

*Box 13*  
FALCONBRIDGE NICKEL MINES LIMITED  
GEOPHYSICAL SURVEY REPORT

ON THE

STIKINE MOLY PROPERTY  
DEASE LAKE AREA  
PROVINCE OF BRITISH COLUMBIA

**FILE**

NTS 104-J-1

Toronto, Ontario  
September 11, 1980

P.A. Smith

*Ref. No. 19762*

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## I INTRODUCTION

At the request of B.W. Downing, Project Geologist for Falconbridge Nickel Mines Limited, geophysical surveys were executed over a group of claims known as the Stikine Moly Property, located in the Dease Lake area of northern British Columbia.

The geophysical work, carried out during the summer of 1979, consisted of Magnetic, VLF Electromagnetic, and Induced Polarization coverage over a grid of approximately 24 line kilometres. The purpose of the survey was to investigate an area of favourable geology which reportedly gave anomalous Mo values from previous geochemical sampling.

A combined Magnetic/VLF approach was taken to outline areas of possible alteration and to provide structural information. The IP method was selected as the primary method to locate and delineate any zones of disseminated to massive mineralization within the grid area.

This report contains a description of the geophysical surveys carried out and an interpretation of the results.

## II PROPERTY DESCRIPTION

A complete description of the property, its location and access, and other pertinent information is included in a separate report by B. Downing, and will not be described herein.

## III GEOPHYSICAL SURVEYS

A grid was established along a N-S offset baseline with perpendicular traverse lines at intervals of 200 metres.

The magnetic and VLF surveys were carried out by S. Presunka during the month of July 1979 and the IP survey was done by Mertens and MacNeil from July 20th to August 2nd, 1979.

Equipment for the surveys consisted of a Scintrex MF-1 Fluxgate magnetometer; a Barringer GM-122 Proton magnetometer; a Geonics EM-16 VLF-EM receiver; and a McPhar/Phoenix frequency domain IP system. Technical specifications for the instruments used are listed in Appendix I.

The theory and mode of operation of each of the geophysical methods employed has been described in numerous scientific publications and reports and no attempt will be made to provide a detailed description within the text of this report. Additional information may be obtained from the manufacturers of the equipment used. A brief description of the application of each method follows:

### A) Magnetics

The magnetic survey was carried out in two phases using two different magnetometers. On lines 0-20N, a Barringer GM-122 Proton Precession

unit was used to measure the total magnetic field of the earth. Values are plotted in gammas (nanoteslas) relative to a background of 58,000 gammas. On lines 2S-10S, a Scintrex MF-1 Fluxgate type magnetometer was used to record the vertical component of the earth's magnetic field, relative to a pre-selected background datum.

In this survey, the zero level of the fluxgate unit was adjusted to correspond to the 58,000 gamma level of the proton unit, thereby ensuring all readings were relative to the same base. Standard base station tie-in procedures were used to correct for the effects of diurnal drift. Readings were taken at intervals of 25 metres along the traverse lines and at 50 metre intervals along the baseline.

The results of the magnetic survey are shown in Figure 9.

B) VLF-EM

A Geonics EM-16 VLF receiver was used to record the in-phase and quadrature components of the secondary field. Transmitting stations at Annapolis (21.4 khz) and Hawaii (23.4 khz) were employed as primary field sources to ensure that all conductors would be energized, regardless of orientation. Readings were taken at intervals of 25 metres on traverse lines and baselines. The in-phase and quadrature data are shown in Figure 10 (Annapolis) and Figure 11 (Hawaii).

C) Induced Polarization

The IP and Resistivity survey carried out by Mertens and MacNeil consisted of 17 lines of 100 metre dipole-dipole coverage and two short lines of detailed work with an electrode spacing of 30 metres. Equipment consisted of a McPhar Model P-660 frequency domain IP transmitter powered by a 2.5 KVA - 120 VAC motor generator in conjunction with a Phoenix IPVI receiver. Frequencies of 0.3 and 5.0 hz were employed throughout with readings taken to n=4 or n=5 (detail). The results have been plotted in pseudo-section format for each line and are appended to this report as drawings 13 through 30. The surface projection of anomalous areas is indicated on the pseudo-section plots.

IV DISCUSSION OF RESULTS

A) Magnetics

The results of the magnetic survey shown in Figure 9, indicate a general N-S trend with values ranging from 0 to 2,500 gammas. Two areas of low magnetic intensity have been observed. Zone A is situated at the southwest portion of the grid and Zone B occurs near the baseline on lines 8N-16N. Both zones occur within a unit mapped as a porphyritic quartz monzonite and may represent areas of intense alteration.

There are several apparent discontinuities in the magnetic trend which have been attributed to narrow cross-cutting dykes or faults. The PQM/Granodiorite contact at the south end of the grid is fairly well defined by the 1,000 gamma contour.

The contours for Zone A are shown in Figure 2.

B) VLF-EM

The VLF results are quite erratic and correlation of trends is difficult due to the number of anomalies and the relatively large line spacing. Portions of the data (Zone A and Zone B) were filtered using the method described by Fraser, 1969, in an attempt to provide a less ambiguous interpretation. The results met with moderate success as evidenced by the contoured filtered values shown in Figures 3 and 4 and the VLF interpreted trends shown in Figures 5 and 7.

The discrepancies in the position of conductors shown in Figures 3 and 4 are due to the strike of the conductors relative to the energizing sources. Those conductors with a NW/SE orientation would provide a maximum coupled response to the Annapolis transmitter, while NE/SW striking conductors will yield stronger responses from the Hawaii transmitter. A combination of the two sets of data is shown in Figure 5. The dashed lines represent the interpreted conductor axes and the solid dots indicate VLF anomalies which are isolated from the interpreted linears or which occur on one set of VLF data only.

The EM linears over most of the grid follow the general NE/SW geological trend with numerous conductors of random orientation forming a complex network within the areas of lower magnetic intensity.

C) I.P.

Results of the IP survey are shown as pseudo sections in drawings 13 through 30. The original scale has been reduced by about 50% in the process of duplication.

Lines 20N to 16N are essentially non-anomalous with chargeabilities of less than 3%. The weak anomalies seen on lines 14N and 12N increase in amplitude to the south where frequency effects reach 6.0% near the baseline on line 10N. This area of moderately high polarizability (Zone B) is associated with a resistivity and magnetic low. Unfortunately, lines south of line 10N did not extend east of the baseline and coverage of this anomalous area is incomplete. An increase in chargeabilities can be observed at the easterly limits of lines 8N and 6N and additional coverage in this area is warranted.

Lines 4N through 2S are relatively non-anomalous.

The first evidence of Zone A occurs on line 4S, increasing in amplitude to the south. The strongest response occurs on the intermediate detailed line 9S where frequency effects reach a high of 21%. This broad zone of high polarizability is associated with an area of low magnetic intensity (alteration zone ?), numerous VLF conductors (faults and/or mineralized fractures) and high Mo geochemical values. A molybdenite showing is located on line 8S at 0+15E.

The sharp resistivity and frequency effect contrast near 2E on lines 8S and 10S indicates a change in rock type which probably represents the contact between the porphyritic quartz monzonite and the granodiorite unit to the east.

V CONCLUSIONS AND RECOMMENDATIONS

The magnetic survey outlined two main areas of low magnetic intensity which may represent zones of intense alteration within the porphyritic quartz monzonite. The VLF results indicate a complex network of randomly orientated conductors throughout most of the grid. Several conductors would probably have escaped detection had only one transmitter station been used. The filtering process eliminated most "noise" of very short or very long wavelength VLF anomalies, including effects due to topography, but did not completely eliminate the ambiguity of strike direction because of the widely spaced lines. The IP results located two zones of moderate to high chargeability and fairly low resistivity which have been attributed to localized increases in metallic sulphide content. Coverage was incomplete and Zone A remains open to the west and Zone B is open to the southeast. Additional coverage is warranted.

It is recommended that a minimum of three holes be drilled to check the source of the IP anomalies. Although the 2-3% Py which has been observed in several areas is undoubtedly a contributing factor to the high frequency effects, the high Mo values obtained over Zone A and Zone B cannot be ignored. The pyrite may be part of an alteration halo of a moly deposit.

Three targets selected for drilling are as follows:

|    | <u>Line</u> | <u>Station</u> | <u>Zone</u> | <u>Collar</u>    |
|----|-------------|----------------|-------------|------------------|
| 1) | 9S          | 0+75E          | A           | -45°W from 0+90E |
| 2) | 9S          | 1+00W          | A           | -45°W from 0+60W |
| 3) | 10N         | 0+00           | B           | -45°W from 0+50E |

If the results of the first three holes are encouraging, additional geophysical work should be done.

IP is recommended as the primary tool with lines surveyed at 100 metre intervals or less, with a dipole-dipole electrode separation of 100 metres. Anomalous areas could be detailed with shorter or larger spreads as necessary. Detailed VLF on intermediate lines with a reading interval of 10 metres should provide additional structural information. The practice of using two orthogonal stations should be adhered to.

Respectfully submitted,



P.A. Smith,  
Senior Field Supervisor.

## APPENDIX I

### TECHNICAL SPECIFICATIONS

#### Magnetometer

|              |                       |                             |
|--------------|-----------------------|-----------------------------|
| Make & Model | Barringer GM-122      | Scintrex MF-1               |
| Type         | Proton precession     | Fluxgate                    |
| Accuracy     | $\pm 1$ gamma         | 0.5% of full scale          |
| Range        | 20,000-100,000 gammas | $\pm 100,000$ gammas        |
| Output       | 5 digit LED display   | Meter readout (5 scales)    |
| Measurement  | Total magnetic field  | Vertical magnetic component |

#### VLF-EM

|              |  |
|--------------|--|
| Make & Model | Geonics EM-16  |
| Type         | Crossed coil vertical loop, infinite transmitter           |
| Accuracy     | $\pm 1\%$  |
| Range        | In-phase $\pm 150\%$ , quadrature $\pm 40\%$               |
| Output       | Audible output - null by clinometer and vernier            |
| Measurement  | In-phase and quadrature components of secondary field in % |
| Frequencies  | Annapolis (21.4 khz) and Hawaii (23.4 khz)                 |

#### IP

|                      |   |
|----------------------|---|
| Make & Model         | Tx - McPhar P-660, Rx - Phoenix IPVI              |
| Type                 | Frequency domain                                  |
| Accuracy             | $\pm 0.2\%$                                       |
| Range                | 10v to 0.1mv (meter), 0-1000 calibrated vernier   |
| Frequencies          | 0.3 and 5.0 hz                                    |
| Measurement          | Apparent resistivity and percent frequency effect |
| Power                | 2.5 KVA, 120 VAC                                  |
| Electrode separation | 100 metres (rec), 30 metres (detail) n=4 or 5     |
| Array                | Dipole-dipole (in line)                           |




APPENDIX II

STATEMENT OF QUALIFICATIONS

I, Paul A. Smith, of the City of Toronto, Province of Ontario, do hereby certify that:

1. I am a geophysical technician, residing at 65 Dogwood Crescent, Scarborough, Ontario.
2. I have received diplomas from De Vry Technical Institute, Toronto (Electronics - 1962) and Nova Scotia Land Survey Institute, Lawrencetown (Cartographic Drafting - 1966).
3. I have been actively engaged in geophysical exploration since 1962 and have had world-wide experience in surface and underground survey methods and techniques.
4. I am presently employed as Senior Field Supervisor for Falconbridge Nickel Mines Limited.
5. I have reviewed the data contained in this report and am confident that the geophysical surveys were conducted in a satisfactory manner.

Dated at Toronto this 12th day of September, 1980.

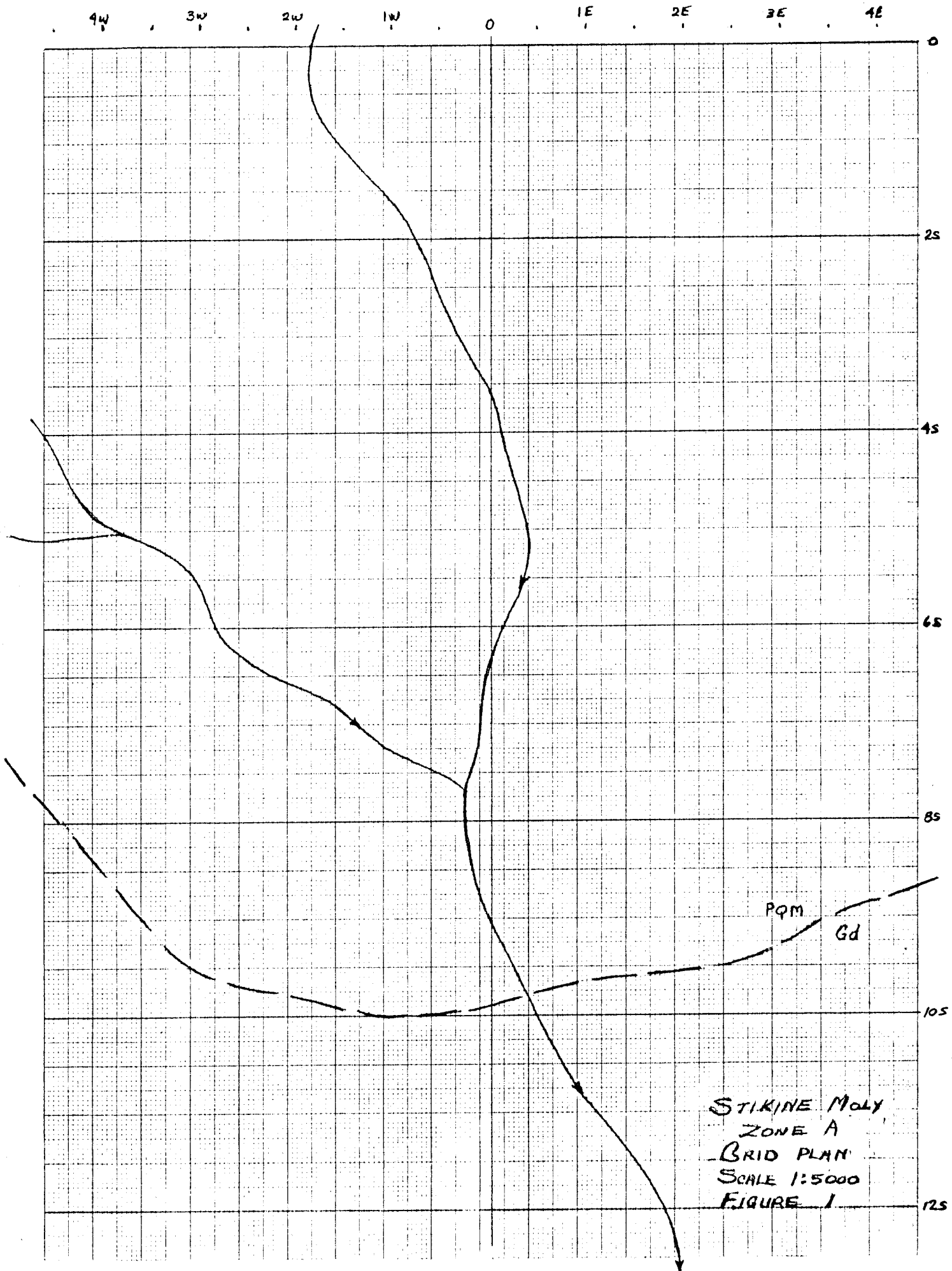


Paul A. Smith,  
Senior Field Supervisor.

APPENDIX III

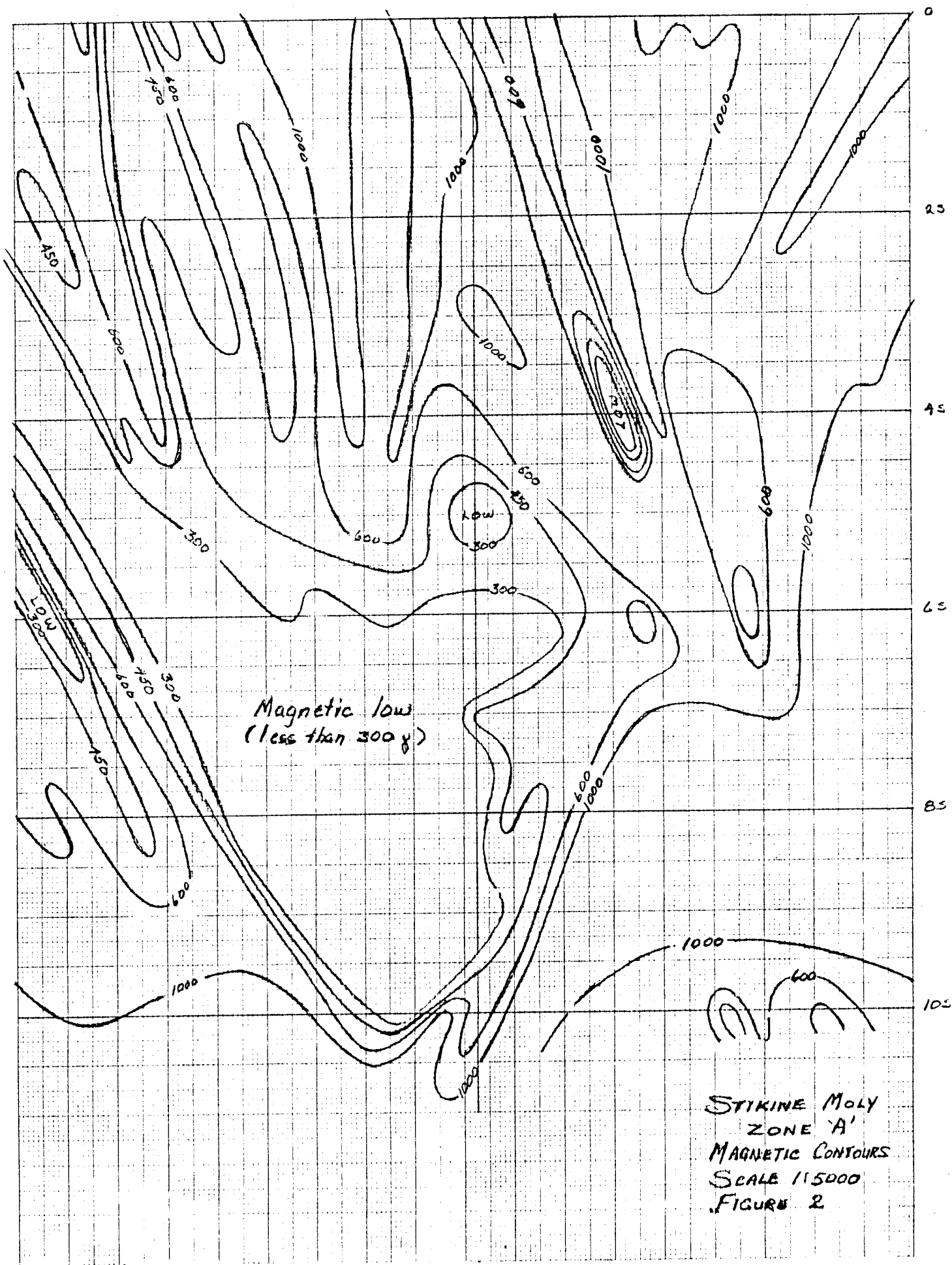
STATISTICAL DATA

|                 |   |   |      |
|-----------------|---|---|------|
| Magnetic Survey | - | Line-kilometres surveyed                      | 24.0 |
|                 | - | No. of observations                           | 900  |
| VLF-EM Survey   | - | Line-kilometres surveyed<br>at each frequency | 24.0 |
|                 | - | No. of observations                           | 3940 |
| IP Survey       | - | Line-kilometres surveyed                      | 25.2 |
|                 | - | No. of dipoles                                | 195  |
|                 | - | No. of observations                           | 1604 |



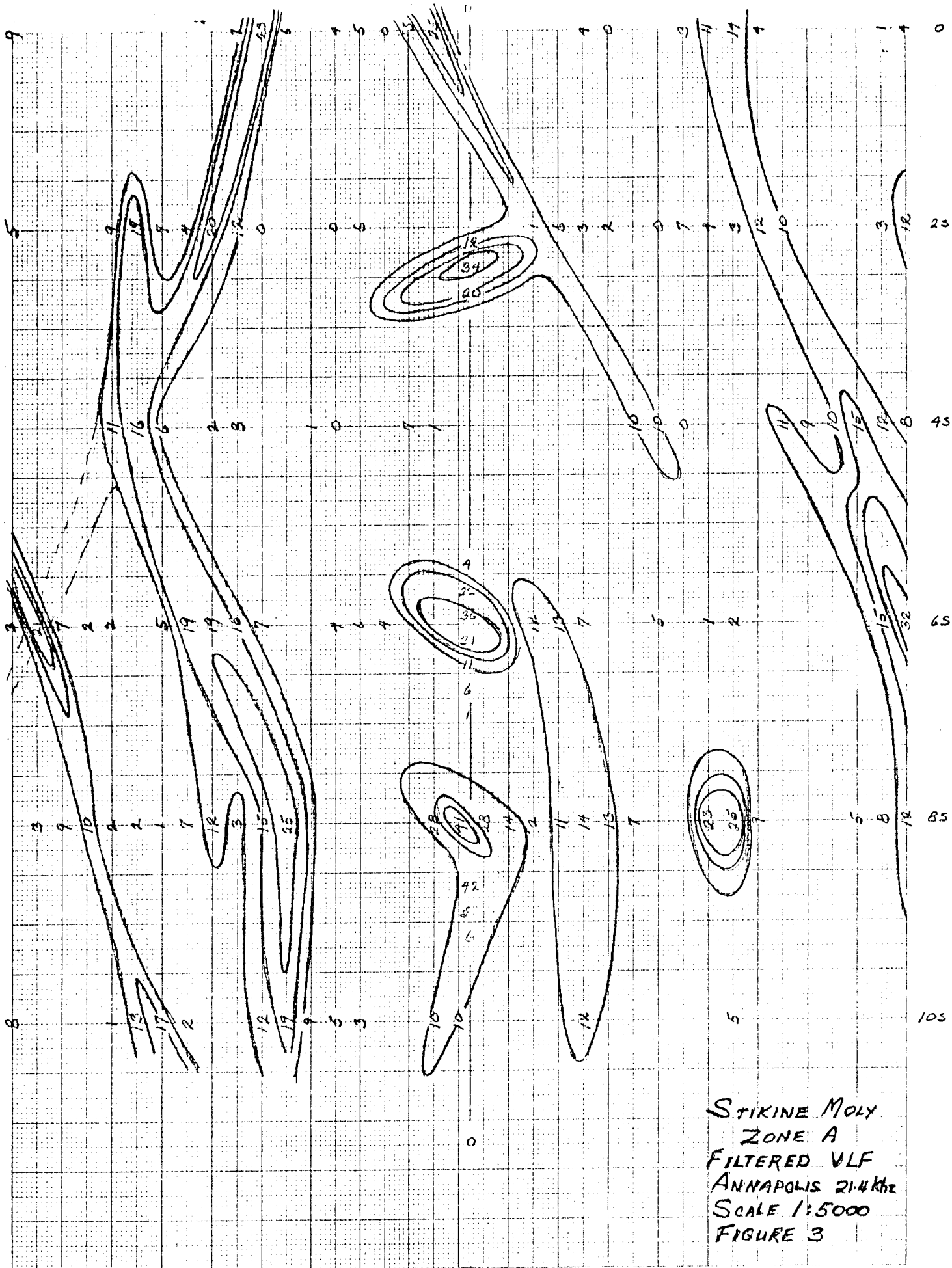
STIKINE Moly  
ZONE A  
GRID PLAN  
SCALE 1:5000  
FIGURE 1

125

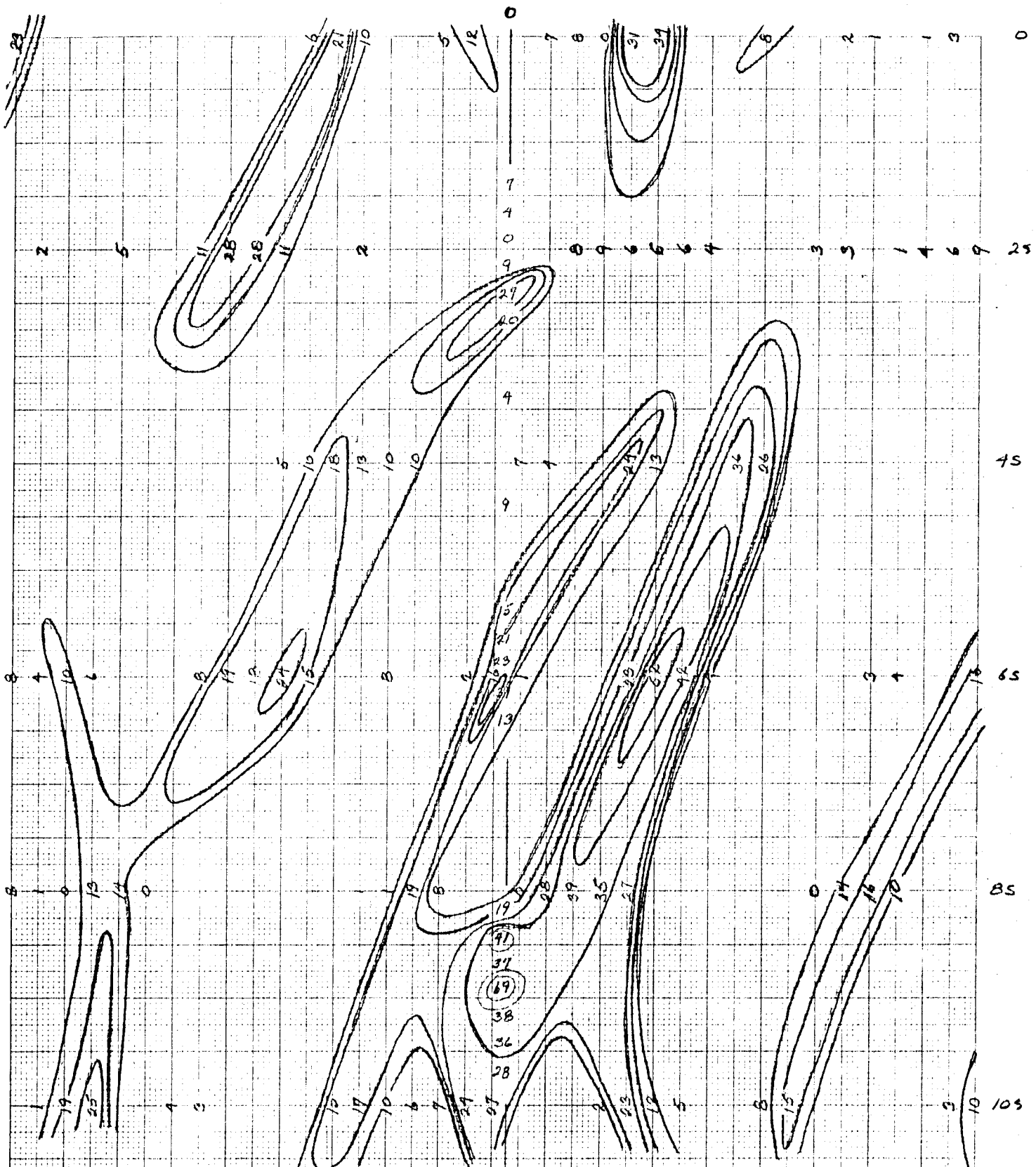


Magnetic low  
(less than 300  $\gamma$ )

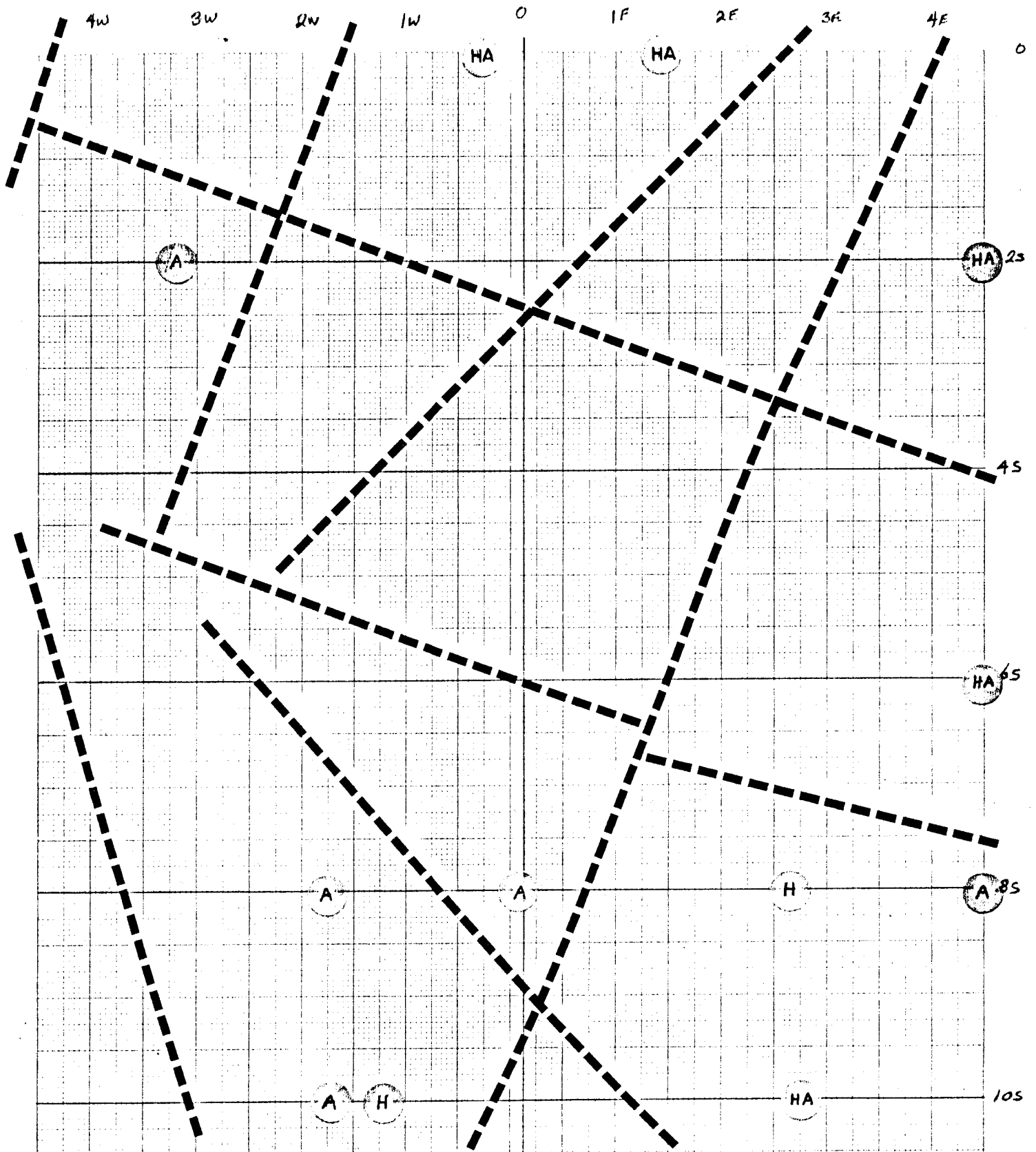
STIKINE Moly  
ZONE 'A'  
MAGNETIC CONTOURS  
SCALE 1:5000  
FIGURE 2



STIKINE Moly  
 ZONE A  
 FILTERED VLF  
 ANNAPOLIS 21.4KHz  
 SCALE 1:5000  
 FIGURE 3



STIKINE MOLY  
 ZONE A  
 FILTERED VLF  
 HAWAII - 23.4 kHz  
 SCALE 1:5000  
 FIGURE A



VLF conductors (both frequencies) - - - - -

Isolated or single frequency anomalies

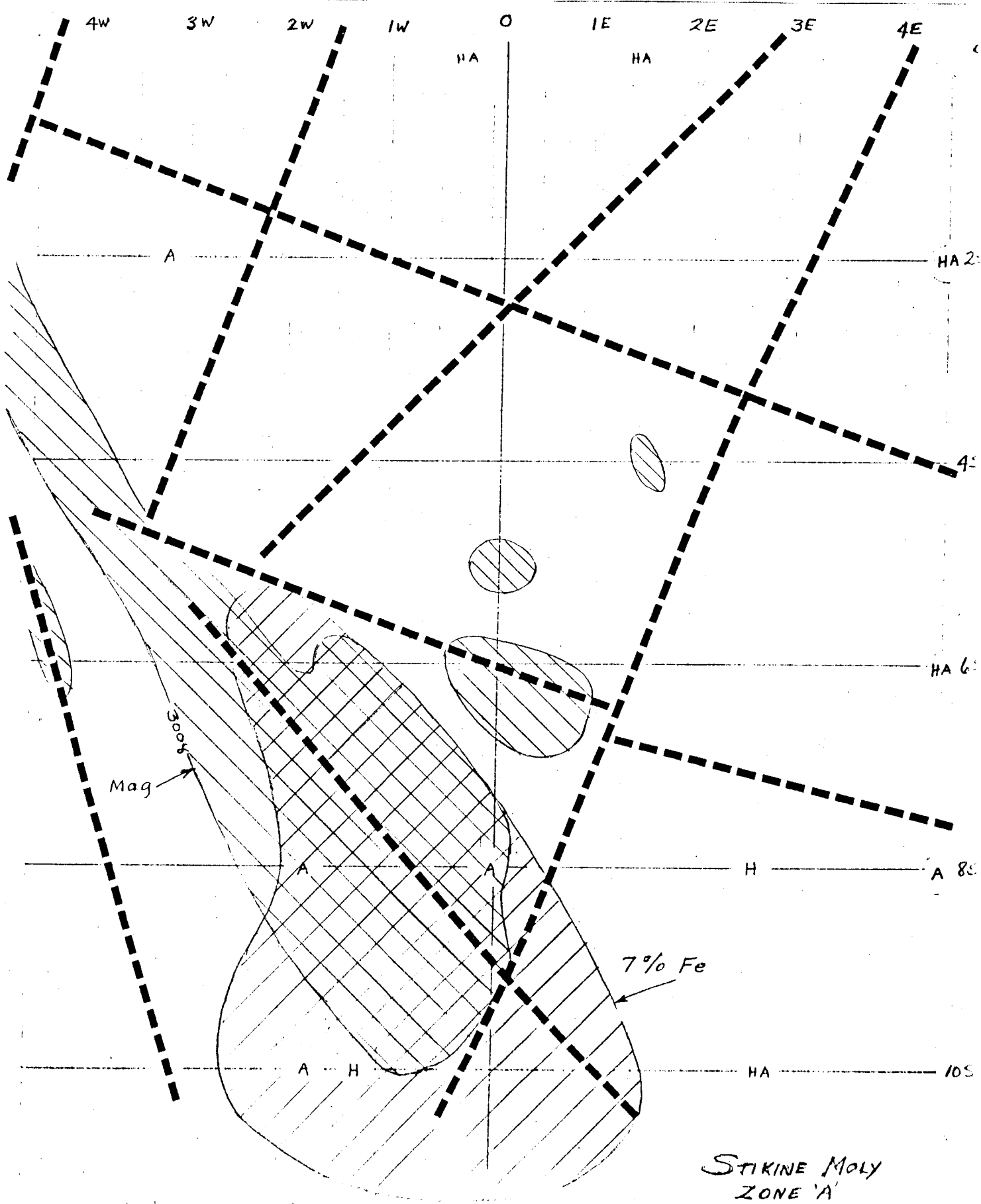
(H) Hawaii

(A) Annapolis

STIKINE MOLY  
ZONE 'A'

VLF ANOMALIES  
SCALE 1:5000  
FIGURE 5

45 1513

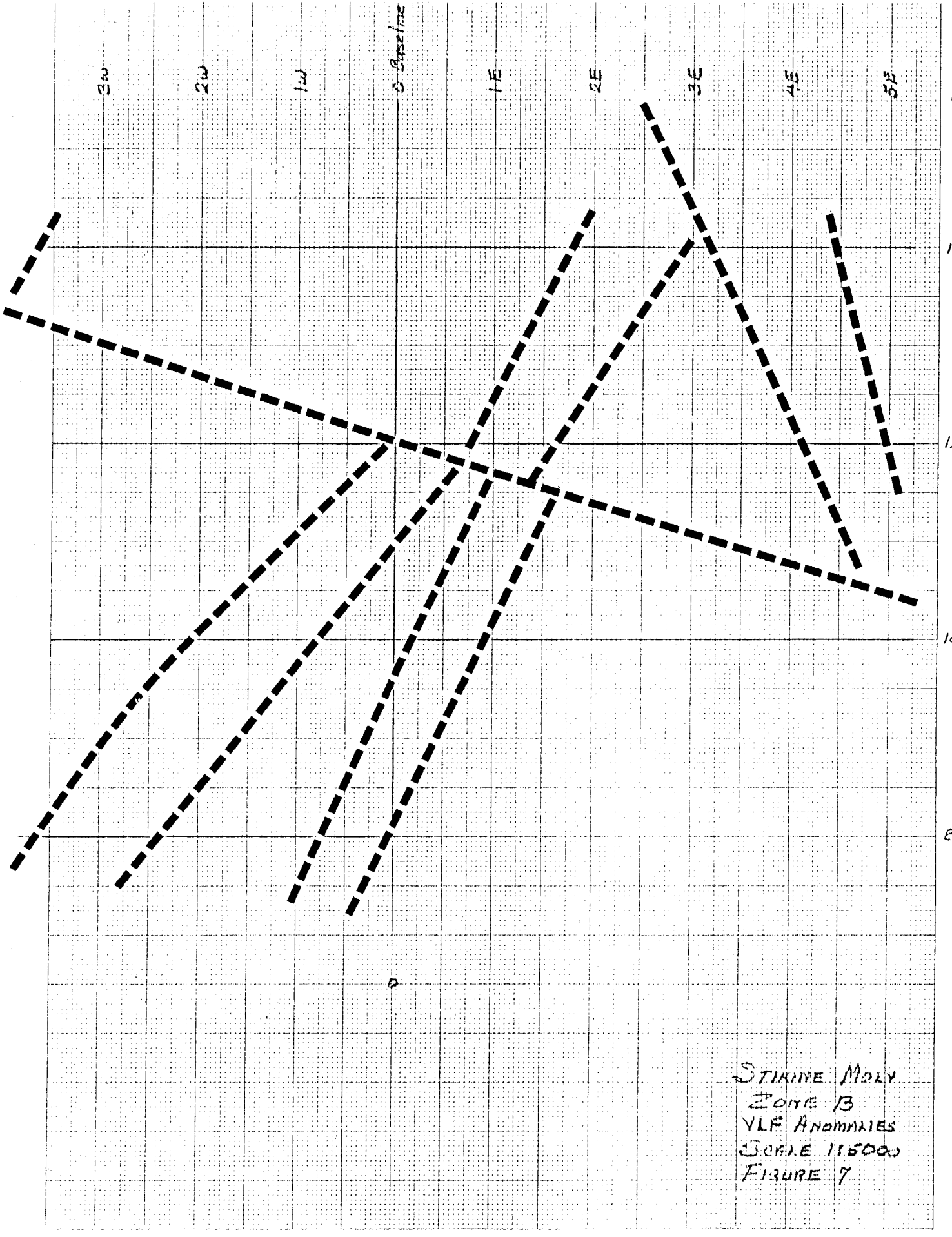


STIKINE Moly  
ZONE 'A'  
COMPILATION  
Scale 1:5000  
FIGURE 6



46 1512

KEUFFEL & ESSER CO. MADE IN U.S.A.



STIKINE MOUNTAINS  
ZONE B  
VLF ANOMALIES  
SCALE 1:15000  
FIGURE 7

STATIONS

RESISTIVITY (ohm-metres)

METAL FACTOR (M.F.)

% FREQUENCY EFFECT (P.F.E.)

FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIXING MOUNT PROJECT

LINE RON

LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P660

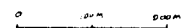
FREQUENCIES: 0.3, 0.8 Hz

SCALE: 2 CM = 100 M

DATE: JULY 30 1979

DATA BY: J. Hae Nivik

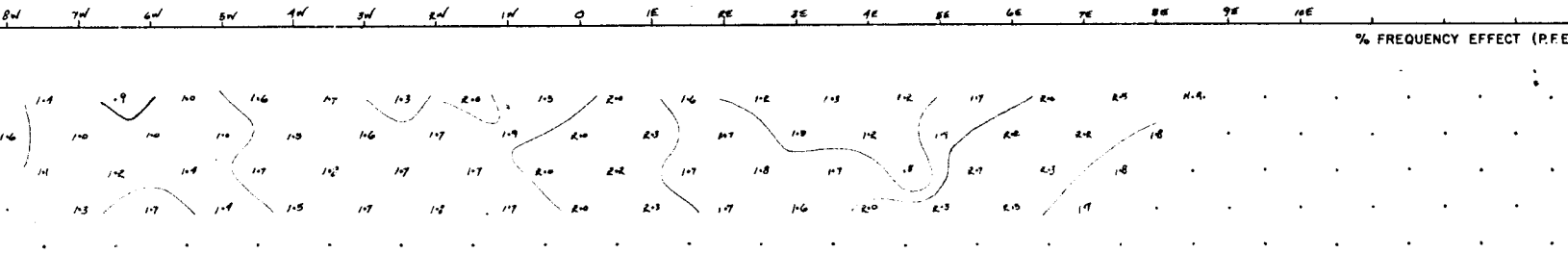
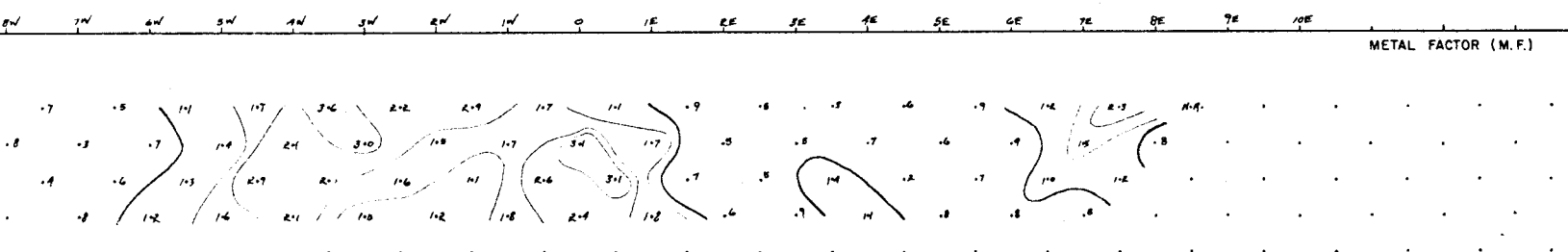
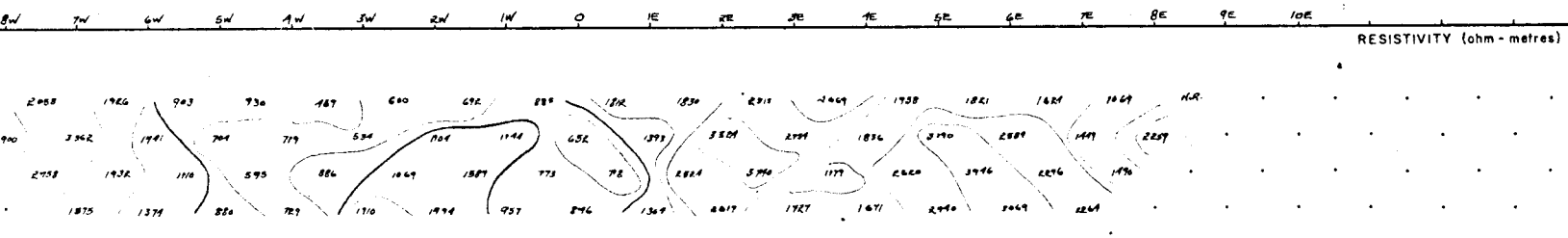
REMARKS: .....



LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I.P. ANOMALY - STRONG  
 MODERATE  
 WEAK

DWG. No. 13



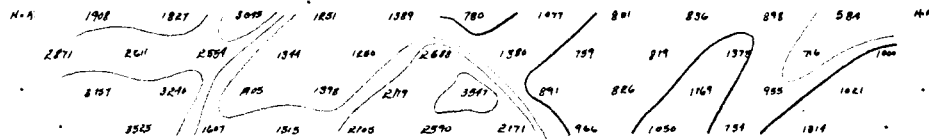
SWAMP



STATIONS

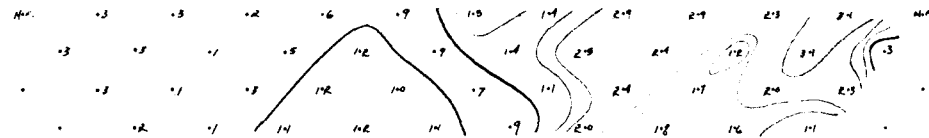
SW AH SWL SWL 1W Q 1E 2E 3E 4E 5E 6E 7E 8E 9E 10E

RESISTIVITY (ohm-metres)



SW AH SWL SWL 1W Q 1E 2E 3E 4E 5E 6E 7E 8E 9E 10E

METAL FACTOR (M.F.)



SW AH SWL SWL 1W Q 1E 2E 3E 4E 5E 6E 7E 8E 9E 10E

% FREQUENCY EFFECT (P.F.E.)



FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOUNTAIN PROJECT

LINE 16K

LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: PG60

FREQUENCIES: 0.3-8.0 Hz

SCALE: 1 CM = 100 M

DATE: JULY 29 1979

DATA BY: J. Mac Naught

REMARKS: Data reduced

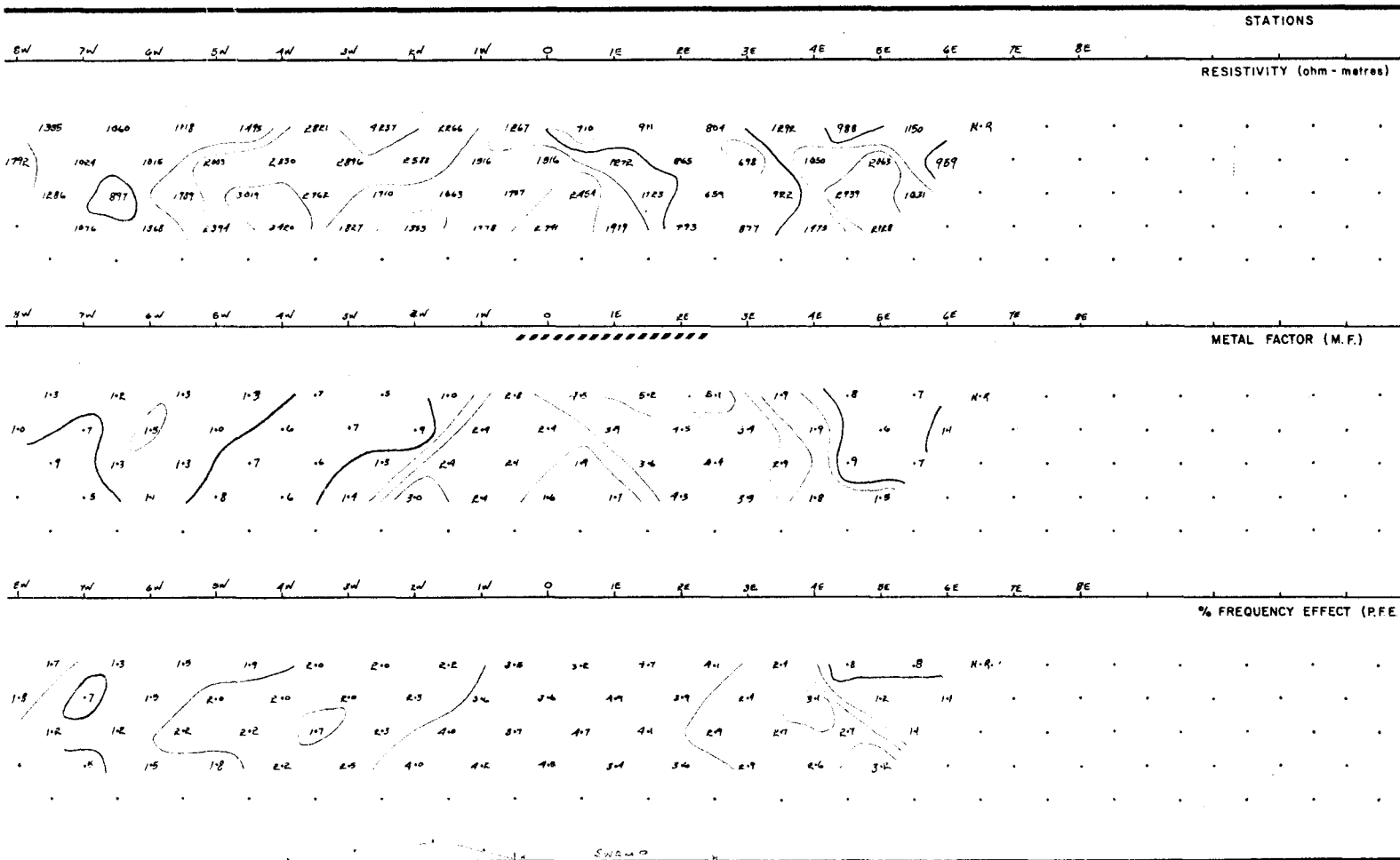
0 100m 200m

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I.P. ANOMALY - STRONG  
 MODERATE  
 WEAK

DWG. No. 15





FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKING MARY PROJECT

LINE 12N

LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P660

FREQUENCIES: 0.375 Hz

SCALE: 2 CM = 100 M

DATE: JULY 28 1979

DATA BY: J. MacNeil

REMARKS: 2 100m 500m

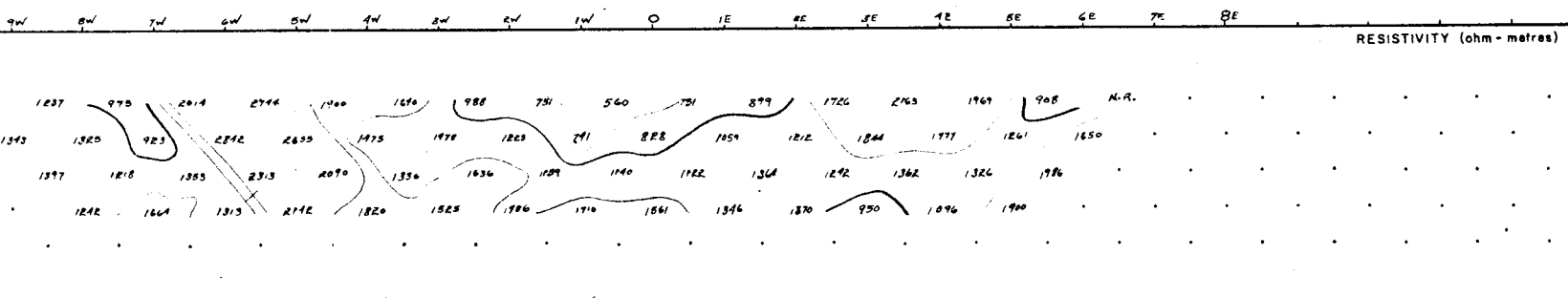
LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I P ANOMALY - STRONG  
 MODERATE  
 WEAK

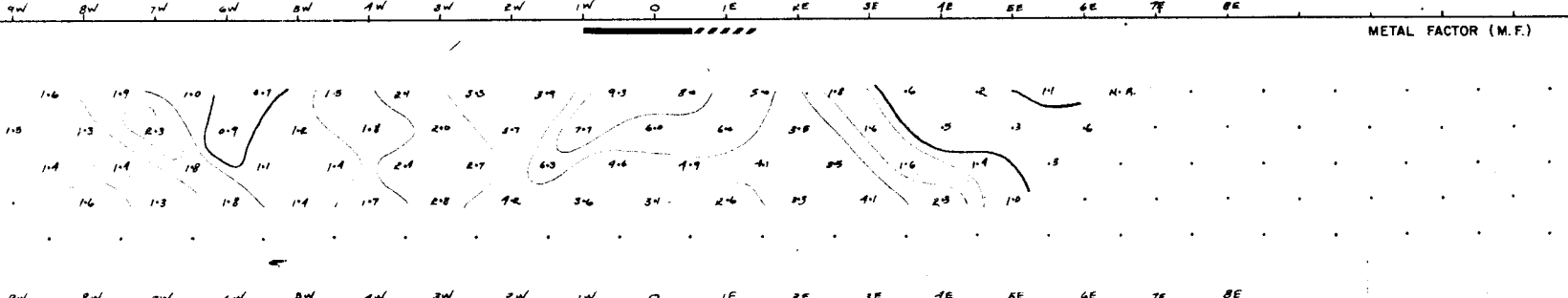
DWG. No. 17

STATIONS

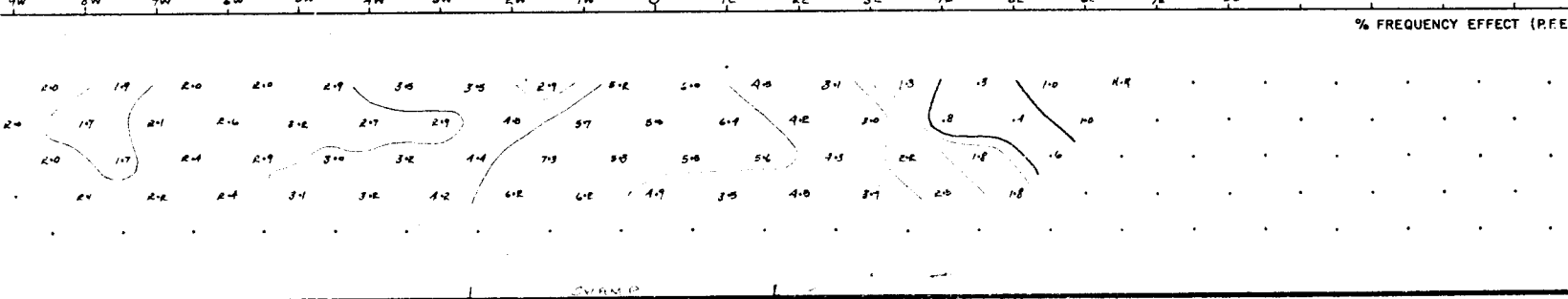
RESISTIVITY (ohm-metres)



METAL FACTOR (M.F.)



% FREQUENCY EFFECT (P.F.E.)



FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOUNTAIN PROJECT

LINE 10N

LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P400

FREQUENCIES: 0.3-1500 Hz

SCALE: RCN = 100M

DATE: JULY 29, 1977

DATA BY: J. MacNeil

REMARKS: Data reduced  
0.1M 200M

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I.P. ANOMALY - STRONG  
MODERATE  
WEAK

DWG. No. 13

## STATIONS

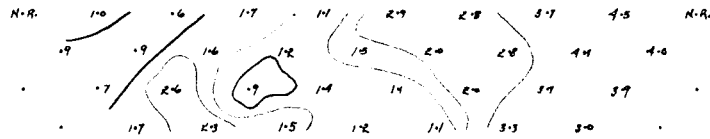
11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

RESISTIVITY (ohm-metres)



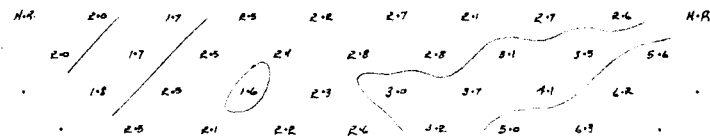
11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

METAL FACTOR (M.F.)



11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

% FREQUENCY EFFECT (P.F.E.)



FALCONBRIDGE NICKEL MINES LIMITED

## INDUCED POLARIZATION SURVEY

STIKINE MOLY PROJECT

LINE 8N

## LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P660

FREQUENCIES: 0.345 HZ

SCALE: RCM = 100M

DATE: JULY 29, 1979

DATA BY: J. PROVIAS

REMARKS: Contour reduced  
0 100m 200m

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I.P. ANOMALY - STRONG  
MODERATE  
WEAK

DWG. No. 19



STATIONS

11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

RESISTIVITY (ohm-metres)

NR 2152 2993 1620 187 2050 2050 1204 1505 NR  
 1754 2229 3150 2581 950 1878 1780 1673 2081  
 1378 2950 3670 1520 1305 1640 2155 1601  
 1484 2764 2938 2774 1050 1500 2407

11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

METAL FACTOR (M.F.)

NR .5 .5 .7 1.4 1.1 1.5 2.2 1.6 NR  
 1.1 1.3 .4 .7 2.4 1.1 1.3 2.4 2.7  
 1.5 .3 .6 1.3 2.0 1.0 1.5 3.5  
 1.1 1.1 .5 1.2 1.5 1.4 2.8

11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

% FREQUENCY EFFECT (P.F.E.)

NR 24 1.4 1.2 1.8 2.2 3.4 3.0 3.1 NR  
 2.0 3.0 1.2 1.8 2.4 2.2 2.6 3.5 2.6  
 2.4 2.6 2.4 2.6 2.6 1.6 3.1 4.0  
 3.7 3.0 2.4 3.0 1.6 2.7 3.8

FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOLY PROJECT

LINE 6N

LEGEND

ARRAY: DIPOLE-DIPOLE  
 UNIT: P660  
 FREQUENCIES: 0.3 HZ | 5 HZ  
 SCALE: 2CM = 100 M  
 DATE: JULY 25 1979  
 DATA BY: J. MACNEIL  
 J. PROVIAS  
 REMARKS: Slope reduced  
 0 100m 200m

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I. P. ANOMALY - STRONG  
 MODERATE  
 WEAK

DWG. No. 20

STATIONS

11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

RESISTIVITY (ohm-metres)

|      |      |      |      |      |      |      |      |      |    |
|------|------|------|------|------|------|------|------|------|----|
| NR   | 1427 | 1742 | 2000 | 1445 | 2420 | 1353 | 4038 | 3300 | NR |
| 3163 | 1367 | 1680 | 1274 | 3854 | 3420 | 1182 | 3663 | 2309 |    |
| 2393 | 1302 | 1261 | 3821 | 4549 | 2817 | 1108 | 2361 |      |    |
| 2600 | 887  | 3420 | 4542 | 3370 | 2304 | 825  |      |      |    |

11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

METAL FACTOR (M.F.)

|     |     |     |     |     |     |     |     |     |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| NR  | 1.8 | 1.9 | 1.7 | 1.2 | 1.7 | 2.1 | 1.6 | 1.9 | NR |
| 1.8 | 1.4 | 1.0 | 1.3 | 1.5 | 1.6 | 2.1 | 1.0 | 1.5 |    |
| 1.9 | 1.5 | 1.3 | 1.7 | 1.6 | 1.7 | 1.2 | 1.3 |     |    |
| 1.0 | 1.3 | 1.6 | 1.5 | 1.7 | 1.5 | 1.3 |     |     |    |

11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

% FREQUENCY EFFECT (P.F.E.)

|     |     |     |     |     |     |     |     |     |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| NR  | 2.9 | 1.4 | 1.7 | 1.7 | 1.8 | 2.0 | 2.5 | 2.5 | NR |
| 2.4 | 2.1 | 1.4 | 1.7 | 1.3 | 2.1 | 2.7 | 3.4 | 4.0 |    |
| 2.2 | 2.0 | 1.4 | 2.5 | 2.4 | 2.0 | 3.4 | 4.4 |     |    |
| 2.0 | 2.4 | 2.0 | 2.4 | 2.3 | 3.3 | 4.4 |     |     |    |

FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOLY PROJECT

LINE 4N

LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P 660

FREQUENCIES: 0.3 / 5 HZ

SCALE: 2CM = 100M

DATE: JULY 24 1979

DATA BY: J. MACNEIL

REMARKS: Noise reduced

0 100m 200m

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

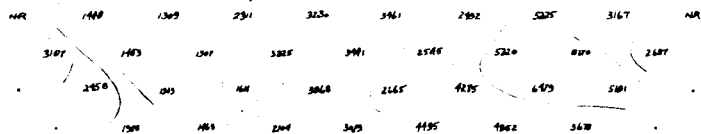
I.P. ANOMALY - STRONG  
 MODERATE  
 WEAK

DWG. No. 21

STATIONS

11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

RESISTIVITY (ohm-metres)



11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

METAL FACTOR (M.F.)



11W 10W 9W 8W 7W 6W 5W 4W 3W 2W 1W 0 1E

% FREQUENCY EFFECT (P.F.E.)



FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOLY PROJECT

LINE 2N

LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P660

FREQUENCIES: 0.315 HZ

SCALE: 2CM = 100M

DATE: JULY 23 1979

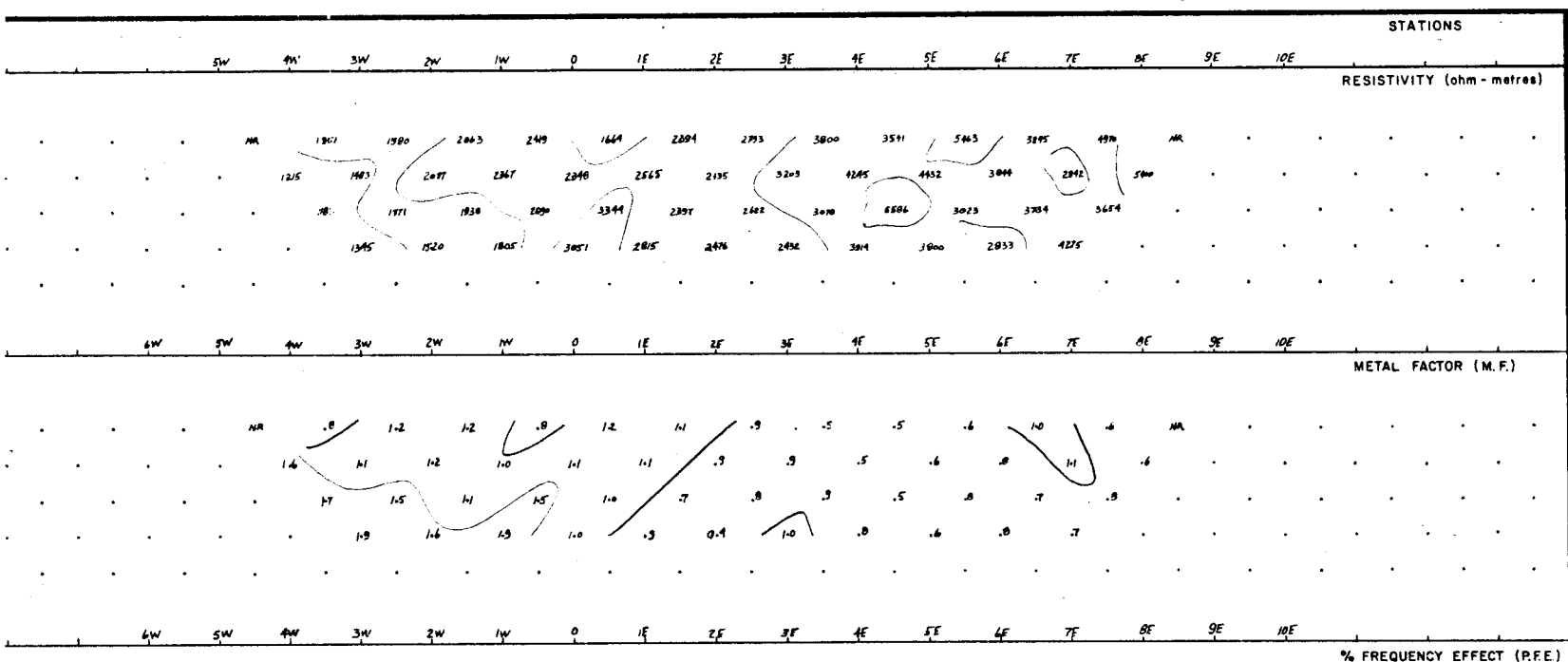
DATA BY: J. MACNEIL

REMARKS: Scale reduced  
100m 200m

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I.P. ANOMALY - STRONG  
MODERATE  
WEAK

DWG. No. 22



**FALCONBRIDGE NICKEL MINES LIMITED**

**INDUCED POLARIZATION SURVEY**

STIKINE MOUNTAIN PROJECT

LINE 0-00

**LEGEND**

ARRAY : DIPOLE - DIPOLE

UNIT : P660

FREQUENCIES : 0.3 & 5 HZ

SCALE : 2 CM = 100 M

DATE : JULY 22 1979

DATA BY : J. MACNEIL

REMARKS : Single channel

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I P ANOMALY - STRONG

MODERATE

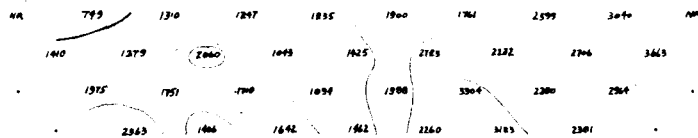
WEAK

DWG. No. 23

## STATIONS

6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

RESISTIVITY (ohm-metres)



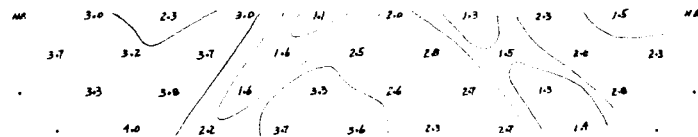
6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

METAL FACTOR (M.F.)



6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

% FREQUENCY EFFECT (P.F.E.)



FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIRLING MOUNT PROJECT

LINE 25

## LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P660

FREQUENCIES: 0.3 + 5 HZ

SCALE: 2 CM = 100 M +

DATE: JULY 22 1979

DATA BY: J. MACNEIL

REMARKS: Data reduced

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I.P. ANOMALY - STRONG

MODERATE

WEAK

DWG. No. 29

STATIONS

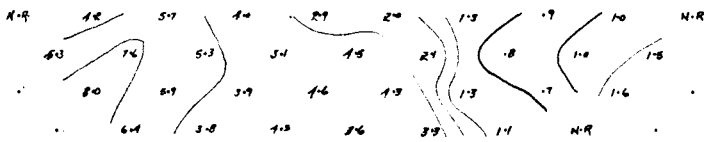
6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

RESISTIVITY (ohm-metres)



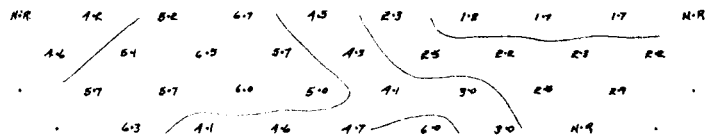
6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

METAL FACTOR (M.F.)



6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

% FREQUENCY EFFECT (P.F.E.)



FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOLY PROJECT

LINE 45

LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P460

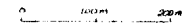
FREQUENCIES: 0.375 HZ

SCALE: PCW = 100M

DATE: JULY 21 1977

DATA BY: J. MAR NEIL

REMARKS: Smile rebound



LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

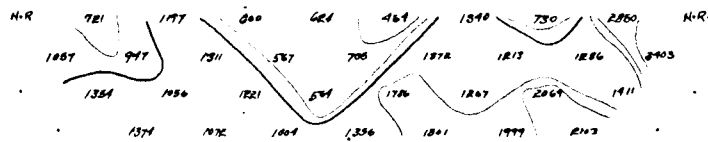
I.P. ANOMALY - STRONG  
 MODERATE  
 WEAK

DWG. No. 25

STATIONS

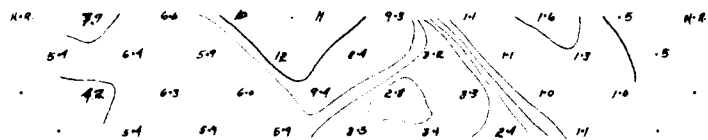
6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

RESISTIVITY (ohm-metres)



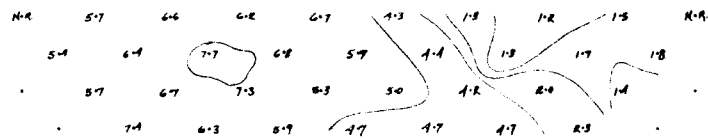
6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

METAL FACTOR (M.F.)



6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

% FREQUENCY EFFECT (P.F.E.)



FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOLY PROJECT

LINE 65

LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P660

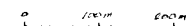
FREQUENCIES: 0.3-8MHz

SCALE: RCN = 100M<sup>2</sup>

DATE: JULY 21, 1979

DATA BY: J. MacNeil

REMARKS: Data reduced



LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I.P. ANOMALY - STRONG

MODERATE

WEAK

DWG. No. 26

SW 44 07

CH 0107

STATIONS

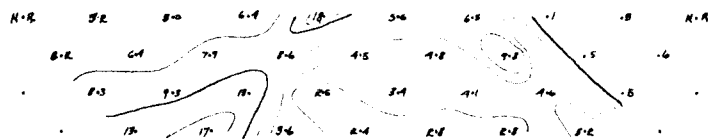
GW SW AW SW EN IW O IE ZE SE 1E 5E 6E

RESISTIVITY (ohm-metres)



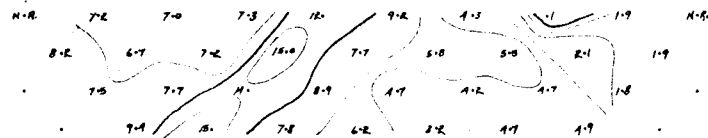
GW SW AW SW EN IW O IE ZE SE 1E 5E 6E

METAL FACTOR (M.F.)



GW SW AW SW EN IW O IE ZE SE 1E 5E 6E

% FREQUENCY EFFECT (P.F.E.)



FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOUNTAIN PROJECT

LINE 8E

LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P660

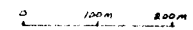
FREQUENCIES: 0.25, 5 Hz

SCALE: PCN = 100M +

DATE: JUN 20, 1977

DATA BY: J. MacNeil

REMARKS: Scale reduced



LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

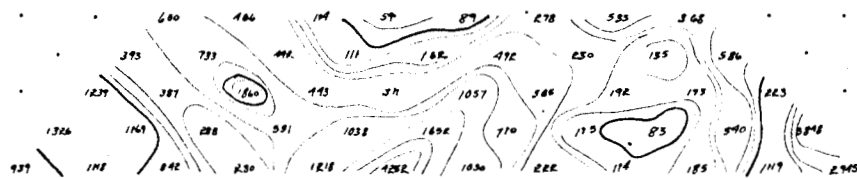
I.P. ANOMALY - STRONG MODERATE WEAK

DWG. No. 27



## STATIONS

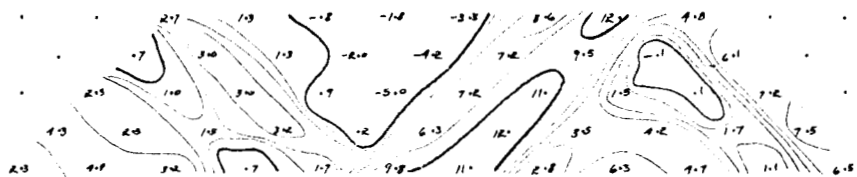
RESISTIVITY (ohm-metres)



METAL FACTOR (M.F.)



% FREQUENCY EFFECT (P.F.E.)



FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOUNTAIN PROJECT

LINE 85

## LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P460

FREQUENCIES: 0.3-4.8KHz

SCALE: 2CM = 30M

DATE: AUG 2 1979

DATA BY: J. MacNeil

REMARKS: Soils removed

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

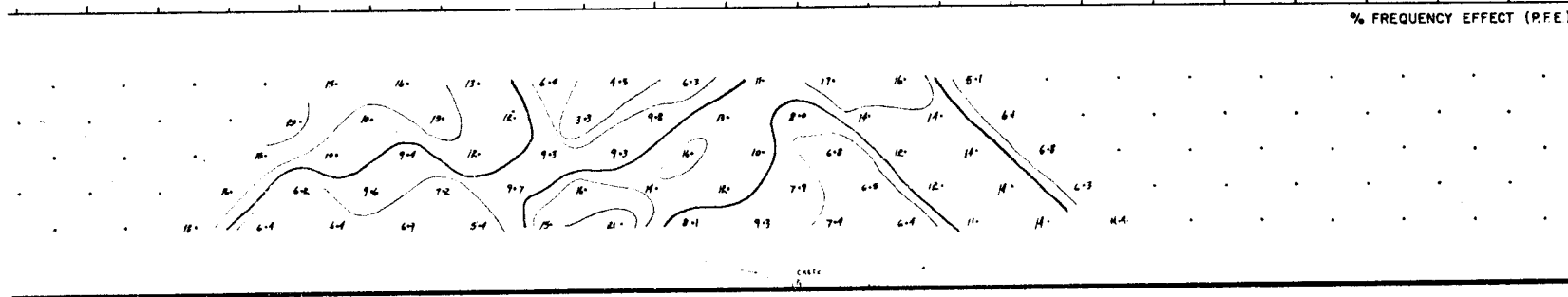
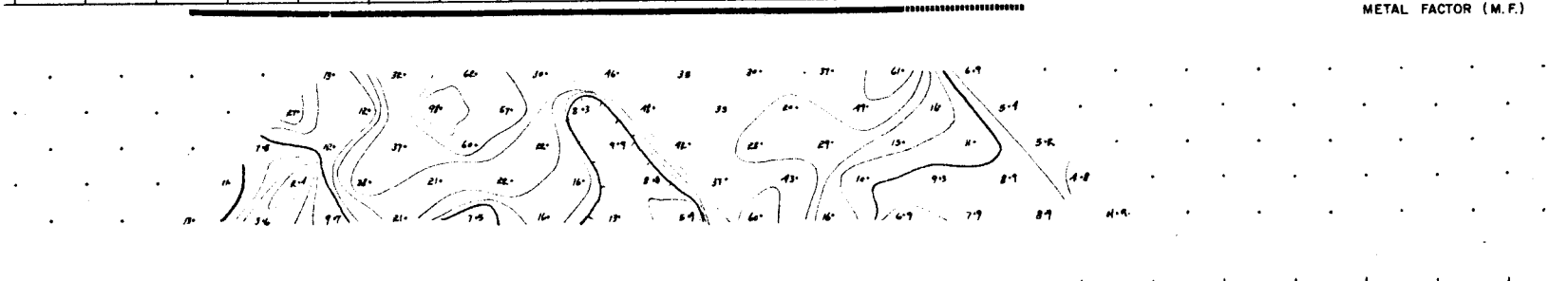
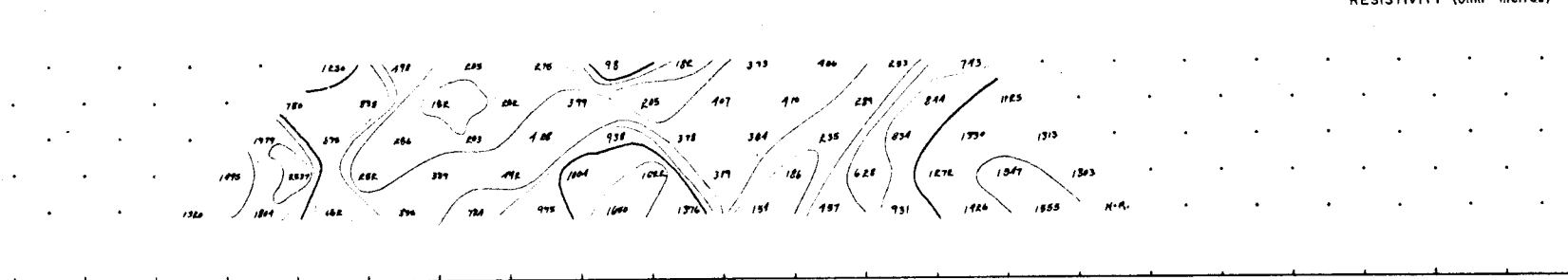
I.P. ANOMALY - STRONG

MODERATE

WEAK

DWG. No. 28

STATIONS  
 RESISTIVITY (ohm-metres)



FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOUNTAIN PROJECT

LINE 95

LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P660

FREQUENCIES: 0.25 Hz

SCALE: RCH = 50M

DATE: Aug 1 1979

DATA BY: J. MacNeil

REMARKS: Scale reduced

0 50m 100m

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I.P. ANOMALY - STRONG

MODERATE

WEAK

DWG. No. 29

## STATIONS

6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

RESISTIVITY (ohm-metres)

NR 1297 2425 1156 1597 1077 1255 1606 1211 NR  
 3421 2068 1500 1879 1561 1173 2308 2059 1109  
 1825 1729 2039 1147 1350 1777 1255 1718  
 2452 2045 842 2779 2460 1241 1747

6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

METAL FACTOR (M.F.)

NR 5.1 2.9 1.2 8.3 11.0 4.6 1.6 NR  
 3.5 2.5 7.2 5.2 5.8 7.6 2.5 .7 1  
 2.3 5.3 4.0 4.6 3.5 4.0 3.2  
 4.6 3.3 3.9 2.3 1.8 5.7 2.2

6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

% FREQUENCY EFFECT (P.F.E.)

NR 5.6 7.0 14.0 12.0 5.9 2.7 1.7 4.9  
 11.0 5.8 11.0 9.7 7.1 7.1 5.1 1.5 1.7  
 9.8 3.2 3.2 8.2 3.2 7.0 4.2 1.7  
 12.0 6.7 7.2 5.7 4.0 5.9 4.4

FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKING HAY PROJECT

LINE 105

## LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P.660

FREQUENCIES: 0.5-15 Hz

SCALE: 2 CM = 100 M

DATE: JULY 20 1977

DATA BY: J. H. H. NIEL

REMARKS: Scale reduced

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I.P. ANOMALY - STRONG

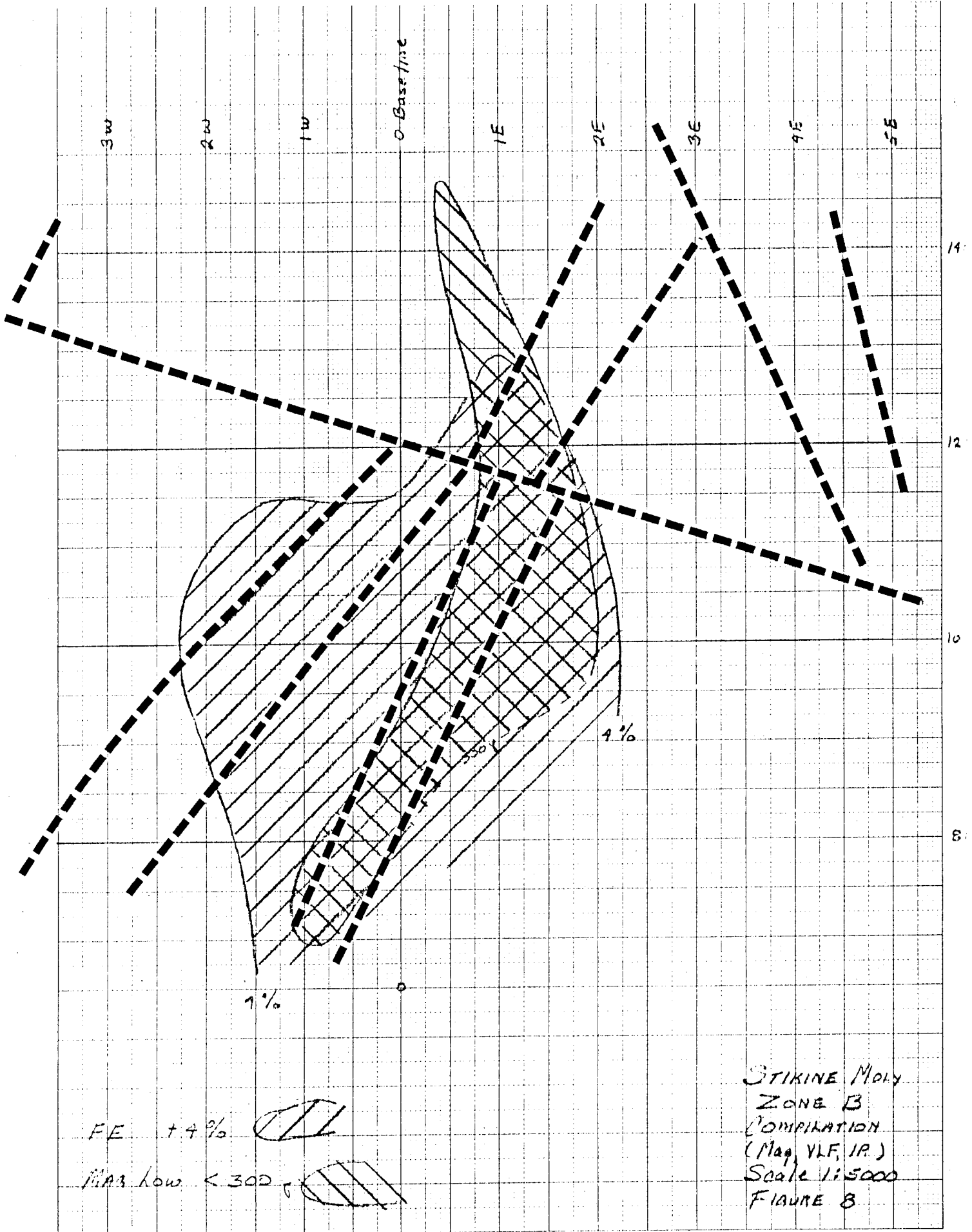
MODERATE

WEAK

DWG. No. 30

461510

10 X 10 TO THE CENTIMETER KEUFFEL & ESSER CO. MADE IN U.S.A.



FE + 4%

MAP low < 300

STIKINE Moly  
ZONE B  
COMPILATION  
(Mag, VLF, IR)  
Scale 1:5000  
FIGURE B

## STATIONS

6W 5W 4W 3W 2W 1W 0 1E 2E 3E 4E 5E 6E

RESISTIVITY (ohm-metres)

N.A. 2166 1928 1818 2382 2081 1983 1812 3181 N.A.  
 2920 211 2071 2503 2431 2190 1938 1559 2044  
 2526 2848 3197 2774 2220 2379 2375 1731  
 3275 4121 3257 2401 2116 2881 1015

METAL FACTOR (M.F.)

N.A. 3.5 3.0 2.4 2.3 2.2 1.7 1.7 1.5 N.A.  
 3.0 1.8 2.4 1.8 2.2 1.6 1.6 1.0 1.9  
 1.4 1.7 1.9 1.9 2.2 1.7 1.3 1.1  
 1.3 1.2 1.9 1.8 2.2 1.6 1.5

% FREQUENCY EFFECT (P.F.E.)

N.A. 3.5 4.3 3.4 4.9 4.0 2.3 2.1 1.6 N.A.  
 3.0 3.8 4.9 4.6 5.5 3.5 3.4 1.5 1.8  
 3.4 4.8 5.9 5.3 4.3 4.1 3.0 1.3  
 4.3 5.1 6.4 4.3 4.9 4.0 2.5

FALCONBRIDGE NICKEL MINES LIMITED

INDUCED POLARIZATION SURVEY

STIKINE MOUNT PROJECT

LINE 125

## LEGEND

ARRAY: DIPOLE-DIPOLE

UNIT: P660

FREQUENCIES: 0.5 + 5 Hz




SCALE: 1 CM = 100 M

DATE: Aug 1, 1979

DATA BY: J. MacNeil

REMARKS: Scale reduced  
 0 100m 200m

LOGARITHMIC CONTOURS - 1.0, 1.5, 2, 3, 5, 7.5

I.P. ANOMALY - STRONG   
 MODERATE   
 WEAK 

DWG. No. 31



**LEGEND**  
 ——— STRONG  
 - - - - - MODERATE  
 / / / WEAK

|   |            |
|---|------------|
| FALCONBRIDGE NICKEL MINES LIMITED                                   |            |
| Property: STIKING MOLY PROPERTY<br>DEASE LAKE AREA B.C.             |            |
| Plan: IP ANOMALY PLAN<br>with<br>contoured frequency effect (n = 2) |            |
| Scale: 0 500 1000 Ft.<br>0 100 200 300m                             |            |
| Date: Sept 1980   | By: P.A.S. |
| N.T.S. Ref: 104-3-1   | Fig. 12    |