



41P03NE0010 63.2817 VALIN

010

McPHAR GEOPHYSICS LIMITED

63, 28'

REPORT ON THE
INDUCED POLARIZATION
AND RESISTIVITY SURVEY
AT
WELCOME LAKE,
VALIN TOWNSHIP, ONTARIO
FOR
CHIMO GOLD MINES LIMITED

1. INTRODUCTION

At the request of Mr. A.C. Mosher, President, an induced polarization and resistivity survey has been completed at Welcome Lake, Valin Township, Ontario for Chimo Gold Mines.

Interest in the area was spurred by the discovery of chalcopryrite-bearing float. A prospecting party was sent out and they located three occurrences of chalcopryrite mineralization. The chalcopryrite was associated with gabbro in two cases and with quartzite in the third case.

The eastern part of the claim group is underlain by quartzite and the western part by gabbro and related rock types, with the contact between the two rock types in the vicinity of the Neault Fault, which lies outside the grid area to the east. A minor fault passes through the grid area.

The induced polarization and resistivity survey was carried out to try to locate economic concentrations of copper mineralization.

2. 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.

<u>Line</u>	<u>Electrode Intervals</u>	<u>Dwg. No.</u>
16+00N	200 feet	IP 5410-1
12+00N	200 feet	IP 5410-2
8+00N	200 feet	IP 5410-3
4+00N	200 feet	IP 5410-4
0+00	200 feet	IP 5410-5
4+00S	200 feet	IP 5410-6
8+00S	200 feet	IP 5410-7
12+00S	200 feet	IP 5410-8
16+00S	200 feet	IP 5410-9
20+00S	200 feet	IP 5410-10
24+00S	200 feet	IP 5410-11

Enclosed with this report is Dwg. I.P.P. 3414, a plan map of the grid area at a scale of 1" = 200'. 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 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.

Geological information was submitted by the professional staff of Chimo Gold Mines Limited.

Reference: Map P 300 - Westree Sheet, Districts of Sudbury and Timiskaming, O. D. M.

Map P 301 - Maple Mountain Sheet, Districts of Sudbury, Timiskaming and Nipissing, O. D. M.

3. DISCUSSION OF RESULTS

Although Map P 300 indicates that a N-S trending fault runs through the grid area, the survey does not outline a continuous structure. In the northern section of the grid area, the mineralization appears to follow a fault zone, but only as far south as Line 4N. The change in resistivities in the grid area, as shown on Dwg. I. P. P. 3414, indicates a probable change in rock types.

The anomalies located by the survey are very weak and generally shallow, with the top of the source at less than 200 feet below surface. The strongest anomaly of the survey is on Line 20S from 10W to 14W, but as the anomalies on the lines to the north and south are much weaker, the source

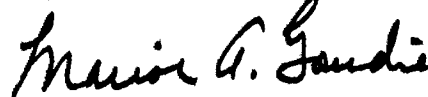
is of limited extent. Even in this anomaly, the MF values are relatively weak and the sulphide content may be limited.

4. CONCLUSIONS

The anomalies located by the survey indicate sources that are very weak, rather narrow, zones of mineralization at depths of less than 200 feet generally. However, such weak anomalies can increase greatly in magnitude when detailed with shorter electrode intervals if the source is narrow and concentrated (see Appendix).

If the area is of continued interest, the anomaly on Line 20S from 10W to 14W should be detailed with 100' electrode intervals. If the results are satisfactory, the survey data should then be re-evaluated in order to plan a drill test.

McPHAR GEOPHYSICS LIMITED



Marion A. Goudie,
Geologist.



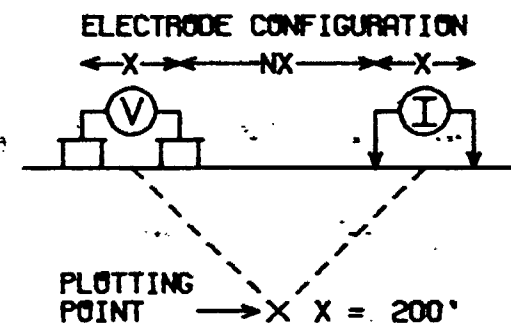
Robert A. Bell,
Geologist.

Dated: March 26, 1970

CHIMØ GOLD MINES LIMITED

WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.D., ONTARIO

LINE NO. - 245



SURFACE PROJECTION
OF ANOMALOUS ZONES

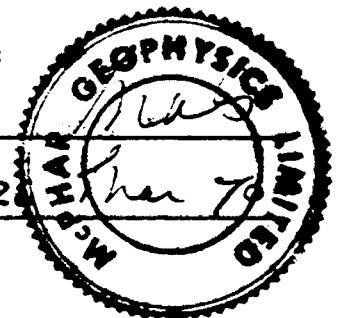
DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED: _____

DATE: 2/28/70

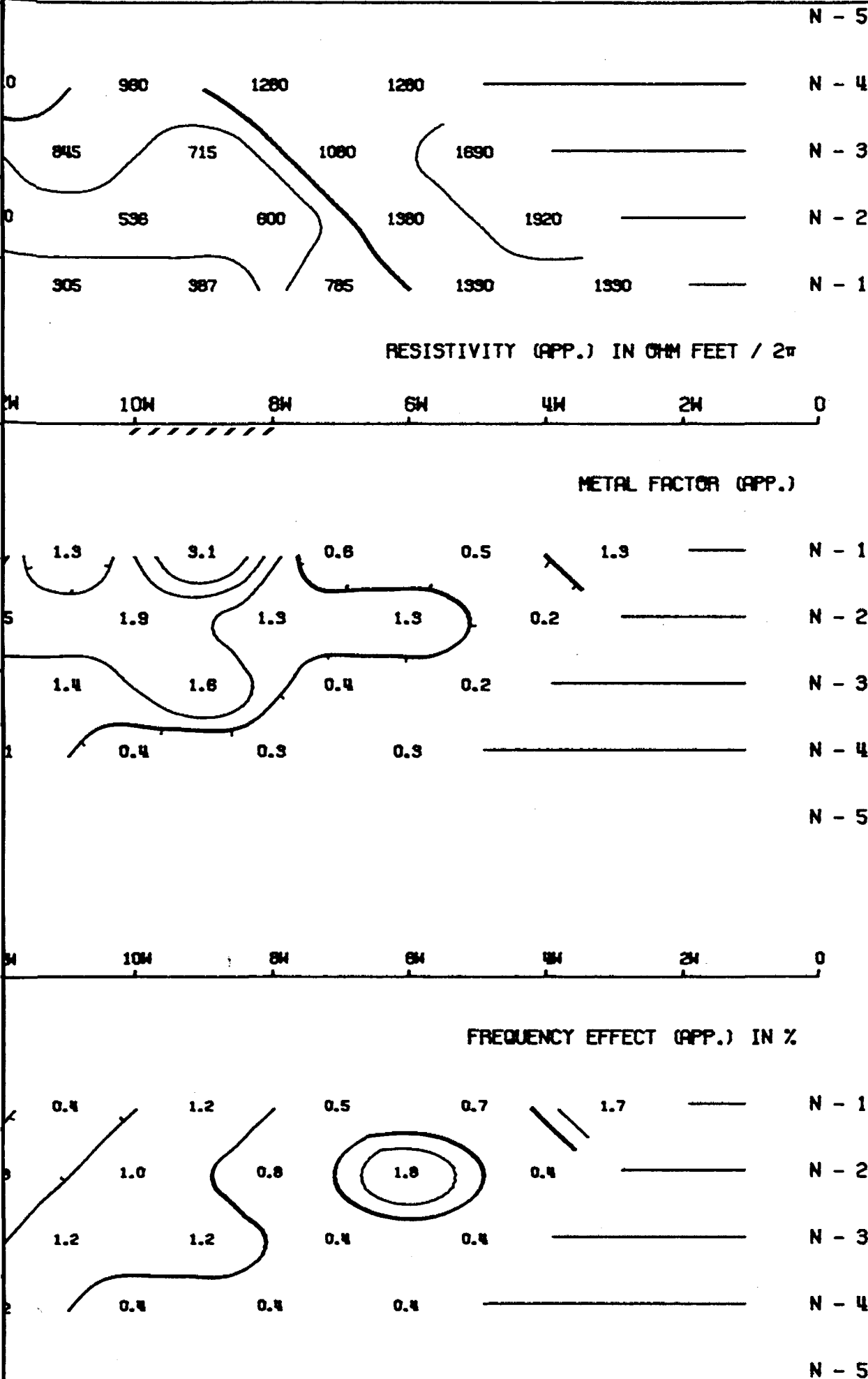


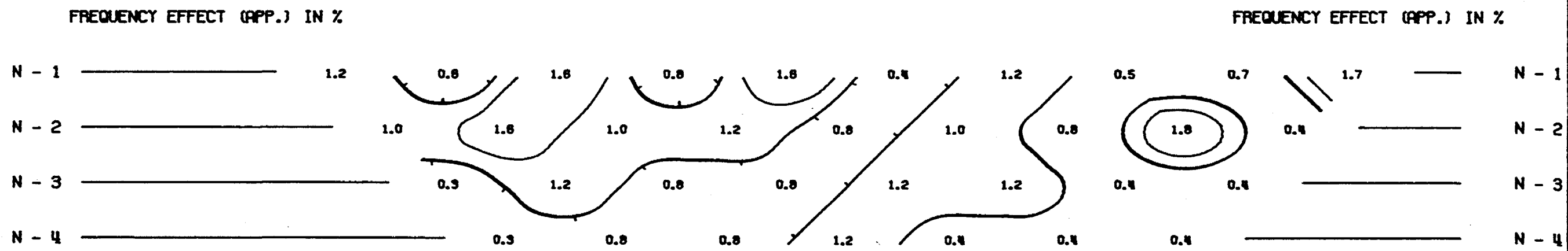
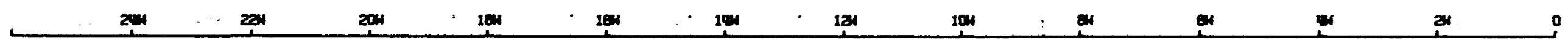
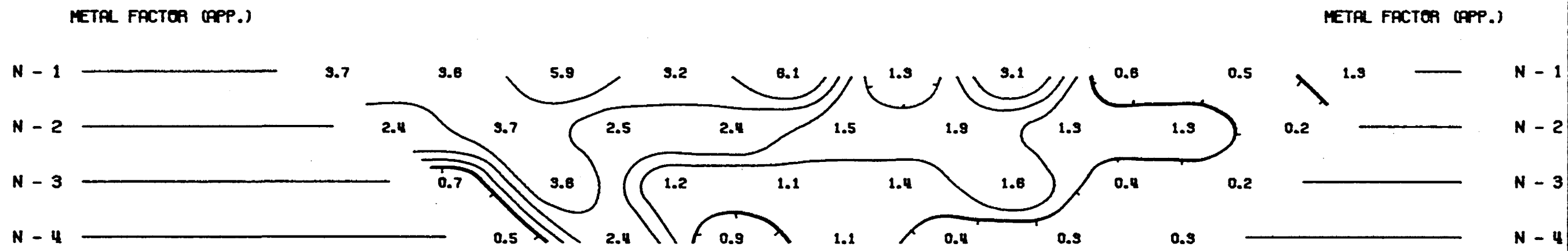
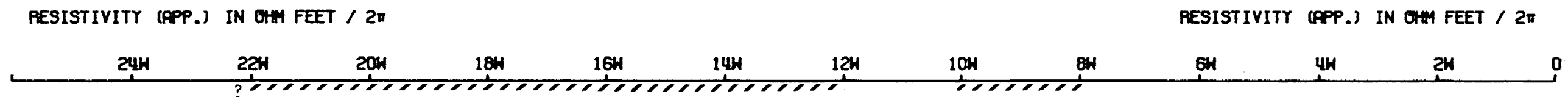
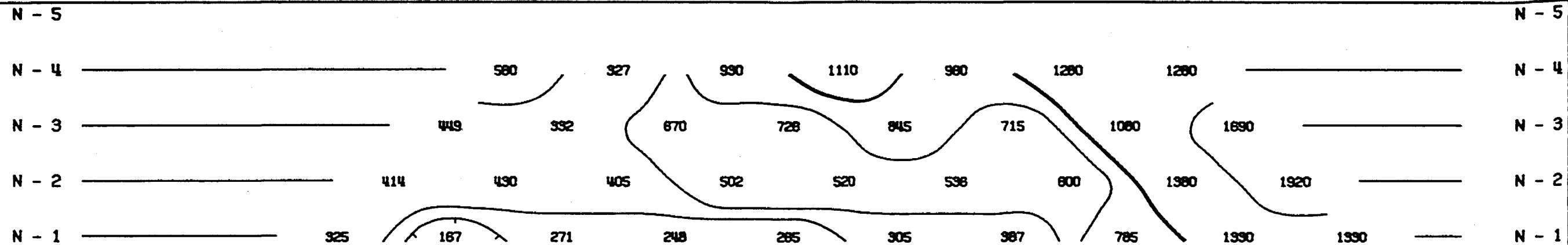
NOTE: CONTOURS AT
LOGARITHMIC INTERVALS
1.-1.5-2.-3.-5.-7.5-10

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER

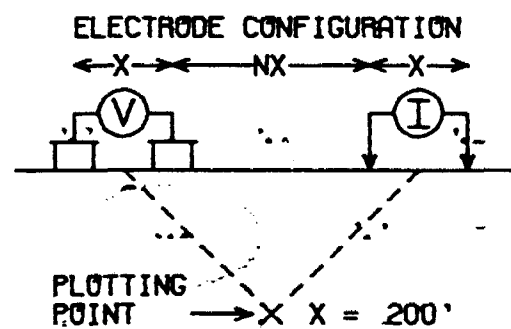




CHIMO GOLD MINES LIMITED

WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.D., ONTARIO

LINE NO. - 205



SURFACE PROJECTION
OF ANOMALOUS ZONES

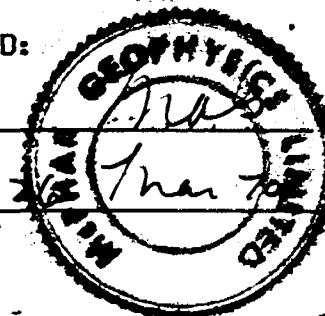
DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED: _____

DATE: _____

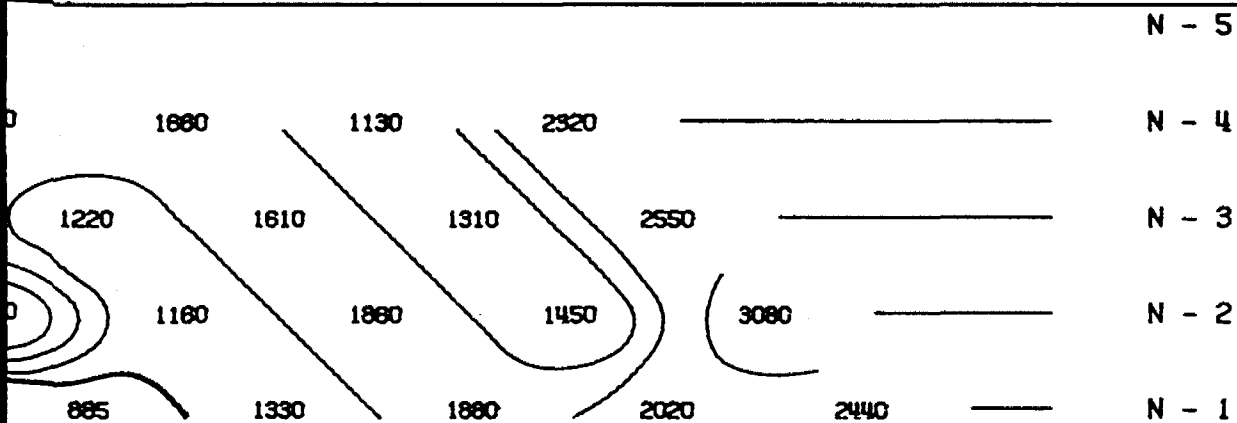


NOTE: CONTOURS AT
LOGARITHMIC INTERVALS
1.-1.5-2.-3.-5.-7.5-10

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

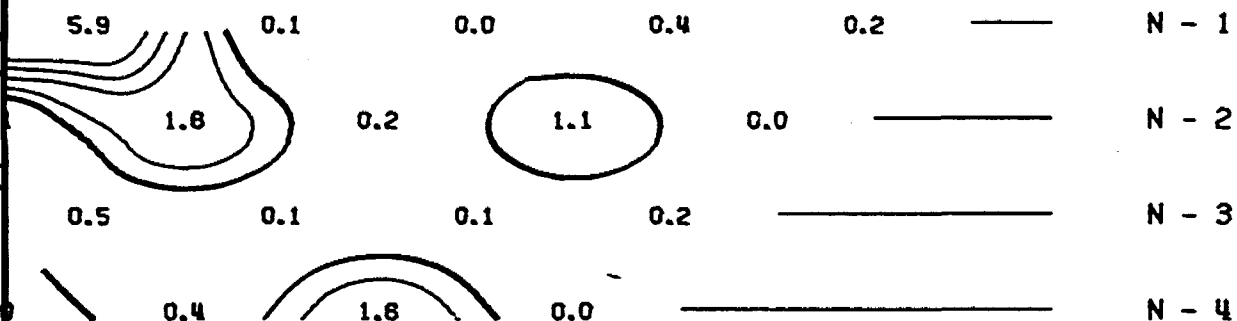
NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER



RESISTIVITY (APP.) IN OHM FEET / 2π

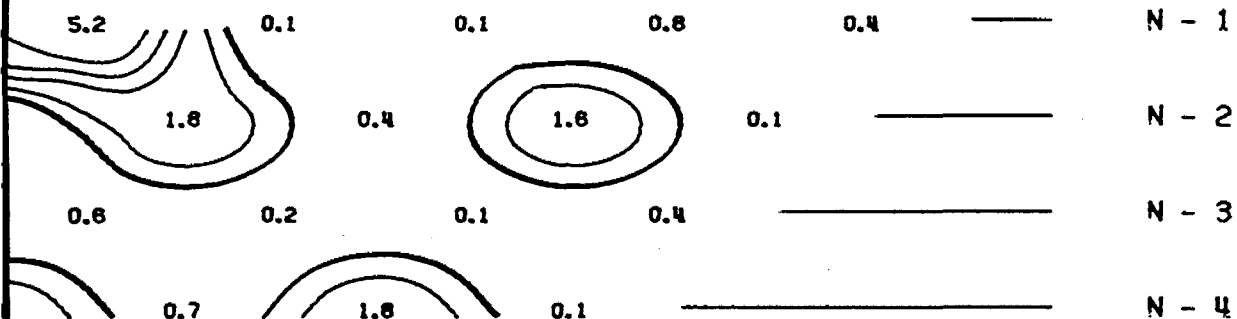
10W 8W 6W 4W 2W 0'

METAL FACTOR (APP.)



10W 8W 6W 4W 2W 0'

FREQUENCY EFFECT (APP.) IN %



N - 5

N - 4

N - 3

N - 2

N - 1

N - 1

N - 2

N - 3

N - 4

N - 5

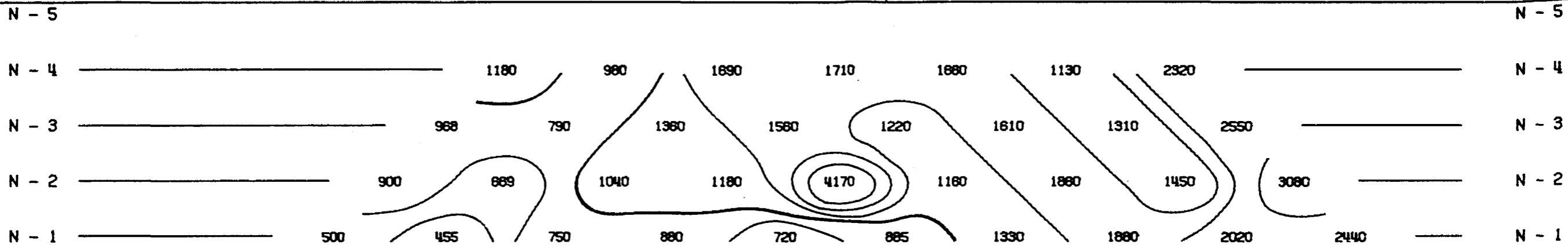
N - 1

N - 2

N - 3

N - 4

N - 5



RESISTIVITY (APP.) IN OHM FEET / 2π

RESISTIVITY (APP.) IN OHM FEET / 2π

24W

22W

20W

18W

16W

14W

12W

10W

8W

6W

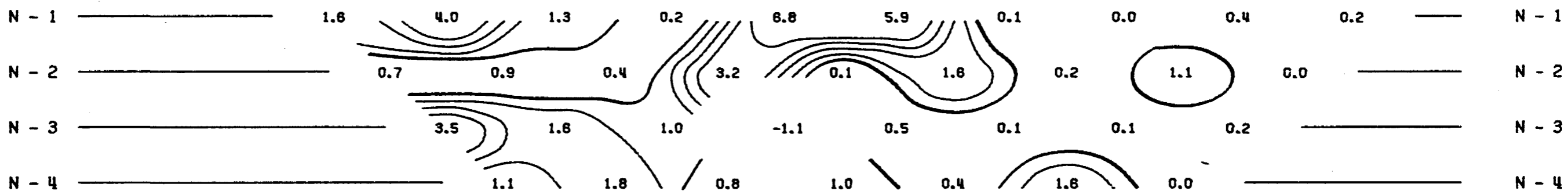
4W

2W

0

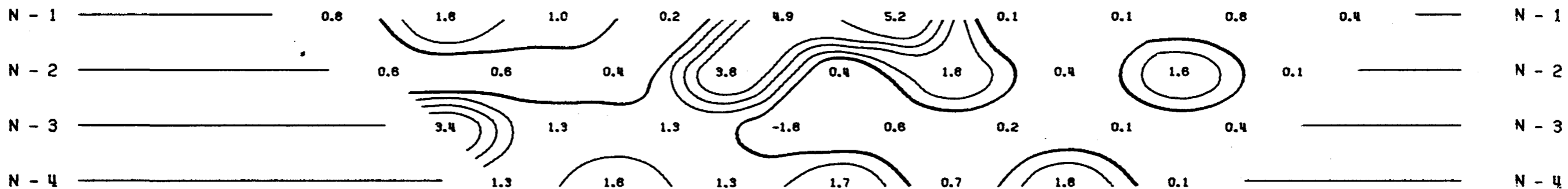
METAL FACTOR (APP.)

METAL FACTOR (APP.)



FREQUENCY EFFECT (APP.) IN %

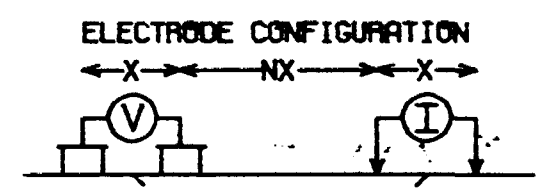
FREQUENCY EFFECT (APP.) IN %



CHIMO GOLD MINES LIMITED

WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.D., ONTARIO

LINE NO. - 169



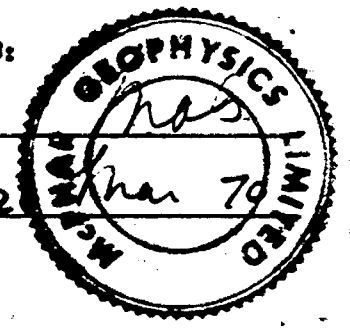
PLOTTING POINT → X X = 200'

SURFACE PROJECTION OF ANOMALOUS ZONES
 DEFINITE **—————**
 PROBABLE **|||||**
 POSSIBLE **////**

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED: _____



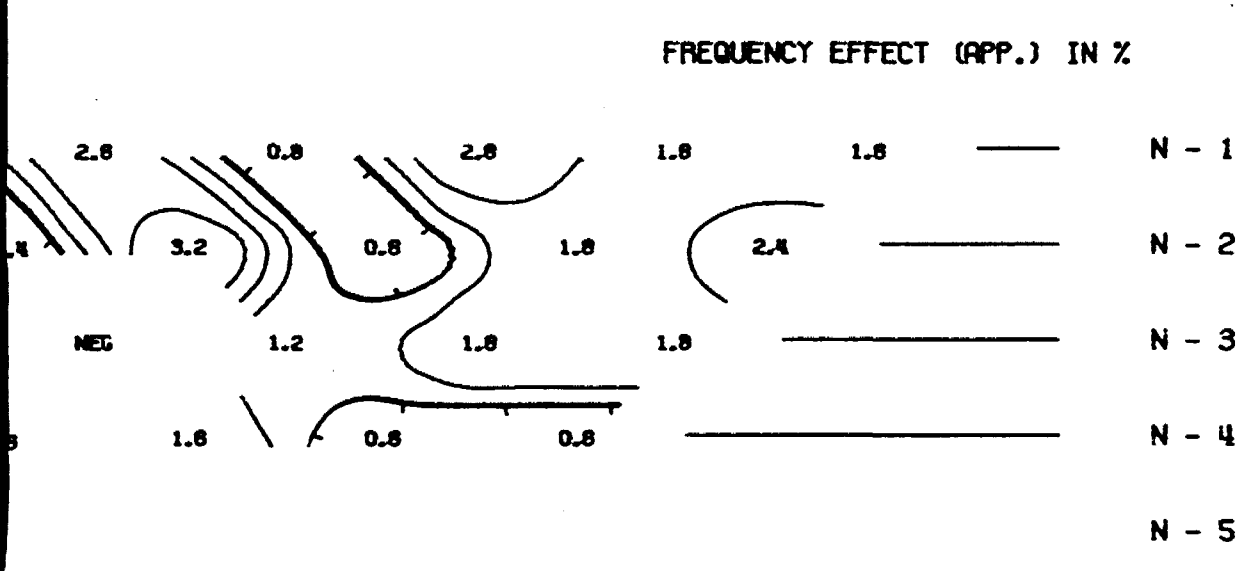
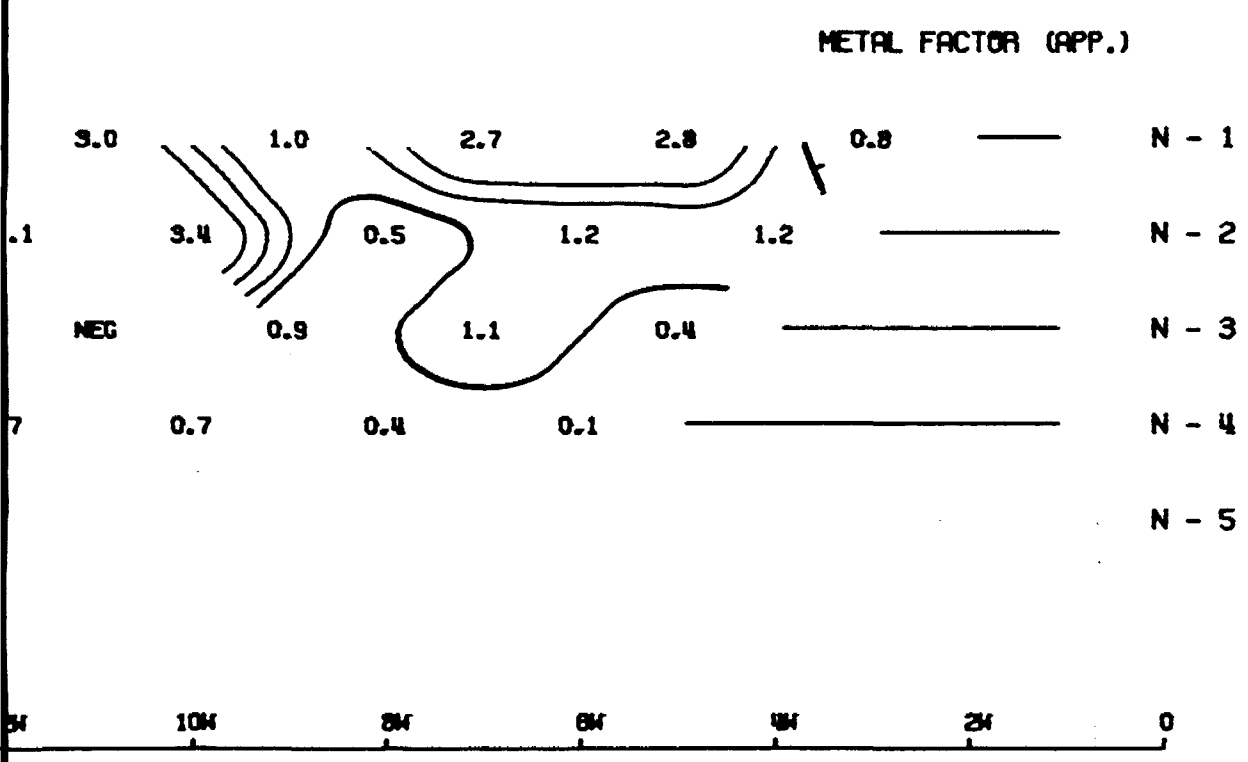
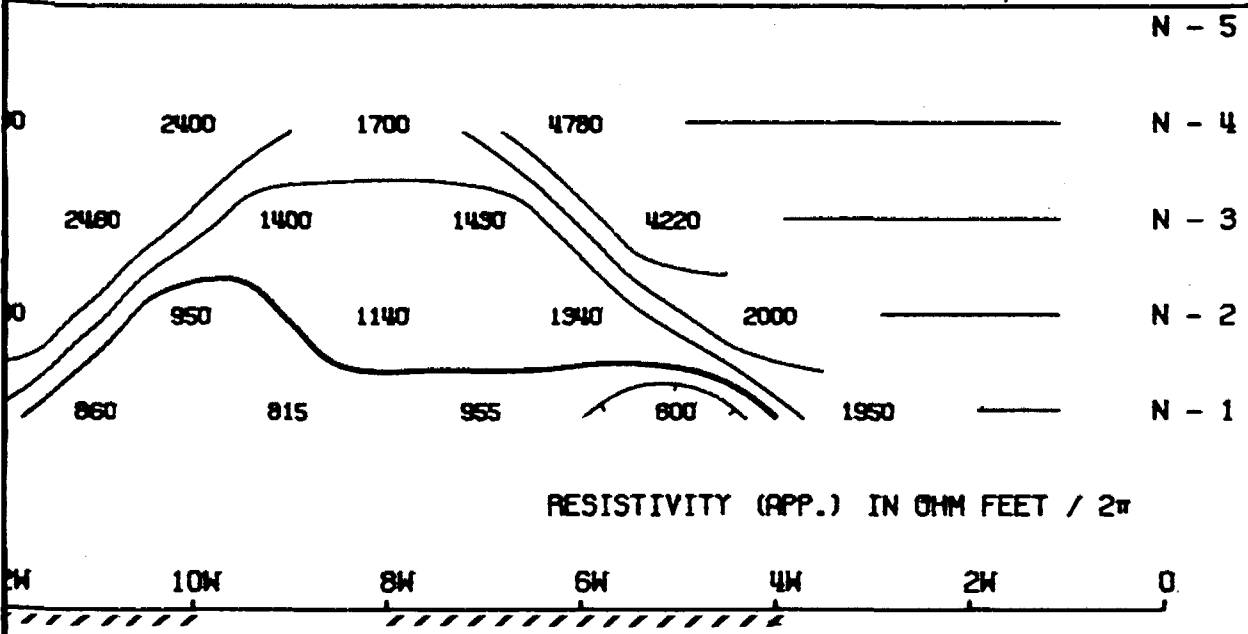
DATE: 2/19/70

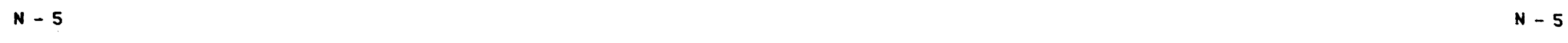
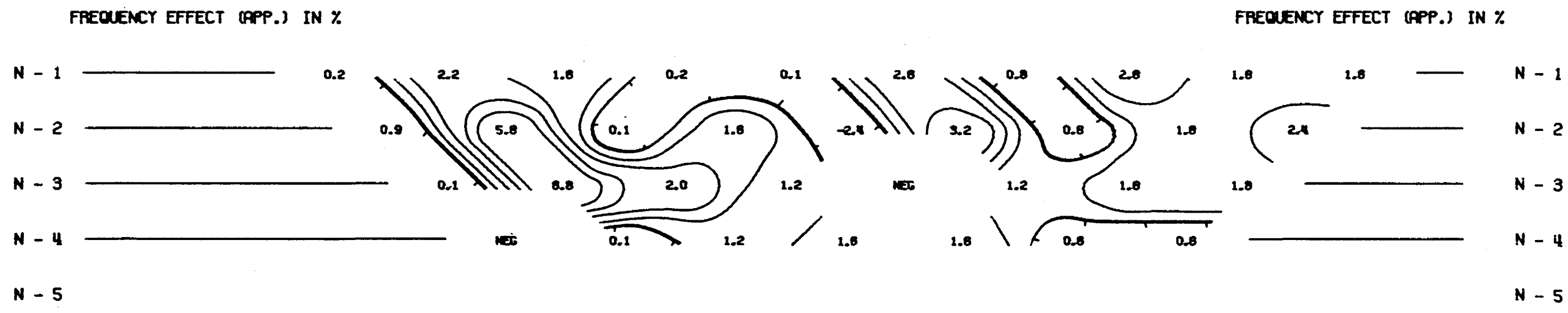
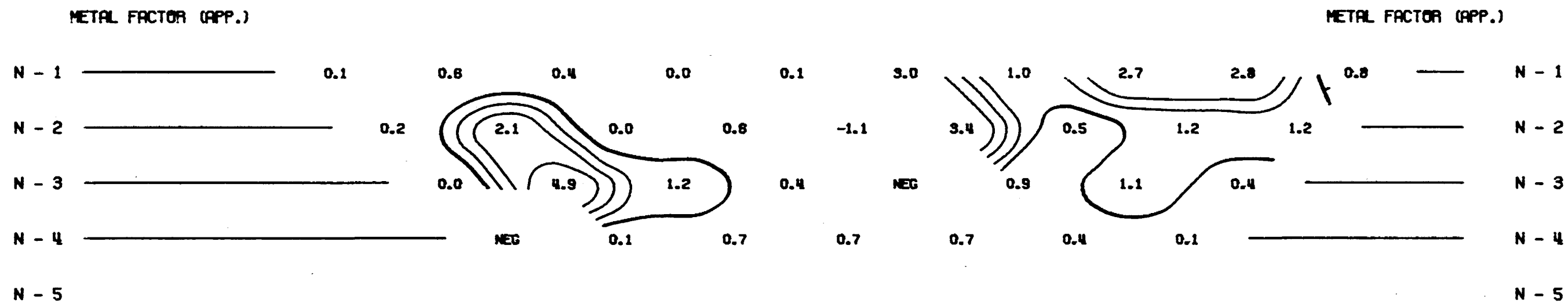
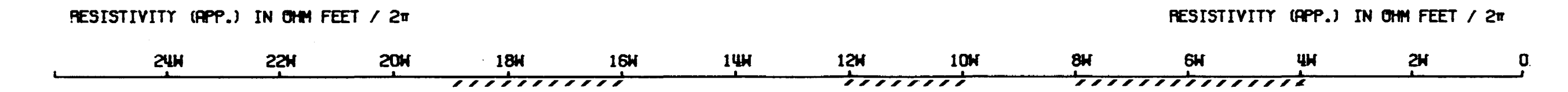
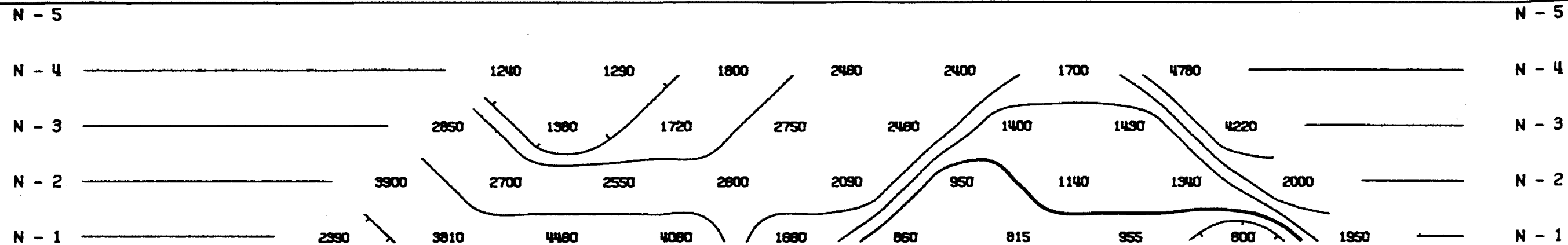
NOTE: CONTOURS AT LOGARITHMIC INTERVALS
1.-1.5-2.-3.-5.-7.5-10

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER

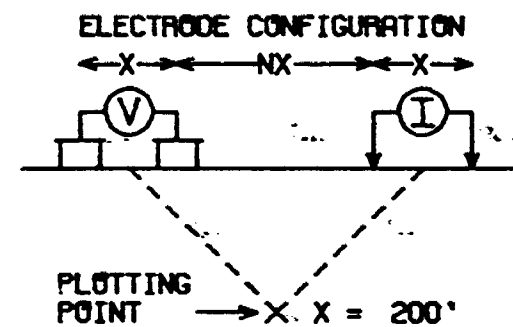




CHIMO GOLD MINES LIMITED

WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.D., ONTARIO

LINE NO. - 12S



SURFACE PROJECTION
OF ANOMALOUS ZONES

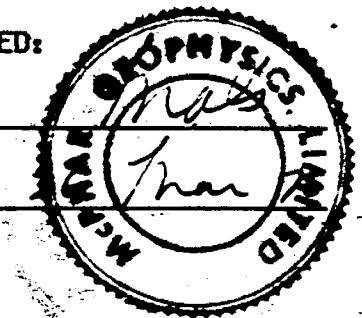
DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED: _____

DATE: _____

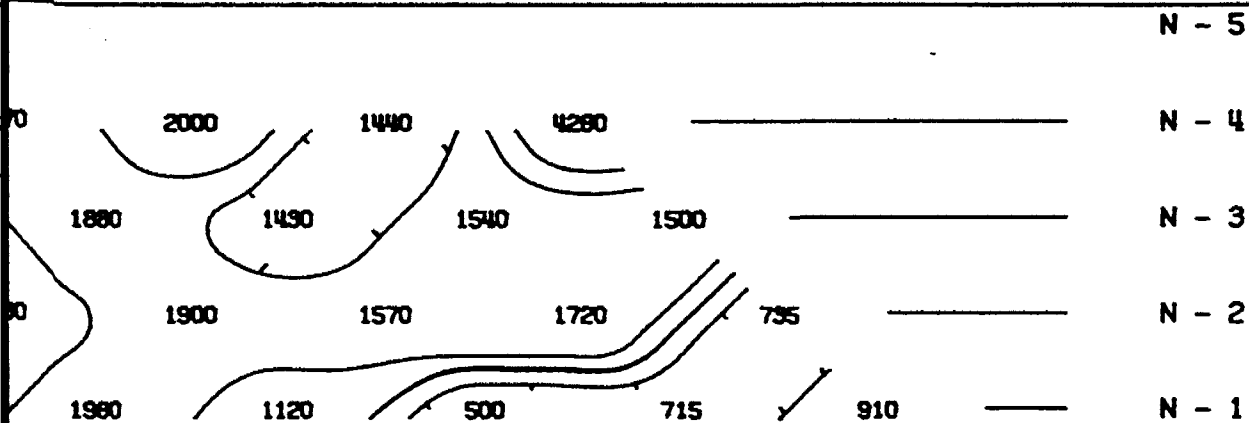


NOTE: CONTOURS AT
LOGARITHMIC INTERVALS
1.-1.5-2.-3.-5.-7.5-10

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 380/75 COMPUTER AND A CALCOMP PLOTTER



RESISTIVITY (APP.) IN OHM FEET / 2π

10M 8M 6M 4M 2M 0

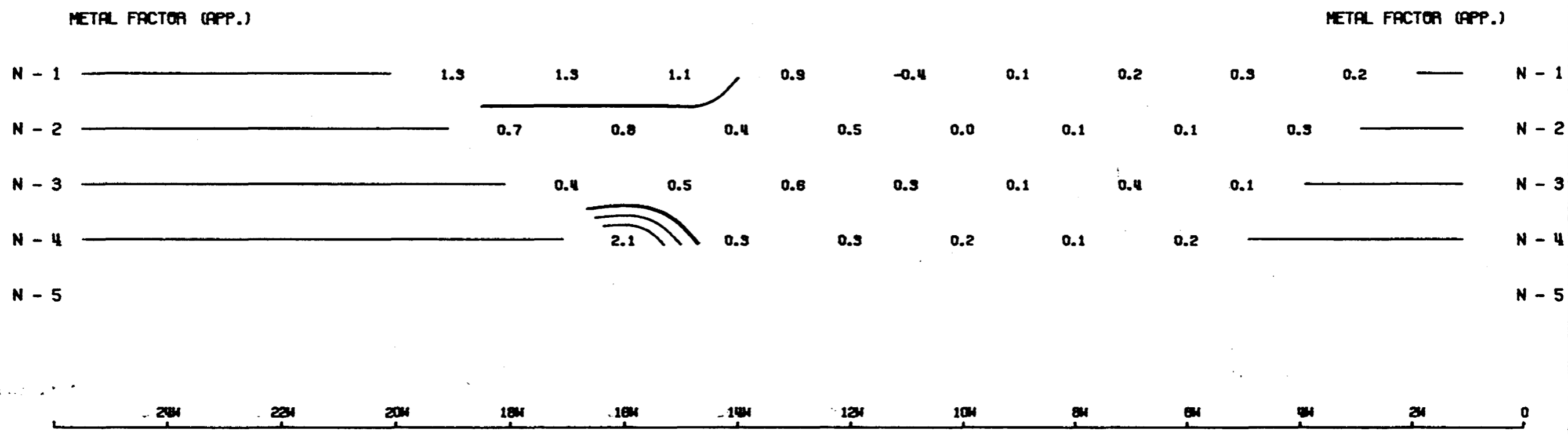
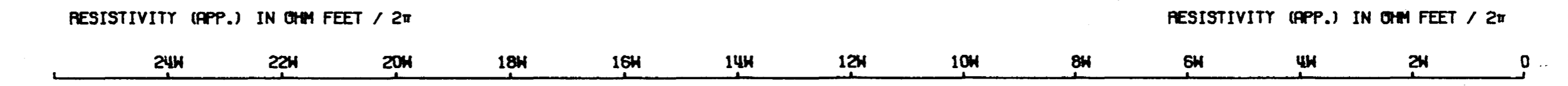
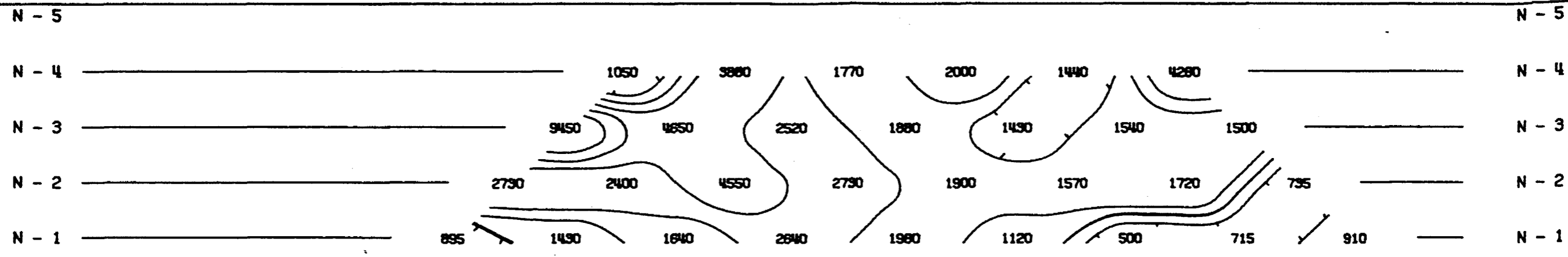
METAL FACTOR (APP.)

-0.4	0.1	0.2	0.3	0.2	_____	N - 1
0.0	0.1	0.1	0.3	_____	_____	N - 2
0.3	0.1	0.4	0.1	_____	_____	N - 3
0.2	0.1	0.2	_____	_____	_____	N - 4
						N - 5

10M 8M 6M 4M 2M 0

FREQUENCY EFFECT (APP.) IN %

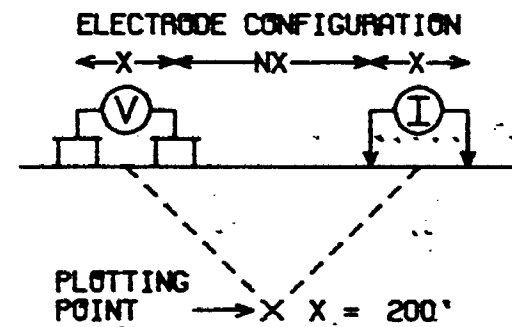
-0.8	0.1	0.1	0.2	0.2	_____	N - 1
0.1	0.1	0.2	0.2	_____	_____	N - 2
0.8	0.2	0.8	0.2	_____	_____	N - 3
0.4	0.2	0.9	_____	_____	_____	N - 4
						N - 5



CHIMO GOLD MINES LIMITED

WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.O., ONTARIO

LINE NO.- 85



SURFACE PROJECTION
OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED: _____

DATE: _____

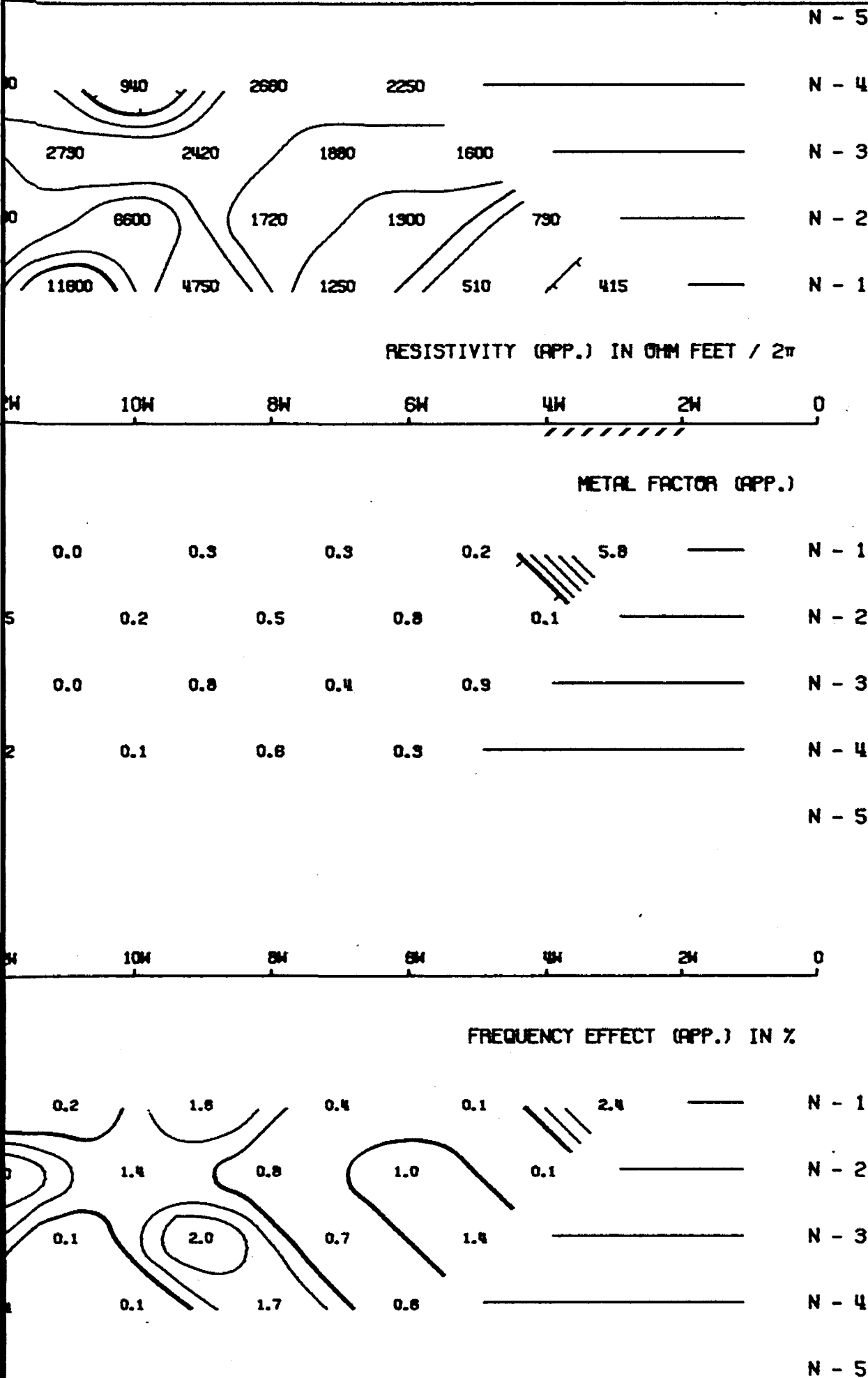


NOTE: CONTOURS AT
LOGARITHMIC INTERVALS
1.-1.5-2.-3.-5.-7.5-10

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER

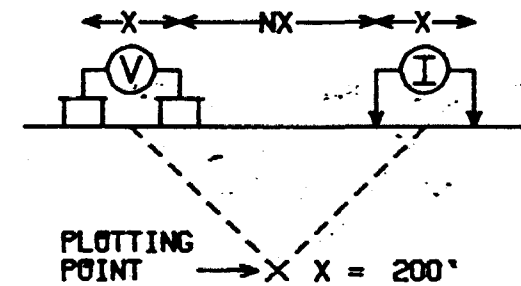


CHIMØ GOLD MINES LIMITED




WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.D., ONTARIO

LINE NO. - 45

ELECTRODE CONFIGURATION



SURFACE PROJECTION
OF ANOMALOUS ZONES

DEFINITE 
PROBABLE 
POSSIBLE 

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED: _____

DATE: _____

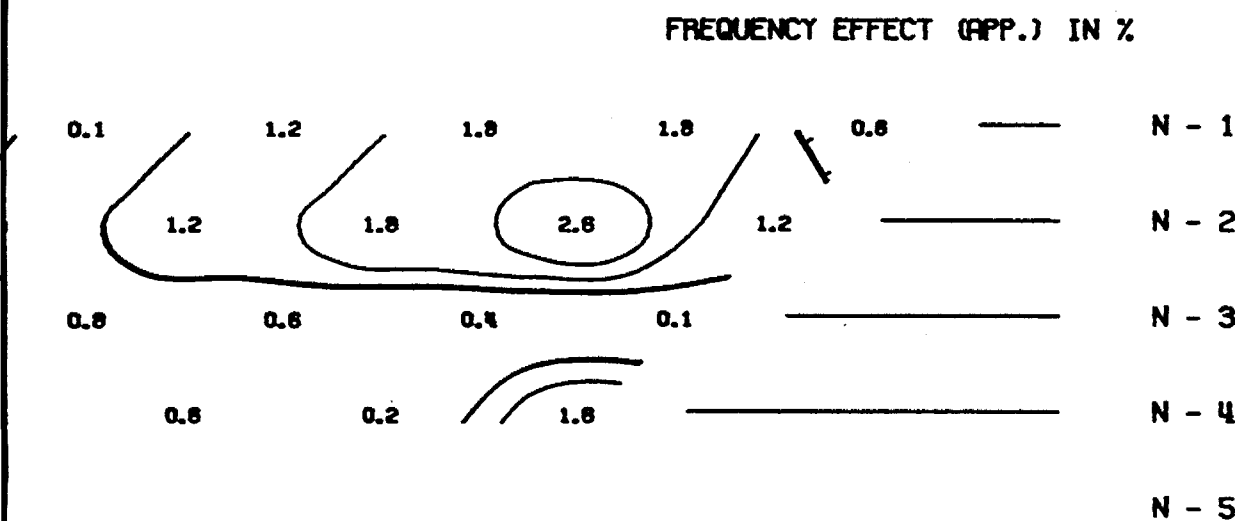
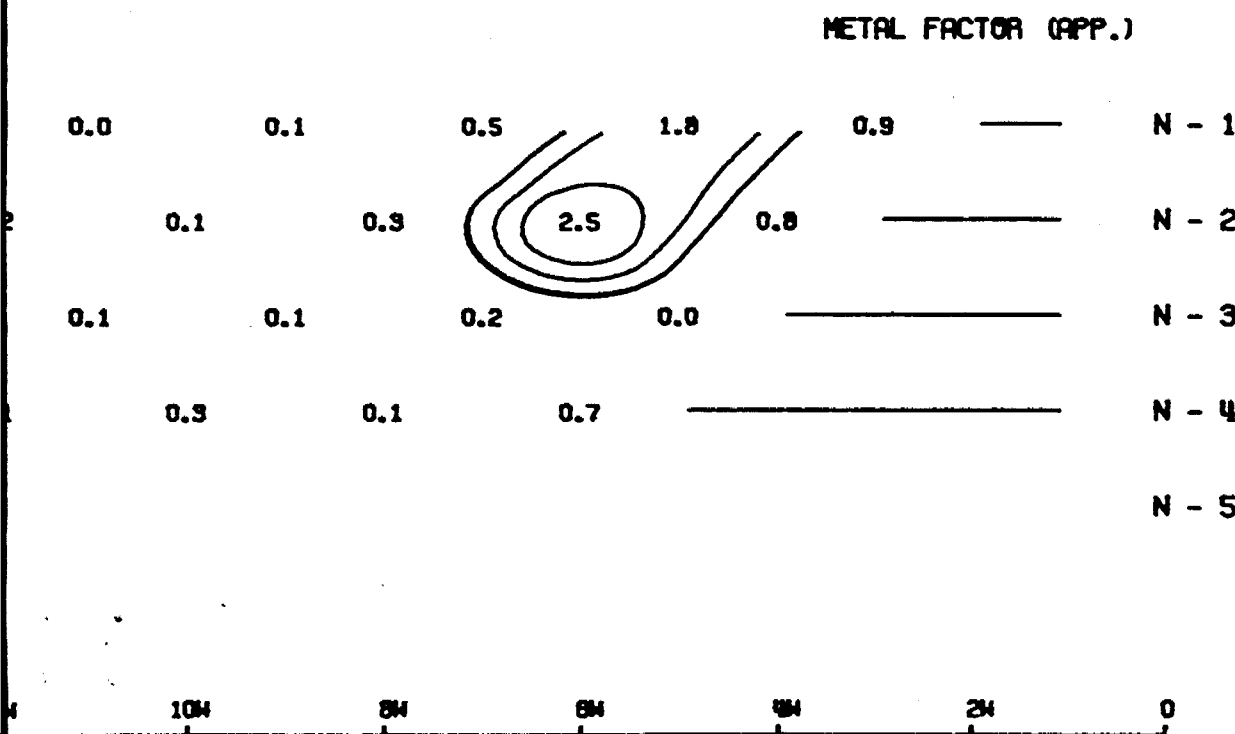
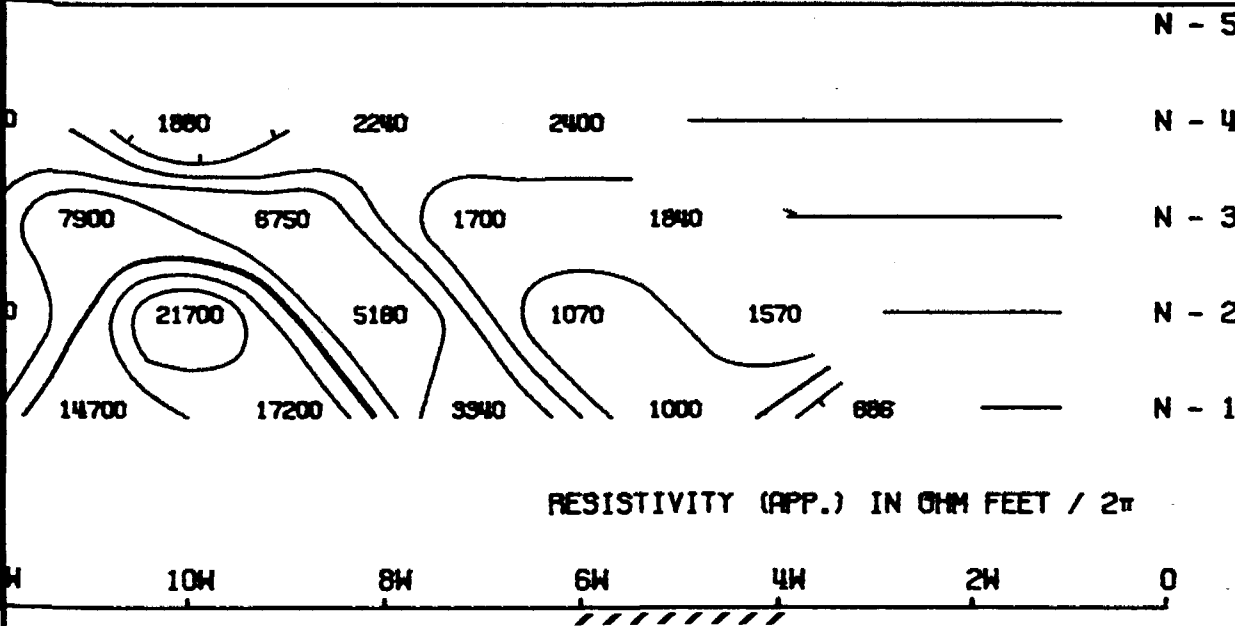


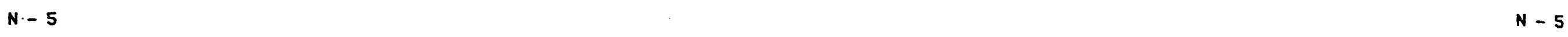
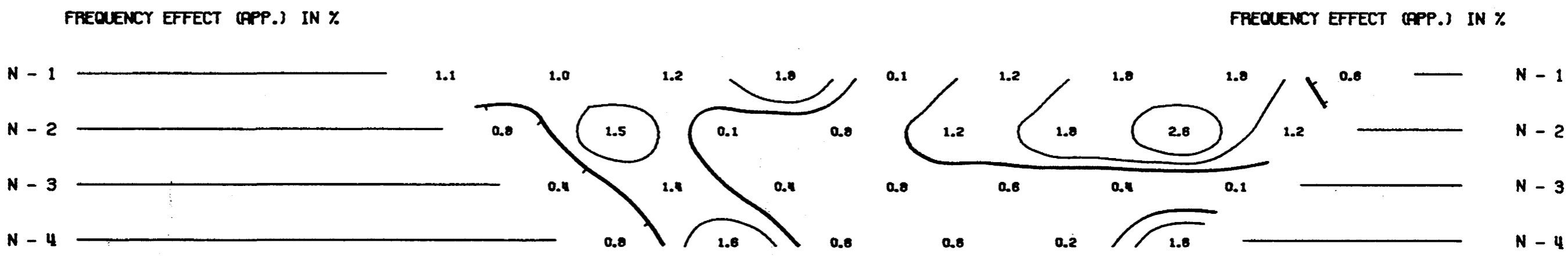
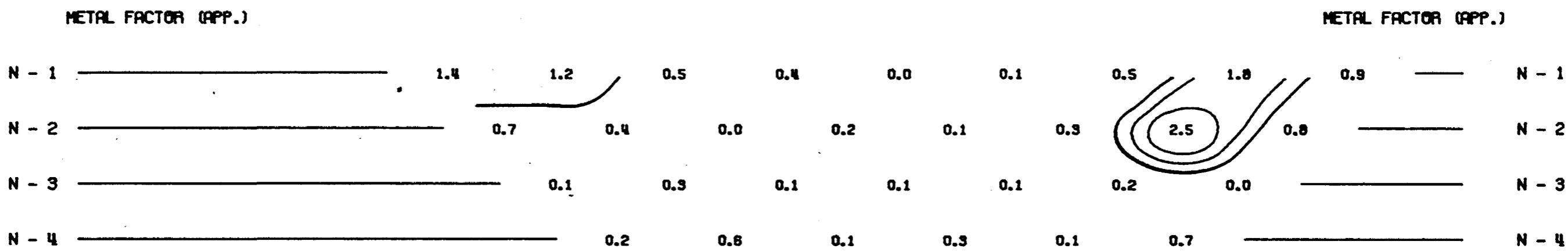
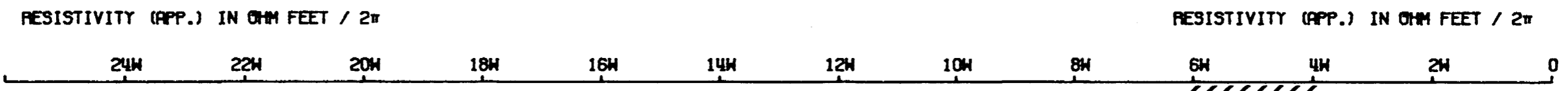
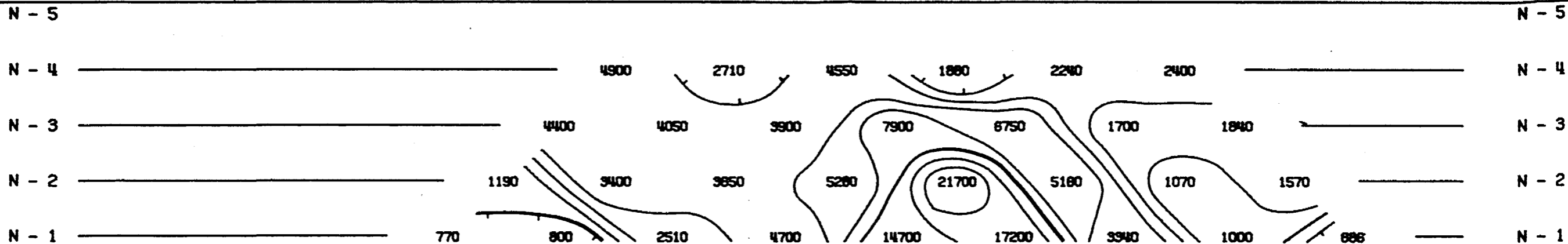
NOTE: CONTOURS AT
LOGARITHMIC INTERVALS
1.-1.5-2.-3.-5.-7.5-10

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER



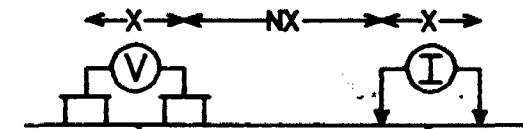


CHIMO GOLD MINES LIMITED

WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.D., ONTARIO




LINE NO. - 0

ELECTRODE CONFIGURATION



PLOTTING POINT → X X = 200'

SURFACE PROJECTION OF ANOMALOUS ZONES

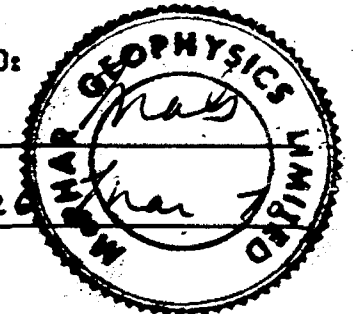
DEFINITE 
PROBABLE 
POSSIBLE 

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED: _____

DATE: 20 _____



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

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER

N - 5

N - 4

N - 3

N - 2

N - 1

N - 1

N - 2

N - 3

N - 4

N - 5

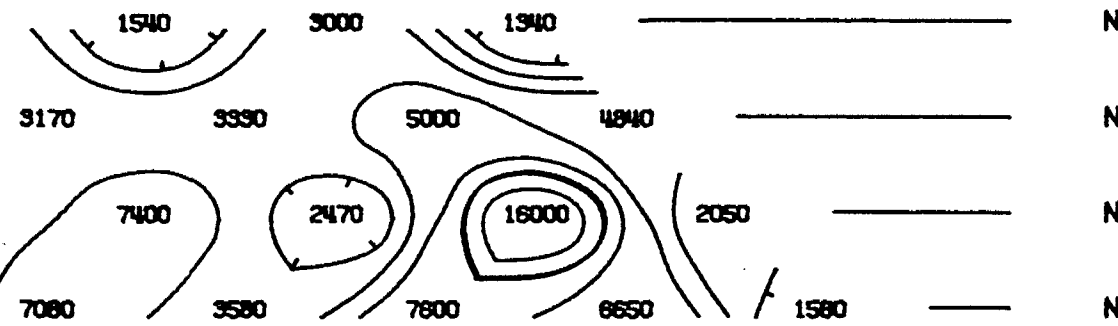
N - 1

N - 2

N - 3

N - 4

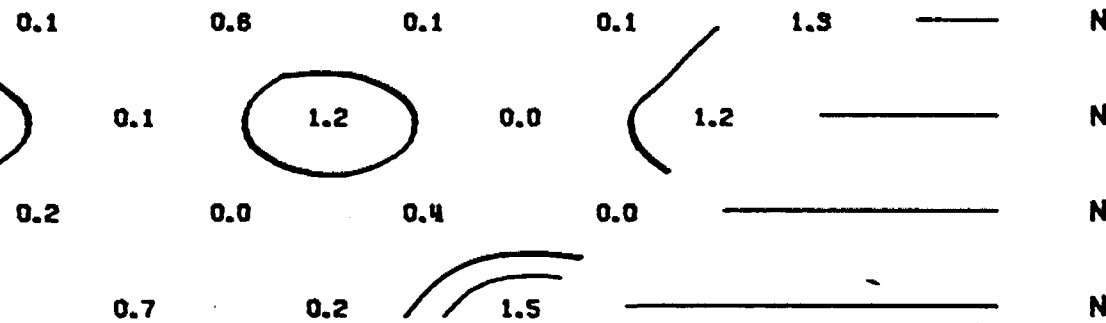
N - 5



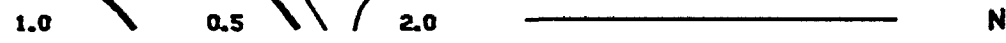
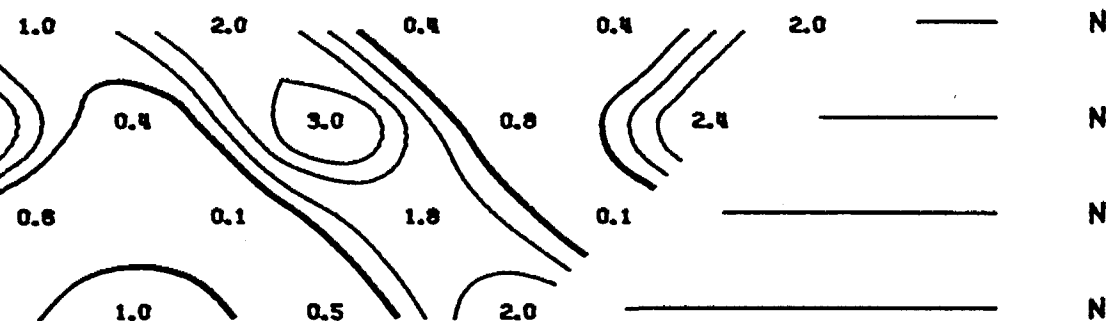
RESISTIVITY (APP.) IN OHM FEET / 2π

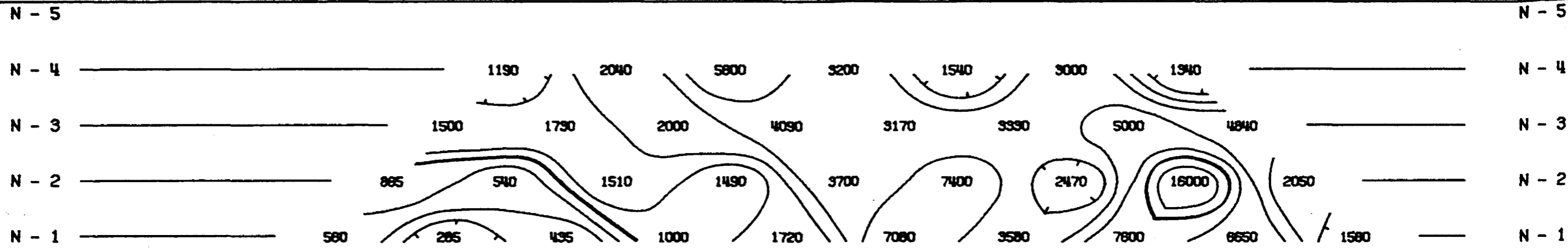


METAL FACTOR (APP.)



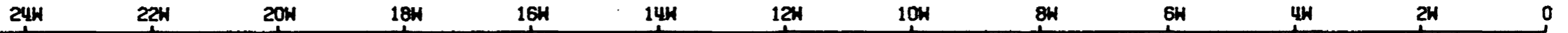
FREQUENCY EFFECT (APP.) IN %





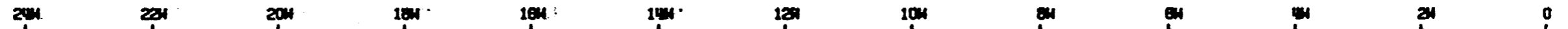
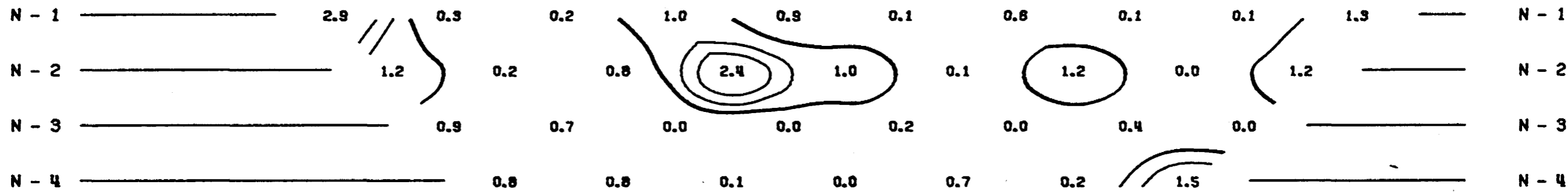
RESISTIVITY (APP.) IN OHM FEET / 2π

RESISTIVITY (APP.) IN OHM FEET / 2π



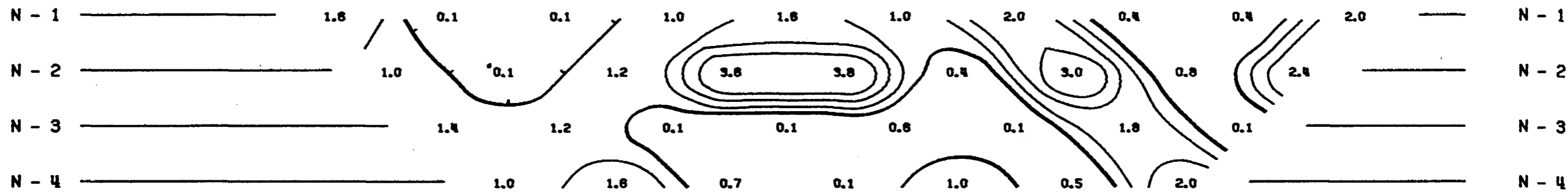
METAL FACTOR (APP.)

METAL FACTOR (APP.)



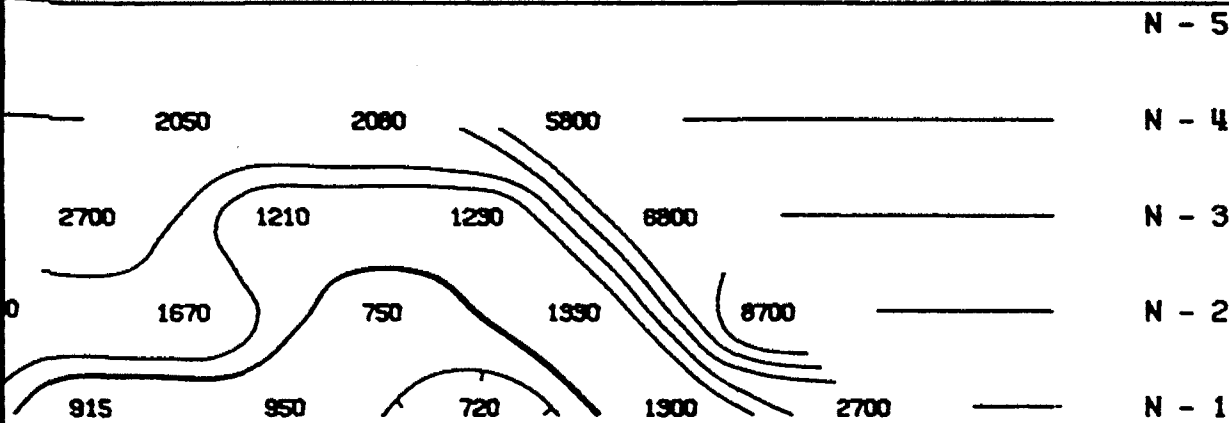
FREQUENCY EFFECT (APP.) IN %

FREQUENCY EFFECT (APP.) IN %

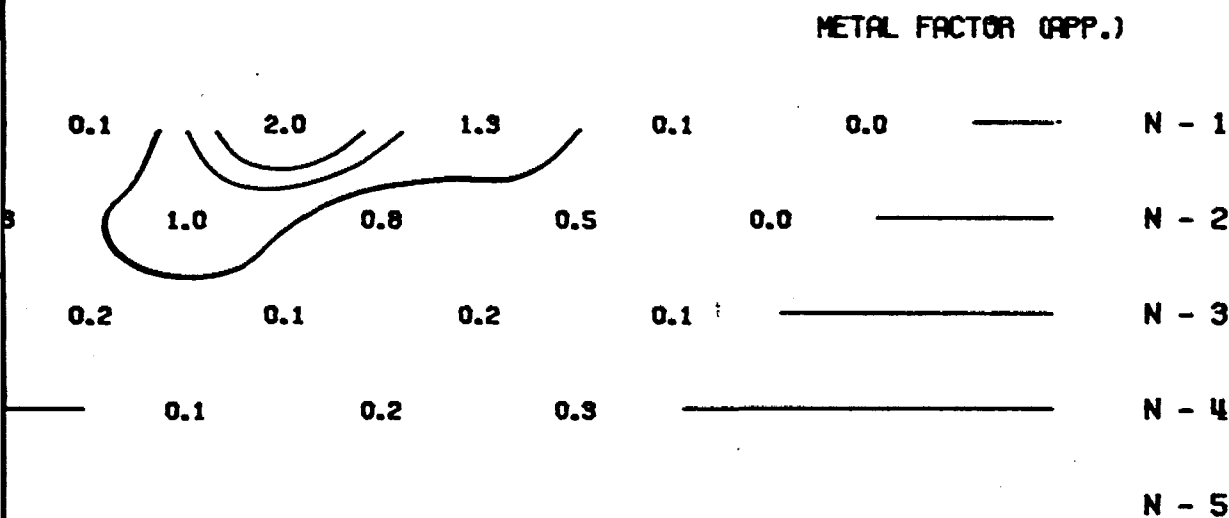
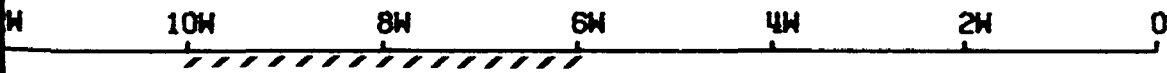


CHIMO GOLD MINES LIMITED

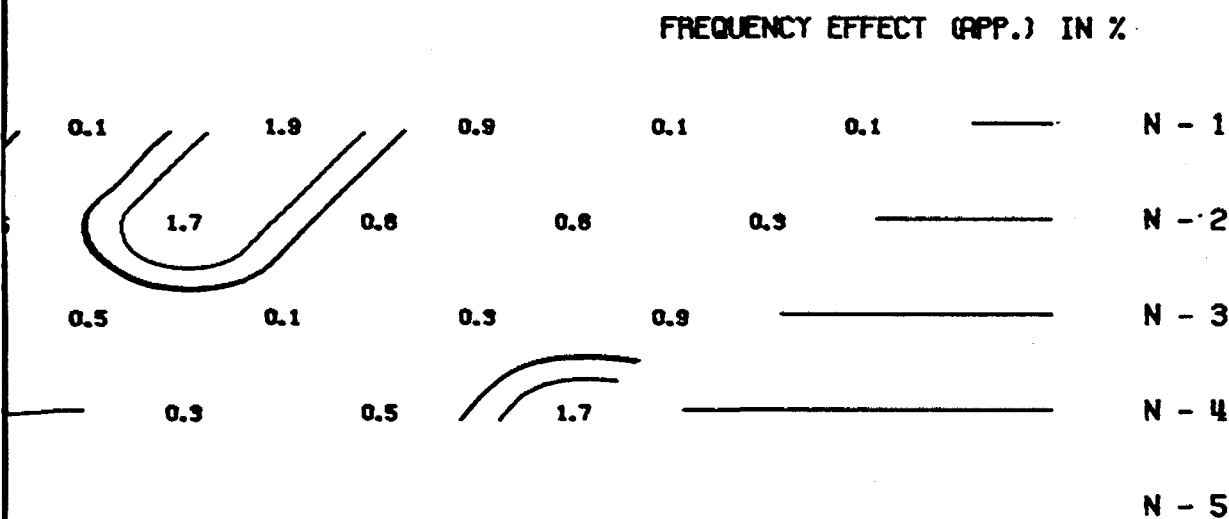
WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.D., ONTARIO



RESISTIVITY (APP.) IN OHM FEET / 2π



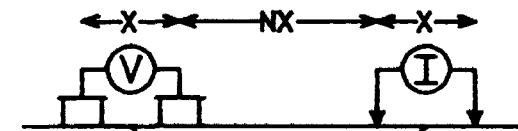
METAL FACTOR (APP.)



FREQUENCY EFFECT (APP.) IN %

LINE NO. - 4N

ELECTRODE CONFIGURATION



PLOTTING POINT → X X = 200'

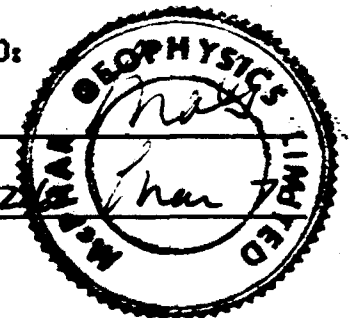
SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED: _____



DATE: 2/28/70

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

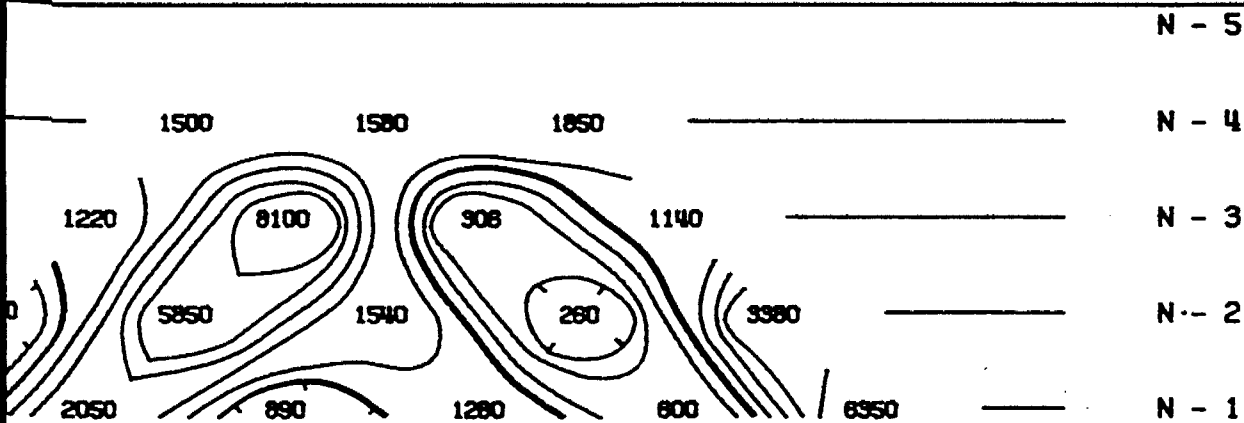
McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

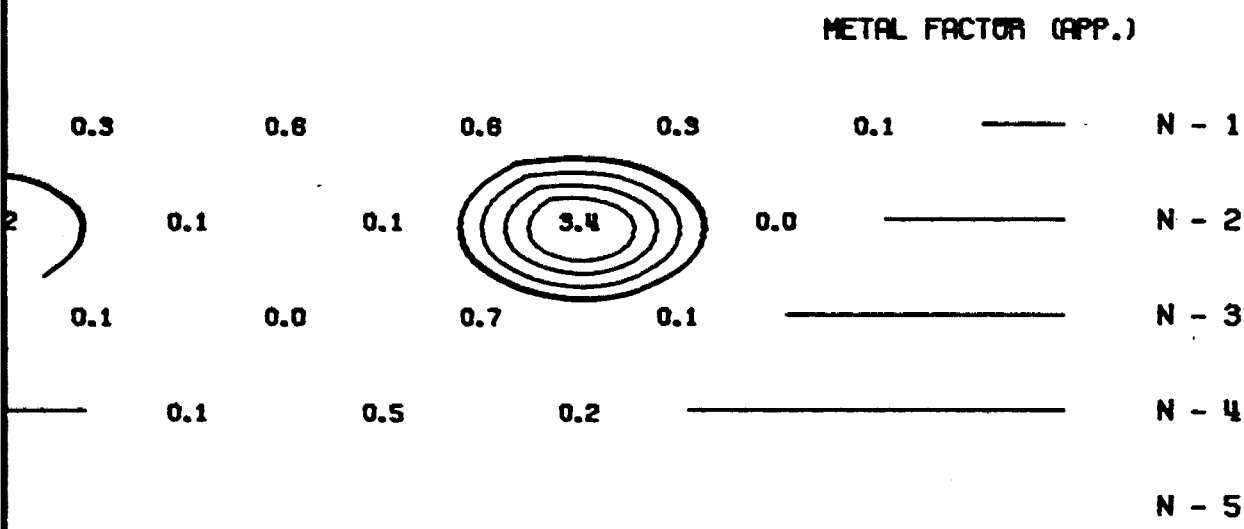
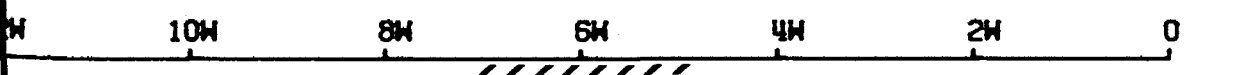
NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER

CHIMO GOLD MINES LIMITED

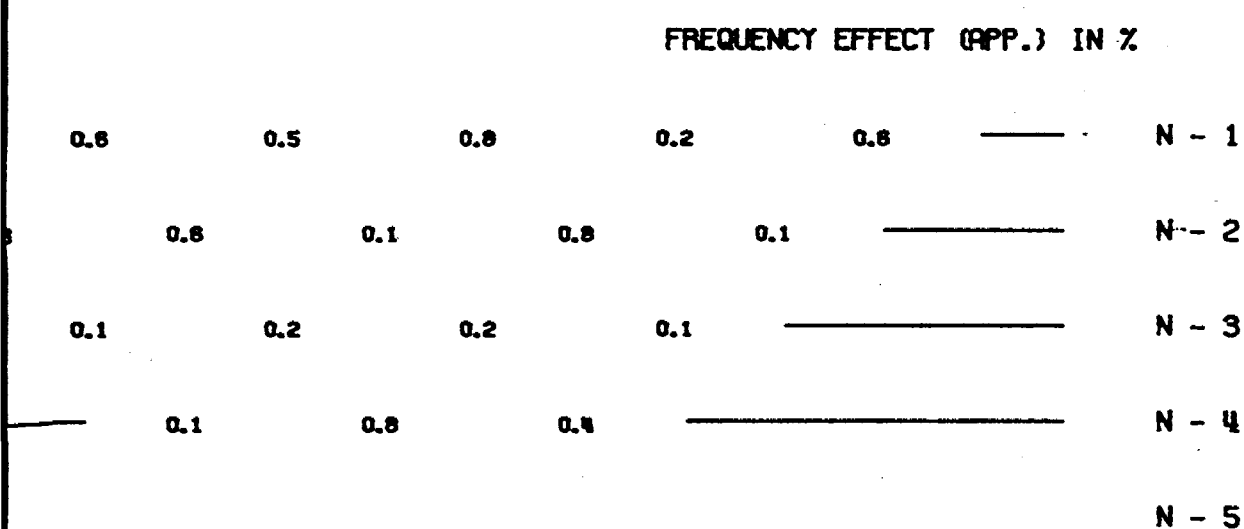
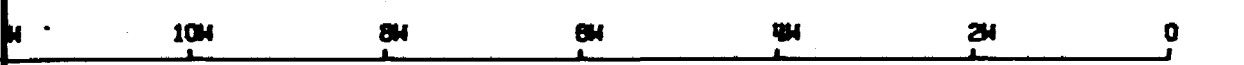
WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.D., ONTARIO



RESISTIVITY (APP.) IN OHM FEET / 2π



METAL FACTOR (APP.)

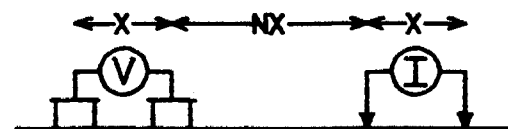


FREQUENCY EFFECT (APP.) IN %



LINE NO.- 8N

ELECTRODE CONFIGURATION



PLOTTING POINT → X X = 200'

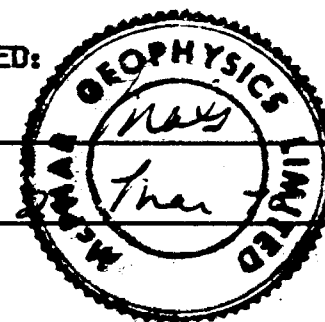
SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED:



DATE:

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

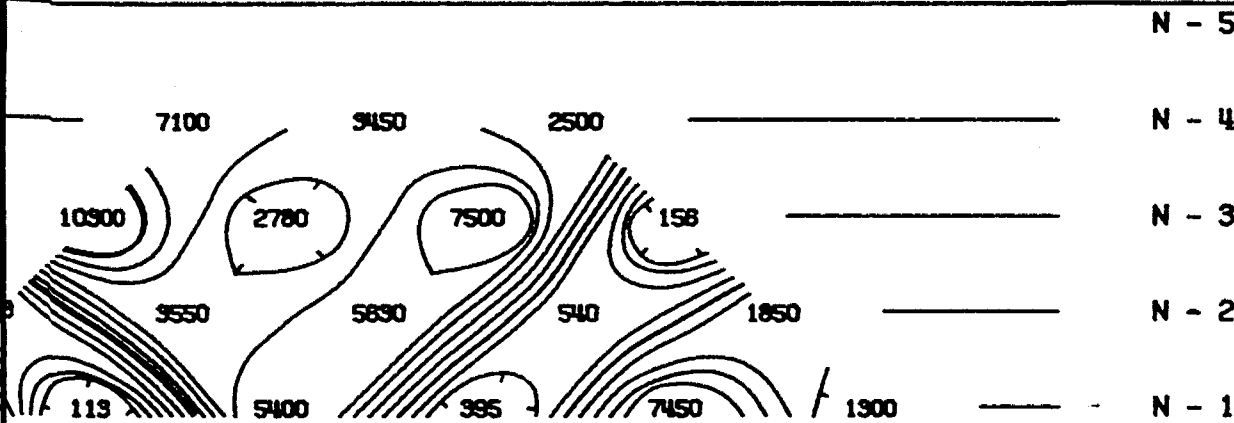
McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER

CHIMO GOLD MINES LIMITED

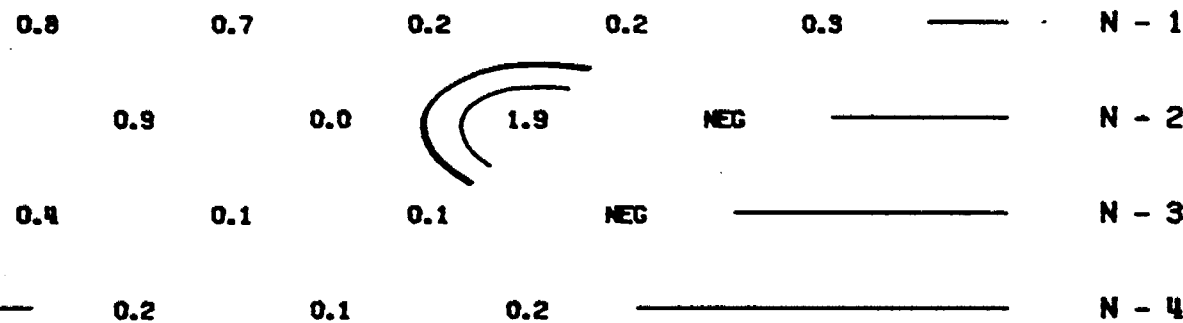
WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.D., ONTARIO



RESISTIVITY (APP.) IN OHM FEET / 2π

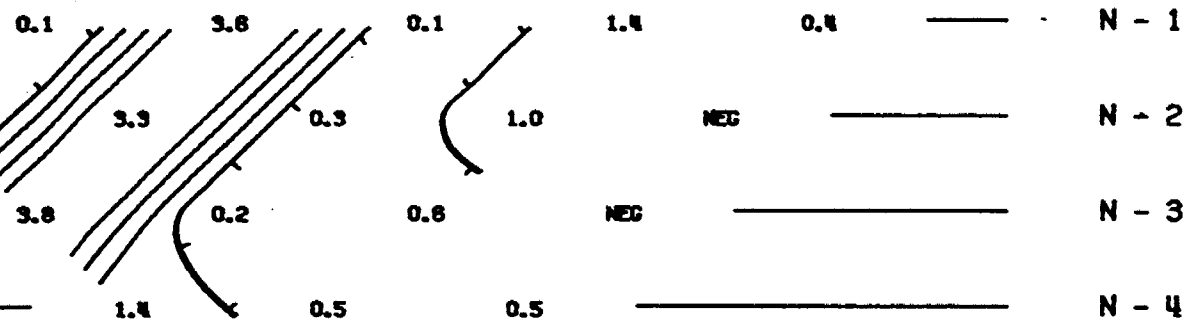
10W 8W 6W 4W 2W 0

METAL FACTOR (APP.)



10W 8W 6W 4W 2W 0

FREQUENCY EFFECT (APP.) IN %



N - 5

N - 4

N - 3

N - 2

N - 1

N - 1

N - 2

N - 3

N - 4

N - 5

N - 1

N - 2

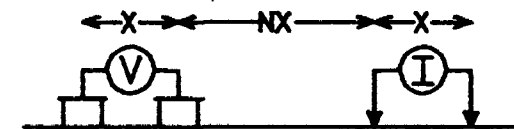
N - 3

N - 4

N - 5

LINE NO. - 12N

ELECTRODE CONFIGURATION



PLOTTING POINT X X = 200'

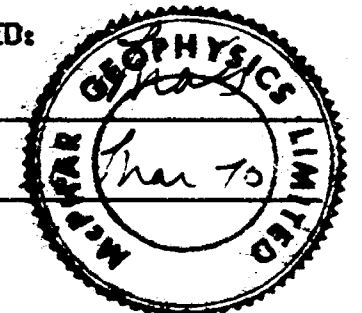
SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED:



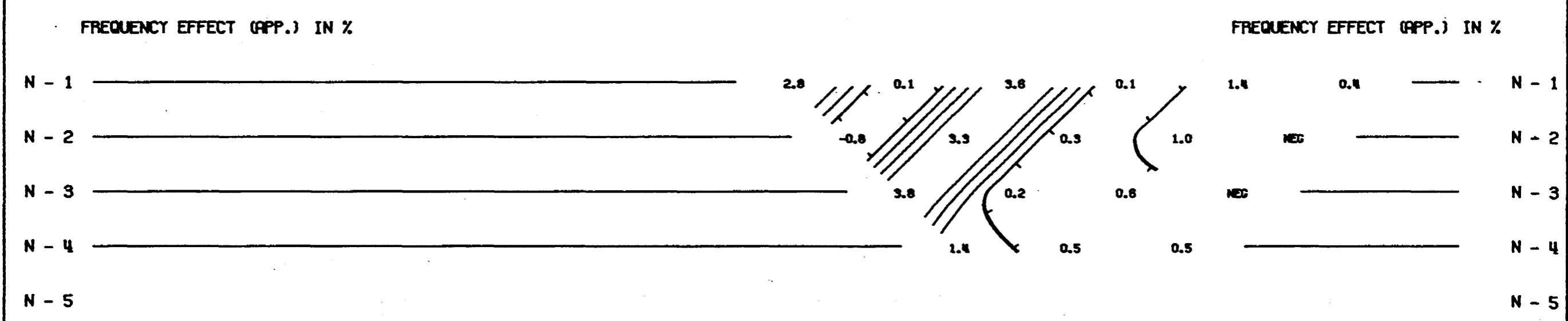
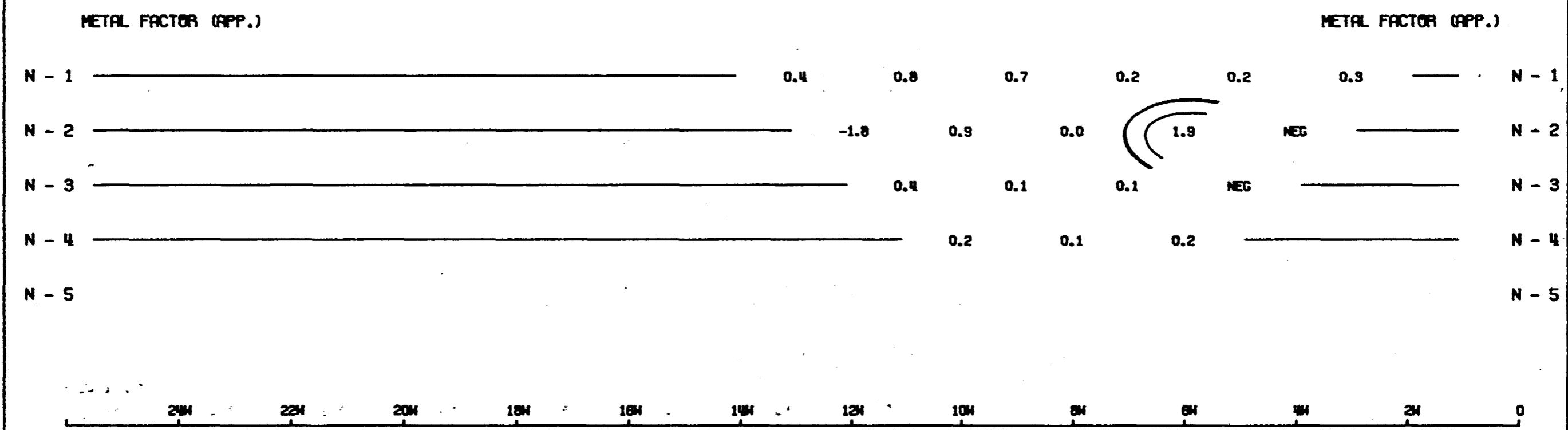
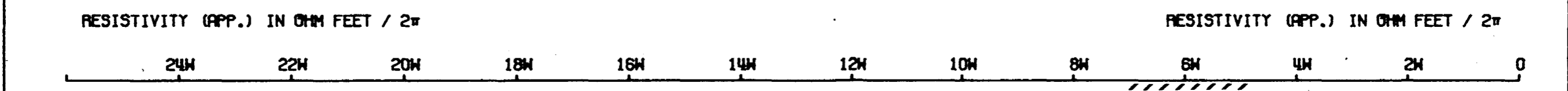
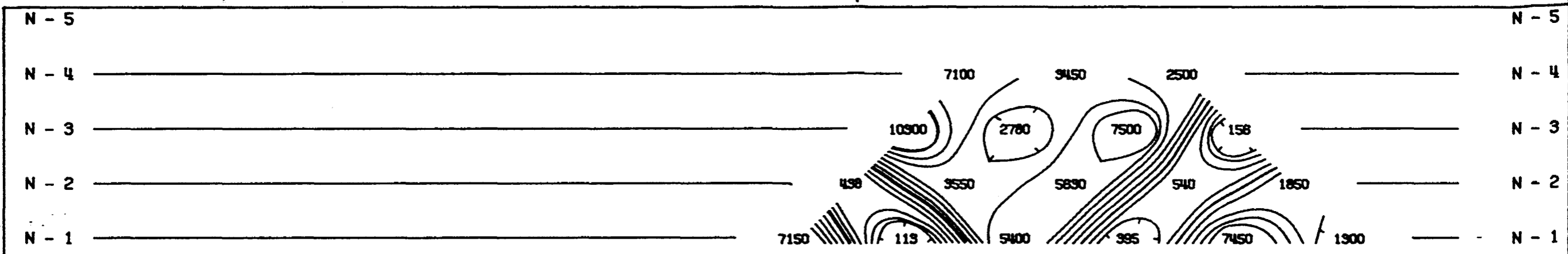
DATE:

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

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

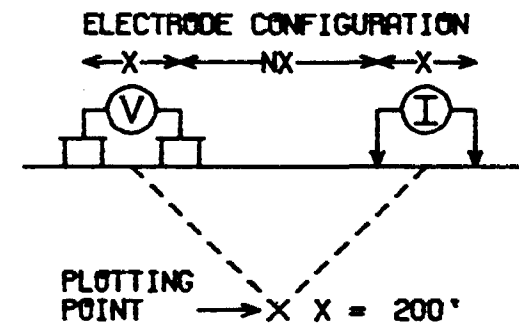
NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 360/75 COMPUTER AND A CALCOMP PLOTTER



CHIMO GOLD MINES LIMITED

WELCOME LAKE, VALIN TWP.
GOWGANDA AREA, SUDBURY M.D., ONTARIO

LINE NO. - 16N



SURFACE PROJECTION
OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCIES: 0.31-5.0 CPS

DATE SURVEYED: FEB 1970

APPROVED: _____

DATE: _____

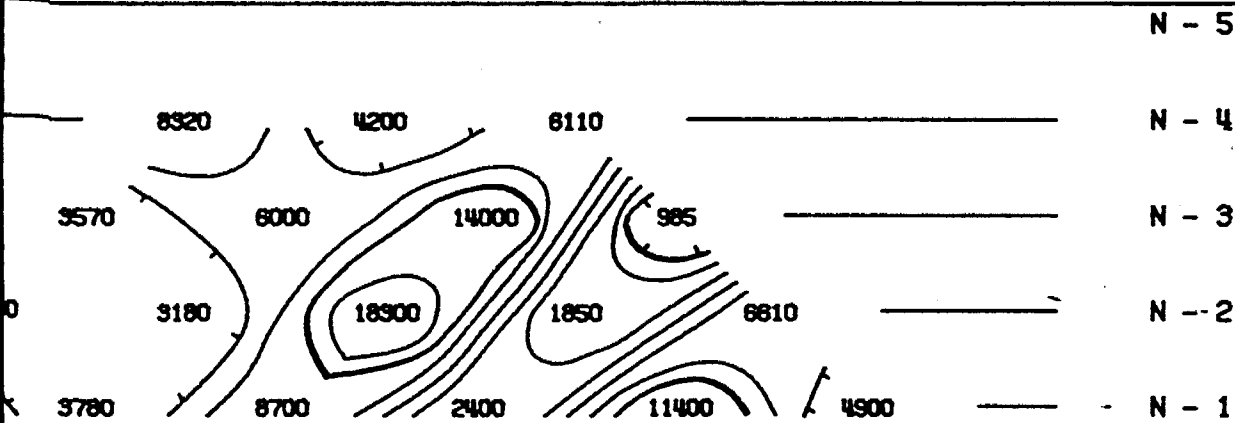


NOTE: CONTOURS AT
LOGARITHMIC INTERVALS
1.-1.5-2.-3.-5.-7.5-10

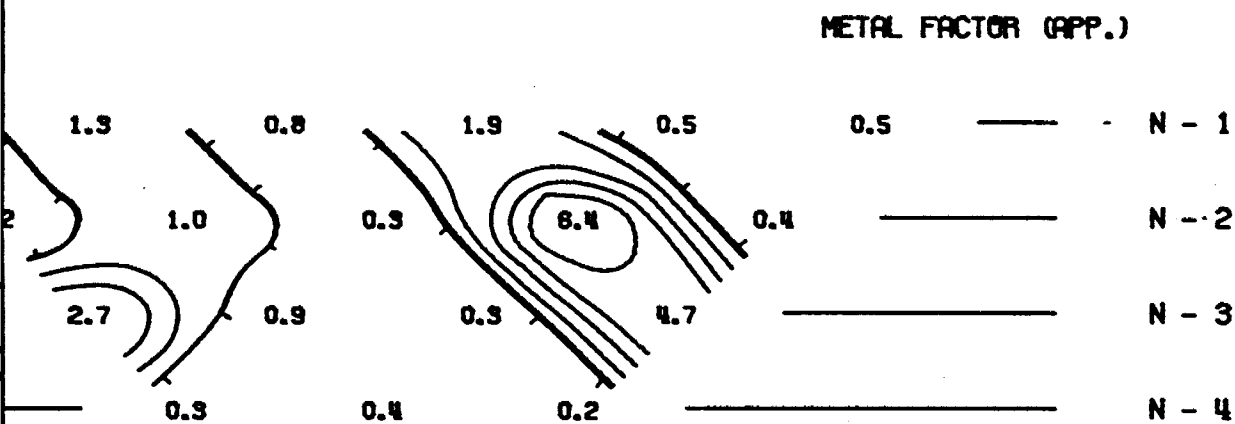
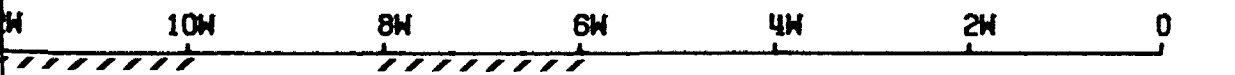
McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY SURVEY

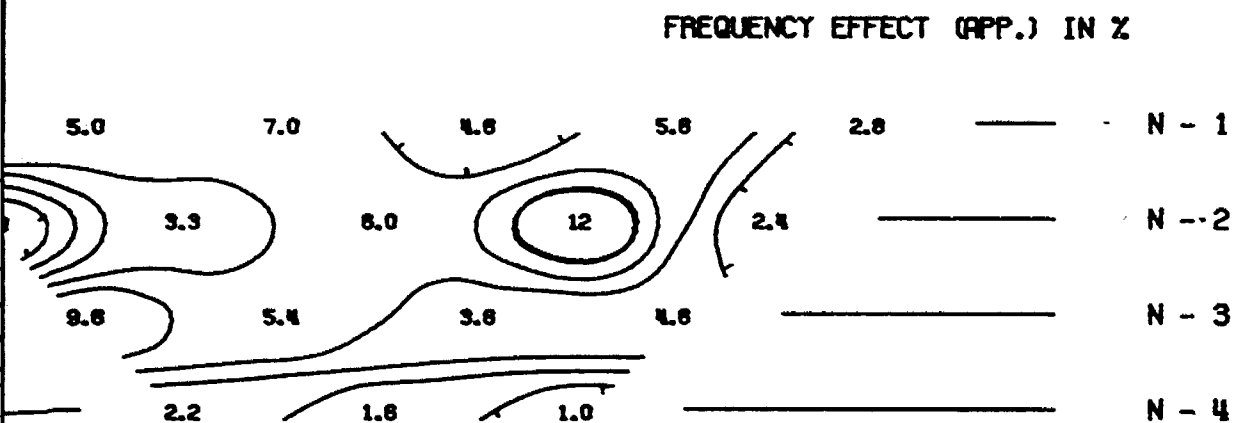
NOTE: THIS PLOT WAS PRODUCED WITH AN IBM 960/75 COMPUTER AND A CALCOMP PLOTTER



RESISTIVITY (APP.) IN OHM FEET / 2π

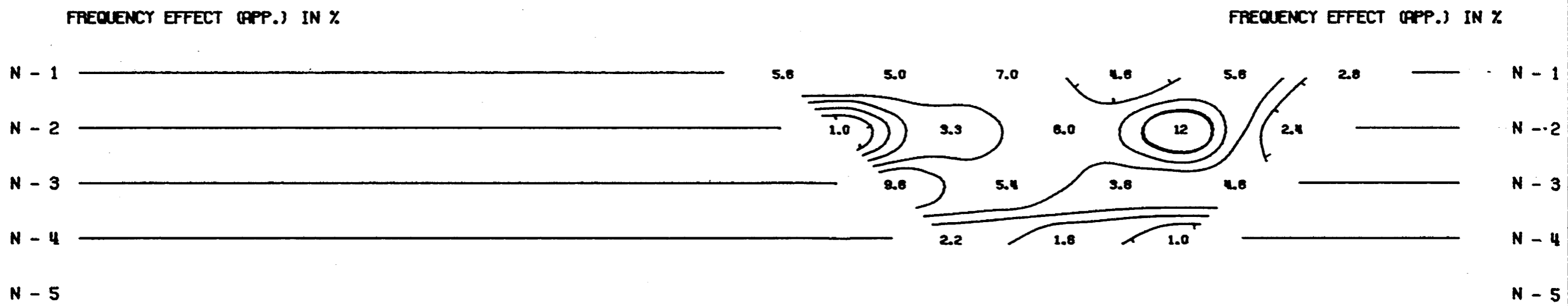
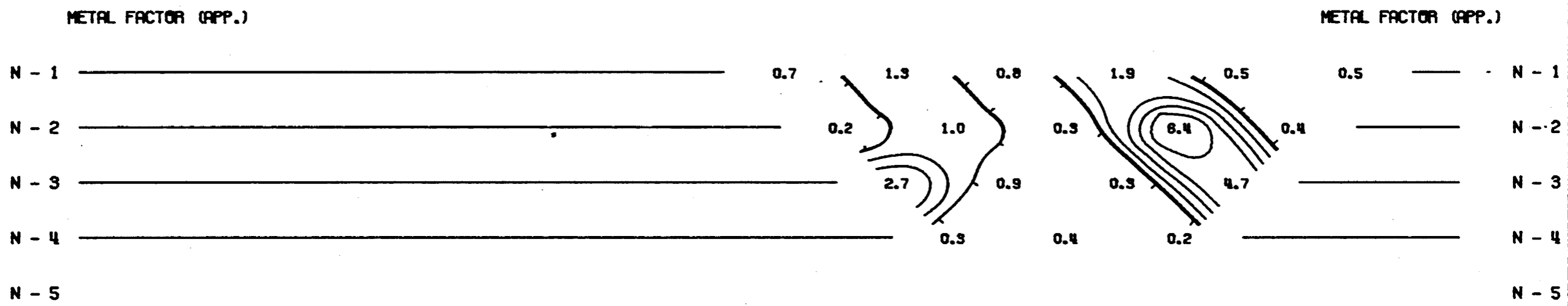
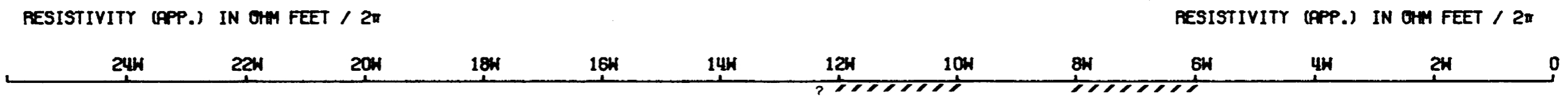
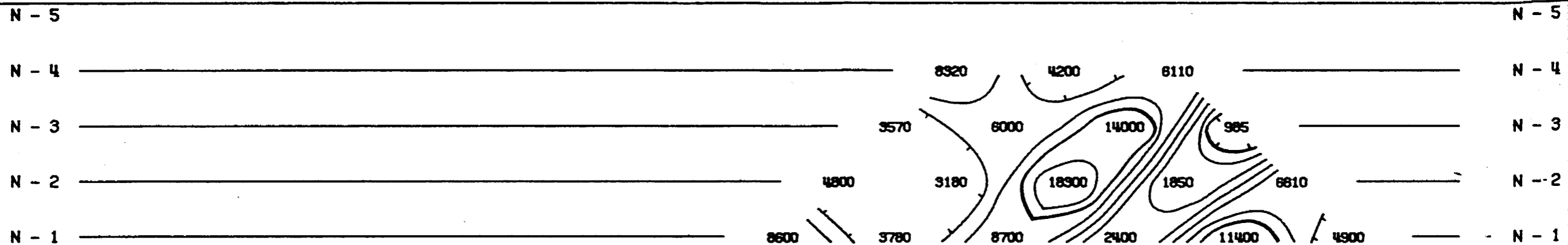


METAL FACTOR (APP.)



FREQUENCY EFFECT (APP.) IN %



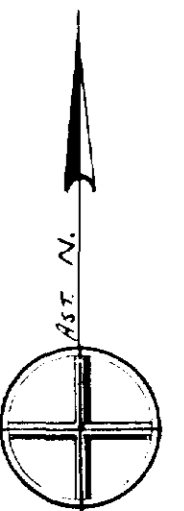
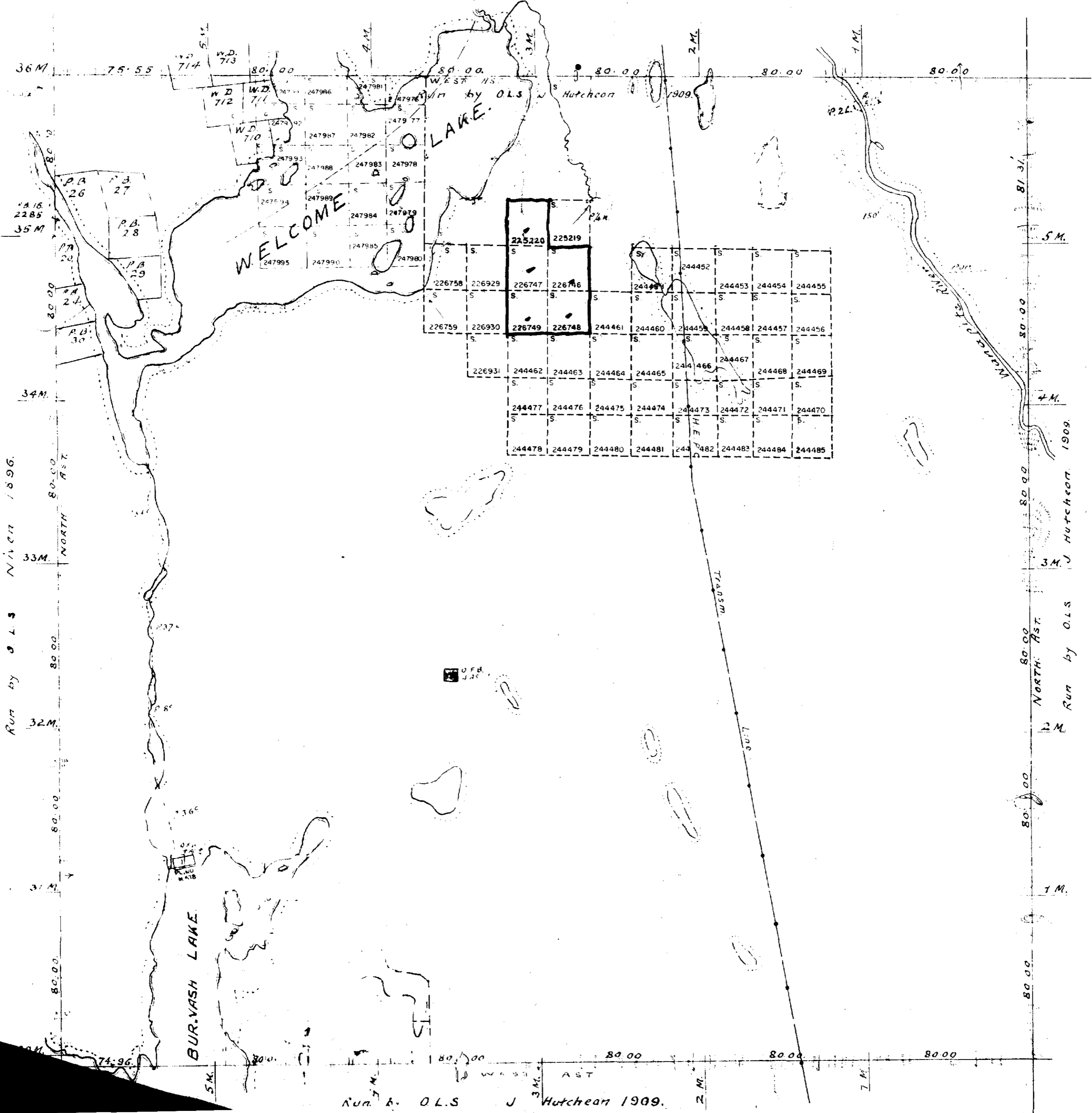


CLAIM MAP. TOWNSHIP OF VALIN

DISTRICT SUDBURY.

Scale: 40 Chains to One Inch.

STULL.

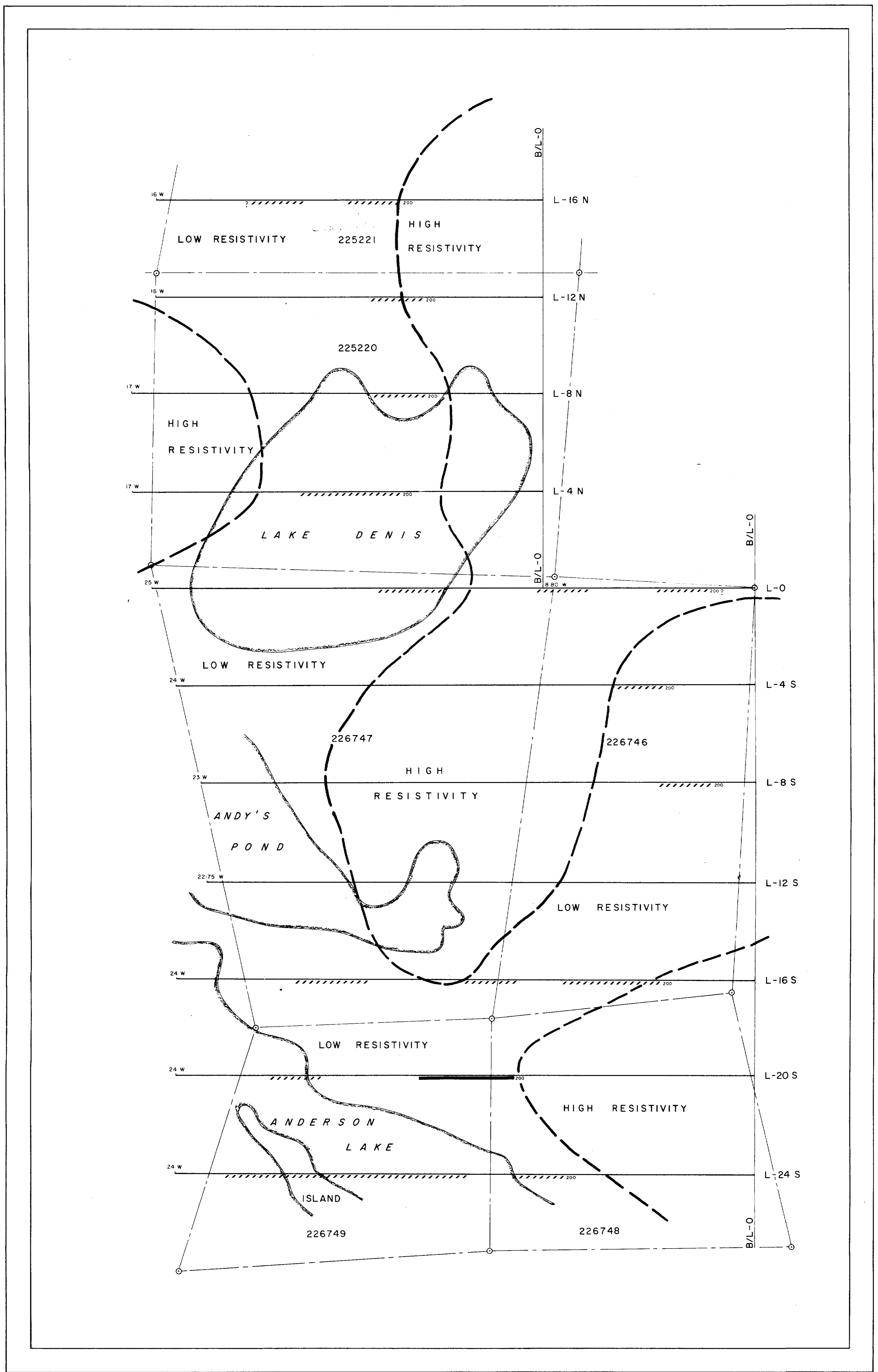


LEASK.

HAENTSCHEL.



McPHAR GEOPHYSICS
INDUCED POLARIZATION AND RESISTIVITY SURVEY
PLAN MAP



SURFACE PROJECTION
OF ANOMALOUS ZONES

DEFINITE —————

PROBABLE - - - - -

POSSIBLE / / / / /

Numbers at the end of the
read used.

CHIMO GOLD MINES LIMITED

WELCOME LAKE, VALIN TWP., GOWGANDA AREA, SUDBURY M.D., ONTARIO.

SCALE

ONE INCH EQUALS TWO HUNDRED FEET

DRAWN: D.N.H.

DATE: 7/0

APP: McPHAR GEOPHYSICS

DATE: 7/0

