REPORT ON THE INDUCED POLARIZATION AND RESISTIVITY SURVEY ON THE COPPER 1-4 CLAIMS (CRATER LAKE)

TELKWA AREA, B.C.

OMINECA MINING DIVISION

FOR

MECCA MINERALS LTD.

N.T.S. 93L/11E

Latitude: 54°31' Longitude:127°07'

BY

PAUL A. CARTWRIGHT, B.Sc., Geophysicist
FRANK DiSPIRITO, B.A.Sc., Geophysicist

September 23, 1980

TABLE OF CONTENTS

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NOTES ON THE THEORY, METHOD OF FIELD OPERATION, AND PRESENTATION OF DATA FOR THE INDUCED POLARIZATION METHOD

Induced Polarization as a geophysical measurement refers to the blocking action or polarization of metallic or electronic conductors in a medium of ionic solution conduction.

This electro-chemical phenomenon occurs wherever electrical current is passed through an area which contains metallic minerals such as base metal sulphides. Normally, when current is passed through the ground, as in resistivity measurements, all of the conduction takes place through ions present in the water content of the rock, or soil, i.e. by ionic conduction. This is because almost all minerals have a much higher specific resistivity than ground water, The group of minerals commonly described as "metallic", however, have specific resistivities much lower than ground waters. The induced polarization effect takes place at those interfaces where the mode of conduction changes from ionic in the solutions filling the interstices of the rock to electronic in the metallic minerals present in the rock.

The blocking action or induced polarization mentioned above, which depends upon the chemical energies necessary to allow the ions to give up or receive electrons from the metallic surface, increases with the time that a d.c. current is allowed to flow through the rock; i.e. as ions pile up against the metallic interface the resistance to current flow increases. Eventually, there is enough polarization in the form of excess ions at the interfaces, to appreciably reduce the amount of current flow through the metallic particle. This polarization takes place at each of the infinite number of solution-metal interfaces in a mineralized rock.

When the d.c. voltage used to create this d.c. current flow is cut off, the Coulomb forces between the charged ions forming the polarization cause them to return to their normal position. This movement of charge creates a small current flow which can be measured on the surface of the ground as a decaying potential difference.

From an alternate viewpoint it can be seen that if the direction of the current through the system is reversed repeatedly before the polarization occurs, the effective resistivity of the system as a whole will change as the frequency of the switching is changed. This is a consequence of the fact that the amount of current flowing through each metallic interface depends upon the length of time that current has been passing through it in one direction.

The values of the per cent frequency effect or F.E. are a measurement of the polarization in the rock mass. However, since the measurement of the degree of polarization is related to the apparent resistivity of the rock mass it is found that the metal factor values or M.F. are the most useful values in determining the amount of polarization present in the rock mass. The MF values are obtained by normalizing the F.E. values for varying resistivities.

The induced polarization measurement is perhaps the most powerful geophysical method for the direct detection of metallic sulphide mineralization, even when this mineralization is of very low concentration. The lower limit of volume per cent sulphide necessary to produce a recognizable IP anomaly will vary with the geometry and geologic environment of the source, and the method of executing the survey. However, sulphide mineralization of less than one per cent by volume has been detected by the IP method under proper geological conditions.

The greatest application of the IP method has been in the search for disseminated metallic sulphides of less than 20% by volume. However, it has also been used successfully in the search for massive sulphides in situations where, due to source geometry, depth of source, or low resistivity of surface layer, the EM method cannot be successfully applied. The ability to differentiate ionic conductors, such as water filled shear zones, makes the IP method a useful tool in checking EM anomalies which are suspected of being due to these causes.

In normal field applications the IP method does not differentiate between the economically important metallic minerals such as chalcopyrite, chalcocite, molybdenite, galena, etc., and the other metallic minerals such as pyrite. The induced polarization effect is due to the total of all electronic conducting minerals in the rock mass. Other electronic conducting materials which can produce an IP response are magnetite, pyrolusite, graphite, and some forms of hematite.

In the field procedure, measurements on the surface are made in a way that allows the effects of lateral changes in the properties of the ground to be separated from the effects of vertical changes in the properties. Current is applied to the ground at two points in distance (X) apart. The potentials are measured at two points (X) feet apart, in line with the current electrodes is an integer number (n) times the basic distance (X).

The measurements are made along a surveyed line, with a constant distance (nX) betwen the nearest current and potential electrodes. In most surveys, several traverses are made with various values of (n); i.e. (n) = 1,2,3,4, etc. The kind of survey required (detailed or reconnaissance) decides the number of values of (n) used.

In plotting the results, the values of apparent resistivity, apparent per cent frequency effect, and the apparent metal factor measured for each set of electrode positions are plotted at the intersection of grid lines, one from the center point of the current electrodes and the other from the center point of the potential electrodes. (See Figure A.) The resistivity values are plotted at the top of the data profile, above the metal factor values. On a third line, below the metal factor values, are plotted the values of the percent frequency effect. The lateral displacement of a given value is determined by the location along the survey line of the center point between the current and potential electrodes. The distance of the value from the line is determined by the distance (nX) between the current and potential electrodes when the measurement was made.

The separation between sender and receiver electrodes is only one factor which determines the depth to which the ground is being sampled in any particular measurement. The plots then, when contoured, are not section maps of the electrical properties of the ground under the survey line. The interpretation of the results from any given survey must be carried out using the combined experience gained from field results, model study results and the theoretical investigations. The position of the electrodes when anomalous values are measured is important in the interpretation.

In the field procedure, the interval over which the potential differences are measured is the same as the interval over which the electrodes are moved after a series of potential readings has been made.

One of the advantages of the induced polarization method is that the same equipment can be used for both detailed and reconnaissance surveys merely by changing the distance (X) over which the electrodes are moved each time. In the past, intervals have been used ranging from 25 feet to 2000 feet for (X). In each case, the decision as to the distance (X) and the values of (n) to be used is largely determined by the expected size of the mineral deposit being sought, the size of the expected anomaly and the speed with which it is desired to progress.

The diagram in Figure A demonstrates the method used in plotting the results. Each value of the apparent resistivity, apparent metal factor, and apparent per cent frequency effect is plotted and identified by the position of the four electrodes when the measurement was made. It can be seen that the values measured for the larger values of (n) are plotted farther from the line indicating that the thickness of the layer of the earth that is being tested is greater than for the smaller values of (n); i.e. the depth of the measurement is increased.

The IP measurement is basically obtained by measuring the difference in potential or voltage (ΔV)obtained at two operating frequencies. The voltage is the product of the current through the ground and the apparent resistivity of the ground. Therefore in field situations where the current is very low due to poor electrode contact, or the apparent resistivity is very low, or a combination of the two effects; the value of (ΔV) the change in potential will be too small to be measurable. The symbol "TL" on the data plots indicates this situation.

In some situations spurious noise, either man made or natural, will render it impossible to obtain a reading. The symbol "N" on the data plots indicates a station at which it is too noisy to record a reading. If a reading can be obtained, but for reasons of noise there is some doubt as to its accuracy, the reading is bracketed in the data plot ( ).

In certain situations negative values of Apparent Frequency Effect are recorded. This may be due to the geologic environment or spurious electrical effects. The actual negative frequency effect value recorded is indicated on the data plot, however, the symbol "NEG" is indicated for the corresponding value of Apparent Metal Factor. In contouring negative values the contour lines are indicated to the nearest positive value in the immediate vicinity of the negative value.

The symbol "NR" indicates that for some reason the operator did not attempt to record a reading although normal survey procedures would suggest that one was required. This may be due to inaccessible topography or other similar reasons. Any symbol other than those discussed above is unique to a particular situation and is described within the body of the report.

PHOENIX GEOPHYSICS LIMITED.

METHOD USED IN PLOTTING DIPOLE-DIPOLE INDUCED POLARIZATION AND RESISTIVITY RESULTS

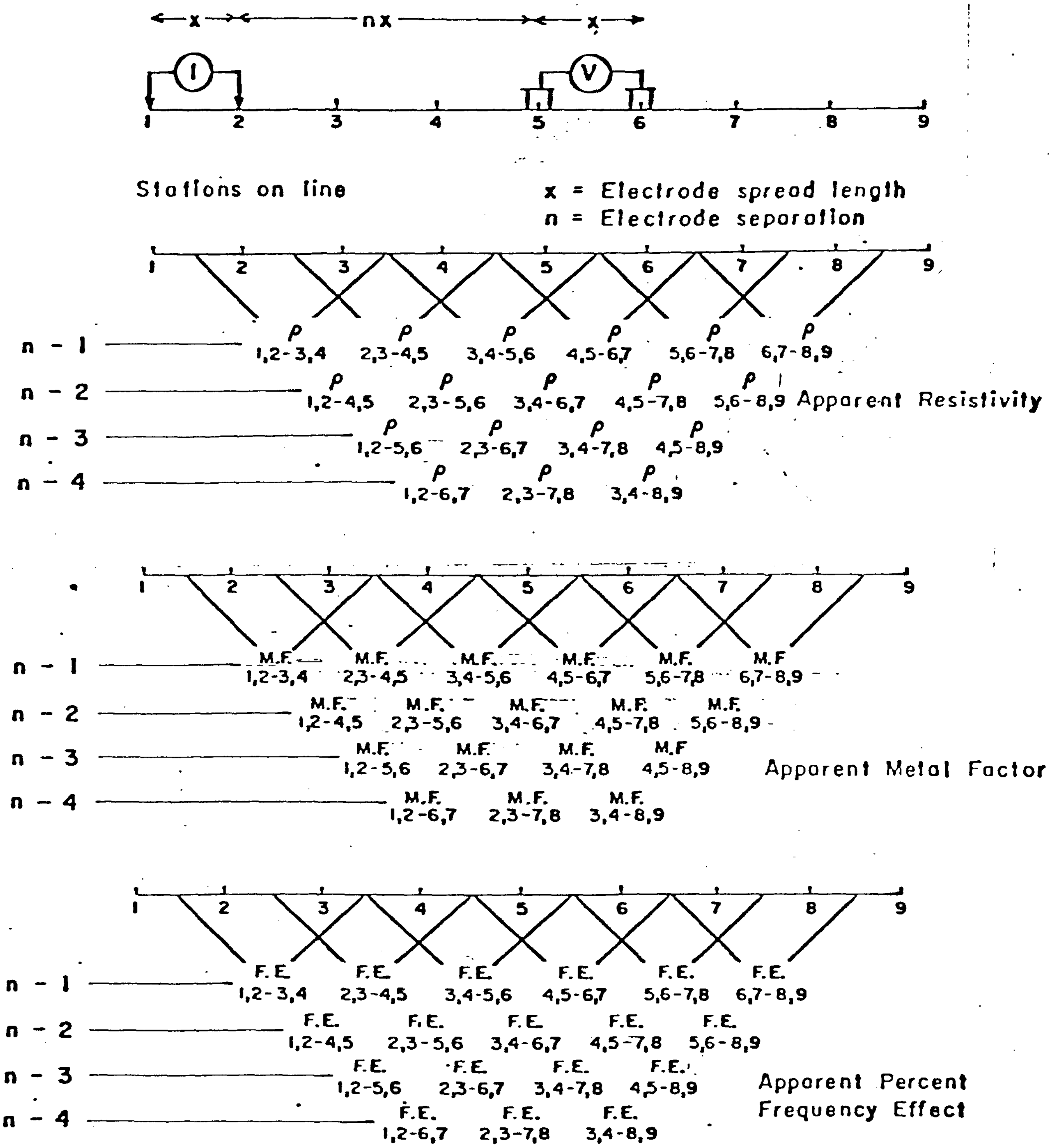


Fig. A

INTRODUCTION

An Induced Polarization and Resistivity survey has been carried out on the Copper 1-4 Claims, Omineca M.D. on behalf of Mecca Minerals Ltd.

The property is located approximately 20 kilometers south-southeast of Telkwa, B.C., at approximately 54° 31' north latitude and 127° 07' west longitude. Access is normally via helicopter from the town of Smithers, located 29 kilometers to the north.

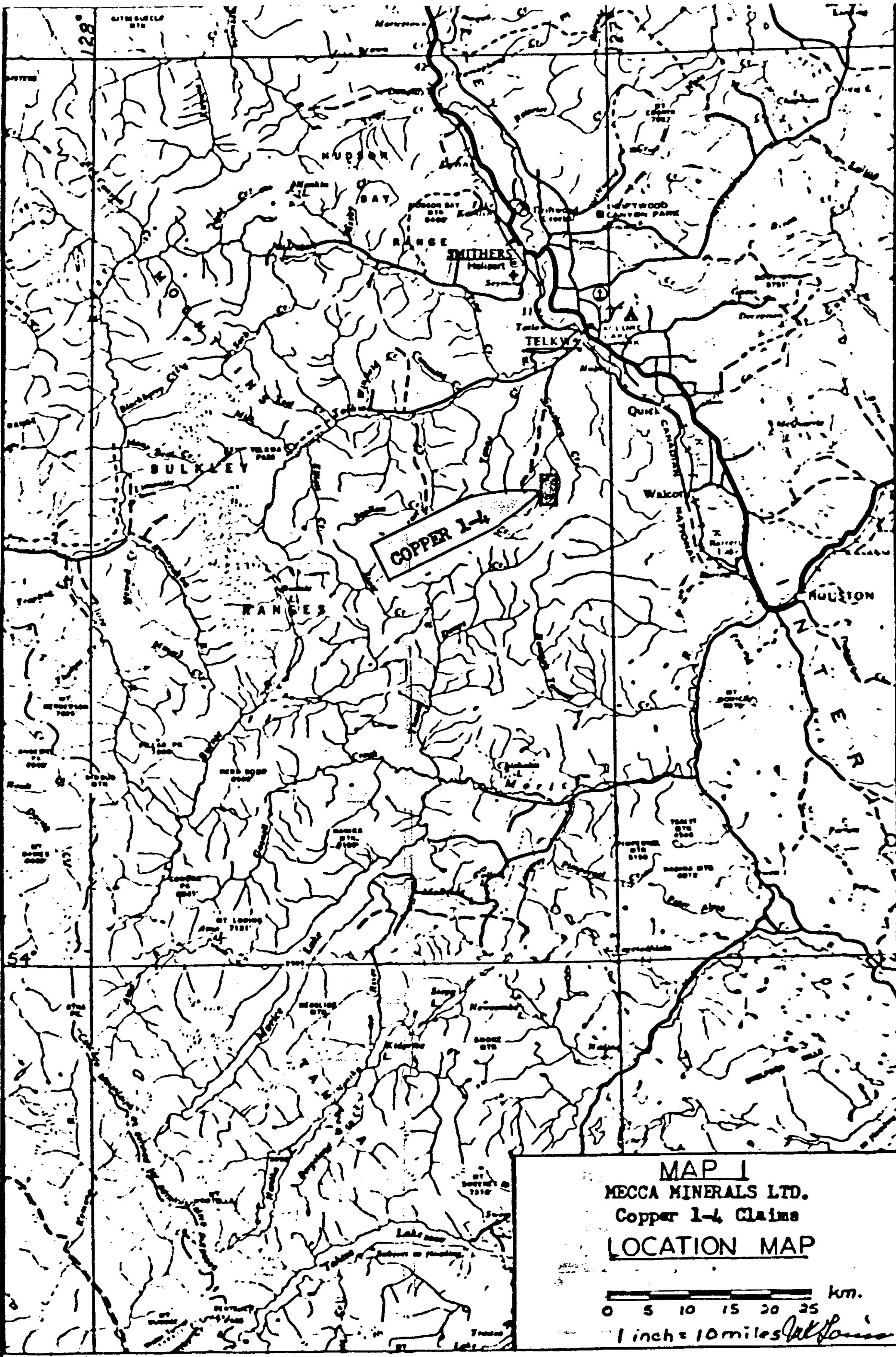
Interesting copper mineralization has been located in a showing on the property. The present IP and Resistivity survey was planned in order to outline additional mineralization.

Field work was completed during early August 1980, and utilized dipole-dipole array with a basic inter-electrode separation of 60 meters. Four dipole separations were recorded using Phoenix Model IPT-1 IP and Resistivity transmitter, and McPhar Model P660 IP and Resistivity receiver, operating at 0.3 Hz. and 5.0 Hz.

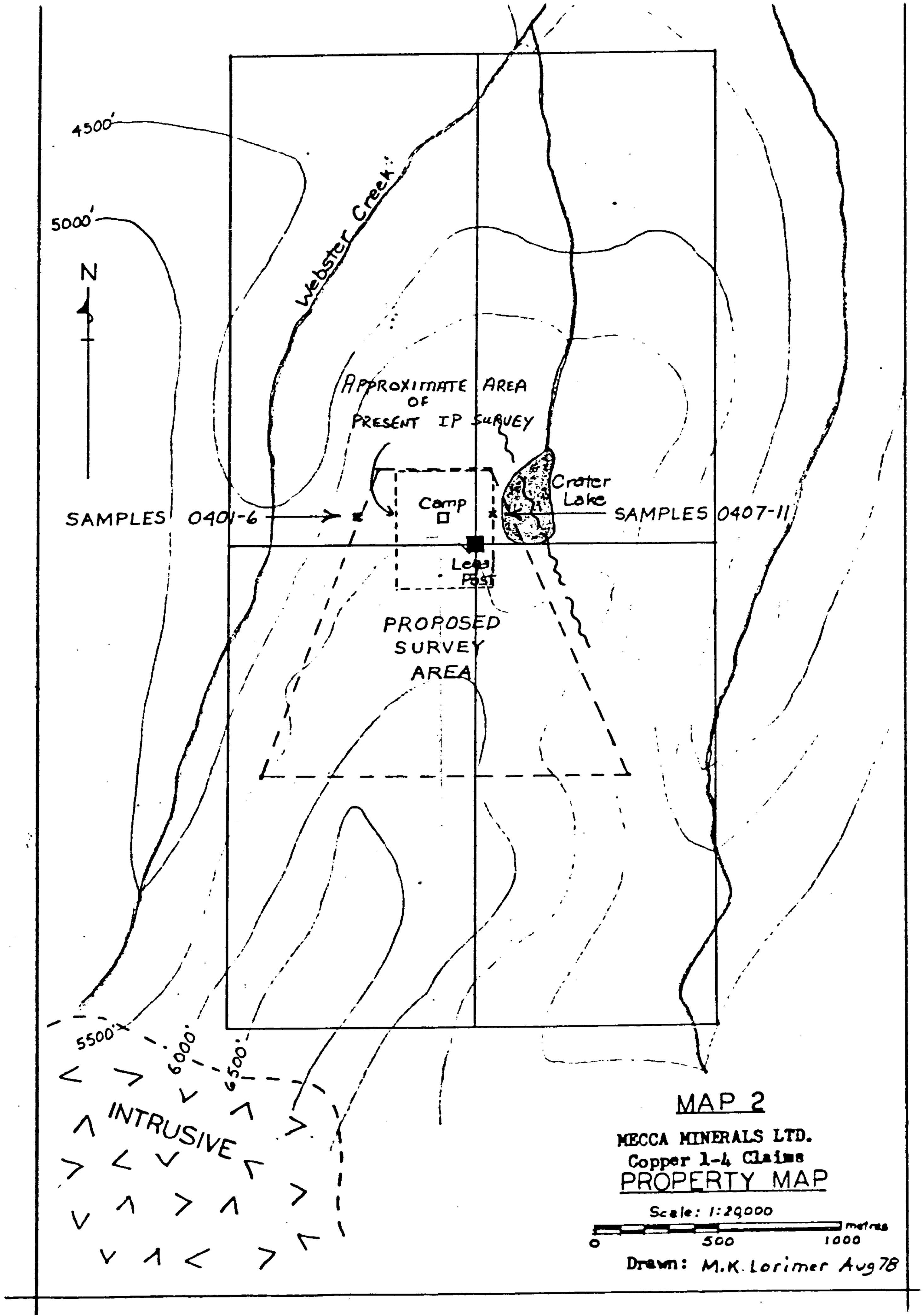
The party chief responsible for the field work was Mr. George Elliott.

DESCRIPTION OF THE CLAIMS

The Copper 1-4 claims, each of eight units, were staked by R.A. Rutherford as agent for Mecca Minerals Ltd.



128°
54°
HUDSON
BAY
RANGE
SMITHERS
TELKWA
BULKLEY
RANGES
COPPER 1-4
QUICK
CANADIAN NATIONAL
Walcott
HOUSTON
MAP 1
MECCA MINERALS LTD.
Copper 1-4 Claims
LOCATION MAP
km.
0 5 10 15 20 25
1 inch = 10 miles



MAP 2

MECCA MINERALS LTD.
Copper 1-4 Claims

PROPERTY MAP

Scale: 1:20000

0 500 1000 metres

Drawn: M.K. Lorimer Aug 78

in the period 25 - 26 July 1978, and were recorded on 9 August 1978.

PRESENTATION OF RESULTS

The Induced Polarization and Resistivity results are shown on the following data plots in the manner described in the notes preceding this report.

Line	Electrode Interval	Dwg. No.
8W	60 meters	I.P.-5214-1
6W	60 meters	I.P.-5214-2
4W	60 meters	I.P.-5214-3
2W	60 meters	I.P.-5214-4
0	60 meters	I.P.-5214-5

Also enclosed with this report is Dwg. I.P.P.-3083, a plan map of the Copper 1-4 claims grid at a scale of 1:2500. The definite, probable, and possible Induced Polarization anomalies are indicated by bars, in the manner shown on the legend, on this plan map as well as on the data plots. These bars represent the surface projection of the anomalous zones as interpreted from the location of the transmitter and receiver electrodes when the anomalous values were measured.

The grid information shown on Dwg. I.P.P.-3083 has been taken from maps made available by the staff of Mecca Minerals Ltd.

DISCUSSION OF RESULTS

Five short lines on the Copper 1-4 Claims grid have been surveyed using the Induced Polarization and Resistivity technique.

One anomalous IP zone can be seen in the data (Zone A), along with a number of other individual anomalies, which are low in magnitude and do not appear to be connected.

IP Zone A is outlined from the vicinity of Line 8W, station 2N to the area of Line 2W, station 2S. All of the anomalies which constitute IP Zone A have been interpreted as weakly anomalous features, with the exception of the signature detected on Line 8W. Here, a well-defined region of higher than background frequency effect readings can be seen coincident with an area of lower than normal resistivity values. Metallic sulphide mineralization would be the most likely cause of this signature, with the most concentrated mineralization being located either at depth (greater than 60 meters) below Line 8W, station 00 to station 4N or further to the west of the present grid.

SUMMARY AND RECOMMENDATIONS

A short Induced Polarization and Resistivity survey has been completed on five lines of the Copper 1-4 claims.

One anomalous IP zone (IP Zone A), which may represent metallic sulphide mineralization, is outlined in the data. It would appear that the most concentrated part of the source is situated either at depth beneath Line 8W, at approximately station 2N, or off the western side of the survey grid.

Ideally, if at all possible, additional IP surveying should be completed further to the west of Line 8W, in order to better ascertain the true significance of IP Zone A, before drill testing is contemplated.

Numerous other weakly anomalous responses have been interpreted in the data, however, none seem to form continuous zones, and as such should receive low priority for further work. Additional work should be in the form of a correlation of all existing data together with the IP data.

Paul A. Cartwright
Paul A. Cartwright, B.Sc.
Geophysicist

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
F. DISPIRITO

Frank DiSpirito, B.A.Sc., P.Eng.
Geophysicist

Dated: September 23, 1980.

ASSESSMENT DETAILS

PROPERTY: Crater Lake

MINING DIVISION: Omineca

SPONSOR: Mecca Minerals Ltd.

PROVINCE: British Columbia

LOCATION: Smithers Area, B.C.

TYPE OF SURVEY: Induced Polarization and Resistivity

OPERATING MAN DAYS: 3.5

DATE STARTED: August 04, 1980

EQUIVALENT 8 HR. MAN DAYS: 5.25

DATE FINISHED: August 08, 1980

CONSULTING MAN DAYS: 1

NUMBER OF STATIONS: 67

DRAFTING MAN DAYS: 1

NUMBER OF READINGS: 489

TOTAL MAN DAYS: 7.25

KILOMETERS OF LINE SURVEYED: 4.02

CONSULTANTS:

P. A. Cartwright - 4238 West 11th Avenue, Vancouver, B.C.
F. DeSpirito - 2748 Oxford Street, Vancouver, B.C.

FIELD TECHNICIANS:

G. Elliott - 50 Aurora Court, Apt. 1109, Agincourt, Ontario

DRAUGHTSMAN:

P. A. Cartwright - 4238 West 11th Avenue, Vancouver, B.C.

PHOENIX GEOPHYSICS LIMITED

Frank DiSpirito, P. Eng.
Geophysicist

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — F. DISPIRITO

Dated: September 23, 1980.

STATEMENT OF COST

Mecca Minerals Ltd. - IP Survey
Copper 1-4 Claims, Smithers, B.C.

Crew: G. Elliott.

Period: August 04, 1980 - August 08, 1980.

Frequency Domain IP Survey

3 1/2 Operating Days	@ $490.00 per day	$1,715.00
1 Organization Day	@ $200.00 per day	200.00
Mobilization - Demobilization		500.00
		$2,415.00

PHOENIX GEOPHYSICS LIMITED

Frank DiSpirito, P. Eng.
Geophysicist

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA F. DISPIRITO

Dated: September 23, 1980.

CERTIFICATE

I, Paul A. Cartwright, of the City of Vancouver, Province of British Columbia, do hereby certify that:

1. I am a geophysicist residing at 4238 West 11th Avenue, Vancouver, B.C.

2. I am a graduate of the University of British Columbia, B.C. with a B.Sc. Degree.

3. I am a member of the Society of Exploration Geophysicists.

4. I have been practising my profession for 10 years.

5. I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly, in the property or securities of Mecca Minerals Limited or any affiliate.

6. The statements made in this report are based on a study of published geological literature and unpublished private reports.

7. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Vancouver

This 22nd day of September 1980.

Paul A. Cartwright

Paul A. Cartwright, B.Sc.

CERTIFICATE

I, Frank DiSpirito, of the City of Vancouver, Province of British Columbia, do hereby certify that:

1. I am a geophysicist residing at 2748 Oxford Street, Vancouver, B.C.
2. I am a graduate of the University of British Columbia, with a B.A.Sc Degree in Geological Engineering.
3. I have been practising my profession for 6 years.
4. I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly, in the property or securities of Mecca Minerals Limited or any affiliate.
5. The statements made in this report are based on a study of published geological literature and unpublished private reports.
6. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Vancouver
This 23rd day of September 1980.

Frank DiSpirito, P. Eng.

PROFESSIONAL
PROVINCE OF
F. DISPIRITO
BRITISH COLUMBIA
ENGINEER

CERTIFICATE

I, George Elliot, of the Municipality of North York, Ontario, DO HEREBY CERTIFY THAT:

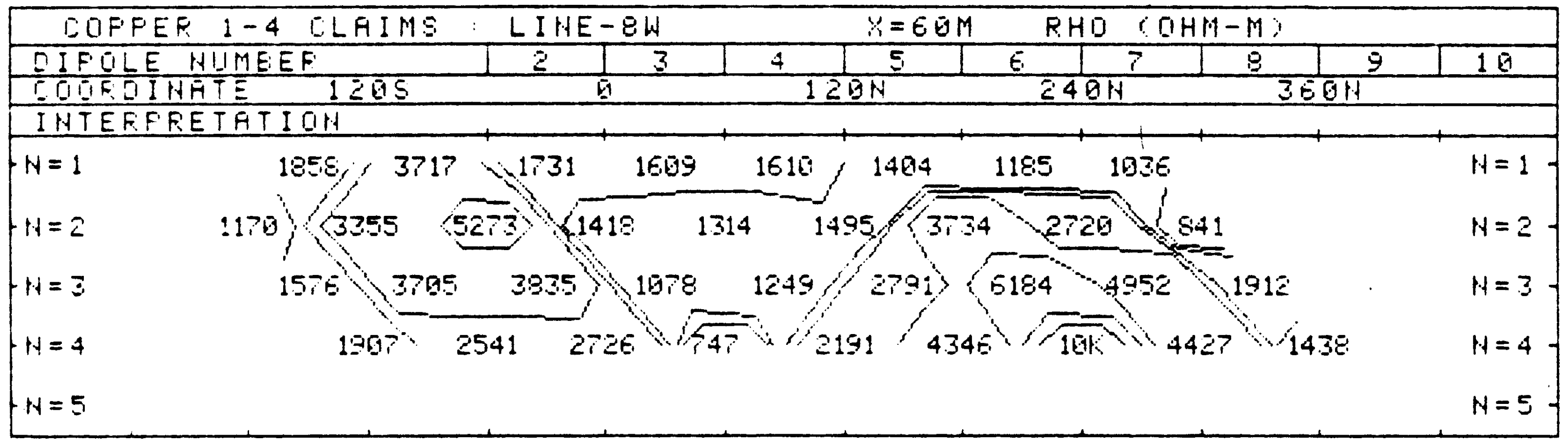
1. I am a geophysical crew leader residing at 90 Aurora Cres., Willowdale, Ontario.
2. I am a graduate of Sir Sanford Fleming Technical College, Lindsay, Ontario.
3. I am presently employed as a geophysical crew leader by Phoenix Geophysics Ltd. of 200 Yorkland Blvd., Willowdale, Ontario.

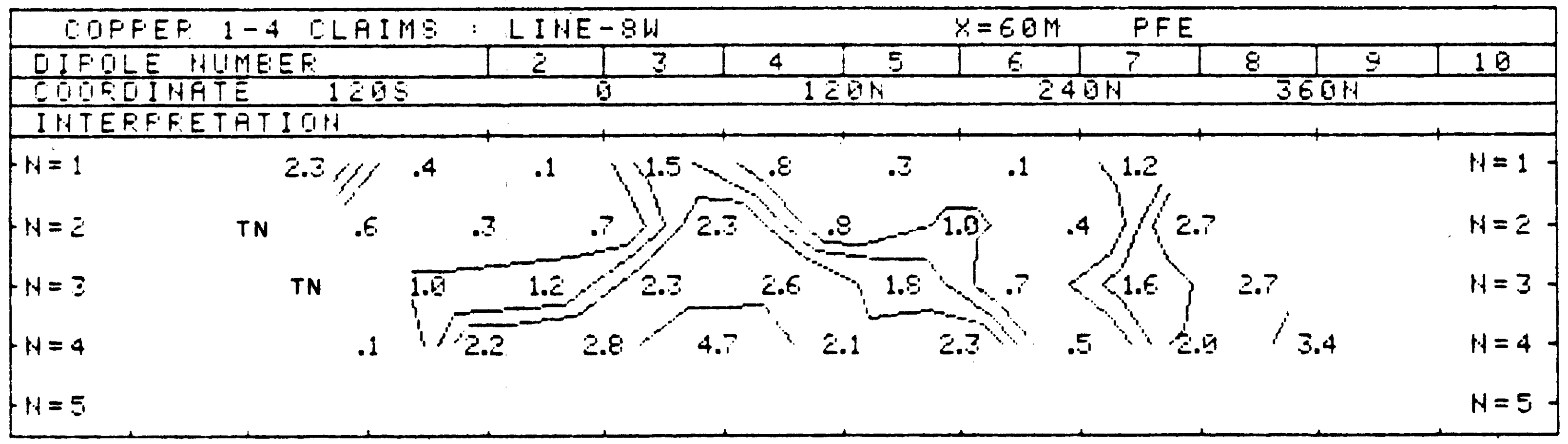
DATED AT VANCOUVER, B.C.

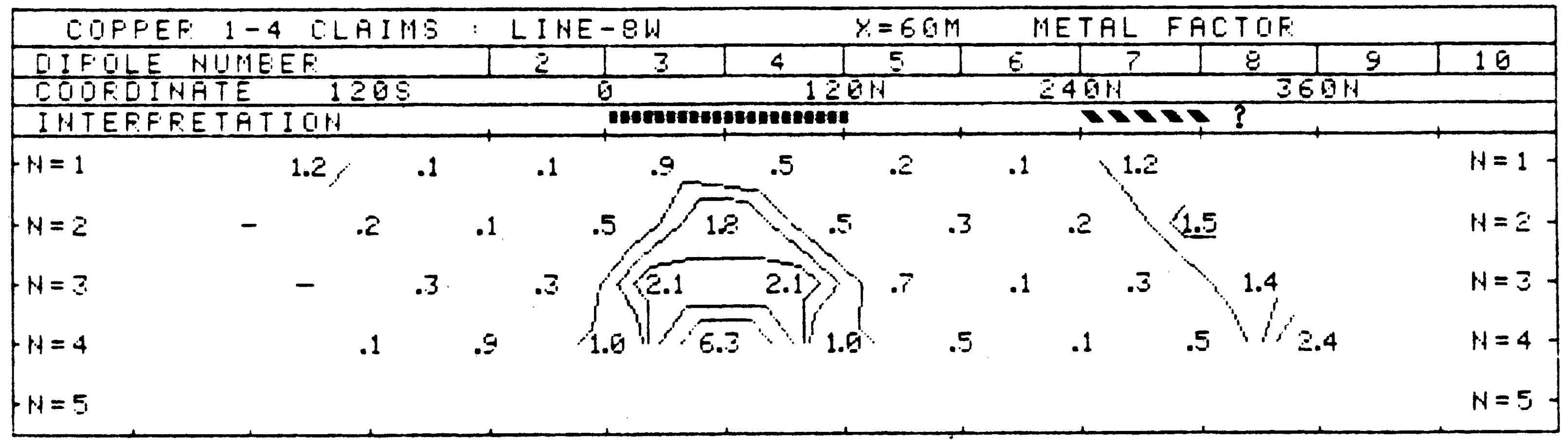
this 23rd day of September 1980.

George Elliot per PAC

George Elliot.







DWG. NO.-I.P.- 5214-1

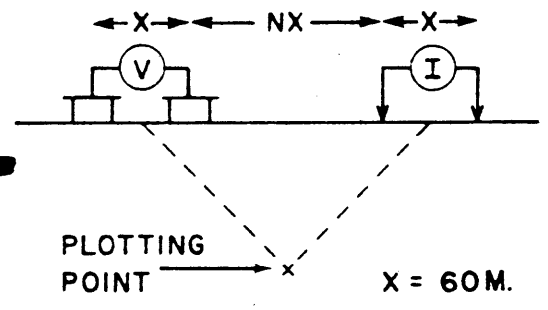
MECCA MINERALS LTD.

COPPER 1-4 CLAIMS (CRATER LAKE)

OMINECA M.D., B.C.

LINE NO.- 8W

ELECTRODE CONFIGURATION



part 1 g2

MINERAL RESOURCES BRANCH ASSESSMENT REPORT

8624

SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE

PROBABLE

POSSIBLE

FREQUENCIES 0·3-5·0 HZ.

DATE SURVEYED AUG. 1980

NOTE - CONTOURS AT LOGARITHMIC INTERVALS 1,-1·5,-2,-3,-5,-7·5,-10

APPROVED

DATE Dec 1/80

PROFESSIONAL ENGINEER F. DISPIRITO BRITISH COLUMBIA

PHOENIX GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

COPPER 1-4 CLAIMS LINE-6W X=60M RHO (OHM-M)

DIPOLE NUMBER		2	3	4	5	6	7	8	9
COORDINATE 90S		30N		150N		270N		390N	
INTERPRETATION									

N=1	1180	2117	782	1961	2171	1013	1440	N=1
N=2	4532	1652	1297	2316	1409	2330	2008	N=2
N=3	3317	2327	1362	1772	2803	3426	3450	N=3
N=4	4050	2318	1060	3296	3845	4953	2856	N=4
N=5								N=5

COPPER 1-4 CLAIMS LINE-6W X=60M PFE

DIPOLE NUMBER		2	3	4	5	6	7	8	9
COORDINATE 90S		30N		150N		270N		390N	
INTERPRETATION									

N=1	1.0	1.3	1.9	2.5	1.8	1.1	1.9	N=1
N=2	1.7	1.8	1.8	2.3	2.1	2.1	2.0	N=2
N=3	2.3	2.2	1.7	2.6	2.2	2.5	2.4	N=3
N=4	2.5	2.2	2.0	2.4	2.5	2.4	2.4	N=4
N=5								N=5

COPPER 1-4 CLAIMS LINE-6W X=60M METAL FACTOR

DIPOLE NUMBER		2	3	4	5	6	7	8	9
COORDINATE 90S		30N		150N		270N		390N	
INTERPRETATION									

N=1	.9	.8	2.4	1.3	.8	1.1	1.3	N=1
N=2	.4	1.1	1.4	1.0	1.5	.9	1.0	N=2
N=3	.7	1.0	1.3	1.5	.8	.7	.7	N=3
N=4	.6	1.0	1.9	.7	.7	.5	.8	N=4
N=5								N=5

DWG. NO. - I.P. - 5214-2

MECCA MINERALS LTD.

COPPER 1-4 CLAIMS (CRATER LAKE)

OMINECA M.D., B.C.

Part 1 of 2

LINE NO. - 6W

ELECTRODE CONFIGURATION

X — NX — X

V I

PLOTTING POINT

X = 60M.

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
8624

SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE
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POSSIBLE

FREQUENCIES 0·3-5·0 HZ.

DATE SURVEYED AUG. 1980

NOTE - CONTOURS AT LOGARITHMIC INTERVALS 1,-1·5,-2,-3,-5,-7·5,-10

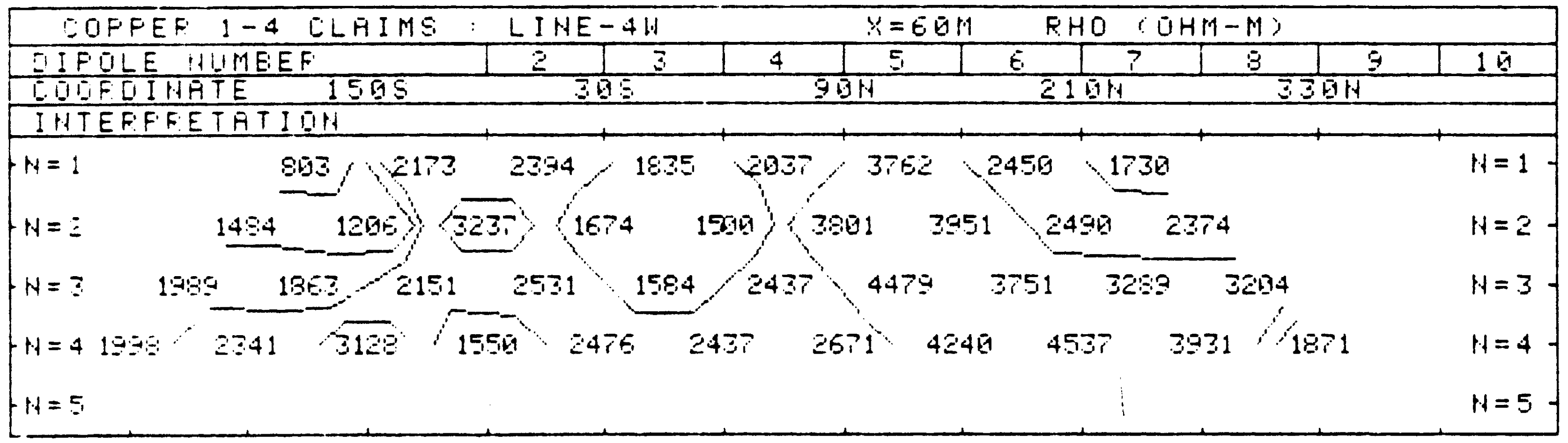
APPROVED

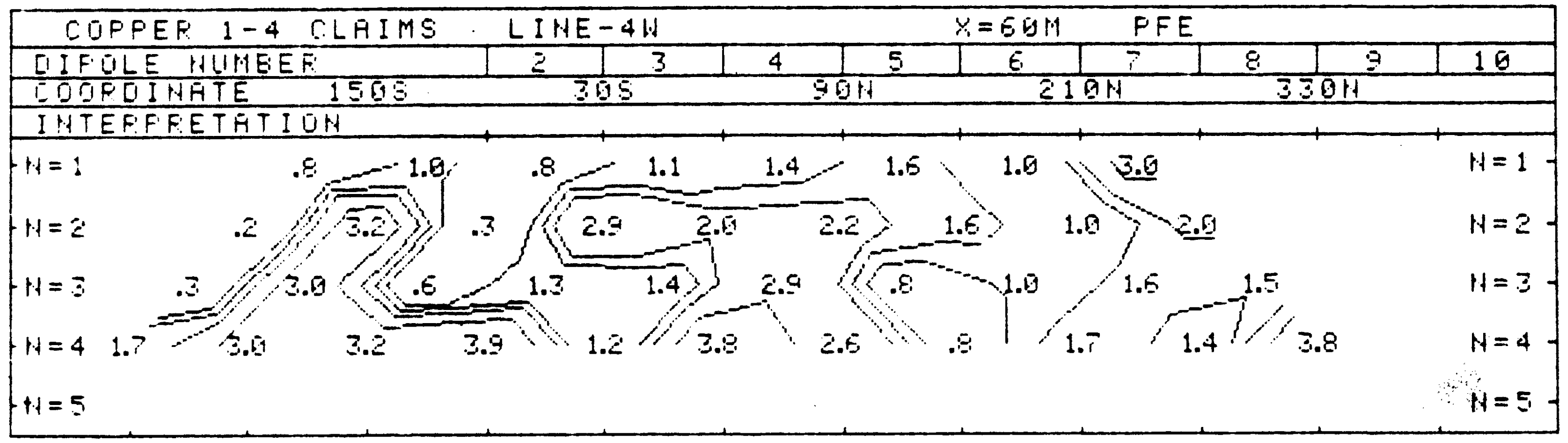
DATE Dec/80

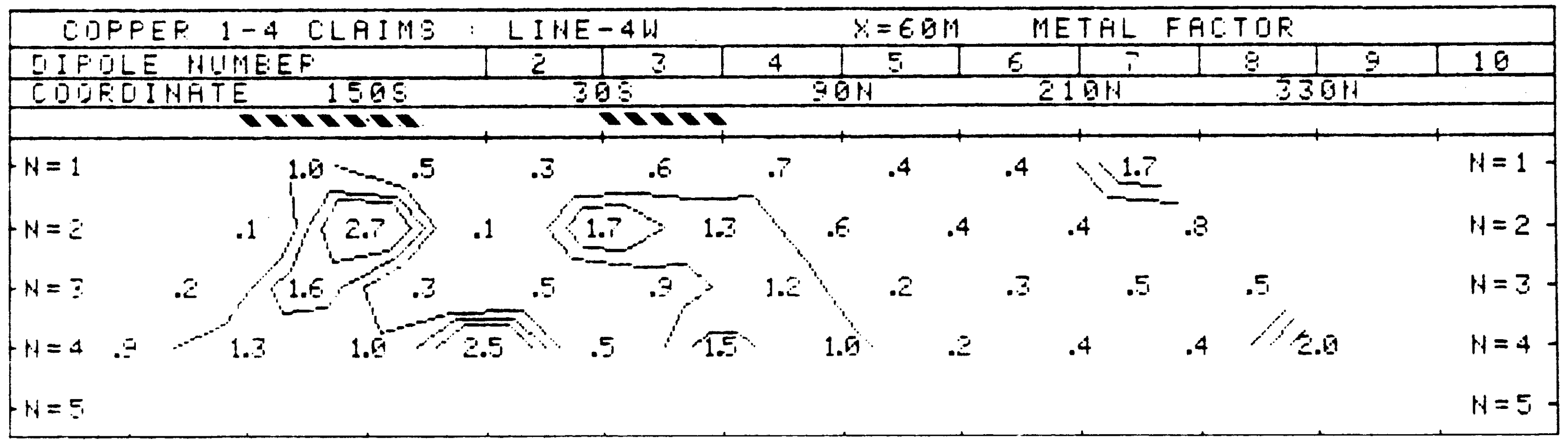
PROFESSIONAL ENGINEER
P. DISPIRITO
BRITISH COLUMBIA

PHOENIX GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY







DWG. NO. - I.P. - 5214-3

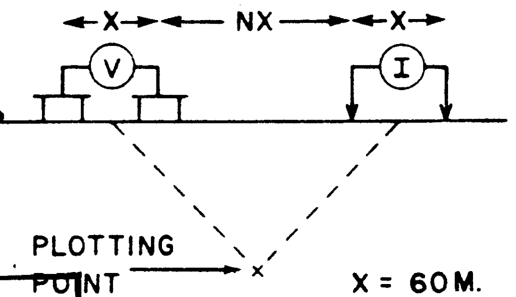
MECCA MINERALS LTD.

COPPER 1-4 CLAIMS (CRATER LAKE)

OMINECA M.D., B.C.

LINE NO. - 4W

ELECTRODE CONFIGURATION



part 1 of 2

MINERAL RESOURCES BRANCH ASSESSMENT REPORT

8624

SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE

PROBABLE

POSSIBLE

FREQUENCIES 0·3-5·0 HZ.

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APPROVED

DATE

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
F. DISPIRITO

NOTE - CONTOURS AT LOGARITHMIC INTERVALS 1,-1·5,-2,-3,-5,-7·5,-10

PHOENIX GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

COPPER 1-4 CLAIMS : LINE-2W					X=60M		RHO (OHM-M)		
DIPOLE NUMBER	2	3	4	5	6	7	8	9	10
COORDINATE 150S		30S		90N		210N		330N	
INTERPRETATION									
N=1	2061	2320	1793	3062	1529	4305	3080	1379	
N=2	(945)	1871	2217	2592	2426	3729	5400	2451	1761
N=3	(881)	1699	2974	2599	5441	4755	3403	2426	2079
N=4	(901)	2042	2610	4770	5814	2931	3241	2446	1518
N=5									

COPPER 1-4 CLAIMS : LINE-2W					X=60M		PFE		
DIPOLE NUMBER	2	3	4	5	6	7	8	9	10
COORDINATE 150S		30S		90N		210N		330N	
INTERPRETATION									
N=1	.8	.7	2.0	1.6	1.9	2.1	1.7	.5	
N=2	(TN)	1.1	1.8	4.7	1.4	1.6	3.2	1.8	2.1
N=3	(TN)	3.6	2.6	2.5	1.2	1.8	2.7	2.6	2.6
N=4	(TN)	5.6	3.4	2.0	2.4	2.5	3.4	3.1	2.7
N=5									

COPPER 1-4 CLAIMS : LINE-2W					X=60M		METAL FACTOR		
DIPOLE NUMBER	2	3	4	5	6	7	8	9	10
COORDINATE 150S		30S		90N		210N		330N	
INTERPRETATION									?
N=1	.4	.3	1.1	.5	1.2	.5	.6	.4	
N=2	–	.6	.8	1.8	.6	.4	.6	.7	1.2
N=3	–	2.1	.9	1.0	.2	.4	.8	1.1	1.3
N=4	–	2.7	1.3	.4	.4	.6	1.1	1.3	1.8
N=5									

DWG. NO. – I.P. – 5214-4

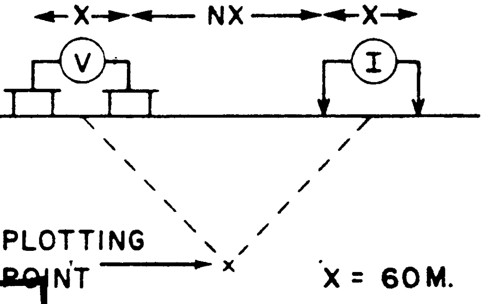
MECCA MINERALS LTD.

COPPER 1-4 CLAIMS (CRATER LAKE)

OMINECA M.D., B.C.

LINE NO. – 2W

ELECTRODE CONFIGURATION



Part 1 of 2

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 8624

SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES 0·3 – 5·0 HZ.

DATE SURVEYED AUG. 1980

NOTE – CONTOURS AT LOGARITHMIC INTERVALS 1, –1·5, –2, –3, –5, –7·5, –10

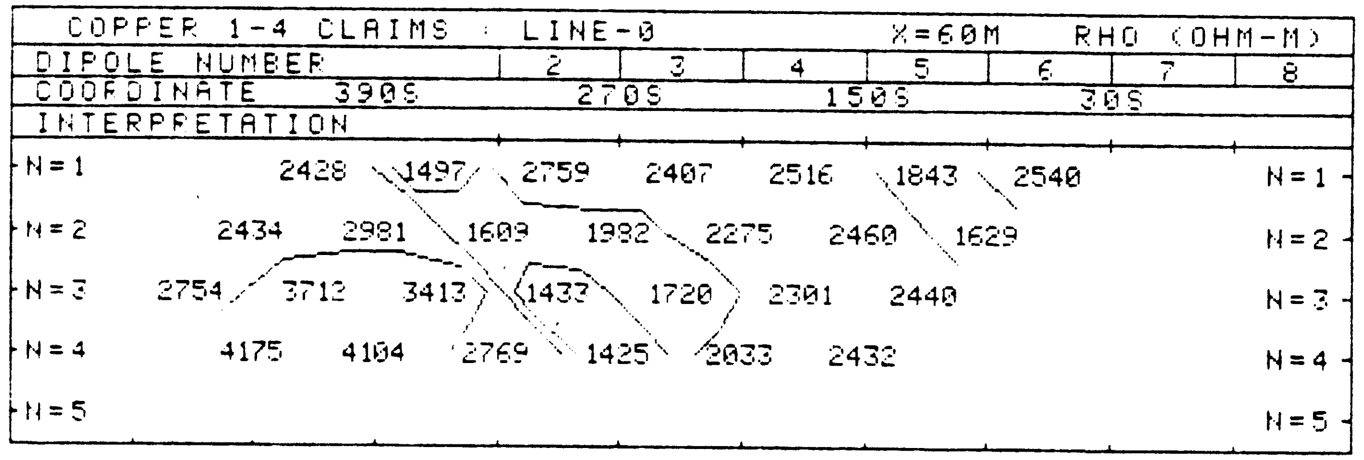
APPROVED

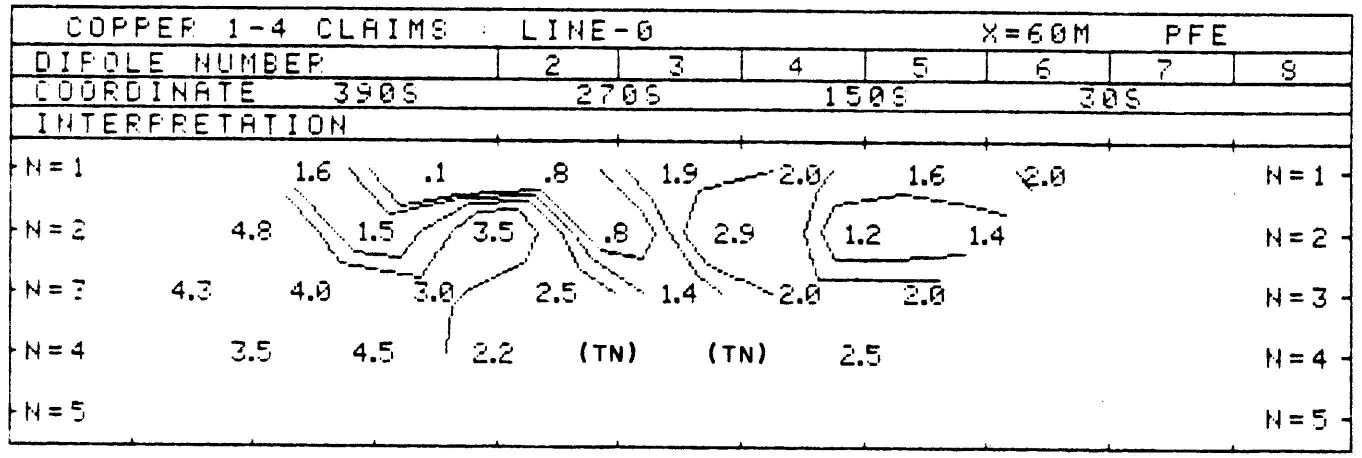
DATE

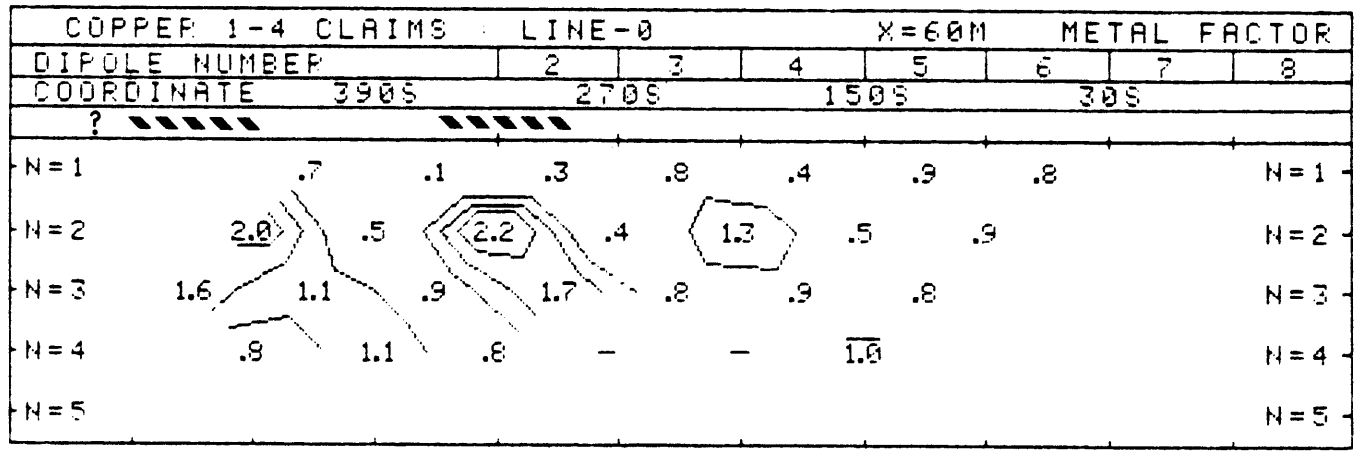
PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA F. DISPIRITO

PHOENIX GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY







DWG. NO. - I.P. - 5214-5

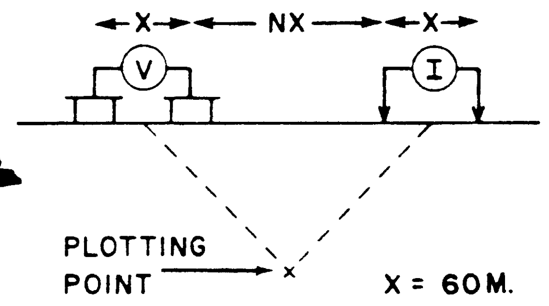
MECCA MINERALS LTD.

COPPER 1-4 CLAIMS (CRATER LAKE)

OMINECA M.D., B.C.

LINE NO. - 0

ELECTRODE CONFIGURATION



Part 1 of 2

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

NO. 8624

SURFACE PROJECTION OF ANOMALOUS ZONE
DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES 0·3-5·0 HZ.

DATE SURVEYED AUG. 1980

APPROVED

DATE

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA

NOTE - CONTOURS AT LOGARITHMIC INTERVALS 1,-1·5,-2,-3,-5,-7·5,-10

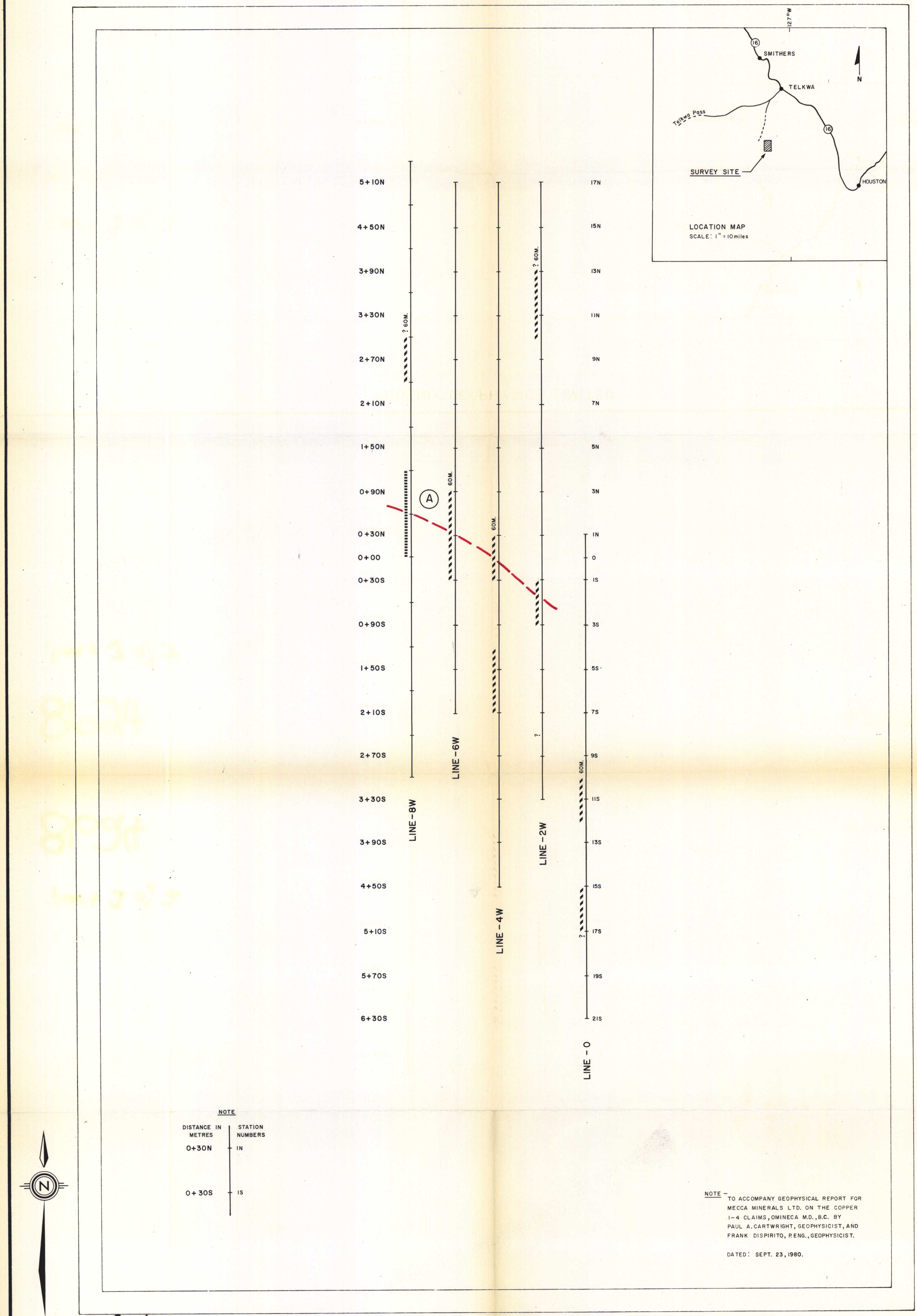
PHOENIX GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PHOENIX GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PLAN MAP



part 1 of 2

SURFACE PROJECTION OF ANOMALOUS ZONE
DEFINITE
PROBABLE
POSSIBLE

NUMBER AT END OF ANOMALIES INDICATE SPREAD USED.

MECCA MINERALS LTD.

COPPER 1-4 CLAIMS (CRATER LAKE)

OMINECA M.D., B.C.

SCALE

50 0 50 100 150 200 METRES

1:2500

— CENTER OF ANOMALOUS I.P. ZONE

REVISED: M.W.R.

DATE: OCT. 1980

APPROVED:

DATE: