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BGS
RECEIVED

EXPLORATION PROPOSAL.

823621

FOR THE

AD PROPERTY

Kamloops Mining Division
British Columbia

Latitude: 50°55' to 51°03'N.
Longitude: 119°29' to 119°37'W.
N.T.S.: 82M/3W & 4E and 82L/13E

FOR

HILTEC EXPLORATION AND DEVELOPMENT LTD.

Suite 34 - 750 Fortune Drive
Kamloops, B.C. V2B 2L2

PREPARED BY:

MINOREX CONSULTING LTD.
2391 Bossert Avenue
Kamloops, B.C. V2B 4V6

January 7, 1984

J.D. Blanchflower
Consulting Geologist

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INTRODUCTION

Mr. J.A. Hilton, president of the Hiltec Exploration and Development Ltd., owns eighteen contiguous mineral claims in the Kamloops Mining Division, British Columbia. This report, prepared at the request of Mr. Hilton, describes the geologic setting, mineralization and exploration potential of the AD property. A staged programme of exploration is recommended with cost estimates.

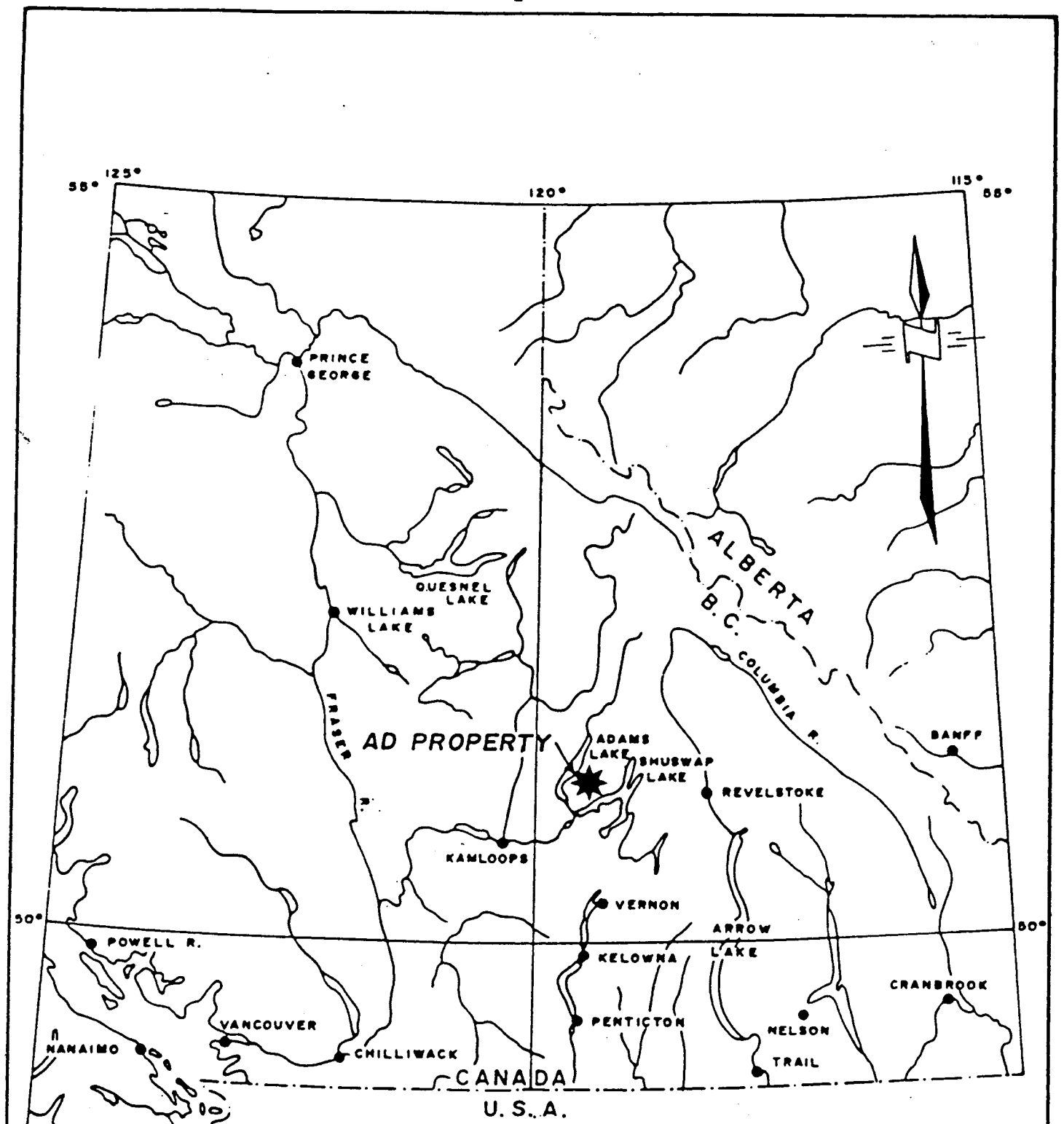
This report is based on the writer's previous experience in the area as well as on data from various published and private reports.

SUMMARY

The AD property covers the highlands between Scotch and Nikwikwaia Creeks from the power transmission easement just north of Shuswap Lake to Orell Resources/Noranda's Mosquito King property on the Adams Plateau. Access is readily possible via Highway 1 from Kamloops east to Squilax; thence by paved and gravel roads north to the claims and the Adams Plateau.

The property is comprised of eighteen contiguous two-post and M.G.S. mineral claims, the AD-1 to -18 claims. Mr. J.A. Hilton of Kamloops, B.C. owns all interest in the AD-1 to -6 and AD-12 to -18 claims. In addition, he has acquired from Mr. R. Shearing of Vancouver, B.C., all interest in the AD-7 to -11 claims.

Results of the writer's work indicate that the subject property is underlain by an intercalated sequence of sedimentary and volcanic rocks belonging to the Late Devonian to Early Mississippian-age Eagle Bay Formation. Regionally the Eagle Bay Formation hosts numerous scattered base metal occurrences. Locally these rocks host a number of massive sulphide showings consisting of: pyrrhotite, pyrite, magnetite, chalcopyrite, sphalerite and galena with associated precious metal values. The style and character of this sulphide mineralization are markedly similar to that of the Kuroko-type massive sulphide deposits.



HILTEC EXPLORATION
and DEVELOPMENT LTD.

LOCATION MAP

AD PROPERTY

Kamloops Mining Division, B.C.

Date: January 6, 1984	Scale: 1" = 64 Miles
Drawn by: P.J.M.	Dwg no. 1

Exploration on the Mosquito King and AD (former BC) properties by Cominco, Giant Metallics, Craigmont, and Orell has included geological, geophysical (Mag, EM-16, CEM, PEM, and IP) and geochemical surveying in addition to 80 drill holes totalling 7,708 metres. Most of the recent work has been undertaken with the Kuroko model in mind.

Results of past work have been indefinite. Economic mineralization occurs as lensoid bodies within particular horizons, pinching and swelling downdip and along strike. Reconnaissance drilling downdip from the known mineralization has been based on too widely-spaced geophysical data.

The subject property has good potential for discovering more mineralization. The abundance and distribution of the known mineralization along strike indicates possible mineralization at depth.

Based on the positive results exploration is definitely warranted to evaluate the economic potential of this property. The first two stages of an exploration programme are recommended with cost estimates of \$194,000.

PROPERTY AND OWNERSHIP (see Figure 2 and Table I)

The AD property is comprised of eighteen contiguous two-post and M.G.S. mineral claims, the AD-1 to -18 claims, all located in the Kamloops Mining Division of southcentral British Columbia. The configuration of the claims is shown in Figure 2. Table I summarizes all pertinent mineral claim data.

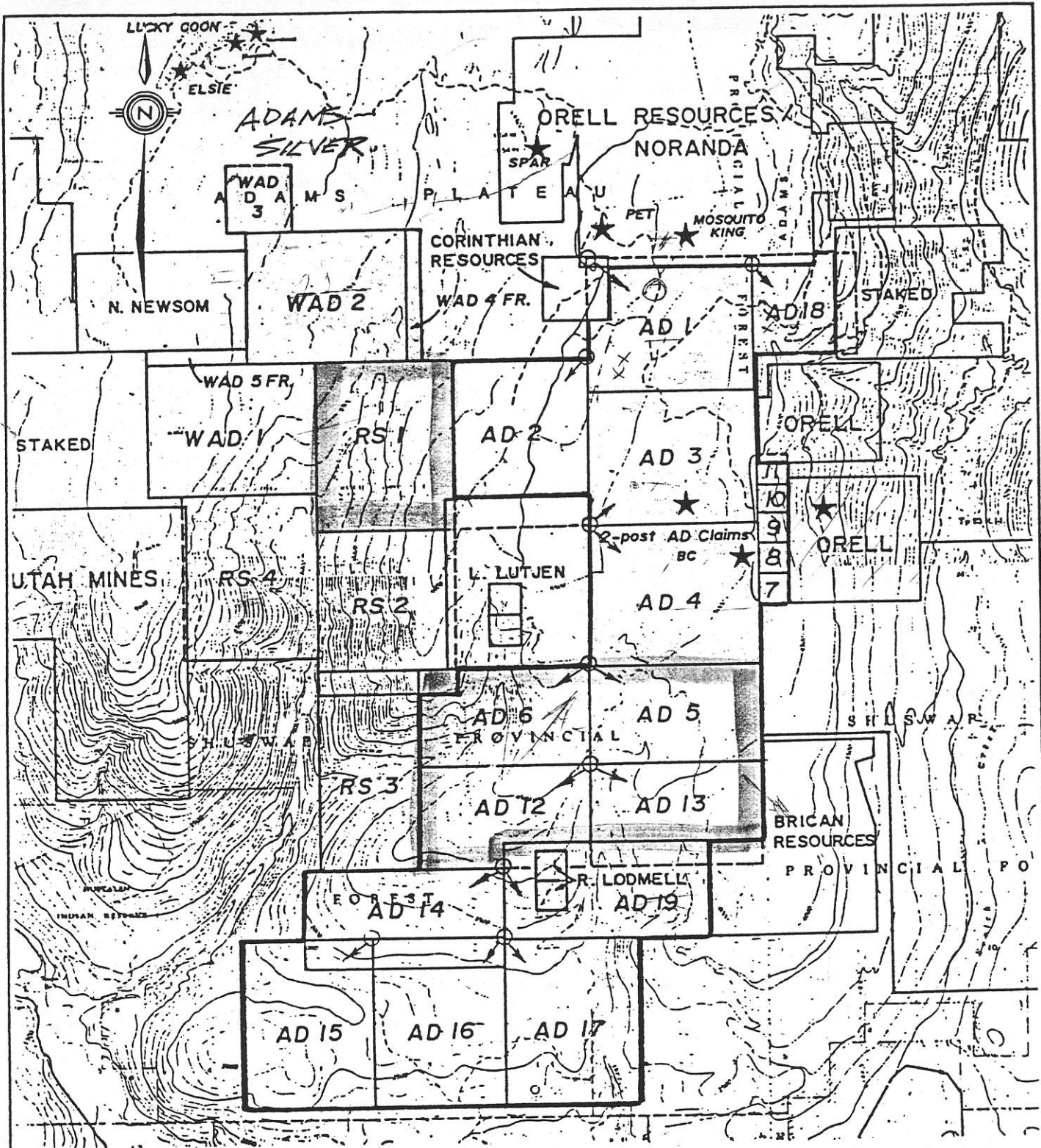
The AD-1 to -6 and AD-12 to -18 M.G.S. mineral claims were staked for Mr. J.A. Hilton of Kamloops, B.C. Mr. R. Shearing staked the two-post AD-7 to -11 mineral claims. According to Mr. Hilton, all interest in these two-post claims have been purchased by Mr. Hilton and the Bill of Sale for this purchase will be recorded on January 9, 1984.

Due to the prevailing winter conditions the writer did not make a field examination of the claim posts. However, a title search of the claim records was undertaken in the Mining Recorder's office in Kamloops, B.C. All of the two-post and M.G.S. claims appear to have been properly filed and recorded.

LOCATION AND ACCESS (see Figure 9)

The property is situated between Scotch and Nikwikaia Creeks from Shuswap Lake north to the top of the Adams Plateau. Alternatively, the claims are located 63 kilometres east-northeast of the city of Kamloops between geographic coordinates 50°55' to 51°03'N. latitude by 119°29' to 119°37'W. longitude (N.T.S. 82M/3W and 4E, and 82L/13E).

The claims are readily accessible from Kamloops via Highway 1 east to Squilax; thence north over the Squilax and Adams River bridges to the north shore of Shuswap Lake. A seasonal gravel logging road leads north from the Shuswap Lake road, through the AD claims and beyond to Orell Resources/Noranda's Mosquito King property. In total the claims are approximately 85 kilometres by road from Kamloops.



HILTEC EXPLORATION
and DEVELOPMENT LTD.
KAMLOOPS, BRITISH COLUMBIA

CLAIM MAP
AD PROPERTY
Kamloops Mining Division, B.C.

Drawn by:	P.J.M.	Scale:	1: 86,000
Date:	January 3, 1984	Figure No.:	2

To accompany report by J.D. Blanchflower

TABLE I

Mineral Claim Data

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Type</u>	<u>Recorded</u>	<u>Owner</u>
AD-1	5144	20	M.G.S.	November 28/83	A. Hilton
AD-2	5148	20	M.G.S.	December 1/83	A. Hilton
AD-3	5149	20	M.G.S.	December 1/83	A. Hilton
AD-4	5150	20	M.G.S.	December 1/83	A. Hilton
AD-5	5151	15	M.G.S.	November 28/83	A. Hilton
AD-6	5145	15	M.G.S.	December 1/83	A. Hilton
AD-7	5254	1	2 Post	December 16/83	R. Shearing
AD-8	5255	1	2 Post	December 16/83	R. Shearing
AD-9	5256	1	2 Post	December 16/83	R. Shearing
AD-10	5257	1	2 Post	December 16/83	R. Shearing
AD-11	5258	1	2 Post	December 16/83	R. Shearing
AD-12	5244	15	M.G.S.	December 16/83	A. Hilton
AD-13	5245	15	M.G.S.	December 16/83	A. Hilton
AD-14	5246	18	M.G.S.	December 16/83	A. Hilton
AD-15	5247	20	M.G.S.	December 16/83	A. Hilton
AD-16	5248	20	M.G.S.	December 16/83	A. Hilton
AD-17	5249	20	M.G.S.	December 16/83	A. Hilton
AD-18	5250	9	M.G.S.	December 16/83	A. Hilton

1
9
1

PHYSIOGRAPHY

The property covers the northerly trending highlands between Scotch Creek on the east and Nikwikwaia Creek on the west. Elevations within the claims range from 2,000 to 5,700 feet A.M.S.L. Reliefs vary considerably from the low rolling hills on the Adams Plateau to the steep slopes on the east and west.

The climate is moderate with temperatures ranging between -25°C. and +30°C. Precipitation is usually moderate to heavy. The exploration season may extend from May to November.

Most of the area is well vegetated with balsam, spruce and poplar. Local logging operations have cleared portions of the claims providing excellent access.

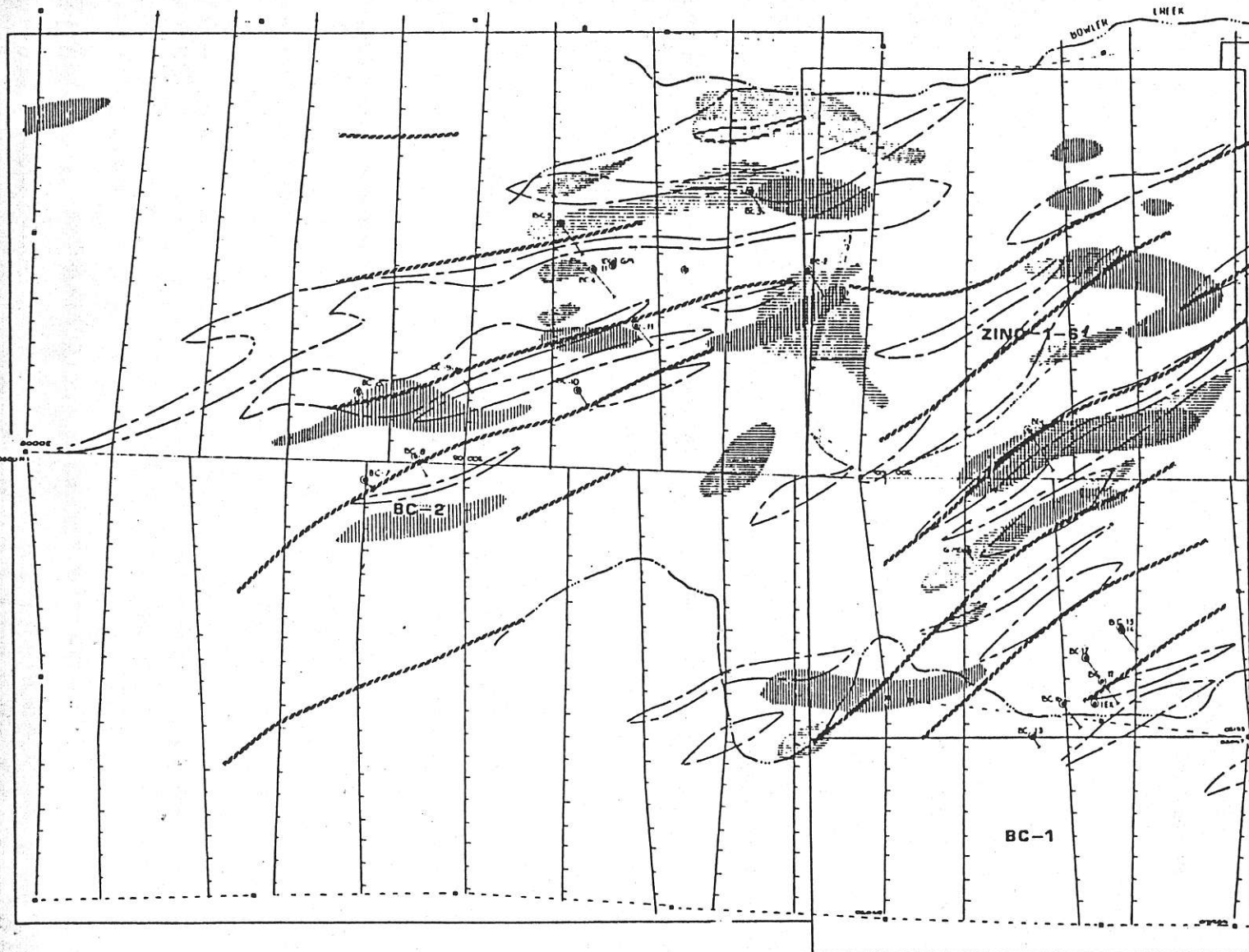
Overburden is shallow but extensive. Glacial ice movements were from the north-northwest.

Bedrock exposures are scarce except in areas with logging roadcuts or higher relief.

HISTORY (see Figures 3 and 4)

The Adams Plateau area has received intermittent exploration attention over the past fifty years. Early work, mainly prospecting and trenching, was directed towards developing several showings of pyrite, sphalerite and galena with silver values. Sulphide mineralization was considered to be "vein" type despite being conformable with bedding.

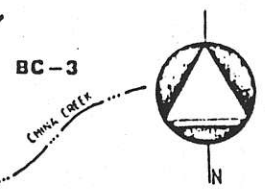
In 1949, Cominco optioned the Mosquito King property situated immediately north of the AD-1 claim. Surface sampling had indicated zones 3 to 4 feet thick with grades approaching 10% combined lead and zinc with approximately 2 oz./ton silver. Twenty holes totalling 880 metres were drilled 300 to 500 feet from the showings. Intersections of mineralization were thinner and of lower grade than expected. Results indicated that the grades and thicknesses were variable and no evidence of where thickening would occur



LOCATION MAP
1:1000,000

LEGEND

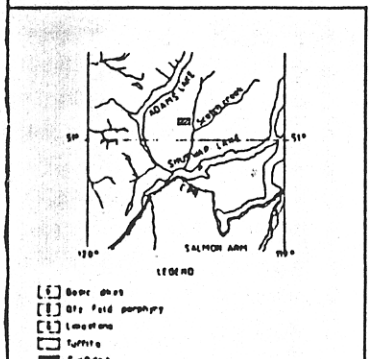
- Cu IN SOIL - 100 ppm
- Zn IN SOIL - 200 ppm
- VLF EM CONDUCTOR - 20%
- MAGNETIC HIGH, 1000 gamma
- o - CLAIM POST
- 10 - DIMENSIONS
- GM - GALT METALS 9-11
- BC - CHAMONT 1-17
- ER - ORELL COPPER PITS 1



ORELL COPPER MINES LTD.
SALMON ARM, B.C.

82M/3 BC GROUP
COMPOSITE PLAN &
DRILLSITES

100 0 100 METERS
scale: 1:5,000



- [] Bare area
- [] Dry field porphyry
- [] Limestone
- [] Turfite
- [] Surface

- Road at weather
- Open wash, meadow
- Lake Pool
- Drillhole MK 1 Orell Copper Mines Ltd.
- Drillhole 77 L. O'Connell Mine Ltd.
- BH Sand Metals

ORELL COPPER MINES LTD.
SALMON ARM, B.C.

82 M/4 MK GROUP
GEOLOGICAL MAP
DRILLSITES

100 0 100 metres

was found (Black, 1978).

In 1966 and 67, Giant Metallics undertook exploration of both the Mosquito King and the nearby Bowler Creek properties, now mostly covered by the AD-3, 4, 7 to 11 claims. Exploration work included trenching, sampling, geophysics (Mag, EM and IP), soil geochemistry, and 18 diamond drill holes totalling 1,500 metres. Results of this work indicated that on the BC claims there were beds grading 0.3% copper over 20 feet with higher values across lesser widths (Black, 1978). Subsequent assaying discovered significant gold and silver values with this mineralization. See Appendix I.

In 1976, Craigmont Mines Ltd. optioned the two properties. During the 1977 field season Craigmont explored these properties with topographic and geologic mapping (1:5,000), geophysics (Mag and EM-16), soil geochemistry, and 14 diamond drill holes totalling 1,047 metres (7 holes on each property). In 1978, a vector EM (P.E.M.) survey was conducted on the MK group and five possible buried sulphide occurrences were located. Two of these targets were drilled (78-8 & 9) while on the BC claims an additional ten holes were drilled. In the two field seasons Craigmont drilled 26 AQ and BQ holes totalling 2,289 metres.

Craigmont terminated their option agreement with Orell in September, 1978 due to a forthcoming large property payment and costly commitments on their CC massive sulphide property.

During 1979, Orell high-graded 161.6 dry tons of ore from the Mosquito King showing on the A-2 mineral claim. This ore was shipped by truck to Cominco's Trail smelter. The average grade of the ore was 10% lead, 8% zinc, 7 oz./ton silver, and a reported 0.07 oz./ton gold.

Brinex examined the properties in 1979 and had initiated a large exploration program in 1980 when option negotiations were terminated because Brinex's eastern representatives would not agree to Orell's 5-year production decision terms.

GEOLOGY

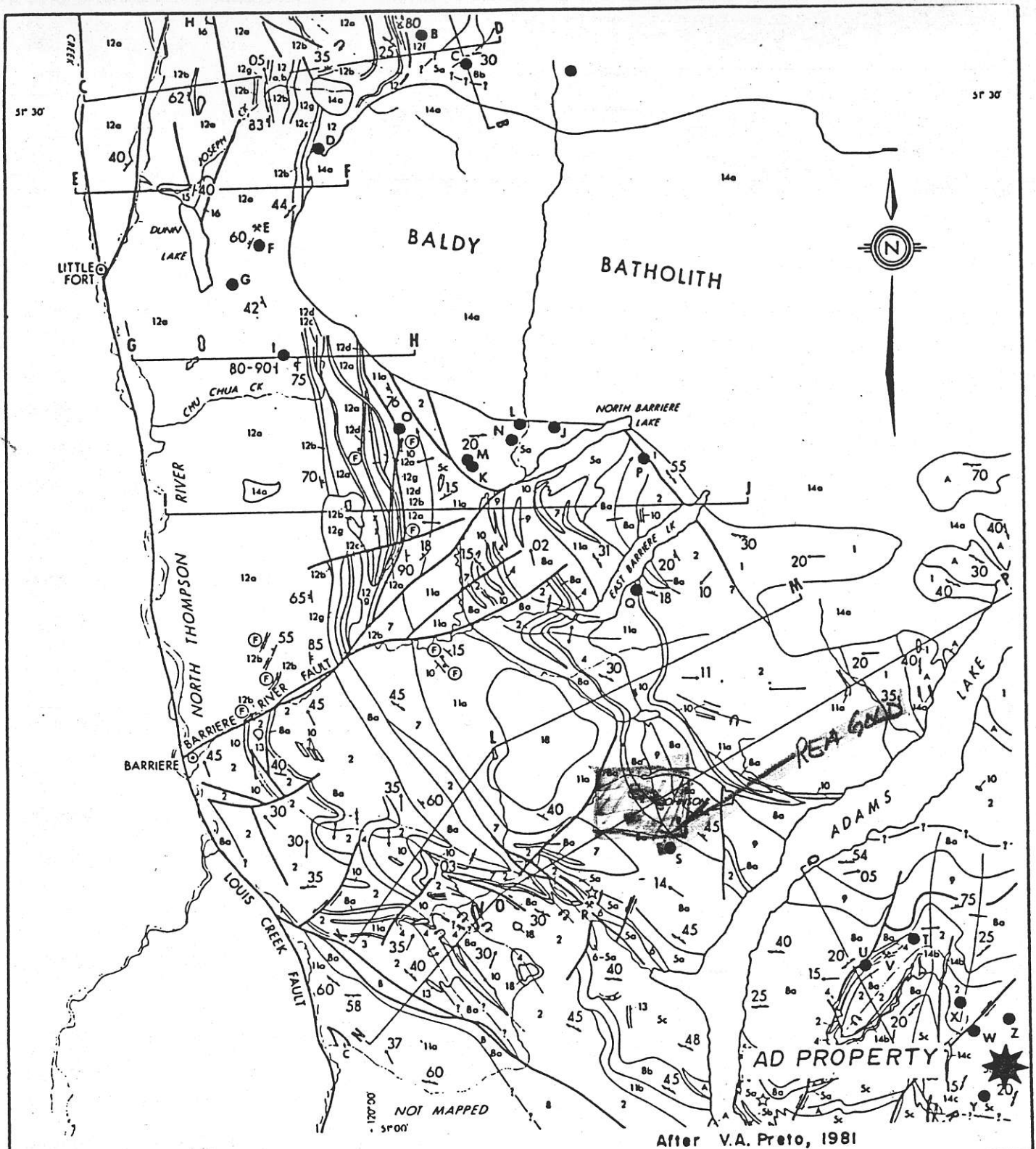
Regional Geology (see Figure 5)

The Barriere Lakes - Adams Plateau region has been geologically mapped by a number of government workers; the most definitive and recent published works have been by V.A. Preto, G.P. McLaren and P.A. Schiarizza (1980) and V.A. Preto (1981). Much of the following text is based on the results of these recent works.

This region is dominantly underlain by a weakly to moderately-metamorphosed assemblage of sedimentary and volcanic strata belonging to the Late Devonian to Early Mississippian-age Eagle Bay Formation. Regionally the Eagle Bay Formation appears to stratigraphically overlie the dominantly volcanic rocks of the Late Devonian Fennell Formation. Both of these major formations have been intruded by granodiorite orthogneiss to biotite quartz monzonite ranging in age from Late Devonian to Cretaceous. Locally the metamorphosed strata and intrusions are overlain by olivine basalt flows of Pleistocene to Recent age.

Structural features of the region include at least two periods of folding and faulting (Preto et al, 1979). An early period of folding, west to northwest trending with axes plunging north to northwest, has deformed the volcanic and sedimentary strata prior to later folding with fold axes plunging gently north.

There are numerous base-metal occurrences, many of which clearly are syngenetic stratabound massive sulphide deposits, known in the region. Such polymetallic deposits, commonly with associated barite and precious-metal values, are most abundant in the Birk Creek - North Barriere Lake, Johnson Lake - Sinmax Creek and Adams Plateau areas (Preto, 1979). See Figure 3 for a map of the regional geology and locations of the known mineral occurrences.



After V.A. Preto, 1981

HILTEC EXPLORATION and DEVELOPMENT LTD. KAMLOOPS, BRITISH COLUMBIA	
REGIONAL GEOLOGY AD PROPERTY Kamloops Mining Division, B.C.	
Drawn by: P.J.M.	Scale: 1:300,000
Date: January 6, 1984	Figure No.: 5

To accompany report by J.D. Blanchflower

LEGEND

PLEISTOCENE AND/OR EARLIER

18 OLIVINE BASALT, MUDSTONE

MIOCENE AND /OR PLIOCENE

17 PLATEAU BASALT

EOCENE AND LATER (?)

18 SKULL HILL FORMATION - VESICULAR ANDESITE

15 CHU CHUA FORMATION - CONGLOMERATE, SANDSTONE, SHALE

CRETACEOUS

14 a GRANITE, QUARTZ MONZONITE

b QUARTZ FELDSPAR PORPHYRY

JURASSIC AND TRIASSIC

13 DIORITE

UPPER TRIASSIC (?)

C AUGITE PORPHYRY BRECCIA

AGE UNKNOWN

B SERPENTINITE

UPPER MISSISSIPPIAN AND (?) OLDER TO LATEST PERMIAN AND (?) YOUNGER

12 FENNEL FORMATION

a MASSIVE AND PILLOW BASALT

b CHERT

c QUARTZ FELDSPAR PORPHYRY

d CONGLOMERATE

e PELITE, SANDSTONE

f MARBLE

g GABBRO AND DIORITE

LATE DEVONIAN

A GRANODIORITE ORTHOGNEISS

LATE DEVONIAN AND (?) OLDER TO LATE MISSISSIPPIAN AND (?) YOUNGER

1-11 EAGLE BAY FORMATION

11 a BLACK PHYLLITE; INTERBEDDED GRIT, SANDSTONE, SILTSTONE, AND LIMESTONE

b CALCAREOUS BLACK PHYLLITE WITH CALCITE AND LIMESTONE LENSES

10 LIMESTONE, DOLOMITE

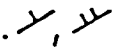

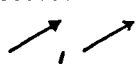
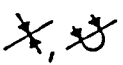
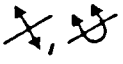
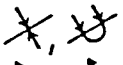
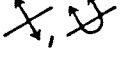


9 TSHINAKIN LIMESTONE AND DOLOMITE

8 a GREENSCHIST

b TUFF, CHLORITE-PHYLLITE, STRIPED AMPHIBOLE, SKARN

- 7 RUSTY, FELDSPATHIC, INTERMEDIATE PHYLLITE
- 6 HOMESTAKE SCHIST - PLATY SERITICE-PYRITE-QUARTZ SCHIST
 - a FELSIC PHYLLITE AND SCHIST
 - b CHERTY TUFF, CHERT, CALC-SILICATE
 - c FELSIC TUFF AND BRECCIA
 - d RHYOLITE
- 4 QUARTZITE
- 3 PYRITE-CHLORITOID-SERICITE-QUARTZ SCHIST
- 2 METASEDIMENTARY PHYLLITE, GRIT, QUARTZITE
- 1 AMPHIBOLITE, QUARTZITE, MARBLE, SILLIMANITE-GARNET-BIOTITE SCHIST

SYMBOLS

- BEDDING: TOPS KNOWN, UNKNOWN 
- EARLY SCHISTOSITY 
- FOLD AXES: EARLY, LATE 
- EARLY AXIAL TRACE:
 - SYNFORM: UPRIGHT, OVERTURNED 
 - ANTIFORM: UPRIGHT, OVERTURNED 
- LATE AXIAL TRACE:
 - SYNFORM: UPRIGHT, OVERTURNED 
 - ANTIFORM: UPRIGHT, OVERTURNED 
- RADIOMETRIC AGE LOCALITY X
- FOSSIL LOCALITY 
- PROSPECT; MINE 

MINERAL DEPOSITS

- A REXSPAR (U, F)
- B FOGHORN (Ag, Pb, Zn, Cu)
- C LYDIA (Pb, Zn)
- D JUDY (Mo, Cu)
- E WINDPASS (Au, Cu, Bi, Ag)
- F SWEET HOME (Au, Cu, Bi)
- G GOLD HILL (Au, Pb, Cu, Zn, Ag)
- H QUEEN BESS (Pb, Zn, Ag)
- I C.C. (Cu, Zn)
- J HARPER (Cu, Pb, Zn)
- K RAINBOW (Cu, Pb, Zn)
- L BROKEN RIDGE (Cu, Zn)
- M COPPER CLIFF (Pb, Zn, Cu)
- N MAY (Cu, Zn)
- O ENARGITE (Pb, Zn)
- P EBL (Cu)
- Q KAJUN (JUNE) (Ag, Pb, Zn, Cu)
- R HOMESTAKE (Ag, Pb, Zn, Au, Cu, Barite)
- S TWIN MOUNTAIN (Ag, Pb, Zn, Au, Cu, Barite)
- T KING TUT (Ag, Pb, Zn, Au)
- U ELSIE (Pb, Zn, Ag, Au)
- V LUCKY COON (Pb, Zn, Ag, Au, As)
- W PET (Pb, Zn)
- X SPAR (Pb, Au, Ag, Cu)
- Y BC (Cu, Pb, Zn)
- Z MOSQUITO KING (Pb, Zn, Ag)

Local Geology

The AD property, according to prior mapping, appears to be underlain by a dominantly volcanic sequence versus the Mosquito King property which is underlain by sediments and volcanics. Siliceous water-lain tuffs (referred to by Vollo, 1978, as "tuffite"), rhyolitic to andesitic flows and minor agglomerates dominate the volcanic units. The sedimentary rocks include mainly argillite with minor quartzite, chert and limestone.

Most of the rocks are thin bedded, up to a few mm. in thickness, and light to dark grey in color. In areas of sulphide mineralization both sediments and volcanics have been stained yellow to dark red.

Structurally this area is extremely complex. In outcrop these rocks appear to strike north to northeasterly and dip gently (10 to 35°) west to northwest. However, on close inspection individual beds are tightly folded reflecting intense and multiple regional deformation.

Faulting and fracturing related to regional deformation have further complicated the structural setting besides providing channel ways for later intrusive activity. Most of the major fracturing strikes northeasterly displacing the stratigraphy.

Some local dyking, including quartz-feldspar porphyry and gabbroic dykes may be coeval with the island-arc formation, while others may be related to the emplacement of granitic intrusions to the east.

ECONOMIC GEOLOGY

The mineralogy plus the spatial and temporal associations of the sulphide mineralization with the host rocks are very analogous to a "Kuroko-type" massive sulphide setting.

Interbedded within the sedimentary-volcanic sequence, usually between altered rhyolite and tuff, are zones of magnetite

and/or sulphides including pyrrhotite, pyrite, sphalerite, chalcopyrite and galena. Massive sulphides commonly contain substantial silver and some gold values. Gangue minerals include quartz, epidote, chlorite, garnet, calcite and zoisite.

These zones, although lensoid in section and plan where they have been exposed, appear to be formational. In such a setting one would expect that the sulphides were deposited as gels within local basins and troughs, proximal to source vents. Later folding has remobilized some of the sulphides to form fracture fillings and possible boudinage structures.

According to Black (1979): "The high-grade zones with a high zinc and lead composition are less than 3 feet thick. Others, of lower grade, are about 11 feet thick and some are much wider. Judging from the continuity of geophysical anomalies, some of the occurrences are very long, especially on the BC Group (now AD claims), where lengths of as much as 1,400 m. or 4,600 feet are seen. These occurrences grade into the beds below and above and generally conform to the bedding. Judging from some geophysical anomalies, the mineral zones curve along strike and may do so down the dip. The changes in attitude may reflect variations in attitude of the bedding, caused by local deviations or rolls. Also, judging from the geophysical anomalies, high-grade mineral zones may be discontinuous.

The beds of the sedimentary-volcanic series strike east-northeastward and dip moderately to gently northwestward and so do the mineral beds. In a central part of the MK Group, where the major mineral occurrences have been found, the bedding strikes more nearly westerly. This change in attitude may reflect a structural change that was conducive to mineral accumulation.

At the Mosquito King, the mineralization is predominantly lead, zinc, silver and on the BC Group, the same metals are present and also copper.

The rocks and mineral beds are cut by dykes. These range from coarse, nearly granitic to fine and andesitic. Most of them strike northward and dip steeply."

GEOPHYSICS (see Figures 7 and 8)

The Mosquito King and AD (Bowler Creek - BC) properties have been surveyed by several types of geophysical methods including ground magnetics, EM (PEM, JEM, and EM-16), Bouger gravity, and IP (pole-dipole, 0.25 to 0.8 amp). The results of these surveys have been thoroughly discussed by Black (1979), Hainsworth (1973) and White (1978). See Appendix I.

It appears that although a variety of surveys have been undertaken the results have been affected by large concentrations of pyrrhotite and/or pyrite which have mislead follow-up programs (i.e. trenching, drilling), or they have not been thoroughly tested. Of all the surveys, magnetics and IP appear to have best defined the buried sulphides. However, testing by diamond drilling was at widely-spaced centres, too wide for such lensoid targets. Any future geophysical survey would necessitate using a method that would define both the iron sulphides and the economic mineralization, plus give some indication of depth, dip and shape of the target for later drilling.

GEOCHEMISTRY (see Figures 7 and 8)

The AD claims in the vicinity of the former BC claims have been soil sampled and the samples have been analysed for copper, lead and zinc. The results of these surveys have been well documented by Black (1979) and Hainsworth (1973). See Appendix I.

An examination of the geochemical data was undertaken to see whether further geochemical work might be recommended. From past discussions between Cecil Kane, president of Orell Resources, and the writer in 1980, exploration of geochemical anomalies alone has had disappointingly negative results. However, Kane indicated at the time that after initial testing many of the geochemical anomalies were ignored or explained away by their proximity to swampy areas. In 1980 trenching on the Mosquito King property discovered sulphide mineralization under some of these anomalies.

It appears then that a more definitive geochemical exploration technique could be employed, such as basal till sampling. This work might be useful in areas where the mineralization is near bedrock surface but it is questionable whether it would define mineralization at any great depth.

DRILLING RESULTS (see Figures 7 and 8)

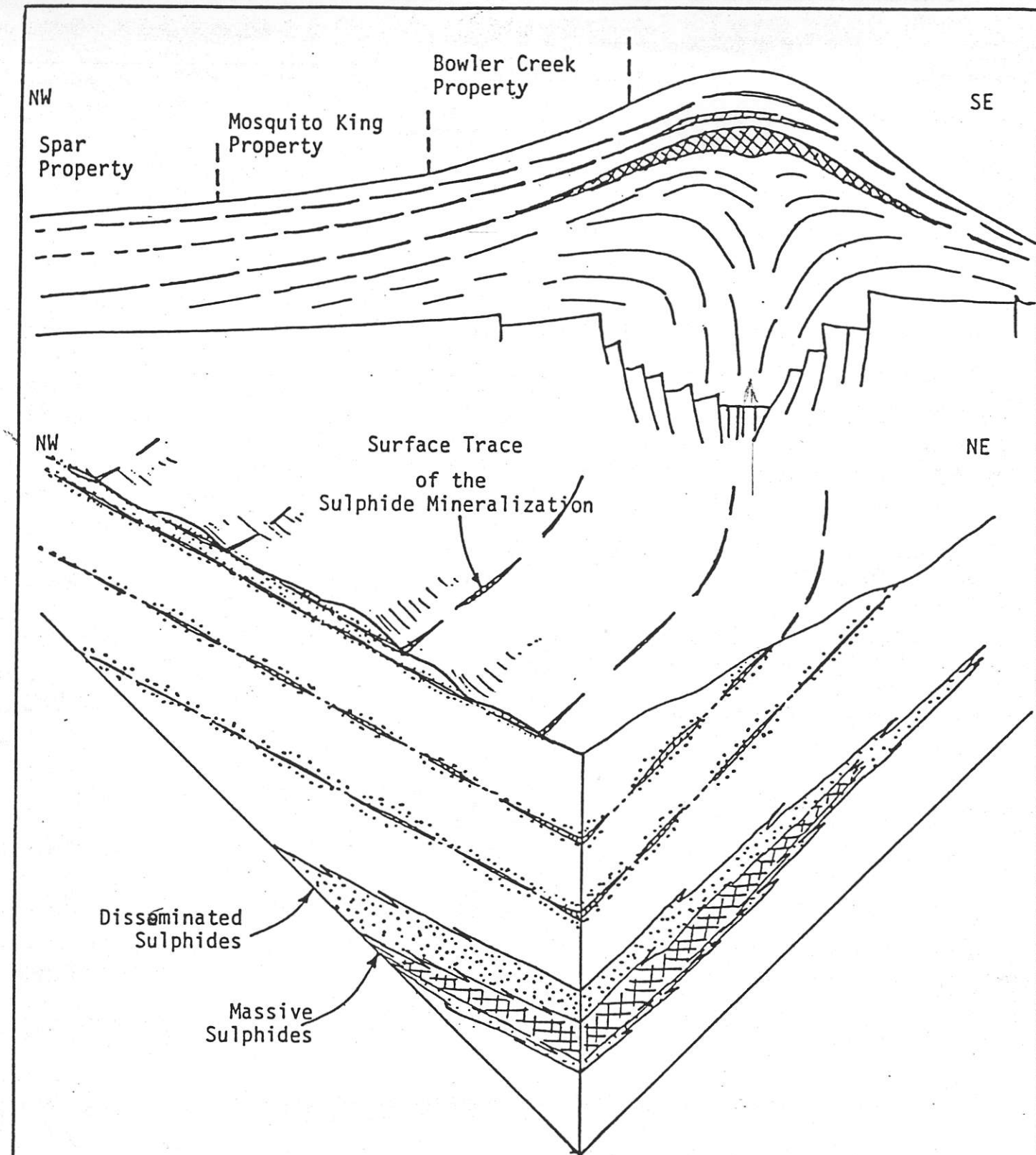
Both the Mosquito King and the former BC property have been tested by, at least, 80 drill holes totalling 7,708.4 metres or 25,289 feet. The Bowler Creek (BC) property has received the most attention with approximately 40 diamond drill holes, while 38 diamond and a few percussion drill holes have tested the Mosquito King claims. The logs of the Craigmont and Orell drilling have been appended (see Appendix I).

Results of past drilling have not been encouraging. Since Cominco's 1950 drilling program, drill results have indicated that the sulphide mineralization varies both in grade and thickness, downdip and along strike. Some of the drilling has been too widely spaced. However, even when drill sites were located on known mineralization this variance in tenor has been noted.

Much of the drilling has been based solely on too widely spaced geophysical data. As might be expected these geophysical surveys have been affected by the setting of the mineralization - shallow dipping, near surface and tabular. Iron sulphides, being more conductive and more continuous than the economic mineralization, mislead the drill testing and mask possible buried deposits.

EXPLORATION POTENTIAL

Exploration programmes by Giant Metallics and Craigmont have explored the Mosquito King and former BC properties with the Kuroko model in mind. Their work was based largely on geophysics with less than thorough drill testing.



HILTEC EXPLORATION
and DEVELOPMENT LTD.
KAMLOOPS, BRITISH COLUMBIA

IDEALIZED GEOLOGICAL MODEL OF
THE ADAMS PLATEAU
AD PROPERTY
Kamloops Mining Division, B.C.

Drawn by: P.J.M.
Date: January 6, 1984

N.T.S.: 82M/4E & 82M/2W
Figure No.: 6

To accompany report by J.D. Blanchflower

Results of the writer's work indicate that the AD property overlies a Kuroko-type geologic setting near but not necessarily proximal to the exhalative centre. This deduction is based on the observed and reported style, and metallogenic trends of the sulphide mineralization. There is sufficient evidence available to indicate that the known mineralization is repetitive as there are several sulphide-rich horizons occurring within the upper sedimentary and volcanic sequences. The centre of this exhalative activity seems to be south or southeast of the Mosquito King property since the former BC property, which lies in this direction, has more abundant copper mineralization within a generally more volcanic sequence. The exhalative centre may have been preserved by downfaulting and burial, or conversely it may have been eroded by glaciation. Such a centre would be the optimum target for future exploration since, in theory, the mineralization should improve near the vent area.

A review of the data shows that, even though the sphalerite and galena mineralization occurs in lensoid structures, iron sulphide-rich mineralization seems to be quite continuous. Pyrrhotite and/or pyrite-rich zones occur stratigraphically between and immediately above the economic mineralization. It is this feature that has been and will be a very real problem with any geophysical exploration. With the possible exception of a powerful deep-probing EM method, most geophysical surveys will be masked by the upper, thin-bedded and sub-economic mineralization. Therefore, to explore a buried target on AD property future exploration will have to include a closely-spaced, systematic diamond drilling programme.

In summary, the subject property has the potential for two types of mineralization: the near-surface thin-bedded variety, amenable to open-cast mining, and a second variety which would be where the horizons coalesce into a zone of higher grade and thicker mineralization. The known mineralization, the first variety, could be explored with the use of detailed geological mapping (1:2,500), geophysics (Max-Min II and/or IP) and shallow diamond drilling on a grid pattern. The ultimate target, the second variety, would be more difficult to explore for, requiring deep diamond drilling possibly without definitive support.

CONCLUSIONS

The AD property is situated within a Kuroko-type geological setting. Exploration work has shown that within both the Mosquito King and AD (former Bowler Creek) properties sulphide mineralization occurs in a number of horizons. These horizons represent repetitive events during which submarine volcanism and metal-bearing brine exhalation occurred.

Based on the observed and reported results these two properties are possibly northwest of, or stratigraphically above, the volcanic centre. Of the two claim groups, the AD property seems to be nearer to but not necessarily at the vent area.

Despite relatively extensive exploration, results have been indefinite. Trenching has exposed a number of showings, on each property, over long strike lengths. Exposed mineralization appears lensoid with average thicknesses from 1 to 3 metres grading up to 18% combined lead and zinc with significant silver and gold values. In contrast, intersections from diamond drilling directed at these showings were considerably thinner (averaging less than 1 metre) and of lower grade (less than 5% combined lead and zinc with negligible precious metal values). Such a discrepancy could be a combination of a number of factors including: poor core recoveries, misdirected drilling, and/or drilling without full comprehension of the geologic setting.

The potential for discovering additional mineralization in the area is good. The abundance and distribution of the showings along strike indicate that more mineralization could be discovered downdip along known mineralized horizons and possibly at depth. A staged exploration programme is therefore recommended to test the economic potential of this property.

RECOMMENDATIONS

A two-stage exploration programme following the outline given below is recommended.

Stage I

- (1) Results of all past exploration should be compiled on a 1:5,000 topographic plan.
- (2) All claim posts, roads and other physical features should be surveyed.
- (3) All favourable geological, geochemical and/or geophysical features from past exploration should be thoroughly investigated when the property becomes accessible in 1984.
- (4) Pending the results of a field investigation a survey grid(s) should be established over all favourable anomalies and a deep-probing EM survey, possibly UTEM, should be undertaken.

Stage II

- (1) Contingent on the success of Stage I a diamond drilling programme should be undertaken to test the extent of the indicated mineralization. An initial 1,000 metres of drilling is proposed for this stage. The sites of this drilling will be determined by the results of Stage I.

COST ESTIMATES

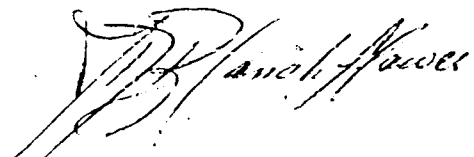
Stage I

Preparation of topographic base map	\$ 3,000.
Compilation of exploration data	5,000.
Claim survey	3,000.
Investigation of all known favourable geological, geophysical and/or geochemical anomalies	25,000.
Establishment of a survey grid and UTEM survey	25,000.
Supervision, reporting	4,000.
	<hr/>
Sub Total	\$ 65,000.

Stage II

Diamond drilling - 1,000 metres @ \$100/metre all total (drilling, assaying, supervision, etc.)	\$100,000.
	<hr/>
Sub Total	\$100,000.
Consulting	7,000.
Report and map preparation	4,000.
Contingency	18,000.
	<hr/>
Total Estimated Cost of Stages I and II	<u>\$194,000.</u>

Respectfully submitted,
MINOREX CONSULTING LTD.



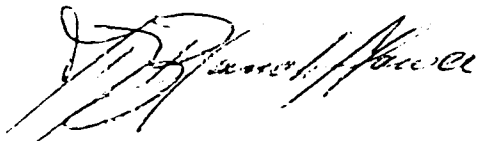
January 7, 1984
Kamloops, B.C.

J.D. Blanchflower, F.G.A.C.
Consulting Geologist

CERTIFICATE

I, J. DOUGLAS BLANCHFLOWER, DO HEREBY CERTIFY THAT:

- (1) I am a consulting geologist with business office at 2391 Bossert Avenue, Kamloops, B.C. V2B 4V6
- (2) I am a graduate of the University of British Columbia with a degree of B.Sc. (Honours Geology, 1971).
- (3) I am a Fellow of the Geological Association of Canada (#F0046).
- (4) I have practised my profession as a geologist for the past twelve years.
- (5) This report is based on the writer's previous experience in the area and on available reports and maps.
- (6) This report may not be used in a Prospectus or Statement of Material Facts.



J.D. Blanchflower, F.G.A.C.

Dated at Kamloops, British Columbia, this 7th day of January, 1984.

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APPENDIX I

Past Exploration Reports

1966 FIELD SEASON

GIANT METALLICS MINES LTD. (N.P.L.)

ADAMS PLATEAU PROPERTY

REFERENCES: Huntec Ltd. report dated December 21, 1966
Allen Geological Engineering Ltd. reports dated February 3, 1966
and November 3, 1966.

Due to the size, elevations from 3,000 to 6,000 feet above sea level, complex geology, it was considered that the following surveys would be suitable for geophysical prospecting during 1966.

- A. Scout Diamond Drilling
- B. Induced Polarization
- C. Magnetometer
- D. Soil Sampling
- E. Geological Survey

Additionally, topography mapping and physically establishing claims in the field was carried out as a by-product of the main programs.

To facilitate the surveys a grid was established on the ground by a series of lines three hundred feet apart running north and south. On these lines stations were marked every 100 feet for reference points. These lines were cut by a D8 bulldozer which exposed rock structure and ore as lines were being run. This greatly aided geology mapping. Secondly, as we anticipated utilizing the grid for two more field season, it assured that the grid lines would not be overgrown and lost as in the field reference points.

The map at the rear of this report roughly outlines the area covered by grids.

Grid statistics are as follows:

Miles run - 39.6 miles
Area covered - approximately 1,200 acres.

Brief important details of each program are as follows:

A. SCOUT DIAMOND DRILLING

Early in this program a percussion drill was utilized for two holes. It was found that chip sampling was not satisfactory as core was required to obtain geology. The first percussion hole encountered water in the hole which we feel caused unsatisfactory sampling. Subsequent probe drilling of the area has established the vein missed by this hole.

The Diamond Drilling of six holes has proven quite satisfactory in aiding I.P. interpretation and geology mapping. Results from these holes have been released to you as they were completed. The significance of each hole in relation to I.P. interpretation will be elaborated under the I.P. survey section.

Probe drilling utilizing our own Company drill has been a tremendous aid. MacDonald Consultants Ltd. have been instructed to log and send for assay core samples from the probe drilling completed during the latter stages of the 1966 field season. This drilling was done on the silver-lead-zinc ore showings on the Pat claims.

The I.P. survey outlined 15 anomalous zones and Hunttec have submitted their comments and recommendations as follows:

(f) Anomalies and Order of Priority

<u>Priority</u>	<u>Anomaly</u>	<u>Recommended Development and Comments</u>
1	K	D.D.H. #1,2,3 "This anomaly is clearly associated with the mineralization at the Ex No. 1 workings. The conductivity is very high and the strongest zone of mineralization appears to lie still farther south of the southern most part of the present workings". The 100 feet spacing gave the strongest response reaching 53.4 milliseconds. The resistivity shows a corresponding marked decrease indicating the massive quality of this mineralization. Although the 100 foot readings are incomplete an interpretation of the zone of strongest mineralization has been made and it appears to lie up to 120 feet south of the southern boundary of the Ex 1 workings. This suggests that more massive mineralization than has been discovered to date in the Ex 1 lies immediately to the south and provides a basis on which other anomalies may be judged".

Our Comment:Our D.D. H. #6-66 was collared 150 feet north of the anomaly and just missed the anomaly clearly outlined by Hunttec. However, our drill results certainly aided I.P. interpretation.

2	1 2	D.D.H. #4 "This anomaly is interpreted as being caused by a narrow but highly conductive chargeable mass centered at 500 south on Line AC which probably dips north".
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Our Comment:Our probe drill cut a band of massive pyrrhotite 200 feet south of this anomaly. It carried good silver-zinc-lead".

3	G	D.D.H. #5 "This narrow zone extends approximately 1,800 feet across six lines. The detail profiles on Line U indicate a relatively narrow causitive body coming close to surface, but the double peak effect on the 200 and 400 foot spacing profiles that one would expect from a shallow source are absent. This is interpreted as being caused by an increase in width of the anomaly as it becomes deeper---".
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Our Comment:Our D.D.H. #5-66 was collared 400 feet south of this anomaly. It was bottomed at 436 feet just 100 feet short of the I.P. anomaly. It bisected a mag anomaly lying south of this I.P. anomaly.

4	B	D.D.H. #6 "The causitive body is interpreted as lying roughly 40 feet below surface and having a width of about 200 feet".
---	---	---

Our Comments: Percussion Hole #2 was collared 50 feet south of this anomaly and was a vertical hole. However, ore was present in the initial ten feet.

- 5 A D.D.H. #7, 8
 2 "This anomaly lies north-west of anomaly B above. The detailing suggests a southerly dip structure and this may be fault controlled rather than by the bedding since mapped geology to the south indicates a shallow northward dip."
- 6 H Trenching
 "The mineralization causing this anomaly appears to be a bread block lying very near the surface and having moderate conductivity."

Our Comment: This anomaly lies under a slew that can be very easily drained. It is of interest to note that a creek running through the anomaly does not freeze over during the winter even under very cold weather.

- 7 E D.D.H. #9
 "The causitive body is interpreted as lying approximately 40 feet below surface and having an east-west strike"

Our Comment: A Large ore showing lies 700 feet south of this anomaly.

- 8 A D.D.H. #10
 1 "This anomaly lies north of anomaly E. This anomaly appears to be roughly square in shape and have a maximum dimension of 500 feet. It is interpreted as lying possibly 80 feet below surface and is moderately conductive.
- 9 C D.D.H. #11
 2 "This anomaly has a more clearly defined east-west strike and is interpreted as a broad mineralization zone lying at a depth of 100 feet--".
- 10 c₁ Further detailing
- 11 l₁ D.D.H. #12
 "This anomaly is probably caused by a broad but weak chargeable mass quite near the surface."
- 12 J₁ and J₂
 l₃ and Zones Further detailing
 L, M, N, O,
- 13 D.F Work depends on results from other anomalies.

Our Comment: Anomalies J₁ and J₂ are in a radio-active area. Zone L is just north of a soil anomaly which was trenched and coarse grained galena uncovered.

Further Comments of Huntco Are:

"The most striking characteristic of the chargeability results in the extremely high relief on activity shown over the entire area. This is undoubtedly due to the widespread mineralization which is seen in many of the outcrops and suggests that the mineralization is more widespread than would appear from an inspection of out-crops. This presents the property developer with the problem of choosing a reasonable number of drilling targets from the large number of anomalies, any of which may be underlain by sulphides barren of economic metals. The I.P. method measures resistivity as a by-product and from this it is possible to determine whether or not an I.P. anomaly is caused by massive or disseminated sulphides.

The Interpretation was selective in that it gave more weight to the more massive deposits in the assumption that these have the better chance of containing economic mineralization".

C. MAGNETOMETER SURVEY

Twenty-seven mag anomalies were outlined of which two have been drilled out. It is encouraging to note that the anomalies are associated to surface showings and/or the I.P. anomalies.

These anomalies are planned to be drilled and/or stripped.

D. SOIL SAMPLING SURVEY

The northern section showed more results from the soil sampling. Three strong copper anomalies, six medium copper anomalies and two heavy metals anomalies were outlined in the northern grid.

Trenching of one anomaly uncovered coarse grained galena which is near an I.P. anomaly and mag anomaly.

Trenching and probing of these anomalies is planned.

E. GEOLOGY SURVEY

A geology map was prepared of the total area worked but will be expanded during the coming field season as more data becomes known.

The summary and conclusions of our consulting engineer are as follows:

"Part of the large property of Giant Metallics on the Adams Plateau has been investigated over a bulldozed grid pattern by a geological survey, magnetometer survey, geochemical survey, induced polarization survey, along with two large diameter percussion drill holes and six diamond drill holes. The area so investigated represents about one-sixth of the total claims held by Giant Metallics.

Because of lack of outcrops the geological survey was not as comprehensive as had been hoped for, but rock types have been classified and an outcrop map is included with this report.

Because of the association of magnetic iron mineralization with silver-lead-zinc showings on the property, it was decided to conduct a magnetometer survey over the grid areas. Twenty-seven anomalous areas have been

outlined and only a few have been investigated by stripping and drilling.

The area was considered suitable for geochemical investigation because of the generally thin mantle of overburden and rather gentle topography. Soil samples from all grid stations were tested by the Rubianic Acid method for copper and dithizone method for heavy metals. Several small anomalous areas for higher than normal copper and lead-zinc were outlined.

The induced polarization survey, conducted by Hunttec Limited was completed over both grid areas. No final interpretation has been received, but a preliminary report was submitted for grid No. 1, and a preliminary map has been compiled for grid No. 2. Ten possible anomalies have been outlined in changes and re-evaluation of some of the preliminary results. Only a few of the areas indicated to be anomalous have been checked to date, but it is planned to investigate all anomalies during the 1967 field season.

Percussion and core drilling was confined to eight holes. The two percussion drill holes failed to cut any zones of important mineralization. The diamond drill holes supplies valuable data pertaining to six anomalous zones, including the Ex 1 deposit.

It is concluded that the results of a comprehensive exploration program, on about one-sixth of the property held by Giant Metallics are sufficiently positive to warrant proceeding with a follow-up programs and investigation of the remainder of the property.

RECOMMENDATIONS

The following recommended programs are considered minimum requirements for a thorough investigation of the Giant Metallics property on the Adams Plateau:

Schedule A

Over known areas of heavy iron mineralization, not located on the area of grid No. 1 and No. 2, conduct the following work, starting before break-up 1967:

	<u>Estimated Cost</u>
1. Magnetometer surveys	\$10,000.00
2. Winter access roads	3,000.00
3. Diamond drilling	25,000.00
4. Office, supervision, & overhead	7,000.00
5. Contingencies	<u>5,000.00</u>
Total estimated cost	\$50,000.00

Schedule B

After spring break-up, the following work should be done on grid areas of No. 1 and No. 2

	<u>Estimated Cost</u>
1. Where possible expose anomalous areas by stripping to bedrock	\$10,000.00
2. Diamond drilling	30,000.00
3. Office supervision & overhead	5,000.00
4. Contingencies	<u>5,000.00</u>
Total estimated cost	\$50,000.00