G NORTH PROPERTY

Cariboo Mining Division

Geology, Geochemistry and Geophysics

NTS

93J/14

March, 1982

A. Troup, P. Eng.

C. Wong, B.Sc.

CLAIMS

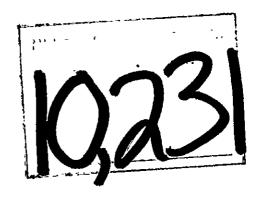
Claim Na	ame	<u>Units</u>	Record No.	Anniversary	Date
G North	1	20	3310	April	7
GN	2	20	3311	April	7
GЙ	3	20	3312	April	7
GЙ	4	20	3313	April	7
G N	5	20	3314	April	7
GN	6	20	3315	April	7
GN	7	20	3316	April	7
GN	8	` 20	3317	April	7
GN	9	20	3318	April	7
GN	10	20	3319	April	7
GN	11	20	3320	April	7
G N	12	20	3321	April	7
GN	13	20	3322	April	7
GN	14	20	3323	April	7
G N	15	20	3324	April	7
GN	16	20	3965	_	26
GN	17	20	3966	-	26
G N	18	20 .	4067	-	30

Location: 54°56'N. Lat., 123°18'W. Long.

Owner: Ezekiel Explorations Ltd.

Operator: Ezekiel Explorations Ltd.

Consultant: A. G. Troup, P. Eng.



G NORTH PROPERTY

Cariboo Mining Division

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NTS 93J/14

SUMMARY

The G. North Property is a gold prospect located in north-central British Columbia. During the 1981 field season, heavy mineral sampling, soil sampling, rock sampling, geologic mapping and VLF-EM surveys were carried out to locate zones of potential gold mineralization.

The results of the 1981 programme are very encouraging. High gold assays, up to 2.5 g/tonne, obtained from calcite veins and sheared pyritic siltstone outcrops indicate potential for vein-type and stockwork gold mineralization along a 4 km section of the McDougall River. VLF-EM conductors on strike with the gold-bearing samples suggest that important mineralization may underlie adjacent till covered areas.

Additional heavy mineral sampling, rock chip sampling, detailed VLF-EM surveys and rotary drilling of all conductors is recommended.

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G NORTH PROPERTY

Cariboo Mining Division

1. INTRODUCTION

The G North property is a gold prospect located 48 km south-southwest of Mackenzie in north-central British Columbia. The property was staked following a regional survey undertaken by the A.T. Syndicate in 1980. Ezekiel Exploration Ltd. optioned the property from the A.T. Syndicate in 1981.

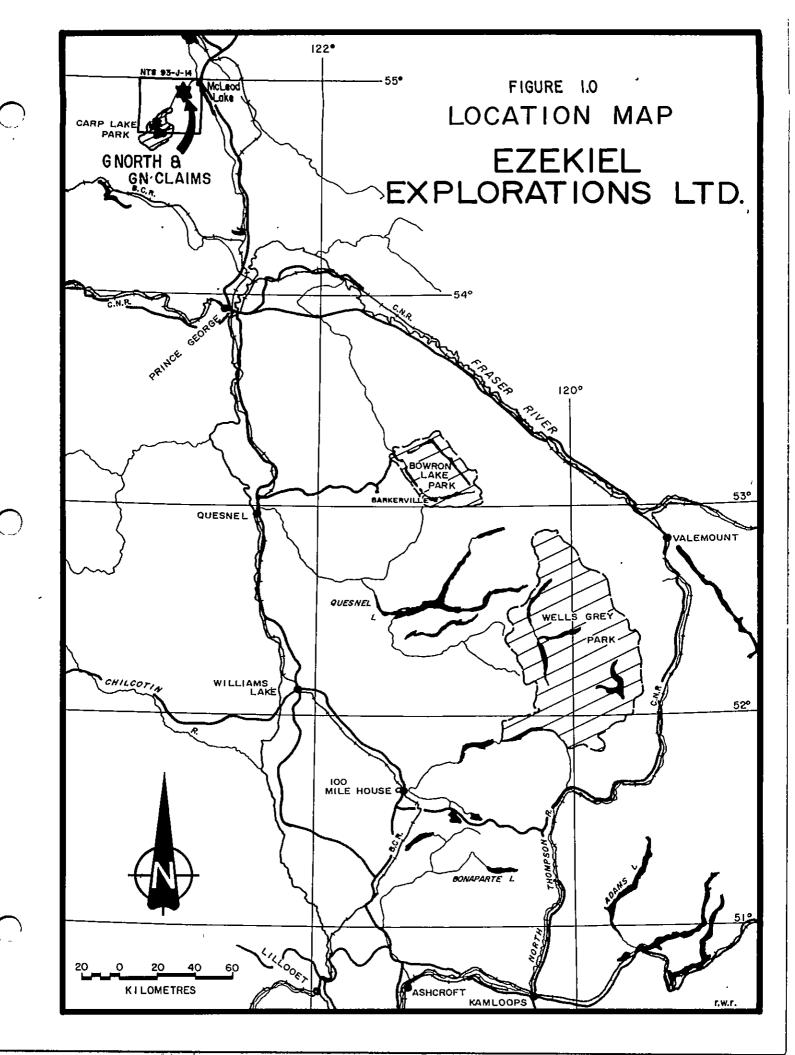
Field work consisting of geological, geochemical and geophysical surveys was carried out by a ten-man crew working from a base camp on the property from May 31 to September 30. The purpose of this work was to delineate areas of placer gold mineralization and to locate the source.

The follow-up work was laid out by A.G. Troup, P.Eng., with Archean Engineering Ltd. Field work was supervised by Mark Management geologist, C. Wong and A.G. Troup, P.Eng.

1.1 LOCATION AND ACCESS

The G North property is located on the McDougall River 48 km south-southwest of Mackenzie in the Cariboo Mining Division of north-central British Columbia (Fig. 1.0). The claims cover an area of 90 km² centred at 54°56'N and 123°18'W.

Access to the property is by helicopter from Mackenzie. A good gravel road running from McLeod Lake to Carp Lake Provincial Park intersects the southeast corner of the property. The McLeod River situated between this road and the property presently restricts use of this road for access. A heavily overgrown dirt road also comes in from McLeod Lake and runs through the northern



portion of the claim area. This road has seen little use since its construction in the early 1930's and would require several days of clearing by bulldozer to make it passable.

1.2 PHYSIOGRAPHY

The property is located on the Nechako Plateau, just west of the Rocky Mountain Trench. Much of the claim area lies on glacially deposited material in an area of low topographic relief. Maximum relief is about 1500 ft (457 m); the highest elevation on the property is 4150 feet (1265 m). Drumlins and eskers are abundant on the eastern half of the property and strike north-northeast to northeast. The northern portion of the property is drained by the McDougall River and the eastern portion by the McLeod River. Numerous small creeks flow north-northwest and northeast across the property into the McDougall River. A few shallow, swampy lakes present in the southeast and southwest corners of the property are the result of glaciation and beaver activity.

Much of the claim area is covered with buckbrush and second growth. Only the eastern portion of the property is bush free. Thick growths of alder, devil's club and wild rose are found in many of the creeks. Trees are small to medium sized, consisting of fir, spruce, balsam and pine.

1.3 CLAIM INFORMATION

The claims are all located within the Cariboo Mining Division and consist of 18 modified grid claims of 20 units each (Fig. 1.1). Claim information is listed in Table 1.1.

Mineral Claims G NORTH 1 and GN 2-15 were staked by Mark Management Ltd. for the A. T. Syndicate.

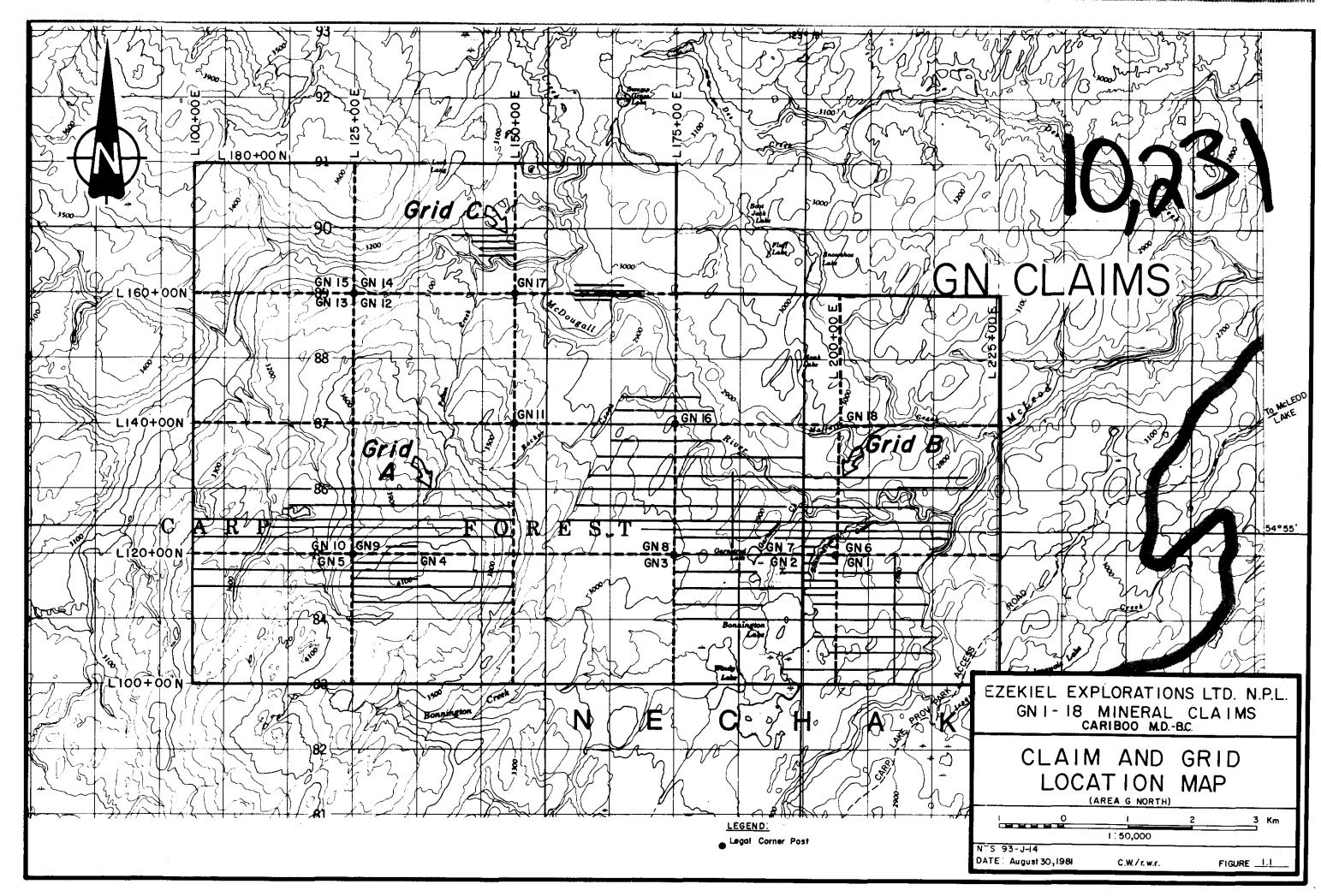


Table 1.1
CLAIMS STATUS

Claim N	ame	Units	Record No.	Expiry Date
G North	1	20	3310	April 7, 1986
G N	2	20	3311	April 7, 1986
G N	3	20	3312	April 7, 1984
G N	4	20	3313	April 7, 1984
G N	5	20	3314	April 7, 1984
G N	6	20	3315	April 7, 1986
G N	7	20	3316	April 7, 1986
G N	8	20	3317	April 7, 1984
G N	9	20	3318	April 7, 1984
G N	10	20	3319	Apirl 7, 1984
G N	11	20	3320	April 7, 1986
G N	12	20	3321	April 7, 1984
G N	13	20	3322	April 7, 1984
G N	14	20	3323	April 7, 1984
G N	15	20	3324	April 7, 1984
G N	16	20	3965	August 26, 1985
G N	17	20	3966	August 26, 1985
G N	18	20	4067	September 30, 1985

1.4 HISTORY

From 1933 to 1934, the McDougall River area was extensively worked by Cariboo Northern Development Co. Ltd. and Northern Reef Gold Mines Ltd. These two companies held much of the mineralized ground east of the Reed Creek - McDougall River confluence. In 1933, Cariboo Northern Development tested their property and obtained encouraging results. The company manager reported that low gravel benches ran as high as \$3.15 (1933) with yardage ranging

from 2 to 13 yards. Fourteen random surface samples taken from zones other than quartz veins assayed as much as \$3.60 (1933) per ton in gold. He also noted that all the concentrates carried assayable platinum concentrations.

In 1934, Northern Reef Gold Mines continued the work begun by Cariboo. The additional work included the construction of a 16-mile (26 km) tractor trail from McLeod Lake, ditch and dam construction, and underground workings. A 52-foot adit with a 28-foot winze at the end of it was driven 10 feet above the river. These underground workings were done over a large quartz showing which outcrops close to the north bank of the river where it changes course from a northward to an eastward flow. Placer testing carried out at four points adjacent to the river showed an average value of \$1.87 (1934) per cubic yard. Hydraulic mining started early in 1935 but the operation was apparently short-lived, because only a small amount of ground was worked. It may be that World War II affected the viability of the operation.

At the present time, Ezekiel Explorations Ltd. holds much of the ground. The only other claim in the immediate area is a block of six units, named the RAN claim (Record No. 1297 (10)) located just east of the Reed Creek - McDougall River confluence. Ezekiel has staked the ground around this claim.

1.5 WORK DONE BY EZEKIEL IN 1981

Field work was done by Ezekiel Explorations Ltd. from May 31 to September 30, 1981. During this period, the following work was completed:

- 1. Reconnaissance heavy mineral sampling was carried out over the entire property to delineate zones of placer gold mineralization.
- Reconnaissance geological mapping was done over the entire property followed by detailed mapping of the river cuts.
- 3. Rock samples were taken from shear zones, quartz veins, calcite veins, rusty zones and any mineralized exposures encountered on the property.
- 4. Detailed EM-16 surveys were run over two grids on the property.
- 5. Detailed soil sampling was carried out over a single sub-grid.

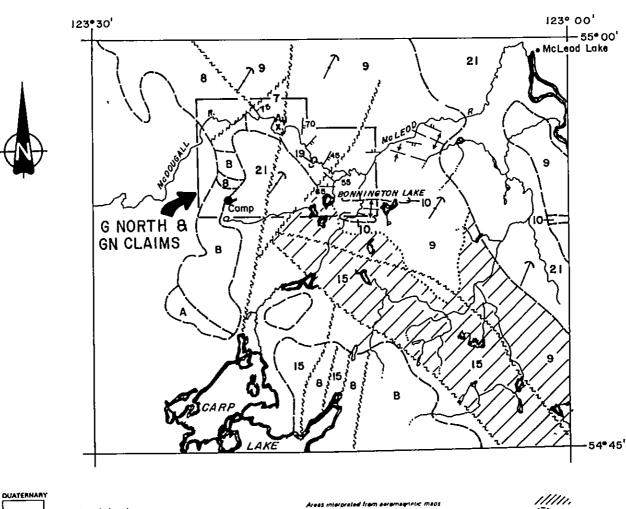
2. GEOLOGY

2.1 GENERAL GEOLOGY

Geologic mapping of this area was undertaken in 1946 by Armstrong, Tipper and Hoadley of the Geological Survey of Canada. The work was completed by Tipper in 1961 and the data compiled as map 1204A (Fig. 2.0). This map shows the claims to be underlain by a variety of lithologies. The western third of the property is underlain by rocks of the Wolverine Metamorphic Complex of unknown age while the eastern third of the property is underlain by Triassic-Jurassic, Takla group volcanics and Mississippian, Slide Mountain Group sediments. The centre of the property is till covered and devoid of outcrop.

In 1981 reconnaissance mapping of the entire property was carried out at a scale of 1:50,000. Detailed mapping at a scale of 1:10,000 was also carried out along river cuts over the eastern end of the property. Mapping was hindered by a thick blanket of Quarternary till and gravel that covers most of the area. Over much of the property rock exposures occur only on ridge tops and along river and creek bottoms. The results of this work agree closely with the G. S. C. mapping and are shown in Fig. 2.1.

The Wolverine Metamorphic Complex outcrops over much of the western third of the property. This unit is comprised of granitoid gneiss, garnetiferous gneiss, micaceous garnetiferous schist, pegmatite, and quartzite. Large and often angular blocks of granodiorite float is found in many locations but was not seen in outcrop. Many of the gneisses and schists are mafic rich approaching amphibolite. Garnets found in the gneisses and schists are of the almandine type and occur as



TRIASSIC AND/OR JURASSIC

UPPER TRIASSIC AND/OR LOWER JURASSIC

UPPER TRIASSIC AND/OR LOWER JURASSIC

TAXLA GROUP

Andestric and Basshic Hows, turis bracces.

15

SLIDE MOUNTAIN GROUP (9,10)

10 Lunastene

9 10 Resaltic pillow laves, andestie, related pyraclestic rects, argible, chert, greywacks

CAMBRIAN AND/OR LATER

(OWER CAMBRIAN AND/OR LATER

CONTROL GROUP (2,8)

9 SNOWSHOE FORMATION(7), pray microceaus evertitie anyline quartitie, physice includes miner pegmistic of A 7 MIDAS FORMATION(7), black quartitose physice argibile

WOLVERINE COMPLEX

A Grandories grantle pagmiste

B grandories grantle pagmiste minor feldspathized quartitie and small bashes of grandonite minor feldspathized quartitie

Areas interpreted from exempentatic maps
Geological beundary (appresimate assumed)
Bedding tops known (heritantal inclined)
Bedding tops unknewn (inclined vertical)
Schistesity, gnessosity (inclined, vertical dip unknewn)
Fault (defined, approximate assumed)
Antichne (defined, approximate)
Syncline (defined appresimate)

Drumlin (direction of ice movement knewn)

Mineral occurrence

Cox

EZEKIEL EXPLORATIONS LTD.

REGIONAL GEOLOGY MAP G NORTH & GN CLAIMS After GSC Map 1204 A

Scale 1:253,440 C.W./r.w.r. Sept., 81

FIGURE 2.0

NTS 93-J-14

euhedral crystals up to 1 cm in size. Depletion haloes are sometimes seen around the garnets. All schists and gneisses are well foliated with the exception of the granitoid gneiss where the foliation is often masked by the granite texture. The foliation may be locally contorted but generally strikes northeast and dips steeply to the east. Four sets of quartz veins are found in the gneisses. Three are pre-metamorphism and have been deformed by shearing and folding. The fourth is post-metamorphism and lacks deformation. Veins of this set strike 020° and dip 60°W.

The Takla volcanics occur locally over the eastern third of the property and in exposures along the McDougall River. This monotonous sequence of olive green andesites is generally unaltered and unweathered. Occasionally these rocks display rusty spots and where cut by quartz and calcite veinlets may be stained rusty brown.

The Slide Mountain Group sediments are seen in river cuts over the eastern end of the property. These rocks are comprised of argillite, siltstone-mudstone, limey siltstone and greywacke. The argillite is a recessive, black, pyritiferous and sometimes graphitic rock often exposed as loose broken slabs and faces. The siltstone-mudstone is a competent, laminated rock varying in colour from grey to light green. The greywacke, seldom found on the property, is drab green to light grey in colour.

Rusty quartz-calcite veins are found cross-cutting all of the sedimentary rocks. The veins display no preferred orientation but usually follow one or the other of two local fracture directions. The calcite in these veins is usually milk white but occasionally is stained rusty brown. It frequently appears as euhedral crystals lining fracture walls.

Regional mapping shows numerous northeasterly and northwesterly striking faults in this area but only northeasterly and north-northeasterly striking faults were found on the property. The observed fault zones are characterized by a gouge of crushed country rock veined by quartz or quartz and calcite. An alteration envelope of chlorite and clay minerals often accompanies the veins.

Spectacular large and small scale foldings is seen in sedimentary rocks exposed in river cuts along the lower McDougall river. However, because of the lack of outcrop information no fold analysis has been attempted.

2.2 MINERALIZATION

Pyrite is the most common sulphide found on the G North property. It occurs as fine disseminations in almost all rock types and as cubes of up to 1.5 cm in the siltstone and argillite units. Pyrrhotite was recognized at a single location on the south side of the McDougall River just west of the old workings. It occurs as fine disseminations in a quartzite unit. Galena together with a soft green mineral (fluorite?) was observed along a 10 cm wide quartz vein cutting an andesite outcrop just east of the old workings.

Although no in situ gold was ever seen varying amounts of gold were obtained in a number of panned concentrates taken over the property. Many of the best gold concentrates were obtained along strike from or just down-stream from some of the strongest EM conductors. Of particular interest are the McDougall River - McLeod River confluence, the Bonnington Creek - McDougall River confluence and the McDougall River east of Rocker Creek. Although much of the gold is very fine most of the coarse pieces are dendritic or angular suggesting a local source.

3. GEOCHEMISTRY

3.1 HEAVY MINERAL CONCENTRATE SAMPLING

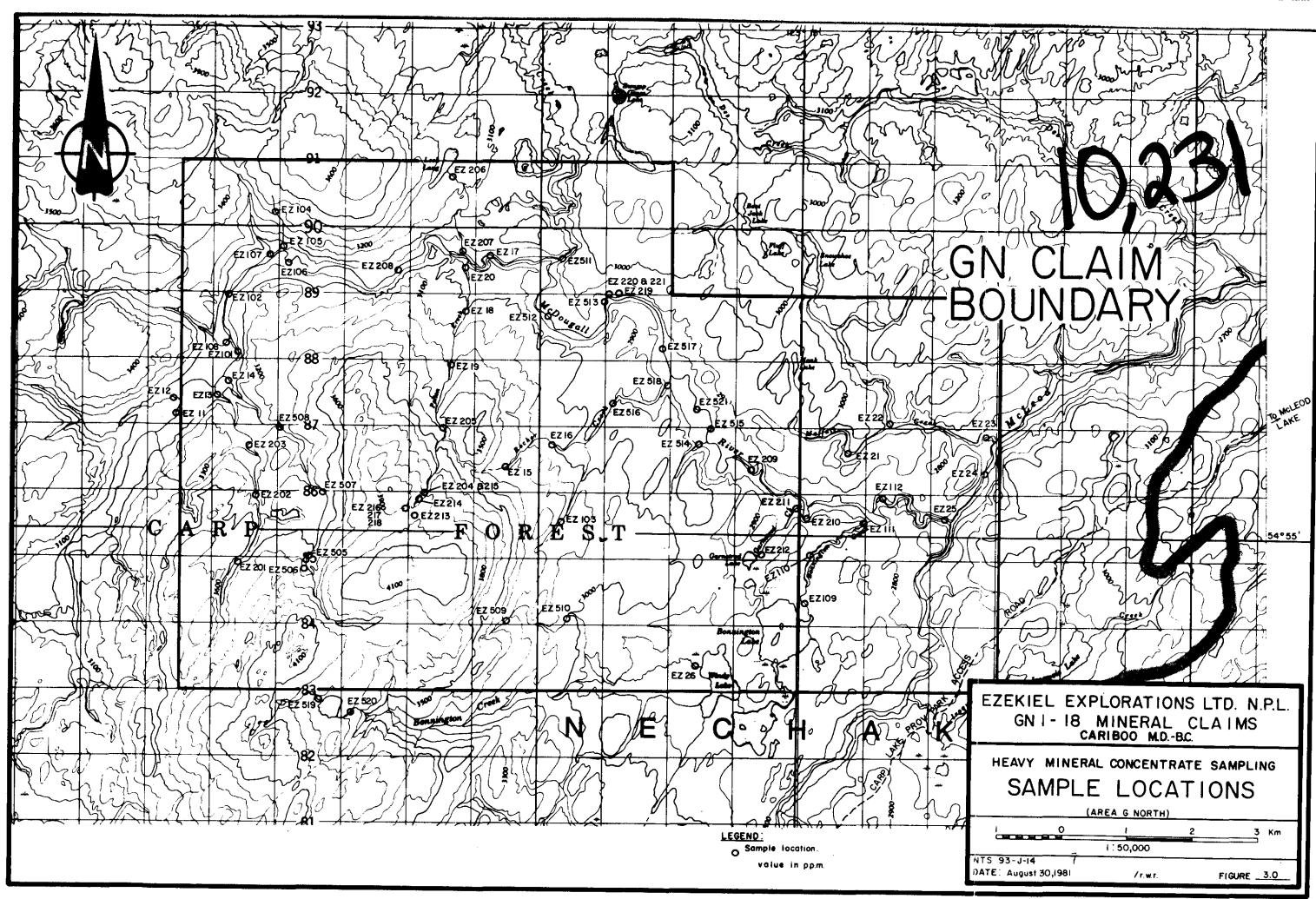
3.1.1 SAMPLING, SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

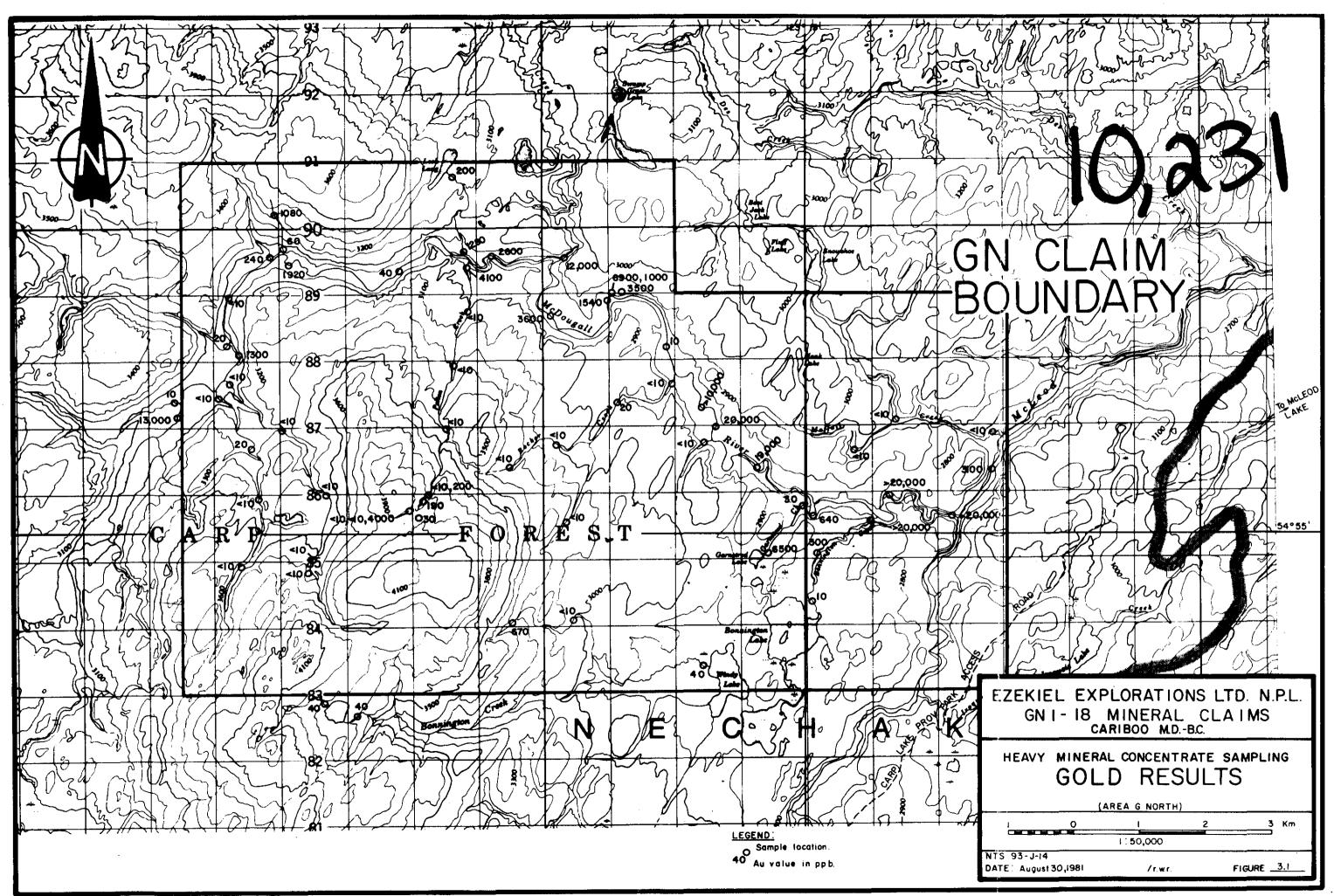
In order to locate areas of important gold mineralization, detailed heavy mineral sampling was carried out along all streams and rivers draining the property (Fig. 3.0). A total of 66 samples were collected during the survey. To ensure truly representative results, 50-100 kg samples were normally taken at one kilometer spacings. These samples were then sieved to minus ten mesh, the coarse fraction discarded and the remaining fine franction panned down to approximately 0.5 kg. The concentrates were placed in numbered kraft envelopes and sent to Chemex Labs Ltd. in North Vancouver for analysis.

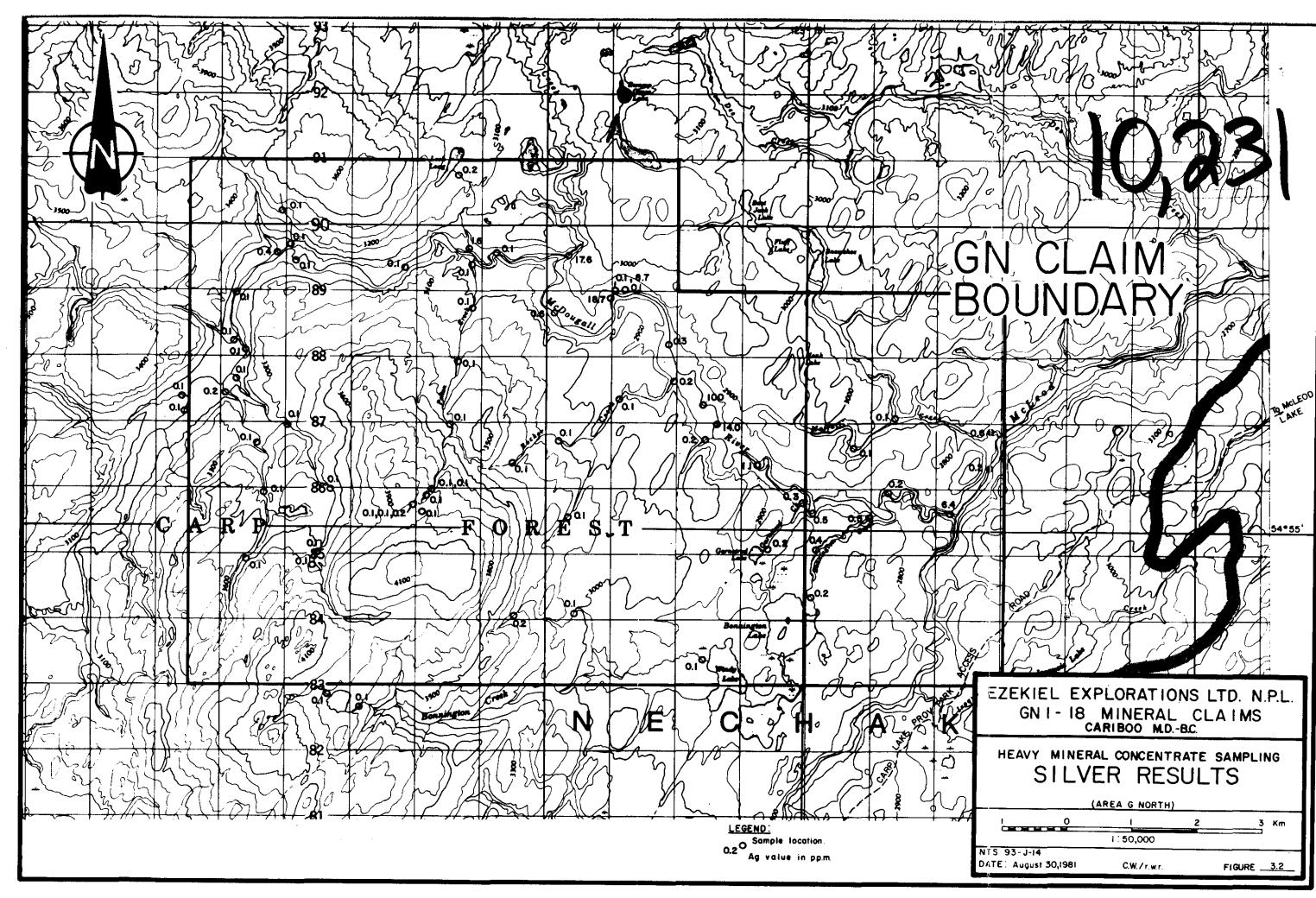
In the laboratory the samples were further concentrated by heavy liquid separation and magnetic mineral separation. The non-magnetic fraction was crushed to minus 200 mesh and analysed for gold, silver, mercury and tungsten by atomic absorption.

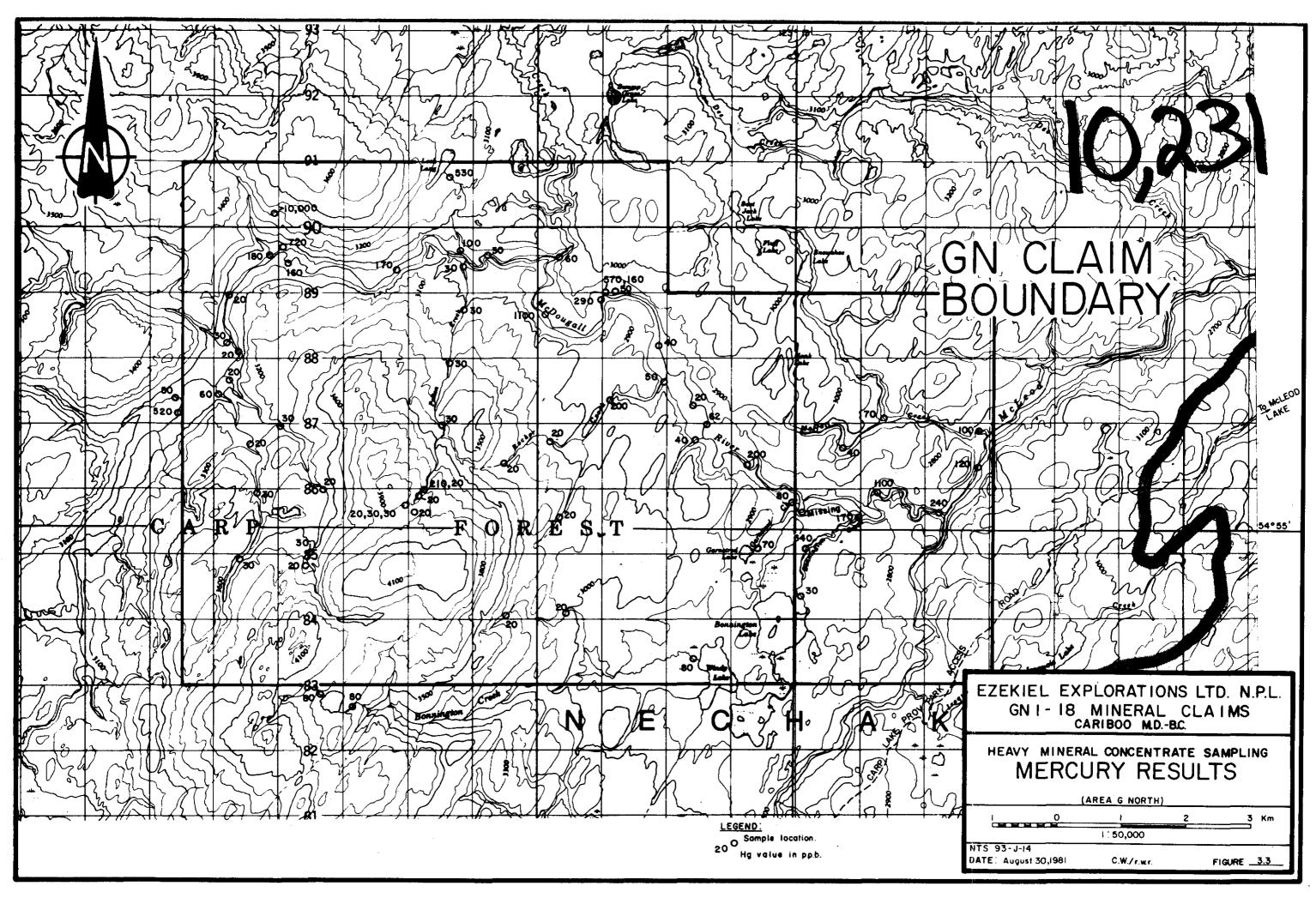
3.1.2 TREATMENT, PRESENTATION AND DISCUSSION OF RESULTS

In order to interpret the results, a statistical study was done to separate anomalous from background values for each of the four elements of interest. Using the background population, threshold values were determined as the mean plus two standard deviations $(\bar{x} + 2s)$ and highly anomalous values as the mean plus three standard deviations $(\bar{x} + 3s)$ or greater. The threshold and anomalous levels determined from this study are given in Table 3.1 Sample results are shown on Figures 3.1 to 3.4 all at a scale of 1:50,000.









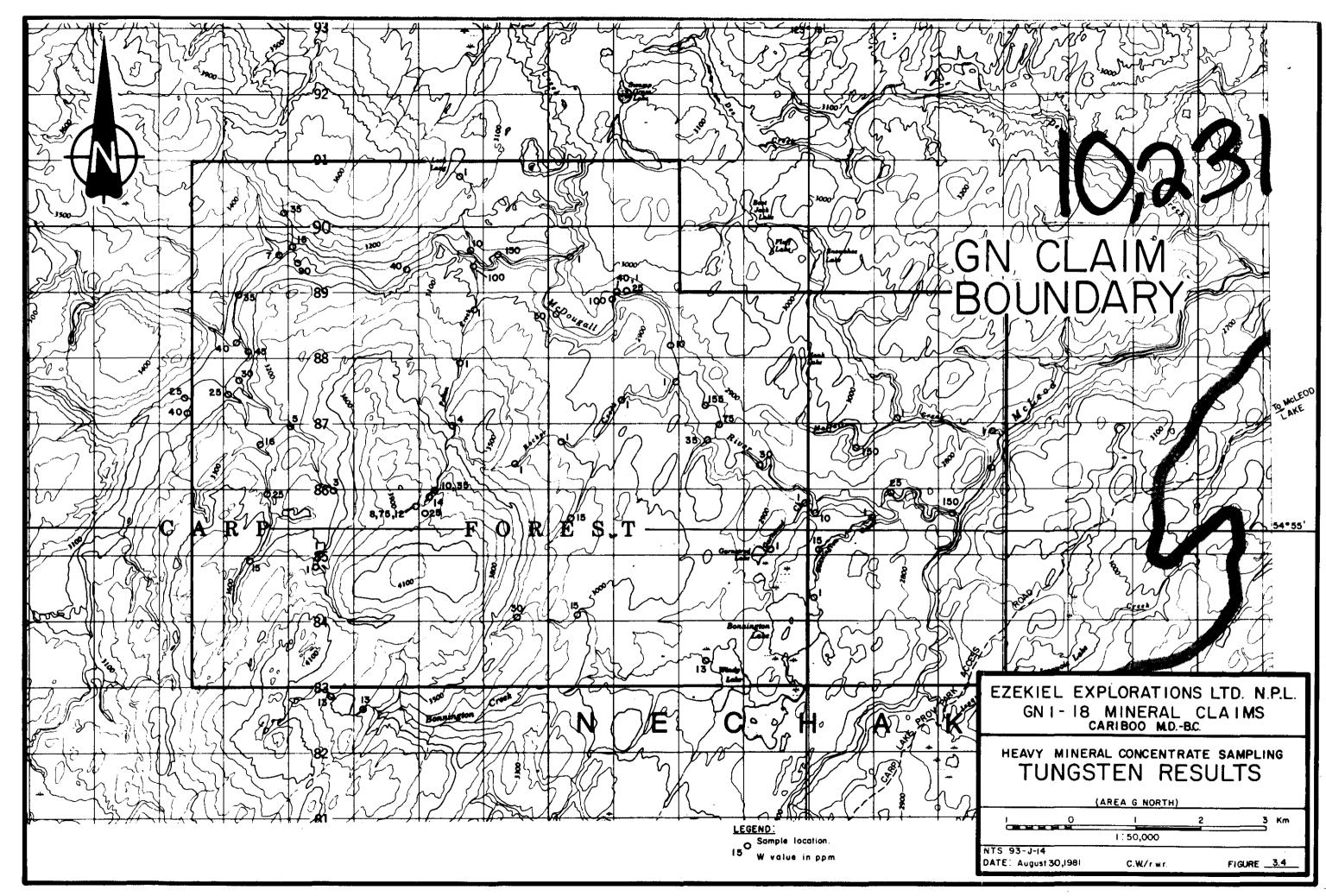


TABLE 3.1

Mean, threshold and anomalous metal values in 111 heavy mineral concentrate samples from streams in the vicinity of the G North property:

Element	N	Mean (x)	Threshold $(\bar{x} + 2s)$	Anomalous $(\bar{x} + 3s)$
Au	110	14	770	5600 ppb
Ag	108	0.04	0.9	4.6 ppm
Hg	107	38	400	1400 ppb
W	111	` 9	110	400 ppm

Inspection of the results shows very high gold values along the lower 4 km of the McDougall River with highly anomalous gold concentrations over two areas. One area is located at the confluence of Bonnington Creek and McDougall River, while the second is located approximately one kilometre downstream from the confluence of Rocker Creek and McDougall River. Anomalous silver values show a spatial correlation with gold suggesting that silver may be a pathfinder for gold over this property. High mercury and tungsten values are scattered and show no correlation with high gold values.

Results of the heavy mineral survey were used as a guide in selecting areas for VLF-EM coverage.

3.2 DETAILED SOIL SAMPLING

3.2.1 SAMPLING, SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Detailed soil sampling was carried out over selected areas of geophysical grid 'B' to test areas underlain by strong VLF-EM conductors. Samples were collected at 20-metre intervals along the geophysical survey lines. A total of 225 'B' horizon samples

were taken. All samples were placed in numbered Kraft envelopes and shipped to Chemex Labs Ltd. in North Vancouver for analysis.

In the laboratory, samples were oven-dried at approximately 60°C and sieved to minus eighty mesh. The coarse fraction was then discarded and the minus eighty fraction analysed for gold and mercury by atomic absorption.

3.2.2 PRESENTATION AND DISCUSSION OF RESULTS

The majority of the values obtained in the laboratory were below the detection limit of 10 ppb, therefore statistical methods could not be used to determine meaningful threshold and anomalous levels. Previous work has shown that over this area gold values of greater than 5 ppb may be considered anomalous in stream sediment samples. Possibly a similar threshold level could be used for soils.

To aid interpretation of the soil results, detectible gold values have been divided into three class intervals, 10 to 19 ppb, 20 to 79 ppb and greater than 80 ppb. The results are plotted on Figure 3.5 with symbols of varying size indicating the gold content of the samples. The results show 29 of the 225 samples to contain detectible gold concentrations with values ranging from 10 ppb to 1700 ppb. Considering the extensive, thick overburden cover and the particulate and relatively insoluble nature of gold, it is significant that 13 percent of the values are anomalous. As was the case for heavy mineral results mercury values show no correlation with gold values.

If anomalous samples taken near streams and rivers are discounted as possible placer accumulations, most values of 20 ppb or greater are seen to occur over or immediately adjacent to VLF-EM conductors. The highest value of 1700 ppb was obtained

about 600 metres southwest of the confluence of McDougall and McLeod River. Immediately south of this site a cluster of high gold values occurs over a major north trending conductor. This is the most striking anomaly indicated by the soil results. It is therefore possibly significant that spectacular concentrations of placer gold were found in panned samples taken along both the McDougall and McLeod Rivers just east of this site.

4. ROCK SAMPLING

4.1 SAMPLING AND SAMPLE TREATMENT

In the course of mapping the property rock samples were taken for assay from all quartz veins, quartz-calcite veins, shear zones, gossanous zones and other mineralized exposures. In most instances the samples consisted of two or three representative specimens, but occasionally areas of pervasive mineralization were systematically chip sampled. A total of 89 such samples were taken. All samples were placed in numbered plastic bags and the sample site indicated by orange flagging bearing the corresponding number. The samples were shipped to Chemex Labs Ltd. in North Vancouver where they were crushed to minus 200 mesh and fire assayed for gold.

4.2 PRESENTATION AND DISCUSSION OF RESULTS

Table 4.1 gives a brief description of the samples together with the assay results, sample numbers and other pertinent information. Sample locations and assay results are shown in Figure 4.1. The results show gold assays to range from trace to 2.5 grams/tonne. The best values are associated with calcite veins and sheared, pyritic and calcite veined sedimentary rocks along a 4 km section of the lower McDougall River. Several strong VLF conductors and scattered high gold values in soils occur near this area.

The association of high gold values with low temperature veins and unmetamorphosed sediments is encouraging and suggests an epigenetic origin for the mineralization.

TABLE 4.1

ROCK SAMPLE RESULTS FROM THE G NORTH PROPERTY

Sample No	. Field Sample No.	Au (g/tonne)	Description
45001	'A' Grid 120+00N,118+00E	<0.1	Hornblende schist with fracture fillings of pyrite
45002	C006	0.1	Midas Formation with disseminated subhedral pyrite
45003	C015	40.1	Iron stained quartz- mica vein with disseminated pyrite
45004	C019	(0.1	Quartz-vein with disseminations of graphite and uniden- tified mafic blebs
45005	в006	0.1	Milky white quartz vein
45006	в013	<0.1	Iron stained granod- iorite
45007	C020	<0.1	Quartz vein with minor pyrite dissem- inations
45008	'A' Grid 117+50N,141+00E	<0.1	Iron stained micaceous quartzite
45009	C023	<0.1	Dark grey-green andesite with oxidized pyrite
45010	C024	<0.1	Argillite with euhed- ral pyrite
45011	C026	(0.1	Andesite rhyodacite with pyrite.
45012	C034	< 0.1	Dark grey siltstone with disseminated pyrite
45013	в036	<0.1	Medium grey laminated mudstone with euhed-ral pyrite

TABLE 4.1 (continued)

Sample No.	Field Sample No.	Au (g/tonne)	Description
45014	C048	<0.1	Siltstone with abundant pyrite
45015	C051	<0.1	Limestone float with euhedral pyrite 3mm
45016	C052	< 0.1	Pre-glacial gravel with iron staining
45017	C053	< 0.1	Black argillite with a pyrite nodule
45018	C054	<0.1	Residual soil
45019	C055	<0.1	Iron stained greywacke
45020	B041	< 0.1	Calcite vein with pyrite
45021	B043	<0.1	Quartz float with tourmaline
45022	B044	(0.1	20 ft. wide quartz vein at old workings
45023	в045	(0.1	Quartz-calcite vein east of old workings
45024	в046	<0.1	Quartz vein in andesite
45025	B049	(0.1	Siliceous andesite boulder with pyrite veining
45026	C056	< 0.1	Quartz vein with minor galena and soft green mineral
45027	в047	0.1	Orange-rust coloured staining on intrusive
45028	B048	< 0.1	Bleached intrusive

TABLE 4.1 (continued)

Sample No.	Field Sample No.	Au (g/tonne)	Description
45029	B052	1.7	Silty conglomerate with orange-rust coloured staining
45030	в054	2.5	30 cm wide calcite vein
45031	в057	0.4	15 cm wide calcite vein across McDougall River
45032	в059	1.2	Chip sample across an iron stained weathered calcite vein
45033	в060	0.3	Siltstone with euhedral pyrite
45034	в061	0.2	Limestone lens in siltstone with euhedral pyrite cubes (<5mm)
45035	B062	0.2	Shear zone in siltstone
45036	B063	0.2	Chip sample across rusty outcrop
45037	в067	0.3	Andesite with dis- seminated pyrite
45038	в070	0.2	Shear zone in siltstone
45039	в071	0.3	Iron stained siltstone
45040	B072	0.3	Siltstone with dis- seminated pyrite
45041	в075	0.2	Calcite vein with disseminated pyrite
45042	в076	0.2	Siltstone with dis- seminated euhedral pyrite
45043	в079	<0.1	Iron stained siltstone with disseminated pyrite
45044	B082A	<0.1	Iron stained siltstone with large euhedral pyrite

TABLE 4.1 (continued)

Sample No.	Field Sample No.	Au (g/tonne)	Description
45045	В082В	<0.1	Iron stained siltstone with disseminated pyrite
45046	B082C	<0.1	Calcite veined siltstone
45047	B082D	<0.1	Siltstone with iron staining
45048	B082E	0.2	Silty conglomerate with iron staining
45049	B083	< 0.1	Conglomerate with disseminated pyrite
45050	B084	〈 0.1	Rhyolite with pyrite
45101	B084A	<0.1	Rhyolite with pyrite
45102	в088	<0.1	Calcite vein in andesite
45103	в090	<0.1	Rusty siltstone
45104	B100	(0.1	Iron stained mudstone
45105	B102	<0.1	Calcite veined mudstone
45106	C059	(0.1	Grey to black siltstone
45107	C064	(0.1	Slightly rusty quartz vein
45108	C065	< 0.1	Rusty quartz vein
45109	C067	<0.1	45 cm wide shear zone in argillite
45110	C068	(0.1	Rusty siltstone
45111	C069	< 0.1	Rusty calcite vein in mid river
45112	C071	<0.1	Rusty calcite lens
45113	C073	〈 0.1	Rusty siltstone with rare pyrite

TABLE 4.1 (continued)

Sample No.	Field Sample No.	Au (g/tonne)	Description
45114	C075	< 0.1	Rusty calcite in siltstone
45115	C076	<0.1	Rust calcite showing colloform habit
45116	C077	<0.1	Laminated siltstone with chalcopyrite (?)
45117	C078	<0.1	Limonite stained calcite vein
45118	C080	< 0.1	Rust stained limestone
45119	C081	< 0.1	Iron stained andesite to rhyodacite
45120	C082	〈 0.1	Highly fractured siltstone with veinlets of calcite and quartz
45121	C084	4 0.1	Lens of iron stained highly fractured argillite
45122	C085	<0.1	Albite porphyry (?) with disseminated pyrite
45123	C085A	< 0.1	Iron stained fractured quartz in a shear zone with chlorite alteration
45124	C085B	< 0.1	Chip sample across l ft. wide quartz vein
45125	C086	〈 0.1	Quartz vein in sheared and fractured andesite
45126	C087	<0.1	Limonite stained shear zone in a grey siltstone
45127	C095	< 0.1	Rusty coloured calcite vein

TABLE 4.1 (continued)

Sample No.	Field Sample No.	Au (g/tonne)	Description
45128	C100	< 0.1	Graphitic shale with iron staining and pyrite
45129	C101	〈 0.1	Rusty coloured quartzite with pyrrhotite and pyrite ((5%)
45130	C103	< 0.1	Blue-grey shale with disseminated pyrite
45131	C104	< 0.1	Highly fractured shale with limonite coating
45132	C105	<0.1	Shale with limonite and green-yellow staining
45133	C107	۷0.1	Grab sample of rusty quartz vein
45134	C109	< o.1	Rusty coloured shale
45135	C110	< 0.1	Graphitic shale with disseminated pyrite
45136	C112	<0.1	Graphitic shale with rust staining
45137	C112A	< 0.1	Limonite stained quartz lens from shear zone
45138	C118	< 0.1	Limonite stained quartz vein
45139	C124	<0.1	Quartz vein in blue- grey shale

On the 'C' grid VLF results show several stong north-trending conductors (Fig. 5.3). Here however, geological inspection of the conductors was possible due to thin and discontinuous soil cover. One conductor passing through 161+25N, 171+25E was found to be due to a north-striking fault. The others were all found to be associated with graphitic or pyritiferous shale and argillite units. Surprisingly, a large 30 m wide quartz vein on this grid gave no VLF response.

5. GEOPHYSICS

5.1 INSTRUMENT AND SURVEY TECHNIQUES

Two Geonics EM-16 units were used to carry out detailed VLF-EM surveys over the claims. Using the 18.6 kHz Seattle, Washington submarine transmitting station (NLK), readings were taken at 20 m intervals along flagged east-west lines spaced 250 m apart. At each station in-phase and quadrature readings were taken in a westerly direction (274°) to insure that east dips were indicated as negative readings. The in-phase readings were later reduced by the Fraser filter method (Fraser, 1969) to allow contouring of the data. A total of 109.85 line kilometres were surveyed over three grids, grids 'A', 'B' and 'C', laid out on the property. All survey lines were established using Topolite hip chains and Silva Ranger compasses. Stations were marked with labelled orange flagging tape.

5.2 PRESENTATION AND DISCUSSION OF RESULTS

Results of the survey are shown on Figures 5.1 to 5.3 which show the dip angle and filtered dip angle results over the three grids. The filtered in-phase readings have been contoured at 10% intervals.

Over the 'A' grid the VLF results show a number of strong north and north-northeast trending conductors (Figure 5.1). Over the western half of this grid the conductors follow the strike of the foliation of the underlying gneisses and schists. It is therefore felt that the results are here showing geology rather than mineralized shear zones. Prospecting over this part of the property gave no indication of mineralization in either float or outcrop.

Results are more promising over the east half of the 'A' grid. Here a number of strong north striking conductors were

defined in an area of extensive thick overburden cover. Of particular interest are two strong conductors passing either side of 120+00N and 132+00E. In this same area blocky angular quartz and granodiorite float carrying disseminated pyrite was found suggesting that the conductors may be due to shear zones that have been filled with quartz veins or granodiorite dykes. Just to the north and down drainage from these conductors visible gold was found in a single panned sample taken at the head of Pelton Creek.

On the 'B' grid two clusters of north to northeast trending VLF conductors were defined with the major portion of the area showing no EM response (Figure 5.2). An extensive thick glacial till cover is believed to be too deep for EM-16 penetration over much of this grid. A strong northeast trending conductor passing through 132+50N and 173+50E is surrounded by several smaller and weaker conductors. On strike with this conductor, and about 800 m to the northeast very high concentrations of gold were obtained in heavy mineral samples panned along McDougall River. Thick till cover prevented geological investigation of the cause of this conductor.

Over the eastern half of the 'B' grid a number of north striking conductors occur over and to the north and east of Bonnington Creek. Although hidden beneath a thick till cover these conductors are believed to be important. In this area highly anomalous gold values were obtained in panned samples taken along McDougall River and from the mouth of Bonnington Creek, and scattered anomalous gold values were found in soil samples both over and adjacent to many of the conductors. Immediately to the north very significant gold assays were obtained from calcite veins and calcite veined sedimentary rocks outcropping along the McDougall River. Placer gold found in panned samples taken along streams draining this area is angular and dendritic suggesting a local source.

6. CONCLUSIONS

The results of the 1981 program suggest that the G North property is a highly significant new gold prospect with potential for vein-type or stockwork gold mineralization. The most important findings of the program may be summarized as follows:

- 1. Heavy mineral samples taken along the lower 4 km of the McDougall River contain very high concentrations of gold. The placer gold particles found here are angular and dendritic indicative of very little transport and thus a local source.
- 2. Rock chip samples taken over rusty calcite veins and sheared pyritic siltstone outcrops along the lower McDougall River assay high in gold (up to 2.5 g/tonne) suggesting the presence of epigenetic mineralization.
- 3. VLF-EM results show several long north-northeasttrending conductors located south of, and on strike with, areas of high placer gold concentrations along the lower McDougall River.
- 4. Soil sample results reveal scattered high gold values over and adjacent to several of the conductors suggesting that these features may represent mineralized shears.

7. RECOMMENDATIONS

Additional exploration consisting of detailed heavy mineral concentrate and VLF-EM surveys, detailed rock chip sampling and rotary drilling is recommended for the property as outlined below:

- Heavy mineral samples should be taken at 250 m intervals along the lower 4 km of the McDougall River. The purpose of this is to locate the most favourable section of the river for the presence of gold mineralization.
- 2. A detailed VLF-EM survey should be carried out to the north of the 'B' grid to close off any conductors found in 1981. This survey should consist of east-west lines spaced 250 m apart with stations at 20 m intervals.
- 3. Detailed rock chip sampling should be done across all quartz-calcite veins. The veins should also be followed along strike to determine the extent of mineralization.
- 4. All favourable conductors should be drilled with a reverse circulation rotary drill and the cuttings panned and concentrated at regular intervals for assay.

A. G. TROUP

BRITISH

COLUMBIA

ON THE PROPERTY OF THE PROPERT

REFERENCES

- Armstrong, J.E., Tipper, H.W., and Hoadley, J.W., 1946,
 Muller, J.E. and Tipper, H.W., 1961, Geology,
 McLeod Lake, British Columbia: Geological Survey
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- Montgomery, J.H., 1981, McDougall River Gold Prospects: Engineers Report
- Taylor, B., 1973, The Geology, Geochemistry and Ground Magnetics of the NICK Claims: Engineers Report.

STATEMENT OF QUALIFICATIONS

A. TROUP, P. ENG.

ACADEMIC		
1967	B. Sc. Geology	McMaster University, Ontario
1969	M. Sc. Geochemistry	McMaster University, Ontario
PRACTICAL		
1980 -	#45-4100 Salish Dr. Vancouver, B.C.	Consulting Geologist with Archean Engineering Ltd.
1977-1980	Geological Survey of Malaysia	Project Manager on a CIDA supported mineral explor-ation survey over peninsular Malaysia.
1969-1977	Rio Tinto Canadian Exploration Ltd. Vancouver, B.C.	Geologist involved in all aspects of mineral exploration in B.C., the Yukon and N.W.T.
1968 (summer)	McMaster University Dept. of Geology Hamilton, Ontario	M.Sc. thesis work. Reconnaissance mapping and geochemical study, Lake Shubenicadia area, Nova Scotia.
1967 · (summer)	Canex Aerial Exploration Ltd. Toronto, Ontario	Geologist in charge of detailed mapping and reconnaissance geochemical program in Gaspe, Quebec
1966 (summer)	McMaster University Dept. of Geology, Hamilton, Ontario	Summer vacation work. Detailed and reconnaissance mapping in Northern Ontario.
1965 (summer)	International Nickel Co. of Canada Thompson, Manitoba	Summer vacation work. Detailed mapping in the Thompson Area, Manitoba.
1964 (summer)	Geological Survey of Canada Ottawa, Ontario	Summer vacation work. Regional geochemical survey in the Keno Hill area, Yukon.

STATEMENT OF QUALIFICATIONS

COLMAN WONG

ACADEMIC		
1981	B.Sc. Geology	University of British Columbia
PRACTICAL		
1980 -	Mark Management Ltd. Vancouver, B.C.	Project Geologist in charge of a detailed mapping, geochemical and geophysical programme in Central B.C.
1980 (summer)	Hudson Bay Expl. and Dev. Co. Ltd., Vancouver, B.C.	Prospecting and detailed mapping in Central and West-Central B.C.
1979 (summer)	Hudson Bay Expl. and Dev. Co. Ltd., Vancouver, B.C.	Regional geochemical survey and prospecting in South- Central and South-Eastern B.C.
1978 (summer)	Hudson Bay Expl. and Dev. Co. Ltd., Whitehorse, Yukon.	Property work in West-Central Yukon and MacMillan Pass, Yukon.

GEOCHEMISTRY, GEOLOGY AND GEOPHYSICS EZEKIEL EXPLORATION LTD.

G NORTH CLAIMS

4 May Through 30 September 1981

GENERAL COSTS

Food & Accommodation		
ll men, 4 May - 30 Sept., 686 man days @ \$15.76		\$ 10,810.10
Supplies		7,160.84
<u>Fuel</u>		1,027.42
Helicopter		
Northern Mountain, 31 May - 30 Sept., 34.6 hrs. @ \$457.93		15,844.38
Fixed Wing		
Reeds Travel, Vcr/PG		192.25
Bus Fares		
Greyhound, 25-29 May, VCR/McK 4 @ \$39.85		159.40
Rental Equipment		
Ezekiel - Camp Equipment, 730 man days @ \$6.00	\$ 4,380.00	
Mark Management - 4 WD Bronco 3 months @ \$985.00	2,955.00	
Ezekiel - SBX-11 Radios, 2, 3 months @ \$200.00	1,200.00	
B.C. Tel - Radio Service	139.95	
U-Haul - Trailer - l Week	338.21	9,013.16

Field Consultants		
Montgomery Consultants, 1 June - 31 July 2 Months @ \$1,666.80		\$ 3,333.60
Expediting		
Wilderness Valley Enterprises		2,029.72
Reparis		336.44
Report Preparation TOTAL GENERAL COSTS		3,775.00 \$ 53,682.31
GEOCHEMISTRY C	OSTS	
Salaries and Wages		
11 men, 4 May - 30 Sept., 122 man days @ \$61.82		\$ 7,542.04
Benefits @ 20%		1,508.41
Soil Analysis		
l Hg 225 Au @ \$4.50 202 Preps @ \$0.60 23 Preps @ \$1.50	\$ 15.00 1,012.50 121.20 34.50	1,183.20
HMC Analysis - Chemex Labs		
15 Ag, Au, Cu, Pb, W, Zn, @ \$12.25 1 Ag, Au, W 84 Ag, Au, Hg, W @ \$13.50 100 Preps @ \$12.00	\$ 183.75 10.00 1,134.00 1,200.00	2,527.75
Rock Assays - Chemex Labs		
l Au, Cu 71 Au @ \$6.00 72 Preps @ \$3.50	\$ 10.50 426.00 252.00	688.50

Freight - Chemex Labs	\$	59.62
Supplies - Chemex Labs		79.00
Consultants Fees		
Archean Engineering, 1.5 days @ \$225.00		337.50
General Costs		
$123.\dot{5}/657 \times \$53,682.31$		10,090.97
TOTAL GEOCHEMISTRY COSTS	\$	24,016.99
GEOLOGY COSTS		
Salaries & Wages		
11 Men, 4 May - 30 Sept., 227 man days @ \$61.82	-	14,033.14
Benefits @ 20%		2,806.63
Consultants Fees		
Archean Engineering, 10 days @ \$225.00		2,250.00
General Costs		
237/657 x \$53,682.31	_:	19,364.85
TOTAL GEOLOGY COSTS	\$: ==	38,454.62
GEOPHYSICS COSTS		
Salaries & Wages		
11 men, 4 May - 30 Sept., 241 man days @ \$61.82	:	14,898.62
Benefits @ 20%		2,979.72

Rental Equipment

Dora - EM16, 4 May - 30 Sept., \$ 1,820.00 14 Weeks @ \$130.00 Gallant - EM16, 4 May - 30 Sept.,

Gallant - EM16, 4 May - 30 Sept., 11 Weeks @\$130.00 \$ 3,250.00

Consultants Fees

Archean Engineering, 11.5 days @ \$225.00

2,587.50

General Costs

252.5/657 x \$53,682.31 TOTAL GEOPHYSICAL COSTS 20,631.33 \$ 44,347.17

COSTS APPORTIONED TO CLAIMS

<u>Cl</u> a	aims	Units	Geology	Geochemistry	Geophysics	<u>Total</u>
G No	rth l	20	\$ 3,845.47	\$ 1,601.13	\$ 4,031.56	\$ 9,478.16
GN	2	20	3,845.47	1,601.13	4,031.56	9,478.16
GN	3	20		1,601.13		1,601.13
GN	4	20	3,845.46	1,601.13	4,031.57	9,478.16
GN	5	20	3,845.46	1,601.13	4,031.56	9,478.15
GN	6	20	3,845.46	1,601.13	4,031.56	9,478.15
GN	7	20	3,845.46	1,601.13	4,031.56	9,478.15
GN	8	20		1,601.13	4,031.56	5,632.69
GN	9	20	3,845.46	1,601.13	4,031.56	9,478.15
GN	10	20	3,845.46	1,601.13	4,031.56	9,478.15
GN	11	20	3,845.46	1,601.13	4,031.56	9,478.15
GN	12	20		1,601.14		1,601.14
GN	13	20		1,601.14		1,601.14
GN	14	20	3,845.46	1,601.14	4,031.56	9,478.16
GN	·15	20		1,601.14		1,601.14
GN	16	20				
GN	17	20	~-			
GN	18	_20				
		360	\$38,454.62	\$24,016.99	\$44,347.17	\$106,818.78
		===				

APPENDIX I

HMC GEOCHEMICAL RESULTS



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1

TELEPHONE: (604)984-0221

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043-52597

. ANALYTICAL CHEMISTS

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• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER, B.C.

V6B 1N2

CERT. # : A8111496-001-A

INVOICE # : 18111496

: 25-JUN-81

DATE P.O. #

: NONE

G. NORTH EZEKUTEL

ATTN:_ATRO	UP CC: C	OLEMAN W	ONG			
Sample	Prep	Ag A	u -{AA}	W	Hg	
description	code	mqq	ppb	ppm	<u>pph</u>	
EZ 011	213	0.1	13000	40	520	
EZ 012	213	0.1	10	25	50	
EZ 013	213	0.2	<10	25	60	 چنب شده
EZ 014	213	0.1	<10	30	20	
EZ 101	213	0.1	1300	45	20	
EZ 102	213	0.1	<10	35	20	
EZ 103	213	0.1	<10	15	20	
EZ 201	213	0.1	<10	15	30	
EZ 202	213	0.1	<10	25	30	
EZ 203	213	0-1	20	16	20	
EZ 204	213	0.1	<10	10	210	
EZ 205	213	0.1	<10	4	30	
EZ 505	213	0.1	<10	1	30	
EZ 506	213	0.1	<10	1	20	
EZ 507	213	0.1	<10	3	20	
EZ 508	213	0.1	<10	5	30	
EZ 509	213	0.2	670	30	20	
EZ 510	213	0.1	<10	15	20	

CANADIAN TESTING ASSOCIATION

HartBichler Certified by .



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NORTH VANCOUVER, B.C
CANADA V7J 2C1

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701-675 W. HASTINGS ST.

VANCOUVER. B.C.

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CERT. # : A8111790-001-A

INVOICE # : I8111790
DATE : 07-JUL-81

P.O. # : NONE

G. NORTH

ATTN:	ART	TROUP	CC:	COLEMAN	WONG

ALLINA ANT TO	00r CC-	COLLINA					
Sample	Prep	Ag A	Au -(AA)	₩	Hg		
description	code	ppm	pbb	ppm	daa		
10-EZ-015	213	0.1	<10	1	20		
10-EZ-016	213	0.1	<10	1	20		
10-EZ-017	213	0.1	2600	150	30		
10-EZ-018	213	0.1	<10	1	30		
10-EZ-019	213	0.1	<10	1	30		
10-EZ-020	213	0.1	4100	100	30		
10-EZ-021	213	0.1	<10	150	40		
10-EZ-022	213	0.1	<10	1	70		
10-EZ-023	213	0.6	<10	1	100		
10-EZ-024	213	0 • 2	3100	1	120		
10-EZ-025	213	6.4	>20000	150	240		
10-EZ-104	213	0.1	1080	35	>10000		
10-EZ-105	213	0.1	60	15	720		
10-EZ-106	213	0.1	1920	90	160	**	
10-EZ-107	213	0.4	240	7	180		
10-EZ-108	213	0+1	20	40	30		
10-EZ-109	213	0.2	10	1	30		
10-EZ-110	213	0 • 4	300	15	640		
10-EZ-111	213	0.5	>20000	1	170		
10-EZ-112	213	0.2	>20000	25	1100		
10-EZ-206	213	0.2	200	1	530		
10-EZ-207	213	1.6	1280	10	100		
10-EZ-208	213	0.1	40	40	170		
10-EZ-209	213	1-1	19000	30	200		
10-EZ-210	213	0.5	640	10	MISSING		
10-EZ-211	213	0.3	30	1	80		
10-EZ-212	213	0.2	6500	1	70		
10-EZ-511	213	17.6	12000	1	60		
10-EZ-512	213	0.6	3600	50	1100		
10-EZ-513	213	18.7	1540	100	290		
10-EZ-514	213	0.2	<10	35	40		
10-EZ-515	213	14.0	20000	75	62		
10-EZ-516	213	0.1	20	1	200		
10-EZ-517	213	0-3	10	10	40		
10-EZ-518	213	0.2	<10	1	50		
				····-			· · · · · · · · · · · · · · · · · · ·



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043-52597

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• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCGUVER. B.C.

V63 1N2

CERT. # : A8112079-001-A

INVOICE # : 18112079 DATE : 21-JUL-81

P.O. # : 68

G. NOR TH

ATTN: ART TROUP C.C. COLEMAN WONG

	Sample	Ргер	Ag Au	-(AA)	W	Hg	
d (escription	code	mag	dqq	ppm	ppb	
ΕZ	026+519+520	213	0.1	40	13	80	
ΕZ	213	213	0 • 1	30	25	25	
EΖ	214	213	0.1	190	14	20	
	215	213	0.1	200	35	20	



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V7J 2C1

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TELEX: 043-52597

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• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER, B.C.

V6B 1N2

CERT. # : A8111904-001-A

INVOICE # : 18111904

DATE : 23-JUL-81

P.O. # : NONE

G. NORTH

ATTN: ART TROUP CC: COLEMAN WONG

Sample	Prep	Ag Au	(AA)- L	W	Hg	
descripti <u>on</u>	code	ppm	ppb	mqq	ppb	
EZ 216	213	0.1	<10	8	20	 ~~
EZ 217	213	0.1	<10	75	30	
EZ 218	213	0.2	4000	12	30	



HartBickler Certified by



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA

V7J 2C1

TELEPHONE: (604)984-0221 043-52597

TELEX:

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER, B.C.

V6B 1N2

CERT. # : A8112318-001-A

INVOICE # : 18112318 : 28-JUL-81 DATE

P.O. # : 68

G NORTH

ATTN: ART TROUPE (MARK MAN.) C.C. EZEKIEL EXPL.

Sample	Prep	Ag At	1 -(AA)	W	Hg	
description	code	ppm	ppb	ppm	ppb	
EZ 219	213	0.1	3500	25	50	
EZ 220	213	0.1	6900	40	570	
EZ 221	213	8.7	1000	1	160	



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212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1

TELEPHONE: (604)984-0221

TELEX:

043-52597

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER, B.C.

V6B 1N2

CERT. #

: A8112642-001-A

INVOICE # : 18112642 DATE : 11-AUG-81

: NONE P.O. #

G-NORTH

ATTN: ART TROUP CC: C. WONG, EZEKIAL EXPL.

213	>100.0	> 10000	<u>ppm</u> 155	<u>ppb</u> 20		
•						
•			-			
		•				
				•		
					,	
		•				
						-



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APPENDIX 2

SOIL GEOCHEMICAL RESULTS



212 BROOKSBANK AVE. NORTH VANCOUVER, B C.

CANADA V7J 2C1

TELEPHONE: (604)984-0221 043-52597

• REGISTERED ASSAYERS

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER, B.C.

V6B 1N2

: A8113067-001-A CERT• #

INVOICE # : 18113067

DATE : 21-AUG-81

P.O. # : 68

G. NORTH

	ATTN. ART TR	OUP; c.c.	C. WONG.	EZEKIAL I	EXPL.			
	Sample	Prep Au		•				
	description	code	dqq					
	ES 001	201	80					
	ES 002	201	<10					
	ES 003	201	<10					
	ES 004	201	20					
·	ES 005	201	<10				***	
	ES 006	201	<10					
	ES 007	201	20					
	ES 008	201	<10					
	ES 009	201	<10					
L	ES 010	201	<10					
	ES 011	201	<10					
	ES 012	201	<10					
	ES 013	201	<10					
	ES 014	201	<10					
	ES 015	201	<10					
	ES 016	201	<10					
	ES 018 17	201	10					
	ES 019 18	201	<10					
	ES 020 -19	201	<10					
	ES 021 20	201	<10					
	ES 022 21	201	10					
	ES 023 22	201	<10					
	ES 024A 23	201	<10					
1	ES 0248 24	201	<10					
	ES 025	201	<10					
	ES 026	201	<10					,
1	ES 027	201	<10		~ -	-~		′
	ES 028	201	<10			·		
1	ES 029	201	<10					*
1	ES 030	201	<10					
	E\$ 031	201	<10		~-			
	ES 032	201	10		~ -			
	ES 033	201	<10					
	ES 034	201	<10					
	ES 035	201	<10					
	ES 036	201	<10					
	ES 037	201	<10					
	ES 038	201	<10					
[`· ¬'	ES 039	201	<10					
	ES 040	201	<10					
<u> </u>	E3 U4U	201	<10					



Certified by Hart Bielle



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C.

CANADA V7J 2C1

TELEPHONE: (604)984-0221

TELEX: 043-52597

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER. 3.C.

V6B 1N2

CERT• # : A8113067-002-A

INVOICE # : 18113067 DATE : 21-AUG-81

P.O. # : 68

G. NORTH

ATTN. ART TE	ROUP; c.c.	C. WONG,	EZEKIAL E	XPL.			
Sample	Prep Au	ı -(AA)					-
description	code	ppb					
ES 041	203	280					
ES 042	201	<10					
ES 043	201	<10					
ES 044	201	<10					
ES 045	201	<10		- <i>-</i>			
ES 046	201	<10					
ES 047	203	<10					
ES 048	203	<10			**		
ES 049	203	<10					- -
ES 050	203	<10				~-	
ES 051	201	<10					***
ES 052	201	<10			~		
ES 053	201	<10					
ES 054	201	<10					
ES 055	203	<10				***	
ES 056	201	<10					
ES 057	201	<10					
ES 058	201	<10					
ES 059	201	<10					
ES 060	203	<10					
ES 061	201	<10		~-			
ES 062	203	<10	- -				
ES 063	201	<10					
ES 064	203	<10					
ES 066A 65	203	<10					
ES 0668 66	201	20					wm
ES 067	201	<10					
ES 068	201	<10					
ES 069	201	10					
ES 070	201	<10					,
ES 071	201	10					
ES 072	201	<10					
ES 073	203	<10		- -			



Certified by Hank Bielle



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CÃNADA V7J 2C1

TELEPHONE: (604)984-0221

TELEX. 043-52597

- ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER, B.C.

V6B 1N2

CERT. # : A8113223-001-A

INVOICE # : 18113223 : 22-AUG-81

DATE P • O • # : 68

G. NORTH

ATIN: ART IR	uap cc: c	WONG FZ	EKTAL EXPL				
Sample	Prep Au						
description	code	ppb					
ES 074	201	<10			~		
ES 075	201	10					
ES 076	201	<10					
ES 077	201	<10		-			
ES_078	201	<10					
ES 079	201	<10					
ES 080	201	20					
ES 081	201	10					
ES 082	201	<10					
ES 083	201	<10					
ES 084	201	<10					
ES 085	201	<10					
ES 086	201	<10					m
ES 087	201	<10			~ ~		
ES 088	201	<10			·		
ES 089	201	<10					**
ES 090	201	<10			'		
ES 091	201	<10					
E\$ 092	201	<10					
ES 093	201	<10					
ES 094	201	<10					
ES 095	201	<10					
ES 096	201	<10					
ES 097	201	<10					
ES 098	201	< 1.0					
ES 099	201	<10					
ES 100	203	<10	~ ~				
ES 101	201	<10					
ES 102	201	<10					
ES 103	201	<10					
ES 104	201	<10					
ES 105	201	10					
·ES 106	201	<10					
ES 107	201	<10					
ES 108	201	<10					
ES 109	201	10					
ES 110	201	<10	÷ •				
() ES 111	201	<10					
ES 112	201	<10					
ES 113	201	<10					



Certified by Hank Rieble



212 BROOKSBANK AVE, NORTH VANCOUVER, B.C. CANADA V7J 2C1

TELEPHONE: (604)984-0221

043-52597 TELEX:

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

. REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER. B.C.

V6B 1N2

CERT. # : A8113223-002-A

INVOICE # : 18113223 DATE : 22-AUG-81

P.O. # : 68

G. NORTH

					G. NOT II	7	
ATTN: ART TR	מוומם כרי כ	WONG E7	EPTAL EVO	•			
Sample	Prep Au		ENTAL EXP	L.•	··	·	
description	code	ppb					
ES 114	201	<10					
ES 115	201	<10	 ←				
ES 116	201	<10					
ES 117	201	<10					- -
ES 118	201	<10					
ES 119	201	10					~-
ES 120	201	10					
ES 121	201	<10					
ES 122	203	<10			==		
ES 123	201	<10		•			
ES 124	201	<10					
ES 125	201	<10					- -
ES 126	201	<10	- -				
ES 127	201	<10					
ES 128	201	<10					
ES 129	201	<10					<u> </u>
ES 130	201	<10					
ES 131	201	<10	- -				
ES 132	201	20					
ES 133	201			-	- -		
ES 134	201	<10 <10					
ES 135	201	<10	~ _	~ -	~-	 ,	==
ES 136	201	<10	- -				_
ES 137	201	<10		- -			~-
ES 138	201	<10					
ES 139							
	203	<10					
ES 140	201	<10					~-
ES 141	203	<10					
ES 142	201	<10	~				-
ES 143	201	<10			<u> </u>		
ES 144	201	<10					
ES 145	203	<10					
ES 146	203	<10					
ES 147	201	<10					
ES 148	201	<10	+=				
ES 149	201	<10					
ES 150	201	<10					
()ES 151	203	<10					
- ES 152	201	<10					
ES 153	201	<10					



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA

V7J 2C1

TELEPHONE: (604)984-0221

043-52597

TELEX:

• REGISTERED ASSAYERS

• ANALYTICAL CHEMISTS

CERTIFICATE OF ANALYSIS

• **GEOCHEMISTS**

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER, B.C.

V6B 1N2

CERT. # : A8113223-003-A

INVOICE # : 18113223 : 22-AUG-81

P.O. # : 68

G. NORTH

ATTN: ART TR	UOP CC: C	. WONG.EZ	EKIAL EXP	L.			
Sample	Prep Au			 			·
description	code	ppb					
ES 154	201	<10					~-
ES 155	201	<10					
ES 156	201	<10					
ES 157	203	<10					
ES 158	201	<10					
ES 159	201	<10					
ES 160	201	<10		- ~			
ES 161	201	<10					
ES 162	201	<10					
ES 163	201	<10					
ES 164	201	<10		ps			
ES 165	201	<10					
ES 166	203	<10	- -			- *	
ES 167	201	<10					
ES 168	201	<10				_ =	·
ES 169	201	<10					
ES 170	201	<10			'		
ES 171	201	<10		·			
ES 172	201	<10					
ES 173	201	<10					** **
ES 174	201	<10			**		
ES 175	201	<10					
ES 176	201	<10	 _				
ES 177	201	<10					
ES 178	201	10					
ES 179	201	<10					
ES 180	201	<10					
ES 181	201	<10					
ES 182	201	860					 -
ES 183	201	20					
ES 184	201	<10					
ES 185	201	<10					
ES 186	201	<10			- -		
ES 187	201	<10					
ES 188	201	<10			~-		
ES 189	201	<10		- -			
_ ES 190	201	<10		- -			
()ES 191	201	10					



ES 193

201

<10

Certified by .



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TELEX:

043-52597

-- --

. ANALYTICAL CHEMISTS

ATTN: ART TRUOP CC: C. NONG, EZEKIAL EXPL.

201

201

201

201

201

201

201

203

201

<10

<10

<10

<10

<10

<10

<10

10

10

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER. B.C.

V6B 1N2

CERT. # : A8113223-004-A

INVOICE # : 18113223 : 22-AUG-81

DATE P.O. # : 68

G. NORTH

Sample	Prep A	u -(AA)				
description	code	dao			 	
ES 194	201	<10			 	
ES 195	201	<10			 	
ES 196	203	<10			 	
ES 197	201	<10	•• ••		 	
ES 198	201	<10			 	
ES 199	201	<10			 	
ES 200	201	<10			 	
ES 201	201	10			 	
ES 202	201	20			 	
ES 203	201	10			 	
ES 204	201	1760			 	
ES 206	201	10			 	
ES 207	203	<10			 	
ES 208	201	10			 ~-	
ES 209	201	<10	`	, , , , , ,	 ''	·
ES 210	201	<10		·	 -~	

ES 220 201 <10 ES 221 201 400 --ES 222 201 10 --ES 223 201 <10 ES 224 201 <10 ES 225 201 <10 **ES 226** 201 <10



ES 211

ES 212

ES 213

ES 214

ES 215

.ES 216

ES 217

ES 218

ES 219

Certified by Hart Bielle



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1

TELEPHONE: (604) 084-0221

TELEPHONE: (604) 984-0221 TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER, B.C.

V6B 1N2

CERT. # : A8210275-001-A

INVOICE # : 18210275 DATE : 11-FEB-82

P.O. # : NONE G. NORTH -EZEKIAL

	TTN: A. TROUP		WONG		_ -		
	ample	Prep	Hg				
		code	ppb				
	001	214	N-S-S-				
	002	214	30				
	003	214	30				
	004	214	20				
	005	214	40				
	006	214	30				
	010	214	60				
	011	214	100				
	012	214	30				
	013	214	30				
	014	214	60		- -		
	015	214	50				
	-022 21	214	30				
	023 22	214	40				
ES_	024A 23	214	40				
	0248 24	214	20				
	025	214	20				
	026	214	60				
	027	214	30				
ES_	0664 65	214	50	. 			
	066B 66	214	40				
	067	214	40				
	068	214	30				
	069	214	30				
	070	214	340				
	071	214	30				
	072	214	30				
	073	214	30				
ES		214	20				
	183	214	40				
	184	214	30				
	185	214	180			,	
ES	186	214	50				



Certified by HouthBuchler

APPENDIX 3

ROCK ASSAY RESULTS



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

TELEPHONE: (604)984-0221

TELEX:

043-52597

CERTIFICATE OF ASSAY

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER. B.C.

V6B 1N2

CERT. # : A8112078-001-A

INVOICE # : 18112078 DATE : 20-JUL-81

: 68 P. D. #

G. NORTH

ATTN: ART TROUP c.c. COLEMAN WONG P.O. #68

Sample description	Prep code	Au (FA) g/tonne			
45001	207	<0.1	 	 	
45002	207	0.1	 	 ***	
45003	207	<0.1	 	 	
45004	207	<0.1	 	 	
45005	207	0.1	 	 	
45006 ·	207	<0.1	 	 	

La come of





212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA

V7J 2C1

TELEPHONE: (604)984-0221 TELEX: 043-52597

ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERT. # : A8111901-001-A

> INVOICE # : 18111901 DATE : 13-JUL-81

P. U. # : NONE

G.NORTH

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER. B.C.

V6B 1N2

ATTN: ART TROUP COLEMAN WONG

Sample	Prep	Au (FA)			
description	code	oz/t			
45007	207	<0.003	***	 	
45008	207	<0.003		 	





212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. · ' V7J 2C1

CANADA

TELEX:

TELEPHONE: (604)984-0221

043-52597

. ANALYTICAL CHEMISTS . GEOCHEMISTS

. REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO: MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER. B.C.

V6B 1N2

: A8112356-001-A CERT. #

INVOICE # : 18112356

: 30-JUL-81 DATE

P.O. # : 68

G. NORTH

C.C. COLMAN WONG ATTN: ART TROUPE

Sampte descrip		Au (FA) g/tonne	 			
45009 B	207	<0.1	 			
45010 B	207	<0.1	 	44.40		~~
45011 B	207	<0.1	 			
45012 B	207	<0.1	 			
45013 B	207	<0.1	 		~ ~	
45014 B	207	<0.1	 			

MEMBER CANADIAN TESTING ASSOCIATION



212 BROOKSBANK AVE. NORTH VANCOUVER, B.C.

CANADA V7J 2C1

. ANALYTICAL CHEMISTS

. GEOCHEMISTS

. REGISTERED ASSAYERS

TELEPHONE: (604)984-0221 TELEX: 043-52597

CERTIFICATE OF ASSAY

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER. B.C.

V6B 1N2

CERT. # : A8112317-001-A

INVOICE # : 18112317

DATE : 28-JUL-81 P.O. # : 68

G NORTH

ATTN: ART TROUP C.C. MARK MANAGEMENT C.C. EZEKIEL EXPL.

Sample	Prep	Au (FA)			•	
description	code	g/tonne				
45015	207	<0.1	 			
45016	207	<0.1	 			
45017	207	<0.1	 			
45018	207	<0.1	 			
45019	207	<0.1	 			
45020	207	<0.1	 			
45021	207	<0.1	 			
45022	207	<0.1	 			
45023	207	<0.1	 			
45024	207	<0.1	 	 .		
45025	207	<0.1	 ** **			
45026	207	<0.1	 			





212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1

TELEPHONE: (604)984-0221

TELEX: 043-52597

CERTIFICATE OF ASSAY

• GEOCHEMISTS

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

. ANALYTICAL CHEMISTS

VANCOUVER, B.C.

V6B 1N2

CERT. # : A8112641-001-A

INVOICE # : 18112641 DATE : 12-AUG-81

P.O. # : # 68

G-NORTH

• REGISTERED ASSAYERS

ATTN: ART TROUP CC: EXEKIAL EXPL.

Sample	Prep	Au (FA)					
description	code	g/tonne		١.			
T-45027	207	0.1.					~~
T-45028	207	<0.1					
T-45029	207	1.7					
T-45030	207	2.5					
T-45031	207	0.4					
T-45032	207	1.2					-
T-45033	207	0.3					
T-45034	207	0.2				~-	
T-45035	207	0.2				→ -	
T-45036	207	0.2					
T-45037	207	0.3					
T-45038	207	0.2					
T-45039	207	0.3					
T∸45040	207	0.3					
T-45041	207	0.2				`	
T-45042	207	0.2					
T-45043	207	<0.1			'		
T∸45044	207	<0.1					
T-45045	207	<0.1					
T-45046	207	<0.1	***				
T-45047	207	<0.1					
T-45048	207	0.2			₩ 44	~-	

3





212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1

TELEPHONE: (604)984-0221

TELEX: 043-52597

. ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER. B.C.

V6B 1N2

CERT• # : A8115436-001-A

INVOICE # : 18115436

DATE : 15-DEC-81

P.O. # : NONE

G-NORTH

Sample	Prep	Au FA		<u> </u>	<u> </u>		
description	code	g/tonne					
45029	214	1.6					
45030	214	2.7					
45031	214	0.3					
45032	214	0.9					
45033	214	0.3					
45034	214	0.2					
45035	214	0.1					
45036	214	0.1					
45037	214	0.2					
45038	214	0.1					
45039	214	0.3					
45040	214	0.3					
45041	214	0.1					
45042	214	0.2					
k -1		/ 36;	*.	· Deg ,	en anderes	, , ,	

MEMBER **CANADIAN TESTING** ASSOCIATION



Ž12 BROOKSBANK AVE. NORTH VANCOUVER, B.C. ₩ V7J 2C1 CANADA

TELEPHONE: (604)984-0221

TELEX: 043-52597

• ANALYTICAL CHEMISTS

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER. B.C.

V6B 1N2

CERT. # : A8112640-001-A

INVOICE # : 18112640 DATE : 13-AUG-81

P.O. # : NONE

G. NDRTH

ATTN: ART TROUP CC: EZEKIAL EXPL.

Sample	Prep	Au (FA)	•			-	
description	code	g/tonne					
T-45049	207	<0.1					
T-45050	207	<0.1					
T-45101	207	<0.1					
T-45102	207	<0.1					
T-45103	207	<0.1					
T-45104	207	<0.1					
T-45105	207	<0.1					
T-45106	207	<0.1					
T-45107	20 7	<0.1					
T-45108	207	<0.1					
T-45109	207	<0.1			~ ~		
T-45110	207	<0.1					~-
T-45111	207	<0.1					
T-45112	207	<0.1					
T-45113	207	<0.1		~ ′		—————————————————————————————————————	. ==
T-45114	207	<0.1					
T-45115	207	<0.1					
T-45116	207	<0.1			'		





212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA 🕥 - V7J 2C1

TELEPHONE: (604)984-0221

043-52597

ANALYTICAL CHEMISTS

207

207

<0.1

<0.1

• GEOCHEMISTS

• REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER, B.C.

V6B 1N2

45128

45129

CERT. # : A8113066-001-A

INVOICE # : 18113066

DATE : 24-AUG-81

P. O. # : 68

G. NORTH

	ATTN. ART T	ROUP:c.c.	C.WONG.	EZEKIAL	EXPL.			
	Sample	Prep	Au (FA)				•	
	description	code	g/tonne					 _
	45117	207	<0.1				~-	
	45118	207	<0.1					
	45119	207	<0.1	~~				
	45120	207	<0.1					
	45121	207	<0.1					
_	45122	207	<0.1			~-	<i>′</i>	 Ī
	45123	207	<0.1					
	45124	207	<0.1					
	45125	207	<0.1					
	45126	207	<0-1					
	45127	207	<0.1					 _





212 BROOKSBANK AVE. NORTH VANCOUVER, B.C. CANADA V7J 2C1

TELEPHONE: (604)984-0221

TELEX: 043-52597

ANALYTICAL CHEMISTS

207

207

207

<0.1

<0.1 <0.1

. GEOCHEMISTS

• REGISTERED ASSAYERS

White was already

CERTIFICATE OF ASSAY

TO : MARK MANAGEMENT LTD.

701-675 W. HASTINGS ST.

VANCOUVER. B.C.

V6B 1N2

45137

45138

45139

CERT. # : A8113224-001-A

INVOICE # : 18113224

DATE : 03-SEP-81

P.O. # : 68

G. NORTH

<u>ATTN:ART TRO</u>	UP CC:C	WONG-EZEK	JAL EXPL.		,	
Sample	Ргер	Au (FA)			·	
description	code	g/tonne			 	
45130	207	<0.1			 	
45131	207	<0.1			 ~ −	
45132	207	<0.1			 	
45133	207	<0.1			 	
45134	207	<0.1			 	
45135	207	<0.1			 	
45136	207	<0.1			 	

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