

801448

WILLIAM M. SHARP, P.ENG.
CONSULTING GEOLOGICAL ENGINEER

Oct. 8 Mike phones to advise he will recommend, by letter report, a preliminary assessment of the ^{171 WEST ESPLANADE} ~~mine~~ ^{NORTH VANCOUVER, B.C.}

by way of some 2000' of X-ray drilling.

August 30, 1969

M. S. concurs this would be an advisable preliminary to a formal report w/ recommendations & large expenditures.

President and Directors,
Dome Babine Mines Ltd. (N.P.L.),
Suite 201-535 Thurlow Street,
Vancouver 5, B. C.

Attention - Mr. D. W. Small

Gentlemen:

INTERIM GEOLOGICAL REPORT
BOT BRENDA CU-AG PROSPECT
DECEPTION LAKE AREA
OMINECA MINING DIVISION, B.C.

PRELIMINARY:

The following report is based on the writer's August 9, 1969 inspection of the Ivanhoe shaft-South pit exposures and relevant bedrock outcrops, together with background geological data concurrently and subsequently provided by Messrs. M. J. Beley and B. Price. Field guidance and sampling assistance were also supplied by Messrs. Beley and Price. The geological reference data provided comprises:

P. H. Blanchet, P. Eng. - report, "Bot Brenda Project, July 19, 1968"

B. Price, Manex Mining Ltd. - Notes on Bot Brenda Geological Map, August, 1969

B. Price & R. Yorke-Hardy - "Geological Map of Grid Area," August, 1969.

B. Price, (a) map, "Magnetometer Survey for Dome Babine Mines Ltd. (N.P.L.) August, 1969"

(b) map, "Geochemical Soil Survey for Dome Babine Mines Ltd. (N.P.L.)" August, 1969

(c) map, "Diagrammatic X-Section A-A'," Aug. 1969

(d) map, "Diagrammatic X-Section B-B'," Aug. 1969

All of the above maps are quite definitive; however, the strong colouring employed precludes getting clear prints from the current tracings. For this reason the stipulated number of prints is being forwarded as requested, but none are included directly with this report.

Samples taken by this writer were initially assayed by T.S.L. Laboratories Ltd.; the same pulps were check-assayed by Bonder-Clegg & Company Ltd.

PROPERTY:

The gross property locates some 24 miles ESE of Smithers, B.C.; locally it is at about two miles S.E. of Deception Lake. It is reached via Highway 16 for 20 miles southeast of Smithers; thence northeasterly via the Watson Ranch-Deception Lake road - totalling 13.6 miles to the present Bot Brenda camp site. The latter section of the road from the ranch to the camp site is new, having been recently built by Dome Babine Mines Ltd. The topography throughout this part of general region is quite moderate; within the actual claims area it is somewhat more rugged, with elevations ranging between 3,800 - 4,700 ft. - the latter applying to the summit of the intrusive dome west of the currently-principal exploration area. Access should not be difficult except during periods of extremely wet or snowy weather.

Specific details of the moderately large claim group are not given here; these may be secured from the Vancouver office of Manex Mining Ltd.

HISTORY:

The original discoveries of Cu-Ag mineralization within the present property boundaries were made prior to 1928. Early exploration of these was by hand-pits and trenches and two, or more short adits. The gross extent of this work was minor, and evidently no significant ore production resulted from it.

P. Blanchet, of Chapman, Wood and Griswold Ltd. was retained by Dome Babine principals to carry out a photogeologic study of the Black Mtn.-Dome Mtn. area during the fall of 1967. As a general result the Company acquired an option on the Bot-Brenda group shortly thereafter. Subsequently the group was expanded via further staking for the Company.

In June, 1968 P. Blanchet made a one-day field examination of the property - basing this essentially on his derived photogeological data - and followed this with a more localized

photogeological study and report, with recommendations for airborne and ground exploration. Consequently, an airborne magnetometer-electromagnetic survey was carried out - mainly resulting in the delineation of some significantly magnetically-anomalous zones.

During 1969, through Manex Mining Ltd., an exploration grid has been prepared, a ground magnetometer survey made, and geochemical soil-sampling accomplished. In addition, B. Price has geologically mapped the 4,000 x 4,000 foot area containing the more significant mineralization on a scale of 1 inch = 200 feet, and prepared an integrated set of geological magnetic, and geochemical survey maps.

The recommended I.P. survey, scheduled for an initial 16 line-mile coverage, is imminent or currently in progress.

GENERAL GEOLOGY:

The following notes almost entirely derive from the P. Blanchet and Manex reference data.

The Black Mtn.-Dome Mtn. area is underlain by volcanic and sedimentary rocks of the regional Hazelton Group. These are very locally intruded by a few small stocks and dykes ranging in composition from granite to diorite. The volcanic-sedimentary rocks have been extensively folded and faulted; principal formational and structural trends tend to be northerly to northwesterly, with important transverse trends mainly represented by NE-striking, offsetting faults.

PROPERTY GEOLOGY:

The central Bot Brenda claims area is underlain by a sequence of (mainly) andesitic tuffs, breccias and lavas containing one or more interbeds of black argillite and/or silty shale. These flank, to the west, a prominent intrusive stock of composition ranging from monzonite or granodiorite through diorite. This body, elongate N-S, has presently-estimated dimensions of some 2,000 by 4,000 feet. The intrusive is complex; presently identified components include dark squigranular, light equigranular, fine and coarse porphyritic, and breccia phases. Generally conformable dykes or sills within the easterly-adjointing volcanic succession are assumed to branch from the main stock. The dip of the composite volcanic-intrusive 'prospect panel' is defined as moderately, to steeply westward.

Fracturing within the grid area is either in the formational (N-NW) direction or obliquely transverse to it. The

principal fractures of the formational set have been related to the long contacts of the stock, and may locally comprise up to 100 feet of its sheared, closely fractured marginal phase and/or the flanking volcanics. The transverse fractures are postulated mainly on local terminations, or offsets of parts of the volcanic sequence; map-wise, they do not appear to offset marginal sections of the main stock. However, occurrences of step-faulting within the main stock have been noted. The greatest concentration of photo-linears, also mainly disposed as (conjugate) N-NNW and E-W (approx.) groups, is within a 2,500' by 3,500' 'wedge' laterally enclosed by the N-S east-marginal fault of the stock and a NW-striking major, continuous-to-discontinuous linear intersecting the N-S linear at about 1,000 feet north of the stock. The Ivanhoe shaft shear-fracture, and south (Bot) pit fracture-fill-dispersed Cu-Ag zones, respectively, occur centrally within this crotch; each of these appears to be situated in actual zones of converging and intersecting fractures of various strengths.

The intrusive rocks are not visibly altered, excepting for local patches of quartz-epidote development. The volcanics are appreciably altered where they are hosts to shear-zone, or boxwork fracture - disseminated mineralization; this includes (soft)bleaching and silicification-chloritization, with subordinate calcite-epidote-quartz occurrences.

MINERALIZATION & SAMPLING:

The main Ivanhoe pit (shaft) exposes a 4 - 6 ft. wide shear-fracture containing calcite-tetrahedrite veinlets. A chip-sample by M. Beley across a 6-foot width of variably-mineralized, bleached volcanics ran Ag, 8.34 oz/ton, and Cu, 0.61 percent; a subsequent chip-sample by P. Blanchet across the better mineralized section of this assayed 3.0 ft. @ Ag, 18.16 oz/ton, and Cu, 1.21 percent. A well defined geochemical anomaly on a corresponding northerly trend suggests a N and S extension of the mineralization. This writer's impression was that the current system of auxiliary trenches was not necessarily on actual strike extensions of the mineralization, and that more trenching is warranted.

The old south pits within the main prospect area expose significant fracture-filling and disseminated chalcopyrite-bornite-tetrahedrite mineralization in hard brittle, friable gray-green tuffs. The individual pits are about 40 feet apart on cross-section; the andesites between these are more-or-less continuously mineralized with similarly-occurring chalcopyrite-pyrite to an apparently lesser, but still appreciable extent. Earlier chip samples returned the following assays:

- (a) Easterly pit, mid-height - 14.5' @ Ag, 3.56 oz/ton;
Cu, 1.16 percent
- (b) Westerly pit, mid-height - 10.0' @ Ag, 0.88 oz/ton;
Cu, 0.56 percent

Samples by this writer, corresponding to the above,
gave:

- (a) East pit, lower face - 14.0' @ avg. Ag, 4.55 oz/ton;
Cu, 1.31 percent
- East pit, grab of excav. mineral - Ag, 4.6 oz/ton;
Cu, 1.30 percent
- (b) West pit, lower face - 14.0' @ avg. Ag, 1.88 oz/ton;
Cu, 0.74 percent

The above grab-sample was taken by Messrs. Beley and Price to provide a general check on the writer's sample (a). An earlier chip-sample across the 40-foot section of surface mineralization between pits (a) and (b) assayed:

(a-b) Ag, 0.28 oz/ton; Cu, 0.38 percent; sampling of deeper, less weathered mineralization across this section would probably return substantially higher assays. However, a weighted average of the writer's (a) and (b) and the earlier (a-b) sample gives 68' @ Ag, 1.52 oz/ton; Cu, 0.646 percent. The gross value of the above is \$9.16 per ton; the realizable value of this should be in the vicinity of \$7 per ton, or of a grade comprising potentially-mineable material over this width - subject to the delineation of an economically-feasible minimum tonnage.

On the road nearby the westerly (b) pit, firm black argillites contain a minor, but undetermined amount of very finely-disseminated chalcopyrite-pyrite. Also, visible disseminated chalcopyrite, and occasional bornite, have been noted within silicified tuffs some 200 feet to the north. Evidently several more small pit-exposures of copper mineralization occur within the 200 foot interval southeast of the main lower pits, according to a previous report.

MAGNETOMETER SURVEYS:

The average magnetic intensity within areas of tuff and other volcanics ranges between 500 - 600 gammas; that in the intrusive is estimated at 1,000 gammas, or greater. The variations, on the whole, appear to reflect the local lithology and structure. The Company geologists report that, to date,

there is no marked correlation between the magnetic data and known zones of mineralization except, perhaps, very locally. In general, however, the more significant mineral occurrences and geochemical trends would appear to lie within the broad, northerly-trending magnetic low over the central (map) panel of mixed volcanic rocks.

GEOCHEMICAL-SOIL SURVEYS:

Anomalous Cu-Pb-Ag values have been plotted according to a derived scale of sub-anomalous and anomalous values. This serves as an indicator of general significant-to-anomalous trends; however, it would appear that more indicative patterns might have resulted from statistical grouping, filtering, and contouring of the data.

On the basis of its known geological-mineral affiliations the most significant indication is of general Cu-Pb-(Ag) 'positive' areas related to the respective shaft and lower-trench zones. Variations in overburden and drainage features tend to mask expectable geochemical correlations.

CONCLUSIONS:

The airborne magnetometer-electromagnetic surveys appear, essentially, to have provided useful geological reconnaissance data. The ground magnetometer survey has provided data relating to more local geological features.

The several individual pits within the south prospect zone have tentatively delineated a 100 by 500 foot area of potentially-economic Cu-Ag mineralization within a much larger, intensely fractured area of mixed volcanic rocks flanking the 2,000' by 4,000' intrusive stock. This fracture-filling-to-disseminated mineral zone, and possible extensions, provides at least one legitimate and attractive target for the forthcoming I.P. survey. Within this generally favourable geological environment it is quite possible that others will be found.

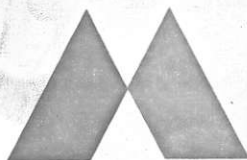
The current exploration program is proceeding on the basis of previously made recommendations; therefore, any that the writer might make would be supplementary, and preferably, contingent on the results of the current I.P. survey. In respect to this, however, the writer suggests that follow-up work be done in sufficient detail to provide as full a delineation as possible, laterally and on cross-section, of principal mineralized zones.

This is considered essential to provide adequate information for subsequent planning of trench and drill exploration.

Respectfully submitted,

W. M. Sharp, P. Eng.
W. M. Sharp, P. Eng.

Aug - Sept / 69



MANEX MINING LTD. (N.P.L.)

SUITE 200 - 535 THURLOW STREET, VANCOUVER 5, B.C. • 681-4411

NOTES ON BOT BRENDA GEOLOGICAL MAP

I. REGIONAL GEOLOGY

-folded Hazelton volcanics with few interbeds of shale. Much tuff and andesite; commonly shades of red and purple, except where bleached or altered.

II. LOCAL GEOLOGY

-granodiorite or monzonite pluton; complex - several distinct phases:

1. dark equigranular (particularly the marginal phase)
2. light equigranular
3. porphyritic (fine matrix)
4. coarse porphyritic
5. igneous breccia

-ring dykes and sills which are probably related. These are porphyritic - large ($\frac{1}{2}$ " phenocrysts of plagioclase in fine crystalline andesitic looking matrix. Marginal phases resemble andesite. The porphyritic areas have characteristic mottled and pitted weathered surface.

-these dykes and sills appear to be connected to the large intrusive (porphyritic type) on the long rounded ridge trending south to southeast.

STRATIGRAPHY

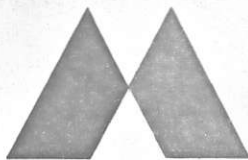
-much of the country rock is red-purple fine grained tuff occasionally finely laminated. Thin beds of purple porphyritic and vesicular andesite are present and coarse tuffs present in the area of the pits -- with associated thin (25 - 35 ft.) beds of soft argillite and silty shales.

STRUCTURE

-most volcanic horizons strike N 10 - 20° W and dip 45 - 65° westerly. The porphyritic diorite on ridge south of camp appears to have a conformable dip. It is probable that in other areas the porphyritic diorite also dip westerly.

FRACTURES

-in the area of the grid have orientations mostly striking 320 - 340° and 80 - 100° and dipping 80 - 90° northeasterly.



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FAULTS

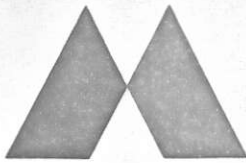
-abundant in the area -- major faults are parallel to contact of intrusion and transverse (trend eastwest). Two transverse faults appear to have offset the center panel (containing major mineralizations) to the east. Several other smaller faults probably exist. One certain fault crosses the baseline at approximately 1300 ft. N. Although outcrop is poor in the vicinity of the shaft, several faults may converge in this area. Step faulting is reported from areas in the intrusion.

SHEARING

- in the vicinity of the hand dug pits and in the adjacent outcrops, strong shearing is present. The mineralized portion in the "shaft" pit is also strongly sheared. The shearing is probably related to intrusion of the porphyry body and dyke nearby.

ALTERATION:

1. No alteration in intrusion itself except patches of quartz and epidote - these are very prominent in the "diorite porphyry sills" and dark green andesite in the SE sector cliffs.
2. Probably silicification and chloritization of tuffs adjacent to the dyke (which strikes SE near pits at the end of the road). This dies out to the SW -- adjacent tuffs are grey and unaltered.
3. Bleaching -- apparent at "shaft" in the narrow (4 ft.) fracture or shear zone and also in old pits near the adit - bleached with calcite and tetrahedrite veinlets.
 - slight bleaching and possible chloritization in interbedded green and red tuffs seen at several localities (400S - 100E) (00N/S - 300W)
 - the porphyritic andesite near the eastern extremity are light coloured and could possibly be bleached.



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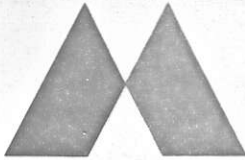
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MINERALIZATION

1. Adit: Tetrahedrite in the narrow zone which strikes approximately N and dips slightly into the hill. Adjacent pits have bleached andesites or intrusive (marginal phase) with calcite and tetrahedrite veinlets and fracture fillings.
2. Intrusion: Disseminated pyrite was seen in many localities in the monzonite/diorite intrusion. Pyrite and chalcopyrite in minor amounts were seen by R. Yorke-Hardy near the western extremity of the grid on lines 800 - 1200 north. Copper mineralization was also reported near the road near 200 S - 1500 W.
3. Pits: In the pits near the end of the cat-road (800 S -100 W to 200 W) the mineralization in the hard green tuffs consists of disseminated chalcopyrite, bornite, thin fracture fillings of chalcopyrite and calcite-tetrahedrite veinlets. On the road nearby, the black hard argillites (slight silicification ??) contain specks of pyrite and chalcopyrite. Disseminated chalcopyrite and occasional bornite is seen in the silicified tuffs above the pits and in the shallow pits near 600 S on the baseline. Calcite veinlets in the "shale" at both occurrences 750 S - 300 W baseline 50 N contain minor amounts of light brown sphalerite, at the latter point thin films of bright yellow-green greenockite were noticed.

Fine grained galena was reported by J. Bot below the road at (approximately 800 S - 500 W). In the shaft near the baseline - 00 calcite-tetrahedrite veinlets are present in a 4 ft. bleached fracture zone.



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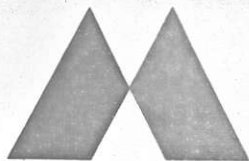
NOTES ON MAGNETOMETER SURVEY

Average reading in the tuffs 500 - 600 gammas

Average in intrusion estimated to be 1000 gammas or greater

Most anomalies can be explained by geology:

1. High area in the W corner corresponds to the aeromagnetic high and to the monzonite-diorite intrusive.
2. Offsetting of the anomalies is possible in the vicinity of the adit. These may correspond to faults inferred from geological mapping.
3. The large anomaly in the eastern portion of the grid also corresponds to the aeromagnetic high. It coincides with a wide band of dark green moderately crystalline andesite, strongly epidotized in places (similar to "porphyry" bodies).
4. Sharp boundaries on the east side of two of the major anomalies 800 S - 1400 W, 800 S - 600 E, may be fault controlled, as steep cliffs occur in these localities adjacent to the outcrops.
5. There appears to be little or no correspondence between the "porphyritic diorite" sills and magnetic anomalies.
6. No correlation between mineralization and magnetic effects is noted, but theoretically mineralized areas should be less magnetic than other areas due to the intense bleaching of wall rock in several localities. A slight magnetic low trends through the NE extremity of the grid -- coinciding approximately with minor pyrite and chalcopyrite mineralization (as well as geochemical trend). This may bear further investigation.



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NOTES ON GEOCHEMICAL (SOIL SAMPLE) MAP

1. Soil samples taken by Manex personnel, B. Dockrill, G. Ramsay, T. Schout and R. McGillev-ray.

100 ft. spacing on lines 00 - 2,000 S

100 ft. spacing on lines 00 - 800 N

200 ft. spacing on lines 1200 N, 1600 N, 2000 N.

On lines 1200 N, 1600 N, 2000 N the samples have been taken at 200 ft. intervals thus control in this sector of the grid is poor.

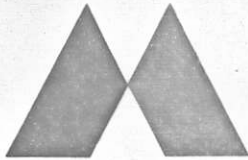
RESULTS:

One well defined geochemical anomaly trends northerly and passes through the central point of the grid baseline/00 near the Ivanhoe "shaft". Silver, lead and copper have anomalous values along this trend.

	<u>copper</u>	<u>lead</u>	<u>silver</u>
Average values in the area	16 ppm	less than 20 ppm	greater than .5 ppm
Slightly anomalous values are considered to be	greater than 30	greater than 30	greater than 1.5
Good anomalous values are considered to be	greater than 100	greater than 100	greater than 10

The main anomaly copper, lead and silver coincides with the trend of geological features (bedding and shearing), faulted dyke sill alignment, as well as with observed mineralization in outcrop, shaft and hand dug trenches. The trend may indicate an extension of the mineralized area to the north and south.

A less well-defined copper and lead anomaly trends south from the vicinity of the Ivanhoe adit and nearby mineralized trenches. The trend probably corresponds closely to that of the intrusive - volcanic contact. Slope direction in this area is roughly due east, hence the anomaly is more likely residual than transported.



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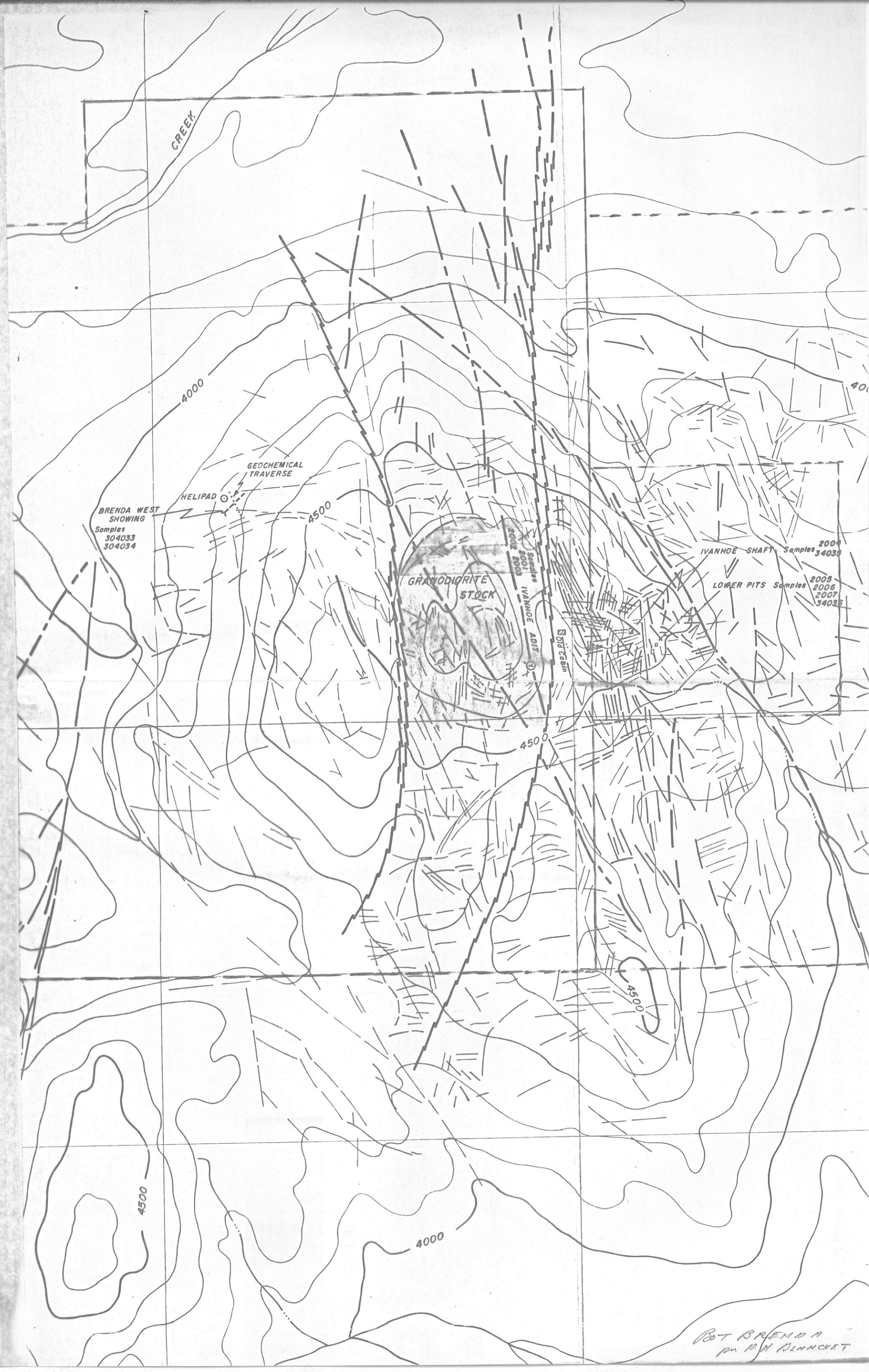
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A third, and only weakly anomalous copper, lead and silver zone is present in the western limit of the grid (2000N -1200W to 600 N - 2000 W). It coincides with a slight depression, several swamps and also with minor occurrences of pyrite and chalcopyrite. All these zones are worthy of further attention if IP surveys result in coinciding anomalous zones.

Abundant scattered anomalous values with no apparent trend are present in other areas of the grid but these generally coincide with swamps and depressions downslope from known mineralization.

Submitted by,

Barry J. Price



BRENDA WEST
SHOWING
Samples
304033
304034

HELIPAD

GEOCHEMICAL
TRAVERSE

GRANODIORITE
STOCK

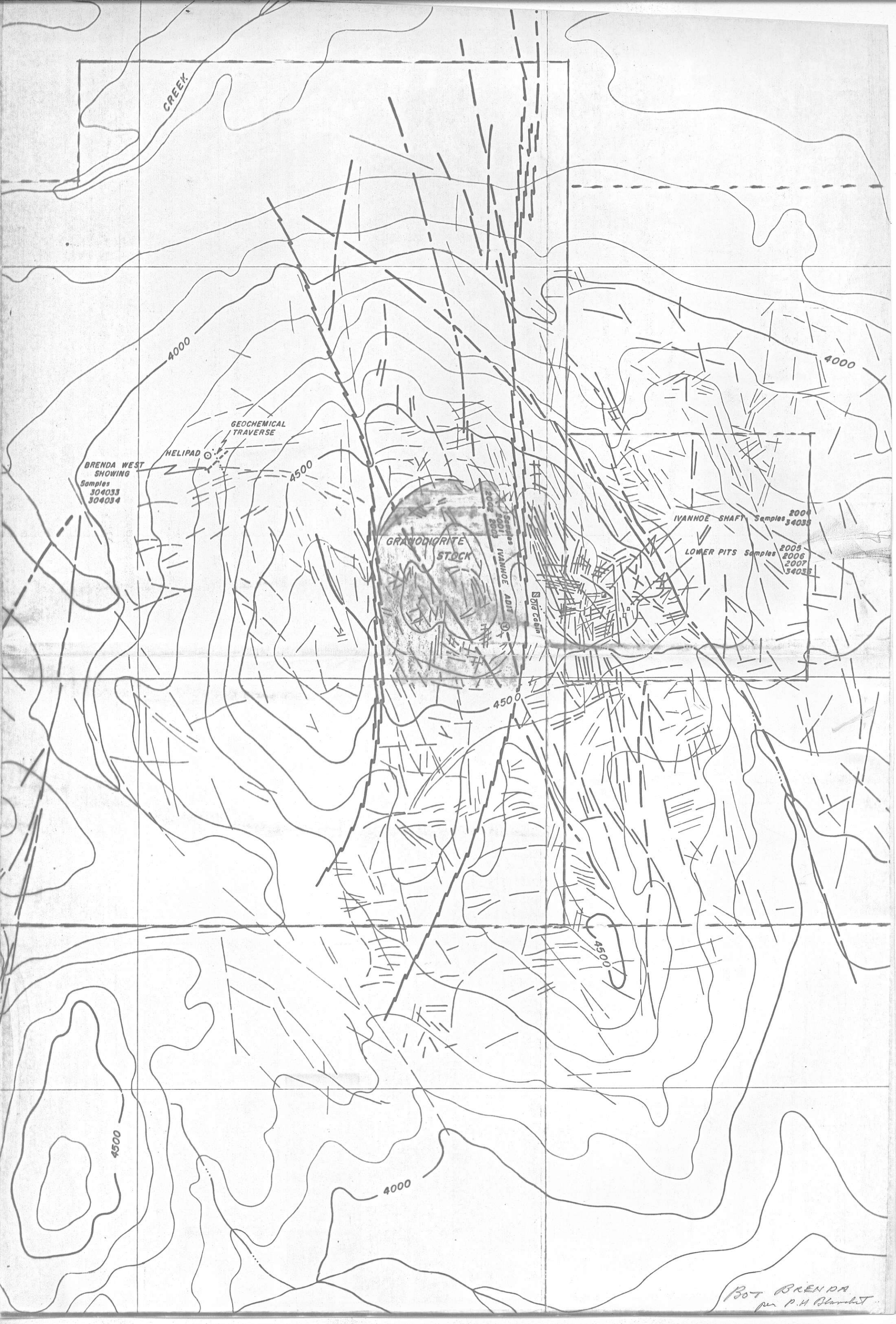
Samples
2002
2003
2004
2005
IVANHOE ADIT

Dip Cabin

IVANHOE SHAFT Samples 2004
34035

LOWER PITS Samples 2005
2006
2007
34035

Bot BRENDA
by P.H. OLIVIER



CREEK

4000

4000

GEOCHEMICAL TRAVERSE

HELIPAD

BRENDA WEST SHOWING
Samples
304033
304034

4500

GRANODIORITE STOCK

IVANNOE SHAFT Samples 2004 34035

LOWER PITS Samples 2005 2006 2007 34035

4500

4500

4500

4000

Bot BRENDA
per P.H. Blomquist

Rec'd Nov. 12/69

From R. Cavén

Toronto report w.

Final maps pending.

GEOPHYSICAL REPORT ON THE BOT-BRENDA PROPERTY

NEAR SMITHERS, BRITISH COLUMBIA

INTRODUCTION

During the month of September, 1969, Barringer Research Limited completed an induced polarization/resistivity survey on the Bot-Brenda group of claims, near Smithers, Omineca Mining Division, British Columbia. The claims are held by Manex Mining Ltd. The scope of the work consisted of 10.6 line-miles of double profile traverses and detail work. This work was carried out from Sept. 5 to Sept. 25, 1969, inclusive, by Barringer's geophysicist Roger Cavén, P. Eng.

Location and access

The claims surveyed are situated approximately 2 miles S E of Deception Lake, and 4000 feet above sea level, in the Omineca Mining Division, British Columbia.

Access to the property is from Highway 16, east of Quick, by 12 miles of gravel and four-wheel drive vehicle road.

NTS map: Smithers 93 L, with S E corner coordinates:
longitude 126° 00' W, and latitude 54° 00' N.

Property and Survey Control

The grid lines were cut in direction of N 55° E normal to the baseline N 145° E, by personnel from Manex Mining Ltd.

GEOLOGY

The property is located on the east side of a monzonite - diorite intrusive. Only a small part of the grid is on the intrusive. The intruded rocks consist of tuffs

and andesites belonging to the Hazelton group. The volcanic beds appear to be dipping very steeply. In a few observed places the dip is approximately vertical, but it may be variable over the property. Mineralization has been observed in a few outcrops and was part of the reason for the induced polarization survey.

SURVEY AND EQUIPMENT

The work was carried out on a grid with lines 200 - 400 feet apart.

The induced polarization survey employed a Hunttec 7.5 kW pulse type transmitter, and a Hunttec 200 series receiver, providing a current-on time of 1.5 seconds and a 400 millisecond measuring interval for secondary voltage. Readings were taken at 200 foot station intervals. The electrode array used was a pole - dipole with an 'a' - spacing of 200 feet and $n = 1$ & 2 for a distance of 200 respectively 400 feet between current and the near potential electrodes. For detail work the pole - dipole array was expanded to $n = 3$ and 4 . The direction of traversing was grid west to grid east, with the potential dipole leading.

GEOPHYSICS

General

The geophysical survey shows that the apparent resistivity is generally high over the surveyed area, with values ranging from 200 ohm - metres to 9500. The highest values occur in the western corner of the claims group where the diorite intrusive outcrops. The 2000 ohm - metre resistivity contour approximately outlines the out-cropping intrusive in the area of the highest values. Elsewhere on the property locally high values of apparent resistivity may be interpreted as tongues or sills of the intrusive, and this view is also supported by geology.

A ground magnetic survey undertaken by Manex Mining Ltd features high values of the vertical component of the earth's magnetic field over parts of the intrusive and also to the east in the vicinity of a sharp change in elevation. No definite

correlation exists between the induced polarization and the ground magnetic surveys, although the chargeability highs tend to occur in a magnetically inactive zone. An exception is the chargeability high on line 8 N at station 8 W obtained with electrode separation $n = 2$. This anomaly has a magnetic correlation. Magnetite as a source of the chargeability highs can therefore be discounted.

Chargeability

The maximum values of chargeability are low, reaching a peak of 12.4 and 12.6 milliseconds in two isolated instances. 8 to 9 milliseconds constitute peak values in general. Background values range from 3 to 4 milliseconds. The anomalies are therefore twice or three times background.

A correlation between observed mineralization and chargeabilities exists, such as at line 6 S, on 0 W where disseminated sulphides occur in tuff-beds.

The anomalies form a band trending just west of north, with an offset between lines 10 S and 12 S. Electrode separations for $n = 1$ and 2 display very similar trends, and together indicate that the sources of the chargeability anomalies not only extend at depth, but also come close to surface.

At $n = 2$ there appeared on line 20 S two high values, one of which reappeared at $n = 4$, but no high readings were obtained at $n = 1$ or 3. These anomalous chargeabilities are all associated with relatively low resistivities, none of which are equal. The location of these anomalous readings in relation to the anomaly trend further north is interesting, as well as the relationship between the easterly high at $n = 2$ and the one at $n = 4$. The possibility of spurious readings does exist although it would be highly coincidental. The electrode separations for $n = 1$ & 2, and $n = 3$ & 4 were used on different days. When the results for $n = 1, 2, 3,$ and 4 are viewed as pseudo sections, it can be seen that the intensity of the anomalies

increases with depth, and that the sources appear near vertical. The amplitude of the chargeability anomalies also increase to the south.

Apparent resistivity

Apart from the high values appearing over the diorite intrusive the apparent resistivity does not show a coherent pattern. This is no doubt due to the varying lithology of the volcanics, and also because of fingers of the intrusive penetrating the bedded rock. The chargeability anomalies are generally associated with resistivity highs.

CONCLUSIONS AND RECOMMENDATIONS

The induced polarization survey has shown that a band of high chargeabilities exists on the property. Although there is an association of high apparent resistivities this is not necessarily damaging since the observed mineralization occurs in a highly siliceous environment and may have been introduced in microfractures cutting through the bedding of the volcanics (personal communication by Mr. W. Sharp, Consulting geologist). It was also observed that the anomalies increase in amplitude at depth, with the higher values towards the south end of the property.

Although the sources of the induced polarization anomalies appear to be stronger or wider at depth they also are evident near surface.

To provide an assessment of the economic potential of these anomalies the following drillholes are recommended:

- D H 1 Collar at Line 8 S, station 7 W, azimuth N 55° E
(grid east), inclined 50° from the horizontal, length 400 feet
- D H 2 Collar at Line 4 N, station 2 W, azimuth N 90° E,
inclined 50° from the horizontal length 300 feet.

- D H 3 Collar at Line 20 S, station 4 W, azimuth N 55° E,
(grid east), inclined 45° from the horizontal, length 600 feet.
- D H 4 Collar at Line 20 S, station 2 W, azimuth N 55° E,
(grid east), inclined 45° from the horizontal, length 350 feet.
- D H 5 Collar at Line 24 S, station 5 W, azimuth N 90° E,
inclined 45° from the horizontal, length 500 feet.
- D H 6 Collar at Line 20 S, station 11 W, azimuth N 90° E,
inclined 50° from the horizontal, length 300 feet.

Drillhole 6 has the lowest priority and should at present only be undertaken if positive results have been obtained from the other anomalies.

In addition it would be informative to test the anomaly on line 8 N, 8 W obtained with electrode separation $n = 2$:


- D H 7 Collar at Line 8 N, station 6 + 50 W, azimuth N 270° E,
inclined 50° from the horizontal, length 350 feet.

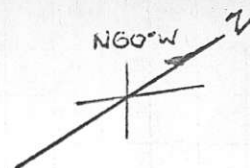
This drillhole is also of low priority.

The above drilling program is designed to test the various anomalies, and to serve as a basis for further work if the results so warrant.

November 10 th, 1969.

BARRINGER RESEARCH LIMITED


Roger Cavén, P.Eng.
Geophysicist



SOUTH GROUP

NORTH GROUP

12 833800	11 833799	9 833797	10 833798	WP2
14 833802	13 833801	7 833795	8 833796	39 911863
16 833804	15 833803	5	6	37 911861
18 911988	17 911987	3	4	35 912205
20 911990	19 911989	2	1	33 912203
22 911992	21 911991	25 911995	27 911997	29 911999
24 911994	23 911993	26 911996	28 911998	30 912000
				31 912201
				32 912202
				34 912204
				36 912206
				38 911862
				39 911863
				40 911864

BOT-SUSAN PROPERTY
MANEX HOLDINGS LTD.

Claims + Geology

1" = 1500' Feb/69

Re. Bot Susan per 30 y. - Sept 17/69 - see map 671A
 Money Holdings Ltd (M.H.L.) Houston for prop. loc'n.

see p. 121 1918 - Social Group - 10' ⁴ ^{do} ^{do} also claim map on file -
 p. 106 1922 - Iriguois ^{located on} ^{prop. sec. entitled} (Smithers) (Money Holdings) -
 p. 147 1929 - " ^{depth}

p. 147 1929 - Lakeview @ 1/2 mi. east of Iriguois
 at 6000' ^{long} ^{from} zone - 5' shaft - 16' drifts - 35';
 s.w. drift has 18" ^{perm.} ^{to} ^{gr.} & strikes N 45° E
 (mag) w dip @ 69° S.E.

Note: Ground (block) between Bot Susan and
 L.H. showings has been stated.

Agreement w John C Bot, - dated Sept 3/68
 (on the head's small letter)
 Box 41, Smithers, B.C.

Re. Money Holdings Ltd (M.H.L.) - option on mineral
 claims Susan 1-6 incl.

* 1000 units payt. to total of \$ 100,000 within
 year after exp. of agree't.

If property placed into production prior to expiration
 of option agreement then bal of payt's shall be
 accelerated via 10% of net smelter returns -
 signed D.W.A.

For Money Holdings Ltd (M.H.L.)

Sampling	Assay of Ore	Pg. 02/68	Cu. oz.
T.S.G. Sept 17/68			
15133 grab from old dump main working adit base of cliffs	-	1.03	5.65
15128 old dump, grab of - to the grade in the zone		47.20	22.10
15129 grab, N. end of main tr. 1'-2' surface showing on plateau w 1/4" cp. = Intersect. of two ore zones @ top of cliffs		2.08	12.78
34440	(tr.)	5.09	16.80

{ 6' wide chip in
 mid-og. zone near
 top of cliff - main
 why above small
 adit on cliff face.