503

50°, 120°, S.W.

REPORT ON THE GEOPHYSICAL SURVEY (INDUCED POLARIZATION & RESISTIVITY) ON THE COPPERADO MINE CLAIM GROUP NICOLA MINING DIVISION, B.C.

92I/2E

FOR

TOLUMA MINING & DEVELOPMENT CO. LTD.

BY

D. B. SUTHERLAND, M.A.

NAME AND LOCATION OF PROPERTY:

COPPERADO MINE CLAIM GROUP,

NICOLA MINING DIVISION, B.C., 50° N, 120° W

DATE STARTED - JULY 18, 1963

DATE COMPLETED - JULY 29, 1963

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McPHAR GEOPHYSICS LIMITED

NOTES ON THE THEORY OF INDUCED POLARIZATION AND THE METHOD OF FIELD OPERATION

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 effectively stop all 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 "metal factor" or "M. F. " are a measure of the amount of polarization present in the rock mass being surveyed. This parameter has been found to be very successful in mapping areas of sulphide mineralization, even those in which all other geophysical methods have been unsuccessful. The induced polarization measurement is more sensitive to sulphide content than other electrical measurements because it is much more dependent upon the sulphide content. As the sulphide content of a rock is increased, the "metal factor" of the rock increases much more rapidly than the resistivity decreases.

Because of this increased sensitivity, it is possible to locate and outline zones of less than 10% sulphides that can't be located by E. M. Methods. The method has been successful in locating the disseminated "porphyry copper" type mineralization in the Southwestern United States.

Measurements and experiments also indicate that it should be possible to locate most massive sulphide bodies at a greater depth with induced polarization than with E. M.

Since there is no I. P. effect from any conductor unless it is metallic, the method is useful in checking E. M. anomalies that are suspected of being due to water filled shear zones or other ionic conductors. There is also no effect from conductive overburden, which frequently confuses E. M. results. It would appear from scale model experiments and calculations that the apparent metal factors measured over a mineralized zone are larger if the material overlying the zone is of low resistivity.

Apropos of this, it should be stated that the induced polarization measurements indicate the total amount of metallic constituents in the rock. Thus all of the metallic minerals in the rock, such as pyrite, as well as the ore minerals chalcopyrite, chalcocite, galena, etc. are responsible for the induced polarization effect. Some oxides such as magnetite, pyrolusite, chromite, and some forms of hematite also conduct by electrons and are metallic. All of the metallic minerals in the rock will contribute to the induced polarization effect measured on the surface.

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 a distance (X) apart. The potentials are measured at two other points (X) feet apart, in line with the current electrodes. The distance between the nearest current and potential 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 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. The resistivity values are plotted above the line and the metal factor values below. 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. These 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, model and theoretical investigations. The position of the electrodes when anomalous values are measured must be used 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 100 feet to 1000 feet for (X). In each case, the decision as to the distance (X) and the values of (N) 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 1 below demonstrates the method used in plotting the results. Each value of the apparent resistivity and the apparent "Metal factor" 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.

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

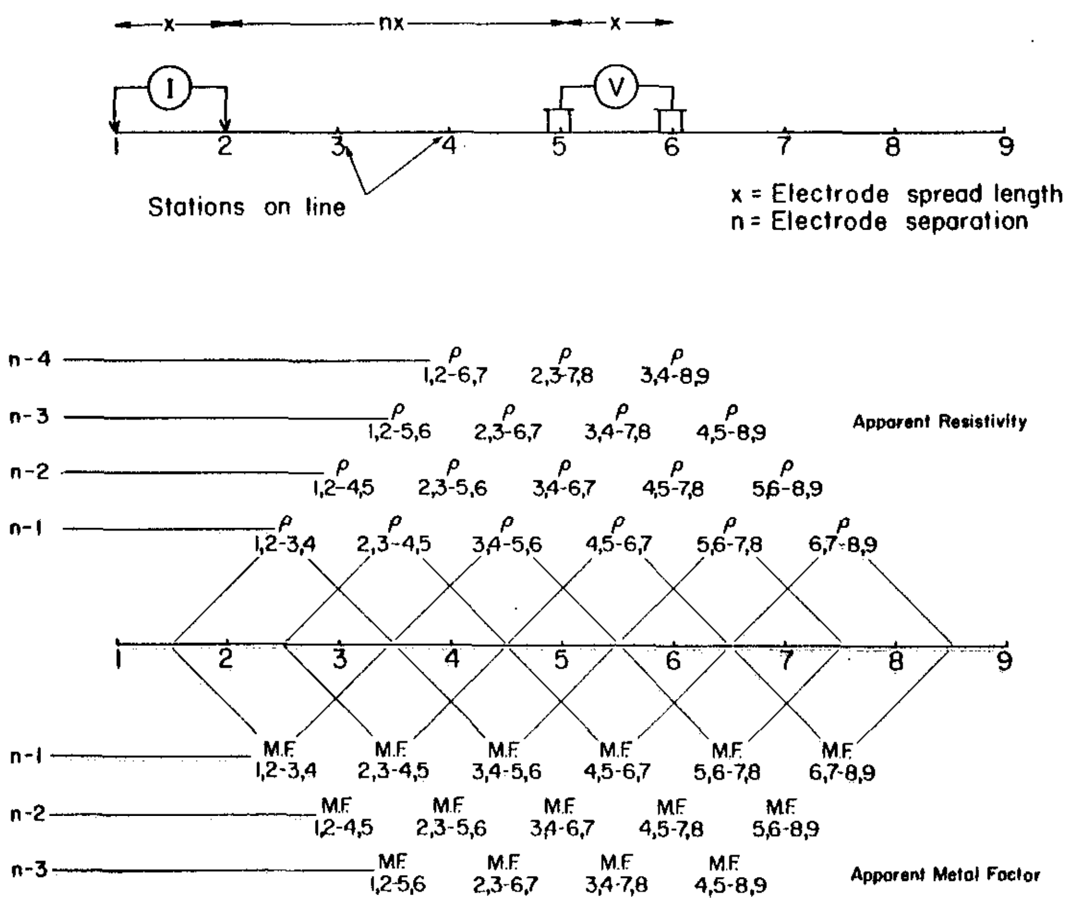

FIG. 1

McPHAR GEOPHYSICS LIMITED

REPORT ON THE

GEOPHYSICAL SURVEY

(INDUCED POLARIZATION & RESISTIVITY)

ON THE

COPPERADO MINE CLAIM GROUP

NICOLA MINING DIVISION, B.C.

FOR

TOLUMA MINING & DEVELOPMENT CO. LTD.

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1. INTRODUCTION

At the request of Mr. W. B. Montgomery, General Manager of Toluma Mining & Development Co. Ltd., a combined induced polarization-resistivity survey has been carried out over part of the company's Copperado Mine Claim Group. This property is located in the Nicola Mining Division near Merritt, B.C. in the southeast quadrant of the one degree quadrilateral whose southeast corner is at 50° N-120° W.

Previous work on the property included a geochemical survey, geological mapping as well as stripping, trenching and a series of six diamond drill holes. These investigations revealed an area of interesting molybdenum, copper and silver mineralization. The purpose of the induced polarization survey was to investigate the area surrounding the known mineralization for the presence of disseminated sulphides.

2. PRESENTATION OF RESULTS

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

Line	Electrode Separation	Drawing
Line 48N	300 feet	Dwg. I.P. 2086-1
Line 45N	300 feet	Dwg. I.P. 2086-2
Line 40N	300 feet	Dwg. I.P. 2086-3
Line 35N	300 feet	Dwg. I.P. 2086-4
Line 30N	300 feet	Dwg. I.P. 2086-5
Line 25N	300 feet	Dwg. I.P. 2086-6
Line 22N	300 feet	Dwg. I.P. 2086-7
Line 22N	100 feet	Dwg. I.P. 2086-8
Line 19N	300 feet	Dwg. I.P. 2086-9
Line 15N	300 feet	Dwg. I.P. 2086-10
Base Line F	300 feet	Dwg. I.P. 2086-11

Enclosed with this report is Dwg. Misc. 4040, a plan map of the property at a scale of 1" = 200 feet. The definite and possible induced polarization anomalies are indicated by solid and broken bars respectively on this plan map as well as 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 spread length; i.e. when using 200' spreads the position of a narrow sulphide body can only be determined to lie between two stations 200' apart. In order to locate sources at some depth, larger spreads must be used, with a corresponding increase in the uncertainties of location. Therefore, while the center 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.

3. DISCUSSION OF RESULTS

No strong induced polarization effects were encountered by the survey. Several weak indications that could be caused by small bodies of low metallic content have been interpreted from the data. However, these are based on minimal I.P. responses.

Lines 48N and 45N

There are a few metal factor values that are above background on these two lines, but they are too weak to warrant further consideration.

Line 40N

A possible anomalous zone has been interpreted from a single row of metal factor values between D10E and D13E. They are indicative of a narrow and probably steeply dipping source of low metallic content.

Line 35N

The possible anomalous zone shown between D10E and D13E is probably due to a weakly mineralized source with some depth to the top. The location of this zone suggests that it may correlate with the response on Line 40N. However, the character of the contour patterns is quite different on these two lines.

Line 30N

There are a few above background metal factor values on this line, but there are no definite contour patterns and the values are not strong enough to be considered anomalous.

Line 25N

A source of low metallic content with some depth to the top could be the cause of the possible anomalous zone shown between D14E and D20E on the data plot. However, the results are not sufficiently strong to warrant its classification as a definite anomaly.

Line 22N

A weak and probably shallow source occurs between D11E and D17E on this line. This may correlate with the anomalous results on Line 25N that were discussed above but the character of the two responses is quite different.

A weak response occurs between E11E and E14E, immediately east of the known mineralization and a series of drill holes. Detail surveying with 100 foot spreads was carried out in the vicinity of this anomaly but there was only a slight increase in the metal factor values.

Considering both the reconnaissance and detail results, this weakly anomalous source appears to have some depth to the top and to lie to the east of the area intersected by drill holes TM-11, TM-12 and TM-15.

It is of interest to note that the known mineralization did not give rise to any strong induced polarization effects.

A third weak anomaly is shown between E20E and E23E on this line. It has been interpreted from minimal I.P. effects and is considered to be of minor importance.

Lines 15N and 19N

There are no significant Induced Polarization effects on either of these lines.

Line Base Line "F"

Base Line "F" is a north-south line that passes within 400 feet of the area of stripping and drilling. A weak anomaly is shown between 21N and 27N on this line.

The I.P. results suggest that the cause of the anomaly is a rather broad zone of low metallic content that is not too deeply buried and may even outcrop. There is a slight increase in the metal factor values with increasing separation which indicates that the metallic content improves slightly with depth.

4. SUMMARY AND RECOMMENDATIONS

No strong Induced Polarization effects were encountered on the portion of the claim group that was surveyed.

In addition, no significant effects were obtained directly over the area of previous drilling and stripping. A weak anomaly was found to lie immediately east of this area that could be caused by a small percentage of sulphides. On the basis of the geophysical results alone, it is difficult to recommend the drilling of this weak anomaly even though only small effects would be expected from a low, and possibly economic, percentage of molybdenite. However, if the geological and geochemical results are particularly favourable in this area, then several hundred feet of test drilling may be considered worthwhile.

The remaining weak indications on the property appear to be grouped into a discontinuous zone that trends roughly north-south between Line 22N and Line 40N. The zone lies across the boundary of Claims A4MC and TM1MC and just west of the boundary of Claims A6MC and J22MC. These weak responses occur in an area where moderate to strong values were obtained in the geochemical work using the Rubeanic Acid Test for Copper. As before, the geophysical results are not strong enough to warrant drilling. However, unusually good geological evidence coupled with the geochemical data could increase the importance of the induced polarization results. Consequently, additional geological work should be considered for this zone with particular attention to the vicinity of Line 25N where the best induced polarization effects were encountered.

McPHAR GEOPHYSICS LIMITED

D. B. Sutherland,
Geophysicist.

Dated: August 30, 1963

ASSESSMENT DETAILS

PROPERTY: Copperado Mines Claim Group

MINING DIVISION: Nicola

SPONSOR: Toluma Mining and Development Company Ltd.

PROVINCE: British Columbia

LOCATION: Merritt, B.C.

TYPE OF SURVEY: Induced Polarization

OPERATING DAYS:	35.0	DATE STARTED: July 18, 1963
EQUIVALENT 8 HR. MAN DAYS:	52.5	DATE FINISHED: July 29, 1963
CONSULTING MAN DAYS:	3.0	NUMBER OF STATIONS OCCUPIED: 87
DRAUGHTING MAN DAYS:	5.0	NUMBER OF READINGS TAKEN: 736
TOTAL MAN DAYS:	60.5	MILES OF LINE SURVEYED: 4.12

CONSULTANTS:
D. B. Sutherland, 412 Eglinton Avenue, East, Toronto 12, Ontario.

FIELD TECHNICIANS:
E. MacDonald, 52 Douglas Street, Charlottetown, P.E.I.
E. Winniski, 27 Peterlee Avenue, Toronto 17, Ontario.
Three Helpers supplied by client

DRAUGHTSMEN:
F. R. Peer, 38 Torrens Avenue, Toronto 6, Ontario
R. Martin, 107 Atlas Street, Toronto, Ontario
R. MacKenzie, 55 Shandon Drive, Scarboro, Ontario

McPHAR GEOPHYSICS LIMITED

D. B. Sutherland,
Geophysicist.

Dated: August 30, 1963.

SUMMARY OF COST

Toluma

Crew

7 days Operating	@ $175.00/day	$1,225.00

Expenses

Airfare - 2 men	$183.48	
Excess Baggage	15.71	
Meals and Accommodation	66.83	
Airfreight	65.96	
Vehicle Rental, Taxi, etc.	36.70	368.68
		$1,593.68

McPHAR GEOPHYSICS LIMITED

D. B. Sutherland,
Geophysicist.

Dated: August 30, 1963.

I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City of Vancouver, in the Province of British Columbia, this 26 day of Sept., 1963, A.D.

Sub-mining Recorder

CERTIFICATE

I, Don Benjamin Sutherland of the City of Toronto, Province of Ontario, do hereby certify that :

1. I am a geophysicist residing at 412 Eglinton Avenue, East, Toronto 12, Ontario.

2. I am a graduate of the University of Toronto in Physics and Geology with the degree of Bachelor of Arts (1954); and a graduate of the University of Toronto in Physics with the degree of Master of Arts (1955).

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

4. I have been practising my profession for over seven 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 Toluma Mining & Development Co. Ltd.

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

Dated at Toronto

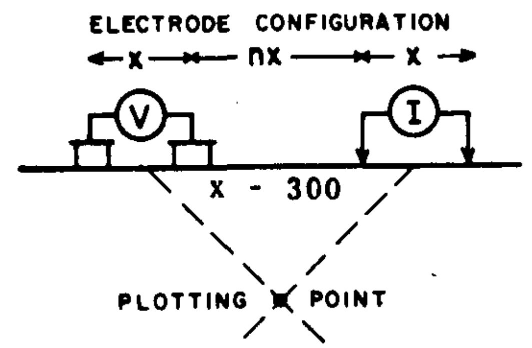
This 30th day of August, 1963

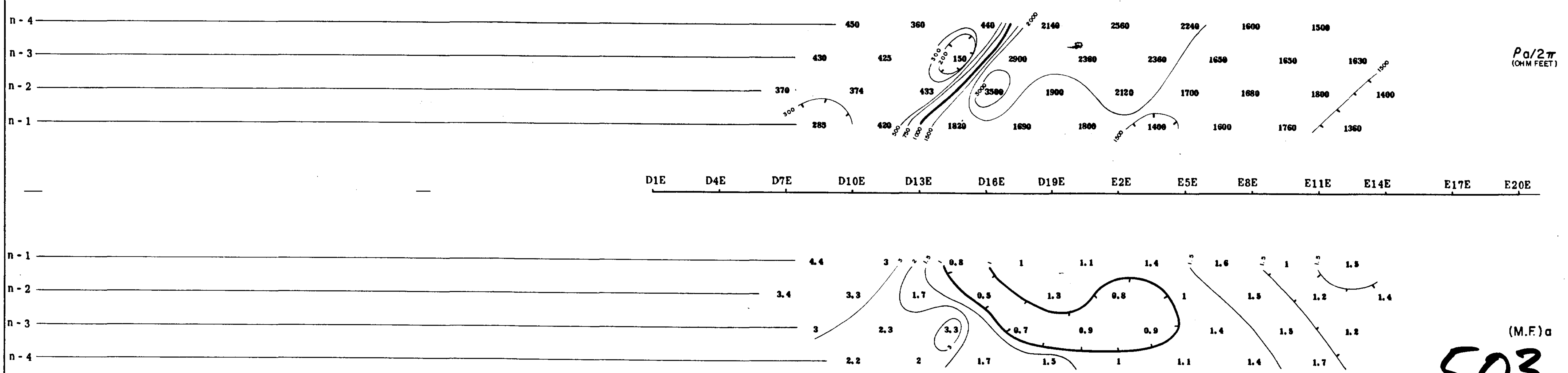
Don B. Sutherland, M.A.

DWG. NO.-I.P.-2086-1

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





LINE NO.- 48 N

503

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP—NICOLA M.D.—MERRITT, B.C.

Scale-One Inch = 300 Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY .31 — 5 C.P.S.

DATE SURVEYED JULY, 1963

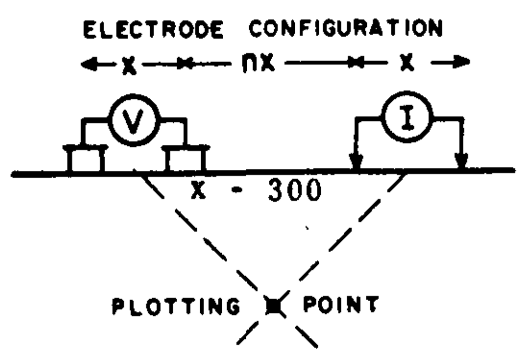
APPROVED

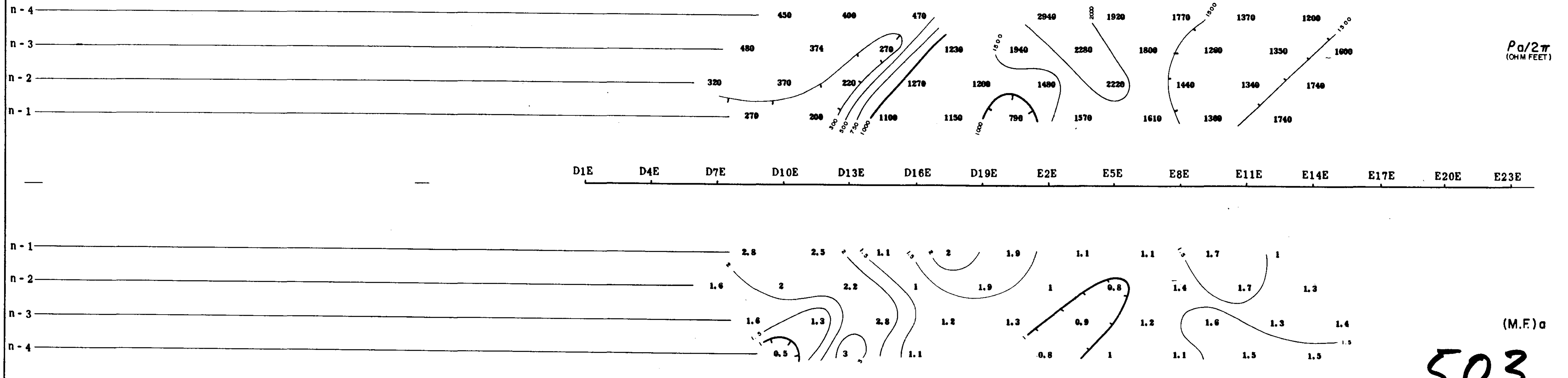
DATE 30/8/63

DWG. NO.-I.P.-2086-2

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





LINE NO.-45N

503

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP—NICOLA M.D.—MERRITT, B.C.

Scale-One inch = 300 Feet

ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY .31 — 5 C.P.S.

DATE SURVEYED JULY, 1963

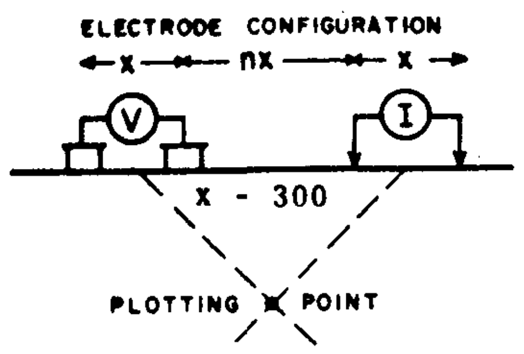
APPROVED d.b.l.

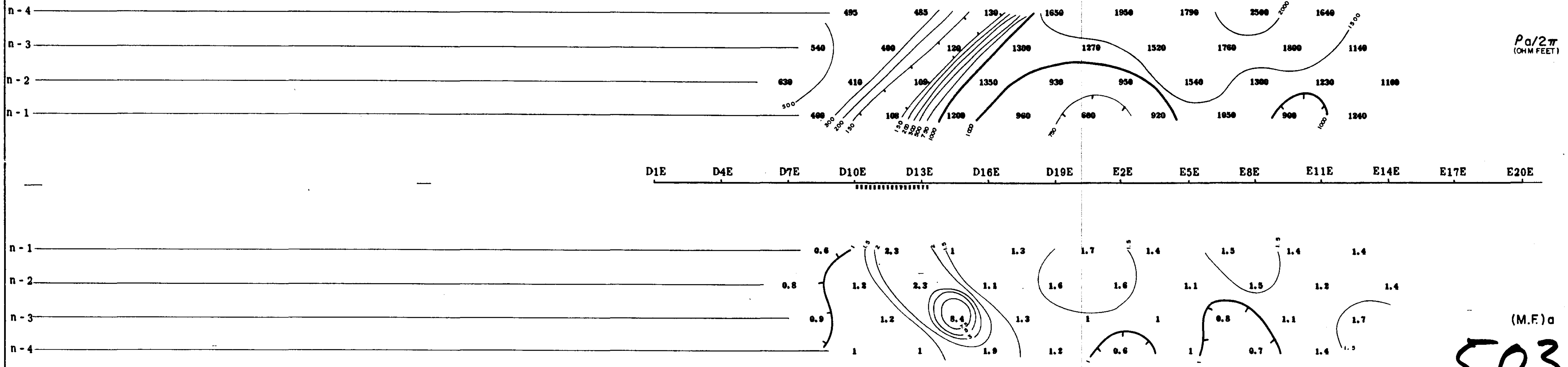
DATE 30/8/63

DWG. NO.-I.P.- 2086-3

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





LINE NO.-40N

503

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP—NICOLA M.D.—MERRITT, B.C.

Scale-One Inch = 300 Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY .31 — 5 C.P.S.

DATE SURVEYED JULY, 1963

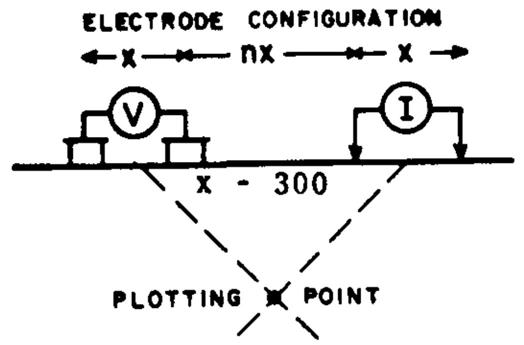
APPROVED

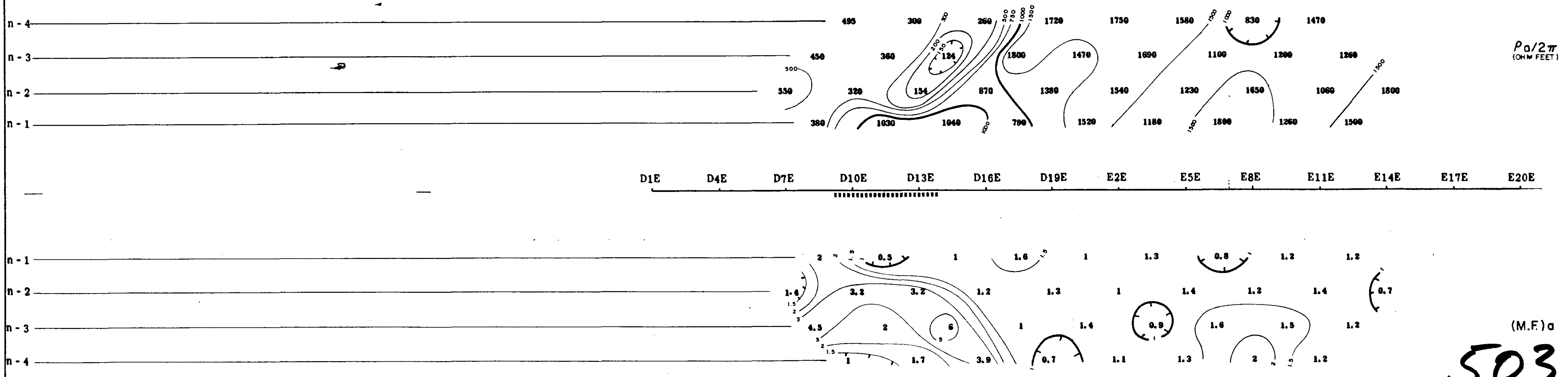
DATE 30/8/63

DWG. NO.-I.P.-2086-4

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





LINE NO.- 35 N

503

(M4)

FREQUENCY .31 – 5 C.P.S.

DATE SURVEYED JULY, 1963

APPROVED

DATE 30/8/63

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP – NICOLA M.D. – MERRITT, B.C.

Scale-One Inch = 300 Feet

ANOMALOUS ZONE

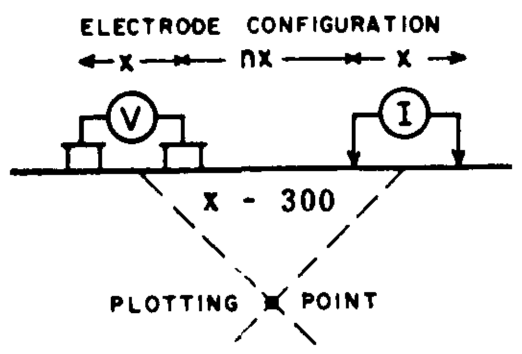
POSSIBLE ANOMALOUS ZONE

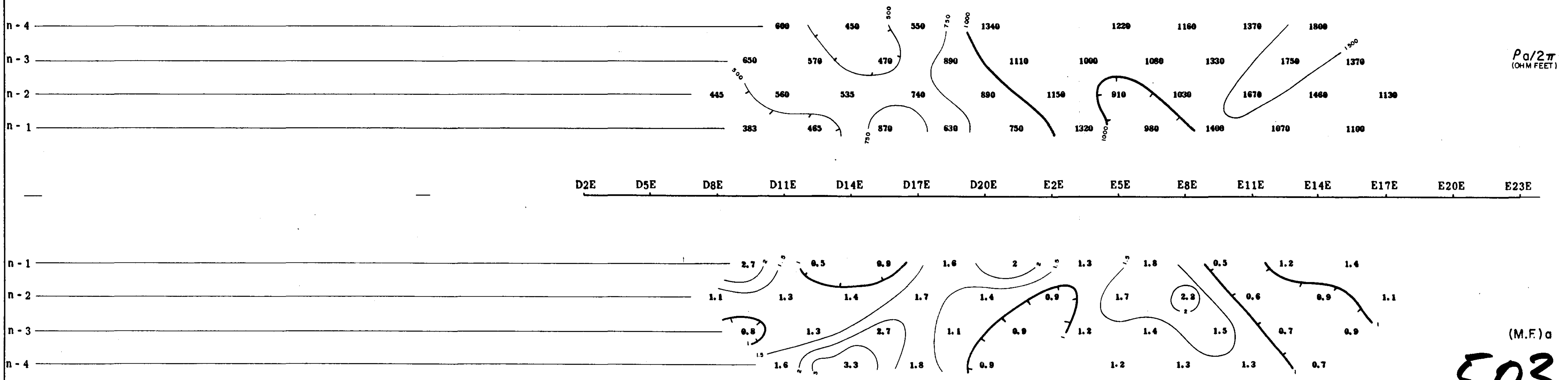
NOTE
LOGARITHMIC CONTOUR INTERVAL

DWG. NO.-I.P.-2086-5

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





LINE NO.-30N

503

(M5)

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP—NICOLA M.D.—MERRITT, B.C.

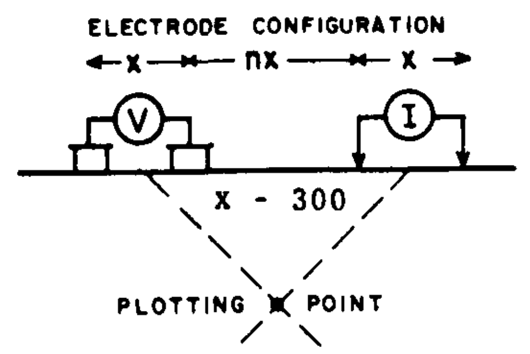
Scale-One inch = 300 Feet

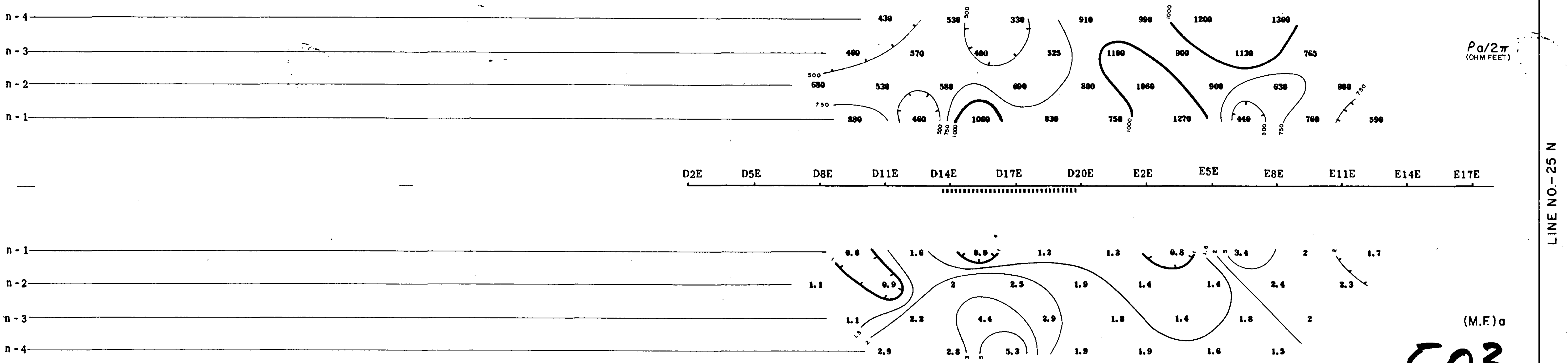
ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY .31 – 5 C.P.S.
DATE SURVEYED JULY, 1963
APPROVED 8B1
DATE 30/8/63

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





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TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP—NICOLA M.D.—MERRITT, B.C.

Scale-One Inch = 300 Feet

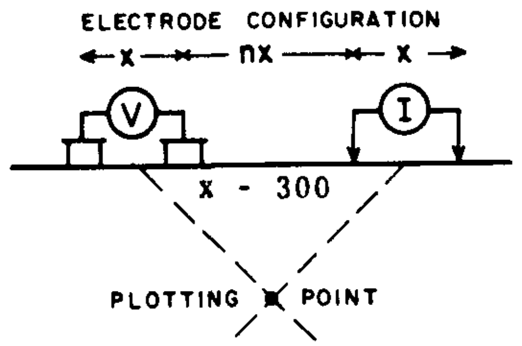
ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

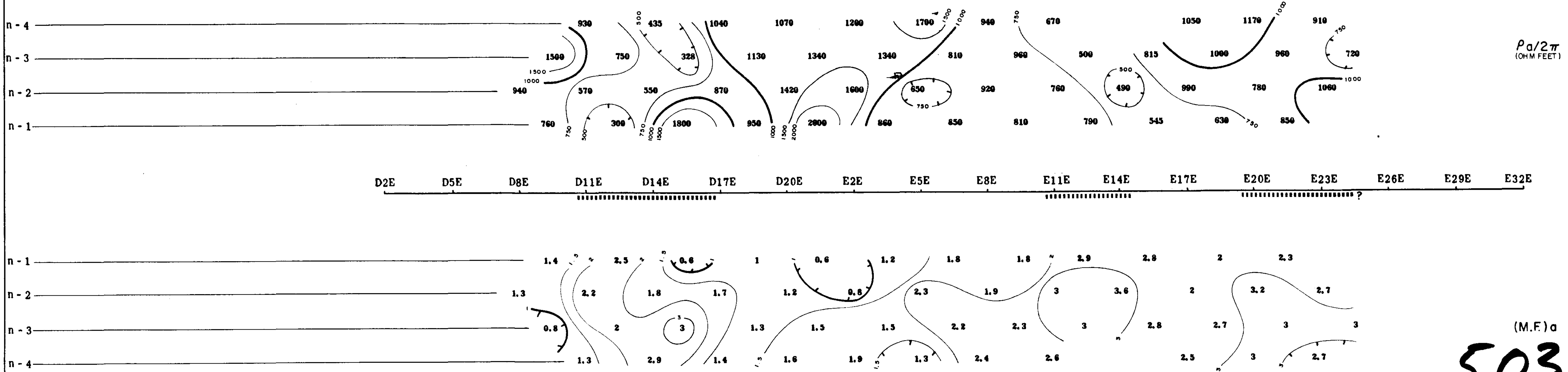
FREQUENCY .31 — 5 C.P.S.
DATE SURVEYED JULY, 1963
APPROVED [illegible]
DATE 30/8/63

DWG. NO.-I.P.-2086-7

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





LINE NO.-22N

503

M7

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP—NICOLA M.D.—MERRITT, B.C.

Scale-One inch = 300 Feet

ANOMALOUS ZONE ▬▬▬

POSSIBLE ANOMALOUS ZONE ▬ ▬ ▬

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY ·31 — 5 C.P.S.

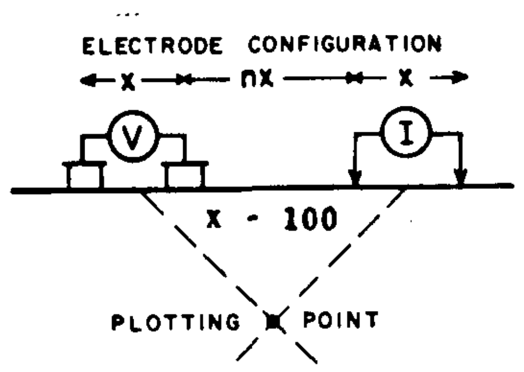
DATE SURVEYED JULY, 1963

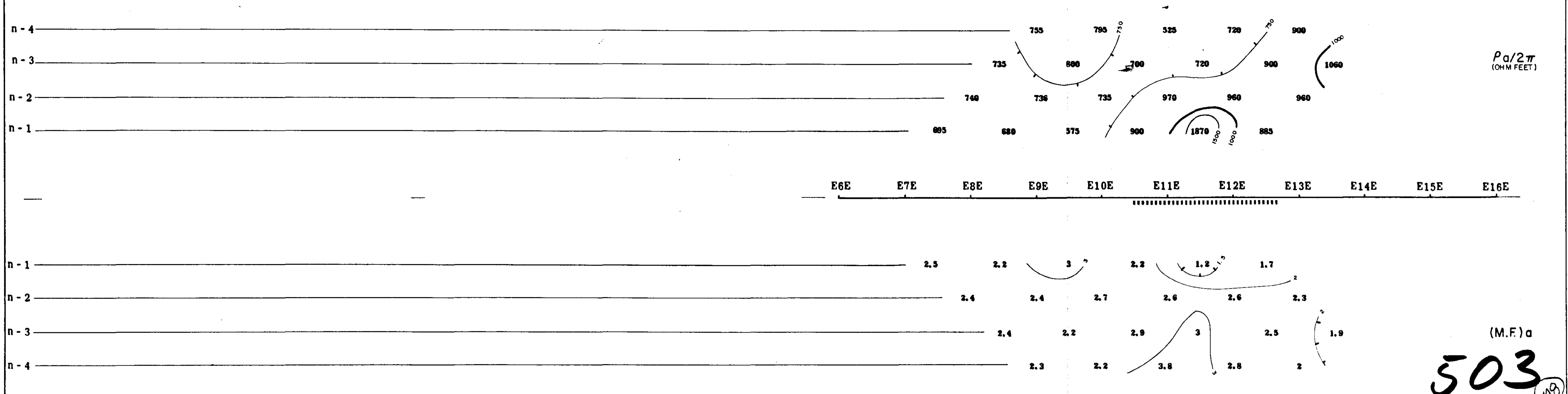
APPROVED ABS

DATE 30/8/63

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





LINE NO.-22 N

503 (M8)

FREQUENCY 31 – 5 C.P.S.

DATE SURVEYED JULY, 1963

APPROVED H.S.

DATE 30/9/63

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP—NICOLA M.D.—MERRITT, B.C.

Scale-One inch = 100 Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

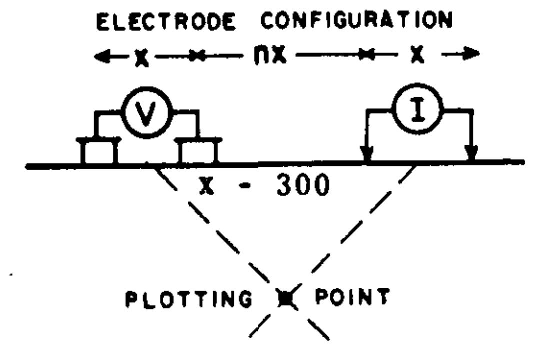
NOTE

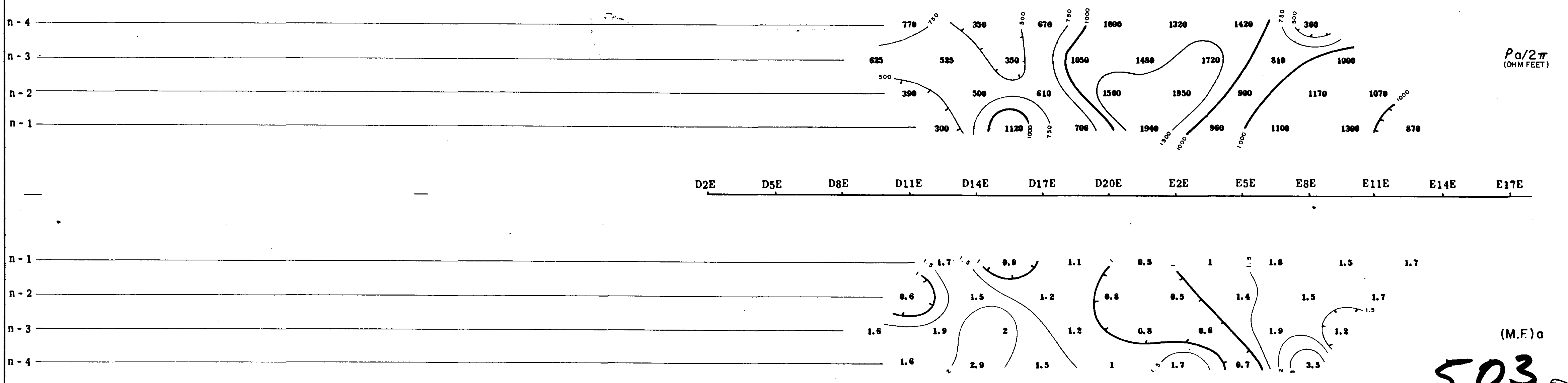
LOGARITHMIC CONTOUR INTERVAL

DWG. NO.-I.P.-2086-9

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





LINE NO.-19 N

503 (H9)

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP—NICOLA M.D.—MERRITT, B.C.

Scale-One inch = 300 Feet

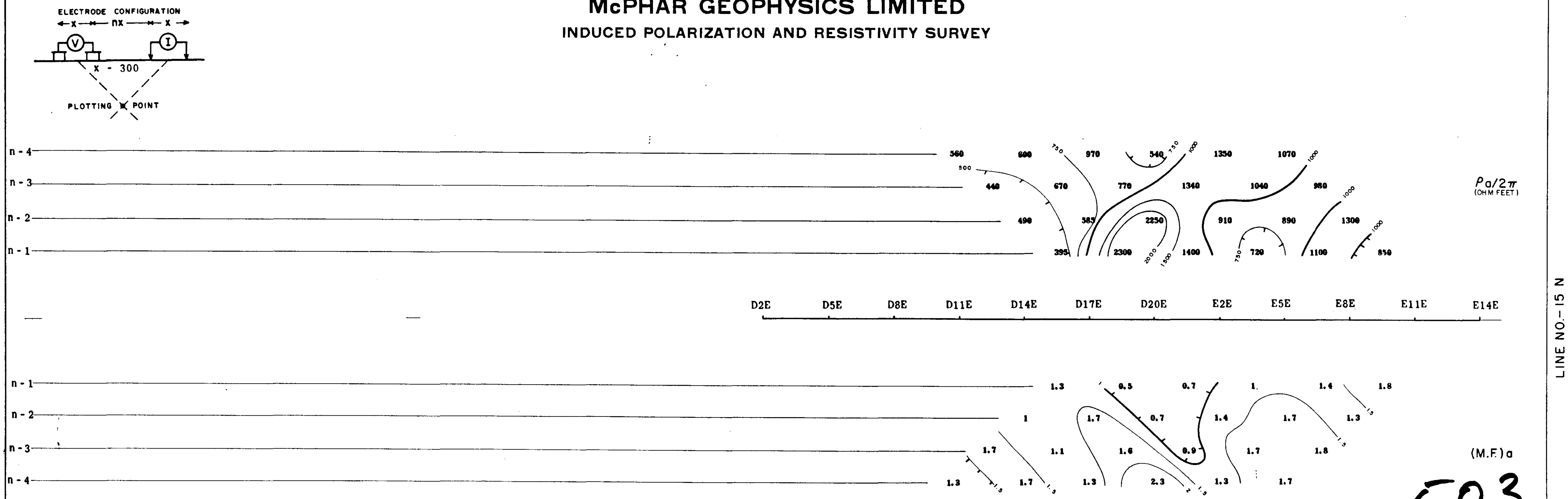
ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY 31 - 5 C.P.S.
DATE SURVEYED JULY, 1963
APPROVED [signature]
DATE 30/8/63

DWG. NO.-I.P.-2086-10

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



503 (M10)

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP—NICOLA M.D.—MERRITT, B.C.

Scale-One Inch=300 Feet

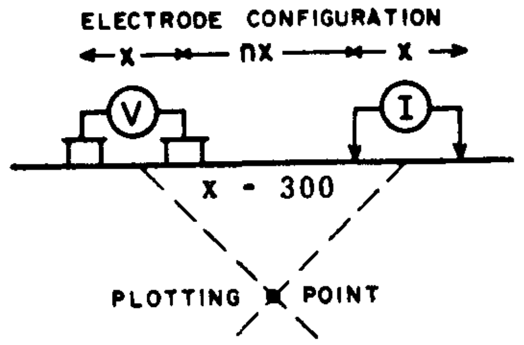
ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

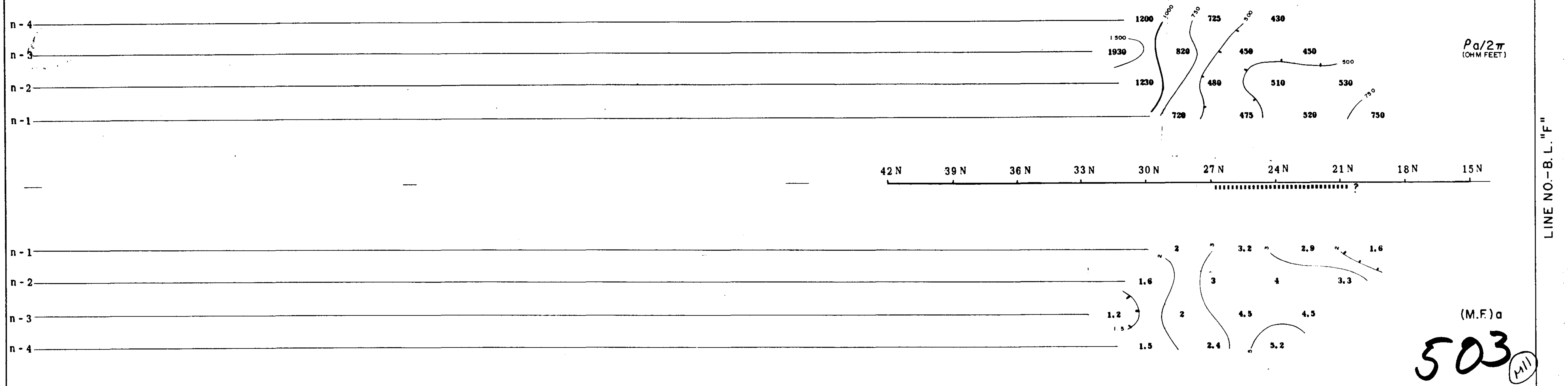
FREQUENCY-31 — 5 C.P.S.
DATE SURVEYED JULY, 1963
APPROVED [signature]
DATE 30/8/63

DWG. NO.-I.P.-2086-11

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





FREQUENCY .31 - 5 C.P.S.

DATE SURVEYED JULY, 1963

APPROVED H.B.S.

DATE 30/8/63

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP—NICOLA M.D.—MERRITT, B.C.

Scale-One inch = 300 Feet

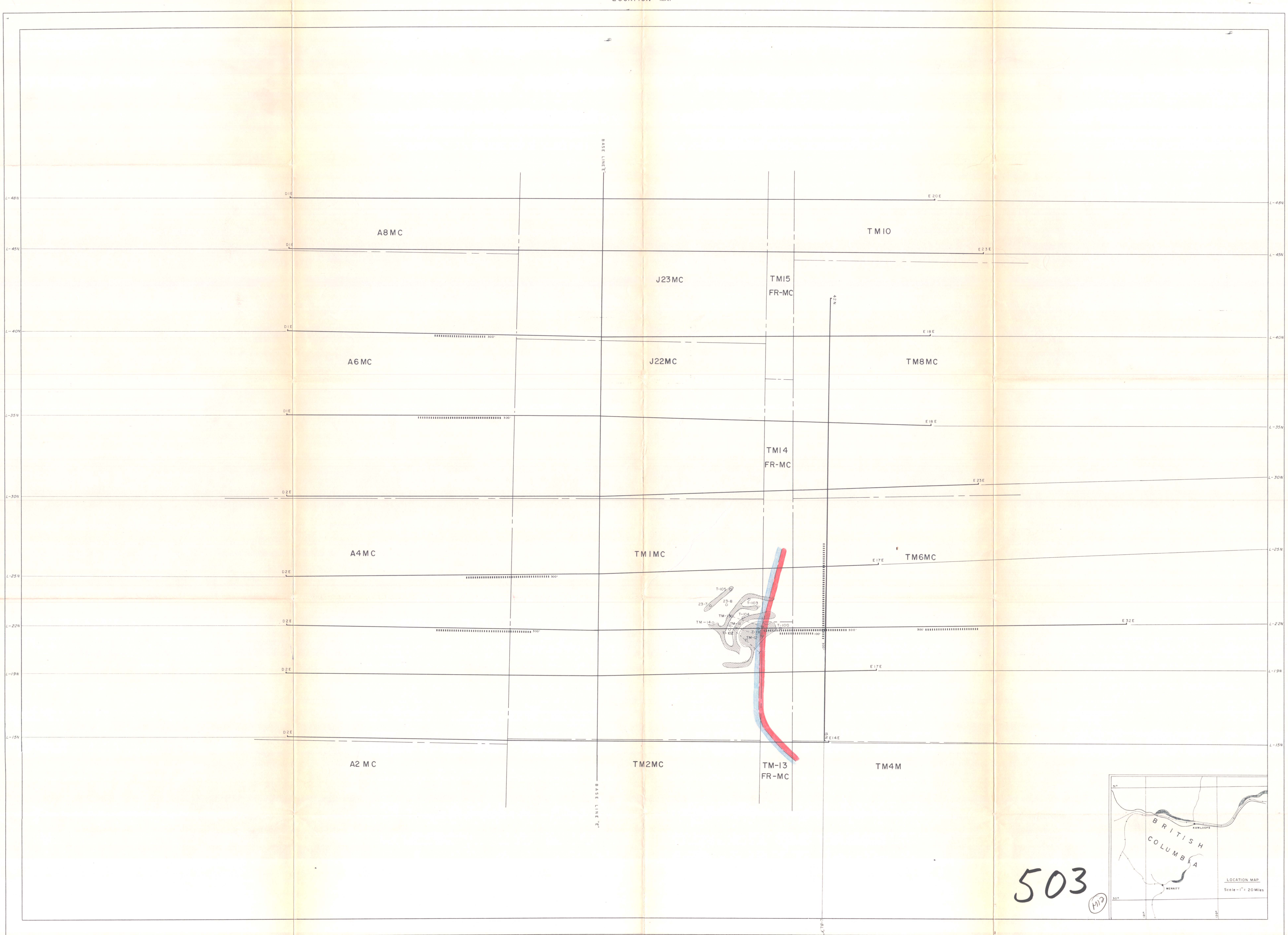
ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

McPHAR GEOPHYSICS LIMITED

LOCATION MAP



ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

CLAIM BOUNDARY

NUMBERS AT END OF ANOMALIES INDICATES SPREAD USED.

TOLUMA MINING and DEVELOPMENT COMPANY LIMITED

SOUTH-EAST AREA COPPERADO MINE CLAIM GROUP — NICOLA M.D. — MERRITT, B.C.

SCALE

200 150 100 50 0 200 400 600 800 1000 FEET

One Inch = Two Hundred Feet

T-106 DRILLED HOLES.

MAIN CONTACT.

AREA OF COPPER MINERALIZATION EXPOSED BY STRIPPING.

GRANITE.

GRANODIORITE.

TO ACCOMPANY GEOPHYSICAL REPORT BY DON B. SUTHERLAND, M.A., ON THE SOUTH-EAST AREA, COPPERADO MINE CLAIM GROUP, NICOLA MINING DIVISION, MERITT, BRITISH COLUMBIA.

DATED: AUGUST 30th, 1963.

Report 503

DRAWN: D.A.G.
DATE: AUGUST, 1963
APPROVED: [signature]

DATE: 30/8/63

DWG. MISC.-4040