

6050

GEOPHYSICAL REPORT #6050
On An
INDUCED POLARIZATION SURVEY
On Behalf Of
ENVOY RESOURCES LTD.

ULLA mineral claims, Stamp Lake area, Nicola
Mining Division, B. C.

Lat. 50°²⁴19'N Long. 120°27'W N.T.S. 92 I/8

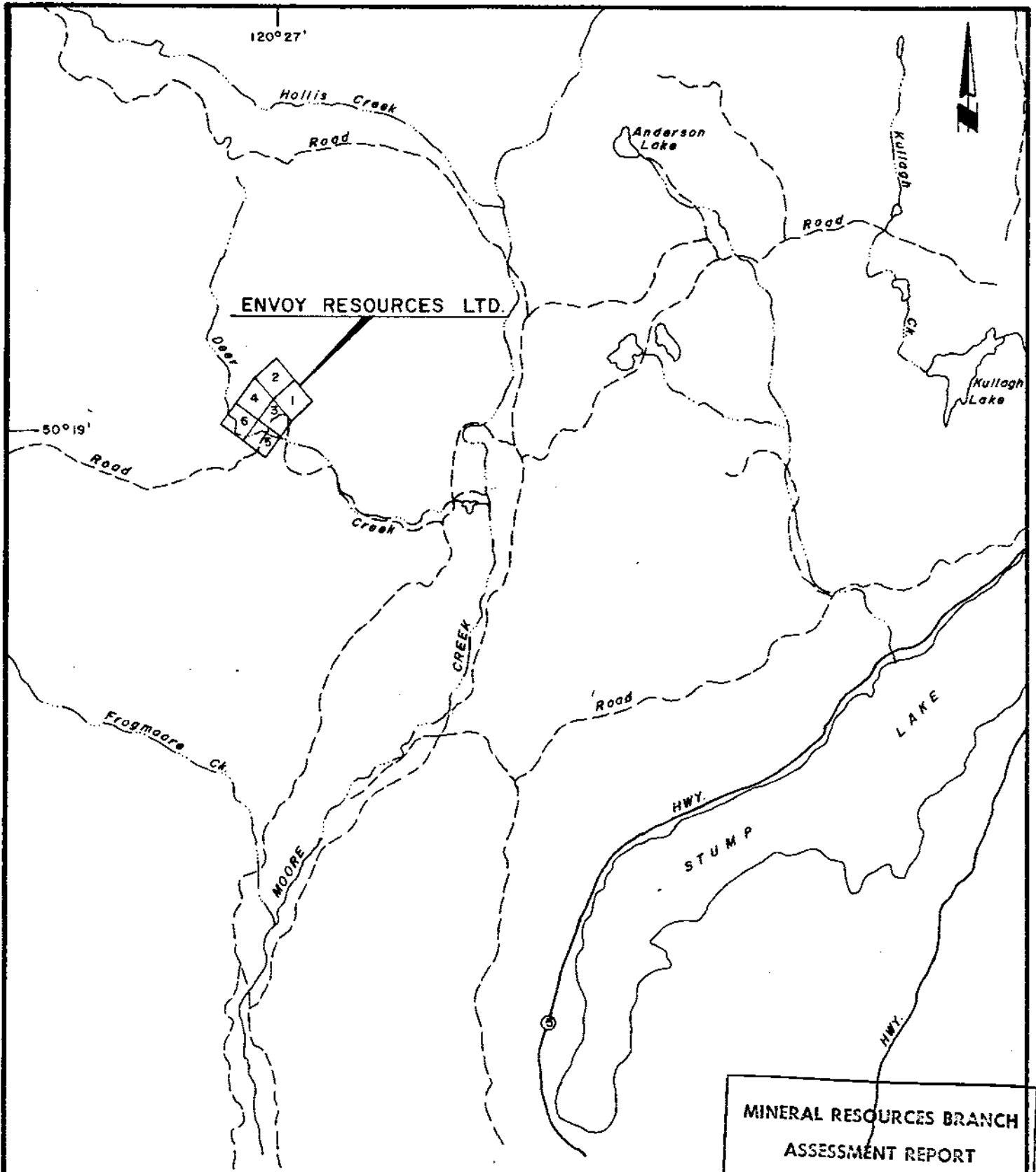
AUTHOR: Glen E. White, B.Sc., Geophysicist

DATE OF WORK: September 22-25, 1976

DATE OF REPORT: October 22, 1976

ULLA
92I/8W

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6050



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 LOCATION AND CLAIM MAP

Glen E. White
 geophysical consulting
 Envoy Resources Ltd.

N.T.S. 92 1/8
 SCALE 1:50,000

OCT. 20, 1976
 FIG. 1

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INTRODUCTION

A limited program of induced polarization surveying was conducted over the ULLA 1 - 6 mineral claims by Glen E. White Geophysical Consulting & Services Ltd. on behalf of Envoy Resources Ltd. during the period September 22-25, 1976.

The survey was undertaken to examine a localized area of high copper geochemical values from which float-bearing molybdenum mineralization has been recovered.

PROPERTY

The property consists of mineral claims ULLA 1 - 6 located under the two part staking system, as illustrated on Figure 1.

LOCATION AND ACCESS

The ULLA mineral claims are located west of Moore Creek on Deer Creek some 5 miles directly west of the northern end of Stump Lake, Latitude 50°19'N, Longitude 120°27'W, N.T.S. 92 I/8.

Access to the mineral claims is by dirt road from either the north or south ends of Stump Lake.

GENERAL GEOLOGY

The ULLA claims lie on the eastern flank of the Moore Creek batholith of Jurassic age which extends from Nicola Lake in the south to Edith Hill in the north forming a cigar-like body some 30 miles long. The batholith is part of the Coast Intrusions consisting of granites, granodiorite and gabbro. Locally the rocks have been designated as chlorite schist-quartz-mica schist and amphibolite generally gneissic in character.

SURVEY SPECIFICATIONS

Survey Grid

The copper geochemical anomaly was located by a regional geochemical survey on lines spaced 800 feet apart. The geophysical crew used these lines as control in checking the soil anomaly. Some 1.5 miles of surveying was completed.

Electrode Array

The data was obtained using the Wenner array. This array consists of two outside current stakes and C_1 and C_2 and two inside potential electrodes P_1 and P_2 which are spaced equal distance apart, known as the "a" spacing, and moved together along a traverse line. A 200 foot "a" spacing was used for this survey.

Induced Polarization System

A time domain Hunttec MK III receiver and a LOPO M-3 transmitter were used for this survey. The data recorded in the field consisted of the current (I) flowing through electrodes C₁ and C₂, the primary voltage (V_p) appearing between electrodes P₁ and P₂ during the "current on" part of the cycle and four segments, M₁, M₂, M₃ and M₄, in percent of the secondary voltage (V_s) during the "current off". A continuous cycle time of 4 seconds was used with approximately 1.5 seconds on and 0.5 seconds off with the current then reversing in polarity to complete the cycle until stable readings were obtained. A period of 20 msec. and a delay time of 60 msec. were used. The four M factors were then numerically summed to obtain the area under the decay curve in milliseconds.

DISCUSSION OF RESULTS

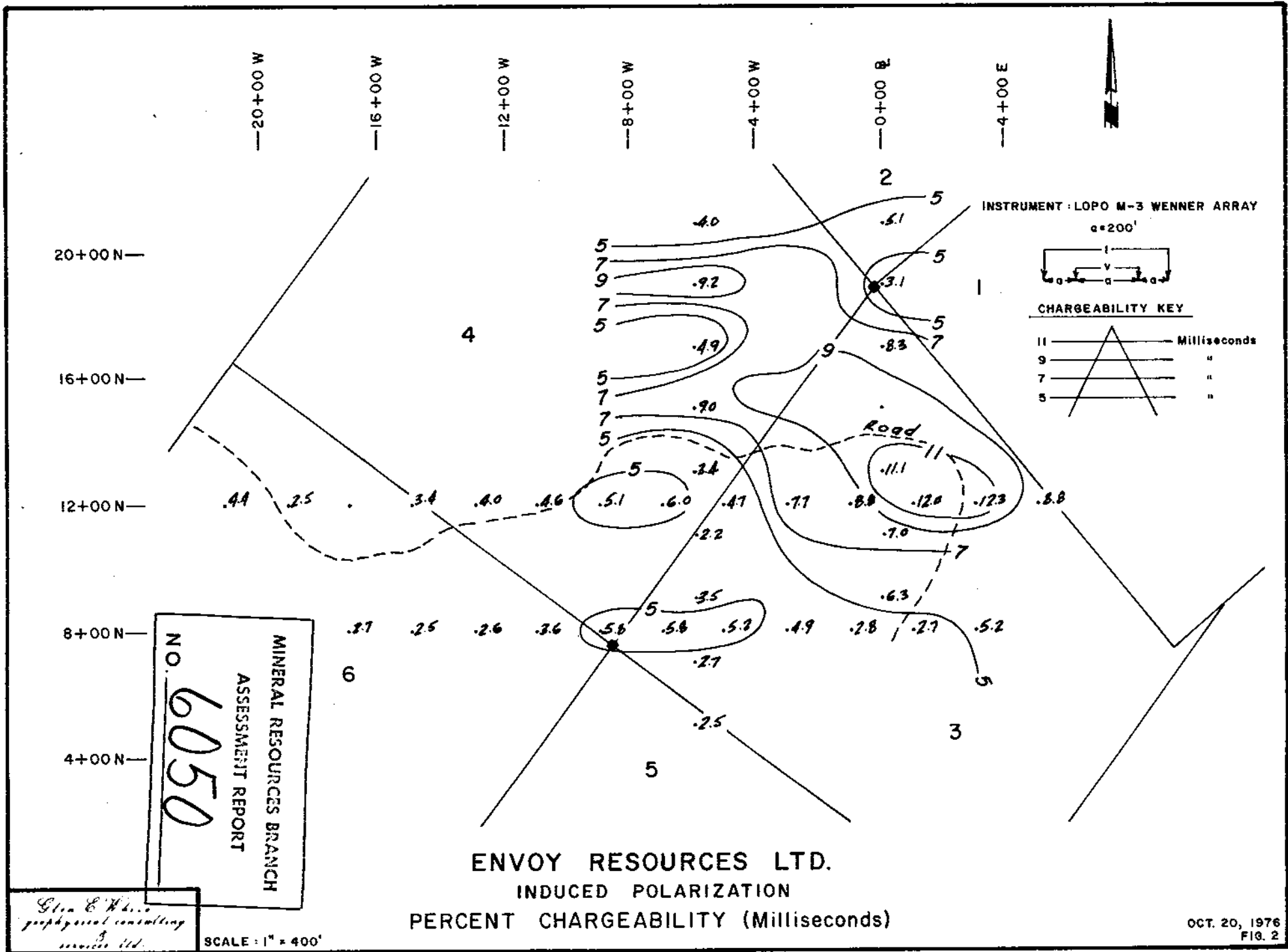
The induced polarization, chargeability, apparent resistivity and geochemical copper data are illustrated on Figures 2 - 4 respectively.

The copper geochemical data, Figure 4, shows the copper anomaly which was examined. It reached a high of 1050 p.p.m. copper above a background of some 60 p.p.m.

The chargeability data reached a high of 12.3 msec. above a background of some 2.5 msec. The chargeable source materials appear to lie in an east-west direction and thus may reflect fracture controlled mineralization.

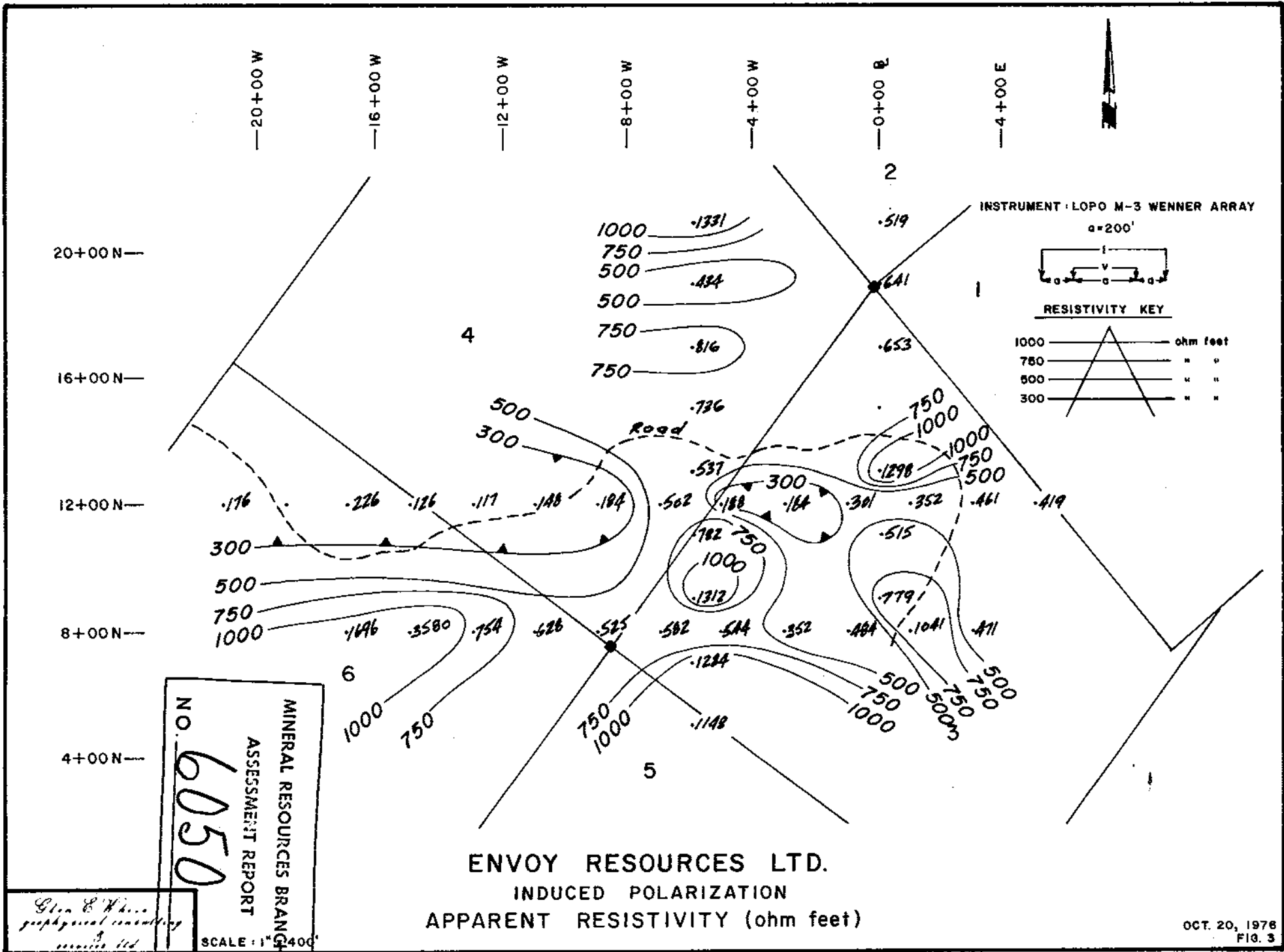
The apparent resistivity data shows moderate changes from 117 ohm-feet to 3580 ohm-feet which in general reflects variations in the characteristics of the overburden and depth to bedrock. The resistivity contours are also biased in an east-west direction which would suggest the trends of the underlying lithology or structure.

Correlation of the chargeability and geochemical data shows that the copper anomaly is situated along the southern flank of the high chargeability values. This would suggest either downslope ionic movement or displacement due to glacial erosion. However, the geochemical anomaly could be insitue as it is in an area of 4 - 6 msec. The higher chargeability values may possibly be caused in part by flanking pyrite mineralization.



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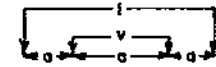


20+00 W — 16+00 W — 12+00 W — 8+00 W — 4+00 W — 0+00 E — 4+00 E

20+00 N —
16+00 N —
12+00 N —
8+00 N —
4+00 N —

INSTRUMENT: LOPO M-3 WENNER ARRAY

a=200'



RESISTIVITY KEY

1000	ohm feet
750	" "
500	" "
300	" "

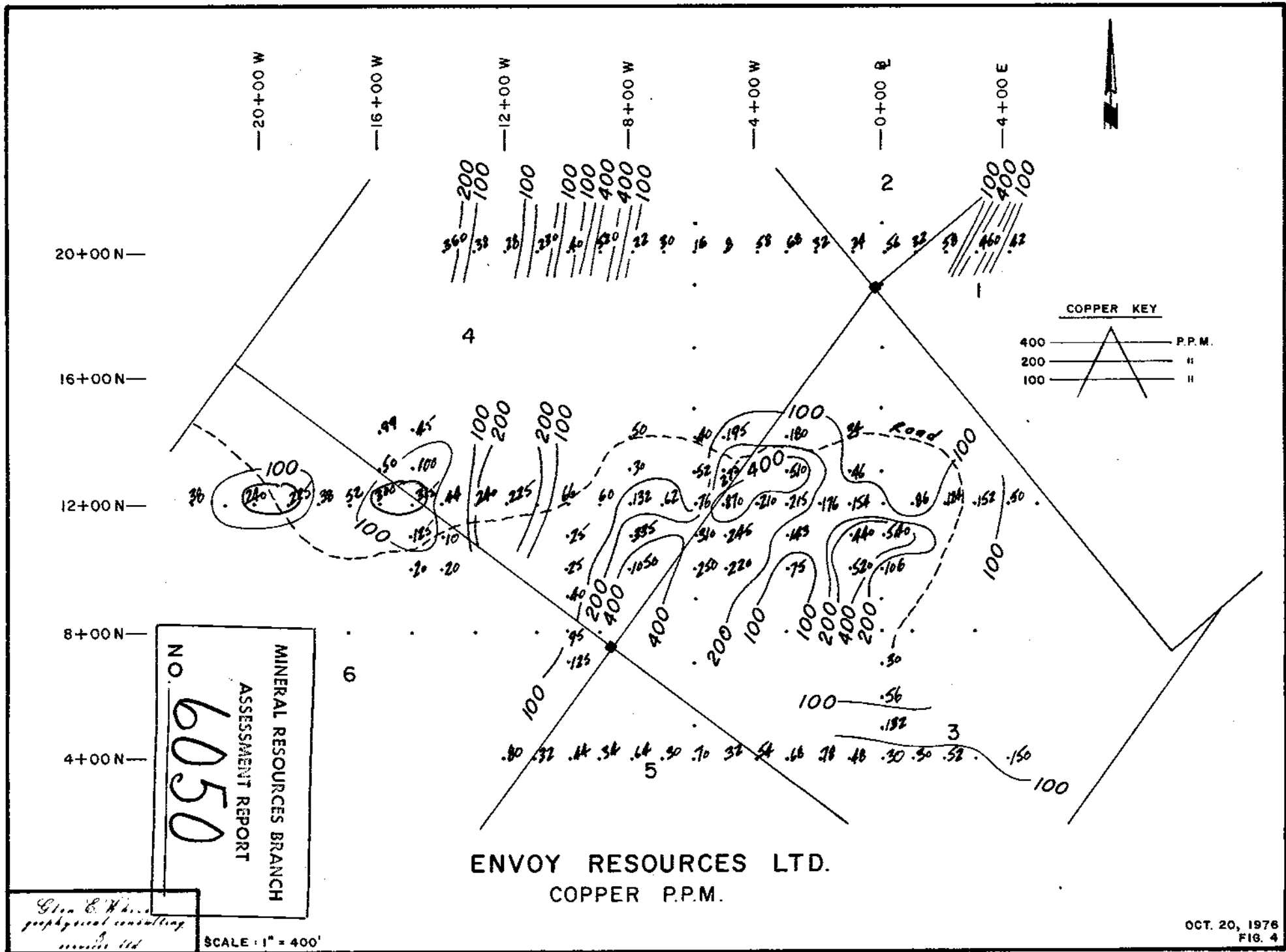
ENVOY RESOURCES LTD.
INDUCED POLARIZATION
APPARENT RESISTIVITY (ohm feet)

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SCALE: 1"=2400'

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FIG. 3



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SCALE 1" = 400'

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COPPER P.P.M.


OCT. 20, 1976
FIG. 4

CONCLUSION AND RECOMMENDATION

During the latter part of September 1976, a limited amount of induced polarization surveying was conducted to test a copper geochemical anomaly on the ULLA claims on behalf of Envoy Resources Ltd.

The survey showed excellent correlation between the geochemical data and induced polarization chargeability anomaly. The geochemical anomaly lies along the southern flank of the chargeability high and may possibly be displaced downslope due to erosion or ionic movement. The area of high chargeability response, 12.3 milliseconds, should be tested by diamond drilling.

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



Glen E. White B.Sc.
Geophysicist

A P P E N D I X

Instrument Specifications

A. Induced Polarization Receiver

- (1) Type - Hunttec MK III time domain
- (2) Sensitivity - $V_p = 10^{-7}$ to 10^{-6} volts 1% resolution
 $V_p = 10^{-6}$ to 10 volts 0.1% resolution
- (3) Range - 30×10^{-6} to 10 volts
- (4) Self Potential - \neq 1 volt
- (5) M Factor - 0.1%
- (6) Power - 0.7 ampere at 12 volts
Rechargeable batteries
- (7) Size - 16" x 9" x 5 3/4"

B. Induced Polarization Transmitter

- (1) Type - Hunttec LOPO M-3
- (2) Maximum Current - 1.5 A D.C.
- (3) Maximum Voltage - 1,800 V D.C.
- (4) Load Power - \neq 160 watts @ 75% efficiency
- (5) Load Current - Continuously adjustable
- (6) Cycle Time - 2, 4, 8 or 16 seconds

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.

Five years Consulting Geophysicist.

Active experience in all Geologic provinces of Canada.

COST BREAKDOWN

<u>Personnel</u>	<u>Period</u>	<u>Wages</u>	<u>Total</u>
C. Ashworth.....	Sept. 22-25/76.....	\$90/day.....	\$360.00
C, Beach.....	"....."	80/day.....	320.00
L. Durkin.....	"....."	75/day.....	300.00
R. Stewart.....	"....."	70/day.....	280.00
Vehicle including gas.....			140.00
Meals and Accomodations.....			400.00
Instrument Lease.....			240.00
Interpretation and Report.....			<u>450.00</u>
Total.....			<u>\$2490.00</u>