4378

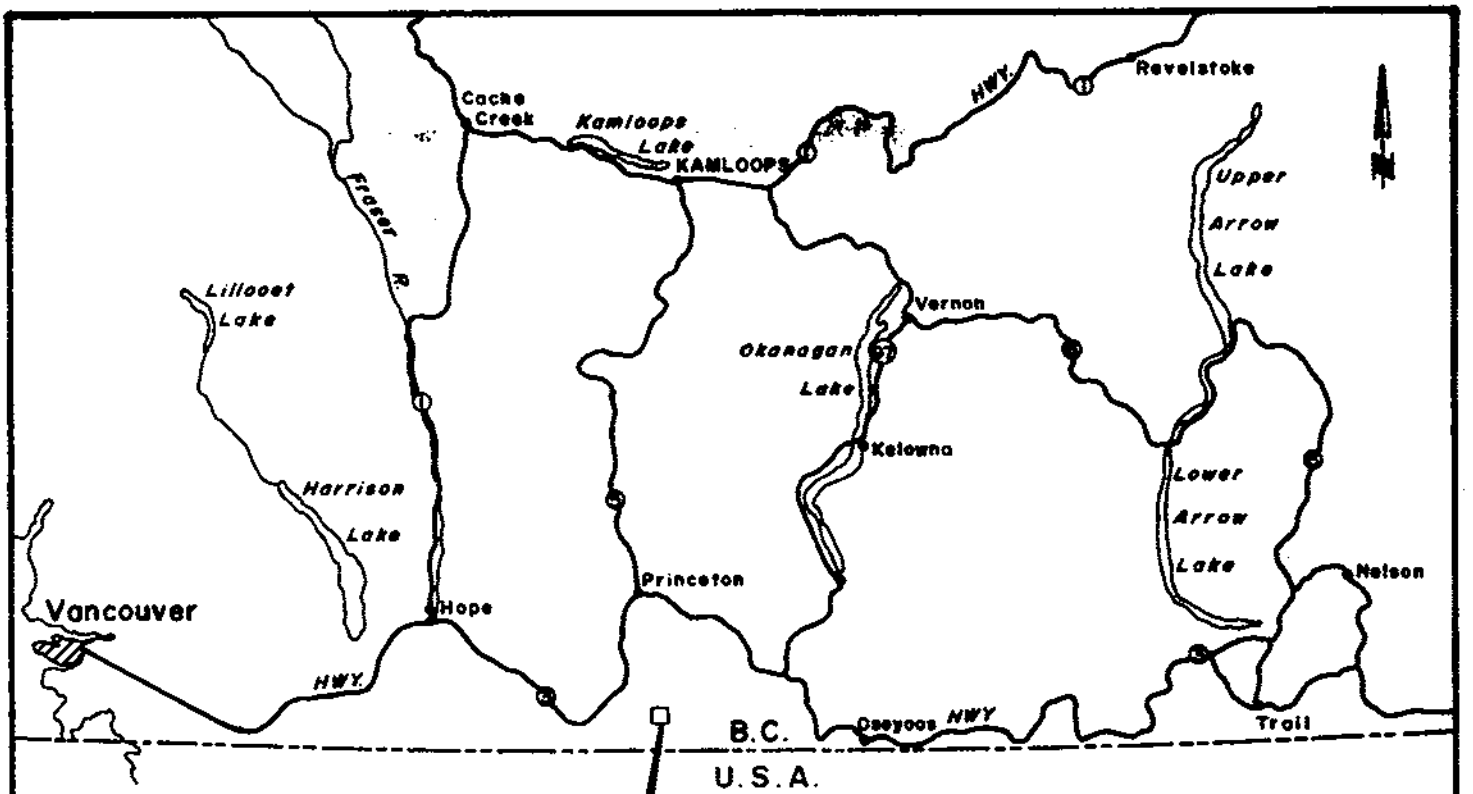
GEOPHYSICAL REPORT
On An
INDUCED POLARIZATION SURVEY
on behalf of
MINERAL MOUNTAIN MINING CO. LTD.

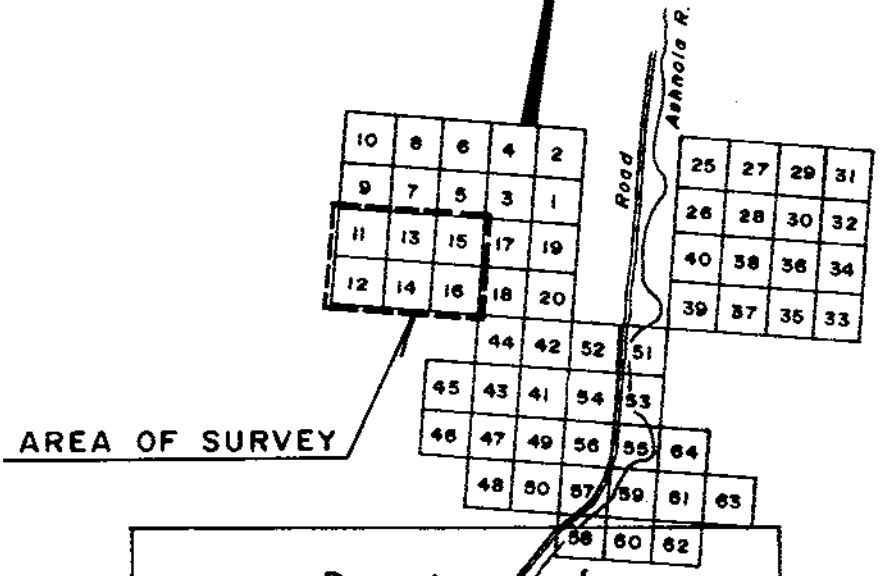
IT mineral claims Ashnola River Area, Osoyoos Mining Division.

Lat. 49°6'N. Long. 120°21'W N.T.S. 92H/1

AUTHOR: Glen E. White, Geophysicist
P. ENG; R. W. Phendler
DATE OF WORK; October 26 - 31, 1972
DATE OF REPORT; November 10, 1972

C O N T E N T S





Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4378 MAP #1

R. W. Pl... P.Eng

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. R. W. PHENDLER

CANNON – HICKS ASSOCIATES LTD.

MINERAL MOUNTAIN MINING CO. LTD.

IT CLAIMS

LOCATION AND CLAIMS MAP

SCALE : LOCATION MAP : 1" = 39 MILES APPROX. CLAIMS MAP : 1/2" = 3000' APPROX.

Glen E. Wi...
geophysical consulting
services ltd.

FIG. 1
NOV. 6, 1972

INTRODUCTION

During the period October 26 - 31, 1972, Glen E. White Geophysical Consulting and Services Ltd. under the supervision of R. W. Phendler, P. Eng, of Cannon-Hicks Associates Ltd., conducted some 2 line miles of induced polarization surveying on the IT mineral claims in the Ashnola area on behalf of Mineral Mountain Mining Co. Ltd.

The purpose of the survey was to examine an area of limonite stained pipe-like breccia zone which showed anomalous geochemical copper responses.

LOCATION AND ACCESS

The survey area was located at an elevation of approximately 6500 feet some 26 miles south southeast of Princeton B.C., Osoyoos Mining Division, Latitude 49°6'N Longitude 120°21'W N.T.S. 92H/1.

PROPERTY

The induced polarization survey discussed in this report was conducted in the area of mineral claims IT 11 - 16 as illustrated in Figure 1.

SURVEY SPECIFICATIONS

Electrode Array

The data was obtained using the "three electrode" array. This array consists of one current (C_1) and two potential electrodes (P_1 and P_2)which are moved together along the survey line at a fixed distance apart, which is known as the "a" spacing. The second current electrode (C_2) is placed at "infinity".

Induced Polarization System

The equipment used on this survey was the Huntec pulse-type unit. Power was obtained from a JLO motor,

coupled to a 2.5 KW 400 cycle three-phase generator, providing a maximum of 2.5 KW D.C. to the ground. The cycling rate is 1.5 seconds "current on" and 0.5 seconds "current off", the pulses reversing continuously in polarity. Power was transmitted to the ground through two current electrodes C_1 and C_2, and measurements taken across two potential electrodes, P_1 and P_2.

The data recorded in the field consist of careful measurements of the current (I) in amperes flowing through electrodes C_1 and C_2, the primary voltage (V_p) appearing between electrodes P_1 and P_2 during the "current on" part of the cycle, and the secondary voltage (V_s) appearing between electrodes P_1 and P_2 during the "current off" part of the cycle.

The apparent chargeability (M_a), in milliseconds, is calculated by dividing the secondary voltage by the primary voltage and multiplying by 400, which is the sampling time in milliseconds of the receiver unit. The apparent resistivity, in ohm-feet, is proportional to the ratio of the primary voltage to the measured current, the proportionality factor depending on the geometry of the electrode array used. The chargeability and resistivity obtained are called "apparent" as they are values which that portion of the earth sampled by the array would have if it were homogeneous. As the earth sampled is usually inhomogeneous, the calculated apparent chargeability and apparent resistivity are functions of the actual chargeabilities and resistivities of the rocks sampled and of the geometry of these rocks.

Survey Grid

The survey was conducted along traverse lines trending approximately east-west. The lines were spaced 400 feet apart along a northerly directed baseline and flagged at 100 foot intervals. The survey was conducted with a reconnaissance "a" spacing of 200 feet. Detail was conducted with "a" = 200' , N = 2.

DISCUSSION OF RESULTS

The chargeability and apparent resistivity data from this survey are illustrated in Figures 2 and 3 respectfully. A detailed geological map of the breccia zone was provided by R. Phendler of Cannon-Hicks Associates Ltd. for correlation with the induced polarization data.

The apparent resistivity data, Figure 3, shows a ridge of high resistivity values trending southward across the survey area. The variations in apparent resistivity in general reflect changes in the moisture content and type of overburden and in the depth to bedrock.

The chargeability data shows a weak chargeability zone which rises to a high of 4.2 milliseconds. This weak chargeability pattern is roughly coincident with areas underlain by the volcanic breccia and may possibly reflect a slight increase in chargeability material within the breccia. A limited amount of testing was completed with a = 200 feet, n = 2. This second seperation showed a slight increase in chargeability with depth. However the per-volume chargeability response with either seperation indicates there is only a minor amount of chargeability material present.

CONCLUSIONS AND RECOMMENDATIONS

During the latter part of October 1972, a limited amount of induced polarization surveying was conducted over the IT mineral claims under the supervision of R. Phendler of Cannon-Hicks Associates Ltd. on behalf of Mineral Mountain Mining Co. Ltd.

The survey located a zone of weak above background chargeability responses which roughly coincide with a geologically favourable zone of volcanic breccia, but which is not of sufficient magnitude to warrent diamond drilling.

Respectfully submitted,

Glen E. White
Geophysicist

R. W. Phendler P. Eng
5/1973

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. W. PHENDLER

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 northwest 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. One year Consulting Geophysicist. Active experience in all Geologic provinces of Canada.

A P P E N D I X

Instrument Specifications

Method of Survey - Induced Polarization

A. Instruments

(a) Type - Pulse
(b) Make - Huntec
(c) Serial No. - transmitter #107 - receiver #207

B. Specifications

(a) Size and Power - 2.5 KW
(b) Sensitivity - 300 x 10.5 volts
(c) Power Sources - 2.5 KW 400 cycle - three-phase generator
(d) Power by JLO motor, 5.2 H.P. @ 3,600 R.P.M.
(e) Timing - electronic, remote and direct
(f) Readings - (i) amps (ii) volts primary and secondary
(g) Calculate (i) Resistivity - ohm-feet
(ii) Chargeability - milliseconds

C. Survey Procedures

(a) method - power supplied to mobile probe along TW 18 stranded wire from stationary set-up.
(b) configuration - Pole - dipole (three electrode array) Plot point midway between C_1 and P_1.

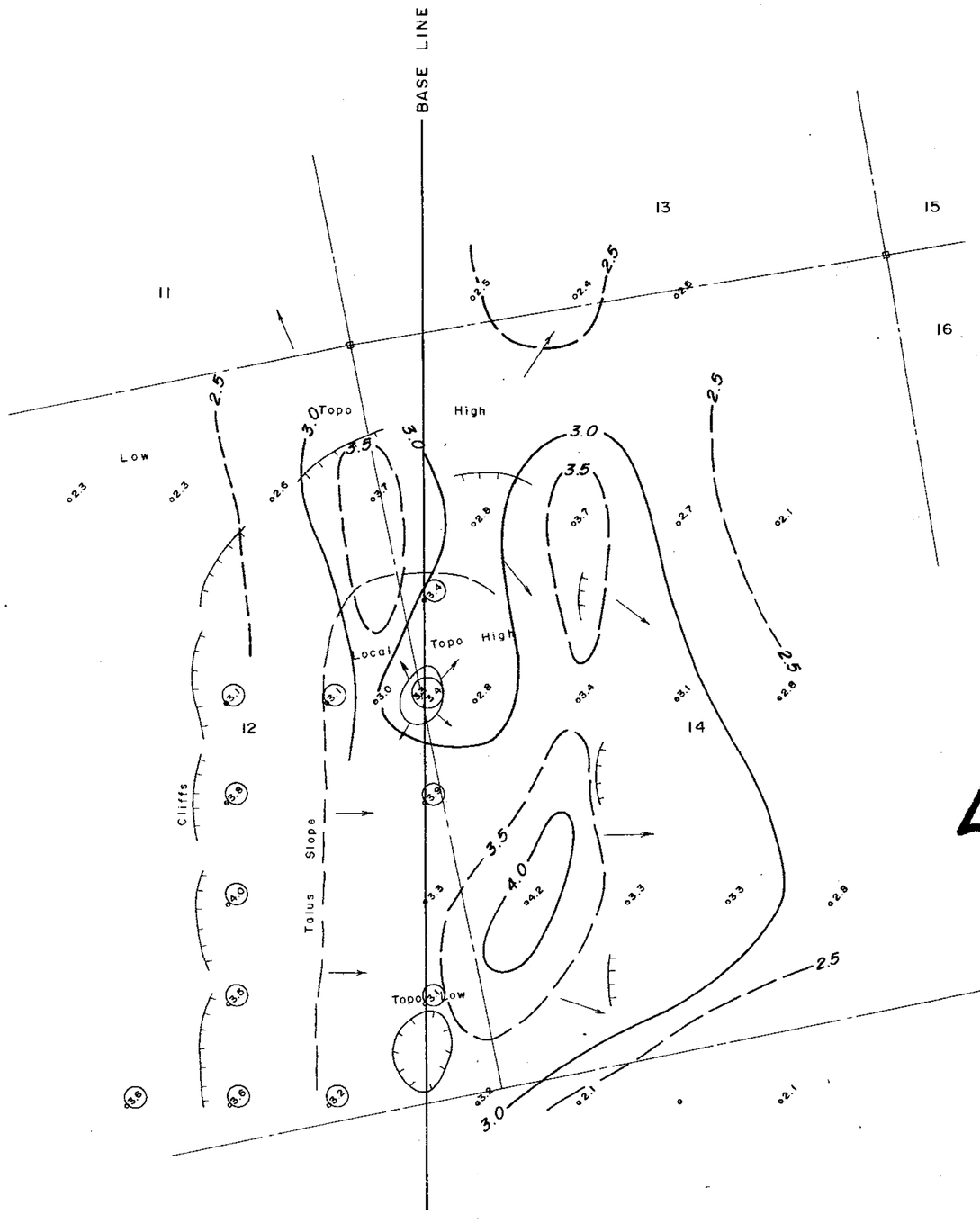
D. Presentation

Contour Maps (i) Chargeability - milliseconds
(ii) Resistivity - ohm-feet

8+00 W | 6+00 W | 4+00 W | 2+00 W | 120°21' | 0+00 | 2+00 E | 4+00 E | 6+00 E | 8+00 E

23°00'
MAGNETIC

16+00 N
14+00 N
12+00 N
10+00 N
8+00 N
6+00 N
4+00 N
2+00 N
0+00
49°06'



LEGEND

- Contour Line. Contour Interval : 2.5, 3.0, 3.5, 4.0 milliseconds
- Stations
- Outline of Claims
- Claim Posts
- Unpaved Roads

INSTRUMENT HUNTEC 2.5 KW TIME DOMAIN (a = 200')

C2 ← I — V
C1 Pole — P2 Dipole — P1

4378 M-2

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ASSESSMENT REPORT
NO. 4378 MAP #2

NOTE
Values shown (3.3) a=200' n=2

200 100 0 200 400 600
1" = 200'

N.T.S. 92 H/1

120°21'

R.W. Phendler P. Eng
June 1/1973

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R.W. PHENDLER

To Accompany Geophysical Report on
THE IT CLAIM GROUP
Date _____
By GLEN E WHITE - B Sc _____ GEOPHYSICIST

CANNON — HICKS ASSOCIATES LTD.
MINERAL MOUNTAIN MINING CO. LTD.
OSOYOOS MINING DIVISION — BRITISH COLUMBIA

IT CLAIMS
GEOPHYSICAL MAP
INDUCED POLARIZATION
PERCENT CHARGEABILITY (milliseconds)

Glen E. White geophysical consulting & services ltd.

INTERPRETED BY : G.E.W.	
DRAWN BY :	
CHECKED BY :	
DATE : NOV. 6, 1972	
FIG. No. : 2	

8+00 W | 6+00 W | 4+00 W | 2+00 W | 120°21' | 0+00 | 2+00 E | 4+00 E | 6+00 E | 8+00 E

23°00'
MAGNETIC

LEGEND

Contour Line. Contour Interval 200,300,500,750,1000 1500,2000,3000 (ohm feet)

Stations

Outline of Claims

Claim Posts

Unpaved Roads

16+00 N
14+00 N
12+00 N
10+00 N
8+00 N
6+00 N
4+00 N
2+00 N
0+00

49°06'

BASE LINE

11 | 13 | 15 | 16 | 12 | 14

Topo High | Topo Low | Cliffs | Talus Slope

1000 | 750 | 500 | 3000 | 2000 | 1500 | 300 | 200

120°21'

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4378 MAP #3

NOTE
Values shown (760) a=200' n=2

200 100 0 200 400 600
1"=200'

N.T.S. 92 H/1

CANNON — HICKS ASSOCIATES LTD.
MINERAL MOUNTAIN
MINING CO. LTD.
OSOYOOS MINING DIVISION — BRITISH COLUMBIA

IT CLAIMS
GEOPHYSICAL MAP
INDUCED POLARIZATION
APPARENT RESISTIVITY (ohm feet)

Glen E. White geophysical consulting services ltd.

INTERPRETED BY: G.E.W.
DRAWN BY:
CHECKED BY:
DATE: NOV. 6, 1972
FIG No: 3

R. W. Pendler Eng

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. W. PENDLER

To Accompany Geophysical Report on
THE IT CLAIM GROUP
Date _____
By GLEN E. WHITE - B.Sc. _____ GEOPHYSICIST