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McPHAR GEOPHYSICS LIMITED

PHONE 685-3613
VANCOUVER AREA CODE 604

SUITE 811, 837 WEST HASTINGS STREET, VANCOUVER 1, B.C., CANADA

TELEX: 04-507818

September 10, 1973

MEMORANDUM TO: Dr. W.R. Bacon
Bacon and Crowhurst Limited
1720-1055 West Hastings Street
Vancouver 1, B.C.

SUBJECT: Induced polarization survey for:
Channel Copper Mines Limited,
Reiseter Property, Omineca Mining
Division, B.C.

Antimony, lead, zinc, copper, molybdenum and silver mineralization occurs in narrow veinlets and in fractures within an altered sedimentary rock of the Hazelton group. Granodiorite is situated both east and northwest of the sediments. Two relatively small stocks of similar composition intrude the sediments within the IP grid.

Pyrite is described as common within the sediments varying in content from 0.5 to 2.0%. It occurs both as disseminations and as smears in fractures.

A soil geochemical survey located a well defined molybdenum anomaly trending ENE across the survey grid. Copper values in the soil were low and do not correlate with the molybdenum anomaly.

The IP survey was carried out using relatively large 300 foot electrode intervals and the dipole - dipole electrode array. The expanding electrode technique was used to three separations, i. e. N=1, 2 and 3.

The IP survey located weak but quite well defined IP anomalies that trend E-W in a zone that straddles the baseline. The resistivity background of the anomalous IP zones is relatively high suggesting that some silicification probably accompanied the alteration described in the geological report.

The IP zone shows reasonable agreement with the anomalous molybdenum zone. Most of the higher Mo values are contained within the IP zone. Undoubtedly the low but ubiquitous pyrite content of the sedimentary rocks contributes in part to the IP effect. The mineral molybdenite does not contribute significantly to the IP effect, however, it is not uncommon to have associated metallic sulfides such as pyrite create the IP anomalies that lead to molybdenum discoveries.

Most of the IP anomalies appear shallow relative the electrode interval used for the survey. With 300 foot dipoles, this means less than 100 feet. Wherever there is some suggestion of depth to the source, the letter "D" has been placed over the appropriate portion of the anomaly.

The IP zone because of its correlation with both the molybdenum geochemical anomaly and favourable geological conditions warrants further investigation. Since relatively large electrode intervals were used for this survey, it would be desirable to investigate the initial drill sites with additional IP using shorter electrode intervals.

Detail surveying using 100 foot electrode intervals and four separations, N=1, 2, 3 and 4 is recommended at the following locations:

Line 28 W - survey from 4S to 8N
Line 16 W - survey from 4S to 8N

This detail surveying will provide more information as to the depth to the source and will better define the anomaly location.

The cost of this work if it can be done with a crew already in the area is estimated at \$ 450.00.


A. W. Mullan
McPHAR GEOPHYSICS LIMITED

Enclos.

AWM/lm