of the Whistle Formation and consists of well rounded to angular limestone clasts generally up to one metre in diameter, with rare fragments of other lithologies. The breccia varies from clast to matrix supported, and the matrix varies from massive to thinly bedded.

Unit 9a (Hedley intrusion): This unit consists of narrow dykes of dioritic composition that generally form coarse grained, porphyritic to equigranular, dark coloured and massive rocks. Porphyritic textures tend to be common in the dykes and are marked by coarse, euhedral to subhedral phenocrysts of plagioclase and hornblende.

Unit 20c (Mafic dyke): This light green, 2 to 5 metre wide dyke consists of porphyritic, 1 to 2 millimetre wide augite phenocrysts in a dark groundmass. Most or all of the augite has been partially or completely pseudomorphed to chlorite.

4.4 MINERALIZATION

One hundred and six rock samples were collected from various areas of the property during the 1999 work program including the Mission and Blitz showings, main and detailed grids on the East Pettigrew Zone and the central portions of the Van-1 and Paul-2 mineral claims. A brief description of each area follows.

4.4.1 MISSION SHOWING

The Mission showing (Figure 4.0) is located in the south central portion of the Van-2 claim and is located within an elongate mass of medium grained granodiorite of the Cahill Creek pluton. Previous workers on the property have described the mineralization as fracture controlled and contained within three principle shear zones. The Barnes zone is the most significant zone, striking 030° and dipping 70° southeast. This zone has been traced for 240 metres along strike and is between three and five metres wide. The Walker and Winkler appear to be subsidiary zones extending southwest from the Barnes zone. The Walker zone has been traced for 90 metres, strikes 060° and dips 80° northwest, while the Winkler zone has been traced for 140 metres, strikes 060° and dips 85° southeast.

A cursory examination was made of the Mission showing (Barnes zone) and two samples taken (054 and 055). The granodiorite is altered to quartz, sericite, kaolinite, chlorite, carbonate and epidote. Fractures and quartz veinlets varying from 1 to 50 millimetres wide cut the altered granodiorite, and generally strike 104° and dip steeply north. The quartz veinlets make up to 25% of the altered zone and contain varying amounts of pyrite, arsenopyrite and sphalerite. Sample 054 was a select sample of a 5 centimetre wide quartz veinlet containing 10% pyrite, 5% arsenopyrite and 5% sphalerite. This sample gave 4.05 grams gold per tonne, 277 grams silver per tonne, 6.03% zinc and > 10,000 ppm arsenic. A one metre chip sample (055) containing 25% quartz veinlets with 5% pyrite, 2% arsenopyrite and 2% sphalerite gave 0.02 grams gold per tonne, 18.2 grams silver per tonne, 1,000 ppm zinc and > 10,000 ppm arsenic.

4.4.2 BLITZ SHOWING

Mineralization occurs at a number of different locations at the Blitz showing (Figure 5.0). The area is underlain by thinly bedded argillites and minor limestone of the Stemwinder Formation. A northerly trending magnetic high approximately 300 to 500 metres wide extends along baseline 10000E from line 9800N to 1100N. The argillite within the magnetic high is silicified and contains disseminated pyrrhotite that appears to be causing the magnetic high.

The highest gold values at the showing came from a 10 to 20 centimetre wide quartz vein within a 75 to 140 centimetre wide shear zone exposed in trenches 7 and 8. The quartz vein and associated shear zone have been exposed for about 10 metres along strike, strike 007° and dip 65° west, with the quartz vein containing 2 to 3% pyrite and 2 to 4% arsenopyrite. Two samples of the quartz vein (058, 062) gave 3.35 grams gold per tonne and > 10,000 ppm arsenic, and 8.3 grams gold per tonne and > 10,000 ppm arsenic respectively. Samples of the shear zone (057, 059, 061, 063) on both the hanging wall and foot wall of the quartz vein gave weakly anomalous gold values ranging from 50 to 675 ppb, with anomalous arsenic and antimony.

A 60 to 140 centimetre wide quartz vein striking 009° and dipping 64° west is exposed over a strike length of 6 metres at the winze. The vein contains up to 5% pyrite locally with limonite filled boxworks. Four samples of the quartz vein (064-066, 069) gave weakly anomalous gold values ranging from 105 to 565 ppb. Arsenic was moderately anomalous (562 to 1010 ppm) and molybdenum was weakly anomalous (8 to 25 ppm). Two samples of silicified argillite (067, 068) with disseminated pyrrhotite and pyrite gave weakly anomalous gold (60 and 100 ppb) and arsenic (106 and 118 ppm) values.

At the shaft, a 120 to 140 centimetre wide zone of quartz stockwork and breccia striking 005° and dipping 76° west is exposed in the north wall. The zone is hosted by weakly sheared and fractured silicified argillite, and consists of 10 to 75% quartz veinlets with breccia fragments of quartz and silicified argillite. The quartz veinlets are strongly oxidized and contains ½% disseminated pyrite. Four samples of the quartz stockwork (073-076) gave weakly anomalous gold values ranging from 50 to 90 ppb. Arsenic (70-746 ppm) and molybdenum (40-120 ppm) were both moderately anomalous.

Silicified argillite with a weak quartz stockwork is also exposed in trench 16. The quartz veinlets contain 2 to 4% disseminated pyrrhotite and ½% disseminated pyrite. Two samples of the quartz stockwork (081, 082) gave weakly anomalous gold values of 65 and 90 ppb respectively. Arsenic (230, 66 ppm) was weakly anomalous and zinc (2510, 1295 ppm) strongly anomalous.

A grab sample (084) of silicified argillite with 1 to 3% disseminated pyrrhotite and 1% disseminated pyrite from trench 14 gave a weakly anomalous gold (20 ppb), moderately anomalous molybdenum (74 ppm) and strongly anomalous zinc (1885) values.

The quartz veins and stockwork exposed at the Blitz showing all have similar strikes (005°to 009°) and dips (64°to 76° west) and appear to be along the same strike. It is not known if they represent en echelon veins, or a single vein with different character along strike.

4.4.3 MAIN GRID EAST PETTIGREW ZONE

Prospecting and rock sampling were carried over the main grid on the East Pettigrew zone (Figure 6.0) to determine a) the cause of the high chargeability induced polarization anomaly on lines 1700N and 1900N between 1700E and 2050E and b) the cause of the multi-element soil geochemical anomaly (Mo-As-Ag) extending from line 000N to 1900N,. Outcrop is generally sparse over the grid and 34 rock samples were collected, mostly of float and mostly along the trend of the multi-element soil geochemical anomaly. A few rock samples gave a weak geochemical response.

There are no outcrop exposures over the high chargeability anomaly on lines 1700N and 1900N. One float sample (144) of siltstone with rusty fractures and limonite filled boxworks gave a weakly anomalous gold value of 10 ppb and silver value of 0.8 ppm.

A cluster of float samples (122, 123, 135) taken around line 1300N and 1900E gave weakly anomalous gold, silver, arsenic, copper and molybdenum values. Sample 122 (argillite/siltstone breccia with white calcite veinlets) was weakly anomalous in arsenic (80 ppm), sample 123 (bleached tuff, limonite on fractures and disseminated) was weakly anomalous in gold (35 ppb), silver (0.8), arsenic (36 ppm)), copper (135 ppm) and molybdenum (15 ppm), and sample 135 (clay altered calcareous tuff, fine grained boxworks, limonite) was weakly anomalous in silver (1.0 ppm), arsenic (40 ppm) and molybdenum (74 ppm).

Argillite of the Stemwinder Formation is poorly exposed at the south end of the grid between line 000N and 300N in the central portion of the multi-element soil geochemical anomaly. The argillite has rusty fractures and contains locally up to 15% pyrrhotite. Samples of the argillite gave weakly anomalous silver (161-0.6 ppm, 164-0.4 ppm, 167-0.6 ppm), arsenic (164-32 ppm) and copper (167-107 ppm) values.

4.4.4 DETAILED GRID EAST PETTIGREW ZONE

Prospecting and rock sampling were carried out on the detailed grid of the East Pettigrew zone (Figure 7.0) to determine the source of the Au-As soil geochemical anomalies. Outcrop is generally sparse over the grid and 24 rock samples were taken, mostly of float. A few samples gave a weak geochemical response.

The strongest geochemical response was from sample 178 (bleached, fractured, clay altered tuff, 15% limonite filled boxworks) that gave 85 ppb gold, 0.8 ppm silver, 340 ppm arsenic and 317 ppm copper. Sample 180 (tuff, 1 cm quartz veinlet, 1% pyrrhotite) was weakly anomalous in gold (25 ppb) and sample 184 (fractured, silicified tuff, 1-8 mm quartz veinlets, rusty boxworks with limonite) was weakly anomalous in gold (30 ppb), copper (132) and molybdenum (39 ppm).

A number of other samples, mainly of fractured and silicified or bleached tuff gave weakly anomalous silver (087, 095, 174), arsenic (092, 139) and copper (095, 173, 174, 181-184) values.

4.4.5 VAN SHOWING

The Van showing (Figure 4.0) is located in the central portion of the Van-1 claim and consists of angular boulders with hornfels alteration exposed at two logging landings approximately 250 metres apart. A tuffaceous siltstone has been altered to glassy grey and black hornfels and/or silicified.The rock is strongly fractured and contains 2 to 4% disseminated pyrite and pyrrhotite, some in seams up to 2 millimetres wide. Four samples (127-130) were taken at the north landing with the highest gold value 100 ppb from sample 129. The samples also gave weakly anomalous silver (0.8 ppm), arsenic (184 ppm), cadmium (1.5 ppm), molybdenum (15 ppm) and zinc (148 ppm) values.

Five samples of the hornfels altered, sulphide bearing material were also taken at the south landing. The highest gold value was 75 ppb from sample 086, with other samples giving weakly anomalous silver (2.4 ppm), arsenic (60 ppm), cadmium (3.0 ppm), copper (225 ppm) and zinc (142 ppm) values.

5.0 GEOCHEMISTRY

5.1 STREAM SEDIMENT GEOCHEMISTRY

Fifty-five stream sediment samples were collected from drainages within the claim area, mainly from the upper reaches of Pettigrew Creek and Johns Creek. The sample locations are shown on Figure 4.0 and background and anomalous values are given in Table 6.0.

TABLE 6.0 - ANOMALOUS STREAM SEDIMENT GEOCHEMICAL VALUES

ELEMENTS	VALUES			
		RANGE	BACKGROUND	ANOMALOUS
Au	ppb	<5 - 80	5	15
Ag	ppm	<0.2 - 0.4	0.2	0.4
As	ppm	<2 - 186	12	18
Cu	ppm	3 - 53	15	23
Mo	ppm	<1 - 18	3	5
Pb	ppm	<2 - 10	3	6
Sb	ppm	<2 - 8	3	6
Zn	ppm	24 - 236	66	99

ppb - parts per billion, ppm - parts per million

Nine samples were collected from the Central Fork of Pettigrew Creek that drains an area underlain by Skwel Peken Formation, including garnet bearing rhyodacite. None of the samples were anomalous for gold, however two were weakly anomalous for arsenic (005-18 ppm, 007-20 ppm), two were weakly anomalous for antimony ((003-6 ppm, 008-8 ppm) and one was weakly anomalous for lead (004-6 ppm).

Three samples were collected from the upper reaches of Burn Creek, and two from the southeast flowing, upper reaches of Paul Creek. These creeks drain the same area as the Central Fork of Pettigrew Creek and none of the samples were anomalous.

Nineteen samples were collected from the East Fork of Pettigrew Creek that drains an area underlain by the Stemwinder, Whistle and Skwel Peken formations, as well as the Cahill Creek pluton and the Pettigrew stock of the Hedley intrusions. The Blitz showing (quartz vein with gold bearing arsenopyrite) is located at the headwaters of one branch of the creek.

None of the samples were anomalous for gold, however one was weakly anomalous for copper (040-35 ppm), one was weakly anomalous for molybdenum (040-5 ppm), two were weakly anomalous for lead, (011-6 ppm, 040-6 ppm), three were weakly anomalous for antimony (013-6 ppm, 034-6 ppm, 037-6 ppm) and one was weakly anomalous for lead (040-146 ppm). Sample 040 was the most strongly anomalous (copper, molybdenum, antimony and zinc) and is the closest sample taken to the Blitz showing.

Four samples were collected from Five A Creek. This creek drains an area underlain by the Whistle and Stemwinder formations and the East Pettigrew zone Mo-As-Ag soil geochemical anomaly. Two of the samples showed elevated gold values of 10 ppb (025, 026), two were anomalous for arsenic (025-20 ppm, 026-24 ppm), four were anomalous for copper (024-35 ppm, 025-43 ppm, 026-37 ppm, 027-31 ppm), three were anomalous for molybdenum (024-13 ppm, 025-17 ppm, 026-18 ppm), one was anomalous for antimony (024-6 ppm) and one was anomalous for zinc (026-102 ppm). Two samples were also collected from a small creek 500 metres south of Five A Creek and draining the same area. Neither of the samples were anomalous for gold, however both were anomalous for arsenic (028-18 ppm, 029-30 ppm), copper (028-53 ppm, 029-33 ppm) and molybdenum (028-7 ppm, 029-5 ppm).

The stream sediment sampling from these two creeks confirmed the East Pettigrew zone Mo-As-Ag soil geochemical anomaly. The creeks were also choked with caliche, indicating the presence of limestone or strongly calcareous rocks.

One sample was collected from the upper reaches of Van Creek that drains an area underlain by the Stemwinder Formation. The sample (046) gave an elevated gold value of 10 ppb and an anomalous copper value of 53 ppm.

Ten samples were collected from the upper reaches of Johns Creek that is underlain by the Stemwinder and Whistle formations and the Cahill Creek pluton. Three of the samples were anomalous for gold (043-25 ppb, 048-70 ppb, 051-80 ppb), one was anomalous for silver (048-0.4 ppm), five were anomalous for arsenic (041-18 ppm, 042-18 ppm, 047-18 ppm, 050-28 ppm, 051-22 ppm), one was anomalous for copper (048-23 ppm), one was anomalous for molybdenum (042-5 ppm), two were anomalous for lead (042-6 ppm, 048-6 ppm), two were anomalous for antimony (043-8 ppm, 051-6 ppm) and eight were anomalous for zinc (041-120 ppm, 042-188 ppm, 043-114 ppm, 044-106 ppm, 045-104 ppm, 047-116 ppm, 050-104 ppm, 051-110 ppm).

The samples taken from Johns Creek gave the most strongly anomalous results for gold and pathfinder elements of the stream sediment survey. No cause is evident for the anomalous values, although there is hornfels alteration and strong pyrite/pyrrhotite mineralization in the central portion of the Van-1 claim.

Two samples were collected from Jameson Creek that is underlain by tuffaceous siltstone of unknown age and the Cahill Creek pluton. Jameson Creek drains the area of the Mission showing that contains pyrite, arsenopyrite and sphalerite mineralization. Sample 052 gave an elevated gold value of 10 ppb, and was anomalous for silver (0.4 ppm), arsenic (186 ppm), copper (28 ppm), lead (10 ppm) and zinc (236 ppm). Sample 053 was anomalous for zinc (170 ppm). The stream sediment sample results reflect the mineralization at the Mission showing.

5.2 SOIL GEOCHEMISTRY

The soil geochemical survey consisted of sampling a number of old hand trenches (Blitz showing) at five metre intervals to try and locate extensions of a narrow quartz vein with arsenopyrite mineralization and strongly anomalous gold values. The values for gold, arsenic and copper are shown on Figure 8.0 and background and anomalous values are given in Table 7.0.

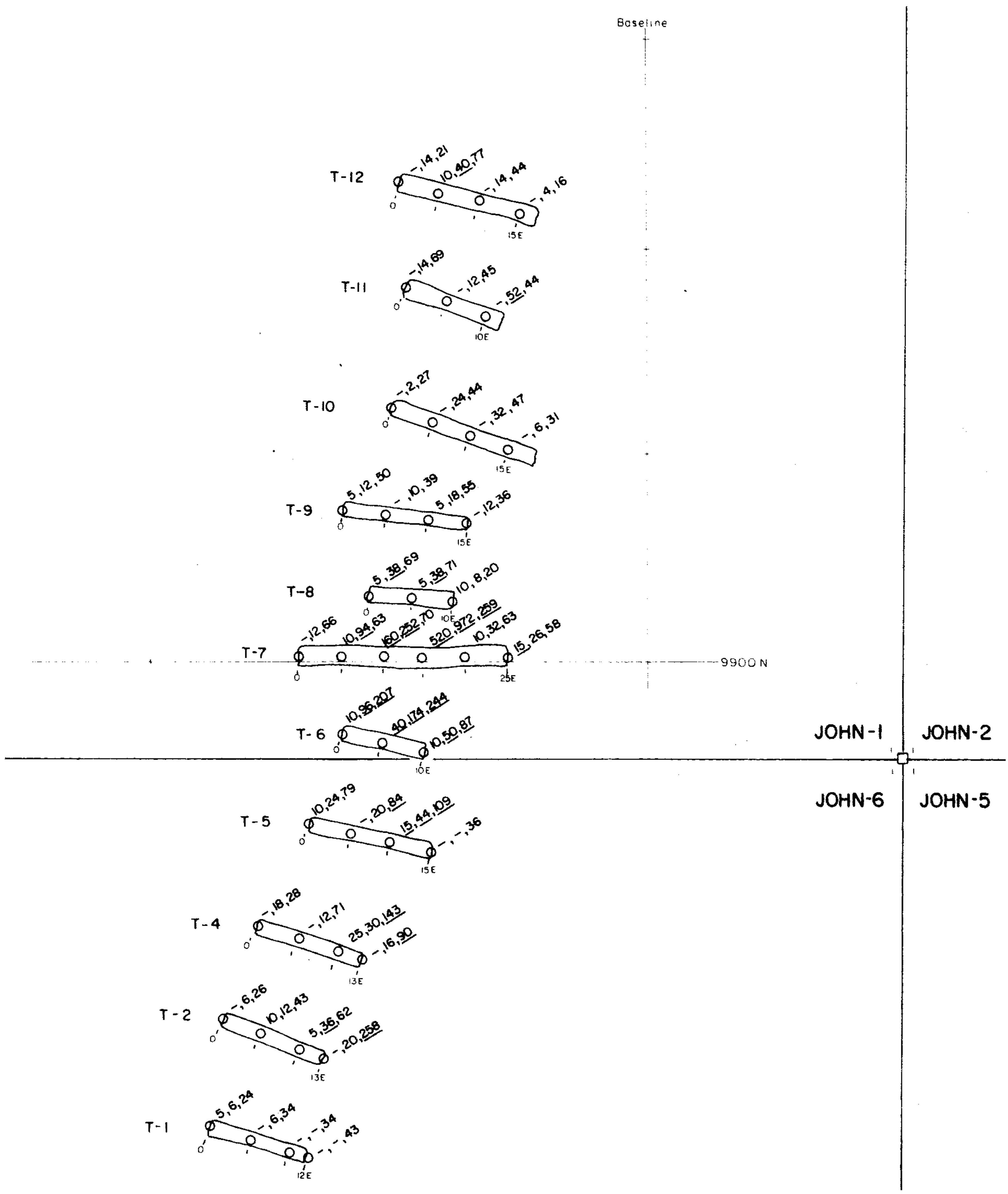
TABLE 7.0 - ANOMALOUS SOIL GEOCHEMICAL VALUES

ELEMENTS	VALUES			
		RANGE	BACKGROUND	ANOMALOUS
Au	ppb	<5 - 520	5	15
Ag	ppm	<0.2 -1.2	0.2	0.4
As	ppm	<2 - 972	23	34
Cu	ppm	16 - 259	55	82
Mo	ppm	<1 - 48	5.6	9.0
Pb	ppm	<2 - 18	3.7	6.0
Sb	ppm	<2 - 14	2.9	6.0
Zn	ppm	50 - 476	195	293

ppb - parts per billion, ppm - parts per million

GOLD

Gold values ranged from < 5 to 520 ppb (Figure 8.0) with background established at 5 ppb and anomalous values 15 ppb and greater. The highest gold values of 520 and 160 ppb were a mixture of B and C horizon soil taken from trench 7. This trench exposes a shear zone and an arsenopyrite bearing quartz vein with 8.3 grams gold per tonne. One of the samples collected from each of trenches 4, 5 and 6 south of trench 7 also gave an anomalous gold value.



LEGEND

T-2	Trench & N°
O 10,96,207	Soil sample location ppb Au, ppm As, ppm Cu (Au <5 ppb & As <2 ppm are shown as –)
15	≥ 15 ppb Au anomalous
34	≥ 34 ppm As anomalous
82	≥ 82 ppm Cu anomalous
-□-	Legal post (1 - initial , 2 - final)

PROFESSIONAL PROVINCE OF G. F. CROOKER BRITISH COLUMBIA GEOSCIENTIST

GEOTEC CONSULTANTS LTD.

GRANT F. CROOKER

HEDLEY PROJECT
BLITZ SHOWING
SOIL GEOCHEMISTRY

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

0 10 20 30 Metres

DATE: OCT 1999	DRAWN BY: G.F.C.	FIGURE 8.0
SCALE: 1:500	REVISED:	

ARSENIC

Arsenic values ranged from < 2 to 972 ppm (Figure 8.0) with background established at 23 ppm and anomalous values 34 ppm and greater. The highest arsenic values of 252 and 972 ppm were also soil samples taken from trench 7 that exposes the arsenopyrite bearing quartz vein. Trench 8, to the north of trench 7 also exposes the arsenopyrite bearing quartz vein and two samples gave moderately anomalous arsenic values. Trench 6, to the south of trench 7 gave three strongly anomalous arsenic values, and one of the samples collected from each of trenches 2, 5, 11 and 12 also gave an anomalous arsenic value.

COPPER

Copper values ranged from 18 to 259 ppm (Figure 8.0) with a background established at 55 ppm and anomalous values 82 ppm and greater. The highest copper value of 259 ppm was also taken from trench 7. Trench 6, to the south of trench 7 gave three anomalous copper values, and two samples from each of trenches 4 and 5, and one sample from trench 2 also gave anomalous copper values.

The strongest gold and multi-element soil geochemical response was in trench 7 that exposes the arsenopyrite bearing quartz veins with anomalous gold values. The anomalous values extend to the south to trench 2, while the geochemical response to the north was much weaker. This indicates the quartz vein extends to the south for at least 50 metres, while an extension to the north is unclear.

6.0 GEOPHYSICS

6.1 MAGNETIC SURVEY

A total of 20.0 kilometres of total field magnetic survey was carried out over the main grid of the East Pettigrew zone during 1999. Survey lines were spaced at 100 metre intervals with station spacing 25 metres. Total field magnetic contours are displayed on Figure 9.0 and the data listed in Appendix II.

The magnetic data can generally be divided into two zones of magnetism. The first is a zone of background magnetism with values ranging from 55,800 nT to 56,000 nT that generally covers the grid area north of line 1100N. This area includes the induced polarization high chargeability anomaly on lines 1700N and 1900N from approximately 1250E to 2100E that has been interpreted to be caused by a high concentration of metallic sulphides. The lack of a magnetic response over the chargeability anomaly indicates that pyrrhotite or other magnetic sulphides are not the cause of the anomaly.

The second zone of magnetism consists of magnetic highs with values ranging from 56,000 nT to 56,500 nT. Magnetic high A (MG-A) is linear feature striking slightly east of north, 400 metres long by 50 metres wide and extending from line 1700N and 2725E to line 1300N and 2675E. Geological mapping has not been carried out over the feature. It may be caused by a Hedley dyke, or a slightly more magnetic sedimentary or volcanic unit.

Magnetic high B (MG-B) is a broad zone of higher magnetism extending from approximately line 600N to 200N between 1700E and 2450E and open to the south. The highest magnetic values occur on line 200N between 2150E and 2250E, an area that is underlain by pyrrhotite rich argillite of the Stemwinder Formation.

With the exception of the zone of high magnetism associated with the pyrrhotite rich argillite on line 200N, the multi-element (Mo-As-Ag) soil geochemical anomaly outlined in 1997 does not coincide with zones of higher magnetism.

7.0 CONCLUSIONS

7.01 Two of the drainages from which stream sediment samples were collected gave anomalous geochemical values. Sampling of Five A Creek (4 samples) and a subsidiary creek (2 samples) draining the southern portion of the Mo-As-Ag soil geochemical anomaly on the East Pettigrew zone confirmed the soil geochemical anomaly. Two of the samples showed elevated gold values of 10 ppb, and others were anomalous for arsenic (4), molybdenum (6) and copper (5). Ten samples were collected from the upper reaches of Johns Creek and they gave the most strongly anomalous results for gold and pathfinder elements of the stream sediment survey. Three of the samples were anomalous for gold (25, 70, 80 ppb), while others were anomalous for silver (1), arsenic (5), copper (1), molybdenum (1), lead (2), antimony (2) and zinc (8).

7.02 Geological mapping, prospecting and rock sampling were carried out over the main grid on the East Pettigrew zone to determine a) the cause of the high chargeability induced polarization anomaly on lines 1700N and 1900N and b) the cause of the multi-element soil geochemical anomaly (Mo-As-Ag) extending from line 000N to 1900N. There is a general lack of outcrop over the grid. Most of the grid is underlain by siltstone and tuff of the Whistle Formation (often calcareous), although argillite with narrow interbeds of limestone of the Stemwinder Formation are poorly exposed at the south end of the grid. Rock sampling gave weakly anomalous gold (35 ppb) and pathfinder elements, with the highest geochemical values from a cluster of float samples (122, 123, 135) taken around line 1300N and 1900E. The geophysical and geochemical anomalies have not been explained.

7.03 The magnetic survey over the East Pettigrew zone did not delineate zones of higher magnetism over the multi-element (Mo-As-Ag) soil geochemical anomaly or the high chargeability induced polarization anomaly outlined in 1997. This indicates the two anomalies are not associated with magnetic sulphide minerals such as pyrrhotite.

7.04 Geological mapping, prospecting and rock sampling were carried out on the detailed grid of the East Pettigrew zone to determine the cause of the Au-As soil geochemical anomalies. The grid is underlain by siltstone and tuff of the Whistle Formation, although outcrop is sparse. The highest rock geochemical response was from bleached, fractured, and clay altered tuff float with up to 15% limonite filled boxworks (sample 178) that gave 85 ppb gold, 0.8 ppm silver, 340 ppm arsenic and 317 ppm copper. The cause of the geochemical anomalies has not been adequately explained.

7.05 The auriferous quartz veins exposed at the Blitz showing contain the anomalous pathfinder elements arsenic, molybdenum and silver. These pathfinder elements are identical to the Mo-As-Ag soil geochemical anomaly on the East Pettigrew Zone, and similar quartz veins and/or shear zones may be causing the soil geochemical anomaly on the East Pettigrew zone.

7.06 The Van showing consists of angular boulders of tuffaceous siltstone, strongly altered to hornfels, with fracturing and 2 to 4% pyrite and pyrrhotite exposed at two logging landings. One sample of float collected from each landing gave weakly anomalous gold (100 ppb, 75 ppb) and pathfinder element (Ag, As, Cd, Mo, Zn) values.

7.07 The Mission showing is located within granodiorite of the Cahill Creek pluton that has been altered to quartz, sericite, kaolinite, chlorite, carbonate and epidote and cut by fractures and quartz veinlets (1 to 50 millimetres wide) generally striking 104° and dipping steeply north.. The mineralization is contained within one principal zone (Barnes, striking 030°, dipping 70° southeast, 240 metres long, 3 to 5 metres wide) and two subsidiary zones (Walker, striking 060° and dipping 80° northwest, 90 metres long and Winkler striking 060° and dipping 85° southeast, 140 metres long). The quartz veinlets make up to 25% of the altered zone and contain varying amounts of pyrite, arsenopyrite and sphalerite. A selects ample (054) of a 5 centimetre wide quartz veinlet containing 10% pyrite, 5% arsenopyrite and 5% sphalerite gave 4.05 grams gold per tonne, 277 grams silver per tonne, 6.03% zinc and > 10,000 ppm arsenic. A one metre chip sample (055) containing 25% quartz veinlets with 5% pyrite, 2% arsenopyrite and 2% sphalerite gave 0.02 gram gold per tonne, 18.2 grams silver per tonne, 1,000 ppm zinc and > 10,000 ppm arsenic.

7.08 The Blitz showing is underlain by thinly bedded argillite and minor limestone of the Stemwinder Formation. Silicified argillite with 1 to 5 % disseminated pyrite are exposed in a number of old trenches. Quartz veins or stockwork with anomalous gold values, striking approximately 007° and dipping moderately west are exposed at three old workings over a strike length of 900 metres. It is not known if they represent en echelon veins, or a single vein with different character along strike. The highest gold values (058-3.35, 062-8.3 grams gold per tonne) with strongly anomalous arsenic (> 10,000 ppm) came from a 10 to 20 centimetre wide quartz vein with pyrite and arsenopyrite exposed in trenches 7 and 8. Four samples (064-066, 069) of a 60 to 140 centimetre wide quartz vein with pyrite exposed at the winze gave weakly anomalous gold values ranging from 105 to 565 ppb with moderately anomalous arsenic (562 to 1010 ppm). At the shaft, a 120 to 140 centimetre wide zone of oxidized quartz stockwork and breccia with weak shearing and fracturing is exposed in the north wall. The quartz veinlets contain up to ½% disseminated pyrite and make up 10 to 75% of the zone. Four samples of the quartz stockwork (073-076) gave weakly anomalous gold values ranging from 50 to 90 ppb, while arsenic (70-746 ppm) and molybdenum (40-120 ppm) were both moderately anomalous.

7.09 The strongest soil geochemical response for gold and pathfinder elements from the samples collected at the Blitz showing was at trenches 7 and 8 that expose the auriferous quartz veins. The anomalous values extend to the south to trench 2, while the geochemical response to the north was much weaker. This indicates the quartz vein extends along strike to the south for at least 50 metres, while an extension to the north is unclear.

8.0 RECOMMENDATIONS

8.01 Prospecting be conducted to determine the source of the anomalous (gold and pathfinder elements) stream sediment samples from Johns Creek.

8.02 Prospecting and rock sampling be continued over the high chargeability anomaly and multi-element soil geochemical anomaly on the main grid of the East Pettigrew zone to determine their causes.

8.03 Prospecting and rock sampling be continued over the Ag-As soil geochemical anomalies on the detailed grid of the East Pettigrew zone to determine their causes. The soil geochemical anomalies easily accessible from the Johns Creek road be trenched.

8.04 A grid be established over the Van showing, and soil geochemical sampling, magnetic and VLF-EM geophysical surveying and geological mapping be carried out to determine the extent of gold mineralization at the showing. If significant geochemical, geophysical or geological targets are developed they be tested by trenching.

8.05 The Mission showing be evaluated by establishing a grid over the showing and conducting soil geochemical sampling, magnetic and VLF-EM geophysical surveying and geological mapping to develop targets for trenching.

8.06 A new grid be established over the Blitz showings and extended to the east. Soil geochemical sampling, magnetic and VLF-EM geophysical surveying and geological mapping should be carried out to develop targets for trenching. Trenching should also be carried out over the showings to develop targets for drilling.

Respectfully submitted,

PROFESSIONAL PROVINCE OF G. F. CROOKER BRITISH

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

9.0 REFERENCES

BCEMPR: Annual Report 1925, p 160-170
Annual Report 1935, p D19-D120
Annual Report 1936, p D9-D10, D11-D12
Annual Report 1968, p218-219

BCEMPR: Minfile 92H-SE052 Mission
Minfile 92H-SE053 Snowstorm
Minfile 92H-SE054 Gold Hill
Minfile 92H-SE138 Hed
Minfile 92H-SE175 Blitz

Amendolagine, E. (Feb 1, 1982): Geology and Soil Geochemistry Survey Report GM Claim in the Similkameen Mining Division, BC for Kelly Kerr Energy Corporation. AR# 10,013, Part 1 of 2.

Amendolagine, E. (Feb 1, 1982): Geology and Soil Geochemistry Survey Report EA Claim in the Similkameen Mining Division, BC for Tuscalaloosa Oil and Gas Inc. AR# 10.014, Part 1 of 2.

Amendolagine, E. (Feb 1, 1982): Geology and Soil Geochemistry Survey Report VA Claim in the Similkameen Mining Division, BC for Kadrey Energy Corporation. AR# 10.015, Part 1 of 2.

Amendolagine, E. (Feb 1, 1982): Geology and Soil Geochemistry Survey Report JA Claim in the Similkameen Mining Division, B.C. for Berle Oil Corporation. AR# 10.016, Part 1 of 2.

Billingsley, P. and Hume, C.B. (1941): The Ore Deposits of Nickel Plate Mountain, Hedley, BC, The Canadian Institute of Mining and Metallurgy, Transactions, Volume XLIV, 1941, pp.524-590.

Botel, W. G. (January 13, 1997): Summary Report on the WP Property Hedley Area, Similkameen Mining Division for Northpoint Resources Ltd.

Candy, C. and White, G. (April 1983): Geophysical Report on a Magnetometer and VLF Electromagnetometer Survey for Fox Resources Ltd, Similkameen Mining Division. AR# 11,688.

Cavey, G. and Helgason, R. (Jan 5, 1984): Geochemical Report on the EA Claims for Tuscaloosa Oil and Gas Inc., Similkameen Mining Division, Orequest Consultants Ltd.

Cavey, G. and Helgason, R. (Jan 5, 1984): Geochemical Report on the GM Claims for Kelly Kerr Energy Corporation, Similkameen Mining Division, Orequest Consultants Ltd.

Cavey, G. and Helgason, R. (Nov 30, 1983): Geochemical and Geophysical Report on JA Claims for Berle Oil Corporation, Similkameen Mining Division, Orequest Consultants Ltd.

Cavry, G. and Helgason, R. (Jan 5, 1984): Geochemical Report on the VA Claims for Kadrey Energy Corporation, Similkameen Mining Division, Orequest Consultants Ltd.

Crooker, G.F. (1989): Geochemical Report on the WP 1-4 Claims, Hedley Area, Similkameen Mining Division for Cannelle Exploration Ltd. AR# 19,413.

Crooker, G.F. and Rockel, E.R. (1987): Geological, Geochemical and Geophysical Report on the WP 1-4 Claims, Hedley Area, Similkameen Mining Division for Cannelle Exploration Ltd. AR# 16,896.

Crooker, G.F. and Rockel, E.R. (1988): Geological, Geochemical and Geophysical Report on the WP 1-4 Claims, Hedley Area, Similkameen Mining Division for Cannelle Exploration Ltd. AR# 18,453.

Crooker, G.F. (1994): Geophysical Report on the WP 1-3 Claims, Hedley Area, Similkameen Mining Division for Grant F. Crooker. AR# 23,412.

Crooker, G.F. (1997): Geological and Geochemical Report on the WP 1A, 2 ,3 5A and 6A Claims, Hedley Area, Similkameen Mining Division for Northpoint Resources Ltd. AR# 24,821.

Crooker, G.F. (1997): Geological, Geochemical, Geophysical, Trenching and Core Drilling Report on the WP 1A, 2, 3, 5A, 9A and W 1, 2 Mineral Claims, Hedley Area, Similkameen Mining Division for Northpoint Resources Ltd. AR# 25,269.

Dolmage, V. and Brown, C.E. (1945): Contact Metamorphism at Nickel Plate Mountain, Hedley BC, Canadian Institute of Mining and Metallurgy, Transactions, Volume XLVIII, 1945, pp 27-67.

Falconer, J.S. et al (1987): Geophysical, Geochemical and Geological Surveys on the Lost Horse Project for Montello Resources Ltd., 92H/8E, Osoyoos Mining Division. AR# 15,177.

Freeze, J.C. (Dec 1986): Geological and Geochemical Report on the Blitz Property, Similkameen Mining Division for Fox Resources Ltd. AR# 15,441.

Freeze, J.C. and White, G. (Nov 1986): Geology and Electromagnetic Report on the Blitz Property, Similkameen Mining Division for Fox Resources Ltd. AR#16,275.

Jones, H.W., (1982): Assessment Report, A Geological-Geochemical Report on Gold Mine and Gold Hill Claims, Whistle Creek, Hedley Area, Similkameen Mining Division for Philex Gold and Energy Corporation. AR# 10,882.

Jones, H.W., (1985): Assessment Report, A Geochemical Report on Gold Mine and Gold Hill Claims, Whistle Creek, Hedley Area, Similkameen Mining Division for Philex Gold and Energy Corporation. AR# 13,988.

Jones, H.W., (1986): A Report on Gold Mine and Gold Hill Claims, Whistle Creek, Hedley Area, Similkameen Mining Division for Philex Gold and Energy Corporation.

Jones, H.W., (1987): Assessment Report, Geology - Geochemical Report on Gold Mine and Gold Hill Claims, Whistle Creek, Hedley Area, Similkameen Mining Division for Philex Gold and Energy Corporation. AR# 16,427.

Jones, H.M., (1988): Assessment Report, Geology - Geochemical Report on the Gold Mine and Gold Hill Claims, Whistle Creek, Hedley Area, Similkameen Mining Division for Philex Gold and Energy Corporation. AR # 17,966.

Jones, H.M., (1988): A Report on the Gold Mine and Gold Hill Claims Whistle Creek, Hedley Area, Similkameen Mining Division for Philex Energy Corporation.

Jones, H.M., (1989): Geophysical Report on the Gold Mine and Gold Hill Claims, Whistle Creek, Hedley Area, Similkameen Mining Division for Philex Gold and Energy Corporation. AR# 19,351.

Kregorsky, R> (1987): Diamond Drilling Report on the Flint and Mission Claims for Agio Resources. AR# 16,916.

Little, H.W. (1961): Geology Kettle River (West Half), BC, Geological Survey of Canada Map 15-1961.

MacDonald, C.C. (1976): Geology, Geochemistry and Diamond Drilling Report on the HED Claims, for Canadian Occidental Petroleum Ltd. AR# 6,060.

Mariano, A., (1982): Prospecting Report on the Gold Mine Mineral Claim, Whistle Creek - Hedley Area, Similkameen Mining Division, BC for Bransol Management Corp. AR# 10,018.

Peto, P> (986): Geological, Electromagnetic and soil Geochemical Report on the Alpha, Flint, Ion and Gamma Claims for Agio Resources. AR#15,630.

Pezzot, E.T. and White, G.E. (Jan 1984): Geophysical Report on an Airborne VLF-EM and Magnetometer Survey, GM Claim, *Similkameen Mining Division* for Kelly Kerr Energy Corporation. AR# 10,013, Part 2 of 2.

Pezzot, E.T. and White, G.E. (Jan 1984): Geophysical Report on an Airborne VLF-EM and Magnetometer Survey, EA Claim, Similkameen Mining Division for Tuscaloosa Oil and Gas Inc. AR# 10,014, Part 2 of 2.

Pezzot, E.T. and White, G.E. (Jan 1984): Geophysical Report on an Airborne VLF-EM and Magnetometer Survey, VA Claim, Similkameen Mining Division for Kadrey Energy Corporation. AR# 10,015, Part 2 of 2.

Pezzot, E.T. and White, G.E. (Jan 1984): Geophysical Report on an Airborne VLF-EM and Magnetometer Survey, JA Claim, Similkameen Mining Division for Berle Oil Corporation. AR# 10,016, Part 2 of 2.

Phendler, R. (1980): Diamond Drilling and Induced Polarization Survey on the Flint and Mission Claims for *Agio Resources. AR#9,222.*

Ray, G.E., Dawson, G.L. (1994): The Geology and Mineral Deposits of the Hedley Gold Skarn District, Southern British Columbia, Bulletin 87.

Ray, G.E., Simpson, R., Wilkinson W. and Thomas P. (1986): Preliminary Report on the Hedley Mapping Project, B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 1985, Paper 1986-1, Pages 101-105.

Ray, G.E., Dawson, G.L. and Simpson, R. (1986): The Geology and Controls of Skarn Mineralization in the Hedley Gold Camp Southern British Columbia, B.C. Ministry of Energy, Mines and Petroleum Resources, 1985, Paper 1987-1, pages 65-79.

Ray, G.E., *Dawson, G.L. and Simpson, R. (1987): Geology, Geochemistry and Metallogenic Zoning in the* Hedley Gold-Skarn Camp (92H/08, 82E/05).

Ray, G.E. and Dawson, G.L. (1987): Geology and Mineral Occurrences in the Hedley Gold Camp, Southern British Columbia (92H-8E), Ministry of Energy Mines and Petroleum Resources, Open File Maps 1987-10 a, b, c.

Ray, G.E. and Dawson, G.L. (1988): Geology and Mineral Occurrences in the Hedley Gold Camp, Southern British Columbia, BC Ministry of Energy, Mines and Petroleum Resources, Open File Map 1986-6.

Rice, H.M.A. (1947): Geology and Mineral Deposits of the Princeton Map-Area BC, Geological Survey of Canada Memoir 243.

Saleken, L.W. and Crooker, G.F. (1989): Exploration Report Phase I on the WP Property, Hedley Area, Similkameen Mining Division for Cannelle Exploration Ltd.

Saleken, L.W. (1997): Summary Report Stage I Drilling Program, The WP Property, Hedley Gold District for Northpoint Resources Ltd.

Seraphim, R.H., (1984): Report on Banbury Gold Mines Ltd Hedley, BC.

Vancouver Stock Watch, Banbury Gold Mines Ltd.: November 13, 1986, June 23, July 7, July 30, August 24 and September 29, 1987.

White, G., (1972): Electromagnetic and Soil Geochemical Report on the Flint Claim for Austro-Canadian Exploration. AR# 3,904.

10.0 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, 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 25 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 WP, W, John, Van, V and Paul claim groups;

Respectfully submitted,

PROFESSIONAL PROVINCE OF G. F. CROOKER BRITISH COLUMBIA GEOSCIENTIST

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

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

A9925795

Comments:

CERTIFICATE A9925795

(LOY) -

Project: BLITZ
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-AUG-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
201	13	Dry, sieve to -80 mesh
202	13	save reject
229	13	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
866	13	Fusion weight in grams	BALANCE	0.01	60.00
983	13	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	13	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	13	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	13	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	13	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	13	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	13	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	13	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	13	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	13	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	13	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	13	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	13	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	13	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	13	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	13	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	13	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	13	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	13	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	13	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	13	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	13	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	13	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	13	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	13	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	13	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	13	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	13	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	13	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	13	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	13	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	13	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	13	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	13	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	13	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

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-A
Total Pages : 2
Certificate Date: 19-JUL-1999
Invoice No. : I9922107
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9922107

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B 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 %
126001	201	229	< 5	< 0.2	2.42	14	< 10	160	< 0.5	< 2	0.61	< 0.5	6	9	5	2.44	< 10	1	0.06	< 10	0.33
126002	201	229	< 5	< 0.2	1.07	8	< 10	70	< 0.5	< 2	0.36	< 0.5	3	6	3	1.65	< 10	< 1	0.04	< 10	0.25
126003	201	229	< 5	< 0.2	1.39	< 2	< 10	100	< 0.5	< 2	0.40	< 0.5	5	7	3	1.97	< 10	< 1	0.06	< 10	0.32
126004	201	229	< 5	< 0.2	2.75	8	< 10	170	< 0.5	< 2	0.50	< 0.5	8	14	8	3.55	< 10	1	0.08	10	0.30
126005	201	229	< 5	< 0.2	1.79	18	< 10	120	< 0.5	< 2	0.40	< 0.5	7	9	5	2.53	< 10	1	0.07	< 10	0.28
126006	201	229	< 5	< 0.2	1.61	2	< 10	130	< 0.5	< 2	0.44	< 0.5	5	8	4	2.26	< 10	1	0.05	< 10	0.26
126007	201	229	< 5	< 0.2	1.90	20	< 10	130	< 0.5	< 2	0.47	< 0.5	5	8	5	2.17	< 10	1	0.05	10	0.24
126008	201	229	< 5	< 0.2	1.52	10	< 10	100	< 0.5	< 2	0.43	< 0.5	5	7	4	2.26	< 10	2	0.06	10	0.29
126009	201	229	< 5	< 0.2	1.59	12	< 10	100	< 0.5	< 2	0.44	< 0.5	4	7	4	2.06	< 10	< 1	0.07	10	0.28
126010	201	229	710	< 0.2	1.40	6	< 10	130	< 0.5	< 2	0.45	< 0.5	4	8	4	2.31	< 10	1	0.07	10	0.25
126011	201	229	5	< 0.2	1.23	16	< 10	80	< 0.5	< 2	0.47	< 0.5	4	9	6	2.05	< 10	1	0.06	< 10	0.25
126012	201	229	< 5	< 0.2	1.47	16	< 10	100	< 0.5	< 2	0.55	< 0.5	4	8	7	1.99	< 10	2	0.06	< 10	0.28
126013	201	229	< 5	< 0.2	1.02	4	< 10	80	< 0.5	< 2	0.43	< 0.5	4	11	6	3.50	< 10	< 1	0.05	< 10	0.23
126014	201	229	< 5	0.2	1.01	10	< 10	80	< 0.5	< 2	0.45	< 0.5	4	11	5	3.26	< 10	1	0.05	< 10	0.24
126015	201	229	< 5	< 0.2	1.47	16	< 10	100	< 0.5	< 2	0.62	< 0.5	4	10	12	2.59	< 10	< 1	0.07	< 10	0.34
126016	201	229	< 5	< 0.2	1.49	8	< 10	100	< 0.5	< 2	0.61	< 0.5	5	14	12	3.81	< 10	< 1	0.07	< 10	0.32
126017	201	229	< 5	< 0.2	1.42	14	< 10	90	< 0.5	< 2	0.69	< 0.5	4	10	9	2.41	< 10	< 1	0.07	10	0.36
126018	201	229	< 5	< 0.2	1.29	14	< 10	90	< 0.5	< 2	0.64	< 0.5	4	8	7	2.04	< 10	1	0.06	10	0.31
126019	201	229	< 5	< 0.2	1.59	6	< 10	70	< 0.5	< 2	0.39	< 0.5	7	12	4	2.91	< 10	1	0.05	< 10	0.18
126020	201	229	< 5	< 0.2	1.51	2	< 10	60	< 0.5	< 2	0.51	< 0.5	5	6	3	1.86	< 10	1	0.05	< 10	0.34
126021	201	229	< 5	< 0.2	1.64	4	< 10	70	< 0.5	< 2	0.43	< 0.5	5	9	4	2.41	< 10	< 1	0.05	< 10	0.29
126022	201	229	< 5	< 0.2	1.76	8	< 10	80	< 0.5	< 2	0.47	< 0.5	7	12	5	3.32	< 10	2	0.08	< 10	0.40
126023	201	229	< 5	< 0.2	1.74	12	< 10	110	< 0.5	< 2	0.47	< 0.5	8	11	7	3.34	< 10	1	0.08	< 10	0.33
126024	201	229	< 5	< 0.2	1.51	16	< 10	120	< 0.5	< 2	14.95	0.5	6	26	35	2.16	< 10	1	0.16	< 10	0.94
126025	201	229	10	< 0.2	1.69	20	< 10	140	< 0.5	< 2	13.90	0.5	6	32	43	2.35	< 10	1	0.19	< 10	1.12
126026	201	229	10	0.2	1.72	24	< 10	140	< 0.5	< 2	13.50	0.5	6	38	37	2.39	< 10	1	0.19	< 10	1.27
126027	201	229	< 5	< 0.2	2.02	16	< 10	130	< 0.5	< 2	13.00	< 0.5	5	24	31	2.53	< 10	1	0.21	< 10	1.15
126028	201	229	< 5	< 0.2	2.65	18	< 10	230	< 0.5	< 2	3.94	0.5	11	29	53	3.16	< 10	< 1	0.19	< 10	0.77
126029	201	229	5	< 0.2	1.80	30	< 10	100	< 0.5	< 2	9.83	< 0.5	7	16	33	2.38	< 10	< 1	0.12	< 10	0.55
126030	201	229	< 5	< 0.2	1.81	14	10	110	< 0.5	< 2	1.18	< 0.5	7	13	19	2.55	< 10	1	0.10	< 10	0.46
126031	201	229	< 5	< 0.2	1.29	14	< 10	100	< 0.5	< 2	0.78	< 0.5	3	8	8	1.84	< 10	2	0.07	10	0.28
126032	201	229	< 5	< 0.2	1.19	10	10	90	< 0.5	< 2	0.73	< 0.5	4	9	8	2.05	< 10	< 1	0.06	10	0.26
126033	201	229	< 5	< 0.2	1.21	14	< 10	80	< 0.5	< 2	0.71	< 0.5	4	8	7	1.74	< 10	< 1	0.06	< 10	0.25
126034	201	229	< 5	< 0.2	1.25	14	10	80	< 0.5	< 2	0.77	< 0.5	4	11	8	3.25	< 10	1	0.06	10	0.27
126035	201	229	< 5	< 0.2	1.07	10	< 10	60	< 0.5	< 2	0.76	< 0.5	5	13	9	3.61	< 10	< 1	0.06	10	0.23
126036	201	229	< 5	< 0.2	0.83	2	< 10	60	< 0.5	< 2	0.64	< 0.5	3	8	6	2.34	< 10	< 1	0.04	10	0.16
126037	201	229	< 5	< 0.2	0.85	6	< 10	60	< 0.5	< 2	0.64	< 0.5	3	7	8	1.53	< 10	< 1	0.04	< 10	0.16
126038	201	229	< 5	< 0.2	0.91	< 2	< 10	60	< 0.5	< 2	0.68	< 0.5	4	8	7	1.73	< 10	1	0.04	< 10	0.18
126039	201	229	< 5	< 0.2	1.34	6	10	70	< 0.5	< 2	1.07	< 0.5	5	17	14	3.25	< 10	< 1	0.06	< 10	0.30
126040	201	229	< 5	0.2	1.86	6	10	100	< 0.5	< 2	1.88	0.5	8	23	35	2.80	< 10	< 1	0.09	10	0.41

CERTIFICATION: [signature]

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-B
Total Pages : 2
Certificate Date: 19-JUL-1999
Invoice No. : I9922107
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9922107

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
126001	201	229	680	3	0.04	5	390	2	0.01	< 2	3	58	0.11	< 10	< 10	56	< 10	38
126002	201	229	270	1	0.03	3	230	2	< 0.01	< 2	1	26	0.09	< 10	< 10	40	< 10	24
126003	201	229	460	1	0.03	4	250	< 2	< 0.01	6	2	30	0.08	< 10	< 10	44	< 10	26
126004	201	229	920	< 1	0.03	7	380	6	0.01	2	4	48	0.10	< 10	< 10	84	< 10	38
126005	201	229	895	1	0.03	5	280	2	< 0.01	4	3	34	0.09	< 10	< 10	59	< 10	32
126006	201	229	880	3	0.03	5	360	4	< 0.01	< 2	2	37	0.10	< 10	< 10	56	< 10	28
126007	201	229	705	1	0.03	4	370	2	0.01	2	2	41	0.08	< 10	< 10	51	< 10	32
126008	201	229	715	3	0.03	4	350	< 2	< 0.01	8	2	33	0.09	< 10	< 10	51	< 10	28
126009	201	229	550	1	0.03	5	320	< 2	< 0.01	< 2	2	32	0.09	< 10	< 10	46	< 10	30
126010	201	229	2290	4	0.03	5	430	< 2	0.01	< 2	2	31	0.10	< 10	< 10	52	< 10	30
126011	201	229	315	2	0.03	3	400	6	< 0.01	2	2	42	0.09	< 10	< 10	51	< 10	60
126012	201	229	325	< 1	0.02	4	320	< 2	< 0.01	< 2	2	67	0.10	< 10	< 10	46	< 10	46
126013	201	229	295	1	0.02	3	380	2	< 0.01	6	1	35	0.09	< 10	< 10	93	< 10	32
126014	201	229	315	1	0.02	3	400	4	< 0.01	2	1	34	0.10	< 10	< 10	87	< 10	34
126015	201	229	335	1	0.02	6	440	< 2	< 0.01	2	3	46	0.10	< 10	< 10	68	< 10	50
126016	201	229	320	2	0.03	7	410	< 2	< 0.01	< 2	3	42	0.13	< 10	< 10	107	< 10	52
126017	201	229	425	1	0.03	5	420	< 2	< 0.01	< 2	3	45	0.11	< 10	< 10	64	< 10	44
126018	201	229	355	3	0.03	5	310	2	< 0.01	< 2	2	43	0.11	< 10	< 10	55	< 10	38
126019	201	229	535	1	0.03	5	190	< 2	< 0.01	< 2	2	28	0.13	< 10	< 10	80	< 10	32
126020	201	229	405	1	0.04	3	350	2	0.01	2	2	34	0.12	< 10	< 10	51	< 10	40
126021	201	229	285	1	0.03	4	230	< 2	0.01	< 2	2	30	0.12	< 10	< 10	66	< 10	38
126022	201	229	485	1	0.04	5	410	< 2	0.01	< 2	3	33	0.15	< 10	< 10	91	< 10	56
126023	201	229	900	1	0.05	7	310	< 2	< 0.01	2	2	38	0.14	< 10	< 10	84	< 10	58
126024	201	229	505	13	0.04	17	1430	2	0.08	6	3	273	0.05	< 10	< 10	64	< 10	78
126025	201	229	565	17	0.05	20	1740	< 2	0.08	< 2	3	281	0.05	< 10	< 10	72	< 10	90
126026	201	229	585	18	0.05	22	2250	2	0.08	< 2	4	299	0.05	< 10	< 10	77	< 10	102
126027	201	229	480	4	0.05	14	760	4	0.08	< 2	4	204	0.09	< 10	< 10	66	< 10	72
126028	201	229	855	7	0.13	29	1540	< 2	0.05	2	4	440	0.10	< 10	< 10	90	< 10	98
126029	201	229	535	5	0.08	13	660	< 2	0.05	2	3	177	0.09	< 10	< 10	69	< 10	64
126030	201	229	515	4	0.07	8	510	< 2	0.01	< 2	3	94	0.11	< 10	< 10	72	< 10	62
126031	201	229	360	2	0.04	4	500	< 2	0.01	< 2	2	56	0.09	< 10	< 10	47	< 10	42
126032	201	229	445	2	0.04	5	520	< 2	0.01	2	2	53	0.09	< 10	< 10	55	< 10	40
126033	201	229	350	3	0.04	5	480	< 2	0.01	2	2	55	0.09	< 10	< 10	46	< 10	42
126034	201	229	440	3	0.04	5	620	< 2	0.01	6	2	50	0.11	< 10	< 10	85	< 10	46
126035	201	229	465	< 1	0.04	5	680	< 2	0.01	< 2	2	50	0.10	< 10	< 10	96	< 10	50
126036	201	229	385	2	0.03	4	530	< 2	0.01	4	1	40	0.07	< 10	< 10	61	< 10	40
126037	201	229	435	2	0.03	5	530	< 2	0.01	6	1	42	0.06	< 10	< 10	39	< 10	40
126038	201	229	435	< 1	0.04	4	500	< 2	0.01	< 2	1	43	0.08	< 10	< 10	47	< 10	36
126039	201	229	335	3	0.05	13	930	< 2	0.03	2	2	84	0.08	< 10	< 10	93	< 10	94
126040	201	229	275	5	0.05	22	1290	6	0.10	2	4	144	0.08	< 10	< 10	78	< 10	146

CERTIFICATION: [signature]

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: 19-JUL-1999
Invoice No. :I9922107
P.O. Number :
Account :LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9922107

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B 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 %
126041	201	229	< 5	< 0.2	2.02	18	10	140	< 0.5	< 2	4.29	< 0.5	10	32	22	2.97	< 10	< 1	0.16	< 10	0.67
126042	201	229	< 5	< 0.2	2.42	18	< 10	160	< 0.5	< 2	3.56	0.5	11	36	32	3.61	< 10	1	0.16	< 10	0.72
126043	201	229	25	< 0.2	1.95	4	< 10	100	< 0.5	< 2	1.58	0.5	8	25	17	2.95	< 10	1	0.12	< 10	0.62
126044	201	229	< 5	< 0.2	1.89	10	10	110	< 0.5	< 2	2.75	0.5	9	22	22	2.69	< 10	< 1	0.12	< 10	0.61
126045	201	229	< 5	< 0.2	1.90	14	< 10	100	< 0.5	< 2	4.26	0.5	9	20	22	2.77	< 10	1	0.11	< 10	0.57
126046	201	229	10	< 0.2	1.52	4	< 10	80	< 0.5	< 2	7.46	< 0.5	6	18	53	2.34	< 10	1	0.08	< 10	0.59
126047	201	229	< 5	< 0.2	1.80	18	< 10	180	< 0.5	< 2	3.06	0.5	10	19	21	3.50	< 10	1	0.21	10	0.65
126048	201	229	70	0.4	1.72	10	< 10	170	< 0.5	< 2	0.95	< 0.5	7	17	23	3.08	< 10	1	0.18	10	0.48
126049	201	229	< 5	< 0.2	1.61	16	10	150	< 0.5	< 2	0.92	< 0.5	6	17	19	3.41	< 10	2	0.15	10	0.41
126050	201	229	< 5	< 0.2	1.80	28	< 10	180	< 0.5	< 2	1.59	< 0.5	10	21	20	3.76	< 10	< 1	0.22	< 10	0.65
126051	201	229	80	< 0.2	1.95	22	< 10	130	< 0.5	< 2	1.73	< 0.5	10	17	16	3.97	< 10	1	0.23	20	0.77
126052	201	229	10	0.4	1.32	106	10	140	< 0.5	< 2	2.90	3.5	10	18	28	3.47	< 10	< 1	0.11	10	0.45
126053	201	229	< 5	< 0.2	1.53	12	< 10	70	< 0.5	< 2	2.37	1.5	4	21	14	2.26	< 10	< 1	0.09	< 10	0.50

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: 19-JUL-1999
Invoice No. :I9922107
P.O. Number :
Account :LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9922107

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
126041	201	229	295	3	0.06	18	810	< 2	0.10	2	4	276	0.12	< 10	< 10	83	< 10	120
126042	201	229	685	5	0.08	27	1060	6	0.04	< 2	6	268	0.10	< 10	< 10	86	< 10	188
126043	201	229	320	3	0.07	15	850	2	0.05	8	5	148	0.12	< 10	< 10	83	< 10	114
126044	201	229	615	3	0.07	16	810	< 2	0.03	< 2	5	170	0.09	< 10	< 10	70	< 10	108
126045	201	229	490	1	0.08	16	920	< 2	0.04	2	4	276	0.10	< 10	< 10	73	< 10	104
126046	201	229	440	3	0.05	23	690	< 2	0.07	< 2	3	424	0.09	< 10	< 10	57	< 10	80
126047	201	229	810	3	0.04	16	1060	< 2	0.03	2	5	165	0.11	< 10	< 10	82	< 10	116
126048	201	229	460	3	0.05	9	710	6	0.01	2	4	115	0.10	< 10	< 10	85	< 10	68
126049	201	229	390	1	0.05	8	650	< 2	< 0.01	< 2	4	121	0.11	< 10	< 10	95	< 10	60
126050	201	229	945	4	0.05	15	980	< 2	0.01	< 2	6	149	0.13	< 10	< 10	95	< 10	104
126051	201	229	775	1	0.05	13	1660	< 2	0.01	6	6	121	0.16	< 10	< 10	95	< 10	110
126052	201	229	2980	3	0.04	17	810	10	0.03	4	4	194	0.08	< 10	< 10	68	20	236
126053	201	229	250	1	0.05	10	770	2	0.03	< 2	3	197	0.11	< 10	< 10	63	< 10	170

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

##

Page Number : 1-A
Total Pages : 1
Certificate Date: 23-AUG-1999
Invoice No. : I9925795
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9925795

SAMPLE	PREP CODE		fusion wt. gm	Au ppb FA+AA	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm
126090	201	202	30.93	10	0.8	1.77	22	< 10	100	< 0.5	< 2	3.22	0.5	14	20	73	3.31	< 10	< 1	0.14	10
126091	201	202	15.00	< 5	0.4	2.11	26	< 10	110	< 0.5	< 2	2.34	0.5	15	23	78	3.71	< 10	< 1	0.19	10
126097	201	202	5.65		< 0.2	0.83	2	< 10	40	< 0.5	< 2	0.31	< 0.5	4	9	4	2.14	< 10	< 1	0.04	< 10
126098	201	202	15.48	< 5	< 0.2	0.92	2	< 10	40	< 0.5	< 2	0.29	< 0.5	3	6	4	1.26	< 10	< 1	0.04	< 10
126099	201	202	5.59	< 10	< 0.2	0.91	< 2	< 10	40	< 0.5	< 2	0.35	< 0.5	4	9	4	2.16	< 10	< 1	0.03	10
126100	201	202	5.98	< 10	< 0.2	1.44	2	< 10	80	< 0.5	< 2	0.42	< 0.5	5	8	4	1.90	< 10	< 1	0.05	< 10
126101	201	202	5.48	< 10	< 0.2	1.83	2	< 10	120	< 0.5	< 2	0.47	< 0.5	6	7	5	2.17	< 10	< 1	0.05	10
126102	201	202	15.23	< 5	< 0.2	1.97	4	< 10	140	< 0.5	< 2	0.54	< 0.5	8	9	6	2.60	< 10	< 1	0.07	10
126103	201	202	5.61	< 10	< 0.2	1.73	4	< 10	100	< 0.5	< 2	0.48	< 0.5	5	8	5	2.10	< 10	< 1	0.06	10
126104	201	202	5.24		< 0.2	1.53	2	< 10	90	< 0.5	< 2	0.45	< 0.5	5	9	5	2.30	< 10	< 1	0.06	10
126105	201	202	5.84		< 0.2	0.83	< 2	< 10	50	< 0.5	< 2	0.34	< 0.5	5	16	4	4.76	< 10	< 1	0.04	10
126106	201	202	5.98	< 10	< 0.2	0.88	< 2	< 10	80	< 0.5	< 2	0.33	< 0.5	5	13	5	3.77	< 10	< 1	0.05	10
126107	201	202	5.04	< 10	< 0.2	1.04	2	< 10	60	< 0.5	< 2	0.37	< 0.5	4	11	5	3.14	< 10	< 1	0.06	10

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

##

Page Number : 1-B
Total Pages : 1
Certificate Date: 23-AUG-1999
Invoice No. : I9925795
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9925795

SAMPLE	PREP CODE		Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
126090	201	202	0.77	755	11	0.01	30	1130	8	0.04	6	4	121	0.04	< 10	< 10	45	< 10	122
126091	201	202	0.83	850	11	0.01	32	1340	8	0.03	4	5	83	0.05	< 10	< 10	50	< 10	138
126097	201	202	0.14	700	1	0.02	4	250	< 2	< 0.01	< 2	1	20	0.09	< 10	< 10	52	< 10	20
126098	201	202	0.14	395	1	0.02	3	250	< 2	0.01	< 2	1	20	0.08	< 10	< 10	29	< 10	18
126099	201	202	0.12	590	1	0.02	3	310	< 2	< 0.01	< 2	1	23	0.10	< 10	< 10	52	< 10	20
126100	201	202	0.17	1105	2	0.03	4	370	< 2	< 0.01	< 2	2	27	0.08	< 10	< 10	36	< 10	22
126101	201	202	0.19	1660	3	0.03	4	430	< 2	0.01	< 2	2	36	0.08	< 10	< 10	37	< 10	26
126102	201	202	0.28	2400	4	0.03	6	460	< 2	0.01	< 2	3	40	0.10	< 10	< 10	43	< 10	30
126103	201	202	0.25	1165	3	0.03	4	420	< 2	0.01	< 2	3	33	0.11	< 10	< 10	38	< 10	28
126104	201	202	0.25	1075	3	0.03	5	450	< 2	0.01	2	2	30	0.10	< 10	< 10	46	< 10	28
126105	201	202	0.16	765	1	0.01	4	410	< 2	< 0.01	< 2	1	19	0.10	< 10	< 10	118	< 10	26
126106	201	202	0.19	450	1	0.01	4	400	< 2	0.01	< 2	1	18	0.10	< 10	< 10	93	< 10	26
126107	201	202	0.21	435	1	0.01	4	390	< 2	< 0.01	< 2	2	22	0.09	< 10	< 10	72	< 10	26

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: 19-JUL-1999
Invoice No. : I9922147
P.O. Number :
Account : LOY

Project :
Comments:

CERTIFICATE OF ANALYSIS A9922147

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B 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 %
T-1 0	201	202	5	< 0.2	2.53	6	10	110	< 0.5	< 2	0.67	2.0	6	10	24	1.75	< 10	< 1	0.14	< 10	0.24
T-1 5m	201	202	< 5	< 0.2	2.34	6	10	90	< 0.5	< 2	0.63	0.5	9	15	34	2.26	< 10	< 1	0.16	< 10	0.36
T-1 10m	201	202	< 5	< 0.2	1.68	< 2	10	120	< 0.5	< 2	1.01	2.0	5	8	34	1.31	< 10	< 1	0.09	< 10	0.19
T-1 12m	201	202	< 5	< 0.2	1.15	< 2	< 10	140	< 0.5	< 2	0.61	3.5	4	5	43	0.97	< 10	< 1	0.13	< 10	0.14
T-2 0	201	202	< 5	< 0.2	2.06	6	< 10	100	< 0.5	< 2	0.66	0.5	8	13	26	2.07	< 10	< 1	0.18	< 10	0.32
T-2 5m	201	202	10	< 0.2	1.79	12	< 10	70	< 0.5	< 2	0.64	< 0.5	7	12	43	2.17	< 10	< 1	0.15	< 10	0.37
T-2 10m	201	202	5	0.2	1.58	36	10	90	< 0.5	< 2	0.85	1.5	9	9	82	1.81	< 10	< 1	0.10	< 10	0.28
T-2 13m	201	202	< 5	< 0.2	1.34	20	10	70	< 0.5	< 2	0.38	3.0	10	5	258	1.09	< 10	< 1	0.05	< 10	0.11
T-4 0	201	202	< 5	< 0.2	2.00	18	< 10	120	< 0.5	< 2	0.50	0.5	7	15	28	2.23	< 10	< 1	0.22	< 10	0.33
T-4 5m	201	202	< 5	< 0.2	1.55	12	10	120	< 0.5	< 2	0.69	2.0	6	8	71	1.39	< 10	< 1	0.09	< 10	0.17
T-4 10m	201	202	25	0.6	2.61	30	< 10	120	< 0.5	< 2	0.98	1.0	12	22	143	3.11	< 10	< 1	0.14	10	0.48
T-4 13m	201	202	< 5	0.2	1.95	16	10	110	< 0.5	< 2	1.16	2.0	11	11	90	2.17	< 10	< 1	0.13	< 10	0.26
T-5 0	201	202	10	< 0.2	2.29	24	10	100	< 0.5	< 2	0.87	< 0.5	11	20	79	3.08	< 10	< 1	0.26	< 10	0.50
T-5 5m	201	202	< 5	0.2	1.94	20	10	100	< 0.5	< 2	1.33	0.5	9	12	84	2.21	< 10	< 1	0.13	< 10	0.33
T-5 10m	201	202	15	0.6	2.05	44	< 10	100	< 0.5	< 2	2.01	< 0.5	8	18	109	2.84	< 10	1	0.16	< 10	0.53
T-5 15m	201	202	< 5	< 0.2	1.61	< 2	< 10	80	< 0.5	2	0.71	2.0	5	6	36	1.21	< 10	< 1	0.06	< 10	0.12
T-6 0	201	202	10	0.2	2.27	96	10	140	< 0.5	< 2	0.86	0.5	9	13	207	4.65	< 10	1	0.19	< 10	0.25
T-6 5m	201	202	40	1.2	2.52	174	10	110	< 0.5	< 2	0.92	< 0.5	15	21	244	5.98	< 10	< 1	0.15	10	0.45
T-6 10m	201	202	10	0.2	1.70	50	< 10	70	< 0.5	< 2	0.71	2.0	12	8	87	1.96	< 10	< 1	0.06	< 10	0.16
T-7 0	201	202	< 5	< 0.2	2.26	12	10	90	< 0.5	< 2	0.74	< 0.5	8	20	66	2.65	< 10	< 1	0.25	< 10	0.44
T-7 5m	201	202	10	0.2	2.30	94	< 10	160	0.5	< 2	0.38	1.0	22	17	146	4.79	< 10	< 1	0.17	< 10	0.69
T-7 10m	201	202	160	0.2	2.12	252	10	120	< 0.5	< 2	0.87	0.5	10	13	70	2.74	< 10	< 1	0.16	< 10	0.32
T-7 15m	201	202	520	1.0	2.08	972	10	110	< 0.5	< 2	0.68	2.0	22	24	259	7.33	< 10	< 1	0.14	10	0.53
T-7 20m	201	202	10	0.2	1.86	32	10	100	< 0.5	< 2	0.92	2.0	10	9	63	1.77	< 10	< 1	0.13	< 10	0.19
T-7 25m	201	202	15	< 0.2	2.45	26	10	100	< 0.5	< 2	0.61	0.5	9	17	58	2.53	< 10	< 1	0.11	< 10	0.37

CERTIFICATION: [signature]

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: 19-JUL-1999
Invoice No. : I9922147
P.O. Number :
Account : LOY

Project :
Comments:

CERTIFICATE OF ANALYSIS A9922147

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
T-1 0	201	202	420	3	0.03	17	1750	< 2	0.07	< 2	1	40	0.05	< 10	< 10	31	< 10	476
T-1 5m	201	202	360	2	0.03	21	1090	< 2	0.04	4	3	49	0.06	< 10	< 10	49	< 10	288
T-1 10m	201	202	765	3	0.02	12	2270	4	0.09	< 2	< 1	52	0.03	< 10	< 10	25	< 10	330
T-1 12m	201	202	970	4	0.01	10	1980	< 2	0.05	< 2	< 1	37	0.03	< 10	< 10	16	< 10	366
T-2 0	201	202	310	3	0.03	17	720	2	0.03	< 2	3	46	0.06	< 10	< 10	42	< 10	274
T-2 5m	201	202	320	3	0.03	19	850	< 2	0.03	< 2	3	50	0.04	< 10	< 10	54	< 10	104
T-2 10m	201	202	605	3	0.03	18	1110	< 2	0.05	< 2	1	52	0.03	< 10	< 10	34	< 10	196
T-2 13m	201	202	530	4	0.01	43	840	< 2	0.15	< 2	< 1	19	0.02	< 10	< 10	19	< 10	218
T-4 0	201	202	350	3	0.01	15	1150	18	0.04	< 2	2	44	0.03	< 10	< 10	46	< 10	268
T-4 5m	201	202	830	3	0.02	19	1980	< 2	0.07	< 2	< 1	40	0.03	< 10	< 10	24	< 10	332
T-4 10m	201	202	510	4	0.04	38	1090	< 2	0.06	4	5	60	0.08	< 10	< 10	58	< 10	234
T-4 13m	201	202	680	3	0.03	25	2430	4	0.12	< 2	1	60	0.03	< 10	< 10	36	< 10	260
T-5 0	201	202	380	2	0.04	22	1080	< 2	0.04	2	6	62	0.06	< 10	< 10	57	< 10	124
T-5 5m	201	202	710	6	0.04	24	1050	< 2	0.10	4	2	67	0.05	< 10	< 10	39	< 10	152
T-5 10m	201	202	440	7	0.05	27	690	< 2	0.07	4	4	86	0.06	< 10	< 10	62	< 10	92
T-5 15m	201	202	770	8	0.01	14	1430	< 2	0.08	< 2	< 1	36	0.01	< 10	< 10	18	< 10	250
T-6 0	201	202	2380	15	0.02	46	1430	2	0.09	< 2	3	61	0.06	< 10	< 10	46	< 10	158
T-6 5m	201	202	1225	24	0.04	48	1120	8	0.09	10	6	89	0.07	< 10	< 10	72	< 10	136
T-6 10m	201	202	795	9	0.02	47	1220	< 2	0.08	< 2	1	32	0.03	< 10	< 10	26	< 10	304
T-7 0	201	202	290	2	0.02	19	860	< 2	0.04	< 2	5	51	0.05	< 10	< 10	51	< 10	114
T-7 5m	201	202	1025	13	0.02	46	1220	10	0.07	8	4	162	0.04	< 10	< 10	47	< 10	156
T-7 10m	201	202	555	7	0.03	25	1150	4	0.08	< 2	3	64	0.05	< 10	< 10	45	< 10	198
T-7 15m	201	202	1145	48	0.01	61	1660	18	0.14	14	6	65	0.03	< 10	< 10	86	< 10	220
T-7 20m	201	202	920	10	0.02	30	1780	< 2	0.08	2	1	45	0.03	< 10	< 10	31	< 10	306
T-7 25m	201	202	355	4	0.04	18	1010	< 2	0.04	4	4	51	0.07	< 10	< 10	55	< 10	152

CERTIFICATION: [signature]

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: 23-JUL-1999
Invoice No. : I9922858
P.O. Number :
Account :LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9922858

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B 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 %
T-8 0	201	229	5	< 0.2	2.73	38	< 10	130	< 0.5	< 2	1.02	0.5	10	18	69	3.43	< 10	< 1	0.24	< 10	0.40
T-8 5E	201	229	5	0.2	2.70	38	< 10	90	< 0.5	< 2	0.80	< 0.5	9	18	71	3.18	< 10	1	0.23	< 10	0.47
T-8 10E	201	229	10	< 0.2	2.92	8	< 10	130	< 0.5	< 2	0.41	< 0.5	7	11	20	1.80	< 10	< 1	0.13	< 10	0.22
T-9 0	201	229	5	< 0.2	2.38	12	< 10	120	< 0.5	< 2	0.89	< 0.5	8	18	50	2.33	< 10	< 1	0.16	< 10	0.42
T-9 5E	201	229	< 5	< 0.2	2.52	10	< 10	100	< 0.5	< 2	0.69	< 0.5	9	20	39	2.62	< 10	< 1	0.29	< 10	0.40
T-9 10E	201	229	5	0.2	2.48	18	< 10	90	< 0.5	< 2	0.66	< 0.5	11	17	55	2.59	< 10	< 1	0.22	< 10	0.40
T-9 15E	201	229	< 5	< 0.2	2.51	12	< 10	130	< 0.5	< 2	0.65	0.5	7	12	36	1.93	< 10	< 1	0.17	< 10	0.26
T-10 0	201	229	< 5	< 0.2	2.44	2	< 10	110	< 0.5	< 2	0.73	0.5	6	9	27	1.44	< 10	< 1	0.08	< 10	0.21
T-10 5E	201	229	< 5	< 0.2	1.69	24	< 10	110	< 0.5	< 2	0.91	0.5	8	9	44	1.72	< 10	< 1	0.15	< 10	0.25
T-10 10E	201	229	< 5	0.2	1.74	32	< 10	100	< 0.5	< 2	0.75	1.5	7	9	47	1.65	< 10	< 1	0.14	< 10	0.23
T-10 15E	201	229	< 5	0.2	2.23	6	< 10	70	< 0.5	< 2	0.98	1.0	5	10	31	1.53	< 10	< 1	0.11	< 10	0.23
T-11 0	201	229	< 5	< 0.2	3.70	14	< 10	170	0.5	< 2	1.08	0.5	12	19	49	2.65	< 10	< 1	0.26	< 10	0.44
T-11 5E	201	229	< 5	< 0.2	3.84	12	< 10	170	< 0.5	< 2	0.79	< 0.5	11	22	45	2.60	< 10	< 1	0.17	< 10	0.48
T-11 10E	201	229	< 5	0.2	2.23	52	< 10	60	< 0.5	< 2	1.02	0.5	7	12	44	2.02	< 10	< 1	0.11	< 10	0.29
T-12 0	201	229	< 5	0.2	2.91	14	< 10	140	< 0.5	< 2	0.74	0.5	7	11	21	1.77	< 10	< 1	0.11	< 10	0.24
T-12 5E	201	229	10	0.2	2.88	40	< 10	110	< 0.5	< 2	0.90	0.5	13	19	77	3.05	< 10	< 1	0.12	< 10	0.46
T-12 10E	201	229	< 5	0.2	3.03	14	< 10	140	< 0.5	< 2	0.88	< 0.5	10	22	44	2.57	< 10	< 1	0.20	< 10	0.51
T-12 15E	201	229	< 5	< 0.2	2.91	4	< 10	80	< 0.5	< 2	0.52	< 0.5	7	11	16	1.77	< 10	< 1	0.05	< 10	0.22

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: 23-JUL-1999
Invoice No. : I9922858
P.O. Number :
Account :LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9922858

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
T-8 0	201	229	505	4	0.03	18	1820	10	0.07	2	4	74	0.06	< 10	< 10	58	< 10	136
T-8 5E	201	229	330	3	0.04	21	1050	2	0.03	4	5	67	0.07	< 10	< 10	75	< 10	50
T-8 10E	201	229	550	1	0.03	13	2270	< 2	0.07	< 2	1	40	0.05	< 10	< 10	29	< 10	196
T-9 0	201	229	355	1	0.05	17	760	2	0.04	< 2	4	66	0.06	< 10	< 10	52	< 10	74
T-9 5E	201	229	325	< 1	0.02	15	990	2	0.05	< 2	5	50	0.05	< 10	< 10	54	< 10	92
T-9 10E	201	229	405	1	0.03	19	810	< 2	0.04	2	5	57	0.05	< 10	< 10	56	< 10	84
T-9 15E	201	229	385	3	0.03	14	1060	2	0.05	< 2	3	46	0.05	< 10	< 10	34	< 10	128
T-10 0	201	229	705	3	0.03	13	2670	4	0.09	< 2	< 1	39	0.03	< 10	< 10	23	< 10	152
T-10 5E	201	229	680	3	0.04	14	1490	4	0.06	< 2	1	55	0.04	< 10	< 10	30	< 10	128
T-10 10E	201	229	820	5	0.03	16	1200	6	0.05	< 2	1	44	0.04	< 10	< 10	26	< 10	174
T-10 15E	201	229	310	4	0.04	12	750	2	0.05	2	2	50	0.06	< 10	< 10	30	< 10	234
T-11 0	201	229	535	< 1	0.04	23	2020	6	0.08	< 2	4	94	0.06	< 10	< 10	54	< 10	220
T-11 5E	201	229	375	1	0.04	20	930	2	0.04	2	5	67	0.09	< 10	< 10	56	< 10	200
T-11 10E	201	229	325	7	0.07	16	1020	< 2	0.06	2	3	62	0.06	< 10	< 10	40	< 10	266
T-12 0	201	229	590	< 1	0.04	14	1520	< 2	0.07	< 2	1	58	0.06	< 10	< 10	31	< 10	238
T-12 5E	201	229	585	4	0.06	25	770	2	0.02	< 2	6	88	0.08	< 10	< 10	67	< 10	150
T-12 10E	201	229	410	1	0.05	17	710	2	0.03	< 2	5	84	0.09	< 10	< 10	61	< 10	150
T-12 15E	201	229	310	4	0.05	13	750	< 2	0.04	< 2	2	29	0.07	< 10	< 10	31	< 10	310

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

A9922859

Comments:

CERTIFICATE A9922859

(LOY) -

Project: BLITZ
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-JUL-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	23	Geochem ring to approx 150 mesh
226	23	0-3 Kg crush and split
3202	23	Rock - save entire reject
229	23	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	23	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
2118	23	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	23	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	23	As ppm: 32 element, soil & rock	ICP-AES	2	10000
557	23	B ppm: 32 element, rock & soil	ICP-AES	10	10000
2121	23	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	23	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	23	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	23	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	23	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	500
2126	23	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	23	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	23	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	23	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	23	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
2131	23	Hg ppm: 32 element, soil & rock	ICP-AES	1	10000
2132	23	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	23	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	23	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	23	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	23	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	23	Na %: 32 element, soil & rock	ICP-AES	0.01	10.00
2138	23	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	23	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	23	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
551	23	S %: 32 element, rock & soil	ICP-AES	0.01	5.00
2141	23	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	23	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	23	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	23	Ti %: 32 element, soil & rock	ICP-AES	0.01	10.00
2145	23	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	23	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	23	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	23	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	23	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000

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: 19-JUL-1999
Invoice No. : I9922105
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9922105

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B 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 %
126054	205	226	4050	>100.0	0.22	>10000	30	10	< 0.5	50	< 0.01	>500	21	60	684	11.50	< 10	7	0.18	< 10	0.01
126055	205	226	200	18.2	0.36	>10000	10	30	< 0.5	44	0.02	28.0	1	109	38	4.37	< 10	1	0.28	< 10	0.03
126056	205	226	15	1.8	2.70	396	< 10	90	0.5	< 2	2.19	3.0	5	93	62	1.66	< 10	2	0.09	< 10	0.36
126057	205	226	80	1.8	1.30	766	< 10	100	< 0.5	< 2	0.31	< 0.5	15	111	233	9.38	< 10	1	0.22	< 10	0.35
126058	205	226	3350	1.8	0.31	>10000	< 10	10	< 0.5	< 2	0.15	< 0.5	< 1	189	15	2.26	< 10	< 1	0.06	< 10	0.07
126059	205	226	675	1.4	0.96	2620	10	140	< 0.5	< 2	0.25	< 0.5	7	151	68	2.76	< 10	< 1	0.29	10	0.22
126060	205	226	15	0.4	2.41	80	< 10	100	< 0.5	< 2	1.98	< 0.5	7	112	70	1.89	< 10	< 1	0.10	< 10	0.30
126061	205	226	50	0.8	2.43	408	10	120	< 0.5	< 2	1.61	2.0	8	95	79	2.93	< 10	4	0.12	< 10	0.37
126062	205	226	8300	0.2	0.13	>10000	< 10	< 10	< 0.5	< 2	0.05	< 0.5	< 1	153	5	3.52	< 10	1	0.04	< 10	0.07
126063	205	226	165	1.0	1.68	444	< 10	90	< 0.5	< 2	0.92	< 0.5	9	161	84	2.72	< 10	< 1	0.17	10	0.54

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: 19-JUL-1999
Invoice No. : I9922105
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9922105

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
126054	205	226	50	1	< 0.01	8	< 10	500	>5.00	318	< 1	1	< 0.01	< 10	< 10	1	< 10	>10000
126055	205	226	20	3	< 0.01	4	60	518	1.53	242	< 1	6	< 0.01	< 10	< 10	4	< 10	1030
126056	205	226	125	5	0.14	20	1130	8	0.53	2	3	204	0.11	< 10	< 10	29	< 10	180
126057	205	226	235	61	< 0.01	30	950	8	0.07	18	8	27	< 0.01	< 10	< 10	51	< 10	90
126058	205	226	25	4	0.01	4	100	2	0.87	142	< 1	15	< 0.01	< 10	< 10	9	< 10	32
126059	205	226	175	12	< 0.01	15	580	2	0.11	18	4	20	< 0.01	< 10	< 10	50	< 10	22
126060	205	226	100	5	0.11	28	1120	< 2	0.97	6	1	204	0.11	< 10	< 10	22	< 10	38
126061	205	226	655	13	0.19	31	1050	6	0.18	10	6	219	0.07	< 10	< 10	52	< 10	212
126062	205	226	20	2	< 0.01	7	< 10	6	2.03	366	< 1	4	< 0.01	< 10	< 10	6	< 10	8
126063	205	226	175	21	0.08	20	1130	2	0.38	8	5	103	0.04	< 10	< 10	77	< 10	104

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: 23-JUL-1999
Invoice No. :19922859
P.O. Number :
Account :LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9922859

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B 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 %
126064	205	226	565	0.8	0.52	734	< 10	80	< 0.5	< 2	0.27	< 0.5	1	181	30	3.70	< 10	< 1	0.07	< 10	0.12
126065	205	226	425	0.8	0.94	1010	< 10	90	< 0.5	< 2	0.45	< 0.5	5	155	63	4.44	< 10	< 1	0.06	< 10	0.18
126066	205	226	105	0.8	0.78	562	< 10	60	< 0.5	< 2	0.40	< 0.5	3	175	58	2.39	< 10	< 1	0.08	< 10	0.17
126067	205	226	60	1.2	4.25	118	< 10	150	0.5	< 2	3.43	0.5	10	83	87	2.72	< 10	< 1	0.12	< 10	0.34
126068	205	226	100	0.6	3.56	106	< 10	140	0.5	< 2	2.72	< 0.5	7	102	63	1.95	< 10	< 1	0.13	10	0.39
126069	205	226	365	0.8	0.61	826	< 10	< 10	< 0.5	< 2	0.38	< 0.5	5	209	80	3.34	< 10	< 1	0.04	< 10	0.20
126070	205	226	< 5	1.0	2.55	4	< 10	100	< 0.5	< 2	0.57	< 0.5	24	57	93	5.37	< 10	< 1	0.75	< 10	1.13
126071	205	226	< 5	1.0	2.04	2	< 10	70	< 0.5	< 2	9.88	0.5	8	124	38	2.96	< 10	< 1	0.52	< 10	1.34
126072	205	226	< 5	0.8	1.65	< 2	< 10	90	< 0.5	< 2	9.33	0.5	8	132	34	2.98	< 10	< 1	0.38	< 10	0.93
126073	205	226	90	1.8	2.88	434	< 10	< 10	< 0.5	< 2	1.78	< 0.5	4	108	76	4.63	< 10	< 1	0.06	< 10	0.30
126074	205	226	70	0.8	2.40	746	< 10	80	< 0.5	< 2	1.73	< 0.5	6	96	110	1.91	< 10	< 1	0.08	< 10	0.44
126075	205	226	50	0.8	1.71	406	< 10	40	< 0.5	< 2	1.79	< 0.5	6	172	92	2.98	< 10	< 1	0.05	< 10	0.28
126076	205	226	70	1.0	1.66	70	< 10	10	< 0.5	< 2	1.52	< 0.5	1	205	32	1.98	< 10	< 1	0.05	10	0.42
126077	205	226	10	0.6	2.81	8	< 10	130	0.5	< 2	2.46	< 0.5	9	118	90	1.90	< 10	< 1	0.16	10	0.39
126078	205	226	< 5	0.8	4.10	80	< 10	150	< 0.5	< 2	3.37	< 0.5	26	24	75	4.26	< 10	< 1	0.10	< 10	0.69
126079	205	226	< 5	0.8	6.77	< 2	< 10	100	0.5	< 2	4.46	< 0.5	9	88	58	2.15	10	< 1	0.05	< 10	0.16
126080	205	226	10	0.6	2.54	56	< 10	100	< 0.5	< 2	2.61	< 0.5	8	128	61	2.98	< 10	< 1	0.09	< 10	0.33
126081	205	226	65	0.4	0.92	230	< 10	10	< 0.5	< 2	1.49	16.5	3	243	34	2.06	< 10	< 1	0.03	< 10	0.25
126082	205	226	90	0.6	0.71	66	< 10	60	< 0.5	< 2	0.53	7.0	3	222	62	2.77	< 10	< 1	0.08	< 10	0.23
126083	205	226	10	0.4	7.96	28	< 10	160	< 0.5	< 2	4.25	< 0.5	12	60	35	2.38	10	< 1	0.30	< 10	1.07
126084	205	226	20	0.8	2.07	34	< 10	70	< 0.5	< 2	4.70	18.5	13	81	134	3.13	< 10	< 1	0.09	< 10	0.20
126085	205	226	10	0.6	8.12	48	< 10	70	< 0.5	< 2	3.73	0.5	13	80	240	3.84	< 10	< 1	0.10	< 10	0.49
126086	205	226	75	0.8	4.61	24	< 10	150	< 0.5	< 2	2.17	< 0.5	26	44	223	5.01	10	< 1	0.79	< 10	1.10

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: 23-JUL-1999
Invoice No. :19922859
P.O. Number :
Account :LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9922859

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
126064	205	226	85	21	0.01	8	240	10	0.60	4	1	32	0.03	< 10	< 10	43	< 10	16
126065	205	226	120	17	0.01	22	370	< 2	2.05	6	1	42	0.03	< 10	< 10	60	< 10	20
126066	205	226	100	25	0.01	11	290	6	0.42	4	1	25	0.03	< 10	< 10	53	< 10	14
126067	205	226	285	8	0.16	30	1090	8	1.40	10	3	422	0.08	< 10	< 10	31	< 10	102
126068	205	226	190	1	0.14	31	1540	2	0.85	6	3	332	0.12	< 10	< 10	28	< 10	46
126069	205	226	95	8	< 0.01	20	200	2	1.87	2	1	9	0.01	< 10	< 10	38	< 10	10
126070	205	226	330	< 1	0.21	17	250	< 2	2.33	< 2	15	92	0.18	< 10	< 10	126	< 10	54
126071	205	226	305	6	0.19	25	4210	6	1.06	2	6	411	0.08	< 10	< 10	109	< 10	124
126072	205	226	270	1	0.20	23	4160	4	1.40	2	6	398	0.08	< 10	< 10	105	< 10	124
126073	205	226	270	120	< 0.01	24	960	12	0.13	6	3	82	0.09	< 10	< 10	188	< 10	28
126074	205	226	345	65	0.04	29	880	8	0.48	6	5	89	0.11	< 10	< 10	128	< 10	32
126075	205	226	285	40	0.02	19	350	4	0.75	< 2	4	42	0.08	< 10	< 10	111	< 10	16
126076	205	226	365	76	0.01	6	610	6	0.37	< 2	2	34	0.07	< 10	< 10	103	< 10	12
126077	205	226	160	2	0.36	36	2790	4	0.80	6	1	272	0.07	< 10	< 10	38	< 10	44
126078	205	226	370	< 1	0.34	11	740	24	1.79	2	5	231	0.22	< 10	< 10	71	< 10	72
126079	205	226	90	< 1	0.33	14	810	6	0.88	2	1	365	0.13	< 10	< 10	11	< 10	38
126080	205	226	375	8	0.08	28	710	2	1.38	2	2	182	0.11	< 10	< 10	43	< 10	60
126081	205	226	375	19	0.01	18	330	4	0.82	2	1	41	0.03	< 10	< 10	47	< 10	2530
126082	205	226	270	17	0.02	9	350	4	0.59	2	1	34	0.04	< 10	< 10	45	< 10	1295
126083	205	226	190	2	1.10	13	530	2	0.92	4	6	946	0.17	< 10	< 10	98	< 10	60
126084	205	226	250	74	0.07	35	960	6	1.70	2	2	244	0.08	< 10	< 10	57	< 10	1885
126085	205	226	245	1	0.15	29	1120	2	1.91	4	4	419	0.16	< 10	< 10	47	< 10	90
126086	205	226	195	< 1	0.36	11	590	< 2	1.73	2	15	187	0.22	< 10	< 10	165	< 10	48

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: 23-AUG-1999
Invoice No. : I9925799
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9925799

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B 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 %
126087	205	226	< 5	0.4	0.87	10	< 10	80	< 0.5	< 2	>15.00	< 0.5	3	8	18	2.80	< 10	< 1	0.04	< 10	0.84
126088	205	226	10	0.2	2.27	14	< 10	130	< 0.5	< 2	14.70	1.0	9	21	32	2.51	< 10	< 1	0.11	< 10	1.41
126089	205	226	< 5	0.2	0.21	16	< 10	40	< 0.5	< 2	>15.00	< 0.5	1	3	6	1.06	< 10	< 1	< 0.01	< 10	0.43
126092	205	226	< 5	0.2	1.29	32	< 10	130	< 0.5	< 2	>15.00	< 0.5	5	22	40	1.76	< 10	< 1	0.15	< 10	0.74
126093	205	226	< 5	0.2	1.76	18	< 10	160	< 0.5	< 2	5.50	0.5	13	53	59	2.63	< 10	< 1	0.22	< 10	1.06
126094	205	226	< 5	< 0.2	0.57	12	< 10	40	< 0.5	< 2	>15.00	1.5	2	6	13	2.24	< 10	< 1	0.03	< 10	0.60
126095	205	226	< 5	0.6	2.37	16	< 10	130	< 0.5	< 2	4.46	< 0.5	14	41	104	3.52	< 10	< 1	0.20	< 10	1.54
126096	205	226	< 5	< 0.2	0.10	2	< 10	10	< 0.5	< 2	>15.00	< 0.5	1	27	7	0.32	< 10	< 1	0.01	< 10	0.09
126108	205	226	< 5	< 0.2	1.25	< 2	< 10	70	< 0.5	< 2	0.45	< 0.5	< 1	114	4	1.23	< 10	< 1	0.23	10	0.12
126109	205	226	< 5	< 0.2	2.59	10	< 10	80	< 0.5	< 2	0.96	< 0.5	< 1	98	2	1.43	< 10	< 1	0.35	< 10	0.29
126110	205	226	< 5	< 0.2	2.07	< 2	< 10	90	< 0.5	< 2	0.73	< 0.5	< 1	94	3	1.17	< 10	< 1	0.30	< 10	0.13
126111	205	226	< 5	< 0.2	1.97	2	< 10	120	< 0.5	< 2	0.74	< 0.5	< 1	82	1	0.93	< 10	< 1	0.27	< 10	0.06
126112	205	226	< 5	< 0.2	1.09	< 2	< 10	120	< 0.5	< 2	0.42	< 0.5	1	91	3	0.86	< 10	< 1	0.25	10	0.10
126113	205	226	< 5	0.2	3.67	6	< 10	40	< 0.5	< 2	2.02	< 0.5	10	57	54	3.44	< 10	< 1	0.26	< 10	1.50
126114	205	226	< 5	0.2	3.11	2	< 10	370	< 0.5	< 2	1.27	< 0.5	17	21	58	4.53	< 10	< 1	0.33	< 10	1.98
126115	205	226	< 5	0.2	2.83	8	< 10	120	< 0.5	< 2	11.60	0.8	7	68	46	2.55	< 10	< 1	0.09	10	3.59
126116	205	226	10	1.8	0.22	18	< 10	120	< 0.5	< 2	13.35	5.0	3	41	16	0.92	< 10	< 1	0.09	10	0.30
126117	205	226	< 5	< 0.2	3.30	4	< 10	220	< 0.5	< 2	2.33	< 0.5	10	20	48	4.09	< 10	< 1	0.24	< 10	1.99
126118	205	226	< 5	< 0.2	3.39	< 2	< 10	160	< 0.5	< 2	6.41	< 0.5	11	29	40	3.07	< 10	< 1	0.14	< 10	1.41
126119	205	226	< 5	< 0.2	3.27	4	< 10	180	< 0.5	< 2	2.75	< 0.5	16	71	114	4.00	< 10	< 1	0.17	< 10	1.92
126120	205	226	< 5	< 0.2	1.44	6	< 10	160	< 0.5	< 2	>15.00	< 0.5	4	19	37	2.02	< 10	< 1	0.16	10	0.66
126121	205	226	< 5	< 0.2	3.58	2	< 10	170	< 0.5	< 2	0.91	< 0.5	29	7	35	6.08	< 10	< 1	0.20	< 10	2.24
126122	205	226	< 5	< 0.2	0.08	80	< 10	50	< 0.5	< 2	>15.00	0.5	1	22	10	0.69	< 10	1	0.03	< 10	0.37
126123	205	226	35	0.8	2.91	36	< 10	320	0.5	< 2	1.26	1.5	20	122	136	4.27	< 10	< 1	0.52	30	1.65
126124	205	226	< 5	< 0.2	4.11	6	< 10	60	< 0.5	< 2	2.65	< 0.5	13	48	126	3.45	< 10	< 1	0.07	< 10	1.01
126125	205	226	< 5	< 0.2	0.78	56	< 10	70	< 0.5	< 2	5.34	< 0.5	17	57	9	4.94	< 10	< 1	0.16	< 10	0.20
126126	205	226	< 5	< 0.2	1.98	26	< 10	160	< 0.5	< 2	0.70	< 0.5	9	47	32	3.72	< 10	< 1	0.52	10	0.87
126127	205	226	10	0.2	7.99	184	< 10	190	0.5	< 2	4.84	< 0.5	25	69	41	1.71	10	< 1	0.15	< 10	0.71
126128	205	226	10	0.4	2.33	8	< 10	90	< 0.5	< 2	1.51	1.5	19	105	89	3.24	< 10	< 1	0.28	< 10	0.73
126129	205	226	100	0.8	2.43	24	< 10	70	< 0.5	< 2	2.03	< 0.5	19	81	81	3.50	< 10	< 1	0.08	< 10	0.34
126130	205	226	15	0.2	1.78	16	< 10	30	< 0.5	< 2	2.00	0.5	17	146	83	2.31	< 10	< 1	0.04	< 10	0.23
126131	205	226	< 5	0.4	2.77	60	< 10	40	< 0.5	< 2	3.54	0.5	11	48	64	1.44	< 10	< 1	0.18	< 10	0.35
126132	205	226	< 5	0.6	3.02	32	< 10	70	< 0.5	< 2	2.70	0.5	12	58	77	1.87	< 10	< 1	0.27	< 10	0.45
126133	205	226	25	2.4	5.22	60	< 10	220	< 0.5	< 2	4.25	3.0	24	42	225	3.53	< 10	< 1	0.29	< 10	0.50
126134A	205	226	5	0.8	2.11	36	< 10	90	< 0.5	< 2	0.20	< 0.5	7	36	120	10.60	< 10	< 1	0.10	< 10	0.11
126134B	205	226	< 5	< 0.2	2.38	8	< 10	230	< 0.5	< 2	1.90	< 0.5	17	33	30	3.33	< 10	< 1	0.28	< 10	1.51
126135	205	226	10	1.0	1.96	40	< 10	290	< 0.5	< 2	7.63	3.0	10	65	77	2.70	< 10	< 1	0.28	30	1.23
126136	205	226	< 5	0.2	2.80	< 2	< 10	410	< 0.5	< 2	0.56	< 0.5	9	35	42	4.41	< 10	< 1	0.24	10	1.84
126137	205	226	< 5	< 0.2	2.38	2	< 10	110	< 0.5	< 2	3.09	< 0.5	18	26	114	3.65	< 10	< 1	0.09	< 10	1.14
126138	205	226	< 5	< 0.2	1.20	4	< 10	20	< 0.5	< 2	>15.00	< 0.5	7	9	20	1.64	< 10	< 1	0.07	< 10	0.68

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: 23-AUG-1999
Invoice No. : I9925799
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9925799

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
126087	205	226	1105	3	< 0.01	8	1090	< 2	0.02	2	1	567	< 0.01	< 10	< 10	14	< 10	52
126088	205	226	1395	1	0.05	13	1680	< 2	0.07	2	5	490	0.05	< 10	< 10	73	< 10	68
126089	205	226	1990	< 1	< 0.01	< 1	60	< 2	0.07	2	< 1	1545	< 0.01	< 10	< 10	4	< 10	6
126092	205	226	650	1	< 0.01	9	3350	< 2	0.01	4	2	534	< 0.01	< 10	< 10	17	< 10	54
126093	205	226	580	3	< 0.01	29	820	22	0.01	4	3	259	< 0.01	< 10	< 10	36	< 10	120
126094	205	226	1210	1	< 0.01	6	130	< 2	0.03	4	< 1	1015	< 0.01	< 10	< 10	18	< 10	96
126095	205	226	680	6	0.01	28	1060	< 2	0.01	2	3	98	< 0.01	< 10	< 10	58	< 10	96
126096	205	226	785	< 1	< 0.01	3	70	< 2	0.01	< 2	< 1	779	< 0.01	< 10	< 10	4	< 10	8
126108	205	226	565	1	0.13	2	220	4	0.02	< 2	< 1	31	0.02	< 10	< 10	< 1	< 10	60
126109	205	226	570	16	0.35	2	230	8	0.53	< 2	< 1	87	0.01	< 10	< 10	< 1	< 10	66
126110	205	226	620	2	0.27	1	270	8	0.04	< 2	< 1	64	0.02	< 10	< 10	< 1	< 10	44
126111	205	226	310	3	0.25	2	370	6	0.32	< 2	< 1	53	< 0.01	< 10	< 10	< 1	< 10	94
126112	205	226	415	1	0.14	1	320	6	0.01	< 2	< 1	41	0.01	< 10	< 10	< 1	< 10	46
126113	205	226	505	2	0.22	15	620	< 2	0.02	2	4	130	0.19	< 10	< 10	88	< 10	80
126114	205	226	475	4	0.04	14	1870	< 2	< 0.01	2	5	151	< 0.01	< 10	< 10	55	< 10	102
126115	205	226	900	1	< 0.01	26	1870	2	0.46	2	6	417	< 0.01	< 10	< 10	49	< 10	142
126116	205	226	805	26	< 0.01	16	880	< 2	0.01	6	2	789	< 0.01	< 10	< 10	19	< 10	82
126117	205	226	410	3	0.05	8	540	< 2	0.05	2	4	67	0.16	< 10	< 10	63	< 10	106
126118	205	226	1025	1	0.19	14	1260	< 2	0.01	4	6	288	0.12	< 10	< 10	84	< 10	80
126119	205	226	480	1	0.09	24	770	< 2	0.36	4	9	126	0.19	< 10	< 10	106	< 10	92
126120	205	226	1780	< 1	< 0.01	6	4030	< 2	< 0.01	2	4	500	< 0.01	< 10	< 10	18	< 10	68
126121	205	226	1010	3	0.04	7	980	< 2	< 0.01	4	6	23	< 0.01	< 10	< 10	129	< 10	78
126122	205	226	1275	5	< 0.01	6	260	< 2	0.04	2	< 1	608	< 0.01	< 10	< 10	3	< 10	28
126123	205	226	220	15	0.01	65	5230	2	< 0.01	6	5	106	0.01	< 10	< 10	112	< 10	202
126124	205	226	435	4	0.37	5	730	< 2	0.24	< 2	5	182	0.13	< 10	< 10	70	< 10	28
126125	205	226	1025	< 1	0.01	17	410	< 2	0.01	2	17	83	< 0.01	< 10	< 10	56	< 10	80
126126	205	226	650	3	0.13	8	1050	< 2	0.21	2	5	53	0.18	< 10	< 10	74	< 10	62
126127	205	226	430	4	0.59	66	610	< 2	0.50	6	3	642	0.31	< 10	< 10	55	< 10	68
126128	205	226	305	15	0.12	39	540	< 2	2.44	2	11	101	0.15	< 10	< 10	125	< 10	126
126129	205	226	315	15	0.09	27	460	< 2	1.90	< 2	7	73	0.16	< 10	< 10	66	< 10	72
126130	205	226	615	11	0.06	52	270	4	1.43	< 2	5	44	0.12	< 10	< 10	62	< 10	148
126131	205	226	115	4	0.26	22	730	< 2	0.52	2	1	219	0.20	< 10	< 10	47	< 10	38
126132	205	226	130	5	0.24	18	600	< 2	0.71	2	2	148	0.20	< 10	< 10	56	< 10	46
126133	205	226	430	4	0.42	23	860	12	1.13	6	7	301	0.23	< 10	< 10	101	< 10	116
126134A	205	226	175	9	0.05	18	870	< 2	0.17	6	29	50	< 0.01	< 10	< 10	260	< 10	142
126134B	205	226	720	7	0.03	18	1010	< 2	< 0.01	2	4	47	< 0.01	< 10	< 10	49	< 10	160
126135	205	226	270	74	0.01	56	6980	6	0.02	10	5	211	< 0.01	< 10	< 10	60	< 10	160
126136	205	226	240	4	0.02	13	2590	< 2	0.04	2	5	111	< 0.01	< 10	< 10	45	< 10	76
126137	205	226	685	2	0.15	8	1060	< 2	0.16	< 2	4	54	0.21	< 10	< 10	127	< 10	70
126138	205	226	1385	< 1	< 0.01	3	350	< 2	< 0.01	2	5	1710	< 0.01	< 10	10	30	< 10	26

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: 23-AUG-1999
Invoice No. : I9925799
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9925799

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B 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 %
126139	205	226	< 5	< 0.2	0.22	28	< 10	10	< 0.5	< 2	12.40	< 0.5	1	102	15	1.02	< 10	< 1	0.01	< 10	0.30

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: 23-AUG-1999
Invoice No. : I9925799
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9925799

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
126139	205	226	870	2	< 0.01	5	200	< 2	0.27	< 2	1	819	< 0.01	< 10	< 10	9	< 10	16

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: 04-OCT-1999
Invoice No. : 19929702
P.O. Number :
Account : LOY

Project : BLITZ
Comments: ATTN: GRANT CROOKER

CERTIFICATE OF ANALYSIS A9929702

SAMPLE	PREP CODE		Au ppb FA+AA	Ag ppm	Al %	As ppm	B 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 %
126140	205	226	< 5	< 0.2	3.46	< 2	< 10	120	< 0.5	< 2	9.01	< 0.5	19	40	93	4.67	10	< 1	0.33	< 10	1.95
126141	205	226	< 5	< 0.2	1.27	2	< 10	230	< 0.5	< 2	0.30	< 0.5	10	36	61	5.21	< 10	< 1	0.26	10	0.04
126142	205	226	5	0.2	3.14	6	< 10	470	< 0.5	< 2	1.23	< 0.5	18	121	67	5.08	10	< 1	0.37	10	2.34
126143	205	226	< 5	< 0.2	1.01	< 2	< 10	60	< 0.5	< 2	>15.00	< 0.5	3	25	13	1.76	< 10	1	0.06	< 10	0.75
126144	205	226	10	0.8	2.19	< 2	< 10	120	< 0.5	< 2	0.81	0.5	12	125	70	3.38	10	< 1	0.22	< 10	1.68
126145	205	226	5	< 0.2	2.89	< 2	< 10	20	< 0.5	< 2	3.34	< 0.5	14	40	93	3.15	10	< 1	0.09	< 10	1.25
126146	205	226	< 5	< 0.2	4.44	10	570	30	< 0.5	< 2	6.13	< 0.5	10	38	29	1.92	10	< 1	0.03	< 10	0.40
126147	205	226	< 5	1.0	1.44	22	< 10	80	< 0.5	< 2	12.00	0.5	7	32	59	1.87	< 10	< 1	0.17	< 10	1.42
126161	205	226	5	0.6	2.30	4	< 10	220	< 0.5	< 2	0.32	< 0.5	12	40	57	3.29	10	< 1	0.37	< 10	1.64
126162	205	226	< 5	0.2	1.81	< 2	< 10	230	< 0.5	< 2	6.46	0.5	11	59	45	3.46	< 10	< 1	0.31	< 10	1.39
126163	205	226	< 5	< 0.2	2.92	< 2	< 10	60	< 0.5	< 2	2.63	< 0.5	18	55	59	5.44	10	< 1	0.51	< 10	1.82
126164	205	226	< 5	0.4	2.69	32	< 10	250	< 0.5	< 2	4.38	< 0.5	13	36	40	3.82	10	< 1	0.45	< 10	1.48
126165	205	226	< 5	< 0.2	2.98	< 2	< 10	150	< 0.5	< 2	5.30	0.5	16	60	51	4.99	10	< 1	0.45	< 10	1.86
126166	205	226	< 5	0.2	4.19	6	< 10	30	< 0.5	< 2	3.17	< 0.5	29	20	63	6.67	10	< 1	0.50	< 10	3.01
126167	205	226	5	0.6	2.19	2	< 10	270	< 0.5	< 2	0.49	< 0.5	11	52	107	3.42	10	< 1	0.40	< 10	1.52
126168	205	226	< 5	< 0.2	1.99	< 2	< 10	460	< 0.5	< 2	>15.00	< 0.5	9	22	29	2.98	< 10	< 1	0.37	< 10	1.17
126169	205	226	< 5	< 0.2	1.66	2	< 10	50	< 0.5	< 2	1.02	< 0.5	14	68	108	3.10	< 10	< 1	0.12	< 10	0.66
126170	205	226	< 5	< 0.2	2.93	< 2	< 10	750	< 0.5	< 2	0.47	< 0.5	11	51	45	3.78	10	< 1	0.43	10	2.02
126171	205	226	< 5	< 0.2	1.12	< 2	< 10	30	< 0.5	< 2	0.99	< 0.5	10	26	72	2.06	< 10	< 1	0.09	< 10	0.32
126172	205	226	< 5	< 0.2	1.27	< 2	< 10	60	< 0.5	< 2	1.64	< 0.5	7	73	73	1.56	< 10	< 1	0.06	< 10	0.51
126173	205	226	< 5	< 0.2	4.41	10	< 10	60	< 0.5	< 2	2.57	< 0.5	19	37	148	4.24	10	< 1	0.13	< 10	1.31
126174	205	226	10	1.2	3.15	16	< 10	40	< 0.5	< 2	3.14	< 0.5	18	62	151	4.42	10	< 1	0.09	< 10	1.95
126175	205	226	< 5	< 0.2	2.46	8	< 10	10	< 0.5	< 2	5.35	< 0.5	5	29	13	0.85	< 10	< 1	0.04	< 10	0.13
126176	205	226	< 5	0.2	3.05	14	< 10	10	0.5	< 2	6.00	< 0.5	9	40	58	1.38	< 10	< 1	0.03	< 10	0.64
126177	205	226	< 5	< 0.2	2.00	12	< 10	20	< 0.5	< 2	9.34	< 0.5	8	41	22	1.67	< 10	< 1	0.05	< 10	0.39
126178	205	226	85	0.8	2.82	340	< 10	40	< 0.5	< 2	3.16	< 0.5	25	29	317	7.09	10	< 1	0.10	< 10	1.68
126179	205	226	< 5	< 0.2	2.31	10	< 10	10	< 0.5	< 2	8.93	< 0.5	13	22	60	3.38	10	< 1	0.07	< 10	1.64
126180	205	226	25	< 0.2	2.60	20	< 10	50	< 0.5	< 2	1.51	< 0.5	12	38	82	3.49	10	< 1	0.06	< 10	1.39
126181	205	226	< 5	< 0.2	1.33	58	< 10	40	< 0.5	< 2	1.24	< 0.5	13	21	121	2.49	< 10	< 1	0.05	< 10	0.72
126182	205	226	< 5	< 0.2	3.36	8	< 10	90	< 0.5	< 2	1.69	< 0.5	18	62	151	3.93	10	< 1	0.17	< 10	1.21
126183	205	226	< 5	< 0.2	2.25	10	< 10	40	< 0.5	< 2	2.34	< 0.5	17	22	116	4.34	10	< 1	0.07	< 10	1.26
126184	205	226	30	0.2	2.01	16	< 10	20	< 0.5	< 2	1.65	< 0.5	20	34	132	4.31	< 10	< 1	0.05	< 10	1.33

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: 04-OCT-1999
Invoice No. : 19929702
P.O. Number :
Account : LOY

Project : BLITZ
Comments: ATTN: GRANT CROOKER

CERTIFICATE OF ANALYSIS A9929702

SAMPLE	PREP CODE		Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm
126140	205	226	2070	1	0.08	16	1510	< 2	0.09	< 2	12	246	0.19	< 10	< 10	195	< 10	92
126141	205	226	345	10	< 0.01	18	840	< 2	0.01	4	5	26	< 0.01	< 10	< 10	56	< 10	146
126142	205	226	375	4	0.02	60	3160	2	< 0.01	2	7	64	0.01	< 10	< 10	77	< 10	224
126143	205	226	1765	< 1	< 0.01	10	390	2	0.03	< 2	2	1760	< 0.01	< 10	< 10	19	< 10	50
126144	205	226	225	4	0.01	44	740	6	0.05	< 2	5	37	0.01	< 10	< 10	68	< 10	144
126145	205	226	570	3	0.13	10	800	< 2	0.38	< 2	3	66	0.16	< 10	< 10	79	< 10	50
126146	205	226	905	3	0.01	5	860	< 2	0.01	< 2	1	41	0.18	< 10	< 10	81	< 10	38
126147	205	226	400	1	< 0.01	21	1190	4	0.01	2	2	257	< 0.01	< 10	< 10	31	< 10	68
126161	205	226	200	2	0.06	15	780	6	1.02	< 2	4	70	0.02	< 10	< 10	39	< 10	90
126162	205	226	955	1	0.05	16	1880	2	0.35	< 2	5	100	0.01	< 10	< 10	55	< 10	132
126163	205	226	495	4	0.16	14	1620	< 2	2.09	< 2	10	90	0.06	< 10	< 10	98	< 10	132
126164	205	226	1015	< 1	0.23	15	1700	< 2	1.76	2	6	108	0.07	< 10	< 10	55	< 10	66
126165	205	226	855	1	0.15	17	1990	< 2	1.40	< 2	8	168	0.04	< 10	< 10	80	< 10	140
126166	205	226	965	< 1	0.22	7	980	< 2	3.14	< 2	11	111	0.04	< 10	< 10	157	< 10	90
126167	205	226	170	3	0.06	15	470	< 2	1.02	< 2	7	50	0.03	< 10	< 10	81	< 10	64
126168	205	226	2680	< 1	0.05	10	1120	2	0.32	< 2	7	170	0.05	< 10	< 10	56	< 10	86
126169	205	226	300	3	0.16	22	990	< 2	0.88	< 2	3	78	0.22	< 10	< 10	75	< 10	36
126170	205	226	405	3	0.03	19	1400	4	0.40	< 2	7	30	0.03	< 10	< 10	56	< 10	104
126171	205	226	225	1	0.11	5	760	< 2	0.20	< 2	3	33	0.17	< 10	< 10	66	< 10	26
126172	205	226	365	3	0.01	5	320	2	0.01	< 2	1	92	0.04	< 10	< 10	52	< 10	28
126173	205	226	515	6	0.38	10	980	< 2	0.92	< 2	3	147	0.23	< 10	< 10	108	< 10	52
126174	205	226	940	5	0.12	22	1310	< 2	0.64	2	5	120	0.18	< 10	< 10	116	< 10	82
126175	205	226	450	5	0.03	9	1340	< 2	0.04	< 2	1	91	0.09	< 10	< 10	22	< 10	104
126176	205	226	480	3	0.01	17	870	< 2	0.06	< 2	2	60	0.10	< 10	< 10	35	< 10	60
126177	205	226	700	1	0.07	16	1900	< 2	0.18	< 2	3	159	0.08	< 10	< 10	37	< 10	96
126178	205	226	1260	6	0.04	9	1060	2	< 0.01	< 2	9	28	0.16	< 10	< 10	122	< 10	94
126179	205	226	780	< 1	0.04	9	600	< 2	0.01	2	5	249	< 0.01	< 10	< 10	95	< 10	48
126180	205	226	605	6	0.16	12	760	< 2	0.89	< 2	4	79	0.12	< 10	< 10	77	< 10	70
126181	205	226	265	2	0.10	7	690	< 2	0.28	< 2	3	56	0.07	< 10	< 10	39	< 10	26
126182	205	226	415	7	0.35	23	1040	< 2	1.21	< 2	2	167	0.12	< 10	< 10	98	< 10	68
126183	205	226	785	1	0.15	8	980	< 2	0.91	< 2	7	83	0.12	< 10	< 10	128	< 10	76
126184	205	226	530	39	0.09	14	830	< 2	1.12	< 2	3	49	0.15	< 10	< 10	94	< 10	64

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

Comments:

CERTIFICATE	A9923233

(LOY) -
Project: BLITZ
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 20-JUL-1999.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
212	1	Overlimit pulp, to be found

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
384	1	Ag g/t: Gravimetric	FA-GRAVIMETRIC	3	3500
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: 20-JUL-1999
Invoice No. : I9923233
P.O. Number :
Account : LOY

Project : BLITZ
Comments:

CERTIFICATE OF ANALYSIS A9923233

SAMPLE	PREP CODE		Ag FA g/t	Zn %
126054	212	--	277	6.03

CERTIFICATION: [signature]

OVERLIMITS from A9922105

APPENDIX II

MAGNETIC DATA

Grant F. Crooker

Area: WP5A Claim
Grid: East Pettigrew
Date: September 1999
Instrument Type:
Scintrex MP-2:

Data Types: #1

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

File Name: WPma01

Details:
Corrected Total Field Magnetic Values

Corrected Total Field Magnetic Values

N/S	E/W	#1
line 1900		
1900	1700	55939
1900	1725	55933
1900	1750	55885
1900	1775	55882
1900	1800	55868
1900	1825	55874
1900	1850	55867
1900	1875	55892
1900	1900	55875
1900	1925	55870
1900	1950	55878
1900	1975	55854
1900	2000	55851
1900	2025	55822
1900	2050	55923
1900	2075	55937
1900	2100	55938
1900	2125	55993
1900	2150	55964
1900	2175	55980
1900	2200	56020
1900	2225	55992
1900	2250	55943
1900	2275	55956
1900	2300	55970
1900	2325	55980
1900	2350	56019
1900	2375	55951
1900	2400	56028
1900	2425	55966
1900	2450	55995
1900	2475	55920
1900	2500	55929
1900	2525	55907
1900	2550	55931
1900	2575	55961
1900	2600	55939
1900	2625	55966
1900	2650	55966
1900	2675	55956
1900	2700	55946
1900	2725	55899
1900	2750	55912
1900	2775	55937
line 1800		
1800	1700	55877
1800	1725	55882
1800	1750	55877
1800	1775	55867
1800	1800	55870
1800	1825	55875
1800	1850	55891
1800	1875	55867
1800	1900	55845
1800	1925	55856
1800	1950	55863
1800	1975	55854
1800	2000	55853
1800	2025	55844
1800	2050	55925
1800	2075	55922
1800	2100	55932
1800	2125	55929
1800	2150	55908
1800	2175	55936
1800	2200	55926
1800	2225	55941
1800	2250	55942
1800	2275	55939
1800	2300	55929
1800	2325	55908
1800	2350	55954
1800	2375	55964
1800	2400	55979
1800	2425	55937
1800	2450	55959
1800	2475	55943
1800	2500	55941
1800	2525	55927
1800	2550	55957
1800	2575	55981
1800	2600	56035
1800	2625	55995
1800	2650	55968
1800	2675	55984
1800	2700	55974
1800	2725	55935
1800	2750	55925
1800	2775	56002
line 1700		
1700	1700	55890
1700	1725	55868
1700	1750	55853
1700	1775	55847
1700	1800	55831
1700	1825	55847
1700	1850	55854
1700	1875	55849
1700	1900	55831
1700	1925	55828
1700	1950	55828
1700	1975	55827
1700	2000	55809
1700	2025	55821
1700	2050	55898
1700	2075	55916
1700	2100	55908
1700	2125	55937
1700	2150	56017
1700	2175	55936
1700	2200	55908
1700	2225	55928
1700	2250	55939
1700	2275	55935
1700	2300	55990
1700	2325	55927
1700	2350	55994
1700	2375	56078

1700	2400	55974
1700	2425	55960
1700	2450	55944
1700	2475	55936
1700	2500	55959
1700	2525	55944
1700	2550	55972
1700	2575	55953
1700	2600	55949
1700	2625	55946
1700	2650	55944
1700	2675	55956
1700	2700	56093
1700	2725	56132
1700	2750	56073
line 1600		
1600	1700	55877
1600	1725	55896
1600	1750	55868
1600	1775	55845
1600	1800	55833
1600	1825	55837
1600	1850	55831
1600	1875	55835
1600	1900	55832
1600	1925	55834
1600	1950	55842
1600	1975	55836
1600	2000	55843
1600	2025	55861
1600	2050	55873
1600	2075	55905
1600	2100	55915
1600	2125	55924
1600	2150	55942
1600	2175	55932
1600	2200	55912
1600	2225	55915
1600	2250	55938
1600	2275	55907
1600	2300	55940
1600	2325	55941
1600	2350	55940
1600	2375	55950
1600	2400	55975
1600	2425	56004
1600	2450	55953
1600	2475	55949
1600	2500	55958
1600	2525	55936
1600	2550	55928
1600	2575	55932
1600	2600	56003
1600	2625	55969
1600	2650	55972
1600	2675	55974
1600	2700	55955
1600	2725	56000
1600	2750	56022
1600	2775	56151
1600	2800	56063
line 1500		
1500	1700	55866
1500	1725	55882
1500	1750	55924
1500	1775	55901
1500	1800	55870

1500	1825	55888
1500	1850	55878
1500	1875	55875
1500	1900	55864
1500	1925	55865
1500	1950	55868
1500	1975	55863
1500	2000	55877
1500	2025	55884
1500	2050	55856
1500	2075	55899
1500	2100	55890
1500	2125	55931
1500	2150	55933
1500	2175	55916
1500	2200	55920
1500	2225	55925
1500	2250	55930
1500	2275	55919
1500	2300	55955
1500	2325	55937
1500	2350	55939
1500	2375	55967
1500	2400	55959
1500	2425	55971
1500	2450	55977
1500	2475	55927
1500	2500	55939
1500	2525	55948
1500	2550	55971
1500	2575	55970
1500	2600	55959
1500	2625	55968
1500	2650	55976
1500	2675	55996
1500	2700	56033
1500	2725	56046
1500	2750	56095
1500	2775	56123
1500	2800	56262
line 1400		
1400	1700	55927
1400	1725	55967
1400	1750	55920
1400	1775	55902
1400	1800	55932
1400	1825	55910
1400	1850	55898
1400	1875	55888
1400	1900	55883
1400	1925	55871
1400	1950	55872
1400	1975	55878
1400	2000	55866
1400	2025	55863
1400	2050	55875
1400	2075	55865
1400	2100	55869
1400	2125	55863
1400	2150	55893
1400	2175	55879
1400	2200	55879
1400	2225	55890
1400	2250	55876
1400	2275	55902
1400	2300	55954
1400	2325	55915

1400	2350	55946
1400	2375	55931
1400	2400	55916
1400	2425	55909
1400	2450	55904
1400	2475	55907
1400	2500	55907
1400	2525	55926
1400	2550	55951
1400	2575	55947
1400	2600	55965
1400	2625	55986
1400	2650	55733
1400	2675	56131
1400	2700	56045
1400	2725	56233
1400	2750	56472
1400	2775	56400
1400	2800	56045
line 1300		
1300	1700	55884
1300	1725	55956
1300	1750	55910
1300	1775	55900
1300	1800	55938
1300	1825	55932
1300	1850	55883
1300	1875	55865
1300	1900	55849
1300	1925	55860
1300	1950	55851
1300	1975	55838
1300	2000	55847
1300	2025	55838
1300	2050	55829
1300	2075	55838
1300	2100	55840
1300	2125	55838
1300	2150	55880
1300	2175	55908
1300	2200	55909
1300	2225	55922
1300	2250	55914
1300	2275	55954
1300	2300	55964
1300	2325	55979
1300	2350	55998
1300	2375	55979
1300	2400	55974
1300	2425	55959
1300	2450	55926
1300	2475	55897
1300	2500	55892
1300	2525	55900
1300	2550	55930
1300	2575	55954
1300	2600	55995
1300	2625	56051
1300	2650	56130
1300	2675	56301
1300	2700	56060
1300	2725	56028
1300	2750	56009
line 1200		
1200	1700	55851
1200	1725	55871
1200	1750	55901

1200	1775	55920
1200	1800	55927
1200	1825	55886
1200	1850	55918
1200	1875	55878
1200	1900	55888
1200	1925	55856
1200	1950	55853
1200	1975	55847
1200	2000	55842
1200	2025	55838
1200	2050	55834
1200	2075	55828
1200	2100	55859
1200	2125	55863
1200	2150	55969
1200	2175	55893
1200	2200	55954
1200	2225	55904
1200	2250	55912
1200	2275	55953
1200	2300	55936
1200	2325	55966
1200	2350	55891
1200	2375	55903
1200	2400	55904
1200	2425	55987
1200	2450	55936
1200	2475	56011
1200	2500	56074
1200	2525	55968
1200	2550	55935
1200	2575	55922
1200	2600	55935
1200	2625	55963
1200	2650	55926
1200	2675	55946
1200	2700	55954
1200	2725	56018
line 1100		
1100	1700	55907
1100	1725	55919
1100	1750	55935
1100	1775	55927
1100	1800	55919
1100	1825	55937
1100	1850	56130
1100	1875	56009
1100	1900	55911
1100	1925	55984
1100	1950	55865
1100	1975	55883
1100	2000	55878
1100	2025	55864
1100	2050	55866
1100	2075	55861
1100	2100	55939
1100	2125	56017
1100	2150	56024
1100	2175	56002
1100	2200	56081
1100	2225	56014
1100	2250	55962
1100	2275	55943
1100	2300	55968
1100	2325	55963
1100	2350	55969

1100	2375	56046
1100	2400	55997
1100	2425	55975
1100	2450	56094
1100	2475	56073
1100	2500	56050
1100	2525	55923
1100	2550	55948
1100	2575	55874
1100	2600	55985
1100	2625	56013
1100	2650	56025
1100	2675	56102
1100	2700	56082
line 1000		
1000	1700	55897
1000	1725	55946
1000	1750	55907
1000	1775	55913
1000	1800	55976
1000	1825	55939
1000	1850	55951
1000	1875	55949
1000	1900	55839
1000	1925	55918
1000	1950	55986
1000	1975	56065
1000	2000	55995
1000	2025	55947
1000	2050	55930
1000	2075	55931
1000	2100	55982
1000	2125	56001
1000	2150	55979
1000	2175	56055
1000	2200	56036
1000	2225	56021
1000	2250	55891
1000	2275	56054
1000	2300	56059
1000	2325	56002
1000	2350	56027
1000	2375	56096
1000	2400	56042
1000	2425	56049
1000	2450	56002
1000	2475	56044
1000	2500	56000
1000	2525	55895
1000	2550	55952
1000	2575	55957
1000	2600	56023
1000	2625	55993
1000	2650	56012
1000	2675	56065
1000	2700	56116
line 900		
900	1700	55945
900	1725	55946
900	1750	56008
900	1775	55981
900	1800	56017
900	1825	56136
900	1850	56088
900	1875	56088
900	1900	55975
900	1925	55999

900	1950	56011
900	1975	56071
900	2000	56019
900	2025	55977
900	2050	55952
900	2075	55941
900	2100	56310
900	2125	56260
900	2150	56184
900	2175	56088
900	2200	56086
900	2225	55999
900	2250	55927
900	2275	56089
900	2300	56092
900	2325	56092
900	2350	56105
900	2375	55885
900	2400	56059
900	2425	55881
900	2450	55899
900	2475	55917
900	2500	55936
900	2525	56002
900	2550	55978
900	2575	56051
900	2600	56105
900	2625	56059
900	2650	56073
900	2675	56088
900	2700	55999
line 800		
800	1700	55927
800	1725	55966
800	1750	56029
800	1775	56014
800	1800	56073
800	1825	56171
800	1850	56162
800	1875	56091
800	1900	56050
800	1925	55994
800	1950	56000
800	1975	56124
800	2000	56052
800	2025	55980
800	2050	55984
800	2075	56009
800	2100	56001
800	2125	56147
800	2150	56034
800	2175	56053
800	2200	56171
800	2225	56004
800	2250	56102
800	2275	56037
800	2300	56075
800	2325	55941
800	2350	55911
800	2375	55870
800	2400	55959
800	2425	55985
800	2450	55982
800	2475	56085
800	2500	56049
800	2525	56024
800	2550	55998

800	2575	55991
800	2600	56126
800	2625	56033
800	2650	55983
800	2675	56006
800	2700	56000
line 700		
700	1700	55940
700	1725	55939
700	1750	56004
700	1775	55992
700	1800	56037
700	1825	56087
700	1850	56005
700	1875	56004
700	1900	55898
700	1925	55963
700	1950	55977
700	1975	55984
700	2000	55984
700	2025	55947
700	2050	55901
700	2075	55899
700	2100	55995
700	2125	56163
700	2150	56021
700	2175	56017
700	2200	56033
700	2225	55996
700	2250	55869
700	2275	55888
700	2300	55895
700	2325	55844
700	2350	55915
700	2375	55991
700	2400	56018
700	2425	55932
700	2450	55946
700	2475	55959
700	2500	55986
700	2525	56034
700	2550	55990
700	2575	55950
700	2600	55854
700	2625	55894
700	2650	55887
700	2675	55863
line 600		
600	1700	56007
600	1725	56001
600	1750	56055
600	1775	56118
600	1800	56153
600	1825	56131
600	1850	56106
600	1875	56111
600	1900	56070
600	1925	56061
600	1950	56024
600	1975	56030
600	2000	56022
600	2025	56029
600	2050	56017
600	2075	55980
600	2100	55968
600	2125	55946
600	2150	55907

600	2175	55890
600	2200	55906
600	2225	55876
600	2250	55850
600	2275	55873
600	2300	55886
600	2325	55861
600	2350	55865
600	2375	55979
600	2400	55950
600	2425	56012
600	2450	55966
600	2475	55930
600	2500	55989
600	2525	56080
600	2550	55924
600	2575	55934
600	2600	55957
600	2625	56070
600	2650	55965
600	2675	55791
600	2700	55801
line 500		
500	1700	56016
500	1725	56074
500	1750	56114
500	1775	46136
500	1800	56199
500	1825	56248
500	1850	56169
500	1875	56145
500	1900	56121
500	1925	56126
500	1950	56136
500	1975	56132
500	2000	56154
500	2025	56094
500	2050	56080
500	2075	56045
500	2100	56067
500	2125	56094
500	2150	56094
500	2175	56088
500	2200	56079
500	2225	56086
500	2250	56098
500	2275	56056
500	2300	56068
500	2325	56173
500	2350	56115
500	2375	56010
500	2400	56102
500	2425	56120
500	2450	56045
500	2475	56031
500	2500	55973
500	2525	55882
500	2550	55921
500	2575	55914
500	2600	55994
500	2625	55991
500	2650	56021
500	2675	55955
500	2700	55960
500	2725	55994
line 400		
400	1700	56013

400	1725	56035
400	1750	56033
400	1775	56048
400	1800	56066
400	1825	56089
400	1850	56119
400	1875	56159
400	1900	56215
400	1925	56147
400	1950	56153
400	1975	56144
400	2000	56224
400	2025	56224
400	2050	56171
400	2075	56157
400	2100	56179
400	2125	56158
400	2150	56117
400	2175	56126
400	2200	56128
400	2225	56133
400	2250	56003
400	2275	56003
400	2300	56114
400	2325	56113
400	2350	56002
400	2375	56058
400	2400	56093
400	2425	56013
400	2450	55970
400	2475	55985
400	2500	56084
400	2525	56082
400	2550	56051
400	2575	56101
400	2600	56033
400	2625	55991
400	2650	55914
400	2675	55925
400	2700	55934
400	2725	55821
line 300		
300	1700	55991
300	1725	55994
300	1750	55992
300	1775	56016
300	1800	56077
300	1825	56078
300	1850	56090
300	1875	56079
300	1900	56122
300	1925	56139
300	1950	56151
300	1975	56157
300	2000	56178
300	2025	56180
300	2050	56192
300	2075	56156
300	2100	56142
300	2125	56138
300	2150	56125
300	2175	56117
300	2200	56128
300	2225	56134
300	2250	56136
300	2275	56119
300	2300	56089

300	2325	56170
300	2350	56072
300	2375	56031
300	2400	55960
300	2425	56128
300	2450	56115
300	2475	56099
300	2500	56043
300	2525	56010
300	2550	56120
300	2575	56084
300	2600	55979
300	2625	56013
300	2650	55962
300	2675	55968
300	2700	55963
300	2725	56057
line 200		
200	1700	56063
200	1725	56098
200	1750	56109
200	1775	56103
200	1800	56119
200	1825	56147
200	1850	56187
200	1875	56232
200	1900	56335
200	1925	56275
200	1950	56339
200	1975	56390
200	2000	56293
200	2025	56223
200	2050	56164
200	2075	56157
200	2100	56225
200	2125	56680
200	2150	56209
200	2175	56233
200	2200	56398
200	2225	56254
200	2250	56122
200	2275	56147
200	2300	56121
200	2325	56106
200	2350	56051
200	2375	56062
200	2400	56079
200	2425	56080
200	2450	56142
200	2475	56037
200	2500	56060
200	2525	56044
200	2550	55844
200	2575	55983
200	2600	55991
200	2625	55984
200	2650	55957
200	2675	55960
200	2700	55959
baseline 1700		
1700	1900	55939
1700	1875	55918
1700	1850	55899
1700	1825	55894
1700	1800	55877
1700	1775	55868
1700	1750	55895

1700	1725	55869
1700	1700	55886
1700	1675	55980
1700	1650	55901
1700	1625	55875
1700	1600	55877
1700	1575	55882
1700	1550	55902
1700	1525	55913
1700	1500	55860
1700	1475	55886
1700	1450	55920
1700	1425	55901
1700	1400	55927
1700	1375	55904
1700	1350	55882
1700	1325	55871
1700	1300	55886
1700	1275	55910
1700	1250	55864
1700	1225	55873
1700	1200	55867
1700	1175	55866
1700	1150	55888
1700	1125	55900
1700	1100	55907
1700	1075	55878
1700	1050	55869
1700	1025	55894
1700	1000	55897
1700	975	55853
1700	950	55877
1700	925	55932
1700	900	55945
1700	875	55975
1700	850	56004
1700	825	55982
1700	800	55927
1700	775	55934
1700	750	55940
1700	725	55950
1700	700	55940
1700	675	56080
1700	650	56000
1700	625	56014
1700	600	56007
1700	575	56041
1700	550	56099
1700	525	56052
1700	500	56016
1700	475	56040
1700	450	56042
1700	425	56040
1700	400	56013
1700	375	56015
1700	350	56023
1700	325	55990
1700	300	55991
1700	275	56007
1700	250	55989
1700	225	56027
1700	200	56063
1700	175	56102
1700	150	56097
1700	125	56105
1700	100	56150
1700	075	56196

1700	050	56217
1700	025	56222
1700	000	56262

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

APPENDIX IV

ROCK SAMPLE DESCRIPTIONS

ROCK GEOCHEMICAL ANALYSIS						
Sample No	Width cm	Au ppb	As ppm	Cu ppm	Mo ppm	Description
054	select	**4050**	**>10000**	**684**	1	5 cm qtz veinlet, 10% sp, 10% py, 5% asp, from fractured, veined intrusive
055	100	**200**	**>10000**	38	3	25%, 1-10 mm qtz veinlets, 5% py, 2% sp, 2% asp, bleached intrusive
056	60	15	**396**	62	5	footwall, silicified argillite, rusty fractures, 1% py, minor 1 cm qta veinlets
057	20	**80**	**766**	**233**	**61**	footwall shear, bleached, oxidized, silicified argillite, red gouge
058	12	**3350**	**>10000**	15	4	white qtz vein, fractured, 2% asp, 1% py
059	50	**675**	**2620**	68	12	hangingwall shear, bleached, silicified argillite, rusty gouge, 1 cm qtz veinlets
060	60	15	**80**	70	5	grey-black argillite, some weakly silicified, 2% po
061	25	**50**	**400**	79	13	footwall shear, fractured, weakly silicified argillite, rusty gouge, trace po
062	18	**8300**	**>10000**	5	2	white qtz vein, fractured, 3% asp, 1% py
063	100	**145**	**444**	84	**21**	hangingwall shear, silicified argillite, rusty gouge, 1% py, 1-5 mm qtz veinlets
064	130	**565**	**734**	30	**21**	white qtz vein, qtz flooding along margins, fg boxworks, lim, 2% py
065	140	**425**	**1010**	63	**17**	white, grey qtz vein, fractures, locally to 5% py
066	60	**105**	**562**	58	**25**	white, grey qtz vein, ½% py
067	70	**60**	**118**	87	8	footwall, grey argillite, silicified? 1-4% po, ½% py on fractures
068	grab	**100**	**106**	63	1	hangingwall, grey argillite, silicified? 1-2% diss py
069	grab	**365**	**826**	80	8	dump, qtz vein, 5% py
070	grab	< 5	4	93	< 1	black, rusty argillite, 2-4% diss py
071	grab	< 5	2	38	6	calcareous breccia, 3 cm clasts, 1-4% diss po
072	grab	< 5	< 2	34	1	calcareous breccia, Copperfield? 2-4% diss po
073	30	**90**	**434**	76	**120**	breccia, argillite frags, 25% 5-10 mm qtz veinlets, breccia, ½% diss py, lim,
074	60	**70**	**746**	**110**	**65**	silicified argillite, strongly oxidized, 10% qtz veinlets
075	40	**50**	**406**	92	**40**	silicified argillite, 75% qtz veinlets, strongly oxidized, ½% py
076	select	**70**	**70**	32	**76**	dump, qtz vein, breccia, lim in boxworks
077	grab	10	8	90	2	silicified argillite, rusty fractures
078	grab	< 5	**80**	75	< 1	grey, rusty silicified limestone? 5-10% diss po
079	30	< 5	< 2	58	< 1	silicified zone, white, translucent qtz, ½% po, py along fractures
080	grab	10	**56**	61	8	silicified argillite, 5% po diss, along fractures
081	grab	**65**	**230**	34	**19**	silicified argillite, 60% qtz veinlets, 1-4% po, ½% py, diss, along fractures
082	grab	**90**	**66**	62	**17**	silicified argillite, minor qtz veinlets, 2-4% diss po, ½% py
083	grab	10	**28**	35	2	silicified argillite, 1-2% diss po
084	grab	20	**34**	**134**	**74**	dump, silicified argillite, 1-3% po, 1% py, diss
085	grab	10	**48**	**240**	1	dump, silicified argillite, 5% po diss, along fractures
086	grab	**75**	**24**	**223**	< 1	hornfels, some silicification? 2-10% po, on fractures, as 1 cm blebs
087	float	< 5	10	18	3	calcareous siltstone, white and black calcite veinlets, lim
088	float	10	14	32	1	calcareous tuff, 2-8 mm calcite veinlets, rusty fractures, lim, trace py
089	float	< 5	16	6	< 1	white and black calcite vein, trace to ½% py along fractures
092	grab	< 5	**32**	40	1	calcareous tuff, rusty fractures, some with calcite
093	float	< 5	18	59	3	calcareous tuff, stockwork 2-10 mm calcite veinlets, rusty fractures
094	float	< 5	12	13	1	massive white crystalline calcite, minor fractures, trace py
095	float	< 5	16	**104**	6	argillite, 1-2 mm qtz-carb veinlets, rusty boxworks
096	float	< 5	2	7	< 1	massive white crystalline calcite, minor rusty fractures
108	grab	< 5	< 2	8	1	grey siliceous dacite, 1-2 mm red-brown garnet,
109	float	< 5	10	2	**16**	grey dacite, minor 1-3 mm brown garnet, 1-2% po along fractures
110	grab	< 5	< 2	3	2	grey dacite, rare 1-2 mm garnet, fractures with chl, trace py
111	float	< 5	2	1	3	rhyodacite, 1-4 mm brown garnet, 1-2% po along fractures
112	grab	< 5	< 2	3	1	grey rhyodacite, 1-4 mm garnet,
113	float	< 5	6	54	2	argillite, rusty fractures, 1-3 mm calcite veinlets
114	float	< 5	2	58	4	calcareous argillite, bleached, weak clay alteration, rusty fractures
115	float	< 5	8	46	1	calcareous argillite, stretched calcite frags, 1% py

116	float	10	16	16	**26**	argillite breccia, stockwork white calcite veinlets
117	float	< 5	4	48	3	tuff, rusty fractures
118	float	< 5	< 2	40	1	calcareous tuff, rusty fractures
119	float	< 5	4	**114**	1	calcareous tuff, rusty fractures with calcite
120	float	< 5	6	37	< 1	grey-green tuff, stockwork of rusty, 1-10 mm white calcite veinlets
121	float	< 5	2	35	3	bleached calcareous tuff, rusty
122	float	< 5	**80**	10	5	argillite breccia, stockwork white calcite veinlets
123	float	**35**	**36**	**136**	**15**	bleached tuff, lim on fractures, diss
124	float	< 5	6	**126**	4	Hedley diorite dyke, rusty fractures
125	grab	< 5	**56**	9	< 1	calcareous sediment? fractured, 1 mm calcite veinlets, manganese stain
126	grab	< 5	**26**	32	3	hornfels, silicification? manganese stain, py along fractures
127	grab	10	**184**	41	**4**	hornfels, rusty fractures, 1-2% py on fractures
128	grab	10	8	89	**15**	hornfels, rusty fractures, 1-2% py
129	grab	**100**	**24**	81	**15**	hornfels, rusty fractures, 1-2% py, py seams to 2 mm wide
130	grab	15	16	83	11	hornfels, trace py on fractures,
131	float	< 5	**60**	64	6	hornfels, green, pink bands, 1% po
132	grab	< 5	**32**	77	5	hornfels, trace grey sulphide, po?
133	grab	**25**	**60**	**225**	4	hornfels, green bands, rusty fractures, with py, lim, manganese stain
134A	float	5	**36**	**120**	9	clay altered gouge, rusty fractures, lim
134B	float	< 5	5	10	7	bleached intrusive, rusty boxworks
135	float	10	**40**	72	**74**	clay altered calcareous tuff, fg boxworks, lim
136	float	< 5	< 2	42	4	bleached, banded tuff, rusty fractures, boxworks, lim
137	float	< 5	2	**114**	2	grey-green tuff, 1-2 mm calcite veinlets, fractures, ½% po
138	float	< 5	4	20	< 1	white calcite veinlets, angular fragments tuff
139	float	< 5	**28**	15	2	5-10 mm qtz-carb veinlet, angular fragments tuff, 3% py, rusty boxworks
140	float	< 5	< 2	93	1	tuff, 2 mm frags, rusty fractures, boxworks, lim, 2% diss py
141	float	< 5	2	61	10	bleached, clay altered argillite breccia, fractures, boxworks, lim
142	float	5	6	67	4	tuff, 1-3 mm argillite frags, rusty boxworks, lim
143	grab	< 5	< 2	13	< 1	tuff, 1-4 cm wide calcite veinlets, minor rustiness
144	float	10	< 2	70	4	siltstone, 2-3 mm argillite frags, rusty fractures, minor boxworks, lim
145	float	5	< 2	93	3	tuff, 20% 1-10 mm qtz veinlets, trace py
146	float	< 5	10	29	3	tuff, 2-10 mm qtz veinlets, rusty fractures, trace py
147	grab	< 5	**22**	59	1	calcareous tuff, 1 mm py cubes, fractures, calcite, trace py
161	grab	5	4	57	2	siltstone, rusty fractures, lim, py
162	float	< 5	< 2	45	1	argillite, argillite frags, rusty boxworks, lim, 5% diss po
163	float	< 5	< 2	59	4	argillite, 5% diss po
164	grab	< 5	**32**	40	< 1	argillite, rusty fractures, 5% diss po
165	float	< 5	< 2	51	1	calcareous argillite, argillite frags, 5% diss po
166	float	< 5	6	63	< 1	grey limestone? 10-15% po
167	float	5	2	**107**	3	siltstone, rusty fractures, 1% po
168	grab	< 5	< 2	29	< 1	interbedded limestone, siltstone, 2-5% po
169	float	< 5	2	**105**	3	grey felsic dyke, minor py on fractures
170	float	< 5	< 2	45	3	argillite breccia, 5% rusty boxworks, lim
171	float	< 5	< 2	72	1	fg green dyke, rusty fractures
172	float	< 5	< 2	73	3	calcareous grey tuff, 2-3 mm qtz veinlets, rusty boxworks
173	grab	< 5	10	**148**	6	tuff, strong fractures, po, py
174	grab	10	16	**151**	5	tuff, fractures, trace py, 1-4 mm qtz-carb veinlets
175	float	< 5	8	13	5	silicified tuff? 1-3 mm qtz veinlets, minor rusty boxworks, trace py
176	float	< 5	14	58	3	tuff, 1-6 mm qtz-carb veinlets, boxworks, lim, trace py
177	float	< 5	12	22	1	silicified tuff, rusty fractures, calcite, 1% po
178	float	**85**	**340**	**317**	6	bleached, clay altered tuff, fractures, 15% rusty boxworks, lim
179	float	< 5	10	60	< 1	tuff, stockwork 1-4 mm calcite veinlets, rusty boxworks
180	grab	**25**	**20**	82	6	tuff, 1 cm qtz veinlet, 1% po

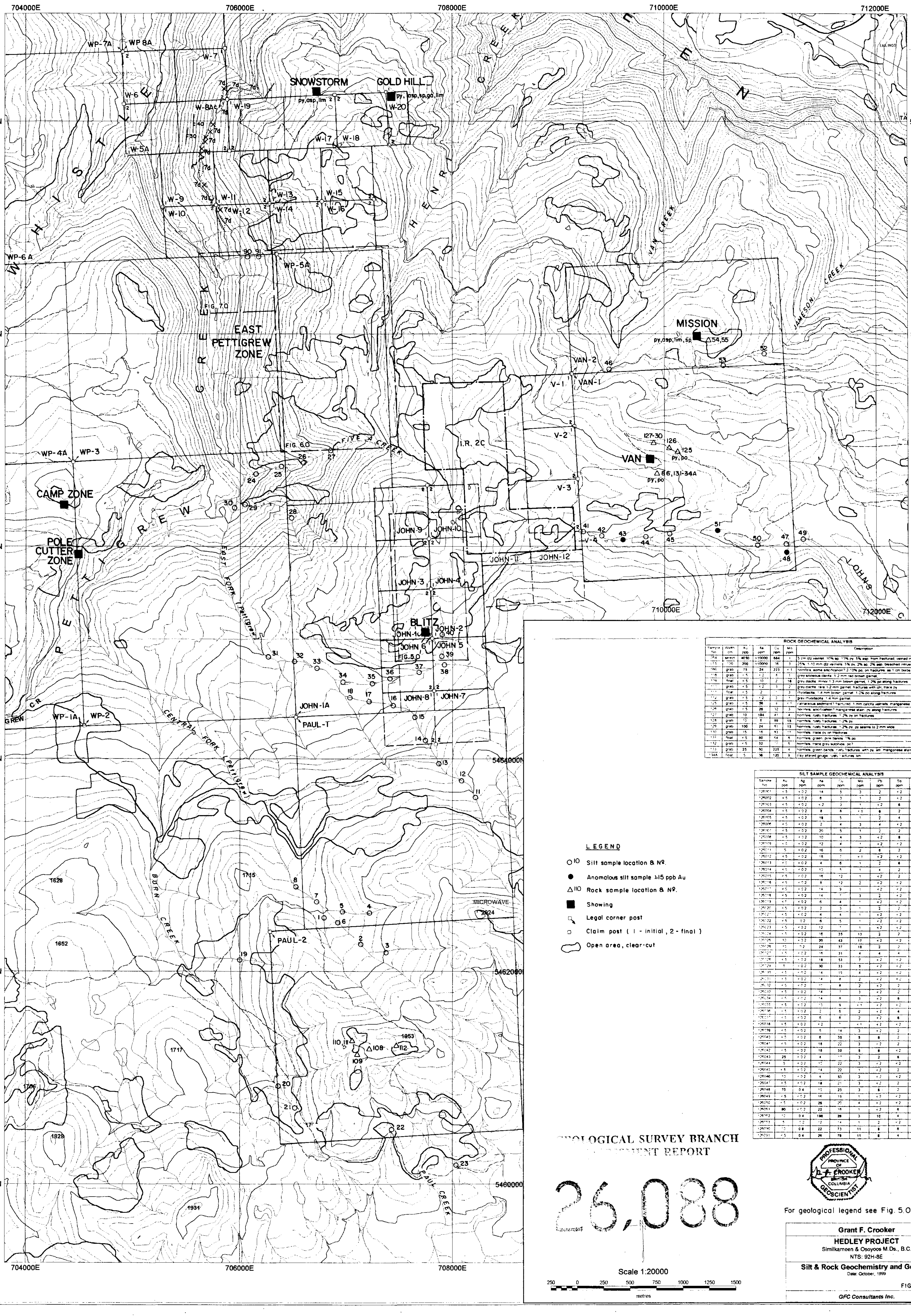
181	grab	< 5	**58**	**121**	2	Hedley dyke, 1-3% diss py
182	float	< 5	8	**151**	7	silicified tuff, fractures, 1-3 mm qtz veinlets, py
183	float	< 5	10	**116**	1	tuff, rusty fractures, po
184	float	**30**	16	**132**	**39**	silicified tuff, fractures, 1-8 mm qtz veinlets, rusty boxworks, lim, trace py

APPENDIX V

COST STATEMENT

COST STATEMENT

SALARIES	
Grant Crooker, Geologist Oct 10, 1998 - Nov 10, 1999 40 days @ $ 400.00/day	$ 16,000.00
LW Saleken, Geologist Oct 10, 1998 1 day @ $ 400.00/day	400.00
MEALS AND ACCOMMODATION	
Grant Crooker - 32 days @ $ 60.00/day	1,920.00
Len Saleken - 1 day @ $ 60.00/day	60.00
TRANSPORTATION	
Vehicle Rental (Blazer 4 x 4) Oct 10, 1998 - Oct 15, 1999 32 days @ $ 60.00/day	1,920.00
Gasoline	404.72
EQUIPMENT RENTAL	
Magnetometer (Scintrex MP-2) June 4, 25, July 23, Sept 1, 3, 5 days @ $ 25.00/day	125.00
GEOCHEMICAL ANALYSIS	
55 silt samples - 32 element ICP, Au (30 gram) @ $ 20.33	1,118.15
43 soil samples - 32 element ICP, Au (30 gram) @ $ 21.29	915.47
106 rock samples - 32 element ICP, Au (30 gram) @ $ 24.45	2,591.70
1 rock sample - silver, zinc assay @ $ 21.13	21.13
BASE MAP	1,000.00
SUPPLIES	140.00
FREIGHT	114.32
DRAFTING	400.00
PREPARATION OF REPORT (Reproduction, copying, telephone, overhead)	250.00
TOTAL	$ 27,380.49



LEGEND

- ○10 Silt sample location & Nº.
- ● Anomalous silt sample ≥15 ppb Au
- △110 Rock sample location & Nº.
- ■ Showing
- Legal corner post
- Claim post (1 - initial , 2 - final)
- Open area, clear-cut

ROCK GEOCHEMICAL ANALYSIS						
Sample No.	Width cm	Au ppb	As ppm	Cu ppm	Mo ppm	Description
054	select	4050	>10000	684	1	5 cm qtz veinlet, 10% sp, 10% py, 5% asp, from fractured, veined intrusive
055	100	200	>10000	38	3	25% 1-10 mm qtz veinlets, 5% py, 2% sp, 2% asp, bleached intrusive
086	grab	75	24	223	< 1	hornfels, some silicification? 2-10% po, on fractures, as 1 cm blebs
108	grab	< 5	< 2	8	1	grey siliceous dacite, 1-2 mm red brown garnet,
109	float	< 5	10	2	16	grey dacite, minor 1-3 mm brown garnet, 1-2% po along fractures
110	grab	< 5	< 2	1	2	grey dacite, rare 1-2 mm garnet, fractures with chl, trace py
111	float	< 5	2	1	3	rhyodacite, 1-4 mm brown garnet, 1-2% po along fractures
112	grab	< 5	< 2	3	1	grey rhyodacite, 1-4 mm garnet,
125	grab	< 5	56	9	< 1	calcareous sediment? fractured, 1 mm calcite veinlets, manganese stain
126	grab	< 5	26	32	3	hornfels, silicification? manganese stain, py along fractures
127	grab	10	184	41	4	hornfels, rusty fractures, 1-2% py on fractures
128	grab	10	8	89	15	hornfels, rusty fractures, 1-2% py
129	grab	100	24	51	15	hornfels, rusty fractures, 1-2% py, py seams to 2 mm wide
130	grab	15	16	93	11	hornfels, trace py on fractures
131	float	< 5	80	64	6	hornfels, green, pink bands, 1% po
132	grab	< 5	32	17	5	hornfels, trace grey sulphide, po?
133	grab	25	60	225	4	hornfels, green bands, rusty fractures, with py, lim, manganese stain
134A	float	5	36	120	9	clay altered gouge, rusty fractures, lim

SILT SAMPLE GEOCHEMICAL ANALYSIS								
Sample No.	Au ppb	Ag ppm	As ppm	Cu ppm	Mo ppm	Pb ppm	Sb ppm	Zn ppm
126001	< 5	< 0.2	14	5	3	2	< 2	38
126002	< 5	< 0.2	6	3	1	2	< 2	24
126003	< 5	< 0.2	< 2	3	1	< 2	6	26
126004	< 5	< 0.2	8	8	< 1	6	2	36
126005	< 5	< 0.2	18	5	1	2	4	32
126006	< 5	< 0.2	2	4	3	4	< 2	28
126007	< 5	< 0.2	20	5	1	2	2	32
126008	< 5	< 0.2	10	4	3	< 2	8	28
126009	< 5	< 0.2	12	4	1	< 2	< 2	30
126011	5	< 0.2	16	6	2	6	2	60
126012	< 5	< 0.2	18	7	< 1	< 2	< 2	66
126013	< 5	< 0.2	4	6	1	2	8	32
126014	< 5	< 0.2	10	5	1	4	2	34
126015	< 5	< 0.2	18	12	1	< 2	2	50
126016	< 5	< 0.2	8	12	2	< 2	< 2	52
126017	< 5	< 0.2	14	9	1	< 2	< 2	44
126018	< 5	< 0.2	14	7	3	2	< 2	36
126019	< 5	< 0.2	6	4	1	< 2	< 2	32
126020	< 5	< 0.2	2	3	1	2	2	40
126021	< 5	< 0.2	4	4	1	< 2	< 2	38
126022	< 5	0.2	6	5	1	< 2	< 2	56
126023	< 5	< 0.2	12	7	1	< 2	< 2	58
126024	< 5	< 0.2	16	35	13	2	2	78
126025	10	< 0.2	20	43	17	< 2	< 2	90
126026	10	0.2	24	37	18	2	2	102
126027	< 5	< 0.2	16	31	4	4	4	72
126028	< 5	< 0.2	18	53	7	< 2	< 2	98
126029	5	< 0.2	30	33	5	< 2	< 2	64
126030	< 5	< 0.2	14	19	4	< 2	< 2	62
126031	< 5	< 0.2	14	8	2	< 2	< 2	42
126032	< 5	< 0.2	10	8	2	< 2	2	40
126033	< 5	< 0.2	14	7	3	< 2	2	42
126034	< 5	< 0.2	14	8	3	< 2	6	46
126035	< 5	< 0.2	10	9	< 1	< 2	< 2	50
126036	< 5	< 0.2	2	6	2	< 2	4	47
126037	< 5	< 0.2	6	8	2	< 2	6	40
126038	< 5	< 0.2	< 2	7	< 1	< 2	< 2	36
126039	< 5	< 0.2	6	14	3	< 2	2	94
126040	< 5	< 0.2	6	35	5	8	2	146
126041	< 5	< 0.2	18	22	3	< 2	2	120
126042	< 5	< 0.2	18	32	5	8	< 2	186
126043	25	< 0.2	4	17	3	2	6	114
126044	5	< 0.2	10	22	3	< 2	< 2	108
126045	< 5	< 0.2	14	22	1	< 2	2	104
126046	10	< 0.2	4	53	3	< 2	< 2	80
126047	< 5	< 0.2	18	21	3	< 2	2	118
126048	70	0.4	10	23	3	8	2	68
126049	< 5	< 0.2	16	19	1	< 2	< 2	60
126050	< 5	< 0.2	26	20	4	< 2	< 2	104
126051	80	< 0.2	22	18	1	< 2	6	116
126052	10	0.4	186	28	3	10	4	236
126053	5	< 0.2	12	14	1	2	< 2	170
126090	10	0.8	22	73	11	8	6	122
126091	< 5	0.4	26	78	11	8	4	138

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,088

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

For geological legend see Fig. 5.0

Scale 1:20000

250 0 250 500 750 1000 1250 1500 metres

Grant F. Crooker

HEDLEY PROJECT

Similkameen & Osoyoos M.Ds., B.C.

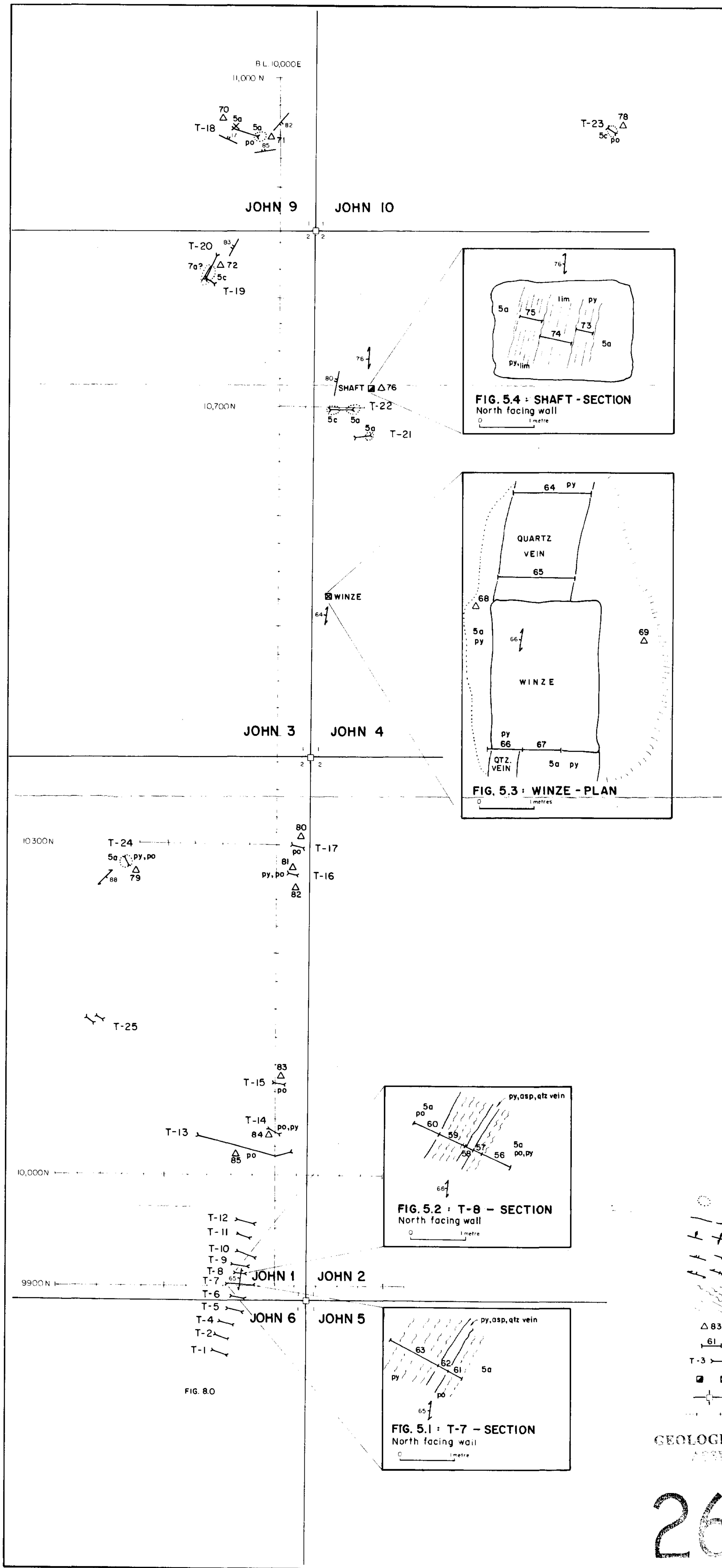
NTS: 92H-8E

Silt & Rock Geochemistry and Geology

Date: October, 1999

FIG. Nº. 4.0

GFC Consultants Inc.



ROCK GEOCHEMICAL ANALYSIS						
Sample No	Width cm	Au ppb	As ppm	Cu ppm	Mo ppm	Description
056	60	15	396	62	5	footwall, silicified argillite, rusty fractures, 1% py, minor 1 cm qta veinlets
057	20	80	766	233	61	footwall shear, bleached, oxidized, silicified argillite, red gouge
058	12	3350	>10000	15	4	white qtz vein, fractured, 2% asp, 1% py
059	50	675	2620	68	12	hangingwall shear, bleached, silicified argillite, rusty gouge, 1 cm qtz veinlets
060	60	15	80	70	5	grey-black argillite, some weakly silicified, 2% po
061	25	50	400	79	13	footwall shear, fractured, weakly silicified argillite, rusty gouge, trace po
062	18	8300	>10000	5	2	white qtz vein, fractured, 3% asp, 1% py
063	100	145	444	84	21	hangingwall shear, silicified argillite, rusty gouge, 1% py, 1-5 mm qtz veinlets
064	130	565	734	30	21	white qtz vein, qtz flooding along margins, fg boxworks, lim, 2% py
065	140	425	1010	63	17	white, grey qtz vein, fractures, locally to 5% py
066	60	105	562	58	25	white, grey qtz vein, ½% py
067	70	60	118	87	8	footwall, grey argillite, silicified? 1-4% po, ½% py on fractures
068	grab	100	106	63	1	hangingwall, grey argillite, silicified? 1-2% diss py
069	grab	365	826	80	8	dump, qtz vein, 5% py
070	grab	< 5	4	93	< 1	black, rusty argillite, 2-4% diss py
071	grab	< 5	2	38	6	calcareous breccia, 3 cm clasts, 1-4% diss po
072	grab	< 5	< 2	34	1	calcareous breccia, Copperfield? 2-4% diss po
073	30	90	434	76	120	breccia, argillite frags. 25% 5-10 mm qtz veinlets, breccia, ½% diss py, lim.
074	60	70	746	110	65	silicified argillite, strongly oxidized, 10% qtz veinlets
075	40	50	406	92	40	silicified argillite, 75% qtz veinlets, strongly oxidized, ½% py
076	select	70	70	32	76	dump, qtz vein, breccia, lim in boxworks
077	grab	10	8	90	2	silicified argillite, rusty fractures
078	grab	< 5	80	75	< 1	grey, rusty silicified limestone? 5-10% diss po
079	30	< 5	< 2	58	< 1	silicified zone, white, translucent qtz, ½% po, py along fractures
080	grab	10	56	61	8	silicified argillite, 5% po diss, along fractures
081	grab	65	230	34	19	silicified argillite, 60% qtz veinlets, 1-4% po, ½% py, diss, along fractures
082	grab	90	66	62	17	silicified argillite, minor qtz veinlets, 2-4% diss po, ½% py
083	grab	10	28	35	2	silicified argillite, 1-2% diss po
084	grab	20	34	134	74	silicified argillite, 1-3% diss po, 1% py
085	grab	10	48	240	1	silicified argillite, 5% po diss and along fractures

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 EOCENE
MARRON FORMATION

[19] 19, andesitic, trachyandesitic and phonolitic volcanic flows

SPRINGBROOK FORMATION

[18] 18, poorly consolidated conglomerate, sandstone talus, fluvial and lacustrine deposits

EARLY CRETACIOUS
SPENCES BRIDGE GROUP

[17] 17a, andesitic to rhyodacitic flows and minor tuffs, 17b, lahar and minor volcanic breccia; 17c, welded tuff and ignimbrite

VERDE CREEK STOCK

[16] 16, granite and microgranite to quartz monzonite

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)

QUARTZ PORPHYRY

[14] 14, quartz eye felsic intrusion (may be related to units 12, 13 and 20b)

LOOKOUT RIDGE PLUTON

[13] 13a, pink, equigranular to feldspar porphyritic, quartz monzonite to granodiorite; 13b, marginal phase granodiorite to diorite to mafic gabbro

CAHILL CREEK PLUTON

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

EARLY JURASSIC
MOUNT RIORDAN STOCK

[11] 11a, equigranular gabbro, quartz gabbro and diorite; 11b, hornblende porphyritic granodiorite

LATE TRIASSIC
BROMLEY BATHOLITH

[10] 10a, granodiorite, 10b, diorite to quartz diorite

HEDLEY INTRUSIONS

[9] (includes the Stemwinder, Aberdeen, Toronto, Banbury, Pettigrew and Larcon 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

UNCERTAIN AGE
ROCKS OF UNCERTAIN AGE

[8] 8, undifferentiated, 8a, mafic tuffs (probably Whistle Formation); 8b, mafic tuffs; 8c, limestone and/or marble; 8d, polymictic conglomerate, 8e argillite, 8f, tuffaceous siltstone (possibly Oregon Claims Formation), 8g, limestone, marble and minor chert pebble conglomerate; 8h, limestone breccia and conglomerate, 8i, chert pebble conglomerate, 8j, massive garnetite skarn (8g,h,i and j probably French Mine or Oregon Claims Formations)

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

CHUCHUWAYHA FORMATION

[6] 6a argillite ± thin limestone beds, 6b, siltstone ± thin limestone beds, 6c, limestone, 6d, siliceous and tuffaceous argillite

STEMWINDER FORMATION

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

HEDLEY FORMATION

[4] 4a, siltstone; 4b, argillite, 4c, limestone and/or marble; 4d, andesitic ash tuff ± tuffaceous siltstone; 4e, polymictic pebble conglomerate

FRENCH MINE FORMATION

[3] 3a, limestone and/or marble, 3b, limestone conglomerate and breccia; minor chert pebble conglomerate, argillite and mafic tuff

OREGON CLAIMS FORMATION

[2] 2a, basaltic ash tuff and minor basaltic flows, 2b, basaltic tuff with chert and quartz fragments, 2c, bedded mafic ash and dust tuff; 2d, basaltic tuff with large marble blocks, 2e, chert pebble conglomerate, 2f, limestone and/or marble

CONTACT FAULTED OR OCCUPIED BY CAHILL CREEK PLUTON

PALEOZOIC AND TRIASSIC
APEX MOUNTAIN COMPLEX

[1] 1a siltstone, 1b, argillite; 1c, greenstone, 1d, andesitic to basaltic ash tuff, 1e, limestone; 1f, chert, 1g, gabbro, 1h, limestone boulder conglomerate and breccia

GEOLOGY AFTER G.E. RAY, BCMM, 1994

SYMBOLS

- X Outcrop
- Geological contact
- Fault - inclined, vertical
- Bedding (tops unknown) - inclined, vertical
- Quartz vein - inclined, vertical
- Shearing
- Quartz stockwork
- △83 Rock sample (grab) & Nº.
- 61 Rock sample (chip) & Nº.
- T-3 Trench & Nº.
- Shaft, winze
- Legal post (1 - initial, 2 - final)
- Grid line

ABBREVIATION

py	Pyrite
po	Pyrrhotite
asp	Arsenopyrite
lim	Limonite
sp	Sphalerite
ga	Galena
mag	Magnetite
c	Calcareous

GEOTEC CONSULTANTS LTD.

GRANT F. CROOKER

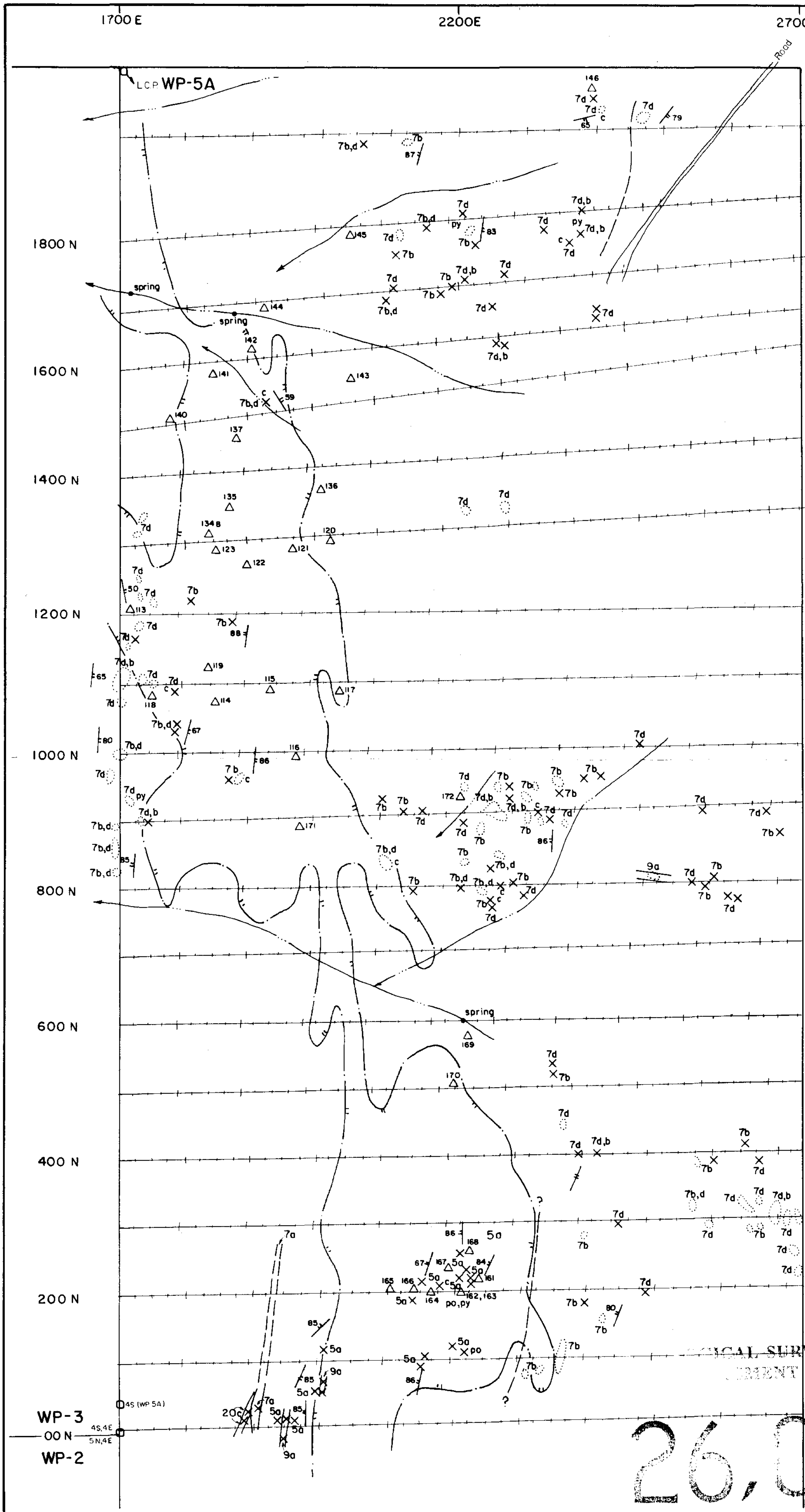
HEDLEY PROJECT
BLITZ SHOWING
GEOLOGY & ROCK GEOCHEMISTRY

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

0 50 100 150 METRES

SCALE 1:2500 | DATE OCT. 1999 | FIG Nº 5.0
DRAWN BY G.F.C.

CHONG



LEGEND

- 123 △ Rock sample location & Nº.
- Mo-As-Ag soil geochemical anomaly
- Legal corner post
- Claim post
- Creek

ROCK GEOCHEMICAL ANALYSIS						
Sample No	Width cm	Au ppb	As ppm	Cu ppm	Mo ppm	Description
113	float	< 5	6	54	2	argillite, rusty fractures, 1-3 mm calcite veinlets
114	float	< 5	2	58	4	calcareous argillite, bleached, weak clay alteration, rusty fractures
115	float	< 5	8	46	1	calcareous argillite, stretched calcite frags, 1% py
116	float	10	16	16	26	argillite breccia, stockwork white calcite veinlets
117	float	< 5	4	48	3	tuff, rusty fractures
118	float	< 5	< 2	40	1	calcareous tuff, rusty fractures
119	float	< 5	4	114	1	calcareous tuff, rusty fractures with calcite
120	float	< 5	6	37	< 1	grey-green tuff, stockwork rusty, 1-10 mm white calcite veinlets
121	float	< 5	2	35	3	bleached calcareous tuff, rusty
122	float	< 5	80	10	5	argillite breccia, stockwork white calcite veinlets
123	float	35	36	136	15	bleached tuff, lim on fractures, diss
134B	float	< 5	5	10	7	bleached intrusive, rusty boxworks
135	float	10	40	72	74	clay altered calcareous tuff, fg boxworks, lim
136	float	< 5	< 2	42	4	bleached, banded tuff, rusty fractures, boxworks, lim
137	float	< 5	2	114	2	grey-green tuff, 1-2 mm calcite veinlets, fractures, ½% po
140	float	< 5	< 2	93	1	tuff, 2 mm frags, rusty fractures, boxworks, lim, 2% diss py
141	float	< 5	2	61	10	bleached, clay altered argillite breccia, fractures, boxworks, lim
142	float	5	6	67	4	tuff, 1-3 mm argillite frags, rusty boxworks, lim
143	grab	< 5	< 2	13	< 1	tuff, 1-4 cm wide calcite veinlets, minor rustiness
144	float	10	< 2	70	4	siltstone, 2-3 mm argillite frags, rusty fractures,r boxworks, lim
145	float	5	< 2	93	3	tuff, 20% 1-10 mm qtz veinlets, trace py
146	float	< 5	10	29	3	tuff, 2-10 mm qtz veinlets, rusty fractures, trace py
161	grab	5	4	57	2	siltstone, rusty fractures, lim, py
162	float	< 5	< 2	45	1	argillite, argillite frags, rusty boxworks, lim, 5% diss po
163	float	< 5	< 2	59	4	argillite, 5% diss po
164	grab	< 5	32	40	< 1	argillite, rusty fractures, 5% diss po
165	float	< 5	< 2	51	1	calcareous argillite, argillite frags, 5% diss po
166	float	< 5	6	63	< 1	grey limestone? 10-15% po
167	float	5	2	107	3	siltstone, rusty fractures, 1% po
168	grab	< 5	< 2	29	< 1	interbedded limestone, siltstone, 2-5% po
169	float	< 5	2	105	3	grey felsic dyke, minor py on fractures
170	float	< 5	< 2	45	3	argillite breccia, 5% rusty boxworks, lim
171	float	< 5	< 2	72	1	fg green dyke, rusty fractures
172	float	< 5	< 2	73	3	calcareous grey tuff, 2-3 mm qtz veinlets, rusty boxworks

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

N

For geological legend see Fig. 5.0

GEOTEC CONSULTANTS LTD.

GRANT F. CROOKER

HEDLEY PROJECT
EAST PETTIGREW ZONE
GEOLOGY & ROCK GEOCHEMISTRY

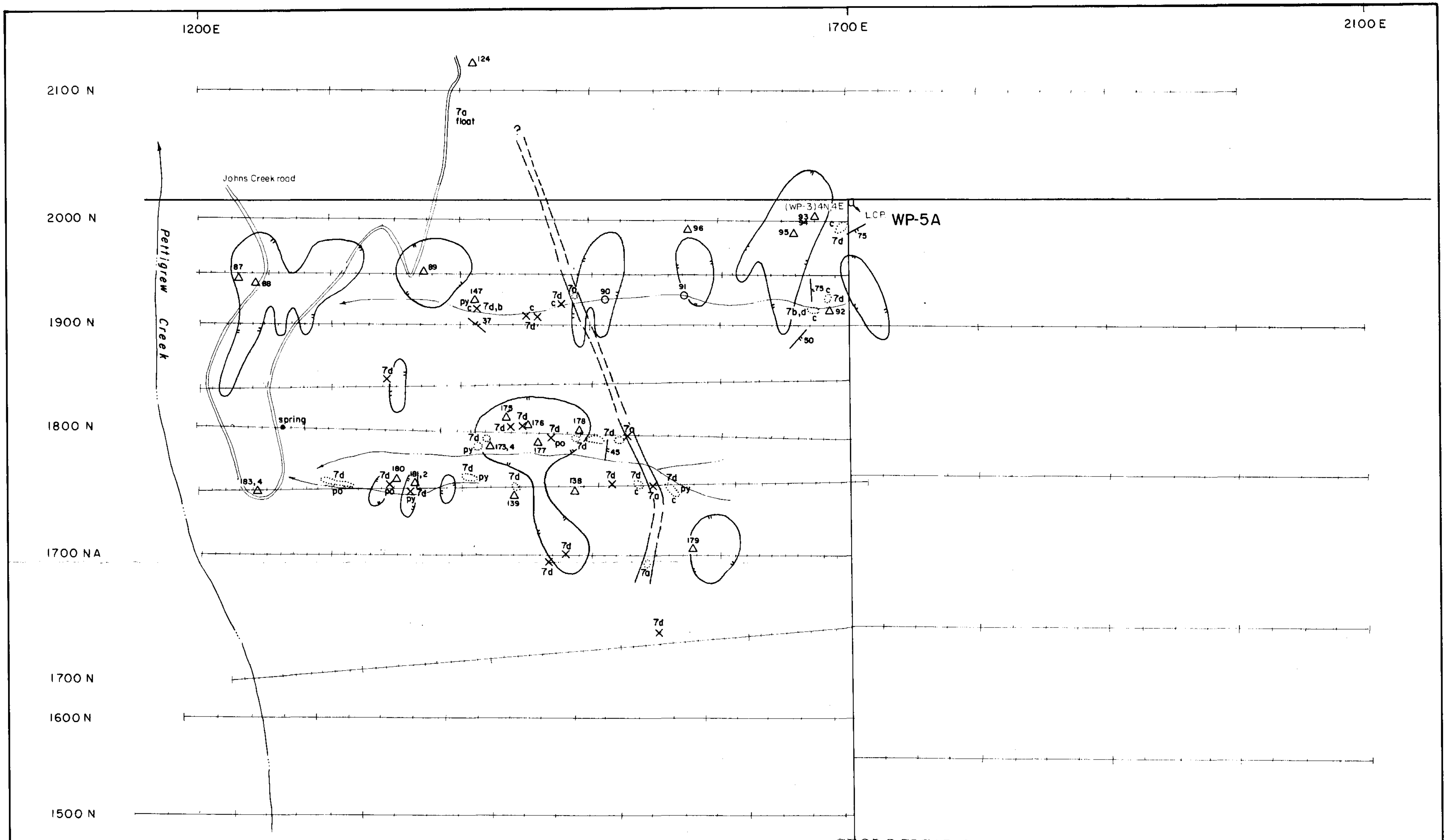
N.T.S. 92H-8E — SIMILKAMEEN M.D., B.C.

0 100 200 300 METRES

SCALE 1:5000 — DATE OCT. 1999 — FIG. Nº. 6.0

DRAWN BY: G.C.

CHONG



ROCK GEOCHEMICAL ANALYSIS						
Sample No	Width cm	Au ppb	As ppm	Cu ppm	Mo ppm	Description
087	float	< 5	10	18	3	calcareous siltstone, white and black calcite veinlets, lim
088	float	10	14	32	1	calcareous tuff, 2-8 mm calcite veinlets, rusty fractures, lim, trace py
089	float	< 5	16	6	< 1	white and black calcite vein, trace to ½% py along fractures
092	grab	< 5	32	40	1	calcareous tuff, rusty fractures, some with calcite
093	float	< 5	18	59	3	calcareous tuff, stockwork 2-10 mm calcite veinlets, rusty fractures
094	float	< 5	12	13	1	massive white crystalline calcite, minor fractures, trace py
095	float	< 5	18	104	6	argillite, 1-2 mm qtz-carb veinlets, rusty boxworks
096	float	< 5	2	7	< 1	massive white crystalline calcite, minor rusty fractures
124	float	< 5	6	128	4	Hedley diorite dyke, rusty fractures
138	float	< 5	4	20	< 1	white calcite veinlets, angular fragments tuff
139	float	< 5	28	15	2	5-10 mm qtz-carb veinlet, fragments tuff, 3% py, rusty boxworks
147	grab	< 5	22	59	1	calcareous tuff, 1 mm py cubes, fractures, calcite, trace py
173	grab	< 5	10	148	6	tuff, strong fractures, po, py
174	grab	10	16	151	5	tuff, fractures, trace py, 1-4 mm qtz-carb veinlets
175	float	< 5	8	13	5	silicified tuff? 1-3 mm qtz veinlets, minor rusty boxworks, trace py
176	float	< 5	14	56	3	tuff, 1-6 mm qtz-carb veinlets, boxworks, lim, trace py
177	float	< 5	12	22	1	silicified tuff, rusty fractures, calcite, 1% po
178	float	85	340	317	6	bleached, clay altered tuff, fractures, 15% rusty boxworks, lim
179	float	< 5	10	60	< 1	tuff, stockwork 1-4 mm calcite veinlets, rusty boxworks
180	grab	25	20	82	8	tuff, 1 cm qtz veinlet, 1% po
181	grab	< 5	58	121	2	Hedley dyke, 1-3% diss py
182	float	< 5	8	151	7	silicified tuff, fractures, 1-3 mm qtz veinlets, py
183	float	< 5	10	116	1	tuff, rusty fractures, po
184	float	30	16	132	39	silicified tuff, fractures, 1-8 mm qtz veinlets, rusty boxworks, lim, trace py

LEGEND

- Rock sample location & Nº.
- Silt sample location & Nº.
- Gold soil geochemical anomaly >15 ppb
- Legal corner post
- Road
- Creek

For geological legend see Fig. 5.0

GEOTEC CONSULTANTS LTD.

GRANT F. CROOKER

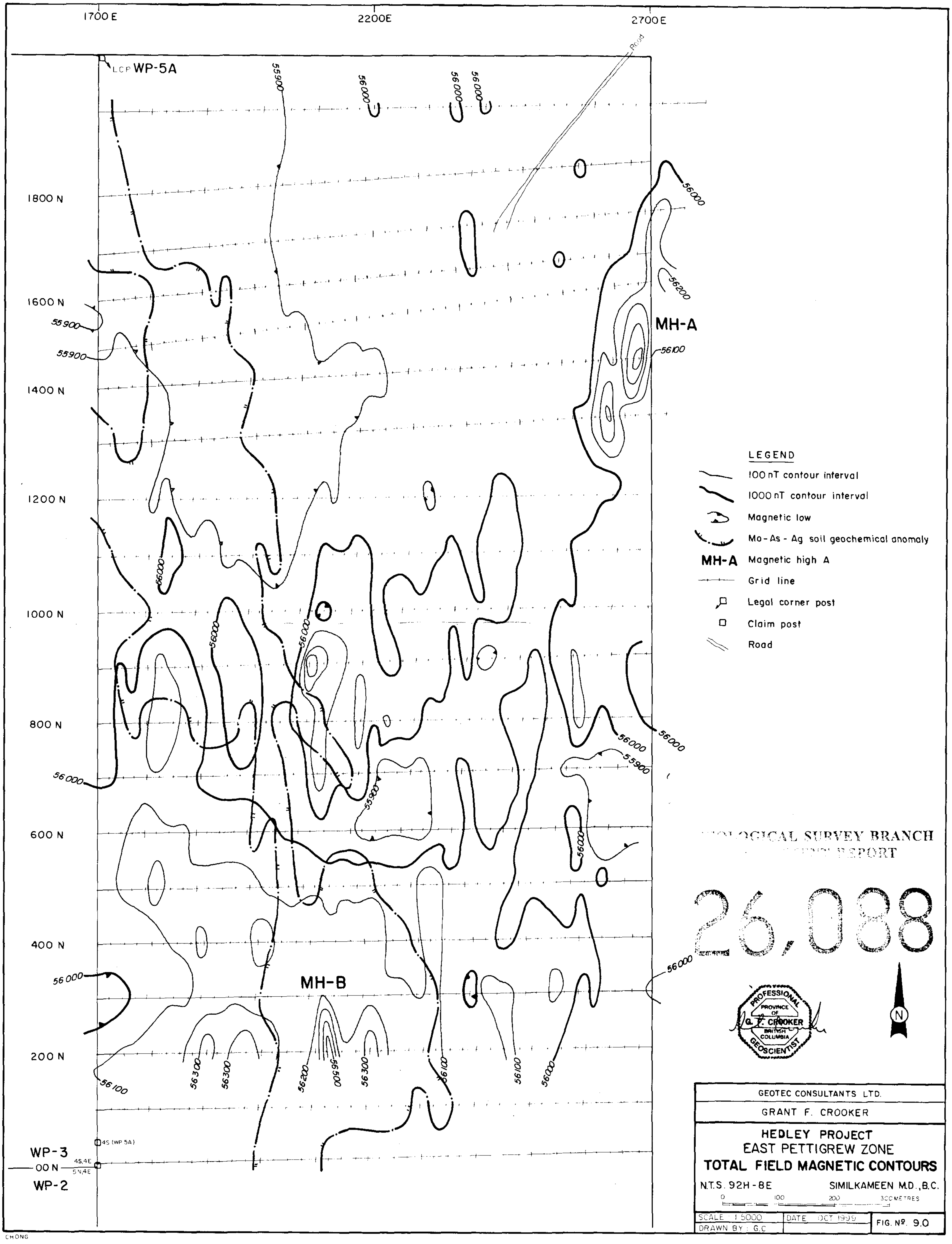
HEDLEY PROJECT
EAST PETTIGREW ZONE
DETAILED
GEOLOGY & ROCK GEOCHEMISTRY

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

0 50 100 150 METRES

SCALE 1:2500	DATE: OCT. 1999	FIG. Nº. 7.0
DRAWN BY G.C.		

CHONG


1700 E
2200E
2700 E
LCP WP-5A
Road
1800 N
1600 N
1400 N
1200 N
1000 N
800 N
600 N
400 N
200 N
00 N
WP-3
WP-2
4S (WP 5A)
4S,4E
5N,4E
55900
56000
56100
56200
56300
56500
55900
MH-A
MH-B
LEGEND
100 nT contour interval
1000 nT contour interval
Magnetic low
Mo-As-Ag soil geochemical anomaly
MH-A Magnetic high A
Grid line
Legal corner post
Claim post
Road
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
26,088
PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
G. F. CROOKER
N
GEOTEC CONSULTANTS LTD.
GRANT F. CROOKER
HEDLEY PROJECT
EAST PETTIGREW ZONE
TOTAL FIELD MAGNETIC CONTOURS
N.T.S. 92H-8E
SIMILKAMEEN M.D., B.C.
0 100 200 300 METRES
SCALE 1:5000
DATE OCT 1999
DRAWN BY: G.C
FIG. Nº. 9.0
CHONG