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GEOCHEMICAL REPORT

FILMED

on the

PHACOPS PROPERTY

Liard Mining Division  
British Columbia

North Lat. 57° 29' West Long. 131° 42'  
NTS 104G/5E

SUB-RECORDER  
RECEIVED  
APR 11 1990  
M.R. # \_\_\_\_\_ \$ \_\_\_\_\_  
VANCOUVER, B.C.

.Prepared for.

JOSEPH TARNOWSKI  
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GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,881

April 1, 1990

Paul P.L. Chung, F.G.A.C.  
Consulting Geologist

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## INTRODUCTION

Mr. Joseph Tarnowski of Vancouver owns the PHACOPS property which is comprised of 4 mineral claims situated in the Liard Mining Division, northwestern British Columbia. This report, prepared at the request of Mr. Tarnowski describes the work program conducted on the property during September of 1989.

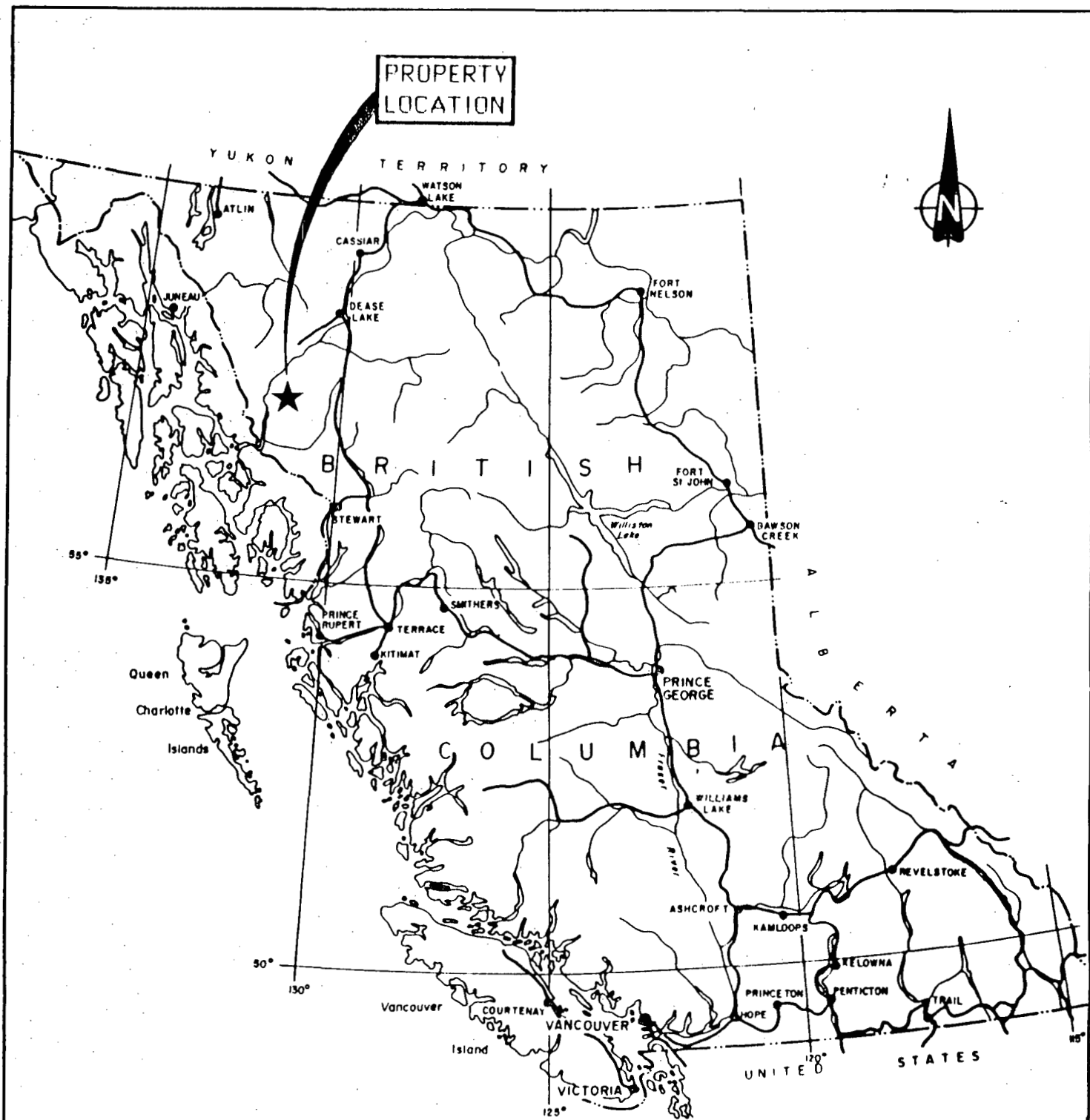
## SUMMARY

The OKSA property is comprised of 4 M.G.S. mineral claims that together total 80 units in the Liard Mining Division. The claims covers part of the Butterfly Creek and Brydon Creek drainages, approximately 55 kilometres south of Telegraph Creek in northwestern British Columbia. The geographic coordinates of the property are 57° 29' N Latitude by 131° 42' W Longitude.

Access to the property is provided by helicopter from the Scud River airstrip, approximately 25 kilometres to the southwest, or from the Bronson Creek airstrip, some 105 kilometres to the southeast.

There is no reported recent exploration of the property. However, some prospecting work has been done on the nearby Oksa Gold claims in the past year and the whole Galore Creek Camp has experienced an increase in precious metal exploration recently.

A preliminary prospecting program was conducted on the property during September, 1989. During this program, 18 rock samples were collected and analyzed.



PROPERTY  
LOCATION

PHACOPS PROPERTY

PROPERTY LOCATION MAP

LIARD MINING DIVISION

COAST MOUNTAIN GEOLOGICAL LTD.

DRAWN BY

B.K.

NTS

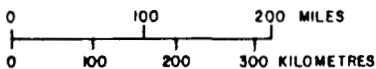
104G/5

DATE:

APRIL, 1990

FIGURE

1



After reviewing the results, a more detailed mapping and sampling program is recommended as the next stage of exploration.

#### LOCATION, ACCESS AND PHYSIOGRAPHY

The PHACOPS property is located within the Coast Range Mountains approximately 180 kilometres northwest of Stewart and 55 kilometres southwest of Telegraph Creek in northwestern British Columbia (Figure 1). The claims lie within the Liard Mining Division and the geographical coordinates for the centre of the property is 57° 29' North Latitude and 131° 42' West Longitude.

Access to the property is provided by helicopter from the Scud River airstrip which is located approximately 25 kilometres to the southwest, or from the Bronson Creek airstrip which is located approximately 105 kilometres to the southeast. During the 1989 field season, a helicopter was stationed at the Galore Creek airstrip, some 40 kilometres to the southeast. Fix-wing aircraft fly charters from Smithers, Dease Lake and Telegraph Creek to the Scud River and Galore Creek airstrips. Scheduled flights from Smithers to the Galore Creek airstrip via the Bronson Creek airstrip during the field season are available. On the Alaska side of the border, Wrangell lies approximately 115 kilometres to the southwest, and provides a full range of services and supplies, including a major commercial airport. The Stikine River has been navigated by 100-ton barges up river as far as Telegraph Creek, allowing economical transportation of heavy machinery and fuel to the Scud River airstrip.

The PHACOPS claims covers the head waters of Brydon Creek, Devil's Elbow Mountain and the west slope of Phacops Mountain. Topography is steep and rugged with elevations ranging from about

150 metres near the shore of the Stikine River to over 2000 metres at the top of Devil's Elbow Mountain. The tree line is at approximately 1100 metres. Vegetation varies considerably throughout the property. Along the creek, a few rare areas of towering cottonwoods and evergreens with little undergrowth are tucked away in an extremely dense, almost impenetrable jungle of Devil's club, huckleberry and alder. Most of the slopes are found to be well timbered with spruce, hemlock and fir with little undergrowth.

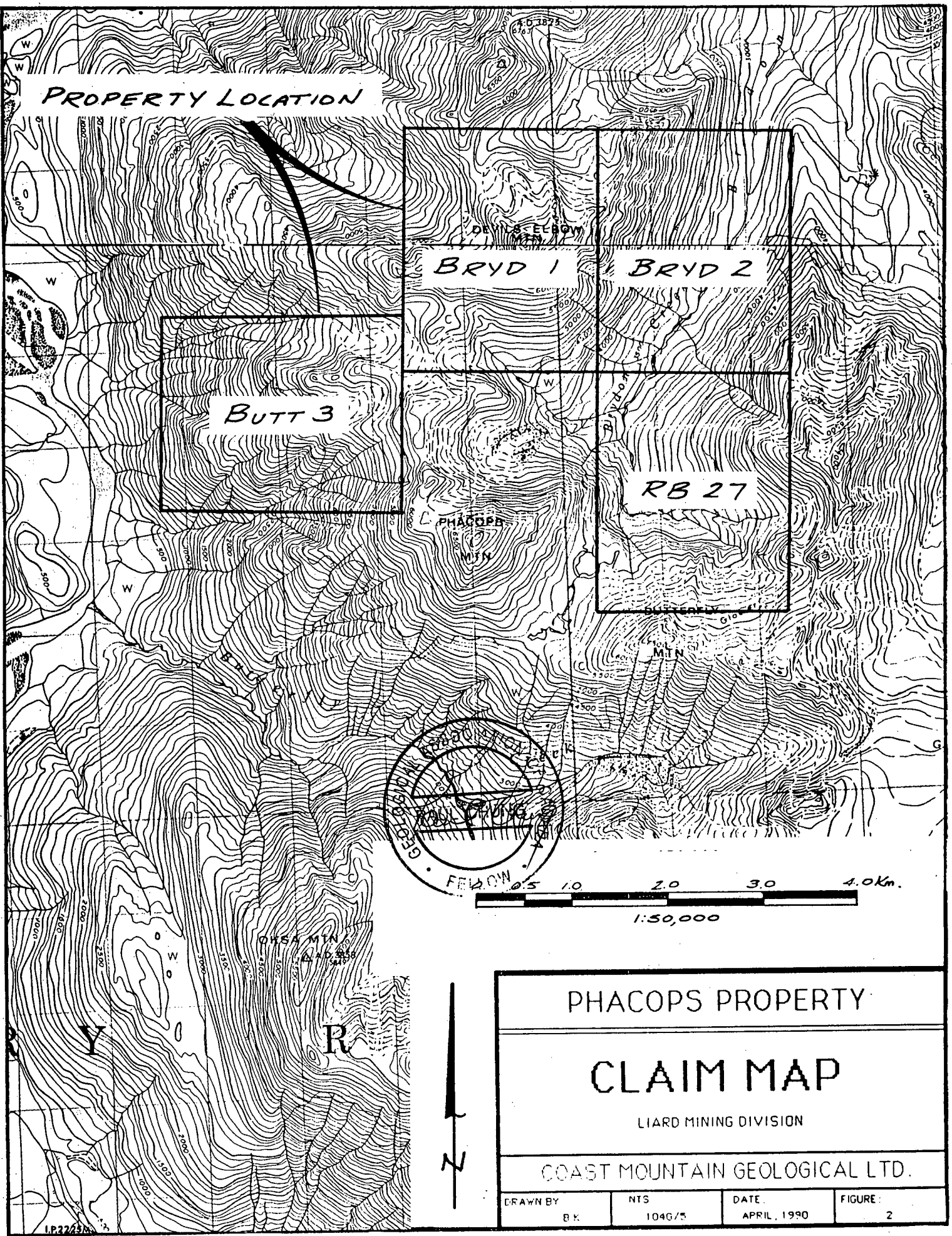
The claims are situated at the boundary between the wet belt and the gradational belt. In this area temperatures range from -30 to +30 degrees centigrade and approximately 300 centimetres of precipitation is recorded per year, mostly in the form of snow.

#### PROPERTY AND OWNERSHIP

The PHACOPS property is comprised of 4 M.G.S. mineral claims that together total 80 units and covers approximately 2000 hectares. The claims are situated in the Liard Mining Division, British Columbia. The configuration of the claims are shown in Figure 2. Records of the British Columbia Ministry of Energy, Mines and Petroleum Resources indicate that the claims are owned by Joseph Tarnowski. The following table summarizes the pertinent claim data.

| <u>Claim</u> | <u>Record No.</u> | <u>Units</u> | <u>Record Date</u> |
|--------------|-------------------|--------------|--------------------|
| RB 27        | 5681              | 20           | January 14/89      |
| BRYD 1       | 5817              | 20           | February 19/89     |
| BRYD 2       | 5818              | 20           | February 19/89     |
| BUTT 3       | 5821              | 20           | February 19/89     |

PROPERTY LOCATION

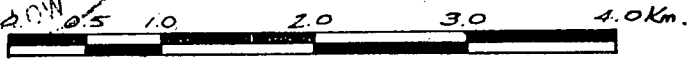


BRYD 1

BRYD 2

BUTT 3

RB 27



1:50,000

PHACOPS PROPERTY

CLAIM MAP

LIARD MINING DIVISION

COAST MOUNTAIN GEOLOGICAL LTD.

|                  |               |                     |             |
|------------------|---------------|---------------------|-------------|
| DRAWN BY<br>B.K. | NTS<br>104G/5 | DATE<br>APRIL, 1990 | FIGURE<br>2 |
|------------------|---------------|---------------------|-------------|

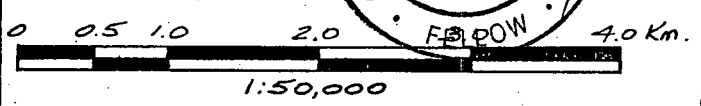
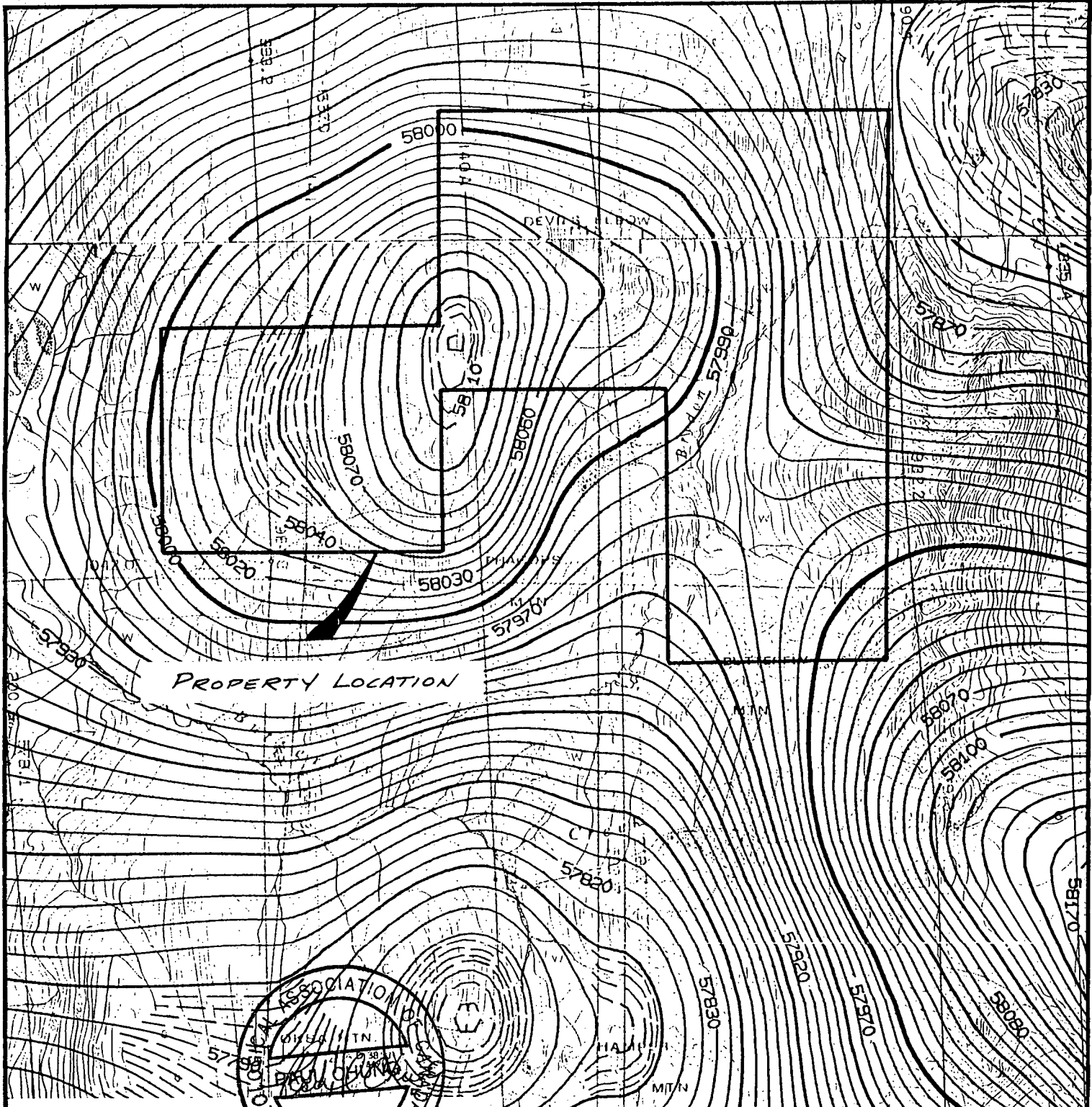
## HISTORY

The property first received exploration activity sometime prior to 1914, when Dixon and Bodel staked claims on the Devil's Elbow properties, where the Stikine Mining Company did work for a couple of years. The first systematic mineral exploration in the area occurred in the 1950's following the discovery of the Galore Creek deposit. This early exploration was initiated by Kennco Copper and their search was directed towards finding large tonnage, porphyry copper deposits similar to Galore Creek.

In 1981, Teck Explorations Limited prospected the Oksa Creek drainage area after hearing rumours from prospectors of a high grade gold bearing quartz vein. Their efforts uncovered a .6 metre wide quartz vein which returned assays up to 0.42 oz/ton gold and 2.12 oz/ton silver. This vein is covered by the present Oksa Gold claims which is approximately 8 kilometres to the south.

The Geological Survey of Canada conducted a regional aeromagnetic survey of the area in 1978. This survey shows a prominent magnetic high around Devil's Elbow Mountain (Figure 3).

In 1987, the government conducted a Regional Geochemical Survey (RGS) over the Telegraph map sheet (104G). Two of those samples (873053 and 873064) were collected from the BRYD 2 and RB 27 claims. Sample 873053 returned assays in the 75th percentile for copper, lead, zinc, nickel and 95th percentile in cobalt. Sample 873064 returned assays in the 75th percentile for nickel, cobalt and tin.



- ISOMAGNETIC LINES (absolute total field):
- 250 gammas .....
  - 50 gammas .....
  - 10 gammas .....
  - 2 gammas .....
  - Magnetic depression .....
  - Flight lines .....
- Flight altitude: 3000 m above sea level
- (1 gamma = 1 nanotesla in SI units)

|                                       |               |                     |              |
|---------------------------------------|---------------|---------------------|--------------|
| <b>PHACOPS PROPERTY</b>               |               |                     |              |
| <b>AEROMAGNETIC SURVEY MAP</b>        |               |                     |              |
| LIARD MINING DIVISION                 |               |                     |              |
| <b>COAST MOUNTAIN GEOLOGICAL LTD.</b> |               |                     |              |
| DRAWN BY:<br>B.K.                     | NTS<br>104G/5 | DATE<br>APRIL, 1990 | FIGURE:<br>3 |

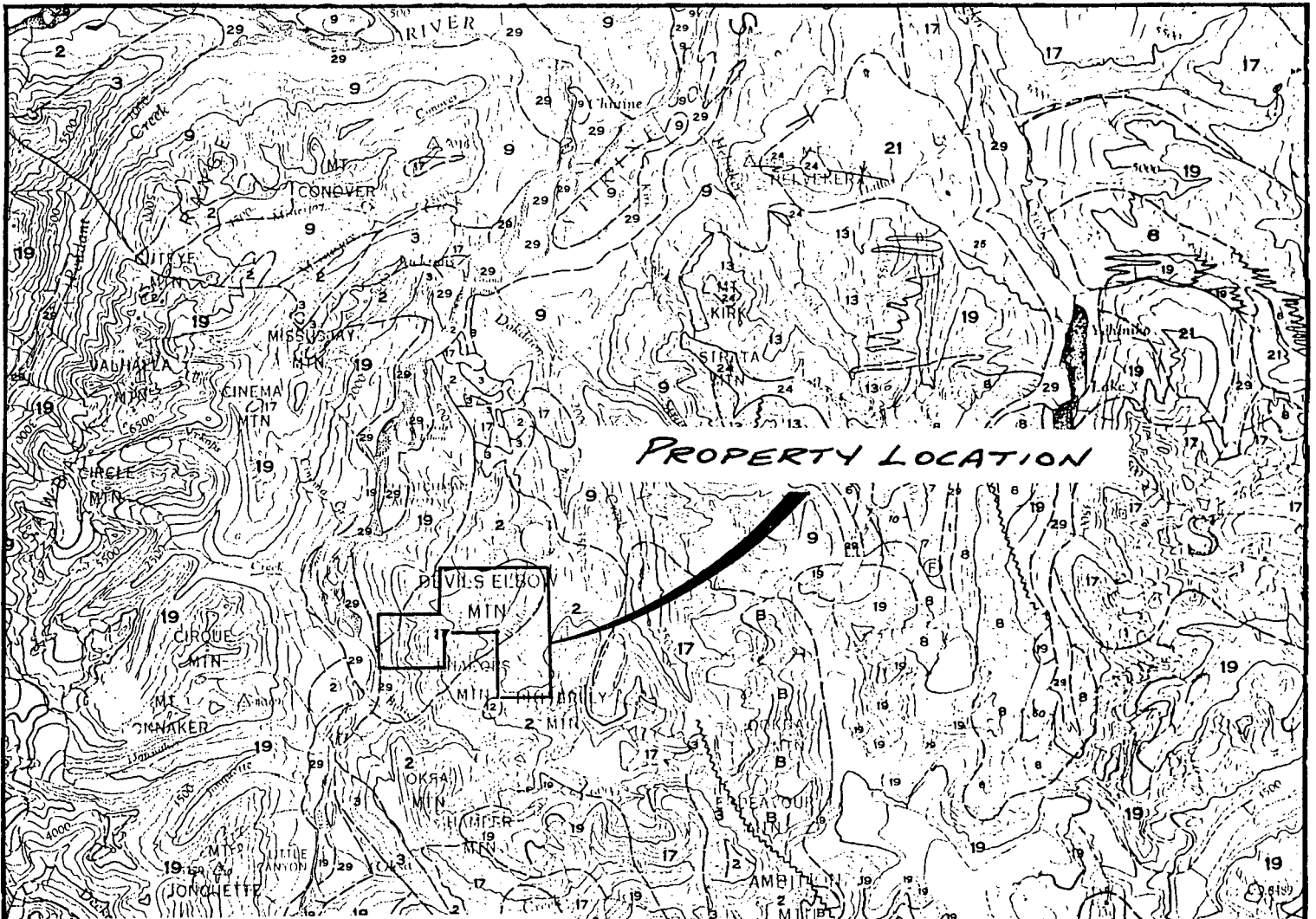
## REGIONAL GEOLOGY

The Galore Creek area lies on the western margin of the Intermontane Belt within the Stikine Arch near its contact with the Coast Plutonic Complex (Figure 4). A sequence of Paleozoic to middle Triassic oceanic sediments is unconformably overlain by Upper Triassic Hazelton Group island arc volcanics and sediments. These have been intruded by Upper Triassic to Lower Jurassic syenitic stocks and by Jurassic to Lower Cretaceous quartz diorite and granodiorite plutons of the Coast Plutonic Complex.

The oldest rock assemblage in the Galore Creek area consists of Permian bioclastic limestone (Unit 3) overlying metamorphosed sediments and volcanics (Unit 2) and crinoidal limestone (Unit 1).

Unconformably overlying the Permian limestone unit are Upper Triassic Hazelton Group island arc volcanics and sediments (Units 5 through 8). In the Galore Creek area, Souther (1971) grouped these volcanic and sedimentary members in Unit 9, noting however that it was composed predominantly of augite andesite breccia, conglomerate and volcanic sandstone. The Paydirt gold deposit, located 50 kilometres south of the PHACOPS property, contains 185,000 tonnes of drill-indicated reserves grading 4.11 grams gold per tonne, is hosted within silicified, sericitized and pyritized Upper Triassic andesitic tuffs. This Upper Triassic volcano-sedimentary package is also correlative with that which hosts the Snip and Stonehouse gold deposits of the Iskut River district approximately 85 kilometres to the south.

Subvolcanic syenite and orthoclase porphyry stocks (Unit 12), dated as Late Triassic to Early Jurassic by Souther (1971), intrude all older stratified rocks. The Galore Creek copper-gold porphyry deposit, whose Central Zone hosts reserves of 125 million tonnes grading 1.06% copper and 400 ppb gold, is hosted by Upper Triassic volcanics intruded by syenitic stocks. Orthoclase porphyry or



PROPERTY LOCATION

~ FROM SOUTHER - 69 ~

CRETACEOUS AND TERTIARY  
UPPER CRETACEOUS AND LOWER TERTIARY

- SLOKO GROUP**
- 24 Light green, purple and white rhyolite, trachyte and dacite flows, pyroclastic rocks and derived sediments
  - 22, 23 22. Biotite leucogranite, subvolcanic stocks, dykes and sills  
23. Porphyritic biotite andesite, lava domes, flows and (?) sills
- SUSTUT GROUP**
- 21 Chert-pebble conglomerate, gravel-boulder conglomerate, quartzose sandstone, arkose, siltstone, carbonaceous shale and minor coal
  - 20 Felsite, quartz-feldspar porphyry, pyritiferous felsite, orbicular rhyolite in part equivalent to 22
  - 19 Medium-to coarse-grained, pink biotite-hornblende quartz monzonite

JURASSIC AND/OR CRETACEOUS  
POST-UPPER TRIASSIC PRE-TERTIARY

- 18 Hornblende diorite
- 17 Granodiorite, quartz diorite; minor diorite, leucogranite and migmatite

TRIASSIC AND JURASSIC  
POST-UPPER TRIASSIC PRE-LOWER JURASSIC

- 12 Syenite, orthoclase porphyry, monzonite, pyroxenite

PERMIAN  
MIDDLE AND UPPER PERMIAN

- 3 Limestone, thick-bedded mafoly bioclastic limestone; minor siltstone, chert and tuff

PERMIAN AND OLDER

- 2 Phyllite, argillaceous quartzite, quartz-schist, chlorite schist, gneiss, minor chert, schistose tuff and limestone

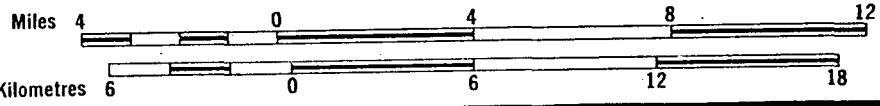
MISSISSIPPIAN

- 1 Limestone, crinoidal limestone, ferruginous limestone; maroon tuff, chert and phyllite

- B Amphibolite, amphibolite gneiss; age unknown probably pre-Upper Jurassic



Scale 1:250,000



|                                       |                |                     |             |
|---------------------------------------|----------------|---------------------|-------------|
| <b>PHACOPS PROPERTY</b>               |                |                     |             |
| <b>REGIONAL GEOLOGY MAP</b>           |                |                     |             |
| LIARD MINING DIVISION                 |                |                     |             |
| <b>COAST MOUNTAIN GEOLOGICAL LTD.</b> |                |                     |             |
| DRAWN BY<br>B.K.                      | NTS.<br>104G/5 | DATE<br>APRIL, 1990 | FIGURE<br>4 |

syenite stocks are associated with most significant precious metals deposits in the Stewart, Sulphurets and Iskut River districts, including the Silbak Premier, Sulphurets, and Snip deposits.

Jurassic and Cretaceous granodiorite to quartz diorite batholiths (Unit 17) of the Coast Plutonic Complex intrude all older lithologies.

#### 1989 WORK PROGRAM

Between September 22 and 24 of 1989, Coast Mountain Geological conducted a preliminary prospecting, and mapping on the property on behalf of J. Tarnowski, the owner of the claims. During the program, a total of 18 rock samples were taken (Figure 5).

#### Rock Geochemistry Survey

The rock samples were collected while prospecting and mapping. They were selected for their potential for carrying mineralization. The samples were then sent to Acme Laboratories in Vancouver where they were pulverized and screened. The minus 100 mesh portions were then analyzed for 32 elements by ICP and gold by AA. All 18 samples were collected from the RB 27, Bryd 1 and 2 claims. In general, the results from the survey were not very conclusive, however, there appears to be a definite presence of copper on the property. One sample of andesite (PHF-13) returned copper values of 1443 ppm and 1.1 ppm in silver. Gold values were rather disappointing as only one sample reached above 10 ppb. However, the results of the survey must be taken in context as the survey was conducted in just 3 days and over only a portion of the property. The Certificate of Analysis and the rock sample descriptions accompanies this report as Appendix I and II respectively.

### Property Geology

The property is underlain by Permian and older intermediate metavolcanic and metasedimentary rocks. This sequence of rocks is in contact with a Jurassic age intrusion. The area around Butterfly Mountain (RB 27 claim) is characterized by moderate folding with north to northwest striking chlorite-sericite foliation and tight to isoclinal chevron folds. Large quartz veins are common along the nose of the folds, but are usually pure white and barren of sulphide mineralization. Fault and shear zones cut the package and are often traceable over large distances. Sulphide mineralization and gossanous zones are often associated with these areas. Fine grain east to southeast trending andesite dykes with 1% to 3% pyrite/pyrrhotite is common on the property.

The metavolcanic unit consists mainly of green foliated hornblende and chlorite altered andesite flows. Minor amounts of quartz sericite schist, chlorite schist, crystal tuffs and lithic lapilli tuffs were also encountered. The sediments consist mostly of limestone with some phyllite and argillaceous quartzite. The limestone is very altered and disturbed near the contact with the intrusive. It is also mineralized, up to 2-3%, with pyrrhotite, pyrite, sphalerite and chalcopyrite.

The intrusive encountered on the property is a medium grained, equigranular hornblende-biotite granodiorite. The granodiorite is well fractured and mineralized near the contact with up to 15% pyrite. It is massive and generally is pink in colour from weathering. The mafics are hornblende, biotite and augite which together comprise up to 20% of the rock and are generally chloritized. Euhedral plagioclase make up 35% as does potassium feldspar.

## DISCUSSIONS AND CONCLUSIONS

The Galore Creek camp has gained prominence recently with the discovery of precious metal mineralization of the Trophy Project and more recently the very encouraging results on the Jack Wilson property belonging to Bellex Gold Corp. The mineralization in these properties are generally associated with syenite stocks which have intruded an volcanic and/or sedimentary sequence.

The PHACOPS property is in a favourable geological setting being underlain by a Permian volcanic and sedimentary sequence in contact with a Jurassic intrusion. The rock sampling program produce some encouraging results for copper but did not identify any areas of mineralization. However, the program conducted on the property was limited in scope and area. Also, the area which produced the anomalous results for gold, silver, zinc and tin from the government geochem survey has not been investigated.

## RECOMMENDATIONS

After reviewing the data, the following program is recommended for further exploration of the property:

- (1) mapping and prospecting over the property, especially around the area that produced the anomalous RGS silt sample.
- (2) reconnaissance geochemical soil survey lines should be run in the area of the anomalous RGS silt samples.

STATEMENT OF COSTS

|                                       |             |
|---------------------------------------|-------------|
| Mob and Demob                         | \$1,200.00  |
| Project Geologist: 2 days @ \$300/day | 600.00      |
| Geologist: 2 x 2 days @\$250/day      | 1,000.00    |
| Prospector: 2 day @ \$200/day         | 400.00      |
| Camp Costs: 8 @ \$130/each            | 1,040.00    |
| Consumables                           | 105.00      |
| Equipment                             | 105.00      |
| Project Prep                          | 500.00      |
| Assays: Rocks - 18 @ \$13.75 each     | 247.50      |
| Helicopter: 2.9 hour @ \$767.80       | 2,226.62    |
| Freight and Communications            | 200.00      |
| Management: 12%                       | 914.89      |
| Report                                | 1,500.00    |
|                                       | -----       |
| TOTAL COST OF PROGRAM                 | \$10,039.01 |
|                                       | =====       |

Respectfully submitted

BOA SERVICES LTD.



Paul P.L. Chung, FGAC

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Logan, J.M. and V.M. Koyanagi. 1989: Geology and Mineral Deposits of the Galore Creek Area, Northwestern B.C. (104G/3, 4), B.C. Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork, 1988, Paper 1989-1, pages 269-284.

Souther, J.D. 1971: Telegraph Creek Map Area, British Columbia; Geological Survey of Canada Paper 71-44.

STATEMENT OF QUALIFICATIONS

I, Paul P.L. Chung, of the City of Richmond, Province of British Columbia, DO HEREBY CERTIFY THAT:

- (1) I am a Consulting Geologist with business address office at Suite 840 - 650 West Georgia Street, Vancouver, British Columbia, V6B 4N8; and president of Boa Services Ltd.
- (2) I am a graduate in geology with a Bachelor of Science degree from the University of British Columbia, in 1981.
- (3) I have practised my profession continuously since graduation.
- (4) I am a Fellow of the Geological Association of Canada.
- (5) I have conducted various mineral exploration programmes in B.C., Yukon, Manitoba, Ontario, Quebec, Nova Scotia and Nevada.
- (6) This report is based on information supplied to me by Coast Mountain Geological and on selected publications and reports.

  
Paul P.L. Chung F.G.A.C.  
FELLOW

Dated at Vancouver, British Columbia, this 2nd day of April, 1990.

APPENDIX I

CERTIFICATE OF ANALYSIS

| SAMPLE#    | Mo<br>PPM | Cu<br>PPM | Pb<br>PPM | Zn<br>PPM | Ag<br>PPM | Ni<br>PPM | Co<br>PPM | Mn<br>PPM | Fe<br>% | As<br>PPM | U<br>PPM | Au<br>PPM | Th<br>PPM | Sr<br>PPM | Cd<br>PPM | Sb<br>PPM | Bi<br>PPM | V<br>PPM | Ca<br>% | P<br>% | La<br>PPM | Cr<br>PPM | Mg<br>% | Ba<br>PPM | Ti<br>% | B<br>PPM | Al<br>% | Na<br>% | K<br>% | W<br>PPM | Au*<br>PPB |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|--------|-----------|-----------|---------|-----------|---------|----------|---------|---------|--------|----------|------------|
| PHF-10     | 1         | 326       | 10        | 31        | .2        | 32        | 16        | 1915      | 14.93   | 2         | 5        | ND        | 1         | 20        | 1         | 4         | 2         | 370      | .43     | .048   | 2         | 11        | .09     | 30        | .04     | 5        | .26     | .02     | .04    | 1        | 3          |
| PHF-11     | 1         | 13        | 8         | 25        | .2        | 10        | 6         | 623       | 2.73    | 2         | 5        | ND        | 1         | 92        | 1         | 2         | 3         | 80       | 1.40    | .039   | 3         | 13        | .61     | 86        | .02     | 5        | .99     | .01     | .31    | 1        | 2          |
| PHF-12     | 1         | 70        | 11        | 25        | .2        | 31        | 41        | 245       | 3.75    | 10        | 5        | ND        | 1         | 47        | 1         | 2         | 2         | 50       | .68     | .132   | 2         | 38        | 1.07    | 32        | .12     | 3        | 1.30    | .04     | .09    | 1        | 10         |
| PHF-13     | 1         | 1443      | 3         | 22        | 1.1       | 70        | 37        | 93        | 3.57    | 2         | 5        | ND        | 1         | 133       | 1         | 2         | 5         | 22       | 1.18    | .044   | 2         | 54        | .43     | 114       | .06     | 7        | 1.99    | .11     | .12    | 1        | 7          |
| PHF-14     | 9         | 48        | 3         | 12        | .1        | 17        | 5         | 119       | .84     | 2         | 5        | ND        | 1         | 29        | 1         | 2         | 2         | 31       | .31     | .015   | 2         | 81        | .40     | 30        | .05     | 3        | .71     | .05     | .19    | 1        | 12         |
| PHK-01     | 1         | 34        | 3         | 42        | .2        | 37        | 22        | 334       | 6.47    | 2         | 5        | ND        | 1         | 44        | 1         | 2         | 2         | 162      | 1.72    | .459   | 4         | 59        | 1.29    | 642       | .10     | 6        | 1.28    | .03     | .89    | 1        | 1          |
| PHK-02     | 1         | 1783      | 2         | 18        | 1.2       | 2         | 6         | 585       | 2.21    | 2         | 5        | ND        | 1         | 189       | 1         | 2         | 2         | 19       | 11.71   | .033   | 2         | 6         | .03     | 11        | .01     | 7        | .22     | .01     | .01    | 1        | 4          |
| PHK-03     | 1         | 1249      | 3         | 44        | .8        | 4         | 3         | 389       | 1.43    | 2         | 5        | ND        | 1         | 81        | 1         | 2         | 2         | 64       | 7.63    | .027   | 2         | 3         | .08     | 18        | .05     | 15       | .85     | .01     | .02    | 1        | 18         |
| PHK-04     | 1         | 91        | 7         | 77        | .2        | 75        | 19        | 555       | 4.81    | 2         | 5        | ND        | 1         | 112       | 1         | 4         | 2         | 88       | 1.71    | .160   | 24        | 26        | 2.23    | 520       | .23     | 2        | 2.07    | .14     | .43    | 1        | 2          |
| PHK-05     | 1         | 232       | 7         | 12        | .1        | 6         | 8         | 65        | 5.93    | 2         | 5        | ND        | 1         | 160       | 1         | 2         | 3         | 41       | .67     | .212   | 4         | 6         | .15     | 63        | .07     | 4        | .52     | .05     | .07    | 1        | 1          |
| PHK-06     | 3         | 10        | 4         | 72        | .1        | 2         | 6         | 329       | 3.60    | 2         | 5        | ND        | 1         | 36        | 1         | 2         | 3         | 34       | 1.16    | .367   | 23        | 8         | 1.34    | 171       | .07     | 19       | 1.61    | .08     | .21    | 1        | 2          |
| PHK-07     | 2         | 105       | 4         | 34        | .2        | 8         | 5         | 156       | 2.58    | 2         | 5        | ND        | 1         | 19        | 1         | 2         | 2         | 20       | .38     | .034   | 2         | 8         | .16     | 106       | .06     | 2        | .95     | .03     | .19    | 1        | 15         |
| PHK-09     | 1         | 66        | 2         | 10        | .2        | 4         | 12        | 129       | 2.98    | 3         | 5        | ND        | 1         | 12        | 1         | 2         | 2         | 19       | .30     | .013   | 2         | 35        | .28     | 4         | .01     | 10       | .30     | .01     | .01    | 1        | 11         |
| PHK-10     | 1         | 89        | 3         | 9         | .1        | 9         | 5         | 148       | 1.20    | 3         | 5        | ND        | 2         | 8         | 1         | 2         | 2         | 22       | .44     | .021   | 4         | 11        | .22     | 32        | .03     | 4        | .37     | .03     | .15    | 1        | 2          |
| PHS-01     | 1         | 33        | 2         | 23        | .3        | 21        | 9         | 2927      | 6.39    | 7         | 5        | ND        | 1         | 204       | 1         | 2         | 3         | 16       | 13.09   | .066   | 5         | 24        | .37     | 8         | .03     | 5        | .76     | .01     | .01    | 13       | 41         |
| PHS-02     | 1         | 44        | 14        | 73        | .5        | 21        | 9         | 2231      | 5.32    | 7         | 5        | ND        | 1         | 200       | 1         | 2         | 2         | 41       | 10.93   | .024   | 4         | 41        | 1.32    | 4         | .03     | 5        | 1.99    | .01     | .01    | 1        | 1          |
| PHS-03     | 1         | 21        | 8         | 110       | .2        | 23        | 15        | 842       | 5.14    | 8         | 5        | ND        | 1         | 115       | 1         | 2         | 2         | 76       | 2.15    | .259   | 28        | 44        | 1.95    | 36        | .28     | 11       | 2.47    | .02     | .03    | 1        | 1          |
| PHS-04     | 1         | 38        | 3         | 85        | .2        | 26        | 5         | 188       | 2.54    | 13        | 5        | ND        | 1         | 88        | 1         | 2         | 2         | 27       | 3.11    | .015   | 4         | 23        | .91     | 23        | .02     | 2        | 1.73    | .02     | .12    | 1        | 4          |
| PHS-05     | 1         | 60        | 10        | 54        | .1        | 7         | 8         | 320       | 2.87    | 2         | 5        | ND        | 4         | 187       | 1         | 2         | 2         | 104      | 1.74    | .165   | 18        | 14        | .81     | 113       | .12     | 2        | 3.21    | .16     | .22    | 1        | 2          |
| PHS-06     | 3         | 38        | 8         | 23        | .4        | 46        | 6         | 64        | 1.24    | 15        | 5        | ND        | 1         | 349       | 1         | 2         | 2         | 23       | 3.11    | .030   | 6         | 18        | .22     | 16        | .06     | 10       | 2.34    | .09     | .07    | 1        | 1          |
| PHS-07     | 3         | 125       | 2         | 32        | .5        | 52        | 21        | 207       | 4.02    | 8         | 5        | ND        | 3         | 67        | 1         | 2         | 2         | 48       | 1.55    | .089   | 5         | 61        | 1.05    | 30        | .11     | 7        | 2.17    | .11     | .08    | 1        | 4          |
| PHS-08     | 1         | 7         | 3         | 38        | .2        | 6         | 9         | 307       | 2.41    | 2         | 5        | ND        | 11        | 33        | 1         | 2         | 2         | 51       | .52     | .057   | 10        | 13        | .87     | 30        | .09     | 3        | .94     | .02     | .06    | 2        | 1          |
| PHS-09     | 1         | 112       | 10        | 39        | .8        | 16        | 16        | 403       | 3.02    | 2         | 5        | ND        | 3         | 71        | 1         | 2         | 2         | 55       | 1.03    | .086   | 4         | 17        | 1.06    | 16        | .12     | 4        | 1.97    | .06     | .03    | 2        | 1          |
| PHS-10     | 4         | 57        | 7         | 57        | .2        | 8         | 11        | 435       | 3.92    | 4         | 5        | ND        | 7         | 51        | 1         | 2         | 2         | 68       | .79     | .088   | 12        | 13        | .95     | 68        | .13     | 3        | 2.08    | .11     | .16    | 3        | 5          |
| PHS-11     | 1         | 370       | 5         | 46        | .3        | 6         | 16        | 347       | 4.00    | 2         | 5        | ND        | 7         | 26        | 1         | 2         | 2         | 74       | .59     | .058   | 10        | 13        | 1.02    | 172       | .17     | 3        | 1.78    | .06     | .27    | 1        | 2          |
| PHS-12     | 1         | 30        | 9         | 49        | .2        | 27        | 15        | 406       | 3.61    | 21        | 5        | ND        | 8         | 24        | 1         | 2         | 2         | 63       | .25     | .024   | 5         | 28        | 1.28    | 73        | .18     | 2        | 2.26    | .04     | .72    | 1        | 6          |
| PHS-13     | 5         | 68        | 2         | 39        | .3        | 9         | 4         | 300       | 3.69    | 2         | 5        | ND        | 1         | 12        | 1         | 2         | 3         | 68       | .28     | .017   | 2         | 26        | 1.65    | 36        | .15     | 2        | 2.06    | .03     | .16    | 1        | 1          |
| JKCB-01    | 2         | 46        | 477       | 467       | 1.3       | 2         | 5         | 549       | 2.13    | 3         | 5        | ND        | 11        | 59        | 24        | 2         | 2         | 1        | 1.32    | .028   | 13        | 2         | .12     | 64        | .01     | 2        | .27     | .03     | .13    | 1        | 16         |
| JKCB-02    | 4         | 49        | 61        | 42        | .8        | 2         | 6         | 701       | 2.10    | 5         | 5        | ND        | 9         | 58        | 2         | 2         | 2         | 1        | 1.35    | .031   | 12        | 2         | .15     | 54        | .01     | 2        | .25     | .02     | .11    | 2        | 6          |
| JKCB-03    | 2         | 31        | 50        | 85        | .2        | 4         | 8         | 735       | 2.98    | 2         | 5        | ND        | 11        | 122       | 4         | 2         | 2         | 22       | 2.66    | .052   | 8         | 8         | .58     | 71        | .02     | 4        | .97     | .02     | .18    | 1        | 1          |
| JKCB-04    | 1         | 580       | 2         | 22        | .7        | 7         | 22        | 389       | 4.34    | 2         | 5        | ND        | 1         | 13        | 1         | 2         | 2         | 2        | .89     | .010   | 2         | 4         | .02     | 12        | .02     | 3        | .10     | .01     | .03    | 3        | 5          |
| JKCB-05    | 3         | 7287      | 9         | 258       | 10.1      | 8         | 29        | 252       | 5.83    | 2         | 5        | ND        | 1         | 31        | 9         | 2         | 3         | 10       | 1.17    | .036   | 2         | 6         | .10     | 8         | .05     | 3        | .25     | .01     | .02    | 1        | 92         |
| JKCB-06    | 3         | 88        | 29        | 44        | .4        | 2         | 5         | 578       | 2.78    | 8         | 5        | ND        | 10        | 62        | 1         | 2         | 2         | 2        | 1.34    | .034   | 19        | 2         | .18     | 51        | .01     | 5        | .40     | .03     | .10    | 2        | 5          |
| JKCB-07    | 1         | 3104      | 2         | 84        | 1.9       | 19        | 81        | 233       | 22.51   | 2         | 5        | ND        | 1         | 10        | 1         | 3         | 4         | 6        | .71     | .019   | 2         | 17        | .08     | 6         | .03     | 6        | .15     | .01     | .02    | 248      | 10         |
| JKCB-08    | 5         | 133       | 10        | 76        | .3        | 33        | 11        | 162       | 3.22    | 2         | 9        | ND        | 2         | 87        | 1         | 2         | 2         | 19       | 2.27    | .386   | 13        | 23        | .44     | 59        | .04     | 3        | 2.41    | .10     | .13    | 1        | 1          |
| JKCB-09    | 13        | 129       | 6         | 346       | 1.0       | 41        | 9         | 151       | 3.18    | 2         | 5        | ND        | 1         | 68        | 5         | 2         | 2         | 100      | 1.38    | .151   | 5         | 17        | .67     | 51        | .04     | 5        | 1.49    | .06     | .25    | 1        | 3          |
| STD C/AU-R | 18        | 59        | 41        | 131       | 7.1       | 68        | 30        | 1022      | 4.05    | 39        | 19       | 8         | 36        | 47        | 19        | 15        | 17        | 58       | .48     | .095   | 37        | 56        | .87     | 173       | .06     | 35       | 1.97    | .06     | .14    | 12       | 480        |

APPENDIX II

SAMPLE DESCRIPTIONS - ROCKS

Project TF  
Date Sept 22/89

Project \_\_\_\_\_  
Property RB 25 + RB 27

Location Ref \_\_\_\_\_  
Air Photo No \_\_\_\_\_

| SAMPLE NO. | LOCATION | SAMPLE TYPE | Sample Width | True Width | DESCRIPTION |            |                | ADDITIONAL OBSERVATIONS | ASSAYS |  |  |  |
|------------|----------|-------------|--------------|------------|-------------|------------|----------------|-------------------------|--------|--|--|--|
|            |          |             |              |            | Rock Type   | Alteration | Mineralization |                         |        |  |  |  |
| -F01       | RB 25    | GRAB        | /            |            | Andesite    | chloritic  | pyrite         | limonitic, siliceous    |        |  |  |  |
| -F02       | RB 25    | FLYBT       | /            |            | Andesite    | chloritic  | py + pyrrh.    | limonitic               |        |  |  |  |
| -F03       | RB 25    | GRAB        | /            |            | Syenite     | —          | pyrite         | syenite dyke            |        |  |  |  |
| -F04       | RB 25    | GRAB        | /            |            | Syenite     | —          | pyrite         | limonitic               |        |  |  |  |
| -F05       | RB 25    | GRAB        | /            |            | Syenite     | —          | pyrite         | limonitic               |        |  |  |  |
| -F06       | RB 25    | GRAB        | /            |            | Syenite     | —          | pyrite         | limonitic               |        |  |  |  |
| -F07       | RB 25    | GRAB        | /            |            | Hornblende  | —          | pyrite         | limonitic               |        |  |  |  |
| -F08       | RB 25    | GRAB        | /            |            | Syenite     | —          | —              | limonitic               |        |  |  |  |
| -F09       | RB 25    | GRAB        | /            |            | Andesite    | chloritic  | py + pyrrh.    | siliceous + limonitic   |        |  |  |  |
| -F10       | RB 25    | GRAB        | /            |            | Andesite    | chloritic  | pyrite         | limonitic + manganese   |        |  |  |  |
| -F11       | RB 25    | GRAB        | /            |            | Syenite     | —          | pyrite         | limonitic siliceous     |        |  |  |  |
| -F12       | RB 27    | GRAB        | /            |            | Andesite    | chloritic  | —              | limonitic manganese     |        |  |  |  |
| -F13       | RB 27    | GRAB        | /            |            | Andesite    | chloritic  | —              | limonitic, manganese    |        |  |  |  |
| -F14       | RB 27    | GRAB        | /            |            | Qtz vein    | —          | —              | limonitic               |        |  |  |  |
|            |          |             | /            |            |             |            |                |                         |        |  |  |  |
|            |          |             | /            |            |             |            |                |                         |        |  |  |  |
|            |          |             | /            |            |             |            |                |                         |        |  |  |  |
|            |          |             | /            |            |             |            |                |                         |        |  |  |  |
|            |          |             | /            |            |             |            |                |                         |        |  |  |  |
|            |          |             | /            |            |             |            |                |                         |        |  |  |  |

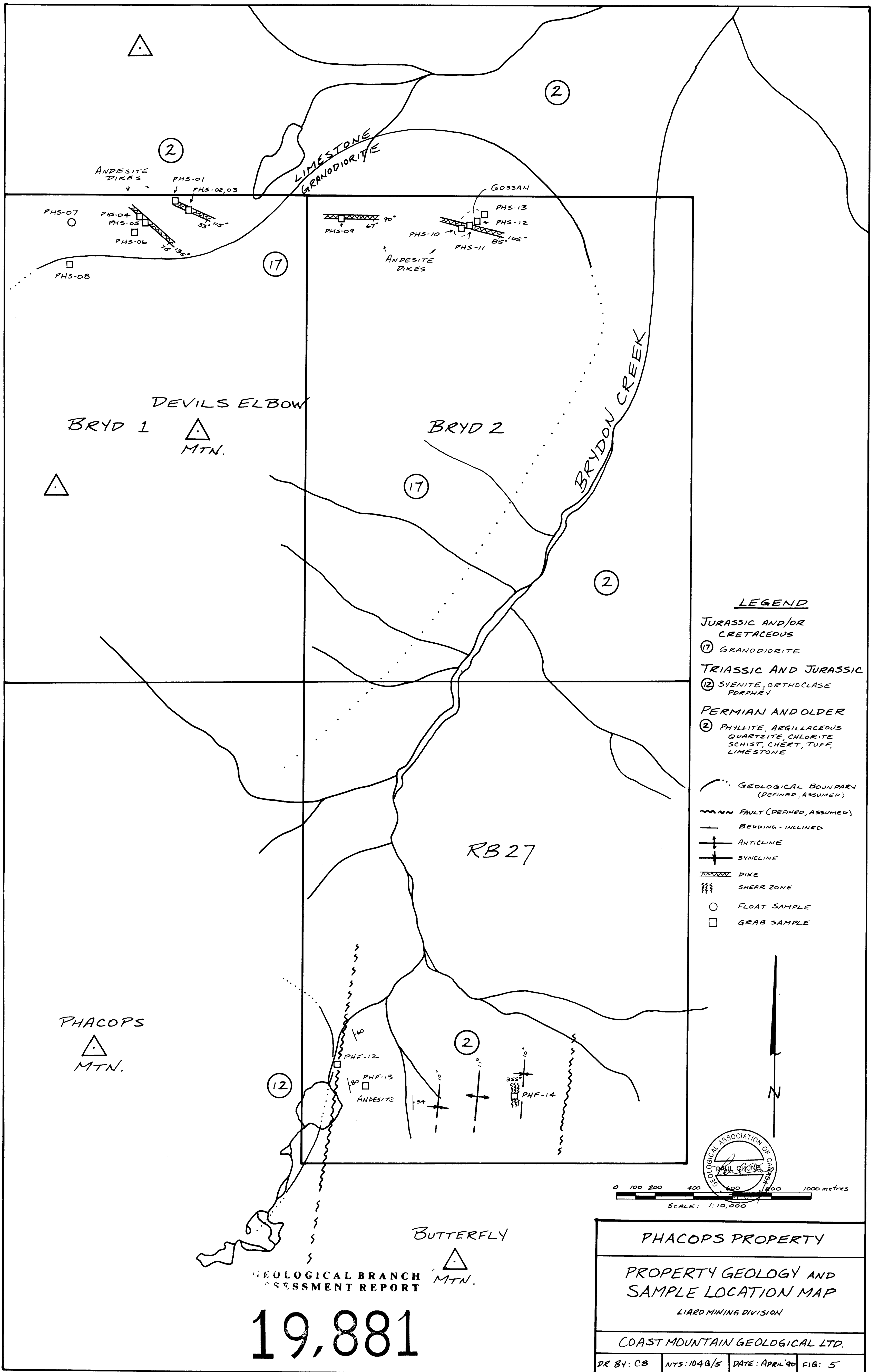
Concave ground

Sampler D.S.  
Sept 22 / 89

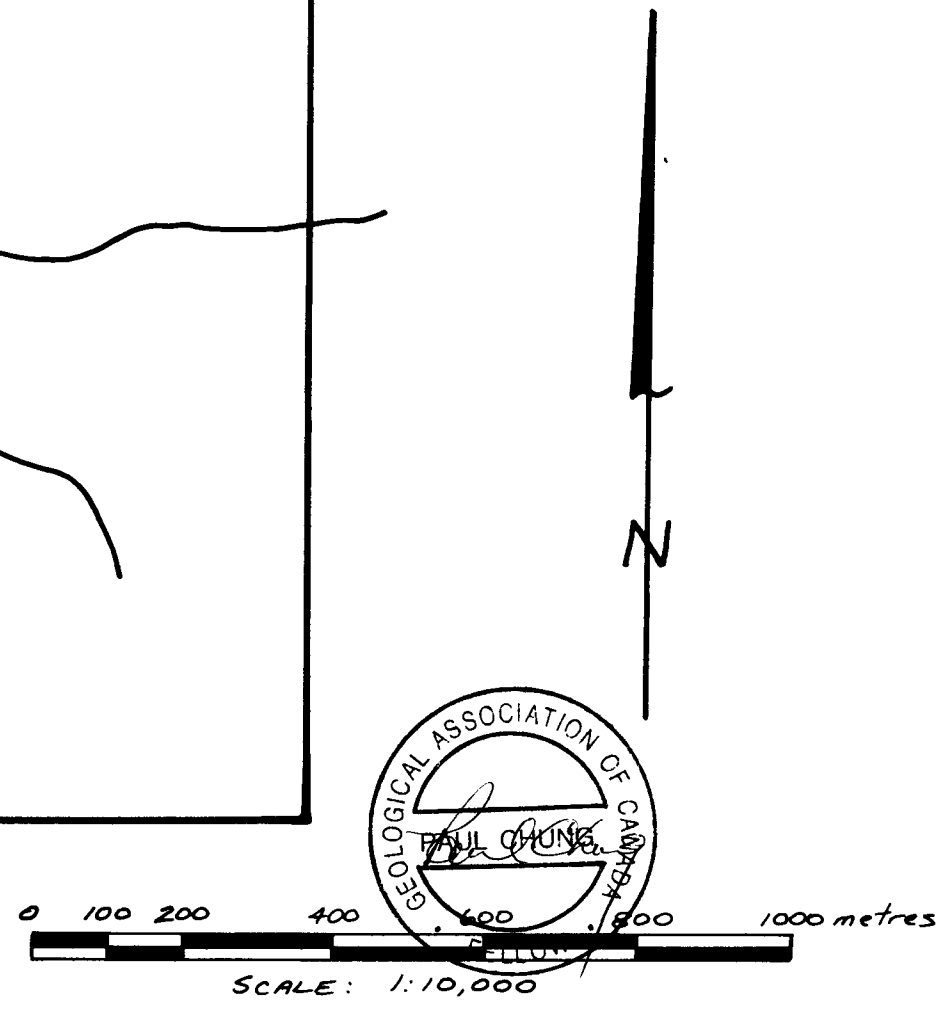
Project \_\_\_\_\_  
Property BYRD 1

Location Ref \_\_\_\_\_  
Air Photo No \_\_\_\_\_

| SAMPLE NO. | LOCATION | SAMPLE TYPE | Sample Width<br>True Width | DESCRIPTION       |             |                | ADDITIONAL OBSERVATIONS | ASSAYS |  |  |  |  |  |
|------------|----------|-------------|----------------------------|-------------------|-------------|----------------|-------------------------|--------|--|--|--|--|--|
|            |          |             |                            | Rock Type         | Alteration  | Mineralization |                         |        |  |  |  |  |  |
| TS01       | BYRD 1   | GRAB        | /                          | Limestone         | —           | pyrrhotite     | manganese staining      |        |  |  |  |  |  |
| TS02       | "        | GRAB        | /                          | Limestone Breccia | —           | pyrrhotite     | manganese, fluorite     |        |  |  |  |  |  |
| TS03       | "        | GRAB        | /                          | Andesite          | chlorite    | pyrrhotite     |                         |        |  |  |  |  |  |
| TS04       | "        | GRAB        | /                          | Limestone         | argillic    | pyrite         | manganese               |        |  |  |  |  |  |
| TS05       | "        | GRAB        | /                          | Limestone         | —           | pyrite         | manganese, limonitic    |        |  |  |  |  |  |
| TS06       | "        | GRAB        | /                          | Limestone         | —           | pyrite         | manganese, limonitic    |        |  |  |  |  |  |
| TS07       | "        | FLOAT       | /                          | Quartz            | —           | pyrite         | manganese, limonitic    |        |  |  |  |  |  |
| TS08       | "        | GRAB        | /                          | Granodiorite      | —           | —              |                         |        |  |  |  |  |  |
| TS09       | "        | GRAB        | /                          | Granodiorite      | sericitized | —              | limonitic               |        |  |  |  |  |  |
| TS10       | "        | GRAB        | /                          | Granodiorite      | sericitized | pyrite         | massive                 |        |  |  |  |  |  |
| TS11       | "        | GRAB        | /                          | Granodiorite      | sericitized | pyrite         | massive                 |        |  |  |  |  |  |
| TS12       | "        | GRAB        | /                          | Granodiorite      | sericitized | pyrite         | massive                 |        |  |  |  |  |  |
| TS13       | "        | GRAB        | /                          | Granodiorite      | sericitized | pyrite         | massive                 |        |  |  |  |  |  |



- LEGEND**
- JURASSIC AND/OR CRETACEOUS
  - (17) GRANDIORITE
  - TRIASSIC AND JURASSIC
  - (12) SYENITE, ORTHOCLASE PORPHYRY
  - PERMIAN AND OLDER
  - (2) PHYLITE, ARGILLACEOUS QUARTZITE, CHLORITE SCHIST, CHERT, TUFF, LIMESTONE
  - ..... GEOLOGICAL BOUNDARY (DEFINED, ASSUMED)
  - FAULT (DEFINED, ASSUMED)
  - BEDDING - INCLINED
  - ANTICLINE
  - SYNCLINE
  - ▨ DIKE
  - ||| SHEAR ZONE
  - FLOAT SAMPLE
  - GRAB SAMPLE



**PHACOPS PROPERTY**

**PROPERTY GEOLOGY AND SAMPLE LOCATION MAP**

LIARD MINING DIVISION

COAST MOUNTAIN GEOLOGICAL LTD.

DR. BY: CB    NTS: 1049/5    DATE: APRIL '90    FIG: 5

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**19,881**