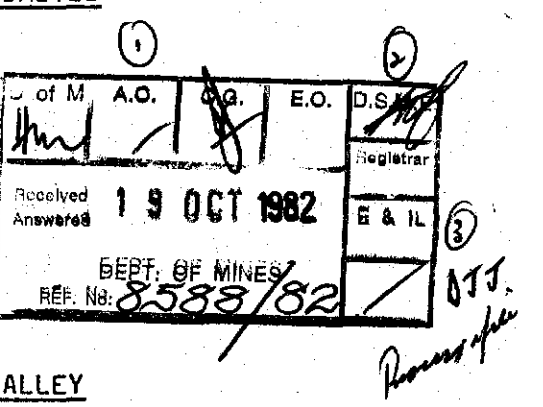
701001

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

West Coast Mines



EXPLORATION LICENCE NO. 4/73 - STERLING VALLEY

Progress Report on Activity
5th May to 24th August, 1982

Geology Department
Report No. 154 MD

R.A. Sainty,
J.H.A. Mill,
August, 1982.

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1. INTRODUCTION

This report covers continuing exploration on E.L. 4/73 by the Electrolytic Zinc Company of Australasia Limited acting as Manager for a Joint Venture consisting of E.Z., Aberfoyle Exploration Pty, Ltd and Getty Oil Development Co. Ltd. The work covered in this report was requested by a Joint Venture Committee Meeting held on 25th May, 1982 to define the mineralisation type responsible for Sn soil geochemistry anomalies and magnetic anomalies which had been outlined by previous work.

2. PREVIOUS EXPLORATION

Previous exploration on E.L. 4/73 is detailed in E.Z. reports no's 133, 143, 146 and 150.

3. ABBREVIATIONS

Standard symbols and terminology used on geological plans and sections are detailed on Plate 1 of E.Z. report no. 143 "E.L. 4/73 Progress Report on Activity, July, 1980 - June, 1981".

4. EXPLORATION UNDERTAKEN 5.5.'82 - 24.8.'82

4.1. Work Completed (Refer to 1:50,000 Scale plan A4-526-0003)

4.1.1. Dipole-dipole I.P. Survey

Between 11th and 15th June, Scintrex completed 5 setups of dipole-dipole I.P. to test Sn/As soil geochemistry anomalies and magnetic anomalies over the Mt. Black Volcanics at Sterling Valley.

The lines surveyed are tabulated below:-

Line	From	To	Dipole Sapcing	Anomaly Type
3,020N	4,560E	4,980E	60m	Ground Magnetics
3,260N	4,500E	4,920E	60m	Sn/As Geochem
3,260N	4,500E	4,710E	30m	" "
3,320N	4,500E	4,920E	60m	" "
3,500N	4,500E	4,920E	60m	" "

The I.P. and previous magnetic surveys were studied by Dr. J.R. Bishop of Mitre Geophysics - see Appendix 1.

4.1.2. Costeaning

Two costeans were dug in the area. A small costean was completed on line 3,260N at 4,750E to ascertain whether the granitic rocks mapped there were true bedrock.

A larger costean was dug on line 3,260N between 4,570 and 4,660E to cover the zone of maximum Sn/As soil geochemistry which has coincident magnetic and I.P. responses.

The costeans were geologically mapped and sampled. Rock chip samples of the major units and mineralisation were taken from the smaller costean. Rock chip samples were taken every 10m across the floor of the larger coastean and as well, vertical channel samples were taken at the same interval from the south wall of the costean. The vertical samples were divided into 20cm lengths.

A close spaced magnetometer traverse (5m readings) was also run along the costean.

4.2. Results Received

4.2.1. Dipole-dipole I.P. Survey (see Appendix 1 for comments and pseudo-sections)

Line 3,020N:

This line of I.P. was designed to test a 350 magnetic anomaly between 4,400E and 4,700E, but covered only the eastern part of the anomaly. The pseudo-section is featureless over the magnetic anomaly with only a subtle suggestion of a surficial resistivity low 700-800Ω/m (background ±2,500Ω/m) centred at 4,680E and associated with a chargeability peak of 22.5 mV/V. A significant anomaly occurs east of 4,920E as the Farrell Slates are approached.

These results confirm that the magnetic anomaly is caused by magnetite within the mafic rocks and is not associated with significant disseminated pyrrhotite/pyrite mineralisation.

Lines 3,260N; 3,320N and 3,500N:

I.P. on these lines was designed to cover Sn/As soil geochemical anomalies (500 ppm Sn and 1800 ppm As) reported in E.Z. report no. 150. They also cover a north/south trending "tongue" of ground magnetic responses (±30 gammas above background) which extends into the area from the main mafic associated anomaly to the south. The anomalies occur in a soil covered area thought to be underlain by mafic volcanics. Float of coarse grained biotite/hornblende diorite also occurs indicating the presence of a second outcropping intrusive. Minor thin quartz veins containing pyrite and arsenopyrite have been observed during mapping.

The I.P. profiles indicate the presence of a distinct resistivity low (<150Ω/m in background of 1000+Ω/m) observed at 4,560E-4,620E on line 3,260N. This low is associated with a subtle chargeability high of ± 30 mV/V (background ± 16 mV/V) and is coincident with the magnetic high referred to above. A 30m dipole-dipole survey positioned the low at about 4,590E.

The anomaly can be traced over at least 350m and was observed on line 3,320N (4,560-4,620E), line 3,500N (4,560-4,680E) where it is also associated with the magnetic high and line 3,560N (4,640-4,700E). The anomaly appears to deepen to

the north but is still open beyond 3,560N.

The anomaly is in a similar position with respect to the Henty Fault Zone as another I.P. anomaly drilled by STP 218 on line 4,520N. However the latter has higher chargeability and resistivity values indicating more disseminated and less interconnecting mineralisation.

Bishop has explained the I.P. anomaly as possibly being caused by a weakly mineralised breccia or shear zone.

Modelling of the magnetic tongue on lines 3,260N and 3,500N shows that the profiles are best fitted by a horizontal cylinder as shown in Appendix 1. Conceivably, a body of this form may be approximated by replacement along intersecting fracture sets or at the crest of an antiform.

4.2.2. Costeaning

4.2.2.1 Costean No. 1:

This costean was dug to explain the bedrock geology in the vicinity of diorite and mafic float on line 3,260N at 4,750E. The costean revealed a 1.5m wide bar of diorite traversing orange-brown clay that probably represents weathered basaltic intrusive. The diorite strikes approximately north-south and dips vertically. Three metres west of the diorite was a narrow (30cm) silica/sulphide vein encased within basaltic intrusive. The vein strikes sub-parallel to the intrusive. No dips were observed. Analysis of rock from the trench gave the following results:

Rock	Sample No.	Pb(%)	Zn(ppm)	Cu(ppm)	Fe(%)	As(%)	Ag(ppm)	Sn(XRF ppm)
Sulphide vein	48076	0.61	65	490	0.93	1.9	102	161
Weathered diorite (Quartz-mica clay rock)	48077	0.34	295	715	4.9	23.0	59	41
Fresh Unmineral-ised Diorite	48078	20 ppm	280	25	3.8	315 ppm	0.5	X

The unmineralised diorite assayed 24 ppm Sn by A.A.S.

The results suggest that at least two samples have been switched and the material will be resubmitted for analysis. In addition, the arsenic, lead and iron assays are insufficient to explain the amount of sulphide present. It is possible the sulphides are complex arsenides and thus samples will be sent to C.M.S. for petrographic work. Of note are the high silver assays.

4.2.2.2. Costean No. 2:
(Refer to attached plan A0-526-0032)
This costean was dug across a coincident I.P./ground magnetic/Sn/As soil geochemistry anomaly between 4,570 and 4,660E on line 3,260N. The costean exposed only minor bedrock, despite being almost 2.0m deep in places, due to the highly weathered nature of the basaltic intrusive.

Costean Geology:
The main exposure was orange-brown clay similar to that observed in Costean no. 1. The clay contains scattered remnants of weathered cleaved basaltic intrusive. Near the western end (4,575E) a thin (<2.0m) band of diorite (strike 080° A.M.G. dip?) intrudes the basalt. Small isolated pods of diorite were also observed close to this vein.

Mineralisation occurs as narrow (<20cm) silica sulphide veins adjacent to the diorite (as in costean no. 1) and at 4,615E, 45m to the east. The veins strike between 090° and 160° and dip steeply north. Mineralisation has been tentatively identified as pyrite, ?arsenopyrite and galena in a siliceous matrix.

Costean Mineralogy:

Mineralisation observed in the costean occurs as thin veins within the basaltic intrusive which occasionally appear as a breccia. The veins were not observed to be crosscutting the diorite.

The veins are up to 0.4m thick and consist mainly of pyrite, arsenopyrite and ?covellite in a siliceous matrix. In places the blackish groundmass indicates fine grained tourmaline. Pyrrhotite and fluorite were not observed in any of the veins.

Analysis of the veins indicates that they contain high Sn, As, Ag and Cu values - see sheet AD-526-0032 for details. As such, they appear to explain the source of the Sn/As geochemistry observed in the auger holes.

If the veins are interconnected at depth then they also may explain the resistivity low observed in the I.P. survey.

Costean Geochemistry:

The costean has been comprehensively sampled to define the sources of tin and arsenic in the soils. Channel samples were taken across the floor at 10m intervals. Rib samples were taken from the walls in conjunction with the channel samples at 0.2m vertical intervals. Rock samples of mineralised and unmineralised rock were collected as required. In all,7 floor channel samples, 63 rib samples and 6 rock samples were taken. All samples were analysed by Analabs (Burnie) for Cu, Pb, Zn, Ag, Fe and Mn (A.A.S. after perchloric/nitric digestion) As (vapour hydride generation) Sn (cold acid & vapour hydride generation after ammonium chloride sublimation) and Sn, W (pressed powder XRF).

Original Soil Geochemistry

Soil auger holes at 20m spacings were completed during January, 1982. The holes ranged from 0.05m to 0.65m in depth and in most cases did not penetrate the thick clay layer covering the bedrock. The sampling detailed a coincident Sn/As anomaly. These values were associated with elevated Cu (<55 ppm- background 15-20 ppm), Pb (<120 ppm - background 20-30 ppm) values, An and Ag show no obvious anomalous trends while Mn values appear lower than normal.

Rib Sample Geochemistry

The position of the rib samples is plotted on the attached plan together with the material type and the Sn/As values. Most of the samples are of yellow clayey material designated 'C' on the sheet, thought to be directly derived from the basaltic intrusive. In some cases the samples are demonstrably weathered bedrock and are designated 'R' on the sheet.

Good correlation between the augering and the rib sampling was obtained for Sn in all but one auger hole. The correlation for As was not so well defined. The rib sampling therefore confirmed the soil auger Sn/As anomaly. However a very marked decrease in values with depth was noted for tin in almost every rib sample. The trend is shown at 4,610E where the 0-20cm sample assayed 894 ppm Sn while the deepest sample, 160cm-180cm, assayed only 10 ppm. Arsenic showed similar trends in some rib samples i.e. 4,610 and 4,590E but not in others.

Lead is moderately elevated from 4,580 to 4,620E (125-560 ppm) with a peak of 1.44% in sample 48019. All but three zinc values were below 1,000 ppm (maximum 1,350 ppm) and most copper values are below 100 ppm (maximum 1,750 ppm). Manganese and silver values are not considered anomalous. Most Tungsten

values are below detection limits with isolated values up to 26 ppm. Considerable enrichment of iron has occurred in places.

Comparison of the three types of tin analysis indicates that most of the tin is present as cassiterite with only minor amounts as silicate tin and negligable sulphide tin.

Floor Geochemistry

Channel samples taken across the floor of the costean at 10m intervals gave only two anomalous tin values (577 ppm and 625 ppm). As and Pb values were much lower than for corresponding rib samples. Silver values were enhanced, however with most being in the range of 0.5-1.0 ppm.

Rock Geochemistry

As expected samples of mineralised veins on the floor of the costean gave the best geochemical responses. Tin values up to 1.25% (XRF) and arsenic values up to 16% were obtained. The values were sporadic however with some veins assaying well and others poorly. Lead and zinc values were only weakly anomalous (Pb max. 560 ppm and Zn max. 190 ppm) but copper was strongly anomalous in most cases (up to 2.51%) as was silver (up to 25 ppm). No tungsten was detected.

Costean Magnetics

A ground magnetic survey was completed over the costean with readings being taken every 5.0m. The survey was connected to the Sterling Valley Magnetic Base-station to make it compatable with the previous survey completed in January, 1982. Both surveys are plotted on the attached costean plan.

Good correlation was obtained beyond the western end of the costean where no soil has been removed. However where soil has been removed the new survey is markedly lower in magnitude than the old survey. A major discrepancy occurs at 4,590E where a magnetic peak of 450 gammas recorded in January, 1982 is now recorded as a trough of 265 gammas.

This suggests that much of the magnetic response in the earlier survey is caused by concentrations of ?magnetite in the soils above the mafic intrusives and may not be directly related to concentrations in the insitu rock.

The August survey shows that magnetic peaks occur close to the diorite intrusive at the western end of the costean.

APPENDIX 1. Memorandum: J.R. Bishop, Mitre Geophysics to R. Sainty, W.C.M. on Sterling Valley Geophysics dated 24th June, 1982.

701014

MEMORANDUM

TO: R. Sainty, W.C.M. DATE: 24th June, 1982

FROM: J.R. Bishop, Mitre Geophysics

SUBJECT: STERLING VALLEY GEOPHYSICS

Exploration Target

The main target is for cassiterite, probably in association with pyrrhotite, however the possibility of a base metal sulphide deposit is not discounted. The search for the former has concentrated on the region around the Mt. Black Volcanics - Farrell Slates contact. The latter, if present, would be expected to occur within the Farrell Slates. Three specific , potentially stanniferous areas are discussed below.

Geophysics

Parts of four lines of the Sterling Valley Grid have been covered by dipole-dipole I.P.. The details are:-

Contractor: Scintrex
Date: June, 1982
I.P. Receiver: IPR-8; pulse 2 sec on/2 sec off, M_{32} plotted

Line	Interval Surveyed (for full n=1 to n=6 coverage)			Dipole Spacing
3,500	4,560E	to	4,920E	60m
3,320	4,470E	to	4,860E	60m
3,260	4,470E	to	4,860E	60m
3,260	4,485E	to	4,725E	30m
3,020	4,560E	to	4,920E	60m

This coverage adds to that already obtained by the Scintrex (1977), 1979/80 Geoquest (1976) and McPhar (1960-61) dipole-dipole I.P. surveys (Bishop, 1980).

Specific Targets

1) Testing of the 'mafic intrusive'.

The southern most line, 3,020, was surveyed to test the magnetic high between lines 2,360 and 3,140, immediately east of the Murchison Highway. This has been previously interpreted as a mafic intrusive.

Overlaying the I.P. on to the magnetic contour map shows that it has only partially tested the magnetic high, however there was no response on the western edge of the survey, nor was there any on the next line to the north, 3,080 (surveyed by Scintrex, 1979), which also has a separate magnetic anomaly to the east of the 'mafic intrusive'. (Bishop (1980) notes that this separate anomaly might be associated with the southern end of a weak anomalous I.P. trend, but a re-examination shows that on line 3,080, it is very weak indeed.)

Thus the I.P. surveys on lines 3,020 and 3,080 suggest that the magnetic responses are not due to, nor associated with, sulphide mineralisation. Despite a shallow 40 mV/V chargeability anomaly on line 2,600 at 4,670E, a similar (magnetic) source is likely for the southern end of the anomaly and the adjacent responses. The interpretation of a mafic intrusive has been reinforced by the I.P. surveys.

2) Testing of Geochem. Anomalies.

The I.P. surveys on lines 3,260; 3,320 and 3,500 were done to test Sn (and As) anomalies (values between 150 ppm and 500 ppm Sn had been recorded between 4,550E and 4,700E on all three lines, on a background of <10 ppm). On all three lines good resistivity anomalies were obtained (<150 ohm-m in backgrounds of 1,000+ ohm-m) with corresponding weak (max. value 30 mV/V) and poorly defined chargeability responses (this situation of good resistivity and poor chargeability is rather unusual, I.P. being designed, and mainly used, for disseminated mineralisation where resistivities do not change appreciably). One possible explanation is a weakly mineralised brecciated or shear zone. On all three lines, the anomalies are situated below (about) 4,600E. The resistivity contours for the line 3,260 and 3,320 pseudo-sections are open at n=1, whilst they are closed on line 3,500; i.e. the source is dipping to the north.

There are good, coincident magnetic anomalies of 50-80γ over each resistivity anomaly (see attached figures): those over the southern two lines are very similar, while the one over line 3,500 indicates a deeper source. Therefore it appears that the resistivity and magnetic anomalies have the same (weakly chargeable) source.

The magnetic anomalies provide a much more definite target (since they may be quantitatively modelled) than do the I.P. responses. An interpretation of the anomaly over line 3,260 suggests that a thin, steeply dipping tabular body (?conforming to the geology) does not cause the response, and a long, horizontal cylinder has been used for the modelling. A reasonable fit to the data was obtained with a horizontal cylinder at a depth to centre of 100m below 4,580E (line 3,260). For a magnetic susceptibility of $.25 \times 10^{-3}$ cgs units, the radius is 90m; for 10×10^{-3} cgs units, it is 14m (see attached figure). An interpretation of the anomaly on line 3,500, suggested a similarly shaped source centred at about 120m below 4,620E, but the fit of the model to the observed data was not so good for this line (see attached figure).

In summary, a well defined magnetic anomaly has a good coincident resistivity low, but a weak and poorly defined chargeability response.

3) Base Line Magnetic Anomaly (anomaly A)

You have expressed interest in the magnetic anomaly on 5,000E between lines 3,320N and 3,500E. This is one of three magnetic anomalies over the Farrell Slates: for the purposes of the Memo, I have labelled them:-

A, between lines 3,320 and 3,500
B, between lines 4,160 and 4,400
C, between lines 5,220 and 5,460 (40N to 48N on the old labelling).

All anomalies, being within the Farrell Slates, have coincident I.P. anomalies due to the graphitic shales.

Anomaly A, which is most strongly developed on line 3,380, was drilled by DDH SV 3 for tin. The hole was targeted on a tabular body extending from line 3,200 to 3,560 with a depth to the top of the source of between 135 and 150m and a dip of approximately 60° to the west. Simpson (1978) believed that the hole had flattened too rapidly ("magnetic susceptibility measurements on cores from this hole do not explain the magnetic anomaly measured at the surface (anon., ?1977)), however redrilling was not attempted because of the lack of significant tin intersections in SV 3 (max. value 2,000 ppm over 0.85m).

A similar source to that interpreted for 3,320 seems likely for 3,380, the higher amplitude of the latter probably being due to a separate, shallower source to the east of the main body. A reinterpretation of 3,320 would probably not produce a markedly different depth for the source. For both lines the magnetic interpretations are compatible with the resistivity data from the I.P. surveys.

When considering anomaly A, it may be appropriate to consider the other two areas within the black slates which have coincident I.P./resistivity and magnetic anomalies. Anomaly B was drilled by DDH STP 220 in November, 1980, on line 4,280. The target was the source of a well defined magnetic anomaly of about 300γ centred on 5,200E. A Rio Tinto E.M. survey (1959) had defined a conductor midway between these two eastings and a Geoquest (1976) I.P. survey response straddled them (somewhat displaced to the east). The cause of the magnetic responses in STP 220 was apparently pyrrhotite in black slate and/or volcaniclastic siltstone-greywacke. Only minor amounts of tin were intersected: 4.4m at 400 ppm near 28m and 3.7m of 720 ppm near 140m. The tin occurred mostly in the black slates: the mineralisation was vein style, with no evidence of replacement. Anomaly C which was defined by Rio Tinto in the 1950's has apparently not been further investigated. More recent, but nevertheless incomplete, surveying suggests that it may be a series of small anomalies.

In summary, anomaly A has probably been inadequately tested, but drilling of similar (combined) anomalies along strike to the north has proved disappointing.

J.R. BISHOP

26TH JUNE, 1982.

REFERENCES

ANON., ?1977 Joint Venture Proposal Sterling Valley E.L. 4/73, Tasmania. (Prepared by Abminco N.L.)

BISHOP, J.R., 1980 An appraisal of the geophysical surveys carried out in the Sterling Valley, Tullah and Farrell Areas. Mitre Geophysics Report for E.Z.

SIMPSON, D.C., 1978 Report on diamond drilling programme E.L. 4/73 Sterling Valley, Tasmania. Sept.-Nov., 1977.

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

701017

DATE

PLOTTED BY R.P

PULSE 2 SEC | RX. 2 SEC

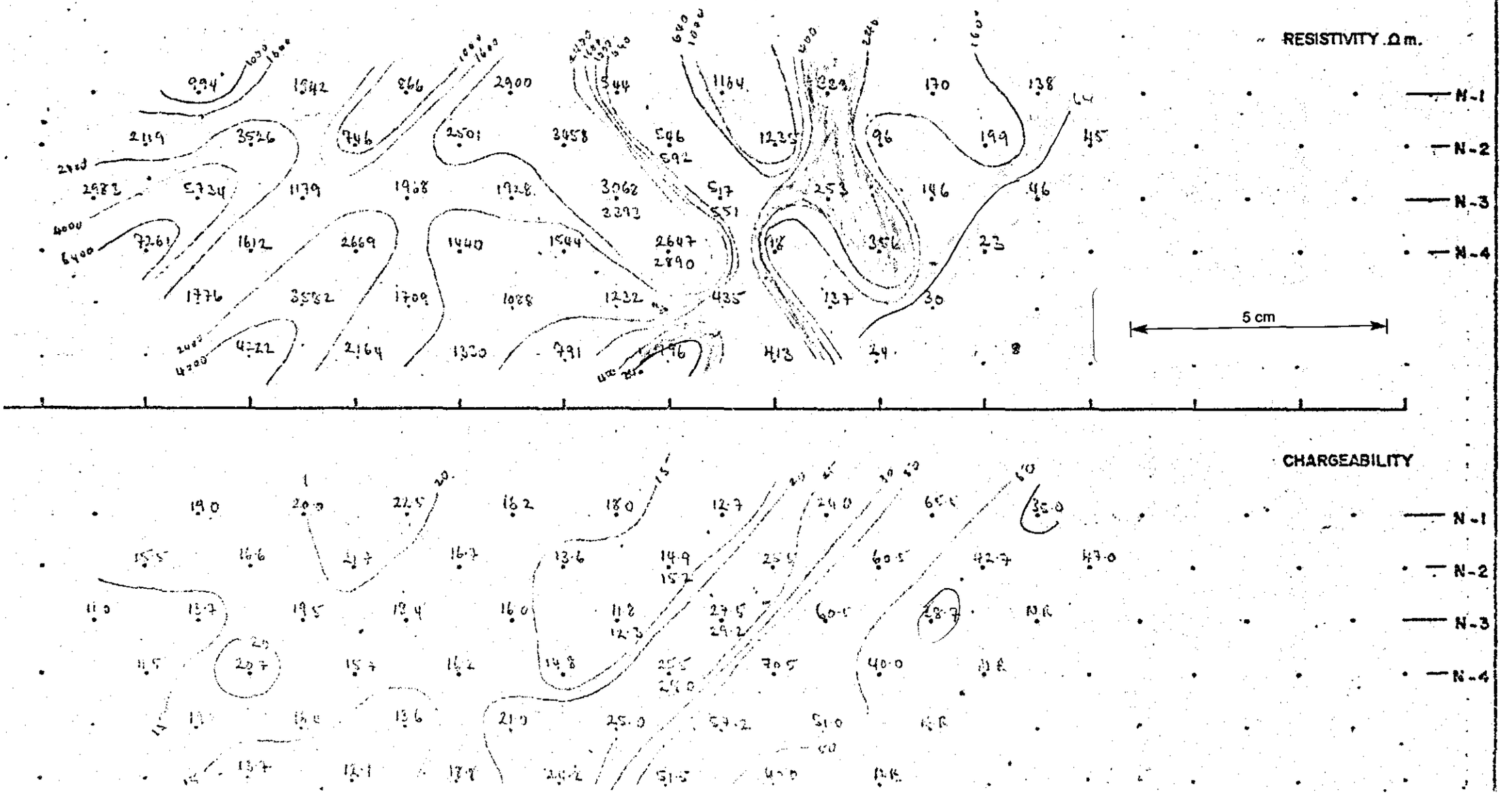
DIPOLE SPACING 60m

E 3 N

PROSPECT STERLING VALLEY

JOB No. TAS 094X

Scale 1:3000



SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

701018 mag high

DATE

PLOTTED BY

PULSE 2 SEC. | Rx. 1 SEC.

DIPOLE SPACING 60 m

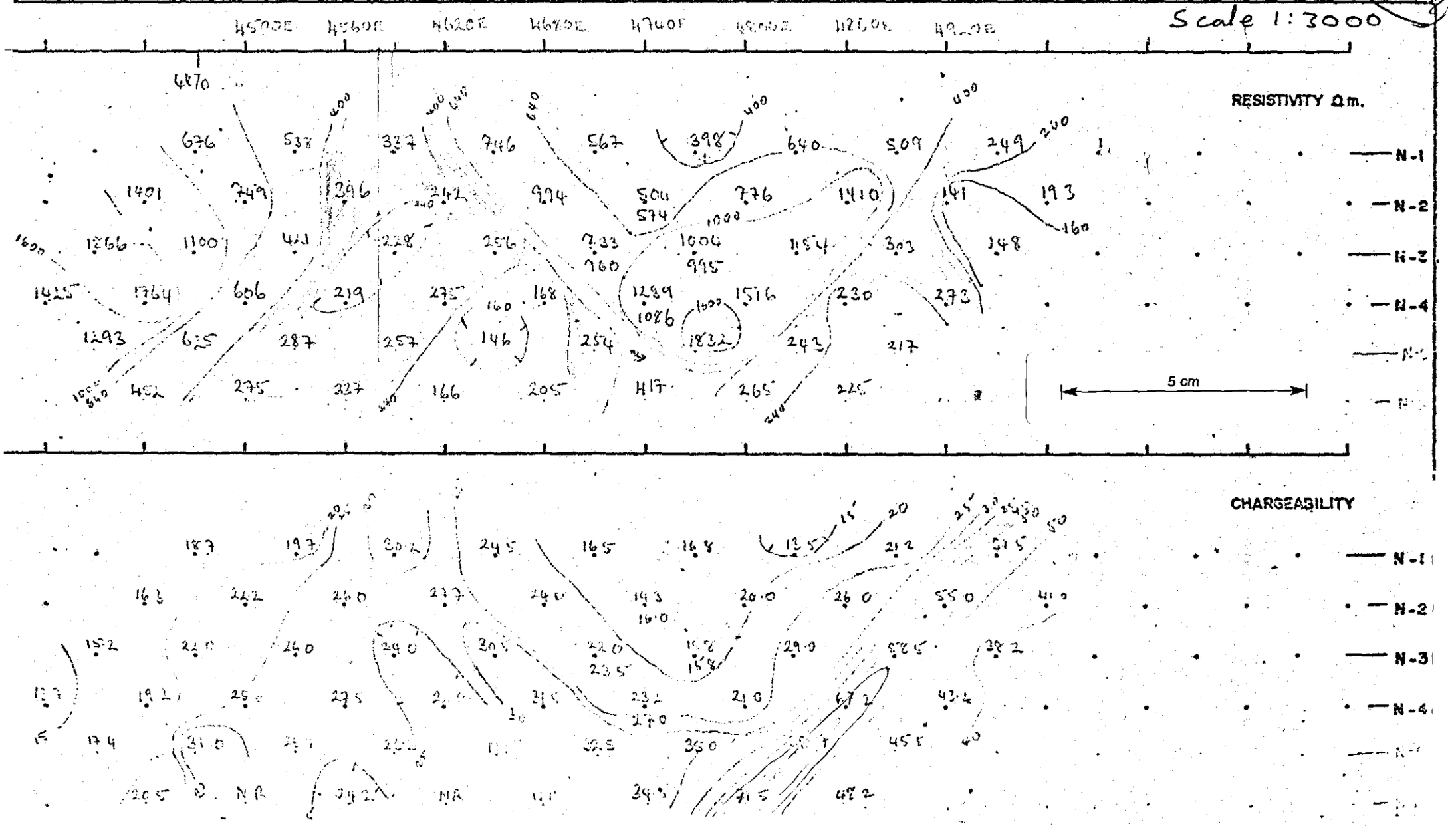
E 3[illegible]0

2

PROSPECT STERLING VALLEY

JOB No. TAS 094 X (IP/R)

Scale 1:3000



SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

701019 mag. high

DATE

PLOTTED BY R.P

PULSE

Rx.

DIPOLE SPACING 60m

LINE N 3

PROSPECT STERLING VALLEY

JOB No. TAS 094

Scale 1:3000

RESISTIVITY Ωm.

N-1

N-2

N-3

N-4

5 cm

CHARGEABILITY

N-1

N-2

N-3

N-4

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

701020

DA[redacted] 15[redacted]-79

PLOTTED BY R.P

PULSE 2 SEC | Rx. 2 SEC.

DIPOLE SPACING 60m.

LIN[redacted] No. 5320N 4

PROSPECT [redacted] VALLEY

JOB No. TAS 074 X

Scale 1:3000

4500E 4560E 4620E 4680E 4740E 4800E 4860E 4920E

RESISTIVITY Ωm.

CHARGEABILITY

5 cm

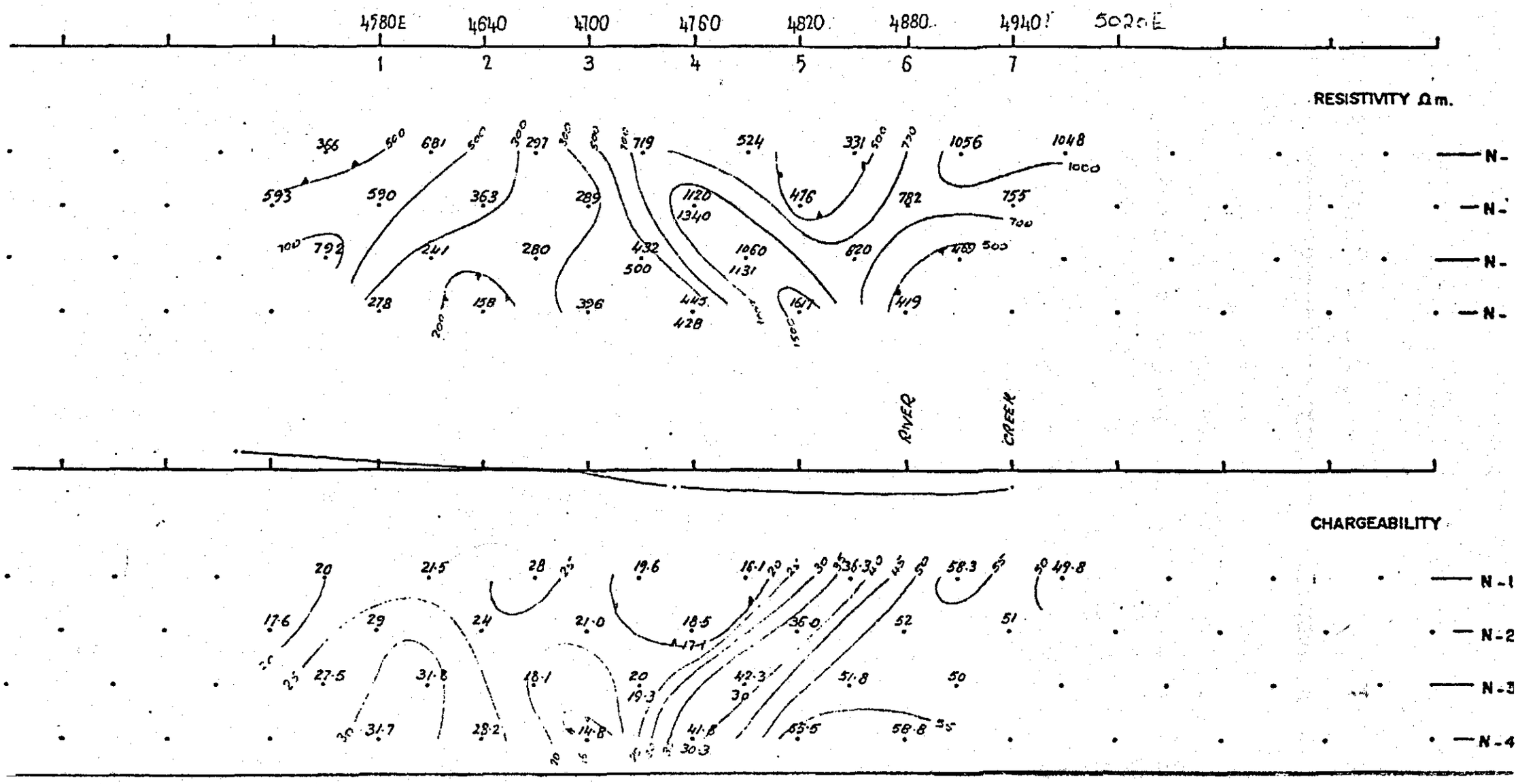
SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

701021

DATE 9-10-79	LINE No. 3560 N
PLOTTED BY T.Y.S	PROSPECT STERLING VALLEY
PULSE 2 sec / Rx.	
DIPOLE SPACING 60 m	JOB No. TAS-065



SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

701022

DATE 9-10-79		LINE No. 3560 N
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PULSE 2 sec	Rx.	
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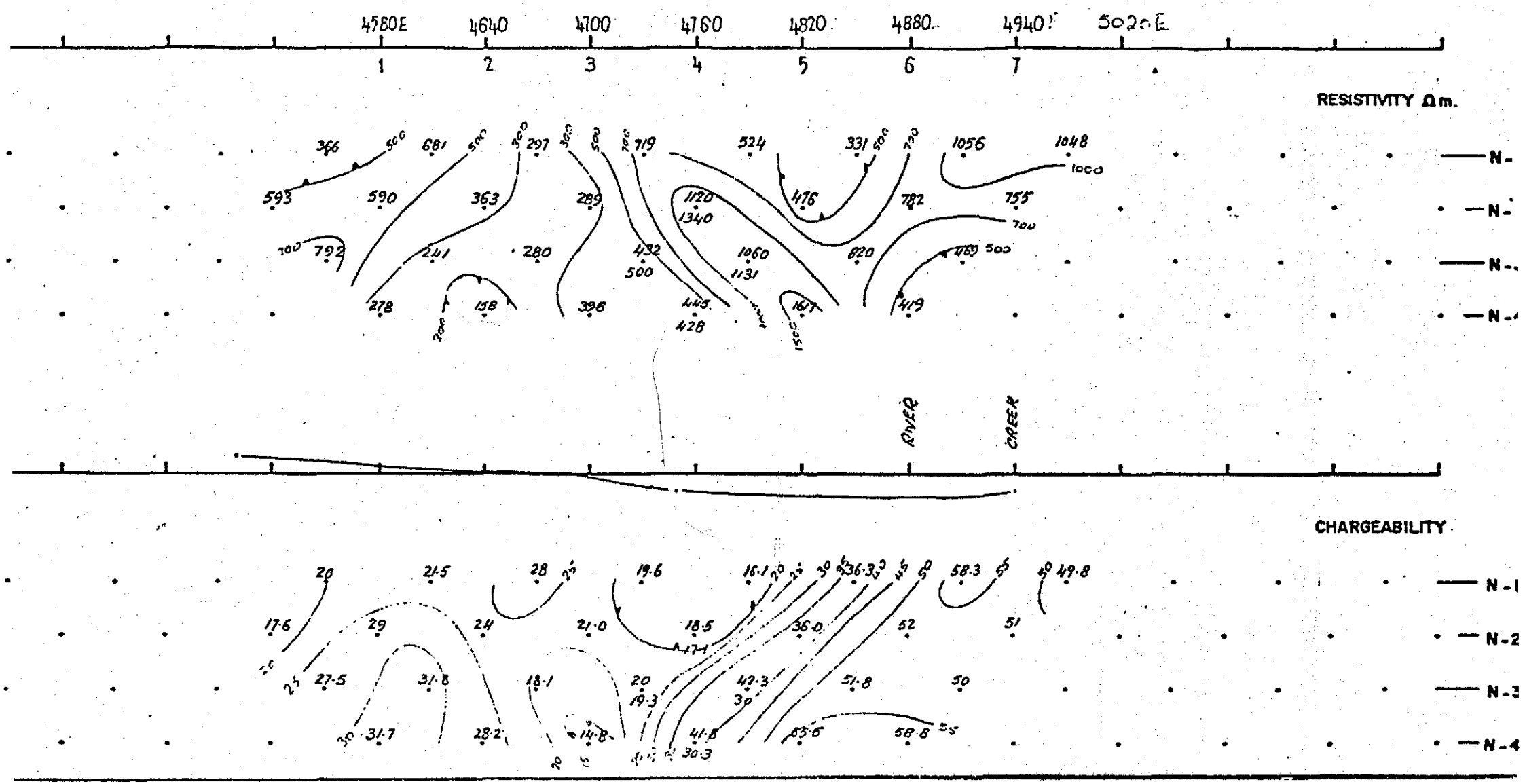


SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

701023

DATE

PLOTTED BY G.P

PULSE

Rx.

DIPOLE SPACING 30m

LINE No. 3260 N 7

PROSPECT

JOB No.

Scale 1:3000

5 cm

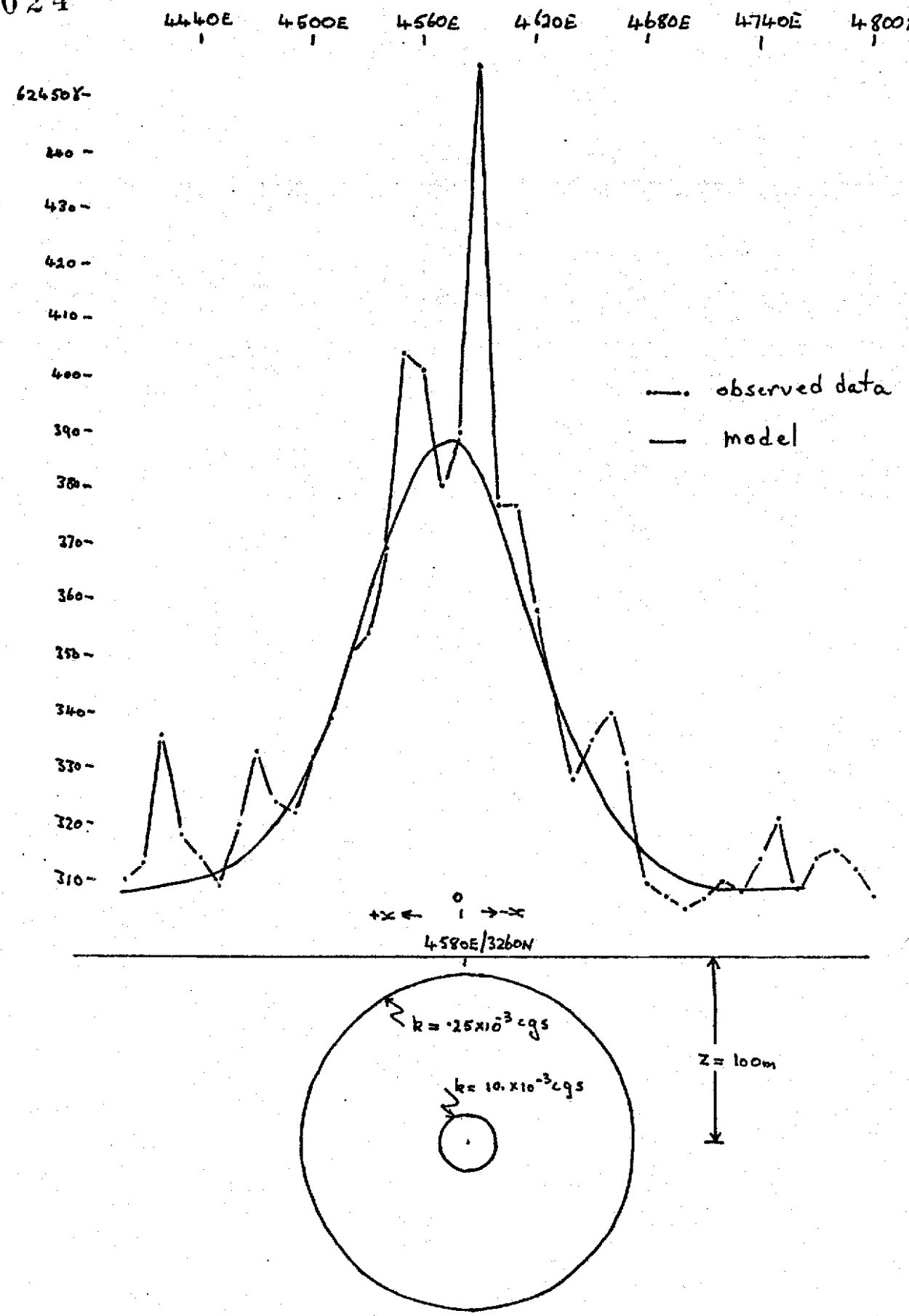
RESISTIVITY Ωm.

N-1 N-2 N-3 N-4

CHARGEABILITY

N-1 N-2 N-3 N-4

701024



model: long horizontal cylinder

depth to centre : 100 m

$R^2 k = 2.$

5 cm

Note : scale matches the 1:1 pseudosections

Mitre Geophysics

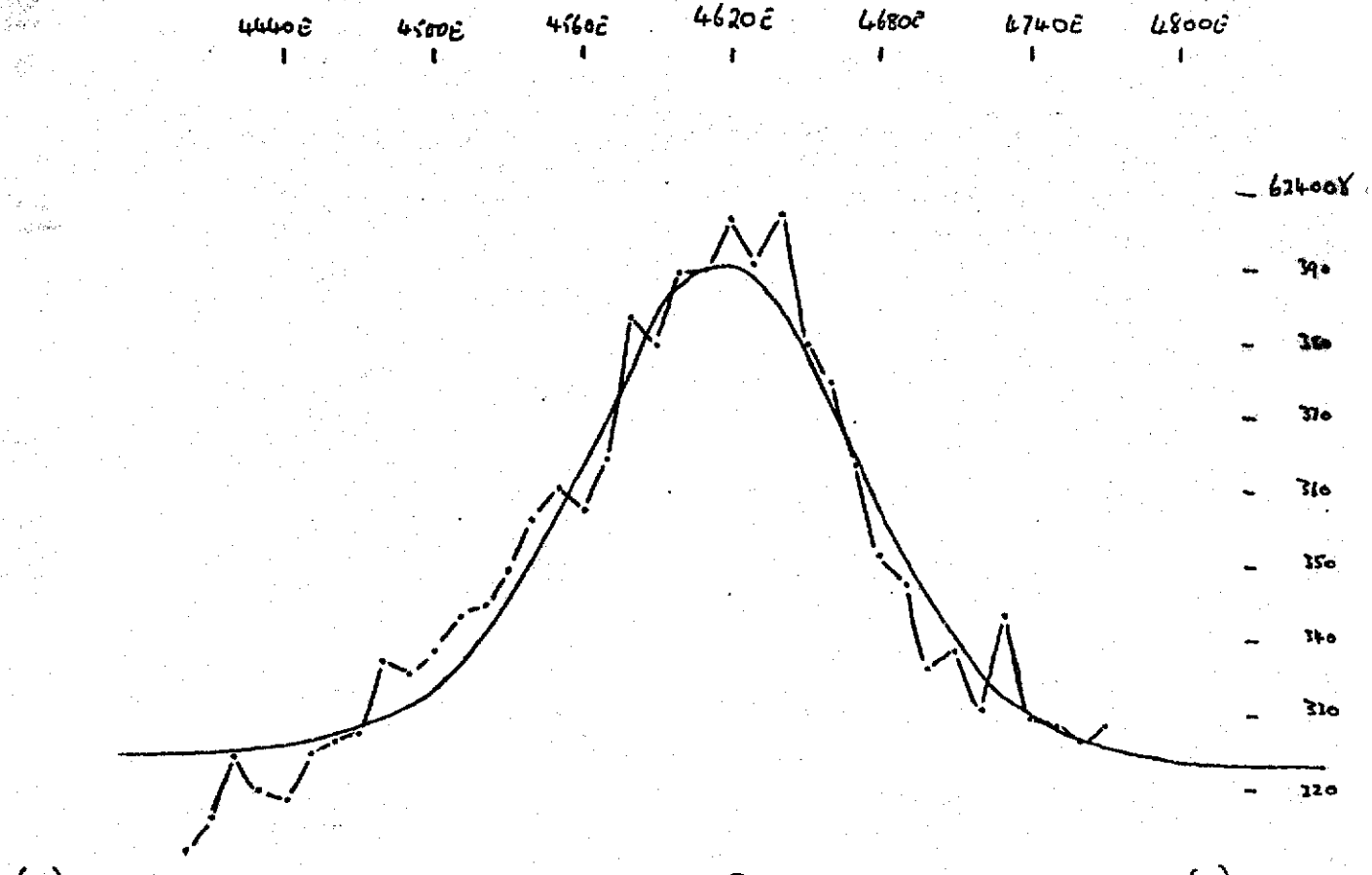
Sterling Valley Grid

Magnetic Profile & Model Results

Line 3260N

date 28-6-82

701025



$$\Delta F = \frac{2\pi R^2 k T}{(z^2+x^2)^2}\left[(z^2-x^2)C_1 - 2xzC_2\right]$$

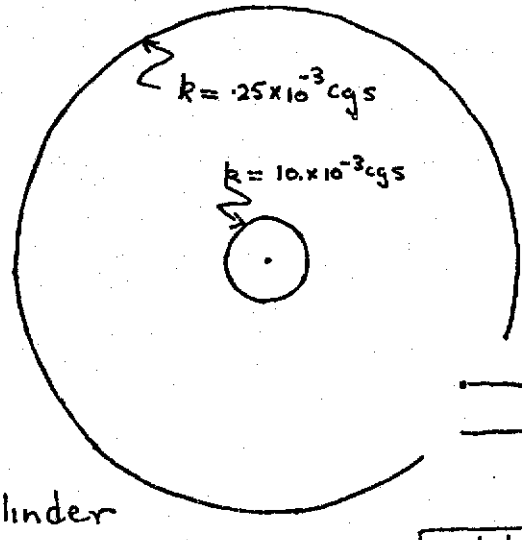
$C_1 = \sin^2 I - \cos^2 I \sin^2\alpha$

$C_2 = 4\cos I \sin I \sin\alpha$

$T = 62300\gamma$

$I = -72°$

$\alpha = 5°$ (strike dirn)



Model: long horizontal cylinder

depth to centre = 120 m

$R^2k = 2{\cdot}4492$

5 cm

note: scale matches the IP pseudosections

Mitre Geophysics

Sterling Valley Grid

Magnetic Profile & Model Results

Line 3500N

scale 1:3000 date 18-6-80

APPENDIX 2. Geochemical Data Sheets

CRA Exploration Pty Ltd
Rosebery Tas.

701027 GEOCHEMICAL SAMPLE DATA SHEET

Project : STERLING VALLEY
Locality : .....
Grid Name : .....
Nominal Grid Azimuth : .....

Material : Costean
Sample Method : channel x chip
Sampled By : G. Brecknell
Date : 4-8-87

Size Fraction Analysed : .....
Analysed By : .....
Method : .....

SAMPLE NUMBER	Sample Location Data: Grid Line No / Grid Easting	AMG CO-ORDINATES: NORTHING	AMG CO-ORDINATES: EASTING	cm DEPTH	Sample Composition Data: COLOUR	Clay	Sand	Rock Frags.	Organic	Contam.	Geology	METAL CONTENT (ppm unless specified): Cu	Pb	Zn	As	Mn	Fe %	As	Sn AAS	Sn XRF	Sn AA
48001	4573	53	3	0 - 20		X						60	95	130	X	405	16·05	1500	2·60	294	5
2	"	53	3	20 - 40		X						35	65	75	X	155	6·95	1600	2·25	263	X
3	"	53	3	40 - 60		X						50	75	110	X	325	8·50	1600	2·15	247	5
4	"	53	3	60 - 80		X						60	85	155	X	325	8·35	1300	1·75	201	X
5	"	53	3	80 - 100		X						45	70	100	X	230	6·90	1200	2·40	246	X
		53	3																		
48006	4580	53	3	0 - 20		X						75	95	155	X	550	16·50	3300	3·90	343	5
7	"	53	3	20 - 40		X						100	135	300	X	865	18·00	1300	4·5	50	X
8	"	53	3	40 - 60		X						115	125	250	X	575	7·75	3900	4·0	391	X
9	"	53	3	60 - 80		X						135	185	280	X	1750	9·25	1300	5·6	46	X
10	"	53	3	80 - 120		X						120	175	280	X	3450	8·35	1000	3·6	40	X
11	"	53	3	100 - 120		X						140	155	315	0·5	4350	8·45	5600	4·8	52	X
12	"	53	3	120 - 140				X				115	185	365	X	6050	9·15	4000	3·0	45	X
13	"	53	3	140 - 160				X				110	85	365	X	2150	7·60	2800	3·1	24	X
14	"	53	3	160 - 180				X				95	65	360	X	9800	7·90	2100	1·0	5	X
		53	3																		
48015	4590	53	3	0 - 20		X						160	130	125	X	2850	22·00	3900	1·72	221	
16	"	53	3	20 - 40		X						175	150	125	0·5	2650	22·00	6100	1·70	219	10
17	"	53	3	40 - 60		X						250	120	135	X	2110	28·50	5800	1·05	1148	5
18	"	53	3	60 - 80		X						465	560	195	X	6000	29·50	8600	5·5	119	5
19	"	53	3	80 - 100		X						1750	1·44%	905	X	1·12%	18·50	2·4%	1·45	202	30
20	"	53	3	100 - 120				X				355	395	1050	0·5	4300	23·50	1400	5	39	X
21	"	53	3	120 - 140				X				115	220	690	0·5	4250	25·50	710	2	36	X
22	"	53	3	140 - 160				X				70	85	555	0·5	3600	21·50	7200	1·4	82	X
23	"	53	3	160 - 180				X				50	85	540	X	4100	23·00	6800	6	63	X
24	"	53	3	180 - 200				X				45	95	460	X	3900	23·00	3100	3	48	X
		53	3																		
		53	3																		
		53	3																		

E.Z. Co of A'Asia Ltd
Rosebery Tas.

701028

GEOCHEMICAL SAMPLE DATA SHEET

Project : STERLING VALLEY
Locality :
Grid Name :
Nominal Grid Azimuth :

Material : COSTEAN
Sample Method : CHANNEL & CHIP
Sampled By : G. BERESFORD
Date : 4.8.82

Size Fraction Analysed :
Analysed By :
Method :

SAMPLE NUMBER	Grid Line No / Grid Easting	AMG CO-ORDINATES NORTHING	AMG CO-ORDINATES EASTING	DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Contam.	Geology	METAL CONTENT (ppm unless specified) W
48001		53	3									16
2		53	3									16
3		53	3									7
4		53	3									8
5		53	3									8
		53	3									
48006		53	3									20
7		53	3									4
8		53	3									x
9		53	3									x
10		53	3									x
11		53	3									x
12		53	3									x
13		53	3									x
14		53	3									x
		53	3									
48015		53	3									15
16		53	3									x
17		53	3									5
18		53	3									13
19		53	3									x
20		53	3									x
21		53	3									x
22		53	3									x
23		53	3									x
24		53	3									x
		53	3									
		53	3									
		53	3									

EZ Co of E Asia Ltd
Rosebery Tas.

GEOCHEMICAL SAMPLE DATA SHEET 701029 3

Project : STERLING VALLEY
Locality :
Grid Name :
Nominal Grid Azimuth :
Material : COSTEAN
Sample Method : CHANNEL & CHIP
Sampled By : G. Beresford
Date : 4-8-82
Size Fraction Analysed :
Analysed By :
Method :

SAMPLE NUMBER	Grid Line No / Grid Easting	AMG CO-ORDINATES NORTHING	AMG CO-ORDINATES EASTING	DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Contam.	Geology	Cu	Pb	Zn	Ag	Mn	Fe %	As	Sb AAS	Sn XRF	Sn AAS
480225	4600	53	3	0-20				X				110	65	1350	X	3·85%	18·75	430	·	X	X
226	"	53	3	20-40				X				120	115	1300	0·5	1·55%	15·00	740	·	X	X
227	"	53	3	40-60				X				90	290	835	1·5	7900	18·50	670	14	64	X
228	"	53	3	60-80				X				135	190	730	X	4300	20·50	440	34	79	5
		53	3																		
480229	4610	53	3	0-20		X						45	190	85	0·5	1130	7·65	9100	906	894	15
230	"	53	3	20-40		X						60	230	1050	X	1140	20·00	4100	420	451	10
231	"	53	3	40-60		X						85	230	1350	X	2120	21·50	5200	250	316	15
232	"	53	3	60-80		X						110	355	1450	X	1450	23·00	5800	200	248	5
233	"	53	3	80-100		X						85	205	2270	X	11500	18·00	3000	18	20	X
234	"	53	3	100-120		X						65	380	2500	X	30500	8·70	1700	6	5	X
235	"	53	3	120-140		X						85	265	3335	X	20000	17·00	1700	316	422	X
236	"	53	3	140-160		X		X				90	530	1885	X	28000	31·75	510	13	20	X
237	"	53	3	160-180		X		X				85	290	1600	X	17500	31·90	4300	16	10	X
		53	3																		
480238	4620	53	3	0-20		X						45	135	70	X	38520	·50	13000	405	404	10
239	"	53	3	20-40		X						40	110	70	X	4650	9·25	11000	390	477	10
240	"	53	3	40-60		X						35	90	55	X	1550	8·45	10000	385	466	5
241	"	53	3	60-80		X						40	110	70	X	2165	8·95	6100	435	537	5
242	"	53	3	80-100		X						55	260	75	X	3650	8·75	12000	1125	1588	X
243	"	53	3	100-120		X		X				65	520	130	X	9050	18·00	5900	1105	883	X
		53	3																		
480244	4630	53	3	0-20		X						15	15	35	X	650	5·10	5400	212	3691	5
245	"	53	3	20-40		X						20	35	40	X	550	6·85	11100	267	3200	5
246	"	53	3	40-60		X						45	45	55	X	880	9·85	20000	1855	2311	X
247	"	53	3	60-80		X						50	45	60	X	8501	7·50	11900	1555	1844	5
248	"	53	3	80-100		X						70	125	75	X	36000	8·35	4400	12	6	X
249	"	53	3	100-120			X	X				90	85	120	X	4600	9·30	4300	12	X	X
250	"	53	3	120-140								85	75	135	X	5250	16·00	11000	112	13	X

EZ Co of Asia Ltd
Rosebery Tas.

GEOCHEMICAL SAMPLE DATA SHEET

701030 4

Project : STERLING VALLEY
Locality :
Grid Name :
Nominal Grid Azimuth :

Material : COSTEAN
Sample Method : CHANNEL & CHIP
Sampled By : A. BERESFORD
Date : 4:8:82

Size Fraction Analysed :
Analysed By :
Method :

SAMPLE NUMBER	Sample Location Data: Grid Line No. / Grid Easting	AMG CO-ORDINATES: NORTHING	AMG CO-ORDINATES: EASTING	DEPTH	Sample Composition Data: COLOUR	Clay	Sand	Rock Frags.	Organic	Contam.	Geology	METAL CONTENT (ppm unless specified) W
48025		53	3									x
26		53	3									7
27		53	3									24
28		53	3									14
		53	3									
48029		53	3									x
30		53	3									10
31		53	3									20
32		53	3									x
33		53	3									x
34		53	3									5
35		53	3									x
36		53	3									x
37		53	3									x
		53	3									
48038		53	3									10
39		53	3									15
40		53	3									26
41		53	3									10
42		53	3									x
43		53	3									x
		53	3									
48044		53	3									26
45		53	3									25
46		53	3									11
47		53	3									17
48		53	3									x
49		53	3									6
50		53	3									x

E Z Co of A'Asia Ltd
Rosebery Tas.

GEOCHEMICAL SAMPLE DATA SHEET

701031

5

Project : Sterling Valley
Locality :
Grid Name :
Nominal Grid Azimuth :

Material : Costean
Sample Method : Channel & CHIP
Sampled By : G. Berasford
Date : 4-8-82

Size Fraction Analysed :
Analysed By :
Method :

SAMPLE NUMBER	Grid Line No 3260 N — Grid Easting	AMG CO-ORDINATES — NORTHING	AMG CO-ORDINATES — EASTING	DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Contam	Geology	Cu	Pb	Zn	Ag	Mn	Fe	AsN	Sn AAS	Sn XRF	Sn AAS
48051	4640	53	3 0	20		X						15	20	25	X	40	2.65	130	140	224	X
52	"	53	3 20	40		X						20	15	40	X	70	5.20	270	180	234	X
53	"	53	3 40	60		X						20	15	35	X	55	4.80	210	165	224	X
54	"	53	3 60	80		X						45	35	70	X	70	8.60	380	125	141	X
55	"	53	3 80	100		X						55	40	70	0.5	75	19.50	430	105	119	X
56	"	53	3 100	120		X						65	55	100	X	100	14.50	470	68	80	X
57	"	53	3 120	140		X						60	70	135	X	300	8.90	410	10	7	X
58	"	53	3 140	160		X						60	85	170	X	255	7.00	330	4	8	X
59	"	53	3 160	180		X		X				55	65	245	X	340	5.35	160	4	X	X
48060	4650	53	3 0	20		X						20	25	30	X	65	3.00	190	245	268	X
61	"	53	3 20	40		X						40	115	170	X	110	7.70	370	160	236	X
62	"	53	3 40	60		X						45	40	70	X	95	8.50	570	170	228	X
63	"	53	3 60	80		X						50	40	70	X	100	9.00	600	170	181	X
48064	4580	53	3					X				100	90	320	1	2200	6.50	420	28	18	5
65	4590	53	3					X				155	185	600	1	3700	21.50	3650	470	577	X
66	4600	53	3					X				90	35	925	X	2.85%	12.50	660	3	X	X
67	4610	53	3					X				100	370	560	0.5	3750	19.00	580	78	104	X
68	4620	53	3					X				25	60	55	X	415	3.55	240	X	X	X
69	4630	53	3					X				200	115	175	0.5	3100	9.55	410	505	625	5
70	4640	53	3					X				30	35	365	1	2850	20.00	130	12	51	X

Zinc Co of Aust Ltd
Rosebery Tas.

GEOCHEMICAL SAMPLE DATA SHEET 701032 6

Project : STERLING VALLEY
Locality :
Grid Name :
Nominal Grid Azimuth :

Material : COSTEAN
Sample Method : CHANNEL & CHIP
Sampled By : G. BERESFORD
Date : 4.8.82

Size Fraction Analysed :
Analysed By :
Method :

SAMPLE NUMBER	Sample Location Data: Grid Line No.	Grid Easting	AMG CO-ORDINATES: NORTHING	EASTING	DEPTH	Sample Composition Data: COLOUR	Clay	Sand	Rock Frags.	Organic	Contam.	Geology	METAL CONTENT (ppm unless specified): W
4801			53	3									23
02			53	3									24
03			53	3									18
04			53	3									12
05			53	3									14
06			53	3									X
07			53	3									4
08			53	3									X
09			53	3									X
			53	3									
4810	6	10	53	5									17
11	6	11	53	3									20
12	6	12	53	3									18
13	6	13	53	3									8
			53	3									
4814	6	14	53	3									X
15	6	15	53	3									X
16	6	16	53	3									X
17	6	17	53	3									6
18	6	18	53	3									X
19	6	19	53	3									4
20	7	20	53	3									14
			53	3									
			53	3									
			53	3									
			53	3									
			53	3									
			53	3									
			53	3									

E Z Co of A'Asia Ltd
Rosebery Tas.

GEOCHEMICAL SAMPLE DATA SHEET

701033 7

Project : STERLING VALLEY
Locality : 3260N
Grid Name :
Nominal Grid Azimuth :

Material : ROCK SAMPLES
Sample Method : CHIPS FROM COSTEAN
Sampled By : ROD SAINTY
Date :

Size Fraction Analysed :
Analysed By :
Method :

SAMPLE NUMBER	Sample Location Data: Grid Line No 3260N, Grid Easting	AMG CO-ORDINATES NORTHING	AMG CO-ORDINATES EASTING	DEPTH	Sample Composition Data: COLOUR	Clay	Sand	Rock Frags.	Organic	Contam	Geology	METAL CONTENT (ppm unless specified): Cu	Pb	Zn	Ag	MN	Fe	AS %	Sn AAS	Sn XRF	Sn MS
48071	4573	53	3									5300	560	190	18.0	300	7.15	16.0	2.3%	1.2%	90
72	4580	53	3									1800	45	95	4.0	270		3550	450	541	40
73	4620	53	3									2.51%	110	65	25.0	85	26.50	10.5	4800	6720	205
74	4620	53	3									280	5	55	X	730	5.05	1000	71	86	5
75	4637	53	3									180	60	25	1.5	145	6.75	6.00	7500	1.25%	150
76	4750	53	3									490	6100	65	102.0	65	9250	19.0	105	161	X
77	4750	53	3									715	3375	295	59.0	90	4.90	23.00	22	41	X
78	4750	53	3									25	135	280	0.5	585	3.80	3150	9	X	X
79		53 3380N	3 4670E									25	20	105	X	330	2.85	670	24	17	5
48080	4575	53	3									45	45	90	0.5	655	4.35	450	29	26	X

E.Z. Co of A'Asia Ltd
Rosebery Tas.

GEOCHEMICAL SAMPLE DATA SHEET

701034 8

Project : STERLING VALLEY
Locality : ....
Grid Name : ....
Nominal Grid Azimuth : ....

Material : ROCK SAMPLES
Sample Method : CHIPS FROM COSTEAN
Sampled By : ROD SAINTY
Date : ....

Size Fraction Analysed : ....
Analysed By : ....
Method : ....

SAMPLE NUMBER	Sample Location Data: Grid Line No. / Grid Easting	AMG CO-ORDINATES NORTHING	AMG CO-ORDINATES EASTING	DEPTH	Sample Composition Data: COLOUR	Clay	Sand	Rock Frags.	Organic	Contam.	Geology	METAL CONTENT (ppm unless specified): W	Au	Mo	Rpt As
48971		53	3									X	8.62	X	15.00%
72		53	3									X	0.04	X	3100
73		53	3									X	26.6	X	3.9%
74		53	3									X	0.18	25	950
75		53	3									X	0.33	X	5.7%
76		53	3									X	1.19	110	19.0%
77		53	3									X	1.47	X	21.0%
78		53	3									X			
79		53	3									X			
48080		53	3									X			
		53	5												
		53	3												
		53	3												
		53	3												
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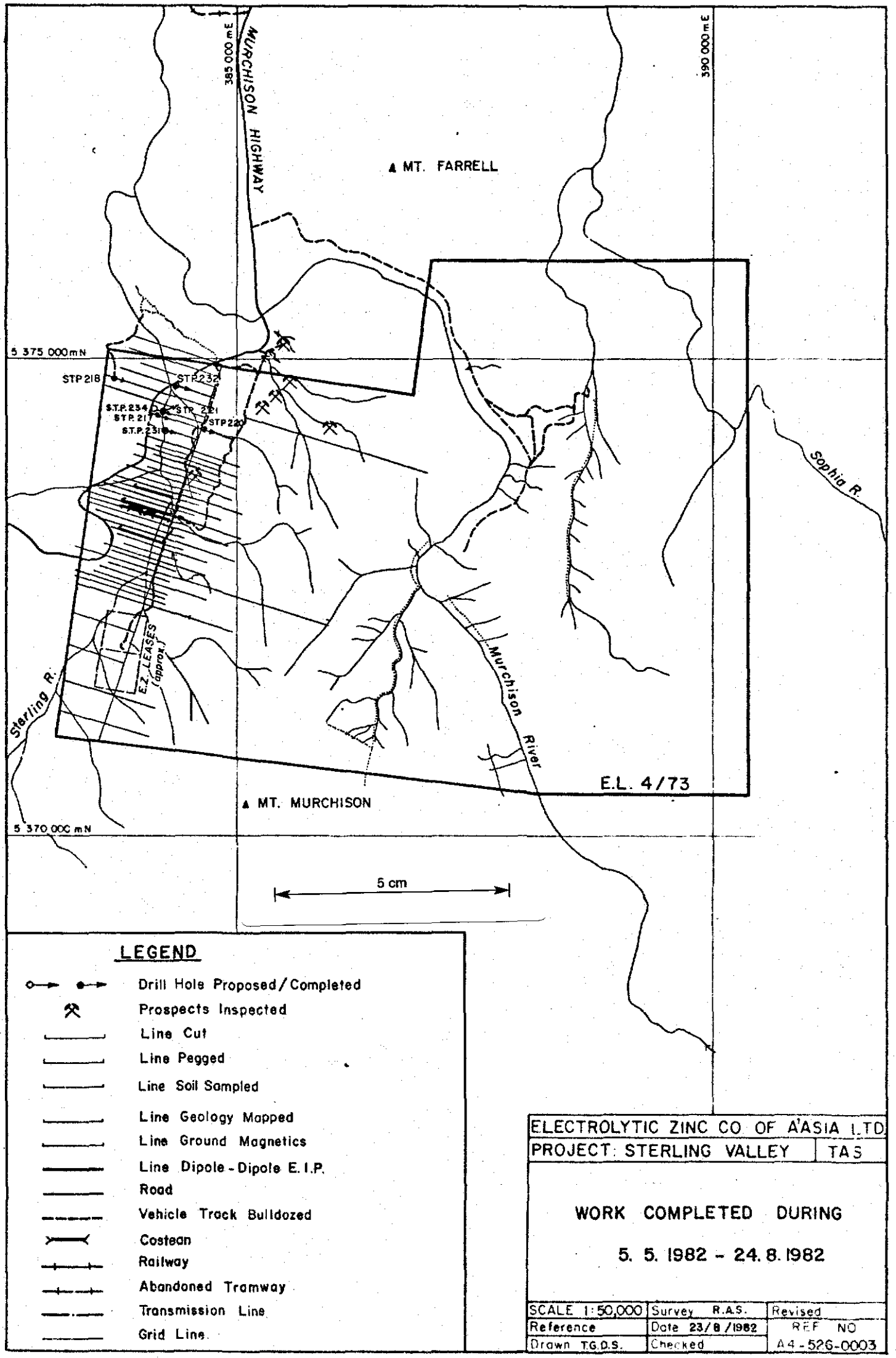


LEGEND

- Drill Hole Proposed / Completed
- Prospects Inspected
- Line Cut
- Line Pegged
- Line Soil Sampled
- Line Geology Mapped
- Line Ground Magnetics
- Line Dipole - Dipole E.I.P.
- Road
- Vehicle Track Bulldozed
- Costean
- Railway
- Abandoned Tramway
- Transmission Line
- Grid Line

ELECTROLYTIC ZINC CO OF A'ASIA LTD.

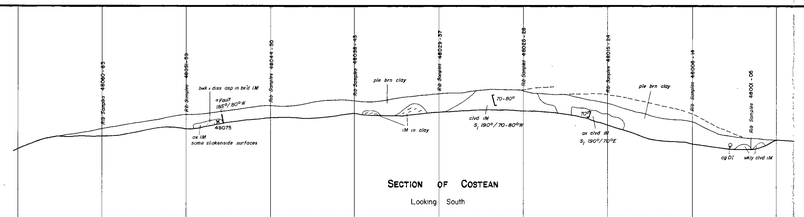
PROJECT: STERLING VALLEY | TAS

WORK COMPLETED DURING

5. 5. 1982 - 24. 8. 1982

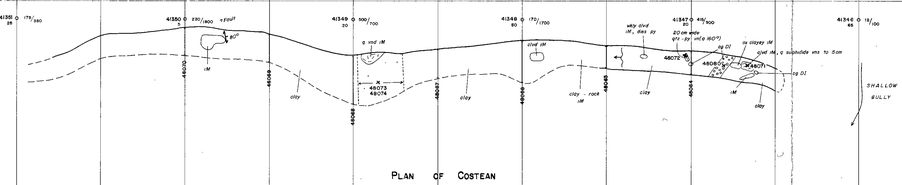
SCALE 1:50,000	Survey R.A.S.	Revised
Reference	Date 23/8/1982	REF NO
Drawn T.G.D.S.	Checked	A4-526-0003

COSTEAN GEOLOGY



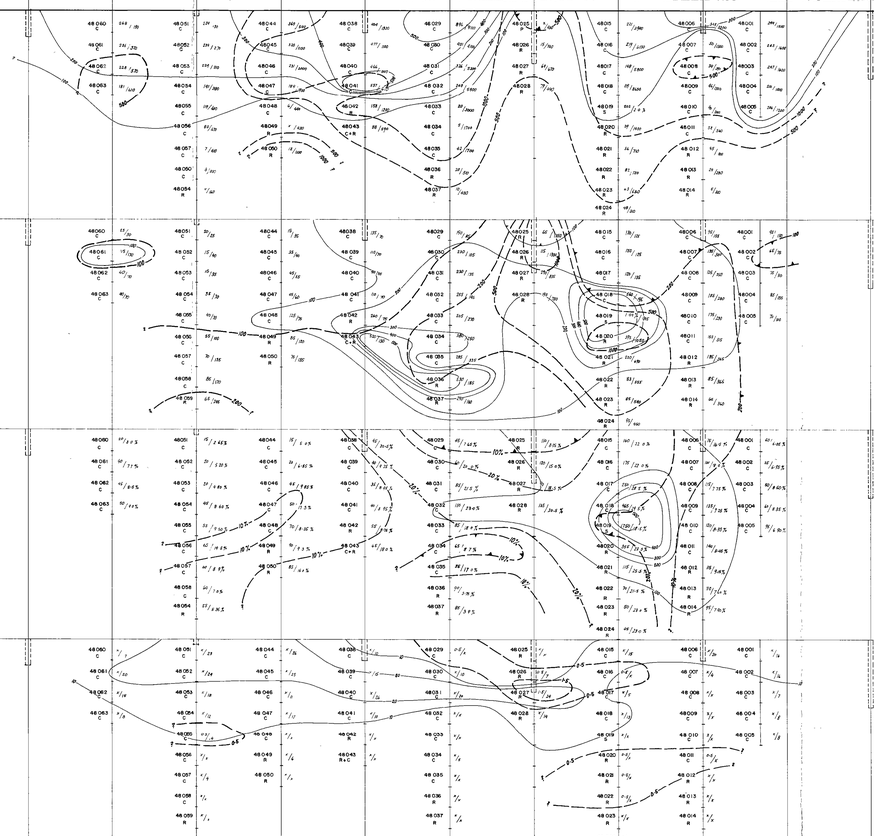
SECTION OF COSTEAN

Looking South

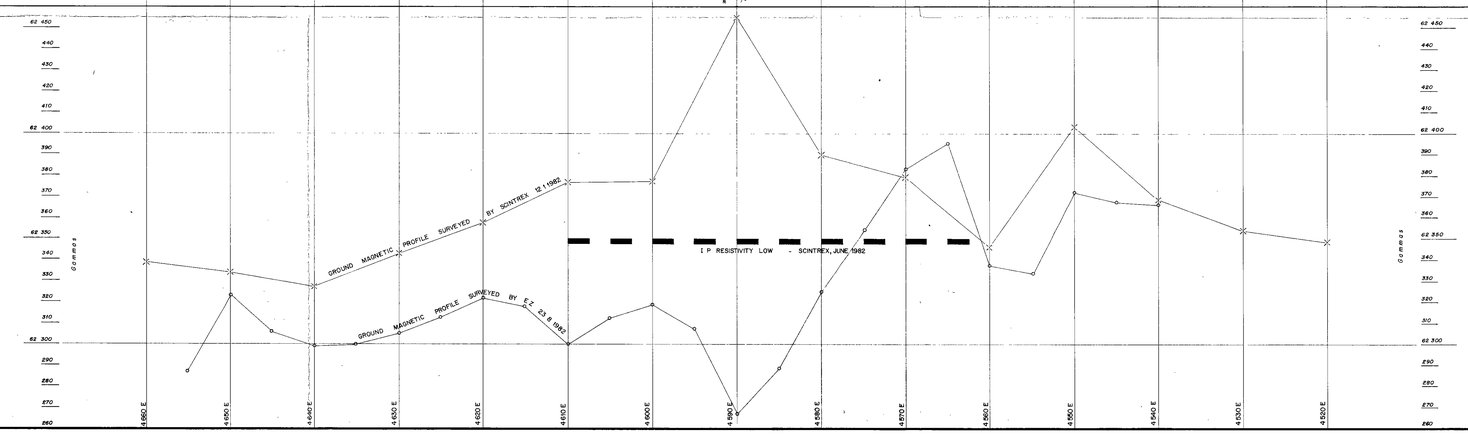


PLAN OF COSTEAN

COSTEAN GEOCHEMISTRY



COSTEAN GEOPHYSICS



ROCK SAMPLES

Sample No.	Description	Assays								
		Pb (ppm)	Zn (ppm)	Cu (ppm)	Fe (%)	Mn (ppm)	Ag (ppm)	As (%)	Sn (ppm) XRF	W (ppm) XRF
48071	Massive silica/sulphide vein in mafics adjacent to diorite	560	190	5300	7·15	300	18	16·0	1·12 %	x
48072	Quartz vein with stringer and dissem py in mafics	45	95	1800	0·87	270	4	0·355	541	x
48073	Sulphide veins in mafics	110	65	2·51 %	26·5	85	25	10·5	6720	x
48074	Quartz vein with dissem. py + asp	5	55	280	5·05	730	x	0·1	86	x
48075	Mafics with dissem py + ?asp	60	25	180	6·75	145	1·5	6·0	1·25 %	x
48080	Unmineralized diorite	45	90	45	4·35	655	0·5	450 ppm	26	x

FLOOR SAMPLES

Sample No.		Assays								
		Pb (ppm)	Zn (ppm)	Cu (ppm)	Fe (%)	Mn (ppm)	Ag (ppm)	As (ppm)	Sn (ppm) XRF	W (ppm) XRF
48064		90	320	100	6·50	2200	1·0	420	18	x
48065		105	600	155	21·50	3700	1·0	3550	577	x
48066		35	925	90	12·50	2·85 %	x	660	x	x
48067		370	560	100	19·00	3750	0·5	580	104	6
48068		60	55	25	3·55	415	x	240	x	x
48069		115	175	200	9·55	3100	0·5	410	625	4
48070		35	365	30	20·00	2850	1·0	130	51	14

LEGEND

RB SAMPLES — Auger hole shown; Sample No R - Rock C - Clay S - Soil; T 20 cm

ROCK SAMPLES — Sample No. x

FLOOR SAMPLES — Sample No

SOIL AUGER SAMPLES — Sample No; Depth (cm); Sn (ppm) AAS / As (ppm) AAS

GEOLOGY
IM – Mafic (basaltic intrusive)
D1 – Diorite

5 cm

ELECTROLYTIC ZINC CO. OF A'ASIA LTD.

PROJECT: STERLING VALLEY | TAS.

701036

LINE 3260 COSTEAN

GEOLOGY, GEOCHEMISTRY, GEOPHYSICS

SUMMARY PLAN

82-1844

Scale : 1:250	Survey : R.A.S., I.M.D.	Revised :
Reference :	Date : Aug. 1982	Ref. No. AO-526-0032
Drawn : N.K.	Checked :	