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WORK DATES: Geochemical Soil Survey, August 21-29, 1973 Ground Magnetic Survey, August 21-29, 1973

DATE: November 7, 1973

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### BOW ASSESSMENT REPORT

### INTRODUCTION

During the period August 24, 1973 to August 29, 1973, a program of soil geochemistry and a ground magnetometer survey was completed on the Bow 1-8 mineral claims.

The Bow claims are located in the Omineca Mining Division, and lie four miles west of Fleet Peak at elevations varying from 4500 to 5500 feet. The centre of the claim group is at  $56^{\circ}45^{\circ}N$ ,  $126^{\circ}21^{\circ}W$  (N.T.S. 94D/16W). Access is by helicopter or by float planes which can land on Wrede Lake that borders the southern edge of the property. The Bow 1-4 claims were staked on July 31, 1973 and recorded on August 14, 1973, and the Bow 5-8 claims were staked on August 9, 1973 and recorded on September 10, 1973.

### GENERAL GEOLOGY

The claim group is predominantly underlain by andesitic to rhyolitic volcanic rocks presumably of the Upper Triassic - Lower Jurassic Takla Group. The volcanics have been intruded by a small body of quartz-feldspar porphyry, possibly related to the Jura-Cretaceous Omineca Intrusives. A prominent gossan zone covers the area of the intrusive, which contains from 1 - 5% disseminated pyrite.

Northerly trending basaltic dikes cut through the area.

The regional structural trend through the claims is northwesterly, paralleling a structural break which can be inferred from topographic features.

### GRID CONTROL

A base line was established bearing  $355^{\circ}$  across the claim block by the use of a compass and Topofoil chain. The Topofoil chain is a "lost" thread measuring device in which a counter accurately records in feet from 0 to 15,000 feet the length of thread unreeling from the unit when measuring a length or distance covered. The operator attaches the end of the thread to a fixed point, the counter is set a zero and the operator moves on foot carrying the Topofoil chain. As the thread unwinds, the counter records the length. The counter readout is accurate to  $\pm 2\%$ . On completion of a measurement the counter is reset at zero. The biodegradeable thread is cut and abandoned.



FIGURE 1

BOW CLAIMS, LOCATION MAP Omineca Mining Division N.T.S. 94D/16 - Scale 1:250,000

CULLOW

The base line was marked by using coloured flagging, stations were numbered and flagged at 200 foot spacings along the line. Cross lines were placed every 400 feet or 800 feet in N85E - S85W directions by use of the Topofoil chain and compass. These were marked with flagging at stations spaced at 200 foot intervals along the lines. The grid was tied into the claim posts and obvious topographic features.

GEOCHEMICAL SOIL SURVEY

### Methods

In the course of the survey a total of 184 soil samples were collected over 7.0 miles of line grid, and subsequently analyzed for molybdenum and zinc. At each soil sample location a hole was dug with a mattock and where possible a h - 6 ounce sample of B horizon soil was taken with a stainless steel trowel. The soil was placed in a Kraft, high wet strength sample bag and marked appropriately.

The sample collection was undertaken by B. Wong and R. Walker. The writer was in the field on August 24 to organize the survey and to study the soil development and the general geology.

# Analytical Treatment of Soil Samples

The soil samples were analyzed by Core Laboratories in Vancouver. The samples were dried in their respective bags at a temperature of  $120^{\circ}F$  and then sieved to -80 mesh through a nylon screen. Two grams of each sample were digested for three hours in a 80% perchloric, 20% nitric acid mixture, bulked with deionized water, and analyzed by atomic absorption.

# Results and Conclusions

A statistical analysis was made of the molybdenum results (see Figure 2). A qualitative examination of the zinc results indicates that no significant anomalous patterns are present (see Figure 5).

Statistical cumulative frequency analysis of the molybdenum results defines two populations of 1 - 2 ppm and +6 ppm molybdenum; the 2 - 6 ppm range is a zone of overlap. Anomalous molybdenum values are considered to be those of the +6 ppm population.

Two anomalies are outlined by the survey (see Figure 3).

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Anomaly 1 coincides in part with the gossan zone and probably reflects a bedrock source.

Anomaly 2 occurs in a flat, poorly drained portion of the valley, devoid of outcrop, and probably represents accumulation of molybdenum fixed by organic materials.

#### GEOPHYSICAL SURVEY

### Field Procedures and Data Processing

The ground magnetic survey was completed with a McPhar MF-700 Fluxgate vertical component magnetometer. The reading accuracy of the instrument is  $\pm 10$  gammas below the 1000 scale and  $\pm 20$  gammas above the 1000 scale. Readings were taken every 100 feet along the N85E - S85W grid lines. Diurnal time corrections of the geomagnetic field were made by checking every two hours with established standard base stations located on the base line at every second cross line. The operator traversed a given portion of the grid area in a loop-like fashion checking in at respective standard base stations. The magnetic survey results are plotted on Figure 4 and contoured at 100 gamma intervals. The magnetic survey was performed by G. Nolin.

### Results

The survey outlined a northwesterly striking magnetic high anomaly which can be correlated with augite-porphyritic volcanics which outcrop in the area. A northwesterly series of linear magnetic low anomalies is outlined in an area where a structural break is indicated topographically and suggests the likely presence of a fault structure.

The survey did not show any obvious diagnostic patterns in the area of the gossan zone and molybdenum geochemical anomalies.

### CONCLUSIONS AND RECOMMENDATIONS

- 1. Soil geochemistry outlined two molybdenum anomalies; anomaly 1 probably reflecting a bedrock source, coincident with a gossanous alteration zone, and anomaly 2 reflecting accumulation and fixing by organic material.
- 2. The ground magnetometer survey outlined a northwest trending fault structure and a belt of augite-porphyry volcanics.

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3. Further work should be performed on the claims to evaluate the potential ( of molybdenum geochemical anomaly 1.

Respectfully submitted,

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C.V. Dyson, P.Eng.

STATEMENT OF COSTS

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LABOUR COSTS		
Geophysical - Field	1	
G. Nolin	3 days @ \$30/day, Aug. 21-26	\$ 90.00
Geochemical - Field	i	
R. Walker B. Wong C. Dyson	6 days @ \$25/day, Aug. 24-29 6 days @ \$25/day, Aug. 24-29 1 day @ \$55/day, Aug. 24	\$ 150.00 \$ 150.00 \$  55.00
Office		
C. Dyson	l day @ \$55/day, Nov. 7	\$ 55.00
Drafting		
G. Bandura	3 days @ \$30/day	\$ 90.00
PERSONNEL MAINTENANCE		
	15 days @ \$10/day	\$ 150.00
ANALYTICAL COSTS		
184 soil samples @	\$2 per sample	\$ 368.00
TRANSPORTATION COSTS		
50 miles - Beaver ( 20 miles - Otter (1	(float) rental @ 75¢/mile Noat) @ \$1.25/mile	\$    37.50 \$    25.00
SECRETARIAL, REPRODUCTIO	N, MISCELLANEOUS COSTS	\$ 75.00
	TOTAL	\$1245.50
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To accompany report on a Geochemical Soil Survey and Ground Magnetic Survey on the BOW 1-8 mineral claims, Omineca Mining Division, by C.V. Dyson, P.Eng.

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