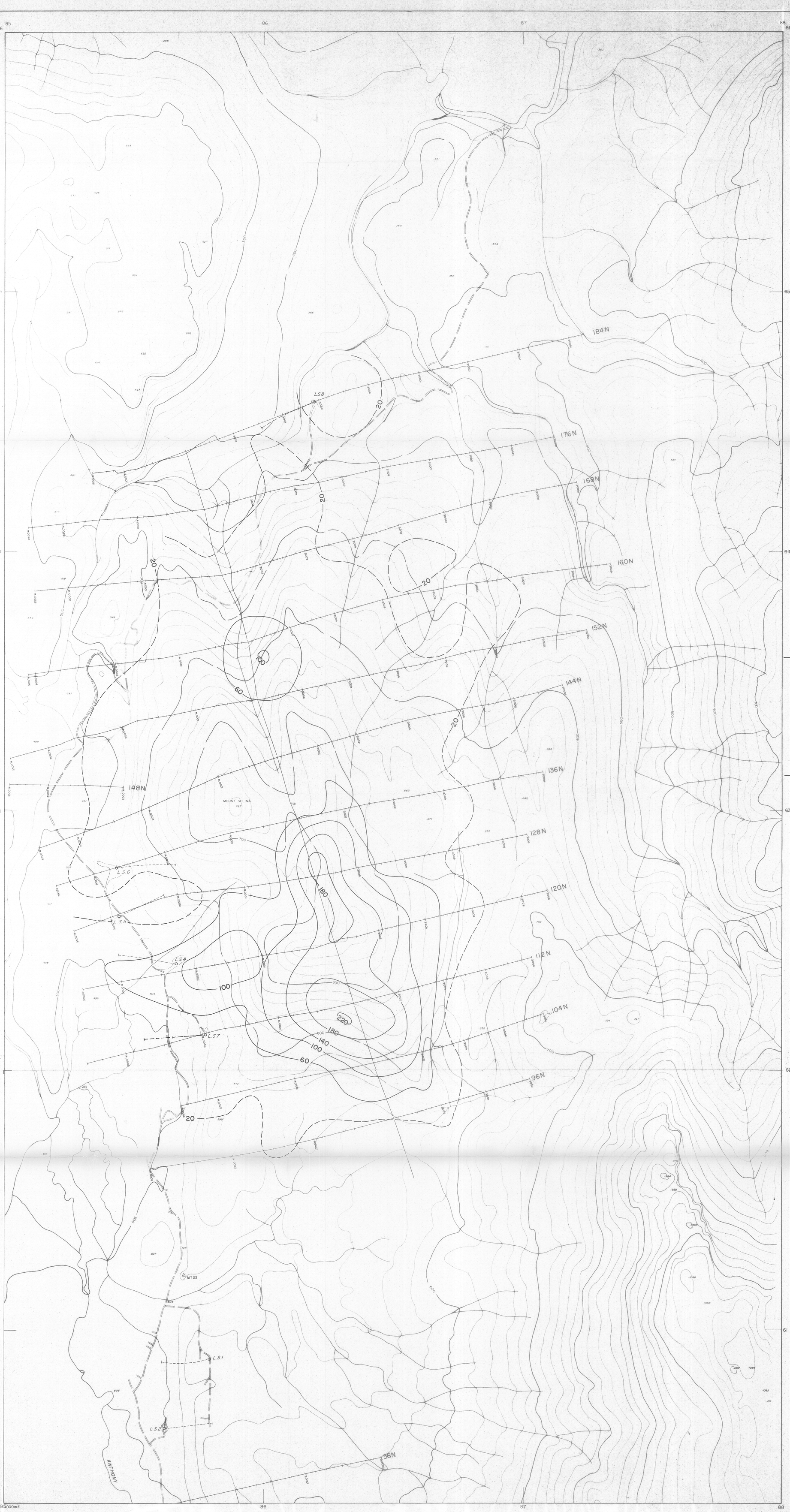


BLOCK AVERAGES

ppm
220
180
140
100
60
20

1980-81 Samples, -80# assays.

Area divided into diamond-shaped blocks

400m N-S axes

200m E-W axes

Logarithmic mean of Zn assays within each block plotted at the centre

Averages contoured linearly

Contour interval 40ppm

- SEALED ROAD, BRIDGE
- VEHICULAR TRACK
- LOGGING TRACK, BULLDOZER SCAR
- WALKING TRACK
- RAILWAY, TRAMWAY ABANDONED
- PROMINENT PEAK
- TRIG STATION
- BENCH MARK
- SPOT ELEVATIONS
- RIVER, CREEK
- LAKE
- SWAMP
- POWER LINE & PYLONS
- BUILDING
- FLYING FOX
- PIT
- COSTEAN, TRENCH
- ADIT
- SHAFT (Depth metre)
- OPEN CUT
- ALLUVIAL WORKINGS
- DUMP

5 cm

100 0 100 200 300 400 500

Metres

914140

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

E.L.9/66

SELINA GRID

SOIL GEOCHEMISTRY

BLOCK AVERAGES

Zn

REVISIONS.

FIG 33

SCALE 1:5000 | DRAWN BY M.H.

DATE | DRAFTSMAN H.D.J

A0-172-5

81-1660.



SOIL GEOCHEMISTRY

B/C Horizon assays

Pegging interval, 100ft

A Horizon assays

Samples collected in 1981, - 80 ** assayed at Mt Lyell by AAS

Elements assayed, in order reading away from the grid line:

Cu, Pb, Zn, Ag

Detection limits: 10ppm - Cu, Pb, Zn,

2 ppm - Ag

\- = Below detection limit

ns = not sampled

ROCK CHIP GEOCHEMISTRY

∘ 27325 Sampling point and number

Elements assayed, reading left to right: Cu, Pb, Zn, Ag, Mn, Co, S, Fe

S & Fe in %, all others ppm.

5 cm

81-1660 914141

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

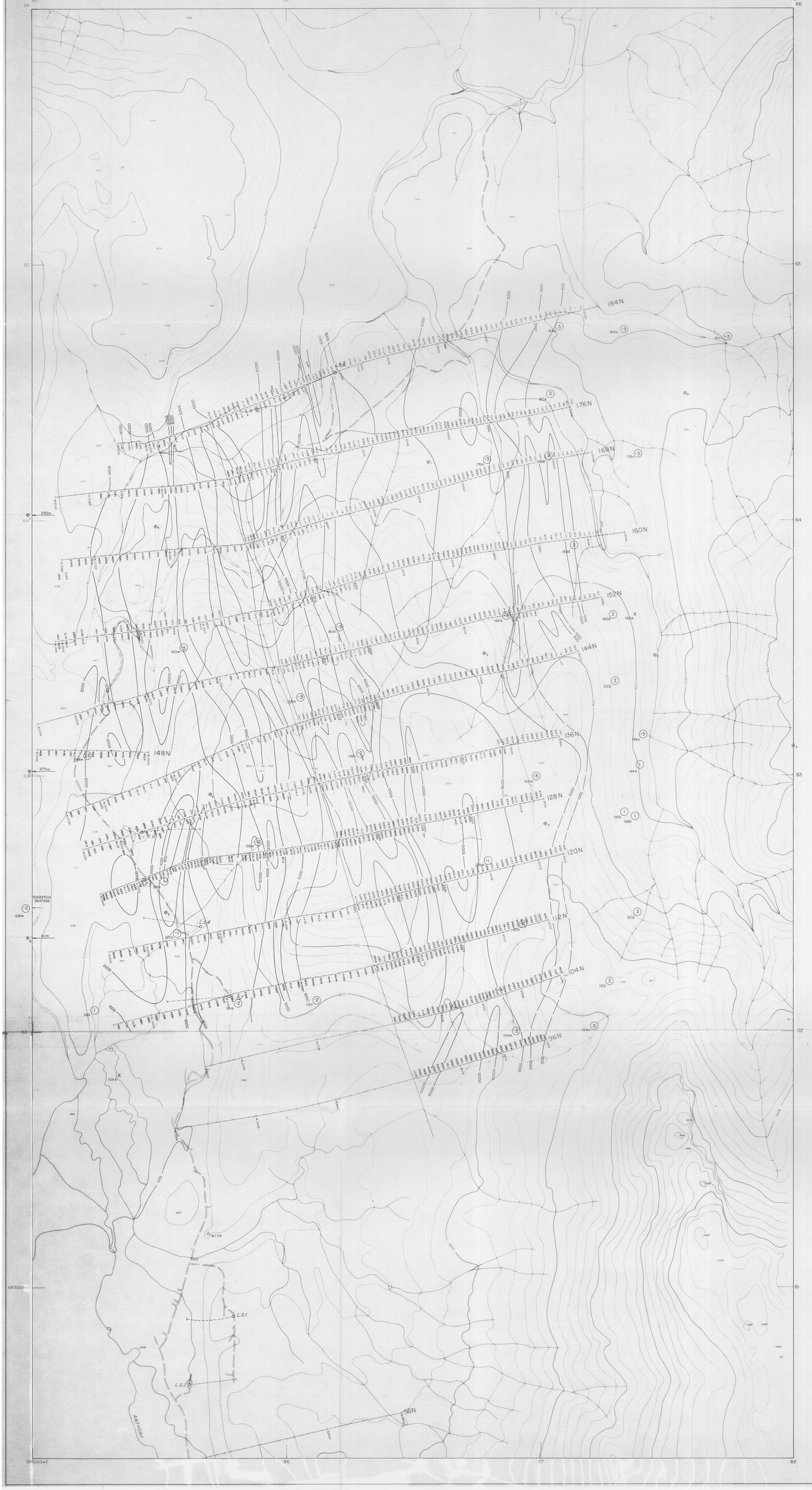
E.L. 9/66
ROLLESTON GRID
GEOCHEMISTRY
1980-81 ASSAYS

REVISIONS

FIG. 34

A3-175

SCALE 1:5000	DRAWN BY M.H.
DATE 5th November 1981	DRAFTSMAN H.D.J.



DIGHEM, 1980 AIRBORNE ELECTROMAGNETICS

ANOMALY GRADE

6
5
4
3
2
1
X
-1
-2
-3

Dighem

Mitre

increasing order of merit

Flight line 102A — Identifier; 1 — Grade

GRADIENT ARRAY I.P

Survey by Scintrex Pty Ltd 1981

Transmitter : Scintrex 25/3 kw time domain IP transmitter

Receivers : Scintrex I.P.R-8 I.P. receivers

Receiver dipole: 20 m east of base line
100 ft west of baseline except for line 128N-50ft

Station interval : As for receiver dipole

Resistivity : Logarithmic contours in ohm metres

$\oplus_6$ Electrode position with array number

ohm-metres

- > 10000
- 5000-10000
- 2000-5000
- 1000-2000
- 500-1000
- < 500

- SEALED ROAD, BRIDGE
- VEHICULAR TRACK
- LOGGING TRACK, BULLDOZER SCAR
- WALKING TRACK
- RAILWAY, TRAMWAY ABANDONED
- PROMINENT PEAK
- TRIG STATION
- BENCH MARK
- SPOT ELEVATIONS
- RIVER, CREEK
- LAKE
- SWAMP
- POWER LINE & PYLONS
- BUILDING
- FLYING FOX
- PIT
- COSTEAN, TRENCH
- ADIT
- SHAFT (Depth metre)
- OPEN CUT
- ALLUVIAL WORKINGS
- DUMP
- DIAMOND DRILL HOLE

5 cm

100 0 100 200 300 400 500
Metres

31-1660 914142

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

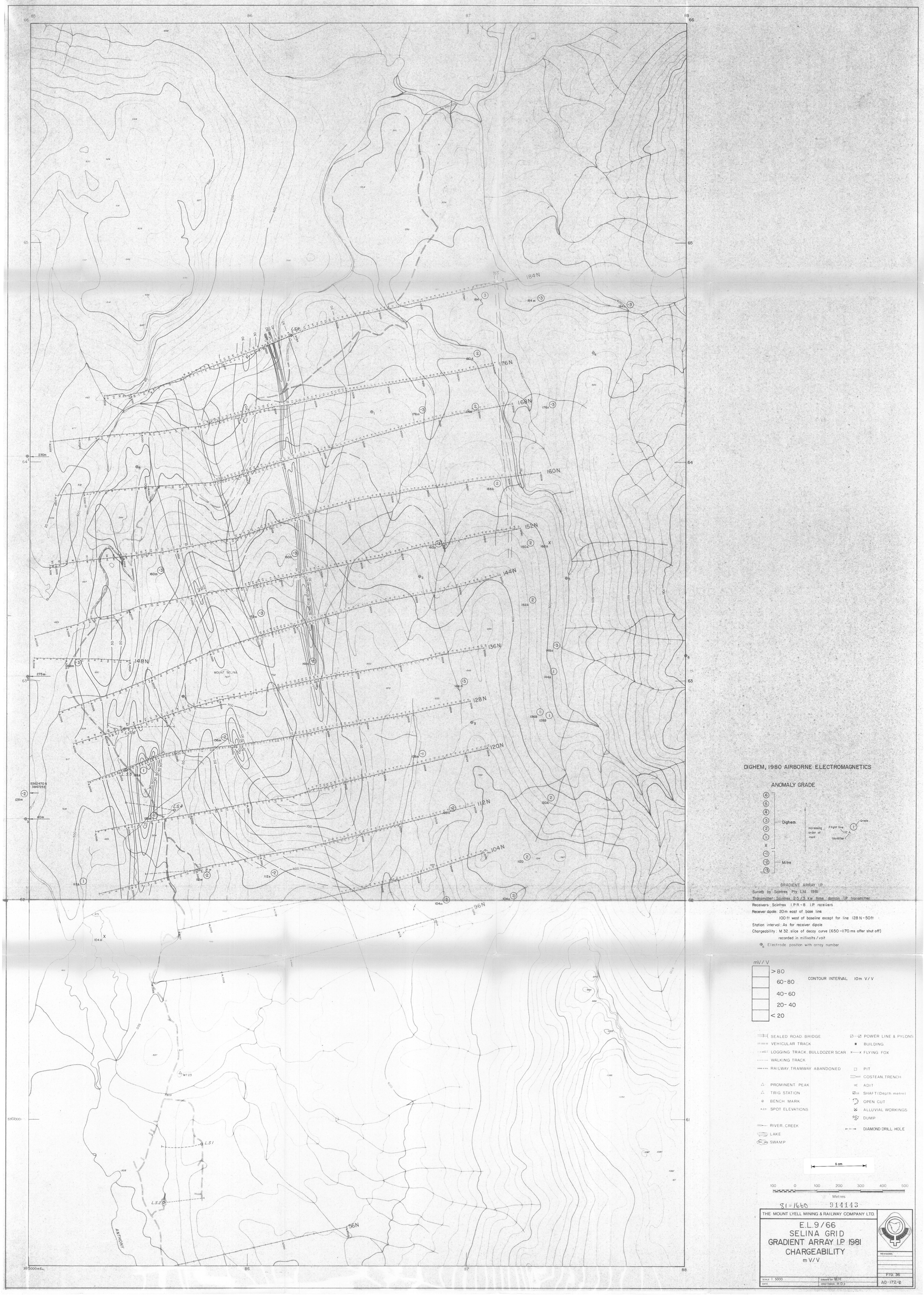
E.L. 9/66
SELINA GRID
GRADIENT ARRAY I.P 1981
RESISTIVITY
ohm-metres

REVISIONS

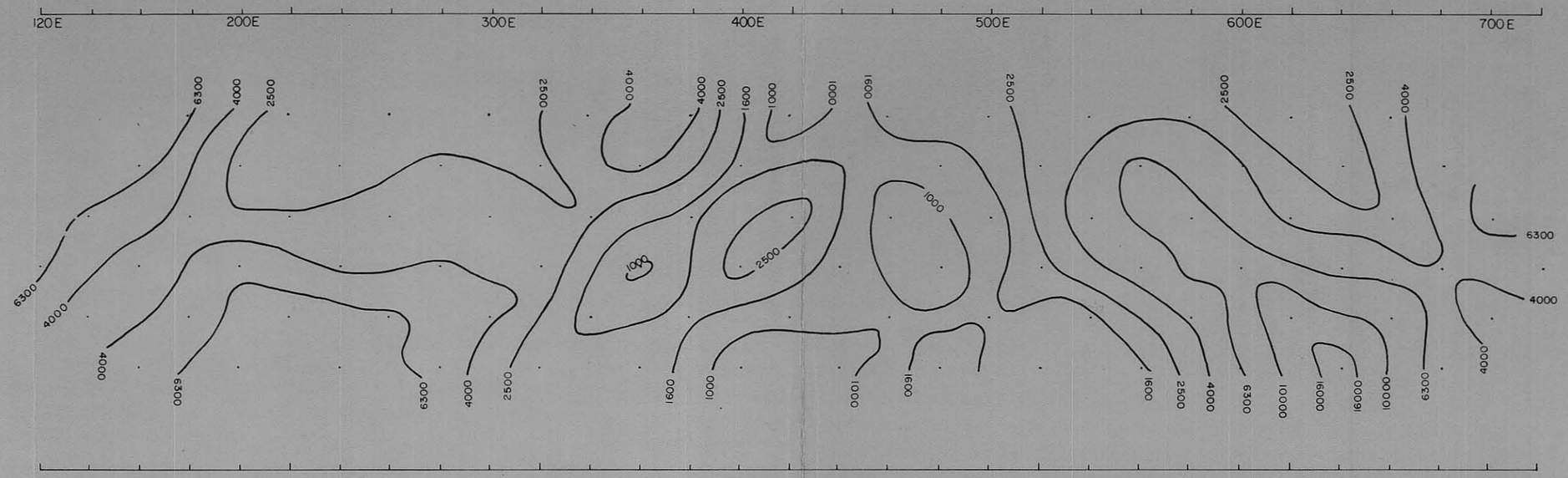
FIG. 35

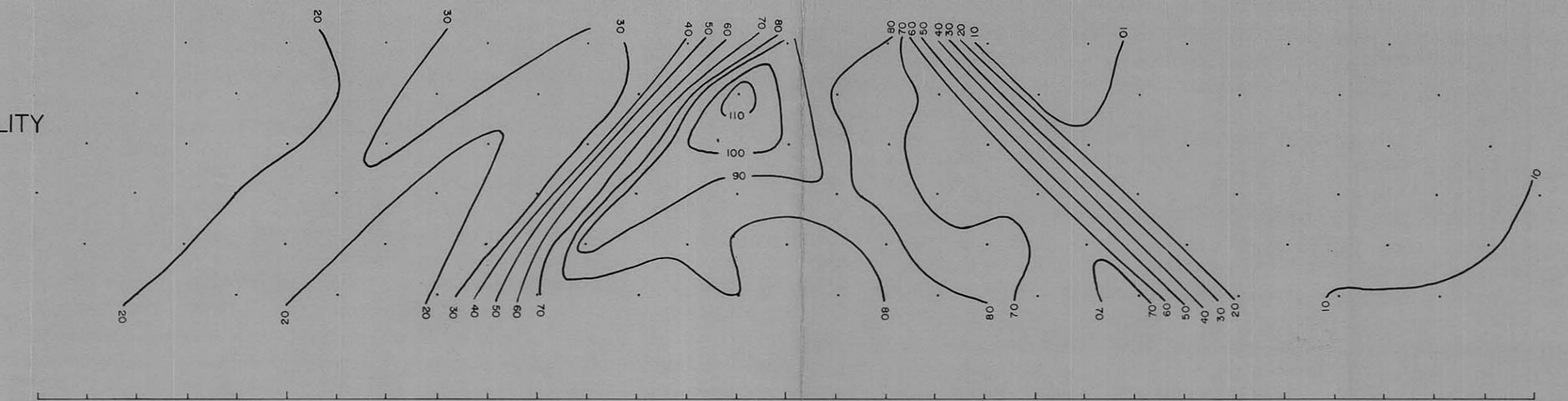
SCALE 1:5000 DRAWN BY M.H.
DATE DRAUGHTSMAN H.D.J.

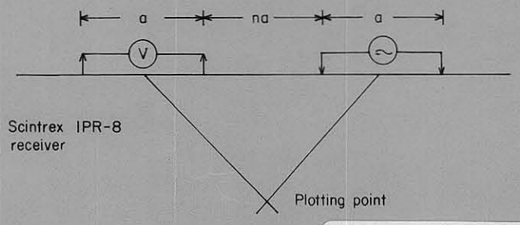
AO-172-8



184N
176N
168N
160N
152N
144N
136N
148N
128N
120N
112N
104N
96N
56N
MOUNT SELINA
ANTHONY
LS1
LS2
DIGHEM, 1980 AIRBORNE ELECTROMAGNETICS
ANOMALY GRADE
Dighem
Mitre
Increasing order of merit
Flight line
Identifier
Grade
GRADIENT ARRAY I.P.
Survey by Scintrex Pty. Ltd. 1981
Transmitter: Scintrex 2.5/3 kw time domain I.P. transmitter
Receivers: Scintrex I.P.R.-8 I.P. receivers
Receiver dipole: 20m east of base line
100 ft west of baseline except for line 128 N-50ft
Station interval: As for receiver dipole
Chargeability: M 32 slice of decay curve (650-1170 ms after shut off)
recorded in millivolts / volt
Electrode position with array number
mV/V
> 80
60-80
40-60
20-40
< 20
CONTOUR INTERVAL 10m V/V
SEALED ROAD, BRIDGE
VEHICULAR TRACK
LOGGING TRACK, BULLDOZER SCAR
WALKING TRACK
RAILWAY, TRAMWAY ABANDONED
PROMINENT PEAK
TRIG STATION
BENCH MARK
SPOT ELEVATIONS
RIVER, CREEK
LAKE
SWAMP
POWER LINE & PYLONS
BUILDING
FLYING FOX
PIT
COSTEAN, TRENCH
ADIT
SHAFT (Depth metre)
OPEN CUT
ALLUVIAL WORKINGS
DUMP
DIAMOND DRILL HOLE
5 cm
100 0 100 200 300 400 500
Metres
81-1660 914143
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.
E.L.9/66
SELINA GRID
GRADIENT ARRAY I.P. 1981
CHARGEABILITY
mV/V
REVISIONS
FIG. 36
SCALE 1:5000
DRAWN BY M.H.
DATE
DRAFTSMAN H.D.J.
A0-172-2







5 cm

Survey date 13-5-81 to 14-5-81

Survey by Scintrex Pty Ltd

RESISTIVITY
ohm-metres

>4000
1000-4000
400-1000
250-400
<250

Logarithmic contour interval

CHARGEABILITY
mV/V

>100
80-100
60-80
40-60
20-40

Contour interval 10 mV/V

914144

81-1660

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

SELINA GRID
DIPOLE-DIPOLE I.P.
PSEUDOSECTIONS
LINE 184N, 120mE - 720mE

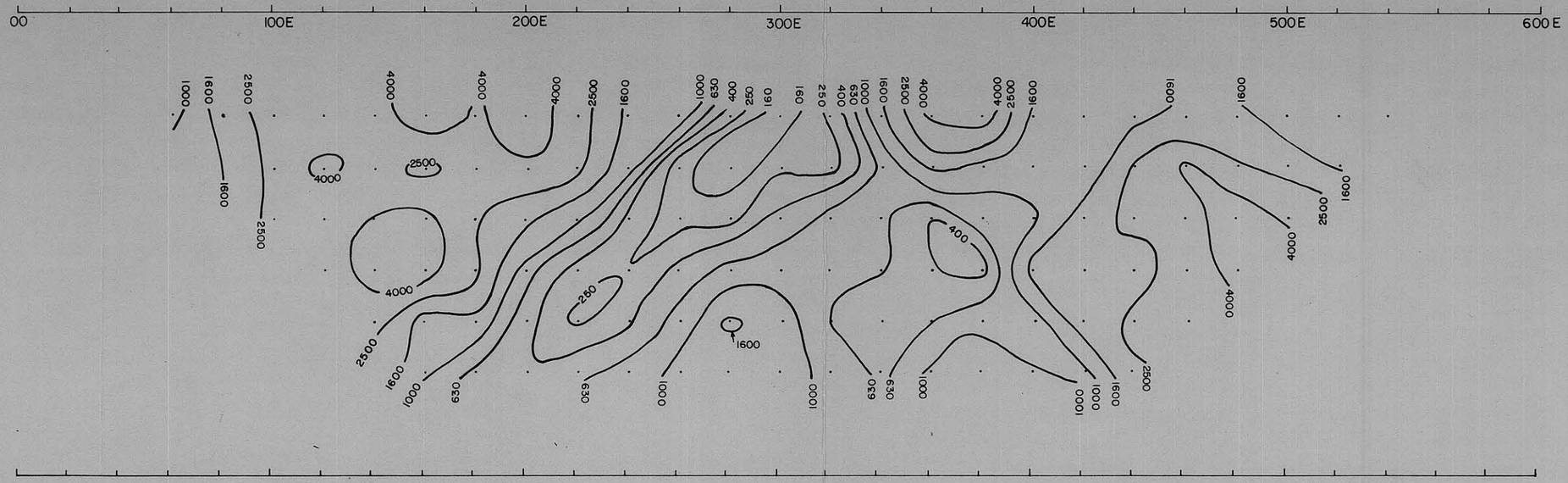
SCALE 1:2000	DRAWN BY M.J.H.
DATE 30-9-81	DRAFTSMAN P.J.R.

REVISIONS

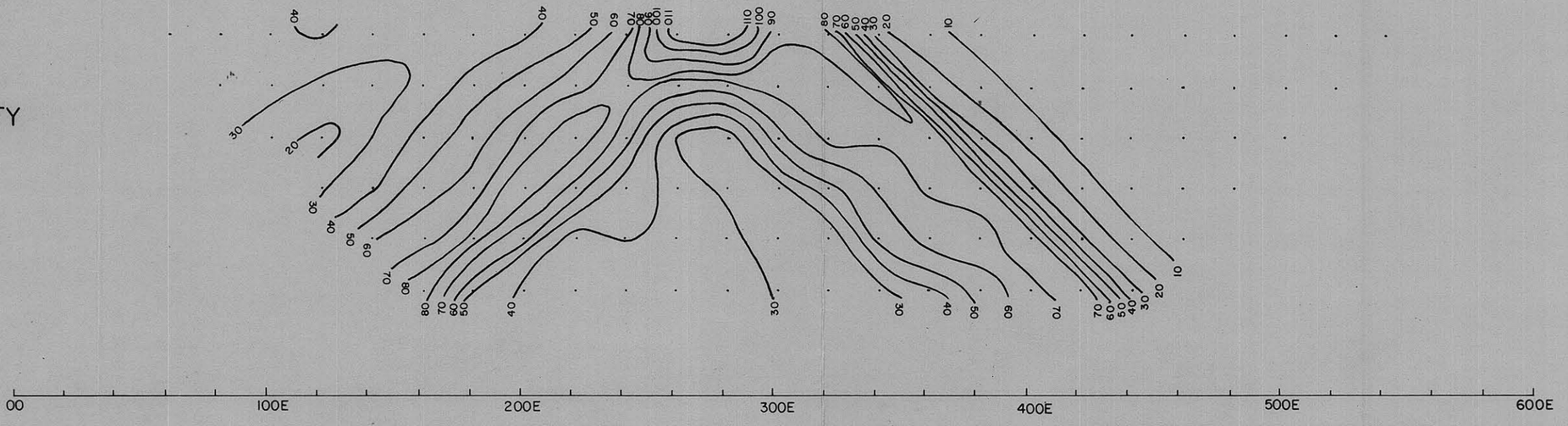
FIG. 37

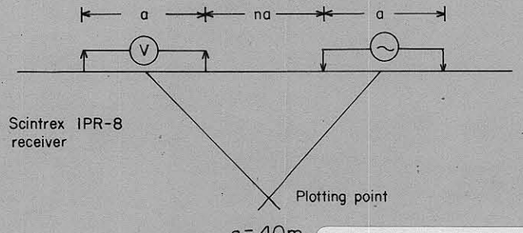
A3-165-1

RESISTIVITY
ohm-metres



CHARGEABILITY
mV/V





5 cm

RESISTIVITY
ohm-metres

>4000
1000-4000
400-1000
250-400
<250

Logarithmic contour interval

CHARGEABILITY
mV/V

>100
80-100
60-80
40-60
20-40

Contour interval 10mV/V

Survey date 7-8 April, 1981

Survey by Scintrex Pty Ltd

81-1660

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

SELINA GRID
DIPOLE-DIPOLE I.P.
PSEUDOSECTIONS
LINE 144N, 00m - 600mE

REVISIONS

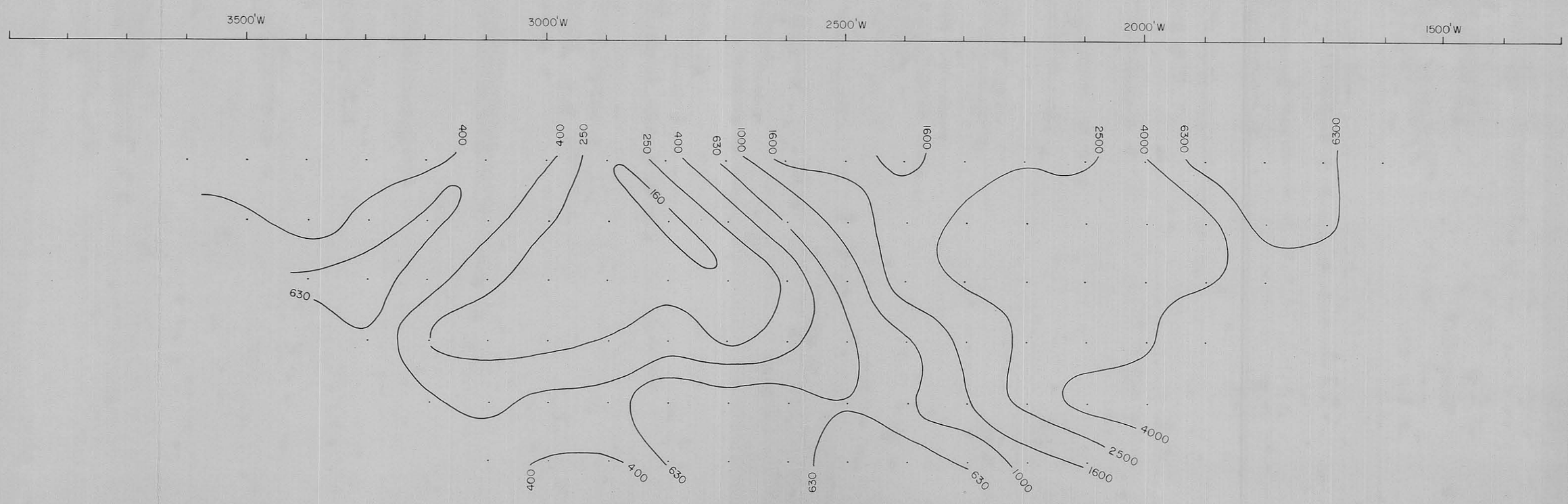
SCALE 1:2000	DRAWN BY M.J.H.
DATE 30-9-81	DRAFTSMAN P.J.R.

FIG. 38

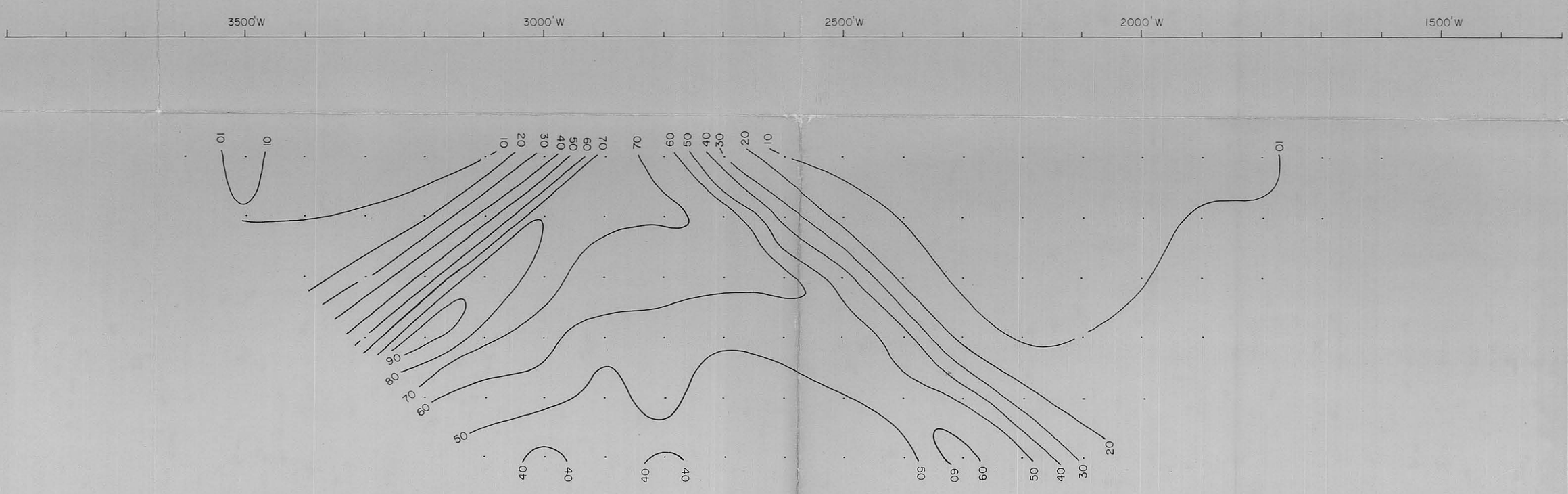
A3-165-2

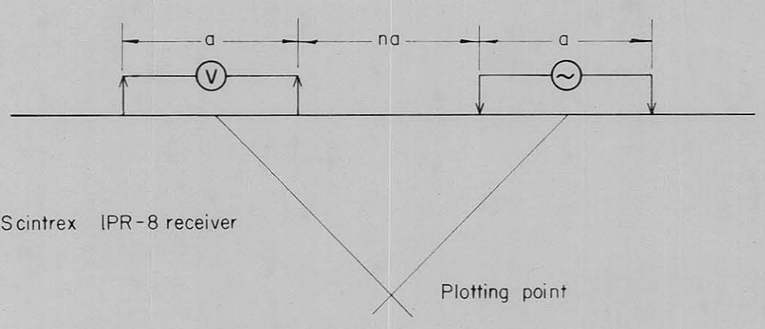
914145

Resistivity ohm-metres



Chargeability mV/V





a = 200 ft (61m)

Survey dates 24-25 APRIL, 1981

Survey by Scintrex Pty Ltd.

RESISTIVITY
ohm-metres

- > 4000
- 1000-4000
- 400-1000
- 250-400
- < 250

Logarithmic contour interval

CHARGEABILITY
m V/V

- > 100
- 80-100
- 60-80
- 40-60
- 20-40

Contour interval 10 mV/V

5 cm

81-1660

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

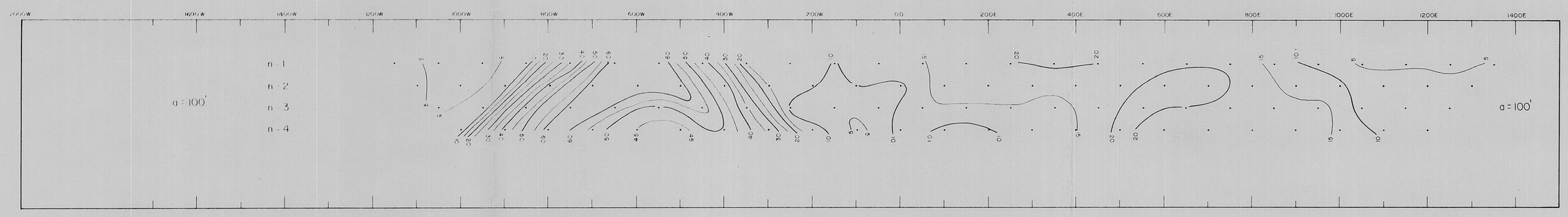
SELINA GRID
DIPOLE-DIPOLE I.P. PSEUDOSECTIONS
LINE 120 N 3900'W-1300'W

SCALE 1:2000	DRAWN BY M.H.
DATE 28-8-1981	DRAFTSMAN H.D.J.

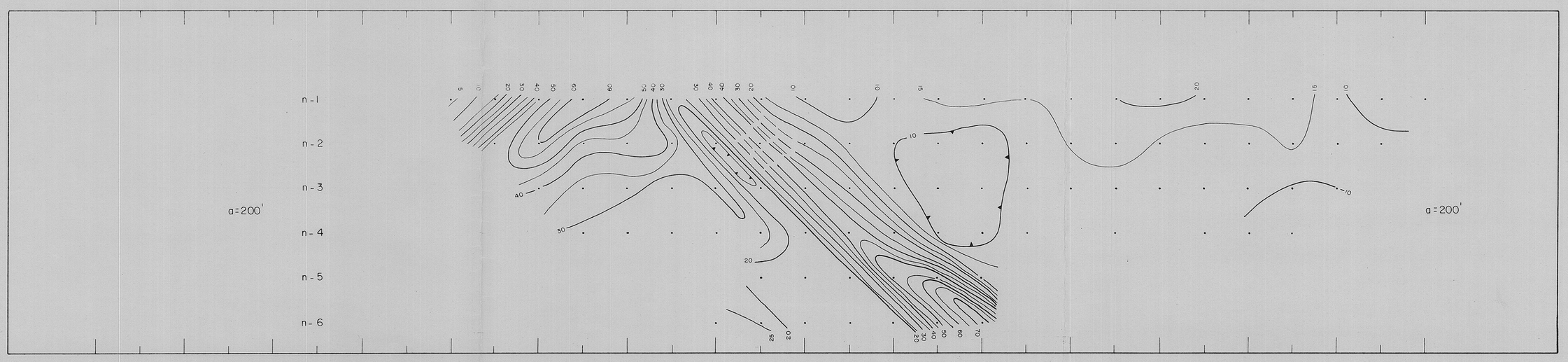
REVISIONS:

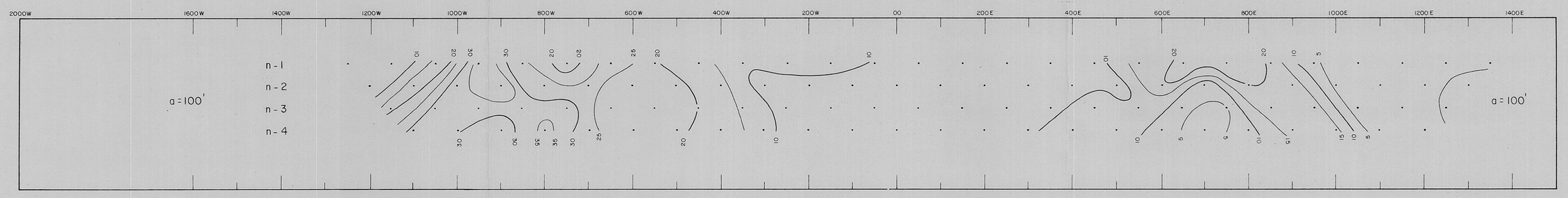
FIG. 39

A2-170

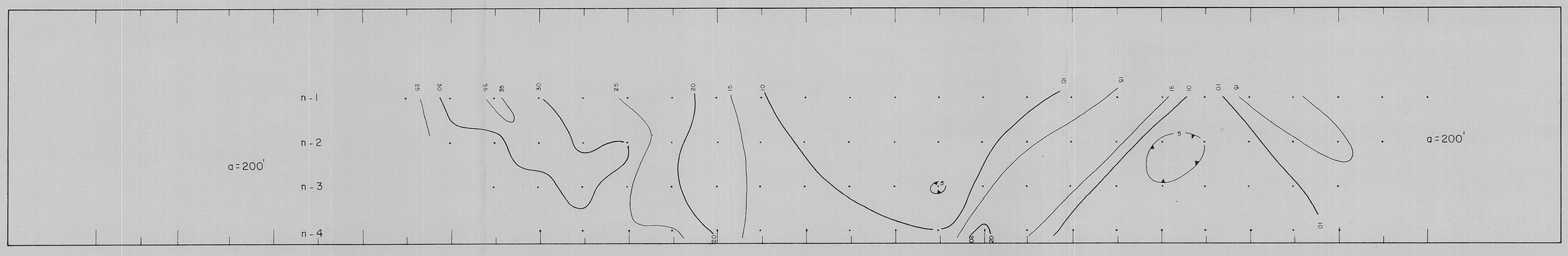


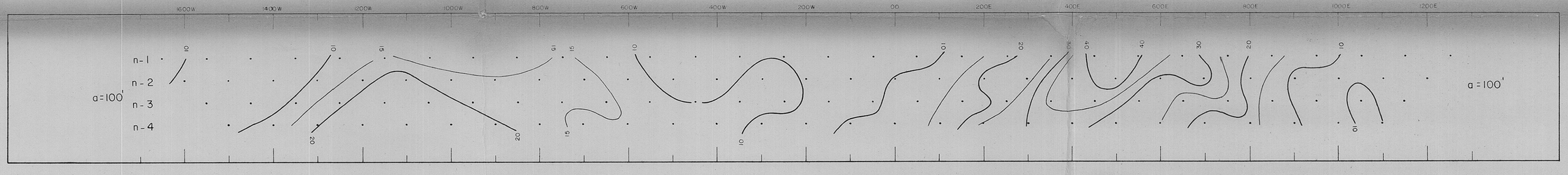
56 N



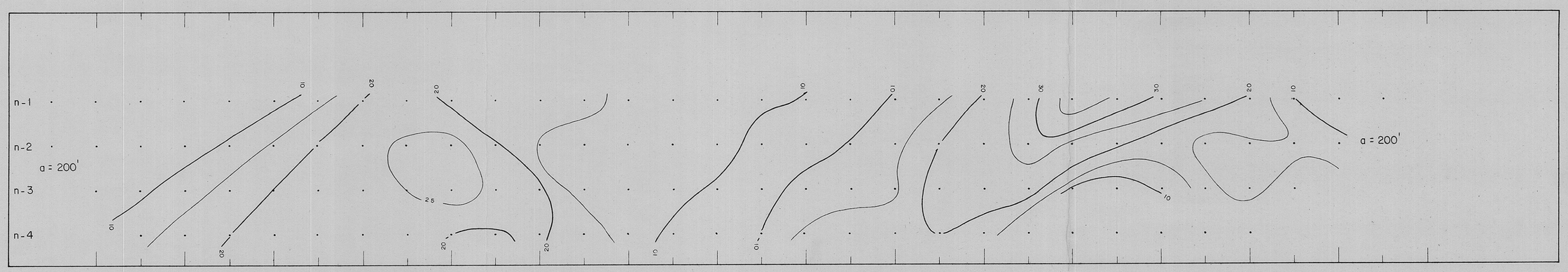


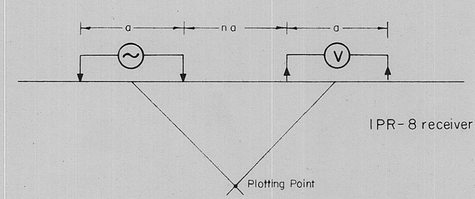
48 N





40 N





Survey by Scintrex Pty Ltd.

5 cm

mV/V

	>100
	100-80
	80-60
	60-40
	40-20

Contour interval 5m V/V

Survey dates 29-1-81 to 13-2-81

914147 81-1660

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

ROLLESTON GRID

Dipole-dipole pseudosections

CHARGEABILITY

REVISIONS:

FIG 40

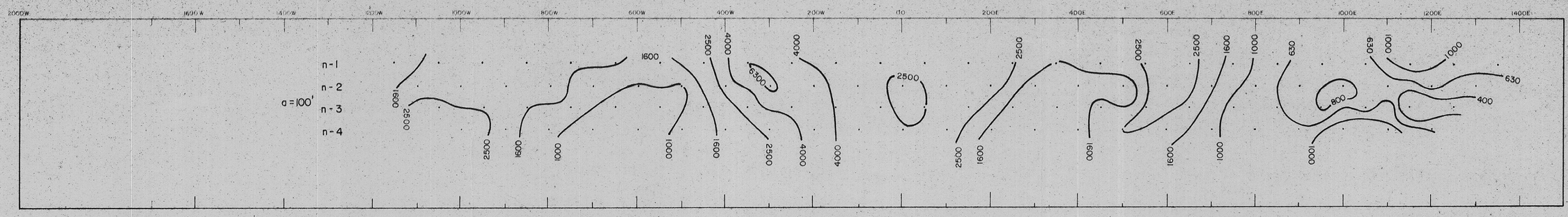
A1 - 154

SCALE 1:2000

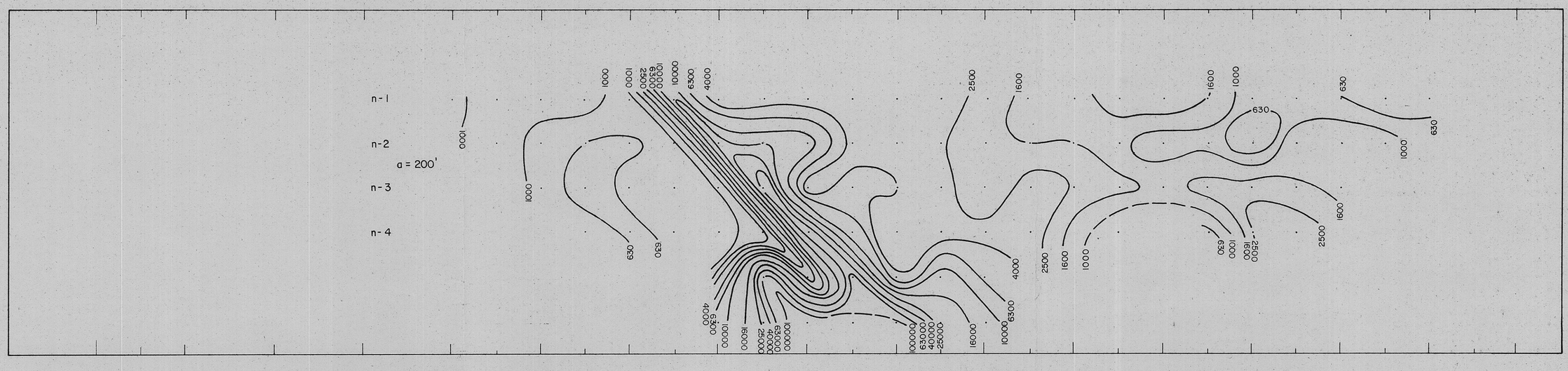
DATE 13-8-1981

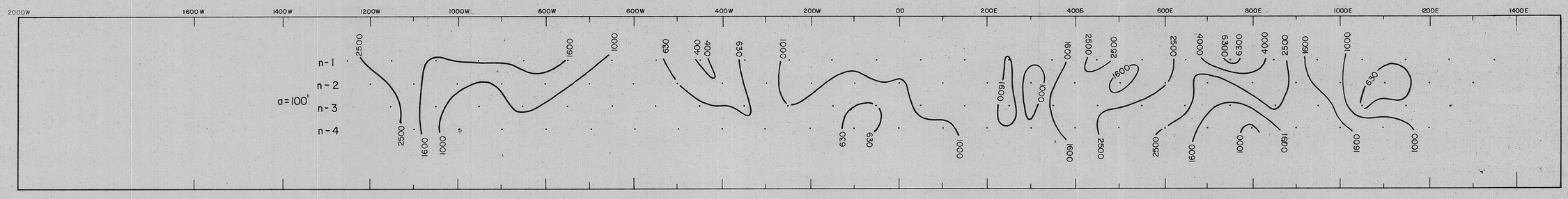
DRAWN BY: M. H.

DRAFTSMAN: H.D.J

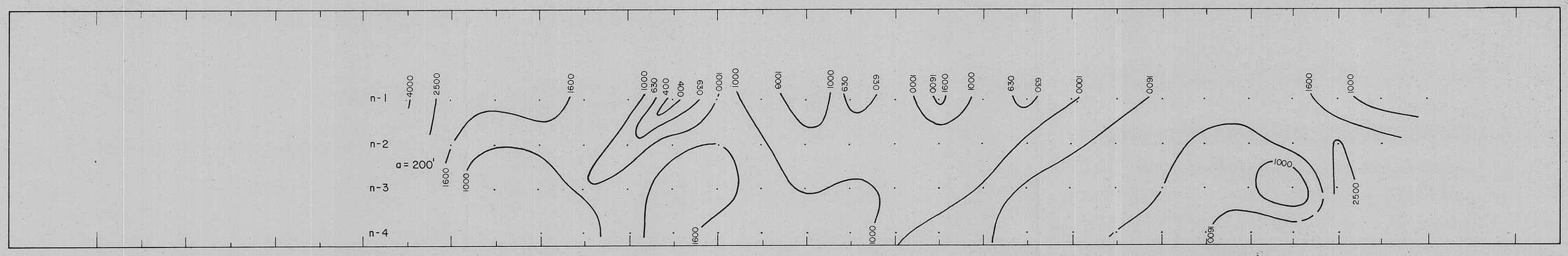


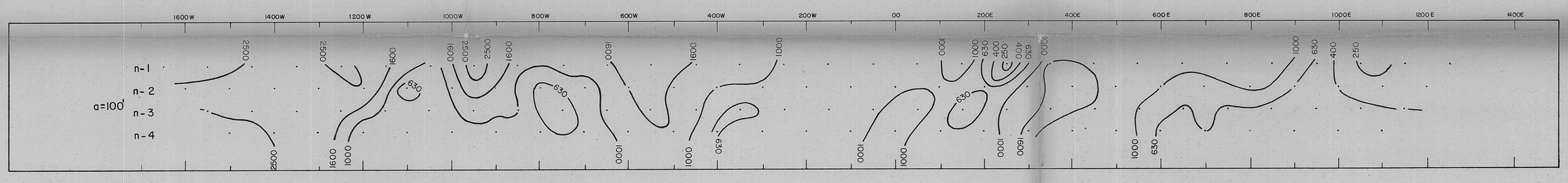
56 N



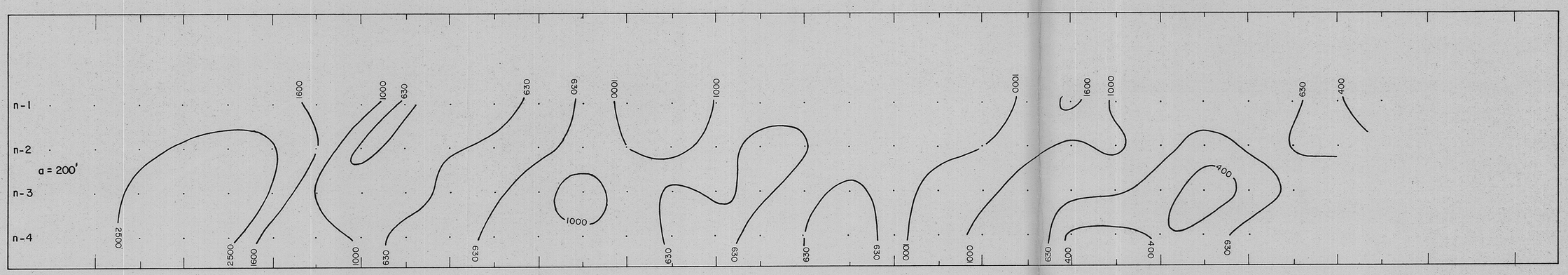


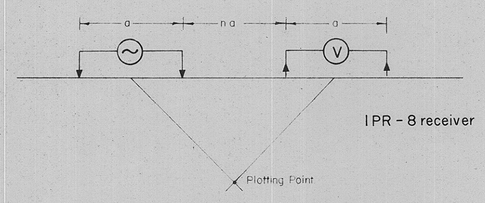
48 N





40 N





Survey by Scintrex Pty. Ltd.

Logarithmic contour interval ohm-metres 250,400,630,1000,2500, 4000,6300,10000,25000,40000,63000, 100000.

5 cm

Ohm-metres

- >25000
- 10000-25000
- 1000-10000
- 630-1000
- 400-630
- < 400

Survey dates 29-1-81 to 13-2-81

81-1660 914148

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

ROLLESTON GRID

Dipole-dipole pseudosections

RESISTIVITY

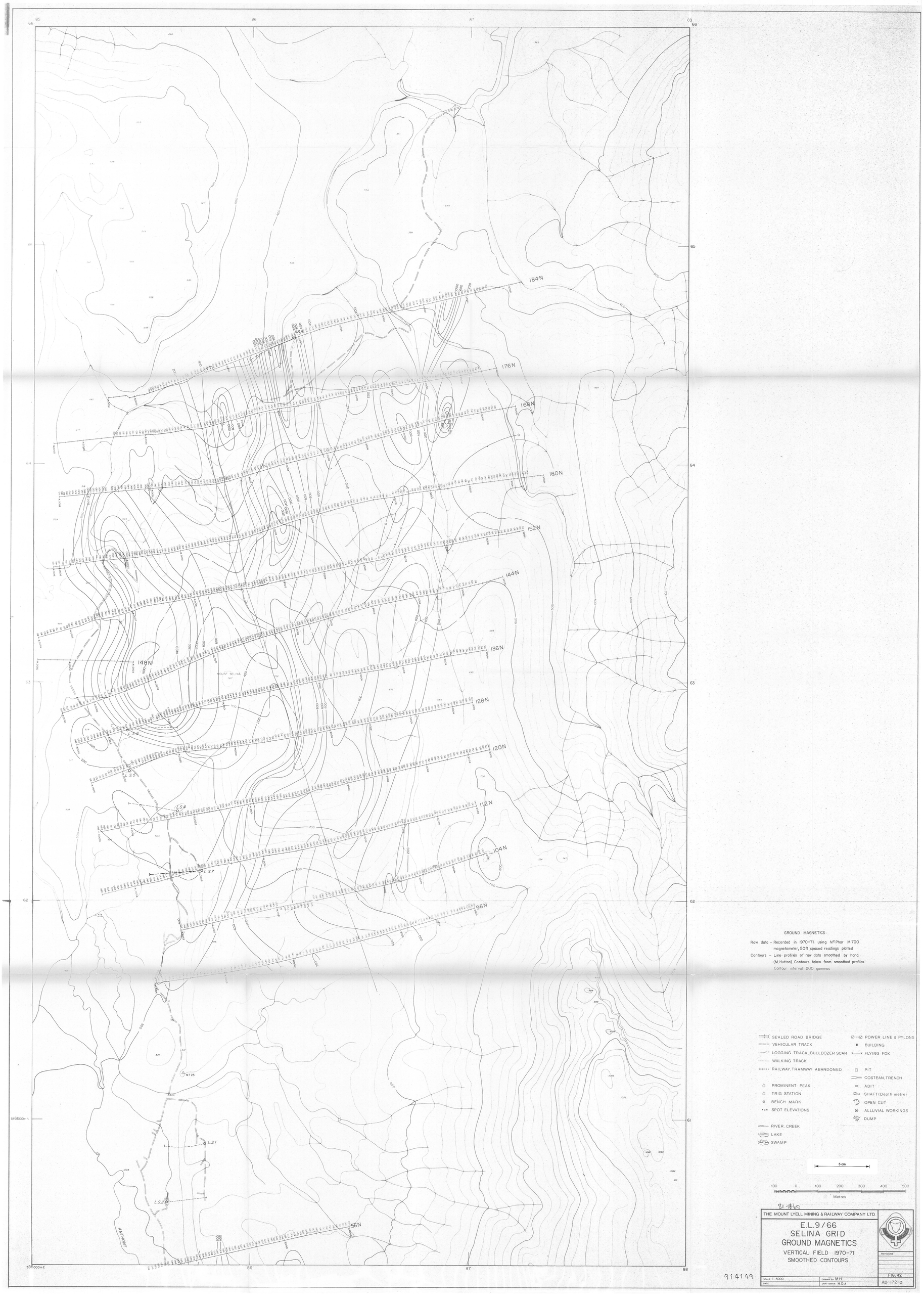
REVISIONS

FIG. 41

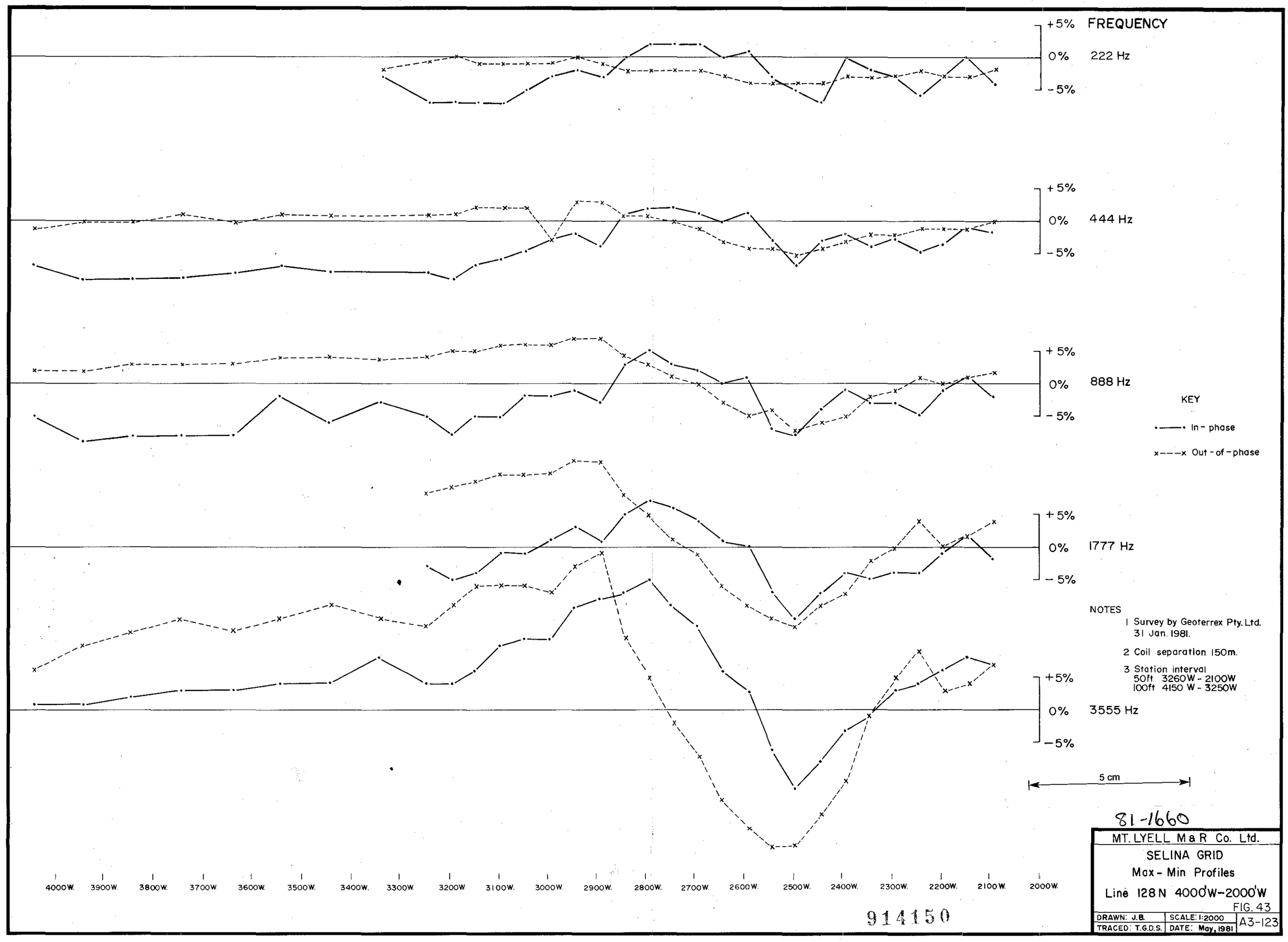
A1 - 154 - 1

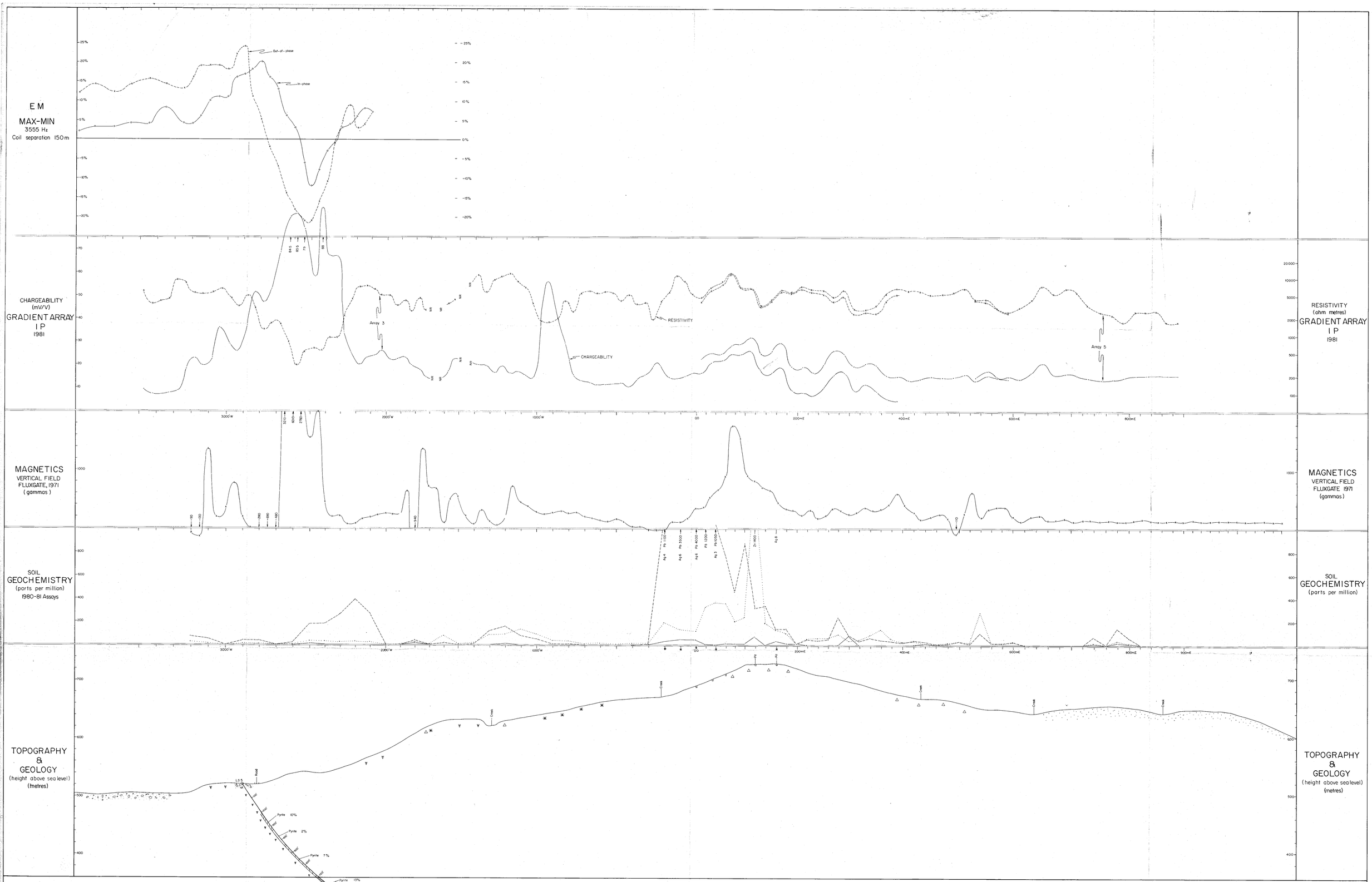
A1 1:2000
13-8-1981

DRAWN M. H.
TRACED MAN. H. D.



184N
176N
168N
160N
152N
144N
136N
148N
128N
120N
112N
104N
96N
56N
MOUNT SELINA
L.S.1
L.S.2
L.S.4
L.S.5
L.S.6
L.S.7
ANTHONY
GROUND MAGNETICS
Raw data - Recorded in 1970-71 using McPhar M 700 magnetometer, 50ft spaced readings plotted
Contours - Line profiles of raw data smoothed by hand (M. Hutton). Contours taken from smoothed profiles
Contour interval 200 gammas
SEALED ROAD BRIDGE
VEHICULAR TRACK
LOGGING TRACK, BULLDOZER SCAR
WALKING TRACK
RAILWAY, TRAMWAY ABANDONED
PROMINENT PEAK
TRIG STATION
BENCH MARK
SPOT ELEVATIONS
RIVER, CREEK
LAKE
SWAMP
POWER LINE & PYLONS
BUILDING
FLYING FOX
PIT
COSTEAN, TRENCH
ADIT
SHAFT (Depth metre)
OPEN CUT
ALLUVIAL WORKINGS
DUMP
5 cm
100 0 100 200 300 400 500
Metres
81-1660
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.
E.L.9/66
SELINA GRID
GROUND MAGNETICS
VERTICAL FIELD 1970-71
SMOOTHED CONTOURS
REVISIONS
FIG. 42
A0-172-3
SCALE 1:5000
DRAWN BY M.H.
DATE
DRAFTSMAN H.D.J.
914149


FREQUENCY
+5%
0%
-5%
222 Hz
444 Hz
888 Hz
1777 Hz
3555 Hz
KEY
In - phase
Out - of - phase
NOTES
1 Survey by Geoterrex Pty. Ltd. 31 Jan. 1981.
2 Coil separation 150m.
3 Station interval
50ft 3260W - 2100W
100ft 4150 W - 3250W
5 cm
4000W. 3900W. 3800W. 3700W. 3600W. 3500W. 3400W. 3300W. 3200W. 3100W. 3000W. 2900W. 2800W. 2700W. 2600W. 2500W. 2400W. 2300W. 2200W. 2100W. 2000W.
81-1660
MT. LYELL M & R Co. Ltd.
SELINA GRID
Max - Min Profiles
Line 128 N 4000'W-2000'W
FIG. 43
DRAWN: J.B.
SCALE: 1:2000
TRACED: T.G.D.S.
DATE: May, 1981
A3-123
914150



GEOLOGY

QUATERNARY Moraine, alluvium

CAMBRIAN Lithic tuffs/volc. ss.

Massive volcanics Rhyolitic lavas

Quartz porphyry crystal tuffs

Quartz feldspar porphyry intrusive

LOWER CAMBRIAN Sediments

MAGNETICS

Coarse scale

Fine scale

GRADIENT ARRAY

Chargeability

Resistivity

GEOCHEMISTRY (ppm)

Cu

Pb

Zn

Mn

Ag > 2 ppm

5 cm

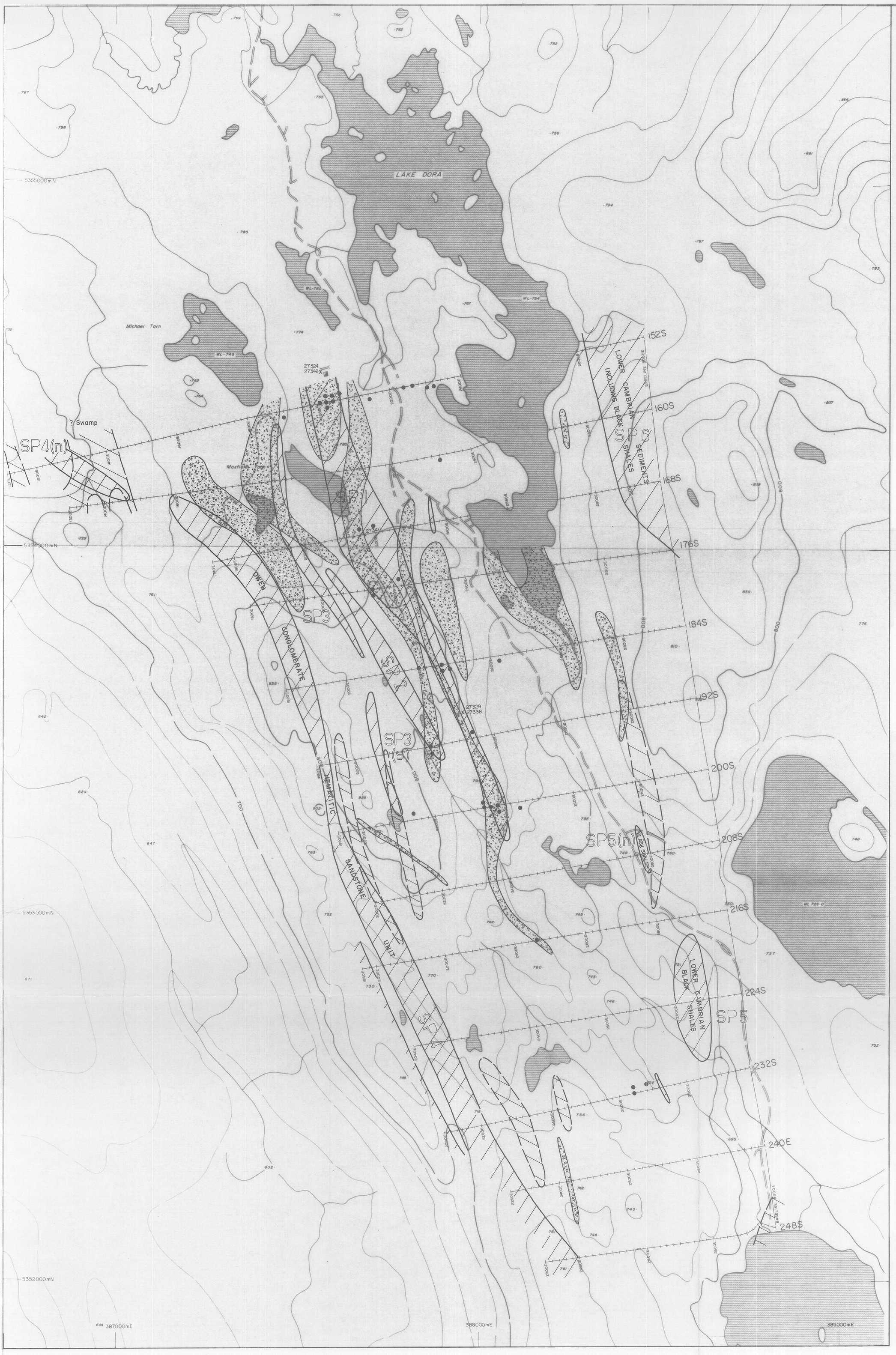
81-1660 914151

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

E.L. 9/66
SELINA GRID
LINE 128 N PROFILE

SCALE 1:2000
DATE 5th Nov 1981
DRAWN BY MJK
CHECKED BY PJR

FIG. 44
AO-176



ROCK CHIPS

SIGNIFICANT ASSAYS

SAMPLE No.	TYPE OF SAMPLE	Cu %	Pb %	Zn %	Ag g/t
27324	Random	0·48	0·01	0·04	7
27342	Picked	0·93	0·03	0·05	7
27340	Picked	0·02	0·95	2·3	4
27329	Random	0·09	0·25	0·13	13
27338	Picked	0·20	4·0	5·7	160

GEOCHEMISTRY

SOILS - B Samples

Cu ≥ 40ppm
Pb ≥ 180ppm
Zn ≥ 90ppm

ROCK CHIP - SIGNIFICANT ASSAYS
x 27340

GEOPHYSICS

Gradient Array I.P.

Chargeability > 20 m V/V

Resistivity < 2000 ohm-m

Magnetics > 63000 γ (600 γ above background)

SP1 Anomaly number

914152 81-1660

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

E.L.9/66
SPICER GRID
ANOMALY COMPILATION

REVISIONS

FIG.45

SCALE 1:5000 | DRAWN BY M.H.

DATE 24th November 1981 | DRAUGHTSMAN H.D.P.

A1 - 177 - 2

LAKE DORA

Michael Tarn

Maxfield Tarn

WL-760

WL-754

WL-745

WL 726·0

BASELINE 3000E

152S

160S

168S

176S

184S

192S

200S

208S

216S

224S

232S

240E

248S

5355000mN

5354000mN

5353000mN

5352000mN

387000mE

388000mE

389000mE

GEOLOGICAL BOUNDARIES

- Accurate
- Approximate / inferred
- Gradational

FAULTS

- Accurate
- Approximate / Inferred
- Concealed

STRUCTURES

- Bedding, with dip
- Bedding, vertical
- Cleavage, with dip
- Cleavage, vertical

QUATERNARY

Glacial moraine, alluvium

ORDOVICIAN

Gordon Limestone

Owen Conglomerate

CAMBRIAN

T — Jukes Formation
Hematitic volcaniclastic sandstone and minor hematitic tuffs

Dora Conglomerate
Volcaniclastic boulder conglomerate and minor volcaniclastic sandstone

CAMBRIAN

Quartz crystal-vitric tuffs

Felsic lavas
rhyolite-dacite

Crystal-lithic and lithic-crystal tuffs, grading to agglomerate locally

Quartz-feldspar crystal tuff

LOWER CAMBRIAN

Quartz sandstone, pebble conglomerates, shales

INTRUSIVES

Quartz-feldspar porphyry

Feldspar-hornblende porphyry

Coarse-grained granodiorite

Data sources : Hutton, 1981
Brophy, 1981
Airphotos: F301, Queenstown 1972
8/16-20, 9/51-59. 1:18,000

914153

5 cm

81-1660

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

E.L.9/66
SPICER GRID
GEOLOGY

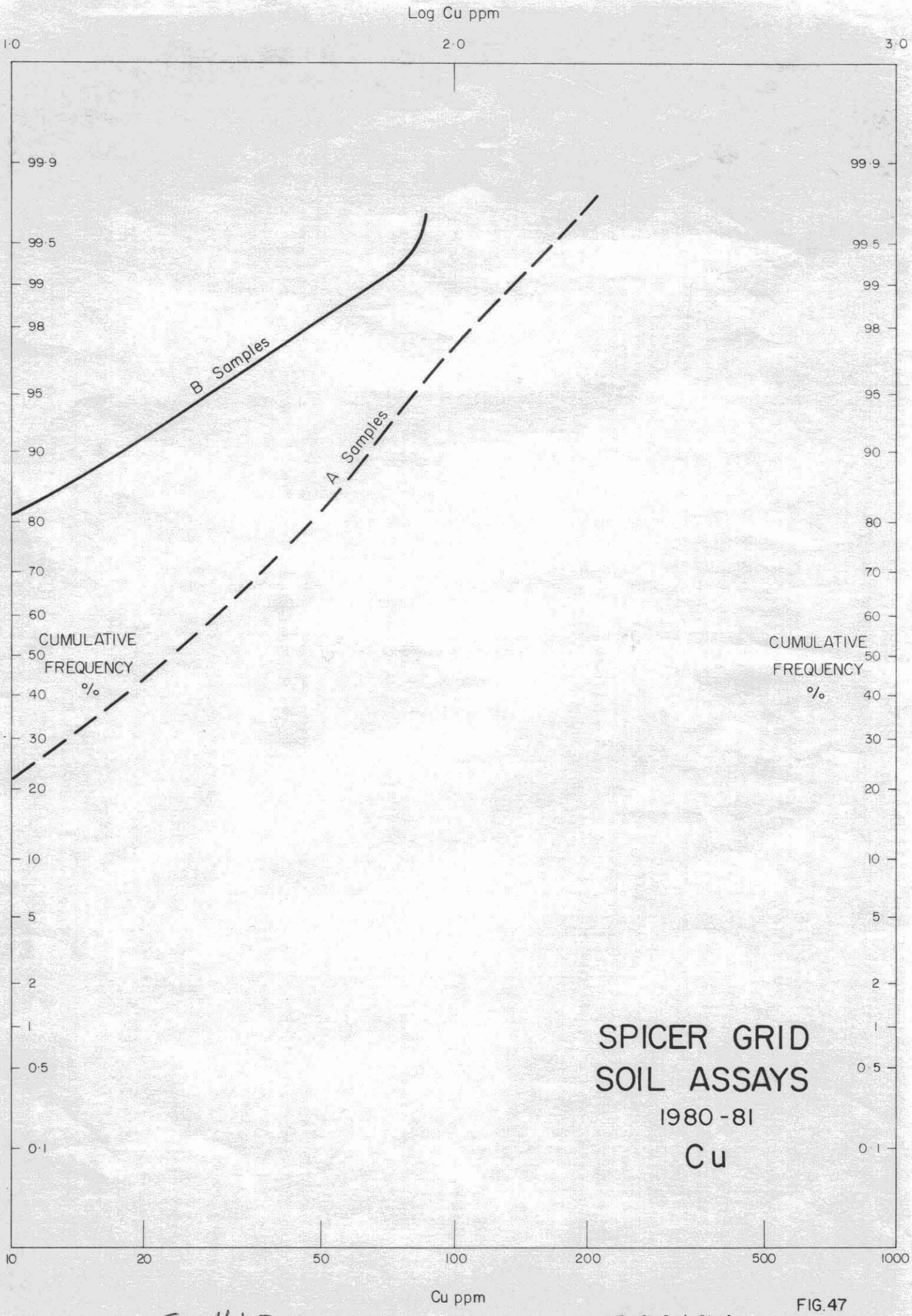
REVISIONS

FIG 46

SCALE 1:5000 — DRAWN BY M.H.

DATE — DRAFTSMAN H.D.J

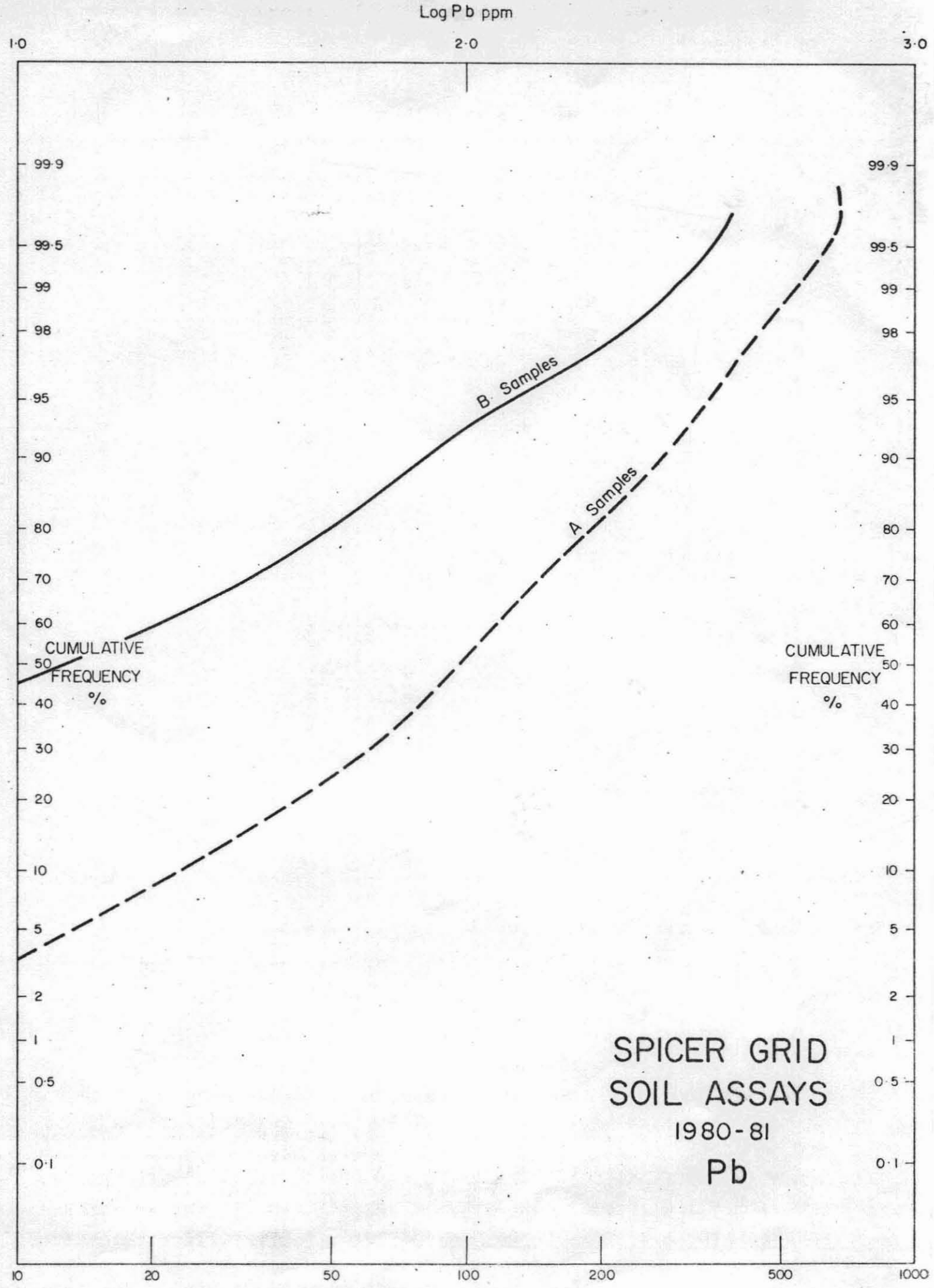
A1-177-1



81-1660

914154

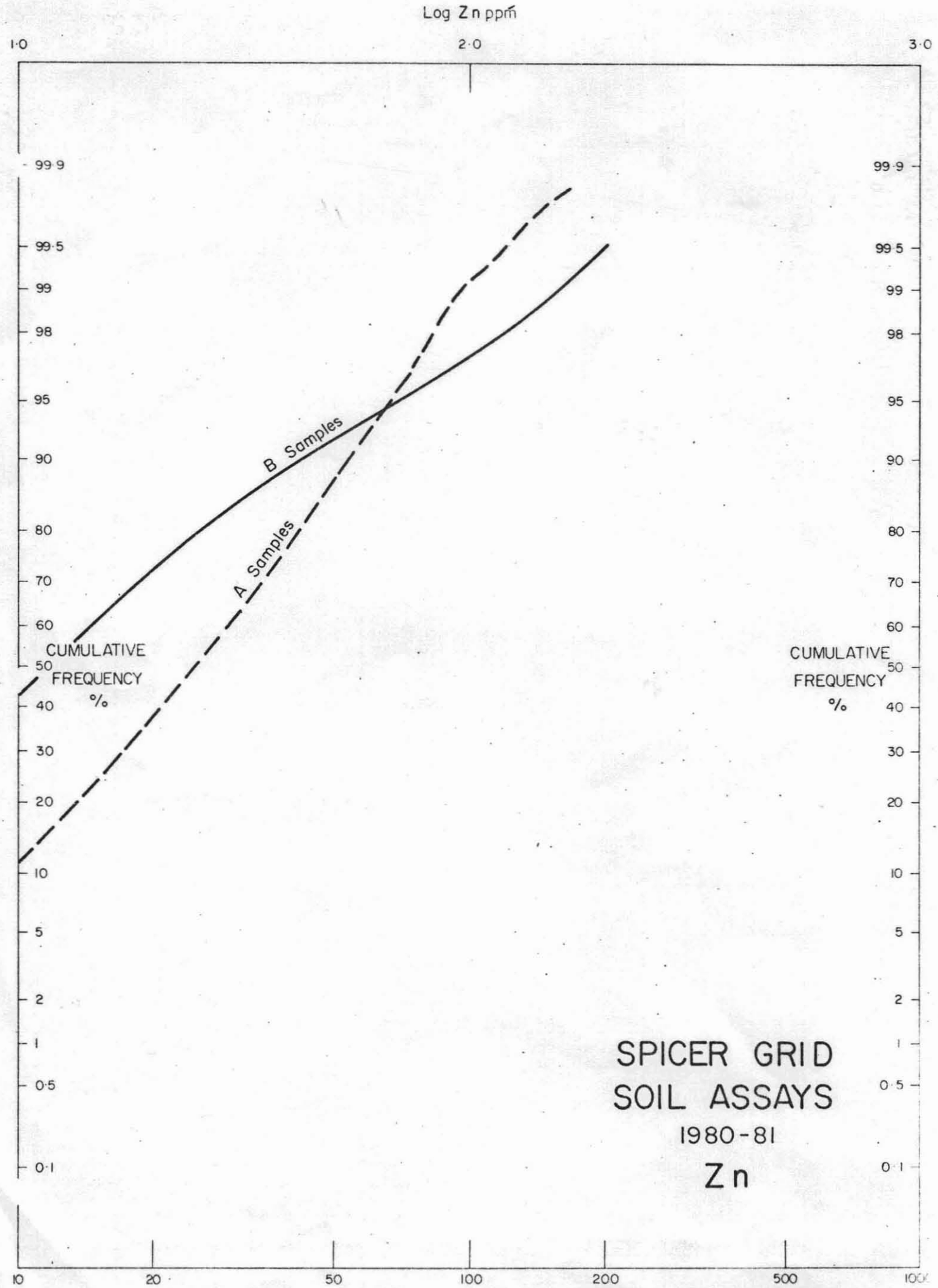
FIG. 47
A4-163-3



81-1660

914155

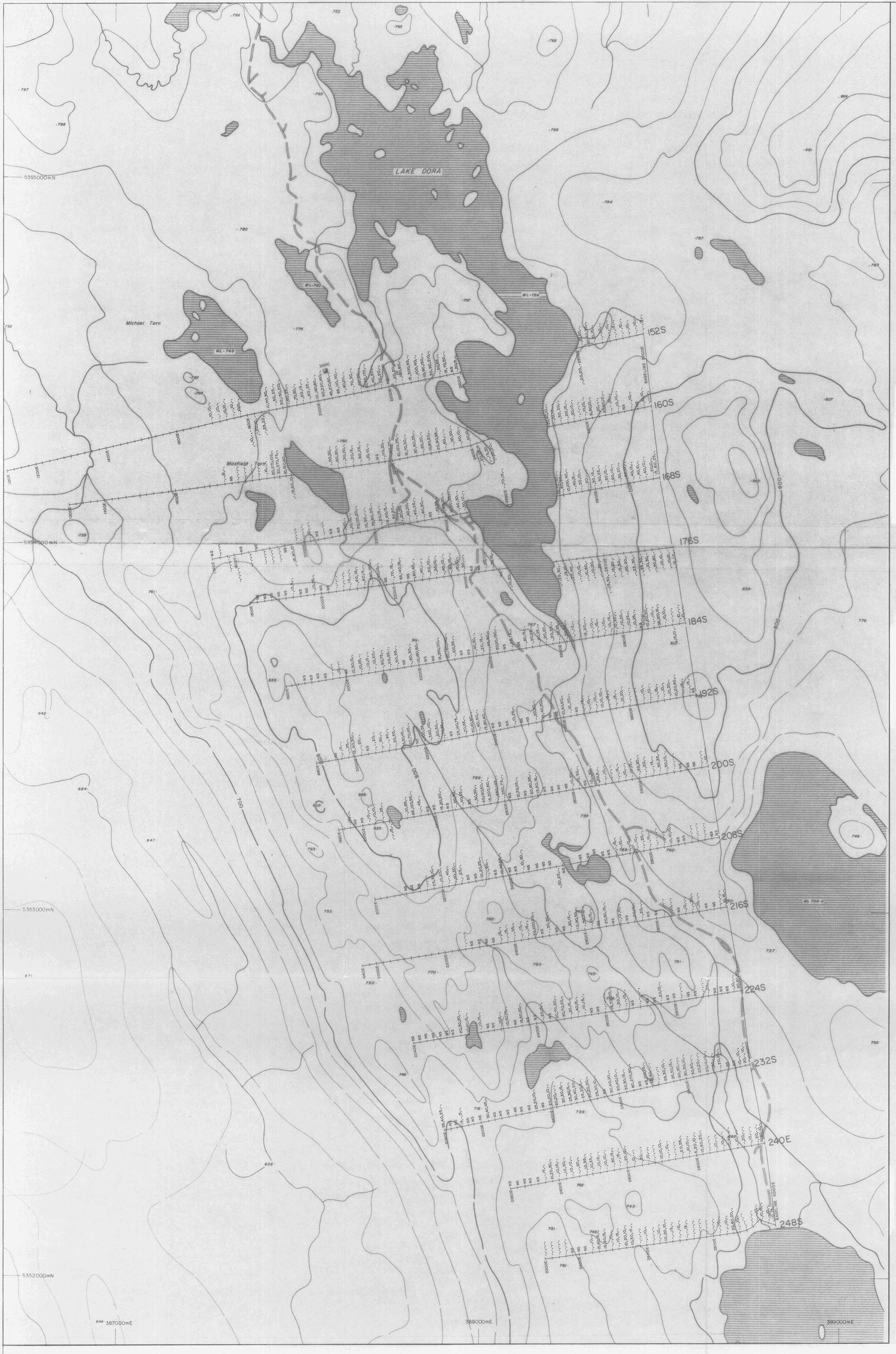
FIG. 48
A4-163-1



81-1660

914156

FIG 49
A4-163-2



SOIL GEOCHEMISTRY DATA

Cu, Pb, Zn, Ag, Mn, Co, Ba, Fe

Assays listed in order reading away from sample point

- = below dectection point

/ = not assayed

NS= not sampled

Samples assayed at Mt Lyell by AAS, -80 ## fraction

Detection limits Cu, Pb, Zn, Mn, Co, Fe, < 10ppm

Ag: < 2ppm

Ba: < 100ppm

5 cm

81-1660 914157

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

E.L.9/66
SPICER GRID
SOIL GEOCHEMISTRY
-80#, 1980-81 ASSAYS
B/C HORIZONS

REVISIONS

FIG. 50

SCALE 1:5000 | DRAWN BY M.H.

DATE 5th November 1981 | DRAUGHTSMAN H.B.J.

A1-177-3



Survey by Scintrex Pty Ltd, February, 1981

Magnetometers: Geometrics G816
Scintrex MP-2

Base station: Rolleston camp

Station intervals: 5m - 20m

Line profiles of corrected data smoothed by hand and contoured by M. Hutton

Gammas

	> 63800
	63400 - 63800
	63000 - 63400
	62600 - 63000
	< 62600

5 cm

81-1660 914158

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

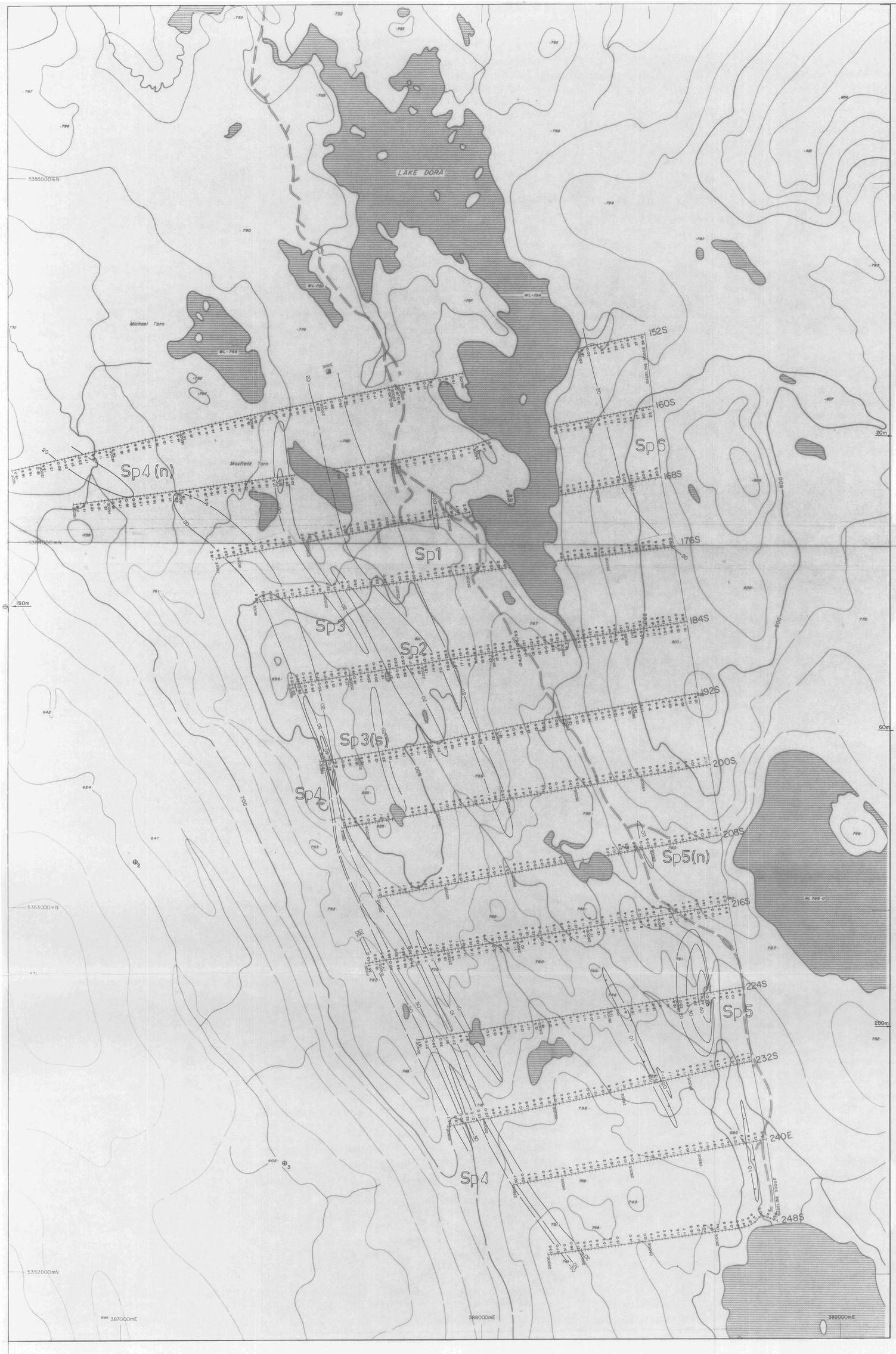
E.L.9/66
SPICER GRID
GROUND MAGNETICS
SMOOTHED CONTOUR PLAN
1980-81 SURVEY

SCALE 1:5000	DRAWN BY M.H.
DATE 5th November 1981	DRAFTSMAN H.D.J.

REVISIONS

FIG: 51

A1 - 177 - 6



Survey by Scintrex Pty Ltd, Dec, 1980 - Jan 1981

Transmitter: Scintrex 2·5/3 kw time domain I.P. transmitter

Receivers: Scintrex IPR-8 I.P. receivers.

Receiver dipole: 20 m

Station interval: 20 m

Chargeability: M32 slice of normalised decay curve 650-1170ms after shut off.

⊕3 Electrode position with array number

mV/V

	> 40
	30-40
	20-30
	10-20
	< 10

CONTOUR INTERVAL 10mV/V

Sp1 ANOMALY NUMBER

914159

81-1660

5 cm

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

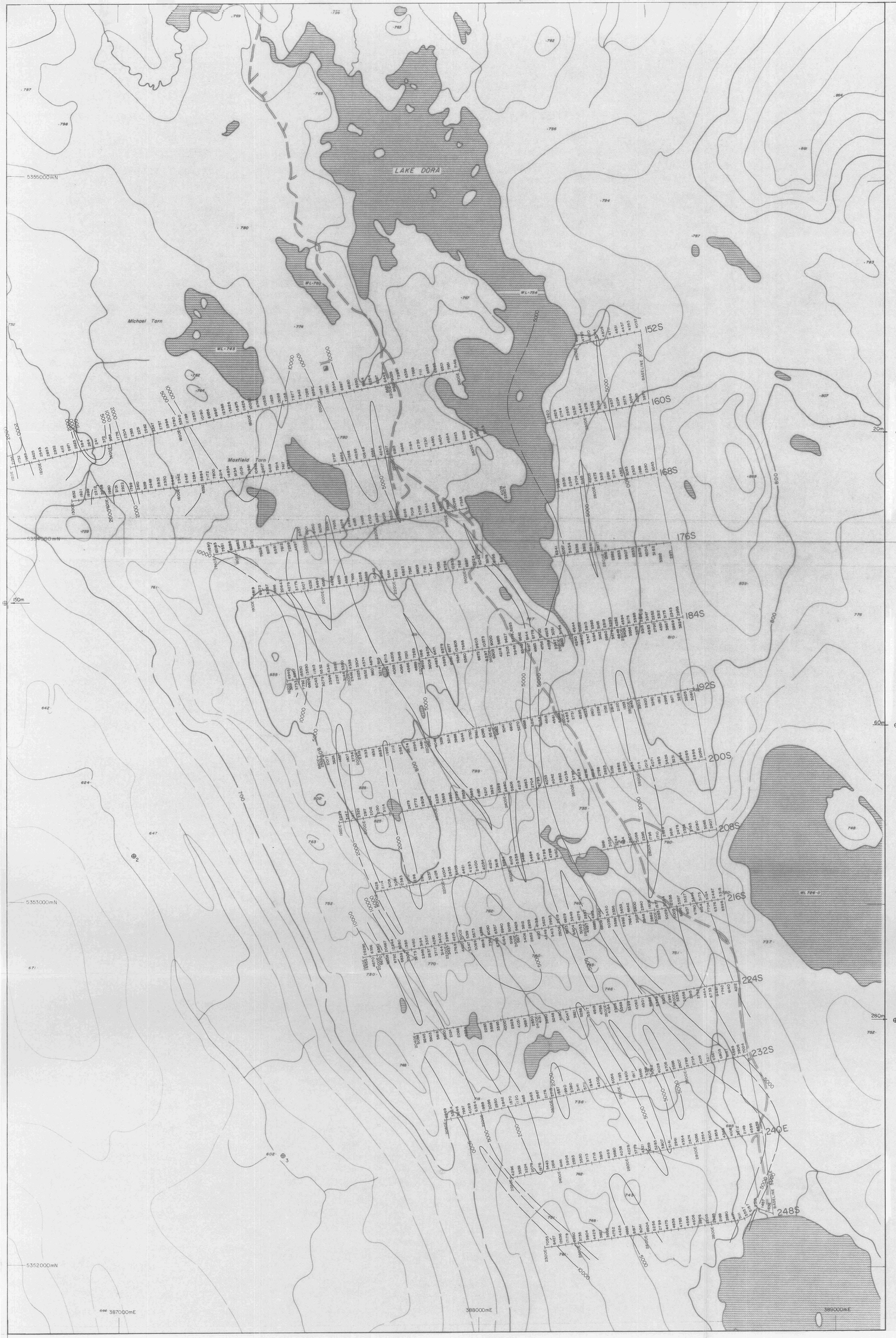
E.L.9/66
SPICER GRID
GRADIENT ARRAY I.P.
CHARGEABILITY
1980-81 SURVEY

REVISIONS

FIG. 52

SCALE 1:5000 | DRAWN BY M.H. | DATE 5th November 1981 | DRAFTSMAN H.D.J.

A1-177-4



Survey by Scintrex Pty Ltd, Dec. 1980 – Jan, 1981

Transmitter: Scintrex 2·5/3 kw time domain I.P. transmitter

Receivers: Scintrex IPR-8 I.P. receivers.

Receiver dipole: 20 m

Station interval: 20 m

Resistivity: Logarithmic contours in ohm-metres

$\oplus_3$ Electrode position with array number

ohm-metres

- > 10 000
- 5000 – 10000
- 2000 – 5000
- 1000 – 2000
- 500 – 1000
- < 500

5 cm

914160

81-1660

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

E.L.9/66
SPICER GRID
GRADIENT ARRAY I.P. RESISTIVITY

1980-81 SURVEY

SCALE 1:5000

DRAWN BY M.H.

DATE 11th November 1981

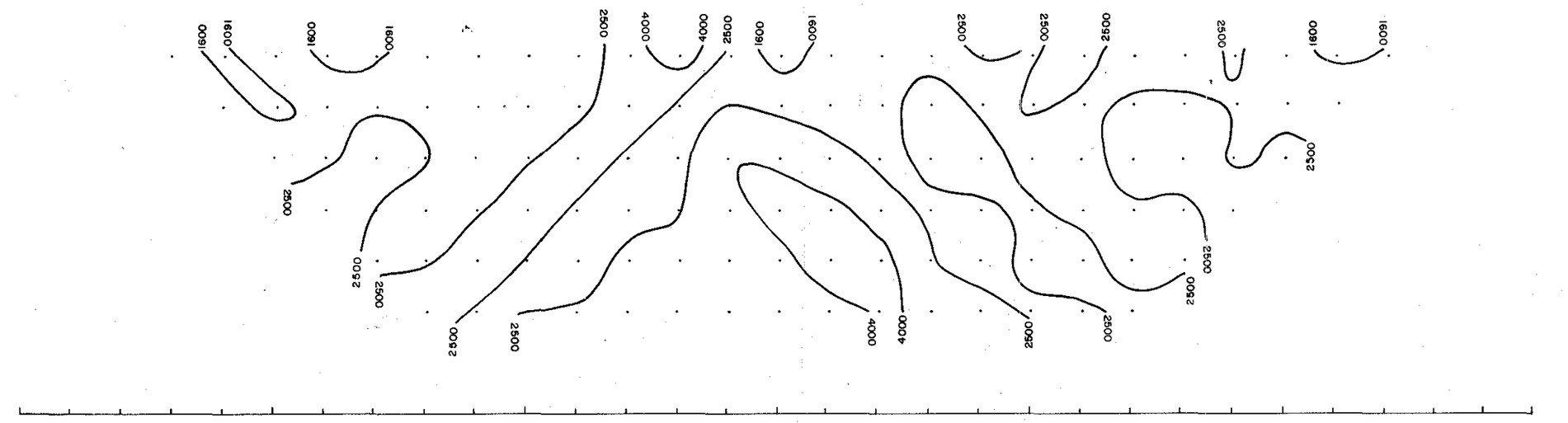
DRAUGHTSMAN H.O.J.

REVISIONS

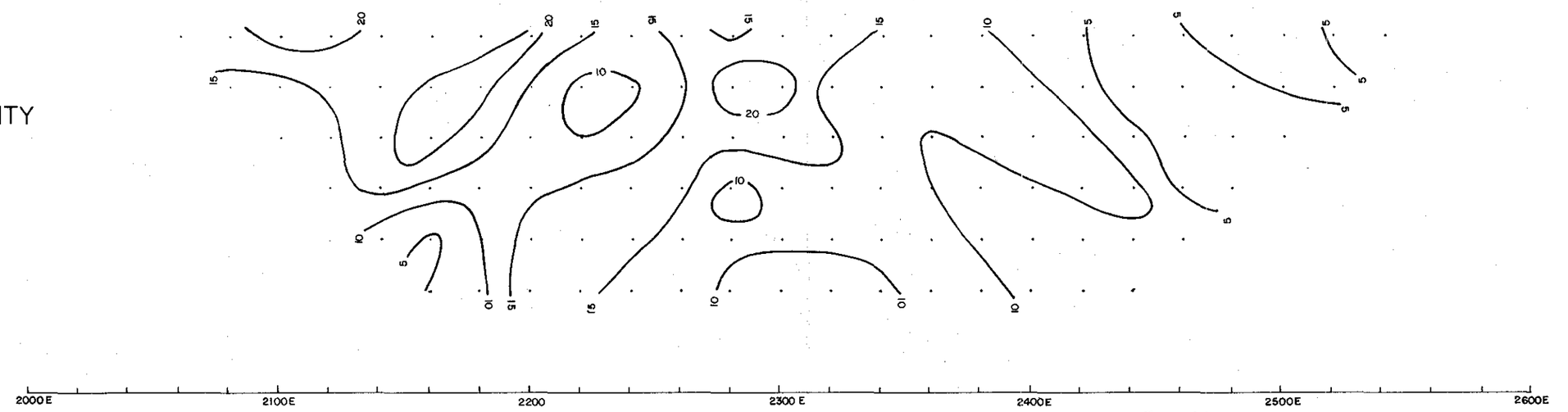
FIG 53

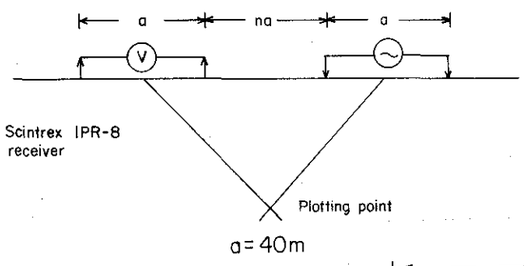
A1 – 177 – 5

RESISTIVITY
ohm-metres



CHARGEABILITY
mV/V





5 cm

Survey date 12-22-23, April, 1981

Survey by Scintrex Pty Ltd

RESISTIVITY
ohm-metres

>4000
1000-4000
400-1000
250-400
<250

Logarithmic contour interval

CHARGEABILITY
mV/V

>100
80-100
60-80
40-60
20-40

Contour interval 5mV/V

81-1669

914161

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD

SPICER GRID
DIPOLE-DIPOLE I.P.
PSEUDOSECTIONS
LINE 192S, 2000m-2600mE

REVISIONS

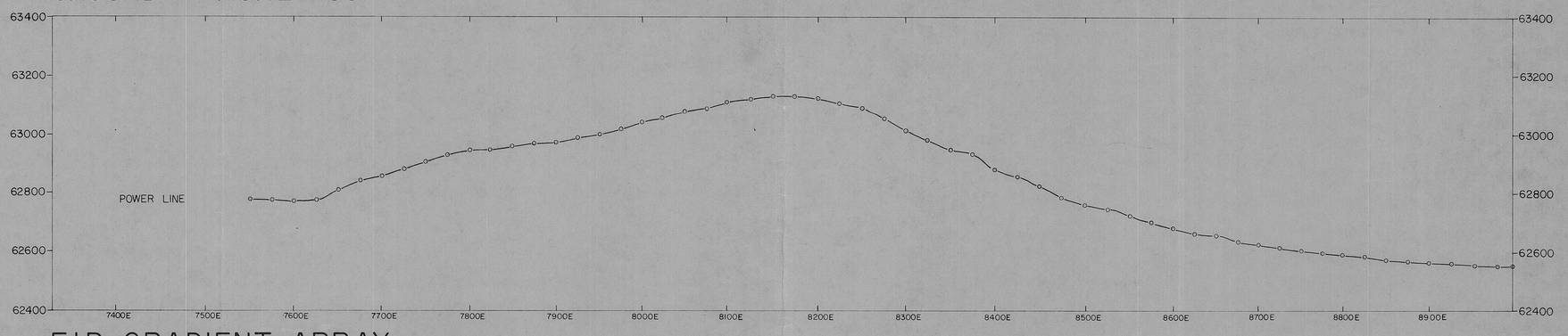
FIG. 54

SCALE 1:2000 | DRAWN BY M.J.H.

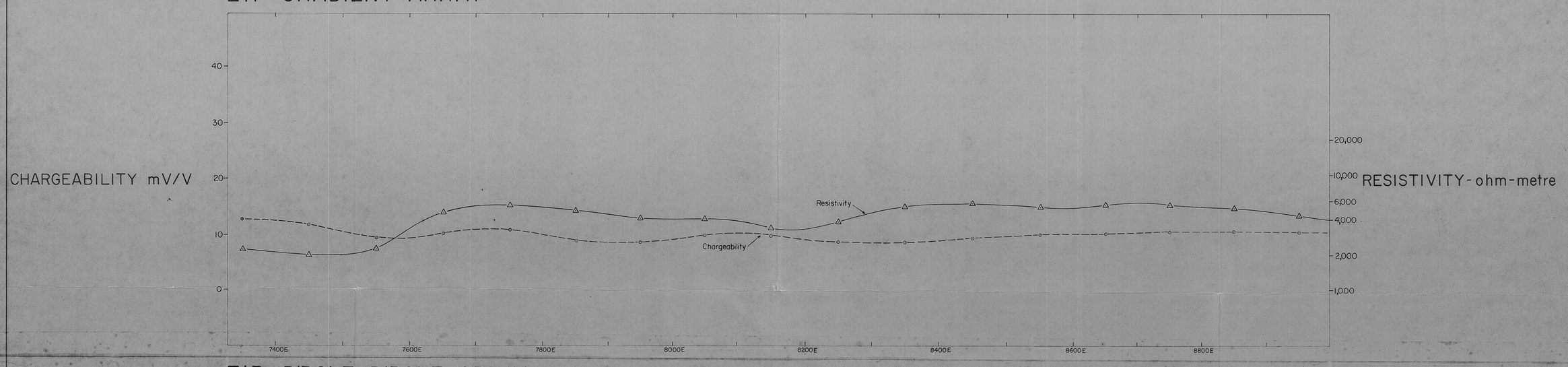
DATE 30-9-81 | DRAUGHTSMAN P.J.R.

A3-165-3

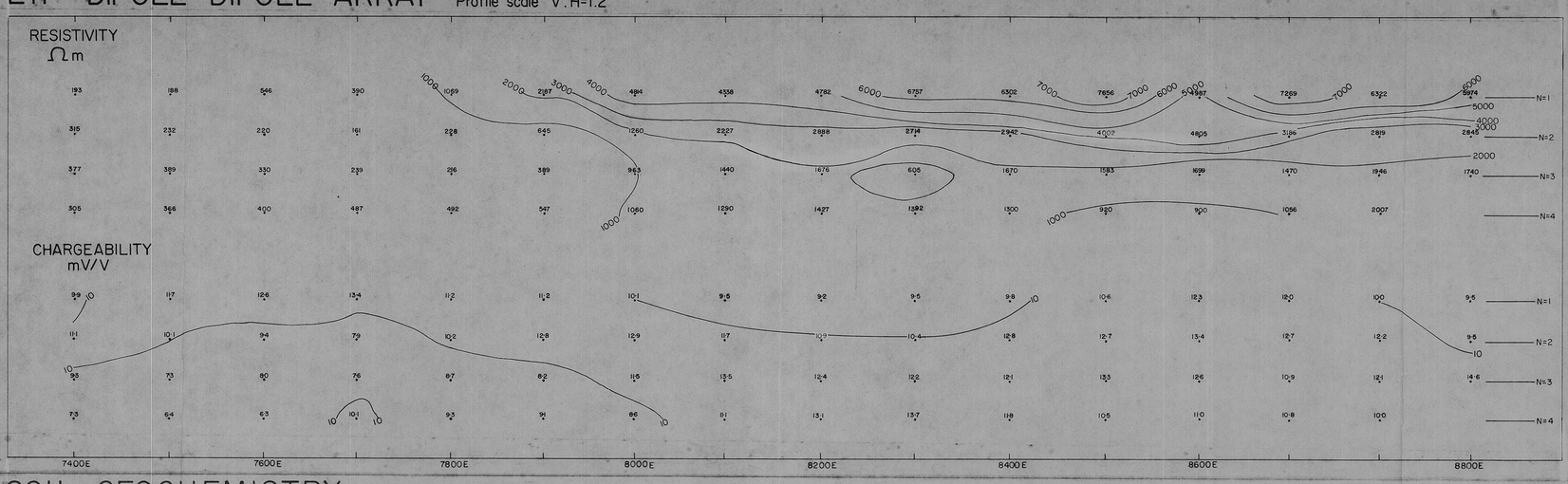
GROUND MAGNETICS



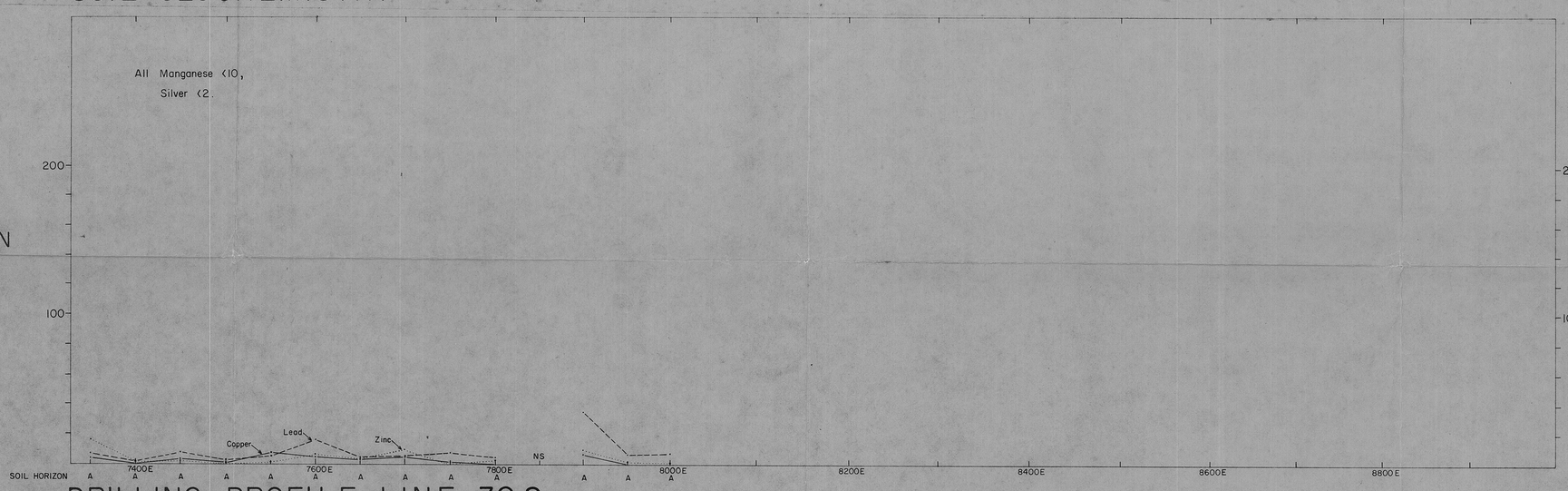
EIP GRADIENT ARRAY



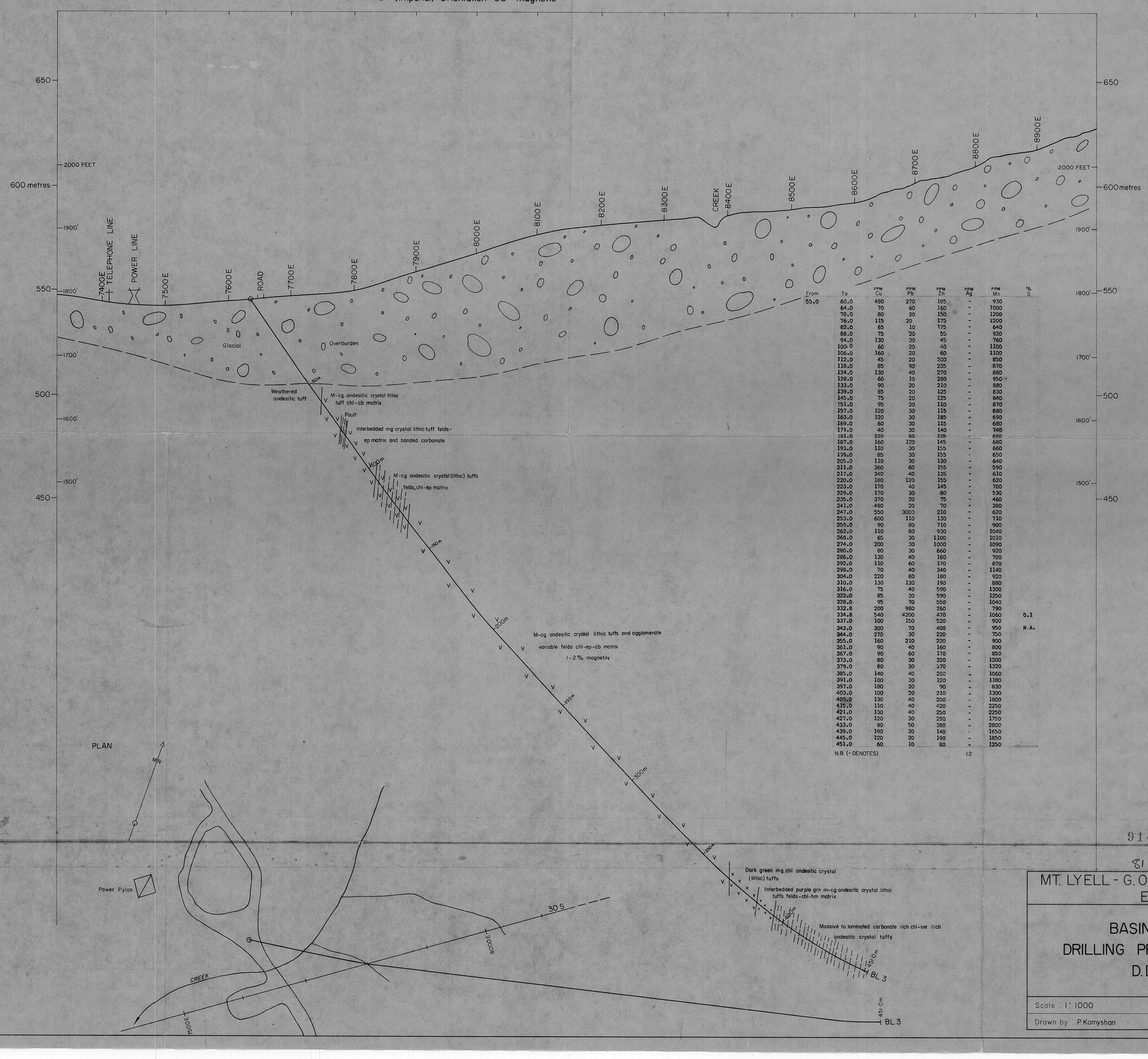
EIP DIPOLE-DIPOLE ARRAY Profile scale V:H=1:2



SOIL GEOCHEMISTRY



DRILLING PROFILE LINE 30 S (imperial) Orientation 65° magnetic



From	To	PPM Cu	PPM Pb	PPM Zn	PPM Ag	PPM Mn	% S
55.0	60.0	490	270	185	-	930	
	64.0	70	60	160	-	1000	
	70.0	80	20	150	-	1200	
	76.0	115	20	175	-	1200	
	82.0	65	10	175	-	640	
	88.0	75	20	55	-	920	
	94.0	130	30	45	-	760	
	100.0	60	20	40	-	1100	
	106.0	160	20	60	-	1100	
	112.0	45	20	200	-	850	
	118.0	85	90	235	-	870	
	124.0	130	40	270	-	860	
	128.0	60	10	280	-	950	
	133.0	90	20	210	-	880	
	139.0	85	20	125	-	830	
	145.0	75	20	125	-	840	
	151.0	95	20	110	-	870	
	157.0	120	30	115	-	880	
	163.0	120	30	185	-	690	
	169.0	60	30	115	-	680	
	175.0	40	30	140	-	740	
	181.0	220	80	125	-	680	
	187.0	160	120	145	-	680	
	193.0	110	30	155	-	660	
	199.0	85	30	155	-	650	
	205.0	110	30	130	-	640	
	211.0	360	60	155	-	590	
	217.0	340	40	135	-	610	
	220.0	180	120	155	-	620	
	223.0	170	40	145	-	700	
	229.0	170	30	80	-	530	
	235.0	370	20	75	-	460	
	241.0	490	20	70	-	380	
	247.0	550	3000	210	-	620	
	253.0	600	110	130	-	710	
	259.0	90	80	710	-	900	
	262.0	110	80	930	-	1040	
	268.0	65	30	1100	-	1010	
	274.0	200	30	1000	-	1090	
	280.0	80	30	660	-	920	
	286.0	130	40	180	-	700	
	292.0	110	60	170	-	870	
	298.0	70	40	340	-	1140	
	304.0	220	80	180	-	920	
	310.0	130	130	190	-	880	
	316.0	75	40	590	-	1300	
	322.0	85	30	590	-	1250	
	328.0	95	70	550	-	1040	
	332.8	200	980	260	-	790	
	334.8	540	4200	470	-	1060	0.1
	337.0	100	150	520	-	900	
	343.0	300	70	400	-	950	N.A.
	344.0	270	30	220	-	750	
	355.0	160	210	220	-	900	
	361.0	90	40	160	-	800	
	367.0	90	60	170	-	850	
	373.0	80	30	320	-	1200	
	379.0	80	30	370	-	1320	
	385.0	140	40	200	-	1060	
	391.0	100	30	120	-	1180	
	397.0	180	20	90	-	830	
	403.0	100	20	210	-	1300	
	409.0	130	40	200	-	1800	
	415.0	110	40	420	-	2250	
	421.0	130	40	250	-	2250	
	427.0	120	30	280	-	1750	
	433.0	90	50	380	-	2800	
	439.0	190	30	140	-	1650	
	445.0	120	30	190	-	1850	
	451.0	60	10	80	-	1250	

N.B. (- DENOTES) <2

PLAN

914162

81-1660

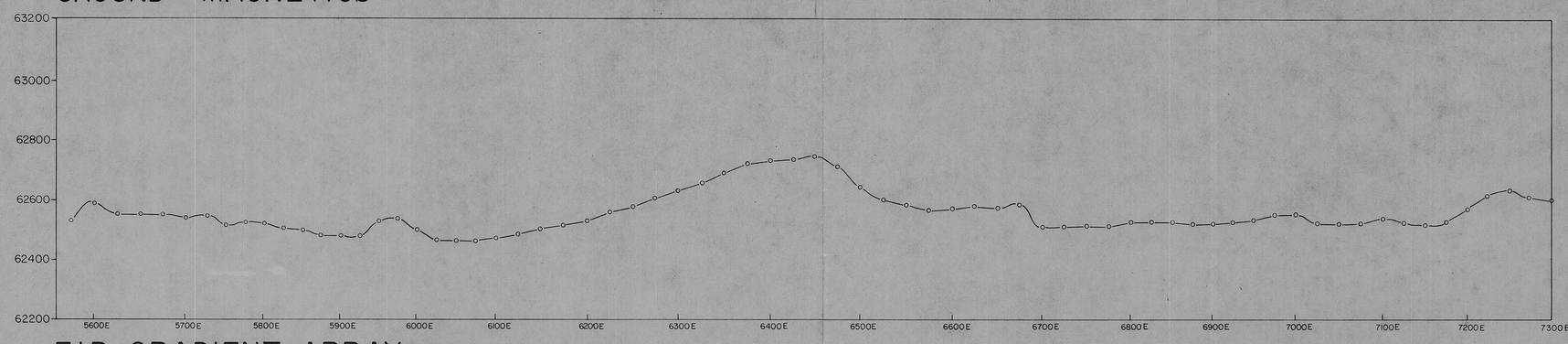
5 cm

MT. LYELL - G.O.D.L. JOINT VENTURE E.L. 9/66	Revision
BASIN LAKE GRID DRILLING PROFILE LINE 30 S D.D.H. BL 3	
Scale : 1" 1000	Date : 31 - 3 - 1981
Drawn by : P. Komyshan	Draftsman: P. J. R
	Map Number 19/504

FIG. 55

GROUND MAGNETICS

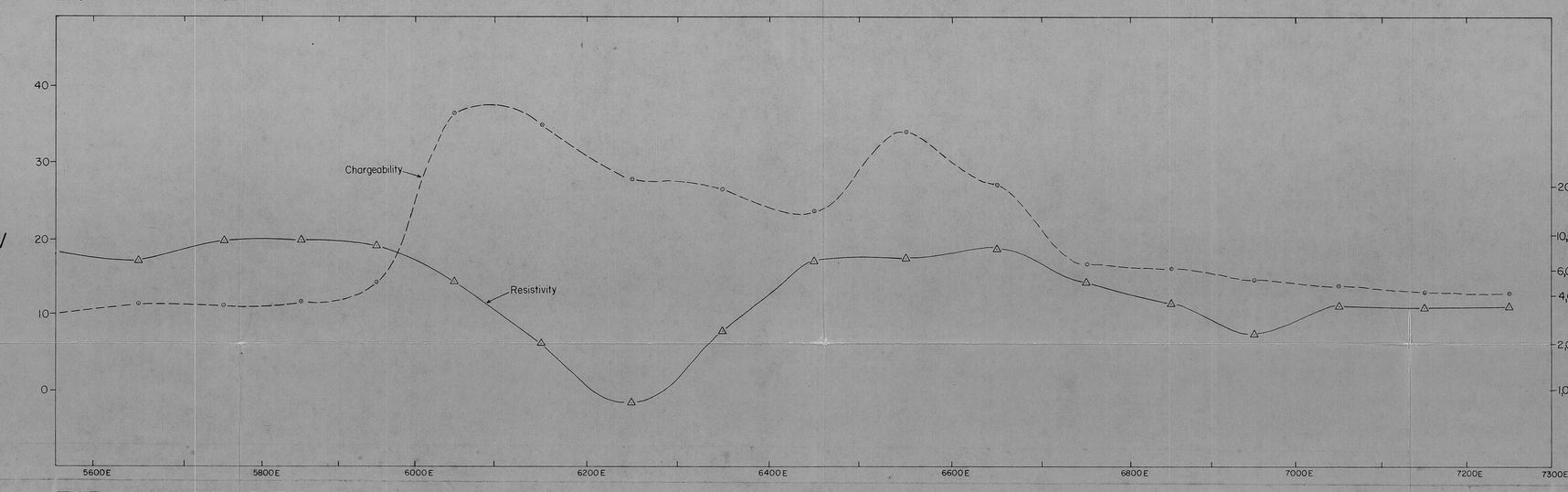
GAMMAS



GAMMAS

EIP GRADIENT ARRAY

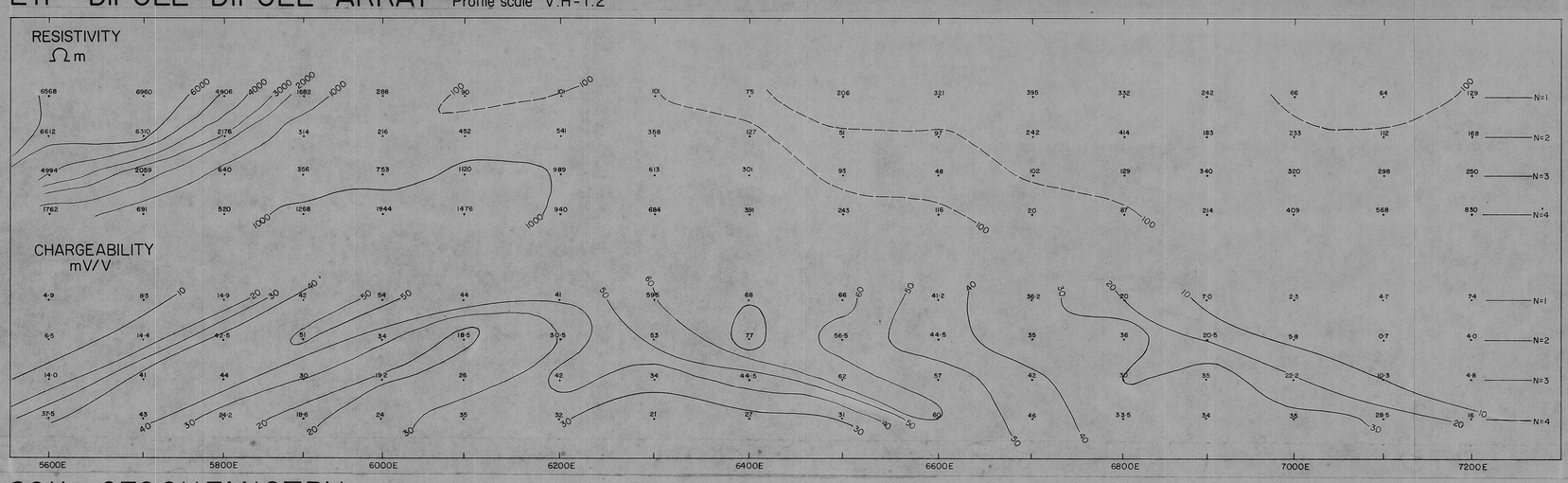
CHARGEABILITY mV/V



20,000
10,000
6,000
4,000
2,000
1,000

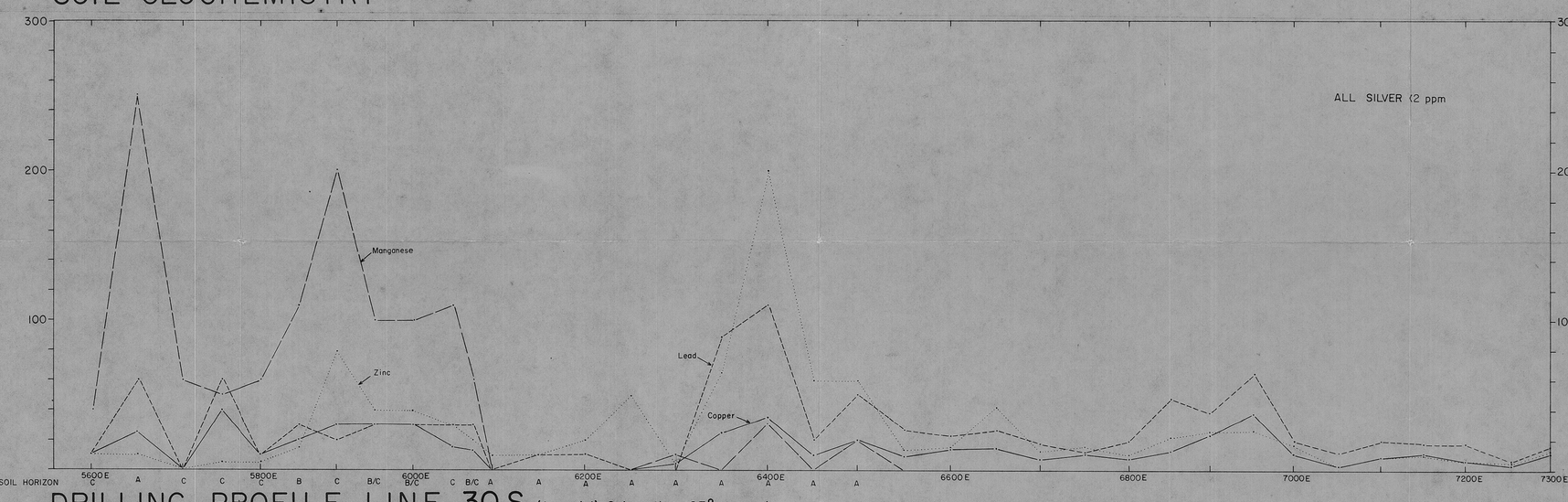
RESISTIVITY ohm-metre

EIP DIPOLE-DIPOLE ARRAY Profile scale V:H = 1:2



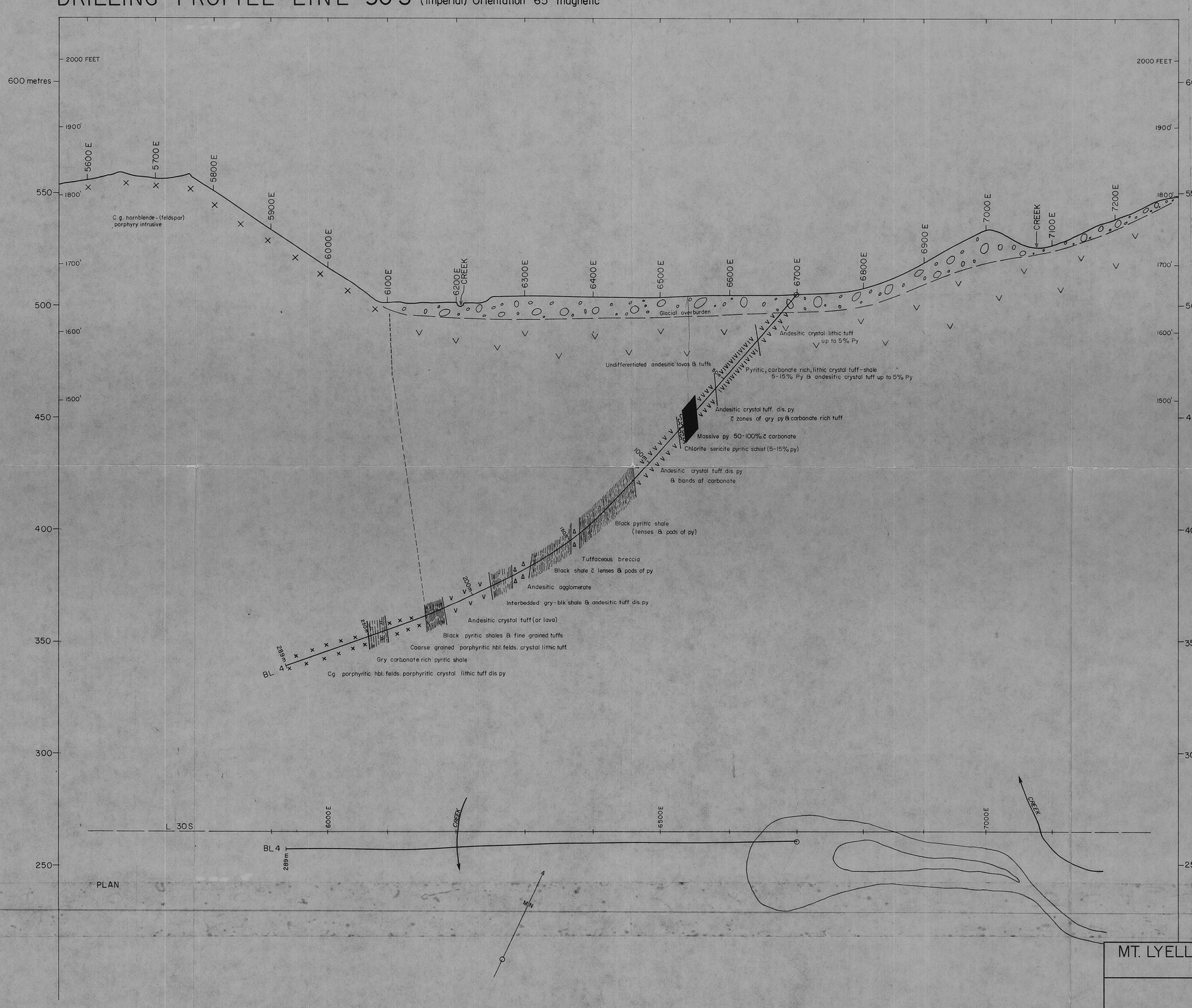
SOIL GEOCHEMISTRY

COPPER - LEAD - ZINC
MANGANESE
PARTS PER MILLION



PARTS PER MILLION

DRILLING PROFILE LINE 30 S (Imperial) Orientation 65° magnetic



BL 4 ASSAY DATA

FROM	TO	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Mn ppm	%S	%Fe by Calculated
9.6	10.8m	160	80	230	4.2	1100	0.3	0.5
	12.5	210	130	220	-	920	1.0	1.8
	14.0	110	130	230	-	630	2.5	4.6
	15.6	140	200	320	-	420	3.8	5.2
	17.0	100	70	270	-	450	2.9	5.4
	18.5	110	80	270	-	530	4.5	8.4
	20.0	120	140	440	-	840	4.9	9.1
	21.9	70	140	970	-	810	2.9	5.3
	23.5	50	50	90	-	370	1.9	3.5
	25.0	70	20	140	-	350	0.8	1.3
	27.0	200	20	180	-	630	1.1	2.0
	28.5	150	190	20	-	80	4.8	9.0
	30.0	140	30	80	-	300	2.8	5.2
	31.5	70	30	70	-	230	2.6	4.8
	33.5	130	60	20	-	70	4.8	9.0
	35.1	110	20	190	-	930	1.0	1.8
	36.3	130	30	10	-	60	4.0	7.5
	38.0	150	20	100	-	400	1.9	3.5
	39.1	110	70	410	-	10	3.6	6.7
	39.8	50	10	120	-	460	0.3	0.5
	40.5	80	10	80	-	220	1.9	3.5
	43.0	130	40	50	-	100	3.0	5.6
	44.0	60	10	140	-	300	1.3	2.4
	46.0	100	30	30	-	90	3.6	6.7
	48.4	50	10	100	-	870	0.3	0.5
	49.2	70	50	30	-	210	4.4	8.2
	51.7	40	10	80	-	550	0.7	1.3
	53.2	100	90	10	-	30	6.0	11.2
	55.1	100	60	140	-	100	5.1	9.5
	56.3	110	30	170	-	850	2.8	5.2
	58.0	90	100	160	-	650	3.5	6.5
	59.5	100	110	130	-	550	3.6	6.7
	61.0	160	90	100	-	310	5.0	9.3
	62.5	120	20	90	-	360	3.5	6.5
	64.0	210	30	90	-	240	3.5	6.5
	65.5	610	70	20	3	410	9.1	16.9
	67.0	600	350	50	7	160	10.0	18.6
	68.3	50	90	10	4.2	160	7.7	14.4
	70.0	440	20	50	5	410	39.9	74.6
	71.6	130	410	20	8	30	17.8	33.3
	72.9	80	330	20	4	30	4.9	9.1
	74.5	80	430	10	3	30	4.7	8.8
	76.0	80	530	10	3	40	7.9	14.8
	77.1	100	620	150	6	20	5.0	9.3
	78.5	740	60	170	13	30	4.6	-
	80.0	250	180	40	6	20	1.6	-
	81.2	390	1800	100	7	120	1.8	-
	83.0	120	80	270	-	1050	0.1	-
	84.5	100	310	390	-	1150	0.1	-
	86.0	80	120	180	-	860	-	-
	87.5	90	430	160	-	910	0.2	-
	89.0	70	170	170	-	940	-	-
	91.0	60	320	150	-	1000	0.2	-
	93.0	30	90	160	-	840	-	-
	95.0	50	150	140	-	750	1.0	-
	97.0	60	160	120	-	780	1.2	-
	98.6	70	290	430	-	700	1.4	-
	99.5	70	70	40	-	580	2.0	-
	101.0	90	40	50	-	600	0.2	-
	103.0	40	40	50	-	530	0.1	-
	106.0	50	40	50	-	630	0.1	-
	109.0	60	30	50	-	690	-	-
	112.2	60	10	40	-	760	0.1	-
	113.5	90	50	80	-	410	1.5	-
	116.8	110	50	90	-	360	2.0	-
	117.4	100	10	50	-	600	0.8	-
	119.0	90	40	70	-	320	1.7	-
	120.0	40	40	150	-	300	1.3	-
	121.8	120	30	70	-	960	0.4	-
	124.5	100	40	90	-	400	1.9	-
	127.1	90	20	70	-	940	0.7	-
	129.0	70	40	90	-	580	0.8	-
	131.4	80	50	100	-	380	1.6	-
	134.0	80	10	60	-	850	0.1	-
	136.0	100	20	80	-	840	0.3	-
	138.0	90	30	60	-	790	0.4	-
	140.4	70	160	70	-	750	1.5	-
	142.6	80	80	120	-	420	2.4	-
	145.0	80	20	60	-	880	1.7	-
	148.0	90	30	60	-	810	1.2	-
	150.2	70	20	60	-	1000	2.3	-
	152.0	40	60	110	-	400	2.7	-
	154.0	70	90	110	-	570	1.8	-
	156.0	60	80	110	-	450	2.4	-
	158.0	90	90	100	-	450	1.5	-
	160.0	90	80	100	-	440	2.4	-
	162.0	50	100	110	-	440	1.8	-
	164.0	50	80	110	-	450	2.1	-
	166.0	70	80	110	-	470	2.3	-
	168.0	60	90	110	-	470	1.6	-
	171.2	80	80	100	-	460	1.9	-
	174.0	70	50	70	-	830	1.3	-
	177.0	110	40	60	-	1000	0.1	-
	180.0	120	30	60	-	790	-	-
	182.0	100	20	60	-	740	-	-
	185.5	130	20	60	-	750	0.2	-
	186.8	50	60	40	-	350	0.7	-
	188.8	90	30	60	-	740	0.2	-
	190.8	90	20	60	-	780	-	-
	192.7	90	80	110	-	440	1.6	-
	196.0	60	30	50	-	640	-	-
	199.0	60	20	50	-	500	-	-
	202.0	60	30	40	-	500	-	-
	205.0	90	30	40	-	500	-	-
	208.0	170	10	45	-	560	0.1	-
	211.0	140	10	60	-	710	-	-
	214.0	70	20	60	-	930	-	-
	216.5	60	40	80	-	560	1.3	-
	218.5	70	50	130	-	650	2.2	-
	221.0	90	30	70	-	810	1.0	-
	223.0	1600	400	740	2	1250	2.8	-
	225.6	340	90	160	-	510	1.4	-
	229.0	80	10	45	-	630	0.2	-
	232.0	40	-	30	-	790	0.3	-
	235.0	40	-	30	-	700	-	-
	238.0	50	10	35	-	620	0.1	-
	241.0	50	10	30	-	530	0.5	-
	244.0	80	10	40	-	600	0.6	-
	247.0	50	10	60	-	800	1.1	-
	250.0	50	-	40	-	580	1.0	-
	253.0	40	-	40	-	500	0.1	-
	256.0	30	-	30	-	500	-	-
	259.0	120	30	45	-	540	0.1	-
	262.0	80	-	40	-	500	-	-
	265.0	80	10	45	-	530	0.1	-
	268.0	60	10	45	-	570	-	-
	271.0	70	-	30	-	580	-	-
	274.0	90	10	40	-	500	-	-
	277.0	130	-	40	-	520	-	-
	280.0	250	10	40	-	670	0.2	-
	283.0	80	10	40	-	500	0.4	-
	286.0	130	-	50	-	500	0.5	-
	289.0	50	30	150	-	700	0.1	-
Detection Limits		10	10	10	2	10	0.1	

9.6 - 256.0m: 100% sampled, assays by A.R.S.-Mount Lyell.
256.0 - 289.0m: 50% sampled, assays by A.R.S.- Mount Lyell.

5 cm

MT. LYELL - G.O.D.L. JOINT VENTURE
E.L. 9/66

914163

BASIN LAKE GRID
DRILLING PROFILE LINE 30 S
D.D.H. BL 4

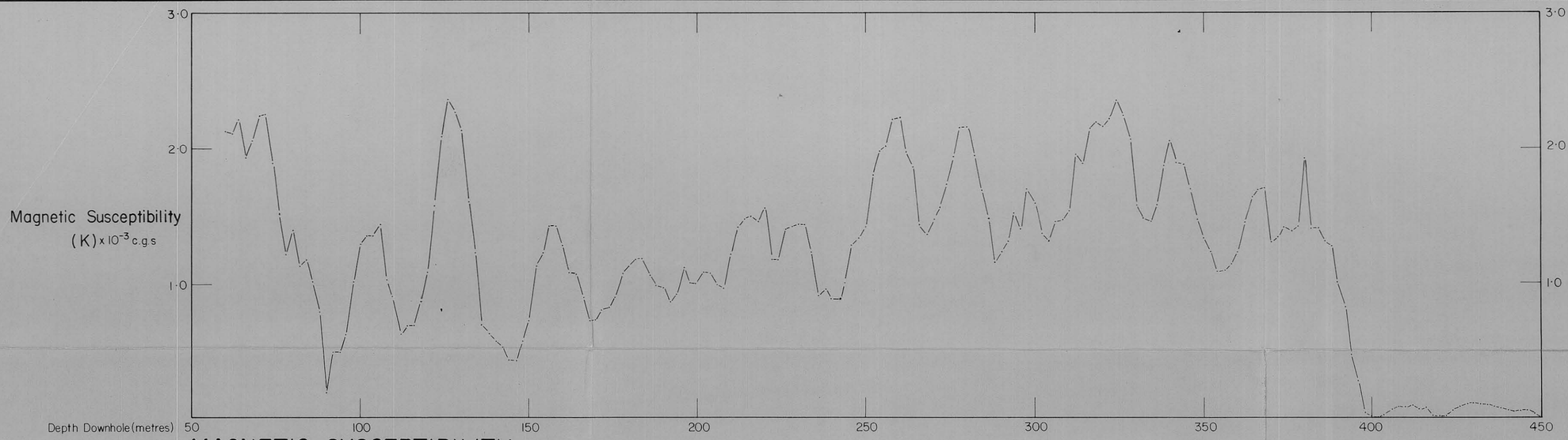
81-1660

Revision

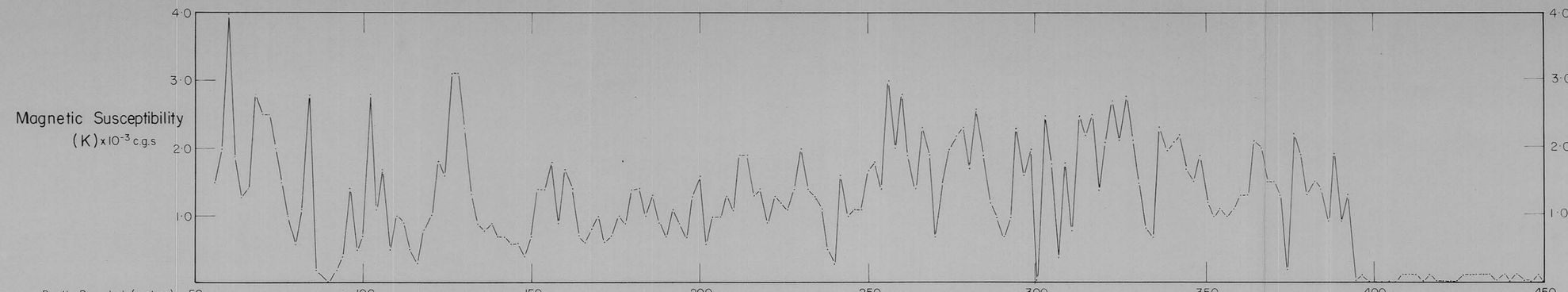
Scale : 1: 1000
Date : 31-3-1981
Drawn by : P. Komyshan
Draftsman: P.J.R.

Map Number:
19/505

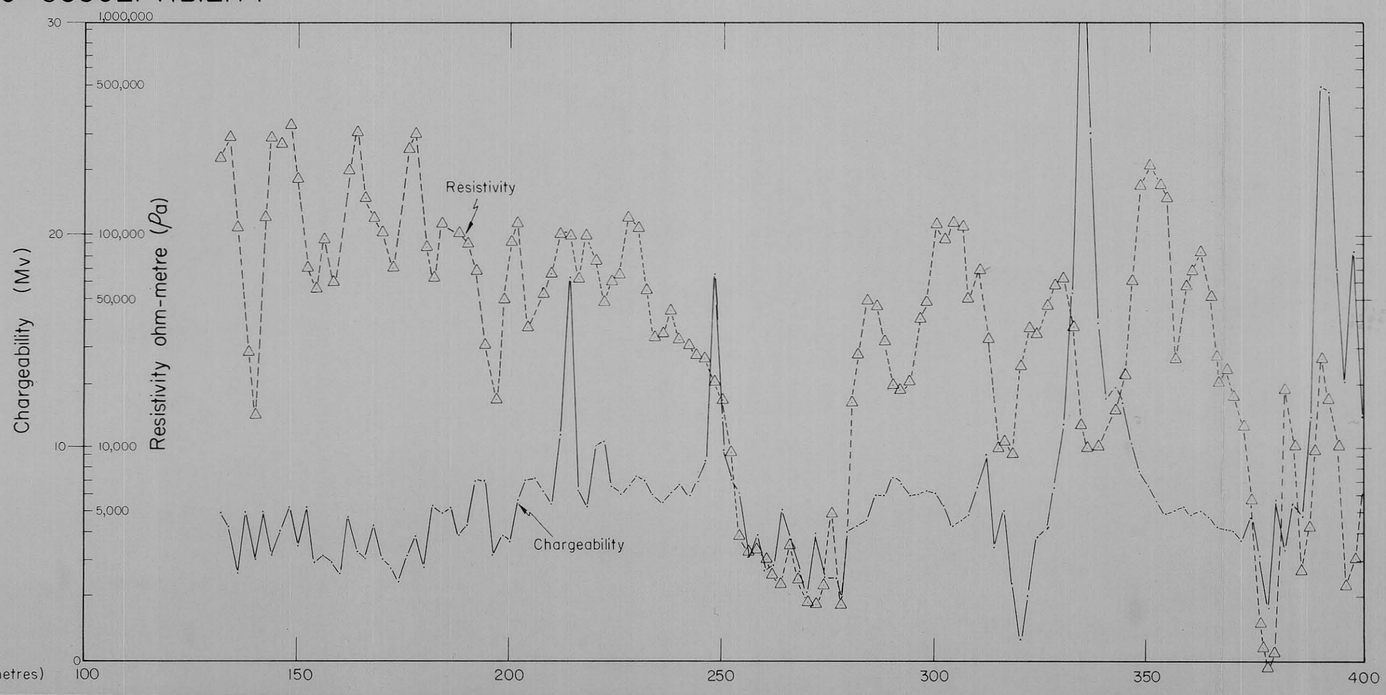
FIG. 56



MAGNETIC SUSCEPTIBILITY - (Average over 5 readings)



MAGNETIC SUSCEPTIBILITY



DOWNHOLE - 3 ARRAY I. P.

5 cm

914164

81-1660

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

BASIN LAKE

DDH-BL3

MAGNETIC SUSCEPTIBILITY (Average)

MAGNETIC SUSCEPTIBILITY

DOWN-HOLE - 3 ARRAY I. P.

REVISIONS:

SCALE 1: 1000

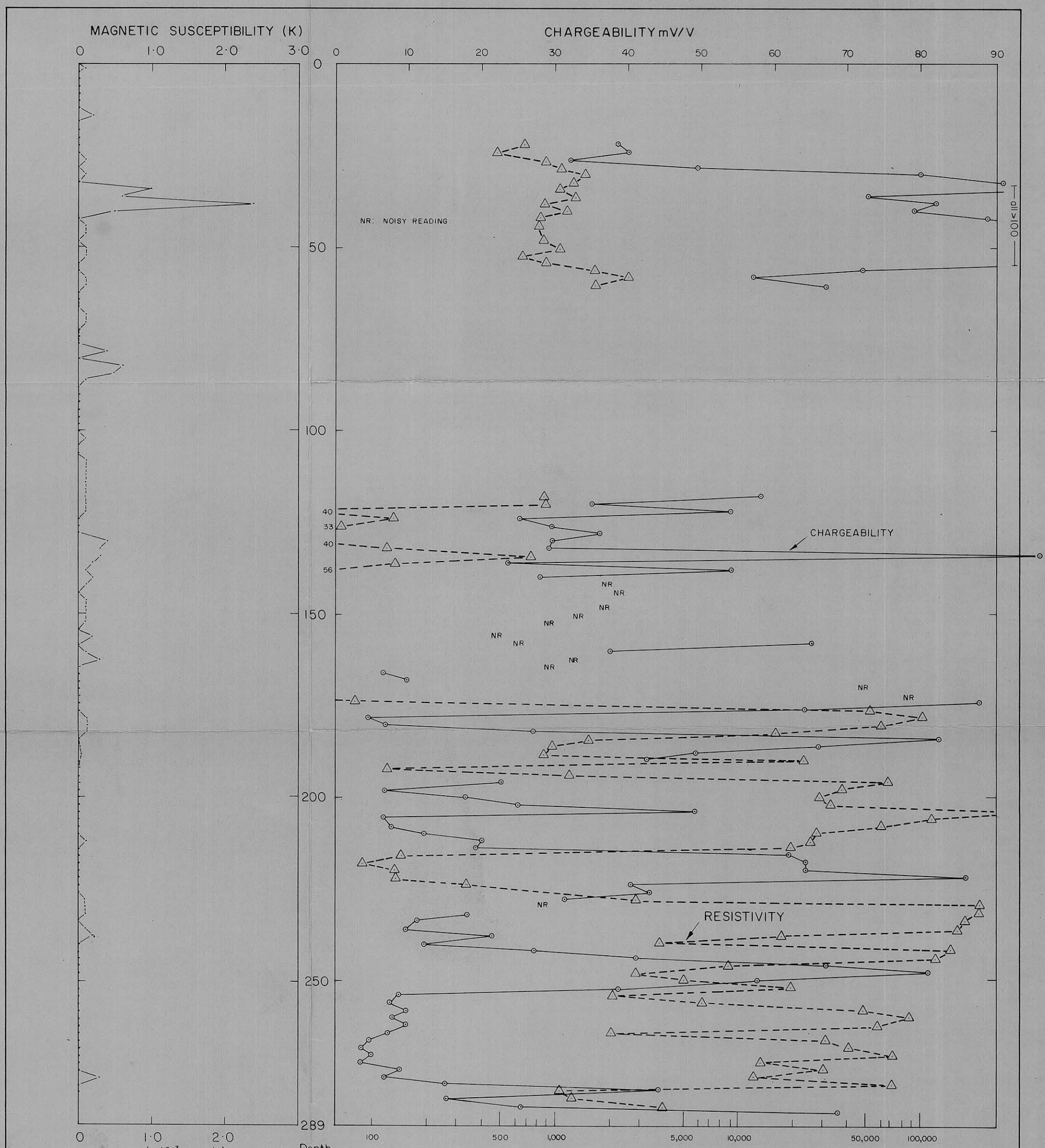
DATE 11-8-1981

DRAWN BY: P.K.

DRAFTSMAN: H.D.J.

FIG. 57

A2-153



I.P. Survey by Scintrex
Survey date 28-5-81

5 cm

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

BASIN LAKE
DDH BL4 GEOPHYSICS
DOWN HOLE 3 ARRAY I.P.
MAGNETIC SUSCEPTIBILITY

914165

SCALE 1:1000	DRAWN BY P.K
DATE 24·8·1981	DRAFTSMAN H.D.J

REVISIONS:

FIG. 58

A3-159

81-1660

N

S

HOWARD'S ANOMALY

EAST TYNDALL

BASIN LAKE

TYNDALL GROUP

TYNDALL GROUP CONTACT

TYNDALL GROUP CONTACT

NEWTON CREEK

HA 3

COSTEAN 142

HA 6

HA 4

HA 5

COSTEAN 3

COSTEAN 4

HA 2

TYN 3

TYN 1

BL 3

BL 2

BL 1

COSTEAN LINE 00
BASIN LAKE

BL 4

?F

VERTICAL
1:2500

HORIZONTAL
1:10000

SCALE
METRES

Volcanoclastic ss & cong.

Rhyolitic a.f. tuffs & lavas phen. faq

Dacitic f-mg xlt phen f & q part ser

Andesitic f-mg xlt phen f part ser

Hematitic andesitic f-mg xlt phen f liths hm

Interbedded f-mg and. xlt, bedded & disrupted hm & cb

Dacitic a.f. xlt phen f & q

Dacite-andesite xlt phen f & q

Andesitic xlt phen f

Andesitic xlt phen f, hbl

Interbedded with cb

Porphyritic andesitic xlt— lava phen f hbl

Agglomerate, V dacitic, Λ andesitic

Chert & chert horizon

Tuffaceous shale & greywacke

Black & grey shale

Massive pyrite

5 cm

914166

81-1660

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

EL 9/66

EAST TYNDALL-HOWARDS ANOMALY
BASIN LAKE AREA

GEOLOGY & RELATIVE STRATIGRAPHY

Drill holes and outcrop data is plotted relative to the known or infered Tyndall Group-Upper Cambrian Pyroclastic Boundary

REVISIONS:

FIG. 59

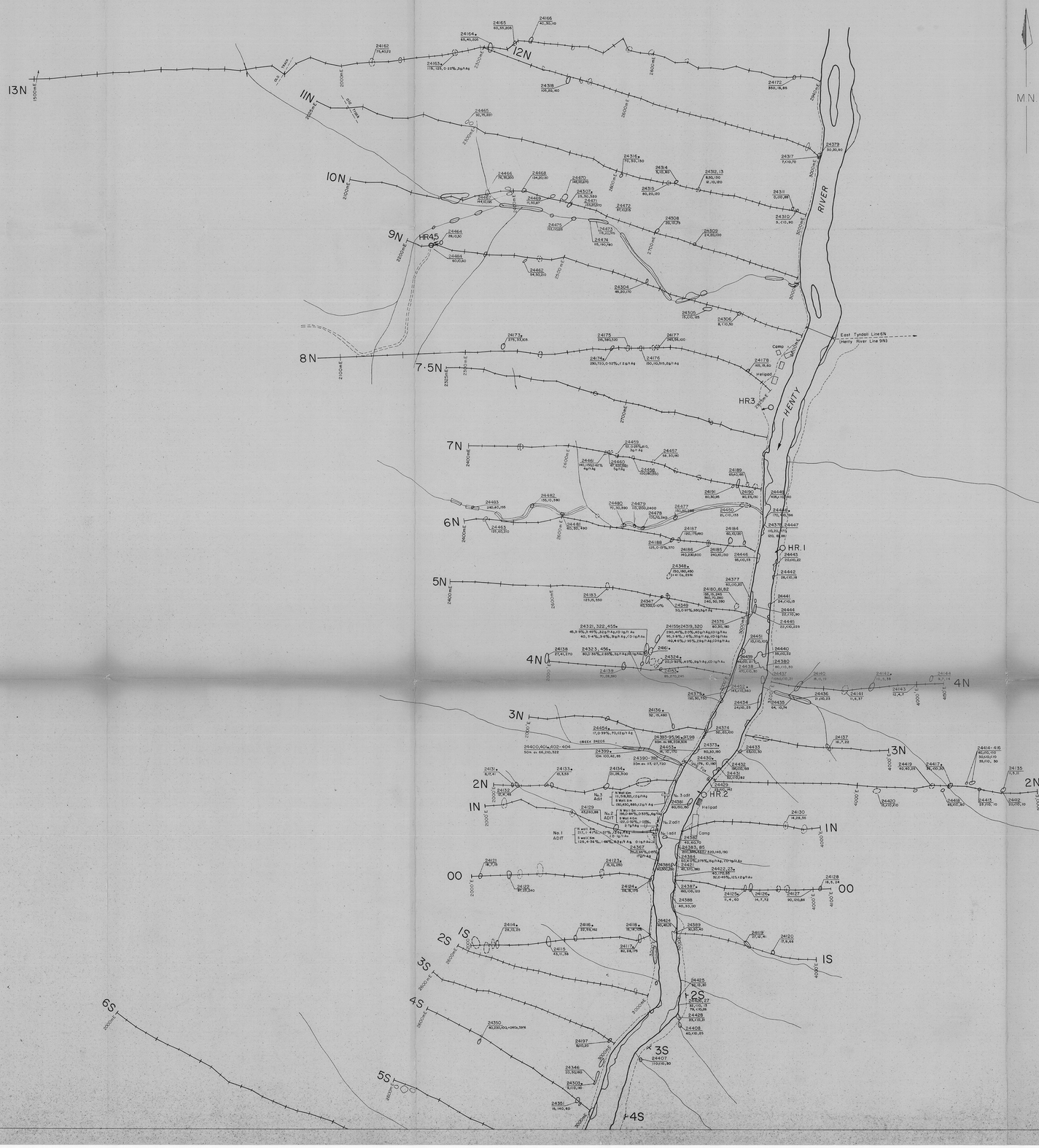
SCALE H=1:10,000 V=1:2500

DATE 11-9-81

DRAWN BY P.K.

DRAFTSMAN R.J.R.

A1-164

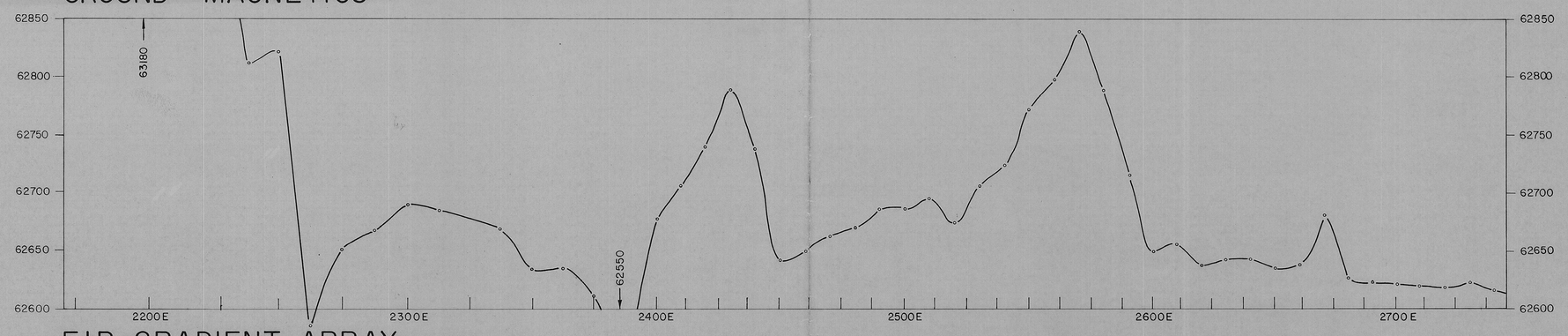


31-1660 911107 SHEET 1 of 2

MT. LYELL - G.O.D.L. JOINT VENTURE E.L. 9/66	DRAWN: R. Moores
	DRAFTSMAN: H.D.J.
HENRY RIVER GRID ROCK CHIP GEOCHEMISTRY AND PETROLOGY LOCATIONS	DATE: (-7-1911)
	SCALE: 1:2500
	1/318
	FIG: 60

GROUND MAGNETICS

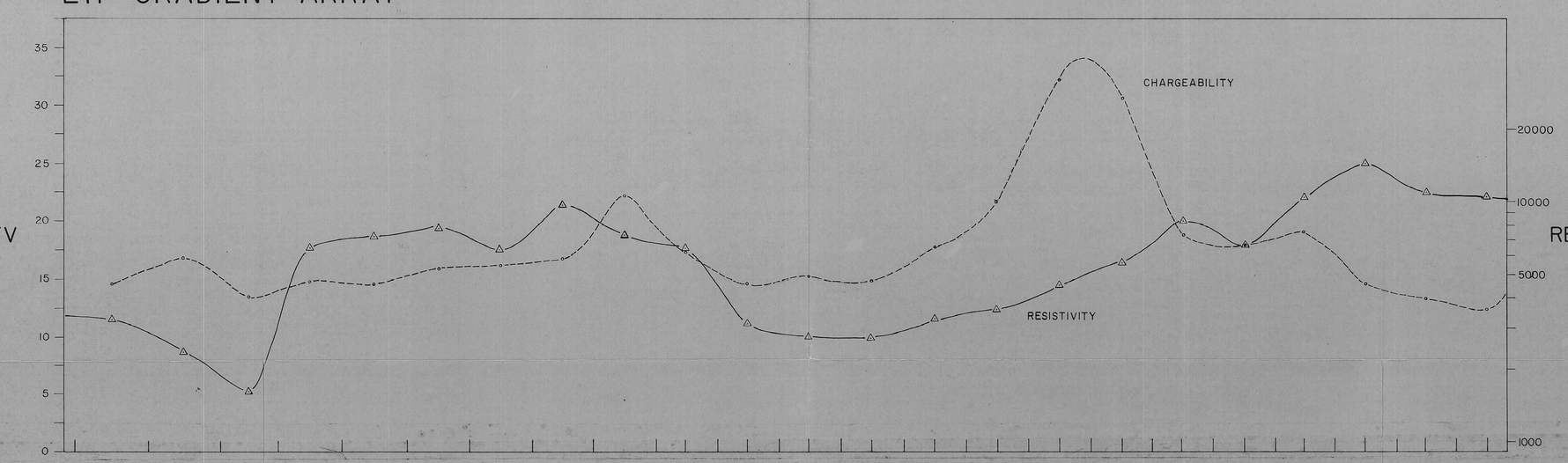
GAMMAS



GAMMAS

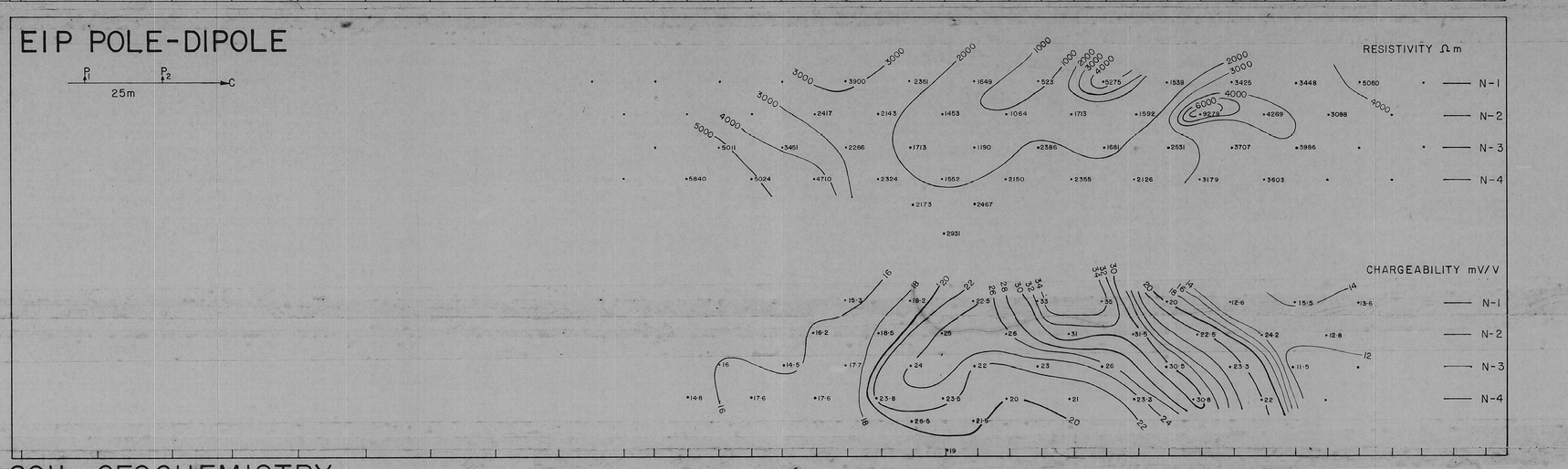
EIP GRADIENT ARRAY

CHARGEABILITY mV/V



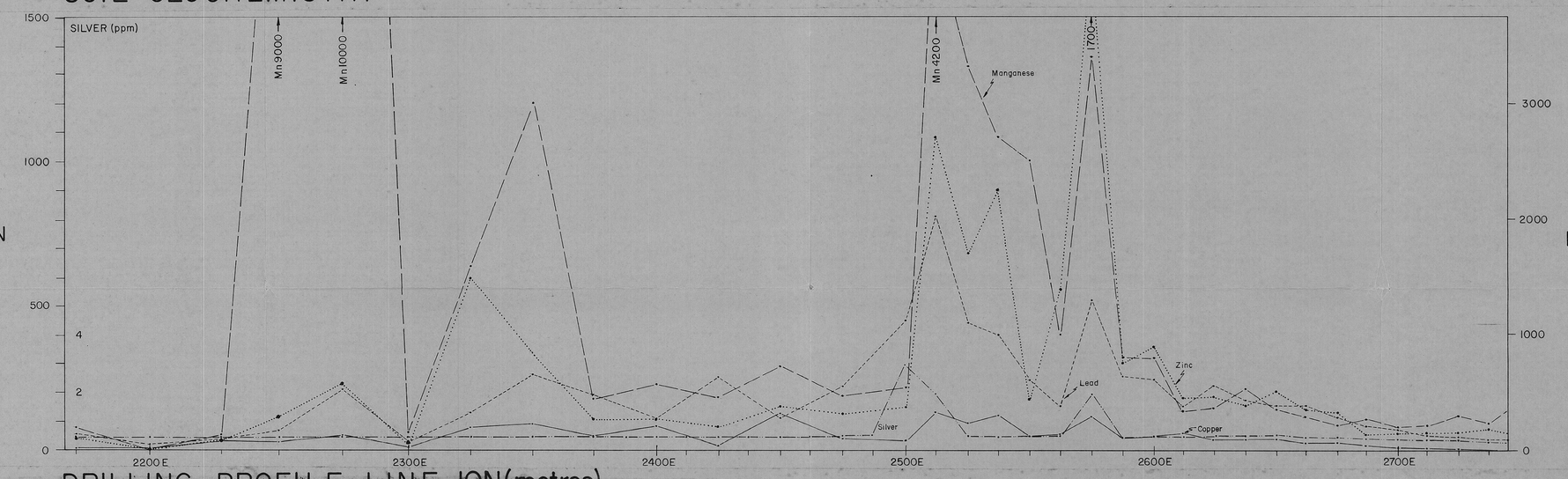
RESISTIVITY ohm-metre

EIP POLE-DIPOLE



SOIL GEOCHEMISTRY

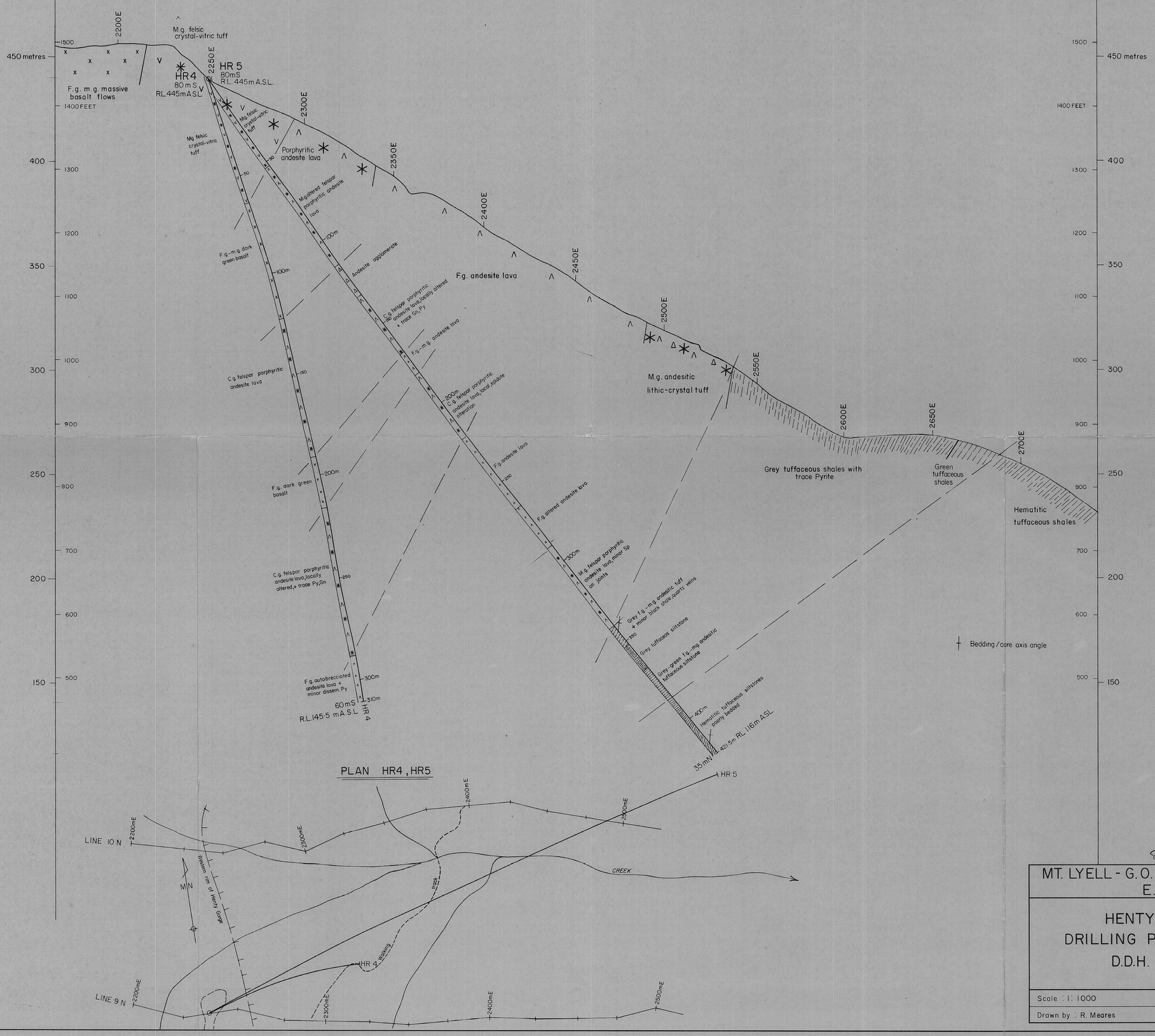
COPPER - LEAD - ZINC
PARTS PER MILLION



MANGANESE
PARTS PER MILLION

DRILLING PROFILE LINE ION(metres)

ORIENTATION 280°(magnetic)



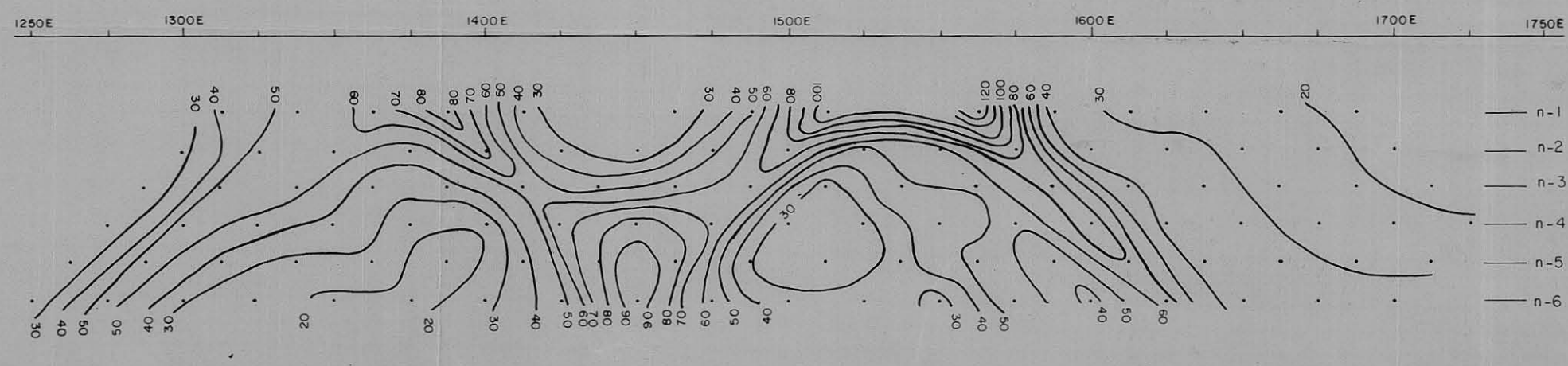
PLAN HR4, HR5

5 cm

81-1660 914168

MT. LYELL - G.O.D.L. JOINT VENTURE E.L. 9/66	Revision
HENTY RIVER GRID DRILLING PROFILE LINE ION D.D.H. HR4 & HR5	FIG. 61 Map Number:
Scale : 1: 1000 / Drawn by : R. Meares	Date : 18-4-1980 / Draftsman: H.D.J.
	1/508

Chargeability (mV/V)



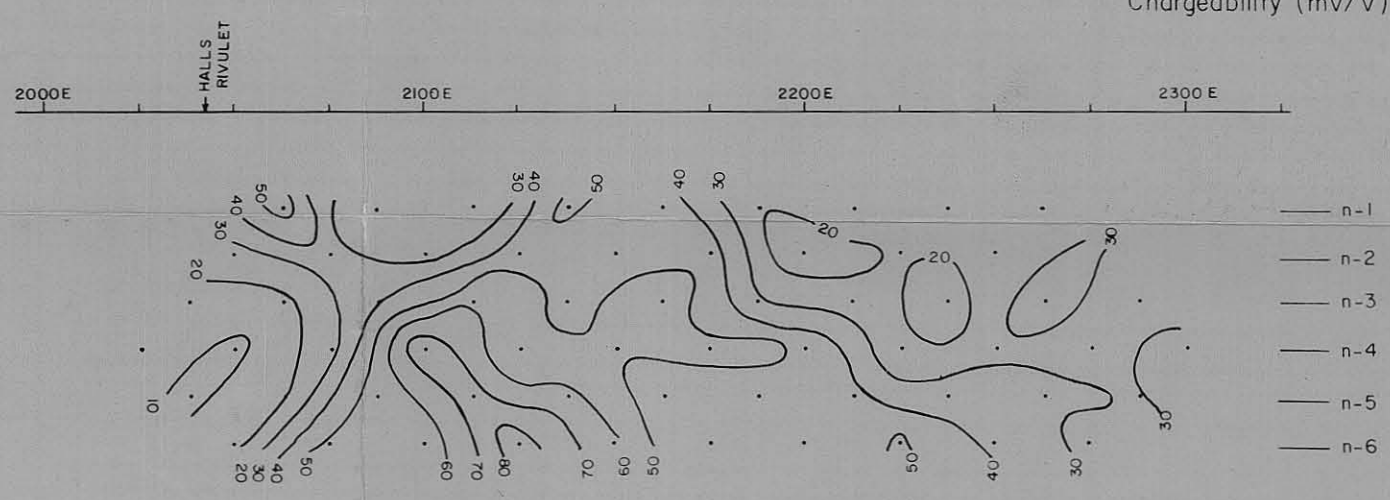
LINE 12 N

a = 25 m

Resistivity (ohm-metres)



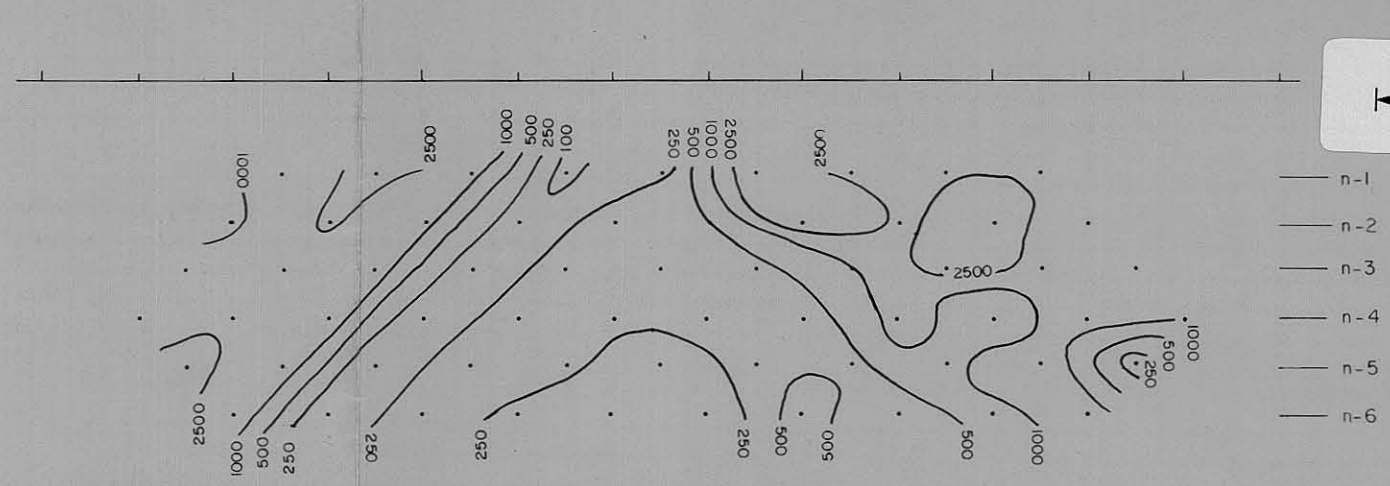
Chargeability (mV/V)



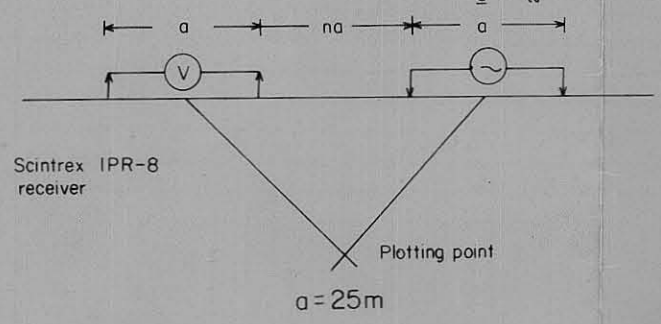
LINE 10N

a = 25 m

Resistivity (ohm-metres)



5 cm



Survey dates 11-22 June, 1980

Resistivity contours in ohm-metres: 50, 100, 250, 500, 1000, 2500

Chargeability contour interval 10 mV/V

81-1660

914169

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

E.L. 9/66
WEST TYNDALL GRID
DIPOLE-DIPOLE IP 1980
PSEUDOSECTIONS
LINES 12N & 10N

REVISIONS:

FIG. 62

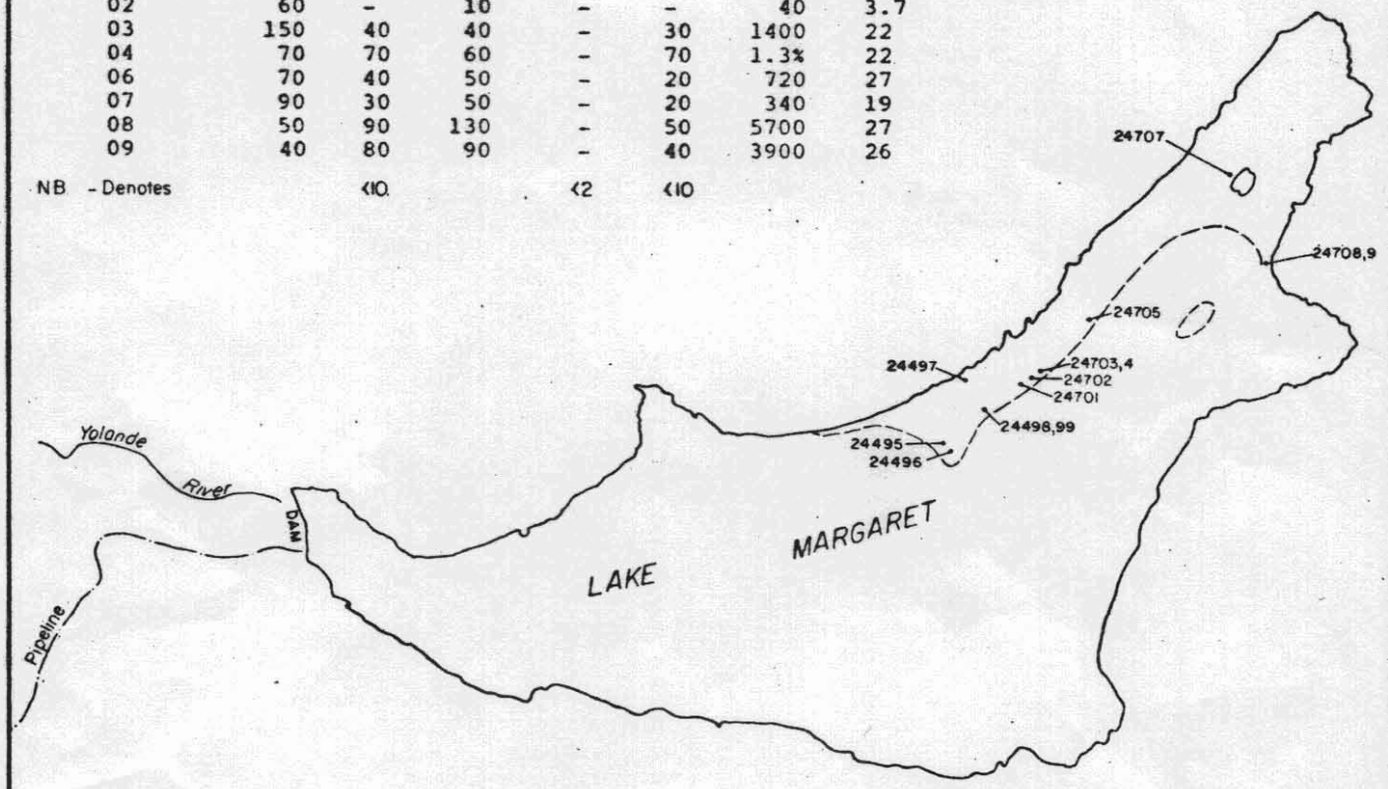
SCALE 1:2000 | DRAWN BY M.J.H.

DATE: 3-11-80 | DRAFTSMAN PJR

A3 - 174

914170

Sample No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Co ppm	Mn ppm	Fe %
24495	130	50	50	-	10	500	29
96	220	60	60	-	20	740	28
97	150	50	30	-	-	70	40
98	170	60	50	-	-	480	33
99	100	20	50	-	20	730	20
24701	110	20	40	-	20	380	20
02	60	-	10	-	-	40	3.7
03	150	40	40	-	30	1400	22
04	70	70	60	-	70	1.3%	22
06	70	40	50	-	20	720	27
07	90	30	50	-	20	340	19
08	50	90	130	-	50	5700	27
09	40	80	90	-	40	3900	26
NB - Denotes		<10		<2	<10		





LEGEND

- Treeline
- Shoreline on 16/2/81
- Sample locations

5 cm

DRAWN FROM Queenstown 1972 aerial photography
Project F 301, Photo 6/106

81-1660

MT. LYELL M a R Co. Ltd.

LAKE MARGARET AREA

ROCK CHIP GEOCHEMISTRY

EL 9/66

FIG 63

DRAWN RMDM	SCALE 1:8,000	A4-157
TRACED PJR	DATE 19·8·81	