

GEOCHEMICAL - GEOPHYSICAL REPORT  
ON THE  
PROPERTY  
OF

AQUARIUS INVESTMENTS LIMITED

PETE, THOR, RANJO, MARTY, RAM CLAIMS  
SPILLMAN CREEK AREA, ADAMS PLATEAU

KAMLOOPS MINING DIVISION

PROVINCE OF BRITISH COLUMBIA

LAT.  $51^{\circ}05'$  N : LONG.  $119^{\circ}35'$  W.

N.T.S. 82 M/4

FIELD WORK DONE

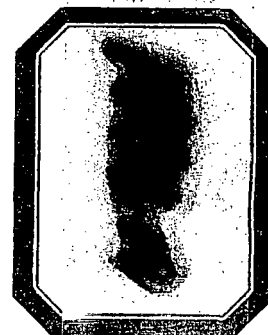
SEPTEMBER 19th TO OCTOBER 2nd, 1968

by

C.T. PASIEKA, B.Sc.  
GEOLOGIST

VELOCITY SURVEYS LIMITED

DECEMBER 23rd, 1968



1936

PART 1

REPORT

on

PROPERTY

of

AQUARIUS INVESTMENTS LIMITED

PETE, THOR, RANJO, MARTY, RAM CLAIMS

ADAMS PLATEAU AREA

KAMLOOPS MINING DIVISION

PROVINCE OF BRITISH COLUMBIA

VELOCITY SURVEYS LIMITED

DECEMBER 23RD

1968

I N D E X

Introduction	Page 1
Property	Page 1
Location and Access	Page 2
Topography and Vegetation	Page 2
Geology	Page 2
Mineralization	Page 3
Programme and Method	Page 4
Discussion of Results	Page 5
Conclusions	Page 8
Recommendations	Page 8
Map	In Pocket

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT

NO. **1936A** MAP.....

## INTRODUCTION

In the month of September 1968 a reconnaissance programme consisting of geological observation, geochemical soil sampling and magnetometer surveying was carried out on behalf of Aquarius Investments Limited on the mining property in the Adams Plateau Area of British Columbia. The programme was initiated in order to assess the economic potential of the property and to formulate procedures and techniques for a future exploration programme. The techniques of geochemistry and detailed magnetics as applied to the area in question are thought to yield valid results that may be applied directly to the search for base metals. The application of these results is to be later discussed.

## PROPERTY

The property consists of some 40 contiguous located mineral claims as follows:

	<u>Record Numbers</u>
Pete 1 to 18 inclusive	55791 - 55808
Ranjo 1 to 4 inclusive	47192 - 47195
Marty 5 to 10 inclusive	46966 - 46971
Thor 2	49122
Ram 1 to 10 inclusive	Recently staked.

The above claims are recorded in the Kamloops Mining Division, Province of British Columbia.

### LOCATION AND ACCESS

The property is located some sixty-six miles north-east of the City of Kamloops, B.C. Facile access is available by means of helicopter from the base at Kamloops operated by Okanagan Helicopters Limited. Road access is possible by means of secondary roads from a point forty miles east of Kamloops, however these secondary roads are only suitable for jeep travel.

### TOPOGRAPHY AND VEGETATION

The average elevation of the property is 5,500 feet above sea level. The surface presented by the area of the property is generally flat or gently rolling with the hills well rounded by recent glaciation. The northeast portion of the property is somewhat more rugged with a series of fault scarps and bluffs running in a northeast direction. Numerous minor streams with steeply eroded banks occur, however, the beds of these streams do not reach bedrock, suggesting an origin controlled by recent glacial developments.

The area of the property is completely forest-covered with commercial to sub-commercial Fir, Pine and Cedar. Where standing timber is absent, the open areas support dense brush.

### GEOLOGY

The area of the property is underlain by a metamorphic complex of probable Permian Age. The major unit exposed is a fine grained dark coloured greenschist striking in a northeast direction with well developed schistosity dipping from  $10^{\circ}$  to

70° to the northwest with the most common dip angle approximately 25°.

The alteration products consist of chlorite, epidote, albite and quartz. Many of the cleavage surfaces show recrystallized chlorite which gives a smooth shiny appearance. Generally the schistosity tends to be linear but in some cases the lineation has been deformed into a series of small synclinal folds parallel to the general strike.

A well developed almost vertical dipping cross joint pattern, slightly inclined to the regional strike occurs wherever outcrop is visible. Small euhedral prisms of recrystallized epidote occur on many of the joint faces. Epidote is also found in stringers generally parallel to strike and in segregated porphyroblasts. Quartz veins occur parallel or sub-parallel to strike randomly throughout the area. Evidence of shearing and minor faulting with a strike from N.10° W. to N.30° E with an easterly dip of 65 to 75° was observed at several locations.

Within the metamorphic complex also occur minor intercalated lenses of limestone, phyllite and quartz cericite schist. Also many small dykes of fine grained dark green andesite occur with random orientations and showing minor alterations, mainly chloritization.

#### MINERALIZATION

Mineralization observed on the property was restricted to the green schists and phyllites and would appear to be structurally controlled. Veins of massive sulphides of lead, zinc and copper lining fault and shear zones have been observed.

These veins are of nominal dimension, i.e., 1" to 22" and normally occur within the quartz veins and quartz impregnations of the shear zones. These veins are of hydrothermal origin and show evidence of sequential deposition, the more open vugs containing laminated and euhedral quartz. Sulphide minerals in order of abundance include galena, sphalerite, pyrite and chalcopyrite.

Near the west margin of the property on the Pete No.16 Claim old trenching revealed a vein approximately one foot in thickness containing massive sulphides over a strike length of fifty feet. The lens strikes NE and dips  $65^{\circ}$  in a westerly direction. On the adjoining property of International Copper Corporation Ltd., consisting of six Crown Granted mineral claims, a similar vein containing massive galena, sphalerite and chalcopyrite was observed.

#### PROGRAMME AND METHOD

The programme carried out on the property consisted of geological observation, geochemical soil sampling and magnetometric surveying. It was intended to obtain correlation between geology, geochemistry and magnetics by testing selected areas. These areas were selected on the basis of recent airborne magnetic surveys carried out and geological observations. The work was carried out by S.V. Ramani, B.Sc., geologist, and by P. Krause, prospector.

Geochemical soil samples were taken along selected pairs of traverses at one hundred foot intervals. Samples were

extracted from the "B" horizon, i.e., the soil layer immediately below the humus layer. Extraction was effected by means of a stainless steel auger from an average depth of one foot. Individual samples were placed in heavy manila envelopes, labelled and catalogued. The samples were then shipped to Crest Laboratories of Edmonton, where they were dried, digested with hot nitric acid and analyzed using the Atomic Absorption technique. Analyses for Zinc, Copper and Silver were carried out.

Simultaneous to the geochemical sampling, magnetic readings were taken using a vertical force Sharpe M.F. 1 Fluxgate Magnetometer. This instrument measures the vertical force field and has a sensitivity of 210 gammas. Readings were taken along the same traverses as the geochemical sampling at one hundred foot intervals.

#### DISCUSSION OF RESULTS

The magnetic and geochemical traverses are plotted on the enclosed map and designated AA, DD, EE, FF and GG. The geochemical analyses are plotted in their appropriate geographical positions and presented in value as parts per million. The magnetic readings are plotted similarly after correction for diurnal and instrument drifts. Anomalous sections along these traverses are designated a, b, etc. and are described as follows:

- (a) This section carried anomalous values in zinc with moderate copper values associated with



moderate magnetic intensity. The area is covered by extensive overburden so that it is not possible to correlate geological and geochemical data.

- (b) High values of zinc and copper with a trace of silver are associated with a low magnetic trend. The anomalous readings extend over four stations and the extended length is probably due to the sampled section cutting the local geological strike at an acute angle.
- (c) High values of zinc, copper and silver in an area of moderate magnetic intensity with the values of zinc approaching nine times background. These values are derived from an area of heavy overburden and are considered of real significance.
- (d) These geochemical values in zinc and copper of moderate tenor are associated with a pronounced magnetic low.
- (e) Geochemical analyses showing moderate to high values in zinc and copper are associated with low to moderate magnetic values. Heavy overburden conditions preclude geological correlation except in a regional sense.
- (f) High values in zinc, copper and silver are here associated with a pronounced magnetic low flanking a high magnetic ridge.

- (g) High values in zinc, moderate values in copper and significant values in silver are here associated with moderate magnetic values.
- (h) Moderate to high zinc values with moderate silver values in an area of low magnetic intensity. In this general area occur mineralized joints and shears.
- (i) Moderate zinc and silver values are again associated with low magnetic values.
- (j) High zinc and copper readings which may be again correlated with a zone of low magnetic response.
- (k) This zone of high zinc and copper values may be correlated with a zone of low magnetic intensity.

All of these anomalous sections can only be treated as isolated points due to the lack of continuous cover. Information regarding the continuity and strike of the area is totally lacking and complete coverage of the area would be necessary before any conclusions may be reached in that regard.

In spite of the limited sampling in the statistical sense there is a strong tendency for anomalous values derived from the geochemical soil sampling to be associated with areas of low to moderate magnetic intensity. Normally, the extensive overburden cover does not allow facile correlation with geological information, however, anomaly "h" covers an area where old trenching exposed a mineralized shear zone. This shear zone carries massive sphalerite, galena and chalcopyrite over a width of up to a foot.

The above direct correlation with geochemical magnetic and geological data lends credence to the possibility the many anomalous indications are caused by mineralized structures occurring immediately below the overburden.

### CONCLUSIONS

The results of the pilot geochemical and magnetic surveys must be viewed with encouragement in that several anomalous conditions have been indicated. Further, the original purpose of the programme, i.e., to determine the suitability of the techniques of geochemistry and magnetometrics in the current geological environment, has been satisfied. These techniques may thus be well applied to the search for base metals within the Shuswap Metamorphic Complex.

### RECOMMENDATIONS

In view of the encouraging results of the pilot programme of geochemistry and magnetometrics, it is recommended that the area of the property be subjected to complete coverage by these techniques. In order to facilitate an assessment of the economic potential of the property, a continuing exploration programme should be instigated as follows:

1. LINE CUTTING: In order to maintain rigid geographical control for ensuing operations a rectilinear grid of cut lines should be laid out over the area of the property. A base line should be cut parallel to geological strike with cross lines at four hundred foot spacing with stations established at one hundred foot intervals.

2. MAGNETIC SURVEY: The property to be covered with readings taken at every station of the previously established grid. These magnetic readings to be taken with an instrument that measures the vertical component of the earth's field with a sensitivity of  $\pm 10$  gammas.
3. GEOCHEMICAL SURVEY: Soil specimens to be taken at all stations of the previously established grid and analyzed for copper and zinc.
4. BULLDOZER STRIPPING: All areas indicated as anomalous by the geochemical and geophysical surveys should be sectioned to bedrock surface to determine the causative factors of the anomalies.

Areas where extremely heavy overburden preclude reaching bedrock surface will necessarily require investigation by other methods such as diamond drilling.

The above programme would entail the following estimated expenditures:

1. Line Cutting	40 miles @ \$100/mile	\$ 4,000.00
2. Magnetic Survey	40 miles @ \$75/mile	3,000.00
3. Geochemical Survey	40 miles @ \$140/mile	5,600.00
4. Bulldozer Stripping	- 50 hrs. D-8 @ \$35/hr	1,750.00
5. Engineering Supervision & Consulting		1,000.00
6. Contingency		<u>1,000.00</u>
	TOTAL	<u>\$16,350.00</u>

Respectfully submitted,

VELOCITY SURVEYS LIMITED



C.T. Pasieka, B.Sc.  
Resident Geologist

CERTIFICATION

TO WHOM IT MAY CONCERN:

I, Clemens T. Pasieka of the City of Vancouver in the Province of British Columbia, hereby certify:

1. THAT I am a geologist and reside at 906, 1445 West 13th Avenue, Vancouver, B.C.
2. THAT I am a graduate of University College, Dublin, Ireland, and that I have been practising my profession for five years.
3. THAT the information contained in this report is based on personal experience in the area, work conducted by personnel of Velocity Surveys Limited and literature published by the B.C. Department of Mines.
4. THAT I do not have, nor do I expect to receive, either directly or indirectly, any interest in the property, or in the securities of Aquarius Investments Limited.

DATED this twenty-third day of December, 1968.



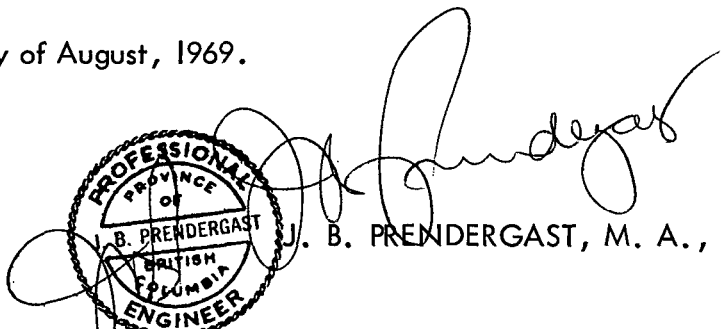
C.T. Pasieka, B.Sc.  
Geologist

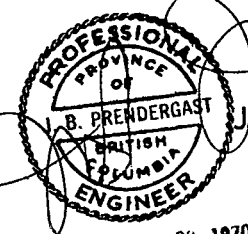
CERTIFICATION

I, Joseph Benoit Prendergast, of the City of Calgary, Province of Alberta, hereby certify that:

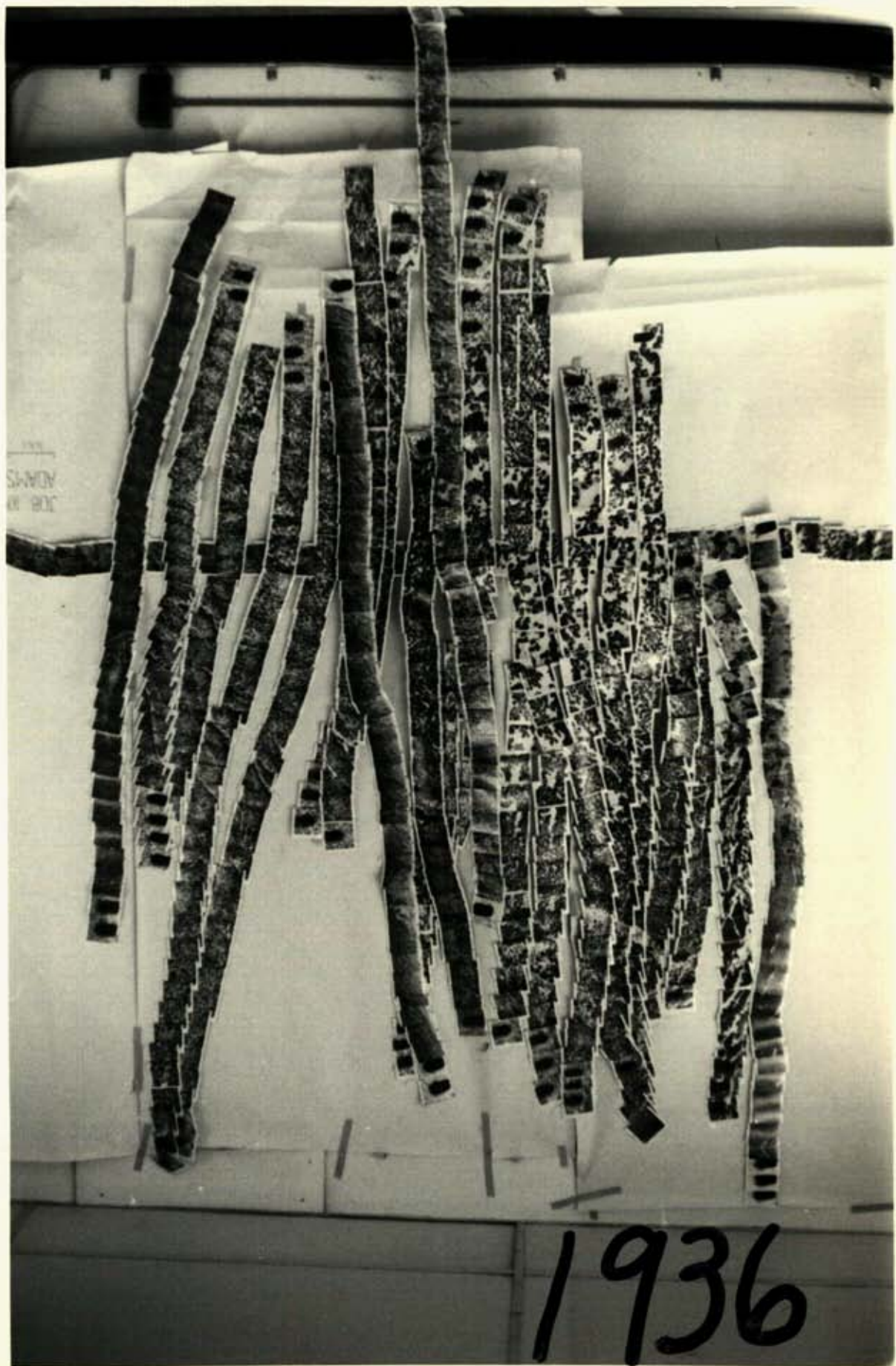
1. I am a geophysicist-geologist with offices at 224 - 9th Ave. S.W., Calgary 2, Alberta.
2. I am a graduate of the University of Toronto, B.A. (Physics and Geology), M.A. (Geophysics), 1951.
3. I have been actively and continuously engaged in mineral exploration and development for 18 years.
4. I am a member of the Associations of Professional Engineers of Ontario, Manitoba, Alberta, and British Columbia.
5. I have no interest, directly or indirectly, nor in the securities of, nor do I expect to receive any such interest in Aquarius Investments Limited.
6. That this report is based on personal experience in the area, work conducted by personnel of Velocity Surveys Limited under Mr. C. T. Pasioka, under my supervision, and literature published by the B. C. Department of Mines.

Dated this 19th day of August, 1969.

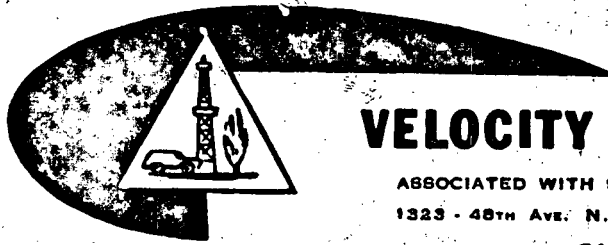
  
J. B. PRENDERGAST, M. A., P. Eng.



Aug 19/69



1936



# VELOCITY SURVEYS LIMITED

ASSOCIATED WITH SULMAC EXPLORATION SERVICES LIMITED  
1325 - 48TH AVE. N.E. TELEPHONE 277-7871

CALGARY 67, ALBERTA

IN ACCOUNT WITH

Mr. Douglas Jenkins,  
Box 643,  
Sherwood Park, Alberta.

DATE ..January.8th..... 1969.....

ADAMS PLATEAU

Invoice #179, GV138, December 1968.

Consulting

2 days at 150.00/day

4 days at 150.00/day

300.00

600.00

900.00

Air Photos

Air Division

46.50

46.50

Accommodation

Delta Hotels

24.30

Delta Hotels

18.45

Delta Hotels

29.25

72.00

Miscellaneous

Crest Laboratories

404.70

404.70

Communication

B.C. Telephone

3.80

B.C. Telephone

5.20

B.C. Telephone

1.00

B.C. Telephone

10.20

20.20

Expense Accounts

S. Ramani

173.98

S. Ramani

86.34

S. Ramani

15.83

P. Krause

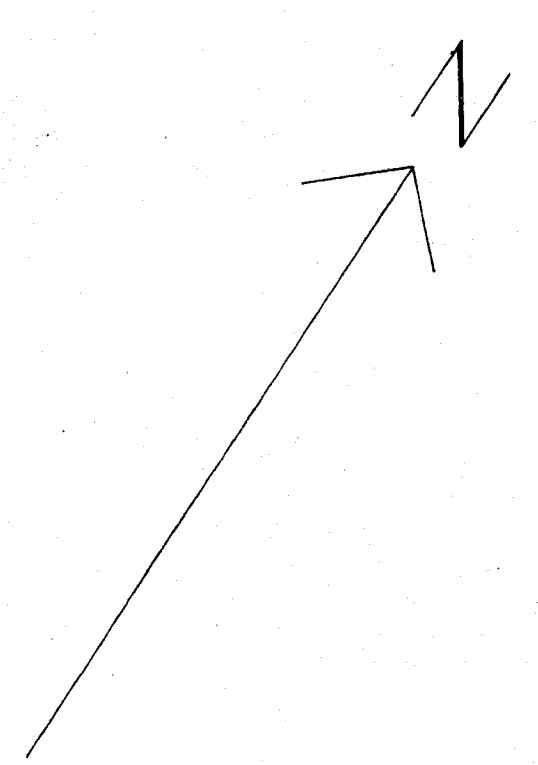
100.00

376.15

TOTAL

1819.55





See also 1937 B  
for position of these claims

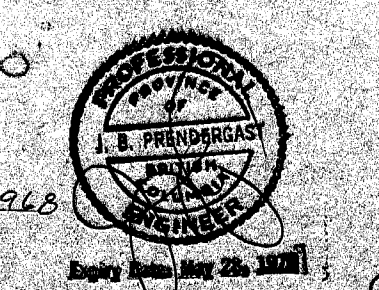
LEGEND

Zn	Cu	Ag	MAG
110 ppm	125 ppm	0.8 ppm	± 350 γ

To ACCOMPANY  
GEOCHEMICAL - GEOPHYSICAL REPORT  
ON THE PROPERTY OF  
**AQUARIUS INVESTMENTS LIMITED**  
PETE MARTY RANJO RAM THOR CLAIMS  
ADAMS PLATEAU  
AMLOOPS MINING DIVISION B.C.  
GEOCHEMICAL AND MAGNETOMETER SURVEY

SCALE 1" = 400'

By C. P. ... 23 Dec 1936



Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 1936A MAP

1936

on the  
Airborne Magnetometer Survey  
on portions of the  
Pete #1 to #18 claims inclusive  
owned by  
T. Rizzi  
and the

Ranjo #1 to #4, Marty #5 to #10 and Thor #2 Claims

owned by  
J.A. Erickson  
and situated in the  
Spillman Creek Area  
Adams Plateau  
Kamloops M.D.

Lat.  $51^{\circ}05'$  N : Long.  $119^{\circ}35'$  W.

N.T.S. 82 M/4

on behalf of

Aquarius Investments Ltd.

Field Work done June 19th, 1968

by

D.R. Cochrane, P. Eng.

July 26th, 1968

Geo-X SURVEYS LTD.  
VANCOUVER, CANADA