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GEOLOGICAL REPORT
ON
THE CUERVO GOLD CLAIMS
WARN BAY AREA
VANCOUVER ISLAND

NTS 92F/5

ALBERNI MINING DIVISION

49° 16' N
125° 40' W

by
Raymond Morris
and
Jennifer Pell, Ph.D., FGAC

JANUARY, 1989

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,013

GEOLOGICAL REPORT ON THE CUERVO GOLD CLAIMS WARN BAY AREA, VANCOUVER ISLAND

1. INTRODUCTION

A prospecting and geochemical survey was carried out on the Cuervo Gold claims in the Warn Bay/Tranquil Creek area of the west coast of Vancouver Island during 1988 and early 1989. The claims were staked to cover some favorable gold anomalies discovered in a small preliminary moss mat sampling program. Coarse grained igneous rocks of the Island Intrusions crop out on the central portion of the claims. To the northwest, the claims are underlain by Karmutsen Formation volcanics, and quartzofeldspathic gneisses of the Westcoast Complex crop out on the southern portion of the property.

The Warn Bay/Tranquil Creek area has a history of discoveries of rich gold-bearing veins that dates back to the 1890's; anomalous gold values found in the course of moss mat sampling indicates that a good potential of finding gold-bearing veins on the Cuervo Gold claims exists.

2. PROPERTY, LOCATION AND ACCESS

The Cuervo Gold property (Figure 1) is located to the east of the head of Warn Bay, approximately 25 kilometers northeast of Tofino, on the west coast of Vancouver Island (Map Sheet 92F/5E). Access is gained by boat or float plane to the mouth of Bulson Creek and then via a 3.5 kilometer hike along a MacMillan Bloedel logging road that runs onto the western part of the property. The eastern portions of the claims can be accessed from a logging road followed for a distance of approximately 6 kilometers from the head of Tranquil Bay. Helicopter facilities are also available in Port Alberni, about 60 kilometers to the east, and periodically in Tofino.

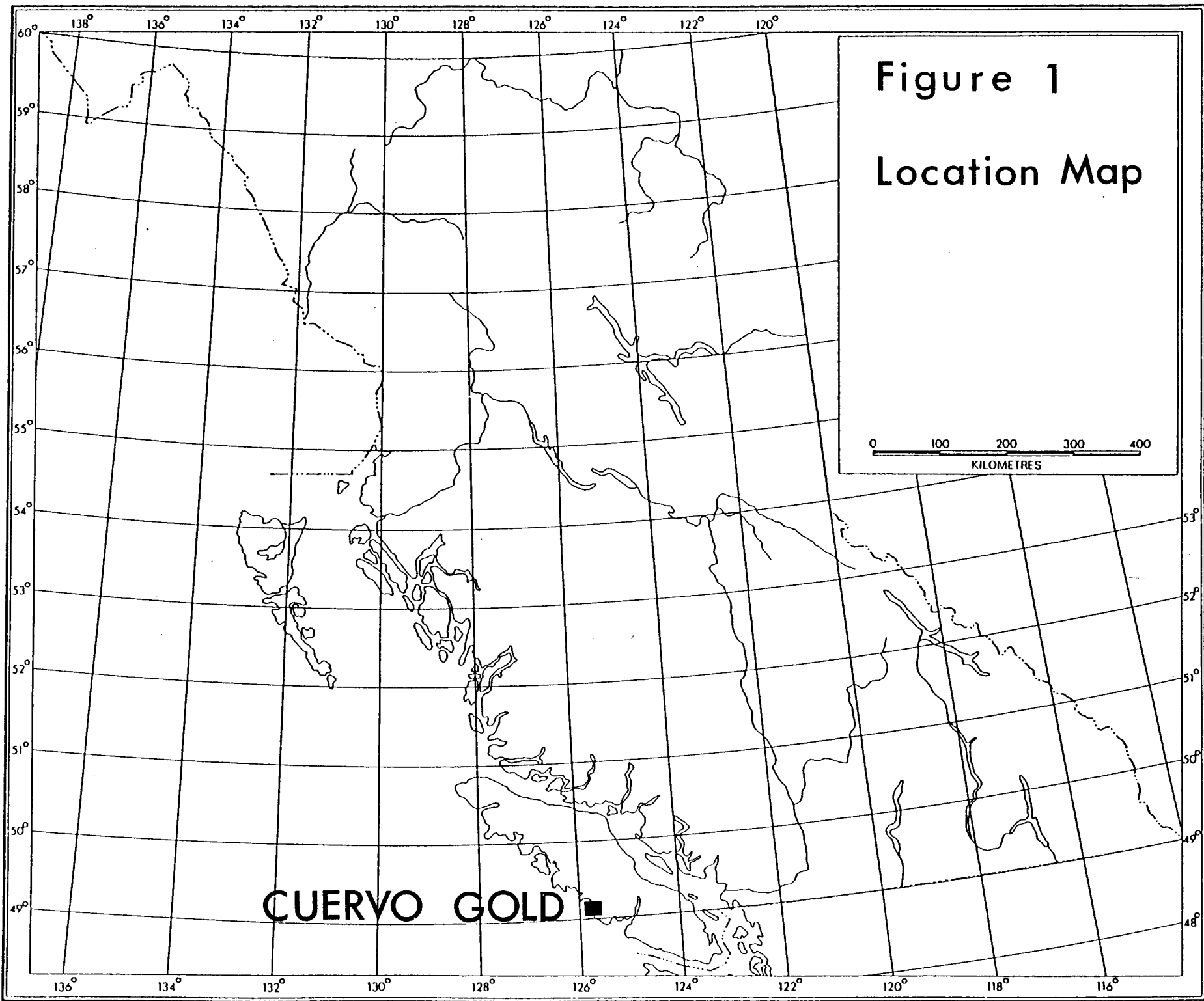
2.1 PHYSIOGRAPHY

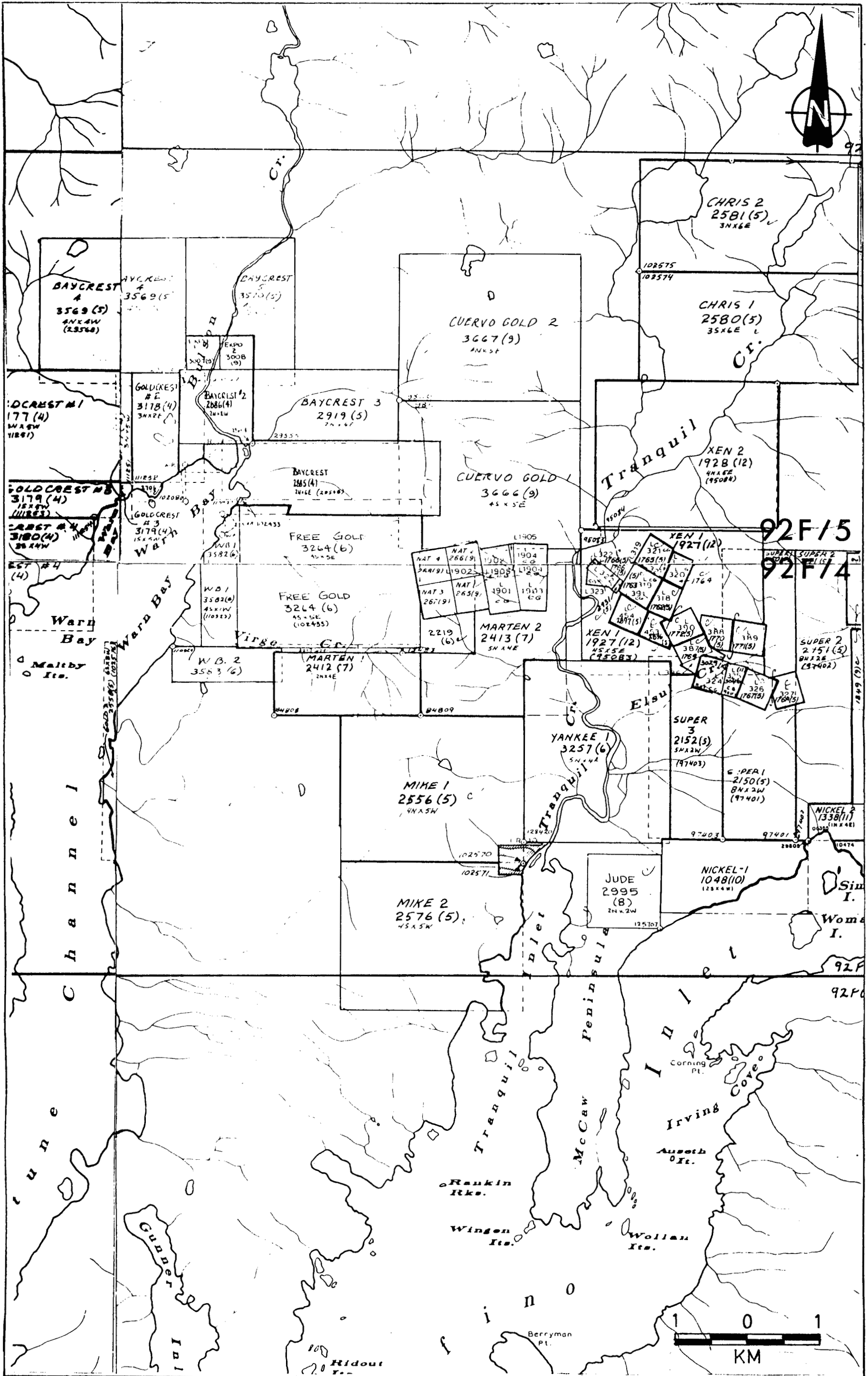
The Warn Bay area is rugged, mountainous with heavily timbered, steep slopes. Property elevations range from 150 to 1250 meters. Vegetation consists mainly of large cedar with moderate to thin underbrush. Annual precipitation levels are high, but winters are mild and it would be possible to work the property year round.

2.2 CLAIM STATUS

The Cuervo Gold property consists of two contiguous 20 unit mineral claims (Figure 2) as follows:

<u>Name</u>	<u>Record No.</u>	<u>Expiry Date</u>	<u>No. of units</u>
Cuervo Gold 1	3666	Sept 8/1989	20
Cuervo Gold 2	3667	Sept 8/1989	20





19013

FIGURE 2 CLAIM MAP

3. GEOLOGY

3.1 REGIONAL GEOLOGY

The Warn Bay - Tranquil Creek area is underlain by a sequence of Late Paleozoic to Mesozoic rocks. The oldest strata in the area, which are exposed northwest of Warn Bay, are Pennsylvanian to Permian metasedimentary rocks of the Sicker Group. Late Triassic basaltic lavas of the Karmutsen Formation are exposed at the head of Tranquil Creek (Figure 3).

The rest of the area is underlain by Early Jurassic intrusive and metamorphic rocks of the Island Intrusions and the Westcoast Complex (Figure 3). The Westcoast Complex consists of hornblende-plagioclase gneisses, quartz diorites, amphibolites and quartzofeldspathic gneisses which are considered to be, in part, metamorphosed equivalents of the Sicker Group and Karmutsen Formation. The Island intrusions are batholiths and stocks of granitoid rocks ranging in composition from quartz diorites to true granites. They are believed to be genetically related to the Westcoast Complex in that they represent the remobilized granitic component formed during the migmatization of the Complex (Muller, 1977).

The regional structure is dominated by steep, northwest-trending faults and northeast-trending cross faults. The northwest-trending structures are interpreted to be Tertiary in age (Carson and Muller, 1969).

3.2 PROPERTY GEOLOGY

The Cuervo Gold claims are predominantly underlain by medium to coarse-grained rocks of the Island Intrusions varying from massive, green-weathering quartz diorites to greyish-weathering granites. Numerous igneous phases are present, with leucocratic granitoids generally crosscutting the more mafic rocks. Screens or inclusions of fine-grained mafic metavolcanic rocks are quite common on the west-central portion of the claims and often contain abundant pyrite. Quartz and quartz-carbonate veinlets are common. Propylitic alteration (epidote, pyrite, chlorite) is common peripheral to the veins and some fractures.

The northwestern portion of the claims is underlain by Karmutsen Formation volcanic rocks. Quartzofeldspathic gneisses of the Westcoast Complex crop out on the southern portion of the claims.

4. REGIONAL HISTORY

The Warn Bay-Tranquil Inlet region has been explored for its mineral potential intermittently since the 1890's. Early development centered on copper-magnetite showings at the head of Elsul Creek approximately 2 kilometers to the southeast of the Cuervo Gold claims (MMAR 1899, 1946). Gold was first discovered at the head of Warn Bay in about 1899; however, only minor development work was done at that time (MMAR, 1899).

Gold exploration began in earnest along the whole of the west coast of Vancouver Island following the 1931 discovery of the Privateer Mine in the Zeballos area, about 100 kilometers to the north of Warn Bay-Tranquil Inlet. Numerous new gold showings that were discovered and explored in the Warn Bay-Tranquil Inlet

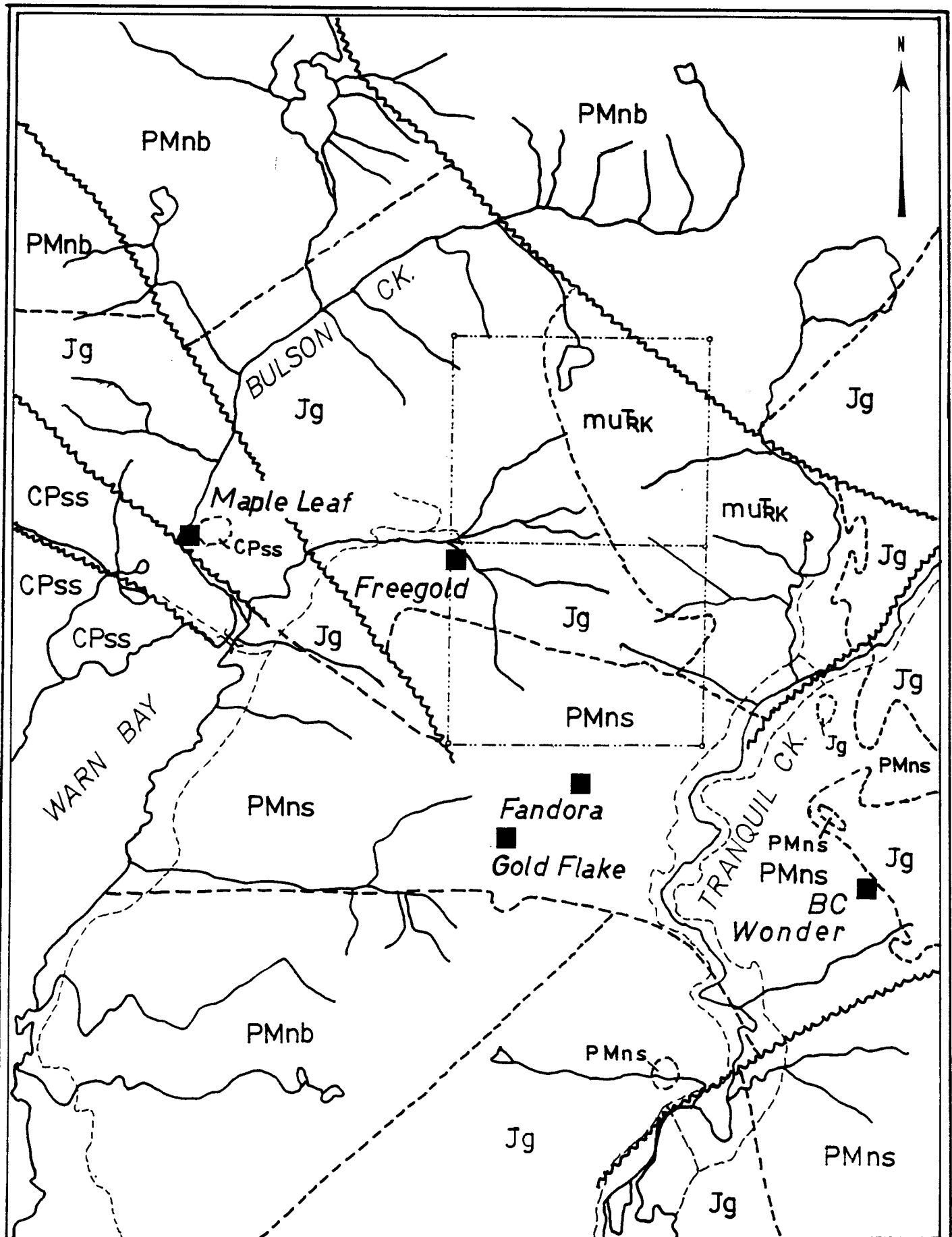


FIGURE 3
REGIONAL GEOLOGY



FIGURE 3

LEGEND

LITHOLOGIES

EARLY JURASSIC

Jg ISLAND INTRUSIONS: granodiorite, quartz diorite, granite,
quartz monzonite

PMns WESTCOAST COMPLEX SILICIC COMPONENT: quartz-feldspar
gneiss, metaquartzite, marble

PMnb WESTCOAST COMPLEX BASIC COMPONENT: hornblende-plagioclase
gneiss, quartz diorite, agmatite, amphibolite

LATE TRIASSIC

muTk KARMUTSEN FORMATION: basaltic lava, pillow lava, breccia,
tuff

PENNSYLVANIAN AND PERMIAN

CPss SIKER GROUP SEDIMENTS: metagreywacke, argillite, schist,
marble

SYMBOLS

--- Geological Contact

~~~~ Fault

---- Road

---

Figure 3 is modified from Lynott, 1946 and Muller, 1977.

area (Fig. 3) until war measures regulations were introduced in 1942 curtailing development of new properties (MMAR; 1940, 1941, 1946).

#### 4.1 FANDORA

The leading development in the Warn Bay-Tranquil Inlet region was on the Fandora prospect (MMAR; 1940, 1942, 1946, 1949, 1958, 1964), located directly south of the Cuervo Gold property (Figure 3). By 1942, considerable underground drifting on two parallel veins, four feet apart, had been conducted by Tofino Gold Mining Co. Following the war, the Fandora property was further developed under option by New Privateer Mines Ltd., and up to July 29/1946 approximately 290 meters of underground drifts and cross cuts had been completed, mainly on three levels. Only minor work was done from 1947 to 1957 at which time the property was acquired by Moneta Mines. Moneta developed the property under lease in the early 1960's during which production data is as follows (BCMEMP, Mindep):

##### Production History - Fandora Prospect

| <u>Year</u> | <u>Production</u>       | <u>Gold</u>                       | <u>Silver</u>                    |
|-------------|-------------------------|-----------------------------------|----------------------------------|
| 1960        | 48 tonnes<br>53 tons    | 467 gr<br>15 oz<br>(0.28 oz/t)    | 62 gr<br>2 oz<br>(.038 oz/t)     |
| 1962        | 36 tonnes<br>40 tons    | 12068 gr<br>388 oz<br>(9.7 oz/t)  | 2644 gr<br>85 oz<br>(2.1 oz/t)   |
| 1963        | 44 tonnes<br>48 tons    | 10291 gr<br>331 oz<br>(6.9 oz/t)  | 2457 gr<br>79 oz<br>(1.6 oz/t)   |
| 1964        | 844 tonnes<br>930 tons  | 22830 gr<br>734 oz<br>(0.79 oz/t) | 3204 gr<br>103 oz<br>(0.11 oz/t) |
| TOTAL       | 972 tonnes<br>1071 tons | 45660 gr<br>1468 oz<br>(1.4 oz/t) | 8367 gr<br>269 oz<br>(0.25 oz/t) |

Presumably, high grade ore was direct shipped in 1962-63. In February 1964, a 35 ton/day mill was utilized. Approximately 930 tons of ore was milled. The mill ceased production in July 1964, and small shipments were made to the Tacoma and Trail smelters (MMAR 1964). Activity on the property was idle from 1964 until 1983 when Devon Industries Inc. optioned the ground, completed a road to the lower level and began some rehabilitation and resampling. Reserves on the Fandora property, (proven and probable) are reported to be 76,000 tons averaging 0.453 Oz Au/ton (Melrose, 1984).

Altered volcanics, tuffs and breccias crop out on the Fandora property. Numerous thin quartz veins are present in shear zones and along dyke margins. The veins are generally sheeted; thin partings of rusty material or fine-grained sulphides separate zones of white quartz. Some carbonates are also present in the veins and



ore minerals include pyrite, and less commonly, chalcopyrite, galena, sphalerite and native gold (Lynott, 1946).

#### 4.2 FREEGOLD

On the western margin of the Cuervo Gold claims is the Freegold showing which was discovered sometime during the 1930's, with development work being done from 1940 to 1942. During this time two adits were driven, a ball crusher established. Two test shipments were mined and shipped:

##### Production History, FreeGold Property

| <u>Year</u> | <u>Production</u> | <u>Gold</u>             | <u>Silver</u>          |
|-------------|-------------------|-------------------------|------------------------|
| 1941        | 0.4880 dry t      | 3.34 oz                 | 0.976 oz               |
| 1942        | 0.9880 dry t      | 8.93 oz                 | 2.77 oz                |
| TOTAL       | 1.476 dry t       | 12.27 oz<br>(8.31 oz/t) | 3.764 oz<br>(2.5 oz/t) |

The main showing on the Freegold property consists of a white quartz vein, 0.2 to 1.0 metres in width which crosscuts a green quartz diorite. Gold is present in its native form, generally found in cavities left by weathered pyrite. Traces of galena are also present (Caulfield and Ikona, 1984).

#### 4.3 MOSCENA (MAPLELEAF)

The Moscena or Mapleleaf prospect lies approximately 2 kilometers to the east of the Cuervo Gold claims. The discovery paralleled that at the Pandora (MMAR; 1899, 1940, 1942, 1946). Two main sheeted gold veins, up to 15 centimeters wide, known as the "Shaft" vein and the "E" vein, are traced for 120 and 240 meters respectively. The majority of the physical work including construction of shafts and open cuts was done by Maple Leaf Syndicate in 1941-42 and Moscena Mines Ltd. in 1946. Three tonnes (3.3 tons) of sample shipped in 1940 contained 124 gr (4 oz) of gold. Some garnet-diopside skarns are also reported from the Moscena property (Guppy, 1987); however, no attention has been paid to potential gold skarn mineralization.

#### 4.4 YANKEE BOY

Little is known about the Yankee Boy prospect which lies 3.5 kilometers to the southeast of the Cuervo Gold claims. References to the Yankee Boy prospect in the Minister of Mines Report of 1946 state: "in 1940, production of approximately 35 oz of gold and some silver was recorded from three properties, the Gold Flake, Mapleleaf, and the Yankee Boy". Results of tonnage lot sample shipments from the Yankee Boy to the Department of Mines sampling plant in Prince Rupert are summarized below (MMAR; 1940, 1941).

### Production History, Yankee Boy Prospect

| <u>Year</u> | <u>Production</u>          | <u>Gold</u>         | <u>Silver</u>      |
|-------------|----------------------------|---------------------|--------------------|
| 1940        | 0.35 tonnes<br>(0.38 tons) | 387 gr<br>(12.4 oz) | 178 gr<br>(5.6 oz) |
| 1941        | 0.43 tonnes<br>(0.47 tons) | 110 gr<br>(3.5 oz)  | 48 gr<br>(1.5 oz)  |
| TOTAL       | 0.77 tonnes<br>(0.85 tons) | 497 gr<br>(16 oz)   | 226 gr<br>(7.3 oz) |

The average grade of the tonnage lot samples is 640.4 gr/tonne (15.96 oz/ton) Au and 292.0 gr/tonnes (8.52 oz/ton) Ag.

#### 5. PROPERTY HISTORY

There is no record of work on the Cuervo Gold claims in the available published and archived literature. The only reference was from an old time prospector who claimed that a vein, on the property, was worked by hand prior to the Second World War. No evidence of old workings was spotted during prospecting of the creeks; however, with the rapid growth of the underbrush it would be doubtful if any such signs would remain visible for long.

#### 6. PROPERTY EXPLORATION

A prospecting and moss mat sampling program was carried out on the western part of the Cuervo Gold property in the Warn Bay/Tranquil Inlet area (Fig. 4A, B, C; Appendix 1). Thirty moss mat and eight rock samples were analysed. A number of extremely anomalous gold values (eg. 1600 ppb, 616 ppb, 400 ppb, Fig 4C; Appendix 1) were found, which suggest the potential of gold bearing veins occurring in a number of areas on the property.

Two separate sample shipments were submitted to Bondar-Clegg for Au + 33 element INAA. A different preparation procedure was used on the second submission; because of this, correlation may be difficult between sample sets (see Appendix 1). Highly anomalous samples were, however, found in both sample sets.

An attempt which was made to locate reported pre-existing workings was unsuccessful. Some veins were sampled and sent for analyses but most sampling was restricted to the stream sediments. A preliminary reconnaissance was made of the eastern portion of the claims. A more detailed program is needed to explore this area.

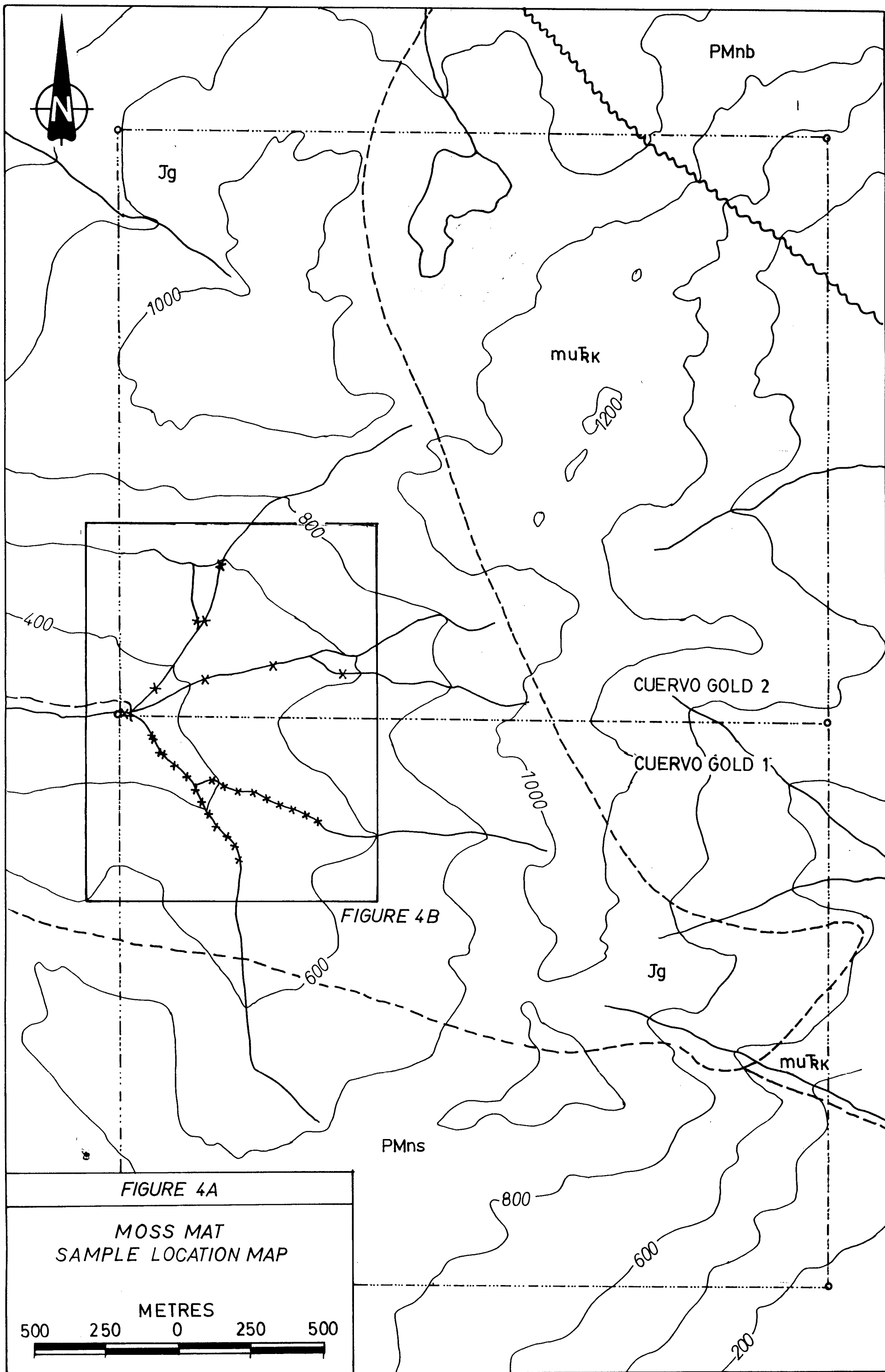


FIGURE 4A

MOSS MAT  
SAMPLE LOCATION MAP

METRES

500 250 0 250 500



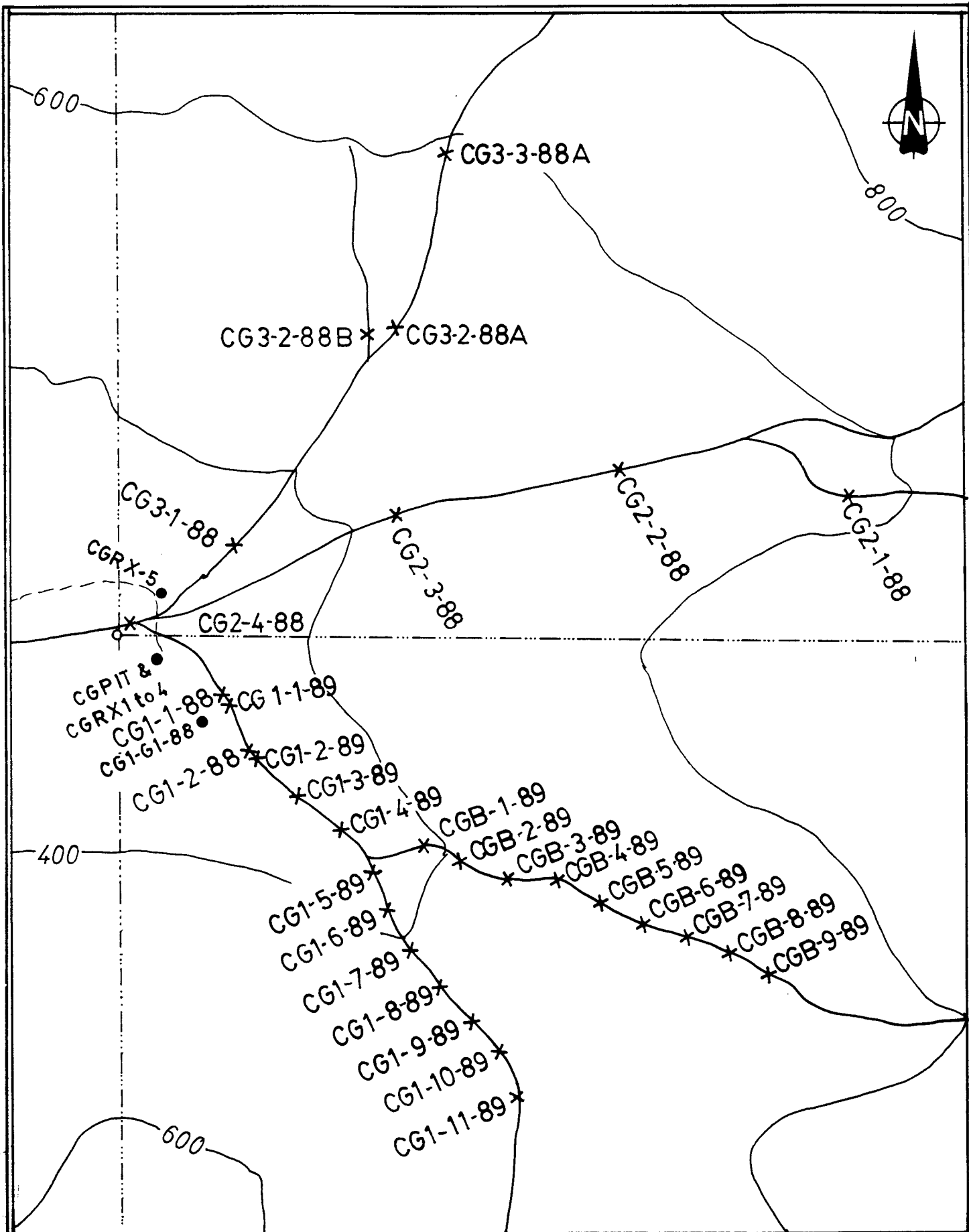
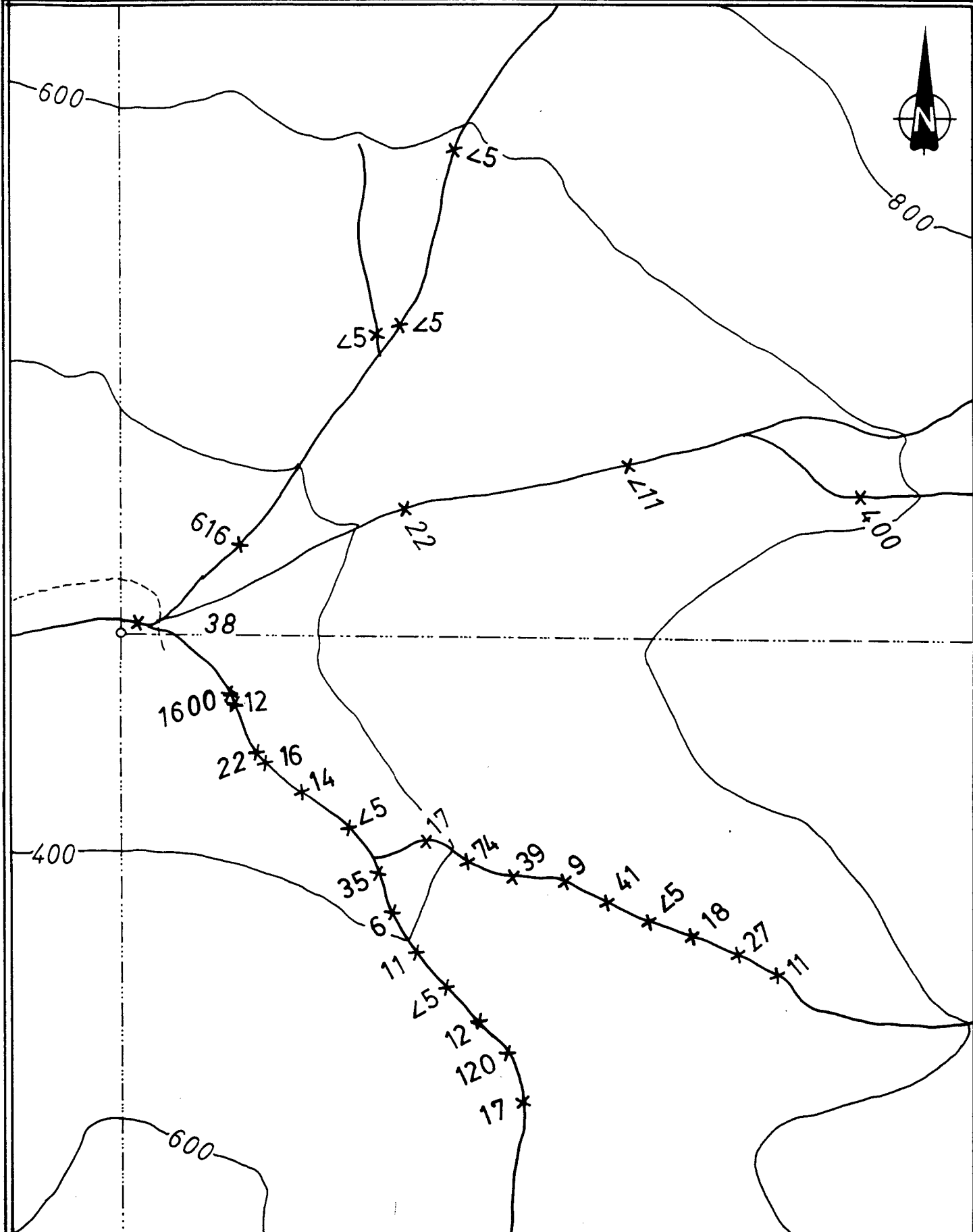


FIGURE 4B DETAILED  
SAMPLE LOCATION MAP





**FIGURE 4C**  
**GOLD IN MOSS MATS, PPB**



## 7. CONCLUSIONS

The sampling program conducted on the Cuervo Gold claims returned some favorable gold anomalies in stream sediments (moss mats) that warrant a more extensive exploration program to test the possibility that vein systems, similar to those on the Pandora and Free Gold properties, may occur on the south and western portions of the claims. There has been good reported values from the Tranquil Creek area, which lies directly to the east of the property, which also support the necessity for a closer examination. The potential for gold mineralization in skarns, as well as in vein systems, must also be examined.

## 8. REFERENCES

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**APPENDIX 1**

**ASSAYS**

Bondar-Clegg & Company Ltd.  
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 North Vancouver, B.C.  
 V7P 2R5  
 (604) 985-0681 Telex 04-352667



Geochemical  
 Lab Report

REPORT: V88-117820.0 ( COMPLETE )

REFERENCE INFO:

CLIENT: MR. RAYMOND MORRIS  
 PROJECT: NONF GTVFN

SUBMITTED BY: UNKNOWN  
 DATE PRINTED: 5-OCT-88

| SAMPLE TYPES       | NUMBER | SIZE FRACTIONS | NUMBER | SAMPLE PREPARATIONS     | NUMBER |
|--------------------|--------|----------------|--------|-------------------------|--------|
| R ROCK OR BED ROCK | 2      | 2 -150         | 2      | DRY, SIEVE -80          | 7      |
| V VEGETATION       | 7      | 1 -80          | 7      | CRUSH, PIII VERTZF -150 | 2      |
|                    |        |                |        | BATCH SURCHARGE         | 9      |

REMARKS: THERE WERE SMALL SAMPLES FOR CG1 288, CG2 188,  
 CG2 288 AND SOME DETECTION LIMITS ARE ELEVATED.

REPORT COPIES TO: MR. RAYMOND MORRIS

INVOICE TO: MR. RAYMOND MORRIS



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Geochemical  
 Lab Report

REPORT: V88-117820.0

PROJECT: NONF GIVEN

PAGE 1A

| SAMPLE NUMBER | ELEMENT UNITS | Au PPM | Ag PPM | As PPM | Ba PPM | Br PPM | Cd PPM | Ce PPM | Co PPM | Cr PPM | Cs PPM | Eu PPM | Fe PCT |
|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| R2 CG1 G188   |               | 14     | <5     | 31     | 450    | <1     | <10    | <10    | 79     | 130    | 2      | <2     | 4.7    |
| R2 CGPIT      |               | 170    | <5     | 21     | 270    | <1     | <10    | 31     | 42     | 78     | 1      | 3      | 7.4    |
| V1 CG1 188    |               | 1600   | <5     | 5      | <100   | 84     | <10    | 23     | 52     | 180    | <1     | <2     | 8.2    |
| V1 CG1 288    |               | 22     | <10    | 6      | <200   | 69     | <20    | <53    | 58     | 300    | <2     | <4     | 9.2    |
| V1 CG2 188    |               | 400    | <10    | 5      | <230   | 366    | <10    | <30    | 33     | 130    | <2     | <2     | 5.5    |
| V1 CG2 288    |               | <11    | 16     | 3      | <100   | 135    | <10    | <29    | 35     | 100    | <1     | <2     | 4.6    |
| V1 CG2 388    |               | 22     | <5     | 4      | <100   | 84     | <10    | 30     | 40     | 170    | 2      | <2     | 6.8    |
| V1 CG2 488    |               | 38     | <5     | 7      | 210    | 55     | <10    | 13     | 42     | 220    | 2      | <2     | 6.7    |
| V1 CG3 288A   |               | <5     | <5     | 8      | 310    | 117    | <10    | 39     | 32     | 120    | 2      | <2     | 5.4    |



REPORT: V88-117820.11

PROJECT: NONF GTVIN

PAGE 18

| SAMPLE NUMBER | ELEMENT UNITS | Hf PPM | Ir PPM | La PPM | Lu PPM | Mn PPM | Na PCT | Ni PPM | Rb PPM | Sb PPM | Sc PPM | Se PPM | Sm PPM |
|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| R2 CG1 6188   |               | <2     | <100   | <5     | <0.5   | 5      | 1.30   | 110    | 44     | 1.8    | 11.0   | <10    | 0.7    |
| R2 CGPIT      |               | 2      | <100   | 13     | <0.5   | 6      | 2.40   | <50    | 42     | 1.4    | 33.0   | <10    | 5.5    |
| V1 CG1 188    |               | <2     | <100   | 11     | <0.5   | 5      | 1.60   | <50    | <10    | 0.9    | 34.0   | <10    | 3.6    |
| V1 CG1 288    |               | <4     | <200   | 12     | <1.0   | <4     | 1.70   | <83    | <54    | 1.3    | 37.0   | <20    | 4.1    |
| V1 CG2 188    |               | <5     | <100   | 8      | <0.5   | 6      | 0.53   | 76     | <32    | 0.8    | 17.0   | <10    | 4.0    |
| V1 CG2 288    |               | <4     | <100   | 7      | <0.5   | 4      | 0.67   | <50    | <30    | 1.0    | 22.0   | <10    | 2.6    |
| V1 CG2 388    |               | <2     | <100   | 9      | <0.5   | 5      | 1.30   | 52     | 32     | 1.4    | 36.0   | <10    | 3.1    |
| V1 CG2 488    |               | 2      | <100   | 9      | <0.5   | 3      | 1.40   | <50    | 16     | 0.9    | 35.0   | <10    | 3.0    |
| V1 CG3 288A   |               | 3      | <100   | 11     | <0.5   | 4      | 1.70   | <50    | <25    | 0.8    | 20.0   | <10    | 3.6    |

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**Geochemical  
 Lab Report**

REPORT: V88-117820.0

PROJECT: NONF GJVN

PAGE 1C

| SAMPLE NUMBER | ELEMENT UNITS | Sn PPM | Ta PPM | Tb PPM | Te PPM | Th PPM | U PPM | W PPM | Yb PPM | Zn PPM | Zr PPM |
|---------------|---------------|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|
| R2 CG1 G188   |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |
| R2 CGPIT      |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | 5     | <5     | <200   | <500   |
| V1 CG1 188    |               | <200   | <1     | 1      | <20    | 1.5    | 1.3   | <2    | <5     | <200   | <500   |
| V1 CG1 288    |               | <400   | <2     | <2     | <40    | <1.0   | 1.3   | <4    | <10    | 1100   | <2000  |
| V1 CG2 188    |               | <400   | <1     | <1     | <53    | 2.2    | 1.5   | <2    | <5     | 370    | <1800  |
| V1 CG2 288    |               | <200   | <1     | <1     | <44    | <0.5   | 0.6   | <2    | <5     | 490    | <1300  |
| V1 CG2 388    |               | <200   | <1     | 1      | <20    | 0.6    | 0.7   | <2    | <5     | 310    | <500   |
| V1 CG2 488    |               | <200   | <1     | <1     | <20    | 0.9    | 1.2   | <2    | <5     | <200   | <500   |
| V1 CG3 288A   |               | <200   | <1     | <1     | <20    | 1.6    | 3.7   | <2    | <5     | <200   | <500   |

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REPORT: V89-00031.0 ( COMPLETE )

REFERENCE INFO:

CLIENT: MR. BOB MATTHEWS  
PROJECT: NONE GIVEN

SUBMITTED BY: B. MATTHEWS  
DATE PRINTED: 30-JAN-89

| SAMPLF TYPES       | NUMBER | SIZE FRACTIONS | NUMBER | SAMPLF PREPARATIONS  | NUMBER |
|--------------------|--------|----------------|--------|----------------------|--------|
| R ROCK OR BED ROCK | 28     | 2 -150         | 28     | CRUSH,PULVERIZE -150 | 28     |
| O ORGANIC OR HUMUS | 23     | O -20          | 23     | SIEVE -20            | 23     |

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Geochemical  
 Lab Report

REPORT: V89-00031.D

PROJECT: NONE GIVEN

PAGE 1A

| SAMPLE NUMBER | ELEMENT UNITS | Au PPB | Ag PPM | As PPM | Ba PPM | Br PPM | Cd PPM | Ce PPM | Co PPM | Cr PPM | Cs PPM | Eu PPM | Fe PCT |
|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| R2 CGRX 1     |               | 14     | <5     | 4      | 130    | <1     | <10    | <10    | 130    | 200    | 1      | <2     | 10.0   |
| R2 CGRX 3     |               | 7      | <5     | <1     | <100   | <1     | <10    | <10    | <10    | 66     | <1     | <2     | 0.6    |
| R2 CGRX 4     |               | <5     | <5     | 1      | <100   | <1     | <10    | 13     | 15     | 130    | <1     | <2     | 2.0    |
| R2 CGRX 5     |               | 6      | <5     | 4      | <100   | <1     | <10    | <10    | 26     | 190    | <1     | <2     | 3.9    |
| R2 TR1        |               | 210    | <5     | 2      | <100   | <1     | <10    | 12     | <10    | 51     | <1     | 12     | 1.7    |
| R2 TR2        |               | 31     | <5     | 1      | <100   | <1     | <10    | 18     | <10    | <50    | <1     | 7      | 1.8    |
| 00 CG1-1-89   |               | 12     | <5     | 2      | <100   | 53     | <10    | <10    | 24     | 67     | <1     | <2     | 3.6    |
| 00 CG1-2-89   |               | 16     | <5     | <1     | 240    | 84     | <10    | <10    | 35     | <50    | <1     | <2     | 0.6    |
| 00 CG1-3-89   |               | 14     | <5     | 3      | 170    | 20     | <10    | 13     | 33     | 110    | <1     | 2      | 4.7    |
| 00 CG1-4-89   |               | <5     | <5     | <1     | <100   | 60     | <10    | 17     | 21     | <50    | <1     | <2     | 1.5    |
| 00 CG1-5-89   |               | 35     | <5     | 2      | 140    | 46     | <10    | <10    | 25     | 77     | <1     | 4      | 3.6    |
| 00 CG1-6-89   |               | 6      | <5     | 4      | 200    | 49     | <10    | <10    | 32     | 54     | 1      | <2     | 3.4    |
| 00 CG1-7-89   |               | 11     | 7      | 3      | <100   | 91     | <10    | 34     | 28     | <50    | <1     | <2     | 1.6    |
| 00 CG1-8-89   |               | <5     | 8      | 1      | <100   | 85     | <10    | <10    | 28     | <50    | <1     | <2     | <0.5   |
| 00 CG1-9-89   |               | 12     | <5     | 2      | <100   | 57     | <10    | 30     | 23     | <50    | <1     | <2     | 1.8    |
| 00 CG1-10-89  |               | 120    | <5     | 5      | 240    | 70     | <10    | 28     | 35     | 58     | 1      | 2      | 3.7    |
| 00 CG1-11-89  |               | 17     | <5     | 6      | 230    | 43     | <10    | 29     | 35     | 58     | <1     | <2     | 3.6    |
| 00 CG3-188    |               | 616    | <5     | 6      | 310    | 74     | <10    | 30     | 37     | 110    | 2      | <2     | 5.4    |

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| SAMPLE NUMBER | ELEMENT UNITS | Hf PPM | Ir PPB | La PPM | Lu PPM | Mo PPM | Na PCT | Ni PPM | Rb PPM | Sb PPM | Sc PPM | Se PPM | Sm PPM |
|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| R2 CGRX 1     |               | <2     | <100   | <5     | <0.5   | <2     | 0.54   | 92     | <10    | <0.2   | 13.0   | <10    | 0.9    |
| R2 CGRX 3     |               | <2     | <100   | <5     | <0.5   | <2     | <0.05  | <50    | <10    | 0.4    | 2.2    | <10    | 0.6    |
| R2 CGRX 4     |               | <2     | <100   | 10     | <0.5   | <2     | 1.90   | <50    | <10    | <0.2   | 7.5    | <10    | 0.6    |
| R2 CGRX 5     |               | <2     | <100   | <5     | <0.5   | <2     | 0.23   | <50    | <10    | <0.2   | 12.0   | <10    | 1.6    |
| R2 TR1        |               | <2     | <100   | 6      | <0.5   | <2     | <0.05  | <50    | <10    | 0.2    | 5.6    | <10    | 3.1    |
| R2 TR2        |               | <2     | <100   | 9      | <0.5   | <2     | 0.17   | <50    | 13     | <0.2   | 6.2    | <10    | 3.2    |
| 0D CG1-1-89   |               | <2     | <100   | 5      | <0.5   | <2     | 0.81   | <50    | <10    | 0.5    | 14.0   | <10    | 1.8    |
| 0D CG1-2-89   |               | <2     | <100   | <5     | <0.5   | <2     | 0.25   | <50    | 21     | 0.2    | 3.2    | <10    | 0.6    |
| 0D CG1-3-89   |               | <2     | <100   | 8      | <0.5   | <2     | 1.70   | <50    | <10    | 0.7    | 22.0   | <10    | 2.6    |
| 0D CG1-4-89   |               | 2      | <100   | <5     | <0.5   | <2     | 0.27   | <50    | 23     | <0.2   | 4.5    | <10    | 0.7    |
| 0D CG1-5-89   |               | 4      | <100   | 6      | <0.5   | <2     | 0.83   | <50    | <10    | 0.5    | 14.0   | <10    | 1.7    |
| 0D CG1-6-89   |               | <2     | <100   | 8      | <0.5   | <2     | 1.10   | <50    | <10    | 0.7    | 13.0   | <10    | 2.2    |
| 0D CG1-7-89   |               | <2     | <100   | 5      | <0.5   | 3      | 0.53   | <50    | 26     | 0.4    | 7.5    | <10    | 1.3    |
| 0D CG1-8-89   |               | 2      | <100   | <5     | <0.5   | <2     | 0.16   | <50    | <10    | <0.2   | 2.3    | <10    | 0.6    |
| 0D CG1-9-89   |               | <2     | <100   | 6      | <0.5   | <2     | 0.63   | <50    | 30     | 0.4    | 7.0    | <10    | 1.3    |
| 0D CG1-10-89  |               | <2     | <100   | 9      | <0.5   | <2     | 1.20   | <50    | 16     | 0.9    | 17.0   | <10    | 2.8    |
| 0D CG1-11-89  |               | <2     | <100   | 14     | <0.5   | <2     | 1.40   | <50    | 26     | 0.9    | 16.0   | <10    | 2.7    |
| 0D CG3-188    |               | 2      | <100   | 12     | <0.5   | <2     | 1.90   | <50    | 27     | 0.6    | 20.0   | <10    | 2.9    |

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| SAMPLE NUMBER | ELEMENT UNITS | Sn PPM | Ta PPM | Tb PPM | Te PPM | Ti PPM | U PPM | W PPM | Yb PPM | Zn PPM | Zr PPM | Cu PPM |
|---------------|---------------|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|--------|
| R2 CGRX 1     |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |        |
| R2 CGRX 3     |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |        |
| R2 CGRX 4     |               | <200   | <1     | <1     | <20    | 6.8    | 2.0   | <2    | <5     | <200   | <500   |        |
| R2 CGRX 5     |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |        |
| R2 TR1        |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |        |
| R2 TR2        |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |        |
| 00 CG1-1-89   |               | <200   | <1     | <1     | <20    | 1.2    | 0.6   | <2    | <5     | <200   | <500   |        |
| 00 CG1-2-89   |               | <200   | <1     | <1     | <20    | 1.0    | 0.6   | <2    | <5     | <200   | <500   |        |
| 00 CG1-3-89   |               | <200   | <1     | 1      | <20    | 1.4    | 0.6   | <2    | <5     | <200   | <500   |        |
| 00 CG1-4-89   |               | <200   | <1     | <1     | <20    | <0.5   | 0.7   | <2    | <5     | <200   | <500   |        |
| 00 CG1-5-89   |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | 800    |        |
| 00 CG1-6-89   |               | <200   | <1     | <1     | <20    | 1.3    | 0.7   | <2    | <5     | <200   | <500   |        |
| 00 CG1-7-89   |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |        |
| 00 CG1-8-89   |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |        |
| 00 CG1-9-89   |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |        |
| 00 CG1-10-89  |               | <200   | <1     | <1     | 34     | 1.1    | 0.7   | 4     | <5     | <200   | <500   |        |
| 00 CG1-11-89  |               | <200   | <1     | <1     | <20    | 1.7    | 0.8   | <2    | <5     | <200   | <500   |        |
| 00 CG3-188    |               | <200   | <1     | <1     | <20    | 2.0    | 1.5   | <2    | <5     | <200   | <500   |        |

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PROJECT: NONE GIVEN

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| SAMPLE NUMBER | ELEMENT UNITS | Au PPB | Ag PPM | As PPM | Ra PPM | Br PPM | Cd PPM | Ce PPM | Co PPM | Cr PPM | Cs PPM | Eu PPM | Fe PCT |
|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 00 CG3-288B   |               | <5     | <5     | 2      | 240    | 65     | <10    | 22     | 13     | 51     | <1     | 2      | 3.3    |
| 00 CG3-388    |               | <5     | <5     | 7      | <100   | 174    | <10    | <10    | 32     | 91     | <1     | <2     | 2.9    |
| 00 CGB-1-89   |               | 17     | <5     | 2      | <100   | 48     | <10    | <10    | 32     | 110    | <1     | <2     | 5.2    |
| 00 CGB-2-89   |               | 74     | <5     | 3      | <100   | 45     | <10    | <10    | 34     | 110    | <1     | <2     | 5.6    |
| 00 CGB-3-89   |               | 39     | <5     | 3      | <100   | 139    | <10    | <10    | 18     | 120    | <1     | <2     | 3.8    |
| 00 CGB-4-89   |               | 9      | <5     | <1     | 170    | 87     | <10    | <10    | <10    | 78     | <1     | <2     | 1.5    |
| 00 CGB-5-89   |               | 41     | <5     | 4      | <100   | 32     | <10    | 14     | 35     | 200    | <1     | 2      | 6.0    |
| 00 CGB-6-89   |               | <5     | <5     | 3      | <100   | 75     | <10    | <10    | 18     | <50    | <1     | <2     | 2.2    |
| 00 CGB-7-89   |               | 18     | <5     | 3      | <100   | 72     | <10    | <10    | 28     | 110    | <1     | <2     | 4.5    |
| 00 CGB-8-89   |               | 27     | <5     | 5      | 110    | 34     | <10    | 25     | 43     | 170    | <1     | <2     | 6.1    |
| 00 CGB-9-89   |               | 11     | <5     | 4      | <100   | 34     | <10    | <10    | 36     | 180    | <1     | <2     | 6.1    |



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PAGE 2B

| SAMPLE NUMBER | ELEMENT UNITS | Hf PPM | Ir PPB | La PPM | Lu PPM | Mo PPM | Na PCT | Ni PPM | Rb PPM | Sb PPM | Sc PPM | Se PPM | Sm PPM |
|---------------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0D CG3-2888   |               | 3      | <100   | 12     | <0.5   | <2     | 1.80   | <50    | 20     | 0.3    | 13.0   | <10    | 2.7    |
| 0D CG3-388    |               | <2     | <100   | 9      | <0.5   | <2     | 0.90   | 50     | <10    | 0.4    | 10.0   | <10    | 2.4    |
| 0D CGB-1-89   |               | <2     | <100   | 7      | <0.5   | <2     | 1.30   | <50    | <10    | 0.6    | 23.0   | <10    | 2.1    |
| 0D CGB-2-89   |               | 2      | <100   | 8      | <0.5   | <2     | 1.30   | <50    | <10    | 0.8    | 25.0   | <10    | 2.3    |
| 0D CGB-3-89   |               | <2     | <100   | 6      | <0.5   | <2     | 0.74   | <50    | <10    | 0.4    | 15.0   | <10    | 1.5    |
| 0D CGB-4-89   |               | <2     | <100   | <5     | <0.5   | <2     | 0.34   | <50    | <10    | <0.2   | 6.1    | <10    | 0.7    |
| 0D CGB-5-89   |               | <2     | <100   | 9      | <0.5   | <2     | 1.60   | <50    | 17     | 0.8    | 28.0   | <10    | 2.5    |
| 0D CGB-6-89   |               | <2     | <100   | 6      | <0.5   | <2     | 0.68   | <50    | <10    | 0.4    | 11.0   | <10    | 1.7    |
| 0D CGB-7-89   |               | <2     | <100   | 6      | <0.5   | <2     | 1.20   | <50    | 17     | 0.6    | 18.0   | <10    | 1.8    |
| 0D CGB-8-89   |               | <2     | <100   | 7      | <0.5   | <2     | 1.50   | <50    | <10    | 1.0    | 29.0   | <10    | 2.5    |
| 0D CGB-9-89   |               | <2     | <100   | 8      | <0.5   | <2     | 1.40   | <50    | <10    | 0.8    | 27.0   | <10    | 2.3    |

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PROJECT: NONF GIVEN PAGE 2C

| SAMPLE NUMBER | ELEMENT UNITS | Sn PPM | Ta PPM | Tb PPM | Te PPM | Th PPM | U PPM | W PPM | Yb PPM | Zn PPM | Zr PPM | Cu PPM |
|---------------|---------------|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|--------|
| 00 CG3-288B   |               | <200   | <1     | <1     | <20    | 1.5    | 1.7   | <2    | <5     | <200   | <500   |        |
| 00 CG3-388    |               | <200   | <1     | <1     | <20    | <0.5   | 5.0   | <2    | <5     | <200   | <500   |        |
| 00 CGB-1-89   |               | <200   | <1     | <1     | <20    | 0.5    | <0.5  | <2    | <5     | <200   | <500   |        |
| 00 CGB-2-89   |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |        |
| 00 CGB-3-89   |               | <200   | <1     | <1     | <20    | <0.5   | 1.2   | <2    | <5     | <200   | <500   |        |
| 00 CGB-4-89   |               | <200   | <1     | <1     | <20    | 0.6    | 0.5   | <2    | <5     | <200   | <500   |        |
| 00 CGB-5-89   |               | <200   | <1     | <1     | <20    | 1.0    | <0.5  | <2    | <5     | <200   | <500   |        |
| 00 CGB-6-89   |               | <200   | <1     | <1     | <20    | 0.5    | <0.5  | <2    | <5     | <200   | <500   |        |
| 00 CGB-7-89   |               | <200   | <1     | <1     | <20    | <0.5   | <0.5  | <2    | <5     | <200   | <500   |        |
| 00 CGB-8-89   |               | <200   | <1     | <1     | <20    | 0.6    | <0.5  | <2    | <5     | <200   | 560    |        |
| 00 CGB-9-89   |               | <200   | <1     | <1     | <20    | 0.5    | <0.5  | <2    | <5     | <200   | <500   |        |

CUERVO GOLD PROPERTY

STATEMENT OF COSTS  
1988/1989

SEPTEMBER, 1988

WAGES

1 prospector, 7 days @ \$100/day \$ 700.00  
2 field technicians, 2x7 days @ \$100/day \$ 1400.00

FOOD \$ 337.16

FUEL/TRAVEL \$ 246.00

MISCELLANEOUS SMALL EQUIPMENT PURCHASES AND  
SUPPLIES \$ 387.06

EQUIPMENT RENTAL AND REPAIRS  
(BOAT) \$ 367.50

JANUARY 1989

WAGES

1 prospector, 7 days @ \$100/day \$ 700.00  
1 field technician, 7 days @ \$100/day \$ 700.00  
1 geologist, 3 days @ \$250/day \$ 750.00

FOOD \$ 319.22

MOTELS \$ 104.76

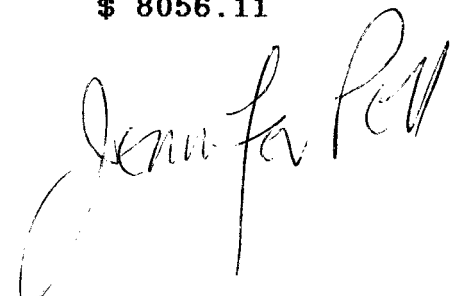
FUEL/TRAVEL \$ 84.00

EQUIPMENT RENTAL AND REPAIRS  
(BOAT AND DIRT BIKE) \$ 480.00

MISCELLANEOUS SUPPLIES \$ 813.91

ASSAY COST \$ 666.50

TOTAL PROJECT COST \$ 8056.11



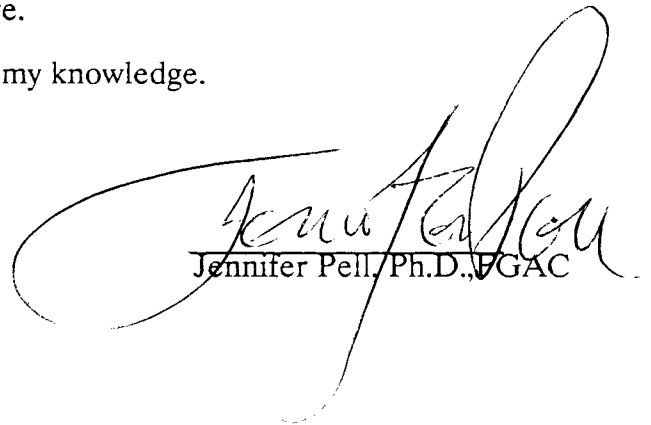
## APPENDIX

### CERTIFICATE OF QUALIFICATIONS

I, Jennifer A. Pell, of 3011 Quadra Street, Victoria, British Columbia, do hereby certify that:

1. I am a graduate of the University of Ottawa with a Bachelor of Science Honours degree in Geology, 1979.
2. I am a graduate of the University of Calgary with a Doctorate of Philosophy degree in Geology, 1984.
3. I am a Fellow of the Geological Association of Canada and a Councilor of the Cordilleran Section of the Geological Association of Canada for 1987/1989.
4. I was employed as an Assistant Professor in the Department of Geology, University of Windsor, teaching Economic Geology and Structural Geology from July, 1985 to July, 1986. From January to April 1987, I was employed by the Department of Geological Sciences, University of British Columbia as a Sessional Lecturer, teaching Introductory Geology.
5. I have been engaged in mineral exploration, geologic mapping and geological research in British Columbia, Manitoba, Ontario and the Northwest Territories, periodically since 1977.
6. This report is based on my knowledge of the properties and local geology as well as a study of available literature.
7. This report is factual to the best of my knowledge.

Vancouver, B.C.  
January 20, 1989



Jennifer Pell, Ph.D., FGAC