5776

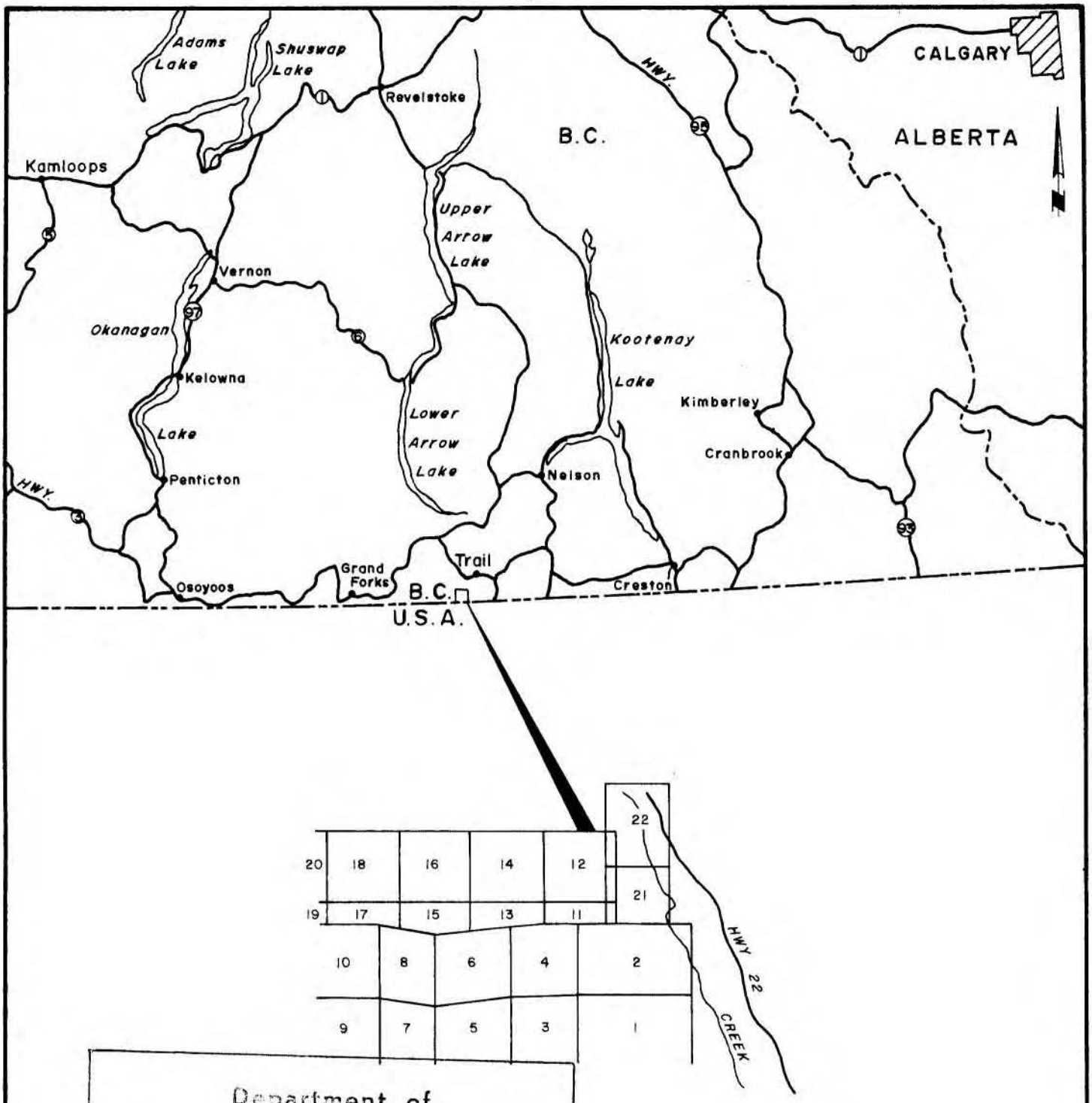
GEOPHYSICAL REPORT
On An
INDUCED POLARIZATION SURVEY
On Behalf Of
BOW RIVER RESOURCES LTD.

Pat mineral claims, Rossland area, Trail Creek Mining Division, B. C.
Lat. 49°00'30"N Long. 117°52'W N.T.S. 82 C/4

AUTHOR: Glen E. White B.Sc.
DATE OF WORK: December 8 - 13, 1975
DATE OF REPORT: January 7, 1976

#5776

Part 1 (of 2)



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 5776 MAP 1
PART A

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PAT CLAIMS

LOCATION AND CLAIMS MAP

SCALE : LOCATION MAP 1" = 40 MILES APPROX CLAIMS MAP 1/2" = 1500 APPROX.

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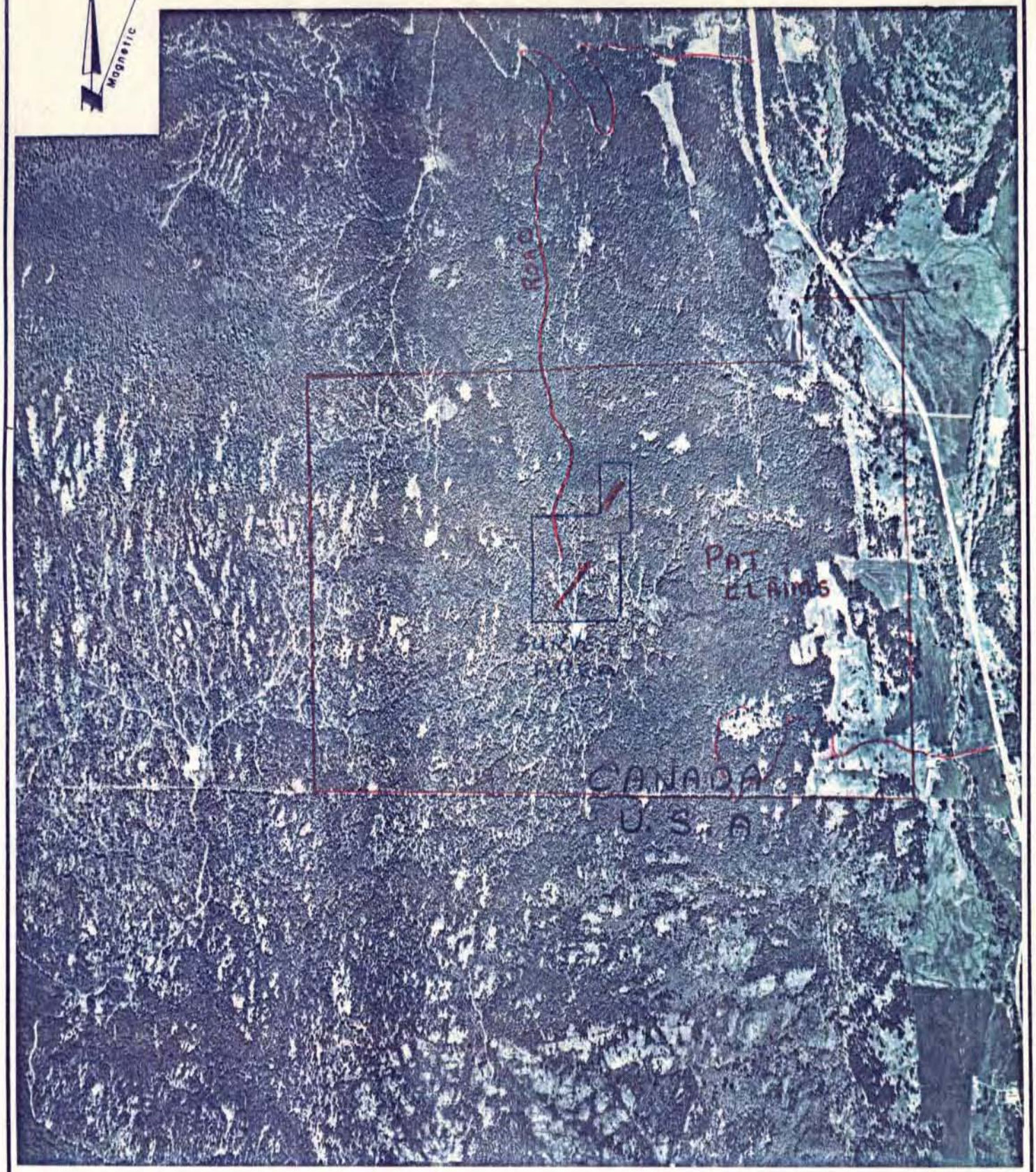
DEC. 22, 1975
FIG. 1



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PHOTOGRAPH LOCATION MAP

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Scale 1" = 1320'

DEC. 22, 1975

FIG. 1A

C O N T E N T S

Illustrations

INTRODUCTION

This report discusses a limited amount of induced polarization surveying conducted over an area of reconnaissance lead, zinc and copper geochemical anomalies on the Pat mineral claims Rossland area, B.C. The reconnaissance geochemical anomalies were located during the fall of 1975 by a survey which covered an area around an old working known as the Sunset Showing. The anomaly covered by this report is approximately 2500 feet northwest of the old showing. The survey was conducted on behalf of Bow River Resources Ltd. registered owner of the Pat mineral claims.

PROPERTY

The property consists of 22 contiguous mineral claims as illustrated in Figure 1. This survey covered an area approximately the size of one mineral claim as shown on the accompanying maps.

LOCATION AND ACCESS

The Pat mineral claims are located on the west side of Highway 22 bounding the Canada - U.S.A. border some 7 miles south of Rossland, B.C. Latitude 49°00'30"N Longitude 117°52'W, N.T.S. 82 C/4.

Access to the survey area is by an unimproved old logging road as illustated in Figure 1A - a distance of some 2.5 miles.

GENERAL GEOLOGY

The general area of the property is underlain by the Mount Roberts Formation of Carboniferous age consisting of argillites with interbedded siltstones, greywackes, conglomerates and limestones. Overlying this is the Rossland group of Lower to Middle Jurassic age consisting of acid to basic flows, flow breccias, augite porphyries and minor interbedded siltstones. These lithologic sequences appear to be striking approximately 038° and dipping 40° north. The Sheppard intrusions of leucocratic granite and a time-related intrusive of porphyritic diorite cut the above sedimentary rocks probably during the Lower Tertiary period. Further general geological information can be obtained from G.S.C. Memoirs 77 and 308.

SURVEY SPECIFICATIONS

Survey Grid

The survey grid was constructed with the same coordinates as the reconnaissance geochemical survey grid and consisted of northsouth lines spaced one hundred feet apart and numbered at 100 foot intervals. Approximately 1.75 line miles of traverse lines were established.

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 100 foot "a" spacing was used for this survey.

Induced Polarization System

A time domain Huntec 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 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 four segmetns, M_1, M_2, M_3 and M_4, in percent of the secondary voltabe (V_s) during the current off. A continuous cycle time of 4 seconds was used with approximately 1.5 seconds on and 0.5 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 15 msec. were used. The four M factors were then numerically summed to obtain the area under the decay curve in milliseconds.

DISCUSSION OF RESULTS

A limited amount of detail geochemical soil sampling was completed by Bow River Resources Ltd. over the reconnaissance geochemical anomaly. The coordinated zinc geochemical values for both surveys is shown on Figure 4. The geochemical patterns thus detected show excellent agreement with the reconnaissance anomalies as illustrated on Figure 5.

The induced polarization chargeability data delineated a high of 10.3 milliseconds above a background of some 1.5 milliseconds. This high value is part of an anomalous trend which shows excellent correlation with the geochemical data. Examination by the author of mineralization

unearthed in some recently completed bulldozer trenches indicated the presence of galena, sphalerite and chalcopyrite with very little pyrite. Thus, the low order chargeability values in the range of 4 to 7 milliseconds may possibly indicate higher concentrations of galena-sphalerite mineralization as sphalerite is not chargeable and galena gives a low response.

Correlation of the geochemical data with the 10.3 millisecond chargeability anomaly indicates an increase in copper geochemistry in this area. Thus, a higher ratio of chalcopyrite, which gives a moderate chargeability response, to lead-zinc mineralization may possibly exist in this zone. Plate 1 shows the results of a larger "a" spacing, "a" = 200 feet, over this anomaly. The chargeability values do not peak as in the 100 foot "a" spacing but appear to be relatively symetrical about a resistivity low of some 2000 ohm-feet. Notes taken during the survey indicate that the 1012 p.p.m. zinc value shown on Figure 4 is at the base of approximately a 50 foot bank downslope of the I.P. anomaly.

The apparent resistivity data detected high values in the order of 10,000 to 20,000 ohm-feet which is usually indicative of limestone. The lower values in

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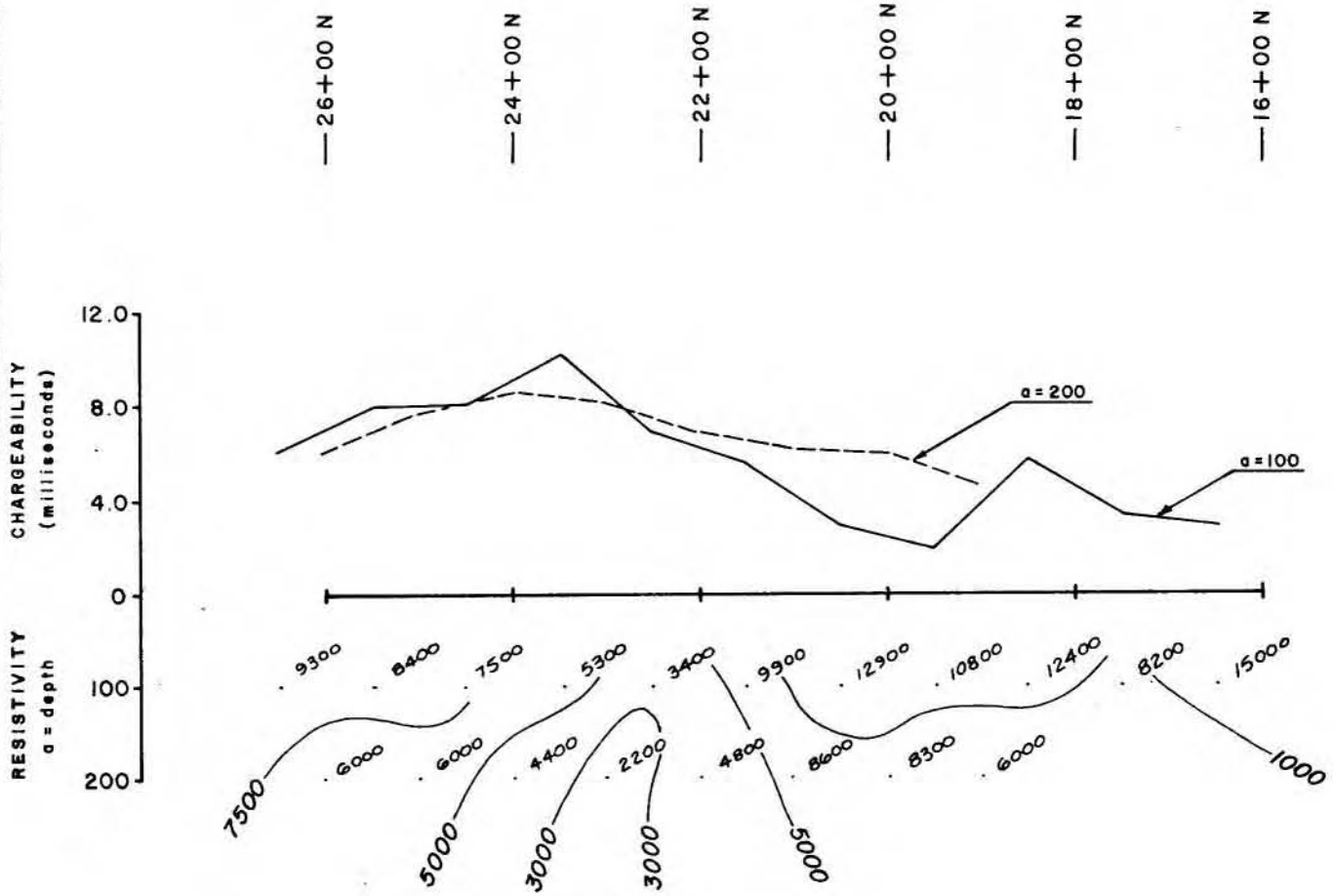
DETAILED INDUCED POLARIZATION PROFILES

LINE 14 + 00 W



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Scale: 1" = 200'

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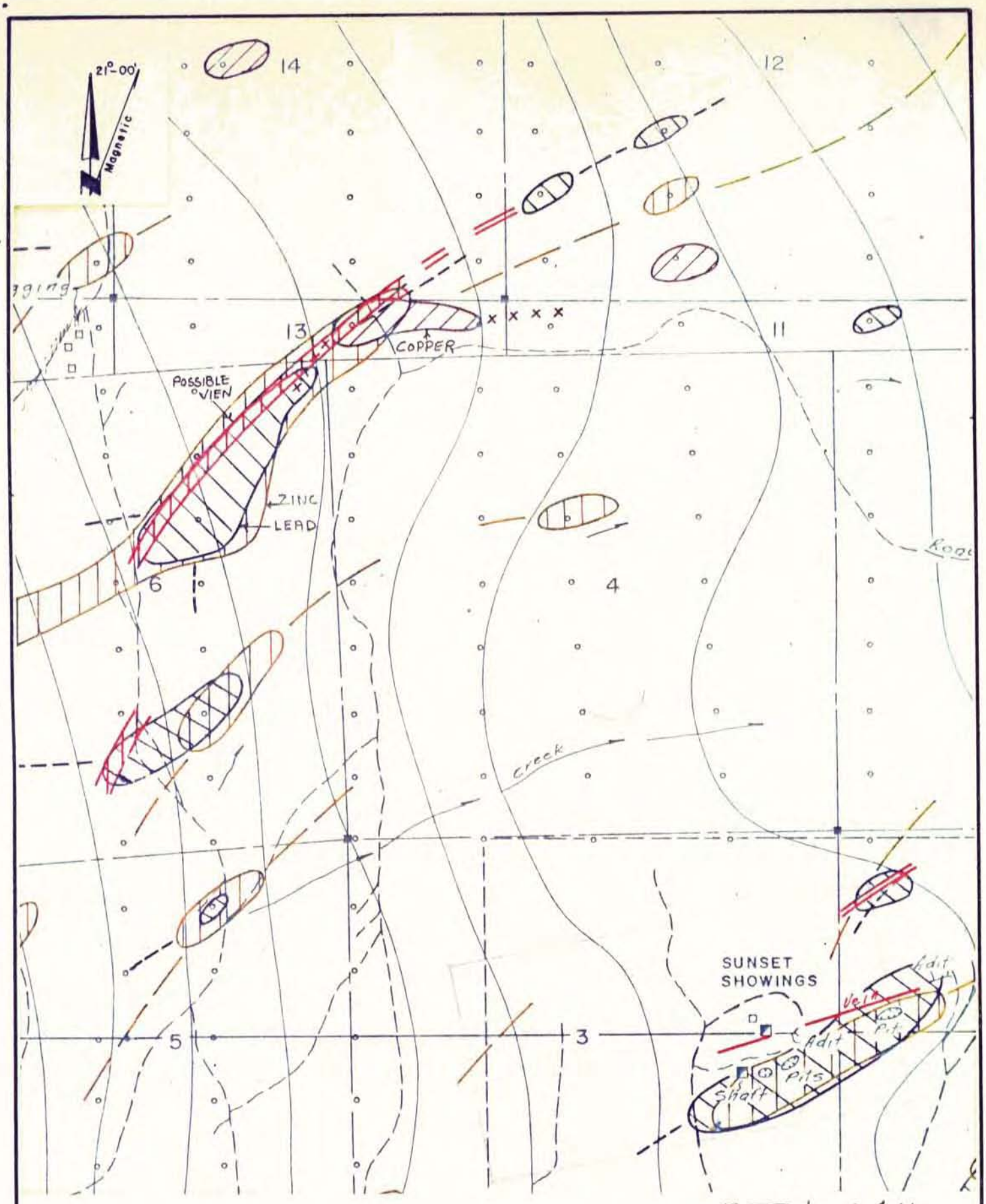
PLATE I



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GEOCHEMICAL INTERPRETATION. MAP

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Scale: 1" = 400'

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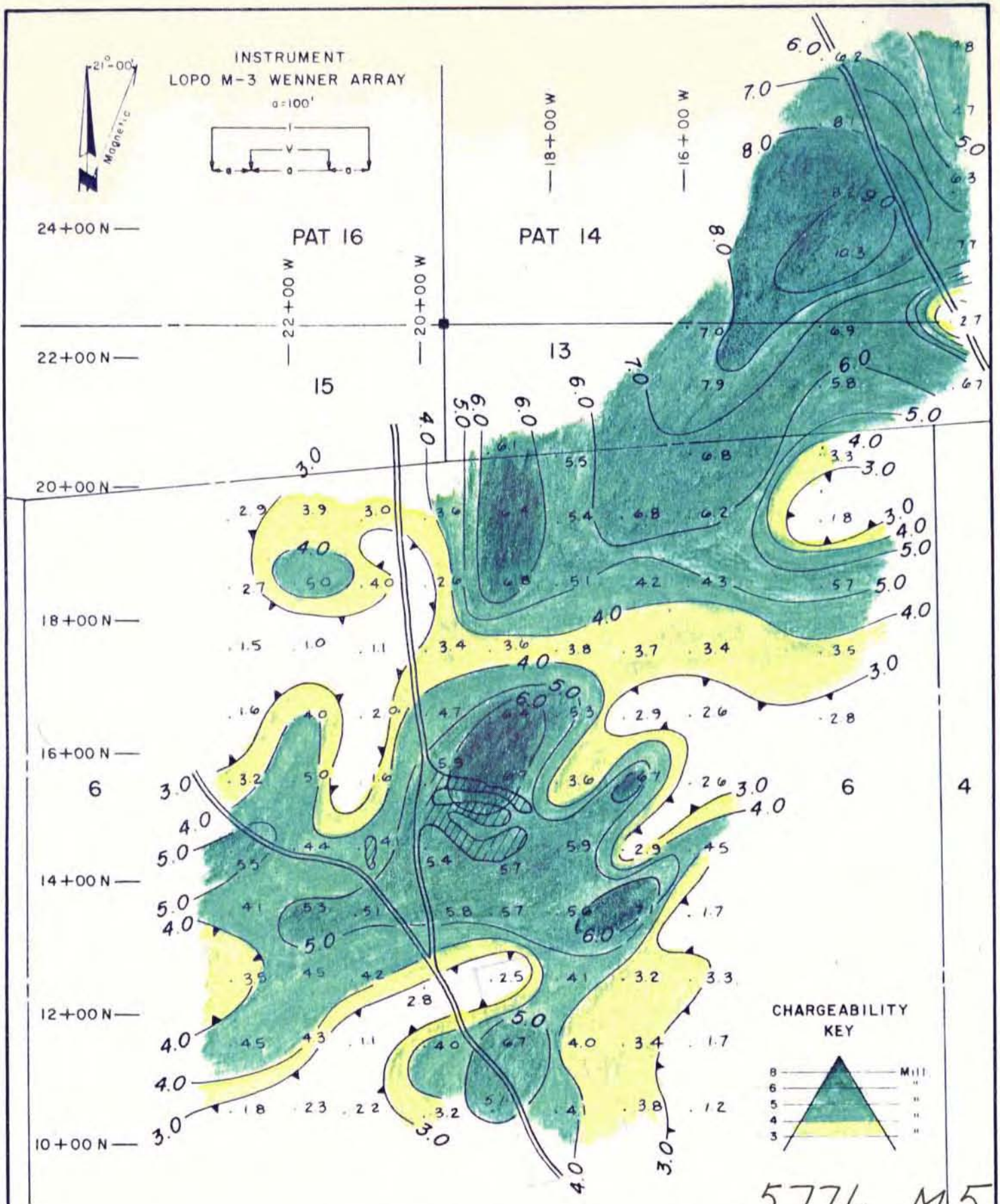
FIG. 5



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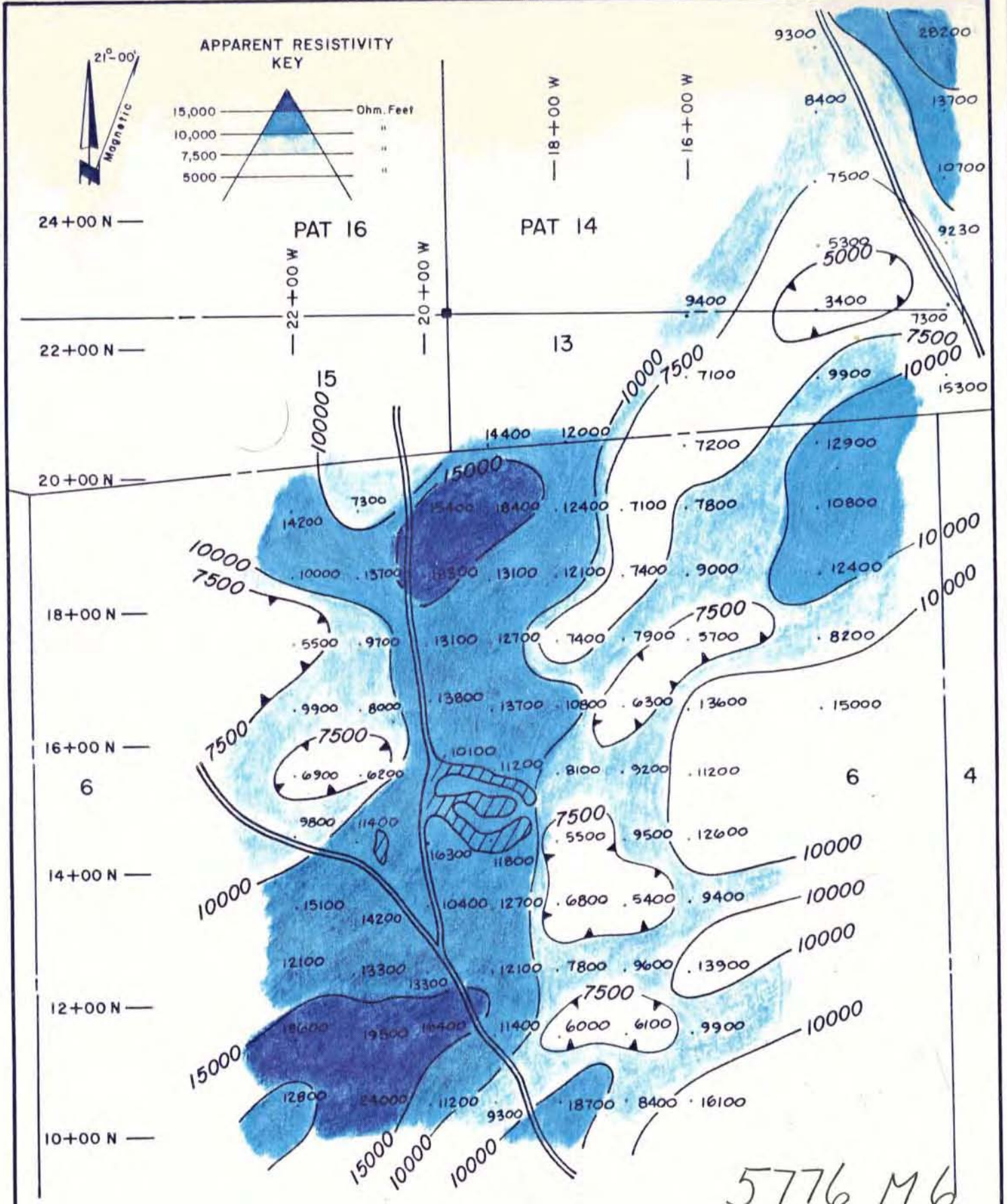
INDUCED POLARIZATION

PERCENT CHARGEABILITY (Milliseconds)

Scale 1" = 200'

DEC 22, 1975

FIG 2



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Part 1 of 2

INDUCED POLARIZATION

APPARENT RESISTIVITY (Ohm Feet)

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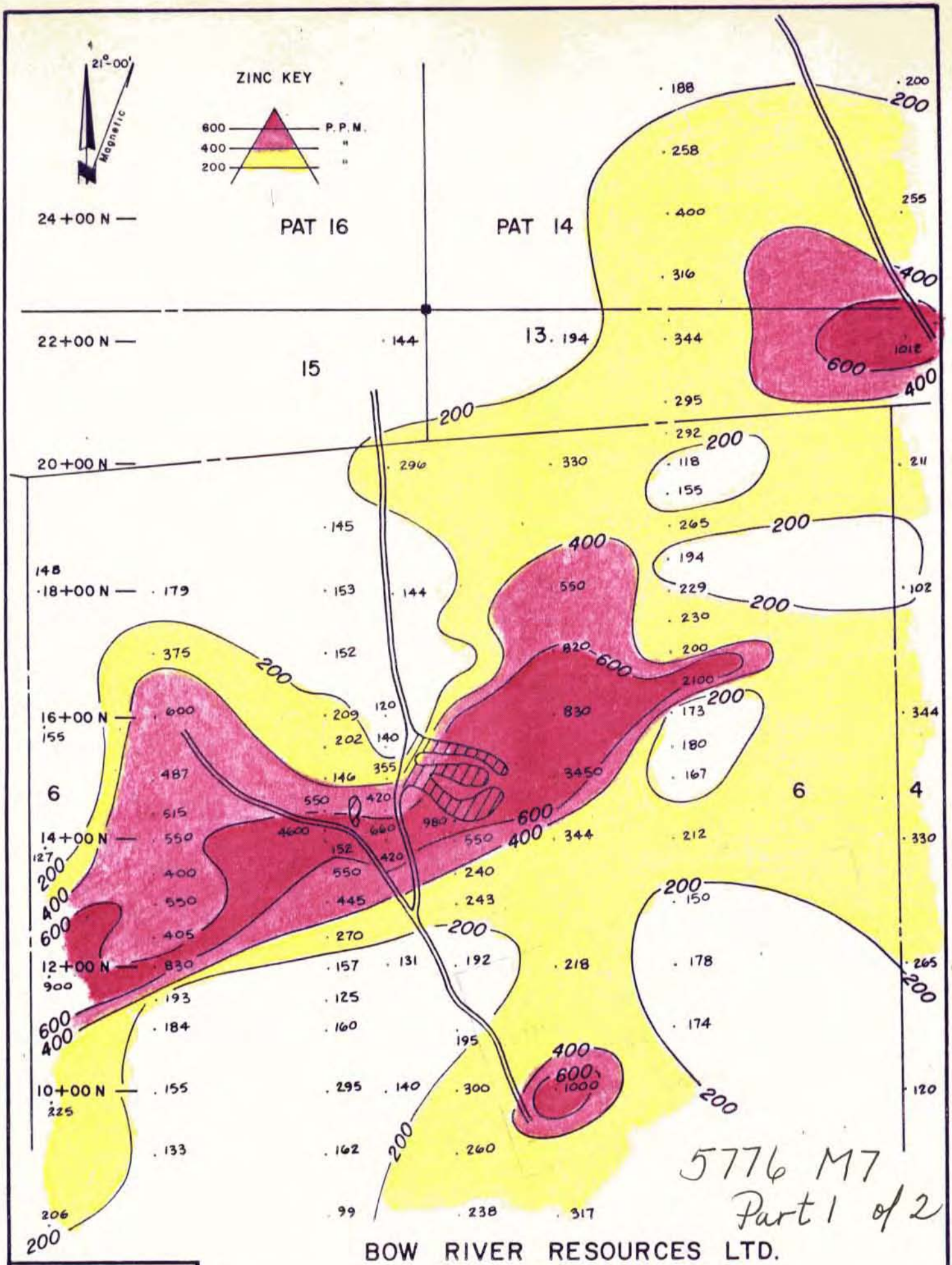
Scale : 1" = 200'

DEC. 22, 1975

FIG. 3



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Part 1 of 2

the order of 5000 to 7500 ohm-feet may possibly reflect a different rock type. The resistivity values also show a general trend in the northeast-southwest direction parallel to the chargeability and geochemical data.

CONCLUSION

During the month of December 1975 a limited amount of induced polarization surveying was conducted over a previously located geochemical anomaly on the Pat mineral claims, Rossland area, B.C.

The survey detected a weak chargeability anomaly which shows excellent correlation with high geochemical vlaues of lead and zinc. The highest chargeability value, 10.3 milliseconds, is associated with an area of low resistivity and higher copper geochemical values which may possibly indicate an increase in copper mineralization in this area. Thus it is recommended that this zone be tested by diamond drilling, in at least two locations, along its length.

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 - Huntec 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 - ± 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 - Huntec LOPO M-3

(2) Maximum Current - 1.5 A D.C.

(3) Maximum Voltage - 1,800 V D.C.

(4) Load Power - ± 160 watts @ 75% efficiency

(5) Load Current - Continuously adjustable

(6) Cycle Time - 2, 4, 8 or 16 seconds

CERTIFICATION

and

STATEMENT OF QUALIFICATIONS

To Whom It May Concern:

I, GLEN E. WHITE, of Richmond, B. C. hereby certify:

(1) That I majored in Exploration Geophysics and Geology at the University of British Columbia and graduated with a B.Sc. degree in 1966.

(2) That I have been engaged in exploration, geophysics, geochemistry and geology for 14 years as follows:

(a) Pregraduate experience with Anaconda American Brass - specialized in geochemical methods and geophysics.

(b) Two years Mining Geophysicist Sulmac Explorations and Spartan Air Services, porphyry, massive sulphide and radiometric experience in Cordilleran and Precambrian rocks.

(c) One year Mining Geophysicist W. P. McGill & Associates N.W.T. and B.C.

(d) Two years Mining Geophysicist Geo-X Surveys airborne, magnetic and radiometric surveys.

(e) Two years Chief Geophysicist Tri-Con Exploration Surveys.

(f) Four years Consulting geophysicist and Exploration Services in all geologic provinces of Canada.

(3) That this report is based upon data obtained under my supervision and that I have no interest in the Pat mineral claims or the securities of Bow River Resources Ltd.

DATED this 7th day of January , 19 76.

Glen E. White B.Sc.

COST BREAKDOWN

Personnel	Date	Wages	Total
G. White	Dec. 8-13/75	$85/day	$510.00
E. Cruz	"	80/day	480.00
T. Johnson	"	75/day	450.00
G. Tomlinson	"	67/day	402.00
Meals and Accomodations			600.00
Instrument Lease			510.00
Vehicle 4x4 including gas			380.00
Interpretation, Maps and Reports			650.00
TOTAL			$3982.00

J. Poikins, Don Peel Sept 3-8, 1975 Geochemical 639.00

4,621.00.