4825

92I/7W

92I/7W

REPORT ON THE INDUCED POLARIZATION AND RESISTIVITY SURVEY ON THE LUCK AND FIN CLAIMS NICOLA MINING DIVISION, B.C. FOR RIO PLATA SILVER MINES LTD.

4825

BY

ASHTON W. MULLAN, B.Sc. P.Eng.

AND

PHILIP G. HALLOF, Ph.D.

NAME AND LOCATION OF PROPERTY:

LUCK AND FIN CLAIMS, B.C.

NICOLA MINING DIVISION, B.C. 50°17'N - 120°51'W

DATE STARTED: OCTOBER 4, 1973

DATE FINISHED: OCTOBER 10, 1973

TABLE OF CONTENTS

McPHAR GEOPHYSICS

REPORT ON THE INDUCED POLARIZATION AND RESISTIVITY SURVEY ON THE LUCK AND FIN CLAIMS NICOLA MINING DIVISION, B.C. FOR RIO PLATA SILVER MINES LTD.

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1. INTRODUCTION

An extension of the previous Induced Polarization and Resistivity Surveys has been completed on the Luck and Fin Claim Group for Rio Plata Silver Mines Limited. The centre of the survey grid is situated at 50°17'N latitude and 120°51' W longitude, about 16 miles NE of Merritt in the Nicola Mining Division, B.C.

The claim area is believed to be underlain with basic intrusives of the Chataway variety, Highland Valley phase. The Chataway variety is part of the Guichon Creek batholith which contains important disseminated chalcopyrite-molybdenite deposits some 12-15 miles north of the claim group.

The present survey was carried out both to the north and south of the previous grid which was surveyed in late Juue, 1973. In addition, detail surveying was carried out on Line 5600N of the previous survey.

The field work was carried out during the period October 6 - October 11, 1973. A McPhar P-660 variable frequency IP system was used for the survey operating at frequencies of 0.3 and 5.0 Hz.

2. DESCRIPTION OF CLAIMS

The IP survey was carried out over the following claims:

Luck 21 - 28 inclusive

Fin 9 - 12 inclusive

Fin 25 - 28 inclusive

3. PRESENTATION OF RESULTS

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

Line	Electrode Intervals	Dwg. No.
0	400 feet	IP 6117-1
800N	400 feet	IP 6117-2
1600N	400 feet	IP 6117-3
5600N	500 feet	IP 6117-4
	400 feet	IP 6075-1
	200 feet	IP 6117-5
6400N	400 feet	IP 6117-6
7200N	400 feet	IP 6117-7
8000N	400 feet	IP 6117-8

Also enclosed with this report is Dwg. I.P.P. 4944, a plan map of the Luck and Fin Claim grid at a scale of 1" = 400'. 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.

Since the Induced Polarization measurement is essentially an averaging process, as are all potential methods, it is frequently difficult to exactly pinpoint the source of an anomaly. Certainly no anomaly can be located with more accuracy than the electrode interval length; i.e. when using 400' electrode intervals the position of a narrow sulphide body can only be determined to lie between two stations 400' apart. In order to definitely locate, and fully evaluate, a narrow, shallow source it is necessary to use shorter electrode intervals. In order to locate sources at some depth, larger electrode intervals must be used, with a corresponding increase in the uncertainties of location. Therefore, while the centre of the indicated anomaly probably corresponds fairly well with source, the length of the indicated anomaly along the line should not be taken to represent the exact edges of the anomalous material.

4. DISCUSSION OF RESULTS

The initial IP survey carried out by McPhar on the Luck and Fin Claims was covered in a report dated May 2, 1973. A subsequent survey extended the grid to the NW and detailed several of the first anomalies. This work is discussed in a report dated July 25, 1973. A third phase of IP surveying has now been completed. This last survey was designed to extend the second survey both to the north and south and to detail IP anomalies previously located on Line 5600N.

Line 0 - Dwg. IP 6117-1

The resistivity pattern on this line is suggestive of deep overburden. Increased resistivities at depth and along the east end of the line are probably a reflection of bedrock. Very weak possible IP anomalies are centred at 28W and 36W. They could originate from within deep overburden.

Line 800N - Dwg. IP 6117-2

The background resistivities are higher than on Line 0 suggesting that the overburden could be shallower. A probable IP anomaly at 22W indicates moderate depth to the source and may originate in bedrock.

Line 1600N - Dwg. IP 6117-3

Increased frequency effects showing moderate depth to the source at 30W coincide with increased resistivities at depth. The resultant metal factor anomaly is weak but warrants further investigation. A similar feature on Line 2400N centred at 28W appears shallower and may be easier to test.

Line 5600N - Dwgs. IP 6117-4 and -5 - Dwg. IP 6075-1

The deep anomaly centred at about 24W has been confirmed with the 500 foot electrode interval detail as shown on Dwg. IP 6117-4. The source still looks deep but can be better perceived with the larger electrode intervals. A vertical hole located at 23+50W and drilled to a depth of at least 400 feet should investigate the source of these IP effects.

Similar shallow anomalies were located at 40W on Line 5600N and Line 6400N. Line 5600N was detailed with 200 foot electrode spacings and the results are shown on Dwg. IP 6117-5. The detail shows a weak IP anomaly with the centre shifted to about 36W. The anomaly is characterised by low resistivities; 40-50 $\rho a/2\pi$ ohm feet. These low resistivities could be indicative of deep overburden. There is a possibility that the anomaly source could emanate from pyrite-magnetite rich clay horizons within the overburden. It is important that at least one of these low resistivity anomalies be tested. A vertical drill hole centred at 36W and drilled to a depth of 300 feet should investigate this IP anomaly.

Line 6400N - Dwg. IP 6117-6

A weak, shallow IP anomaly located within a low-resistivity environment is centred at 40W. A similar feature on Line 5600N has been detailed and recommended for further investigation.

A weak, possible IP anomaly in a higher resistivity background occurs at the west end of the line where it is incomplete.

Line 7200N - Dwg. IP 6117-7

A weak IP anomaly centred at 34W is located within a low-resistivity environment. Further investigation of a similar anomaly to the south will help decide if further testing is required here.

A weak anomaly at the west end of the line is similar to the feature indicated on Line 6400N. The data is incomplete and the line would have to be extended to evaluate these weak IP effects.

Line 8000N - Dwg. IP 6117-8

Similar anomalous IP effects to those found to the south were located within the low resistivity environment. Further consideration of this anomaly will depend on results obtained to the south.

5. SUMMARY AND RECOMMENDATIONS

The IP surveys carried out for Rio Plata Silver Mines Limited have located a number of weak IP anomalies within varying resistivity environments. Portions of the property are characterized by relatively uniform low resistivities in the 10-45 $\rho_a/2\pi$ ohm feet range. On many lines, an increase in resistivity has been noted for the higher "N" values. This condition could be caused by more resistive bedrock under deep overburden. However, detail traverses such as those carried out on Line 5600N, Dwg. IP 6117-5, have confirmed the weak shallow IP responses. Since other factors such as formational changes, rock alteration or mineralisation can cause low resistivities, it is important that further investigation be made of the low resistivity IP anomalies.

Weak IP anomalies such as have been located on the property can be caused by concentrations of magnetite. It is therefore recommended that all IP anomalies be checked with magnetometer profiles before proceeding with drill tests.

The following drill holes are suggested as a preliminary program to sample the various types of IP anomaly located on the property. Further testing will depend on the results obtained from this drill program.

Based on data obtained from the 2nd IP survey (report dated July 25, 1973):

Hole #1	Line 1600S, 7E
	Drill vertical hole to depth of 350 feet.
Hole #2	Line 800S, 12E
	Drill vertical hole to depth of 350 feet.
Hole #3	Line 800S, 0
	Drill vertical hole to depth of 350 feet.

Based on data obtained from the last survey as contained in this report:

Hole #4	Line 5600N, 23+50W
	Drill vertical hole to depth of 400 feet.
Hole #5	Line 5600N, 36W
	Drill vertical hole to depth of 300 feet.
Hole #6	This hole could be drilled from either of the following locations to test a similar feature:
	a) Line 1600N, 30W
	Drill vertical hole to depth of 350 feet.
	b) Line 2400N, 28W
	Drill vertical hole to depth of 300 feet.
Hole #7	This hole would investigate a similar condition to that tested by Hole #5.

Hole #7 (cont'd). Line 6400N, 40W

Drill vertical hole to depth of 350 feet.

McPHAR GEOPHYSICS COMPANY

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA A. W. MULLAN

Ashton W. Mullan, Geologist

Philip G. Hallof, Geophysicist

Dated: December 12, 1973

ASSESSMENT DETAILS

PROPERTY: Luck & Fin Claims

MINING DIVISION: Nicola

SPONSOR: Rio Plata Silver Mines Ltd.

PROVINCE: British Columbia

LOCATION: Merritt Area

TYPE OF SURVEY: Induced Polarization

OPERATING MAN DAYS:	20	DATE STARTED: October 4, 1973
EQUIVALENT 8 Hr. MAN DAYS:	30	DATE FINISHED: October 10, 1973
CONSULTING MAN DAYS:	2	NUMBER OF STATIONS: 113
DRAUGHTING MAN DAYS:	3	NUMBER OF READINGS: 831
TOTAL MAN DAYS:	35	MILES OF LINE SURVEYED: 7.65

CONSULTANTS:

Ashton W. Mullan, 1440 Sandhurst Place, West Vancouver, B.C.
Philip G. Hallof, 15 Earnwood Court, Don Mills, Ontario.

FIELD TECHNICIANS:

J. MacNeil, 175 Cooper Street, Cambridge, Ontario.
R. Bing, General Delivery, Kamloops, B.C.
Plus Extra Labour:
K. Hoeberg, 602 Windsor Street, Kamloops, B.C.
B. Mitten, 1805 Queens Avenue, West Vancouver, B.C.

DRAUGHTSMEN:

N. Lade, 299 Jasper Avenue, Oshawa, Ontario.
M. Slaven, 23 Lascelles Blvd. Toronto, Ontario.
R. Peer, 38 Torrens Avenue, Toronto 6, Ontario.

McPHAR GEOPHYSICS COMPANY

Philip G. Hallof,
Geophysicist

Dated: December 12, 1973

STATEMENT OF COST

Rio Plata Silver Mines Ltd. Luck & Fin Claims
Nicola M.D., B.C.

Crew: J. MacNeil - R. Bing

7.65 Line Miles surveyed

5 Line Miles	@ $440.00/mile	$2,200.00
2.65 Line Miles	@ $400.00/mile	1,060.00
		$3,260.00

Breakdown of above

5 days Operating		@ $366.16	$1,830.80
1 day Preparation)			
½ day Travel) 2 days		@ $100.00/day	200.00
½ day Standby)			

Expenses

Truck Rental	286.20	
Vehicle Expense	51.14	
Meals & Accommodation	392.75	
	730.09	
+ 10%	73.01	
		803.10
Extra Labour	355.07	
+ 20%	71.01	
		426.08
		$3,259.98

McPHAR GEOPHYSICS COMPANY

Philip G. Hallof,
Geophysicist

Dated: December 12, 1973

Declared before me at the *City*

of *Vancouver*, in the

Province of British Columbia, this *28*

day of *Dec. 1913.*, A.D.

[signature]

A Commissioner for taking Affidavits within British Columbia ~~or~~
~~A Notary Public in and for the Province of British Columbia.~~
Sub-mining Recorder

CERTIFICATE

I, Ashton W. Mullan, of the City of Vancouver, in the Province of British Columbia, hereby certify:

1. That I am a geologist and a fellow of the Geological Association of Canada with a business address at Suite 811, 837 West Hastings Street, Vancouver, B.C.

2. That I am registered as a member of the Association of Professional Engineers of the Provinces of Ontario and British Columbia.

3. That I hold a B.Sc. degree from McGill University.

4. That I have been practising my profession as a geologist for about twenty 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 Rio Plata Silver Mines Ltd., 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 Toronto

This 12th day of December 1973

A. W. Mullan, B.Sc. P.Eng.

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA

CERTIFICATE

I, Philip George Hallof, of the City of Toronto, Province of Ontario, do hereby certify that:

1. I am a geophysicist residing at 15 Earnwood Court, Don Mills, Ontario.

2. I am a graduate of the Massachusetts Institute of Technology with a B.Sc. Degree (1952) in Geology and Geophysics, and a Ph.D. Degree (1957) in Geophysics.

3. I am a member of the Society of Exploration Geophysicists and the European Association of the Exploration Geophysicists.

4. I am a Professional Geophysicist, registered in the Province of Ontario, the Province of British Columbia and the State of Arizona.

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 Rio Plata Silver Mines Ltd., or any affiliate.

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

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Dated at Toronto

This 12th day of December 1973

Philip G. Hallof, Ph.D.

McPHAR GEOPHYSICS

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 can not 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 other 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) between 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 the 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 above the line as a mirror image of the metal factor values below. On a second line, below the metal factor values, are plotted the values of the per cent frequency effect. In some cases the values of per cent frequency effect are plotted as superscripts of the metal factor value. In this second case the frequency effect values are not contoured. 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 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. When the F. E. values are plotted as superscripts to the MF values the third section of data values is not presented and the F. E. values are not contoured.

The actual data plots included with the report are prepared utilizing an IBM 360/75 Computer and a Calcomp 770/763 Incremental Plotting System. The data values are calculated, plotted, and contoured according to a programme developed by McPhar Geophysics. Certain symbols have been incorporated into the programme to explain various situations in recording the data in the field.

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 noisey 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.

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

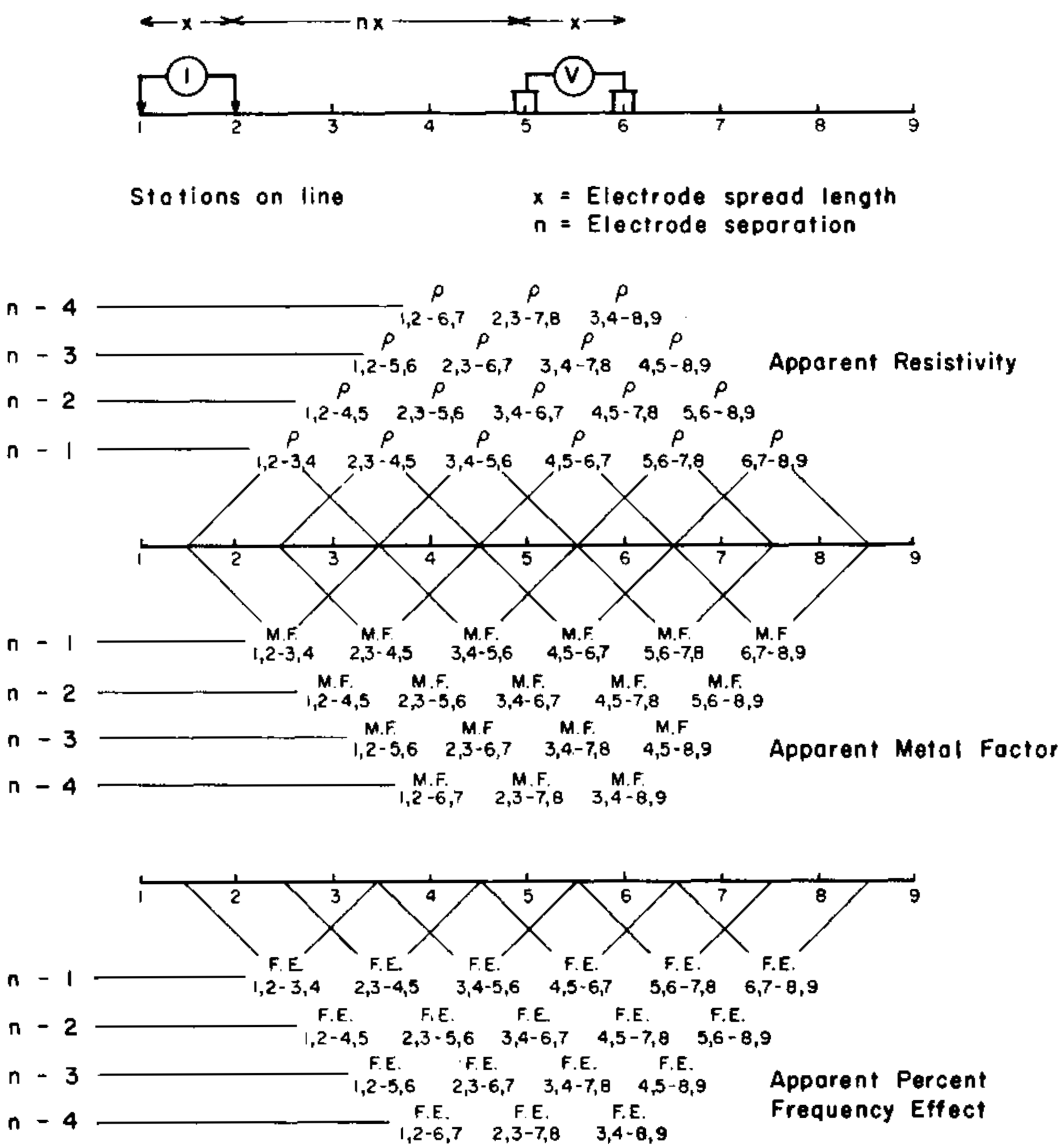
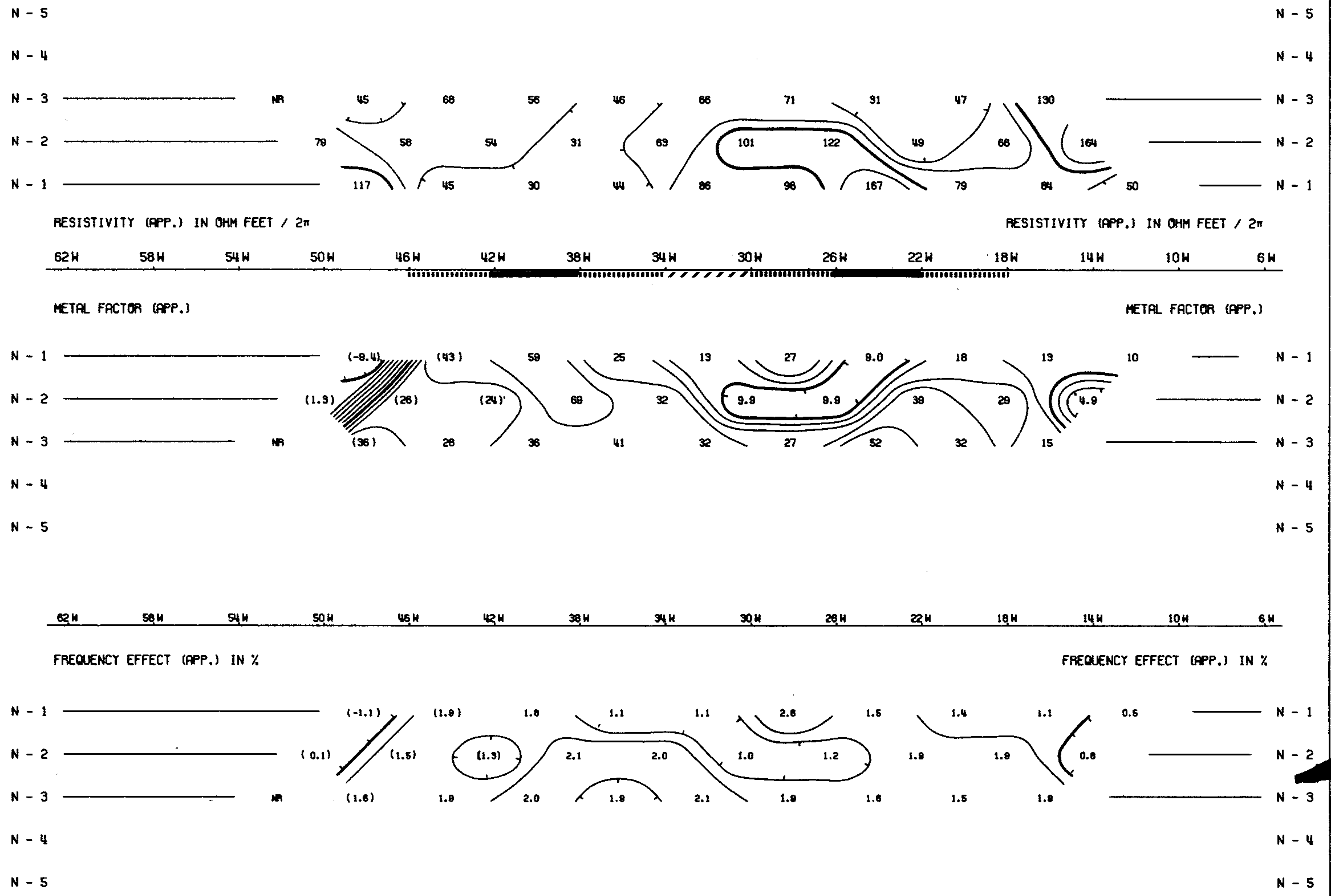


Fig. A



DWG. NO.- I.P.- 6075-1

2 nd. SURVEY

RIO PLATA SILVER MINES LTD.

KRISTIAN ROSS PROPERTY, MERRITT AREA

NICOLA M.D., B.C.

LINE NO.- 5600N

ELECTRODE CONFIGURATION

PLOTTING POINT X = 400FT

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: JUN 1973

APPROVED

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE: 12/12/73

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA PHILIP G. HALLOF

Expiry Date: February 25, 1974

4825

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

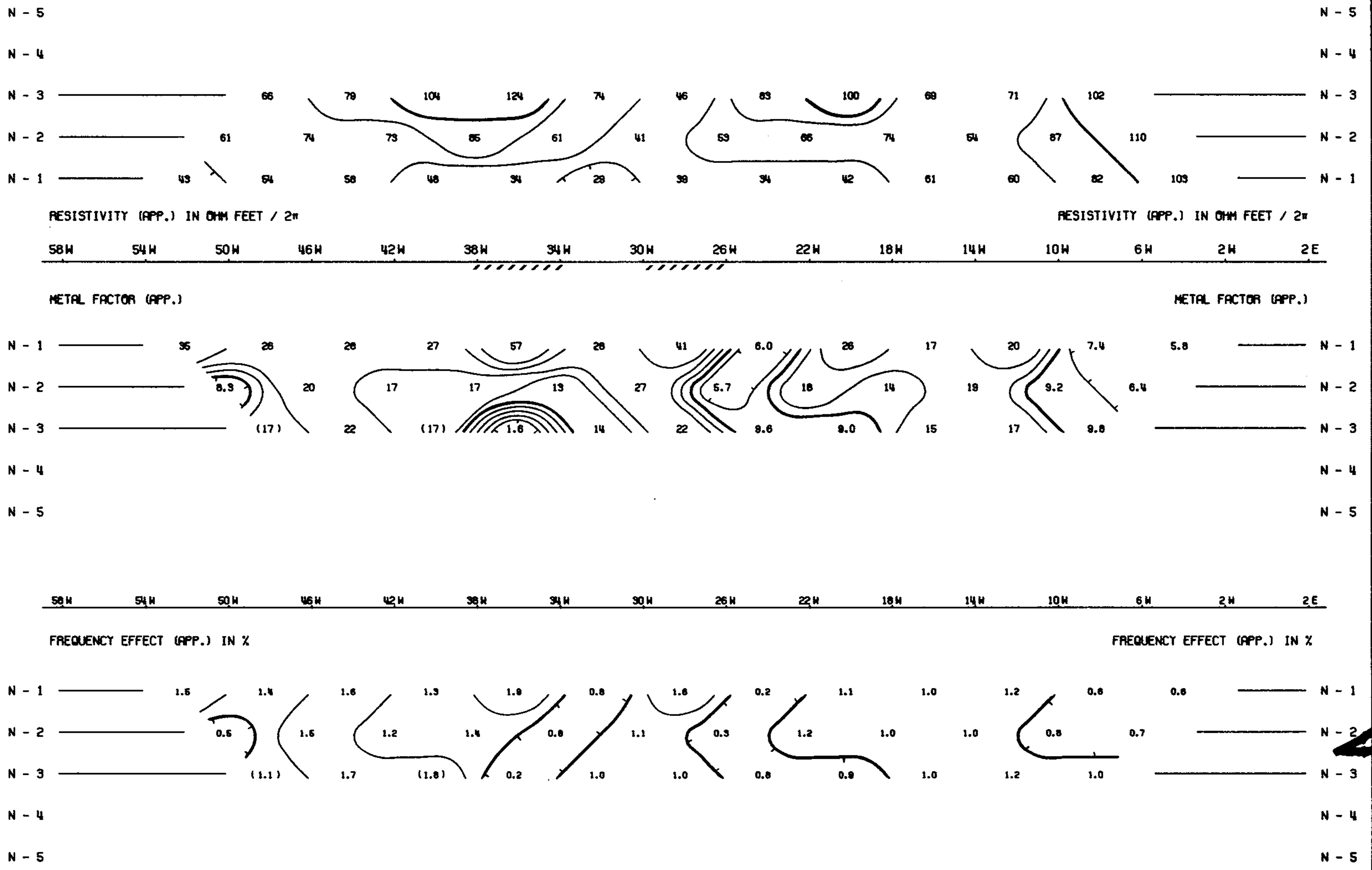
NOTE: THIS PLOT WAS PRODUCED BY MCPHAR COMPUTER DIVISION

DWG. NO.- I.P.-6117-1

RIO PLATA SILVER MINES LTD.

LUCK AND FIN CLAIMS, MERRITT AREA,
NICOLA M.D., B.C.

LINE NO.- 0



ELECTRODE CONFIGURATION

PLOTTING POINT — X = 400FT

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1973

APPROVED:

DATE:

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — PHILIP G. HALLOF

Expiry Date: February 25, 1974

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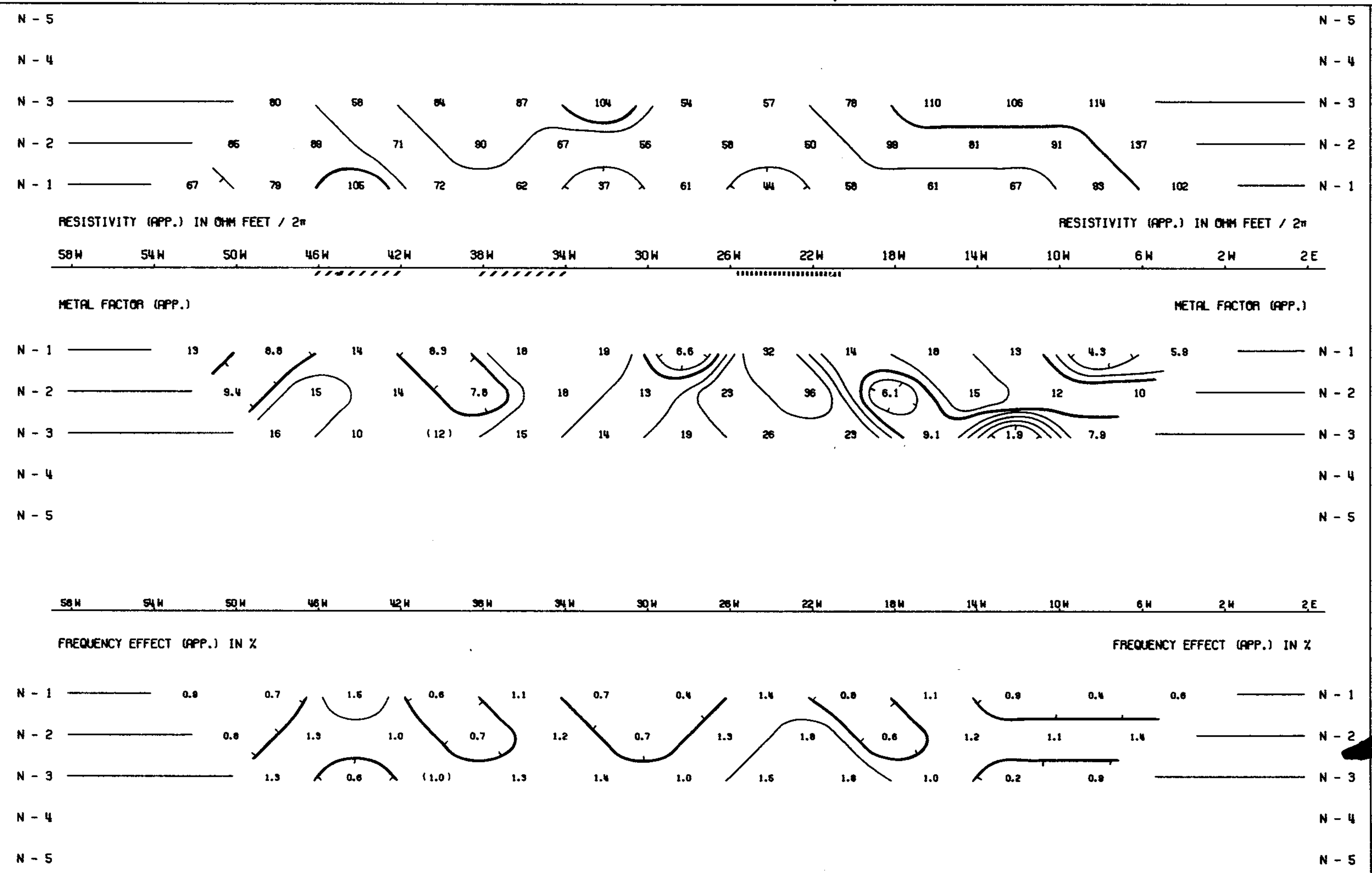
McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED BY MCPHAR COMPUTER DIVISION



DWG. NO.- I.P.-6117-2

RIO PLATA SILVER MINES LTD.

LUCK AND FIN CLAIMS, MERRITT AREA, NICOLA M.D., B.C.

LINE NO.- 800N

ELECTRODE CONFIGURATION

PLOTTING POINT X = 400FT

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1973

APPROVED:

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE:

PROFESSIONAL ENGINEER, PROVINCE OF BRITISH COLUMBIA, PHILIP G. HALLOF

Expiry Date: February 25, 1974

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McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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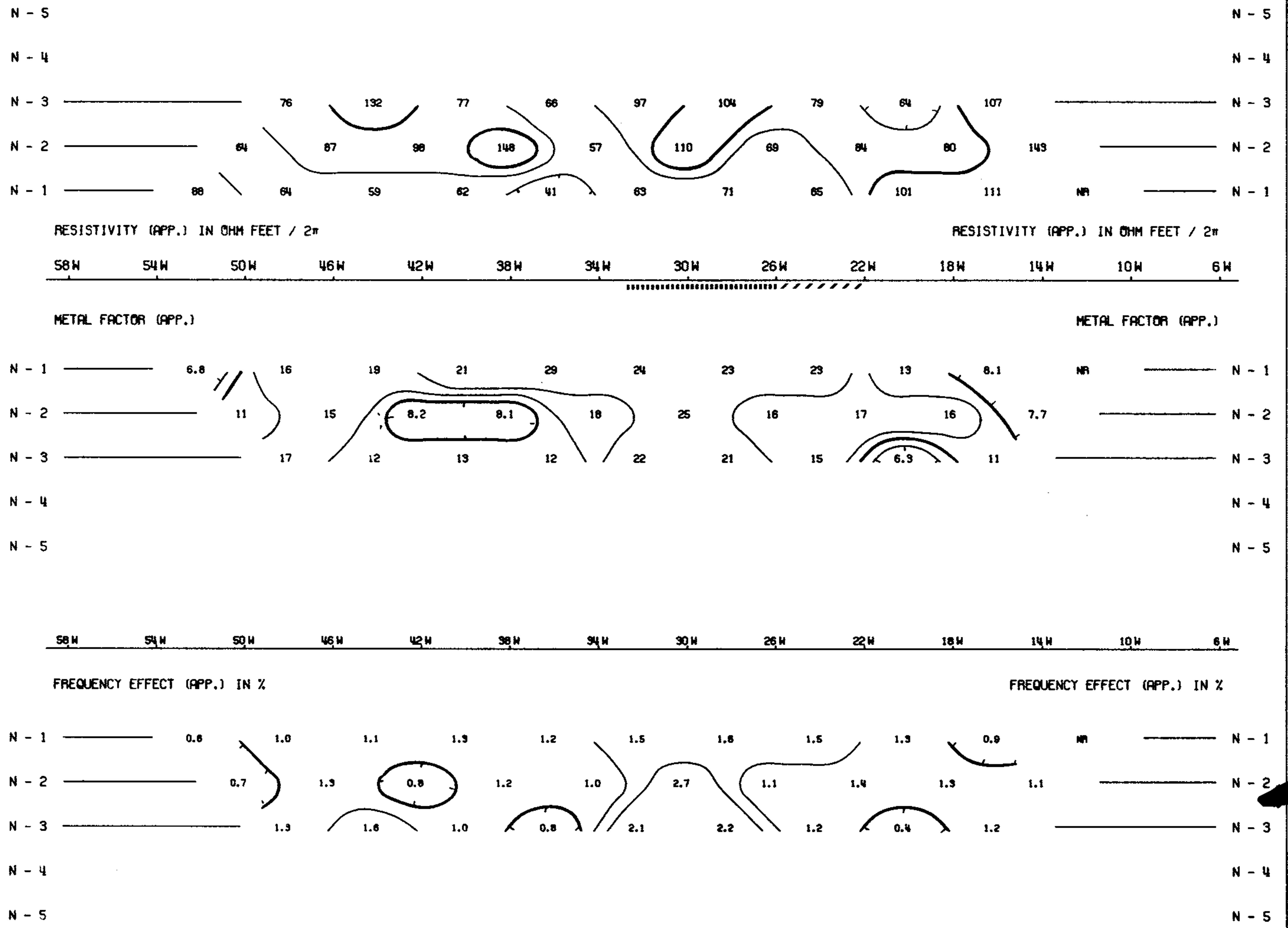


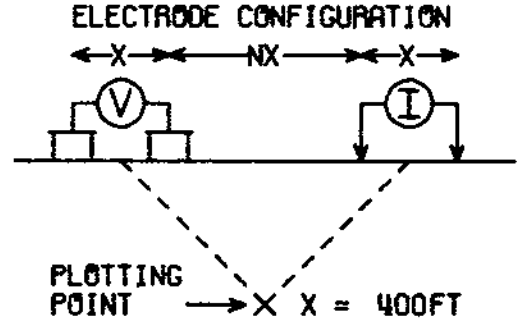
DWG. NO.- I.P.- 6117-3

RIO PLATA SILVER MINES LTD.

LUCK AND FIN CLAIMS, MERRITT AREA,
NICOLA M.D., B.C.

LINE NO.- 1600N

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1973

APPROVED:

DATE:

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA PHILIP G. HALLOF

Expiry Date: February 25, 1974

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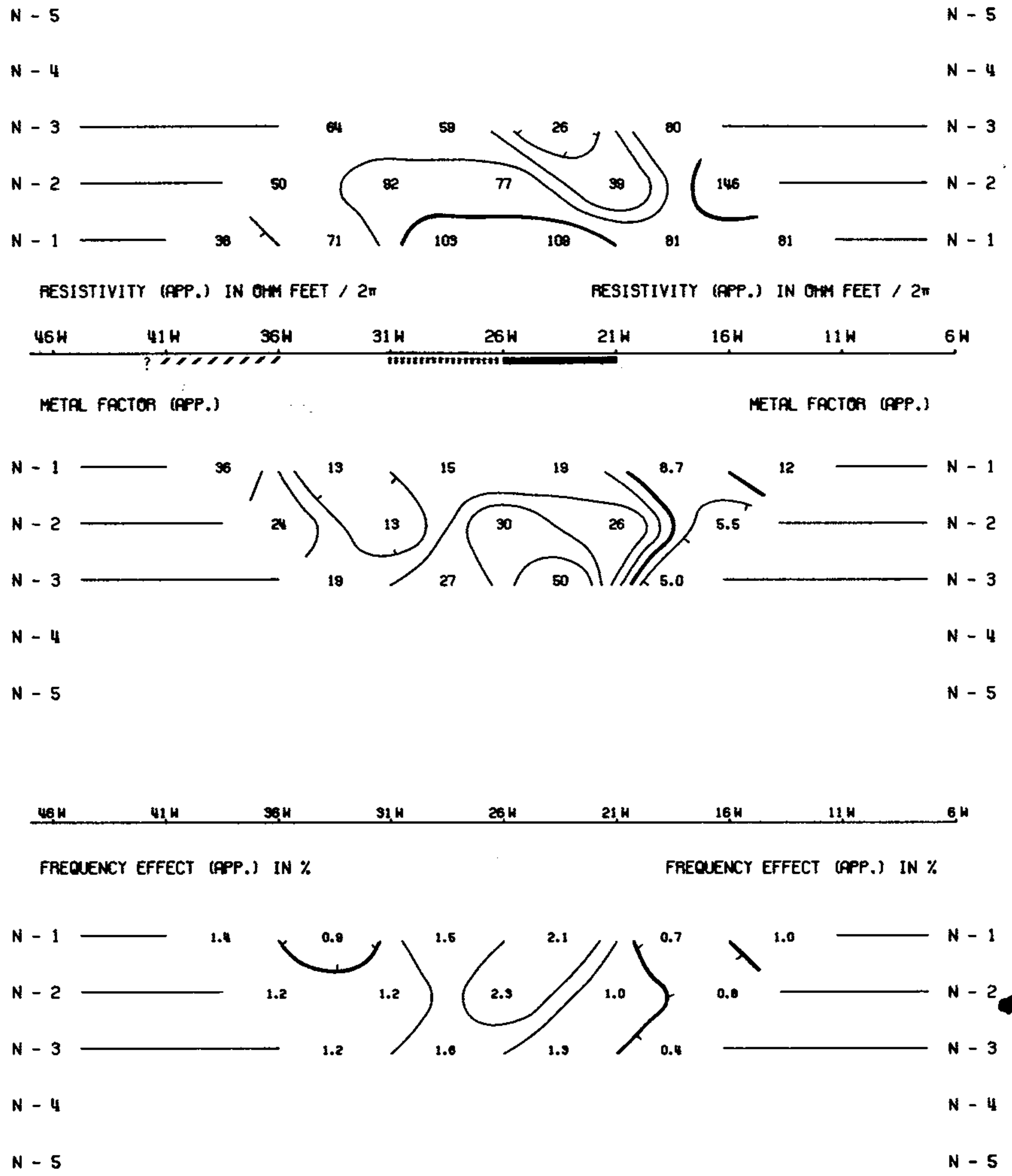
McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED BY McPHAR COMPUTER DIVISION



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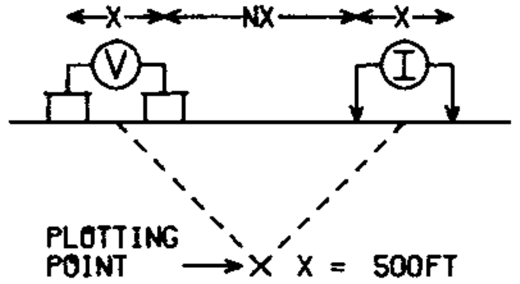
RIO PLATA SILVER MINES LTD.

LUCK AND FIN CLAIMS, MERRITT AREA,
NICOLA M.D., B.C.

LINE NO.- 5600N

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1973

APPROVED:

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
PHILIP G. HALLOF

DATE: 12/1/73

Expiry Date: February 25, 1974

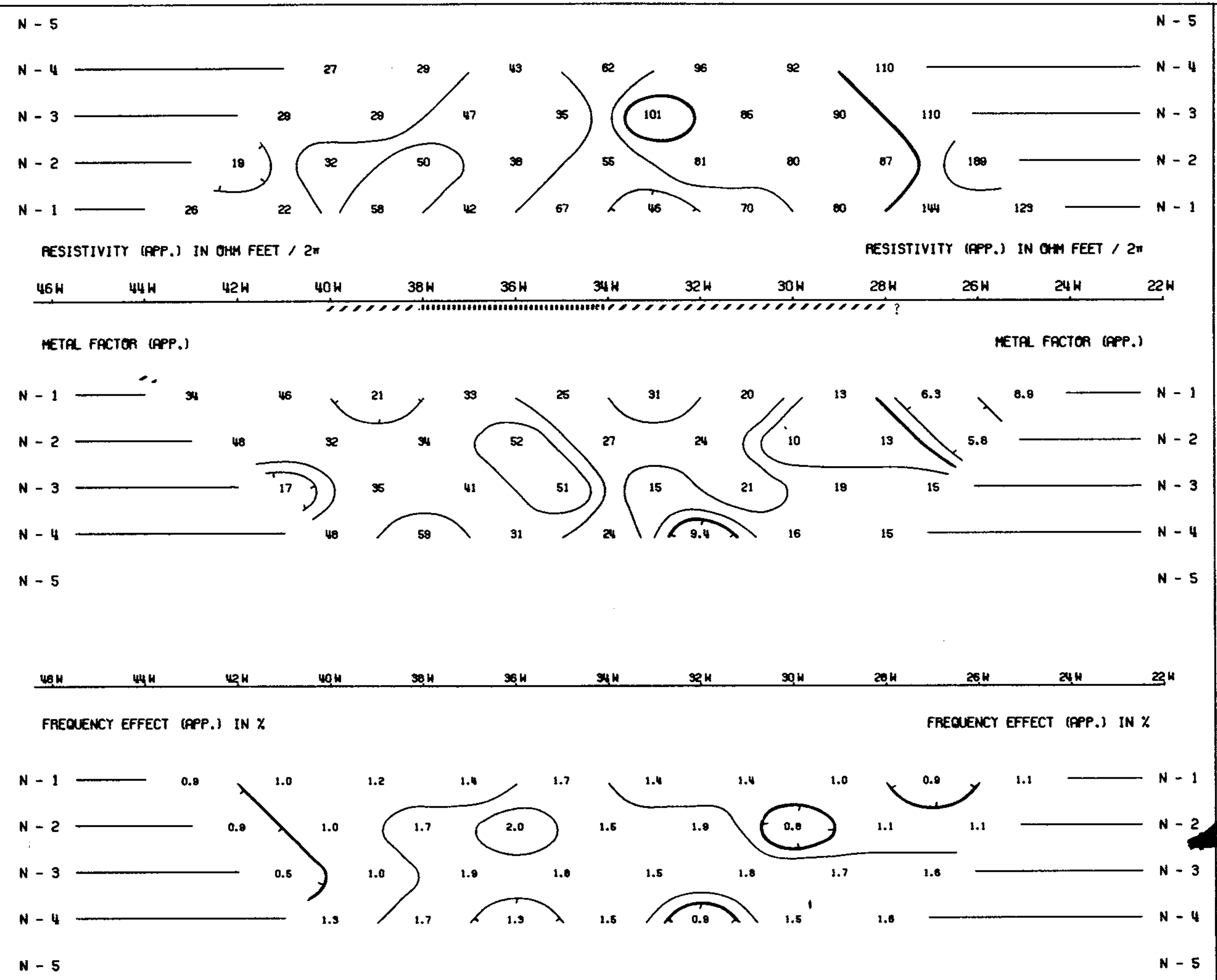
NOTE: CONTOURS AT LOGARITHMIC INTERVALS
1.-1.5-2.-3.-5.-7.5-10

4825

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED BY MCPHAR COMPUTER DIVISION



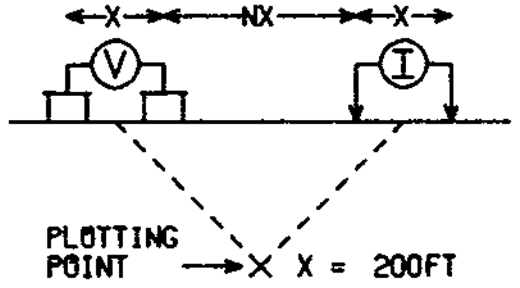
DWG. NO.- I.P.-6117-5

RIO PLATA SILVER MINES LTD.

LUCK AND FIN CLAIMS, MERRITT AREA,
NICOLA M.D., B.C.

LINE NO.- 5600N

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1973

APPROVED:

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE: 12/12/73

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA PHILIP G. HALLOF

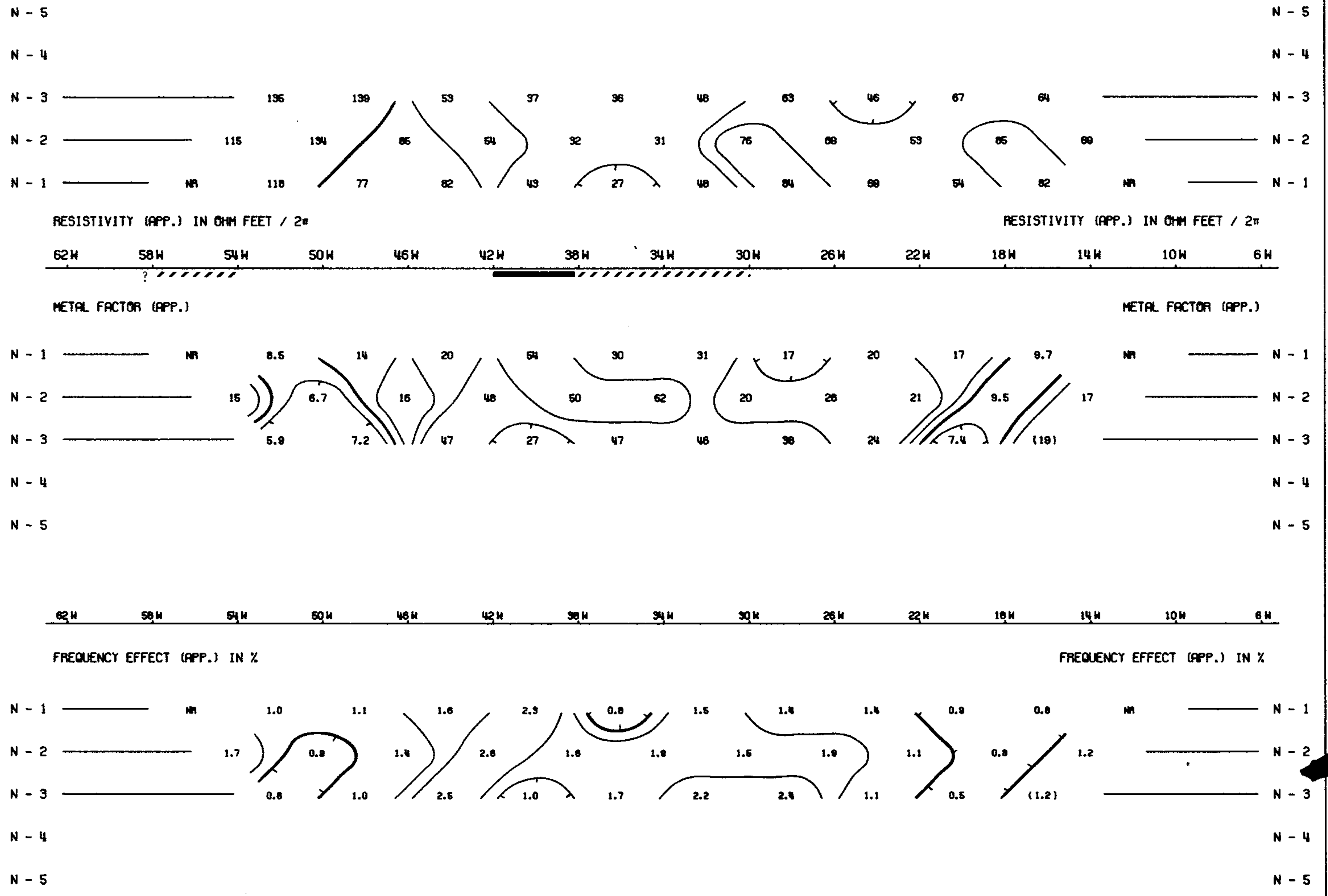
Expiry Date: February 25, 1974

4825

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED BY McPHAR COMPUTER DIVISION



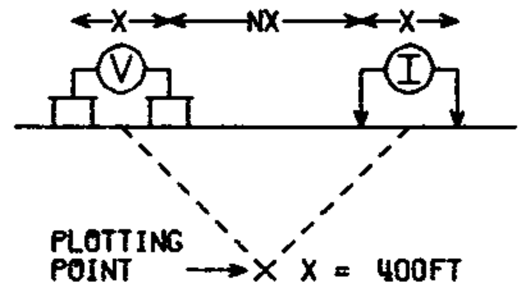
DWG. NO.- I.P.-6117-6

RIO PLATA SILVER MINES LTD.

LUCK AND FIN CLAIMS, MERRITT AREA,
NICOLA M.D., B.C.

LINE NO.- 6400N

ELECTRODE CONFIGURATION



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1973

APPROVED:

DATE: 12/12/73

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — PHILIP G. HALLOF

Expiry Date: February 25, 1974

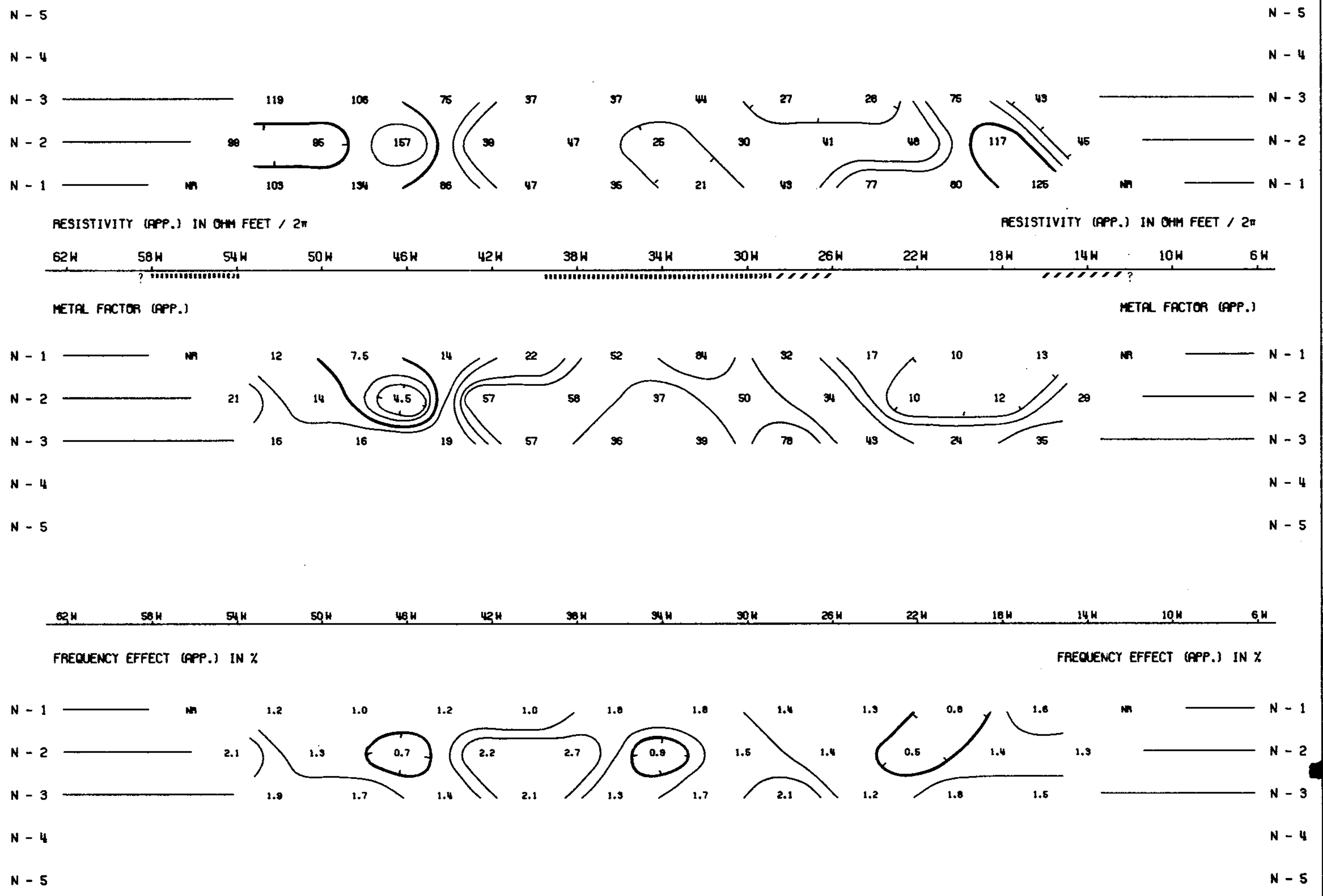
NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

4825

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED BY McPHAR COMPUTER DIVISION



DWG. NO.- I.P.-6117-7

RIO PLATA SILVER MINES LTD.

LUCK AND FIN CLAIMS, MERRITT AREA,
NICOLA M.D., B.C.

LINE NO.- 7200N

ELECTRODE CONFIGURATION

PLOTTING POINT X = 400FT

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1973

APPROVED:

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

DATE:

PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA — PHILIP G. HALLOF

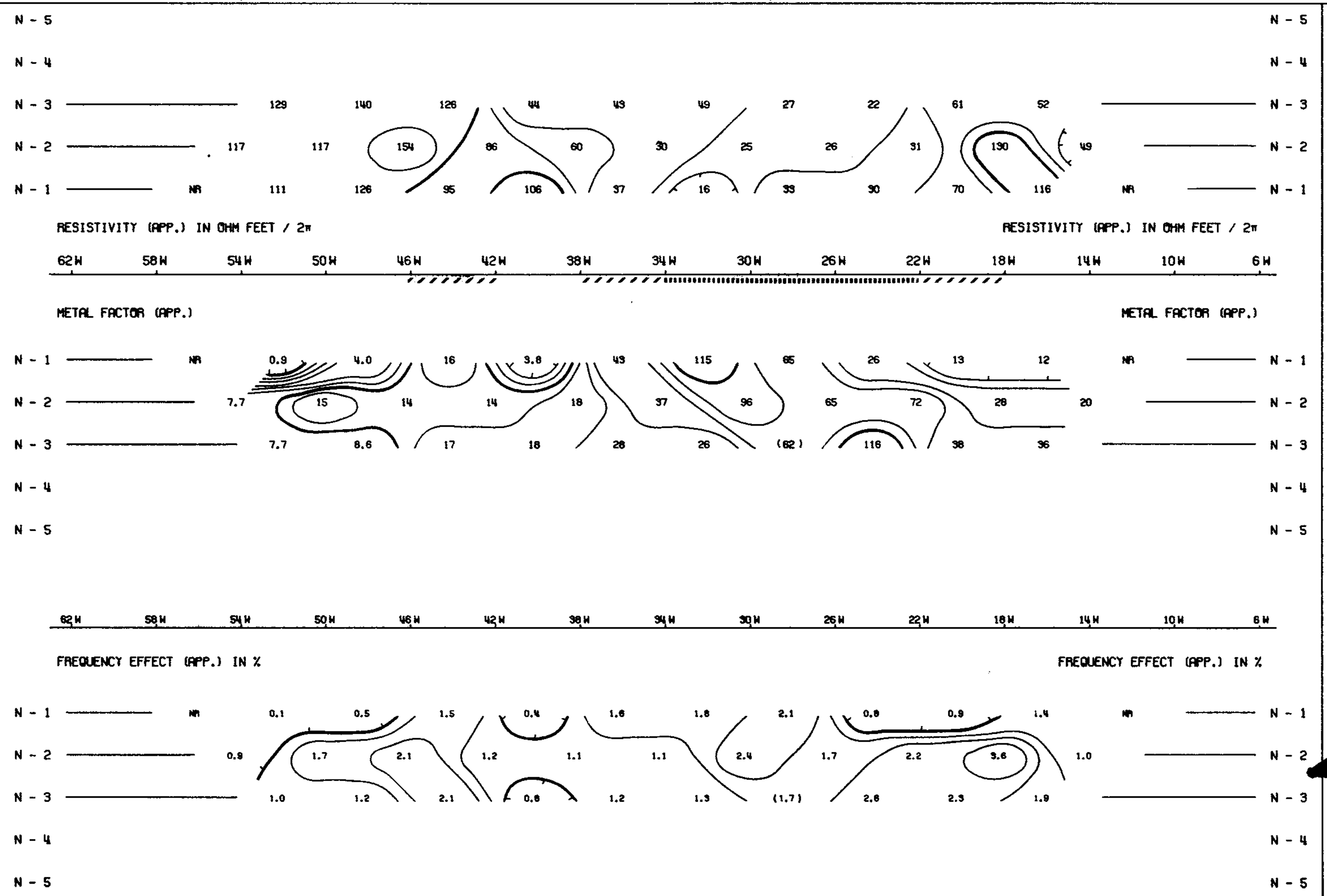
Expiry Date: February 25, 1974

4825

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED BY MCPHAR COMPUTER DIVISION



DWG. NO.- I.P.-6117-8

RIO PLATA SILVER MINES LTD.

LUCK AND FIN CLAIMS, MERRITT AREA,
NICOLA M.D., B.C.

LINE NO.- 8000N

ELECTRODE CONFIGURATION

X NX X

PLOTTING POINT X = 400FT

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 HZ

DATE SURVEYED: OCT 1973

APPROVED

DATE

NOTE: CONTOURS AT LOGARITHMIC INTERVALS 1.-1.5-2.-3.-5.-7.5-10

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA PHILIP G. HALLOF

Expiry Date: February 25, 1974

4825

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

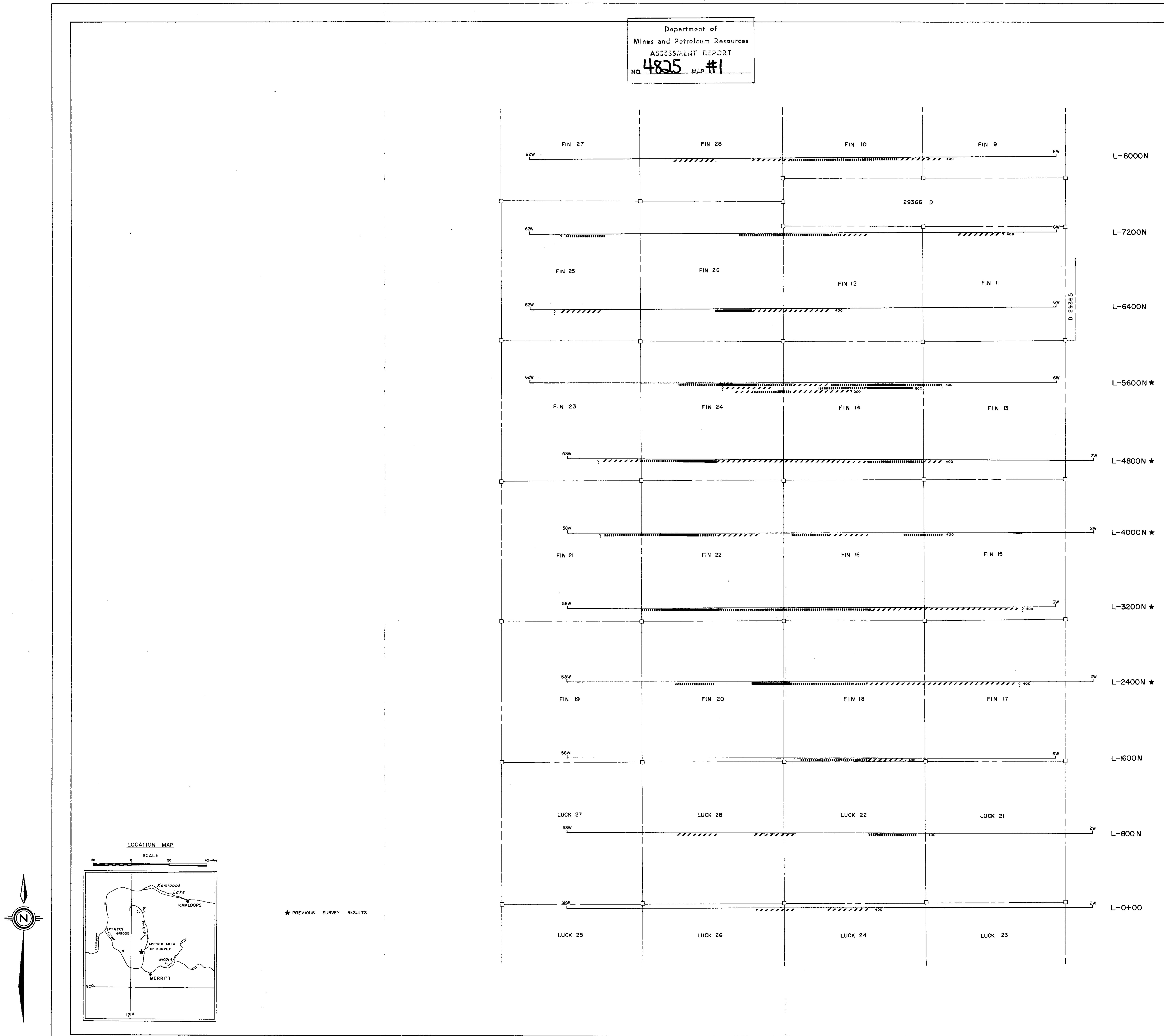
NOTE: THIS PLOT WAS PRODUCED BY MCPHAR COMPUTER DIVISION

DWG. I.P.P. 4944

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PLAN MAP



NOTE

TO ACCOMPANY GEOPHYSICAL REPORT FOR
RIO PLATA SILVER MINES LIMITED ON
FIN AND LUCK CLAIMS, NICOLA M.D.,
MERRITT AREA, B.C. BY A. W. MULLAN, P.ENG.,
(GEOLOGIST) AND P.G. HALLOF, P.ENG., (GEOPHYSICIST)

DATED DEC. 12, 1973

SURFACE PROJECTION
OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

Number at the end of anomaly indicates spread used.

RIO PLATA SILVER MINES LTD

FIN AND LUCK CLAIMS, NICOLA M.D., MERRITT AREA, B.C.

SCALE

ONE INCH EQUALS FOUR HUNDRED FEET

4825
M1

DRAWN
DATE DEC. 1973
APPROVED
PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA
Expiry Date: February 25, 1974

DWG. I.P.P. 4944