

# 4691

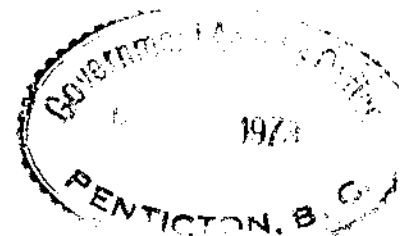
GEOPHYSICAL REPORT  
On An  
ELECTROMAGNETOMETER SURVEY  
AUSTRO-CAN EXPLORATION LTD.

FAP mineral claims, Trout Creek area, Summerland,  
Osoyoos Mining Division, B.C.  
Lat. 49°37'N Long. 119°52'W N.T.S. 82E/13

AUTHOR: Glen E. White, Geophysicist  
P. ENG: D. Parent  
DATE OF WORK: June 27 - 30, 1973  
DATE OF REPORT: July 19, 1973

82E/12W

Department of  
Mineral and Technical Resources  
Exploration and Development  
NO. 4691



C O N T E N T S

PAGE

Introduction..... 1

Property..... 1

Location and Access..... 1

Previous work..... 1

Survey Specifications

    (1) Survey Grid..... 2

    (2) Electromagnetometer Survey..... 2

Discussion of Results..... 3

Conclusions and Recommendations..... 4

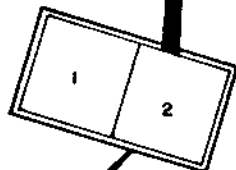
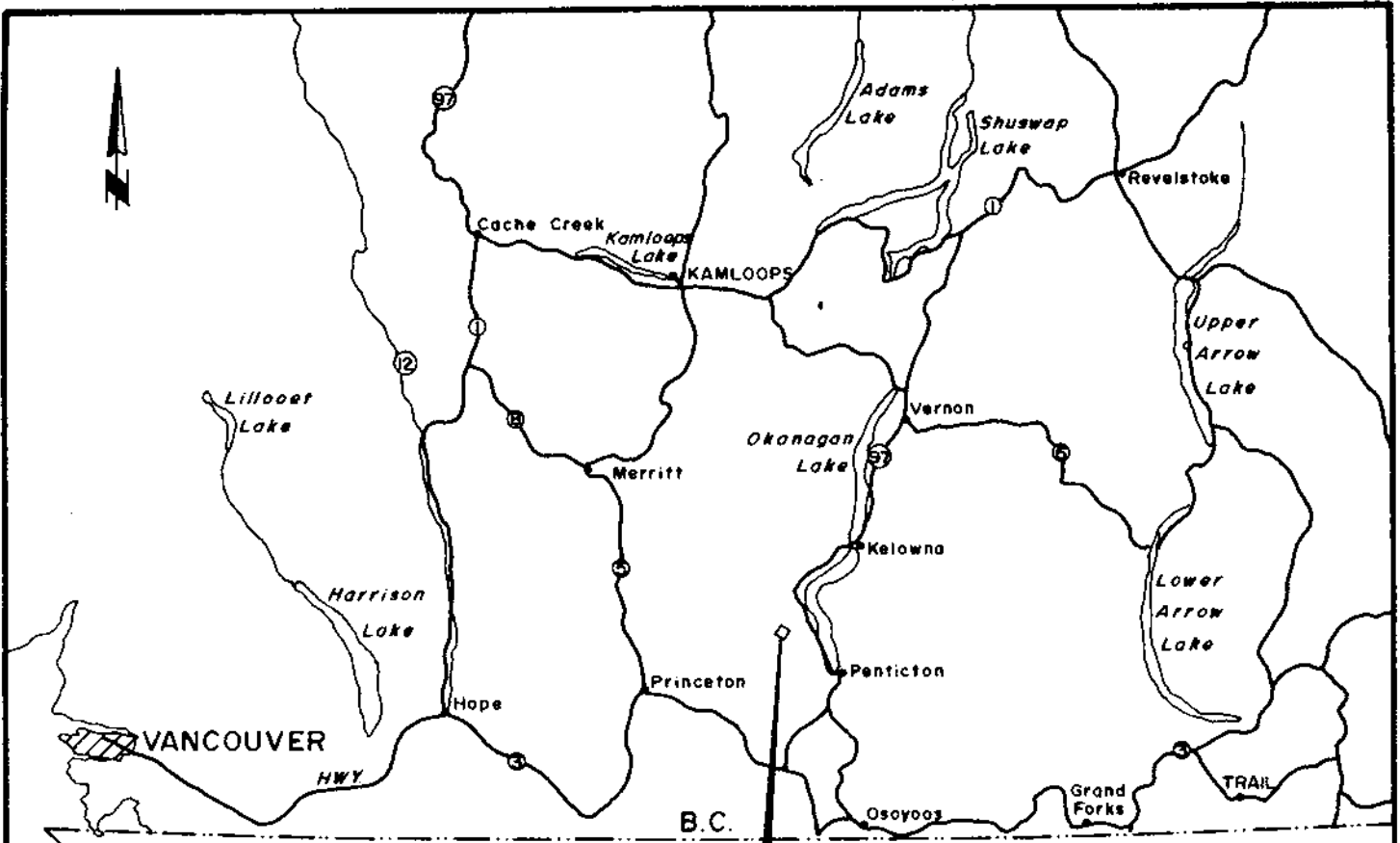
Instrument Specifications - Electromagnetometer... 5

Statement of Qualifications: Glen E. White..... 6

Certificate - D. Parent, P. ENG..... 7

Illustrations

- #1 Location and claims map
- #2 Figure 2 - Electromagnetometer Filtered Dip-Angle %



AREA OF SURVEY

Department of  
 Mines and Technical Resources  
 Assessment Report  
 NO. 4691 (M.P. #1)

AUSTRO-CAN EXPLORATION LTD.

FAP CLAIMS

LOCATION AND CLAIMS MAP

SCALE: LOCATION MAP: 1" = 40 MILES APPROX.

CLAIMS MAP: 1/2" = 1500' APPROX.

*Glen E. White*  
 geophysical consulting  
 &  
 services ltd.

JULY 6, 1973

FIG. 1

## INTRODUCTION

From June 27 - 30, 1973, Glen E. White Geophysical Consulting and Services Ltd. conducted a limited amount of electromagnetometer surveying over the FAP mineral claims, Summerland area on behalf of Austro-Can Exploration Ltd.

The purpose of the survey was to examine an area of copper-bearing mineralization exposed by trenching to try and locate any lenses of massive sulphide mineralization or any major structure zones that may possibly be associated with mineralization of economic interest.

## PROPERTY

The area of survey, mineral claims FAP 1 and 2 is illustrated in Figure 1.

## LOCATION AND ACCESS

The FAP mineral claims are situated along Trout Creek west of the little Village of Summerland, located on the western side of Okanagan Lake, Osoyoos Mining Division, Province of British Columbia. Latitude  $49^{\circ}37'N$ , Longitude  $119^{\circ}52'W$  N.T.S. 82E/13.

Access to the property is via a good secondary gravel road up Trout Creek. This road passes in an east-west direction through the claim group.

## PREVIOUS WORK

Previous work on the survey area consisted largely of trenching and magnetometer surveying. Several diamond drill holes have also been completed.

## SURVEY SPECIFICATIONS

### Survey Grid

The survey grid was established in conjunction with the electromagnetometer survey and consists of east-west lines turned off at right angles every 100 feet from a magnetic north-south orientated baseline. Some 5.7 line miles of traverse grid was established and surveyed by the electromagnetic method.

### The Electromagnetometer Survey

This survey was conducted using a Ronka EM-16 V.L.F. electromagnetometer. This instrument acts as a receiver only. It utilizes the primary electromagnetic fields generated by VLF marine communication stations. These stations operate at a frequency between 15 - 25 KHZ, and have a vertical antenna-current resulting in a horizontal primary field. Thus, this V.L.F. - EM measures the dip-angle of the secondary field induced in a conductor.

For maximum coupling, a transmitter station located in the same direction as the geological strike should be selected, since the direction of the horizontal electromagnetic field is perpendicular to the direction of the transmitting station.

Readings were taken at 50 foot intervals and the data filtered in the field by the operator as described by D. C. Fraser, Geophysics Vol. 34, No. 6 (December 1969). The advantage of this method is that it removes the dc and attenuates long spatical wave lengths to increase resolution of local anomalies, and phase shifts the dip-angle data by  $90^{\circ}$  so that crossovers and inflections will be transformed into peaks to yield contourable quantities.

## DISCUSSION OF RESULTS

The data from the electromagnetometer survey is illustrated in Figure 2 at a scale of 1" = 100 feet.

The results from the magnetometer survey conducted previously were made available by Austro-Can Exploration Ltd. but were correlated with electromagnetometer results on a general basis due to the lack of topographic information. The magnetometer survey detected several sharp increases in magnetic intensity which appear to be caused by lense-like bodies of magnetite mineralization. The survey data also shows a pronounced northeast-southwest trending magnetic low intensity linear which may possibly coincide with a northeast directed gossan zone along which the majority of the surface trenching has been completed.

The electromagnetometer survey located three north-south trending conductor zones - the first at 14W, the second along 6W and the third in the south eastern section of the survey area. The strongest electromagnetic response obtained occurs on line 15N at 14W. This value is part of the conductor along 14W which also shows high values on line 9N. The strongest response for the second conductor occurs at 6 / 50W 15N. The third anomalous conductor pattern is situated in the southeastern quadrant of the survey grid and appears to be caused by a northwest-southeast conductor and a longer northeast-southwest directed one. Diamond drill hole A-1 drilled previously, crossed this conductor in an area of moderate intensity and intersected 25 feet containing pyrite mineralization.

Several of the conductors located by this survey show moderately high responses, in particular the conductor along 14W. Such conductors can be caused by fault zones, graphite, and sulphide mineralization.

CONCLUSION AND RECOMMENDATIONS

During the later part of June 1973, several days of electromagnetometer surveying were conducted on the FAP mineral claims, Summerland area, on behalf of Austro-Can Exploration Ltd.

The survey located three significant conductors, one of which is in an area of previous diamond drilling and trenching. The other two conductors, plus two smaller ones, show strong responses on line 15N and are thus open to the north.

It is recommended that these conductors be investigated for possible sulphide mineralization though graphite and fault zones will also give a conductive response.

Respectfully submitted,  
GLEN E. WHITE GEOPHYSICAL  
CONSULTING AND SERVICES LTD.



Glen E. White B.Sc.  
Geophysicist

A P P E N D I X

Instrument Specifications

ELECTROMAGNETOMETER

A. Instrument

- (a) Type - Geonics VLF - EM
- (b) Make - Ronka Em 16

B. Specifications

- Measurement
- (i) Utilizes primary fields generated by VLF marine communication stations, measures the vertical field components in terms of horizontal field present.
  - (ii) Frequency range 15-25 KHZ
  - (iii) Range of measurement - in phase  $\pm 150\%$   
or  $\pm 90^\circ$   
- quadrature  $\pm 40\%$
  - (iv) Method of reading - null detection by earphone, real and quadrature from mechanical dials.
  - (v) Accuracy -  $\pm 1\%$  resolution

C. Survey Procedures

- Method
- (a) Select closest VLF station perpendicular to traverse lines.
  - (b) In-phase dial measures degree of tilt from vertical position.
  - (c) Quadrature dial calibrated in percent - null.
  - (d) Station plot - plot values read at station surveyed.
  - (e) Manually filter dip-angle data.



STATEMENT OF QUALIFICATIONS

Name: WHITE, Glen E.

Profession: Geophysicist

Education: B.Sc. Geophysics - Geology  
University of British Columbia

Professional Associations: Associate member of Society of Exploration Geophysicists.  
Active member B.C. Society of Mining Geophysicists.

Experience: Pre-Graduate experience in Geology - Geochemistry - Geophysics with Anaconda American Brass.

Two years Mining Geophysicist with Sulmac Explorations Ltd. and Airborne Geophysics with Spartan Air Services Ltd.

One year Mining Geophysicist and Technical Sales Manager in the Pacific north-west for W. P. McGill and Associates.

Two years Mining Geophysicist and supervisor Airborne and Ground Geophysical Divisions, with Geo-X Surveys Ltd.

Two years Chief Geophysicist Tri-Con Exploration Surveys Ltd.

Two years Consulting Geophysicist.

Active experience in all Geologic provinces of Canada.

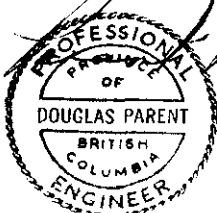
C E R T I F I C A T E

I, Douglas Parent, DO HEREBY CERTIFY AS FOLLOWS:

- (1) That I am a Consulting Mining Engineer with a business office at 4495 Wallace St., Vancouver 8, B.C.
- (2) That I am a Graduate of New Mexico Institute of Mining and Technology having received the degree of B.Sc. in Mining Engineering in 1934.
- (3) That I am a registered P. ENG in the Association of Professional Engineers in the provinces of British Columbia and Quebec.
- (4) That I have practised my profession as a Mining Engineer for the past 36 years.
- (5) That I have reviewed a report dated July 19, 1973 based on work conducted by Glen E. White Geophysical Consulting and Services Ltd. under the supervision of Glen E. White B.Sc. Geophysicist, and concur with the findings therein.
- (6) That this report consists of 7 typewritten pages and maps.
- (7) That I have no interest directly or indirectly in the FAP mineral claims or the securities of Austro-Can Exploration Ltd. nor do I expect to acquire or receive any.

DATED at Vancouver, British Columbia, this 20th day of July, 1973.

*Douglas Parent*

A circular professional seal for Douglas Parent, a Professional Engineer in British Columbia. The seal features the text "PROFESSIONAL ENGINEER OF BRITISH COLUMBIA" around the perimeter and "DOUGLAS PARENT" in the center.

DOMINION OF CANADA:  
PROVINCE OF BRITISH COLUMBIA.

In the Matter of an Electromagnetometer

To Wit:

Survey over FAP mineral claims.  
Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4691 MAP

I, Glen E. White

of Glen E. White Geophysical Consulting and Services Ltd.

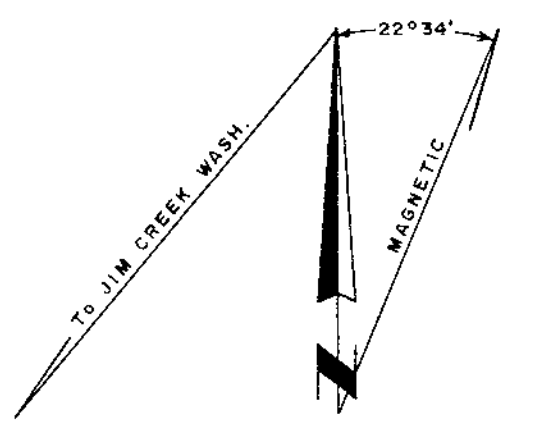
in the Province of British Columbia, do solemnly declare that the costs for the above survey were as follows:

<u>PERSONNEL</u>	<u>PERIOD</u>	<u>WAGES</u>	<u>TOTAL</u>
M. Bell.....	June 27 - 30, 1973.....	\$65.00/day.....	\$260.00
Instrument Lease.....		\$10.00/day.....	40.00
Maps and Reports.....			<u>300.00</u>
. Total.....			<u>\$600.00</u>

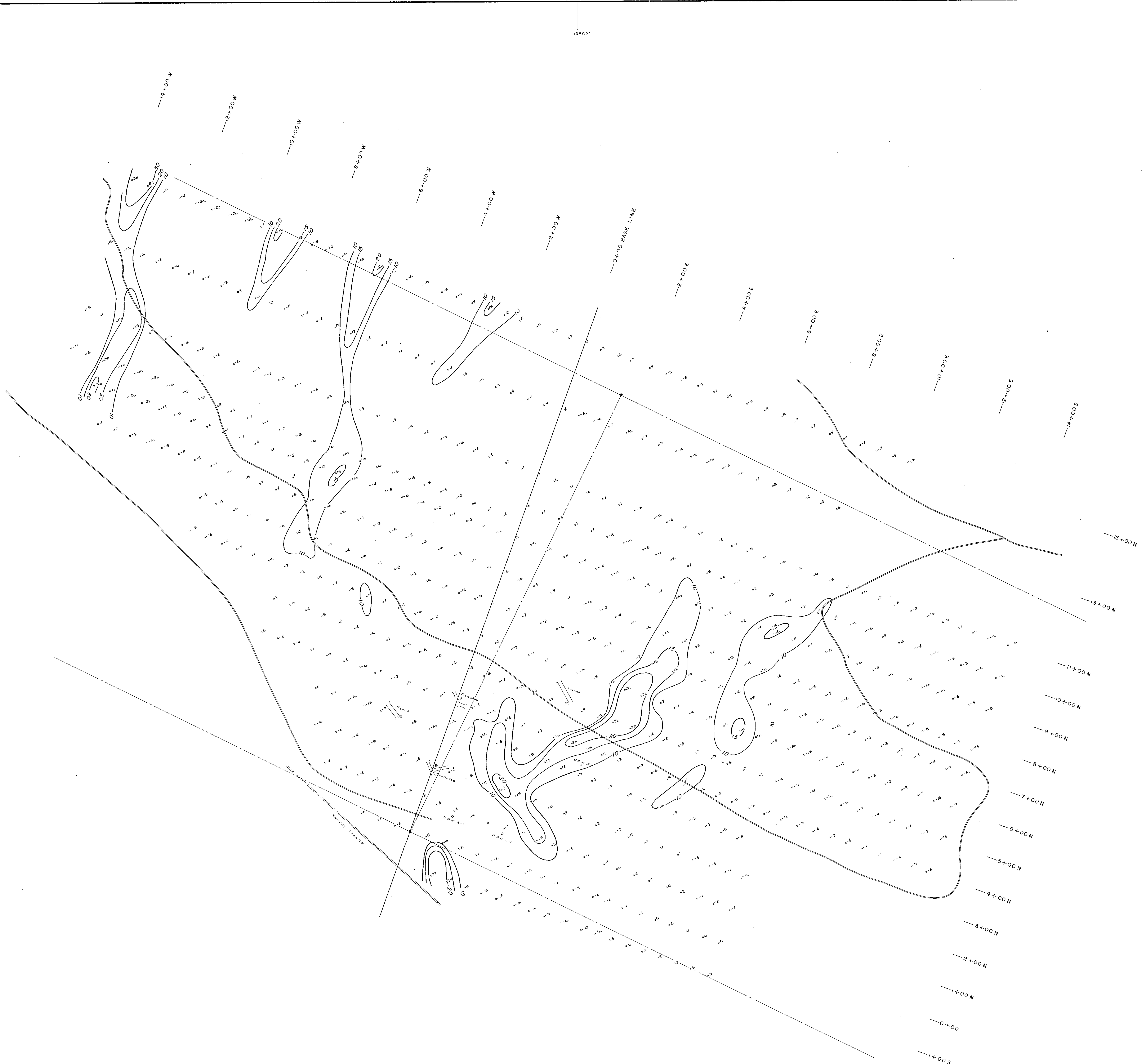
And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City  
of Vancouver, in the  
Province of British Columbia, this 24<sup>th</sup>  
day of July, 1973, A.D.

Joan Paul Sub-mining Recorder  
A Commissioner for taking Affidavits for British Columbia or  
A Notary Public in and for the Province of British Columbia.

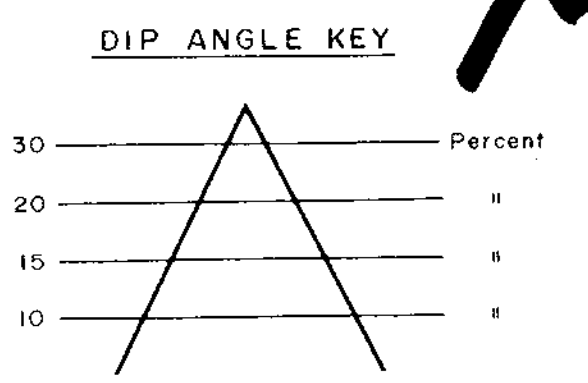


- LEGEND**
- Contour Line Contour Interval: 10, 15, 20, 30 Percent
  - Stations
  - Outline of Claims
  - Claim Posts
  - == Unpaved Roads

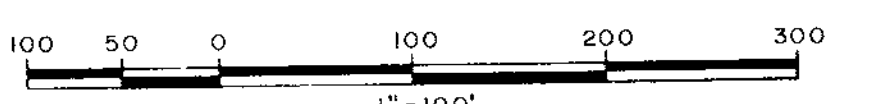


INSTRUMENT  
RONKA EM-16

**4691  
M2**



Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 4691 MAP #2



NT.S. 82 E/13  
**AUSTRO-CAN EXPLORATION LTD.**  
FAP CLAIMS  
OSOYOOS MINING DIVISION - BRITISH COLUMBIA  
GEOPHYSICAL MAP  
ELECTROMAGNETOMETER - FILTERED DIP ANGLE  
(Percent)

INTERPRETED BY: G.E.W.
DRAWN BY:
CHECKED BY:
DATE: JULY 6, 1973
FIG No: 2

In Accompany Geophysical Report on  
THE FAP CLAIM GROUP  
Date: 4/14/73  
by GLEN E. WHITE - B.Sc. GEOPHYSICIST

Glen E. White  
geophysical consulting  
services Ltd.