

GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORTS

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SELF POTENTIAL SURVEY  
OVER THE JAY GROUP,  
INVERMERE AREA

GOLDEN MINING DIVISION,  
BRITISH COLUMBIA

NTS 82K/8W, 82K/9W  
LAT/LONG 50 30' - 116 18'

FOR

W. POCHYLKO  
STETTLER, ALBERTA

BY

ISOGEOS EXPLORATION SERVICES LTD.

CALGARY, ALBERTA

GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

JUNE 1996

FILMED

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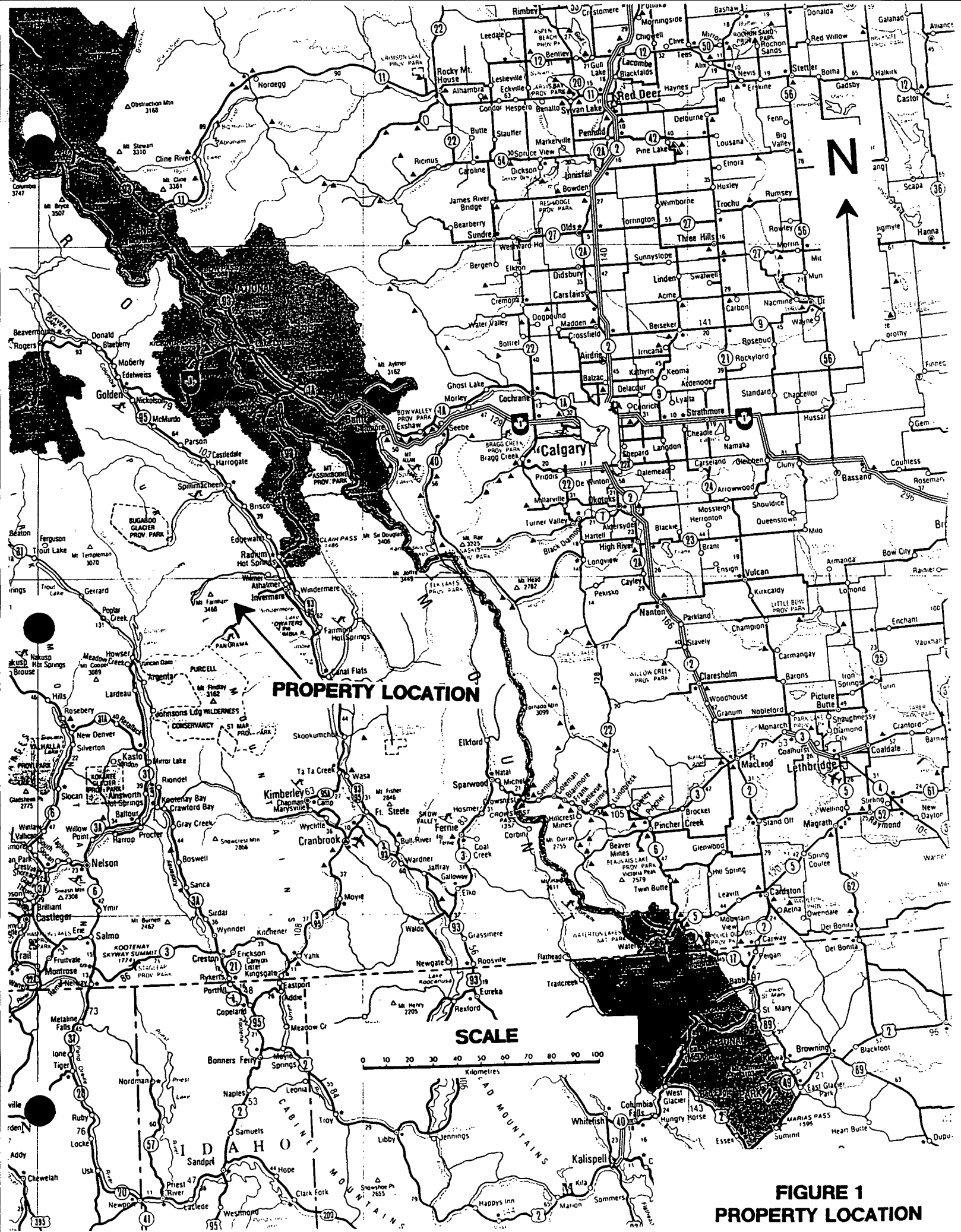
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## INTRODUCTION

The property covered by this report consists of a total group of 52 units covered by the Jay #5, #6 and #7 claims. These claims are located approximately 20 kilometers west of Invermere. B.C., (Figures 1,2).

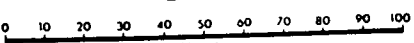
This report covers detail work over a number of anomalies that were located in the previous field season and which are described in an assessment report for that year. The present work was concentrated over the area north of Bruce Creek where the old copper prospects of the Delos and the Pretty Girl are located, Figure 3. Three of the previous anomalies were detailed in order to determine the strike and possibly determine what geological controls affected the location of the copper mineralisation. An additional grid was surveyed over the Jay 5 claim to try and locate any extension to the Pretty Girl Deposit.

A total 6.3 kilometers of detail survey at 20 meter intervals was carried out.



**PROPERTY LOCATION**

**SCALE**



**FIGURE 1  
PROPERTY LOCATION**

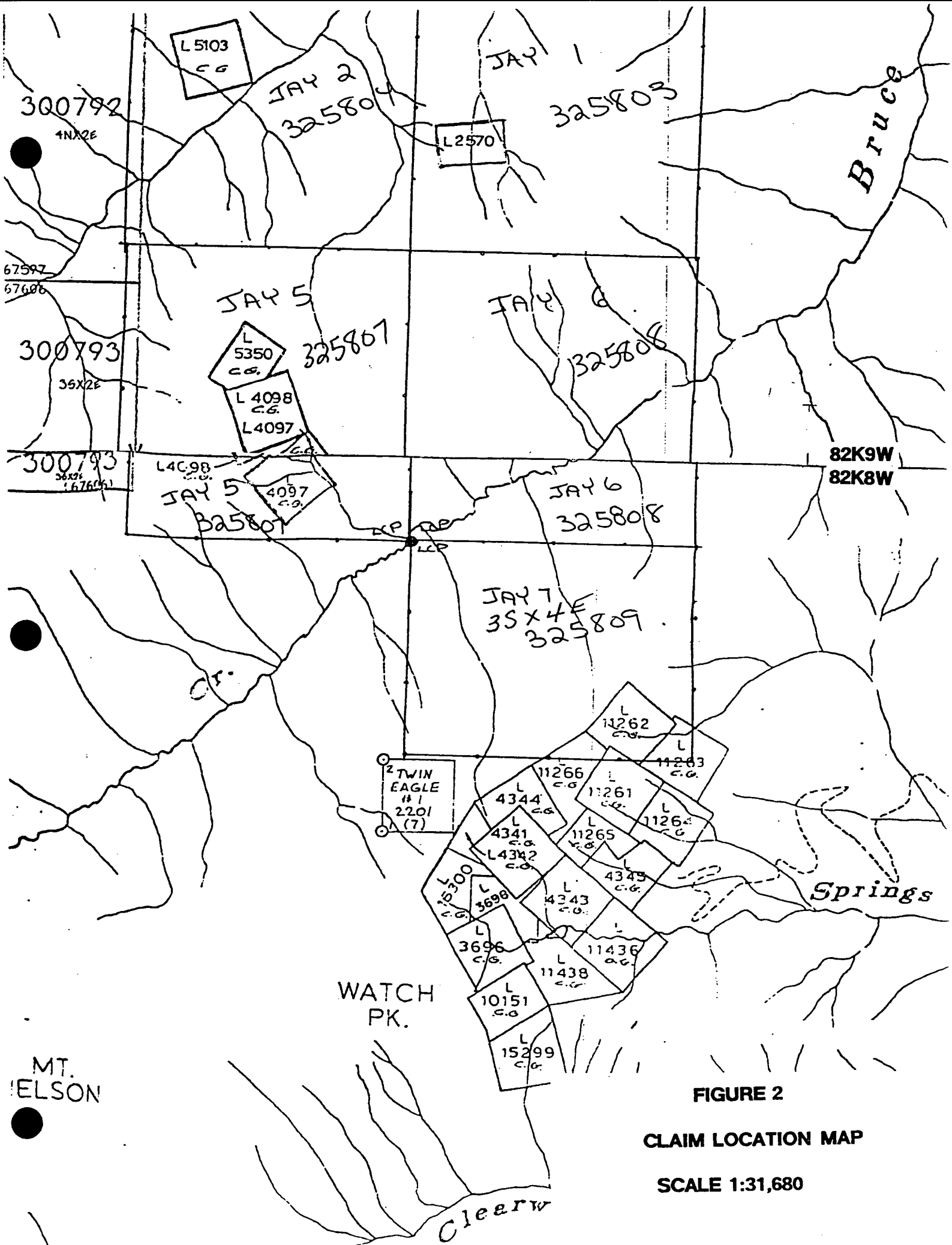


FIGURE 2

CLAIM LOCATION MAP

SCALE 1:31,680

## PROPERTY

The property consists of a total of 52 units registered to W. Pochylko , Stettler. Alberta and are listed as follows:

Claim Name	Record No.	Tag No.	Units	Expiry
Jay #5	325807	67601	20	May 31, 96
Jay #6	325808	67602	20	May 31, 96
Jay #7	325809	211714	12	May 31, 96

The claims are located in the Golden Mining Division, 50 30' Lat, 116 18' Long., and in NTS map sheets 82K/8W and 82K/9W, (Figures 1,2).

## ACCESS

The property is located approximately 20 kilometers directly west of Invermere, B. C. The property can be reached from the Bruce Creek logging road which is accessed from the town of Wilmer, just north of Invermere. The property can also be reached from the Invermere to Panorama highway. An access road just east of the Panorama ski hill passes through the old Paradise Mine site, crosses the ridge and passes through the Jay claims to connect with the Bruce Creek road.

## HISTORY

The claims were staked over a number of old workings in the Bruce Creek area just north of the abandoned Paradise Mine. The present work is concentrated north of Bruce Creek where the old prospects of the Delos, (also known as the Trojan), and the Pretty Girl are located. Ore grades reported in the Minister of Mines Reports are as follows:

Delos:

1898 - selected sample - 32% Cu

1916 - selected sample - 27%, 3 foot sample - 9.6%

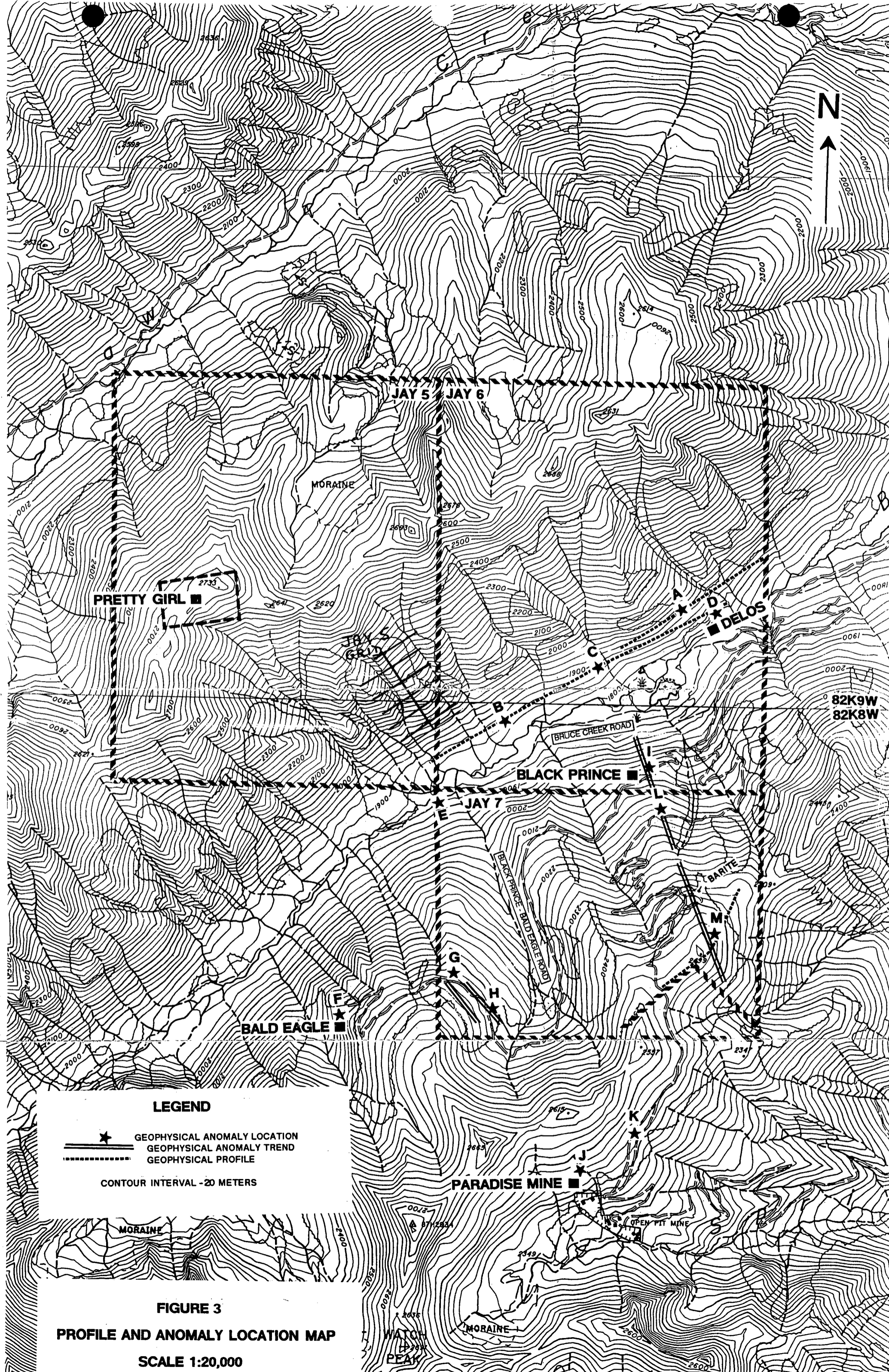
Pretty Girl:

1898 - selected sample - 26 % Cu, 55 oz. Ag

1899 - selected sample - 22% Cu, 40 oz Ag, \$3 Au

The Delos location was never fully prospected in the past as it was believed that it was a mineralised block that was deposited from a major landslide which occurred on the ridge on the south side of Bruce Creek.

The Pretty Girl has also been poorly covered in the past due to the fact that it was incorrectly located on the crest of the ridge directly above the Delos , an error of approximately 3 kilometers.



PRETTY GIRL ■

MORaine

JAY 5 JAY 6

N

82K9W  
82K8W

BLACK PRINCE ■

JAY 7

BARITE

BALD EAGLE ■

PARADISE MINE ■

**LEGEND**

- ★ GEOPHYSICAL ANOMALY LOCATION
- GEOPHYSICAL ANOMALY TREND
- GEOPHYSICAL PROFILE

CONTOUR INTERVAL - 20 METERS

MORaine

WATCH  
PEAR

**FIGURE 3**  
**PROFILE AND ANOMALY LOCATION MAP**  
**SCALE 1:20,000**



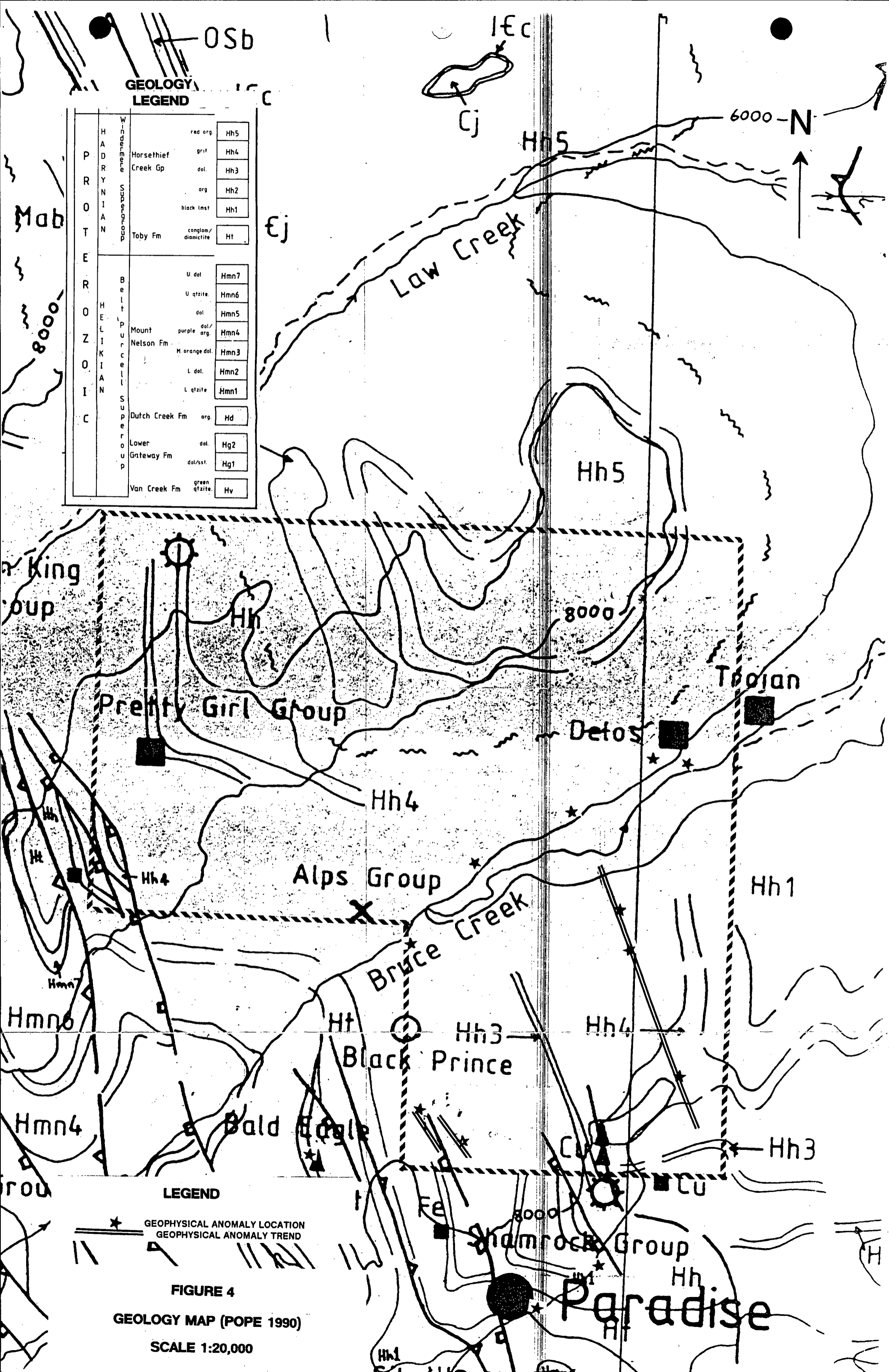
## GEOLOGY

The geology of the area was mapped by Pope (1990), and is shown in Figure 4. The copper deposits are apparently formed as veins within the Horsethief Creek Group which consists of argillites, grits and dolomites. The Pretty Girl deposit is deposited within a highly jointed unit which has a steep dip to the east.

The majority of the ridge above the Delos has been mapped by Pope as a major over-thrust from the west and it would appear from all work to date that there are no prospects above this thrust.

**GEOLOGY LEGEND**

P R O T E R O Z O I C	H A D R Y N I A N	W e s t e r n S u p e r g r 	red arg.	Hh5			
			grit	Hh4			
			dol.	Hh3			
			arg.	Hh2			
			black lsst.	Hh1			
			conglom/ diamictite	Ht			
			E L I A N	B e i l t S u 	H e l i a 	U. dol.	Hmn7
						U. qtzite.	Hmn6
						dol.	Hmn5
						purple dol/ arg.	Hmn4
M. orange dol.	Hmn3						
L. dol.	Hmn2						
L. qtzite	Hmn1						
Dutch Creek Fm	arg.	Hd					
Lower Gateway Fm	dol.	Hg2					
Van Creek Fm	dol/ssl. green qtzite.	Hg1 Hv					



**LEGEND**

- ★ GEOPHYSICAL ANOMALY LOCATION
- ★— GEOPHYSICAL ANOMALY TREND

**FIGURE 4**  
**GEOLOGY MAP (POPE 1990)**  
**SCALE 1:20,000**

## SELF POTENTIAL SURVEY

### (A) Specifications

The self-potential is conducted by measuring the natural voltage between the survey stations using non-polarising copper sulphate electrodes. The voltage is measured by a high input impedance voltmeter capable of measuring in millivolts. The station interval used for the majority of the work was 20 meters.

The normal field procedure is to take the measurements in a series of closed loops so that a drift correction can be applied. The readings are taken in a leap-frog manner with the rear electrode moved past the forward electrode. This reduces the errors for any potential difference between the electrodes as well as establishes that one electrode is stable for adjacent measurements.

The survey over the Delos was conducted using a long reel of wire, (600 meters), so that all stations were referenced to a single station and eliminated any errors caused by moving the reference electrode.

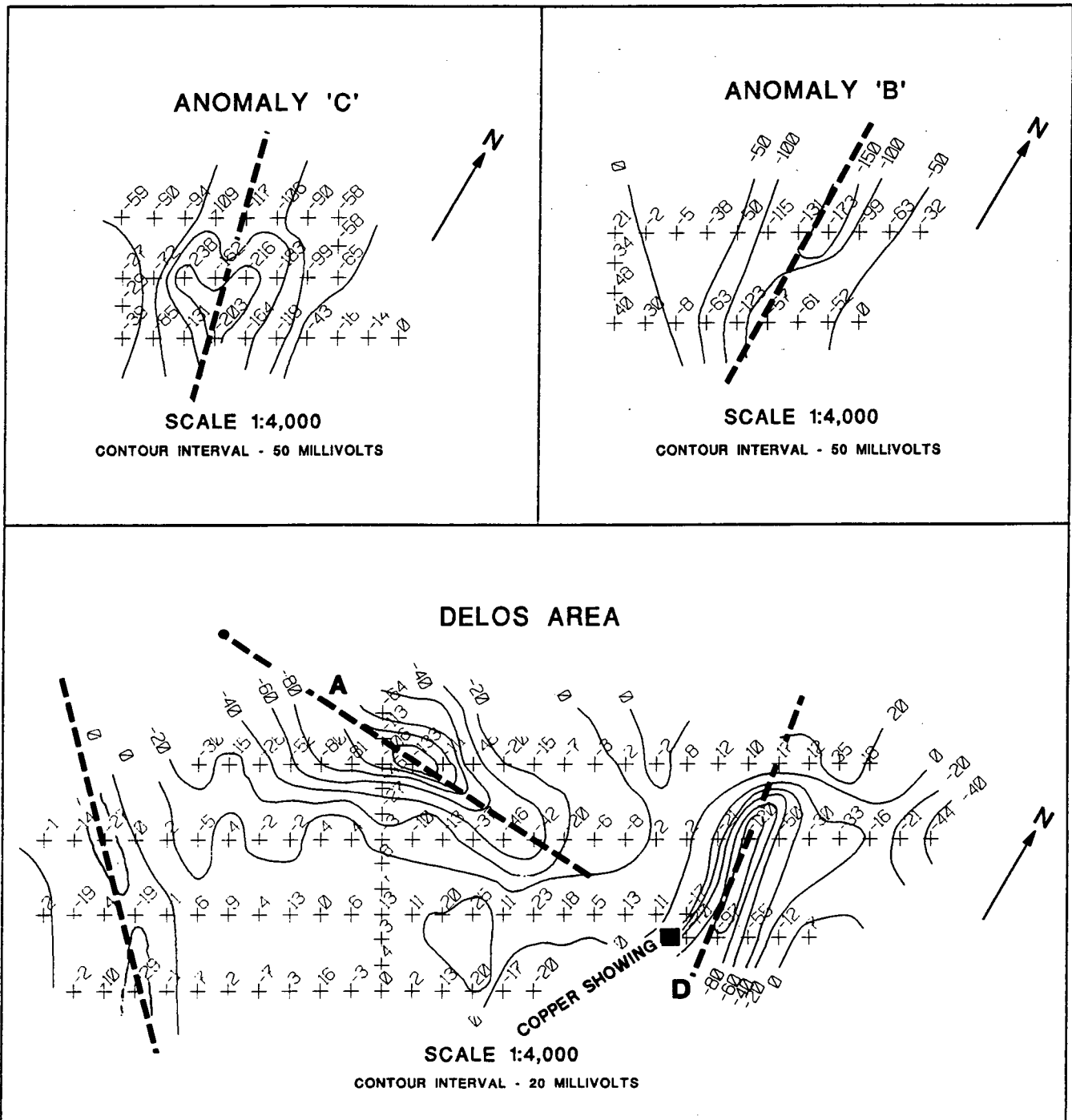
The grid over the Jay 5 claim was located in order to determine if there is any extension of the Pretty Girl deposit at a lower elevation. The ground is mostly scree covered and at the time of the survey was extremely dry making ground contact extremely difficult.

### (B) Results

The results are presented as contour maps, Figures 5 and 6.

Anomalies B, C and D show remarkable similarity in strike and are all probably related to faulting. These are similar in strike to that shown by the Black Prince structure south of Bruce Creek, Figure 3.

Anomaly A in the Delos area is of the most interest as it does not conform to any of the known geological controls. The strike would extend in the direction of the Pretty Girl. The survey grid was restricted due to the thrust fault which is located at the northern limits of the grid.

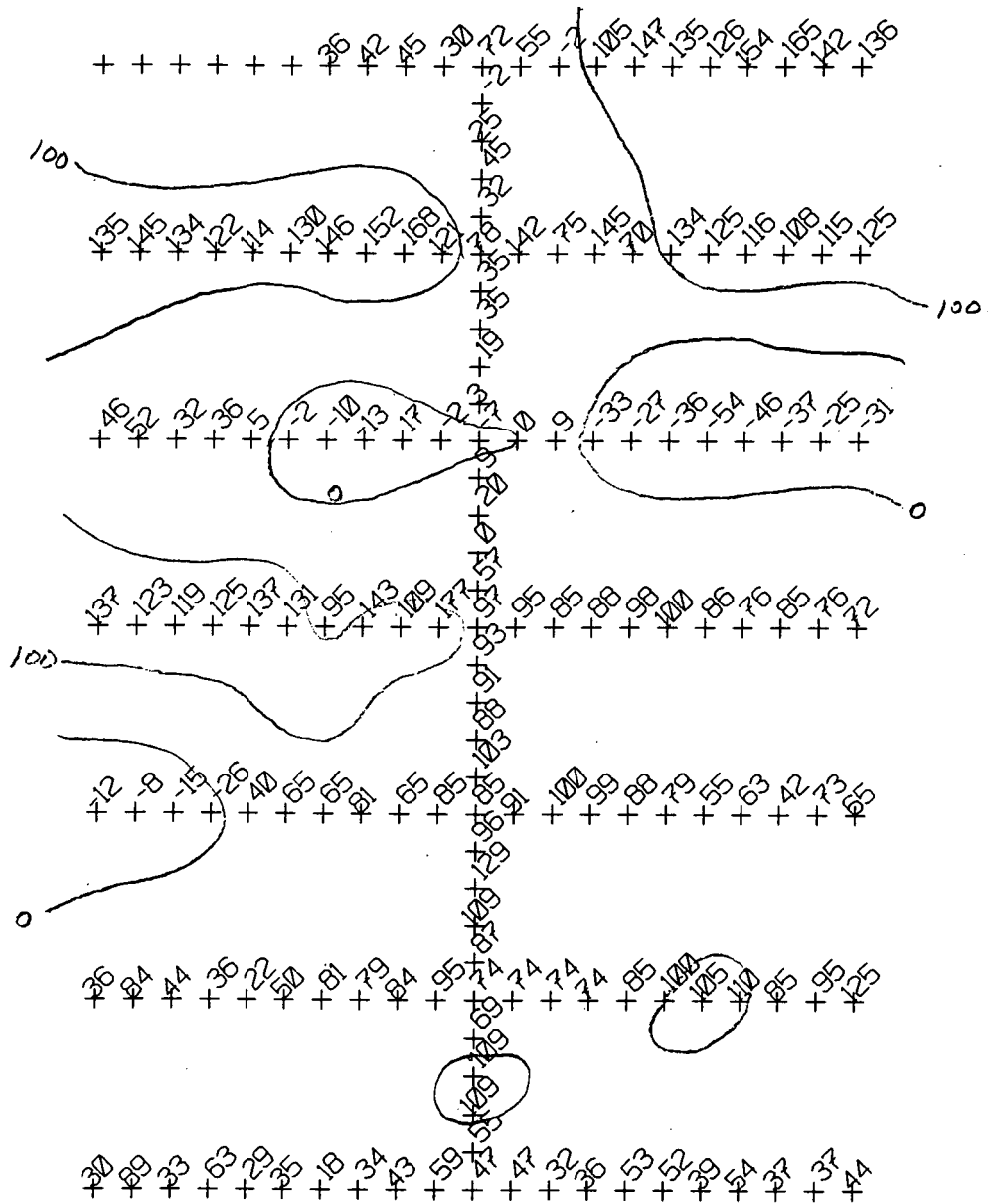


**FIGURE 5**

**SELF-POTENTIAL SURVEY**

DETAIL GRIDS

----- ANOMALY TREND



**FIGURE 6**  
**SELF-POTENTIAL SURVEY**  
**JAY 5 GRID**  
**SCALE 1:4,000**

The survey over the Jay 5 claim does not show any indication of a possible extension of the Pretty Girl through this part of the area but this may have been partly due to the extremely difficult ground conditions. The VLF method might be more useful in this part of the area as anomaly A did produce a VLF anomaly during the previous survey.

## CONCLUSIONS AND RECOMMENDATIONS

The detail work has confirmed the presence of the anomalies and has established that the strike is similar to that of the regional structure.

Anomaly A in the Delos area has an approximate westerly strike which is in the direction of the Pretty Girl deposit but would extend beneath a major thrust belt. Any confirmation of a continuation to the west would have to be conducted closer to the Pretty Girl and at a much higher elevation.

## REFERENCES

Burr S.V., 1982, A Guide to Prospecting by the Self-Potential Method, Ontario Geological Survey, Miscellaneous Paper 99.

Pope A., 1990, The Geology and Mineral Deposits of the Toby-Horsethief Creek Map Area, Northern Purcell Mountains, Southeast British Columbia (82K0, Geological Survey Branch, B.C., Open File 1990-26.



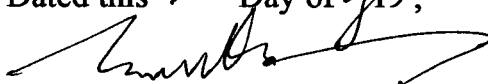
## STATEMENT OF COSTS

Mobilisation/Demobilisation			\$775.00
T. Dundas	Geophysicist	7 days @ \$450	\$3,150.00
W. Pochylko	Assistant	7 days @ \$250	\$1,750.00
	Food & Exp	7 days @ \$50	\$350.00
	Sp rental	7 days @ \$25	\$175.00
	Vehicle	7 days @ \$50	\$350.00
	Report		\$1,900.00
			<hr/> <hr/>
			\$8,450.00

CERTIFICATE

I, Trevor R. B. Dundas do hereby certify that:

1. I am a practicing consultant geophysicist resident in Calgary, Alberta.
2. I have graduated with a B. Sc. Degree in Geology from Queen's University, Belfast in 1965 and an M. Sc. In Geophysics from Imperial College, London University in 1967.
3. I have been actively consulting as a geophysicist since 1968

Dated this *1st* Day of *July*, 19*76*  


Trevor R. B. Dundas