

744001

72-885

(39)
GEOPHYSICS

Q24

REPORT TO MINERALS REPORT 1972/6

INDUCED POLARIZATION SURVEY

OF

UPPER SCAMANDER ANOMALY

E.L. 6/68

N.E. TASMANIA

MICROFILMED
FICHE No.015305 -07

PREPARED BY

GEOPHOTO RESOURCES CONSULTANTS

FOR

TEXINS DEVELOPMENT PTY LTD.

L.J.B. RICHARDSON

July, 1972.

INTRODUCTION

An I.P. survey was carried out using the frequency domain method over selected traverses of the Upper Scamander Grid, E.L. 6/68, N.E. Tasmania during March, 1972. A total of 12,200 feet was surveyed using the dipole-dipole electrode array, and an electrode spacing of 200 feet. The total I.P. coverage and the anomalies are shown on Map 1/156. The results of each traverse are discussed individually and should be read together with the sectional plots.

RESULTSLine 3, Base 2800 N.E. (Base 13)

There are two small anomalies on this line. The first is between 2600 N.E. and 2800 N.E., where the metal factor is above background, and the resistivity is low. The frequency effect shows a small increase in this area, but the I.P. effect is not strong. There is a metal factor high between about 3500 N.E. and 3300 N.E., with an associated resistivity low, and the frequency effect shows a significant increase over the whole of the area. The anomaly suggests a small body centred below 3350' N.E. and at a depth of about 250'.

Line 3, Base 4200 N.E. (Base 14)

There is a metal factor high between 3800' N.E. and 4100 N.E. which appears to reflect the resistivity low as the frequency effect shows no appreciable increase in this area. The anomaly open to the south-west from 3500' N.E. confirms the anomaly observed on the previous line, and is discussed above.

Line 4, Base 2000' N.W. (Base 14)

There is a small near-surface anomaly between 1700' N.W. and 1900 N.W. which is indicated in all three parameters.

A metal factor high between 2200' NW and 2400' NW merely reflects a resistivity low, as there is no associated increase in frequency effect.

Line 1, Base 4500' N.E. (Base 15)

There are no anomalies along this line, although there may possibly be an increase in metal factor and frequency effect values and a decrease in resistivity open to the south-west.

Line 5, Base 3400' N.E. (Base 16)

Between 3400' NE and 3600' NE there is an anomaly expressed in all three parameters; however, it does not appear to extend to depth. A deeper anomaly appears between 2600' NE and 2800' NE, which is again seen in all three parameters and extends to depth.

Line 5, Base 2000' N.E. (Base 17)

This line has a metal factor high between 1700' N.E. and 2100' N.E. The resistivity shows a low in this area, but the expression in frequency effect is only very slight; the anomaly does not extend to depth. There is a second anomaly between 2600' N.E. and 2800' N.E. at about 450' below the surface which extends to depth. This anomaly is expressed in metal factor,

resistivity and frequency effect.

Line 6, Base 800' N.W. (Base 17)

Two readings on this line were unobtainable due to drift of the receiver deviation meter. A metal factor high is apparent between 1200' and 1400' N.W., which reflects the resistivity low observed in this region. This anomaly is not a true I.P. effect as there is no expression in the frequency effect.

Line 7, Base 800' N.W. (Base 18)

Drift was again experienced on this line, causing one of the frequency effect readings to be omitted. There do not appear to be any important anomalies along this traverse, any metal factor highs merely reflect areas of low resistivity, the frequency effect showing little or no variation.

Line 8, Base 1600' N.W. (Base 19)

There is an anomaly at the $n = 5$ separation below 2200' N.W. The anomaly appears between 2000' N.W. and 2300' N.W. at depth, but possibly approaches the surface further north-west. There is an associated resistivity low and frequency effect high in this region. Other small metal factor highs are due to areas of low resistivity, as there is no expression in the

frequency effect.

CONCLUSION:

All the anomalies discussed above appear to indicated small bodies. There are no particularly high frequency effect values, and the frequency effect does not show much variation throughout the traverses suggesting that any mineralization present is fairly disseminated.

A drift of the receiver deviation meter was occasionally experienced, and when this occurred a reading of the frequency effect was impossible. This area of Tasmania (the north-east corner) is likely to show polarization which would result in the observed drift of the receiver deviation meter. This polarization effect has been found to be at a minimum between November and January, and it is suggested that any future I.P. work to be done in this area should be carried out between these months.

L.J.B. RICHARDSON

July, 1972

595,000yds E 1455 2'E

900,000yds E

41° 24' S



LEGEND

- I.P. Coverage 1972
- Lines covered by Austin
- I.P. Anomalies
- I.P. poles
- White areas
- Weak drainage

Scale: 400 Feet to 1 Inch



72-885

SCIENCE SERVICES DIVISION
GEOPHOTO RESOURCES CONSULTANTS
 BRISBANE, AUSTRALIA

TEXINS DEVELOPMENT PTY LTD.
 E.L. 6/68 NORTH EAST TASMANIA
 UPPER SCAMANDER AREA
 GEOCHEMICAL & I.P. ANOMALIES

PROJECT	6/68	DATE	1972	DRAWN BY	56
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595,000yds E

**GEOFOTO RESOURCES
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INDUCED POLARIZATION
SURVEY

CLIENT:

LOCALITY: *Upper Seaward University*

DATE: *8/3/72*

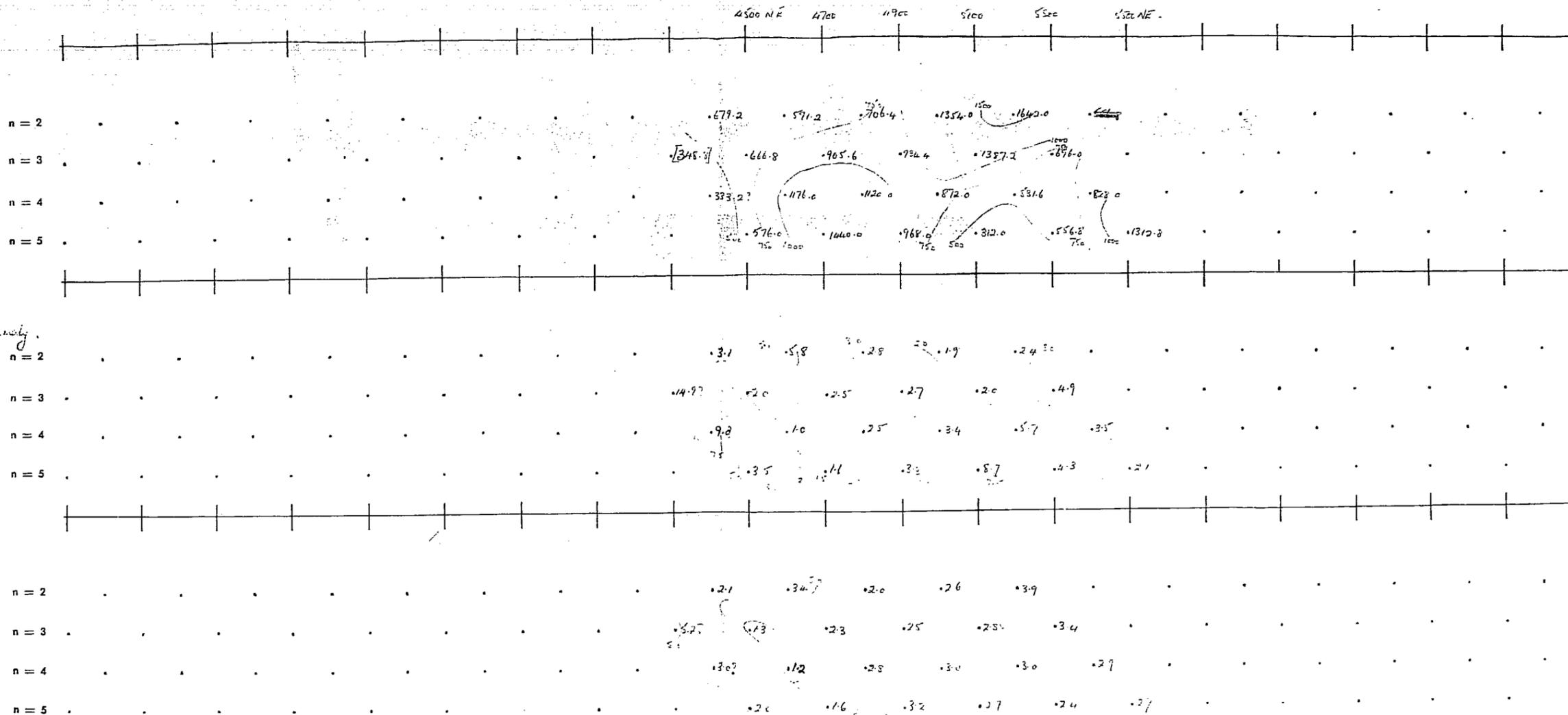
LINE: *1 Base 4 sec (11' 11")*

ELECTRODE INTERVAL: *200'*

FREQUENCY: *3.0, 0.3 Hz*

SCALE: *1" = 200'*

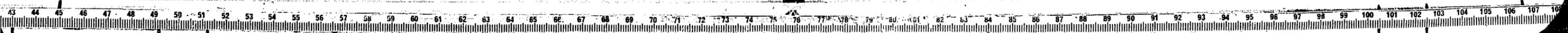
DRAWN BY: *L.R.*



Pa/2π

M.F.

F.E.



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**INDUCED POLARIZATION
SURVEY**

CLIENT:

LOCALITY: upper Seamanter
Alameda

DATE: 29.2.72

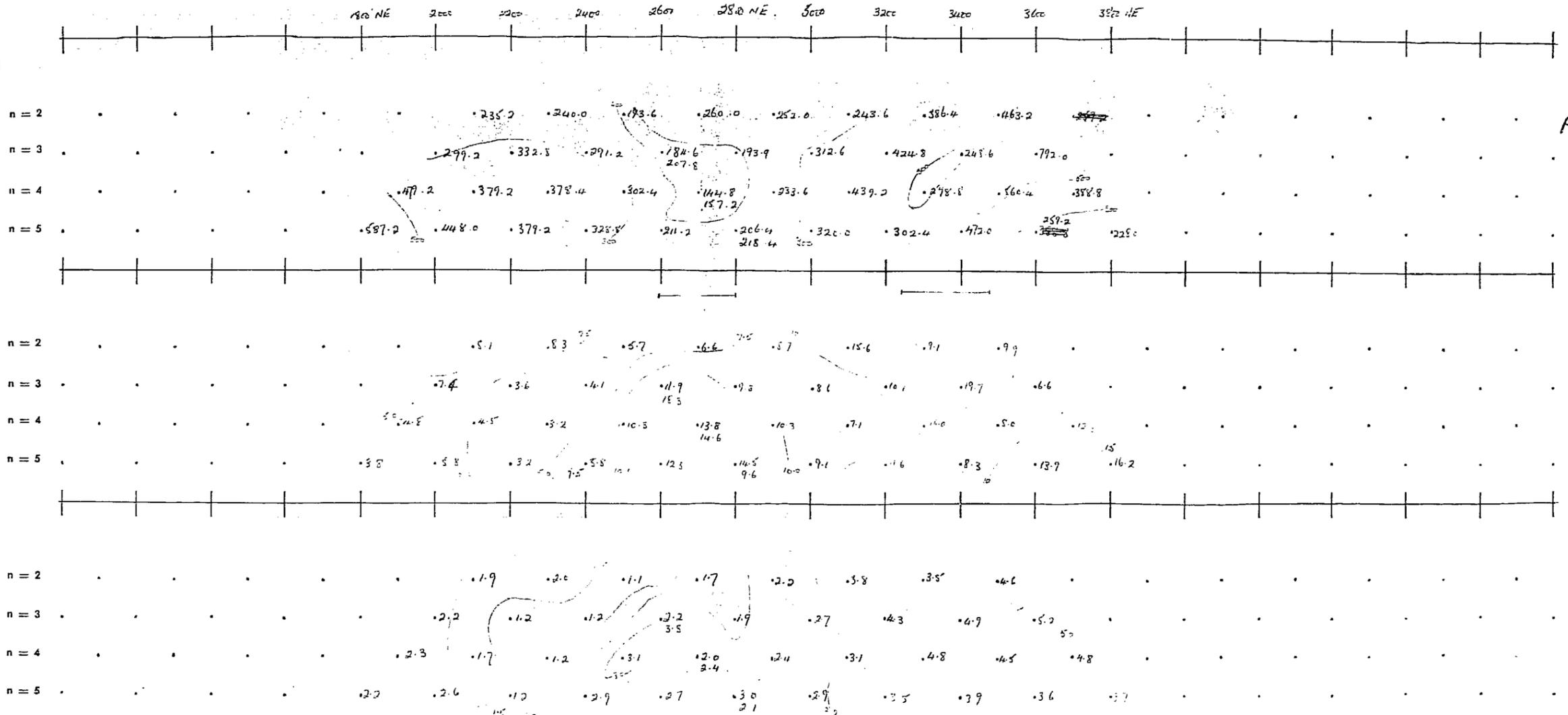
LINE: 3. Base 250' NE (13)

ELECTRODE INTERVAL: 200'

FREQUENCY: 3.0, 0.3 Hz

SCALE: 1" = 200'

DRAWN BY: L.R.



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F.E.



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GEOPHOTO RESOURCES
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INDUCED POLARIZATION
SURVEY

CLIENT:

LOCALITY: *San Marcos Family*

DATE: *1/22*

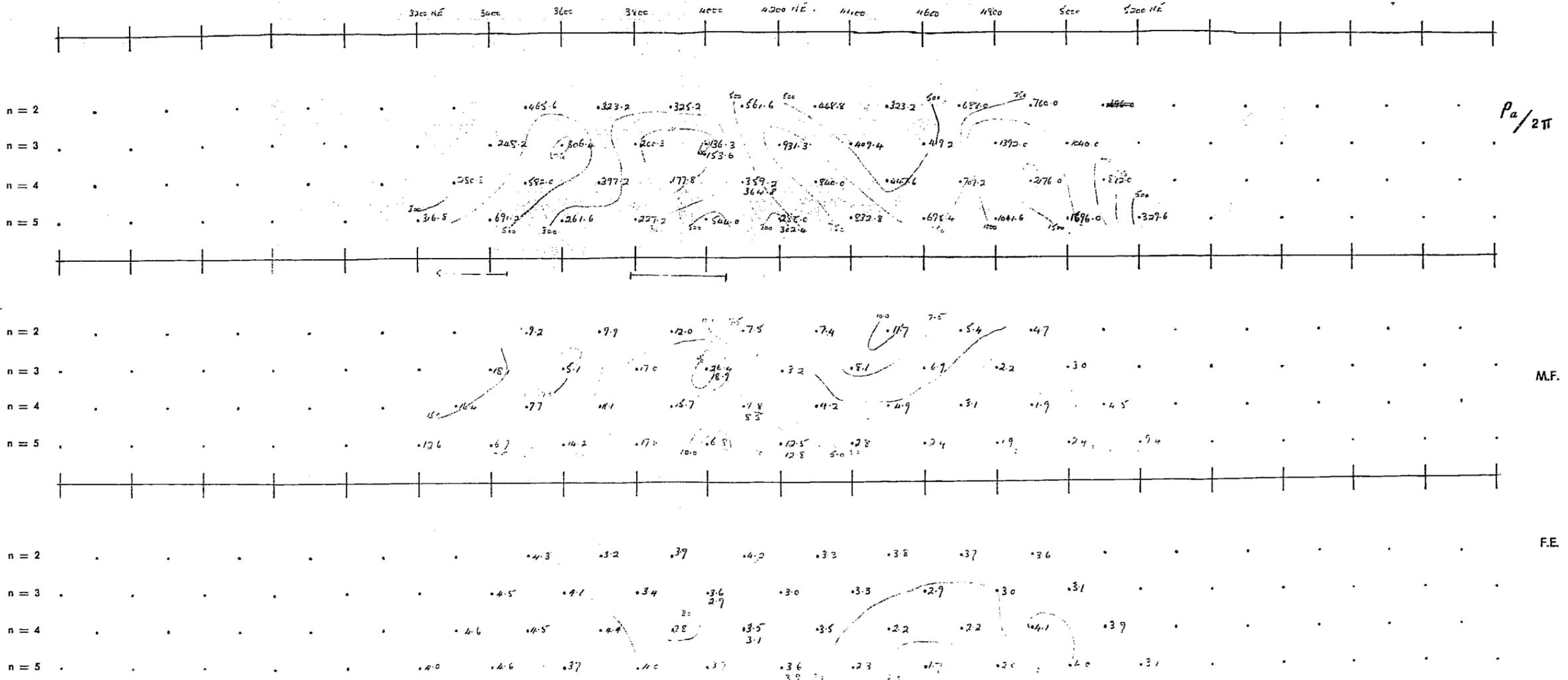
LINE: *4500 NE*

ELECTRODE INTERVAL:

FREQUENCY: *50 Hz*

SCALE: *1" = 100'*

DRAWN BY: *[Signature]*



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M.F.

F.E.



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INDUCED POLARIZATION SURVEY

CLIENT:

LOCALITY: *Upper Seward's University*

DATE: 7. 3. 72.

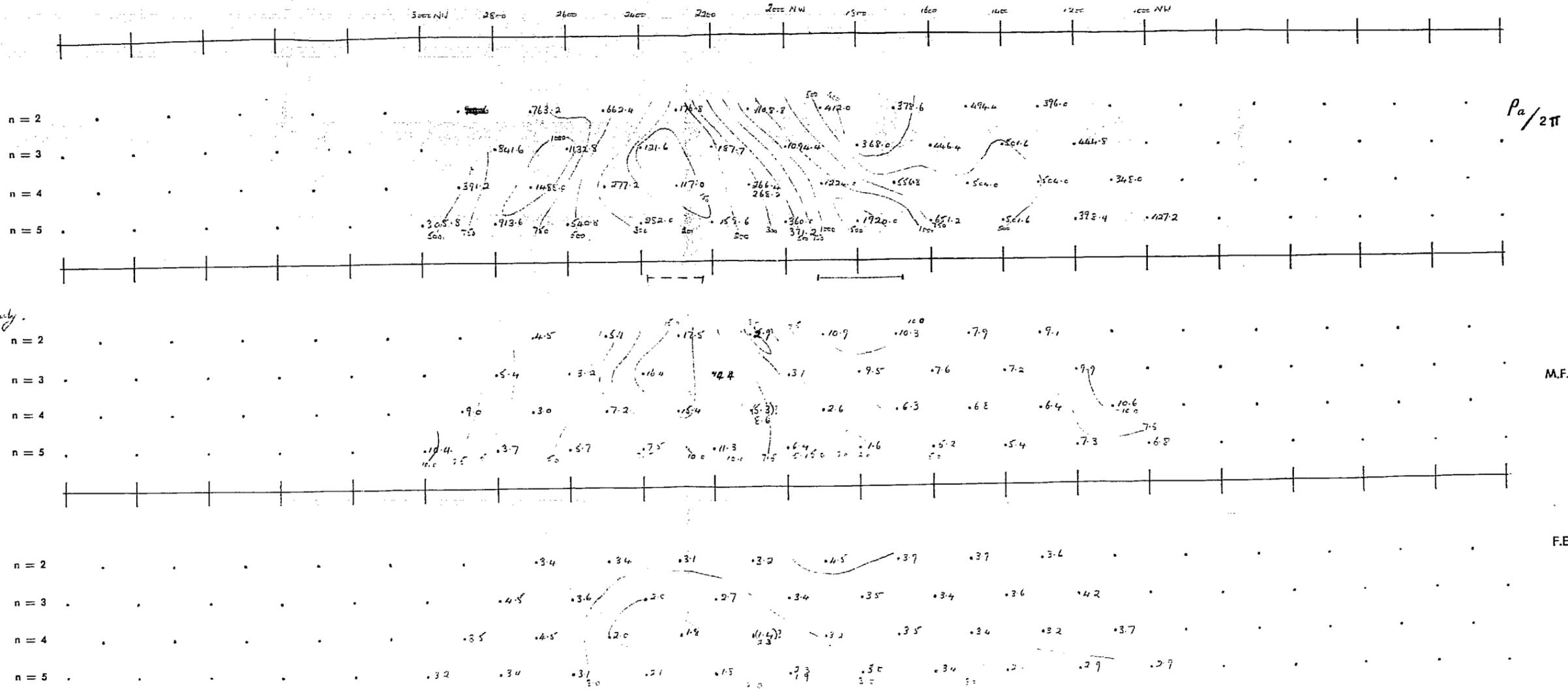
LINE: *near 2000 NW (1)*

ELECTRODE INTERVAL: 200'

FREQUENCY: 3. 0. 3 Hz

SCALE: 1" = 200'

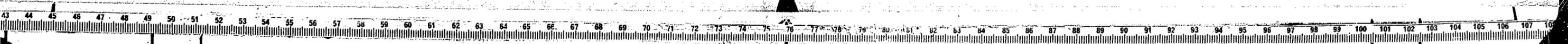
DRAWN BY: L R.



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F.E.



2400 NE 2600 2800 3000 3200 3400 NE 3600 3800 4000 4200 4400 NE

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INDUCED POLARIZATION SURVEY

CLIENT:

LOCALITY: Upper Seaman's Sluiceway

DATE: 9. 3. 72.

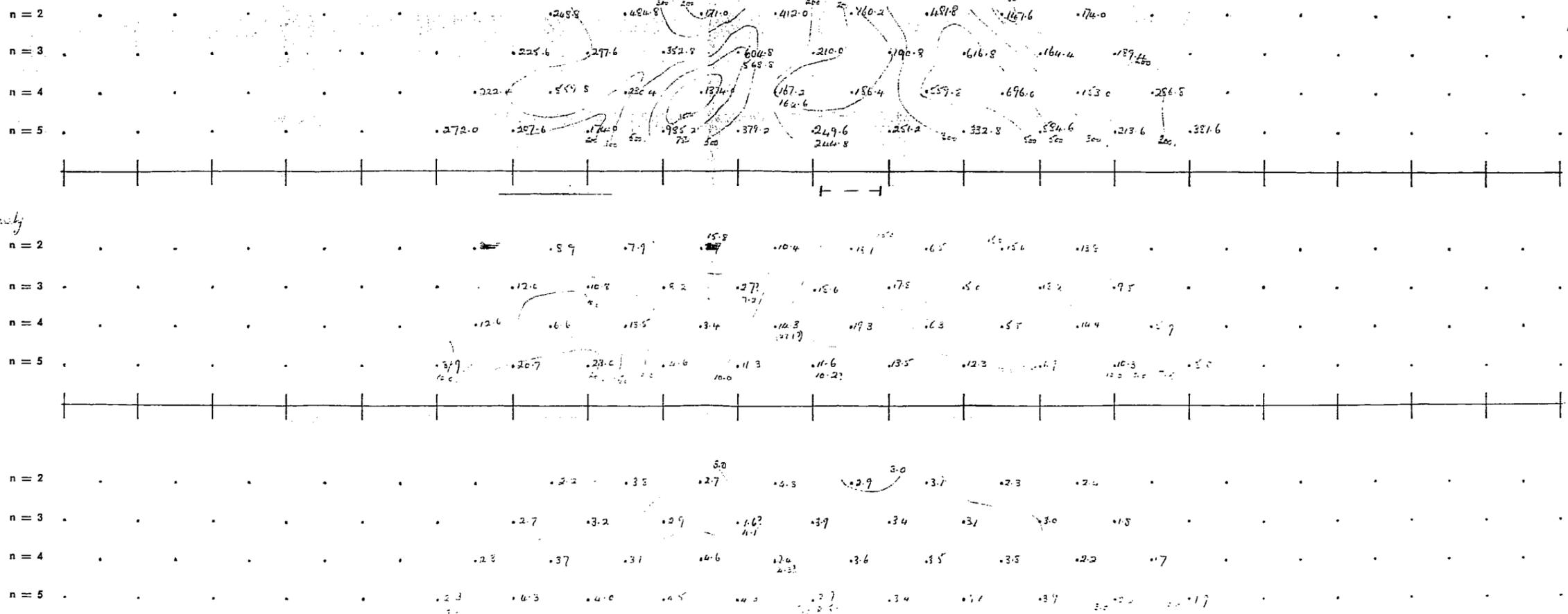
LINE: 5 Ball Subst NE (10)

ELECTRODE INTERVAL: 200'

FREQUENCY: 3000 Hz

SCALE: 1" = 200'

DRAWN BY: L.R.



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F.E.



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**INDUCED POLARIZATION
SURVEY**

CLIENT:

LOCALITY: *oppo Saramba Shandy*

DATE: 14.3.72

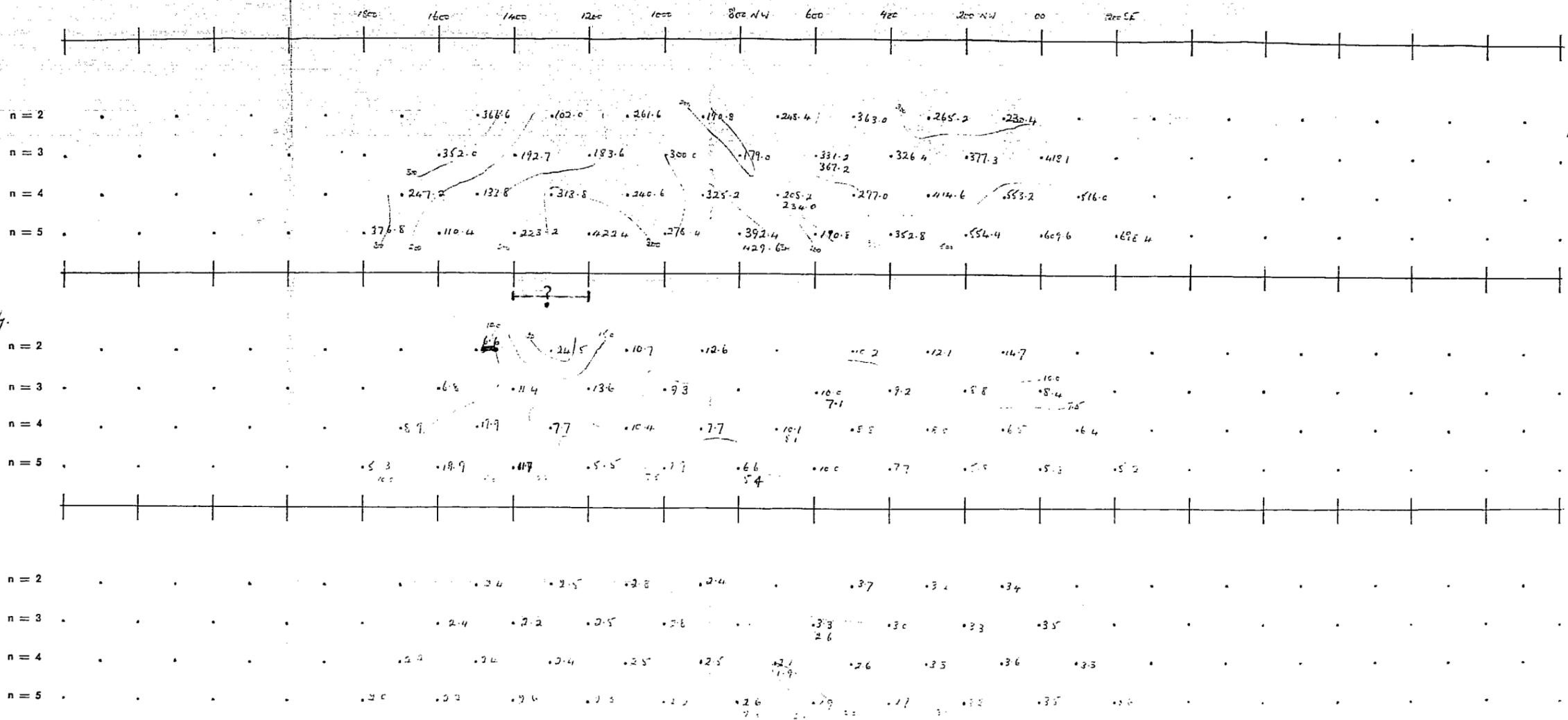
LINE: *6 km SW N1 (17)*

ELECTRODE INTERVAL: 200'

FREQUENCY: 30 c/s Hz

SCALE: 1" = 200'

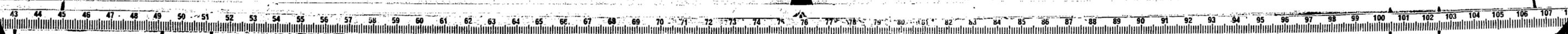
DRAWN BY: *L.R.*



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F.E.



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INDUCED POLARIZATION
SURVEY

CLIENT:

LOCALITY: *Upper Seward's Agency*

DATE: *15 3-72*

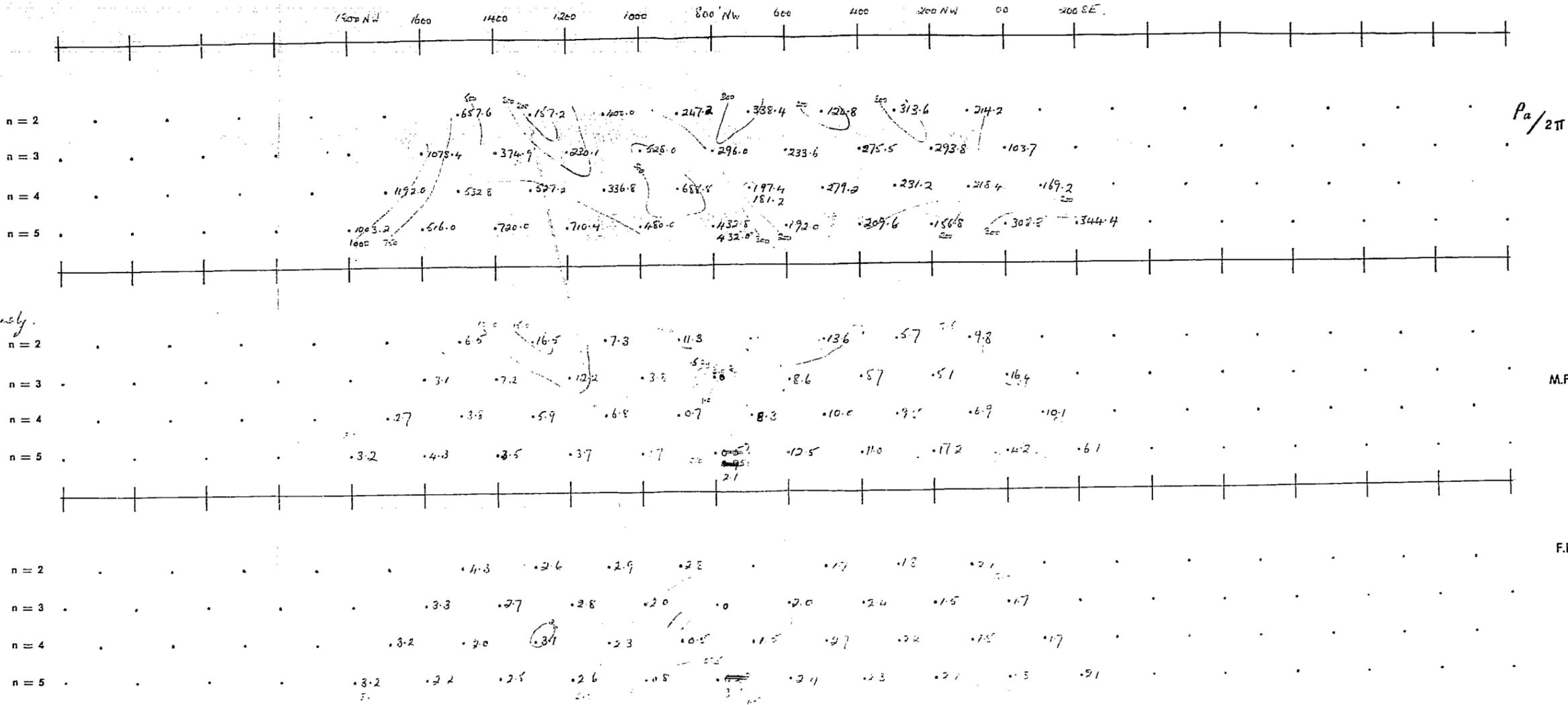
LINE: *Line 500' NW*

ELECTRODE INTERVAL: *500'*

FREQUENCY: *5.0, 2.5 Hz*

SCALE: *1" = 100'*

DRAWN BY: *R.R.*



M.F.

F.E.



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INDUCED POLARIZATION
SURVEY

CLIENT:

LOCALITY: approx. *Somerset Academy*

DATE: 16.3.72

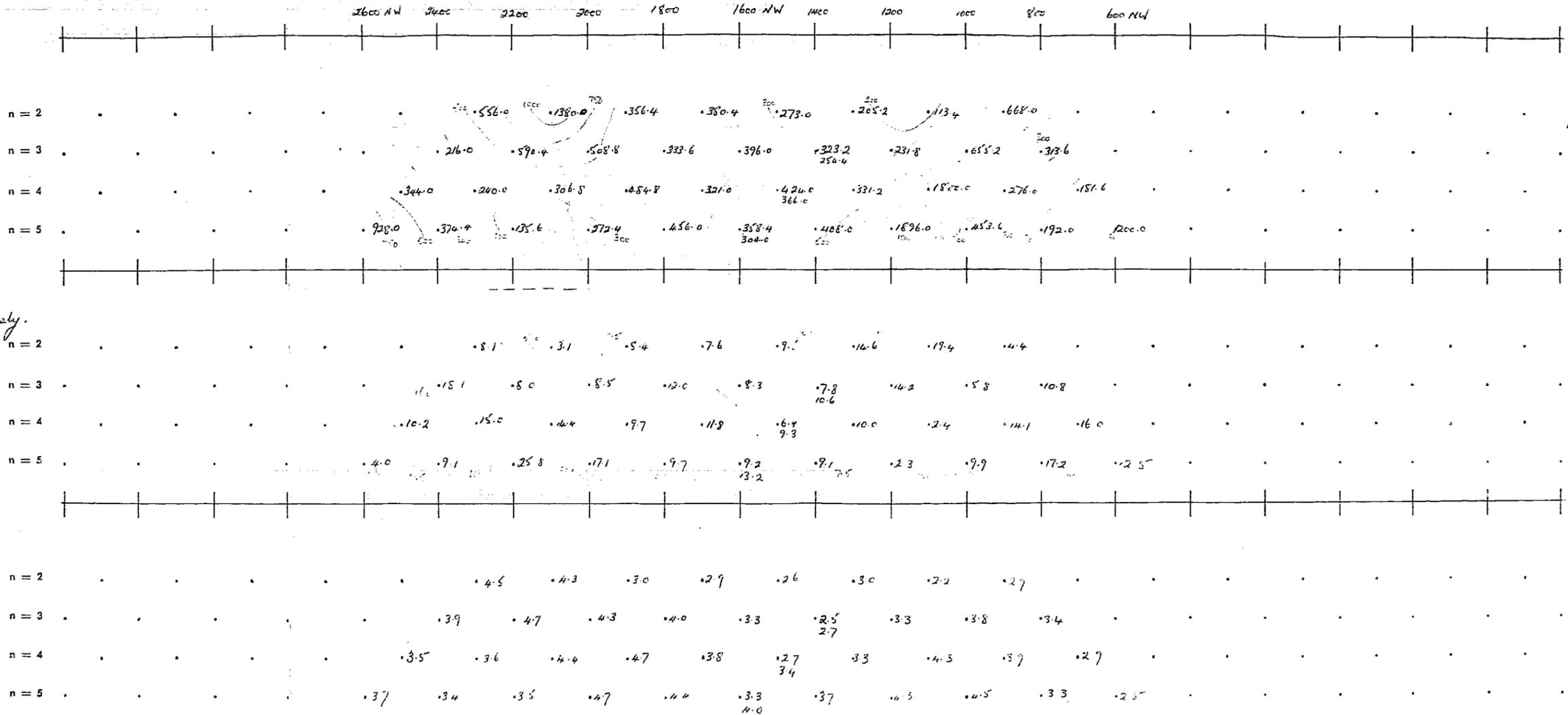
LINE: 8. *200m 1600' NW (17)*

ELECTRODE INTERVAL: 200'

FREQUENCY: 3.0, 0.3 Hz

SCALE: 1" = 200'

DRAWN BY: *L.R.*



$P_a / 2\pi$

M.F.

F.E.

