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Property Submitted

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TAYLOR-HELICON EXPLORATION

BOLING PEAK

SUMMARY REPORT

CHAPMAN, WOOD & GRISWOLD LTD.

by:
M. C. Erskine Jr.

November 2, 1966

BOLING PEAK PROSPECT

LOCATION AND ACCESSIBILITY

The Boling Peak Prospect is located on the west shore of Takla Lake about five miles due south of the trading post at Takla Landing. The property begins at the lake shore and covers a 1200 ft. high hill three miles north of Boling Peak proper. It is in the Omineca Mining Division of Central British Columbia.

The area may be reached by boat from Ft. St. James on Stuart Lake from early May through late November, the trip taking a full day in a good river boat. A 30-ton barge makes regular freighting trips during this season (see: Henry Dagenais, Ft. St. James, 996-8460). The trading post at Takla Landing carries most grocieries (the exceptions are perishable meats, fruits and vegetables), gas and oil (for kickers, autos and aeroplanes), and most bush gear. Prices are high but a 10% discount was offered (see: Jack Newcomb, Takla Lake Post, Takla Landing, B.C.).

The Pacific Great Eastern Railway has begun clearing of right-of-way for a rail spur from Ft. St. James to pass by Takla Landing. They estimate completion in about three years. This would follow the east shore of Takla Lake and pass within three miles of the property.

HISTORY

The prospect was discovered by D. Milburn, J. Cook and A. O'Dell on a THX prospecting traverse. They discovered chalcopyrite associated with potash feldspar in various intrusive and extrusive rock types. Copper in soil on the reconnaissance traverse went as high as 1000 ppm. Since there were other exploration groups working the immediate area 50 claims were staked as rapidly as possible. Geochemical soil samples were taken every 200 feet along the claim line traverses.

Late in the season a follow-up party cut and soil sampled an additional 45,800 feet of line, staked an additional 10 claims, blasted 100 feet of deep trenches and ran two reconnaissance I.P. lines. An aeromagnetic survey was flown to outline the intrusive and some ground magnetics were run as control. In addition the area between 4S and 36S, and from baseline to 26W has been intensively prospected.

Chalcopyrite has now been found from Baseline -106S to Baseline -2N and from 10E on Line 20S to 39W on 32S. Throughout this area, but not confined to it, the bedrock is altered and weathered intrusive capped, in part, by equally altered and weathered volcanics. Maroon limonite is abundant in both rock types.

GEOCHEMICAL PROSPECTING

Nearly 400 silt and soil samples have been collected over 78,000 feet of cut line. Over much of the property so far prospected the geochemical pattern is not reflecting the mineralization visible in adjacent rocks. Soils developed on rocks with up to 0.5% Cu (partly oxidized sample 8 feet below the surface) show only background copper at 32S-21W.

This could possibly be due to a very spotty and erratic primary copper distribution but the following explanation seems more probable to this writer. If a preglacial weathering cycle had leached the outcropping mineralized zone to some depth and then the glaciers had removed only the residual soils with their residual geochemical pattern and not the already leached bedrock, then the post glacial soils developed on already leached bedrock would have exceedingly little copper to work with. Areas where the glaciers stripped to relatively fresh bedrock appear to have a spotty but reasonable geochemical pattern.

The above hypothesis suggests that bleached rock with maroon limonite in it should be considered as a high geochemical value even though the ppm Cu in soils is at background. With this in mind, the only geochemical boundary on the anomalous zone is to the north, the anomaly is open in all other directions.

Not enough ground has been mapped to recognize a pattern to the glacial erosion.

In spite of the above problems much more geochemical coverage is needed because (1) there is heavy soil cover in most of the low lying areas, and (2) some areas on the property have useful geochemical patterns.

AEROMAGNETICS

A helicopter aeromagnetic survey was flown between Takla Lake and Boling Creek on NE-SW flight lines 1/4 mile apart and with an average terrane clearance of 300 feet. Poor base maps and a relatively inexperienced operator resulted in so much flight line mismatch (herring-boning) that only generalized contours could be drawn.

The aeromagnetic pattern indicates a roughly circular plug about two miles in diameter that coincides closely with known mineralization. The internal structure of the plug is, from the magnetic pattern, fairly complex but known mineralization cuts across the complexities.

The data is too poor to interpret the southern part of the anomaly, except to suggest that it is possible that the anomaly only narrows down to widen into a new anomaly.

GROUND MAGNETIC SURVEY

The ground magnetics were run with a radar tortion magnetometer at 100 foot stations on the claim lines and cross lines. In spite of the expected noisy pattern of an intrusive partly capped by a thin layer of andesitic volcanics, the correlation with the aeromagnetic pattern is obvious.

A magnetic storm occurred on the day the magnetic tie line was run and so the data is difficult to contour, but the local highs correlate in a very general way with the broad geochemical picture outlined above.

TRENCHING AND PITTING

Since a large part of the favorable outcroppings consists of strongly altered and deeply weathered rock with no sulfides left at surface, it was felt that much significant information could be acquired by determining whether or not the maroon limonites actually did represent chalcopyrite in the fresh rock. Thus nine trenches or pits were blasted to "fresh" bedrock, first with a cobra and then with an Atlas Copco 125 CFM compressor and jackleg.

All but three of these pits showed significant chalcopyrite mineralization in the bottom. Of the three, two showed a change of rock type towards the bottom and the other showed a change of limonite color. In every pit the rock eventually became fairly fresh but the fractures were still largely rust. Some assays of this material are as follows:

Location	Depth (feet)	% Cu	Sample Description
28+60S, 18+05W	5	0.15	Disseminated chalcopyrite and limonite (50% oxidized)
33+80S, 20+20W	5	0.05	Chip sample thoroughly oxidized
33+80S, 20+20W	6	0.21	Dump sample 50% oxidized
33+80S, 20+20W	8	0.38	Fresh rock but veinlets partly oxidized

INDUCED POLARIZATION SURVEY

At the end of the 1966 field season two I.P. lines were run as an orientation for next year's program. The lines, 20S and 32S, were run with 400 foot dipole-dipole array. Line 20S shows a strong well defined anomaly at its east end (4E to +8E). Only a part of the anomaly was surveyed because of the lateness of the season and the difficulty in making current electrodes in the steep rocky terrane. This anomaly corresponds to a zone of diorite to quartz diorite porphyry that has 1/4" blobs of chalcopyrite. The area is anomalous in all three I.P. parameters: apparent resistivies less than 30 ohm-feet/2π, PFE's over 10% and a metal factor anomaly well defined over at least 400 feet.

Line 32S is a more diffuse anomaly spread over a much larger area. Background PFE's are below 1% and anomalous values go to over 8%.

The pattern represents spotty mineralization over a large area. In the area of the trenches and pits the PFE's are about 3 to 4% and irregular.

A very large area (3 miles x 2 miles) should be surveyed on a reconnaissance basis. Because of the lack of surface water for current electrodes and the fact that both anomalies show on first separation the best survey technique would appear to be use of a Brant array. The amount of ground covered in a given time is more than doubled by this system.

GEOLOGY

Outcropping rocks are for the most part oxidized and leached. The controlling feature of the region is a small complex intrusive capped in part by pre-intrusive volcanics (or at least pre-mineralization volcanics). The volcanics are recognizable mainly by relict textures and have some sulfides in fractures. The composition appears to have been mostly andesitic and the weathered partings suggest that they are flat lying to gently dipping. None of the contacts with the intrusive were observed, outcrops were either volcanic or intrusive.

The intrusive appears to be petrographically and stucturally complex. The rock types range from fine-grained mela-diorite to medium-grained quartz diorite porphyry to a rock consisting entirely of potash feldspar and magnetite. Any of these may appear as a dike or sill in any other. With only scattered outcrops mapping is very slow.

Nothing was seen of the surrounding rocks as outcrops are almost non-existent in the low ground.

CONCLUSIONS

Significant chalcopyrite mineralization has been found scattered over 37 million square feet of surface in an intrusive plug near Boling Peak. The area having a similar magnetic signature to the known mineralization is 4.9 square miles. The intrusive plug can be mapped magnetically and the mineralization can be traced with reconnaissance I.P., with broadly interpreted copper geochemistry as a secondary guide. Trenching is needed on the I.P. anomaly.

RECOMMENDATIONS

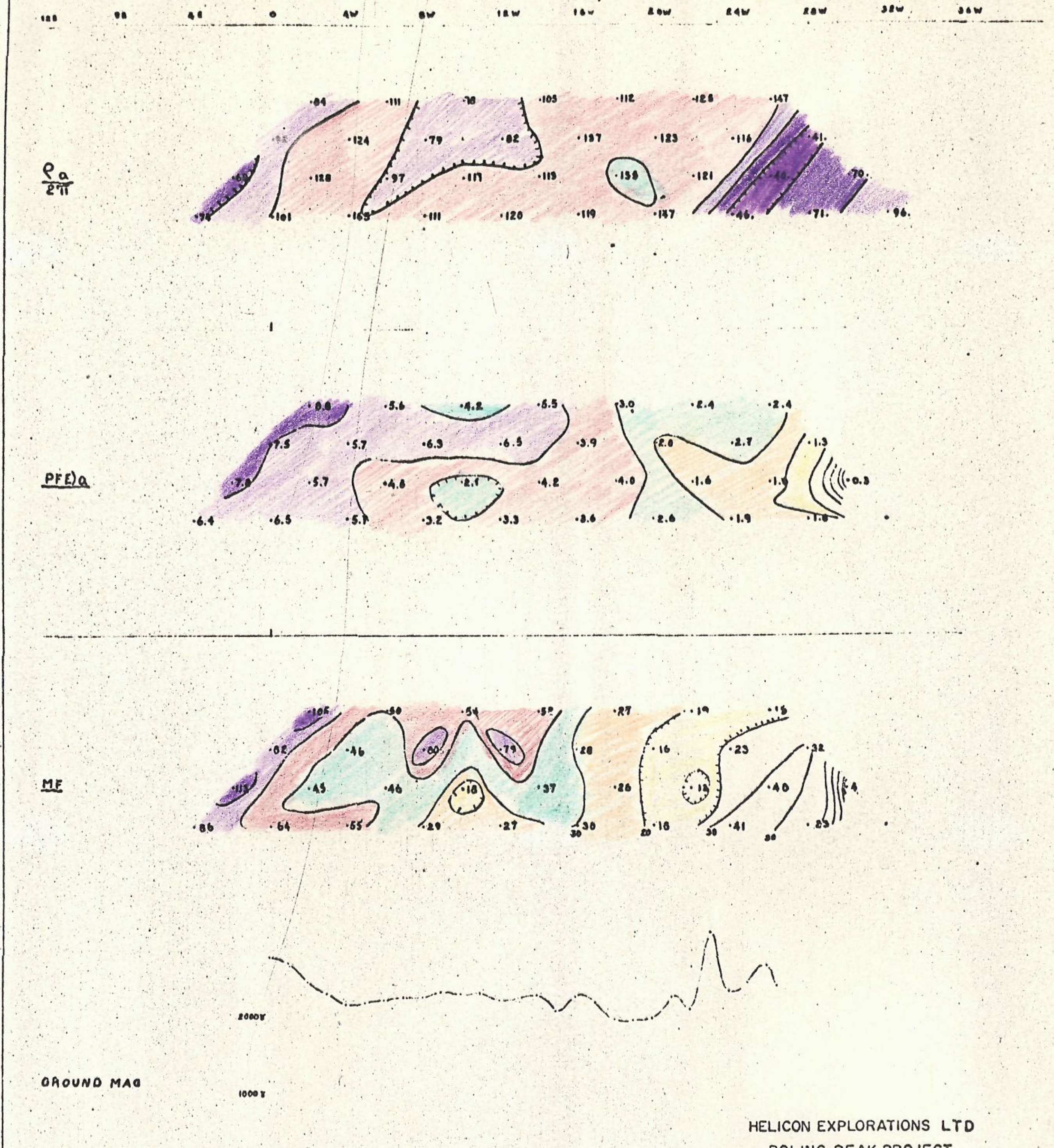
Brant array I.P. and copper geochemistry should be conducted on an 800-foot line spacing over the whole of the aeromagnetic anomaly and its contacts. Simultaneously, the present I.P. anomaly should be trenched. If results of this stage 1 work are favorable, a program of bulldozer trenching and diamond drilling will clearly be justified.

Respectfully submitted,

CHAPMAN, WOOD & GRISWOLD LTD.

M. C. Erskine, Jr.
Exploration Geologist

November 2, 1966



HELICON EXPLORATIONS LTD

BOLING PEAK PROJECT

OMINECA MINING DIVISION B.C.

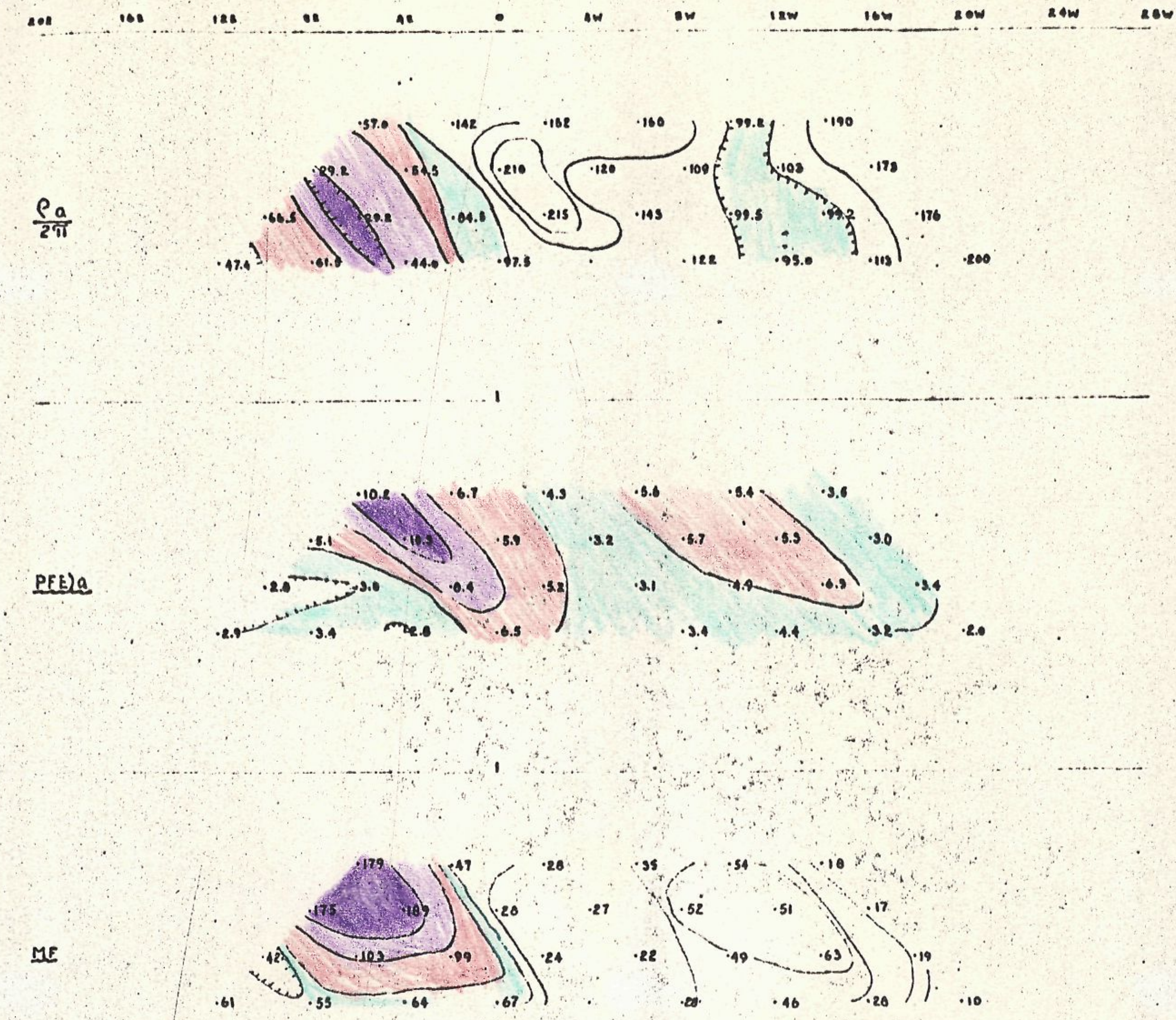
INDUCED POLARIZATION

PROFILE 32S

0 400 800 1200 1600

CWBG Ltd Drwg No.:- 537 DATE:- NOV 4, 1966

Rev'd DATE:-



HELICON EXPLORATIONS LTD

BOLING PEAK PROJECT

OMINECA MINING DIVISION B.C.

INDUCED POLARIZATION

PROFILE 20 S

0 400 800 1200 1600

CWBG Ltd Drwg.No.:- 536 DATE:- NOV4,1966

Rev'd DATE:-