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PROSPECTUS

DATED: OCTOBER 19, 1989

ANDRIA RESOURCES INC.  
(hereinafter called the "Issuer")  
1120 - 510 West Hastings Street,  
Vancouver, B.C.  
V6B 1L5

643

PUBLIC OFFERING 600,000 Common Shares (the "Shares")

Shares	Price to Public	Commissions	Proceeds to Issuer (1)
Per Share	\$0.40 (2)	\$0.06	\$0.34
Total	\$240,000	\$36,000	\$204,000

(1) Before deduction of legal, audit and printing expenses payable by the Issuer estimated not to exceed \$15,000.

(2) The price of the Offering has been determined by the Issuer in negotiation with the Agent.

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May 11/90

MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

MAY 24 1990

KAMLOOPS, B.C.

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THE ISSUE PRICE TO THE PUBLIC EXCEEDS THE NET TANGIBLE BOOK VALUE PER SHARE CALCULATED AS AT JULY 31, 1989 AFTER GIVING EFFECT TO THE OFFERING BY \$0.2155 WHICH REPRESENTS A DILUTION OF 53.88%.

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**Name and Address of Agents**

PACIFIC INTERNATIONAL SECURITIES INC.  
1500 - 700 West Georgia Street  
Vancouver, B.C.  
V7Y 1G1

EFFECTIVE DATE: OCTOBER 25, 1989

GEOCHEMICAL AND GEOPHYSICAL REPORT

on the  
**TAG 1-20 Claims**  
YA94438 - YA94457  
NTS 105 D/2  
Latitude 60°07'N, Longitude 134°40'W  
Whitehorse Mining District

For  
Walter L. Fowler  
Suite 1314 - 510 West Hastings Street,  
Vancouver, B.C.

By  
G. S. Davidson, P.Geol.

June 1987

Note 7 Change in Non-cash Working Capital

The change in non-cash working capital balances related to operations is comprised of prepaid expenses, subscription receivable, accounts payable and management fees payable.

Note 8 Subsequent Events

(a) Subscription of Capital Stock

Subsequent to the year end, the company received subscriptions for 137,000 common share for a total proceed of \$34,250. All subscriptions have been subsequently paid.

(b) Public Offering

The company is in the process of offering to the public the right to subscribe for 600,000 common shares at \$0.40 per share, yielding proceeds of \$240,000 to the company net of commissions. As part of the public offering the company is to issue agent's warrants entitling the agent to purchase a total of 150,000 common shares at a price of \$0.40 per share.

(c) Stock Options

Subsequent to the year end, the company granted stock options to directors and officers of the company. The stock options allow the directors and officers the right to purchase up to 173,000 common shares at \$0.40 per share exercisable for 2 years from the date of the public offering.

## SUMMARY

The TAG 1-20 claims are located on Montana Mountain in the southwestern Yukon adjacent to the old Arctic Gold and Silver Mines property. The Arctic Mine was operational from 1905 to 1909 and from 1966 to 1969; a reported 65,000 tons of gold and silver bearing ore was mined from three quartz vein structures occurring in granitic rocks of the "Carcross Pluton".

The geological environment on the TAG claims is considered similar to that which hosts the fractured quartz vein systems on the old Arctic Mines property. An initial exploration program was undertaken on the TAG property in July 1986.

The geochemical and geophysical surveys outlined inferred VLF conductors and coincidental gold geochemical anomalies at the western and eastern ends of the property. Sporadic anomalous gold values of up to 220 ppb in soil occur along the east-west trending VLF crossovers, mainly at the east end of the grid. A follow-up program of prospecting, detailed geochemistry and bulldozer trenching is recommended to evaluate the anomalous zones.

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## INTRODUCTION

The TAG 1-20 mineral claims lie on Montana Mountain adjacent to the old Arctic Gold and Silver Mines property in southwestern Yukon. An initial exploration program was undertaken on the claims in July 1986. This report, prepared at the request of W. L. Fowler, describes the results of the initial exploration work and recommends a follow-up program of exploration.

Available geological and historical information on the Windy Arm-Montana Mountain district was reviewed during the preparation of this report. The writer has supervised numerous exploration programs in the area and is familiar with the nearby Venus Mine and Arctic Gold and Silver Mine.

## LOCATION AND ACCESS

The TAG claims are located 60 km south of Whitehorse, Yukon, and 5 km south of the town of Carcross on a broad upland area below Sugarloaf Hill on NTS Map Sheet 105-D-2. Approximate geographical co-ordinates are 60°07' north latitude and 134°40' west longitude. The property location is shown in Figure 1.

Access to the claims is by the Arctic Gold and Silver Mines haulage road which leaves the Skagway Highway one kilometer south of Carcross. A secondary road branches off the haulage road approximately 2 km south of the old mill site and extends onto the upland plateau covered by the TAG property. Road distance from the Skagway Highway to the claims is 7 km.





## PHYSIOGRAPHY, CLIMATE, VEGETATION

The TAG property covers a gently sloping broad upland area north of the Montana Mountain massif. Elevations range from treeline at 1370 m (4500') to barren grassy slopes at 1680 m (5500'). Glacial material, cut by shallow gullies, overlies the northern part of the claim block while higher slopes feature the characteristic solifluction overburden patterns. Outcrop is limited to rocky bluffs in the southeast and to a narrow gully in the northwestern edge of the upland plateau.

Southwestern Yukon has a dry subarctic climate with temperatures varying between extremes of  $-50^{\circ}\text{C}$  in winter and  $+25^{\circ}\text{C}$  in summer. Precipitation averages 40 cm per annum. Montana Mountain at 7280 feet is known for its severe weather conditions, primarily at higher elevations, where strong winds and heavy snow cover hinder mineral exploration. On the TAG claims, the access road is snowbound until mid-June. Exploration work is practical between late June and early October.

Vegetation consists of buck brush in the narrow gullies and bracken or grass on the open slopes.

PROPERTY

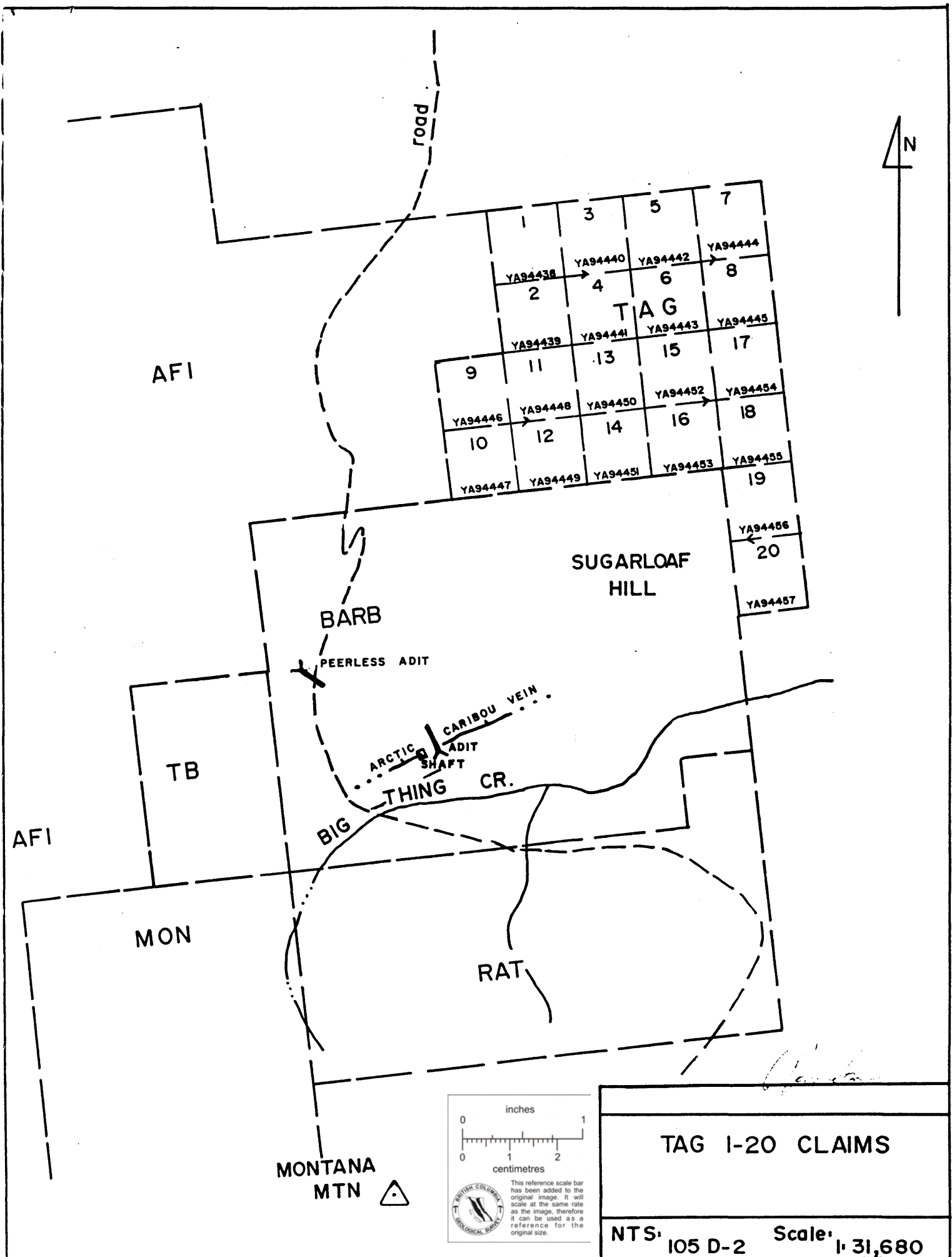
Twenty contiguous mineral claims (TAG 1-20) are recorded in the office of the Whitehorse Mining Recorder. Figure 2 shows the claim plan and property data is listed in Table I.

Table I

PROPERTY COMPOSITION

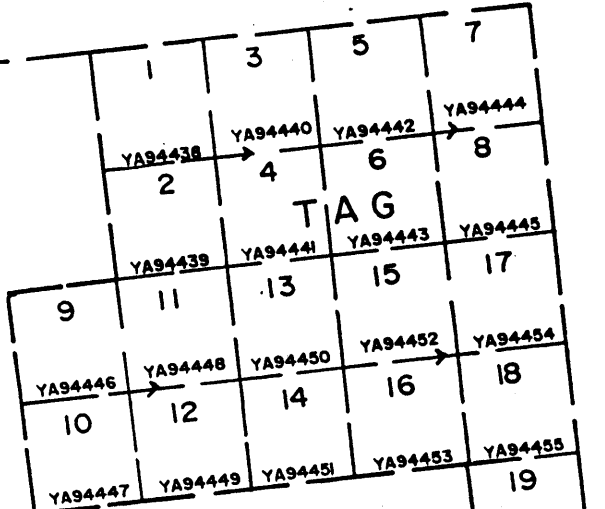
<u>Claim Name</u>	<u>Grant Numbers</u>	<u>Expiry Date</u>	<u>Owner</u>
TAG 1-20	YA94438-YA94457	21 May 1992 (applied for)	W. L. Fowler

During the field work undertaken in July 1986, several claim posts were checked. The claims appear to be staked and tagged in accordance with the requirements of the Yukon Quartz Mining Act.



AFI

road



TAG

SUGARLOAF HILL

BARB

PEERLESS ADIT

TB

AFI

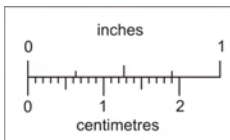
ARCTIC ADIT SHAFT  
CARIBOU VEIN

BIG THING CR.

MON

RAT

MONTANA MTN



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

**TAG 1-20 CLAIMS**

NTS: 105 D-2 Scale: 1:31,680

## REGIONAL GEOLOGY

The Windy Arm-Montana Mountain area overlies the boundaries between three tectonic terranes: the Whitehorse Trough, the Atlin Belt and the Coast Plutonic Complex. Folded metavolcanic and metasedimentary rocks of the first two terranes are intruded and overlain by granitic and volcanic rocks of late Cretaceous or early Tertiary age. The intrusive suite consists of granite to granodiorite with associated aplite and rhyolite porphyry sills and dykes. Late stage features of intrusion include quartz and quartz-carbonate veining with precious and base metal mineralization.

Paleozoic Atlin Terrane metavolcanic rocks (Cache Creek Group), the oldest rocks in the area, outcrop along the eastern slopes of Montana Mountain. Similar volcanic rocks of the Triassic Lewes River Group (Whitehorse Trough) occur on the western flank of Montana Mountain. Laberge Group siltstones, greywackes, argillites and conglomerates overlie the Lewes River Group and outcrop east and west of the Montana Mountain volcanic complex.

The complex consists of andesitic to dacitic flows, tuffs and breccias which correlate with the late Cretaceous or younger Mount Nansen Group of central Yukon. The granitic Carcross Pluton of late Cretaceous age, lying at the northern margin of the volcanic complex, has metamorphosed the volcanic and sedimentary rocks. Swarms of felsic dykes and nearby quartz veins and fracture zones are common in the southern part of the Carcross Pluton and in the volcanic complex.

Figure 3 shows the regional geology.

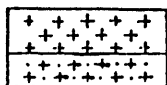
FIGURE 3.1

GEOLOGY OF MONTANA MOUNTAIN  
(from C. Roots, 1981)

LEGEND

EARLY TERTIARY

COAST RANGE INTRUSIONS



biotite - hornblende granodiorite  
chlorite granite (with mauve quartz)

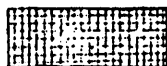
Intrusive contact

MIDDLE OR LATE CRETACEOUS

MOUNT NANSEN GROUP



rhyolite and silicified volcanic rocks



heterolithic breccia; locally interpreted as debris flows and pyroclastic deposits



intermediate volcanic flows and plugs

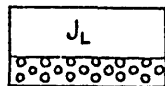


flow-banded intrusion breccia

Intrusive, and locally unconformable contact

LOWER JURASSIC

LABERGE GROUP

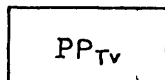


siltstone, greywacke  
conglomerate lenses

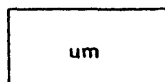
Unconformity

PENNSYLVANIAN or PERMIAN

ATLIN TERRANE, probably NAKINA FORMATION



mafic volcanic flows



BASAL UNIT (?) of Atlin  
serpentinized gabbro

FIGURE 3.2

TAG 1-20 Claims  
Geology

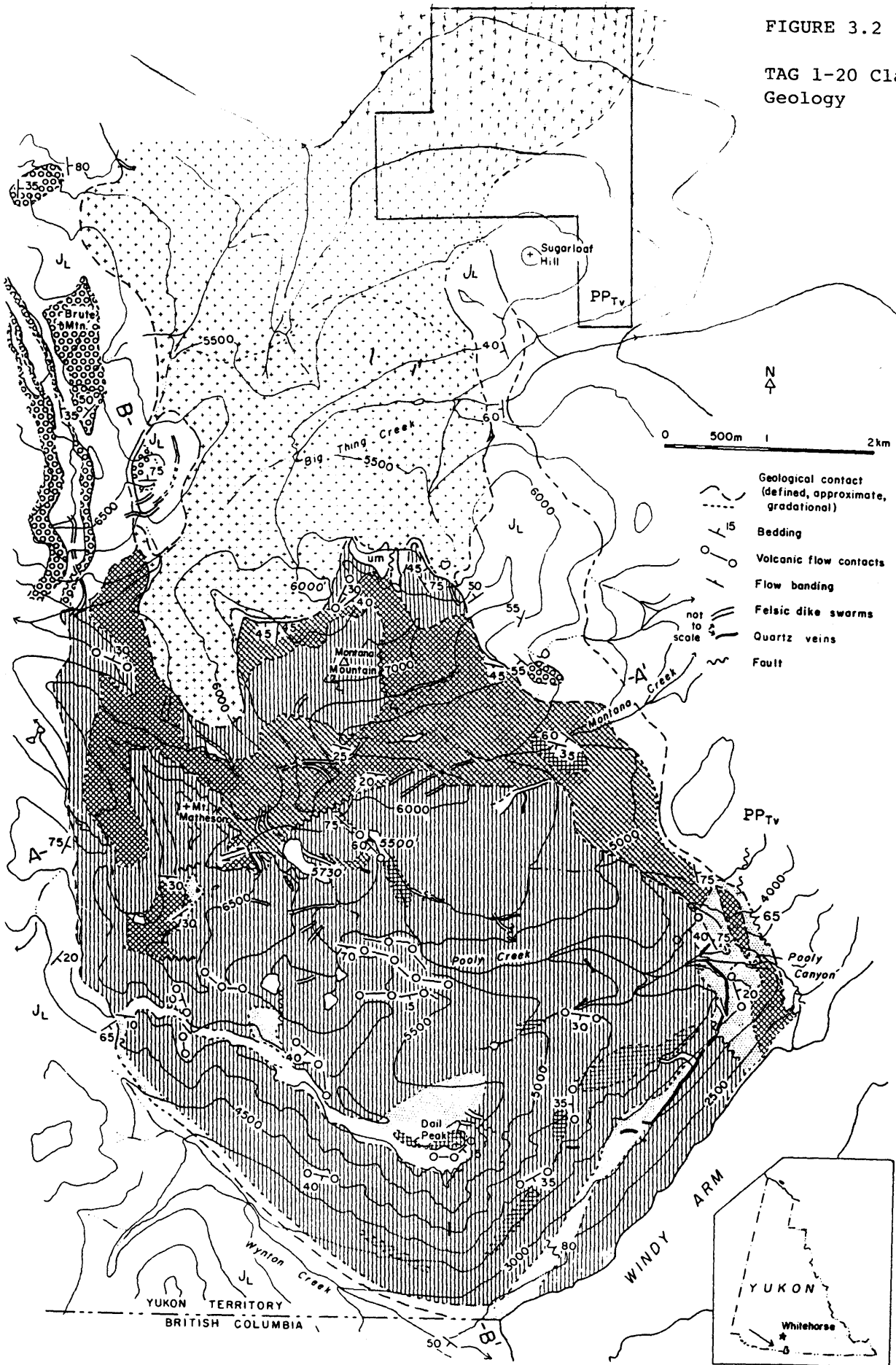


Table II

TABLE OF FORMATIONS

QUATERNARY	Glacial till, alluvial and glacial sands and gravel
LATE CRETACEOUS TO EARLY TERTIARY	Granite and quartz syenite intrusion; rhyolite dyke; andesite, basalt, dacite flows, tuffs, breccias and minor intrusions
LOWER-MIDDLE JURASSIC LABERGE GROUP	Conglomerate, siltstone, argillite, greywacke
UPPER TRIASSIC LEWES RIVER GROUP	Andesite, basalt, volcanic breccia, limestone
MISSISSIPPIAN-PERMIAN (CACHE CREEK <u>OR</u> TAKU GROUPS)	Greenstone, amphibolite; minor limestone, chert and serpentinized ultramafic rocks

Structurally, the volcanic complex is bounded by steeply dipping fault zones. The northern fault contact with the granitic pluton consists of chloritized breccia and fractured alaskite.

Larger regional faults, primarily along major river and lake valleys around Montana Mountain, are associated with movements in the Coast Plutonic Complex.

## HISTORY OF EXPLORATION

Most of the properties located on Montana Mountain were discovered between 1900 and 1910 by prospectors partly or principally controlled by Colonel J. H. Conrad, a renowned mining promoter. Conrad raised large amounts of risk capital in England and Canada to develop and mine these properties under his company, Conrad Consolidated. The first property to be exploited was the Venus Mine, located southeast of the Montana vein, which was developed by Conrad Consolidated from 1901 to 1911, at which time a mortgage foreclosure closed the mining operation. A 100 ton-per-day mill was built at Conrad City, located on Windy Arm of Tagish Lake. Only one shipment of 647 tons of sorted ore was made in 1911 and earned a reported net profit of about \$40,000. During the period 1915 to 1918, leaseholders stoped most of the developed ore and shipped 1715 tons of sorted ore and 314 tons of concentrate for a net profit of \$145,500.

Between 1910 and 1915 the Big Thing (or Arctic Caribou) and the Montana veins were developed and several thousand tons of high grade gold-silver ore were mined, sorted and shipped. An aerial tram some four miles in length and costing about \$150,000 was built from Conrad City to the Mountain Hero property before any exploration work had been done on the Montana vein.

Rising costs, war depleted workforces, and increasingly complicated litigations closed the Montana Mountain operations by 1918 and the claims were eventually dispersed in various estates. Up until 1965 no work was done on these properties. Arctic Mining and Exploration Ltd., at this time, assembled all of the properties previously mentioned, except for the Venus veins.

Extensive underground exploration and development was carried out during the period from 1965 to 1969 on the Arctic Mining and Exploration Ltd. (Arctic Gold and Silver Mines Ltd.) properties and the Venus Mine



## HISTORY OF EXPLORATION

(cont'd)

property. Concentrating plants of 300 TPD capacity were constructed by Arctic and Venus and these mines commenced mining operations in 1968 and 1970 respectively.

Three main vein structures were exposed in the underground workings at the Arctic Caribou and provided the ore produced from this mine. Ore reserves of 163,675 tons proven at 0.668 oz/ton Au, 19.82 oz/ton Ag were reported. However, the system of northeast striking and 15° to 45° north-east dipping quartz veins cutting altered granodiorite and mineralized with pyrite, arsenopyrite, sphalerite, galena and rare chalcopyrite as irregular lenses and shoots within the veins were further complicated by flexures in dip and translation along two fault systems. Production began in May 1968, closed from December 1968 to March 1969 and, after mill modifications, operated at 100 tons per day until final closure in October 1969. Mill heads averaged 0.28 ounces of gold and 10.5 ounces of silver per ton of ore at an average mill rate of 150 tons per day in 1968. A total of 25,132 tons of ore were milled and 4,627 ounces of gold and 119,887 ounces of silver were recovered. A combination of high costs, low metal prices and poor mill recovery attributed greatly to the demise of the Arctic Gold and Silver Mines venture.

Modern exploration work on the Venus vein system began in 1966 when two adits and drifts were driven on the main vein at two levels. The north 20° east vein system dips 30° west and consists of quartz and carbonate up to six feet thick with bands and lenses of pyrite, arsenopyrite, galena, sphalerite and minor chalcopyrite with some ruby silver hosted by andesite and andesite breccia of the Cretaceous Hutshi Group. It was found impossible to maintain the projected 300 tons per day mine production or the anticipated grades. Mining and milling started in September 1970 and ceased in June 1971 when the company went into receivership. A more recent attempt to mine the Venus property was undertaken by United Keno Hill Mines between 1980 and 1982 and new reserves were developed up to 1984. This mine is

## HISTORY OF EXPLORATION

(cont'd)

presently being kept on standby until precious metal prices improve.

During the period of 1966 to present, a number of other mineral occurrences found on Montana Mountain have undergone intermittent exploration. International Mine Services Ltd. conducted underground exploration in 1967-68 on the down dip extension of the Arctic Caribou No. 2 vein and surface exploration in 1967 on the Bear Molybdenum property, including some diamond drilling, and surface work on the Pooley claims. The Montana, Joe Petty and Uranus veins were explored by Arctic Mining and Exploration Ltd. in 1968-69. Montana Mines Ltd. conducted surface examinations of their Mac claims in 1968. More recently, during the past three years, exploration work has been conducted on Montana Mountain by Omni Resources, Tally-Ho Exploration Co., Anooraq, Shakwak Exploration and others. The TAG claims are strategically located on the favourable granodiorite and volcanic rocks that host the Arctic Caribou and Venus vein systems.

## PROPERTY GEOLOGY

The property is underlain by Paleozoic and Mesozoic sedimentary and volcanic lithologies intruded by the granitic "Carcross Pluton". Glacial debris covers most of the upland plateau to an unknown depth.

Altered andesitic flow and pyroclastic rocks of the Cache Creek Group outcrop in the southeast corner of the property. Serpentinized amphibolite lenses occur in the greenstone primarily south of the property. Overlying grey weathering greywacke and associated sedimentary rocks of the Laberge Group outcrop south of Sugarloaf Hill and probably extend onto the claims.

The "Carcross Pluton" consisting of medium to coarse grained granite and granodiorite outcrops at the west end of the property.

South of the TAG property, at the old Arctic Gold and Silver Mines' workings, mineralization occurs in three north to northwesterly dipping fracture zones in the granodiorite. Massive to coarsely crystalline white quartz and sulphides are present in the fractured and altered host rocks. Pyrite, galena, sphalerite, arsenopyrite and minor chalcopyrite are the common sulphide minerals.

## 1986 EXPLORATION PROGRAM

### Introduction

The 1986 exploration program was undertaken to try and locate mineralized quartz vein structures in a geological environment similar to the adjacent Arctic Gold and Silver Mines property. The program involved grid construction, VLF-EM and magnetometer surveys, and soil geochemistry.

In July, Gordon Clark & Associates Ltd. ran 22.6 km of picket base and grid lines on the upland plateau. A 2.2 km baseline orientated at 085° was initially established; then crosslines were turned at 100 m stations. Crosslines were flagged at 25 m intervals and picket stations located every 100 m. The grid plan is shown in Figure 4.

Gordon Clark & Associates collected 500 soil samples at 50 m intervals on the grid lines and a select 203 samples were analysed by Bondar Clegg & Company Ltd. for Au-Ag-Pb. Analytical techniques are described in Appendix I.

Proton magnetometer and VLF-EM surveys were undertaken by the writer on the entire grid. Readings were generally taken at 25 m intervals and occasionally at 50 m intervals. The results of the geochemical and geophysical surveys are reported in the following sections.

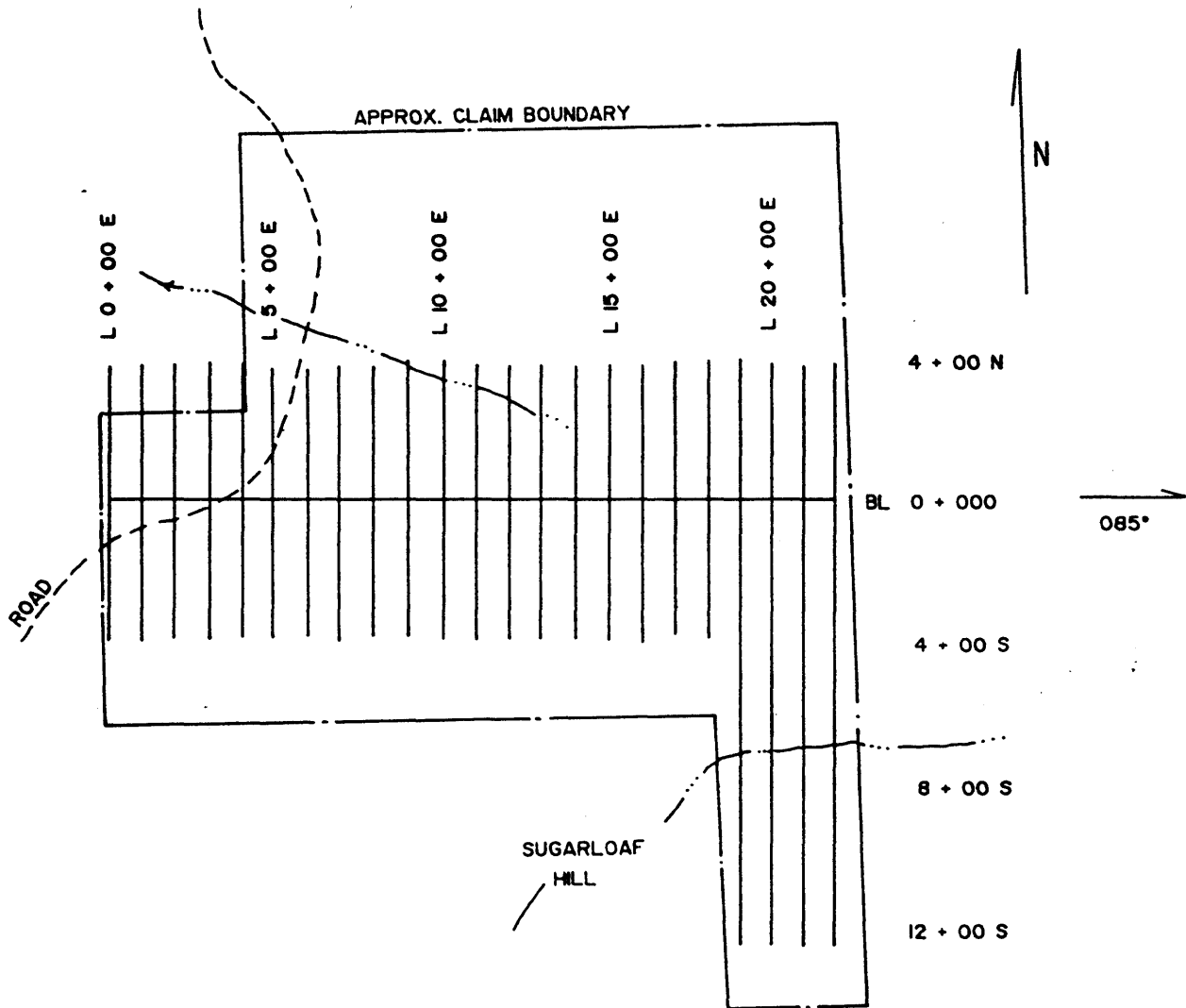
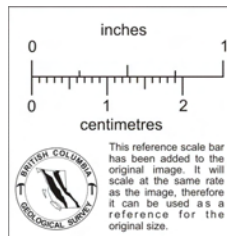


Figure 4

TAG 1 - 20 CLAIMS  
GRID LOCATION MAP



NTS: 105 D/2

TECH: G.D.

DATE: JUNE '87

SCALE 1 : 20,000

DWN. BY: B.B.

FIG.:

## Soil Geochemistry

Several east-west trending gold anomalies of moderate intensity were outlined, mainly at the eastern end of the grid. The significant anomalies are as follows:

- 1) 60-160 ppb Au: located from line 18+00E-3+00S to line 22+00E-4+00S; good correlation with inferred VLF conductors on both the Maine and Seattle channels. Anomaly may extend to 85 ppb Au at L16+00E-1+00S.
- 2) 220, 60, 30 ppb Au: spot anomalies at the southeastern end of the grid; some correlation with apparent VLF conductors on both channels.
- 3) 170 ppb Au: spot anomaly on baseline at L1+00E; correlates with VLF Frazer Filter (Maine) high.
- 4) 25-40 ppb Au: lines 19+00E to 22+00E at 6+00-7+00S; several weak anomalies correlate well with probable VLF conductors; east-west trend.

The geochemical responses in silver and lead were low, with no anomalies outlined. Figure 5 (in pocket) shows the Au-Ag-Pb geochemistry.

An histogram of gold in soil samples is presented in Figure 6.

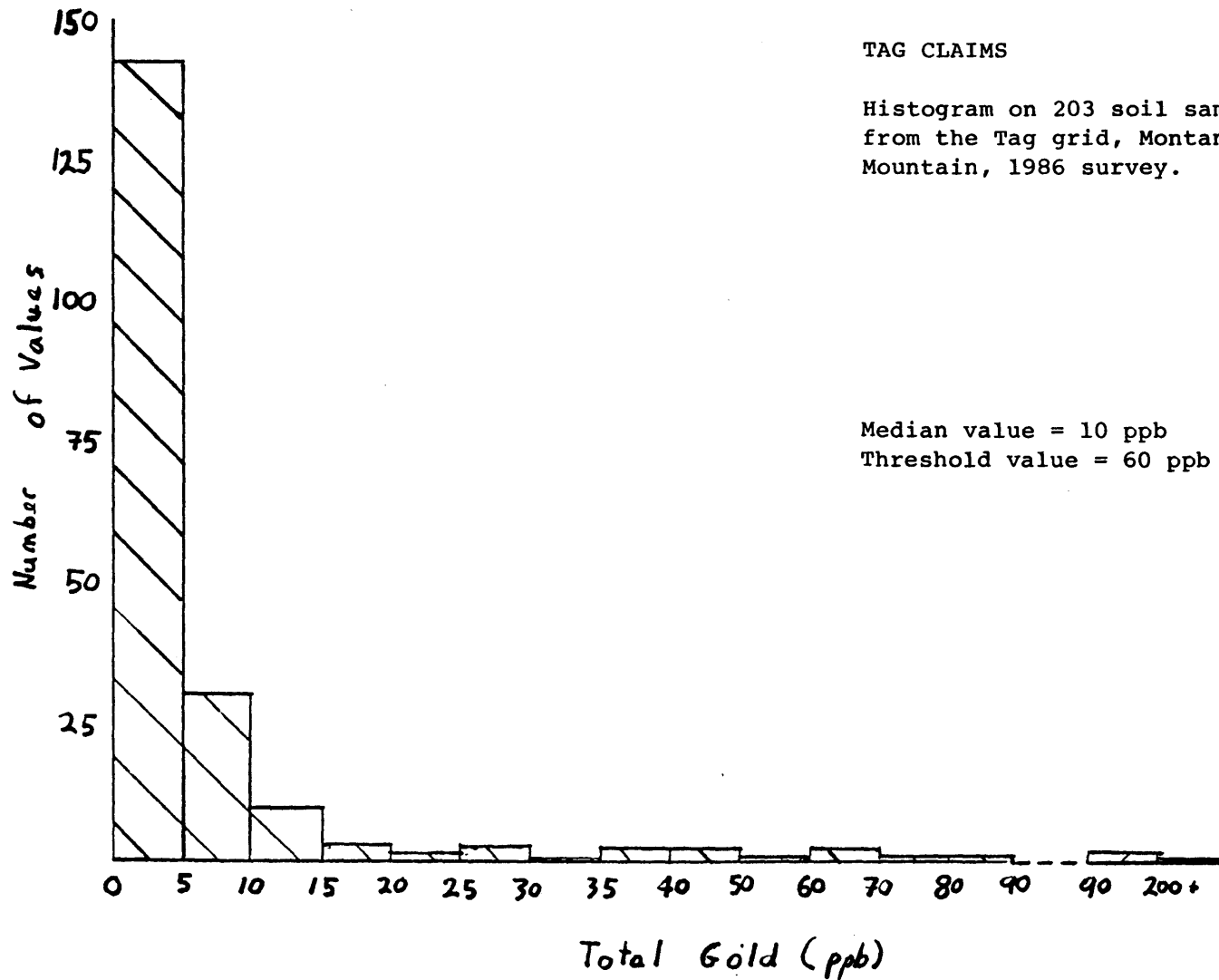
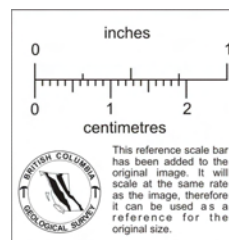


Figure 6



## Magnetometer Survey

A Geometrics G816 portable proton magnetometer was used to survey the 22.6 km of grid lines on the TAG property. Readings were taken at 25 meter (82 foot) intervals on the grid lines and base line. The main base station was established at 4+50N on line 6+00E. Additional base stations were established on the base line at regular 200 meter intervals. The magnetometer was tuned to the 60,000 gamma setting. The sensor was mounted on an eight foot staff throughout the survey and orientated in the same north-south direction at each station. Diurnal variations in the total field intensity ranged up to a maximum of 68 gammas on the first survey day to an average of 25 gammas for the next four survey days. All readings were read to the nearest gamma and corrected for diurnal variation. The results were plotted and contoured at 100 gamma intervals.

The TAG survey results are shown on Figure 7 of this report. The southeast and eastern quadrants of the survey area and the southwest section of the grid are areas of minimal magnetic relief with an average of about 58,600 gammas as background. Maximum local relief seldom exceeds  $\pm 150$  gammas in these locations. The central portion of the grid and particularly the south central area comprises a relatively high magnetic relief that increases southward toward Sugarloaf Hill at the edge of the property. The magnetic relief at this location varies from 500 gammas in the north to 1300+ gammas in the south (L 12E, 5+50S at base of Sugarloaf Hill).

Few outcrops exist in the survey area and, except for one possible location at L 1+00E, 4+50N, no granodiorite outcrops were noted. Volcanic rock of andesitic composition (sheared) outcrops between 5+50S and 12+50S on line 19+00E. In both these locations, the magnetic relief was low, thus indicating that neither the granodiorite nor the andesite rock units are very magnetic. The only area of high magnetic relief is located in the central part of the grid, where overburden is expected to be fairly deep. This extensive magnetic high (700 meters by 1000+ meters) may outline a third rock unit, considerably more magnetic than the granodiorite or andesite units.



Magnetometer Survey (cont'd)

This unit might be expected to contain magnetite and/or pyrrhotite in appreciable quantity and be more basic than the andesite flow or host skarn mineralization. There does not appear to be any discernible correlation between the VLF-EM 16 conductors, geochemical values, and the magnetic survey at this time.

## VLF-EM Survey

The VLF-EM survey utilized a Geonics EM-16 instrument set on the Maine and Seattle channels. Dip angle and quadrature readings were taken at 25 m intervals for both stations. On the TAG claims, the Maine frequency was best suited to pick up east-west trending conductors, while the Seattle frequency is orientated towards detecting northwest-southeast striking structures. Figures 8 and 9 show plans of the Maine and Seattle readings respectively and Figure 10 shows the Frazer Filter interpretation of the Maine channel data. The VLF geophysical method is described in Appendix II.

On both channels, inferred conductors are located at the eastern end of the grid in close association with the anomalous gold geochemistry. Apparent conductors on L22+00E at 7+00S and 10+00S; on L21+00E at 5+00S and 9+25S and on L19+00E at 12+75S were recorded on both channels. These VLF anomalies may trace fault or fracture zones in the underlying rock. The Frazer Filter manipulation of the Maine channel data shows east-west trending anomalies of moderate strength at 5+00S, 7+00S, 9+75S and 12+50S. These anomalies correlate well with the original values plotted on the profile plan. One weakly anomalous area was outlined at the western end of the baseline where anomalous gold geochemical values were obtained. Apparent northwest trending conductors of weak strength were also detected in this area on the Seattle channel.

## DISCUSSION AND RECOMMENDATIONS

Coincidental VLF conductors and gold geochemical anomalies have been outlined at the western and eastern ends of the TAG claims grid. Primarily of moderate to weak intensity, these anomalies may trace underlying fracture or fault zones. Two areas are targeted for further exploration:

- 1) East Grid Anomalies, lines 18+00E to 22+00E, 3+00-13+00S.
- 2) Western Anomaly, approximately BL 1+00E-2+00E.

Weak geochemical and geophysical responses in the central and northern area of the grids are probably due to a thick cover of glacial material. The magnetometer survey suggests that a third granitic rock unit underlies the central part of the claim block. A possible contact between granitic and volcanic rocks would extend to the northeast.

A program of prospecting, detailed geochemistry and limited bulldozer trenching is recommended to evaluate the two target areas outlined above. A follow-up program of trenching and diamond drilling would test potential mineralized veins.

Proposed Expenditures

<b>PHASE I</b>	Geology and prospecting	\$ 4,500
	Detailed geochemistry and assays	3,000
	Blast trenching	10,000
	Camp and support costs	1,500
	Transportation and mobilization	2,000
	Contingency (20%)	4,000
		<hr/>
	TOTAL - PHASE I	\$ 25,000

<b>PHASE II</b>	(Contingent upon results of Phase I)	
	Trenching and/or diamond drilling (400 m)	50,000
	Contingency (20%)	10,000
		<hr/>
	TOTAL - PHASES I AND II	\$ 85,000
		=====

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REFERENCES

**Macdonald, G.**, 1985 - Geological report on the JB 1-16 claims, Montana Mountain.

**Robertson, R.C.R.**, 1985 - Summary report on the RAT 1-28 mineral claims, Montana Mountain area.

**Roots, C.F.**, 1982 - Geology of the Montana Mountain area, Yukon; unpublished M.Sc. thesis, Carleton University, Ottawa.

**Wheeler, J.O.**, 1961 - G.S.C. Memoir 312, Whitehorse map area.

STATEMENT OF QUALIFICATIONS

I, **GRAHAM DAVIDSON**, of the City of Whitehorse in the Yukon Territory hereby certify:

1. That I am a consulting geologist and that I supervised and participated in the work program described in this report.
2. That I am a graduate of the University of Western Ontario (H.B.Sc., Geology, 1981).
3. That I am registered as a Professional Geologist by the Association of Professional Engineers, Geologists and Geophysicists of Alberta (#42308).
4. That I have been engaged in mineral exploration on a full-time and part-time basis for seven years, of which five have been spent in the Yukon, Northwest Territories and British Columbia.
5. I do not have nor have I ever had any interest, direct, indirect or contingent, in the properties of W. L. Fowler, nor do I expect to receive any such interest in the properties or securities pertaining thereto.
6. I hereby grant my permission for W. L. Fowler to use this report for filing with the Vancouver Stock Exchange as partial requirement of a Statement of Material Facts or for any legal purposes normal to the business of W. L. Fowler.

SIGNED at Whitehorse, Yukon Territory, this            day of            1987.

G. S. Davidson, P.Geol.

## APPENDIX I

### ANALYTICAL TECHNIQUES

Soil samples were analysed by Bondar-Clegg Laboratories in Whitehorse and Vancouver. All samples were analysed for Au, Ag and Pb. Soil samples were collected from the B horizon in Kraft paper sample bags. Soil samples are dried and sieved to minus 80 mesh.

Gold analyses are by fire assay techniques using a 10 g sample but, after preparation of the lead bead, the bead is dissolved in acid and the gold content is determined by atomic absorption spectrophotometry.

Lead and silver are analysed by atomic absorption techniques; the sample is dissolved in hot aqua regia.

## APPENDIX II

### THE VLF METHOD

The VLF (very low frequency) method uses powerful radio transmitters set up in different parts of the world for military communications (see Figure 6.34). In radio communications terminology, VLF means very low frequency, about 15 to 25 kilocycles/second. Relative to frequencies generally used in geophysical exploration, this is actually very high.

These powerful radio transmitters induce electric currents in conductive bodies thousands of miles away. Induced currents produce secondary magnetic fields which can be detected at surface through deviations of the normal VLF field. The VLF method is relatively inexpensive and can be a useful prospecting tool.

Successful use of VLF requires that the strike of the conductor be in the direction of the VLF station so that the lines of magnetic field from the VLF transmitter cut the conductor. The upper half of Figure 6.35 shows the magnetic field vector in relation to the transmitting antenna. The lower half of Figure 6.35 shows that currents will be induced in conductor C1 but not in conductor C2 because the lines of magnetic field cut conductor C1 but not conductor C2.

Figure 6.36 shows schematically how the secondary field from the conductor is added to the primary field vector so that the resultant field is tilted up on one side of the conductor and down on the other side. A VLF receiver measures the field tilt and hence we have the tilt profile shown in the upper part of Figure 6.36.

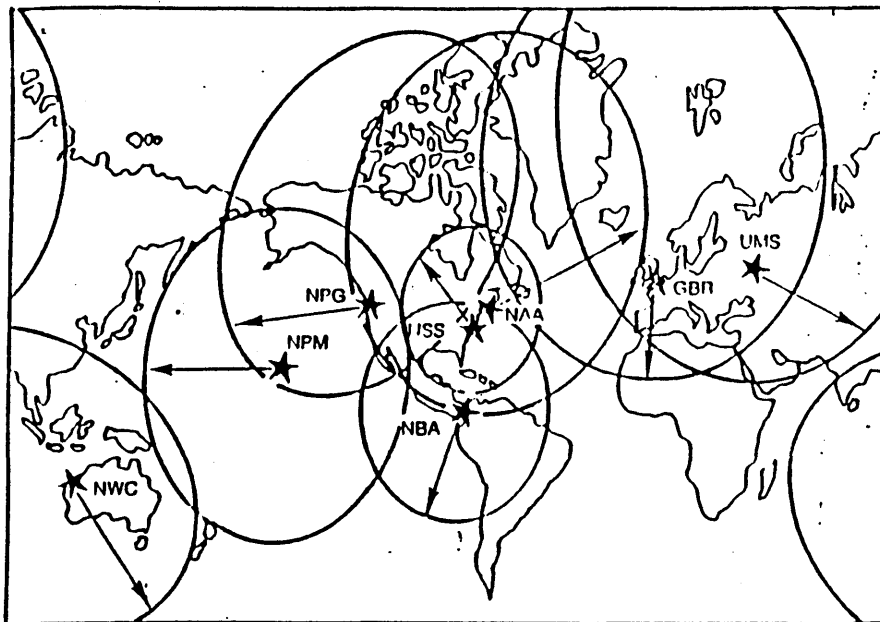
Interpretation is quite simple. The conductor is located at the inflection point marking the crossover from positive tilt to negative tilt, and the maximum in field strength. One cannot make reliable estimates of conductor quality, however. A rule of thumb depth estimate can be made from the distance between the positive and negative peaks in the tilt angle profile. The major disadvantage of the VLF method, however, is that the high frequency results in a multitude of anomalies from unwanted sources such as swamp edges, creeks and topographic highs. It is sometimes impossible to get a powerful enough VLF station to be near the strike direction of the expected conductor. On the other hand, the tendency for VLF to respond to poor conductors has aided in mapping faults and rock contacts.

The VLF-EM survey on Montana Mountain utilized a Geonics EM-16 instrument set on the Seattle, Maine and Hawaii channels. Dip angle and field strength readings were taken at 25 meter intervals on the existing grid. Data was originally plotted on profile plan maps and then transformed to a contour type format using the Frazer Filter method.

The Frazer Filter manipulation procedure provides a data presentation which simplifies interpretation. The manipulation transforms crossovers into peaks and greatly reduces background noise.

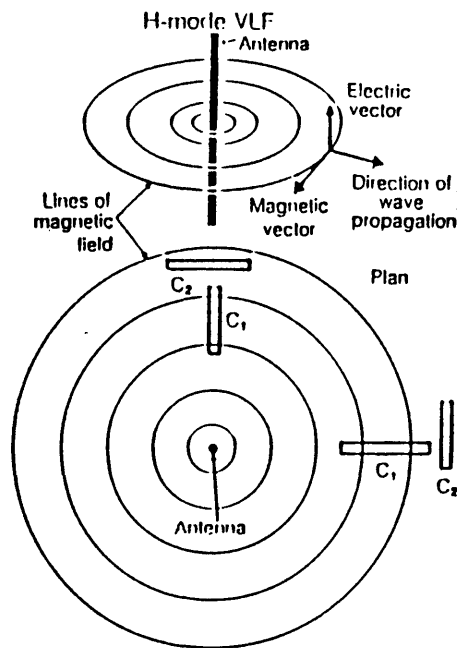


**FIGURE 6.34**  
Locations of well-known VLF transmitter stations

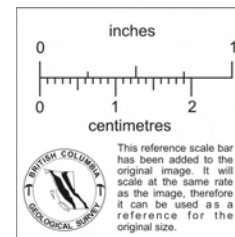
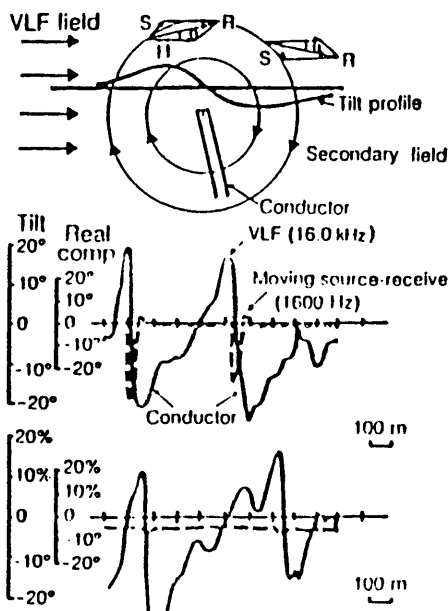


Coverage shown only for well-known stations

**FIGURE 6.35**  
The VLF field

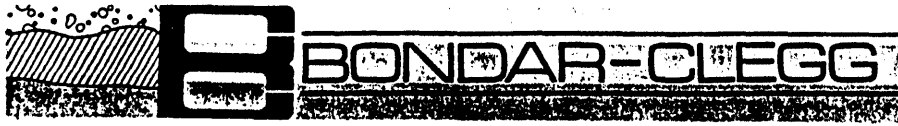


**FIGURE 6.36**  
Tilt of the VLF field vector over a conductor



**APPENDIX III**

**CERTIFICATES OF ANALYSIS**



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PROJECT: TAG CLAIMS

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Pb PPM	Ag PPM	Au PPB	SAMPLE NUMBER	ELEMENT UNITS	Pb PPM	Ag PPM	Au PPB
S1 LOE 1+00N		7	<0.1	<5	S1 L4E 2+00S		14	<0.1	<5
S1 LOE 2+00N		12	<0.1	<5	S1 L4E 3+00S		12	<0.1	<5
S1 LOE 4+00N		30	0.4	10	S1 L4E 4+00S		12	<0.1	<5
S1 LOE 0+00S		9	0.2	<5	S1 L5E 0+00S		14	<0.1	15
S1 LOE 1+00S		10	<0.1	<5	S1 L5E 1+00S		11	<0.1	<5
S1 LOE 2+00S		8	<0.1	<5	S1 L5E 2+00S		17	<0.1	<5
S1 LOE 3+00S		9	<0.1	<5	S1 L5E 3+00S		12	<0.1	<5
S1 LOE 4+00S		34	0.8	<5	S1 L5E 4+00S		15	<0.1	<5
S1 L1E 1+00N		15	<0.1	<5	S1 L6E 0+00S		10	<0.1	<5
S1 L1E 2+00N		10	<0.1	<5	S1 L6E 1+50S		12	0.2	10
S1 L1E 3+00N		7	<0.1	<5	S1 L6E 2+00S		13	<0.1	<5
S1 L1E 4+00N		12	0.2	<5	S1 L6E 3+00S		22	0.2	<5
S1 L1E 0+00S		10	<0.1	170	S1 L6E 4+00S		20	<0.1	<5
S1 L1E 1+00S		20	0.8	25	S1 L7E 0+00S		10	<0.1	5
S1 L1E 2+00S		21	0.6	<5	S1 L7E 1+00S		10	<0.1	<5
S1 L1E 3+00S		8	<0.1	<5	S1 L7E 2+00S		10	<0.1	<5
S1 L1E 4+00S		17	<0.1	<5	S1 L7E 3+00S		27	0.2	15
S1 L2E 1+00N		7	<0.1	<5	S1 L7E 4+00S		14	<0.1	<5
S1 L2E 2+00N		10	<0.1	15	S1 L8E 0+00S		10	<0.1	<5
S1 L2E 3+00N		10	<0.1	<5	S1 L8E 1+00S		19	0.1	<5
S1 L2E 4+00N		7	<0.1	<5	S1 L8E 2+00S		10	<0.1	<5
S1 L2E 0+00S		22	0.6	15	S1 L8E 3+00S		15	<0.1	40
S1 L2E 1+00S		21	0.3	10	S1 L8E 4+00S		13	0.2	5
S1 L2E 2+00S		12	<0.1	<5	S1 L9E 0+00S		20	0.6	<5
S1 L2E 3+00S		11	<0.1	<5	S1 L9E 1+00S		11	<0.1	<5
S1 L2E 4+00S		11	<0.1	<5	S1 L9E 2+50S		15	<0.1	10
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S1 L4E 2+00N		17	0.4	<5	S1 L11E 3+00S		17	0.6	<5
S1 L4E 3+00N		12	0.2	<5	S1 L11E 4+00S		12	<0.1	<5
S1 L4E 4+00N		12	0.2	<5	S1 L12E 0+00S		10	0.1	10
S1 L4E 1+50S		12	<0.1	<5	S1 L12E 1+00S		10	<0.1	10

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SAMPLE NUMBER	ELEMENT UNITS	Pb PPM	Ag PPM	Au PPB	SAMPLE NUMBER	ELEMENT UNITS	Pb PPM	Ag PPM	Au PPB
S1 L12E 2+00S		8	<0.1	<5	S1 L19E 6+50S		22	<0.1	10
S1 L12E 3+00S		15	<0.1	<5	S1 L19E 7+00S		10	0.1	<5
S1 L12E 4+00S		20	<0.1	<5	S1 L19E 7+50S		10	<0.1	30
S1 L13E 0+00S		13	<0.1	5	S1 L19E 8+00S		22	0.2	10
S1 L13E 1+00S		14	<0.1	5	S1 L19E 8+50S		9	<0.1	10
S1 L13E 2+00S		10	<0.1	<5	S1 L19E 9+00S		6	0.1	20
S1 L13E 3+00S		9	<0.1	5	S1 L19E 9+50S		12	<0.1	<5
S1 L13E 4+00S		25	0.2	10	S1 L19E 10+00S		14	<0.1	<5
S1 L14E 0+00S		9	<0.1	<5	S1 L19E 10+50S		12	<0.1	<5
S1 L14E 1+00S		15	0.3	<5	S1 L19E 11+00S		14	0.2	<5
S1 L14E 2+00S		14	<0.1	5	S1 L19E 11+50S		17	<0.1	<5
S1 L14E 3+00S		12	<0.1	5	S1 L19E 12+00S		12	0.1	<5
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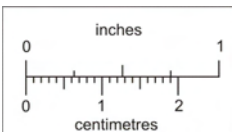
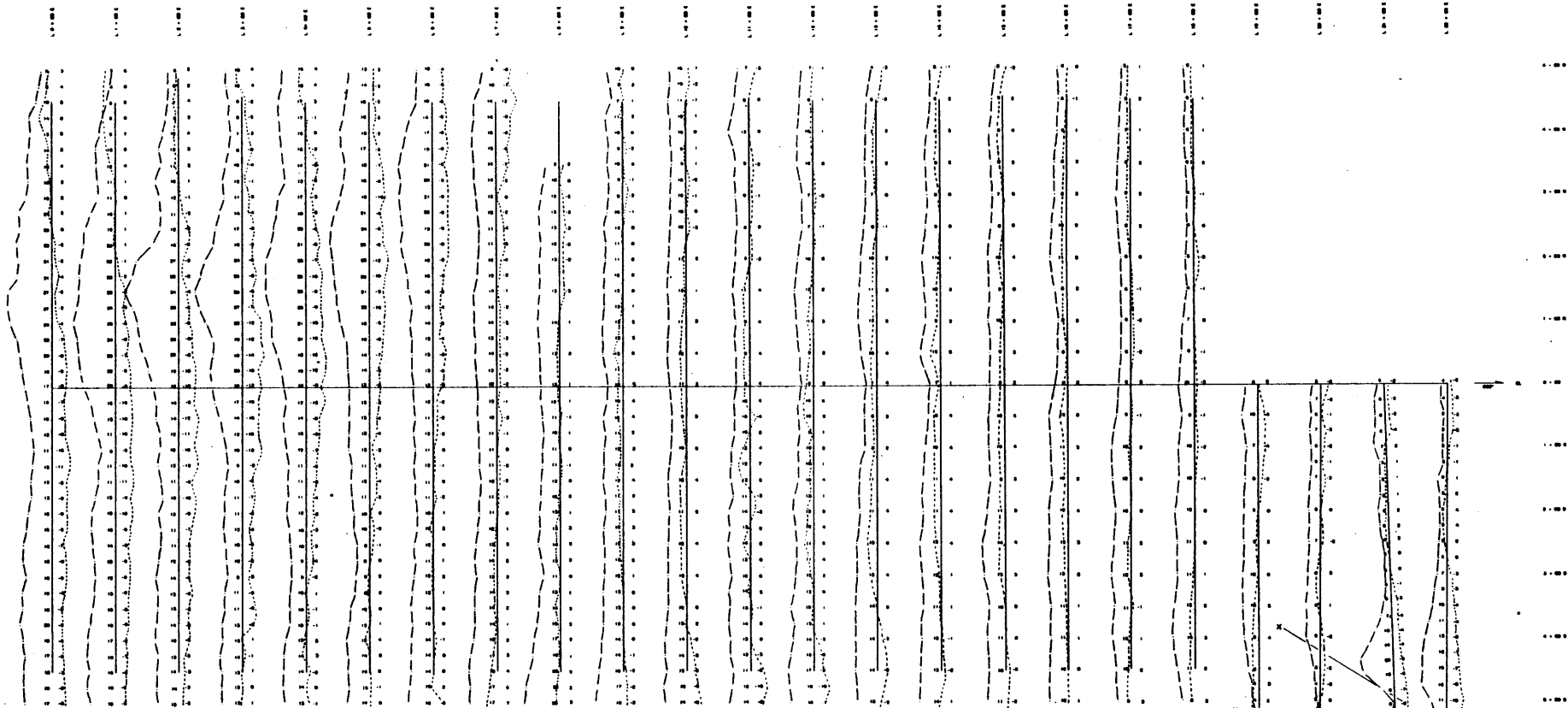


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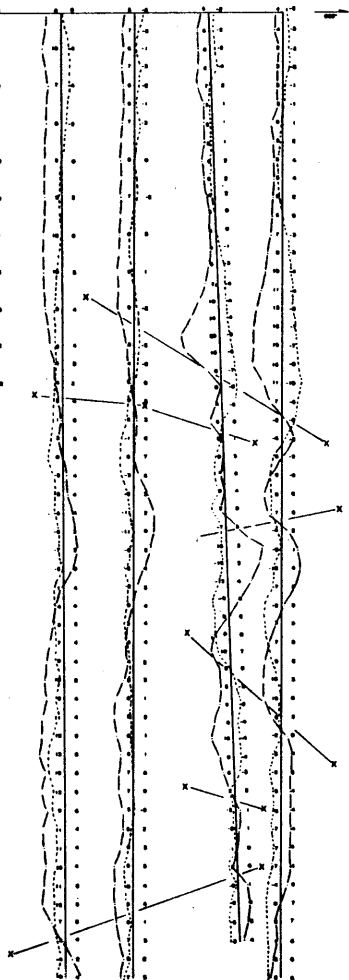
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S1 L21E 5+50S		12	0.1	<5					
S1 L21E 6+00S		7	<0.1	5					
S1 L21E 6+50S		16	0.2	<5					
S1 L21E 7+00S		13	<0.1	<5					
S1 L21E 7+50S		12	<0.1	<5					
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S1 L21E 8+50S		8	<0.1	5					
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S1 L22E 0+00S		12	<0.1	<5					
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S1 L22E 2+00S		13	<0.1	20					
S1 L22E 3+00S		16	0.1	<5					
S1 L22E 4+00S		11	0.1	65					
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S1 L22E 5+00S		10	<0.1	35					
S1 L22E 5+50S		9	<0.1	<5					
S1 L22E 6+00S		19	0.5	<5					
S1 L22E 6+50S		15	<0.1	40					
S1 L22E 7+00S		15	0.2	10					
S1 L22E 7+50S		7	<0.1	<5					
S1 L22E 8+00S		14	<0.1	10					
S1 L22E 8+50S		7	<0.1	10					
S1 L22E 9+00S		7	<0.1	15					
S1 L22E 9+50S		7	<0.1	5					
S1 L22E 10+00S		9	<0.1	<5					
S1 L22E 10+50S		10	0.1	60					
S1 L22E 11+00S		15	0.1	10					
S1 L22E 11+50S		9	<0.1	10					

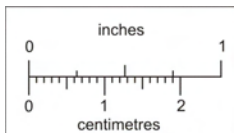
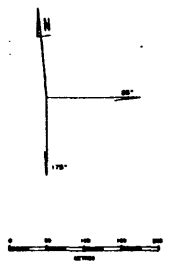
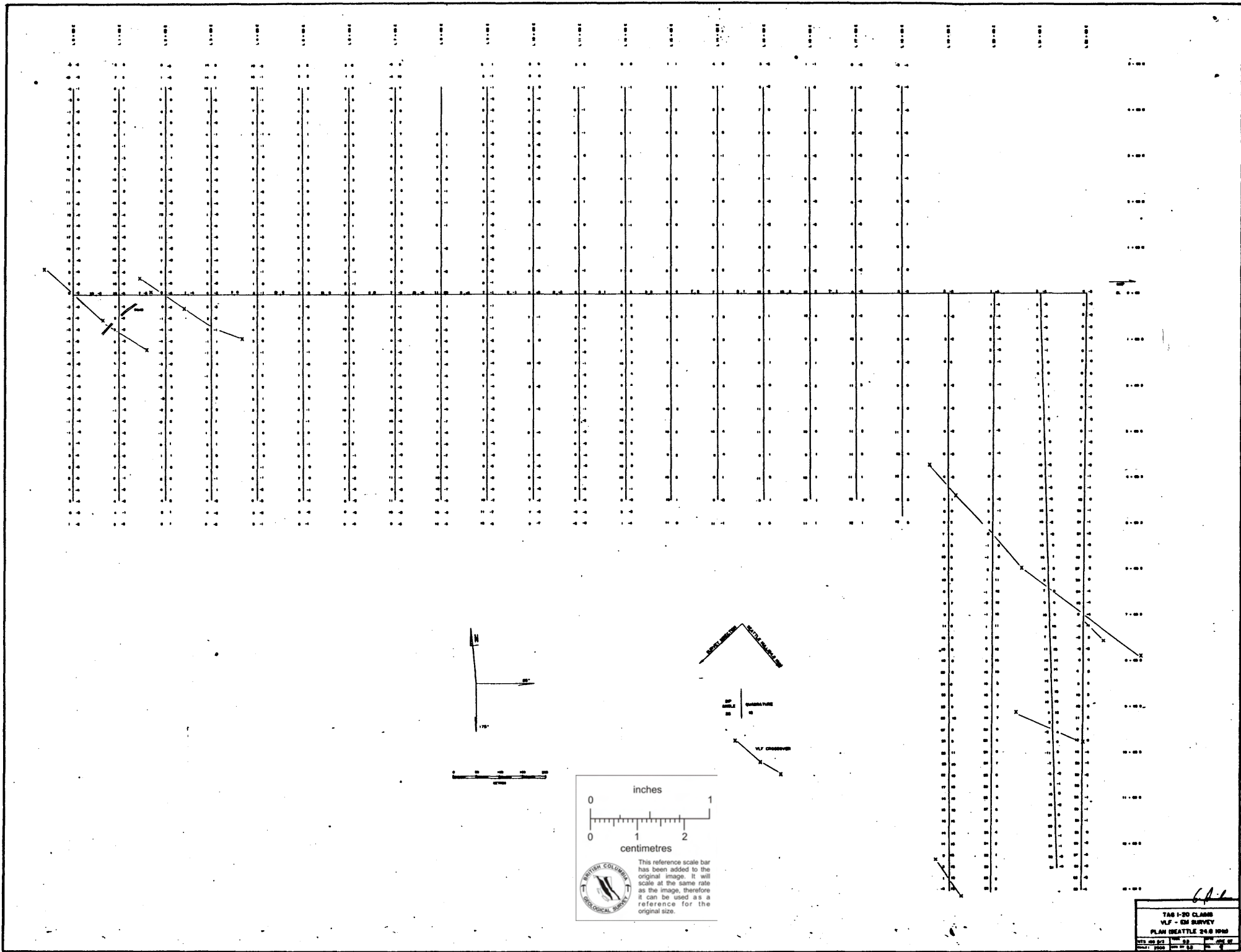


BRITISH COLUMBIA  
GEOLOGICAL SURVEY

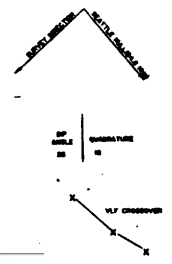
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POINT 1  
POINT 2



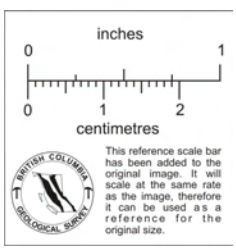


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VLF - 52 SURVEY  
PLAN SEATTLE 24.8 1943

3.00 + 0.3	3.00 + 1.1	3.00 + 2.7	3.00 + 5.1	3.00 + 10.1	3.00 + 15.1	3.00 + 20.1	3.00 + 25.1	3.00 + 30.1	3.00 + 35.1	3.00 + 40.1	3.00 + 45.1	3.00 + 50.1	3.00 + 55.1	3.00 + 60.1	3.00 + 65.1	3.00 + 70.1	3.00 + 75.1	3.00 + 80.1	3.00 + 85.1	3.00 + 90.1	3.00 + 95.1	3.00 + 100.1	3.00 + 105.1	3.00 + 110.1	3.00 + 115.1	3.00 + 120.1	3.00 + 125.1	3.00 + 130.1					
10 0.4 9	<5 0.2 12	<5 <0.1 7	<5 <0.1 10	<5 0.2 12																										4.00 N			
	<5 <0.1 7	<5 <0.1 10	10 0.2 10	<5 0.2 12																										3.00 N			
<5 <0.1 12	<5 <0.1 10	15 <0.1 10	<5 <0.1 7	<5 0.4 17																										2.00 N			
<5 <0.1 7	<5 <0.1 15	<5 <0.1 7	10 <0.1 16	<5 0.5 20																										1.00 N			
<5 0.2 9	170 <0.1 10	5 0.6 22	10 0.4 14		15 <0.1 14	<5 <0.1 10	<5 <0.1 10	<5 <0.1 10	<5 0.5 20	<5 <0.1 20	<5 <0.1 15	10 0.1 10	<5 <0.1 13	<5 <0.1 9	<5 <0.1 7											10 0.2 13	40 0.7 11	<5 <0.1 10	<5 <0.1 12	085	BL 0.00		
<5 <0.1 10	25 0.8 20	10 0.3 21	15 0.1 27		<5 <0.1 11	<5 <0.1 10	<5 0.1 19	<5 <0.1 11	<5 <0.1 10	<5 <0.1 10	10 <0.1 10	<5 <0.1 14	<5 0.3 15	<5 <0.1 11	85 <0.1 12												<5 <0.1 8	<5 <0.1 11	<5 <0.1 10	<5 <0.1 12	1.00 S		
<5 <0.1 8	<5 0.6 21	<5 <0.1 12	<5 <0.1 14	<5 <0.1 14	<5 <0.1 17	<5 <0.1 15	<5 <0.1 10	<5 <0.1 10		<5 0.6 21	<5 0.1 10	<5 <0.1 8	<5 <0.1 10	<5 <0.1 14	<5 <0.1 9	<5 <0.1 10											<5 <0.1 12	<5 <0.1 12	<5 0.2 10	20 <0.1 13	2.00 S		
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Au (ppb)  
Ag (ppm)  
Pb (ppm)

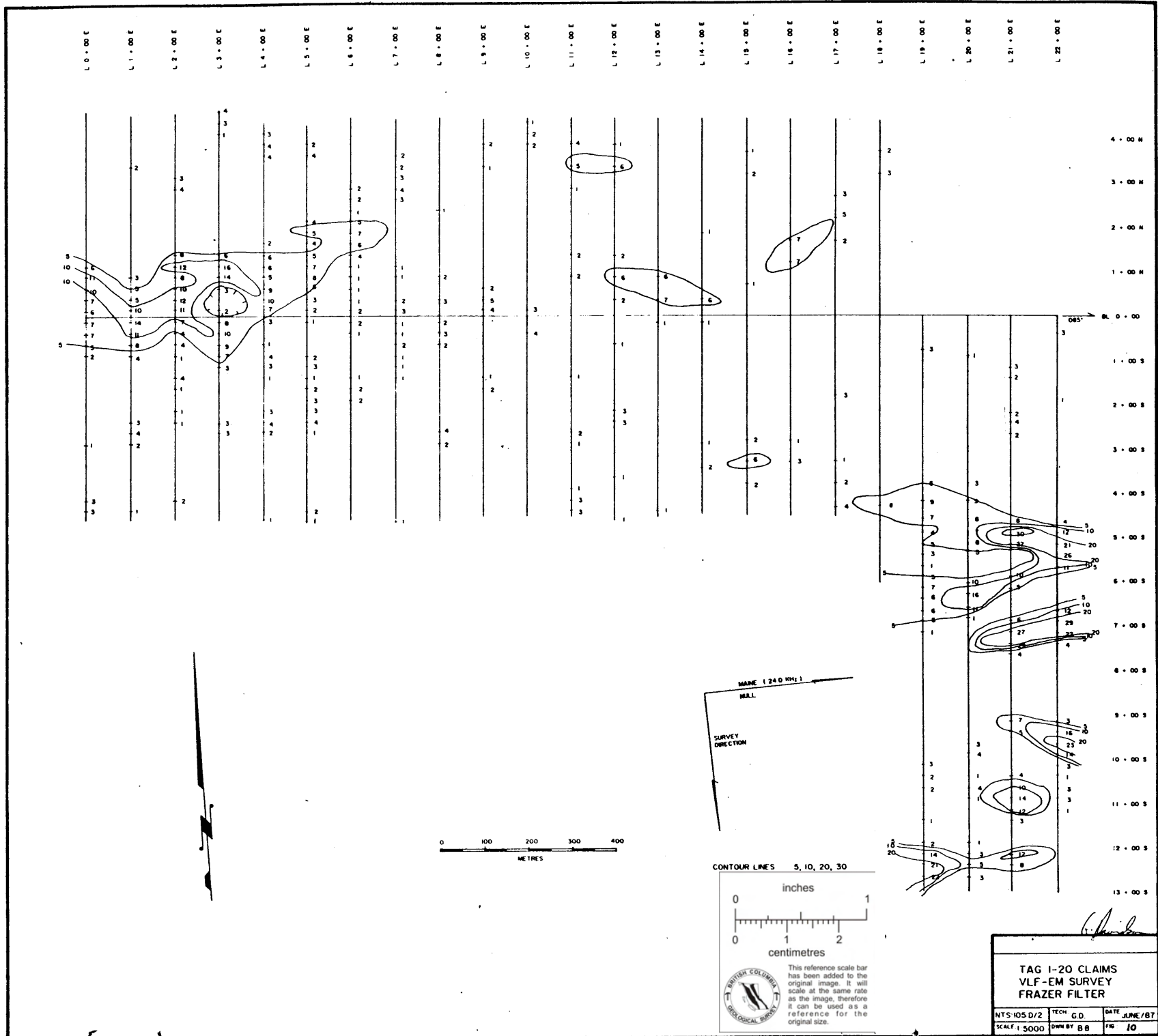
*G. Fisher*

**TAG I-20 CLAIMS**  
**Au-Ag-Pb GEOCHEMISTRY**

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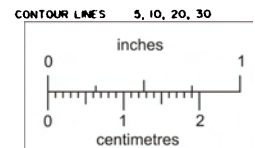
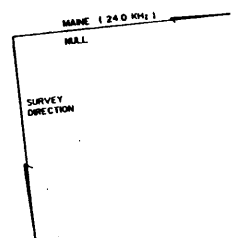






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*G. Smith*

TAG 1-20 CLAIMS VLF-EM SURVEY FRAZER FILTER			
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## SUMMARY

At the request of the Directors of Andria Resources Inc. an evaluation of the Zebedee Group of claims was carried out and forms the subject matter of this report.

The Zeb and Ed Claims occupy a portion of the valley floor and north facing slope of the North Barriere Lake Valley near the east end of North Barriere Lake, Kamloops Mining Division, British Columbia.

The property lies over the contact between the Baldy Mountain Granite Intrusive of Cretaceous Age and Late Devonian Granite and Granodiorite Orthogneiss. Paragneiss observed along the south boundary of the Zeb claim was earlier read as meta-sediments of the Shusway Metamorphic Complex on the basis of lithology. Immediately to the north of the N.W. corner of the Zeb Claim occurs a silicified shear zone striking E.W.. Two channel samples taken normal to strike over lengths of one metre yielded Au 0.01 ozs/ton. Ag 20.0 ozs/ton, Pb 35.6% Zn 0.9% and Au 0.02 ozs/ton. Ag 26.4 ozs/ton, Pb 20.5% Zn 10.0%.

A previously conducted E.M. survey by Kamstar Mines Ltd. in 1966 revealed a strong E.M. conductor striking ENE within and along the south margin of the present Zeb claim. A pilot E.M. survey was conducted along the south margin of the North Barriere Lake Valley confirming the presence and intensity of the conductor.

In spite of the rough terrain, overburden cover is extensive with limited outcrop available for geologic observation.

The presence of a strong electromagnetic conductor supported by surface mineralization in the vicinity and by sulphide mineralization in a drill hole in the general area of the conductor strongly suggests that the conductor be sampled at depth by means of diamond drilling. In addition, the geophysical and geochemical surveys should be expanded to detect other areas of interest and to fully delineate the presently indicated conductor.

The first phase of the recommended programme of Magnetic and E. M. survey and Geochemical sampling followed by diamond drilling would entail the expenditure of some \$76,440. for the first phase of the programme.

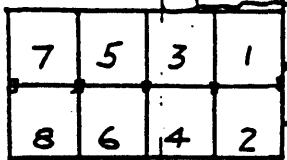
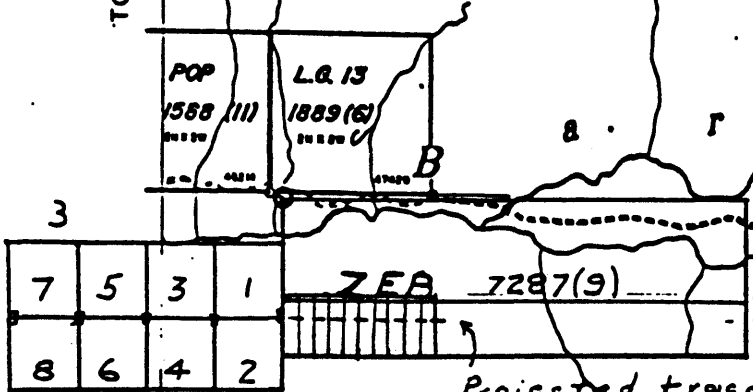
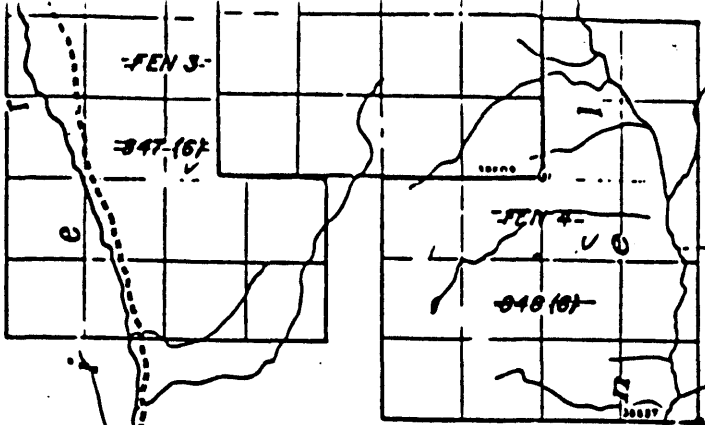
## PROPERTY

The property under discussion consists of the Zeb Claim comprised of twelve units and the Ed claims 1 - 8 incl., two post located mineral claims. The Zeb and Ed Claims, hereinafter referred to as the Zebedee Group, are situate east of the east end of North Barriere Lake, Kamloops Mining Division, British Columbia.

Zeb Claim (12 units)  
Ed Claims 1 - 8 incl.

Record No. 7287 (9)  
Record Nos. 7355 - 7362 incl.

TO WEST SEE MAP 82M/5W

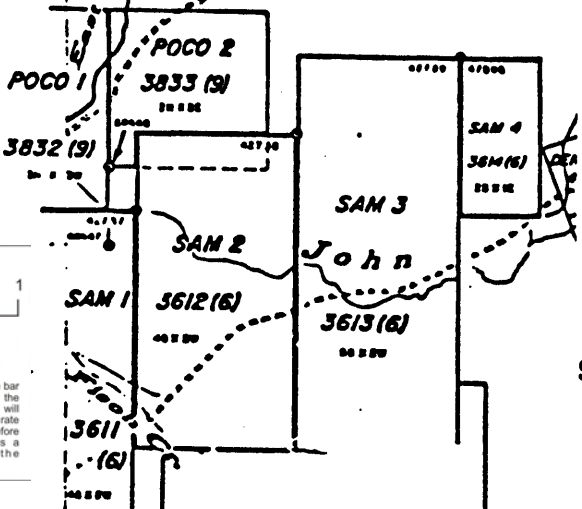


ED CLAIMS

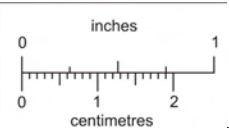
SASKUM MTN.

East Barriere

2



ANDRIA RESOURCES INC.  
CLAIM SKETCH  
ZEB CLAIM  
NORTH BARRIERE LAKE AREA  
KAMLOOPS MINING DIVISION  
BRITISH COLUMBIA



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## LOCATION AND ACCESS

The Zebedee Group of Claims is located some three kilometres east of the east end of North Barriere Lake, Kamloops Mining Division, British Columbia. Facile access to the property is available by means of the North Barriere Lake road which traverses the north margin of the Zeb Claims and various logging roads traversing the property which connect with the North Barriere Lake road. These roads are amenable to the use of conventional vehicles.

The property lies some 106 km NNE of the City of Kamloops, B. C. and 34 km N.E. of the Village of Barriere, B. C. on the Yellowhead Highway (No. 5). Barriere and Kamloops well serve as sources of labour and supplies for any mining or exploration project.

## TOPOGRAPHY AND VEGETATION

Elevations vary from 725 m.a.s.l. along the north margin of the Zeb Claim to 1200 m.a.s.l. along the south boundary. The area of the property is entirely forest covered with spruce, fir and cedar. Minor cottonwood and alders are found along the Barriere River which traverses the Zeb Claim from E to W. Overburden is extensive with outcrop available for observation along the north facing slope of the North Barriere Lake Valley.

The area of the claim group has been selectively logged in the past, however, timber for mining purposes is still available. Ample water for exploration purposes is available from creeks traversing the property.

## GEOLOGY

The area of the Zeb Claim is underlain by the contact between the Baldy Batholith of Cretaceous age and intruded Late Devonian granite and granodiorite orthogneiss formation. The intrusive granite rocks consist of light grey to pink biotite quartz monzonite, usually porphyritic with the development of potassic feldspar crystals of up to ten centimetres in length. Near the projected contact occur minor pegmatites and E.W. oriented silicified shear zones.

To the south of the granite contact occurs an extensive series of gneissic rocks recently mapped as Late Devonian orthogneiss with paragneiss developed to the east. The orthogneiss is presumed to be intrusive and similar in composition to volcanic and volcanoclastic rocks of the overlying Eagle Bay Assemblage west of the property. The paragneiss members to the southeast seem to reflect a sedimentary origin and are lithologically similar to members of the Shushwap Metamorphic Complex in the Adams Lake area to the east.

The main structural feature present consists of the projected Barriere Lake Fault which extends through the North Barriere Lake Valley, traversing the Zeb claim along its length E - W. This is a dextral fault with indeterminate uplift of the southern mass. To the north of the property several sympathetic faults of lower order are suggested by the rectilinear

drainage pattern with several south draining creeks. Marginal to the Baldy granite - orthogneiss contact occur silicified shear zones parallel to the contact.

## MINERALIZATION

Some 250m N of the LCP of the Zeb claim occurs a silicified shear zone carrying blebby massive streaks of sulphides i.e. sphalerite galena and pyrite in increasing order. This shear zone is exposed on surface and in a short adit over a strike length of say 75m. Channel sampling by the author across the one metre width of the silicified shear zone yielded the following results: No. 1 - Au 0.01 ozs/ton, Ag 20.0 ozs/ton, Pb 35.6%, Zn 0.9% and No. 2 - Au 0.02 ozs/ton, Ag 26.4 ozs/ton, Pb 20.5%, Zn 10.0%, sample No. 2 taken 7m to the east of No. 1.

Minor disseminated chalcopyrite and molybdenum disulphide was observed in quartz stringers in meta-sediments along the south boundary of the Zeb Claim. Due to the extensive overburden cover, no other mineralization was observed on surface on the property. An X-ray drill hole was drilled along the foot of the south valley slope near the present south boundary of the Zeb Claim. Efforts to obtain the <sup>exact</sup> location of this hole have been unsuccessful. The author viewed some x-ray sized core derived from this hole containing a section in excess of one metre of silicified dioritic rock containing blebs and streaks of massive sulphides, mainly pyrite with lesser chalcopyrite. The hole was neither logged nor sampled and no records have been found.

## HISTORY

The early history of the area is reported in literature in brief and general terms. Prior to 1945 exploration activities were directed to the search for precious metals.

Between 1934 and 1940 some 107 kg. Au and 79 tonnes of Cu were produced at the Windpass and Sweethome properties on the west flank of Fog Horn Mountain. Mineralization was contained in sulphide bearing quartz veins cutting Lower Fennel Formation - approximately 2 km west of the Baldy Batholith.

Commencing in 1978 a massive copper pyrite deposit was outlined by Craigmont Mines Ltd. some 22 km NNE of Barriere, B. C. The "ore body" of 2 million tons grading 2.0% Cu and 0.4% Zn occurs in pillowed and massive basalts of the Fennel Formation. The local hosts of the Chu Chua deposit are pyritised charts and lenses of magnetite and magnetite talc.

At the head waters of Harper Creek due north of the west end of North Barriere Lake, work by Noranda outlined a body of low grade copper commencing in 1966. Inferred reserves of 90 million tons of 0.4% copper (Belik 1973) are available. The environment is that of quartz sericite phyllites (Fennel Formation) intruded by quartzfeldspathic orthogneiss.

The Samotsum Deposit occurs some 20 km south of the Zeb Claim. Minova have commenced production on a deposit of 136,000 tons grading 14.74 grams/tonne Au, 120 grams/tonne Ag, 3.6% Zn, 3.1% Pb and 0.7% Cu. Massive sulphide mineralization is hosted by felsictomafic tuffaceous metasediments

including charts. The sequence is suggestive of a volcanic exhalative environment. Of interest is the presence of a carbonaceous metasediment lens underlying the mineralization rendering the structure susceptible to detection by electromagnetic geophysical methods.

The area of the Zeb and Ed Claims occupy a portion of the area formerly held by previous operators. In the period 1965 to 1967 Kamstar Mines Ltd. conducted an exploration programme consisting of a line grid, vertical loop E.M. Survey and geological mapping. During the course of their exploration work an EM conductor of high intensity was indicated along the south margin of their property. Overburden precluded surface investigation in the area of this conductive axis. An attempt was made to section the conductor using an x-ray diamond drill, however, the hole was terminated before reaching target depth. Financial difficulties of the company precluded any further work in the area of the company. The area of the conductor was recently acquired by Andria Resources Inc.

#### WORK PROGRAMME

To confirm that the previously indicated EM conductor was within the limits of the Zeb claim, a pilot EM survey was carried out over a portion of the Zeb claim. The instrument used in the survey was a McPhar VHEM unit operating at a frequency of 600 hz and 2400 hz. The instrument was operated in the vertical loop mode.

The McPhar VHEM instrument is comprised of a transmitter and a receiver. The transmitter, by sending an alternating current through a wire coil with its axis horizontal and normal to a line connecting the receiver and transmitter, produces an alternating electromagnetic primary field with a range in excess of 300m. In the absence of any sub-surface electrical conductor the receiver will indicate a dip angle of zero, i.e. the least number of lines of flux passing the least number of turns of wire in the receiver's coil when held with its axis vertical. The presence of say a tabular electrical conductor of possibly magnetite, massive sulphides, graphite etc. will cause an induced or secondary electromagnetic field to be set up. Such a field will be approximately elliptical in section with its axis parallel to the trace of the underlying conductor. The receiver, by taking dip angles at fixed intervals on a traverse normal to the trace of the conductor can fix the horizontal position of the conductive axis. Analysis of the plotted curve of the composite dip angles can indicate the dip, depth, width, and position of the underlying conductor. Dip angles are determined by the null system i.e. measuring minimum voltage. The null width is indicative of the conductivity of the sub-surface conductor.

In practice the control grid is laid out so that grid lines are normal to geological strike or other linears of immediate interest. Frequencies in use vary from 300 hz to 5000 hz. The lower frequencies are capable of detecting structures of very high conductivity and continuity whereas the higher frequencies are of greater sensitivity and in the extreme case may detect spurious occurrences of ionized waters or overburden effects.

In the case of the EM conductor occurring along the south margin of the Zeb claim, the conductor is one of very high conductivity and probably indicative of the presence of massive sulphides or graphite (or both). The continuity of the conductor is indicative of extensive linear structure such as a fault. The conductor is parallel to the Barriere Lake fault indicated in recent mapping by Department of Mines workers and may in fact indicate the south margin of the fault zone.

Two traverses of geochemical sampling were run across the axis of the EM conductor. In spite of minor one point peaks in values for Ag and Pb, no direct correlation was possible. Further sampling should include analysis for Cu and As.

## CONCLUSIONS AND RECOMMENDATIONS

The Zeb and Ed claims overlies the trace of an electromagnetic conductor of high intensity. A thin tabular mass dipping at say 65° to the south and composed of massive sulphides, magnetite or graphite is postulated as the course of the conductor. Since overburden is extensive, the cause of the conductor is best determined by means of diamond drilling. Prior to drilling diamond drilling full use should be made of additional geophysical and geochemical methods to fully delineate the conductive zone and gain additional information as to what minerals and possible mineral associations may be present. In addition, magnetite as a causative factor of the conductive zone.

Recent mapping on a regional scale by B. C. Department of Mines workers indicate the bulk of the property to be underlain by an orthogneiss complex of Late Devonian age. Minor disseminated chalcopyrite and molybdenum disulphide were observed in situ along the south boundary of the Zeb claim. A shallow x-ray drill hole drilled in the vicinity of the present EM conductor was observed to contain blebs and streaks of pyrite and chalcopyrite.

It is recommended, therefore, to completely delineate the known electromagnetic conductive axis on the property and extend coverage over the remainder of the property using geophysical and geochemical methods followed by diamond drilling. Estimated costs for carrying out the first phase of the work is presented as follows:

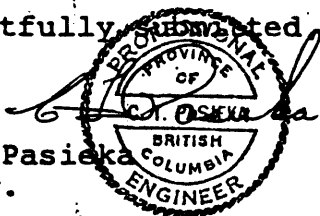
### PHASE 1

1. Line cutting - 30 km @ \$200/km	\$ 6,000.
2. Soil Sampling - 100 @ \$14/sample	1,400.
3. Detailed EM Survey VHEM 25 kg @ \$350/km	8,750.
4. Detailed Magnetic Survey 30 km @ \$200/km	6,000.
5. Bulldozer stripping roads and drill sites 40 hrs. @ \$120./hr.	4,800.
6. Diamond drilling 300 m @ \$82.50/m	24,750.
7. Travel and accomodation	4,000.
8. Consulting and Supervision	8,000.
9. Contingency @ 20%	12,740.
<b>TOTAL PHASE 1..</b>	<b><u>\$76,440.</u></b>

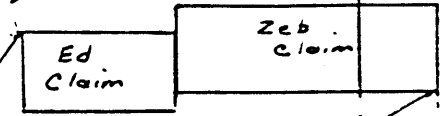
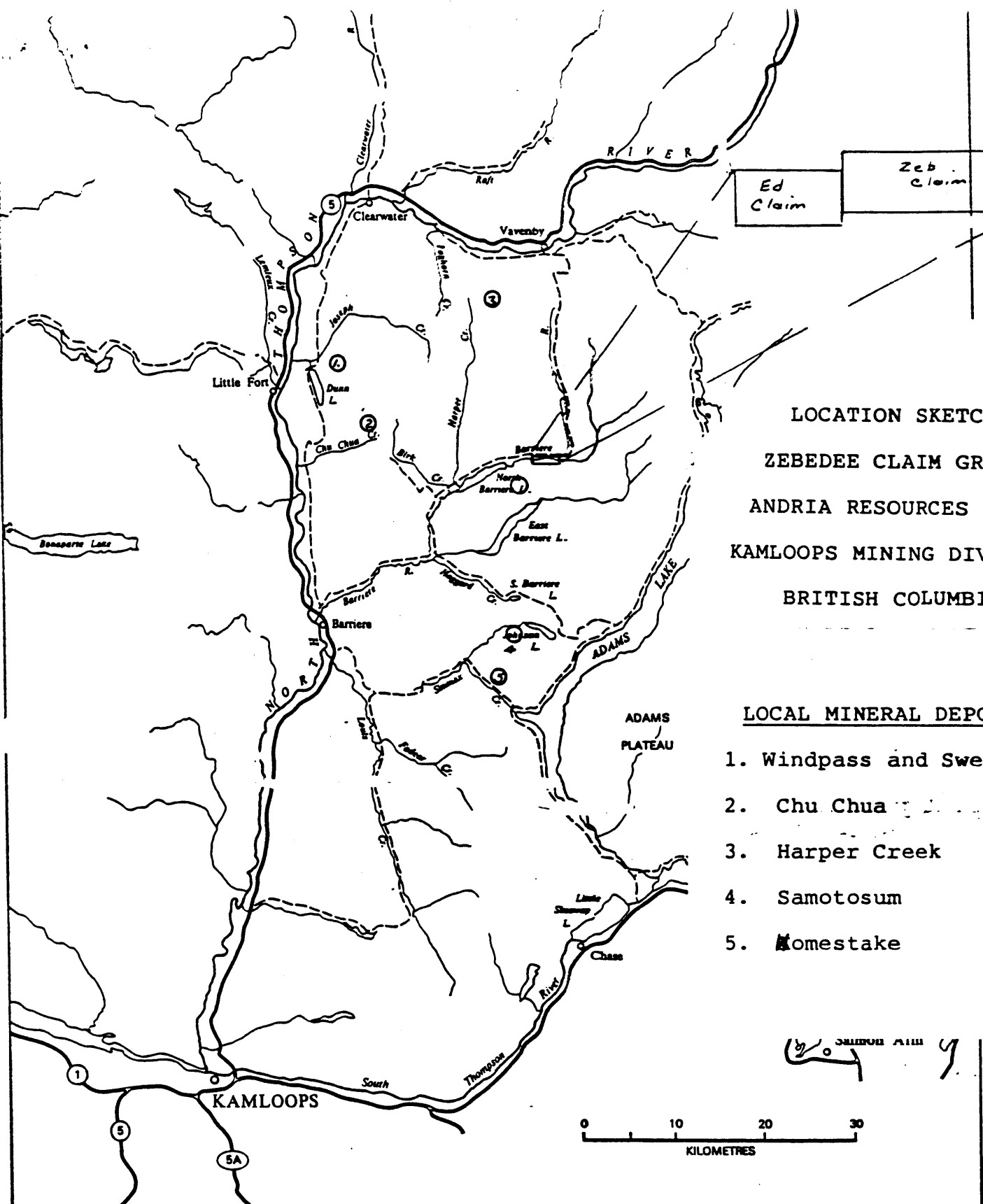
Additional work on the property will be contingent upon the results of the above recommended programme.

Respectfully Submitted

C. T. Pasieka  
P. Eng.







LOCATION SKETCH  
 ZEBEDEE CLAIM GROUP  
 ANDRIA RESOURCES INC.  
 KAMLOOPS MINING DIVISION  
 BRITISH COLUMBIA

- LOCAL MINERAL DEPOSITS
1. Windpass and Sweethome
  2. Chu Chua
  3. Harper Creek
  4. Samotosum
  5. Homestake

inches  
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 centimetres  
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## APPENDIX

1. REPORT ON PILOT ELECTROMAGNETIC SURVEY
2. REGIONAL GEOLOGY
3. ELECTRO MAGNETIC SURVEY - KAMSTAR MINES LTD.
4. GEOLOGY - KAMSTAR MINES LTD.

A  
PROPERTY REPORT  
ON THE  
ZEB AND ED CLAIMS  
NORTH BARRIERE LAKE AREA  
KAMLOOPS MINING DIVISION  
BRITISH COLUMBIA  
FOR  
ANDRIA RESOURCES INC.  
BY  
C. T. PASIEKA, P. ENG.  
JANUARY 20, 1988  
REVISED AUGUST 8, 1989

Reference Sheet 82M/5  
Co-ordinates - 119° 44'W  
- 51° 22'N

G.S. DAVIDSON  
Consulting Geologist  
17-4078 Fourth Avenue  
Whitehorse, Yukon  
Y1A 4K8

April 25, 1989

Andria Resources Inc.  
1324 - 510 W. Hastings Street  
Vancouver, British Columbia  
V6B 1L5

RE: Update on Status of the TAG 1-20 Claims

The TAG claims are located on Montana Mountain in the southwestern Yukon, adjacent to the Arctic Gold and Silver Mines property. The area has been explored since the early 1900's for gold and silver bearing quartz veins. The Arctic and Venus Mines operated periodically between 1905-1981. Montana Mountain lies in the Bennett Lake-Wheaton River mining camp, which currently consists of over 3,000 mineral claims.

The TAG 1-20 (YA94438-YA94457) claims are registered in the name of Andria Resources Inc. in the office of the Whitehorse Mining Recorder. The present expiry date is May 21, 1992.

In 1986, geochemical and geophysical surveys were performed on the TAG claims. These surveys delineated east-west trending VLF anomalies and patchy gold geochemical anomalies at the east end of the property. No recent exploration work has been undertaken on the claims.

The following exploration program is recommended for the TAG claims:

Geological, mapping and prospecting	\$ 4,500
Geochemistry, assays	3,000
Blast or backhoe trenching	10,000
Camp and support costs	2,500
Transportation	2,000
Report and Assessment	3,000
	<hr/>
TOTAL COST	25,000

Yours truly,

G.S. Davidson, P.Geol.  
\*ln



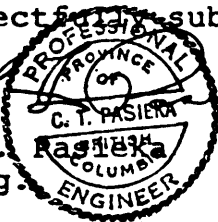
August 21, 1989

TO WHOM IT MAY CONCERN:

I hereby consent to the use of a report entitled, "A PROPERTY REPORT ON THE ZEB AND ED CLAIMS, NORTH BARRIERE LAKE AREA, KAMLOOPS MINING DIVISION, BRITISH COLUMBIA," for Andria Resources Inc., prepared by C. T. Pasioka, P. Eng., August 1989 in any submission to the Vancouver Stock Exchange or the Securities Commission of British Columbia by Andria Resources Inc.

Respectfully submitted,

C. T.  
P. Eng.



## BIBLIOGRAPHY

1. Geology of the Adams Plateau, Clearwater, Vavenby Area, B. C. Dept. of Mines. Paper 1987-2  
P. Schiarizza and V. A. Preto
2. Map 48 1963 Geology Adams Lake, R. B. Campbell
3. Reports - Geology and Electromagnetic Survey for Kamstar Mines Ltd. N.P.L. 1966 - C. T. Pasieka
4. Minister of Mines Report 1935, 1936.

A  
REPORT  
ON THE  
ELECTRO-MAGNETIC SURVEY  
ON THE  
ZEBEDEE GROUP OF CLAIMS  
NORTH BARRIERE LAKE AREA  
KAMLOOPS MINING DIVISION  
BRITISH COLUMBIA  
ZEB CLAIM 12 UNITS 7287  
ED CLAIMS 1-8 INCLUSIVE 7355 - 7362 INCLUSIVE

Ref. Sheet 82M5E  
Co-ordinates 119°44'W  
51°22' N

Operator Andria Resources Inc.  
900 - 777 Hornby Street  
Vancouver, B. C.

BY  
C. T. PASIEKA, P. ENG.

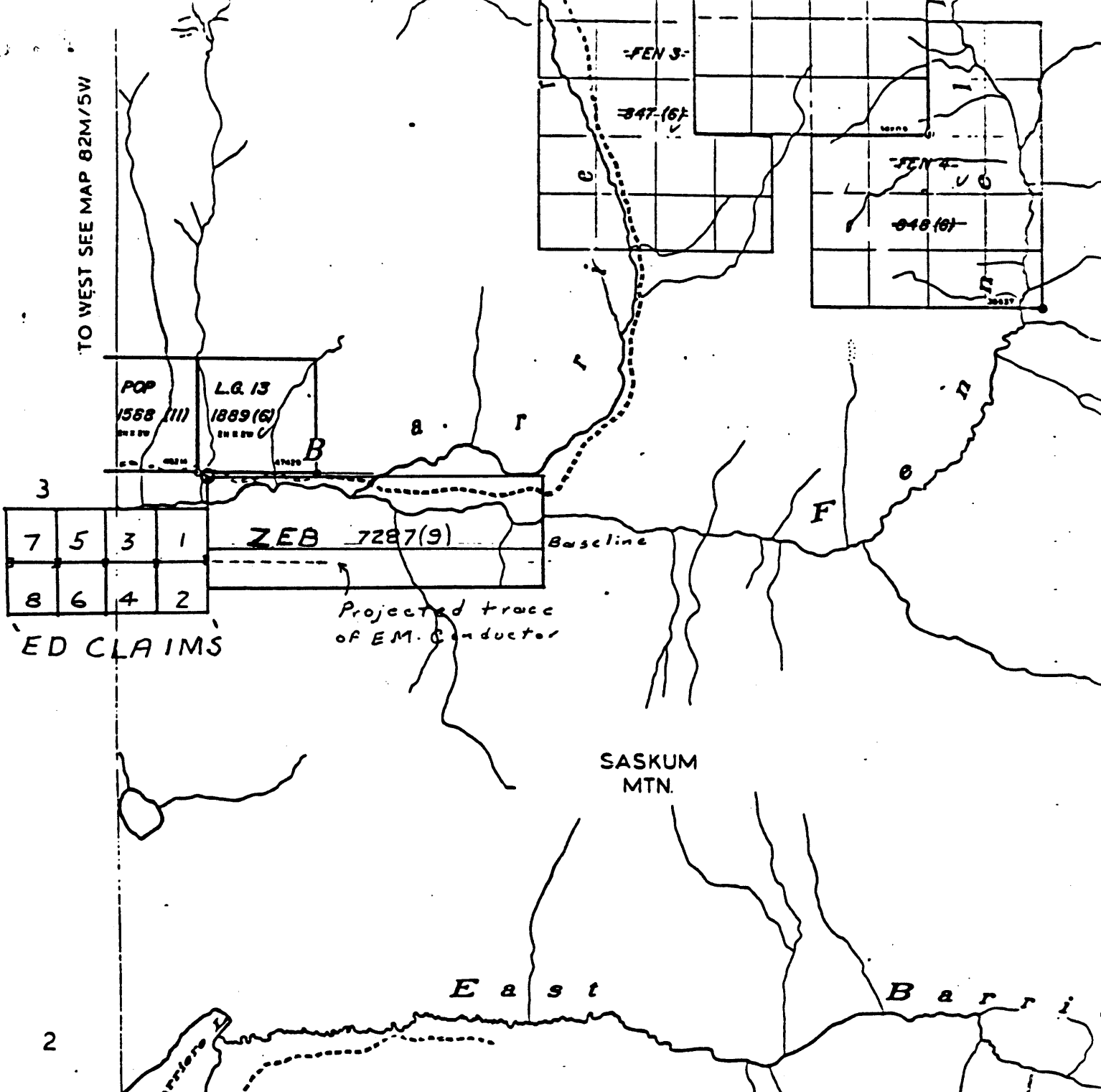
DECEMBER 20, 1988

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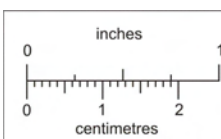
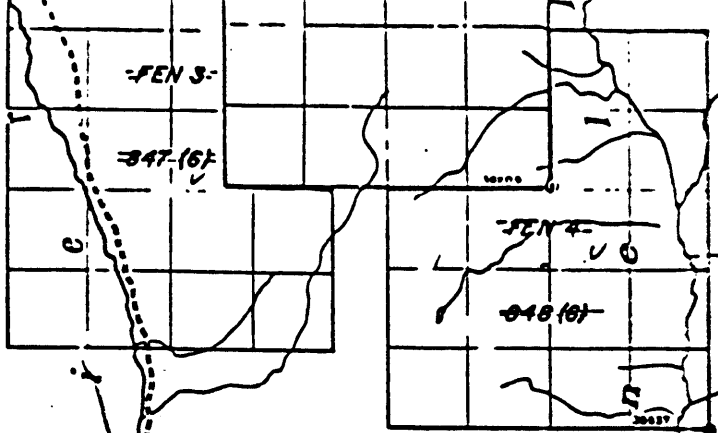


TO WEST SEE MAP 82M/5W

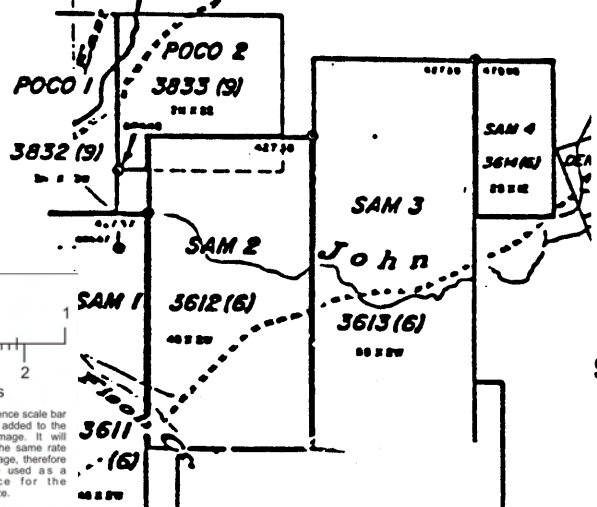


ED CLAIMS

7	5	3	1
8	6	4	2



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ANDRIA RESOURCES INC.  
 CLAIM SKETCH  
 ZEB CLAIM  
 NORTH BARRIERE LAKE AREA  
 KAMLOOPS MINING DIVISION  
 BRITISH COLUMBIA

SCALE 1:50,000 REFERENCE M 82M 5 E

## SUMMARY

At the request of the directors of Andria Resources Inc. of Vancouver, B. C., a pilot Electromagnetic Survey of the southern portion of the Zeb Claim:

The Zebedee Group of claims is situated in the North Barriere Lake Valley near the East end of North Barriere Lake, Kamloops Mining Division, British Columbia.

The geological environment is that of an extensive series of meta-sediments intruded by a porphyritic granite mass. The contact area near the north limit of the Zeb claim is occupied by lamellar gneisses, highly sheared in contact with coarsely porphyritic granite. To the South the gneisses grade into meta-sediments of the Shuswap Metamorphic Complex. Along the North margin of the Zeb claim occur discontinuous silicified shear zones carrying sulphides of the following tenor: Au 0.01 oz/ton, Ag 20.0 oz/ton, Pb 35.6% and Zn 0.99%. Along the South margin of the Zeb claim occurs an electromagnetic conductor of high intensity. This conductor strikes from ENE to E along the lower reaches of the North facing slope of the North Barriere Lake Valley. The causative factors of this anomaly will be determined at bedrock surface and at depth by means of bulldozer stripping and diamond drilling.

## PROPERTY

The Zebedee Claim Group consists of the Zeb claim (12 units) Record Number 7289 (9) and the Ed Claims 1-8 include Record Numbers 7355-7362 inclusive. The claim group is located in the North Barriere Lake Area, Kamloops Mining Division, British Columbia.

## LOCATION AND ACCESS

The Zebedee Claim Group is located some three kilometres East of the East end of North Barriere Lake. Facile access to the property is available by means of the North Barriere Lake road, an all weather hauling road from the village of Barriere some thirty four kilometres to the S.W.. The Barriere Lake road extends along the North margin of the Zeb Claim and a branch logging road accesses the south margin.

The City of Kamloops some 106 kilometres to the SSW and Barriere well serve as sources of supplies and labour for any mining or exploration venture on the property.

## TOPOGRAPHY and VEGETATION

The property under discussion occupies a portion of the North Barriere Lake valley bottom and the lower reaches of the valley margins. Elevations vary from 725 m.a.s.l. along the valley floor to say 1200 m.a.s.l. along the North and South margins of the property. The area of the property is forest covered with marginal commercial timber after selective logging operations. Spruce, Fir and Cedar occupy the slopes with Poplar, Alder and Spruce on the valley floor. The available timber would suffice for mining purposes and abundant water for exploration is available from several creeks on the property.

Overburden cover is extensive and rock outcrop for observation is only available on the steeper slopes.

## GEOLOGY

In the main the area of the Zebedee Claim Group is underlain by meta-sediments varying from quartzites and limestones to silicified tuffs. These meta-sediments are members of the Shuswap Metamorphic Complex. The meta-sediments grade into lamellar gneisses, highly sheared and variably silicified contacting with porphyritic "dents de cheval" granite along the north margin of the property.

Several shear zones occur along the North margin of the property and strike ENE. These shears are thought to reflect a fault system parallel to the axis of North Barriere Lake and are complimented by a set of joints and slips striking N.S., frequently occupied by the creeks draining into the valley from the North and South.

## MINERALIZATION

Along the north margin of the property occur discontinuous silicified shear zones at times carrying sulphide mineralization. Sampling of a one metre cross section of such a shear yielded Au 0.01 oz/ton, Ag .20 oz/ton, Pb 35.6%, Zn 0.9%.

Parallel to the South margin of the Zeb Claim occurs a strong electromagnetic conductive axis. Extensive over burden prevented determination of the cause of the high conductivity. It is anticipated that mineralization similar to that found along the North margin is causing the indicated conductor. It is reported that a diamond drill hole intersected massive sulphides, however, the actual location of the hole is not known. A cache of drill core was found in the area, however, conditions were such that no useful information could be derived.

## HISTORY

The early exploration history of the area is not much in evidence in literature. It is known that the area was prospected prior to 1930 mainly for gold. From 1965 to 1967 Kamstar Mines Ltd. held an extensive tract of land East of North Barriere Lake of which the Zebedee Group of Claims comprises a part. Their exploration activities included geophysical surveys and limited diamond drilling along the North valley slopes. Lack of funds precluded completion of their programme. Several companies and individuals have held properties in the general area, however, the results of their exploration efforts are not known.

## WORK PROGRAMME

Parallel to the south margin of the property an East-West base line was laid out. At 100 metre intervals N-S cross lines were turned off using a precision prism. The lines were cut and blazed and stations established at thirty metre intervals to facilitate geophysical and geochemical surveys and to maintain rigid geographical control.

The gridded area was subjected to a vertical loop electromagnetic survey utilizing frequencies of 600 and 2400 hz. The instrument used was a McPhar VLEM unit. Readings were taken at 30 metre intervals.

The procedure consists of creating a directional induced electromagnetic field by passing controlled frequency AC current through a vertically held transmitting coil. In the presence of a sub surface electrical conductor i.e. a lenticular mass of sulphides or a shear zone containing ionised solution an induced field is created about the axis of the conductor. The line grid is laid out so that the grid lines search coil or receiver is used to detect distortions in the primary field caused by surface conductors present. In the absence of conductive linears the angular distortion of the primary field is zero. The distortion of the field is read as a nullled dip angle. The read dip angles are directional so that linears of high conductivity may be detected and their orientation is space determined. Steeply oriented linears of high conductivity may be easily delineated on the control grid. Conductors of low intensity or flat lying conductors may require orientation in the horizontal sense and greater emphasis placed on measuring the field strength of the secondary induced field. Electromagnetic surveys offer an excellent means of detecting and delineating conductive linears caused by massive sulphides especially when used in conjunction with other exploration techniques such as geochemical soil studies.

#### DISCUSSION OF RESULTS

The electromagnetic survey delineated and traced a moderate to strong conductive axis over a continuous length of 1000 metres along the south margin of the Zeb Claim. An examination of the plotted dip angle curves indicate a planar conductor of nominal width dipping at a steep angle, say  $65^{\circ}$ , to the south and with a composite strike E.W. The dip cannot be described in more finite terms due to the somewhat irregular topography in the area, i.e. the north facing slopes of the North Barriere Lake Valley. The centre of massive effect of conductivity appears to be from 30 metres to 70 metres in depth. The conductor is continuous and extends beyond the limits of the grid surveyed, however, remains within the property boundaries proper.

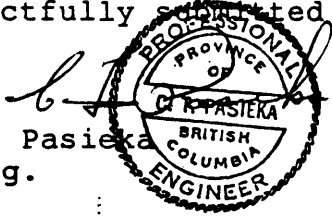
It would be most appropriate to determine the causative factors of the conductive axis by means at diamond drilling at depth and at bedrock surface by means of bulldozer stripping where allowed by topography and overburden depth.

#### CONCLUSIONS AND RECOMMENDATIONS

The electromagnetic survey carried out over a portion of the Zeb Claim was successful in delineating a moderate to strong conductive axis. Such a conductor would owe its existence to the presence of massive sulphides, strongly ionized solutions or highly conductive material such as graphite or magnetite or in fact any combination of the above. The geological environment underlying the area surveyed is amenable to hosting massive sulphides and or graphite as indicated along the South shore of North Barriere Lake to the West and to the South in the Squaam Bay area.

The results of the survey dictate that the causative factors of the conductive axis be determined by means of diamond drilling and that the remainder of the property be investigated by further electromagnetic surveying.

Respectfully submitted

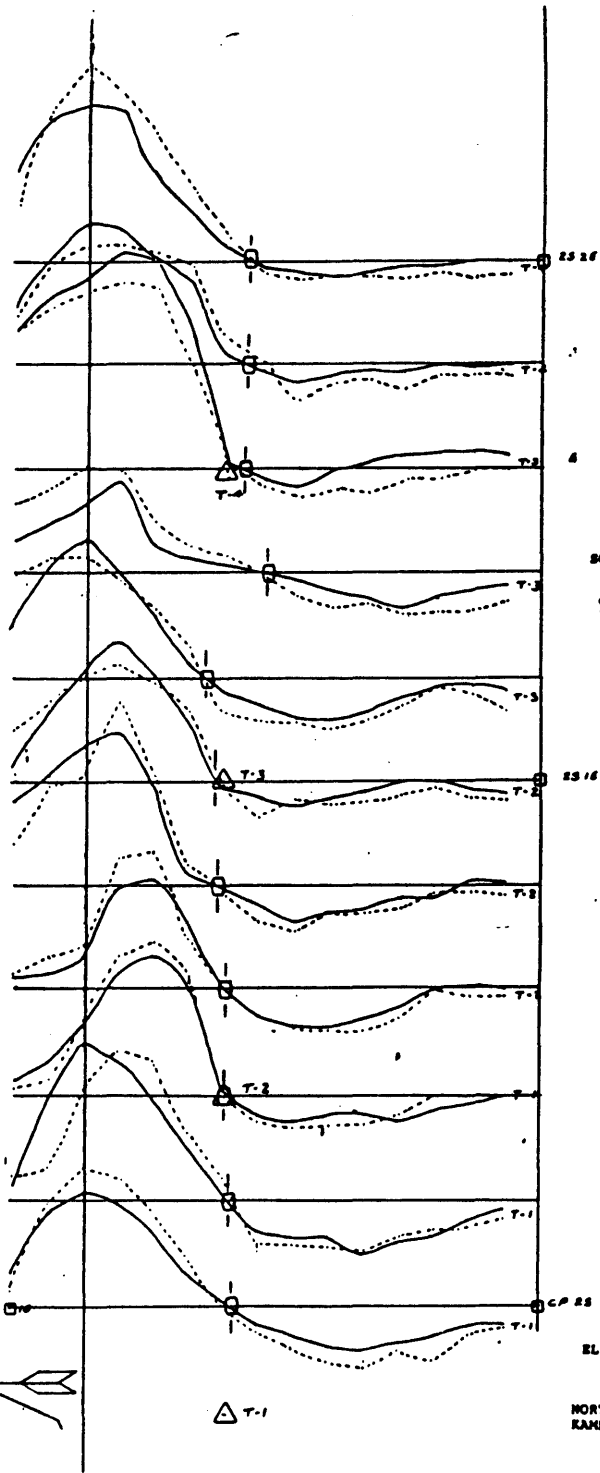


C. T. Pasieka  
P. Eng.

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1. Property Report - Kamstar Mines Ltd. N.P.L., Leemac, Boomac, B-Mac, Star Claims, North Barriere Lake Area, Kamloops Mining Division, British Columbia - C. T. Pasieka December 1965
2. Report of Minister of Mines - 1935, 1935.

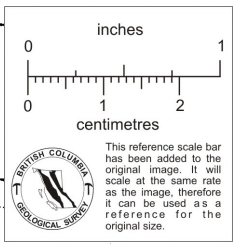
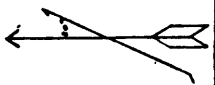
Zed Claim



LEGEND  
 PROFILE 2400 Hz  
 PROFILE 600 Hz  
 TRANSMITTER LOCATION  $\Delta$  T-1  
 CONDUCTOR AXIS  $\square$   
 SCALE - VERTICAL 1mm = 1' 7000  
 HORIZONTAL 1cm = 30m

Scale Reduction  
 Factor 0.648 6000

ELECTROMAGNETIC SURVEY  
 VERTICAL LOOP  
 ZED CLAIM  
 NORTH BARRIERE LAKE AREA  
 KAMLOOPS MINING DIVISION  
 BRITISH COLUMBIA







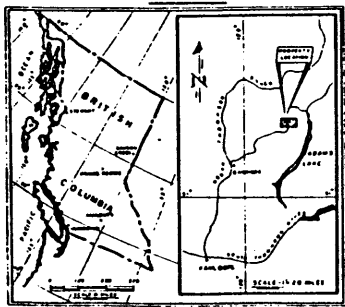


*Zeb Claim*

RECENTLY STAKED BY  
KAMSTAR

RECENTLY STAKED  
BY KAMSTAR

LOCATION MAP



LEGEND

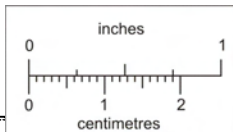
**ELECTROMAGNETIC SURVEY**  
**RECONNAISSANCE**  
 Profile of Electromagnetic Readings  
 Dip Angle  $\gamma = 20^\circ$   
 $\Delta T02$  Electromagnetic Transmitter Location  
 Transmitter Location Reference  
 Conductor Axis

**MAP SYMBOLS**  
 Claim Post and Boundary Lines  
 Road (approx.)  
 Creek (approx.)

**KAMSTAR MINES LTD**

BARRIER-KAMLOOPS-BRITISH COLUMBIA  
 KAMLOOPS MINING DIVISION

**ELECTROMAGNETIC SURVEY**  
 VERTICAL LOOP



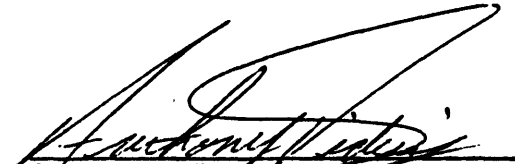
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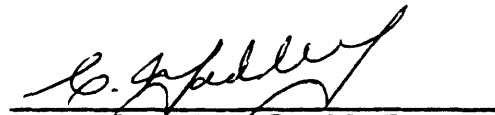


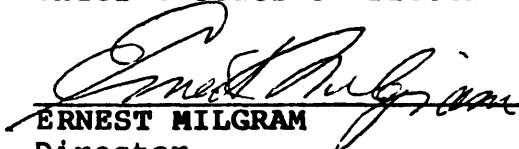
CERTIFICATE

The foregoing constitutes full, true and plain disclosure of all material facts relating to the securities offered by this Prospectus as required by Part 7 of the Securities Act (British Columbia) and the regulations thereunder.

DATED at Vancouver, British Columbia, this 19 day of October, 1989

  
ANTHONY SIBERIS  
President/Director  
Chief Executive Officer

  
CAMERON NORRIS WADDELL  
Secretary/Director  
Chief Financial Officer

  
ERNEST MILGRAM  
Director

  
WALTER LLEWELLYN FOWLER  
Director/Vice-President

To the best of our knowledge, information and belief, the foregoing constitutes full, true and plain disclosure of all material facts relating to the securities offered by this Prospectus as required by Part 7 of the Securities Act (British Columbia) and the regulations thereunder.

DATED: October 20, 1989

PACIFIC INTERNATIONAL SECURITIES INC.

Per:

  
MAX MEIER