

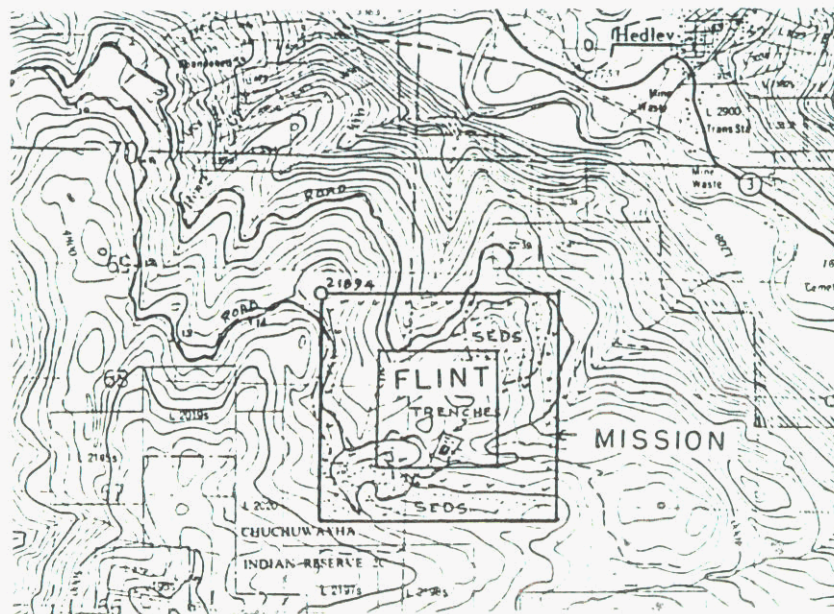
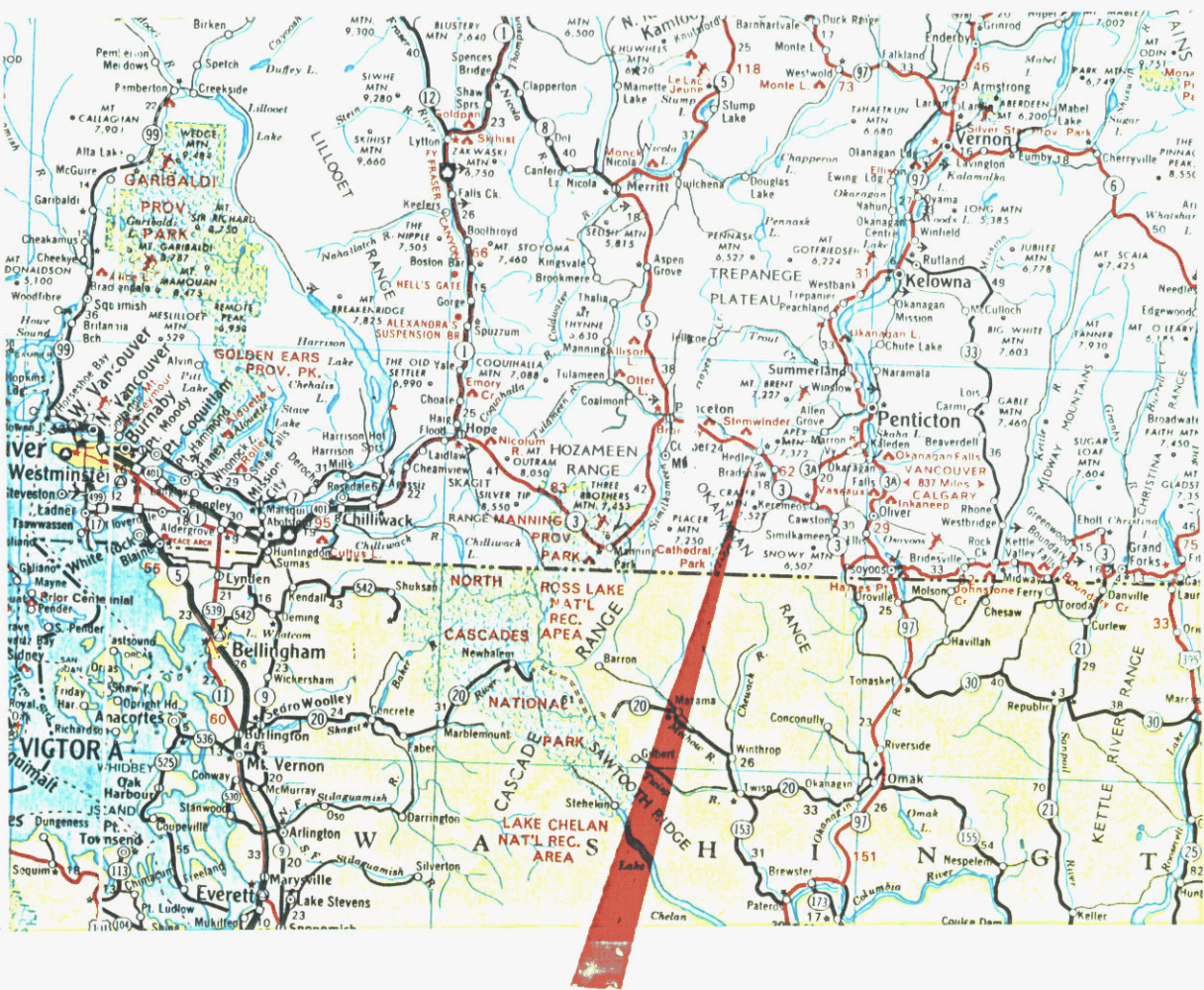
GEOPHYSICAL REPORT  
on an  
INDUCED POLARIZATION SURVEY

AGIO Resource Corporation  
Flint and Mission claims, Hedley area  
Osoyoos M.D. B.C. Lat. 49°20'N Long. 120°07'W  
N.T.S. 92 H/8E

AUTHOR: Glen E. White, B.Sc., P.Eng.  
DATE OF WORK: September 15 - October 1, 1980  
DATE OF REPORT: October 23, 1980

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
No.

9222  
part 2 of  
2



AGIO RESOURCE CORPORATION  
MISSION AND FLINT CLAIMS  
LOCATION AND CLAIMS MAP

Glen C. White  
geophysical consulting  
services Ltd.

## C O N T E N T S

	<u>PAGE</u>
Introduction.....	1
Property.....	1
Location and Access.....	1 - 2
General Geology.....	2
Survey Grid.....	2
Induced Polarization Survey.....	3
Discussion of Results.....	4 - 5
Conclusion & Recommendations.....	6
Instrument Specifications.....	7
Statement of Qualifications.....	8
Cost Breakdown.....	9

### Illustrations

Figure 1 - Claims and location map  
Figure 2 - Chargeability - milliseconds  
Figure 3 - Apparent resistivity

Plate 1 - Detail line 100S

Plate 2 - Detail line 200S

## INTRODUCTION

AGIO Resources Corporation is a reorganization of Austro-Can Explorations Ltd. The area covered by this survey was known as the Flint claims group under the two part staking system and was covered by a limited amount of geochemical and electromagnetic surveying in 1972 by Glen E. White Geophysical Consulting and Services Ltd. on behalf of Austro-Can Explorations Ltd. Since that time bulldozer trenching in an area of geochemical interest exposed multiple veinlets of auriferous and argentiferous arsenopyrite and sphalerite.

Thus the purpose of this survey was to try and trace this zone by the induced polarization method such that a demand filling program could be planned. The induced polarization surveying was conducted during the period Septemer 15 - October 1, 1980.

## PROPERTY

The present Flint claim is comprised of four units and covers the showings that were in the old two part staking group. The present Flint claims are also enclosed in the Mission claim comprising sixteen units as illustrated on Figure 1.

## LOCATION AND ACCESS

The Flint mineral claims are located some four kilometers southwest of Hedley B.C. - Latitude  $49^{\circ}20'N$  Longitude  $120^{\circ}07'W$  N.T.S. 92 H/8E, Osoyoos Mining Division B.C.

Access to the property is southward from the Similkameen bridge some eight kilometers west of Hedley on Highway #3, thence three and one half kilometers southerly on Whistle Creek logging road to the fork

of Henri Creek road and then some eleven kilometers along the southern branch of the Henri Creek road.

#### GENERAL GEOLOGY

G.S.C. Map 888A shows the area of the claim group. An evaluation report on the Mission and Flint claims was prepared by L. S. Trenholme P.Eng. dated October 10, 1979. Mr. Trenholme describes the recent trenching and the old work as discussed in the 1936 B.C. Minister of Mines report.

In general the area is underlain by a tongue of granite which trends northwesterly across the Mission claim and is flanked by outcrops of mainly argillaceous sediments mapped as belonging to the Nicola group of Upper Triassic age.

The recent bulldozer work uncovered an area of intense sericitization and silicifications in the granite which is laced with veinlets of arsenopyrite and sphalerite. Individual shears and stringers strike E.N.E. and dip steeply to the north giving a general ladder effect.

#### SURVEY GRID

A survey grid comprising some fifteen kilometers of traverse line was established. The lines are orientated east-west and spaced one hundred meters apart. A central baseline controls the grid. The 0 - 0 point for the grid is the old Flint initial post. The old Flint posts are marked on the map such that the 1972 and present work can be correlated.

### INDUCED POLARIZATION SURVEY

The equipment used on this survey was the Huntect pulse-type unit, and Mark III receiver. Power was obtained from a Briggs and Stratton 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 pulse reversing continuously in polarity. Power was transmitted to the ground through two potential electrodes,  $P_1$  and  $P_2$  which were deployed in the three electrode array with an "a" spacing of 50 m and separations of  $N = 1, 2$  and  $3$ .

The data recorded in the field consists 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. A cycle time of 4 seconds was used with a duty ratio of  $2.2 - 1$ ,  $T_p$  .20 ms and  $T_d$  60 ms.

The apparent chargeability ( $M'$ ) in milliseconds, is calculated by  $T_p (M_1 + 2M_2 + 4M_3 + 8M_4) = M'$ , where  $T_p$  is the basic integrating time in tenths of seconds.  $M_1$ ,  $M_2$ ,  $M_3$  and  $M_4$  are the chargeability effects at various times on the voltage decay curve following switch off of the transmitter, measured as a percentage of the primary voltage.

### DISCUSSION OF RESULTS

The chargeability map Figure 2 shows a very strong anomaly which reaches a high of 45.2 milliseconds. This anomaly encompasses a major portion of the southwest corner of the survey grid. The eastern flank of the anomaly where it drops from a high of 36.7 milliseconds to some 16 milliseconds is over the area of previous trenching. The background values away from the anomaly are some 3 - 5 milliseconds. The anomaly appears to be trending NE-SW and is open to the SW. The previous VLF-electromagnetometer survey conducted in 1972 shows a trend in the same direction. The conductor would appear to relate to a fault which separates the eastern and western lobes of the main chargeability high. The arsenic and silver geochemical data suggest the presence of arsenopyrite mineralization on the western lobe of the chargeability anomaly as well as on the eastern one where the trenching has been done.

The apparent resistivity data varies from a high of 2268 ohm-meters to a low of 53 ohm-meters. These variations are caused in part by the physical characteristics of the overburden as well as the underlying geology. The high resistivity area may possibly relate to shallow overburden over a resistive bedrock or resistive overburden such as graull. The resistivity contours show a bias for the NE-SW direction which suggest that they are sensing lithology and or structure. A resistivity low occurs in the area of the trenching as well as over a portion of the chargeability high. This would suggest that there is no particular relationship between the content of

chargeability materials and the resistivity. However the resistivity lows are likely caused in part by zones of structural weakness such as a shear zone.

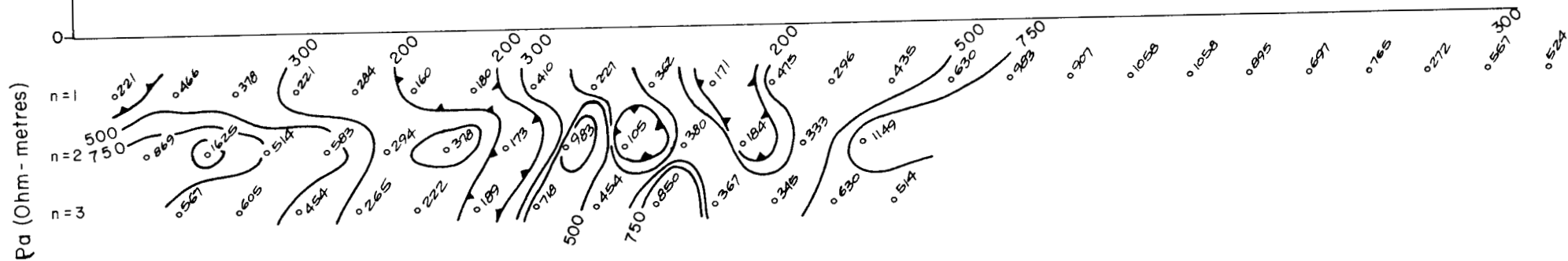
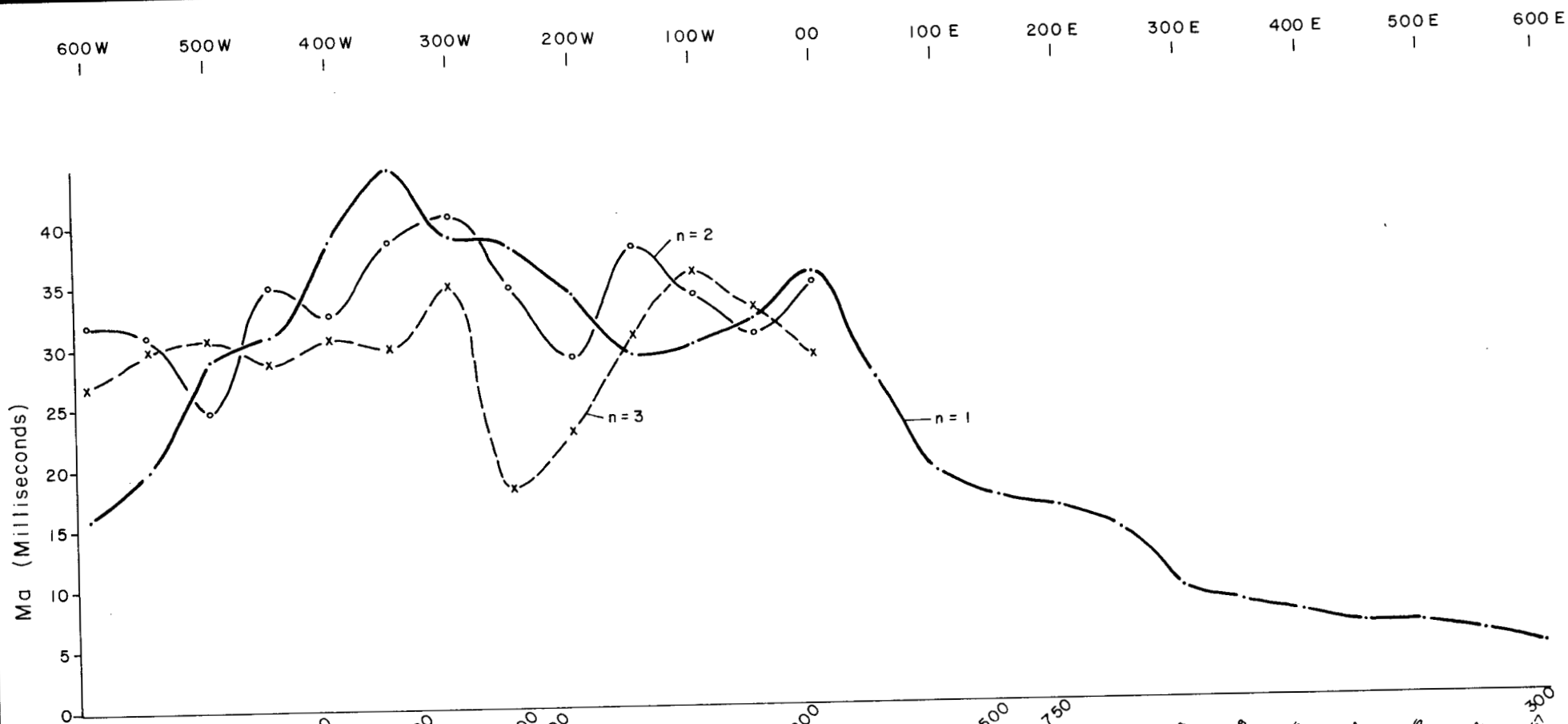
Plates 1 and 2 show the detail surveying with separations  $n = 1, 2$  and  $3$  over lines 100S and 200S. The three separations show a strong anomaly which appears to extend to depth. Line 100S clearly shows the anomaly as two lobes separated by a resistivity low. This low continues to the SW as shown on Plate 2.

The geology of the area is argillites intruded by a tongue of granite. Possible considerations for the high chargeabilities are threefold:

1. that it is caused by graphite and or pyrite bearing sediments
2. that it is largely a marcasite bearing argillite and
3. that it is a highly altered mineralized granite.

The first suggestion should have given strong VLF-EM responses which is not the case. In respect to the second possibility only minor mineralization has been reported in the argillite. The trenching to date has exposed highly altered granite with some 15% sulphide mineralization by volume which would tend to support possibility three. In either case the limited coverage geochemical soil sampling program of 1972 detected a 33 p.p.m. silver and greater than 500 p.p.m. arsenic anomaly which lies nearly on the western lobe of the chargeability high.



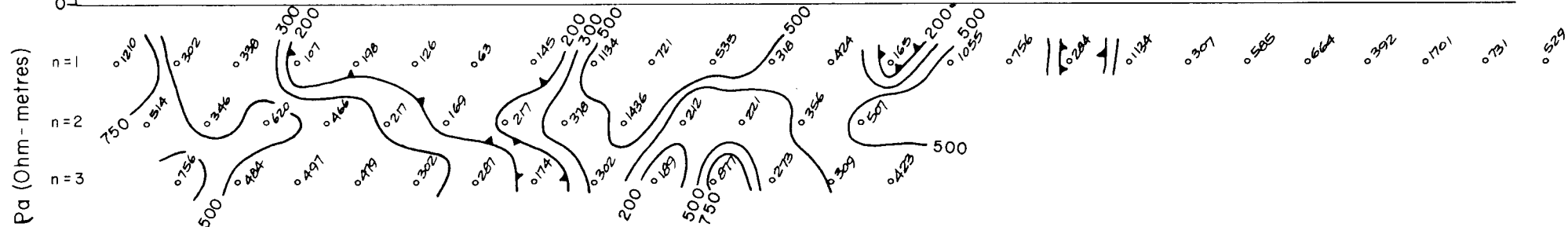
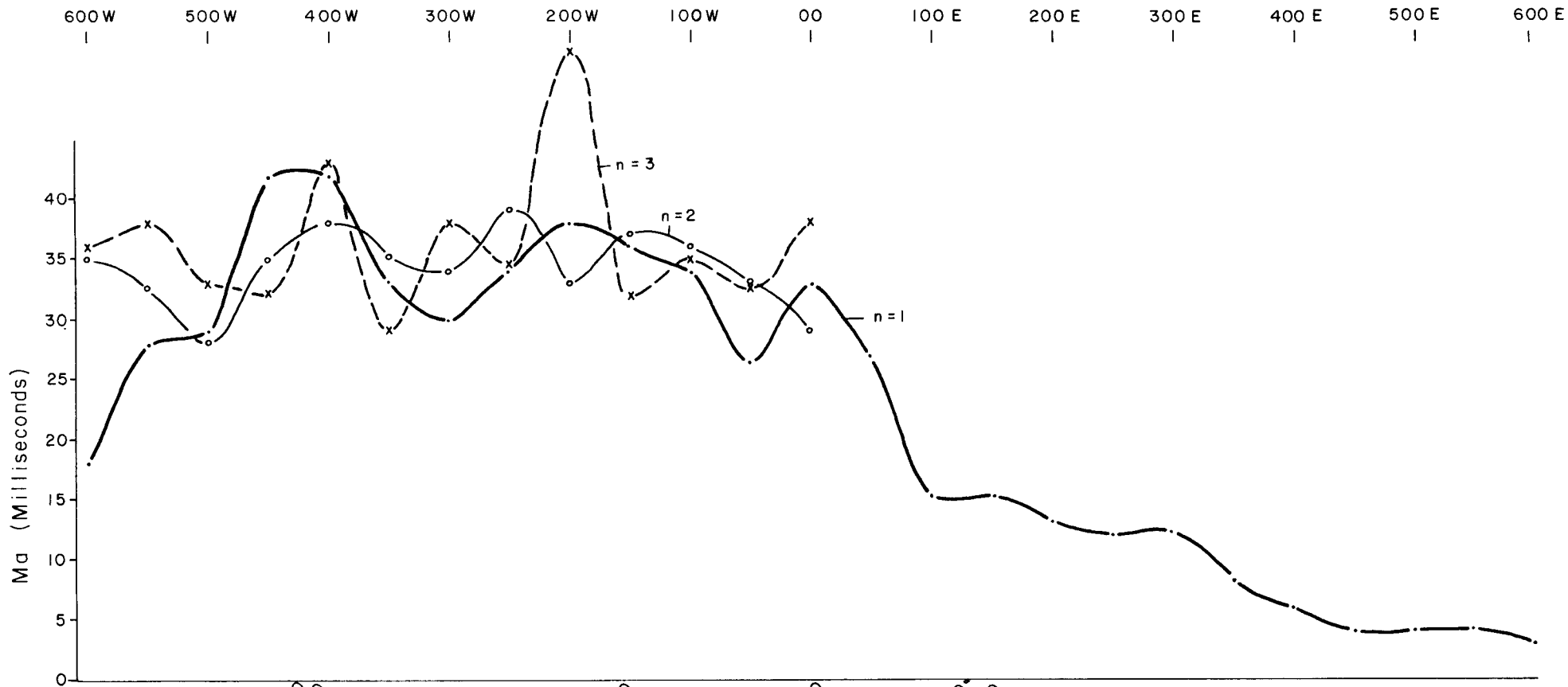


AGIO RESOURCES CORPORATION  
 DETAILED INDUCED POLARIZATION PROFILES  
 LINE 1+00 S

Glen S. White  
 geophysical consulting  
 &  
 services Ltd.

SCALE 1:5,000

OCTOBER 19, 1980  
 PLATE I



AGIO RESOURCES CORPORATION  
 DETAILED INDUCED POLARIZATION PROFILES  
 LINE 2+00S

Glen E. White  
 geophysical consulting  
 services Ltd.

SCALE 1:5,000

OCTOBER 19, 1980  
 PLATE 2

### CONCLUSION

A program of induced polarization surveying covering the Flint claims on behalf of AGIO Resource Corporation during the month of September 1980, located a strong induced polarization anomaly some ten times background. Argentiferous and auriferous arsenopyrite and sphalerite mineralization of some 10 - 20% by volume occur in trenches on the eastern lobe of the strong anomaly. The western lobe which is unexplored is higher in amplitude and has an associated intense silver and arsenic geochemical anomaly.

### RECOMMENDATIONS

It is recommended that a minimum of four diamond drill holes be undertaken to evaluate the anomaly as follows:

- Hole 1 collared at road near 100S - 50E and drilled westerly at an angle of  $-45^{\circ}$  for a length of 100m.
- Hole 2 collared at 300S - 0 drilled westerly at an angle of  $-45^{\circ}$  for a length of 100m.
- Hole 3 collared at 4+50S - 325W on the road and drilled  $N45^{\circ}W$  at an angle of  $-45^{\circ}$  for a length of 150m.
- Hole 4 collared at 150S - 425W on the road and drilled easterly at an angle of  $-45^{\circ}$  for a length of 150m

Respectfully submitted,  
 GLEN E. WHITE  
 & CONSULTING SERVICES LTD.

Glen E. White  
 Consulting Geophysicist

*Glen E. White*

GEOPHYSICAL CONSULTING & SERVICES LTD.

INSTRUMENT SPECIFICATIONS

INDUCED POLARIZATION SYSTEM

A. Instruments

- (a) Type - pulse
- (b) Make - Hunttec
- (c) Serial No. - transmitter #107 - receiver #3016

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 - 8 H.P. Briggs and Stratton @ 3000 R.P.M.
- (e) Timing - electronic, remote and direct.
- (f) Readings - (i) amps (ii) volts primary and secondary
- (g) Calculate (i) Resistivity - ohm-meters (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-meters (ohm-feet)

STATEMENT OF QUALIFICATIONS

NAME: WHITE, Glen E., P. Eng.

PROFESSION: Geophysicist

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

PROFESSIONAL  
ASSOCIATIONS: Registered Professional Engineer,  
Province of British Columbia

Associate member of Society of Exploration  
Geophysicists.

Past President of B. C. Society of Mining  
Geophysicists.

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

Two years Mining Geophysicist with Sulmac  
Exploration 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.

Ten years Consulting Geophysicist.

Active experience in all Geologic provinces of  
Canada.

COST BREAKDOWN

<u>Personnel</u>	<u>Date</u>	<u>Wages</u>	<u>Total</u>
T. Allman	Sept.15 - Oct.1/80	\$115	\$1955.00
G. Ennis	Sept.15 - Oct.1/80	\$ 90	\$1530.00
B. Kitchen	Sept.15 - Oct.1/80	\$ 85	\$1445.00
O. Aareskjold	Sept.22 - Oct.1/80	\$ 90	\$ 950.00
Materials			\$ 55.00
Meals and Accomodations			\$1830.00
Vehicle			\$1105.00
Instrument lease			\$ 850.00
Interpretation and reports			<u>\$ 850.00</u>
TOTAL.....			\$10,570.00

October 23, 1980

AGIO Resources Corporation  
201 - 845 Hornby St.  
Vancouver, B.C.  
V6Z 1V1

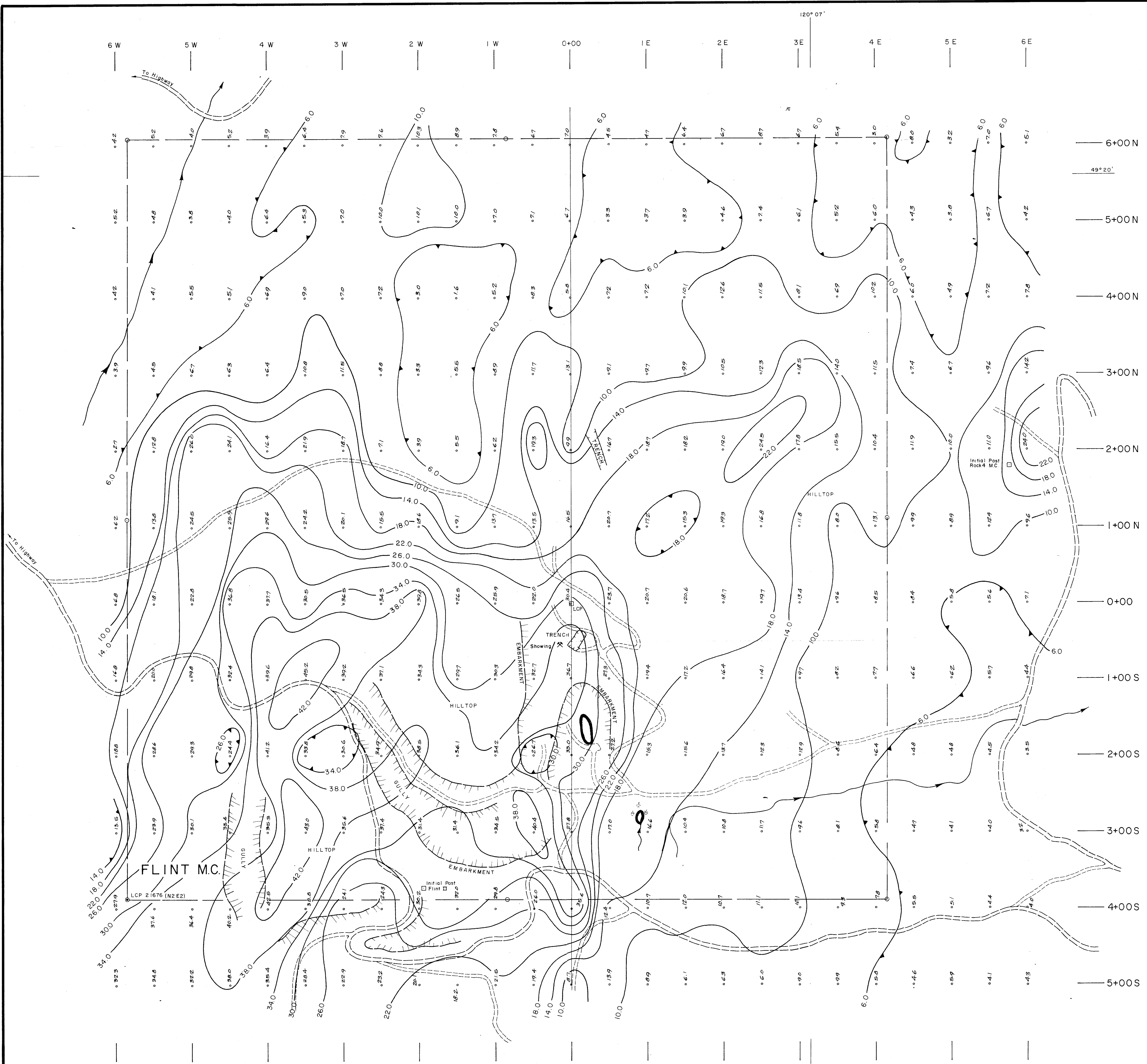
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To Professional Services -

Glen E. White Geophysical Consulting &  
Services Ltd. Induced polarization survey  
Flint claims.....\$10,570.00  
Mobilization.....(\$ 8,000.00)  
Field invoice.....(\$ 3,000.00)  
Total.....\$ 2,570.00

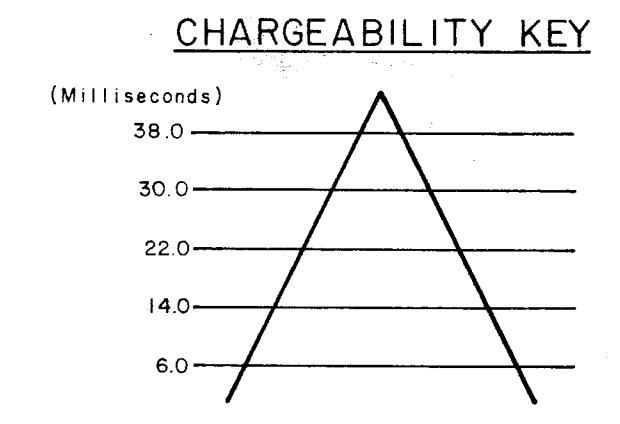
Amount this invoice.....\$ 2,570.00

PAID 27/10/80



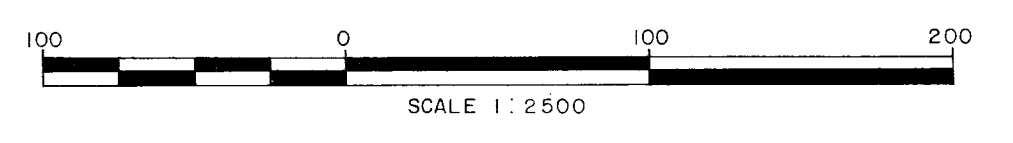
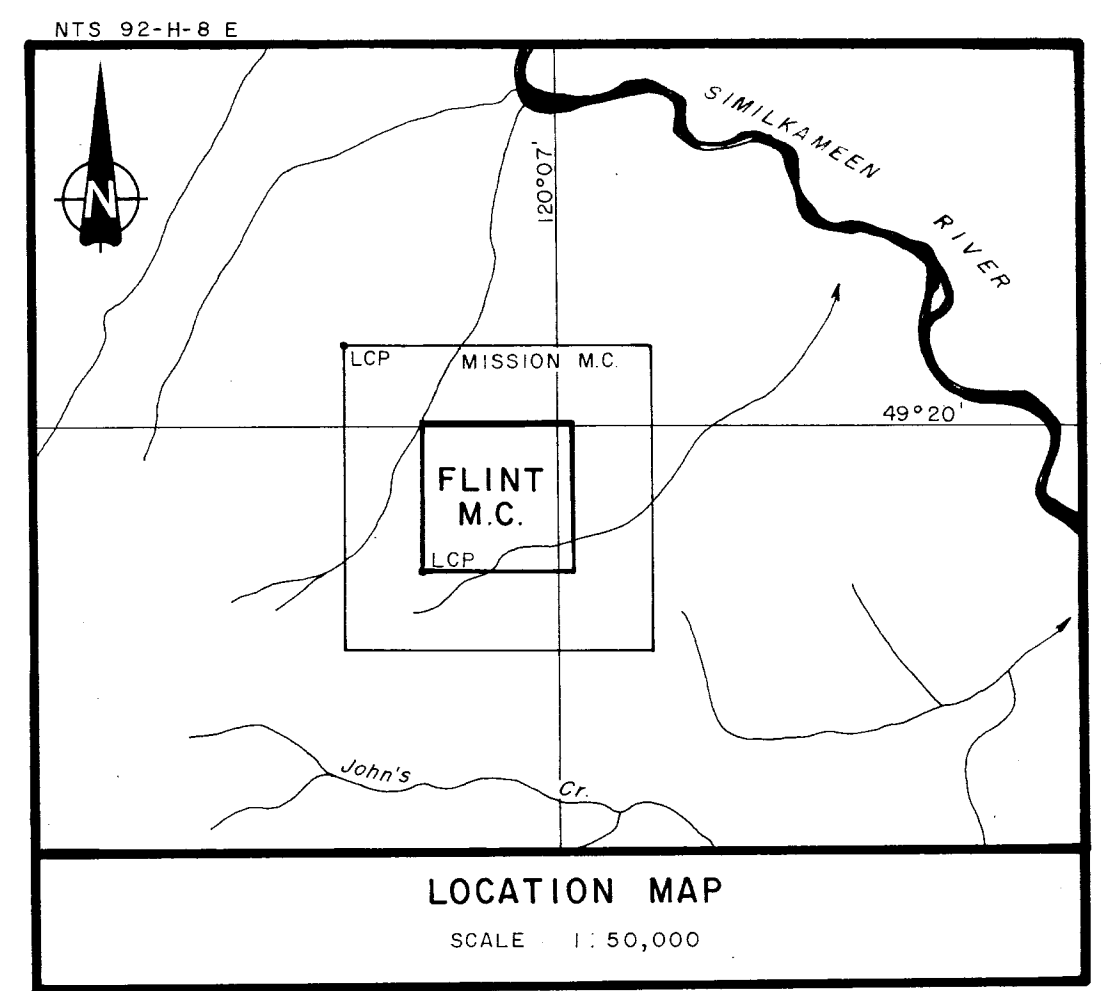
MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**9222**  
part 2  
of 2

- LEGEND:**
- Grid station
  - Stream
  - Good gravel road
  - 4WD road



INSTRUMENT: Huntec 70 Ltd. 2.5 Kw Pulse IP System

50m



**AGIO RESOURCES CORPORATION**  
**FLINT CLAIMS**  
OSOYOOS MINING DIVISION B.C.

**CHARGEABILITY**  
**MILLISECONDS**

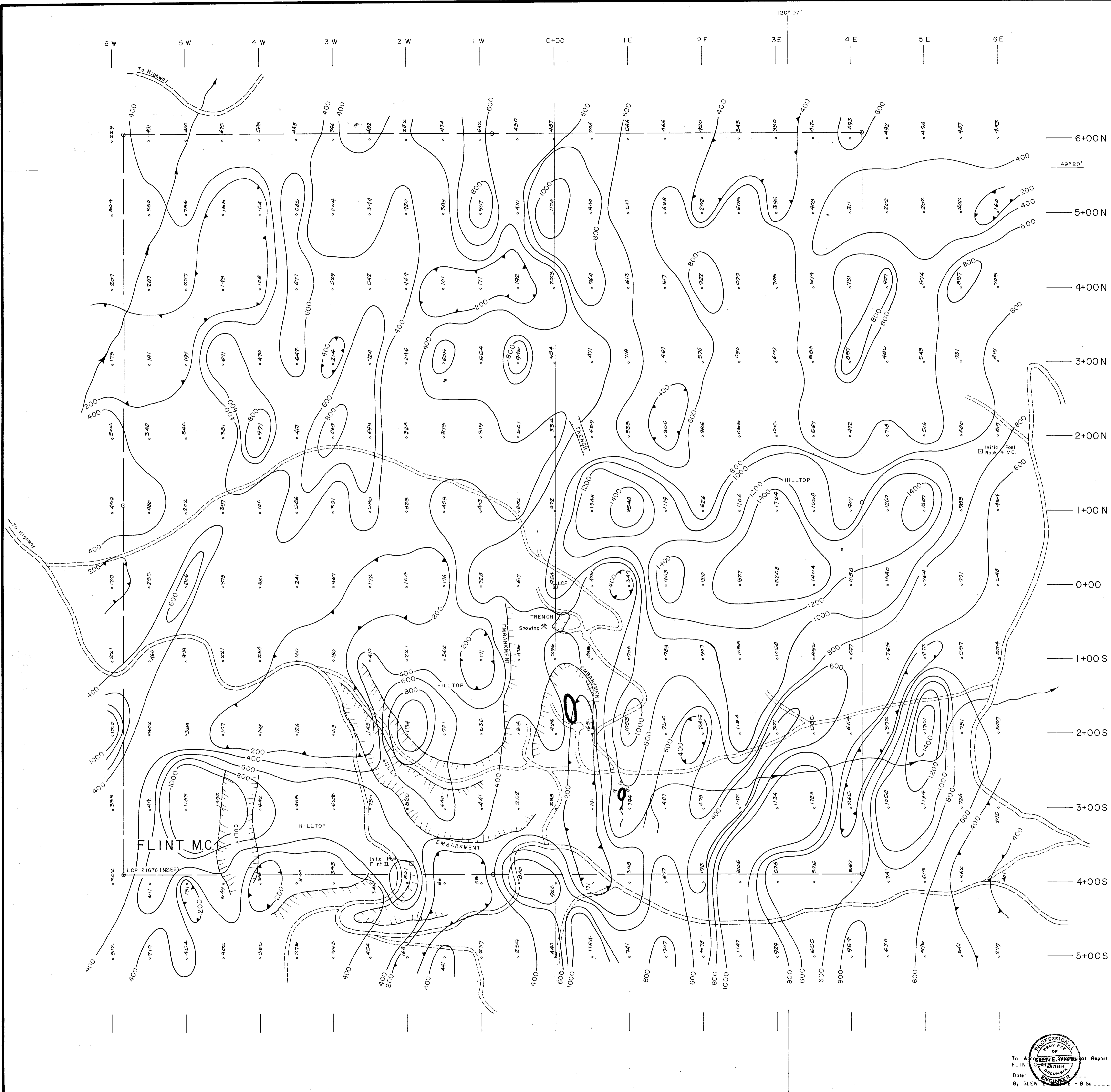
*Glen E. White*  
geophysical consulting  
&  
services Ltd.

INTERPRETED BY: G.E.W.
DRAWN BY: r.w.r.
CHECKED BY:
DATE: OCTOBER 19, 1980
FIGURE NO. 2

To Accompany Geophysical Report on  
FLINT CLAIMS

Date: \_\_\_\_\_  
By: GLEN E. WHITE - B.Sc. \_\_\_\_\_ GEOPHYSICIST

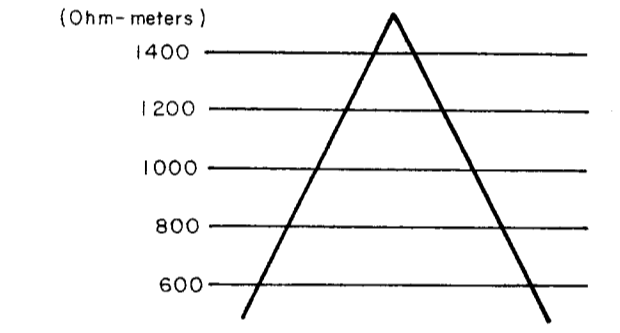




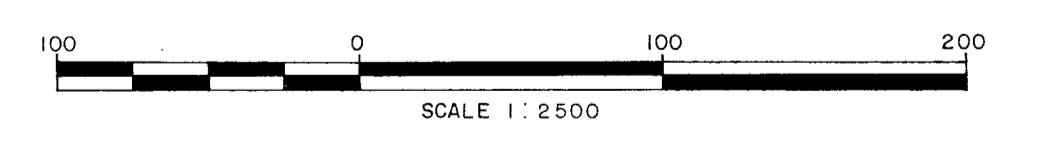
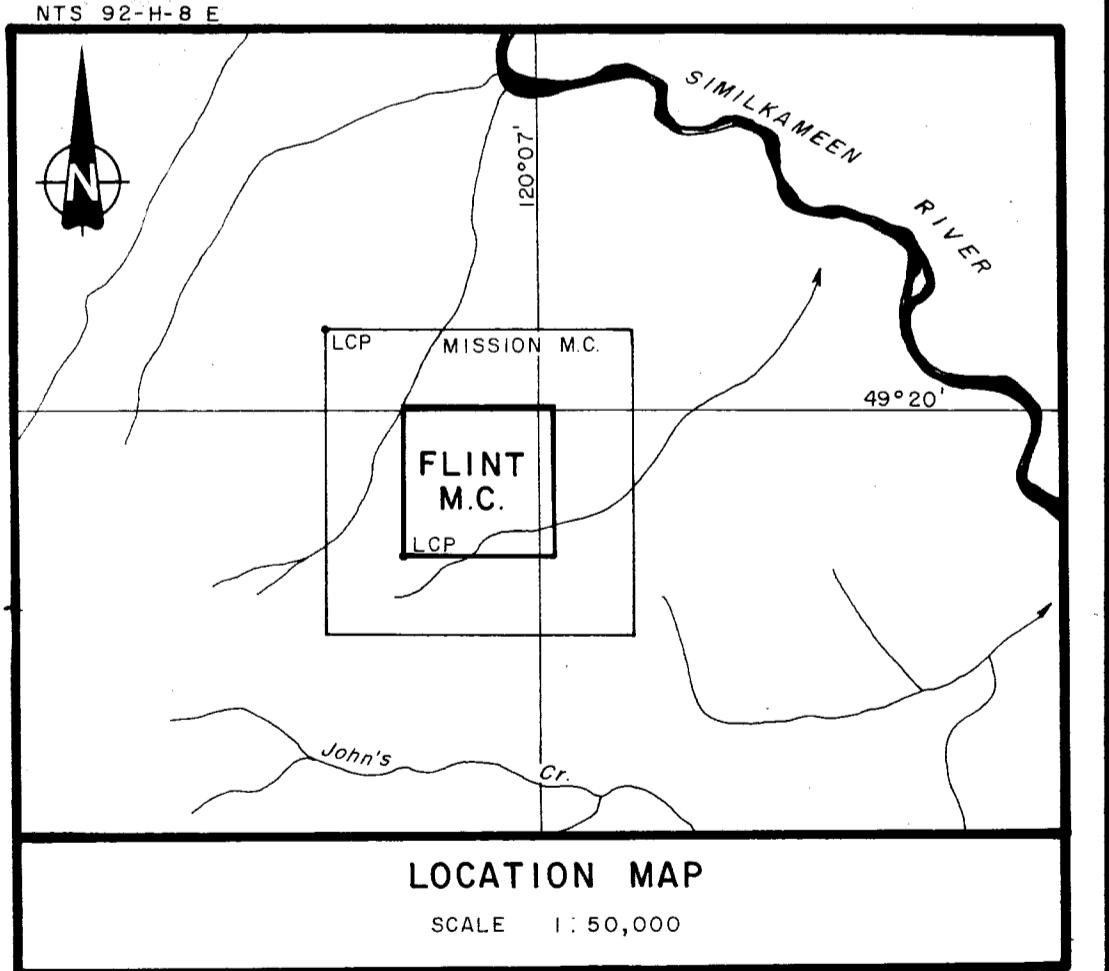
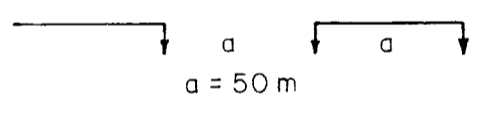
**LEGEND**

- Grid station
- Stream
- Good gravel road
- 4WD road

**RESISTIVITY KEY**



INSTRUMENT : Huntec 70 Ltd. 2.5 Kw Pulse I.P. System



**AGIO RESOURCES CORPORATION**  
**FLINT CLAIMS**  
 OSOYOOS MINING DIVISION B.C.

**APPARENT RESISTIVITY**  
 OHM - METERS

<i>Glen E. White</i> geophysical consulting & services Ltd.	INTERPRETED BY : G.E.W.
	DRAWN BY : F.W.F.
	CHECKED BY :
	DATE : OCTOBER 19 1980
	FIGURE NO. 3

Report on  
 FLINT CLAIMS  
 By GLEN E. WHITE - B.Sc. - GEOPHYSICIST

MINERAL RESOURCES BRANCH  
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9222  
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