

699001

MICROFILMED

D of M <i>hm</i>	A.O. /	D.G. /	E.O. /	D.S. /
Received Answered				19 OCT 1982
DEPT. OF MINES				E & IL
REF. No. 8587/82				<i>075</i>

Process file

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED
West Coast Mines

EXPLORATION LICENCE NO. 4/73 - STERLING VALLEY

Progress Report on Exploration Activity
16th December, 1981 to 4th May, 1982

Geology Department
Report No. 150 MD

R.A. Sainty,
May, 1982.

TABLE OF CONTENTS

<u>TABLE OF CONTENTS</u>	i
<u>LIST OF TABLES AND FIGURES</u>	ii
1. <u>INTRODUCTION</u>	1
2. <u>PREVIOUS EXPLORATION</u>	1
3. <u>ABBREVIATIONS</u>	1
4. <u>EXPLORATION UNDERTAKEN 16.12.'81 to 4.5.'82</u>	2
4.1. <u>Work Completed</u>	2
4.1.1. <u>Geology</u>	
4.1.2. <u>Soil Geochemistry</u>	
4.1.3. <u>Rock Geochemistry</u>	
4.1.4. <u>Geophysics</u>	
4.1.5. <u>General</u>	
4.2. <u>Results Received</u>	
4.2.1. <u>Geology</u>	
4.2.2. <u>Soil Geochemistry</u>	
4.2.3. <u>Rock Geochemistry</u>	
4.2.4. <u>Geophysics</u>	

LIST OF PLANS

<u>Plan No.</u>	<u>Scale</u>	<u>Title</u>	
A4-526-0003	1:50,000	Work Completed	
A0-504-0022	1:5,000	Geology	
-0099	"	Soil Geochem Plan	Sn
-0040	"	" " "	Cu
-0234	"	" " "	As
-0235	"	" " "	Pb
-0233	"	" " "	Zn
-0232	"	Ground MagnetICS	

LIST OF APPENDICES

APPENDIX 1	Thin Section Descriptions - C.M.S. Report 82/2/16
APPENDIX 2	Rock Geochemical Data.
APPENDIX 3	Ground MagnetICS Line Profiles
APPENDIX 4	Ground MagnetICS Contour Plan
APPENDIX 5	J.R. Bishop: Memorandum concerning results of Sterling Valley Ground Magnetic Survey.

1. INTRODUCTION

This report covers work on Exploration Licence No. 4/73 by Electrolytic Zinc Company of Australasia Limited between 16th December, 1981 and 4th May, 1982.

The work was carried out on behalf of a Joint Venture between Aberfoyle Exploration Pty. Ltd., the holders of E.L. 4/73, E.Z., the operators, and Getty Oil Development Co. Ltd., which was initiated in May, 1979.

2. PREVIOUS EXPLORATION

E.Z. Report No. 133 - "E.L. 4/73 Progress Report on Activity, July, 1979 to June, 1980" - in addition to detailing all work carried out during 1979-80 also contains references to all previous exploration in the Licence area. E.Z. Report No. 143 covers exploration activity from July, 1980 to June, 1981, and E.Z. Report No. 146 covers exploration activity from 1st July, 1981 to 15th December, 1981.

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 to June, 1981".

4. EXPLORATION UNDERTAKEN 16.12.'81 to 4.5.'82

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

4.1.1. Geology

The remaining geological line mapping (14.1km on 16 lines) of the Sterling Valley infill grid (totalling 16.5km on 19 lines) was completed.

The aim of this mapping was to provide previously lacking geological data north of line 3,080N in the area between the Murchison Highway and the outcrops of Farrell Group Sediments in the vicinity of the 5,000E baseline. Mapping in the infill area south of 3,080N (i.e. to 2,360N) would provide tighter control for geochemistry/geophysics along these lines.

4.1.2. Soil Geochemistry

Soil sampling of the infill grid was undertaken with 20m spaced nominal 'C' horizon hand auger samples collected in areas of residual soils.

555 samples were submitted to Analabs and analysed for Zn, Pb, Cu, As, Ag, Fe and Mn by A.A.S. after nitric/perchloric acid digestion and for Sn by A.A.S. after vapour hydride volatilization.

4.1.3. Rock Geochemistry

10 rock samples collected during line mapping were analysed by Analabs for Zn, Pb, Cu, As, Ag, Fe, Mn and Sn by the same methods as for the soil samples.

4.1.4. Geophysics

Ground magnetics survey of both original and infill grid lines between 3,980N and 2,360N (nominal 60m line spacing) was undertaken by Scintrex using a Scintrex MP 2 Proton Precession Magnetometer. Coverage on seven lines in the southern part of the grid (3,020N to 2,840N, 2,720N, 2,660N and 2,360N) was later continued westwards on uncut extensions to approximately 100m west of the Murchison Highway. Readings in all cases were taken at 10m station intervals.

4.1.5. General

The Annual Report for 1980-81 was written and compiled and despatched to all Joint Venture Partners and the Mines Department.

The project review section of the last Joint Venture Committee Meeting report was recompiled and sent to the Mines Department as a six-monthly progress report on the E.L. This report is identified by E.Z. Report No. 146. It contains the same technical information as the report presented to the Joint Venture partners.

4.2. Results Received

4.2.1. Geology (Refer to 1:5,000 scale geology plan No. A0-504-0022 and thin section descriptions Appendix 1) Mapping has succeeded in infilling the areas of no data despite generally poor exposure and reliance upon float material. West of the 5,000E baseline the major rock type is an altered, fine to medium-grained basaltic intrusive, frequently well cleaved, extending northwards to at least 3,740N. This has

intruded porphyritic andesites and andesitic crystal tuff, lapilli tuff and agglomerate. Very minor fine-grained acid tuffs were identified. Importantly several small occurrences of acid intrusive were mapped, both within and marginal to the basaltic intrusive. This rock ranges from (dominantly) a quartz-K feldspar porphyry to a medium-grained biotite granite. The occurrences are limited to small loose boulders and no intrusive contacts are exposed. In the vicinity of these acid intrusives and elsewhere the basaltic intrusive is veined by quartz and less frequently pyrite/arsenopyrite veinlets. In addition, vuggy cavities within the quartz veins are infilled with pyrite/arsenopyrite crystals.

Petrographic examination (C.M.S. Report 82/2/16) of 12 rock samples collected during geological line mapping of the infill grid indicates at least some degree of contact metamorphism and metasomatism of the Mt. Black Volcanics has taken place. The quartz-tourmaline-bearing andesite 48364 (3,860N; 4,670E) outcrops 15m from an altered feldspar-quartz rock (?intrusive). Andesite 48346 (3,440N; 4,225E) has undergone incipient hornfelsic recrystallisation, and the basic intrusive and some of the surrounding andesitic lavas have been partially replaced by uralitic tremolite-actinolite.

4.2.2. Soil Geochemistry (Refer to 1:5,000 scale Soil Geochem Plans No's A0-504-0099-Sn; -0040-Cu; -0234-As; -0035-Pb & -0233-Zn)

Soil sampling has delineated a Sn anomaly centred on lines 3,200N to 3,500N with values of 100 to 500 and 600 ppm Sn over a 80m maximum width and values over 20 ppm to 200-300m maximum width. These values are associated with the granitic acid porphyry intrusives mapped both within and marginal to the basaltic intrusive, where pyrite/arsenopyrite/quartz veining

has been observed.

The Sn anomaly is accompanied by coincident As and Pb anomalies, while more mobile Zn and Cu show some displacement down slope.

Interestingly there is an area of secondary closed anomalism in As, Zn, Pb + Sn 200-300m east of the Murchison Highway on lines 3,200N-3,380N. This may represent a leakage halo associated with fracturing.

Sporadic values to 575 ppm Sn occur adjacent to 5,000E over the length of the infill grid and appear to be associated with the black pyritic phyllites and slates of the Farrell Group.

4.2.3. Rock Geochemistry (Refer to Appendix 2 - Rock Geochem Data)

Analyses of 10 rocks collected during line mapping are presented in Appendix 2. A sample of coarse grained brecciated black shale in vuggy siliceous matrix with infilling arsenopyrite and pyrite (5,060E, 3,980N) assayed 0.62% Sn, 2.5% As, 26.5 ppm Ag and 1,750 ppm Cu. A limonite-quartz-actinolite rock (4,985E 2,480N) from close to the projected line of the Henty Fault assayed 340 ppm Sn, 520 ppm As. Three samples of the mafic intrusive were assayed. Two of these were mineralised with thin wisps of arsenopyrite and pyrite and returned 2.0% As, 7 ppm Sn and 0.5% As, 580 ppm Sn. The latter sample is close to a 500 ppm soil Sn sample. The unmineralised sample of mafic intrusive from within a 200-260 ppm soil Sn area assayed 110 ppm As, 60 ppm Sn. The altered siliceous rock (?intrusive)(4,655E 3,860N) which occurs 15m from the quartz-tourmaline-bearing andesite 48364 (and within an area of 29, 69 and 93 ppm soil Sn values) assayed 43 ppm Sn.

4.2.4. Geophysics (Refer Appendix 3, 4 and 5)

Dr. J.R. Bishop has summarised the results of the ground magnetics survey in Sterling Valley (Appendix 5).

The area of strong and irregular magnetic anomalies south of line 3,200N is immediately attributable to the basic intrusive within the Mt. Black Volcanics. Magnetic susceptibility measurements on rock specimens however display no significant response but this is explainable as due to surface oxidisation of the contained magnetite.

The very subdued response of larger circular extent between 3,200N and approximately 3,740N is possibly due to the mapped northward continuation of the basic intrusive beyond the area of strong ground magnetics anomalism, or else is the only response from the system that has produced the observed granite-acid porphyry dykes and soil geochemical expression.

APPENDIX 1: Thin Section Description - C.M.S. Report 82/216

Central Mineralogical Services



39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

REF	NUM	MINE SUPT.	CH MINE ENGR
ACCTS	17 MAR 1982		INDUST
REV	IC	EOL	T

The Manager
Attn. Chief Geologist
Electrolytic Zinc Co. of
Australasia Ltd.
West Coast Mines
P.O. Box 21
ROSEBERY / TAS. 7470

15th March, 1982

REPORT CMS 82/2/16

YOUR REFERENCE: Order No. 900342
DATE RECEIVED: 11th February, 1982
SAMPLE NOS.: 12 Samples
SUBMITTED BY: R. Sainty
WORK REQUESTED: Petrology

H.W. Fanning for

H.W. Fanning, M. Sc.

REPORT CMS 82/2/16

Twelve rock samples were received for petrological examination, and results are compiled in the attached tables. Descriptions incorporate data from K-feldspar staining tests and (stereobinocular, petrological) microscopic examination of representative thin-sections and offcuts.

Summary

This suite consists largely of altered igneous rocks ranging from basic through intermediate to acid, comprising three fairly distinct groups:

1. Andesites and Trachyandesites: typically lavas with minor clastic lava variants; includes 48302, 48310, 48364, 48346 and 48359.
2. Basics: a relatively diverse group including fine-grained (lava-like), medium-grained (?minor intrusive), and altered breccia of uncertain affinities. Sample numbers 48308, 48339 and 48361.
3. Felsic Intermediate to Acid Tuffs: includes a probable Ignimbrite (48307), a bedded rhyolitic vitric-crystal tuff (48309), and a cryptocrystalline pelitic ash (48313).

Alteration features, summarised in individual descriptions, are rather variable, but are generally consistent with low-greenschist facies regional metamorphism. Some rocks exhibit vague contact-metamorphic/metasomatic effects which are semi-characterized by tremolite-actinolite-bearing assemblages in basic to intermediate types, quartz veining with accessory schorl, or grading into silicification or chloritisation zones. Temporal relationships with the regional metamorphism is rather obscure, since the slaty cleavage is non-penetrative (partly a reflection of variations in competence). Veins are locally stressed or brecciated, but this may reflect localised tectonic features (e.g. faults).

D. Cowan, B. Sc.

Sample No.	CMS 82/2/16 Classification - Composition	Fabric	Accessories	Central Mineralogical Service Comments
48302 (T.S. 40969)	Trachyandesite. Albitised/weakly sericite-stained plagioclase, subordinate chloritised ferromag phenocrysts in weakly sericite-chlorite-stained alkali feldspar-microlitic groundmass.	Weakly glomeroporphyritic with extremely fine, incipiently subtrachytic groundmass.	Mildly leucoxenised primary magnetite; traces secondary zoisitic epidote.	Incipiently stressed, moderately (?greenschist) altered porphyritic lava. Purplish colouration, queried in submission sheet, is not detectable; conceivably a light-sensitive chlorite.
48307	Silicified Tuff. Cherty to medium-grained secondary quartz with patchy corroded relics of microfelsitic quartzofeldspathic material, minor relict "volcanic" quartz crystals/fragments.	Stressed to semi-schistose (post-silicification). Patchy relict flow-structured fragmental.	Minor leucoxene stainings, leucoxenised opaques. Rare oxidised very fine pyrite.	Thoroughly silicified, subsequently stressed "rhyolitic" tuff. Relict fabric consistent with an ignimbritic lithic-vitric-crystal tuff, but finer critical details obliterated.
48308	Uralitised Basalt. Albitised plagioclase and tremolitised pyroxene microlaths, tremolitic mesostasis. Minor chloritised pyroxene phenocrysts, semi-pervasive chlorite as partial alteration of tremolite.	Incipiently flow-structured, basaltic.	Thinly disseminated clots (?micro-amygdaloes) of micro-crystalline zoisite. Leucoxenised/oxidised opaques.	Pervasively altered, but essentially unstressed basalt with late "retrograde" chlorite replacing urallitic tremolite-actinolite.
48309	Altered tuff. Pervasively chlorite-kaolin-stained microcrystalline quartzofeldspathic material with disseminated albite, minor quartz crystals/fragments. Frequent stressed quartz veins with marginal silicified zones.	Semi-lenticular, sub-to millimetric bedded, weakly pelite-parted, silty sandy clastic.	Quartz-albite veinlets (predate quartz veining) silicification. Leucoxenic stainings.	Vague relict shardy textures consistent with a (?subaqueous) vitric-crystal "rhyolitic" tuff. Quartz veining postdates albite-chlorite-kaolin assemblage, but subsequently sheared (sl. 48307).
48310	Trachyandesite. Frequent saussuritic, albitised plagioclase, subordinate vague chloritised ferromag phenocrysts. Variably chloritised/epidote-stained microcrystalline feldspathic matrix. Minor chlorite veins.	Glomeroporphyritic, andesitic. Vaguely lithic fragmental; confused by penetrative slaty cleavage.	Leucoxenic opaques (Ti-magnetite, sim. 48302). Minor secondary quartz, calcite (chlorite veins).	Affinities with 48302, relatively sheared, altered. Relict fabric consistent with a lava flow breccia (tuff lava); alternately a cognate xenolithic minor intrusive.
48313	Pelitic Ash. Weakly/pervasively sericite-chlorite-epidote-stained, cryptocrystalline alkali feldspar. Frequent quartz-chlorite-sericite and late straight-walled quartz veinlets.	Slumped/contorted faint bedding laminations. Very vague, but pervasive shardy micro-textures.	Clastic leucoxenic semi-opaques, fine silt-sized quartz, feldspar, mica flakes.	Devitrified, extremely fine-grained vitric ash. Chert-like character, strong K-feldspar (cobaltinitrite) stain could make this rock a useful marker horizon.
48325	quartz-Chlorite Rock. Irregular clasts, zones of chlorite rock, chlorite-quartz rock, quartz-chlorite vein material, veined, cemented by chlorite-stained quartz. Sporadic late quartz veins, vugs.	Essentially a quartz-chlorite-healed, subsequently refractured/quartz-veined breccia.	Rare clasts chloritised felsic-intermediate glassy volcanic. Minor leucoxenic semi-opaques.	Represents a chlorite-quartz alteration/vein assemblage with two contemporaneous phases fracturing. No detectable fluorite.
48339	Picritic Microgabbro. Frequent incipiently uralitised (tremolitised) augite phenocrysts in groundmass of extensively saussuritic/albitised plagioclase laths, augite, vague felsic mesostasis.	Essentially doleritic, but confused by weak boudinaging, shearing effects.	Sparse veinlets epidote, extensively chloritised tremolite. Cloudy sphene (after primary opaques).	Augite-rich basic with finer details obscured by alteration, stress effects. Minor intrusive or alternately medium-grained core of flow.

810669

APPENDIX 2: Rock Geochemical Data.

APPENDIX 2: Rock Geochemical Data.

Sample No.	Mn	Fe	Cu	Zn	As	Ag	Sn	Pb	
48301	105	10.0%	215	150	520	X	340	55	2480N 4985E
48324	545	2.85%	385	255	390	9.5	3	100	3140N 4855E
48326	3550	9.45%	585	380	2.0%	4.5	7	80	3140N 4620E
48332	1350	8.6%	185	540	540	1.0	29	305	3200N 4680E
48333	6250	19.5%	35	750	110	X	60	205	3200N 4650E
48336	4250	19.5%	380	225	5000	1.5	580	55	3260N 4620E
48356	3850	20.5%	95	320	170	X	10	20	3620N 4720E
48365	395	2.65%	30	160	90	X	43	15	3860N 4655E
48366	445	5.35%	70	35	2100	X	47	35	3860N 5165E
48367	50	2.25%	1750	75	2.5%	26.5	6200	225	3980N 5060E

APPENDIX 3:

Ground Magnetics Line Profiles.

LINE 390N
STERLING VALLEY
GROUND MAGNETICS
TAS 099
8-1-82
PLOTTER BY:
M. TANNER.

63500-
62800-
62500-
62200-
62000-
61700-
61500-
61200-
61000-
60700-

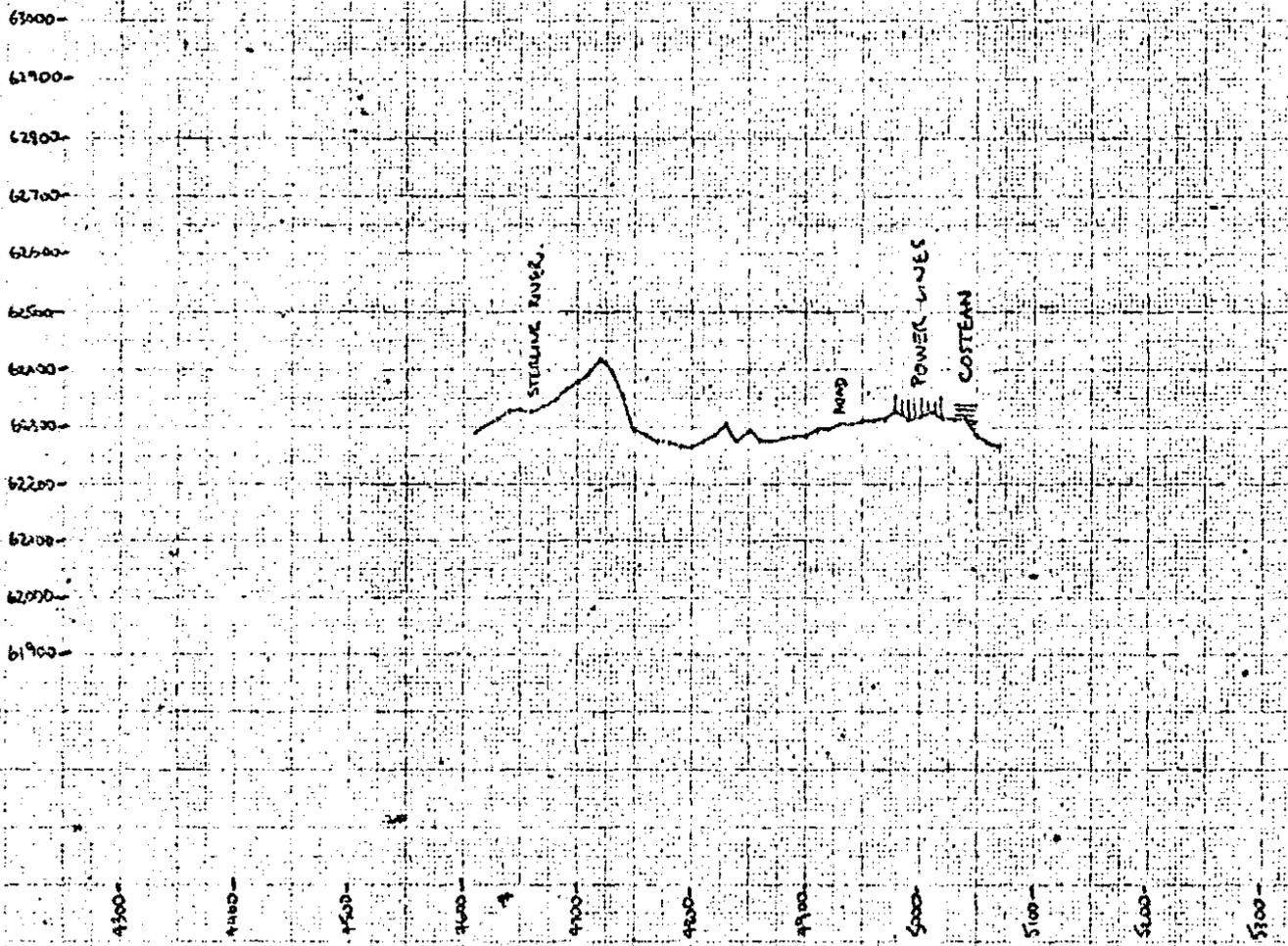
4300-
4400-
4500-
4600-
4700-
4800-
4900-
5000-
5100-
5200-
5300-
5400-

STERLING BLVD.

STERLING BLVD.

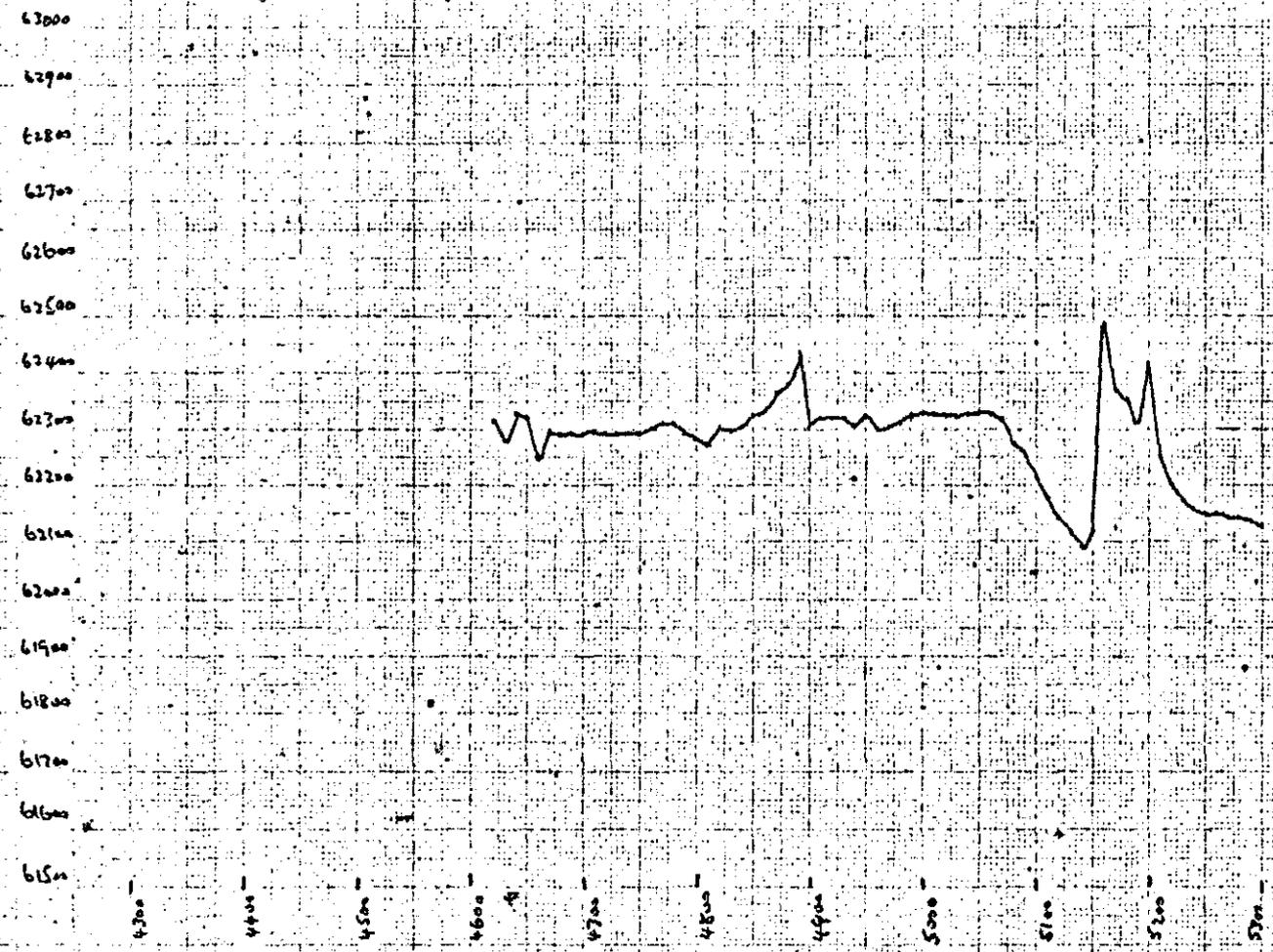
699018

LINE 320 N
STERLING VALLEY
GROUND MAGNETICS
T/S 094
8-1-82
PLOTTER BY
M. TANNER



699019

LINE NO 3860N
GROUND MAGNETICS
STERLING VALLEY,
TXS 094
8-1-82
PLOTTER BY R. LIST.



699020

63000
62900
62800
62700
62600
62500
62400
62300
62200
62100
62000
61900
61800
61700
61600
61500

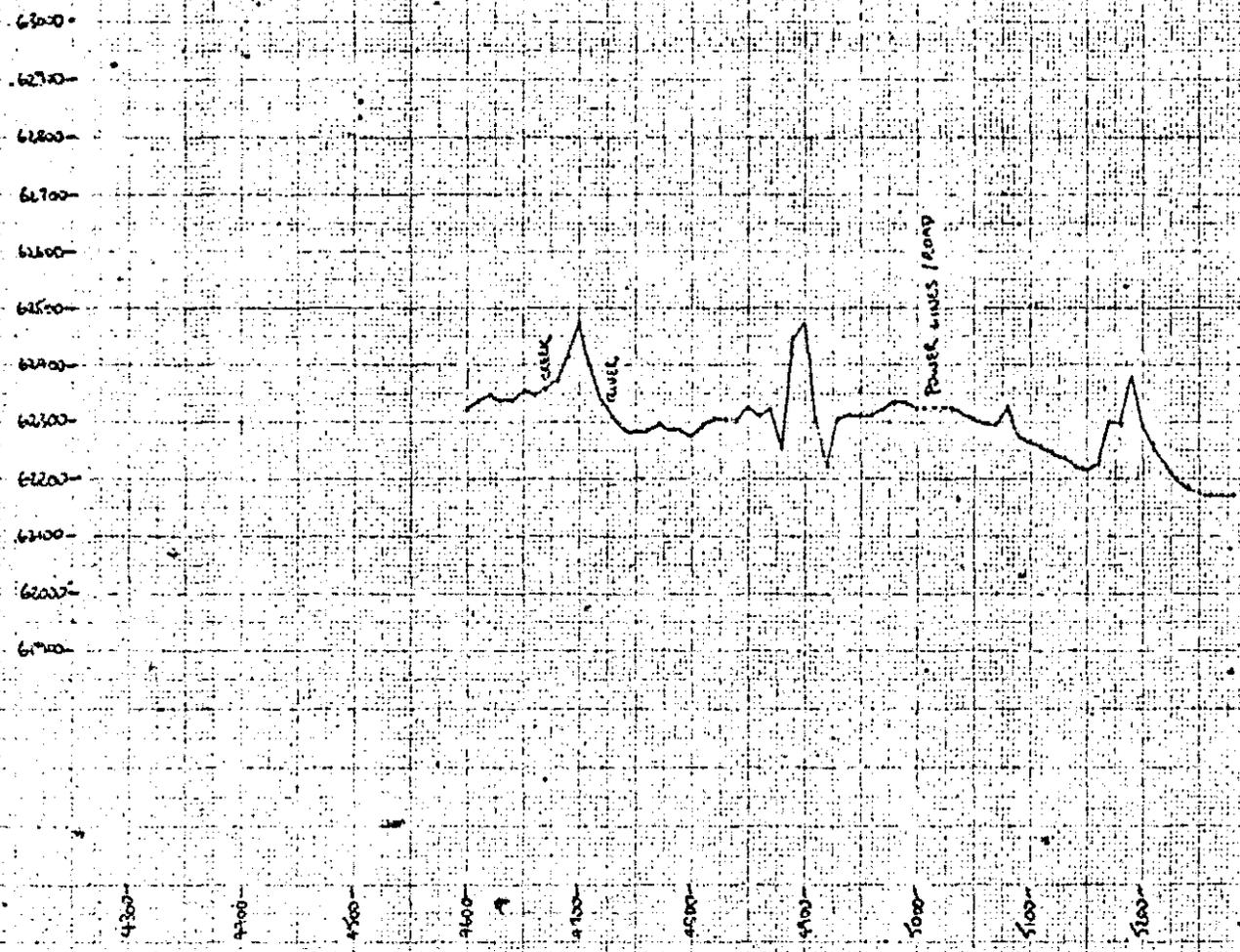
4300
4400
4500
4600
4700
4800
4900
5000
5100
5200
5300



LINE NO 3800N
GROUND MAGNETICS
STERLING VALLEY
TXS 094
9-1-82
PLOTTED BY R. LIST.

699021

LINE 3740N
STERLING INDEX
GROUND MAGNETICS
TAS 094
8. 1. 82.
PLOTTED BY:
M. TANNER.



6990222

LINE 3680 N.
STERLING VALLEY
GROUND MAGNETICS
TAS 099
8-1-82
PLOTTED BY:
M. TANNER.

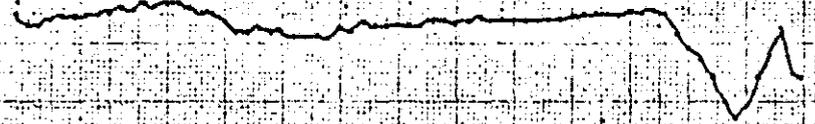


699023

LINE NO 3620M
GROUND MAGNETICS
STERLING VALLEY.
8-1-82
TAS 094
PLOTTED BY R. LIST.

63000
62900
62800
62700
62600
62500
62400
62300
62200
62100
62000
61900
61800
61700
61600
61500

4300
4400
4500
4600
4700
4800
4900
5000
5100
5200



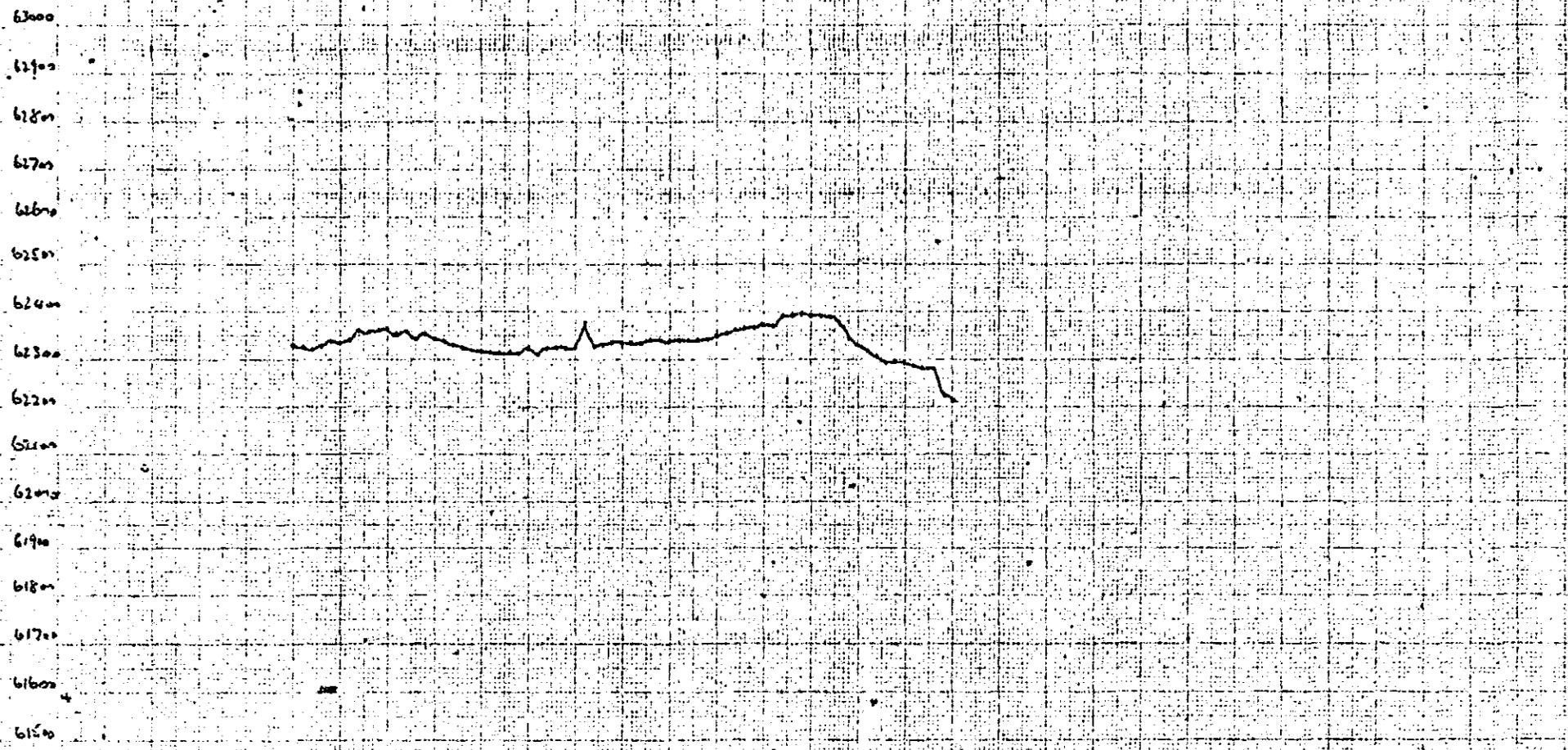
699024

LINE NO 3560N
OPENING MAGNETICS
STERLING VALLEY
TAX 094
9-1-82
PLOTED BY R. LIST

63000
62900
62800
62700
62600
62500
62400
62300
62200
62100
62000
61900
61800
61700
61600
61500

4300
4400
4500
4600
4700
4800
4900
5000
5100
5200

699025

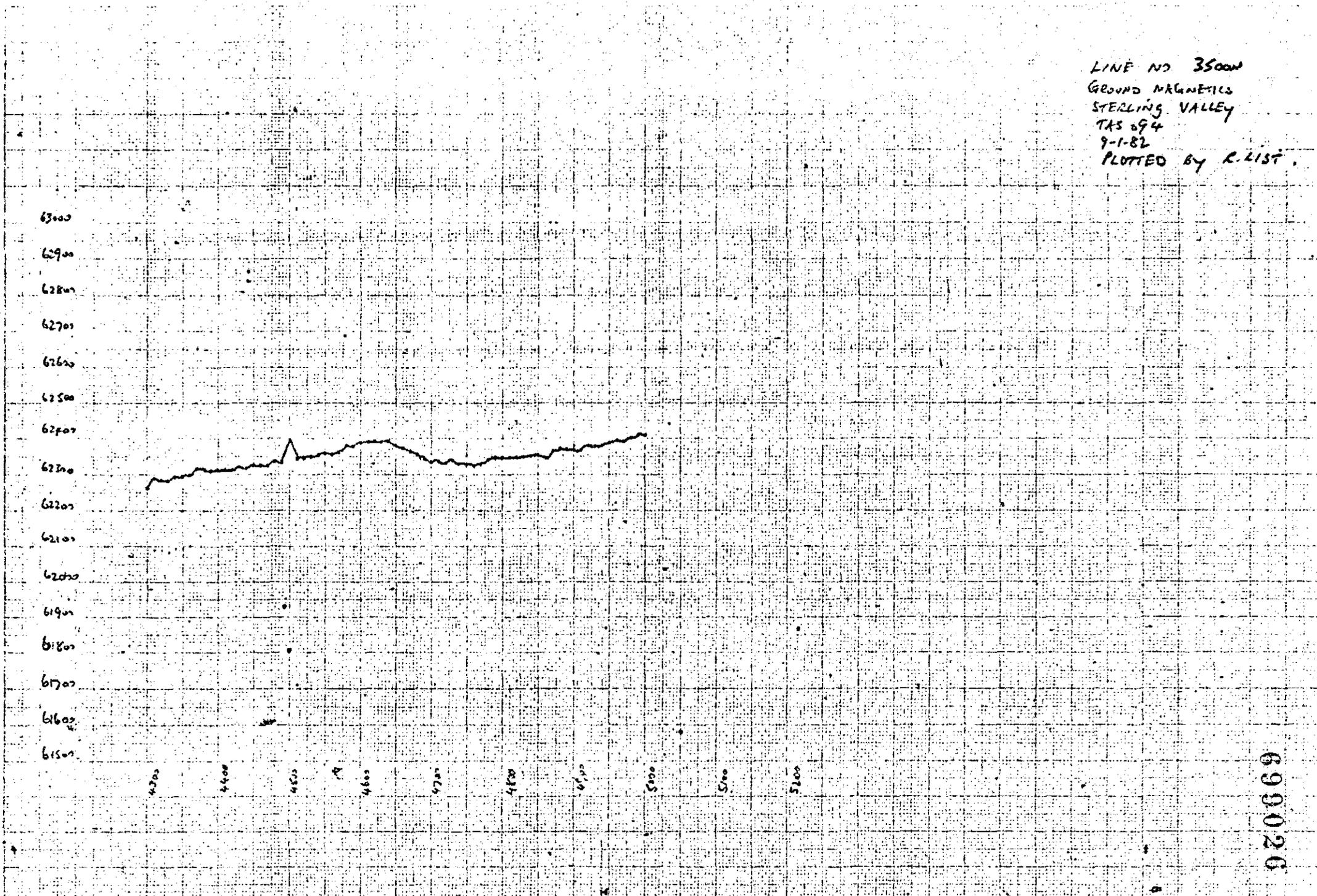


LINE NO 3500W
GROUND MAGNETICS
STERLING VALLEY
TAS 694
9-1-82
PLOTTED BY R. LIST.

63000
62900
62800
62700
62600
62500
62400
62300
62200
62100
62000
61900
61800
61700
61600
61500

4300 4400 4500 4600 4700 4800 4900 5000 5100 5200

699026

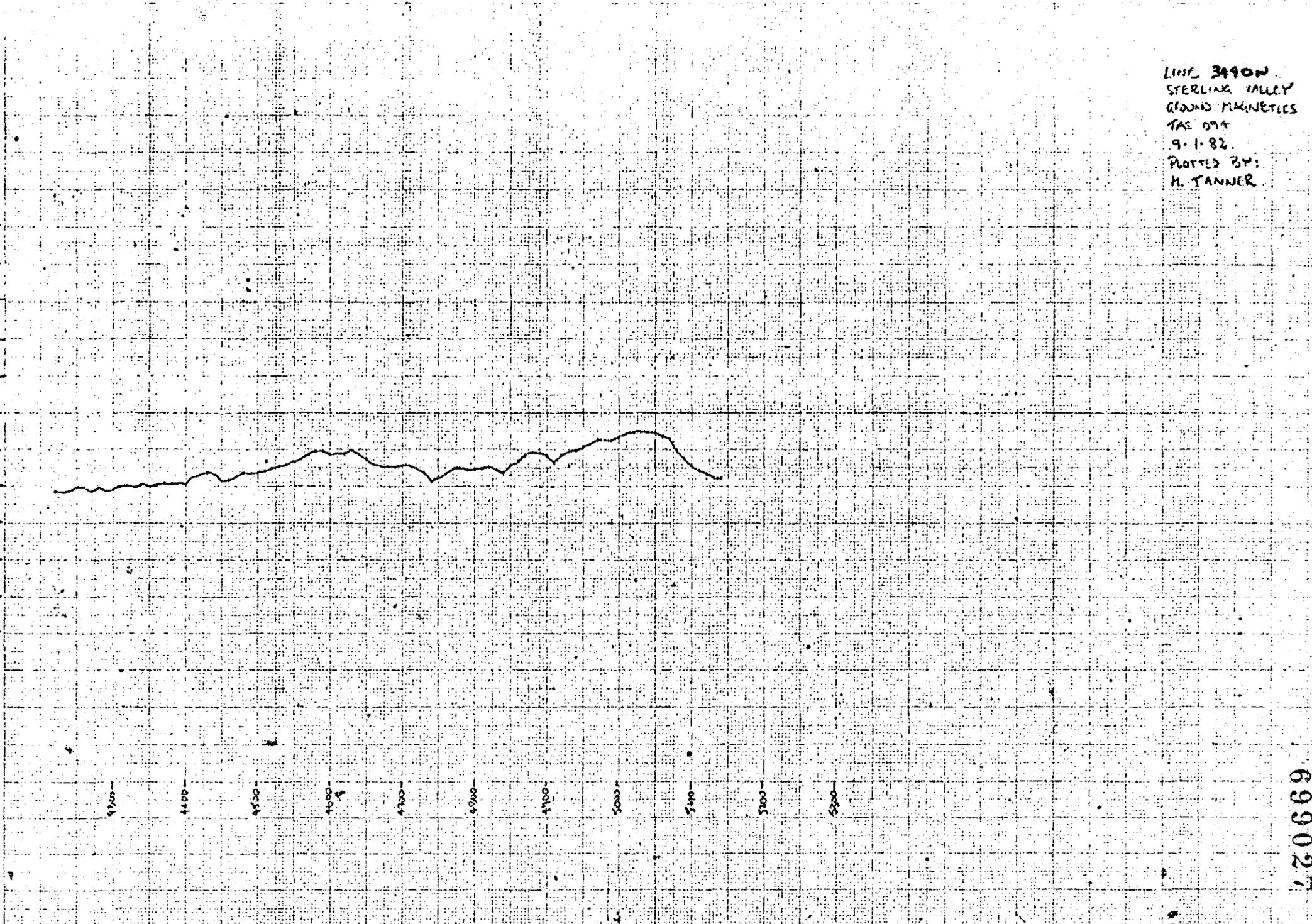


LINE 3490W
STERLING VALLEY
GROUND MAGNETICS
TAE 094
9-1-82
PLOTTED BY:
H. TANNER

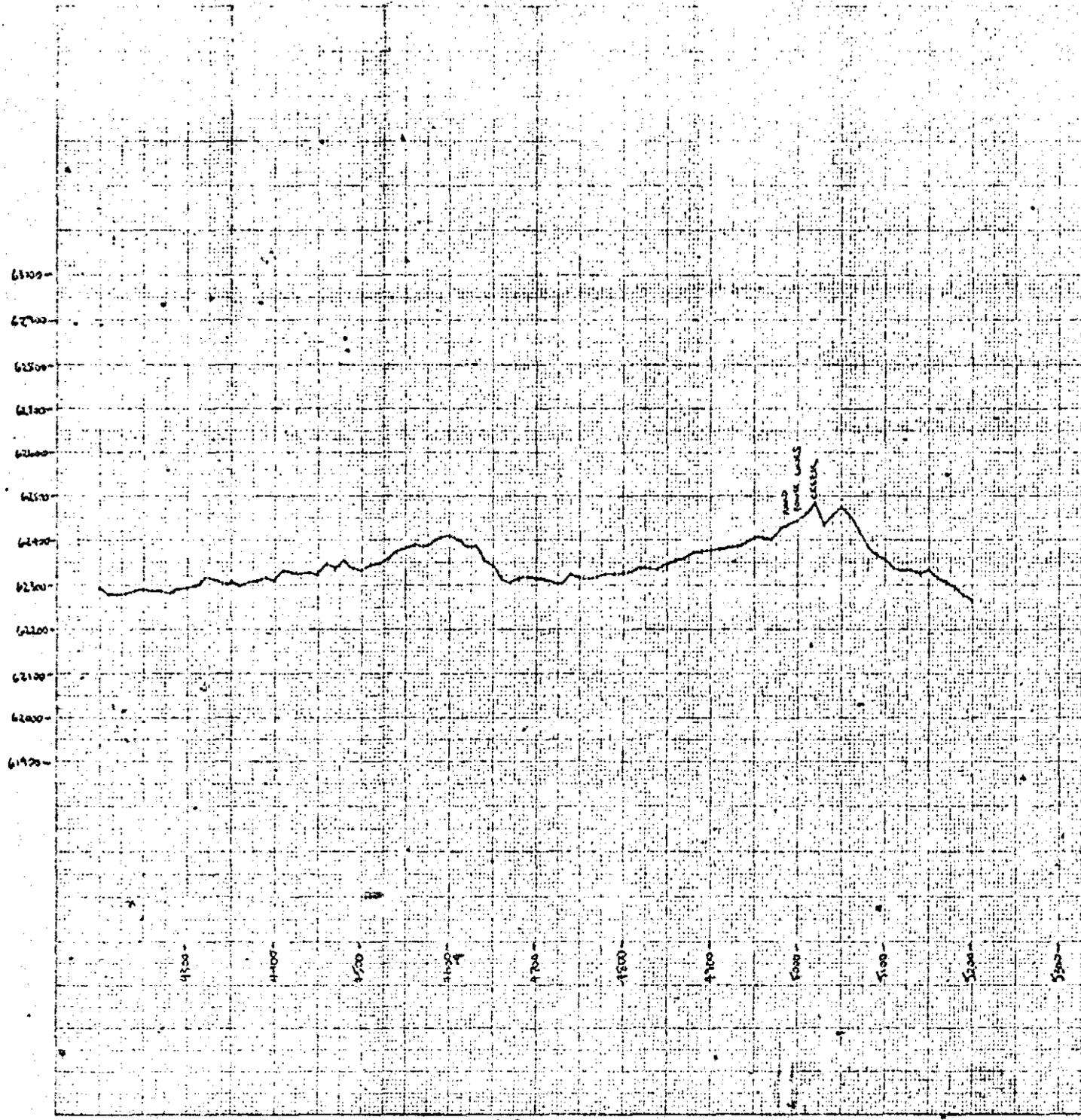
63000-
62700-
62400-
62100-
61800-
61500-

43500-
44000-
44500-
45000-
45500-
46000-
46500-
47000-
47500-
48000-
48500-

699027

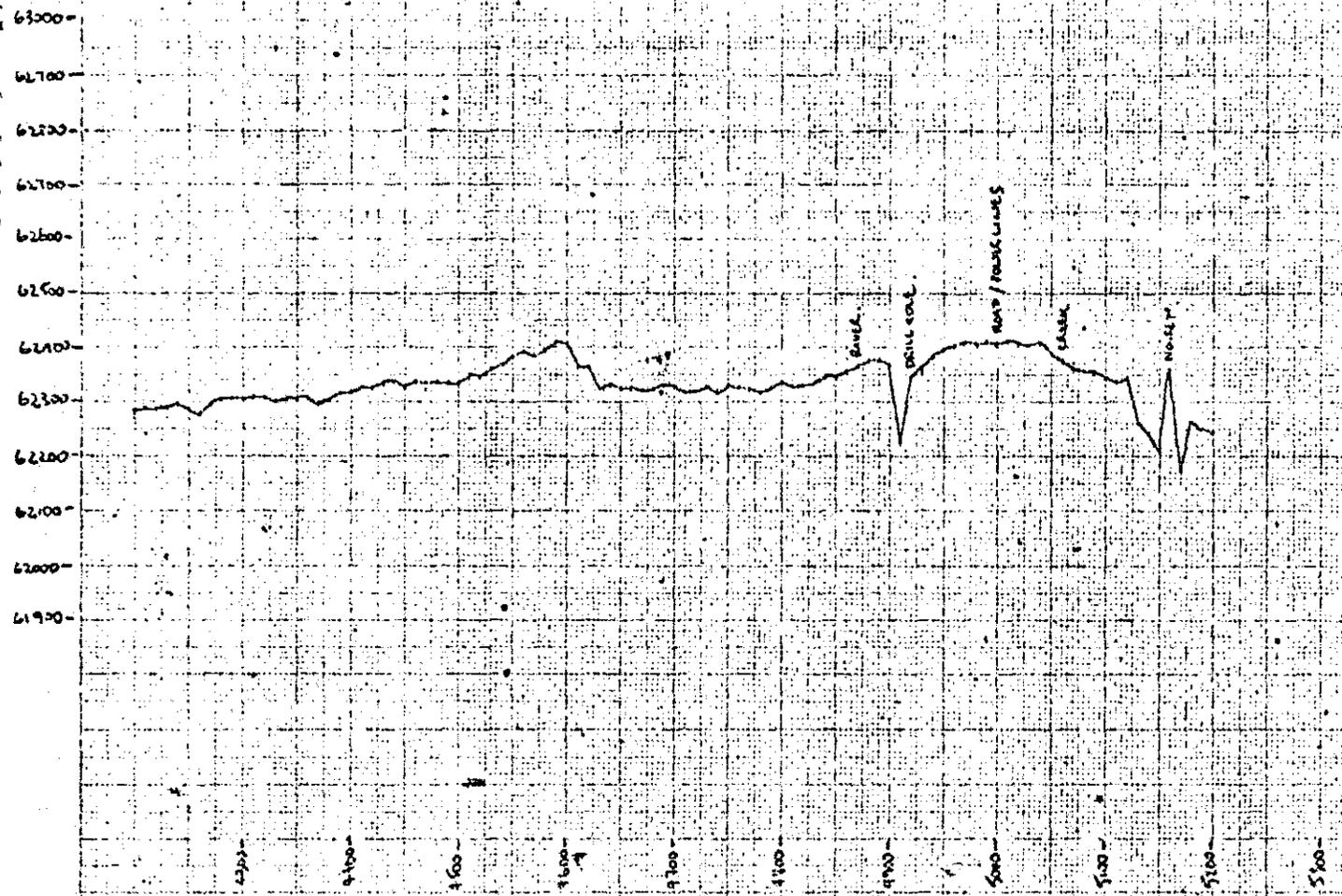


LINE 3380M
STERLING VALLEY
GROUND MAGNETICS
TAS 079
9-1-82
PLOTTED BY:
M. TANNER



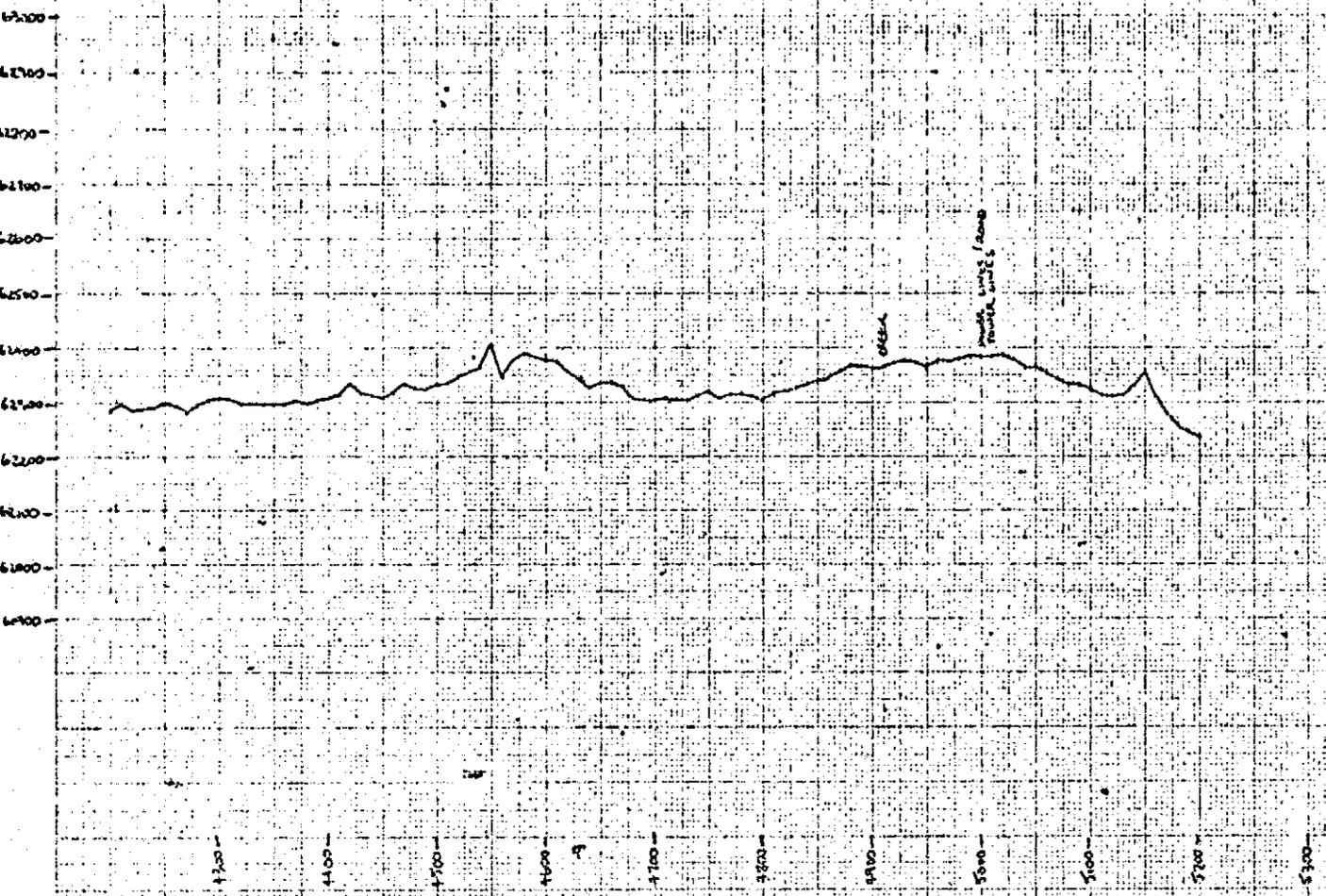
699028

LINE 3320W
STERLING VALLEY
GROUND MAGNETICS
TAS 03A
7-1-82.
PLOT BY:
A. TANNER



699029

LIME 3260N
SEAROCK VALLEY
GROUND MAGNETICS
TAS 074
7.1.82.
PLOTTER BY:
N. TANNER



699030

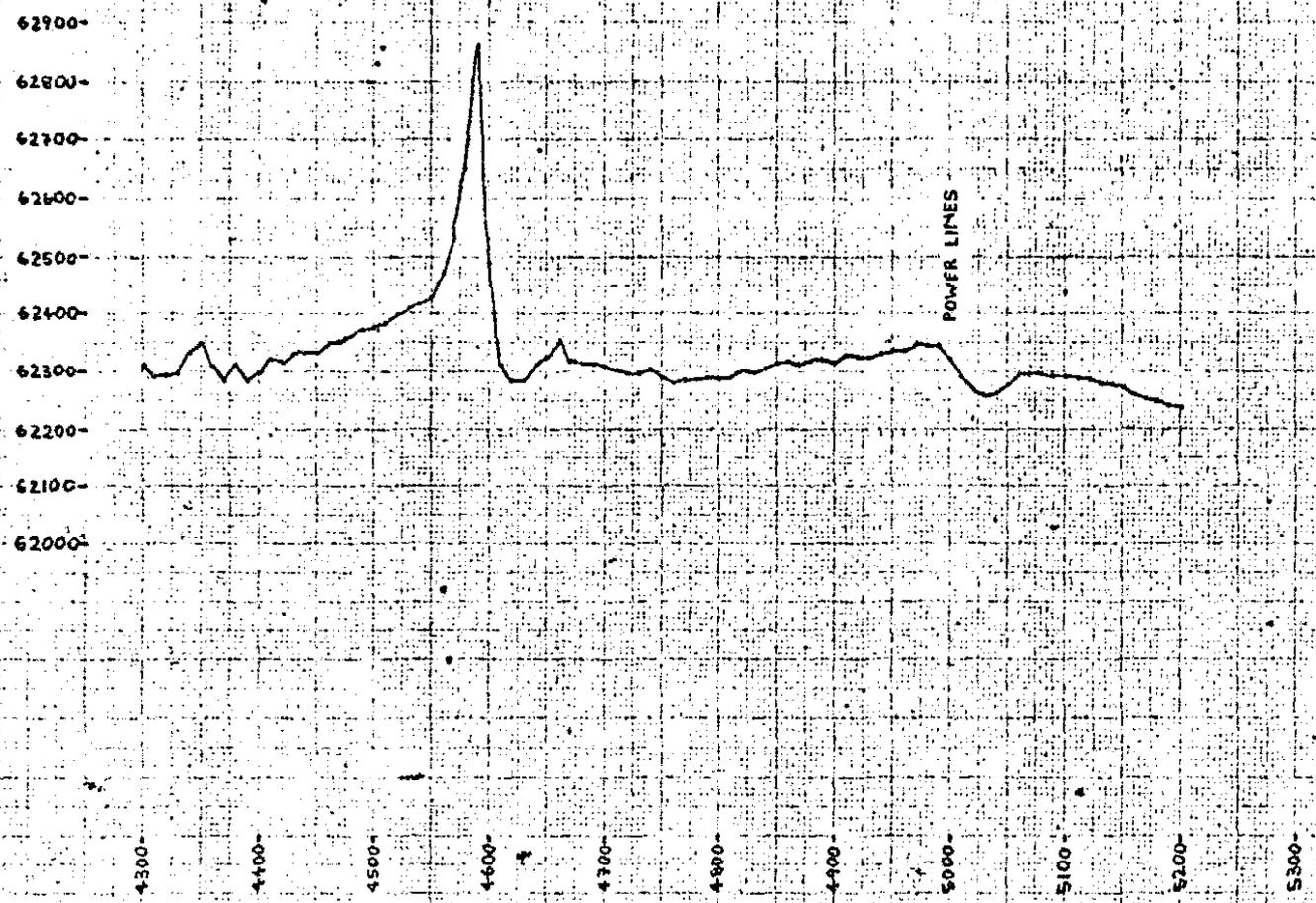
LINE 3200N
STERLING VALLEY
GROUND MAGNETICS
TAS 094
12-1-82
PLOTTED BY:
M. TANNER

41 1213
MAGNETIC FIELD INTENSITY



699031

LINE 3140 N
STERLING VALLEY
GROUND MAGNETICS
TAS 094
12-1-82
PLOTTED BY:
W. STOKES



699032

63500-
63400-
63300-
63200-
63100-
63000-
62900-
62800-
62700-
62600-
62500-
62400-
62300-
62200-
62100-
62000-

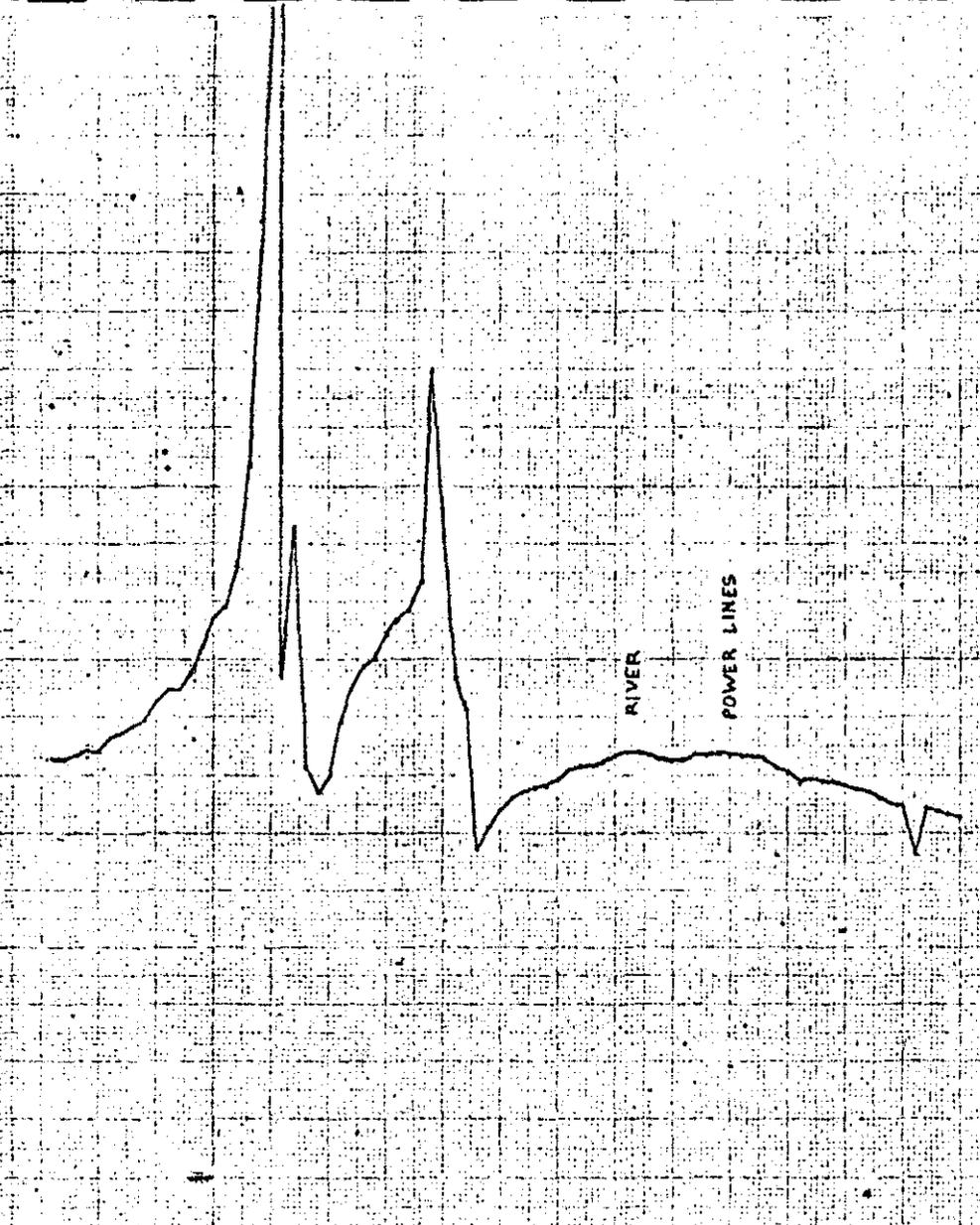
4300-
4400-
4500-
4600-
4700-
4800-
4900-
5000-
5100-
5200-

RIVER

POWER LINES

LINE 3080 N
STERLING VALLEY
GROUND MAGNETICS
TAS 094
12-1-82 & 15-1-82
PLOTTED BY
W. STOKES

699033



LINE 3520N
STERLING VALLEY
GROUND MAGNETICS
TAS-094
24-4-82
JD

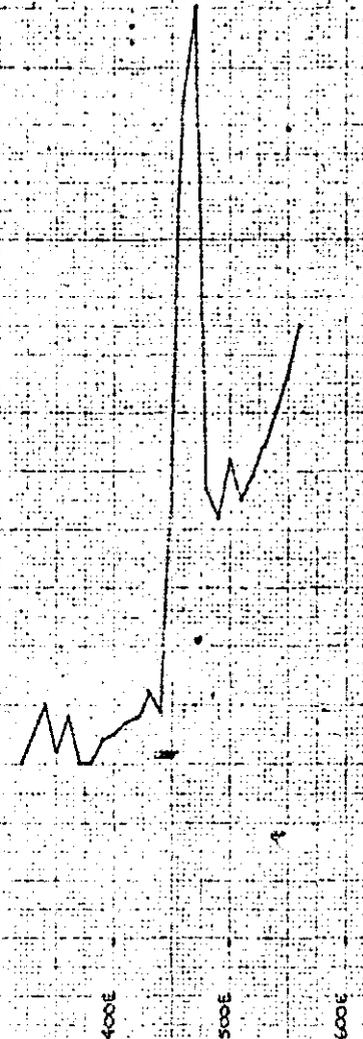
63000
62900
62800
62700
62600
62500
62400
62300
62200

1300E

1400E

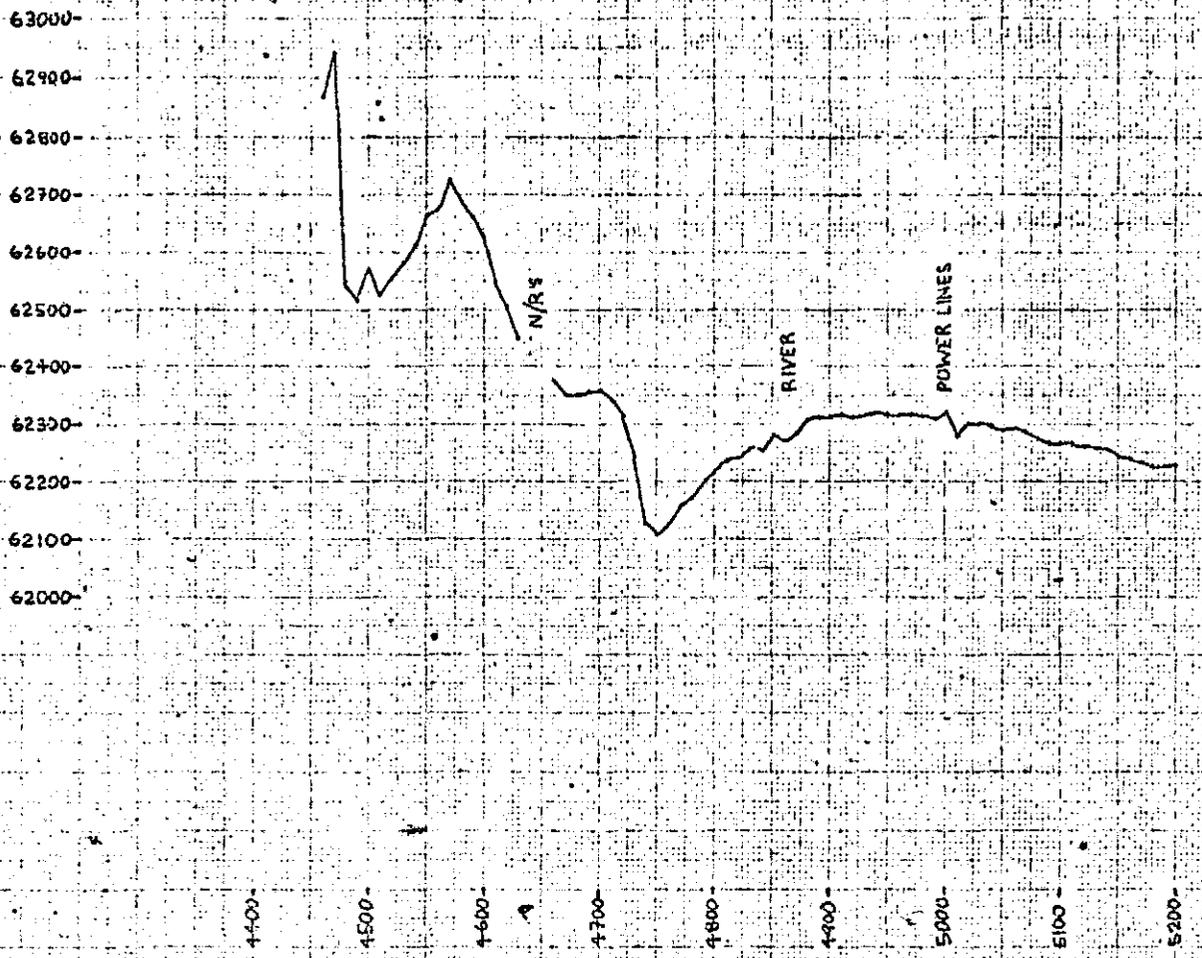
1500E

1600E



699034

LINE 3020 N
STERLING VALLEY
GROUND MAGNETICS
TAS 094
12-1-82
PLOTTED BY
W. STOKES



699035

LINE 2960N
STERLING VALLEY
GROUND MAGNETICS
TAS-074
(24-26)-4-62
JD

62400E

63000E

62900E

62800E

62700E

62600E

62500E

62400E

62300E

62200E

4300E

4400E

4500E

4600E

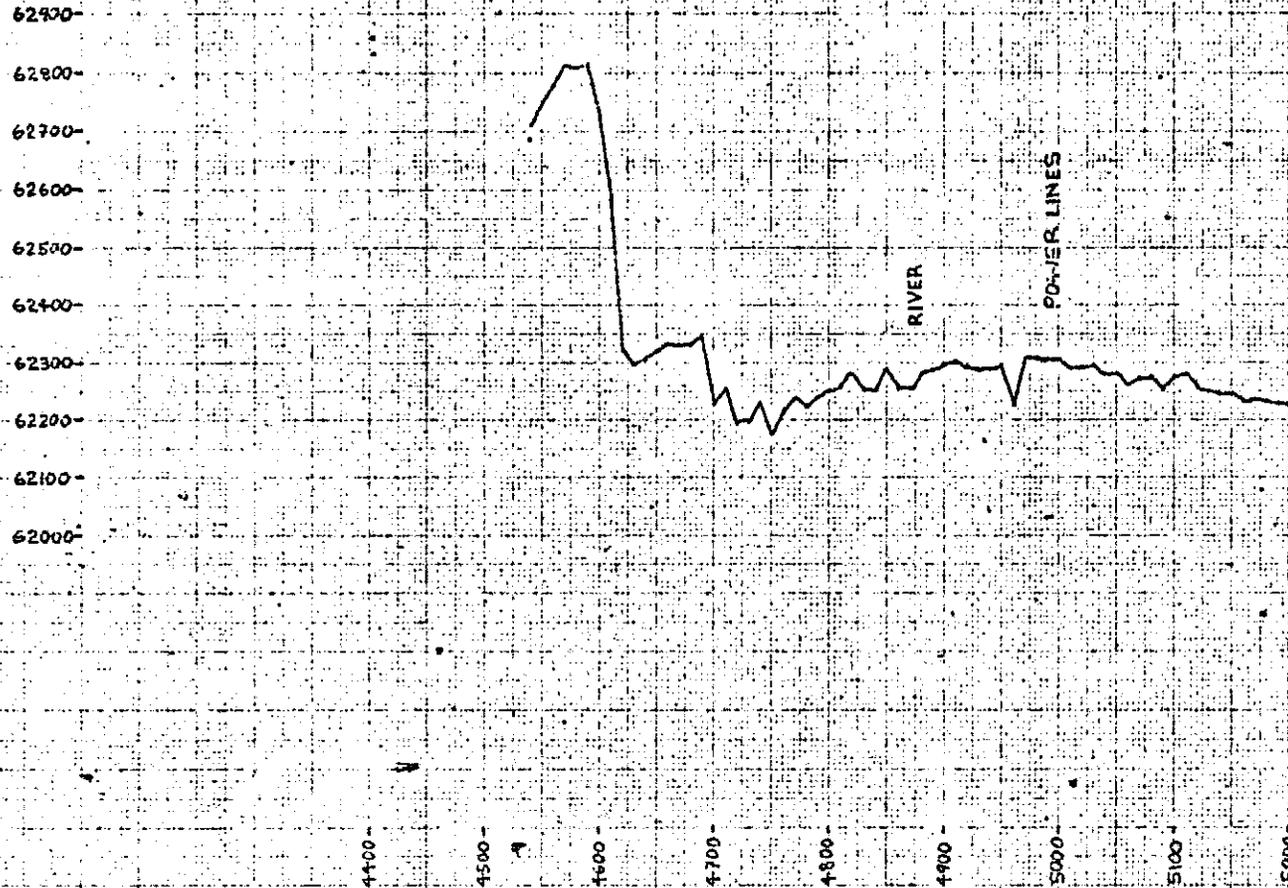
4700E

4800E

699036



LINE 2960 N
STERLING VALLEY
GROUND MAGNETICS
TAS 094
12-1-82
PLOTTED BY
W. STOKES



699037

LINE 2900N
STERLING VALLEY
GROUND MAGNETICS
TAS-094
26-4-82
JD

63000
62900
62800
62700
62600
62500
62400
62300
62200

1400E

1500E

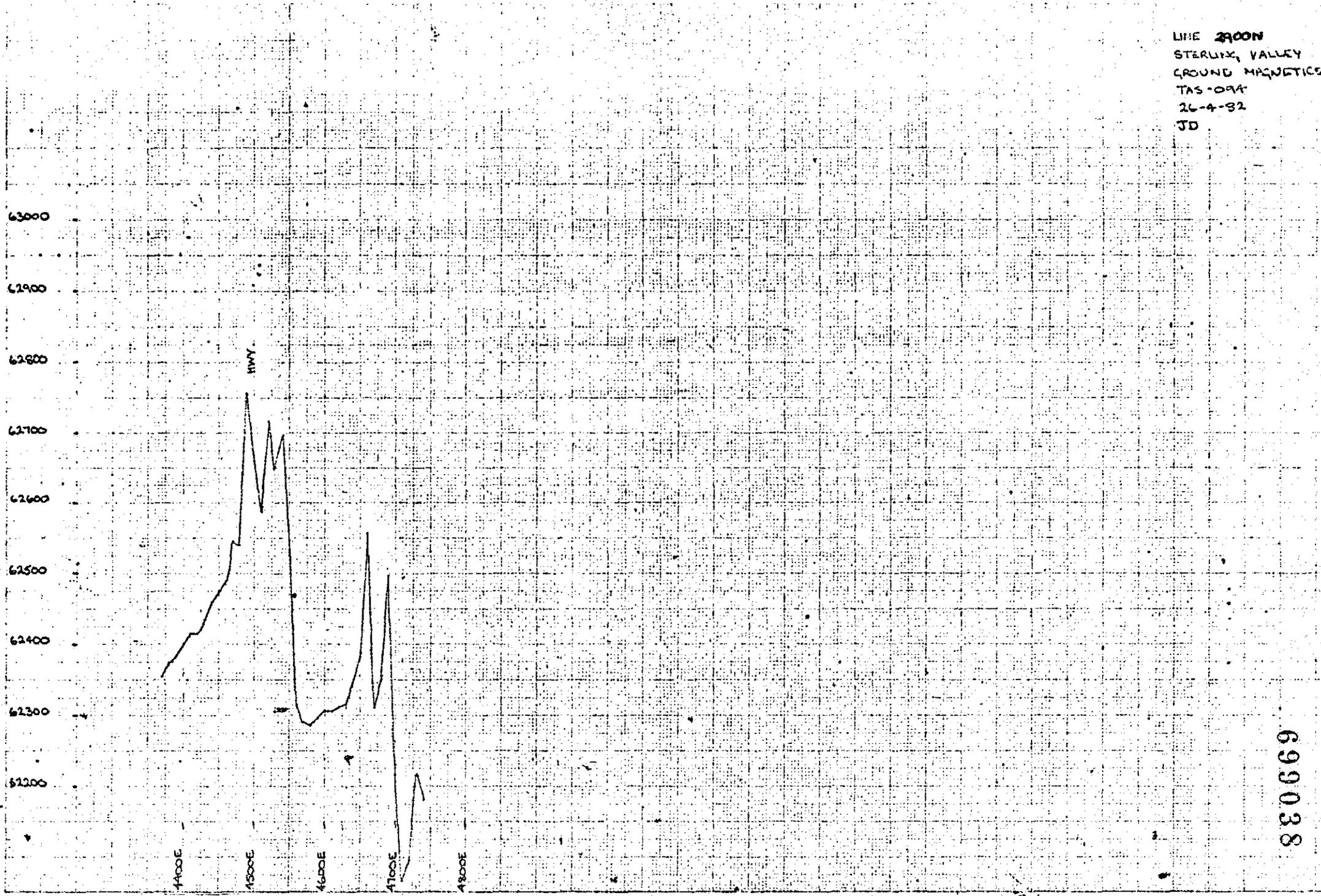
1600E

1700E

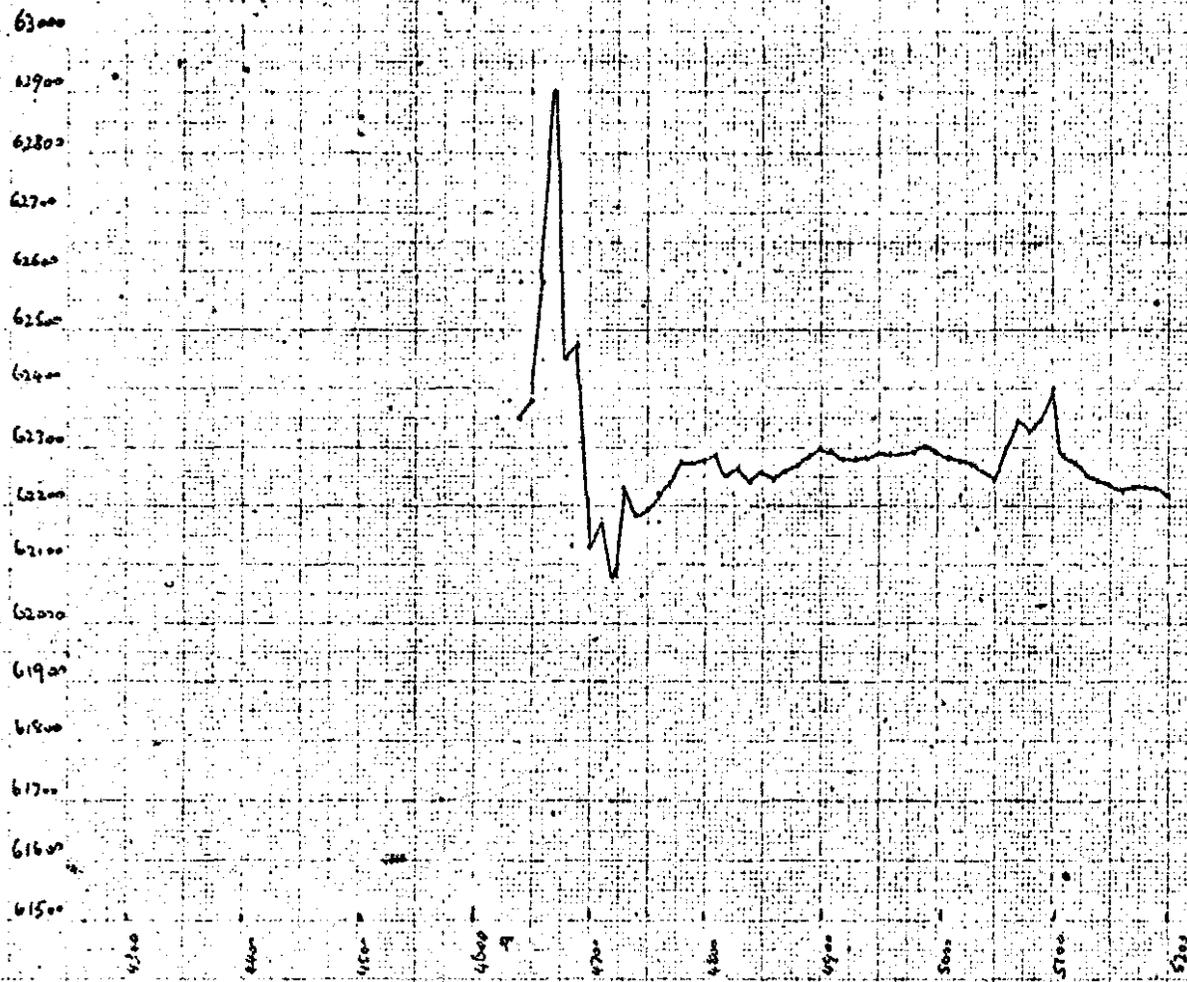
1800E

HWY

699038

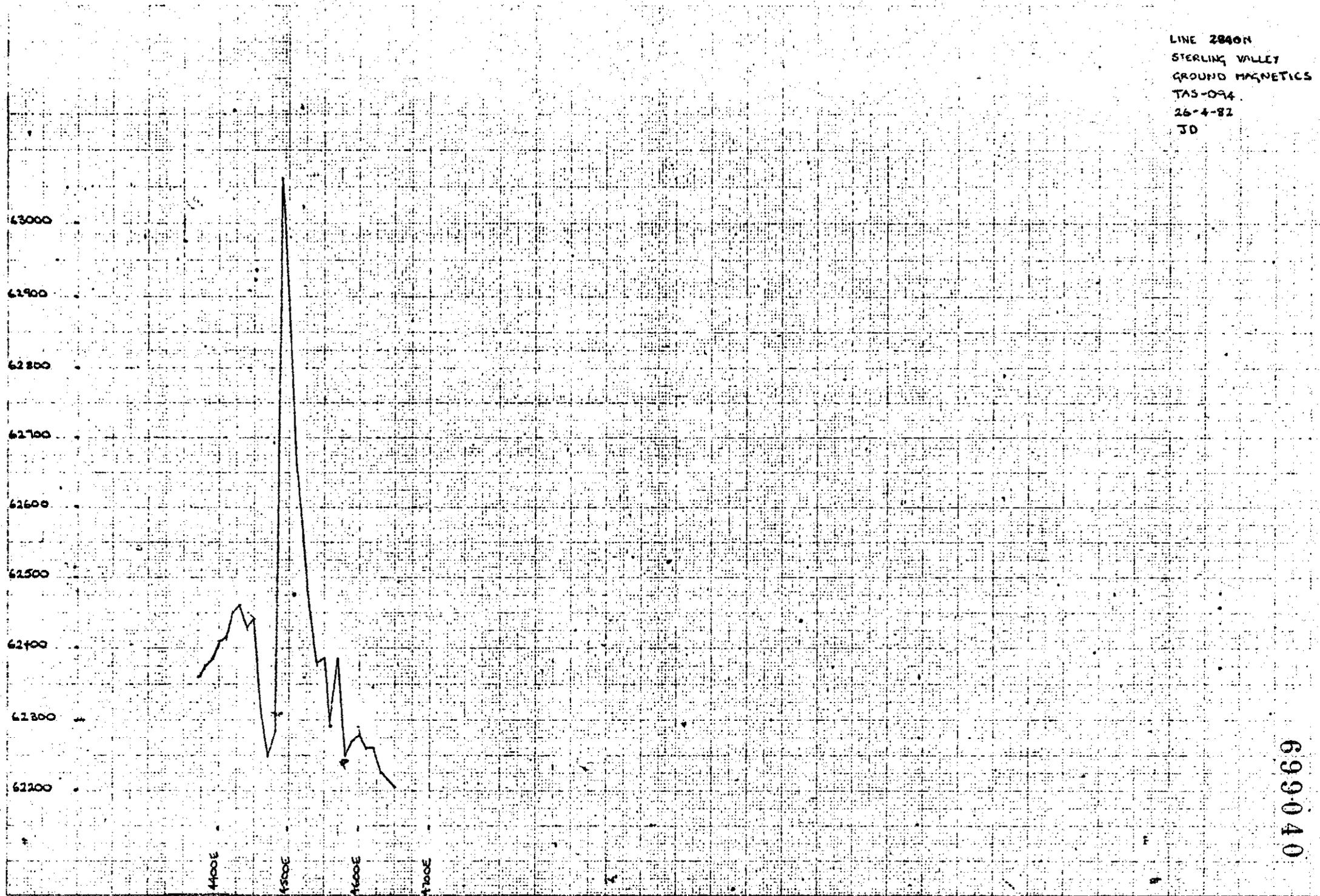


LINE NO 2900N
GROUND MAGNETICS
STERLING VALLEY.
TAS 094
12-1-82
PLOTTER BY R. LIST



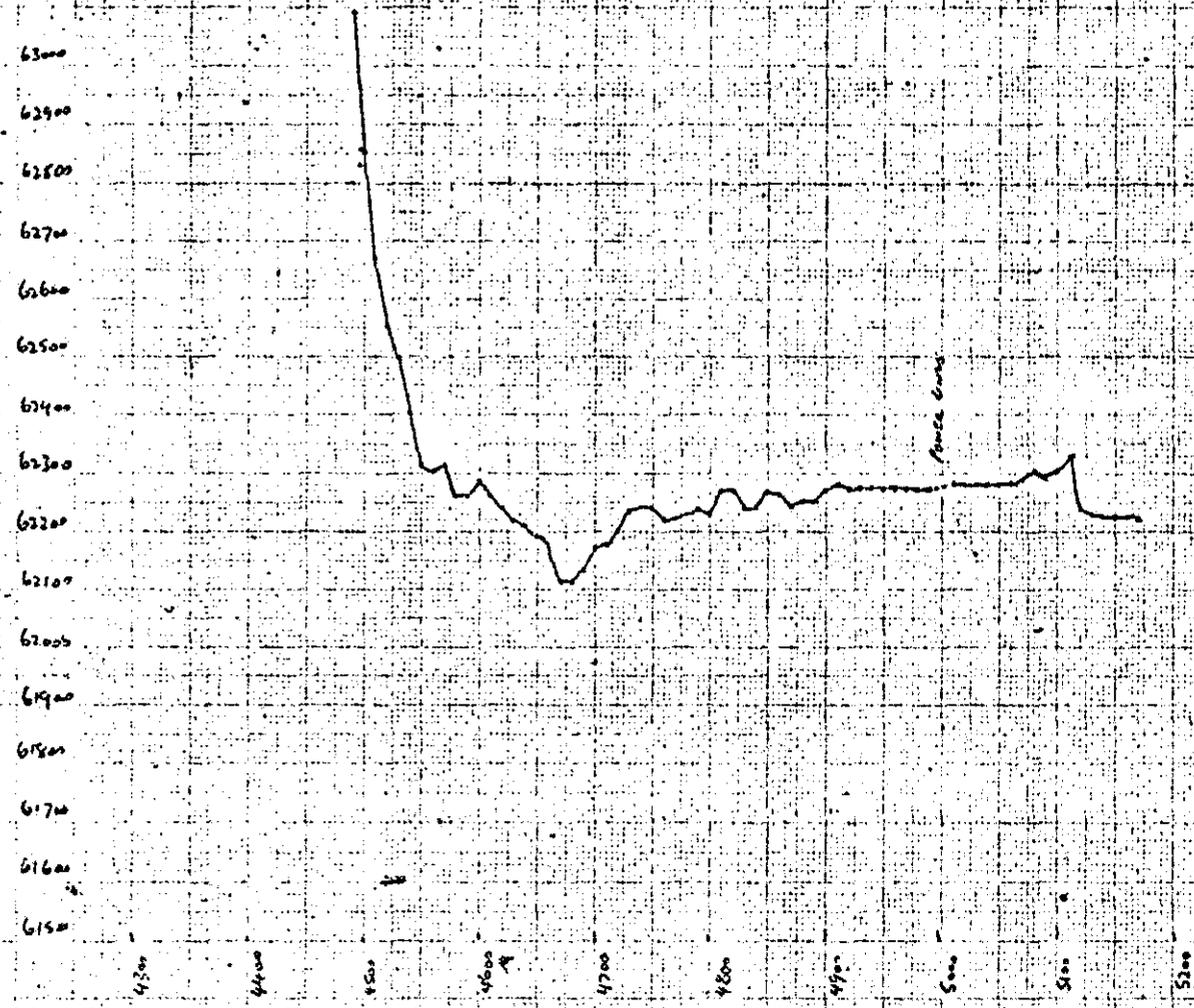
699039

LINE 2840N
STERLING VALLEY
GROUND MAGNETICS
TAS-094
26-4-82
JD



699040

LINE NO. 2840N
GROUND MAGNETICS
STERLING VALLEY,
TAS 894
12-1-82
PLOTTED BY R. LIST.



699041

LINE 2780 N
STERLING VALLEY
GROUND MAGNETICS
TAS 094
15-1-82
PLOTTED BY:
W. STOKES

62700-
62600-
62500-
62400-
62300-
62200-
62100-

44500-
44600-
44700-
44800-
44900-
5000-
5100-
5200-
5300-

POWER LINES

699042



LINE 2730N
STERLING VALLEY
GROUND MAGNETICS
TAS-094
26-4-82
JD.

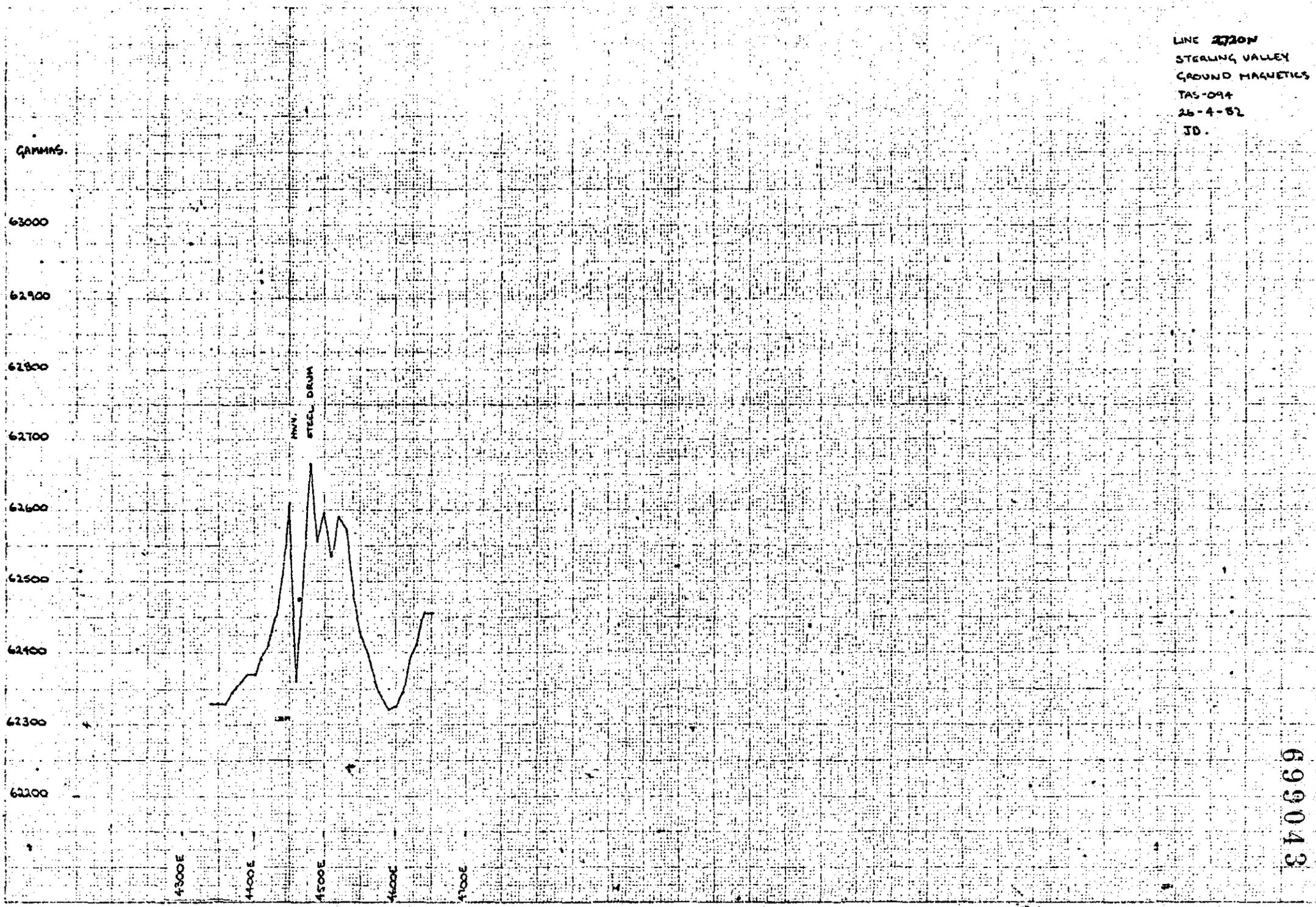
GAMMAS.

63000
62900
62800
62700
62600
62500
62400
62300
62200

4300E
4400E
4500E
4600E
4700E

MVV
STEEL DRUM

699043

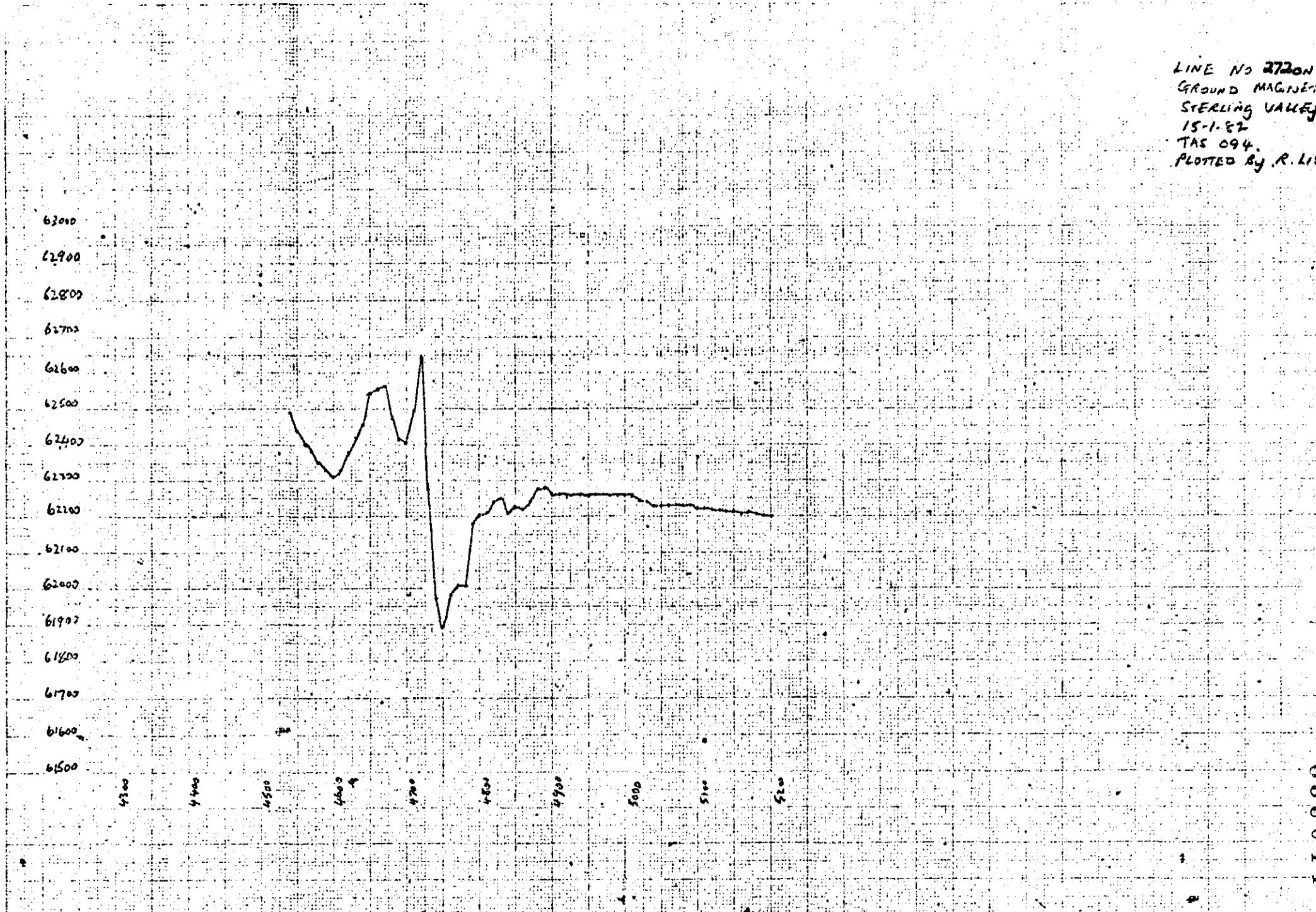


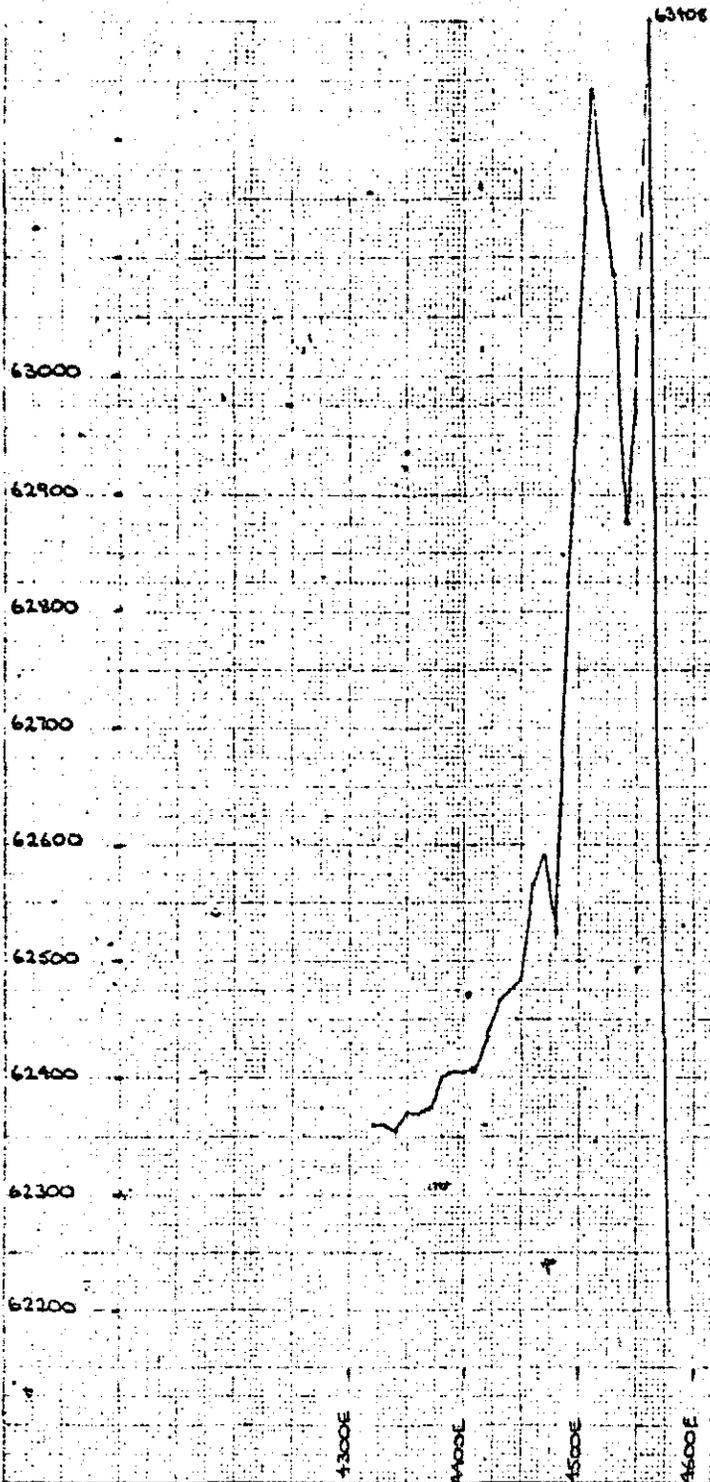
LINE NO 2720N
GROUND MAGNETIC
STERLING VALLEY
15-1-82
TAS 094
PLOTED BY R. LIST.

62000
62900
62800
62700
62600
62500
62400
62300
62200
62100
62000
61900
61800
61700
61600
61500

0054 0064 0054 0097 0084 0094 0067 0009 0015 0025

699044





LINE 2660N
STERLING VALLEY
GROUND MAGNETICS
TAS-094
24-4-82
JD

699045

LINE NO 2660N
GROUND MAGNETIC
STERLING VALLEY.
15-182
TAS 094
PLOTTER BY R. LIST.

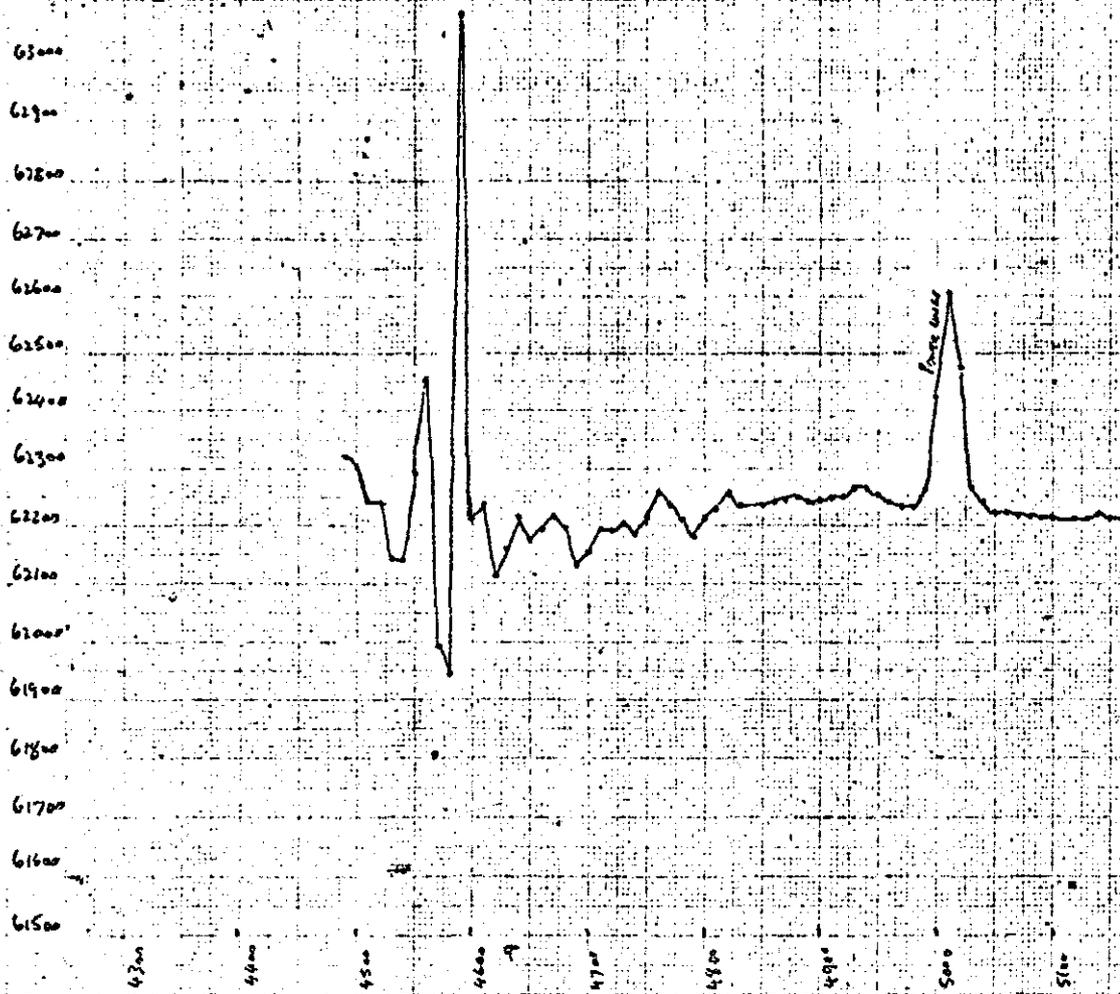
63000
62900
62800
62700
62600
62500
62400
62300
62200
62100
62000
61900
61800
61700
61600
61500

4300
4400
4500
4600
4700
4800
4900
5000
5100
5200



699046

LINE NO 2600W
STERLING VALLEY
GROUND MAGNETICS
TAS 094
15-1-82
PLOTED BY R. LIST



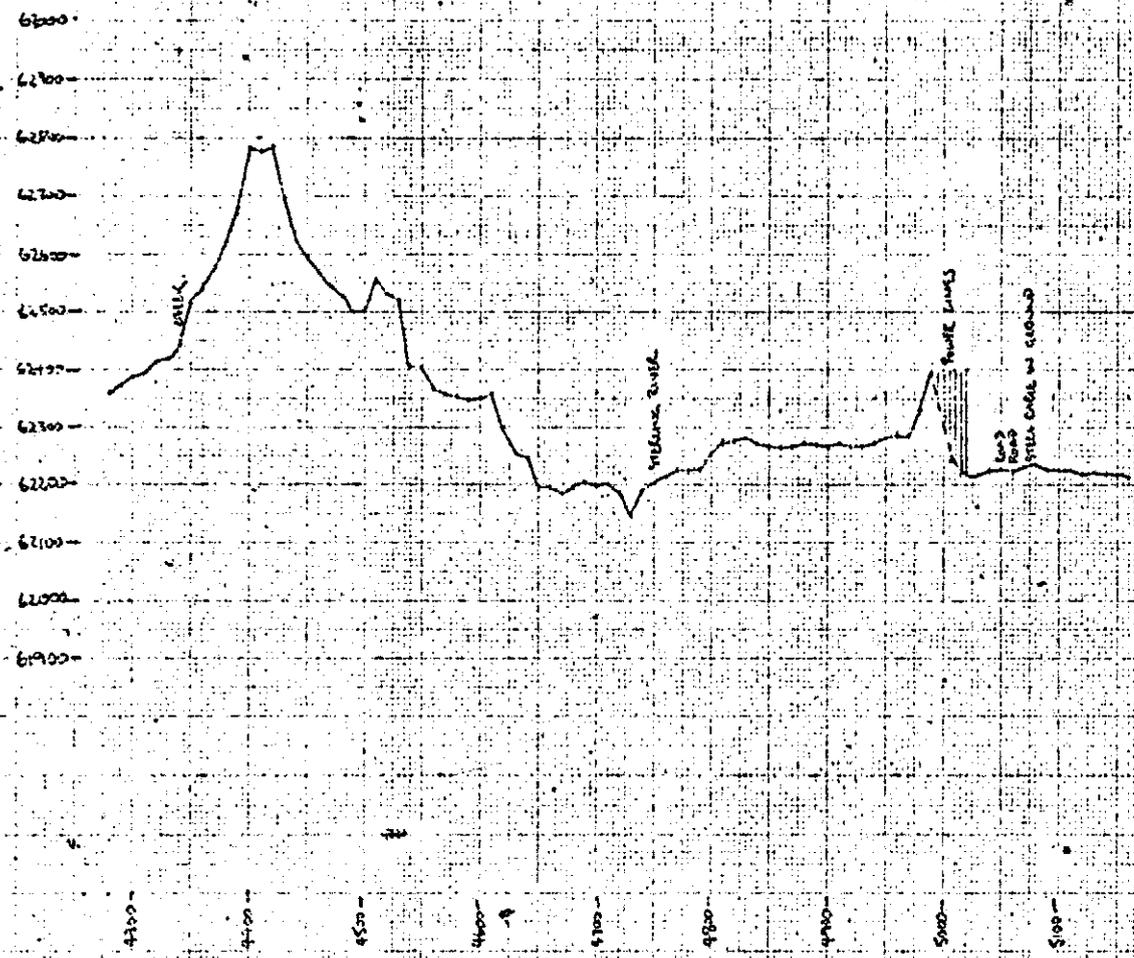
699047

LINE No 2540N
STERLING VALLEY
GROUND MAGNETICS
TAS 094
15-1-82
PLOTED BY R. LIST



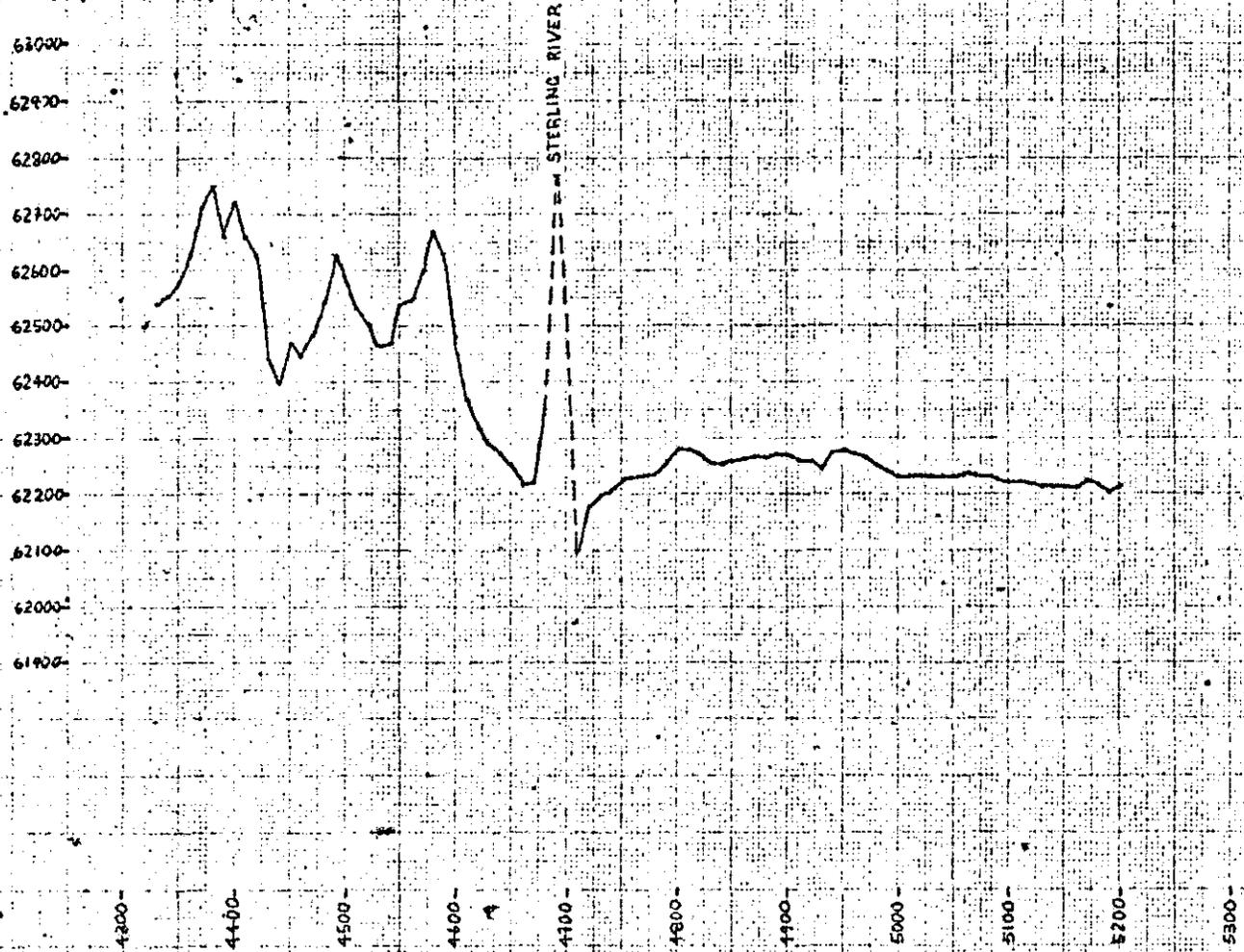
699048

LINE 2480N
STERLING VALLEY
GROUNDS MAGNETICS
TAS 099
15.1.82.
PLOTED BY:
M. TANJER.



699049

LINE 2420N
STERLING VALLEY
GROUND MAGNETICS
TAS 094
15-1-82
PLOTTED BY:
W. STOKES



699050

LINE 2360N
STERLING VALLEY
GROUND MAGNETICS

Gauss

63000

62900

62800

62700

62600

62500

62400

62300

62200

1100E

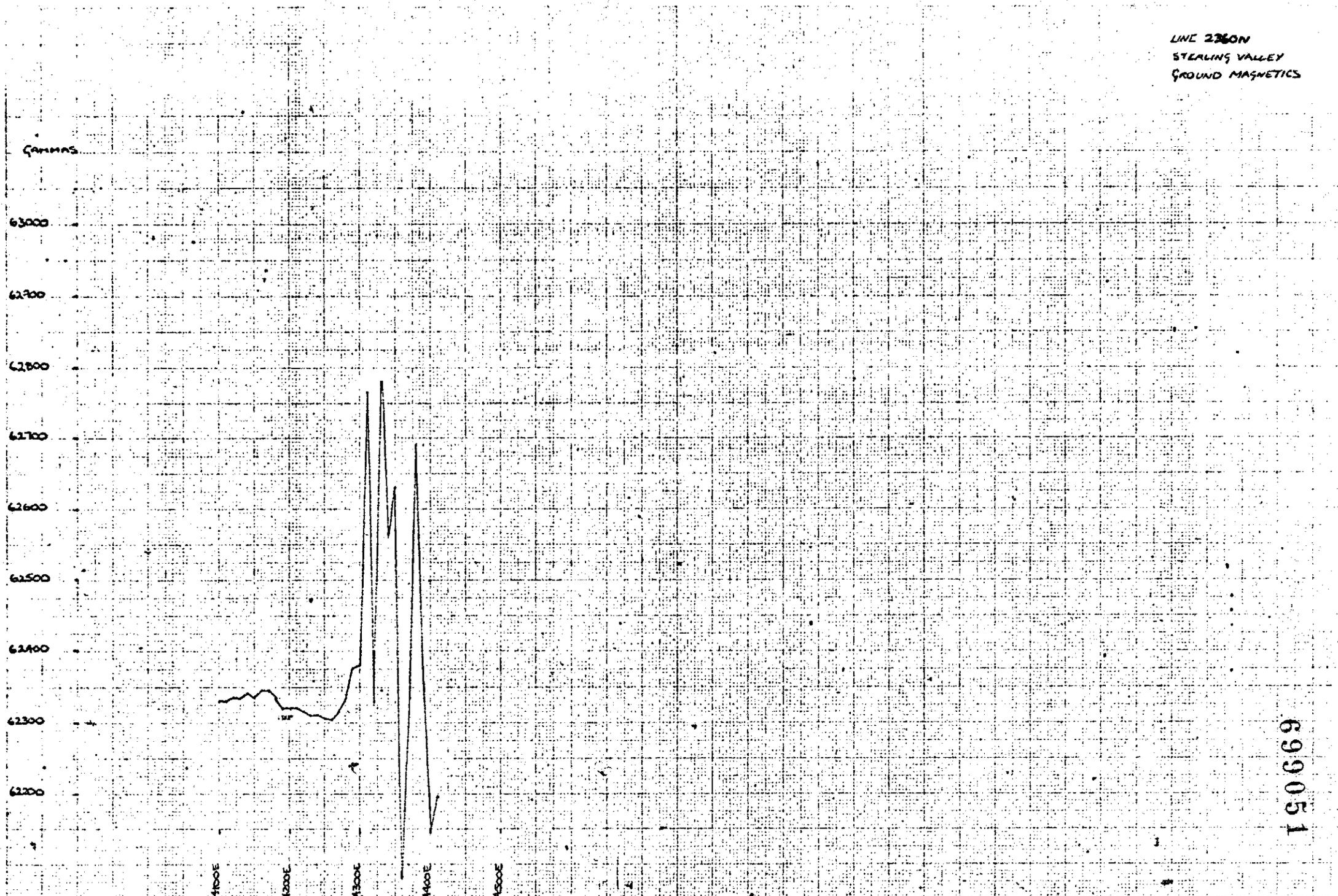
1200E

1300E

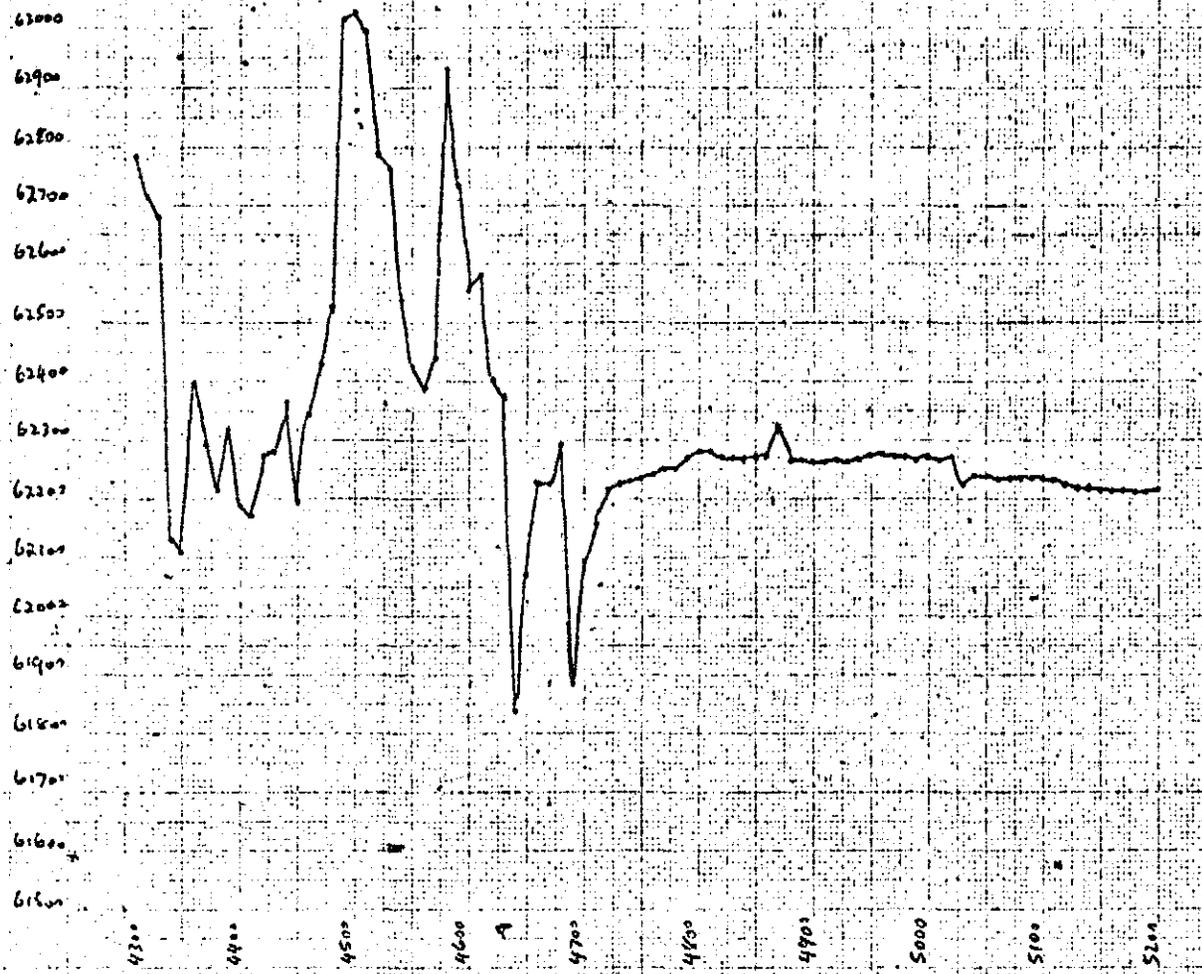
1400E

1500E

699051



LINE NO 2300
STERLING VALLEY
GROUND MAGNETIC
TAS 094
15-1-82
PLOTED BY R. LEST.



699052

699053

APPENDIX 4: Ground Magnetics Contour Plan

APPENDIX 5:

J.R. Bishop: Memorandum concerning results of
Sterling Valley Ground Magnetic Survey.

MEMORANDUM:

To: Chief Geologist, W.C.M. Date: 20th May, 1982

From: J.R. Bishop

Subject: STERLING VALLEY MAGNETIC SURVEY Copies: I.R. McDonald
R.A. Sainty

Magnetic measurements were made of the Sterling Valley Grid (SVG) between lines 2,360N and 3,980N: lines were read at 60m intervals with a station spacing of 10m. This survey was essentially an infilling and detailing of the 1976 Abminco magnetics survey. The need for this infilling was based on a similar survey to the north, which had defined a magnetic high not revealed by the original, less-detailed survey. The results of this survey also shows similarly localised anomalies.

The main and strongest magnetic features are immediately to the east of the Murchison Highway between lines 2,360N and 3,140N (several lines have been extended to the west to fully define the anomaly). This anomaly has been previously interpreted as being due to a mafic intrusive (M.J. McDonald, pers. com.), however R.A. Sainty, the project geologist, has not yet found any magnetically susceptible outcrop.

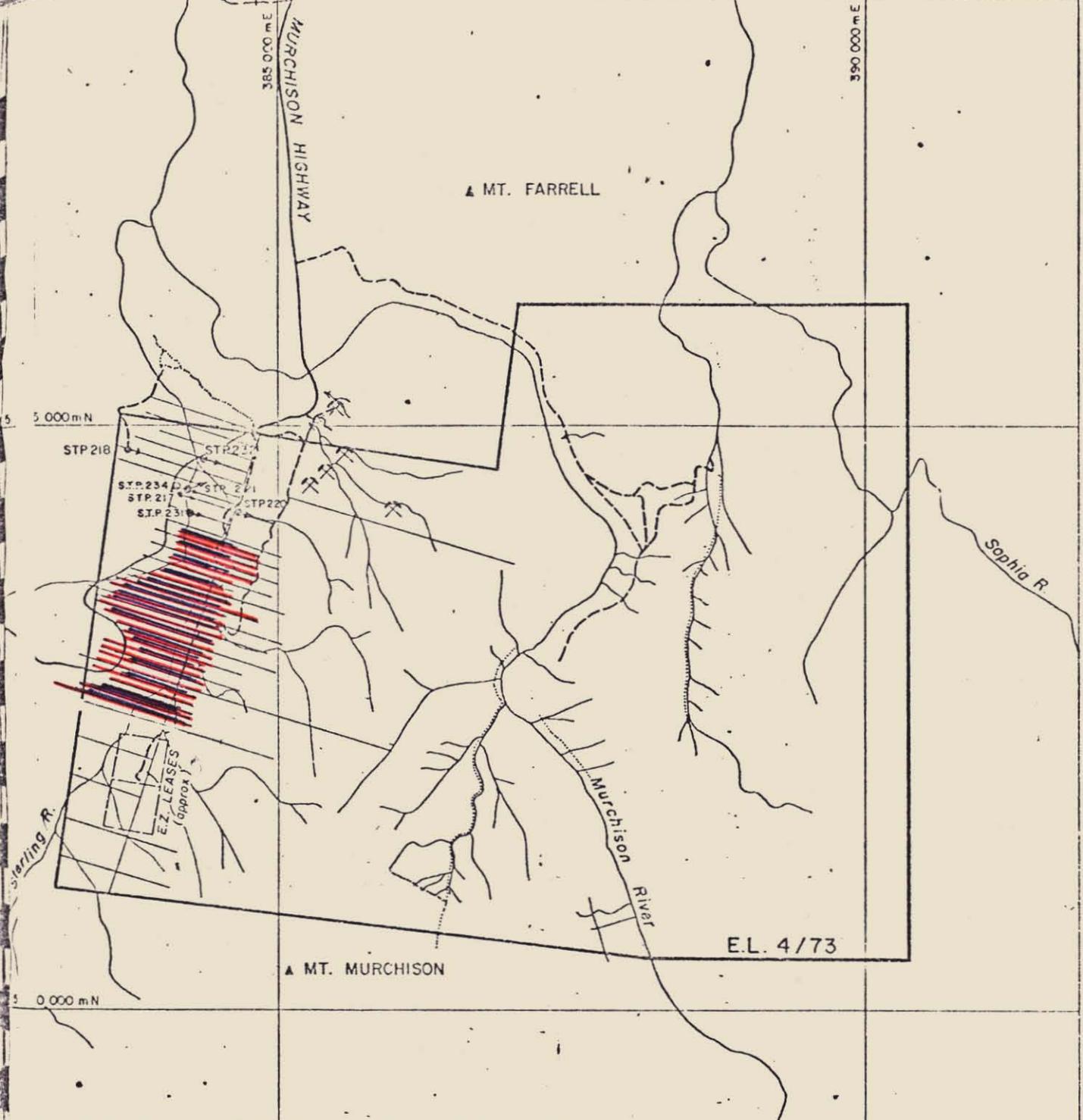
I have not made any interpretation of the magnetics and the contour map is incomplete and preliminary: however an initial inspection suggests that the two anomalies 3,080N; 4,730E and 2,720N; 4,730E are not dissimilar to magnetic highs further north in the Sterling Valley, which have been drilled for tin. Most of these magnetic targets were covered by glacials and thus there were no complementary tin geochem anomalies. (In these holes, tin was intersected in (a loose) association with pyrrhotite; although further to the north, on the Murchison River Grid, two holes were drilled into barren, glacially covered, magnetite-bearing volcanics.) In the area of the SVG magnetic survey, there are some tin soil geochem anomalies to the north of the magnetic highs, but there are no anomalies associated with them: there is no glacial cover here. That is, there is no other



evidence for drilling these magnetic anomalies, other than that, along strike in the northern part of grid, drilling of (?superficially) similar anomalies, beneath glacial cover, has revealed sub-economic quantities of cassiterite.

J.R. BISHOP:

JRB/amd



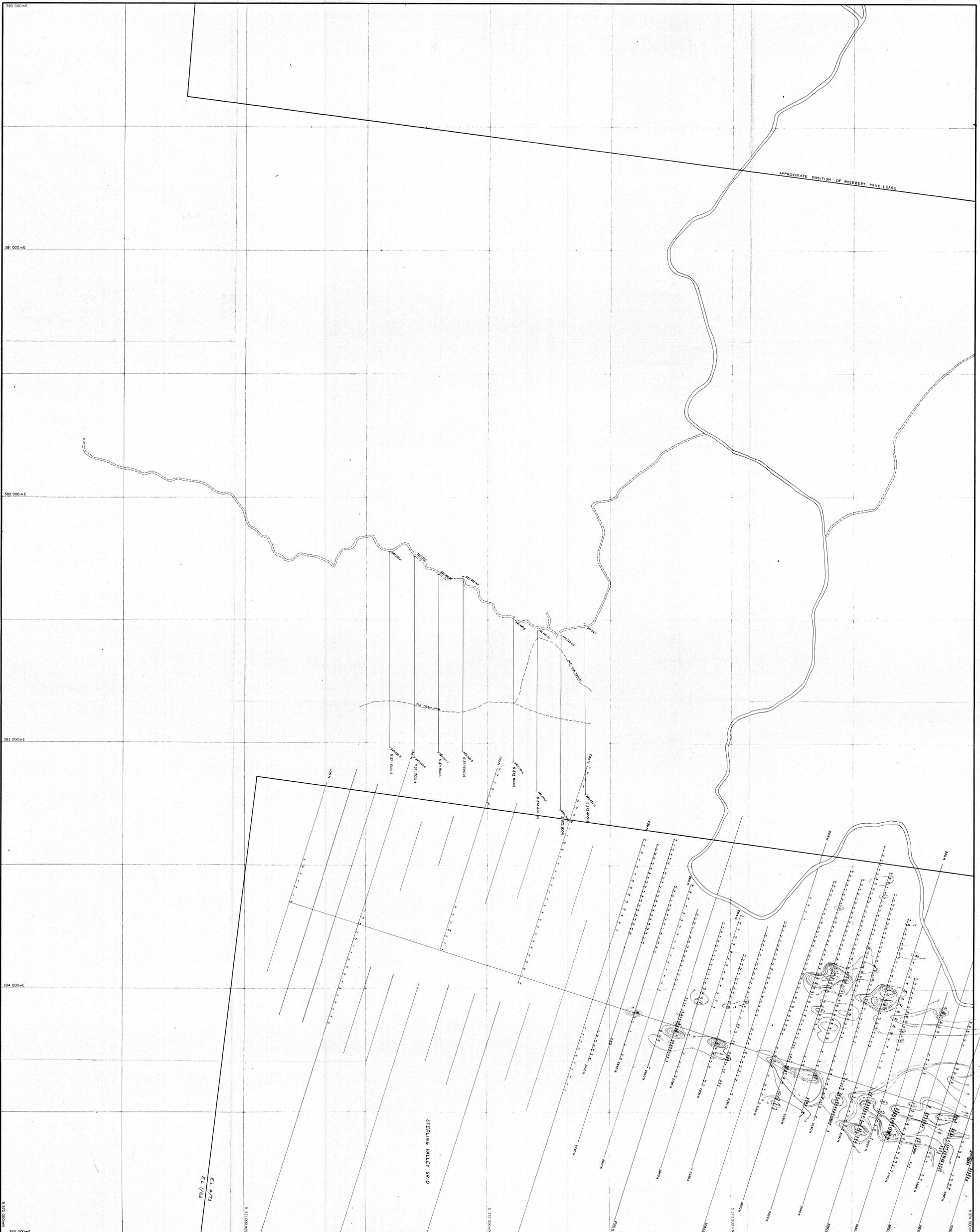
LEGEND

- Drill Hole Proposed/Completed
- Prospects Inspected
- Line Cut
- Line Pegged
- Line Soil Sampled
- Line Geology Mapped
- Line Ground Magnetics
- Access Mapping Completed
- Road
- Vehicle Track Bulldozed
- Walking Track Cut
- Railway
- Abandoned Tramway
- Transmission Line
- Grid Line.

699057

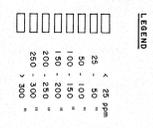
5 cm

ELECTROLYTIC ZINC CO OF ASIA LTD		
PROJECT: STERLING VALLEY		TAS
<p>WORK COMPLETED DURING</p> <p>16.12.1981 - 4.5.1982</p>		
SCALE 1:50,000	Survey R.A.S.	Revised
Reference:	Date 14/5/1982	REF NO
Drawn T.G.O.S.	Checked	AA-526-0003



NOTES

1. Contour for sample area (Mata River channel) is shown and is based on Co. 54, 49 and 25 by American photogrammetry. See Contour Elevation P/L Program Report 1978.



LEGEND

--- Contour sampling 1978
 --- E.T. Sampling 1979
 --- 1981/82
 --- Results in form sheet drawings - address

A	B	A	B	A	B
B	C	0	2	0	C
A	B	A	A	B	
D	C	0	0	C	
A	B	A	B	A	B
B	C	0	0	C	
A	B	A	B	A	B
B	C	0	0	C	

ELECTROLYTIC ZINC CO OF AASIA LTD
 PROJECT: MT BLACK EL/1/62 TAS

GEOCHEMISTRY: SN
 639059

82-1846

SCALE 1:5000
 Survey: J. M.
 Date: May 1982
 Drawn: R. P.T.
 Checked:
 Revised:
 REF NO:
 AD-504-0099



NOTE
 Lines 3620N - 3140N have been extended from the marked western ends of the lines to the highway and tied by stadia survey, and assumed straight between 5000E and the marked end points. Other lines are idealized.

LEGEND

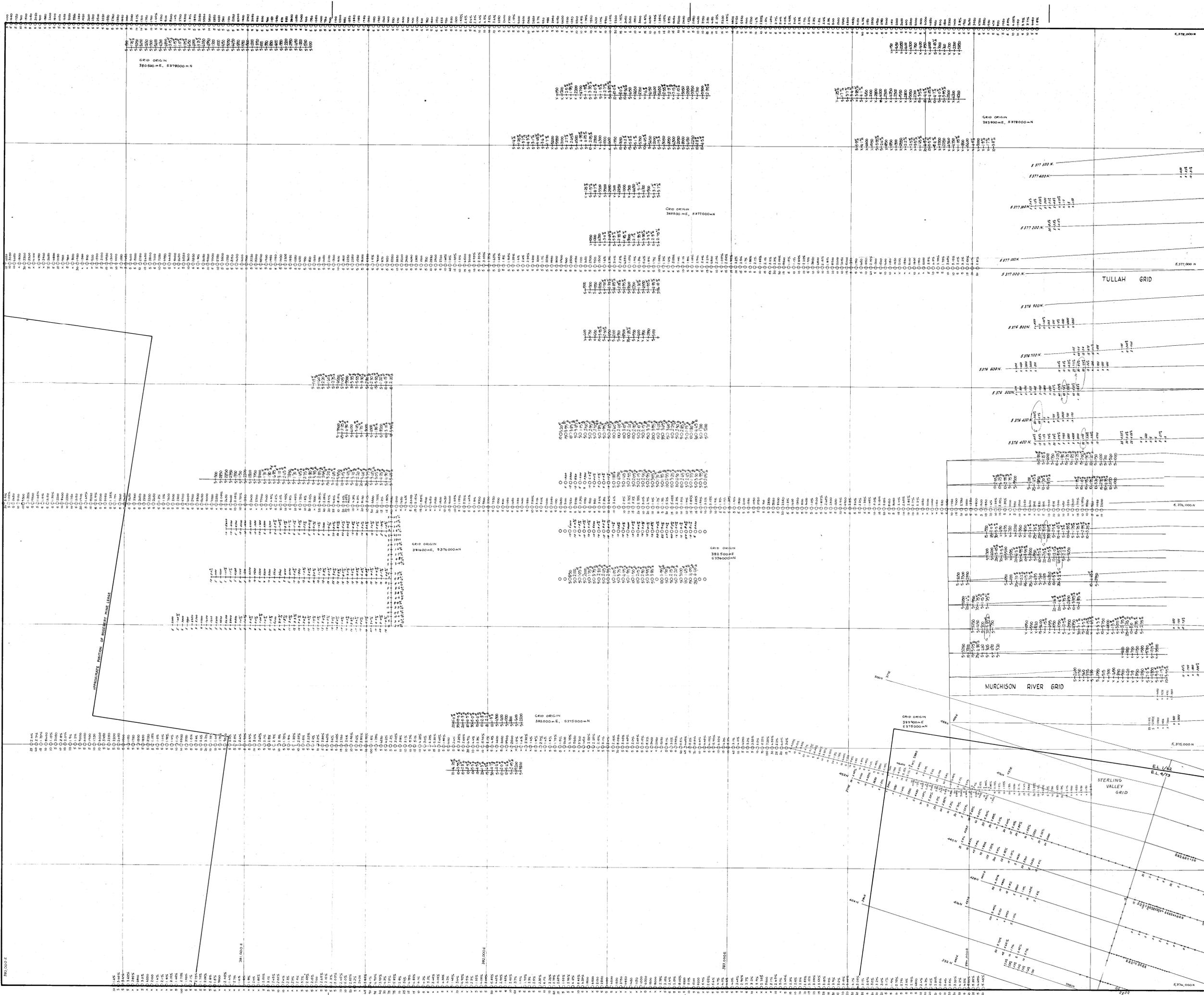
[White Box]	< 50 ppm
[Light Gray Box]	50 - 100 "
[Medium Gray Box]	100 - 200 "
[Dark Gray Box]	200 - 300 "
[Very Dark Gray Box]	300 - 400 "
[Black Box]	400 - 500 "
[White Box]	> 500 "

LEGEND
 --- E.Z. 1981-82.

A	B	A	B
D	C	D	C
3		4	
A	B	A	B
D	C	D	C
5		6	
A	B	A	B
D	C	D	C
A	B	A	B
D	C	D	C
28		8	
A	B	A	B
D	C	D	C
30		10	
A	B	A	B
D	C	D	C
32		11	

ELECTROLYTIC ZINC CO. OF AASIA. LTD.
 PROJECT: MT. BLACK E.L. 1/62 TAS.
 699061
 5 cm
 SOIL GEOCHEMISTRY
 As
 82-1846

SCALE: 1 : 5,000	Survey: R. S.	Revised:
Reference:	Date: May 1982.	REF. NO.
Drawn: R.P.T.	Checked:	A0 - 504 - 0234



NOTES:
Refer to sheet 7B - Geochem. Pb/Zn.

- LEGEND
- P.M.I. 1968.
 - Cominco 1976.
 - E.Z. 1979.
 - E.Z. 1981-82.

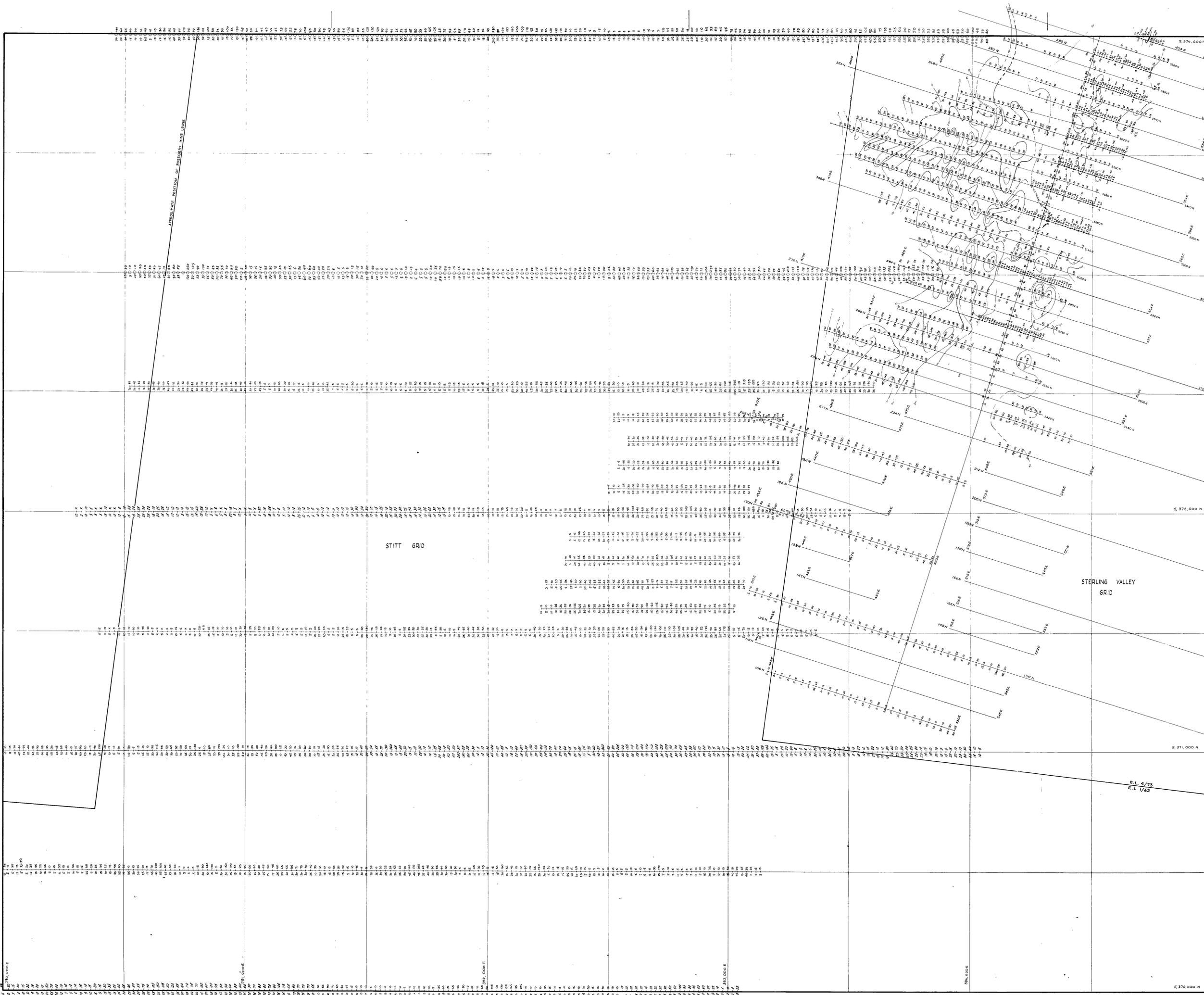
A	B	A	B
D	C	D	C
A	B	A	B
D	C	D	C
A	B	A	B
D	C	D	C
A	B	A	B
D	C	D	C
A	B	A	B
D	C	D	C
A	B	A	B
D	C	D	C

ELECTROLYTIC ZINC CO. OF ASIA, LTD.
PROJECT: MT. BLACK TAS.

699062
GEOCHEMISTRY - Fe

SCALE 1:5000 Survey: P.K.
 Reference: Date: May 1982
 Drawn: R.P.T. Checked: []

62-1946
 Revised: REF. NO. AO-504-0235



NOTES:
Refer to sheet 7B - Geochem Zn

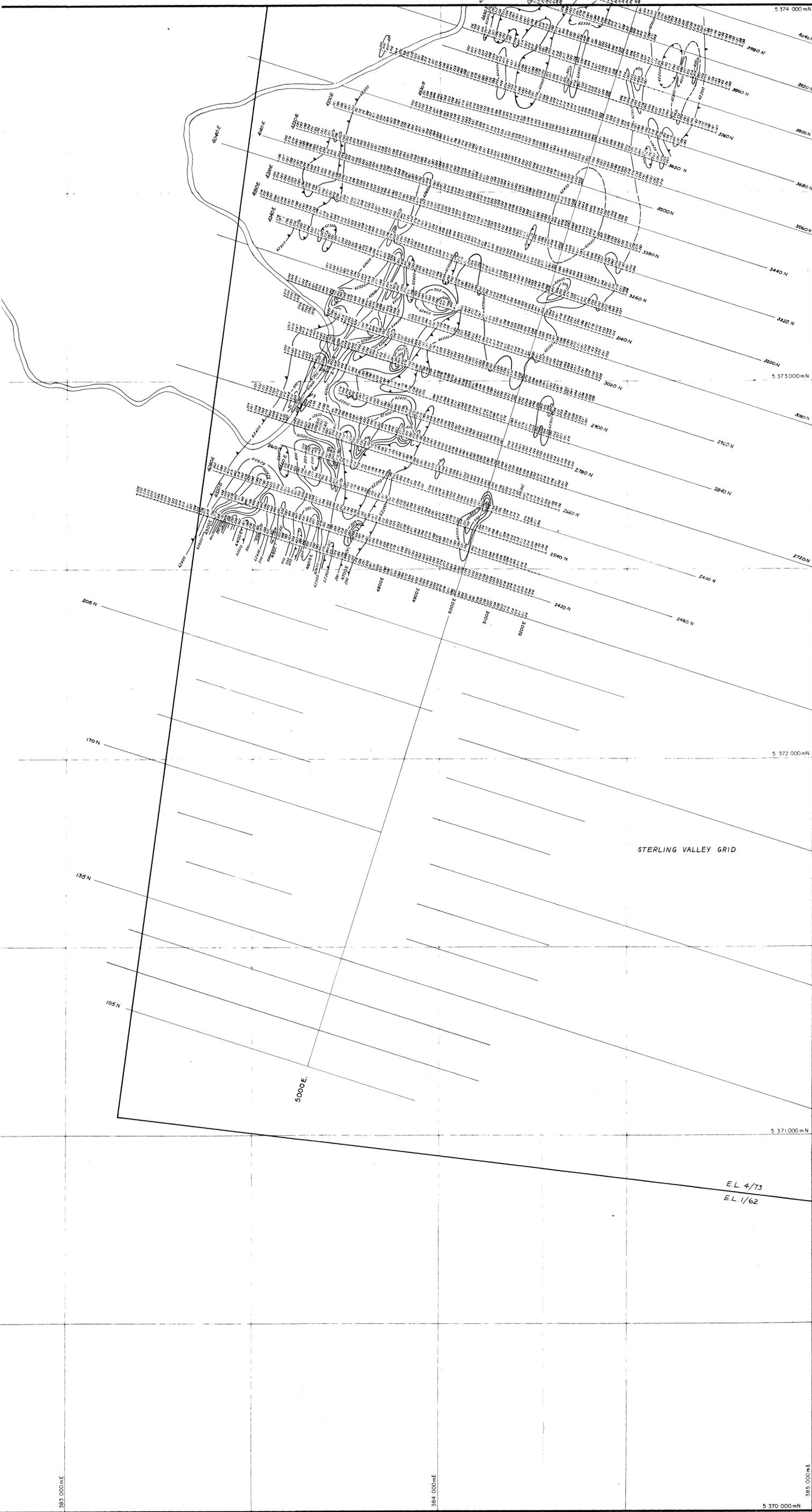
LEGEND
 □ < 50 ppm
 □ 50 - 100 "
 □ 100 - 200 "
 □ 200 - 400 "
 □ > 400 "

LEGEND
 --- P.M.I. 1968
 --- Comico 1976
 --- E.Z. 1979
 --- E.Z. 1981-82

NOTE
 Geochem samples were taken at 20m intervals along lines according to pegged distance. Adjustments have been made to the plotted sample interval on those lines where pegged line length does not coincide with line length on ground.
 Lines affected - 5 368 500 N
 5 369 000 N
 5 369 500 N
 5 370 500 N
 5 371 000 N
 5 371 500 N

A	B	A	B
D	C	D	C
3		4	
A	B	A	B
D	C	D	C
5		6	
A	B	A	B
D	C	D	C
28		7	
A	B	A	B
D	C	D	C
30		9	
A	B	A	B
D	C	D	C
32		11	
A	B	A	B
D	C	D	C

ELECTROLYTIC ZINC CO. OF ASIA, LTD.
 PROJECT: MT. BLACK TAS.
 699063
 GEOCHEMISTRY - Zn
 63-1546
 SCALE: 1:5000 Survey: P.K. Revised:
 Reference: Date: May 1982 REF. NO.
 Drawn: R.P.T. Checked: AO-504-0233



NOTE
 Lines 3620N - 3140N have been extended from the marked western ends of the lines to the highway and tied by stadia survey, and assumed straight between 5000E and the marked end points. Other lines are idealized.
 Add 62000 to obtain field readings in gammas unless otherwise noted in brackets.
 STERLING VALLEY GRID was surveyed by Saintrex in January / February 1982 with westward extensions on lines 3020N - 2840N, 2660N and 2360N surveyed in April 1982.
 CONTOUR INTERVAL 100ft.

A	B	A	B
D	C	D	C
3		4	
A	B	A	B
D	C	D	C
5		6	
A	B	A	B
D	C	D	C
28		7	
A	B	A	B
D	C	D	C
30		9	
A	B	A	B
D	C	D	C
32		11	
A	B	A	B
D	C	D	C

699064

ELECTROLYTIC ZINC CO. OF ASIA. LTD.
 PROJECT: MT. BLACK E.L. 1/62 T.A.S.

5 cm

GROUND MAGNETICS

82-1846

SCALE: 1 : 5,000	Survey: R. S.	Revised:
Reference:..	Date: 12 5. 1982	REF NO
Drawn: I. M'N.	Checked:	A0 - 504 - 0232