A REPORT

ON

AN INDUCED POLARIZATION SURVEY

Dease Lake Area, British Columbia

FOR

HUSPAR RESOURCES LTD.

Vancouver, British Columbia

BY

PETER E. WALCOTT & ASSOCIATES LIMITED
Vancouver, British Columbia

SEPTEMBER 1979

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INTRODUCTION.

Between July 9th and 31st, 1979, at the request of Nuspar Resources Ltd., Peter E. Walcott & Associates Limited carried out an extension of the previous induced polarization (I.P.) surveys over their Eaglehead property, located in the Dease Lake area of British Columbia.

The surveys were carried out over an extension of the lines from the previous survey over the hill to the north-east.

Measurements (first to fourth separation) of apparent resistivity and frequency effect (the I.P. response parameter) were made using the "dipole-dipole" method of surveying with a 200 foot dipole and frequencies of 0.3 and 5 c.p.s. as before.

The progress of the survey was hampered by inclement weather, poor electrical contacts, the steepness of the terrain and by the fact that the geophysical crew was waiting on the linecutting crew.

The I.P. data are presented in contour form on individual line profiles contained in this report.

PROPERTY, LOCATION AND ACCESS.

The property is located in the Liard Mining District of British Columbia and is known as the Eagle property.

It consists of the following claims:

Claim Name	Record No.
EAGLE 1 - 8	49019 - 49026
EAGLE 9 - 22	49132 - 49145
EAGLE 23 - 69	50672 - 50717
EAGLE 79	50728
" 81	50729
" 83	50730
" 85	50731
" 87	50732
" 89	50733
EAGLE 90 - 104	65118 - 65132
EAGLE 105 FR - 111 FR	68887 - 68893
EAGLE 120 - 22	68902 - 68904
" 124	68906
" 126	68908
" 130 - 137	68912 - 68919
EAGLE 140 FR	68922
EAGLE 141 - 144	69300 - 69303
" 149 - 152	69308 - 69311
" 156	69317
" 160	69319

The claims are situated straddling a creek some 5 miles southeast of the latter's mouth in Eaglehead Lake, which in turn is some 30 miles east of the settlement of Dease Lake.

Access can be obtained either by float plane to Eaglehead Lake and thence by helicopter to the property, or directly by helicopter from a base in Dease Lake some 30 miles to the west.

PREVIOUS WORK.

Previous work on the property consists of

1. geological mapping and prospecting

2. geochemical sampling - silt and soil

3. induced polarization surveying and

4. diamond drilling.

This work was carried out by Kennco Explorations Ltd. in 1953 and by Imperial Oil in 1972, 73 and 76 and is well documented in reports held by the latter.

PURPOSE.

The purpose of the survey was to see if a more subtle I.P. response that could be indicative of sulphide mineralization existed to the northeast of the previously obtained strong I.P. response as suggested by the favourable geochemical response.

GEOLOGY.

The reader is referred to the forementioned reports by the staff of Kennco Explorations Ltd. and Imperial Oil Enterprises Limited.

SURVEY SPECIFICATIONS.

The induced polarization (I.P.) survey was carried out using a system manufactured by McPhar Geophysics Limited of Don Mills, Ontario. Measurements with this system are made in the frequency domain.

The system basically consists of three units; a receiver, a transmitter and a motor generator. The transmitter, which obtains its power from the 2.5 kw 400 cycle generator driven by a gasoline engine, injects current into the ground at two electrodes, C_1 and C_2, at two preselected frequencies, while the receiver, a very stable and sensitive potentiometer tuned to the frequency selected, makes measurements of observed voltages across the potential electrodes P_1 and P_2.

The data recorded in the field consists of careful measurements of the current (I) flowing through electrodes C_1 and C_2, the voltage (V) appearing between the potential electrodes P_1 and P_2 on the low frequency, and the "percentage apparent frequency effect" appearing between P_1 and P_2 (the receiver is designed to measure directly:

$$\text{the \%age F.E.} = \frac{(P_a \text{ low} - P_a \text{ high}) \times 100}{P_a \text{ high}}$$

The apparent resistivity (P_a) in ohm-feet is proportional to the ratio of the measured voltage and current, the proportionality factor depending on the geometry of the array used. In practise $\frac{P_a}{2\pi}$ is plotted.

A third parameter termed the "metal factor" is also calculated by dividing the apparent frequency effect by P_a and multiplying by 1,000. $\overline{2\pi}$

The survey was carried out using the "dipole-dipole" electrode array. This electrode configuration and the methods of presenting the results are illustrated in the appendix. Depth penetration with this array is increased or decreased by increasing or decreasing "a" and/or "n".

In practise, the equipment is set up at a particular station of the line to be surveyed: three transmitting dipoles are laid out to the rear, measurements are made for all possible combinations of transmitting and receiving dipoles, the latter consisting of two porous pots filled with an electrolyte copper sulphate solution "a" feet apart, up to the fourth separation, i.e. n = 4; the equipment is then moved 3 "a" feet along the line to the next set-up.

SURVEY SPECIFICATIONS cont'd.

A 200 foot dipole was used on the survey.

DISCUSSION OF RESULTS.

The results of the I.P. survey should be studied in conjunction with those of the previous surveys as referred to previously. As expected the results of the survey showed good agreement with those of the previous surveys.

Nearly all of the area surveyed exhibited a fairly low frequency effect background above which the open 1973 anomalous zones were clearly discernible and thus could be closed off.

Although no new anomalies of any significance were observed the survey did point out that the possible low intensity anomaly primarily on lines 68 and 72 E should actually extend to 38 N and might be worthy of further investigation.

The following is a line by line account of the survey results:

Line 36 W. A narrow shallow possible anomalous zone can be observed around 36 N. The double peak anomaly is discernible from the pantleg nature of the contours. Also higher background frequency effects (in the 2's) were encountered to the north and were not seen elsewhere on the remaining lines.

Line 28 W. No anomalous situations observed.

Line 20 W. " " " " .

Line 12 W. " " " " .

Line 4 W. " " " " .

Line 4 E. " " " " .

Line 60 E. No anomalous situations observed. However on reassessing previous work a small anomaly could exist around 26 N.

Line 68 E. No anomalous situations observed. However on reassessing previous work the possible anomalous zone was extended from 24 to 38 N.

Line 72 E. No anomalous situations observed. However on reassessing previous work the possible anomalous zone was extended from 30 to 38 N.

DISCUSSION OF RESULTS cont'd.

Line 80 E. No anomalous situations observed. However on reassessing previous work the possible anomalous zone was extended to 32 N.

Line 88 E. No anomalous situations observed. Closed off possible anomalous zone at 40 N.

Line 96 E. Confirmed 1976 survey where zone was extended to 38 N.

Line 104 E. Another anomalous zone is observed here centred around 41 N that was not seen on the previous work.

Line 112 E. No anomalous situations observed. Some readings in the 2's were observed but not considered important.

Line 120 E. No anomalous situations observed. Some readings in the 3's observed up to 48 N.

Line 128 E. No anomalous situations observed.

Line 136 E. No anomalous situations observed.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.

Between July 9th and 31st, 1979, Peter E. Walcott & Associates Limited carried out an extension of the 1972, 73 and 76 induced polarization surveys over a property held by Muspar Resources Ltd.

The property, the Eagle claims, is located some 30 miles east of the settlement of Dease Lake, British Columbia.

Although the I.P. survey did not locate any new anomalous areas of any significance it did (1) extend and close off the anomalous zone on Lines 96 and 104 E respectively, and (2) necessitate a reassessment of the previous data on a possible weaker anomaly on Lines 68 and 72 E respectively.

In view of the fact that encouraging results have been obtained from drilling other anomalies and as neither of these anomalous zones mentioned here has been previously tested as to their causative sources the writer suggests that two boreholes be drilled to do the same.

Respectfully submitted,

PETER E. WALCOTT & ASSOCIATES LIMITED

Peter E. Walcott, P.Eng.
Geophysicist

Vancouver,
British Columbia

September 1979

APPENDIX

COST OF SURVEY.

Peter E. Walcott & Associates Limited undertook the survey on a daily basis while mobilization and draughting costs were extra so that the total cost of services provided was $16,318.19.

PERSONNEL EMPLOYED ON SURVEY

Name	Occupation	Address	Dates
P. Walcott	Geophysicist	Peter E. Walcott & Assoc. Ltd., 605 Rutland Crt. Coquitlam, B.C.	Jul. 20 - 31, Aug. 10, Sept. 25th Sept. 26, 1979
V. Pashniak	Geophysical operator	"	Jul. 9 - 20, 1979
S. Gibbons	"	"	Jul. 9 - 31, 1979
D. Cross	"	"	Jul. 20 - 31, 79
P. Charlie	Helper	"	Jul. 9 - 31st, 79
J. Walcott	Typing	"	Sept. 26, 79
J. Winfield	Draughting	Altair Drafting Ltd. Vancouver, B.C.	Aug. 31 - Sept. 26, 1979

CERTIFICATION.

I, Peter E. Walcott, of the Municipality of Coquitlam, British Columbia, hereby certify that:

1. I am a Graduate of the University of Toronto in 1962 with a B.A.Sc. in Engineering Physics, Geophysics Option.

2. I have been practising my profession for the last seventeen years.

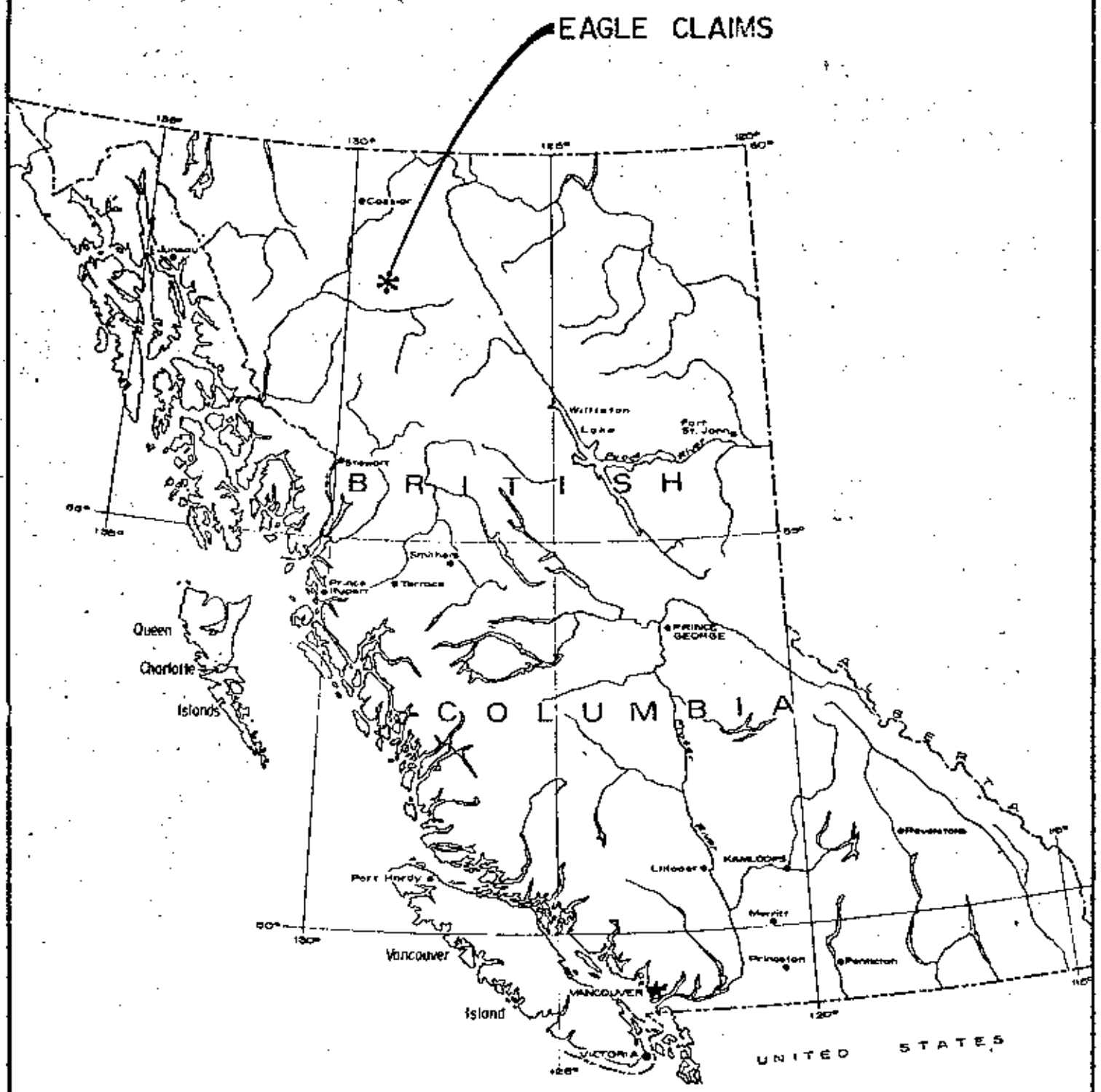
3. I am a member of the Association of Professional Engineers of British Columbia, Ontario and the Yukon Territory.

4. I hold no interests, direct or indirect, in the securities or properties of Nuspar Resources Ltd. nor do I expect to receive any.

Peter E. Walcott, P.Eng.

Vancouver,
British Columbia

September 1979



NUSPAR RESOURCES LTD.

EAGLE CLAIMS, LIARD M.D., B.C.

LOCATION MAP

SCALE

Km. 100 50 0 100 200 300 400 Km.

Miles 100 50 0 100 200 Miles

ALTAIR drafting services ltd.

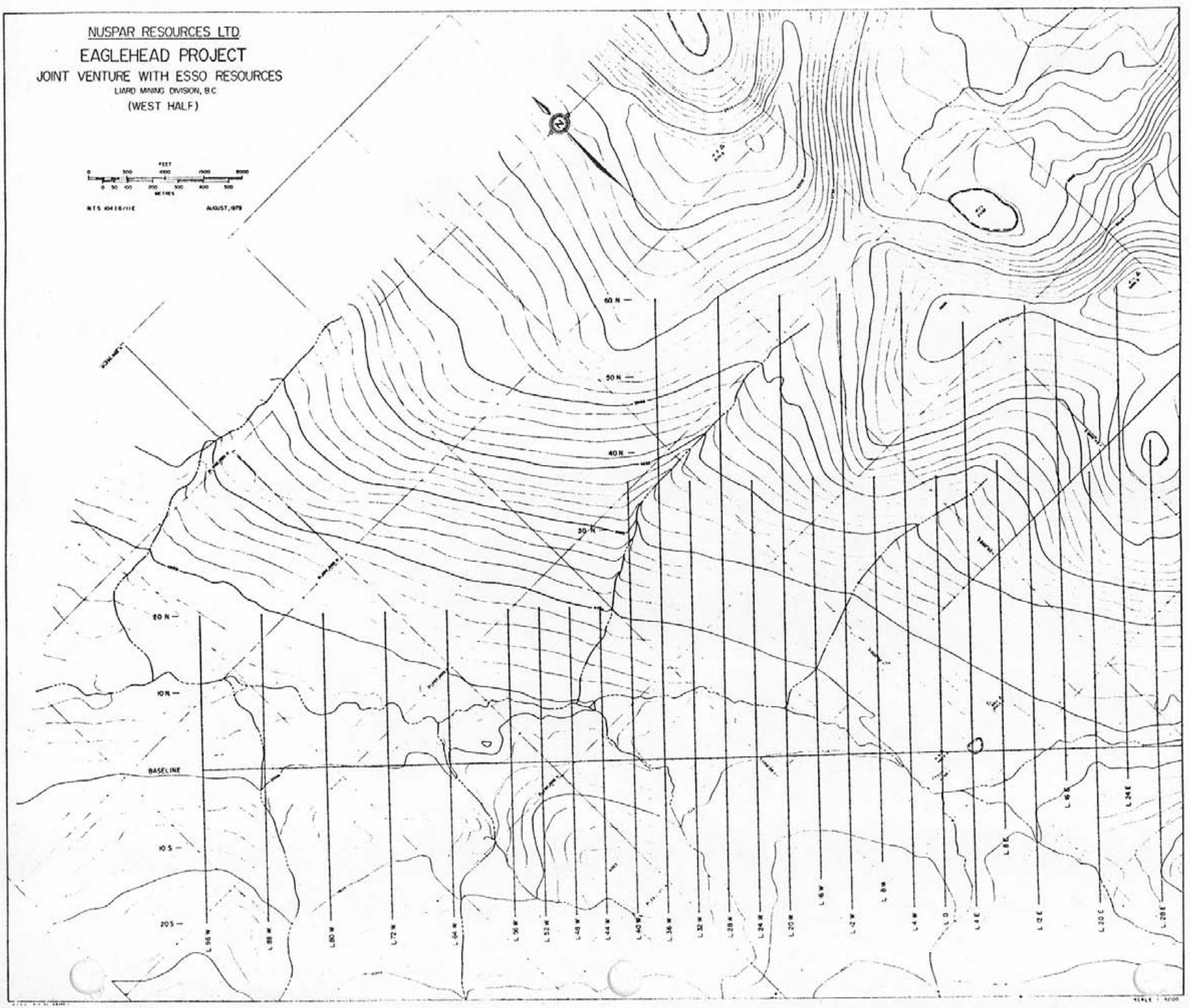
NUSPAR RESOURCES LTD

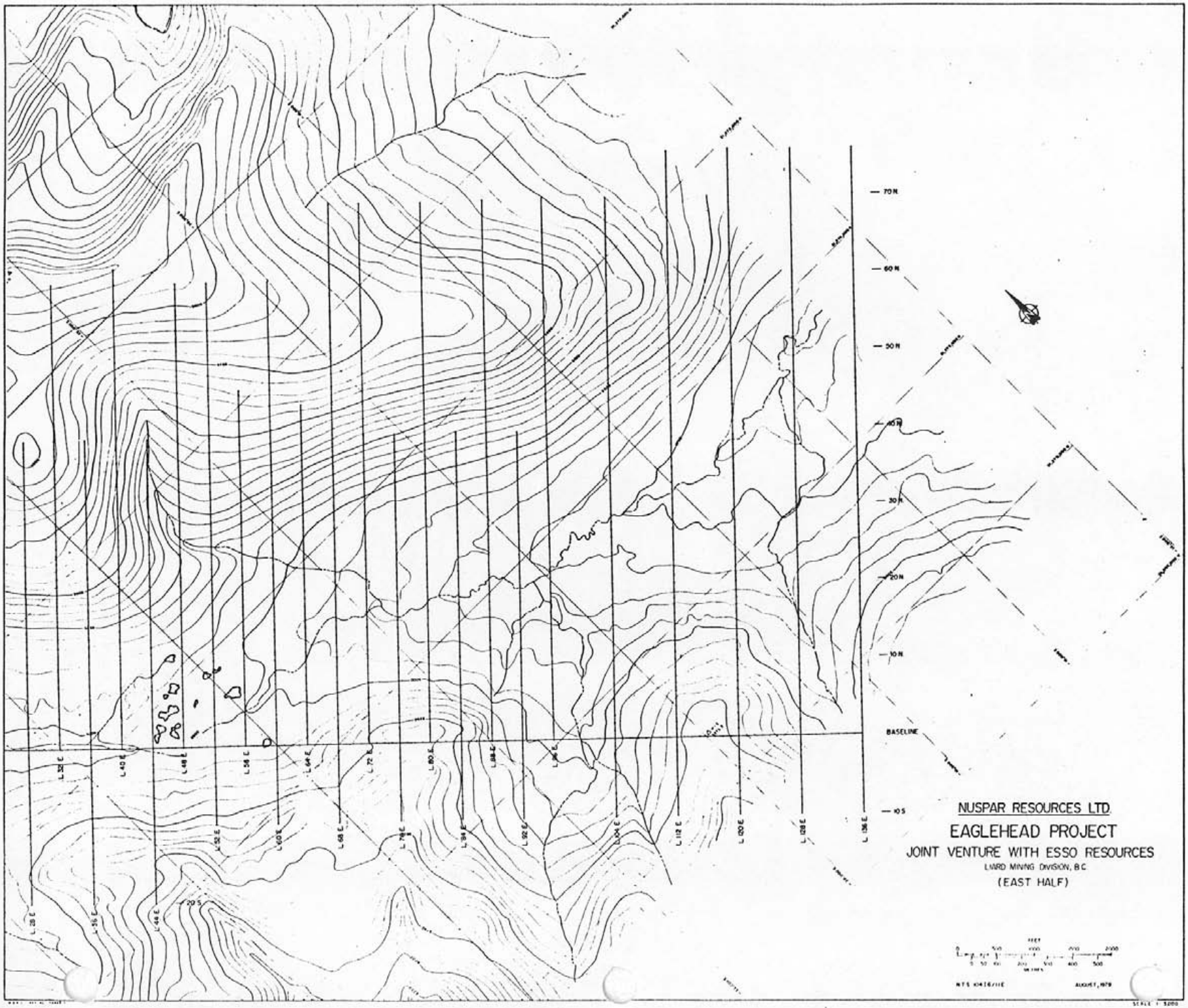
EAGLEHEAD PROJECT

JOINT VENTURE WITH ESSO RESOURCES

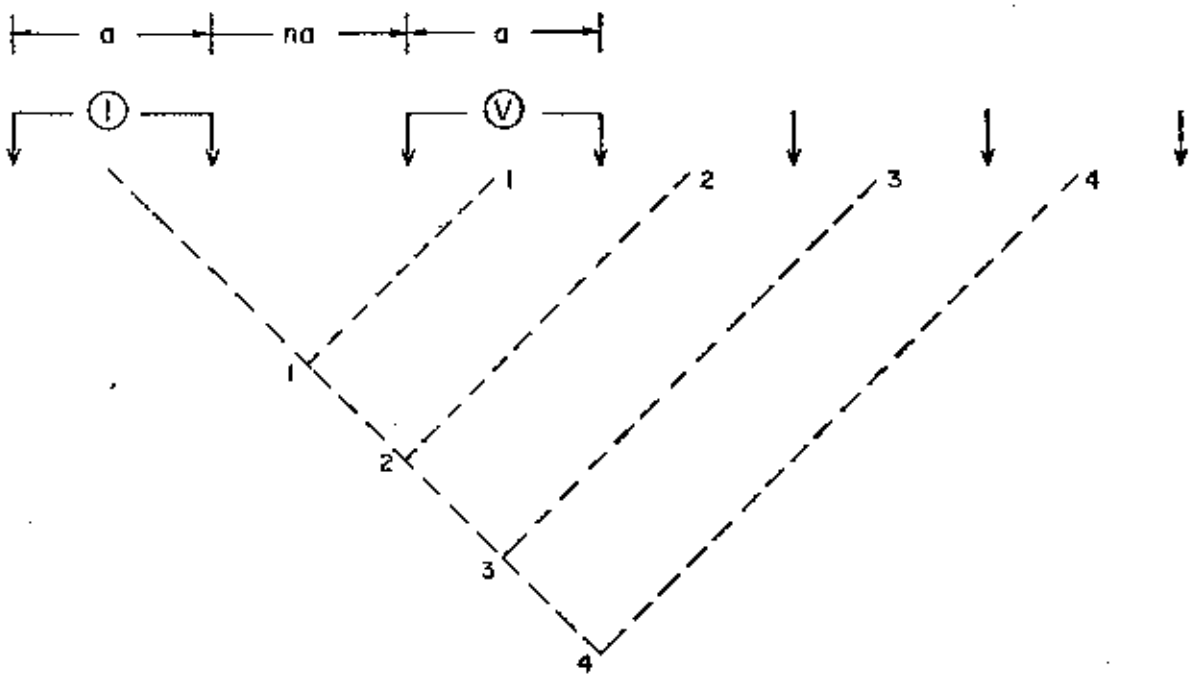
LIARD MINING DIVISION, B.C.

(WEST HALF)



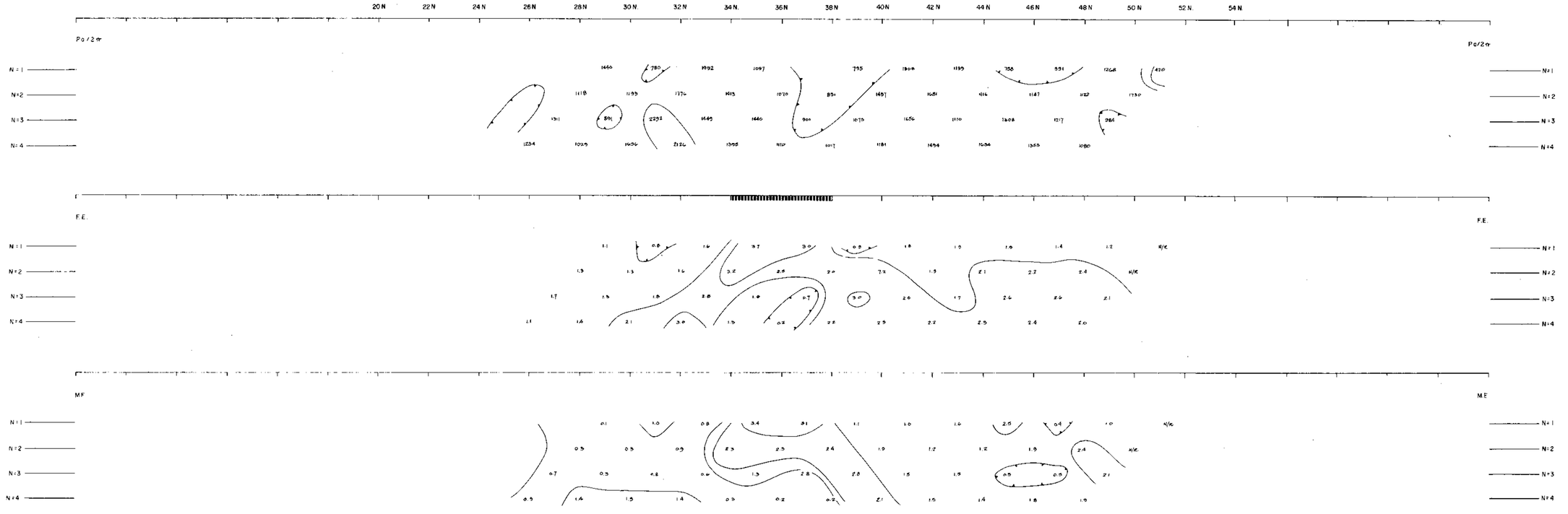

70N
60N
50N
40N
30N
20N
10N
BASELINE
10S
L 32E
L 40E
L 48E
L 56E
L 64E
L 72E
L 80E
L 88E
L 96E
L 104E
L 112E
L 120E
L 128E
L 136E
L 28E
L 36E
L 44E
L 52E
L 60E
L 68E
L 76E
L 84E
L 92E
NUSPAR RESOURCES LTD.
EAGLEHEAD PROJECT
JOINT VENTURE WITH ESSO RESOURCES
LIARD MINING DIVISION, B.C.
(EAST HALF)
NTS 104G/11E
August, 1979

DIPOLE – DIPOLE ARRAY



ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

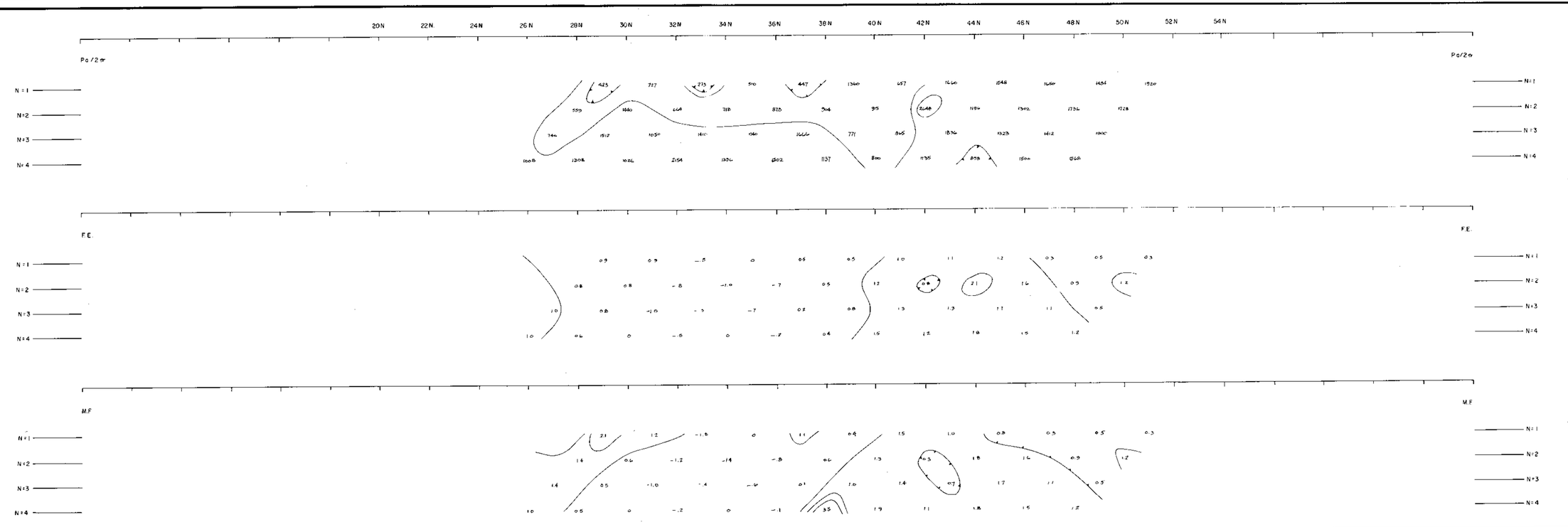
L—36 W.

a = 200'

FREQUENCY 5, 03 c.p.s.

SCALE: 1" = 200'

0 50 100
meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

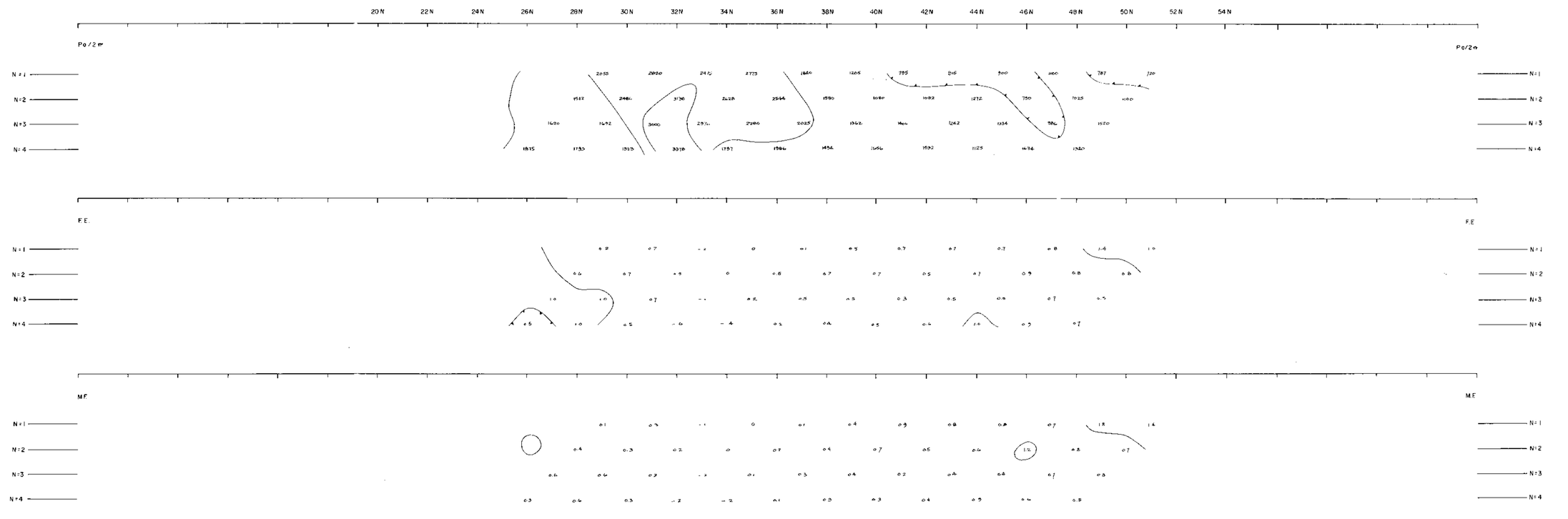
L—28 W.

a = 200'

FREQUENCY 5, 03 c.p.s.

SCALE: 1" = 200'

0 50 100
meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

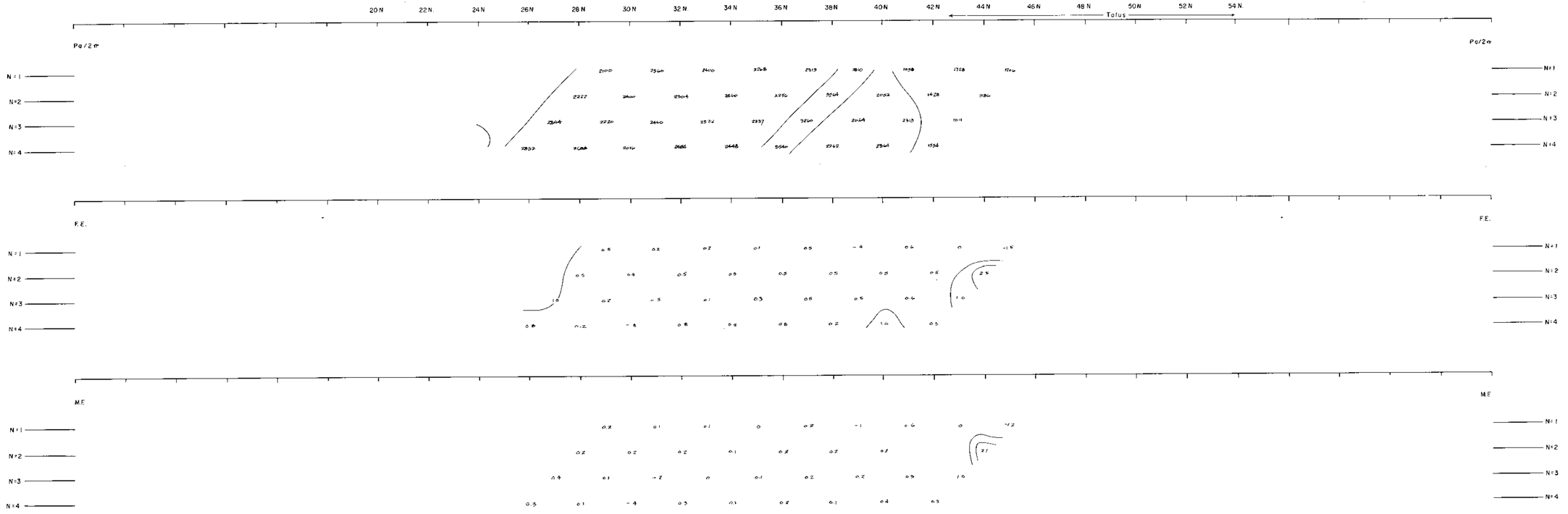
L—20 W.

a = 200'

FREQUENCY 5, 03 c.p.s.

SCALE : 1" = 200'

0 50 100
meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

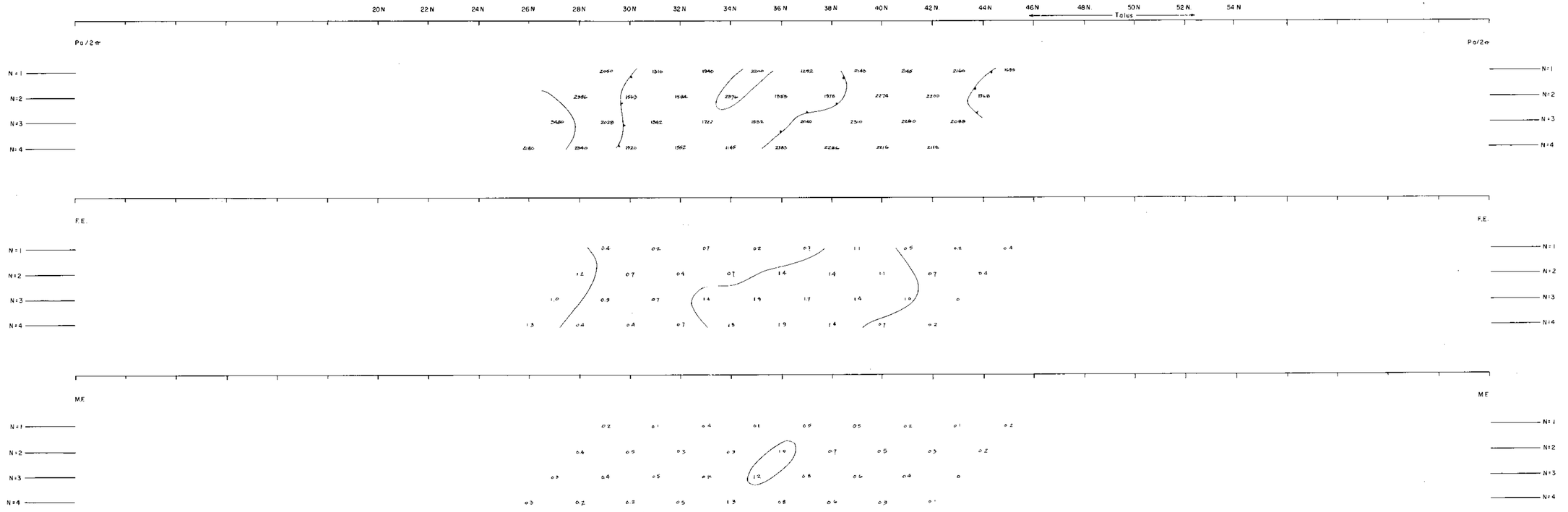
L— 12 W.

a = 200'

FREQUENCY 5, 03 c.p.s.

SCALE 1" = 200'

0 50 100
meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

L—4 W

a = 200'

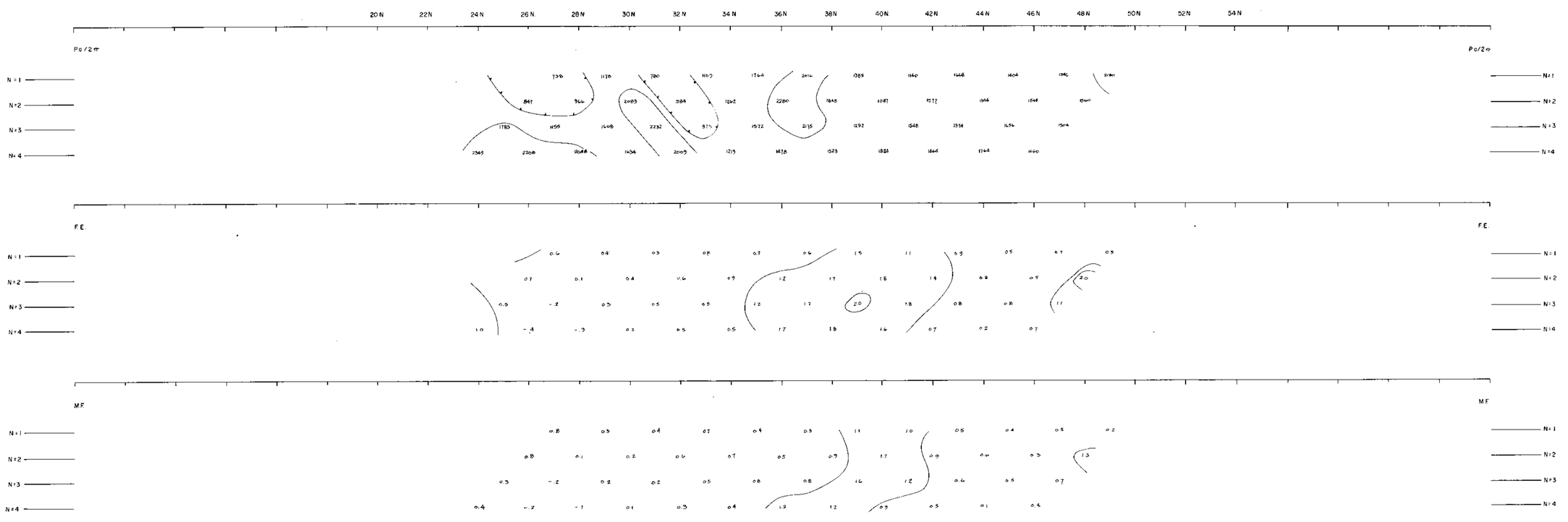
FREQUENCY 5, 03 c.p.s.

SCALE: 1" = 200'

0 50 100
meters

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 7661

PART 1 of 2



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

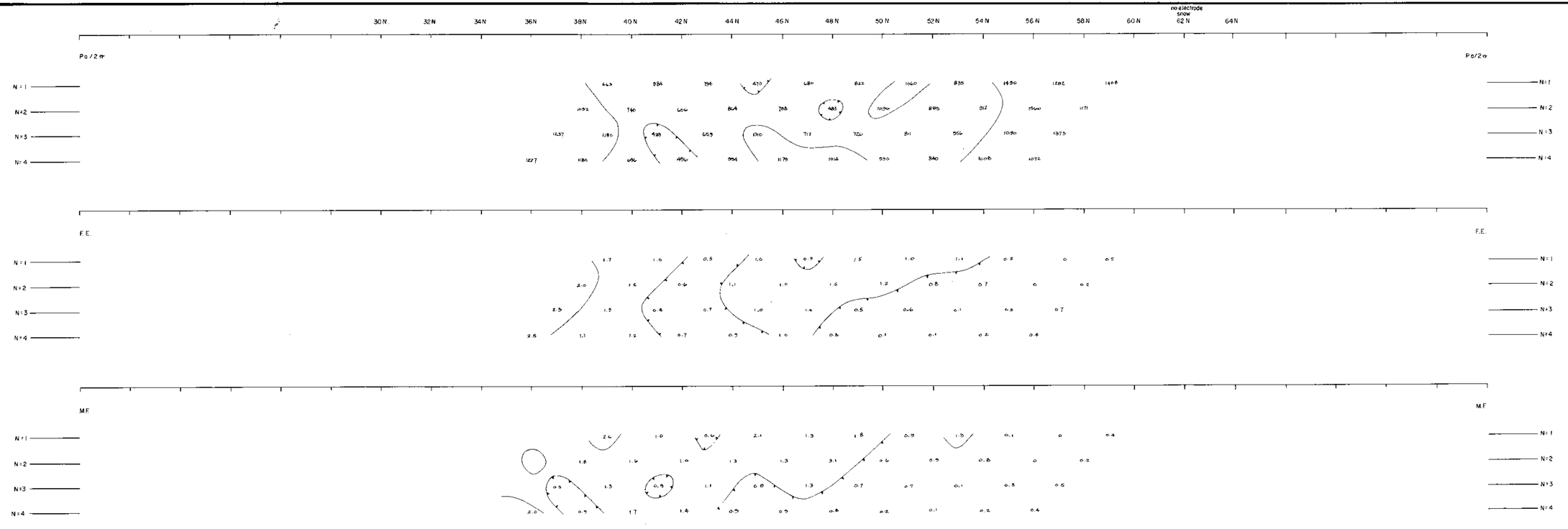
L— 4 E.

a = 200'

FREQUENCY 5,03 c.p.s.

SCALE : 1" = 200'

0 50 100
meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

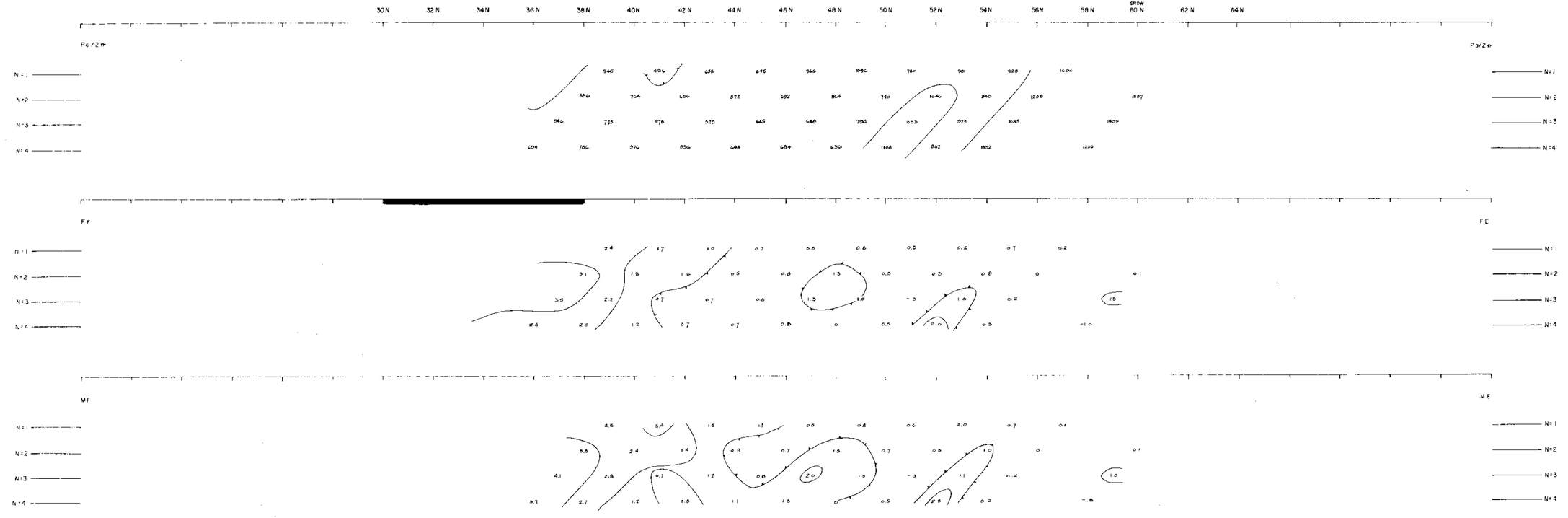
L — 60 E.

a = 200'

FREQUENCY 5, 03 c.p.s.

SCALE: 1" = 200'

0 50 100
Meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

L—68 E.

a = 200'

FREQUENCY 5, 03 c.p.s.

SCALE: 1" = 200'

0 50 100
meters

NUSPAR RESOURCES LTD.

EAGLE CLAIMS

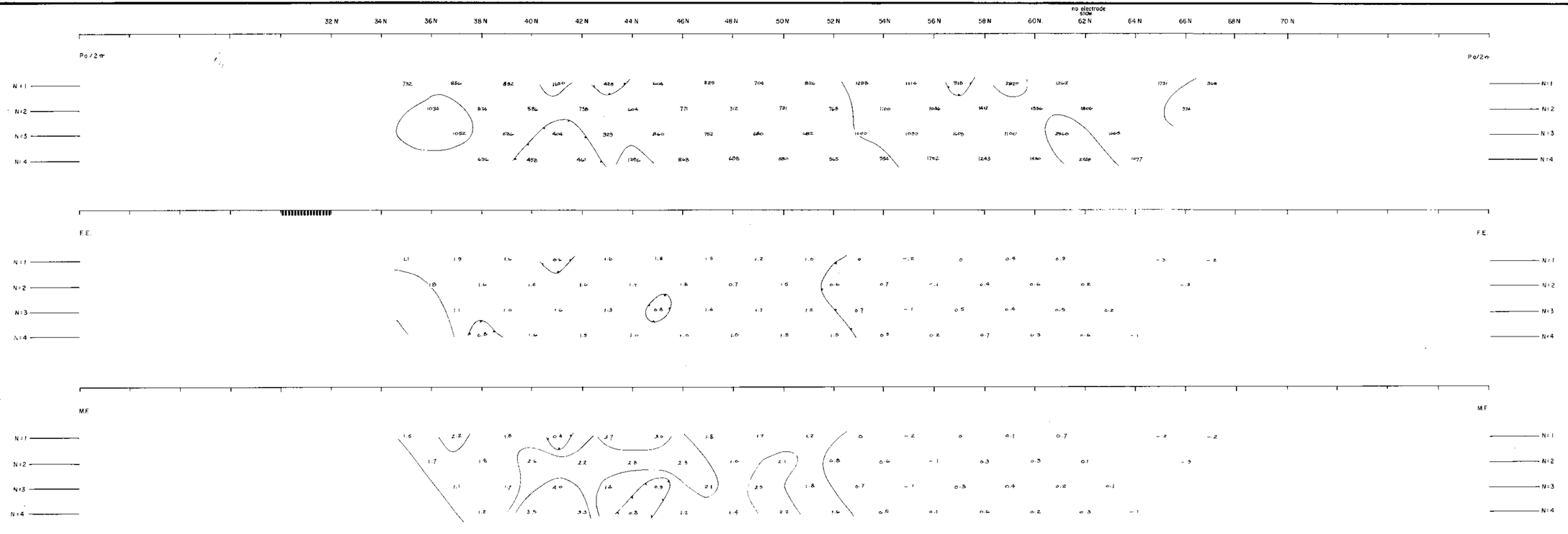
L— 72 E.

a = 200'

FREQUENCY 5, 03 c.p.s.

SCALE 1" = 200'

0 50 100
meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

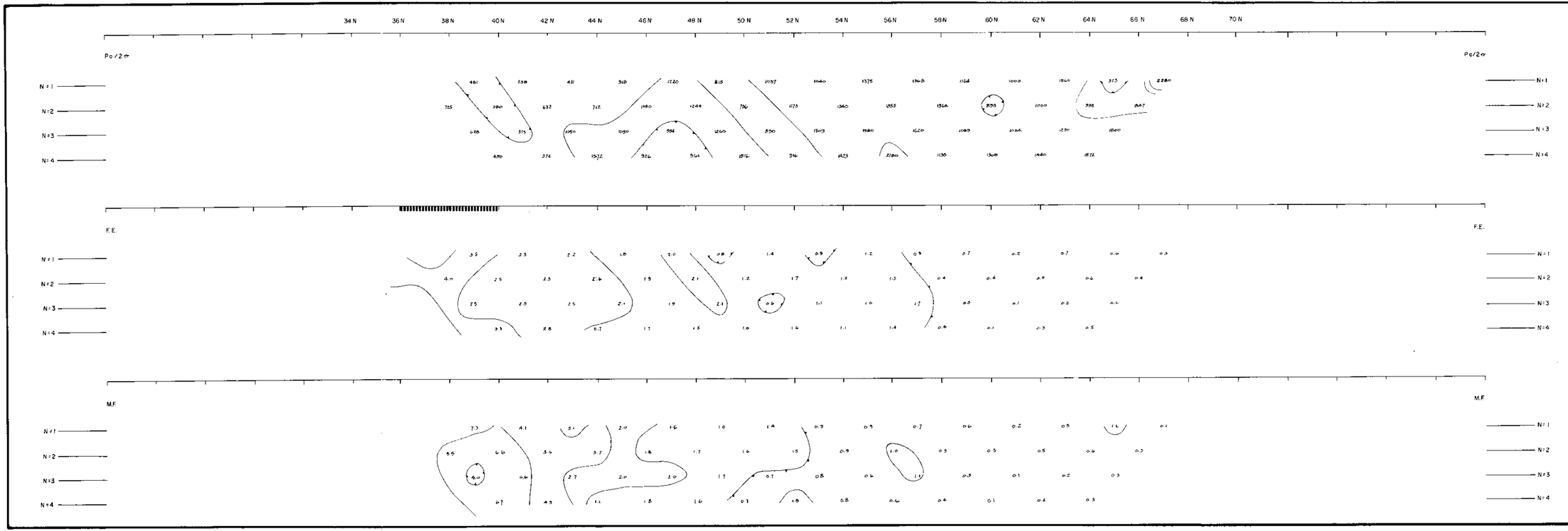
L — 80 E.

a = 200'

FREQUENCY 5, 03 c.p.s.

SCALE 1" = 200'

0 50 100
meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

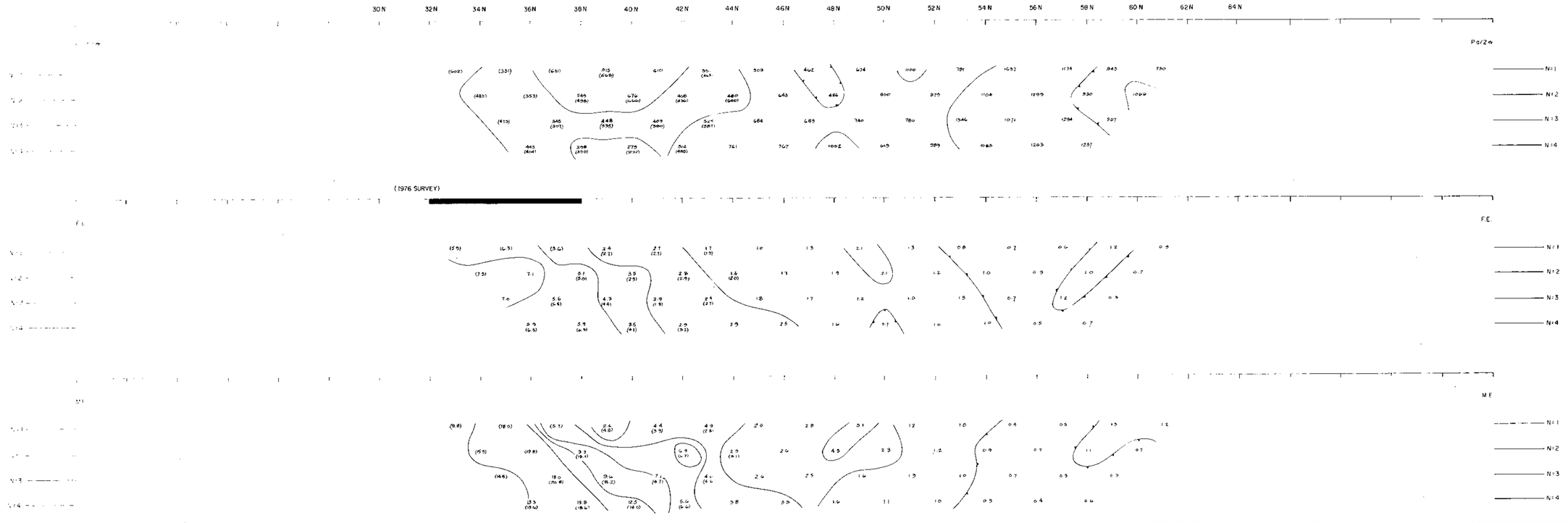
L—88E.

a = 200'

FREQUENCY 5,03 c.p.s.

SCALE: 1" = 200'

0 50 100
meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

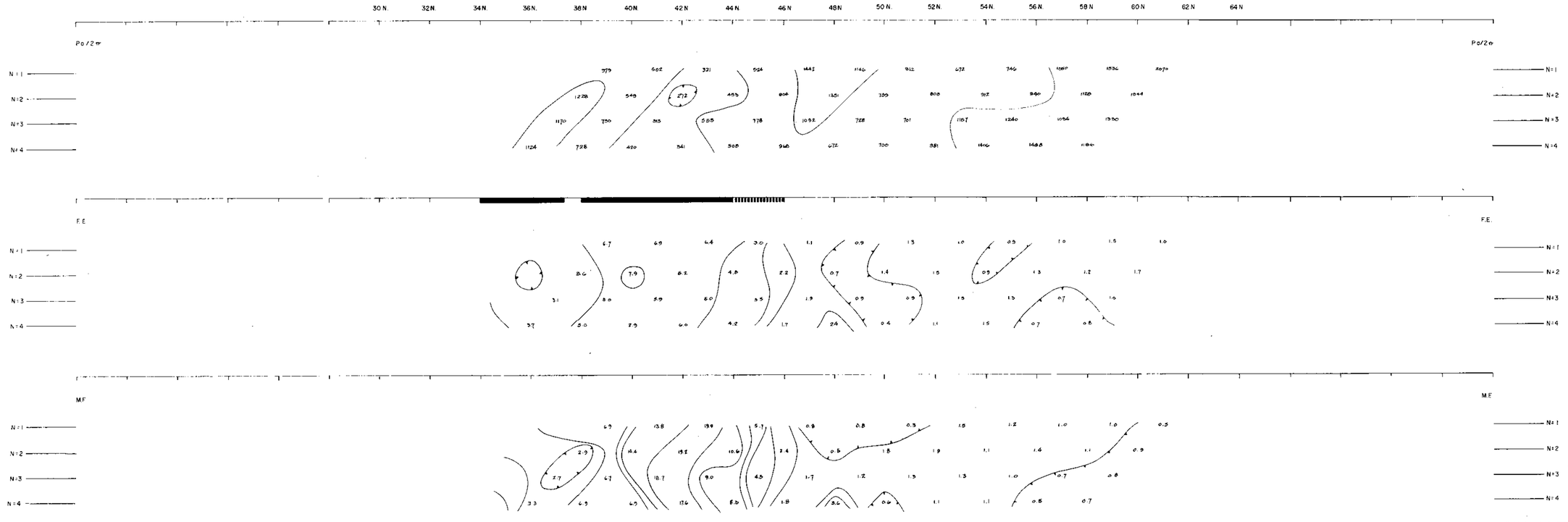
L— 96 E.

a = 200'

FREQUENCY 5, 0.3 c.p.s.

SCALE 1" = 200'

0 50 100
meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

L— 104 E.

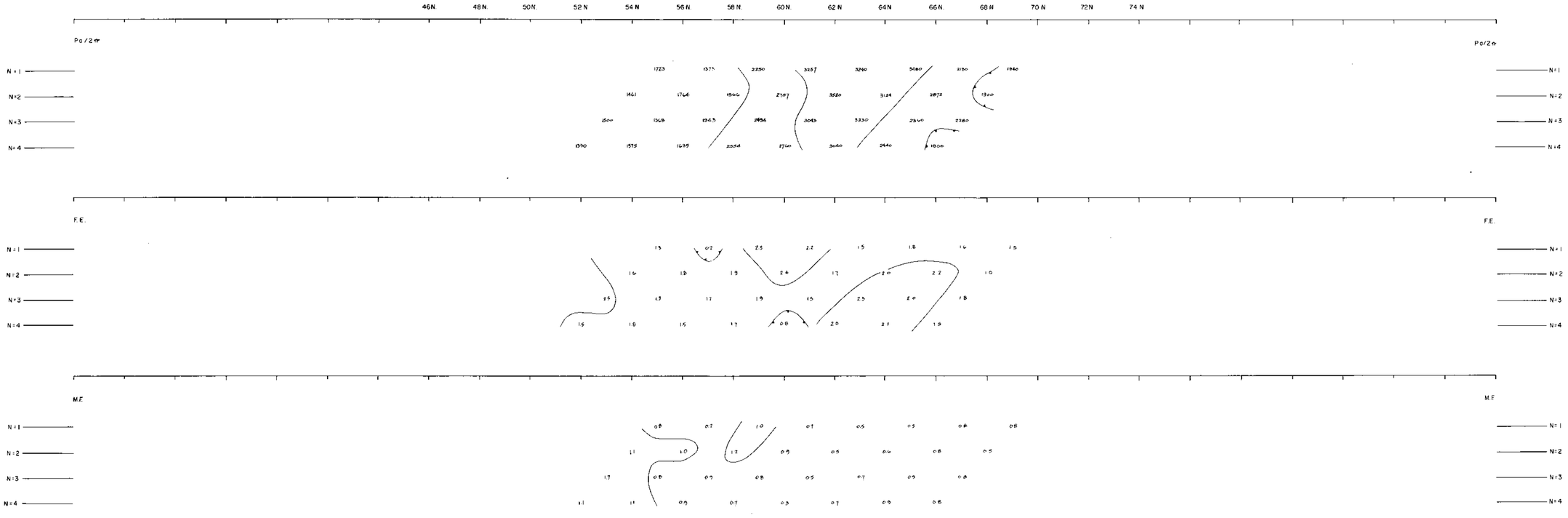
a = 200'

FREQUENCY 5,03 c.p.s.

SCALE: 1" = 200'

0 50 100 meters

PART 1&2



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

L— 112 E.

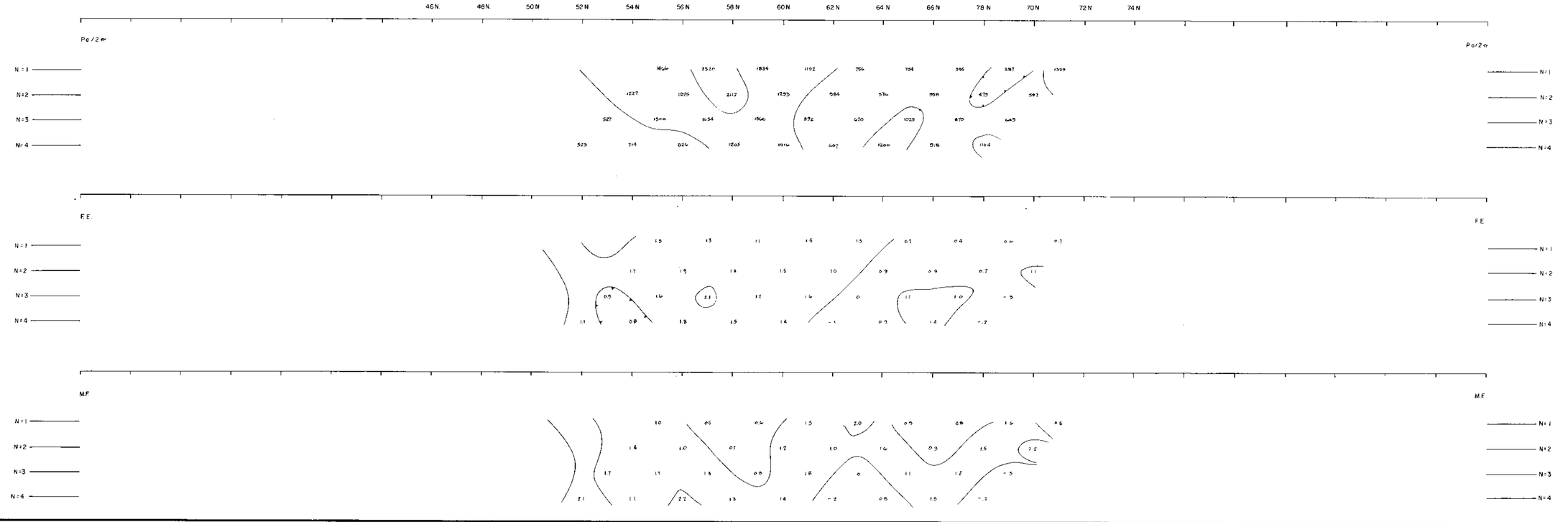
a = 200'

FREQUENCY 5, 03 c.p.s.

SCALE: 1" = 200'

0 100 200 meters

PART 1&2



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

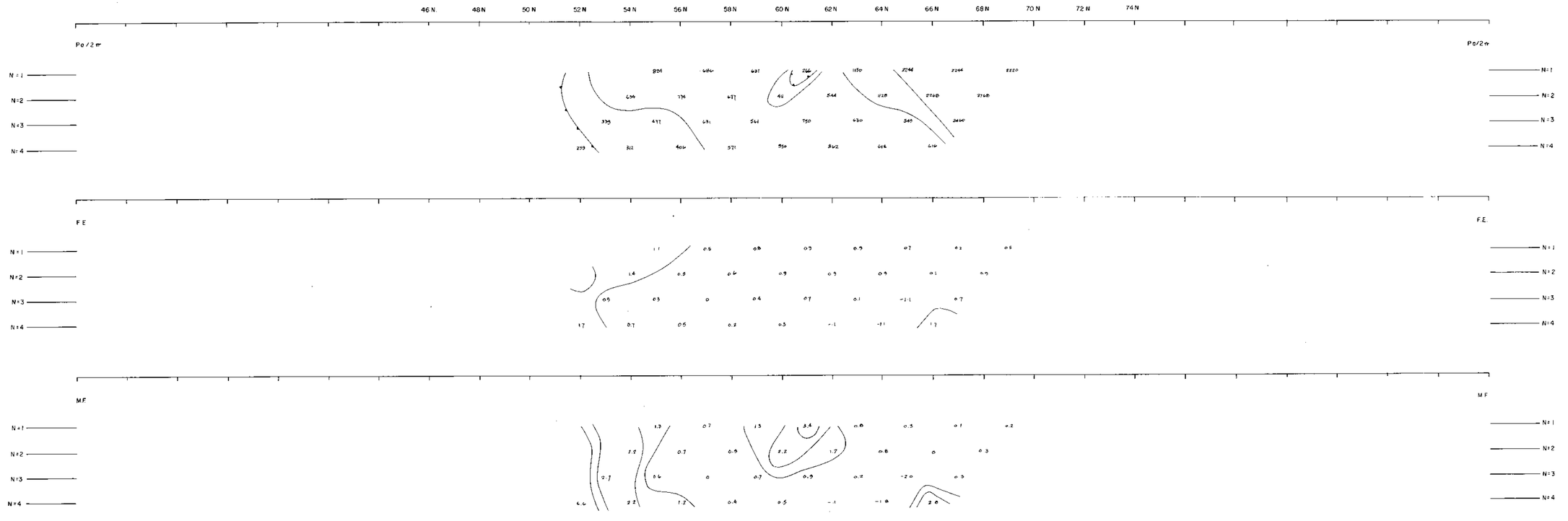
L—120 E.

a = 200'

FREQUENCY 5,03 c.p.s.

SCALE 1" = 200'

0 50 100
meters



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

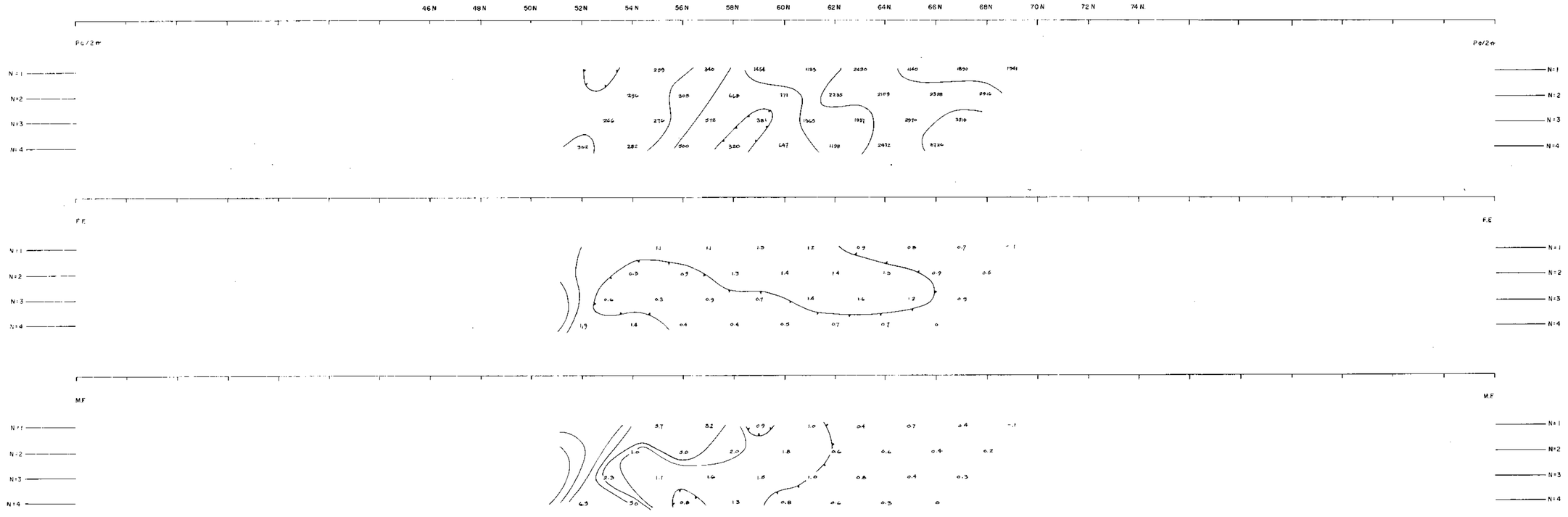
L — 128 E

a = 200'

FREQUENCY 5, 0.3 c.p.s.

SCALE: 1" = 200'

0 50 100
metres



NUSPAR RESOURCES LTD.

EAGLE CLAIMS

L—136 E.

a = 200'

FREQUENCY 5, 0.3 c.p.s.

SCALE: 1" = 200'

0 50 100
METERS