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FILE NO:

GEOLOGICAL AND GEOCHEMICAL ASSESSMENT REPORT

ON THE LES CLAIM GROUP

FILMED

VANCOUVER MINING DIVISION

CHEAKAMUS RIVER AREA, BRITISH COLUMBIA

LOCATION:

N.T.S. : 92 J/3E
LATITUDE : 50° 06' N
LONGITUDE : 123° 04' W

SUB-RECORDER
RECEIVED
JAN 10 1990
M.R. # _____ \$ _____
VANCOUVER, B.C.

CLAIMS:

LES III (# 2416)
LES IV (# 2495)

OWNER/OPERATOR LES DEMCZUK

BY

LES DEMCZUK, M.Sc., F.G.A.C.
1835 E. 13th Avenue
Vancouver B.C. V5N 2B9

JANUARY 10, 1990

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,543

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1.0 SUMMARY

The Les claim group consisting of 30 units is located approximately 8 km of the Whistler in the Cheakamus River Area B.C. (Vancouver Mining Division). The property was staked by Les Demczuk to explore for deposits similar to those adjacent Northair Mines Property and nearby Silver Tusk Mines Ltd. Property. The Northair deposits are about 3 km north and Silver Tusk deposits are about 4 km southwest of the subject property.

The Les property is underlain by quartz diorite (Coast Plutonic Complex) and metavolcanic (Gambier Group). but much of the property remains unexplored. The results of the geochemical survey indicate that the potential for significant precious metals and copper mineralization exists on the Les property.

In order to fully evaluated mineral potential of the Les claims a program of prospecting, detailed geological mapping, geochemical and geophysical survey is warranted and recommended.

2.0 INTRODUCTION

The Les III and IV claim group consists of 30 units and are owned by Les Demczuk. 1835 E. 13th Ave. Vancouver B.C.

The field work on the claims was conducted in May 1989, totaling in 4.5 field days by Les Demczuk geologist and B. Ablay assistant. The work consisted of prospecting, reconnaissance mapping, rock and silt sampling.

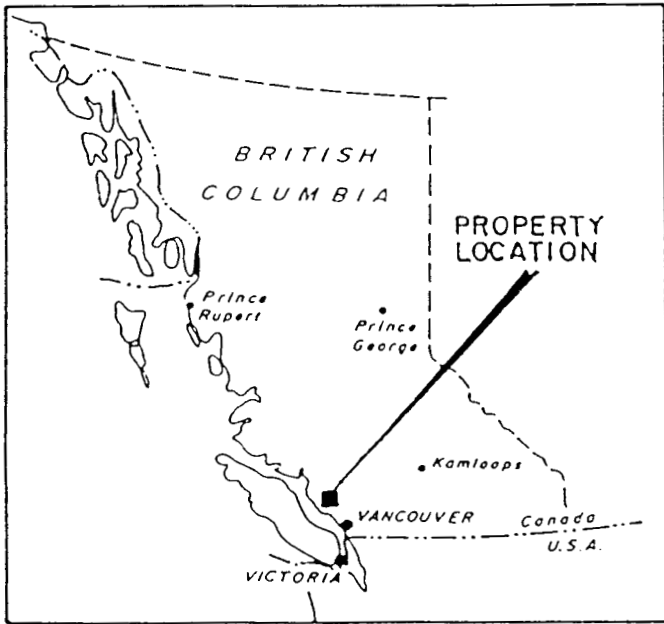
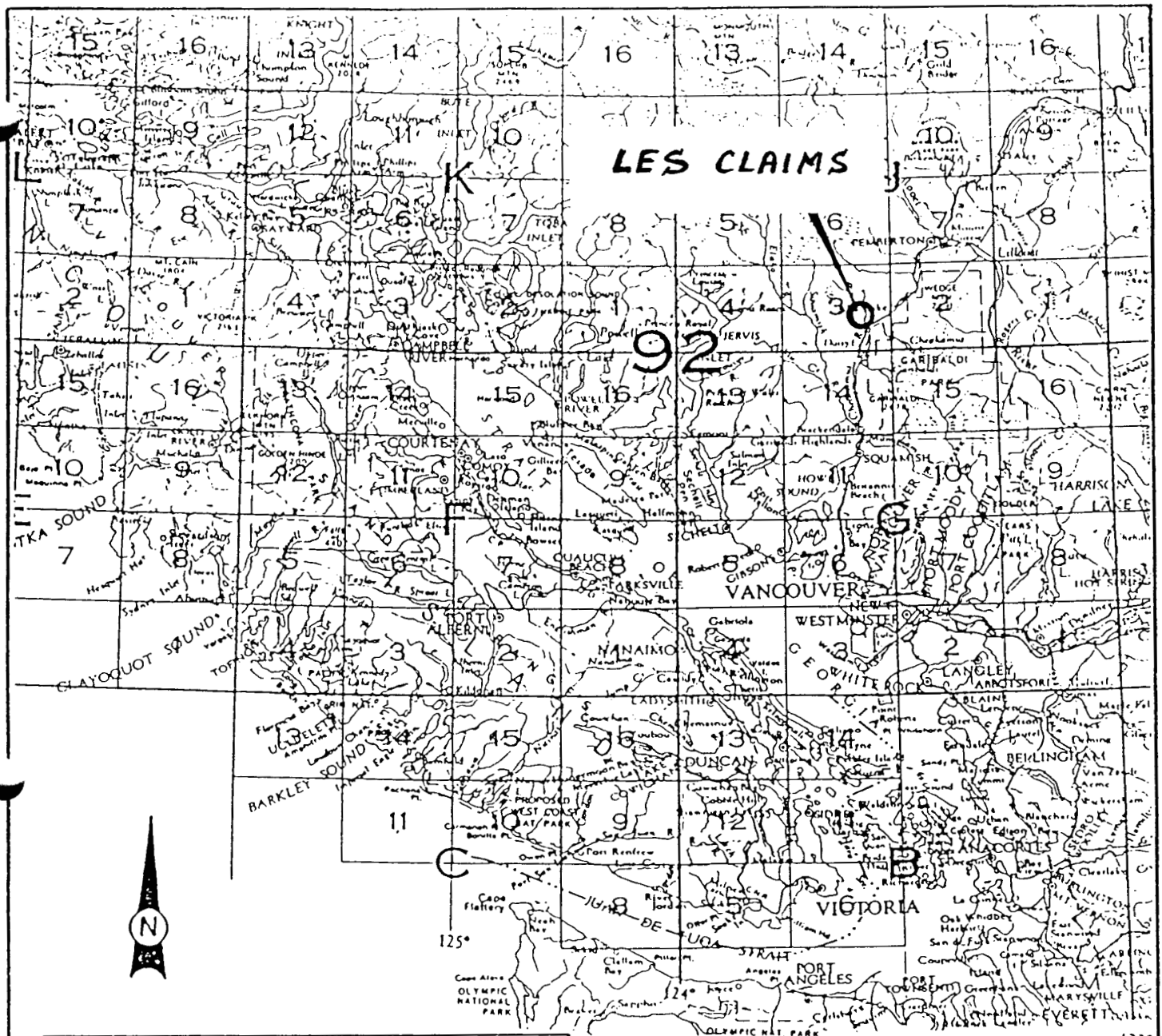
The field work and results described within this report are intended to fulfill the assessment requirements for the Les III and Les IV claims.

2.1 LOCATION AND ACCESS

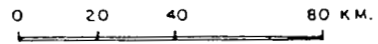
The Les III and IV claims are located in the Vancouver Mining Division approximately 8 km of the ski-resort of Whistler and 85 km north of Vancouver B.C.

Access to the property from Vancouver is Via Highway 99 to the Callaghan Creek Logging (Northair Mine) road which extends northward about 2 km to the southern property boundary. Logging operations throughout the property have resulted in a network of two and four-wheel drive roads on the property.

Elevation on the property range from about 2000 feet (610 meters) in the Cheakamus River Valley to about 5200 feet (1700 meters) with strong relief of 1100 meters. Vegetation is typical of coast rain forest with most of the property being recently logged for commercial stands of hemlock, yellow cedar and balsam.



| | | |
|---------------------|------------------------|--------------------|
| LES CLAIMS | | |
| LOCATION MAP | | |
| SCALE: AS SHOWN | DATE: JAN./1990 | NTS. 93J/3E |
| LES DEMCZUK | | FIGURE No 1 |



2.2 CLAIM STATUS

The Les claim group consists of two continuous claim blocks (Les III and IV) totaling 30 metric units in the Vancouver Mining Division.

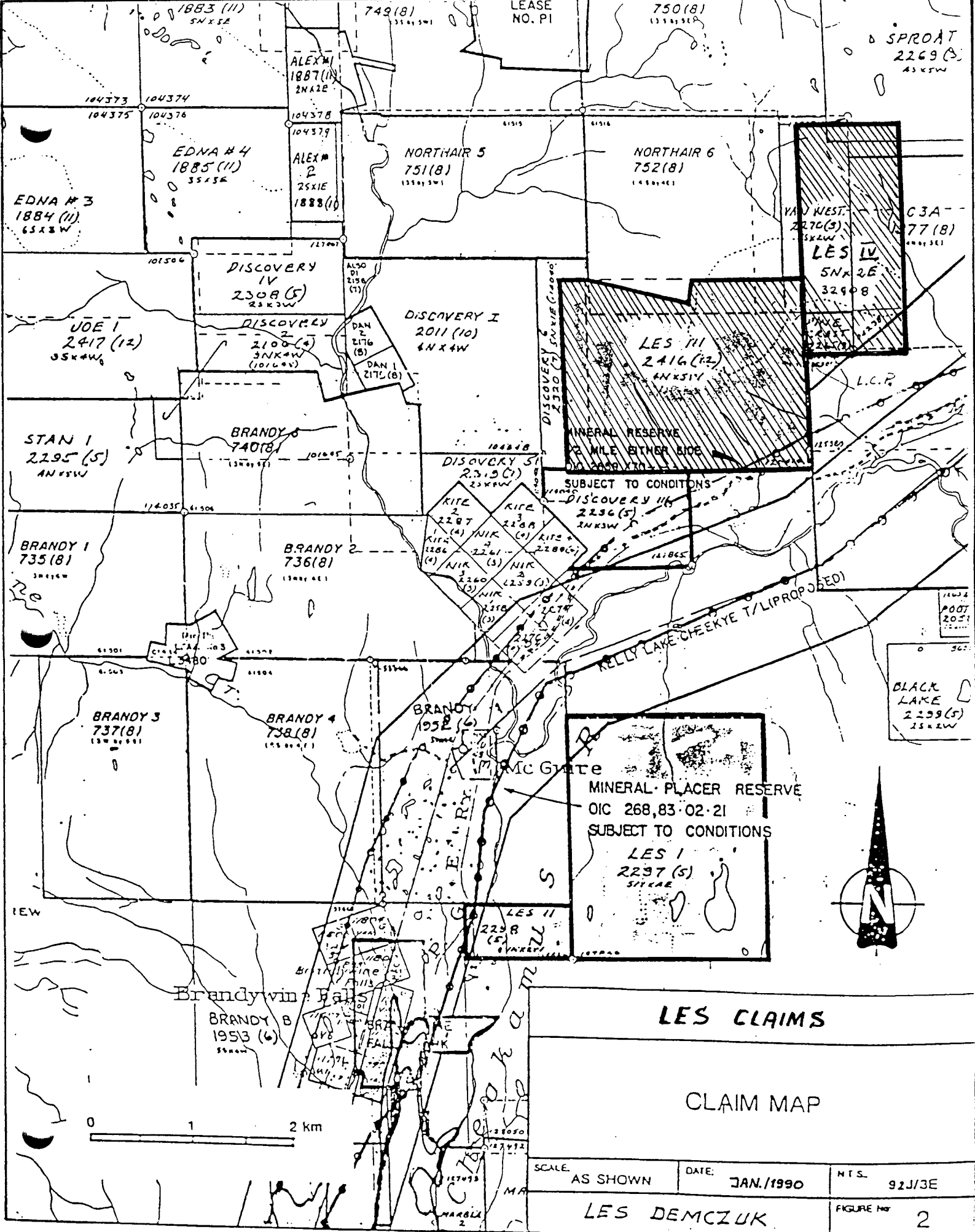
Claim locations shown on Figure 2 are after government claim map 92 J/3E with pertinent claim data summarized below:

| <u>Claim</u> | <u>Units</u> | <u>Record No</u> | <u>Record date</u> |
|--------------|--------------|------------------|--------------------|
| Les III | 20 | 2416 | Dec 30, 1988 |
| Les IV | 10 | 2495 | May 20, 1989 |

All claims are owned and registered in the name of Les Demczuk.

2.3 HISTORY

The earliest recorded work in the area dates back to 1917 when prospectors first located veins with precious and base metal values in the Brandywine Creek area. Various mineral groups such as the AMADRA, BRANDYWINE, BLUEJACK, ASTRA, and FITZSIMMONS were staked along with numerous other small groups. Sporadic interest continued through the years in areas such as these and others such as the east side of Daisy Lake area. In 1969, a Vancouver dentist prospecting along Callaghan Creek isolated mineralized float in conjunction with anomalous stream sediment samples. Lead-zinc-copper mineralization was later isolated in outcrop during the 1970 summer and later trenching exposed what is known today as the Manifold Zone. Two other zones (Discovery and Warman) were also found, and the three combined gave birth to the Northair Mine.



LES CLAIMS

CLAIM MAP

SCALE AS SHOWN DATE: JAN./1990 N.T.S. 92J/3E

LES DEMCZUK FIGURE No 2

Les III previously known as Discon claim group. In 1979 and 1981 Crack Resources performed exploration program including mapping soil sampling and I.P. survey. Mr. J.B. Davies (Ph.D.) reported: "Chalcopyrite, Argentite and Gold exist on surface outcrops near the fracture zones. Grab samples of these rocks yielded .66 oz/t Ag, .04 oz/t Au and 1-2% Cu. Soil and stream sediment samples taken in October of 1978 and April 1980 show consistently high values for copper, silver and gold in two areas. A VLF instrument, recorded anomalous values, in the same vicinity. The apparent wallrock alteration, Cu and iron staining abundant minerals on surface outcrops, large surface extend of quartz-carbonate veins on strike only 4 km south of Northair veins, along with the geochemical and geophysical results establish a promising foundation of evidence for potentially significant mineralization in the Discon claims. (Ass. Rep. 8833).

In 1981 Crack Resources established small grid on the south east part of Discon claim block and Mr. Davies (ph.D.) concluded. "copper minerals have been found on Discon in a number of outcrops of different character-chalcopyrite and leached salts, zinc salts such as smithsonite and hydrozincite are exposed over large areas."

Soil Sampling Survey:

"Anomalous zones are extensive in the north of the grid being mainly for silver, zinc, lead primary. To the south (where carbonate rocks occur) occur copper and zinc anomalies."

J.P. Survey:

"The largest values are on line 7+50N with values greater than 50. This anomalous chargeability is exceptionally high and indicates the possible presence of a high metal content ore-body." (Ass. Rep. 11127).

Les IV claims were staked to cover part of the C3A claim block. This claim block was previously own by McMahon Resources Ltd. and work conducted in 1984 identified favorable for precious and base metals mineralization Cambier Group rocks. Three copper-molybdenum showings have been located on the property (Main showing 5 m width and at least 25 m long-.5 oz.t Ag, .5% Cu and .1% molybdenum). Mr. Cukor P. Eng located a few gold anomalous zones on the C3A claim with the highest value of .086 oz/t Au. (Ass. Rep. 12 801 and 17063).

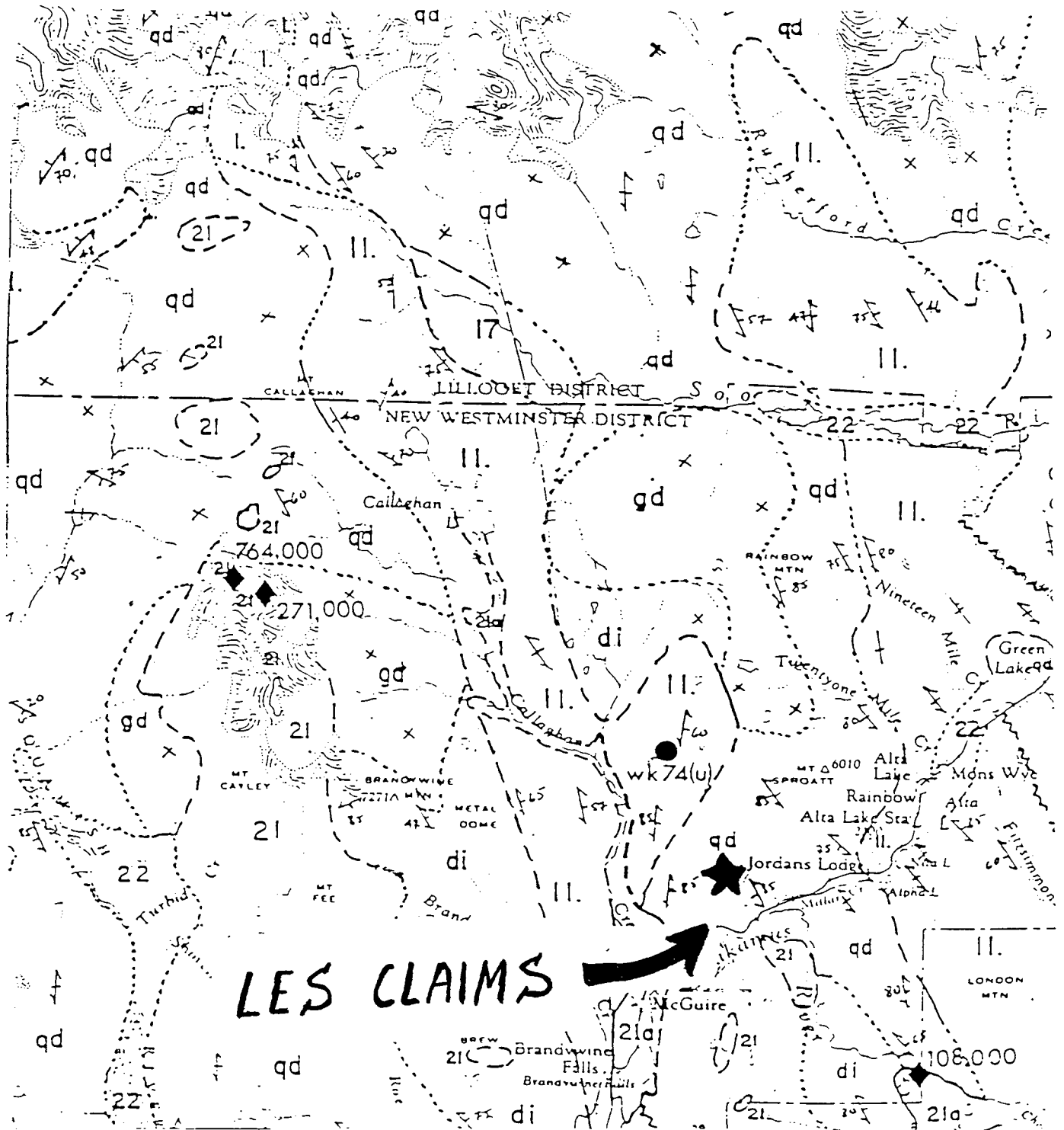
3.0 GEOLOGY

3.1 REGIONAL GEOLOGY AND MINERALIZATION

Regionally the area is underlain by volcanic and sedimentary rocks of the Callaghan Creek roof pendant. This pendant forms one of the many volcanic/sedimentary roof pendants found within the Coastal Plutonic Complex of British Columbia and correlates similarly to the area and formation of the Gambier Group Britannia Mine roof pendant. Associations of the Callaghan Creek roof pendant to the Cheakamus and Fire Lake Groups have also been suggested but confirmation is still in doubt. A K/Ar date of 127+4 Ma on hornblende on a possible zone within the Callaghan Creek pendant suggests a lower Cretaceous age for the volcanics (Miller, 1978). Surrounding the pendant rocks is the coast Plutonic Complex of Cretaceous and early Tertiary diorite, quartz diorite and quartz monzonite. Overlying these units are local Pleistocene mafic and felsic volcanic flows of the Garibaldi Group Regionally the Callaghan Creek pendant rocks can best be described by Miller (1978).

The volcanic rocks have been metamorphosed to greenschist facies, characterized by the occurrence of actinolite, epidote, zoisite, chlorite, biotite, and albite. North northwesterly trending schistosity is commonly subparallel to bedding in the volcanic rocks with near vertical dips. Miller (1978) has indicated with the use of sedimentary structures that units trends to the east. Unit contacts, noticeably the pendant contacts are generally sharp and are commonly associated with narrow shear zones subparallel of foliation.

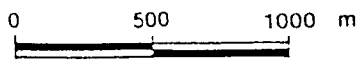
Important to note regionally is all orebodies presently known in the area are restricted to particular units within the volcanics rocks, which inturn offers excellent advantages for mineral exploration. The following are descriptions of known occurrences:



LES CLAIMS

LEGEND

- di Dioritic complex
- qd Quartz diorite
- 21 Garibaldi group
- ↗ Foliation
- × Bedding



LES CLAIMS

REGIONAL GEOLOGY MAP

| | | |
|-----------------|-----------------|---------------|
| SCALE. AS SHOWN | DATE. JAN./1990 | N.T.S. 93J/3E |
|-----------------|-----------------|---------------|

LES DEMCZUK

FIGURE No 3

The Brandywine Camp (Silver Tunnel, Millsite, Tedi-Pit, Zone 4). Located 5 kilometers southwest along strike of the Les claims. these old showings have extensive history for volcanogenic massive sulphide (Pb,Zn,Cu) and high grade gold silver base metal quartz veins. Presently Silver Tusk Mines of Vancouver own 100% interest in the properties. These ore bodies are confined to lense like satellite pendants of the main Callaghan roof pendant. They include greenstone, andecitic volcanics, marbles and intrusive hornblende diorite. These rock units are considered the oldest within the volcanic package.

The Silver Tunnel (Blue Jack) occurs as sulphide minerals in veinlets crosscutting the host greenstone. Ore also occurs as massive sulphide formed parallel to foliation (Miller, 1978). Previous recorded values from fieldwork are as follows:

| | | |
|------------|----------------|-------------------------|
| Open Cut 1 | 0.24 oz/ton Au | , 1.8 oz/ton Ag |
| Open Cut 2 | 0.20 oz/ton Au | , 2.4 oz/ton Ag |
| Open Cut 3 | 0.36 oz/ton Au | , 2.6 oz/ton Ag, 2.5%Pb |

The Millsite showing is essentially a base metal (Pb,Zn,Cu.) occurrence located within greenstone with associated nearby hornblende diorite. Small veinlets and stringers of sphalerite, galena, and chalcopyrite are commonly found within the greenstone.

The Tedi-Pit (Cambria and Astra) has four distinguishable rock units. The mineralized greenstone unit consists of both disseminated and massive sulphide zones of galena, sphalerite, pyrite, and chalcopyrite. Meta dacite, hornblende diorite, and rhyodacite dykes are also closely associated with the ore. Small amounts of mineralized (Pb,Zn,Cu) fault breccia have been isolated in the Tedi-Pit but remain limited in strike length.

| <u>Width</u> | <u>Au oz/ton</u> | <u>Ag oz/ton</u> | <u>Pb</u> | <u>Zn</u> |
|--------------|------------------|------------------|-----------|-----------|
| 15 ft chip | 0.4 | 2.0 | 2.6% | 4.0% |
| 75 ft chip | tr. | 1.5 | 1.4% | 4.0% |

(after Marton, 1978)

Other chip samples from underground workings have yielded similar values as above.

The Zone 4 showing is very possibly a replacement base metal occurrence (Zn,Pb,Cu) located within a pod of marble surrounded by massive greenstone. Limited work has been done on this showing.

The Northair Camp (Warman, Discovery, Manifold)

Located 3 kilometers north of the Les claims, the Northair mine first began producing ore in 1976 at a rate of 300 tpd. Reserves as of May, 1977 were estimated at 330.637 tons (Ditson) averaging 0.4 oz/ton Au, 4.6 oz/ton Ag, 2.7% Pb, and 4.0% Zn. After mine closure in 1982 reserves are presently 65121 tons averaging 0.265 oz/ton Au, 0.78 oz/ton Ag, and 2% combined Pb,Zn (Gardner,1986).

The ore body is confined to the upper units of the Callaghan Creek roof pendant. It strikes south southwesterly and is confined to quartz and quartz carbonate veins within andesitic agglomerate and volcanic breccia. It has been suggested these deposits formed originally as distal volcanogenic ore bodies and were later partially remobilized into crosscutting vein structures. High level hydrothermal (?) precious metal mineralization may have accompanied the remobilization during Tertiary times.

Drill indicated grades from 1976 (after Ditson) are as follows:

| | Cu | Pb | Zn | Au oz/ton | Ag oz/ton |
|----------------|-------|------|------|-----------|-----------|
| Discovery Zone | 0.55% | 5% | 6.5% | 0.10 | 1.18 |
| Warman Zone | 0.24% | 1.4% | 2.4% | 0.68 | 0.85 |
| Manifold Zone | 0.07% | 0.3% | 0.5% | 0.28 | 14.48 |

Daisy Lake (venetian, Nani, Daisy)

These old showings and adits are located approximately 10 km southwest of the Les claims. Property descriptions are best described by Camsell (1917) as follows:

"Several mineral locations have been made on the east side of Daisy Lake, but the only important deposits seem to be on Venetian group which is 750 ft above the lake. Sandstone, slate, and some limestone north 30 degrees west and dipping at high angles, are traversed by a quartz vein striking north 75 degrees west and dipping southward 20 to 35 degrees. The vein is very irregular in size and pinches and swells from a few inches up to 15 feet. The ore minerals are mainly pyrite and chalcopyrite which occur more abundantly near the walls and along fractures in the quartz. The ore contains gold, silver, and copper and about fifteen tons of it have been picked and sacked for shipment. The owners estimate this well average about \$90 per ton in these metals. The vein is developed by an incline from the outcrop, 72 feet in length, and a crosscut tunnel 158 ft long which cuts the vein at a vertical depth of 40 feet below the outcrop."

3.2 PROPERTY GEOLOGY AND MINERALIZATION

Central south and west part of the Les III claim is mainly underlain by quartz diorite (and varieties) of the Coast Plutonic Complex (Figure 4). The diorite unit is fine to medium grained and pale to medium grey-green with an equigranular texture. Dioritic rocks in the area contain mostly of 45% plagioclase, 25% chlorite, 10% epidote and 20% quartz and the remainder accessory minerals.

The southeastern quarter of the Les III claims is mainly underlain by strongly altered porphyritic rhyodacite of the Garibaldi Group?. The rhyodacite is a pale pink to tan, fine grained to aphanitic and equigranular. Phenocrysts of quartz, plagioclase, sanidine and biotite constitute about 50% of the rock.

The chlorite and muscovite schist units located mainly within quartz-diorite, appear to be related to major shear or fault zones that cross the property with a number of northerly and northwesterly zones, with mainly steep easterly dips.

Andesitic agglomerate of the Gambier Group was located on the southwest end of the Les IV property. This rock is fine grained, dark grey-green, weathered on surface with the tuffaceous matrix, averaging 40 volume percent. Fragments are: porphyritic andesite (70%), equigranular andesite (22%) porphyritic dacite (5%), sandstone (2%) and equigranular dacite (1%). Fragments are rounded to subangular, ovoid, and up to 15 cm in diameter. Traces of pyrite were noted in this unit. The contacts of the granodiorite with rhyodacite are in most cases gradational.

Mineralization on the property is associated with shear zones or intrusive rocks. Sulphide minerals occur primarily in crosscutting veinlets or as massive sulphide zones. Disseminated sulphide and copper stain are mainly associated with granitic rocks. The minerals at the Les claim group are: pyrite, pyrrhotite, malachite, chalcopyrite and sphalerite.

3.3 GEOCHEMICAL PROGRAM

The geochemical program consisted of 19 rock and 8 silt samples. All samples were analyzed by 30 element ICP and gold by atomic absorption in Acme Analytical Labs in Vancouver B.C. Rock sample descriptions are presented in Appendix I. Certificates of analysis for rocks and silts are included in Appendix II. Analytical results for Au, Ag, Cu, Pb and Zn are plotted on Figure 4.

GOLD

Gold values varies from 1 ppb to 153 ppb. Eight samples are considered strongly anomalous and range from 46 ppb to 153 ppb.

SILVER

Silver values in the initial 27 samples varies from .1 ppm to 6.6 ppm. Anomalous silver values exceeding 1.0 ppm were recorded in eleven samples.

COPPER

Anomalous copper values exceeding 100 ppm were recorded in seven samples. The highest copper value 2224 ppm was recorded in sample 8124.

LEAD

Four of the samples yielded anomalous lead values exceeding 40 ppb. The highest value .238 ppm was obtained from sample 89LE-09.

ZINC

Zinc values varies from 6 ppm to 279 ppm with fine values over 150 ppm considered anomalous.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The property is a grassroots property with little information available. New roads are built continuously because of active logging at higher levels, thus exposing new outcrops. Although the gold values in the rocks collected are not that exciting (but strongly anomalous), they are at least an indication of the presence of the polymetallic system in the area.

The geology is similar to the Northair Mine. Several features on the property apparently coincide with those of the Northair area, eg. Gambier Group rocks, shear zone, etc.

Gold values, although frequently spotty on the surrounding claims may hint at a potential extension on the Les claims.

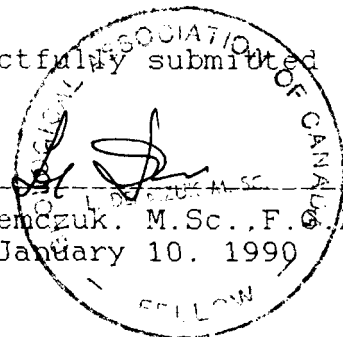
As a result of the encouraging prospect an exploration program designed to test the potential for base and precious metals mineralization is warranted and recommended.

Prospecting and detailed geological mapping is needed to cover the entire property. A rock and soil geochemical program is recommended of prospective areas located by mapping.

A second phase would be contingent on result and should include VLF to isolate possible fault structure, magnetic survey to confirm intrusive volcanic contacts and buried volcanic pendants. Trenching, blasting and initial exploration drilling program should be carried over the best anomalies to define the sources and extent of these anomalies.

Respectfully submitted

Les Demczuk, M.Sc., F.G.A.C.
January 10, 1990



5.0 REFERENCES

- Basil, C. 1988. Geophysical Report on the Discovery 2 and Discovery 4 claims in the Vancouver Mining Division, for Hadley Resources Inc. dated July 22. 1988.
- Demczuk, L. and Cuttle, J. 1987 Geological and Geochemical Report on the Discovery I and Discovery II claim Group. dated October 1987.
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A P P E N D I X I

ROCK SAMPLE DESCRIPTION

| SAMPLE # | TYPE | DESCRIPTION |
|----------|------|--|
| B-7726 | Grab | Coarse to med. grained granitic Coastal Intrusion clay altered and malachite stain. |
| B-7727 | Grab | Grey-green fine grained quartz diorite very little pyrite, chlorite and epd. alt. |
| B-8121 | Grab | Granitic (Coast Intrusion) with iron rich rims and veinlet alteration, sporadic diss. Py. |
| B-8122 | Grab | Coarse to med grained grey-green granitic Coastal Intrusive some epidote grab sample of iron material. |
| B-8123 | Grab | Quartz vein material in granite. |
| B-8124 | Grab | As 8122 but malachite staining |
| B-8125 | Grab | Chlorite schists with quartz veins and rusty (also chlorite in qtz. veins). |
| 89LE01 | Grab | Glassy quartz veins in chlorite schist + diss. Py. |
| 89LE02 | Grab | Shear zone strongly silic. metavolcanics (+5% large Py cubes). |
| 89LE03 | Grab | Light grey schistose metavolcanics +yellow-red quartz veins. |
| 89LE04 | Grab | Mica chlorite schist + 20% Py cubes (2mm). |
| 89LE05 | Grab | Altered felsic intrusive + qtz. veins + diss. Py. |
| 89LE06 | Grab | 20 to 30 cm wide shear zone in alt. intrus. + Py, Chpy, and malachite stains. |
| 89LE07 | Grab | Similar to #89LE06. |
| 89LE08 | Grab | Alt. metavolcanic + 10% sulphides. |

| SAMPLE # | TYPE | DESCRIPTION |
|----------|------|---|
| 89LE09 | Grab | Mica schist. sheared. silicified + Py. |
| 89LE10 | Grab | Silic. volc. tuff (+Py + chlorite). |
| 89LE11 | Grab | Broken quartz veins. rusty on surface (no vis. mineralization). |
| 89LE12 | Grab | Yellow on surface. silic. volc. tuff + 30% Py. |

A P P E N D I X I I

LES & Discovery cl. (JH)

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE (604) 253-3158 FAX (604) 253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: MAY 15 1989 DATE REPORT MAILED: May 19/89 SIGNED BY: C. Long D. TOYE, C. LEONG, J. WANG: CERTIFIED B.C. ASSAYERS

Attn: Les Demore

File # 89-1076

| SAMPLE# | Mo | Cu | Pb | Zn | Ag | Ni | Co | Mn | Fe | As | U | Au | Th | Sr | Cd | Sb | Bi | V | Ca | P | La | Cr | Mg | Ba | Ti | B | Al | Na | K | W | Au* |
|------------|-----|------|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|------|-----|-----|-----|------|-----|-----|-----|-----|
| | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | % | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | % | % | PPM | PPM | % | PPM | % | PPM | % | % | % | PPM | PPM |
| B 7726 | 1 | 370 | 6 | 79 | 3.1 | 6 | 11 | 115 | 2.00 | 3 | 5 | ND | 4 | 27 | 1 | 2 | 16 | 16 | .28 | .046 | 4 | 17 | .92 | 59 | .05 | 2 | 1.06 | .03 | .17 | 1 | 8 |
| B 7727 | 1 | 3 | 2 | 30 | .1 | 5 | 5 | 362 | 1.55 | 2 | 5 | ND | 2 | 43 | 1 | 2 | 2 | 31 | .80 | .057 | 7 | 7 | 1.05 | 67 | .11 | 6 | 1.17 | .04 | .14 | 1 | 4 |
| B 8119 | 3 | 65 | 4 | 73 | 1.3 | 8 | 15 | 774 | 3.30 | 6 | 5 | ND | 1 | 45 | 1 | 2 | 2 | 15 | 1.17 | .059 | 12 | 4 | .48 | 25 | .01 | 9 | .51 | .02 | .12 | 1 | 64 |
| B 8120 | 1 | 38 | 45 | 54 | .2 | 5 | 6 | 812 | 1.46 | 2 | 5 | ND | 4 | 75 | 1 | 2 | 2 | 16 | 4.40 | .033 | 6 | 4 | .82 | 30 | .01 | 7 | .26 | .01 | .07 | 1 | 1 |
| B 8121 | 4 | 9 | 3 | 59 | .1 | 4 | 6 | 1118 | 1.54 | 2 | 5 | ND | 2 | 52 | 1 | 2 | 2 | 16 | .97 | .052 | 5 | 4 | .67 | 97 | .06 | 7 | .94 | .03 | .32 | 1 | 1 |
| B 8122 | 267 | 94 | 4 | 28 | .1 | 7 | 11 | 368 | 1.89 | 2 | 5 | ND | 1 | 37 | 1 | 2 | 2 | 16 | .89 | .048 | 4 | 7 | .71 | 77 | .07 | 4 | .80 | .03 | .12 | 1 | 3 |
| B 8123 | 52 | 68 | 3 | 24 | .2 | 6 | 7 | 484 | 1.55 | 2 | 5 | ND | 3 | 29 | 1 | 2 | 2 | 10 | 2.03 | .031 | 3 | 5 | .45 | 77 | .04 | 6 | .57 | .02 | .13 | 1 | 3 |
| B 8124 | 7 | 2224 | 2 | 34 | 5.7 | 11 | 5 | 480 | 2.10 | 2 | 5 | ND | 1 | 69 | 1 | 2 | 15 | 28 | .54 | .050 | 3 | 9 | 1.14 | 50 | .06 | 2 | 1.36 | .05 | .07 | 3 | 91 |
| B 8125 | 2 | 8 | 5 | 68 | .1 | 12 | 9 | 879 | 2.83 | 2 | 5 | ND | 1 | 28 | 1 | 2 | 2 | 36 | .76 | .039 | 9 | 9 | 1.13 | 20 | .01 | 4 | 1.43 | .03 | .05 | 1 | 1 |
| STD C/AU-R | 18 | 63 | 42 | 132 | 6.5 | 73 | 31 | 1018 | 2.80 | 41 | 17 | 8 | 37 | 51 | 18 | 14 | 21 | 58 | .47 | .066 | 38 | 56 | .87 | 180 | .07 | 34 | 1.81 | .06 | .13 | 12 | 470 |

LES C.I. III / IV (JH)

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE (604) 253-3158 FAX (604) 253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN PB SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: P1 SILT P2 ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: MAY 25 1989 DATE REPORT MAILED: June 1/89 SIGNED BY: C. Long, D. TOYB, C. LEONG, J. WANG: CERTIFIED B.C. ASSAYERS

Attn: Les Demczuk

File # 89-1212 Page 1

| SAMPLE# | Mo | Cu | Pb | Zn | Ag | Ni | Co | Mn | Pb | As | U | Au | Th | Sr | Cd | Sb | Bi | V | Ca | P | La | Cr | Mg | Ba | Ti | B | Al | Na | K | W | AU* |
|------------|-----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|------|-----|-----|-----|------|-----|-----|-----|-----|
| | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | % | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | % | % | PPM | PPM | % | PPM | % | PPM | % | % | % | PPM | PPM |
| 89LES-01 | 1 | 45 | 30 | 161 | 2.6 | 5 | 13 | 684 | 3.52 | 16 | 5 | ND | 2 | 31 | 1 | 2 | 2 | 30 | .55 | .111 | 7 | 3 | 1.16 | 51 | .07 | 2 | 1.30 | .01 | .19 | 1 | 82 |
| 89LES-02 | 1 | 36 | 11 | 66 | .2 | 6 | 8 | 708 | 2.59 | 6 | 5 | ND | 1 | 46 | 1 | 2 | 2 | 33 | .95 | .094 | 6 | 8 | .89 | 66 | .06 | 2 | 1.23 | .01 | .13 | 2 | 3 |
| 89LES-03 | 1 | 56 | 58 | 149 | 4.1 | 7 | 16 | 858 | 3.82 | 27 | 5 | ND | 2 | 31 | 1 | 2 | 2 | 29 | .56 | .107 | 10 | 3 | 1.50 | 64 | .08 | 2 | 1.62 | .01 | .28 | 1 | 145 |
| 89LES-04 | 1 | 135 | 20 | 151 | .4 | 17 | 14 | 1527 | 2.87 | 5 | 5 | ND | 1 | 72 | 1 | 2 | 2 | 41 | 1.95 | .089 | 8 | 14 | 1.10 | 89 | .06 | 4 | 2.97 | .04 | .06 | 1 | 1 |
| 89LES-05 | 3 | 126 | 41 | 243 | .9 | 8 | 17 | 1031 | 4.30 | 11 | 5 | ND | 1 | 44 | 2 | 2 | 2 | 31 | .73 | .087 | 6 | 9 | 1.00 | 56 | .06 | 2 | 1.63 | .02 | .08 | 1 | 1 |
| 89LES-06 | 1 | 53 | 10 | 192 | .1 | 17 | 12 | 874 | 3.25 | 3 | 5 | ND | 1 | 78 | 1 | 2 | 2 | 43 | 2.14 | .091 | 6 | 24 | .93 | 66 | .06 | 2 | 1.80 | .03 | .12 | 1 | 2 |
| 89LES-07 | 5 | 89 | 35 | 279 | .2 | 8 | 11 | 2399 | 1.63 | 7 | 5 | ND | 1 | 68 | 8 | 2 | 2 | 17 | 1.76 | .128 | 22 | 4 | .40 | 164 | .02 | 11 | 1.49 | .01 | .07 | 1 | 2 |
| 89LES-08 | 1 | 43 | 27 | 112 | 1.8 | 4 | 11 | 682 | 2.93 | 13 | 5 | ND | 2 | 31 | 1 | 2 | 2 | 25 | .58 | .101 | 7 | 3 | 1.07 | 51 | .06 | 2 | 1.23 | .01 | .19 | 1 | 91 |
| STD C/AU-S | 18 | 60 | 36 | 131 | 6.6 | 72 | 29 | 1007 | 4.05 | 41 | 19 | 6 | 36 | 50 | 17 | 14 | 16 | 57 | .52 | .090 | 37 | 55 | .93 | 172 | .07 | 32 | 1.90 | .06 | .13 | 12 | 50 |

Attu : Les Demerides

FILE # 89-1212

Page 2

| SAMPLE# | Mo | Cu | Pb | Zn | Ag | Ni | Co | Mn | Fe | As | U | Au | TH | Sr | Cd | Sb | Bi | V | Ca | P | La | Cr | Mg | Ba | Ti | B | Al | Na | K | W | Au* |
|------------|-----|------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-----|-----|------|-----|-----|-----|------|-----|-----|-----|-------|
| | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | % | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | PPM | % | % | PPM | PPM | % | PPM | % | PPM | % | % | % | PPM | PPM |
| RX 89LE-01 | 3 | 23 | 4 | 19 | .2 | 9 | 1 | 190 | .94 | 2 | 6 | ND | 1 | 11 | 1 | 2 | 2 | 2 | .07 | .008 | 2 | 8 | .18 | 7 | .02 | 7 | .30 | .01 | .02 | 1 | 1 |
| RX 89LE-02 | 1 | 19 | 17 | 119 | .2 | 4 | 8 | 637 | 3.60 | 3 | 5 | ND | 1 | 14 | 1 | 3 | 2 | 20 | .80 | .121 | 2 | 3 | 1.13 | 51 | .15 | 5 | 1.46 | .03 | .22 | 1 | 3 |
| RX 89LE-03 | 4 | 43 | 8 | 6 | .1 | 8 | 1 | 67 | 2.46 | 3 | 5 | ND | 1 | 6 | 1 | 2 | 2 | 3 | .01 | .031 | 2 | 8 | .05 | 26 | .01 | 3 | .19 | .01 | .04 | 1 | 1 |
| RX 89LE-04 | 1 | 25 | 35 | 110 | 2.1 | 3 | 8 | 982 | 4.22 | 6 | 5 | ND | 1 | 6 | 1 | 2 | 2 | 28 | .33 | .071 | 2 | 3 | 1.64 | 42 | .15 | 4 | 1.83 | .03 | .09 | 1 | 8 |
| RX 89LE-05 | 1 | 34 | 10 | 66 | .1 | 16 | 10 | 932 | 2.30 | 5 | 5 | ND | 2 | 52 | 1 | 3 | 2 | 23 | .70 | .082 | 4 | 15 | 1.51 | 64 | .11 | 3 | 1.68 | .02 | .16 | 1 | 1 |
| RX 89LE-06 | 1 | 1501 | 6 | 60 | 2.2 | 7 | 7 | 565 | 2.32 | 5 | 5 | ND | 3 | 27 | 1 | 3 | 2 | 18 | .64 | .057 | 3 | 6 | 1.09 | 63 | .06 | 11 | 1.39 | .02 | .24 | 2 | 153 ✓ |
| RX 89LE-07 | 1 | 464 | 11 | 53 | 2.2 | 8 | 7 | 608 | 2.03 | 7 | 6 | ND | 4 | 52 | 1 | 2 | 2 | 21 | 1.14 | .054 | 3 | 7 | 1.05 | 70 | .10 | 4 | 1.34 | .02 | .32 | 1 | 46 |
| RX 89LE-08 | 5 | 22 | 13 | 57 | .1 | 3 | 3 | 422 | 2.29 | 5 | 5 | ND | 5 | 16 | 1 | 2 | 2 | 11 | .30 | .060 | 4 | 2 | .76 | 78 | .08 | 5 | .94 | .02 | .25 | 1 | 3 |
| RX 89LE-09 | 41 | 26 | 238 | 74 | .4 | 5 | 4 | 230 | 2.17 | 5 | 5 | ND | 6 | 5 | 1 | 2 | 2 | 8 | .14 | .051 | 3 | 4 | .44 | 74 | .06 | 11 | .64 | .01 | .26 | 1 | 2 |
| RX 89LE-10 | 1 | 61 | 12 | 99 | .1 | 4 | 11 | 448 | 2.36 | 5 | 7 | ND | 6 | 21 | 1 | 2 | 2 | 17 | .43 | .064 | 5 | 3 | 1.19 | 116 | .09 | 3 | 1.37 | .03 | .47 | 1 | 6 |
| RX 89LE-11 | 3 | 22 | 9 | 75 | .1 | 9 | 5 | 633 | 2.56 | 2 | 5 | ND | 1 | 18 | 1 | 2 | 2 | 29 | .30 | .033 | 2 | 9 | 1.29 | 24 | .09 | 2 | 1.51 | .01 | .07 | 1 | 3 |
| RX 89LE-12 | 2 | 180 | 15 | 69 | .1 | 1 | 9 | 411 | 4.28 | 4 | 5 | ND | 2 | 19 | 1 | 2 | 2 | 16 | .28 | .076 | 5 | 1 | .77 | 55 | .13 | 18 | 1.05 | .04 | .18 | 1 | 76 |

A P P E N D I X I I I

L E S III

May 13 and 21-22, 1989

Personnel

| | | | | |
|--|--------|---------|-------|-------------|
| L. Demczuk, M.Sc. Geologist | 3 days | @ \$300 | \$ | 900.00 |
| B. Ablay, Prspector/Asst. | 3 days | @ \$200 | \$ | 600.00 |
| Truck 4x4 Rental | 3 days | @ \$ 90 | \$ | 270.00 |
| Travel (Meals, Gas, etc.) | 3 days | @ \$ 75 | \$ | 225.00 |
| Geochemistry | | | \$ | 255.00 |
| Field Supplies | | | \$ | 97.20 |
| Report 1/2 (writing, typing, drafting, copy) | | | \$ | 200.00 |
| | | | Total | \$ 2,547.20 |

L E S IV

May 23-24, 1989

Personnel

| | | | |
|--|----------|---------|-------------|
| L. Demczuk. M.Sc.. Geologist | 1.5 days | @ \$300 | \$ 450.00 |
| B. Ablay, Prospect./Asst. | 1.5 days | @ \$200 | \$ 300.00 |
| Truck 4x4 Rental | 1.5 days | @ \$ 90 | \$ 135.00 |
| Travel (Meals, Gas. etc.) | 1.5 days | @ \$ 75 | \$ 112.50 |
| Geochemistry | | | \$ 187.20 |
| Field Supplies | | | \$ 57.25 |
| Report 1/2 (writing, typing, drafting, copy) | | | \$ 200.00 |
| | | Total | \$ 1,441.95 |

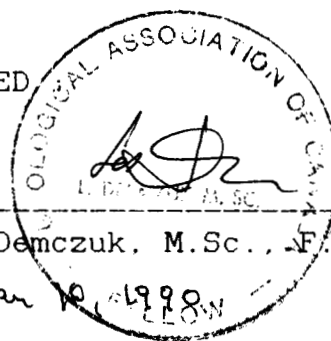
A P P E N D I X I V

STATEMENT OF QUALIFICATION

I, Les Demczuk, of the city of Vancouver, Province of British Columbia so hereby certify that:

1. I am a Mining Geological Engineer residing at 1835 E. 13th Ave., Vancouver B.C.
2. I graduated from University of Mining and Metallurgy, Krakow, Poland in 1977 with Master of Science degree in Geology.
3. I have worked in mineral and coal exploration since 1977 and have practiced my profession since 1977.
4. I am a registered Fellow of the Geological Association of Canada.
5. This report is based upon field work carried out by myself and a review of published and privately held literature pertaining to the claim area.

SIGNED



Les Demczuk, M.Sc., F.G.A.C

Jan 10, 1990

LES IV

LES III



LEGEND

- Road
- Creek
- Outcrop
- Fault or Shear Zone
- Geological Contact
- Bedding
- Foliation

- 89LE 01
8122 Rock Sample Location
- ▼ 89LES 02 Silt Sample Location

GEOCHEMICAL RESULTS

| | Au | Ag | Cu | Pb | Zn |
|---------|--------------------|----|----|----|----|
| 89LE01 | | | | | |
| 8122 | | | | | |
| 89LES02 | (1, .3, 23, 4, 19) | | | | |

- ROCK UNITS**
- 1 Quartz-Diorite
 - 2 Rhyodacite
 - 3 Chlorite/Muscovite Schist
 - 4 Andesitic Agglomerate

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,543

0 100 200 300 400 m

LES CLAIMS

GEOLOGY AND GEOCHEMISTRY
MAP

SCALE: 1:5000 DATE: JAN 1990 AT: 92J/3E
LES DEMCZUK FIGURE NO: 4