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ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

MINERAL RESOURCES DIVISION

EXPLORATION LICENCE NO. 4/78 - ZEEHAN

PROGRESS REPORT ON EXPLORATION ACTIVITY

15TH JUNE, 1984 TO 30TH APRIL, 1985.

E.Z. REPORT No. T205

I.J. MATHISON,

JULY, 1985.

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	9.	"	Zn	-0091
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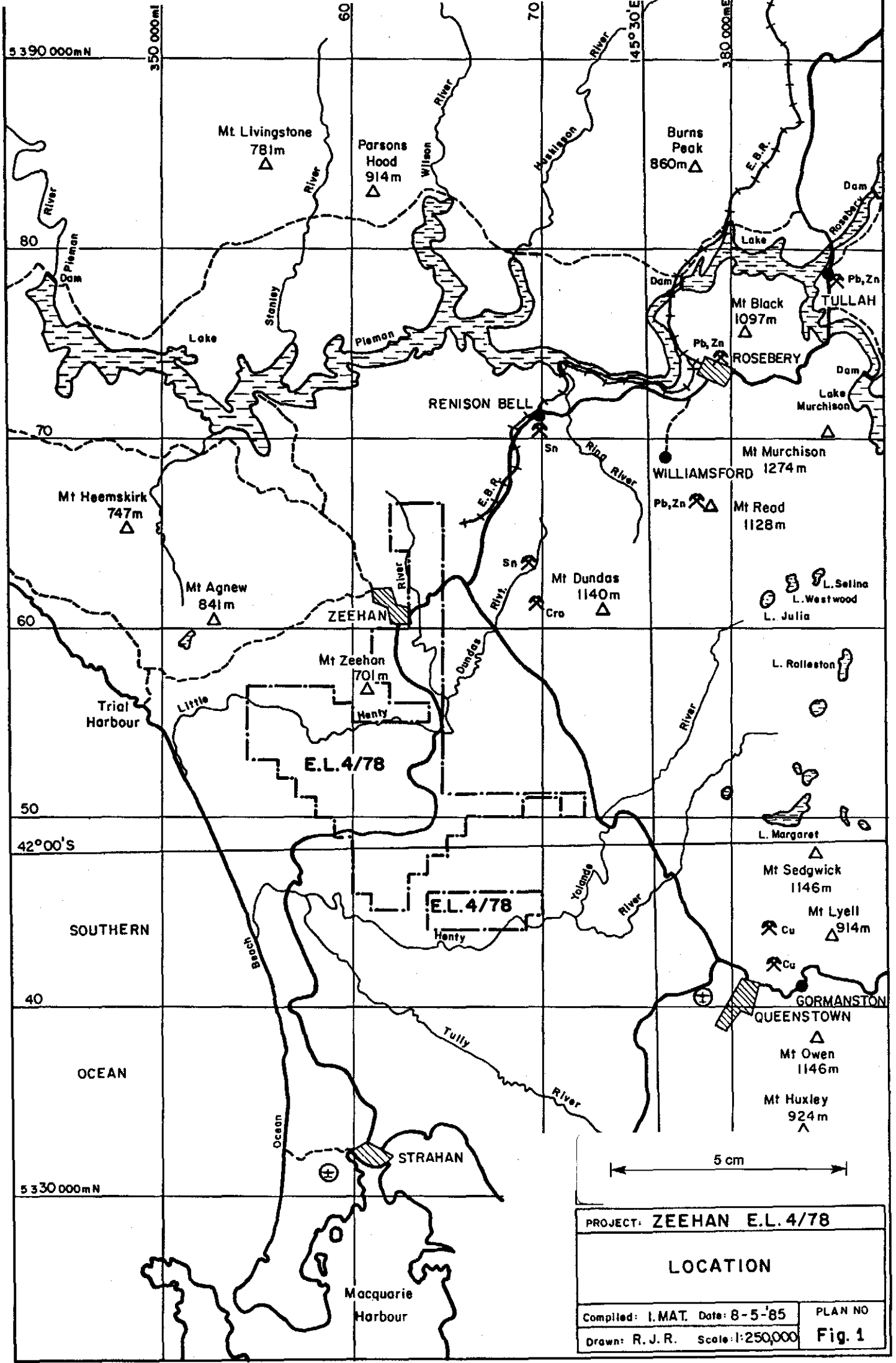
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005

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5 390 000mN

350 000mE

60

70

145°30'E

380 000mE

80

70

60

50

42°00'S

40

5 330 000mN

Mt Livingstone
781m

Parsons
Hood
914m

Burns
Peak
860m

Mt Haemskirk
747m

Mt Agnew
841m

Mt Zeehan
701m

Mt Dundas
1140m

WILLIAMSFORD
1274m

Mt Read
1128m

Mt Black
1097m

L. Selina
L. Westwood
L. Julia

L. Rolleston

L. Margaret

Mt Sedgwick
1146m

Mt Lyell
914m

Mt Owen
1146m

Mt Huxley
924m

Trial
Harbour

SOUTHERN

OCEAN

STRAHAN

Macquarie
Harbour

5 cm

PROJECT: ZEEHAN E.L. 4/78

LOCATION

Compiled: I.MAT. Date: 8-5-85

PLAN NO

Drawn: R.J.R. Scale: 1:250,000

Fig. 1

1. INTRODUCTION

1.1. Location

E.L. 4/78 (Zeehan) of 208km² was granted to Amoco Minerals on 14th July, 1978. E.Z. and Amoco negotiated a joint venture to explore E.L. 4/78, with E.Z. as manager. E.Z. exploration in E.L. 4/78 commenced in October, 1983.

E.L. 4/78 was reduced to 123km² in July, 1984. The location and boundaries of the reduced E.L. are shown on Fig. 1.

The area covered by the joint venture agreement includes all of E.L. 4/78 excepting an exclusion zone around the Oceana Mine workings.

1.2. Previous Exploration and Mining

Early exploration and mining operations are summarised in E.Z. Report T177 (Jan., 1984). All reports by Amoco Minerals on exploration in E.L. 4/78 are listed. For details see E.Z. Report T177. Further exploration by E.Z. to July, 1984 is detailed in E.Z. Report T192.

1.3. Prospect Locations

Fig. 2 shows grid names and prospect locations within E.L. 4/78. There are eleven major blocks of Ordovician Limestone within E.L. 4/78. Nine of these, including the Oceana block, are covered by grids.

1.4. Exploration Philosophy

The primary objective of the Joint Venture has been to explore for large carbonate hosted Pb-Zn deposits within the Ordovician Gordon Limestone. Exploration targets are modelled on the Irish style carbonate hosted deposits. Tin and base metal mineralization within the Cambrian basement shales and carbonates are secondary exploration targets.

132008

360,000mE

370,000m

SASSAFRAS

ZEEHAN

5,360,000mN

LITTLE HENTY

38M/77
J.N.R. Enright-Moony
39M/77

60M/77
Electrolytic Zinc Co. of Asia Ltd.
4M/77

Excluded Area

PYRAMID

AREA 1
RELINQUISHED

E.L. 4/78

MYRTLE

PROFESSOR

FEN CREEK

BAURA

GRIEVES

ROSE VALLEY



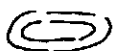
AREA 2
RELINQUISHED

5,350,000mN

11M/66
Malcolm Bendall Mining Syndicate
12M/66

0 1 2 3 4 5 km

5 cm

-  FAULT
-  GORDON LIMESTONE
-  AEROMAGNETIC ANOMALIES

PROJECT ZEEHAN E.L. 4/78	
GRID LOCATIONS	
Compiled S.T.	Date
Drawn R.J.R.	Scale 1:100,000
PLANNO Fig. 2	

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2. EXPLORATION ACTIVITY 15TH JUNE, 1984 TO 30TH APRIL, 1985

Almost all exploration in E.L. 4/78 during this period was restricted to that portion of the Gordon Limestone lying in the Badger River Valley - i.e. the Myrtle, Grieves and Baura Grids. Major projects included deep bedrock sampling at Myrtle, Grieves and Baura, shallow diamond drilling at Grieves, and UTEM surveys at Myrtle, Grieves and Baura.

In addition, sampling of drill hole ZM 1003/1003-A was completed, grid extensions at Myrtle, Baura and Rose Valley were established and mapped; and grid exploration of the Professor area commenced. Ground magnetic surveys were completed over all new grid areas.

All field work performed and results available to 30th April, 1985 are described in this report.

2.1. Geology

Geological mapping of the Gordon Limestone is hindered by the poor exposure of the carbonate rocks. Extended weathering under wet, acid conditions have resulted in extremely deep weathering of the Gordon Limestone. Characteristically this unit outcrops in broad, flat bottomed valleys between steep sided ridges of the more resistant Moina Sandstone and Crotty Quartzite. In these valleys the limestone is commonly covered by Tertiary to Recent deposits including mud, peaty mud, peat, brown coal, sand and gravel. Often a mantle of decarbonatized limestone or 'pug' overlies the fresh rock. Differentiation between transported mud deposits and in situ 'pug' is difficult.

2.1.1. WORK COMPLETED

An interpretation of all available data from Myrtle, Grieves and Baura was completed. Additional geological information was obtained from mapping of grid extensions, from costeans, from pits and from diamond drilling. Air photos of the area were carefully examined and air photo interpretations were checked. Several additional limestone exposures were located when following up air photo interpretation.

2.1.2. RESULTS (See Plates 1, 2 & 3; Table 1)

Table 1 summarizes the stratigraphic succession as currently understood. Most information is derived from the Grieves Siding area. As shown on Plates 2 and 3, the succession at Myrtle and Grieves appears similar. However, much less information is available from these areas and interpretation is hindered by the effects of major faulting and folding. A brief description of the stratigraphic succession in the Badger River area follows.

Moina Sandstone:

This unit forms the footwall of the Gordon Limestone. It consists of siliceous quartz arenite, tubicolar sandstone, pebbly quartz arenite, grit and conglomerate and overlies similar conglomerate, grits and quartz arenite of the Mt. Zeehan Conglomerate. These siliceous rocks weather white, cream, pink or light brown and form part of an elevated peneplaned surface of Tertiary age.

Ordovician Siltstone:

At Grieves and Baura, soft, deeply weathered silty units occur between the Moina Sandstone and the Gordon Limestone. At Baura a thick (>150m?) unit of massive micaceous siltstone, the Eden Siltstone, lies between the Moina Sandstone and the Firewood Siding Fault. At Grieves a thin decomposed, ?calcareous siltstone and silty sandstone occurs between the Moina Sandstone and the overlying Gordon Limestone. The intersection in ZG 1002 suggest a thickness of 20-30m for this unit.

These siltstones may represent a transition between the arenaceous Moina Sandstone and the calcareous Gordon Limestone. Together with the absence of any definite angular discordance, they suggest a conformable contact between these units.

Gordon Limestone:

At Grieves, four members of the Gordon Limestone can be defined. The basal oolitic member is known from around the old Grieves Mine and may represent a restricted, carbonate bank complex. Costean exposures and drill hole intersections indicate a thickness of 20-30m.

TABLE 1 - STRATIGRAPHIC COLUMN... GRIEVES AREA

AGE	UNIT	THICKNESS	LITHOLOGY	SOURCES OF DATA	COMMENTS (Known Mineralisation)
Silurian	Crotty Quartzite (Sc)	~ 400m	Fine to coarse grained, friable lithic and feldspathic quartz arenite, silty quartz sandstone, quartz siltstone. Weathers white.	Field mapping. Grievés Siding 1	
Upper Ordovician	G O R D O N L I M E S T O N E	Upper Limestone (Ogu)	Dolomitic limestone, dolomite, dolomitic siltstone dolomitic sandstone, carbonaceous lime mudstone, micritic limestone and silty limestone.	Grievés Siding 1 Costean L47,600N Costean L50,200N Costean L48,600N ZWG 9	Mineralised dolomitic Limestone in Costean L47,600N ?Banded galena-sphalerite ?veins in costean L50,600N?
		Siltstone Member (Ogs)	Fossiliferous siltstone, finely laminated siltstone, marly siltstone.	A. Ellis Thesis Field Mapping	
		Lower Limestone (Ogl)	Variably dolomitised limestone - lime mudstone, laminated limestone, bioclastic lime wackestone, coralline and shell fossiliferous lime mudstone. Subordinate oolitic, pelletal and bioclastic lime grainstone, oncologic limestone, silty limestone and sandy limestone. Occasional thin siltstone and sandstone beds.	ZG 1001, ZM 1003 ZWG 1 - 7 Costean L47,100N ZWG 11-12 ZG 1002	?Costean L50,500N - Ba. Restricted lenses of mineralised sedimentary limestone breccia. Sulphide clasts and sphalerite, galena and zinc carbonates in matrix.
		Oolitic Member (Ogo)	Recrystallised and sideritised oolitic lime grainstone and clastic limestone breccia.	ZG 1002 Grievés Mine Workings. Costeans L47,800N, 47,900N, 48400N	Extensive low grade zinc carbonate mineralisation. some drusy sphalerite and galena.
Middle Ordovician	Basal Units	10-20m	Muddy siltstone and silty sandstone - probably calcareous.	ZG 1002	
	Eden Siltstone	0-150m	Thick micaceous siltstone unit at Baura	Field Mapping	
	Moina Sandstone (Om)	~500m	Siliceous and silicified pebbly quartz arenite, quartz arenite, quartz arenite with vertical burrows, pebble and cobble conglomerate.	ZG 1002 Field mapping	

Over most of the Badger River valley, only three subdivisions of the Gordon Limestone are evident. The siltstone member, which outcrops as a low ridge, separates the upper and lower limestone members. The upper limestone appears to be more dolomitic, silty and sandy than the lower limestone and passes transitionally and conformably into the overlying Crotty Quartzite.

Crotty Quartzite:

This unit overlies the Gordon Limestone in most of the mapped area. It consists of white weathering silty sandstone, quartz sandstone and quartz siltstone. The easily weathered lithic and feldspathic grains and a probable carbonate cement cause this unit to weather deeply to friable fine sand and silty sand interbedded with porous white quartzite.

Permian Sediments:

These outcrop in the western portion of the Baura Grid south of the Firewood Siding fault. Carbonaceous black sandstone and pebble conglomerate with black shale pebbles exposed in Badger River have steep dips. Faulting along the contact between the Permian Sediments and the Gordon Limestone is indicated.

Faulting:

Two major basin forming faults have been mapped. The Professor Fault trends north westerly along the Professor Range into the Myrtle Grid where it is represented by a zone of intense cleavage, shearing and folding. It degrades to a series of tight fold axes in the overlying Silurian sediments.

The Firewood Siding Fault is a fault of regional significance. It trends north westerly across the Baura Grid with an apparent dextral offset of the Moira Sandstone of 1.5km.

Other smaller north westerly faults have been mapped. The more significant of these clearly offset the basal contact of the Gordon Limestone but appear to die out within the limestone. Two of these faults, the Grieves Fault and a fault through the coast on L47,100N, appear to be associated with mineralization and elevated bedrock geochemistry.

2.2. Petrology

1984 E.Z. drilling, ZG1001, ZG 1002 and ZM 1003, 1003-A, has provided sections of unweathered limestone. These sections are restricted to the lower limestone member and the oolite member.

2.2.1. WORK COMPLETED

As a first step, drill core was logged using the normal aids of pocket knife, hand lens and dilute hydrochloric acid. Broadly descriptive names such as 'Muddy Limestone', 'Banded Limestone' and 'Patchy Limestone' were assigned to core intervals. More technical terms such as 'grainstone' were only used when the identification was obvious.

Next, selected samples of drill core were sectioned, polished, etched and stained with a mixture of alizarin red S and potassium ferricyanide. This allowed calcite, ferroan calcite, ferroan dolomite, dolomite and quartz to be distinguished under a low power binocular microscope. A modification of the Dunham classification scheme (see Appendix A), was used to classify these rocks.

Finally, a suite of samples were submitted to C.M.S. for thin section petrology. This provided good control of mineralogy and alteration fabrics. Subsequently the original sedimentary fabrics were reinterpreted where necessary and rock names assigned by C.M.S. were modified to fit our classification scheme.

2.2.2. RESULTS (See Table 2 and C.M.S. Report - Appendix A)

Table 2 compares rock names and descriptions from the three techniques used. With accommodations for the amount of detail possible at different scales and the size of the sample described, correlation between drill core logging, binocular microscope description and petrological microscope description is generally good. The main problem revealed is the difficulty in discriminating soft sediment brecciation and nodular structures from similar textures produced by patchy dolomitization spreading from a network of cross linking veinlets. As a further complication, evidence of selective dolomitization of more carbonaceous and argillaceous lime mud bands in laminated limestones is wide spread.

TABLE 2. - COMPARISON OF HAND SPECIMEN AND MICROSCOPIC ROCK DESCRIPTIONS

DRILL HOLES ZG 1001, 1002 AND ZM 1003, 1003-A

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Sample No.	Location	Core Log Description	Stained Slab Binocular Microscope	Thin Section Petrographic Microscope	Comments
63601	ZG 1001 7.5m	Graded coarse clastic limestone to lime mudstone.	Dolomitic medium bioclastic packstone with brachiopod valves.		Matrix dolomitised.
602	18.7m	Oncolitic limestone - algal balls around gastropods.	Dolomitic bioclastic wackestone with vaguely concentric oncolites.		Matrix dolomitised.
603	28.4m	Muddy limestone and carbonaceous muddy limestone.	Lumps of micritic limestone in fine ferroan dolomite matrix.	Very fine to fine bioclastic wackestone lenses in carbonaceous lime mudstone.	
604	50.7m	Laminated limestone.	Interlaminated dolomitic and calcite layers.	Interlaminated very fine ?pelletal grainstone and dolomitic carbonaceous lime mudstone.	
605	66.5m	Muddy limestone - occasional shell fragments.	Pelletal wackestone with bands of dolomitic bioclastic wackestone.	Very fine bioclastic wackestone with interbed of dolomitised carbonaceous very fine wackestone.	
606	87.1m	Coarse bioclastic limestone and muddy limestone.	Extremely finely crystalline limestone with some bioclasts.		
607	109.0m	Bioturbated muddy limestone with some thin bioclastic beds.	Pelletal lime wackestone. Incipient dolomitisation along microstylolites.		
608	125.0m	Muddy Limestone.	Calcareous dolomite - dolomitised pelletal wackestone. Some relict bands.		
609	142.8m	Bioturbated muddy limestone and fine bioclastic limestone.	Patches fine bioclastic packstone with patchy dolomitisation.	Dolomitic pelletal and fine bioclastic patchily recrystallised.	Patchy dolomitisation
610	ZM 1003 76.7m	Dolomitised bioclastic limestone with muddy bands and stringers.	Bioclastic wackestone with patchy dolomitisation.	Weakly dolomitic very fine bioclastic wackestone.	
611	80.8m	Fine clastic limestone with bands and stringers of muddy limestone.	Extremely finely crystalline limestone with bands finely crystalline dolomite.		
612	105.0m	Patchy bioclastic and muddy limestone.	Recrystallised bioclastic and pelletal wackestone in patchy dolomite.	Patchily dolomitised very fine bioclastic wackestone.	Patches of complete dolomitisation.
613	ZM 1003-A 111.8m	Laminated limestone	Interlaminated lime mudstone and finely crystalline dolomite.		Later patchy dolomitisation.
614	129.0m	Bioclastic limestone with lithoclasts and oncolites.	Intraclastic and bioclastic limestone with patchy dolomite.		Dolomitisation following veinlets.
615	153.0m	Patchy fine grained limestone with branching corals.	Patchy bioclastic limestone and very finely crystalline dolomite.		
616	171.8m	Patchy medium bioclastic limestone and muddy limestone.	Calcareous dolomite - finely crystalline dolomite with relict limestone.	Calcareous dolomite - dolomitised medium bioclastic wackestone. Relict limestone patches.	Patchy dolomitisation.
617	190.0m	Fine grained limestone with shelly bands.	Vaguely pelletal micritic limestone - one gastropod.	Dolomitic pelletal lime wackestone.	
618	201.0m	Silty Limestone	Very fine grained carbonaceous limestone, weakly fossiliferous.		

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Table 2 (Cont.)

Sample No.	Location	Core Log Description	Stained Slab Binocular Microscope	Thin Section Petrographic Microscope	Comments
63619	ZH 1003-A 203.0m	Patchy fine grained limestone.	Patches of fine grained limestone in finely crystalline dolomite.	Dolomitic pelletal lime wackestone - minor fine-medium bioclasts.	Patchy dolomitisation.
620	219.9m	Dolomite = dolomitised bioclastic lime grainstone.	Recrystallised and dolomitised medium bioclastic grainstone.	Recrystallised and dolomitised medium grained bioclastic and intraclastic lime grainstone.	Occasional rounded quartz.
621	221.8m	Dolomitic fine grained limestone.	Sandy, dolomitic medium bioclastic pelletal ?packstone.	Sandy, medium clastic lime packstone. Grains rounded and clasts recrystallised.	?Aeolian sand and clasts.
622	243.6m	Fine to medium grained lime grainstone.	Dolomitic fossiliferous pelletal packstone.		Bands of dolomitisation.
623	253.0m	Laminated limestone.	Laminated finely crystalline dolomite and lime mudstone.	Interlaminated extremely fine clastic lime wackestone and finely crystalline dolomite.	
624	290.8m	Banded medium to coarse bioclastic and muddy limestone.	Dolomitic fine-medium bioclastic packstone. Matrix and some bands dolomitised.		Some rounded quartz.
625	ZG 1002 40.2m	Medium grey clastic limestone with muddy bands.	Dolomitic, sandy, oolitic and bioclastic packstone.	Sandy, dolomitic, medium grained pelletal and bioclastic lime grainstone - packstone.	Dolomite related to stylolites.
626	45.0m	Interbedded lime mudstone and medium clastic limestone.	Fine bioclastic wackestone with patches and stringers dolomite.		Dolomite related to stylolites.
627	49.3m	Fine to coarse clastic limestone with muddy bands and patches.	Sandy coarse lithoclastic in dolomitic lime mudstone matrix.		Rounded quartz grains.
628	50.8m	Laminated limestone and clastic limestone, slumped.	Dolomitic fine grained limestone with network of fine dolomite.		
629	54.9m	Silty and sandy clastic limestone.	Silty limestone with anastomosing dolomite veinlets.		
630	64.7m	Disrupted ?slumped fine clastic limestone and lime mud.	Dolomitic stylolitic bioclastic wackestone - patches calcareous dolomite.		Patchy dolomitisation.
631	79.7m	Carbonaceous muddy limestone	Carbonaceous lime mudstone with anastomosing dolomite.		Dolomite carbonaceous.
632	86.3m	Disrupted and slumped clastic and muddy limestone.	Weakly fossiliferous lime mudstone clasts in very finely crystalline dolomite.		~40% dolomitised relict limestone 'clasts'.
633	95.0m	Silty limestone - occasional bioclasts.	Fine grained limestone ~10% dolomite as patches.		
634	106.5m	Sideritic coarse clastic limestone.	Recrystallised oolites in a pale brown carbonate cement.	Altered fine to medium oolitic grainstone.	106.4-107.4 Zn 2.32%; Fe 20.44%
635	115.0m	Sideritised oolitic limestone.	Recrystallised calcite oolites in ferroan dolomite cement.	Medium crystalline limestone, vague relict oolites.	
636	120.5m	Recrystallised oolitic limestone	Recrystallised oolites and bioclasts in dolomitic cement.		

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FIGURE 3. - Rock Types



3a "Patchy Limestone" - darker patches calcareous dolomite, lighter patches weakly dolomitic bioclastic wackestone.



3b "Banded Limestone" - darker bands calcareous dolomite, lighter bands limestone.



3c "Laminated Limestone" - interlaminated very finely crystalline calcareous dolomite and lime mudstone.



3d "Onkolitic Limestone" - algal balls in matrix of dolomitized lime wackestone.

Nevertheless, drill core descriptions such as "bioclastic limestone with bands, patches and stringers of muddy limestone" refer to dolomitized bioclastic lime wackestone with patchy dolomitization. During dolomitization, carbonaceous and argillaceous material was concentrated into intergranular positions with a consequent darkening of the rock colour (see Fig's 3a, b, c and d). Advanced dolomitization of this type results in a breccia like texture with ragged and rounded "clasts" of bioclastic limestone floating in a dark grey to black matrix of finely crystalline dolomite.

True debris flow breccias have also been identified. These differ in the diversity of their clasts and by some indications of different degrees of preslumping lithification. Again the matrix is often selectively dolomitized. Only very thin debris flow breccia units have so far been identified in the Myrtle-Baura area.

As suggested in earlier E.Z. reports and as concluded by Ellis (1984), the carbonate rocks so far exposed in the Badger River valley indicate shallow water deposition. Depositional environments range from supratidal, intertidal to shallow subtidal. However, fossils in the siltstone member suggest a slightly deeper environment for this unit (Ellis, 1984).

2.3. Deep Bedrock Sampling (See Fig. 4a & b)

Deep bedrock sampling of the Gordon Limestone is accomplished using a man portable sampling system developed by N. Poltock. A Munrow flow through sample tube on the end of a string of drill rods is hammered to bedrock, or until effective penetration has ceased, by a Wacker portable percussion drill. Material from the bottom of the hole is retained in the sample tube as the rods are jacked out of the hole.

A good sample consists of approximately 100g of weathered limestone with chips and a thin capping of fresher rock. Any overlying peat or peaty clay is discarded before the sample is removed from the sample tube. Samples are described in the field by the sampler and classified as weathered bedrock, possible bedrock or overburden.

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FIGURE 4. - Wacker Sampling - Really!



4a Hammering down to bedrock.



4b Jacking rods and sample tube out of hole.

In the Badger River valley, sample depths up to 27m have been recorded. Most samples, however, were collected from under less than 10m of overburden.

2.3.1. WORK COMPLETED

During 1984-85, Wacker sampling of the Grieves Grid and the northern portion of the Myrtle Grid was completed. Reconnaissance sampling of the Baura Grid and the southern portion of the Myrtle Grid commenced.

Samples were collected at 25m spacings along grid lines. Reconnaissance sampling aims for a maximum line spacing of 400m. Follow-up sampling has reduced the line spacing in several areas to 100m or 200m.

Sampling details are summarized below.

Grid	Bedrock	Possible Bedrock	Not Bedrock	Total
Myrtle	232	18	24	274
Grieves	136	21	14	171
Baura	268	16	19	303

Dried samples, together with occasional check samples and repeat samples, were submitted to Analabs, Burnie for analysis of the whole sample.

Cu, Pb, Zn, Fe and Mn were determined by AAS and Ba by XRF.

Sample details and results were transferred to data sheets and draughted onto grid bases. Where sampling was sufficiently detailed, geochemical plans were contoured. Contour intervals were selected by inspection.

2.3.2. RESULTS (See Appendix B - Data Sheets, and Plates 4 - 15)

The Wacker was able to collect samples of weathered bedrock from most sites attempted. At a few sites, no sample could be collected where hard, fresh limestone underlies peat or mud.

Samples identified as "Not Bedrock" include sand and gravel, peaty mud, brown coal, brown clay and sandstone where limestone was anticipated. Questionable bedrock samples, "?Not Bedrock", are those where no definite bedrock was reached and where the sample does not have the usual appearance of weathered limestone. When contouring, "Not Bedrock" samples were ignored while "?Not Bedrock" results were given qualified significance.

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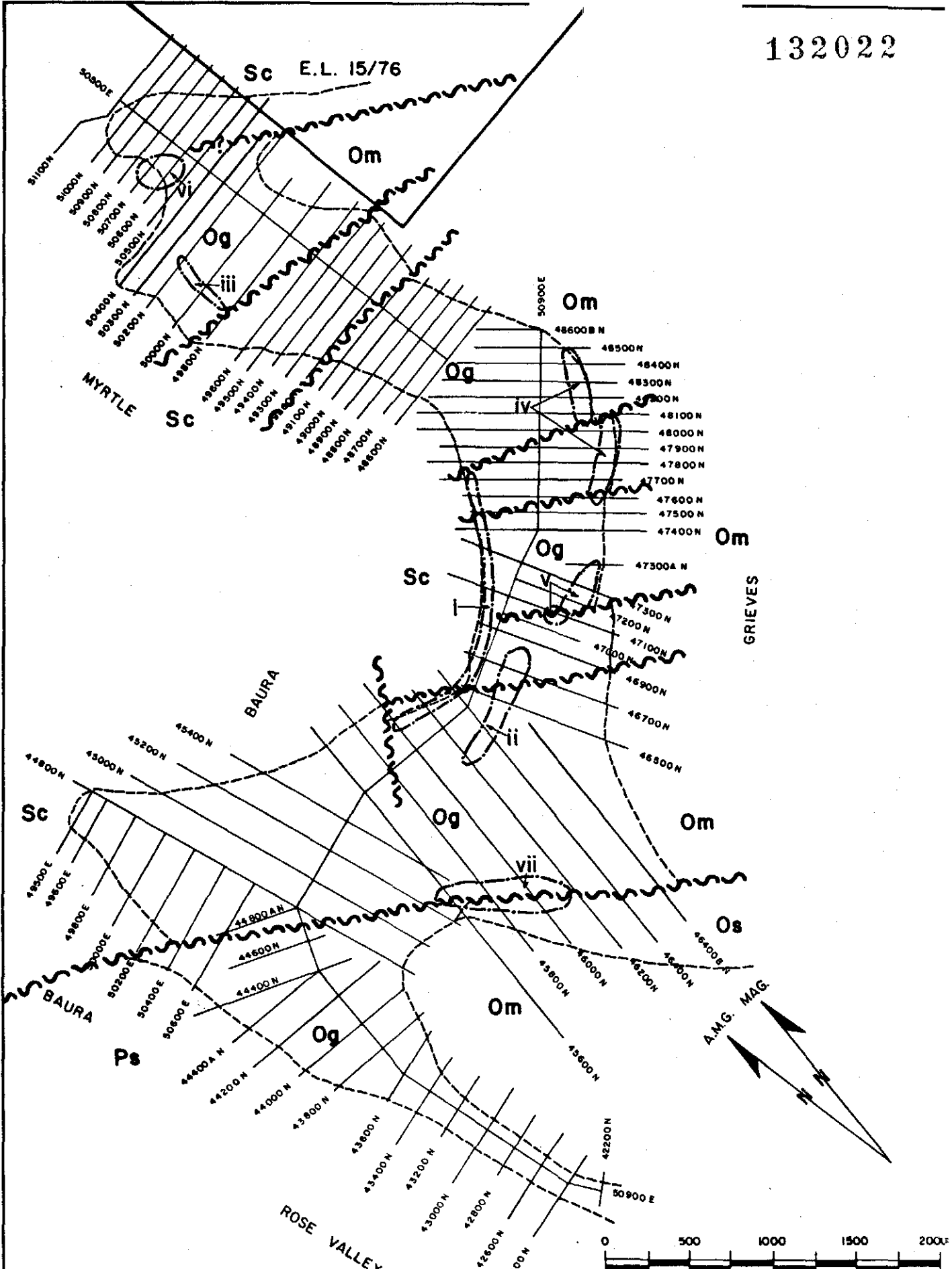
Contoured or highlighted geochemical plans of Myrtle, Grieves and Baura currently show six extended zones which are anomalous in zinc and, to a lesser extent, lead. Some of these areas are also anomalous in manganese while others are anomalous in barium or copper. Numerous one or two point anomalies were also detected.

Several of these anomalies appear related to a distinct stratigraphic horizon or to an inferred mineralizing fault. The six major zinc anomalies and a barium anomaly are described below. Their locations are marked on Fig. 5.

- (i) At Grieves, Baura, and, to a lesser extent, Myrtle the upper units of Gordon Limestone, just under the Crotty Quartzite, are commonly anomalous. One or two station values ranging from 500-3,000 ppm lead and/or zinc occur on most sampled lines which cross this lithological boundary. This zone appears to be best developed on line 47,600N at Grieves between 60,600E and 60,650E. Mineralized dolomite was exposed in the costean on this line with the 12m interval 60,618E-60,630E averaging 3.1% Zn and 0.4% Pb.
- (ii) Across the Grieves Grid and parts of the Myrtle and Baura Grids a consistent 50-100m wide zone is enriched in barium. Barium values between 200 and 600 ppm here define a siltstone member within the Gordon Limestone. Several lead and zinc anomalies lie above, within or just below this siltstone unit. At the junction of the Grieves and Baura Grids, a zinc anomaly over 600m long and up to 200m wide lies below and partially within the siltstone unit. Partially coincident manganese and lead anomalies support this zinc anomaly.
- (iii) Two samples 25m apart on line 50,000N at Myrtle reported Cu to 0.14%, Pb to 2.54% and Zn to 4.03%. Barium values on this line suggest that this anomaly also lies stratigraphically just below the siltstone unit. Results of sampling along lines 49,800N and 50,200N suggest an extension of this zone 200m to the north and a possible, weaker extension to the south.

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LEGEND

- Ps** Permian Sediments
- Sc** Crotty Quartzite
- Og** Gordon Limestone
- Os** "Eden Siltstone"
- Om** Moina Sandstone

- Fault
- Geological Boundary
- Bedrock Geochemistry Anomalies

PROJECT: E.L. 4/73 ZEEHAN	
BADGER RIVER GRIDS GEOCHEMICAL ANOMALIES	
Compiled: I. MAT. Date: 2-7-85	PLAN NO
Drawn: R.J.R. Scale:	Fig. 5

- 022
- (iv) Around the old Grieves Mine, the zone along the footwall contact between the Gordon Limestone and the Moira Sandstone is highly anomalous in zinc and manganese. From 47,400N to 48,400N, zinc values from 400 ppm to 4.50% outline a zone up to 100m wide and over 1km long. This zone is clearly offset by the Grieves Fault. Hole ZG 1002 tested the grid southern portion of this anomaly. It intersected 8.2m of >1.0% Zn in sideritized oolitic limestone.
 - (v) The area around the mineralized costean on L47,100N at Grieves is associated with irregular, rather poorly defined, zinc, lead and manganese anomalies. This area has been tested by drill hole ZG 1001 and Winkie drill holes ZWG 1 to ZWG 7. Anomalous zones towards the grid eastern ends of L47,200N, 47,300N and 47,300AN lie on the opposite side of an interpreted fault through this area. ZWG 8 just reached part of this eastern zone with the bottom 1.75m assaying 0.62% Pb and 0.77% Zn in porous brecciated limestone.
 - (vi) The area around the costeans on L50,500N and 50,600N at Myrtle is highly anomalous. Zinc values to 12.0%, lead values to 1.50% and barium values to 0.7% form approximately coincident, well defined, north to north westerly trending anomalies within an anomalous zone over 200m long and up to 200m wide. This area has been partially tested by drill hole ZM 1003.
 - (viii) An area around the Firewood Siding Fault at Baura has elevated barium values. Scattered, isolated, weakly elevated zinc values also appear to be associated with this fault.

2.4. Geophysics - Ground Magnetics

2.4.1. WORK COMPLETED

The Professor Grid and parts of the Myrtle, Baura and Rose Valley Grids were surveyed. A Lamontagne GSM-18 automatic base station magnetometer recorded diurnal variation while a companion GSM-18 instrument was used as the main field instrument. Consequently most data could be reduced automatically and the corrected results printed. Some lines were read using a Geometrics G816 magnetometer. This data was reduced by hand. Stations were read at 10m intervals but data was plotted at 25m intervals on plans. Interpolation of every second data point was necessary.

2.4.2. RESULTS (See Plates 16, 17 and 18)

No magnetic anomalies were detected. Contouring of data at 5nT intervals was possible and the resulting contoured magnetics reveal several lithological and structural correlations. The usefulness of these correlations is reduced by the low level of precision attained during the survey. Repeat surveys suggest a repeatability of $\pm 2nT$ is the best that can be expected under field conditions. Consequently, the positions of contour lines are not well defined and the more magnetic units and structural features cannot be accurately located.

2.5. Geophysics - UTEM

2.5.1. WORK COMPLETED (See Appendix C - Mitre Geophysics Reports)

Two separate surveys were completed by Lamontagne Geophysics. The first survey covered the northern part of the Myrtle Grid and part of the Grieves Grid. The follow-up survey covered all of the Grieves Grid and the eastern portion of the Baura Grid. Line coverage and loop layouts are detailed in EZ/MG 85/01 and EZ/MG 85/05 - Appendix C.

Results were supplied as machine plotted profiles and data listings. This data and relevant geological information were forwarded to J. Bishop of Mitre Geophysics for interpretation.

2.5.2. RESULTS (See Appendix C)

Figures showing all conductors and conductive zones are included in Mitre Geophysics reports EZ/MG 85/01 and EZ/MG 85/05. The following comments are extracted from these reports.

First survey (EZ/MG 85/01):

"The several weak responses on the Myrtle Grid have mostly been interpreted as being due to patches of conductive overburden. No prospective anomalies were indicated.

On the Grieves Grid three zones were recorded over the limestone (plus the responses along the siltstone contact and the northern (faulted) boundary). No strike lengths have been determined and all could be formational. The most southerly zone is apparently the best conductor, however it is only partially defined and resurveying is recommended."

The second survey was carried out because of this recommendation. Part of the Baura Grid was surveyed at the same time. Bishop concluded (EZ/MG 85/05):

" The UTEM surveys of the Grieves and Baura Grids have defined a number of weak conductive zones. These have been interpreted as being due to contacts, fractures or faults.

No well-defined responses indicative of good conductors were recorded on either grid. However, two anomalies on the Baura Grid have been chosen for further evaluation: one has a moderate amplitude and the other a moderate conductance. The former response, at 46,400N/62,375E, is given the higher priority.

The re-surveying of the Grieves Grid showed that the apparently prospective zone E (interpreted from the first survey) was not of interest (a good example of the benefit to be gained by surveying with loops on both sides of the target). The three anomalies (from two zones) chosen from the first survey were again the most prospective targets defined by the second survey, although all three are likely to have formational sources."

2.6. Geophysics - Gravity

2.6.1. WORK COMPLETED

The Myrtle, Grieves, Baura and Rose Valley were surveyed in 1981 for Amoco. A re-examination of this data in the light of recent costeaming and drilling results suggested that a gravity anomaly on the Grieves Grid could be related to mineralization. John Bishop of Mitre Geophysics was commissioned to interpret this anomaly.

2.6.2. RESULTS (See Mitre Geophysics Report EZ/MG 85/02 - Appendix C)

J. Bishop tested the data by removing terrain effects and by 2D modelling of the residual anomaly. He concluded:

"The Grieves Grid gravity anomaly, although traceable across six lines, is poorly defined on each line. At its highest value, on line 47,300N it is defined by one point only. Whilst no modelling (in the proper sense) can be done to such sparsely sampled data, some approximations suggest that a very shallow (and depth limited) body is required to explain the response."

Shallow diamond drill holes, ZWG 9 and ZWG 10 were drilled to test the gravity anomaly on L47,300N. A thick zone of puggy clay was intersected which could not be safely penetrated by the Winkie Drill. The source of this gravity anomaly may underlie this pug zone.

2.7. Shallow Diamond Drilling (See Fig. 6a, b)

The Winkie is a small, easily portable, diamond drilling system. As set up for our purposes, it is capable of coring to 30 or 40m in good conditions producing 36mm diameter core.

Because the Winkie is small and because its ancilliary equipment is flexible, it can be used on tight sites with little site preparation. It can also be winched for short distances along existing grid lines through rain forest.

2.7.1. WORK COMPLETED

Twelve Winkie holes totalling 275m have been drilled. Target and location details are summarized below. All holes except ZWG 2 were drilled at -60° towards grid east, ZWG 2 was drilled at -70° to grid east.

Hole No.	Location	Depth	Target
ZWG 1	47,102N 60,160E	22.25m	Mineralization in costean L47,100N.
2	47,103N 60,150E	30.70m	" " "
3	47,075N 61,162E	17.00m	Strike extension of mineralization in costean.
4	47,075N 61,172E	18.80m	" "
5	47,000N 61,192E	33.55m	" "
6	47,000N 61,162E	13.95m	" "
7	47,000N 61,175E	31.40	" "
8	47,200N 61,225E	29.25m	Bedrock geochemical anomaly.
9	47,300N 60,775E	19.55m	Gravity anomaly.
10	47,300N 60,792E	16.00m	" "
11	47,300AN 61,125E	26.65m	Bedrock geochemical anomaly.
12	47,300AN 61,150E	15.70m	" " "

FIGURE 6 - Winkie Drilling



6a Winkie drilling near costean L47,100N



6b Winkie drilling in rain forest.

2.7.2. RESULTS (See Drill Logs - Appendix D)

Hole ZWG 1 intersected lead-zinc mineralization in sideritized limestone. The interval 7.2m to 8.9m averaged 5.8% Zn and 2.0% Pb while the interval 12.25m to 19.0m averaged 8.5% Zn and 1.6% Pb. Sulphur values indicate that zinc in the upper section is predominantly in the form of sphalerite while zinc in the lower section is predominantly in a carbonate form.

Best assays from other holes are summarized below:

ZWG 2	20.50 - 21.35m	1.85% Pb; 0.72% Zn
	19.55 - 24.40m	Pb >0.1%; Zn >0.1%.
ZWG 3	9.90 - 11.45m	0.63% Pb; 3.02% Zn
	9.90 - 17.00m	Pb >0.19%; Zn >0.5%
ZWG 4	3.65 - 5.35m	1.17% Pb; 3.16% Zn
	3.65 - 18.80m	Pb >0.05%; Zn >0.3%
ZWG 5	13.85 - 30.30m	Pb <50 ppm; Zn <50 ppm
ZWG 6	12.90 - 13.95m	Pb 20 ppm; Zn 20 ppm
ZWG 7	No assays available. No visible mineralization.	
ZWG 8	27.40 - 29.25m	0.62% Pb; 0.77% Zn
ZWG 9 - 12	No assays available. No visible mineralization.	

Holes ZWG 9 and 10 were designed to test a gravity anomaly on L47,300N at Grieves. A thick zone of black pug was found under the road. The source of the gravity anomaly may lie stratigraphically below this pug zone.

2.8 Deep Diamond Drilling2.8.1. WORK COMPLETED

Most results of drilling of ZG 1001, ZG 1002 and ZM 1003, 3A were reported in E.Z. Report T192. Preliminary drill logs were presented. Since then additional assay data have been received, petrological studies have been completed, (see Section 2.2.) and drill logs have been modified. Completed copies of drill logs are attached (see Appendix E).

2.8.2. RESULTS

Assay results from ZG 1001 and ZG 1002 were reported in E.Z. Report T192. The best assay from ZM 1003A was from the interval 201-202m. This one metre split assayed 0.84% Zn. A small patch of siderite and white sphalerite occurs in patchily dolomitized limestone at 202m.

3. DISCUSSIONS AND CONCLUSIONS

Results of 1984-85 exploration in E.L. 4/78 have broadened our understanding of the relationship between bedrock geochemistry, stratigraphic horizons and mineralizing faults or fracture systems. Several targets in the Myrtle, Grieves and Baura areas have been selected to test this understanding.

In 1984-85, UTEM III was added to the growing list of geophysical techniques and instrument systems used in the area. Several of the weak conductors detected follow stratigraphic horizons where elevated bedrock geochemistry is common. As mineralization of the type sought is likely to be only weakly conductive, masking of an EM anomaly due to mineralization by responses due to lithological changes appears likely. More detailed interpretation of UTEM anomalies occurring along favourable stratigraphic horizons is warranted.

The Wacker sampling system is proving a successful exploration tool in this area. While bedrock geochemical values are very jumpy and although bedrock geochemistry within a few metres of mineralization has been shown by drilling and costeaning to be only slightly above background, the removal of the uncertainty involved in sampling a mixture of transported and residual overburden has made interpretation of results much simpler. Use of this system will continue.

Shallow diamond drilling with the Winkie drill is also proving useful. While this system in no way replaces deep diamond drilling, it does provide valuable information and has reduced the need for trenching with its accompanying environmental disturbance. Initially it was hoped to collect continuous sections of the stratigraphic succession by drilling several closely spaced drill holes. The thickness of overburden in most areas made this impractical. Subsequent Winkie drill holes will be more widely spaced.

4. PROPOSED EXPLORATION 15TH JULY, 1985 TO 14TH JULY, 1986

4.1. Deep Bedrock Sampling

Additional Wacker sampling is required in the Myrtle and Baura areas. Preliminary reconnaissance sampling should be attempted at Rose Valley, Professor and Pyramid.

4.2. Winkie Drilling

The following areas should be tested by shallow diamond drill holes. Results of these holes should lead to the proposal of deep drilling for these areas.

a) **Baura:**

46,000N; 60,700-60,750E.

Target - Geochemical anomaly along the contact between the Crotty Quartzite and the Gordon Limestone.

b) **Myrtle:**

50,000N; 59,850-59,900E

Target - Geochemical anomaly.

c) **Myrtle:**

50,600N; 60,370E

50,500N; 60,380-60,420E

Target - Mineralization exposed by costeans.

4.3. Deep Diamond Drilling (See Fig's 7 & 8)

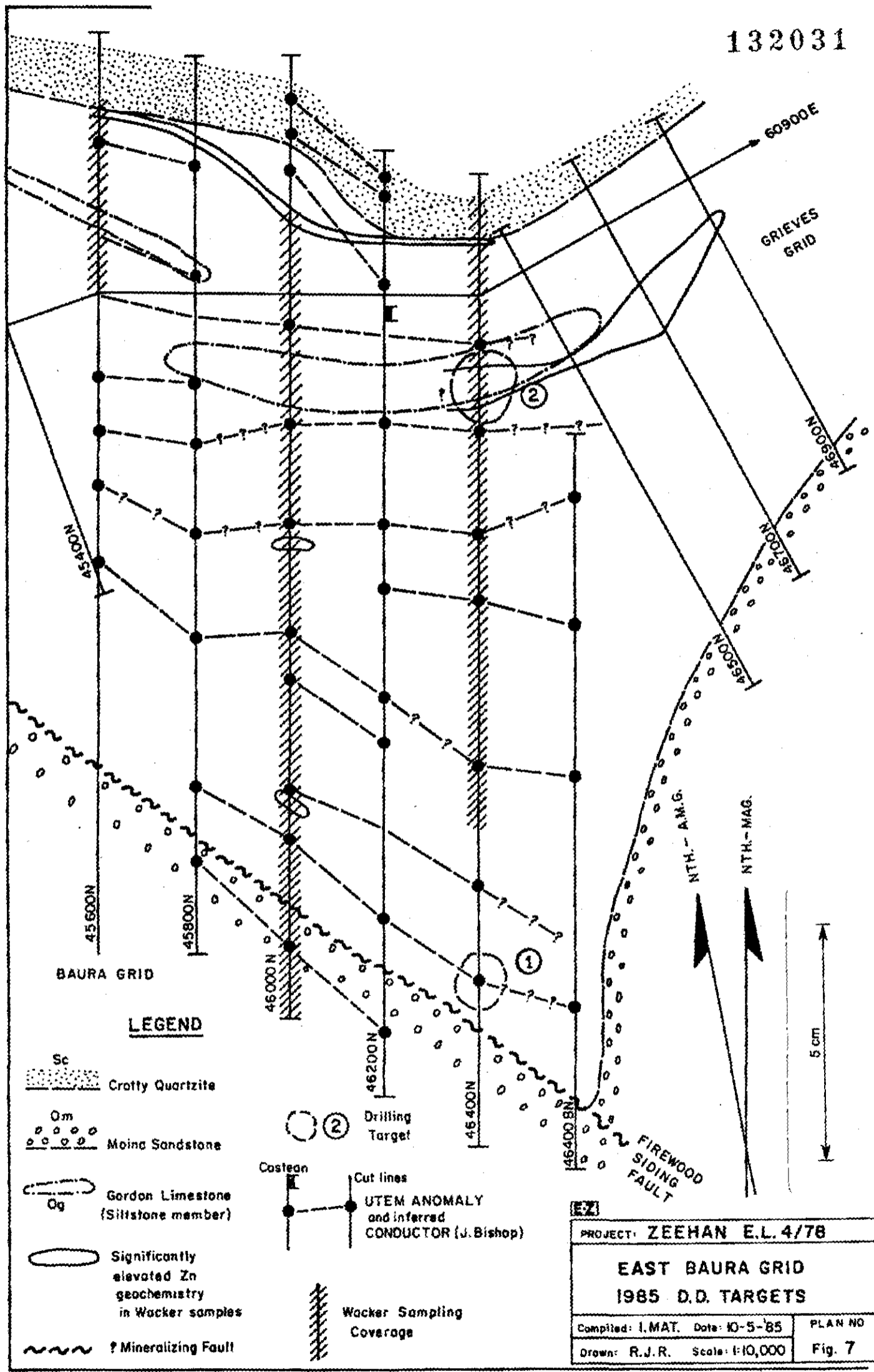
Target 1 - Baura:

70m below 46,400N 62,375E

This UTEM anomaly is described as having a response of moderate amplitude along a generally weakly conductive zone. This zone lies close to the Firewood Siding Fault in an apparently thickened portion of the limestone sequence.

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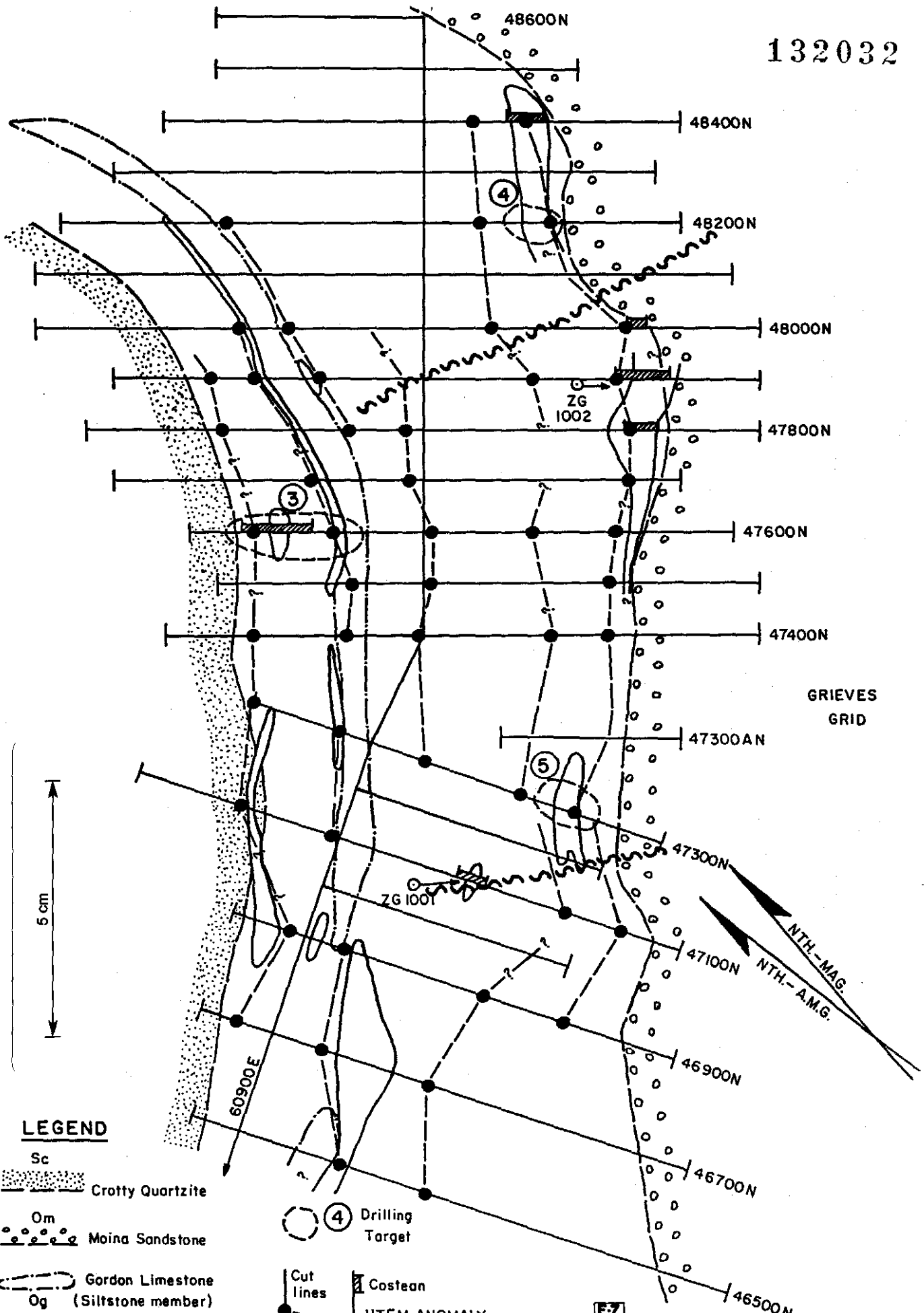
LEGEND

- Sc Crotty Quartzite
- Om Moine Sandstone
- Og Gordon Limestone (Siltstone member)
- Significantly elevated Zn geochemistry in Wacker samples
- ? Mineralizing Fault
- Drilling Target
- UTEM ANOMALY and inferred CONDUCTOR (J. Bishop)
- Wacker Sampling Coverage

PROJECT: ZEEHAN E.L. 4/78	
EAST BAURA GRID 1985 D.D. TARGETS	
Compiled: I.MAT. Date: 10-5-85	PLAN NO
Drawn: R.J.R. Scale: 1:10,000	Fig. 7

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LEGEND

- Sc
Crotty Quartzite
- Om
Moina Sandstone
- Og
Gordon Limestone (Siltstone member)
- Significantly elevated Zn geochemistry in Wacker samples
- ? Mineralizing Fault

- (4) Drilling Target
- Cut lines
- Costean
- UTEM ANOMALY and inferred CONDUCTOR (J. Bishop)
- ZG 1001 DIAMOND DRILL HOLE

PROJECT: ZEEHAN E.L. 4/78	
GRIEVES GRID	
1985 D.D. TARGETS	
Compiled: I.MAT. Date: 10-5-85	PLAN NO
Drawn: R.J.R. Scale: 1:10,000	Fig. 8

Target 2 - Baura:

Line 46,400N 61,050-61,150E

This bedrock geochemical anomaly forms part of a stratigraphically controlled zinc anomaly lying partially within and below a siltstone unit of the Gordon Limestone. The Zn anomaly is over 600m long and from 25 to 150m wide. Zn values range from 400-3,800 ppm with associated elevated Pb, Mn and Ba values.

Target 3 - Greives:

Line 47,600N 60,550-60,650E

This target combines a bedrock geochemical anomaly, costean mineralization, and a favourable geological environment. It lies near the top of the Gordon Limestone near a mineralizing fault. Mineralization in the costean occurs in brecciated dolomite. 12m of this material averaged 3.1% Zn and 0.4% Pb.

Target 4 - Grieves:

Line 48,200N 61,100-61,150E

This bedrock geochemical anomaly occurs in a zone of known mineralization. It lies on the opposite side of the Grieves Fault to the mineralization intersected by ZG 1002. This drill hole intersected 8m of 1% to 3% Zn in sideritized oolitic limestone.

Target 5 - Grieves:

47,300N 61,275-61,325E

This bedrock geochemical anomaly lies on the north eastern side of an inferred mineralising fault. Zn values range from 600-4,900 ppm and are associated with a weak UTEM conductor. Winkie hole ZWG 8 on 47,200N may have just reached part of this zone. 1.8m at the bottom of this hole assayed 0.62% Pb and 0.77% Zn.

4.4. Reconnaissance Exploration

A partially fault bounded slice of Gordon Limestone is mapped around McClean Creek just north of the Little Henty River. No exploration of this area has yet been attempted as access is very difficult. Helicopter or boat assisted exploration of this area using cut grid lines and preliminary Wacker sampling is warranted.

CITED REFERENCES

E.Z. Report T177

Progress Report on Exploration Activity 14th June, 1983
to 14th January, 1984.

T192

Progress Report on Exploration Activity 14th January
to 14th June, 1984.

ELLIS, A.P., 1984

Gordon Group - South Zeeha.
Unpub. Hons. Thesis, University of Tasmania.

APPENDIX A - PETROLOGY

- (i) Classification of Carbonate Rocks.
- (ii) C.M.S. Report 84/9/2.

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CLASSIFICATION OF CARBONATE ROCKS

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Currently E.Z. are exploring large areas of the Gordon Limestone for Irish style, carbonate hosted, lead-zinc mineralization. Although some similarities with the model are anticipated, it is probable that mineralization discovered will have many characteristics of its own.

At present the section of the limestone stratigraphy most favourable for mineralization is unknown. Within this favourable stratigraphy, such mineralization is likely to be preferentially distributed within a particular sedimentary facies. The geological data we are collecting now should be sufficiently refined to permit facies definition.

Consequently a carbonate rock classification scheme that reflects the depositional environment of the sediments is required. A classification that is suited to our requirements and which is easy to use is the Dunham scheme. The details and application of this scheme have been described by Sneider and Roberts (1984).

Rocks classified under this scheme should be examined under a binocular microscope. Simple acid tests or specific carbonate stains are also required to identify major rock types. Essential characteristics and concepts necessary for the application of this scheme are outlined in the following tables and lists.

TABLE 1 - ROCK TYPE (based on % of carbonate component)

Rock Type	% CaCO ₃	% CaMg(CO ₃) ₂
Limestone	>90	<10
Dolomitic Limestone	90-50	10-50
Calcareous Dolomite	50-10	50-90
Dolomite	<10	>90

The following subdivision of carbonate rocks is applicable when depositional textures can be recognised or predicted.

TABLE 2 - TEXTURAL TYPES

Type	Support	Grains %	Mud Matrix %
Mudstone	Mud	<10	>90
Wackestone	Mud	10-40	90-60
Packstone	Grains	>60	>10
Grainstone	Grains	>60	<10 (sparry cement)
Boundstone	Original components bound during deposition.		

(These subdivisions are illustrated in Figure 1.)

When using the textural types defined above, it is also necessary to describe or identify the constituent particles or cement. While general descriptive terms such as those describing roundness and sorting are useful, some special terms are also required. Those most commonly used are listed in Table 3.

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TABLE 3 - IMPORTANT CONSTITUENTS OF CARBONATE ROCKS

Constituent	Adjective	Comments
Fossils	Fossiliferous	Almost complete skeletons.
Bioclasts	Bioclastic	Fossil fragments.
Pellets	Pelletal	A rounded accretion of lime mud - often faecal pellets (<0.3mm approx.).
Oolites	Oolitic	0.25 - 2mm.
Pisolites	Pisolitic	Accretionary carbonate spheres 2 - 10mm.
Oncolites	Oncolitic	Accretionary algal balls or discords 10 - 100mm.
Intraclasts	Intraclastic	Reworked fragments of partially consolidated penecontemporaneous carbonate rocks.
Lithoclasts	Lithoclastic	Includes older carbonate rock fragments.
Mud	Muddy	Clay and fine silt size carbonate - grains <20 μ
Micrite	Micritic	Mud <4 μ = carbonate ooze.
Spar	Sparry	Crystalline carbonate chemically deposited between grains, as replacements and in voids.
Cement		Fine to coarse intergranular sparry carbonate.

NOTE: The textural term Micrite is often used for extremely fine carbonate mudstone = lithographic limestone.

Depositional textures in some carbonate rocks have been almost completely obliterated during diagenesis. These rocks are then described as crystalline carbonate rocks and the size ranges defined in Table 4 are applicable. Frequently such rocks contain recognisable ghosts of original clasts. Descriptive terms as used for less altered rocks can then be used.

TABLE 4 - SIZE RANGES FOR CRYSTALLINE CARBONATE ROCKS (Recrystallized)

	Size (mm)
Microcrystalline	<0.02
Extremely fine	0.02 - 0.062
Very fine	0.062 - 0.125
Finely crystalline	0.125 - 0.25
Medium crystalline	0.25 - 0.5
Coarsely crystalline	>0.5

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TABLE 5 - COMMON MODIFIERS

Adjective	Meaning
Argillaceous	Containing appreciable but less than 50% terrigenous grains of clay, silt, sand or gravel size respectively.
Silty	
Sandy	
Gravelly	
Bituminous	Contains abundant carbonised organic matter. Emits foul odour when broken.
Carbonaceous	Contains abundant carbonised organic material.
Cherty	Siliceous limestone usually interbedded with thin chert beds.

The classification scheme outlined in the tables provides the basis of a satisfactory descriptive classification of carbonate rocks. It is relatively simple to learn and apply. The lists of descriptive and modifying adjectives are by no means exhaustive. Such important terms as laminated and bioturbated and special textures such as birdseye spar have not been listed. Definition of the implications of such terms is difficult without satisfactory illustrations and samples.

Application of the classification scheme is illustrated by the sketches attached.

MAIN REFERENCES

1984, Sneider, R.M. & Roberts, H.H. - Exploration Models in Carbonate Environments. (Course notes for Petroleum Geologists.)

1972, American Geological Institute - Glossary of Geology.

1983, Scholle, P.A. et. al. (Eds.) - Carbonate Depositional Environments. A.A.P.G. Memoir 33.

Depositional Texture Recognizable					Original components were bound together during deposition, as shown by intergrown skeletal matter, lamination contrary to gravity, or sediment-floored cavities that are roofed over by organic or questionably organic matter and are too large to be interstices.	Depositional Texture Not Recognizable (Subdivide according to classifications designed to bear on physical texture or diagenesis.) Crystalline Carbonate
Original Components Not Bound Together During Deposition						
Contains mud (particles of clay and fine silt size, less than 20 microns)			Grain-supported			
Mud-supported		Grain-supported	Less than 10 percent mud			
Less than 10 percent grains	More than 10 percent grains	More than 10 percent mud				
Mudstone	Wackestone	Packstone	Grainstone	Boundstone		

Fig. 1. . Dunham classification

Swanson (1981)

From Sneider & Roberts, 1984

DEPOSITIONAL TEXTURE																	SIZE (mm)							
DUNHAM CLASSIFICATION							PARTICLE/XL SIZE						SORTING											
MDST	WKST	PKST	GRST	BDST	XLN	SUC	MICRO	XF	VF	F	M	CRS	VCRS	XCRS	EW	VW	W	M	P	VP				
MUDSTONE																						MICROCRYSTALLINE	< 0.02	
WACKESTONE																							EXTREMELY FINE	0.02 - 0.062
PACKSTONE																							VERY FINE	0.062 - 0.125
GRAINSTONE																							FINE	0.125 - 0.250
BOUNDSTONE																							MEDIUM	0.250 - 0.500
CRYSTALLINE																							COARSE	0.500 - 1.00
SUCROSIC																							VERY COARSE	1.00 - 2.00
																							EXTREMELY COARSE	> 2.00

Fig. 2. . Dunham texture

From Sneider & Roberts, 1984.

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Central Mineralogical Services




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The Supervising Geologist
Mineral Resources Division
Electrolytic Zinc Co. of
Australasia Ltd.
West Coast Mines
P.O. Box 21
ROSEBERY / TAS. 7470

12th October, 1984

REPORT CMS 84/9/2

YOUR REFERENCE: Order No. 900573
DATE RECEIVED: 3rd September, 1984
SAMPLE NOS.: 15 Samples
SUBMITTED BY: I.J. Mathison
WORK REQUESTED: Petrology


H.W. Fander, M. Sc.

040

2. Similarly, framework components in clastic limestones could be categorised in terms of sizing, using orthodox established sizing criteria. CMS has long-adopted the Valdern-Wentworth scale:

Pebbles	(pebbly)		> 4.0 mm
Grit	(gritty)		2.0 - 4.0 mm
Sand	(sandy)	coarse	1.0 - 2.0 mm
		medium	0.25 - 1.0 mm
		fine	0.0625 - 0.25 mm (65-250 μ)
Silt	(silty)		0.0039 - 0.0625 mm (4-65 μ)

This may complicate application of Table 5-modifying terms with respect to terrigenous components should these become more conspicuous than hitherto apparent in the limestones, but such impure rocks could be simply delineated by use of suitable terms (e.g. arkosic, quartzose, etc.).

3. The terms superficial oolite or oolith could be used to delineate oolitically overgrown pelletal components.

In the context of the present suite, in view of specific queries noted by I. Mathison, a few points bear comment.

- a) There is little evidence of a primary dolomite component in the Gordon Limestone, at least as examined to date. Dolomite, where present, appears invariably of diagenetic origin.
- b) Distinction of quartz grains as aeolian in limestones is tenuous at best. Quartz in carbonate rocks in general tends to exhibit corroded margins, be it primarily clastic or authigenic in origin.
- c) In the present suite, terrigenous components, where present, are trace constituents only, with the exception of sample 63625 where quartz is present in "minor" (2-3 %) proportions. Muscovite flakes typically accompany, but are generally markedly subordinate to, clastic quartz grains.

D. Cowan, B. Sc.

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REPORT CMS 84/9/2

Fifteen samples of limestone lithologies from the Zeehan project were received for brief petrological description, together with brief descriptive notes and a copy of a classification scheme currently in use.

Representative thin-sections were prepared and examined together with the respective offcuts, with carbonate stain tests supplementing the microscopic distinction of carbonate types. The classification scheme supplied has been incorporated, where applicable, notably in terms of rock type (Table 1) and textural/clast-compositional date (Tables 2 and 3).

Summary

The majority of these rocks may be classified broadly as variably dolomitised clastic limestones. Relatively minor variably laminated fine-grained non-clastic limestones are present and both types may be weakly shale-parted or include minor calc-pelitic interbeds. In common with typical Gordon Limestone facies, these sediments are invariably carbonaceous and weakly pyritic. Terrigenous components (quartz grains, mica flakes) appear in the majority of these rocks in trace amounts.

Clastic limestones are variably bioclastic, intraclastic or more typically composite types. Variations comprise strongly pelletal and possibly oolitic types, although the latter group is represented by altered (ankeritised) rocks, with the finer critical textural detail obscured by secondary effects. In general, there is a substantial agreement between the binocular-microscopic and petrographic data.

Contradictions are evident in a few rocks. These relate partly to the generally erratic distribution of secondary (diagenetic) dolomite which may impart a mesoscopic breccia-like appearance to primarily homogeneous rocks (e.g. 63625). Similarly, the distinction between pelletoid and oolitic facies is tenuous, being dependent on microtextures, and these may be obliterated by secondary effects (63634, 63635) to the degree that the poorly diagnostic relict shapes (relatively ovoid-pelletal, spherical-oolitic) are partly obscured.

This facet is further complexed by the occurrence in a few rocks of superficially overgrown pellets, which are then transitional between pelletal and strictly oolitic facies, and by the generally composite nature of the clastic limestones.

These considerations aside, the proposed classification is generally applicable on the petrographic scale. A few modifications and additions may warrant consideration:

1. The size range classification (Table 4) is not applicable to the Gordon Limestone in that virtually all examples seen to date fall into the "very fine" category.

A suitable alternative sizing range classification, essentially a modification of Folk's and others, would be a threefold subdivision:

micrite	micritic	< 5 μ
		microcrystalline	5-30 μ
		"sparry"	> 30 μ

Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES Comments
59454 (T.S. 51346)	<u>Impure Dolomite.</u> Fine sparry ankeritic dolomite with minor interstitial carbonaceous matter, optically ill-defined clays. Minor corroded fine sand-sized detrital quartz grains (<< 1 %). Sparse calcite veinlets.	Even-grained (mean 75µ), weakly laminated with thin discontinuous, weakly stylolitized carbonaceous partings.	Rare corroded relic patches of micritic calcite (to 2 mm), detrital muscovite. Conspicuous ultrafine	Dolomitised impure limestone; incipiently carbonaceous shale-parted, with a minor "terrigenous" component of quartz grains, silt-sized muscovite flakes.
63603	<u>Impure Limestone.</u> Lensoid masses of microcrystalline carbonaceous limestone (60 %) with a matrix (approx. 40 %) of relatively impure (carbonaceous, weakly argillaceous) limestone.	Dimensionally oriented microfossiliferous clasts; low-angle discordantly sheared, weakly microfossiliferous matrix.	Traces of dolomite, fine to ultrafine pyrite. Minor discontinuous calcite veinlets, bryozoan fragments. Conceivably a carbonaceous stylolites.	Clasts exhibit silty to fine sandy clastic fabrics (silty calcarenite) with crinoid stem, spicule, filamentous calcite veinlets, bryozoan fragments. Conceivably a breccia, detail obscured by shearing effects.
63604	<u>Dolomitic Impure Limestone.</u> Interlamination of micritic, weakly carbonaceous limestone and relatively carbonaceous, variably dolomitic, weakly argillaceous limestone. Frequent concordant irregular films, vugs of fine sparry calcite.	Intricately laminated. Limestone bands are silty clastic with rounded micrite clasts, slightly coarser micritic matrix.	Interbeds of fine sparry calcite-matrix limestone breccia. Traces of pyrite, silty clastic quartz, muscovite (<1-2%).	Intercalation of micritic clastic limestone and relatively massive dolomitic impure limestone. Low-angle discordantly sheared. Limestone bands reflect partial diagenetic dissolution.
63605	<u>Dolomitic Impure Limestone.</u> Micritic, weakly carbonaceous, weakly dolomitic limestone with a 1 cm interbed of impure (strongly carbonaceous, argillaceous) dolomite carrying minor silt-sized quartz, muscovite flakes.	Finely bioclastic, vaguely intraclastic limestone; weakly limestone-intraclastic, moderately bioclastic dolomite.	Sporadic late high-angle discordant calcite veinlets. Minor fine to ultrafine pyrite, traces cherty quartz.	Limestone and dolomite are meso- to microtexturally similar. Dolomite distribution consistent with selective dolomitisation of the relatively impure ("shaly") interbed.
63609	<u>Dolomitic Limestone.</u> Framework of silt- to pebble-sized micritic limestone clasts, subordinate to minor calcitic bivalve fragments. Microcrystalline calcite cement. Sporadic clots, irregular films of fine sparry dolomite.	Intraclastic-bioclastic poorly sorted packstone with irregular to vaguely fracture-controlled dolomitised zones.	Minor traces of pyrite. Minor carbonaceous matter. Sporadic sheared dolomitic-carbonaceous stylolites; late calcite veinlets.	Intraclasts include reworked clastic limestone. No detectable oolites, pisolites. Dolomite concentrated in matrix, but locally penetrates clasts; partly stylolite-controlled.
63610	<u>Dolomitic Limestone.</u> Loose framework of calcitic bioclasts (dominantly bivalve fragments) with a weakly carbonaceous microcrystalline calcite matrix, locally weakly (fine sparry) dolomitic. Minor intraclasts of carbonaceous limestone.	Poorly sorted/weakly bedded wackestone, "grading" into bioclastic packstone. Incipiently cleaved; calcite-veined.	Traces bioclast-replacive cherty quartz. Rare corroded silt-sized clastic quartz. Traces ultrafine pyrite.	Weakly dolomitised bioclastic/weakly intraclastic limestone. Clastic quartz content << 1 %. Dolomitic zones are incipiently argillaceous.
63612	<u>Dolomitic Limestone.</u> Microcrystalline weakly carbonaceous limestone with varying proportions silt- to sand-sized calcitic bioclasts (sim. 63610). Irregular relatively carbonaceous fine sparry dolomitic zones. Minor contorted carbonaceous shaly partings.	Soft-pebble conglomerate like composite of bioclastic wackestone and variably dolomitic, relatively massive limestone.	Minor traces corroded silt-sized quartz. Traces fine to ultrafine pyrite (concentrated in shaly partings).	Slumped bioclastic limestone with irregular dolomitised zones, concentrated in the relatively weakly bioclastic matrix. Incipiently stylolitic, calcite-veined, weakly sheared.
63616	<u>Calcareous Dolomite.</u> Fine sparry ankeritic dolomite with subordinate to minor intergranular relics of microcrystalline carbonaceous limestone. Pervasive silt- to sand-sized calcitic bioclasts, minor intraclasts of bioclastic limestone.	Bioclastic, weakly intraclastic wackestone with extensively dolomitised matrix. Weakly sheared.	Minor discontinuous carbonaceous shale partings. Minor "syngenetic" pyrite, sparse calcite veinlets.	Extensively dolomitised bioclastic (dominantly bryozoan) limestone with minor intraclasts of texturally similar bioclastic limestone.

Sample No.	Classification - Composition	Fabric	Accessories	CENTRAL MINERALOGICAL SERVICES
				Comments
63619	Dolomitic Limestone. Microcrystalline to micritic calcite with subordinate to minor silt- to fine sand-sized microcrystalline limestone intraclasts, minor bioclasts. Patchy fine sparry dolomite. Sporadic carbonaceous	Weakly bedded, weakly slumped intraclastic wackestone. Frequent discordant calcite veinlets.	Minor traces ultrafine pyrite, silt-sized clastic quartz. Minor stressed quartz-calcite veinlets.	Mildly dolomitised fine-grained intraclastic/weakly bioclastic limestone. Dolomitisation pattern analogous to e.g. 63609.
63620	Limestone. Framework of ^{partings, stylolites.} medium sand-sized, variably recrystallized limestone clasts, subordinate bioclasts. Matrix of fine-grained calcite. Minor clast-replacive fine sparry dolomite; carbonaceous matter.	Moderately sorted, weakly bedded intraclastic packstone. Relatively recrystallized weakly sheared.	Thinly disseminated angular-subangular clastic quartz. Traces of ultrafine pyrite.	Clasts partly recrystallized to sparry and lustre-mottled calcite and are poorly diagnostic, although dominantly intraclasts. Relatively weakly dolomitised.
63621	Dolomitic Limestone Breccia. Framework of weakly silicified to dolomitised calcitic bioclasts, minor limestone intraclasts, corroded sand-sized quartz grains. Variably dolomitised microcrystalline calcite matrix.	Poorly sorted bioclastic packstone. Slump-brecciated. Frequent carbonaceous microfractures.	Conspicuous ultrafine pyrite. Minor discontinuous calcite veinlets. Crude carbonaceous stylolites.	Slump-brecciated, strongly bioclastic limestone; relatively carbonaceous-pyritic, variably dolomitised. Quartz is conceivably aeolian, but is poorly diagnostic (corroded).
63623	Dolomitic Limestone. Alternation of millimetric silty clastic micrite-matrixed limestone and subordinate sub- to millimetric fine sparry, weakly argillaceous dolomite beds. Sporadic calcite films, vugs.	Intricately banded, weakly high-angle discordantly sheared. Poorly diagnostic silt-sized limestone clasts.	Carbonaceous matter, sparse to conspicuous ultrafine pyrite (concentrated in dolomite interbeds). ^{Minor quartz silt.}	Minor calcite-infilled desiccation cracks, ?burrows. Typical selective dolomitisation of relatively impure interbeds. Silt-sized clasts probably "lithoclasts".
63625	Dolomitic Limestone. Framework of fine sand-sized limestone pellets, minor corroded quartz grains, sparse oolites, crinoid, bivalve fragments, pelletal limestone intraclasts. Microcrystalline calcite matrix, patchy fine sparry dolomite.	Pelletal; weakly intraclastic/bioclastic packstone. Weakly fractured dolomite and late calcite-veined.	Sporadic superficial oolites (weakly overgrown pellets). Traces of ultrafine pyrite.	Primarily a weakly banded but otherwise homogeneous pelletal limestone. The mesoscopic breccia-like appearance reflects the irregularly distributed dolomite.
63634	Altered Limestone. Framework of fine to medium sand-sized sparry ankerite-pseudomorphed pellets, superficial oolites. Matrix of microcrystalline "sideritic" carbonate.	Relict fabric similar to 63625. Ankeritised clasts poorly diagnostic but are dominantly ovoid (pelletal).	Sporadic angular ankeritised ?intraclasts. Carbonaceous matter. Sporadic weakly limonitic cavities.	Ankeritised ?intraclasts may represent altered dolomitised zones. Matrix carbonate is a highly impure (?magnesian) siderite. Apparently primarily weakly oolitised pelletal.
63635 (T.S. 51360)	Altered Limestone. Medium-grained, granular to sparry ankeritic carbonate with patchy corroded relict patches of fine sparry dolomite. Sporadic fine ankerite rhomb-lined vugs with rare galena.	Vague relict fabric analogous to 63625, 63634.	Relics of carbonaceous matter, very fine pyrite. Semi-pervasive clots of microcrystalline siderite as inclusions in ankerite rhombs.	Alteration pattern analogous to 63634; relatively ankeritic. Relict fabric consistent with a pelletal or composite pelletal/oolitic limestone; finer detail obliterated.

044

APPENDIX B. - Geochemical Data Sheets

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: EH. 4/78
LOCALITY: ZEEHAN
GRID NAME: BAURA
NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK
SAMPLE METHOD: WACKER
SAMPLED BY: N. POLDOCK
DATE: NOV. 84

SIZE FRACTION ANALYSED: WHOLE
ANALYSED BY: ANALABS
METHOD: AAS By XRF

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	44800N	NORTHING	EASTING																
61812	60775			5.7	LT GY WH							5	20	135			0.81%	175	60
13	800			2.2	LT GY WH							5	15	150			0.27%	65	18
14	25			2.0	GY							5	25	140			0.74%	100	43
15	50			6.3	LT GY							5	15	145			0.33%	80	25
16	75			7.4	LT GY							10	40	205			0.72%	135	17
17	900			10.2	LT GY							15	30	240			0.55%	115	38
18	25			5.6	LT GY							5	20	170			0.37%	80	X
19	50			2.0	LT GY							5	20	145			0.25%	50	X
61820	75			1.7	GY							15	30	175			0.72%	110	21
21	61000			4.2	GY WH							15	30	180			0.72%	85	10
22	25			3.7	LT GY							10	20	145			0.54%	85	23
23	50			2.4	WH LT GY							10	20	145			0.20%	60	12
24	75			7.5	WH LT GY							10	60	185			0.42%	90	16
25	100			13.9	GY WH							15	15	140			0.41%	95	17
26	25			5.0	DK BU							15	40	310			0.77%	10	190
27	50			2.6	DK GY BN							25	300	1090			0.40%	5	263
28	75			0.8	GY WH							5	10	105			0.15%	5	263
29	200			9.8	DK GY						NO	20	45	1190			2.90%	5	239
61830	25			5.8	DK GY							10	110	540			0.72%	400	196
31	CHECK SAMPLE C																		
32	61250			14.2	LT GY WH							5	30	165			0.77%	390	30
33	75			9.0	LT GY							10	50	215			0.50%	135	27
34	300			3.4	LT BN							5	50	150			0.82%	5	231
35	25			0.7	LT BN							X	5	95			0.07%	5	129
36	50			9.2	GY							5	20	180			0.71%	135	20
37	75			0.6	DK GY							X	20	125			0.83%	150	13
38	400			1.2	GY WH							5	25	210			1.30%	310	28
39	25			4.2	GY							5	25	175			0.74%	180	X
40	50			1.2	WH LT GY							X	190	240			0.52%	160	X
41	75			0.6	LT BN GY						NO	10	40	305			0.67%	110	18

124046

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132047

PROJECT: E.L.4./7.8.....
LOCALITY: Z.E.H.P.N.....
GRID NAME: BAUBA.....
NOMINAL GRID AZIMUTH:

MATERIAL: Bedrock.....
SAMPLE METHOD: Wacker.....
SAMPLED BY: N. Pollock.....
DATE: Nov 84.....

SIZE FRACTION ANALYSED: Whole.....
ANALYSED BY: Appalab.....
METHOD: AAS, Ba by XRF.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)									
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	44890N	GRID EASTING	NORTHING	EASTING																
61881	610550				4.2 DK GY			✓		✓	✓		5	X	10	X		0.71	60	24
82	25				2.8 DK GY			✓		✓	✓		X	X	40			0.60	205	12
83	500				1.8 GY			✓		✓	✓		5	X	15			0.55	95	39
84	475				1.6 GY WH			✓		✓	✓		5	X	60			0.34	135	16
85	50				1.8 DK GY WH			✓		✓	✓		5	X	45			0.53	75	28
86	25				2.0 LT GY	✓		✓		✓	✓		5	X	95			0.14	65	13
87	400				2.8 LT GY	✓		✓		✓	✓		X	X	85			0.08	120	16
88	375				2.2 DK GY			✓		✓	✓		5	X	60			0.28	80	19
89	50				6.0 DK GY			✓		✓	✓		X	X	80			0.50	230	14
90	CHECK SAMPLE B																			
91	60325				2.7 DK GY WH			✓		✓	✓		5	X	95			0.30	115	12
92	3007				1.8 DK GY	✓		✓		✓	?		X	X	10			0.19	60	64
93	300				1.2 DK GY			✓		✓	✓		10	5	95			0.13	65	32
61894	275				0.8 GY			✓		✓	✓		5	X	40			0.17	45	19
95	50				1.4 DK GY			✓		✓	✓		5	X	155			0.58	110	50
96	25				1.2 GY			✓		✓	✓		5	X	15			0.49	135	25
97	200				1.2 DK GY			✓		✓	✓		5	115	710			1.82	250	52

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132048

PROJECT: ... E.L.4/78
LOCALITY: ... ZEEHAN
GRID NAME: ... BAURA
NOMINAL GRID AZIMUTH:

MATERIAL: ... Bedrock
SAMPLE METHOD: ... Wacker
SAMPLED BY: ... N. Pollock
DATE: ... Nov. 84

SIZE FRACTION ANALYSED: ... WHOLE
ANALYSED BY: ... ANANABS
METHOD: ... AAS, Bar. by XRF

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	GRID EASTING	NORTHING	EASTING																
61842	61500			0.6	DK GY			✓		✓	✓	15	25	220	X		2.20%	190	101
43	25			1.2	LT GY PK			✓		✓	✓	10	40	300	X		0.52%	240	X
44	50		DIG!	0.5															
45	75		MIN?	11.2	GY			✓		✓	✓	X	85	250	X		0.56%	230	X
46	600		MIN?	10.2	LT GN GY			✓		✓	✓	5	75	555	X		1.40%	410	X
47	25		MIN?	17.2	WH DK GY			✓		✓	✓	15	55	310	X		1.20%	320	73
48	50			6.3	GY BN			✓			NO	15	10	155	X		0.14%	15	22
49	75			1.5	GY WH			✓			NO	10	X	80	X		0.07%	5	X
SOIL PITS																			
62586	61550		SOIL	0.6	GY BK 50 50						NO	5	25	100			0.41%	20	13
587	61550	BIX	D&S ROCK	0.6	BR GY			✓		NO	✓	X	45	195			0.63%	310	X
588	61475		SOIL	0.6	GY 90 10						NO	10	155	375			0.45%	25	137
589	61475	BIX	LSR ROCK	0.6	DK GY			✓		NO	✓	5	35	115			0.82%	115	24

132049

E.Z. Co. of A'Asia Ltd.,
ROSEBERRY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: ... EL 4/78
LOCALITY: ... ZEEHAN
GRID NAME: ... BAURA
NOMINAL GRID AZIMUTH:

MATERIAL: ... BEDROCK
SAMPLE METHOD: ... WACKER
SAMPLED BY: ... R. TOSK
DATE: ... Oct. '84

SIZE FRACTION ANALYSED: ... WHOLE
ANALYSED BY: ... ANALABS
METHOD: ... P.A.S., Ba. by XRF

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	44800N	GRID EASTING	NORTHING	EASTING																
61682	60750			ROAD	1.6	GLY			✓		✓	5	15	35	X		0.36	75	20	
83	725				2.4	GLY			✓		✓	5	15	20			1.25	170	58	
84	700				1.2	DK GLY			✓		✓	5	30	50			0.45	120	31	
85	675				1.8	GLY			✓		✓	10	20	40			0.89	155	68	
86	650				3.2	GLY			✓		✓	5	15	35			0.37	80	16	
87	625				5.3	LT GLY BN			✓		✓	10	265	160			0.31	130	29	
88	600				6.8	DK GLY			✓		✓	5	25	70			0.20	115	26	
89		CHECK SAMPLE B																		
90	60575				3.4	GLY WH			✓		✓	10	70	200			0.28	150	32	

E.Z. Co. of A'Asia Ltd., ROSEBERY, Tasmania GEOCHEMICAL SAMPLE DATA SHEET 132050

PROJECT: ... E.L. 4/78 ... MATERIAL: ... BEDROCK ... SIZE FRACTION ANALYSED: ... WHOLE ...
 LOCALITY: ... ZEEHAN ... SAMPLE METHOD: ... WACKER ... ANALYSED BY: ... ANALABS ...
 GRID NAME: ... BAURA ... SAMPLED BY: ... P. & T. DICK ... METHOD: ... A.A.S., Ba. by XRF ...
 NOMINAL GRID AZIMUTH: ... DATE: ... Oct. 84 ...

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA								METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	44800AN	GRID EASTING	NORTHING	EASTING																
61678	60650				1.0 LT GY			✓		✓	✓	5	2.5	2.0			0.42	75	12	
79	625				1.2 LT GY			✓		✓	✓	5	1.5	2.5			0.30	90	19	
61680	600		ROAD		1.4 LT GY			✓		✓	✓	5	1.5	2.0			0.53	110	30	
81	575				2.8 DK GY			✓		✓	✓	5	5	2.0			0.90	130	54	

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132051

PROJECT: ... FL 4/78 ...
LOCALITY: ... ZEEHAN ...
GRID NAME: ... BAVRA ...
NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK
SAMPLE METHOD: WACKER
SAMPLED BY: PDLTOK
DATE: Oct. '84

SIZE FRACTION ANALYSED: ... WHOLE
ANALYSED BY: ... ANALABS
METHOD: ... ABS, Ba by XRF

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA								METAL CONTENT (ppm unless specified)							
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	GRID EASTING	NORTHING	EASTING	DEPTH																
61645	60800			1.8	BLGY							10	20	25	X		0.68	115	65	
46	775			3	DKGY							15	20	30			2.15	315	102	
47	750			1.5	GY							5	15	25			0.84	200	46	
48	725			1.0	GY							5	10	85			0.64	140	40	
49	700			3	DKGY							5	15	35			0.20	55	X	
61650	675			7	OLTGY							5	40	70			0.19	105	X	
51	650			3	3LTGY SM							5	25	45			0.25	90	X	
52	625			6	DKGY							5	20	35			0.58	95	58	
53	600			8	DKGY							10	105	85			0.45	170	90	
54	575			11	DKGY							5	125	140			0.46	190	30	
55	60550			14	3 GY							15	135	325			2.25	350	210	
56		CHECK SAMPLE C																		
57	525			20	DKGY							20	25	120			1.60	40	501	
58	500			10	DKGY							15	15	35			1.65	35	450	
59	475			3	4 GY							5	585	190			0.65	245	45	
61660	450			2	8 GY							5	20	35			0.55	115	55	
61	425			1	3 GY							5	25	65			0.28	75	29	
62	400			0	8 GY							5	20	35			0.56	130	17	
63	375			1	5 DK GY							5	15	20			0.62	100	34	
64	350			1	6 GY							5	15	25			1.25	95	27	
65	325			1	5 GY							5	20	35			0.75	130	20	
66	60300			1	4 DK GY							5	20	50			0.31	45	10	
67	275			1	7 GY							5	15	40			0.17	60	X	
68	250			1	7 GY							5	15	35			0.34	80	X	
69	225			1	8 DK GY							5	35	30			0.48	85	15	
61670	200			4	8 GY							5	20	30			0.58	160	12	
71	175			2	0 DK GY							5	30	40			0.43	150	33	
72	150			4	6 DK GY							5	30	60			1.50	95	61	
73	125			9	6 DK GY							45	425	260			1.80	45	336	
74	60100			15	2 DK GY							5	20	50			0.65	200	33	

E.Z. Co. of A'Asia Ltd.,
ROSEDERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132052

PROJECT: E.L. 4./78
LOCALITY: ZEEHAN
GRID NAME: BAURA
NOMINAL GRID AZIMUTH:

MATERIAL: Bedrock
SAMPLE METHOD: Wacker
SAMPLED BY: N. Pollock
DATE: Nov. '84

SIZE FRACTION ANALYSED: Whole
ANALYSED BY: Analysts
METHOD: A.A.S., Ba. by XRF

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)										
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba		
	45200N		NORTHING	EASTING																	GRID EASTING	NORTHING
61850	61550			7.2	DK GY							15	20	145	X		0.74%	130	18			
51	75			4.3	DK GY							20	15	120	X		2.15%	120	63			
52	600			3.2	DK GY							15	10	125	X		1.40%	295	39			
53	25			3.6	DK GY							5	10	310	X		0.36%	85	24			
54	50			2.7	GY							10	15	155	X		0.43%	100	12			
55	75			2.1	LT GY							15	10	125	X		0.61%	120	66			
56	700			3.4	GY							10	15	165	X		0.83%	130	26			
57	25			4.2	GY							15	20	160	X		1.45%	355	46			
58	50			12.6	HT GY BN	✓	✓	✓			??	25	25	170	X		2.10%	835	67			
59	75			6.2	GY CM	✓	✓	✓			?	10	90	705	X		2.90%	350	X			
61860	61525			13.6	BK	✓					NO	45	65	635	X		2.90%	20	261			
61	CHECK SAMPLE A																					
62	61500			8.7	DK GY							15	15	145	X		2.10%	555	46			
63	475			5.0	DK GY							5	10	25	X		0.55%	80	23			
64	50			2.1	GY							10	25	145	X		0.31%	90	33			
65	25			2.0	GY							5	5	95	X		0.77%	255	27			
66	400			1.3	DK GY							X	15	85	X		0.35%	90	X			
67	375			1.5	DK GY							5	10	170	X		0.63%	220	31			
68	50			2.0	DK GY							X	20	195	X		0.40%	125	34			
69	25			1.1	WH DK GY							5	20	155	X		0.34%	215	34			
70	300			11.2	GY							5	10	120	X		1.85%	445	101			
71	275			2.2	GY WH							5	25	570	X		1.25%	235	45			
72	50			10.0	LT GY	✓	✓	✓				X	15	160	X		0.55%	135	13			

E.Z. Co. of A'Asia Ltd., ROSEBERY, Tasmania
 GEOCHEMICAL SAMPLE DATA SHEET
 132053
 PROJECT: F.H. A-79 MATERIAL: BEDROCK SIZE FRACTION ANALYSED: WHOLE
 LOCALITY: ZEEHAN SAMPLE METHOD: WACKER ANALYSED BY: ANALABS
 GRID NAME: BAURA SAMPLED BY: POTOCK METHOD: A.A.S.
 NOMINAL GRID AZIMUTH: DATE: 4.97
 H H H H H

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	45200N	60850E	NORTHING	EASTING																
60428	60850E				*10.0BK	✓						?	X	1425	4500	X		1.98%	25	11/S
29	850				*12.8							?	25	1925	4575	X		3.39%	125	9.02
30	875				9.6BK	✓						?	25	1575	3900	X		2.06%	50	2.53
31	60900				6.2	✓		✓		WE	✓		X	50	50	X		0.23%	50	14
32	925				7.8GYWH	✓		✓		WE	✓		X	50	50	X		0.44%	125	27
33	950				9.4GYWH	✓		✓		WE	✓		X	50	150	X		0.32%	75	22
34	975				7.8GYWH	✓		✓		WE	✓		75	50	75	X		0.27	50	10
35	61000				5.6GYCRWH	✓		✓		WE	✓		X	225	150	X		0.67	150	23
36	025				7.2GYWH			✓		WE	✓		X	50	50	X		0.61	125	27
37	050				7.2LTGYWH	✓		✓		WE	✓		X	50	100	X		0.26	50	19
38	075				2.5							✓	X	25	75	X		1.84	175	99
39	61100				2.5 6Y			✓				✓	X	50	75	X		0.99	125	59
60440	125				3.0GYWH	✓		✓		WE	✓		X	50	25	X		0.64	150	33
41	150				4.0DKGYWH	✓		✓		WE	✓		X	25	25	X		1.01	300	36
42	175				4.3DKGYWH	✓		✓		WE	✓		X	25	25	X		0.12	25	10
60443	61200				*6.0LTGY	✓		✓		WE	✓		X	25	25	X		0.36	75	18

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: ...E.L. 4/7.8.....
LOCALITY: ...ZEEHAN.....
GRID NAME: ...BAURA.....
NOMINAL GRID AZIMUTH:

MATERIAL: ..REPROCK.....
SAMPLE METHOD: ..WACKER.....
SAMPLED BY: ...POLLOCK.....
DATE: ...Oct. '84.....

132054
SIZE FRACTION ANALYSED: ...WHOLE.....
ANALYSED BY: ...ANALABS.....
METHOD: ...AAS., Ba. by XRF

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA								METAL CONTENT (ppm unless specified)						
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	GRID EASTING	NORTHING	EASTING																
61675	60075			18.6	DKGY			✓		✓	✓	10	30	2700			1.65	190	100
76	050	SANDSTONE		5.2				✓		✓	NO	10	15	10			0.08	X	29
77	025			4.6	LT CM BN		✓	✓		✓	?	5	85	30			0.89	X	128
61719	60825			10.6	WH DKGY			✓		✓	✓	10	25	35			0.94	200	27

132055

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: ... F.L.A-78
LOCALITY: ... ZEEHAN
GRID NAME: ... BARRA
NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK
SAMPLE METHOD: WACKER
SAMPLED BY: P.O.T. ROCKS
DATE: 10.8.84

SIZE FRACTION ANALYSED: WHOLE
ANALYSED BY: ANALABS
METHOD: A.A.S.

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	WEATHERED	BEDROCK	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	45600N	NORTHING	EASTING																
61701	60900E	*		15	6DKGY	✓					NO	35	4150	3100	2.0		6.70	20	409
61718	60900E	*		19	2GYWH			✓		✓	✓	10	75	50	X		0.25	125	X
61702	60975E			24	8DKGY		✓	✓		✓	✓	10	40	75			0.36	75	27
703	850			9	0DKGY			✓		✓	✓	5	140	145			1.55	330	14
704	825			23	3GY			✓		✓	✓	X	190	235			0.53	245	16
705	60800			6	7BR	✓		✓		✓	✓	5	30	20			0.37	15	390
706	775			6	6DKGY			✓		✓	✓	20	25	55			1.60	40	459
707	750			11	7DKGYWH			✓		✓	✓	10	50	140			0.63	105	37
708	725			1	2GY			✓		✓	✓	5	15	20			0.57	70	87
709	60700			1	6LTGYWH			✓		✓	✓	5	25	80			0.46	225	21
710	675			1	5GY			✓		✓	✓	X	15	35			0.44	130	14
711	650			2	6LTGY			✓		✓	✓	X	55	40			0.50	235	X
712	625			1	0DKGYWH			✓		✓	✓	5	25	30			0.68	220	61
713	60600			0	8DKGY			✓		✓	✓	5	320	220			0.76	305	12
714	575			2	2GYWH			✓		✓	✓	X	25	90			0.45	215	X
715	550			12	4DKGY			✓		✓	✓	10	20	160			1.10	265	33
716	525			7	8LTBRGY	✓		✓		✓	✓	15	250	1450			1.90	195	183
61717	60500			* 8	9BRLTGY	✓		✓		✓	✓	85	1750	250			3.50	5	619
SOIL FIT																			
62590	60600		SOIL	0.7	GY BK 3070						NO	10	3690	1850			1.54	45	132
591	60600		DUST ROCK	0.7	DKGY			✓		FR	✓	X	410	195			0.67	300	11

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132056

PROJECT: E.L. 4-78
LOCALITY: ZEEHAN
GRID NAME: BAURA
NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK
SAMPLE METHOD: WACKER
SAMPLED BY: POLTOCKS
DATE: 9-84

SIZE FRACTION ANALYSED: WHOLE
ANALYSED BY: ANALABS
METHOD: A.A.S.

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	46000N	NORTHING	EASTING																
61596	61775E			* 1.2	GY BK			✓		✓	✓	25	35	185			2.50	130	514
597	750			1.6	GY			✓		✓	✓	15	30	40			1.70	285	72
598	725			1.5	GY WH			✓		✓	✓	20	40	115			1.20	250	51
599	61700			2.8	GY WH			✓		✓	✓	10	30	15			0.87	145	29
61600	675			5.6	GY	✓		✓		✓	✓	10	25	40			0.48	130	*
601	650			2.6	GY WH			✓		✓	✓	5	20	x			0.49	100	15
602	SAMPLE "C"																		
603	645			6.2	DKGY	✓		✓		✓	✓	15	35	20			1.20	210	51
604	625			5.2	GY			✓		✓	✓	15	40	35			0.82	110	36
605	61600			3.6	GY WH			✓		✓	✓	10	25	40			0.52	120	21
606	575			4.8	DKGY	✓		✓		✓	✓	10	25	30			0.32	105	13
607	550			4.8	DKGY WH			✓		✓	✓	15	30	90			0.46	155	21
608	525			1.6	DKGY	✓		✓		✓	✓	15	35	55			0.97	190	42
609	61500			2.8	DKGY WH	✓		✓		✓	✓	10	30	70			0.53	105	15
61610	475			4.6	LTGY WH			✓		✓	✓	10	35	65			0.65	145	26
611	450			8.0	DKGY	✓		✓		✓	✓	10	30	30			0.65	115	25
612	425			1.6	DKGY	✓		✓		✓	✓	30	275	1085			10.5	50	307
613	61400			1.2	DKGY	✓		✓		✓	✓	10	60	105			0.90	155	58
614	375			1.6	LTGY WH	✓		✓		✓	✓	15	130	115			0.43	225	15
615	350			7.0	DKGY WH			✓		✓	✓	15	35	40			3.20	300	189
616	325			3.0	BLGY BR	✓	✓	✓		✓	✓	5	40	x			0.33	25	190
617	61300			2.0	GY			✓		✓	✓	5	50	100			0.62	180	10
618	275			3.2	GY WH			✓		✓	✓	10	95	120			0.46	320	x
619	250			2.8	GY			✓		✓	✓	10	40	35			0.36	60	x
61620	225			9.7	LTGY WH			✓		✓	✓	10	60	240			0.58	90	23
621	61200			1.4	LTGY	✓	✓	✓		✓	✓	15	35	5			0.57	110	38
622	175			1.8	BRGY BK	✓	✓	✓		✓	✓	25	180	10			0.56	35	443
623	150			1.6	DKGY WH	✓	✓	✓		✓	✓	10	35	15			0.55	130	23
624	125			1.7	GY WH	✓	✓	✓		✓	✓	10	35	60			0.43	150	21
625	61100			* 2.3	GYLT BR	✓	✓	✓		✓	✓	10	90	x			0.89	45	357

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132057

PROJECT: ...E.A.A:79..... MATERIAL: ..BEDROCK..... SIZE FRACTION ANALYSED: ..V.M.O.C.E.....
 LOCALITY:ZEEHAN..... SAMPLE METHOD: ..WACKER..... ANALYSED BY: ..ANALABS.....
 GRID NAME:BAURA..... SAMPLED BY: ..P.O. TOCKS..... METHOD:A.A.S.....
 NOMINAL GRID AZIMUTH:

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bed rock	Cu	Pb	Zn	Ag	Au	Fe%	Mn	Ba
	46000N	GRID EASTING	NORTHING	EASTING																
61571	61800E				* 1.7GY			✓		✓	✓	✓	5	40	65			1.20	225	59
572	825				1.4GYWH			✓		✓	✓	✓	20	280	130			2.05	230	102
573	850				7.8GYWH			✓		✓	✓	✓	5	40	80			0.50	160	17
574	875				7.0LTGYWH	✓		✓		✓	✓	✓	5	45	65			0.49	115	39
575	61900				5.0LTGYWH			✓		✓	✓	✓	10	45	85			0.65	105	33
576	925				10.4GYWH			✓		✓	✓	✓	5	45	100			0.89	110	231
577	950				8.8GY			✓		✓	✓	✓	10	35	245			0.59	130	11
578	975				9.7LTGY			✓		✓	✓	✓	5	45	950			17.5	3500	37
579	62000				12.3LTGYBR	✓	✓				NO	✓	45	100	60			1.35	20	576
61580	025				7.2GYGN	✓	✓	✓		✓	✓	✓	25	30	75			2.05	120	541
581	050				8.7LTGY	✓		✓			✓	✓	40	45	85			0.97	45	620
582	075				5.6LTBR	✓		✓		✓	✓	✓	35	40	170			2.05	40	567
583	62100				6.8GYBR	✓		✓		✓	✓	✓	20	55	50	0.5		2.00	35	497
584	125				5.2LTGYGN	✓	✓	✓		✓	✓	✓	20	70	65			2.15	110	548
585	150				4.8BRGY	✓		✓		✓	✓	✓	45	50	65			1.75	75	577
586	175				1.6BR	✓		✓		✓	✓	✓	20	40	15			3.60	110	601
587	62200				1.6GYBK			✓		✓	✓	✓	25	45	170			2.75	140	442
588	225				0.8BRGY	✓		✓		✓	✓	✓	20	45	35			2.55	115	435
589	250	CREEK			0/C			✓		✓	✓	✓	35	50	150			2.95	140	458
61590	275				1.2GYBK	✓		✓		✓	✓	✓	25	30	75			2.50	115	437
591	62300	CREEK			0/C			✓		✓	✓	✓	15	30	45	0.5		1.70	45	487
592	325				1.0GYBR	✓		✓		✓	✓	✓	20	30	25			2.35	55	425
593	350				2.0GYBR	✓		✓		✓	✓	✓	20	35	30	0.5		3.60	60	424
594	375				2.2GYBK	✓		✓		✓	✓	✓	15	25	x			2.35	90	354
595	62400				* 0.6GYBK	✓		✓		✓	✓	✓	45	65	130			1.90	85	397

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132058

PROJECT: ...E.A. 4.7B... MATERIAL: ...BEDROCK... SIZE FRACTION ANALYSED: ...WHOLE...
 LOCALITY: ...ZEEHAN... SAMPLE METHOD: ...WACKER... ANALYSED BY: ...ANALABS...
 GRID NAME: ...BAURA... SAMPLED BY: ...POLTOCKS... METHOD: ...A.A.S...
 NOMINAL GRID AZIMUTH: ... DATE: ...10-84...

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	46000N	NORTHING	EASTING																
61626	61075E			1	7LTGYBR	✓	✓	✓	✓	✓	✓	20	55	X			0.77	40	409
627	050			1	0LTBR	✓	✓	✓	✓	✓	✓	5	200	X	0.5		0.40	25	325
628	025			2	9LTBR	✓	✓	✓	✓	✓	✓	5	320	X	0.5		0.40	25	300
629	SAMPLE "A"																		
61630	61000			8	0GY	✓	✓	✓	✓	✓	✓	35	85	155			1.95	60	465
631	60975			21	0DKGY		✓	✓	✓	✓	✓	25	75	160			1.75	50	435
632	950			4	5DKGY		✓	✓	✓	✓	✓	15	30	X			0.68	145	51
633	925			5	7GYWH	✓	✓	✓	✓	✓	✓	15	45	35			0.34	130	23
634	60900			6	0GYWH		✓	✓	✓	✓	✓	10	55	20			0.33	235	13
635	875			1	3DKGYWH		✓	✓	✓	✓	✓	10	40	35			0.63	140	40
636	850			1	4GY		✓	✓	✓	✓	✓	15	25	X			0.69	115	75
637	825			7	3DKGYWH		✓	✓	✓	✓	✓	5	40	10			0.30	85	14
638	60800	ROAD DRAIN		5	6DKGY		✓	✓	✓	✓	✓	15	55	50			1.50	225	132
639	775			6	9DKGY		✓	✓	✓	✓	✓	15	40	50			1.75	235	159
61640	750			6	2DKGY		✓	✓	✓	✓	✓	10	2600	1885			1.70	335	54
641	725	PYRITE		3	6DKGY		✓	✓	✓	✓	✓	15	190	60			19.5	80	182
61642	60700			3	2BR		✓	✓	✓	✓	✓	10	40	X	0.5		0.18	20	58
SOIL P/L																			
62592	61050			0	7LTBR		20	80		ND		X	55	5			0.19	5	104
62593	61050	SLT	ROCK	0	7LTBR		✓		✓	✓		X	600	20			0.42	15	362

E.Z. Co. of A'Asia Ltd., ROSEBERY, Tasmania

132059

GEOCHEMICAL SAMPLE DATA SHEET

PROJECT: ..E.L.A-7B..... MATERIAL:BEDROCK..... SIZE FRACTION ANALYSED: ...WHOLEF.....
 LOCALITY: ...ZEEHAN..... SAMPLE METHOD:WACKER..... ANALYSED BY: ...ANALABS...
 GRID NAME: ...BAURA..... SAMPLED BY:POLTOCKS..... METHOD:A.A.S.....
 NOMINAL GRID AZIMUTH: DATE:9-84.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bed rock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	46400 N	NORTHING	EASTING																
61521	60795E	ROAD	DRAIN	5	2DKGY	✓		✓		✓		5	25	30	x		0.58	190	57
522	325			10	3DKGY		✓				NO	5	145	260			0.50	225	16
523	850			3	7DKGY			✓		✓		5	40	330			1.70	205	87
524	875			1	8DKGY			✓		✓		10	35	45			0.54	90	66
525	60900			1	8DKGY			✓		✓		5	25	25			0.74	175	29
526	925			2	0GY			✓		✓		10	25	65			1.30	195	193
527	950			1	0DKGY WH			✓		✓		5	25	30			0.40	80	29
528	975			1	3DKGY WH			✓		✓		5	45	55			0.63	150	72
529	61000			1	8DKGY	✓		✓		✓		20	40	120			2.40	140	82
61530	025			3	2DKGY	✓		✓		✓		20	40	125			2.20	75	397
531	050			8	8DKGY			✓		✓		20	45	555			2.70	230	294
532	SAMPLE F																		
533	075			24	0GY WH	✓	✓	✓		✓		10	670	2300			0.65	195	92
534	61100			8	8GY WH			✓		✓		20	90	470			2.25	345	175
535	125			4	3DKGY WH			✓		✓		20	95	970			1.80	585	79
536	150			3	7GY BR		✓				NO	5	230	35	0.5		0.32	15	195
537	175			8	3GY CR	✓		✓		✓		10	50	75			4.45	1350	38
538	61200			6	2GY			✓		✓		5	40	30			0.55	145	14
539	225			4	6WH			✓		✓		5	55	80			0.75	315	x
61540	250			2	8GY	✓		✓		✓		5	45	140			0.38	90	18
541	275			3	2DKGY WH			✓		✓		5	30	40			0.32	70	x
542	61300			0	8GY			✓		✓		10	25	160			1.45	175	111
543	325			1	0DKGY			✓		✓		10	35	240			0.69	170	62
544	350			0	8DKGY WH			✓		✓		5	20	40			0.38	105	21
545	375			1	0DKGY	✓		✓		✓		10	40	260			1.35	190	33
546	61400			4	5DKGY WH	✓		✓		✓		5	80	95			0.30	85	31
547	425			3	0DKGY WH			✓		✓		5	55	55			0.60	140	15
548	450			1	2DKGY			✓		✓		10	25	25			1.45	225	67
549	475			2	5DKGY WH			✓		✓		10	30	215			0.52	105	23
61550	61500			2	5DKGY			✓		✓		5	50	60			0.33	120	35

E.Z. Co. of A'Asia Ltd., ROSEBERY, Tasmania	GEOCHEMICAL SAMPLE DATA SHEET	132060
PROJECT: ..E.4.A.7B.....	MATERIAL:BEDROCK.....	SIZE FRACTION ANALYSED: ..WHOLE.....
LOCALITY: ...ZEEHAN.....	SAMPLE METHOD:WASHER.....	ANALYSED BY: ..ANALABS.....
GRID NAME: ...BAYRA.....	SAMPLED BY:POLLOCK.....	METHOD: ...A:A:S.....
NOMINAL GRID AZIMUTH:	DATE:2-84.....	

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	46400N	NORTHING	EASTING																
61551	SAMPLE "A"																		
552	61525E			* 3	6DKGYWH			✓	✓	✓		10	30	205			0.44	95	20
553	550			1	36Y			✓	✓	✓		15	35	200			0.52	110	27
554	575			2	5DKGY			✓	✓	✓		5	35	45			2.35	75	12
555	61600			0	86YWH			✓	✓	✓		5	35	30			0.50	90	26
556	625			3	76Y	✓		✓	✓	✓		5	35	25			0.85	130	56
557	650			2	26Y			✓	✓	✓		20	35	230			0.92	165	71
558	675			2	7DKGY	✓		✓	✓	✓		10	35	35			1.55	190	70
559	61700			3	66Y			✓	✓	✓		5	35	30			0.46	165	20
61560	725			10	06YWH	✓		✓	✓	✓		5	25	20			0.38	120	2
561	750			5	26Y	✓		✓	✓	✓		15	30	175			0.98	125	51
562	775			8	06Y			✓	✓	✓		5	30	180			0.60	90	1
563	61800			3	06Y	✓		✓	✓	✓		5	30	25			0.62	125	11
564	825			2	66YWH			✓	✓	✓		5	55	90			0.55	115	26
565	850			12	5DKGYWH	✓		✓	✓	✓		10	55	230			0.58	205	28
566	875			7	8LTDKGY			✓	✓	✓		5	25	30			1.30	175	51
567	61900			6	36Y			✓	✓	✓		5	30	30			1.30	220	64
568	950			3	06YWH	✓		✓	✓	✓		5	60	85			1.70	180	20
569	975			10	06YWH			✓	✓	✓		5	40	75			0.66	80	23
61570	62000			12	5LTDKGY	✓		✓	✓	✓		5	25	65			0.80	105	27
61643	60775			5	8DKGYBR	✓	✓	✓	✓	✓		640	570	1135			2.15	25	366
61644	60745			*10	2BRY	✓	✓	✓	✓	NO		45	65	85			3.15	25	274

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132061

PROJECT: E.A. 4/78.....
LOCALITY: ZEEHAN.....
GRID NAME: BAURA.....
NOMINAL GRID AZIMUTH:

MATERIAL: Bedrock.....
SAMPLE METHOD: Wacker.....
SAMPLED BY: N. Pollock.....
DATE: Nov. 84.....

SIZE FRACTION ANALYSED: Whole.....
ANALYSED BY: Analabs.....
METHOD: A.A.S., Ba. Gy. XRF

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	60	200	E																	
61898	44	775			1.4	DK Gy			✓		✓	✓	5	x	35	x		1.57	170	112
61899		50			1.0	Gy WH			✓		✓	✓	5	115	245			0.56	95	37
61900		25			0.8	LT Gy			✓		✓	✓	5	15	350			0.85	160	65
61720	44	700			1.8	LT Gy WH			✓		✓	✓	x	205	135			0.24	300	13
21		675			2.3	Gy			✓		✓	✓	10	x	120			0.66	170	94
22		50			7.2	Gy			✓		✓	✓	5	x	100			0.85	250	43
23		25			8.7	DK Gy	✓		✓		✓	?	5	x	x			0.66	100	61
24		600			10.2	DK Gy	✓		✓		✓	✓	5	30	220			0.59	65	47
25		575			3.2	Gy			✓		✓	✓	5	x	65			0.12	75	18
26		50			20.0	Gy		✓	✓		✓	✓	5	x	55			1.27	210	45
27		25			4.2	BN DK Gy	✓		✓		✓	?	70	1220	x			0.11	x	189
28		500			3.6	BN			✓		✓	NO	5	x	x			0.10	5	212
29		475			22.6	Gy			✓		✓	NO	5	50	80	0.5		0.36	15	85
30		50			20.0	Gy DR BN	✓				✓	NO	10	x	545			1.92	15	337
31		25			9.8	Gy BN	✓				✓	NO	10	120	2435			3.42	5	309
32		400			8.6	Gy BN	✓				✓	NO	15	80	1335			2.07	30	417
33		375			9.8	DK Gy	✓				✓	NO	20	1220	1120			2.17	25	280
34		50			11.2	DR Gy	✓				✓	NO	60	7900	1.45%	1.5		3.42	900	284

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132062

PROJECT: ...*EAH/78*.....
LOCALITY: ...*ZEEHAN*.....
GRID NAME: ...*BAURA*.....
NOMINAL GRID AZIMUTH:

MATERIAL: ...*BEDROCK*.....
SAMPLE METHOD: ...*WACKER*.....
SAMPLED BY: ...*POLTOCK*.....
DATE: ...*Oct. '84*.....

SIZE FRACTION ANALYSED: ...*WHOLE*.....
ANALYSED BY: ...*ANAL.P.B.S.*.....
METHOD: ...*A.A.S., Ba. by XRF*.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	S ₂
	GRID NORTHING	NORTHING	EASTING																
61691	44775			2.4	LT GY WH			✓		✓	✓	5	75	170			0.46	100	X
92	750			5.0	DK GY			✓		✓	✓	5	25	35			0.35	80	20
93	725			3.5	LT GY WH			✓		✓	✓	20	30	50			0.20	105	20
94	700			2.3	LT GY WH			✓		✓	✓	10	45	190			0.28	100	37
95	675			1.8	LT GY			✓		✓	✓	5	55	120			0.15	80	12
96	650			4.6	LT GY BN	✓		✓		NO	✓	5	25	70			0.24	140	X
97	625			9.8	GY WH			✓		✓	✓	15	90	335			0.37	100	59
98	600			2.6	GY			✓		✓	✓	15	20	35			1.35	195	48
99	575			3.3	GY WH			✓		✓	✓	10	15	80			0.59	125	39
61700	550			7.2	LT GY BN			✓		✓	✓	5	80	435			0.12	110	14
61802	525			10.6	LT GY WH			✓		✓	✓	10	20	65			0.18	60	15
03	44500			4.0	GY			✓		✓	✓	15	20	35			2.45	560	22
04	475			9.6	DK GY			✓		✓	✓	10	30	50			0.46	145	18
05	450			4.0	GY			✓	FRSH	✓	✓	20	25	35			1.25	205	90
06	425			4.7	GY			✓		✓	✓	10	20	40			0.60	240	39
07	400			7.0	LT GY BN			✓		✓	✓	10	55	185			0.44	335	X
08	375			1.0	LT GY			✓		✓	✓	5	45	110			0.64	165	27
09	350		? GRAVEL	0.8	LT GY BN			✓		✓	?	10	80	120			0.47	205	16
61810	325			1.8	LT GY			✓		✓	✓	X	40	45			0.37	235	X
11	300			11.7	DK GY WH			✓		✓	✓	20	30	50			1.80	230	176

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132063

PROJECT:E.H.H/78.....
LOCALITY:ZEEHAN.....
GRID NAME:BAURA.....
NOMINAL GRID AZIMUTH:

MATERIAL: ...Bedrock.....
SAMPLE METHOD: ...Wacker.....
SAMPLED BY: ...N. Pollock.....
DATE:Nov.....84.....

SIZE FRACTION ANALYSED: ...Whole.....
ANALYSED BY:Analaabs.....
METHOD:A.A.S., Bx.Gy.&RF

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						Bedrock	METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered		Cu	Pb	Zn	Ag	Au	Fe	Mn	Ba
	GRID NORTHING	NORTHING	EASTING																
61873	44100			14.3	DK GY		✓	✓		✓	?	x	150	765			0.55	175	29
74	25			9.0	DK GY		✓	✓		✓	✓	S	115	625			0.53	185	65
75	50			3.8	DK GY			✓		✓	✓	x	675	2285			1.67	355	27
76	75			5.0	LT GY			✓		✓	✓	x	80	520			1.27	265	19
77	2100			5.2	GY	✓		✓			?	x	30	170			0.52	260	17
78	25			2.0	GY	✓		✓			?	x	x	35			0.49	275	21
79	50			9.3	GY LT BM	✓		✓			?	x	15	530			0.65	240	53
80	75			11.5	LT GY BM	✓		✓		✓	✓	S	30	145			0.50	110	52

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132064

PROJECT: ... *E.L. 4/78* ...
LOCALITY: ... *ZEEHAN* ...
GRID NAME: ... *GRIEVES* ...
NOMINAL GRID AZIMUTH:

MATERIAL: ... *? Weathered Bedrock* ...
SAMPLE METHOD: ... *Wacker* ...
SAMPLED BY: ... *Pollock* ...
DATE:

SIZE FRACTION ANALYSED: ... *Whole* ...
ANALYSED BY: ... *Analabs* ...
METHOD: ... *AAS, Bar. by XRF* ...

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	GRID EASTING	NORTHING	EASTING	DEPTH																
62458	60875				3.5	DK GY			✓		✓	✓	10	20	115	X		0.59	90	26
59	850				11.8	DK GY	✓		✓		✓	✓	10	8335	3610	1.0		2.37	190	25
60	830		ROAD		13.2	DK GY	✓		✓		✓	✓	10	25	565	X		1.32	180	64
61	800				14.9	GY BN	✓		✓		✓	NO	60	1.44%	3.33%	16.5		5.62	20	331
62	775				6.6	BN	✓	✓	✓		✓	?	10	30	60	X		0.16	15	151

PROJECT: *FAH/28* MATERIAL: *? Weathered Bedrock* SIZE FRACTION ANALYSED: *Whole*
 LOCALITY: *ZEEHAN* SAMPLE METHOD: *Wacker* ANALYSED BY: *Analabs*
 GRID NAME: *GRIEVES* SAMPLED BY: *Pattock* METHOD: *AAS, Ba. by XRF*
 NOMINAL GRID AZIMUTH: DATE: *Aug. 84*

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							Bedrock ?	METAL CONTENT (ppm unless specified)						
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Weathered?	Cu		Pb	Zn	Ag	Au	Fe %	Mn	Ba
	47300N	NORTHING	EASTING																
62439	60875			17.7	DK Gy	✓		✓		✓	✓	25	25	70	x		1.12	25	511
40	850			11.7	DK Gy	✓		✓		✓	?	20	30	120	x		1.57	30	380
41	825			6.5	DK Gy			✓		✓	✓	15	35	360	x		1.87	385	112
42	800			6.0	DK Gy	✓		✓		✓	✓	15	25	245	x		0.36	115	35
43	775			5.8	DK Gy	✓		✓		✓	✓	10	10	40	x		1.22	170	105
44	750			1.4	DK Gy			✓		✓	✓	10	10	45	x		0.55	75	42
45	725			10.8	DK Gy	✓		✓		✓	?	15	45	155	x		1.42	195	139
46	700			5.5	DK Gy			✓		✓	✓	5	70	595	x		1.22	275	37
47	675			7.8	DK Gy	✓		✓		✓	?	20	40	65	x		3.07	10	282
48	650			5.6	DK Gy	✓		✓		✓	✓	2795	7335	45	15.5		0.52	5	329
49	625			6.8	Gy cm	✓	✓	-		-	NO	5	20	5	x		0.47	15	526

E.Z. Co. of A'Asia Ltd.,
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GEOCHEMICAL SAMPLE DATA SHEET

132068

PROJECT: ... E.L.A.79.....
LOCALITY: ... ZEEHAN.....
GRID NAME: ... GRIEVES.....
NOMINAL GRID AZIMUTH:

MATERIAL: ... BEDROCK.....
SAMPLE METHOD: ... JACKER.....
SAMPLED BY: ... POLTOCK.....
DATE: ... A-85.....

SIZE FRACTION ANALYSED: ... WHOLE.....
ANALYSED BY: ... ANALABS.....
METHOD: ... A.A.S.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Bedrock?	WEATHERED	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	47500N	NORTHING	EASTING																
65111	61100E	GRAVEL		2.8	GYWH	✓	✓				NO	x	25	5			0.20	10	17
12	125			3.7	BRLTBR			✓			?	x	30	5			0.22	10	63
13	150			5.2	BRLTGY	✓		✓			✓	10	75	280			9.52	10	137
14	175			7.5	BRLTBR	✓		✓			✓	110	110	45			0.26	5	417
15	61200			6.7	BR			✓			✓	x	30	5			0.23	10	35
16	225			8.7	DKGY	✓	✓				NO	20	65	15			0.30	5	258
65117		SAMPLE "A"																	
18	61250			9.8	BKBR	✓		✓			✓	15	75	270			2.97	15	338
19	275			3.4	DKGY	✓		✓			✓	20	105	395			3.22	30	258
65120	61300E			3.8	BR	✓	✓	✓			?	10	400	6200			4.17	5	132

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132069

PROJECT: ... E.L. A-78
LOCALITY: ... Z.E.H.N
GRID NAME: ... G.R.I.E.V.E.S
NOMINAL GRID AZIMUTH:

MATERIAL: ... BEDROCK
SAMPLE METHOD: ... WACKER
SAMPLED BY: ... POLTOCK
DATE: ... A-85

SIZE FRACTION ANALYSED: ... WHOLE
ANALYSED BY: ... ANALABS
METHOD: ... A.A.S.

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA								METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH M	COLOUR	Clay	Sand	Rock Frags.	Organic	Bedrock	WEATHERED	Cu	Pb	Zn	Ag	Au	Fe%	Mn	Ba
	GRID EASTING	NORTHING	EASTING																	
65170	61175E				9.3	DK BR	✓		✓		✓	✓	10	50	140			2.02	10	233
171	200				2.3	BR	✓				✓	✓	X	35	10			0.32	20	123
172	225	GRAVEL			1.6						NO	✓	X	35	5			0.20	10	57
173	250	GRAVEL			3.4						NO	✓	X	30	5			0.40	20	39
174	275	GRAVEL			3.2						NO	✓	X	25	5			0.20	10	23
65175	61300				5.3	BR	✓	✓	✓		?	✓	20	1650	2100			1.20	5	120

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132070

PROJECT: EL. 4/78
LOCALITY: ZEEHAN
GRID NAME: GREYES
NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK
SAMPLE METHOD: WALKER
SAMPLED BY: NICK POLTOCK
DATE: APRIL 1985

SIZE FRACTION ANALYSED: WHOLE
ANALYSED BY: ANALABS
METHOD: A.A.S.

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA								METAL CONTENT (ppm unless specified)							
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Bed rock	Weathered	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	GRID EASTING	NORTHING	EASTING	DEPTH																
61786	60825			3.0	DKGYWH							5	40	240			2.17	125	29	
87	800			7.4	GY							5	40	170			0.74	100	54	
88	775			7.8	WH	✓						10	25	35			0.74	15	505	
89	750			8.4	DKGY							5	325	970			4.97	5	156	
90	725			20.2	DKGY							20	55	2550			3.17	15	383	
91	700			18.0	DKGY							10	210	280			0.80	45	77	
92	675			5.8	DKGY							5	30	85			0.64	140	36	
93	650			3.2	DKGY							5	400	2550			0.75	170	63	
94	625			6.5	DKGY							5	615	2250			0.60	195	31	
95	600			14.2	DKGY							5	1400	890			0.89	365	X	
96	575			4.0	DKGY							5	40	70			1.12	185	57	
97	550			8.8	TAN							65	410	30			0.43	5	419	
98	850			5.1	DKGY							5	45	650			1.27	240	47	
99	875			9.2	DKGY							10	30	25			0.80	100	73	
61800	60900			9.6	DKGY							5	35	25			0.72	95	53	
65101	60925			5.7	DKGY							X	65	50			0.63	125	73	
2	950			5.7	GY							X	50	15			0.38	80	42	
3	975			5.8	DKGY	✓						15	60	135			2.32	25	289	
4	61000			1.9	GY							5	50	35			0.70	85	40	
5	25			3.2	GY							5	45	20			0.81	115	70	
6	50			4.8	GY	✓						10	50	25			1.67	90	115	
7	75			6.1	GY							X	50	15			0.51	25	28	
8	61100			1.70	GY	✓						5	45	15			1.67	175	49	
9	125			6.1	DKBR	✓						15	60	40			0.55	10	249	
65110	61150			4.5	BRLTBR							X	30	5			0.19	10	39	

E.Z. Co. of A'Asia Ltd., ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132071

PROJECT: .. E.L.A.73

LOCALITY: .. ZEEHAN

GRID NAME: .. GRIEVES

NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK

SAMPLE METHOD: WACKER

SAMPLED BY: POLTOCK

DATE: 4-85

SIZE FRACTION ANALYSED: WHOLE

ANALYSED BY: ANALABS

METHOD: A.A.S.

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							WEATHERED	METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH M	COLOUR	Clay	Sand	Rock Frags.	Organic	Sand Rock		Cu	Pb	Zn	Ag	Au	Fe%	Mn	Ba
	47700N	GRID EASTING	NORTHING	EASTING																
65121	61100E				10.2	DKGY	✓		✓		✓	✓	10	55	70			2.02	165	163
122	125				7.9	DKGY	✓		✓		✓	✓	5	50	30			2.17	165	126
	150				12.4															
123	175				6.1	BR	✓	✓			✓	✓	10	75	290			2.02	10	126
65124	61200				13.4	GY			✓		✓	✓	5	45	35			1.67	230	97
65163	61150				9.4	GY			✓		✓	✓	5	50	50			1.27	100	80
65164	61225		GRAVEL		2.8	CR	✓	✓			NO	✓	X	30	5			0.20	10	X
165	250				6.3	DKBR			✓		✓	✓	10	90	1600			3.07	15	161
166	275		? GRAVEL		2.9				✓		?	✓	X	45	10			0.18	5	22
167	300				22.6	DKGY	✓	✓			?	✓	5	75	3700			16.37	52.50	62
168	325				6.3	GY			✓		✓	✓	X	85	2000			3.22	1400	X
65169	61350				9.2	GY			✓		✓	✓	20	270	1100			3.87	35	238

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132072

PROJECT: A-73
LOCALITY: ZEEHAN
GRID NAME: GRIEVES
NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK
SAMPLE METHOD: WACKER
SAMPLED BY: POLTOCK
DATE: A-85

SIZE FRACTION ANALYSED: WHOLE
ANALYSED BY: ANAKABS
METHOD: A.A.S.

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Bedrock	WEATHERED	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	47800N	NORTHING	EASTING																
65150	61325E			6.6	DKGY			✓		✓	✓	10	545	5350			11.57	3950	20
151	350			5.5	DKLTGY	✓		✓		✓	✓	45	1350	4.5%			3.47	35	344
152	375			11.7	LTGR		✓	✓		✓	✓	x	35	45			0.22	30	x
153	61400			1.6	CR		✓	✓		✓	✓	x	45	130			0.20	10	x
154	61300			10.3	DNGYWH	✓		✓		✓	✓	5	55	2350			1.22	330	29
155	61275			5.3	DKBRGN			✓		✓	✓	5	85	1850			7.77	10	180
156	250			13.1	DKBR	✓				NO	✓	15	90	730			4.77	15	210
157	225			16.8	DNGYWH			✓		✓	✓	x	45	50			0.63	100	31
158	61200			19.6	DNGYBR			✓		✓	✓	x	40	30			1.37	330	69
159	175			8.5	BR		✓	✓		✓	✓	15	55	25			1.87	10	165
65160	150			19.2	DNGY			✓		✓	✓	10	50	15			1.12	120	89
161	125			10.3	GYWH			✓		✓	✓	5	50	20			1.17	180	70
65162	61100			8.2	GYWH			✓		✓	✓	x	50	55			0.22	85	31

E.Z. Co. of A'Asia Ltd.,
ROSEBURY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132073

PROJECT: ... F.L. 4-78
LOCALITY: ... ZEEHAN
GRID NAME: ... GRIEVES
NOMINAL GRID AZIMUTH:

MATERIAL: ... BEDROCK
SAMPLE METHOD: ... WACKER
SAMPLED BY: ... POLLOCK
DATE: ... 4-85

SIZE FRACTION ANALYSED: ... WHOLE
ANALYSED BY: ... ANKARA
METHOD: ... A.A.S.

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH (m)	COLOUR	Clay	Sand	Rock Frags.	Organic	Bedrock	WEATHERED	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	47900N	60800E	NORTHING	EASTING																
65125	60800E				20.5	GYWH							5	70	50			1.92	300	97
126	825				4.3	GYWH	✓				✓	✓	5	45	40			0.65	150	59
127	850				5.2	GYWH					✓	✓	5	50	10			0.83	105	41
128	875				5.6	DKGY					✓	✓	5	55	15			0.94	165	84
129	60900				10.0	GYWH					✓	✓	x	60	45			0.38	65	19
65130	925				11.6	GY					✓	✓	x	40	15			0.63	100	24
131	950				3.2	GY					✓	✓	x	55	35			0.35	75	18
132	975				3.2	DKGYWH					✓	✓	5	50	20			1.02	80	315
133	61000				2.8	GYWH					✓	✓	x	45	10			1.22	165	29
134	025				1.4	LTGYWH					✓	✓	10	45	15			0.50	100	41
135	050				1.4	GY					✓	✓	5	45	10			0.85	160	50
136	075				7.6	DKGY					✓	✓	x	50	30			2.17	65	20
137	61100				7.4	LTGYWH					✓	✓	5	45	20			0.42	220	13
138	125				9.6	LTGYWH					✓	✓	x	50	10			1.62	75	x
139	150				8.2	LTGY					✓	✓	5	50	15			1.37	75	23
65140	175				10.0	DKGYBR					✓	✓	x	55	25			0.97	90	28
141	61200				7.0	DKGY					✓	✓	5	55	145			2.57	100	46
142	225				5.2	LTGYWH					✓	✓	x	50	80			0.67	100	15
143	250				3.6	DKBRGY					✓	✓	5	50	80			0.56	10	149
144	275				2.8	DKBRGY					✓	✓	15	170	110			0.80	20	237
145	61300				2.3	DKBRGY					✓	✓	10	85	660			0.43	10	216
146	325				0.3	BRLTBR					✓	✓	x	765	8850			3.17	1150	67
147	350				2.8	GYLTBR					✓	✓	x	110	2300			0.55	380	x
148	375				6.6	DKGY					✓	✓	10	2150	2750			2.92	50	173
65149	61400				2.3	DKGY					✓	✓	25	1550	1250			1.62	15	175

E.Z. Co. of A'Asia Ltd.,
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GEOCHEMICAL SAMPLE DATA SHEET

132074

PROJECT: EL. 4/28
 LOCALITY: ZEEHAN
 GRID NAME: GRIEVES
 NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK
 SAMPLE METHOD: WALKER
 SAMPLED BY: NICK PETERSON
 DATE: APRIL 1985

SIZE FRACTION ANALYSED:
 ANALYSED BY:
 METHOD:

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Bedrock	Weathered	Cu	Pb	Zn	Ag	Au	Fe%	Mn	Ba
	47900N	GRID EASTING	NORTHING	EASTING																
61774	60775				43	GY						✓	40	130	345			3.62	85	293
75	750				49	GY						✓	10	90	120			0.61	65	47
76	725				51	DK GY						✓	5	35	50			0.35	75	12
77	700				10.7	DK GY		✓				?	5	22.5	8300			0.85	115	18
78	675				6.8	LT GY						✓	10	25	70			1.17	25	408
79	650				2.0	BR						✓	5	17.5	45			0.68	20	353
80	625				7.1	DK GY						✓	20	30	1100			1.82	20	458
81	600				10.9	DK GY		✓	✓			?	5	100	590			1.77	125	55
82	575		SANDS		8.4	GY BR		✓				NO	5	20	10			0.18	5	21
83	550		SANDS		5.4	BR						NO	5	15	10			0.16	5	31
84	525		? GRAVEL		7.0	DK BR						?	55	230	40			0.32	5	268
85	500		? GRAVEL		8.6	BR BR						?	25	390	25			0.26	5	182

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GEOCHEMICAL SAMPLE DATA SHEET

132075

PROJECT: FL. 4/78
LOCALITY: ZEEHAN
GRID NAME: GRIEVES
NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK
SAMPLE METHOD: WACFER
SAMPLED BY: NICK POLTOCK
DATE: MAR./APRIL 1985

SIZE FRACTION ANALYSED:
ANALYSED BY:
METHOD:

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Bedrock	Weathered	Cu	Pb	Zn	Ag	Au	Fe%	Mn	Be
	48200N	GRID EASTING	NORTHING	EASTING																
417	35	60525E			3.0	DKGY			✓		✓	✓	x	50	30			0.34	85	1.6
36		500			8.6	WH			✓		✓	✓	x	75	290			0.17	190	1.8
37		475			1.7	LTNGY	✓		✓		✓	✓	10	45	30			1.87	15	50.2
38		450			5.0	LTGY	✓		✓		✓	✓	45	40	45			0.70	10	44.7
39		425			4.4	BFBK	✓		✓		✓	✓	10	100	550			10.87	10	23.7
40		400			1.6	DKGY			✓		✓	✓	20	45	25			0.78	15	33.0
41		375			5.1	BK			✓		NO	✓	x	5	10			0.19	5	2.8
42		350			6.9	GY			✓		✓	✓	x	25	35			0.34	100	x
43		325			8.7	GY			✓		✓	✓	x	25	50			0.93	370	5.7
44		300			3.2	GY			✓		✓	✓	x	20	30			0.38	165	2.3
45		275			2.8	WHGY			✓		✓	✓	5	25	20			1.22	280	16.2
46		250			3.0	DKGY			✓		✓	✓	5	25	55			0.39	285	2.7
47		225			3.4	GY			✓		✓	✓	x	85	130			0.07	40	x
48		200			4.5	DKGY			✓		✓	✓	x	25	20			0.21	55	1.0
49		60550			4.3	DKGY			✓		✓	✓	5	15	20			0.77	95	55
50		575			1.6	GYWH			✓		✓	✓	5	15	15			0.19	50	x
51		600			1.4	DKGY			✓		✓	✓	10	20	40			1.62	90	11.4
52		625			2.6	DKGY			✓		✓	✓	5	30	20			0.55	90	4.4
53		650			2.9	LTGY			✓		✓	✓	5	30	25			0.64	65	3.2
54		675			3.4	DKGY			✓		✓	✓	5	35	60			1.27	170	8.5
55		700			4.9	DKGY			✓		✓	✓	x	35	65			1.97	205	1.6
56		725			10.6	DKGY			✓		✓	✓	x	25	25			1.12	105	3.8
57		750			5.1	GYWH	✓		✓		✓	✓	x	25	30			0.45	85	2.4
58		775			3.7	GYWH			✓		py	✓	15	100	200			1.42	130	8.0
59		800			4.1	GYWH			✓		✓	✓	5	220	115			0.71	153	2.7
60		825			5.2	LTGY			✓		✓	✓	5	35	35			0.84	110	5.1
61		850			5.8	WHGY			✓		✓	✓	5	25	15			0.45	95	3.1
62		875			2.9	GY			✓		✓	✓	5	35	30			0.91	108	3.8
63		900			3.2	GYWH			✓		✓	✓	x	25	20			0.39	65	1.3
64		925			1.7	GYWH			✓		✓	✓	x	30	25			0.69	140	5.0

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132076

PROJECT: EL. 4/78
 LOCALITY: ZEEHAN
 GRID NAME: GRIEVES
 NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK
 SAMPLE METHOD: WATER
 SAMPLED BY: Nick Pollock
 DATE: APRIL 1985

SIZE FRACTION ANALYSED:
 ANALYSED BY:
 METHOD:

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Bedrock	Weathered	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	GRID EASTING	NORTHING	EASTING	COLOUR																
61765	60950				30	GY			✓		✓	✓	X	25	20			0.32	85	39
66	975				61	LT GY			✓		✓	✓	S	30	35			0.89	90	61
67	1000				108	GY			✓		✓	✓	X	30	210			1.37	90	31
68	25				66	GY WH			✓		✓	✓	X	35	95			0.53	130	52
69	50				213	LT GY			✓		✓	✓	S	45	270			1.17	155	29
70	75				63	GY WH			✓		✓	✓	X	45	270			0.43	125	21
71	100				61	GY			✓		✓	✓	S	75	1350			0.50	75	23
72	150				90	DK GY	✓		✓		?	✓	25	720	2.95			8.57	1400	270
73	175				64	FIA W/N	✓		✓		✓	✓	30	290	310			0.31	10	146

E.Z. Co. of A'Asia Ltd.,
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GEOCHEMICAL SAMPLE DATA SHEET

132077

PROJECT: EL. A-73
LOCALITY: ZEEHAN
GRID NAME: MYRTLE
NOMINAL GRID AZIMUTH:

MATERIAL: BEDROCK & CLAY
SAMPLE METHOD: WACKER
SAMPLED BY: POTOLKS
DATE: 2-84

SIZE FRACTION ANALYSED: WHOLE
ANALYSED BY: ANALABS
METHOD: A.A.S.

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	WEATHERED	BED ROCK	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	49800N	GRID EASTING	NORTHING																
61508	60600E			*	8.0GYBR	✓		✓		✓	✓	25	35	160	X		4.15	25	181
509	575				14.5GYBRWH	✓		✓		✓	✓	20	45	80	X		8.50	25	159
61510	550				21.0GYWHGN	✓		✓		✓	✓	25	65	175	X		5.40	75	163
511	525				16.2GYWH			✓		✓	✓	10	50	195	X		1.30	330	21
512	60500				16.7GYWH			✓		✓	✓	5	35	275	X		0.59	230	16
61513	475				17.5GYWH			✓		✓	✓	5	40	45	X		0.52	165	10
62496	450				16.2DKGY	✓				NO	✓	25	70	140	X		4.77	25	182
61514	425				14.5GYWH			✓		✓	✓	5	30	60	X		0.45	100	10
515	60400				15.8GYWH			✓		✓	✓	5	35	25	X		0.47	140	10
516	375				12.7GYWH			✓		✓	✓	5	30	125	X		0.38	75	28
517	350				12.2DKGYWH			✓		✓	✓	5	30	120	X		1.35	140	80
518	325				5.3DKGYWH			✓		✓	✓	5	30	20	X		0.69	95	22
519	60300				12.2DKGYWH			✓		✓	✓	10	35	135	X		0.85	95	46
520	60275	(ROAD DRAIN)			6.76WDKGY	✓		✓		✓	?	15	25	130	X		2.85	5	262
62497	60425			*	5.0DKBRGY	✓				NO	✓	30	40	260	X		3.37	35	209
62498	SAMPLE "B"																		

E.Z. Co. of A'Asia Ltd.,
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GEOCHEMICAL SAMPLE DATA SHEET

132078

PROJECT: *E.L. 4/78*
LOCALITY: *ZEEHAN*
GRID NAME: *MYATLE*
NOMINAL GRID AZIMUTH:

MATERIAL: ? *Weathered Bedrock*
SAMPLE METHOD: *Wacker*
SAMPLED BY: *Pattock*
DATE: *Aug. 84*

SIZE FRACTION ANALYSED: *Whole*
ANALYSED BY: *Analabs*
METHOD: *BAS., Ba. by XRF*

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe%	Mn	Ba
	50 00 0 N	NORTHING	EASTING																
62463	60325		ROAD	0.7	GY	✓		✓		✓	✓	5	55	135	x		0.32	95	15
64	300			0.6	DK GY	✓		✓		✓	✓	15	15	35	x		0.44	90	43
65	275		O/C?	5.0	GY	✓		✓		✓	✓	10	15	65	x		1.52	85	9
66	250			3.6	GY	✓		✓		✓	✓	5	10	10	x		0.83	90	19
67	225			1.2	GY WH	✓		✓		✓	✓	5	25	55	x		0.45	95	25
68	200			3.2	GY	✓		✓		FR	✓	10	30	75	x		0.47	100	9
69	175			3.6	DK GY BN	✓		✓			NB?	60	85	175	x		3.27	15	252
70	150			4.0	GY BN	✓		✓		✓	?	55	100	25	x		0.88	10	198
71	125			6.8	DK GY BN	✓		✓		✓	?	30	55	455	x		1.82	15	281
72	100			4.8	DK GY BN	✓		✓		✓	✓	130	1685	8260	1.5		4.42	5	204
73	75			3.9	DK GY BN	✓		✓		✓	✓	15	45	25	x		0.12	5	193
74	50			3.8	DK GY BN	✓		✓		✓	?	5	x	5	x		0.10	5	238
75	25			5.0	DK GY	✓		✓		✓	?	15	15	x	x		1.22	135	92
76	60000			13.7	DK GY	✓		✓		✓	?	10	20	35	x		0.92	145	53
77	59975			3.8	DK GY	✓		✓		✓	✓	5	15	85	x		0.45	120	7
78	950			0.6	GY	✓		✓		✓	✓	10	10	60	x		0.38	130	24
79	925			5.7	DK GY	✓		✓		✓	✓	50	9854	0.03%	0.5		1.97	5	17.6
80	900			7.4	BN GY	✓		✓		✓	✓	1395	2.54%	2.43%	3.5		0.90	5	15.4
81	875			5.9	LT BN GY	✓		✓		✓	?	45	185	190	x		3.57	15	33.6
82	850			7.9	GY	✓		✓		✓	✓	25	240	220	x		1.42	20	44.7
83	825			8.4	LT GY	✓		✓		✓	✓	15	20	180	0.5		0.45	135	2.6
84	800			1.0	DK GY	✓		✓		✓	✓	10	45	120	x		0.50	130	3.7
85	775			0.6	GY	✓		✓		FR	✓	10	35	75	x		2.22	230	2.9
86	750			1.0	DK GY	✓		✓		FR	✓	10	25	105	x		1.22	160	10.5
87	725			8.9	DK GY	✓		✓		✓	✓	5	5	30	x		0.37	235	5
88	700			7.8	DK GY	✓		✓		✓	✓	10	30	85	x		0.60	235	2.6
89	675			3.7	DK GY BN	✓		✓		✓	?	25	60	2510	x		4.77	30	24.6
90	650			5.6	PK BN	✓		✓		✓	?	5	5	x	x		0.15	10	3.02

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ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132079

PROJECT: E.L. 4/7.8.....
LOCALITY: ZEEHAN.....
GRID NAME: MYRTLE.....
NOMINAL GRID AZIMUTH:

MATERIAL: ? Weathered Bedrock..
SAMPLE METHOD: .. Wacker.....
SAMPLED BY: .. Pollock.....
DATE: .. Aug - Sep. 84.....

SIZE FRACTION ANALYSED: Whole.....
ANALYSED BY: Analabs.....
METHOD: P.A.S., Ba. by XRF

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA								METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe%	Mn	Ba
	50000N	NORTHING	EASTING	GRID EASTING																
62491	60350			*	4.0 DK GY	✓		✓		✓	✓	20	15	115	x		1.27	155	81	
92	375				11.8 GY	✓		✓		✓	✓	15	20	105	x		1.22	185	47	
93	400				7.8 DK GY BN	✓	✓	✓			NO	30	40	165	x		1.37	1.0	267	
99	400				17.2 DK GY			✓			✓	40	210	45	0.5		2.15	25	280	
62494	425				11.0 DK GY BN	✓					NO	25	45	170	x		1.67	25	247	
62500	425				17.2 PYRITE GY BN	✓					NO	20	55	115	x		2.65	25	286	
61501	425				26.4 GY WH			✓	✓	✓	✓	5	40	35	x		0.45	85	13	
62495	450				5.0 DK GY BN	✓					NO	25	25	210	x		5.67	30	139	
61502	450				12.4 GY WH			✓		✓	✓	5	40	40	x		0.75	120	30	
61503	475				15.5 GY WH			✓		✓	✓	5	35	65	x		0.70	150	27	
504	60500				11.3 DK GY	✓		✓		✓	✓	30	30	65	x		2.65	25	309	
505	525				9.4 BN GY GN	✓		✓		✓	✓	30	45	330	x		2.95	25	236	
506	550				21.8 BN GY GN	✓		✓		✓	✓	35	65	180	x		1.90	20	175	
61507	575			*	4.4 BN	✓		✓		✓	✓	25	65	165	x		2.75	20	188	

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132080

PROJECT: ...*EL. 4.78*.....
LOCALITY: ...*ZEEHAN*.....
GRID NAME: ...*MXRTLE*.....
NOMINAL GRID AZIMUTH:

MATERIAL: ...*BEDROCK*.....
SAMPLE METHOD: ...*WACKER*.....
SAMPLED BY: ...*POLTOCKS*.....
DATE: ...*7-84*.....

SIZE FRACTION ANALYSED: ...*WHOLE*.....
ANALYSED BY: ...*ANALABS*.....
METHOD: ...*A.A.S.*.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	50300N	GRID EASTING	NORTHING																
62953	60400E			*10.6	DRGY	✓						55	410	985	1.0		6.30	15	4770
954	375			11.6	DRGY	✓						105	425	1050	1.0		2.25	30	272
955	350			10.8	LTDKGY	✓			WE			25	105	40	0.5		0.24	6	427
956	325			12.7	CRBRBK	✓			WE			65	135	90	x		0.58	15	419
957	60300			12.5	LTGY	✓			WE			10	35	45	x		0.55	135	31
958	275			14.6	DRGYWH	✓			WE			25	95	490	x		2.40	45	273
62959	250			16.3	LTGYWH	✓			WE			15	35	85	x		0.49	90	75
960	225			13.8	GY	✓			WE			15	55	95	x		0.83	95	83
961	60200			12.5	GYWH	✓			WE			10	45	75	x		0.38	80	36
962	175			20.5	DRGYWH	✓			WE			10	60	290	1.0		1.30	120	129
963	150			18.3	DRGYWH	✓			WE			10	55	90	2.5		0.68	120	39
964	125			12.6	DRGYGM	✓			WE			25	970	7350	x		0.96	20	355
965	60100			16.3	DRGY	✓			WE			10	60	155	x		1.25	160	140
966	075			22.0	DRGYWH	✓			WE	NO		30	640	1000	1.0		2.35	225	120
967	050			7.7	DRGY	✓			WE			15	395	285	1.5		2.10	90	82
968	025			7.6	LTGY	✓			WE			10	50	40	0.5		0.22	10	607
62969	60000			1.3	LTGYBR	✓			WE			10	50	65	0.5		0.67	10	522
970	59975			5.6	LTGYBR	✓			WE			10	45	25	1.5		0.34	10	552
62971	59950			10.7	LTGYBR	✓			WE			20	40	30	0.5		0.36	10	532
62972	60425			12.7	DRGYWH	✓			WE			10	40	35	x		0.45	115	56
973	450			2.5	CRDRGY	✓			WE			10	45	130	0.5		0.78	255	25
974	475			1.5	DRGYWH	✓			WE			15	50	65	1.0		1.50	210	126
975	60500			10.6	LTGY	✓			WE			10	35	240	0.5		4.40	130	20
976	525			10.4	DKLTGY	✓			WE			40	60	75	1.0		2.05	255	98
977	550			22.0	GYGM	✓			WE	NO		20	85	1250	1.0		2.70	20	120
978	575			1.6	BR				WE			10	25	30	1.5		0.10	5	21
979	60600			4.7	DRGYBR	✓			WE			65	590	170	1.5		0.81	25	313
980	625			2.8	BR	✓			WE			10	45	25	x		0.15	10	364
62981	60650			*2.1	BR	✓			✓			5	25	20	1.0		0.10	5	215

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132081

PROJECT: ... E.L.A.-7B ...
LOCALITY: ... ZEEHAN ...
GRID NAME: ... MYRTLE ...
NOMINAL GRID AZIMUTH:

MATERIAL: ... BEDROCK ...
SAMPLE METHOD: ... WALKER ...
SAMPLED BY: ... POLTOCKS ...
DATE: ... 7-84 ...

SIZE FRACTION ANALYSED: ... WHOLE ...
ANALYSED BY: ... ANALABS ...
METHOD: ... A.A.S. ...

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)							
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Weathered	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	GRID EASTING	NORTHING	EASTING																
62982	60675			2.4	LTBRCK	✓		✓		WE	5	205	2.5	1.0		0.24	5	433	
983	700			8.8	SYDRGY		✓	✓		WE	10	1750	1.5	1.0		0.14	5	544	
984	725			7.6	CRWH	✓		✓		WE	45	1000	1.55	x		2.50	20	951	
985	750			10.0	EDNGYCR	✓		✓		WE	40	200	30	1.0		4.70	10	217	
986	775			5.0	LTBRCK	✓		✓		WE	20	60	20	1.0		1.45	1.5	238	
987	60800			49.8	CRWH	✓	✓	✓		WE	10	195	2.5	0.5		0.35	10	258	

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132083

PROJECT: ...EL. A-78...
LOCALITY: ...ZEEHAN...
GRID NAME: ...MYRTLE...
NOMINAL GRID AZIMUTH:

MATERIAL: ...BEDROCK...
SAMPLE METHOD: ...WACKER...
SAMPLED BY: ...POLYCKS...
DATE: ...7-84...

SIZE FRACTION ANALYSED: ...WHOLE...
ANALYSED BY: ...ANALABS...
METHOD: ...A.A.S....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)									
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Wax/meral	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	50500N	GRID EASTING	NORTHING	EASTING																
60386	60500E				13.4	LT DKGY	✓	✓		WH		15	110	175	x		1.25	155	80	
60385	60475				9.2	LTGY	✓	✓		WH		20	80	475	x		0.59	110	116	
60371	60460				10.8	GN BRGY		✓		WH		30	99.5	875%	6.5		2.30	25	1960	
60360	60450				9.2	LTGNBR		✓		WH		25	455	185%	2.0		2.55	40	5920	
60384	60425				13.0	GYBRGN	✓	✓		WH		295	150%	8600	8.5		0.76	20	2820	
60373	60410				1.8	LTGY		✓		WH		15	340	375	1.5		0.35	20	6760	
60383	60400				10.2	GY	✓	✓		WH		30	220	3450	x		2.10	35	6120	
60387	60375				13.6	DKGY	✓	✓		WH		40	140	5150	x		1.35	25	495	
388	350				1.6	DKGYGM	✓	✓		WH		30	130	245	y		0.25	15	222	
389	325				1.2	GYGNBN	✓	✓		WH		35	100	6250	x		1.70	25	428	
60390	60300				4.6	DKGY	✓	✓		WH		25	45	360	x		1.70	30	360	
391	275				14.0	DKGYBR	✓	✓		WH		20	40	1900	x		3.55	30	338	
392	250				1.8	GYLTGY	✓	✓		WH		15	35	230	x		0.53	85	49	
393	225				4.3	GY		✓		WH		15	40	235	x		1.75	195	51	
394	60200				2.8	DKGYWH		✓		WH		50	160	570	1.5		1.90	940	55	
395	175				7.8	DKGYWH		✓		WH		15	40	315	x		0.75	260	51	
396	150				13.6	DKGY		✓		WH		15	45	455	x		0.65	345	49	
397	125				2.0	CRBR		✓	✓	WH		15	30	180	x		0.20	20	x	
60398	60100				6.8	BR		✓	✓	WH		15	30	195	0.5		0.20	20	52	
62901	60525				14.0	DKGY	✓				NB	50	290	1050	0.5		3.60	30	332	
902	550				8.6	DKGY		✓		WH		20	50	205	x		1.20	150	41	
62903	60575				13.6	LTGYWH	✓	✓		WH		15	45	180	x		1.25	145	67	

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132084

PROJECT: .. E.L. 4-78.....
LOCALITY: .. ZEEHAN.....
GRID NAME: .. MYRTLE.....
NOMINAL GRID AZIMUTH:

MATERIAL: ... BEDROCK.....
SAMPLE METHOD: ... WACKER.....
SAMPLED BY: ... POLTOLKS.....
DATE: 7/84.....

SIZE FRACTION ANALYSED: ... WHOLE.....
ANALYSED BY: ... ANALABS.....
METHOD: ... A.A.S.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)									
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	50500N	NORTHING	EASTING	GRID EASTING																
62904	60600E				3.0	LTGYWH	✓		✓		WH		15	25	175	x		0.60	110	86
905	625				2.3	DKGYWH	✓		✓		WH		20	55	240	x		1.55	180	38
906	650				1.6	DKGY			✓				40	465	350	x		3.65	260	73
907	675				1.8	GY			✓		WH		15	40	190	x		1.40	200	23
908	60700				1.0	GY	✓		✓		WH		20	35	190	x		2.35	235	67
909	725				2.8	GYWH			✓		WH		15	30	150	x		0.65	150	38
62910	750				22.0	DKGY	✓				NO		30	420	1050	x		2.30	125	140
911	775				4.6	GYWH			✓		WH		15	35	245	x		1.95	500	48
912	60800				5.8	GY	✓		✓		WH		25	40	225	x		1.35	145	20
913	825				3.6	GYWH			✓		WH		15	30	130	x		0.65	140	23
914	850				5.5	GYWH	✓		✓		WH		10	35	195	x		0.55	185	30
915	875				11.0	LTGY	✓				NO		20	30	500	0.5		0.35	15	360
916	60900				17.0	DKGY	✓		✓		WH		20	40	145	x		1.45	85	310
917	925				2.6	LTGY			✓		WH		15	30	195	x		0.44	190	67
918	950				1.0	DKGY			✓				10	50	145	0.5		1.15	380	57
919	975				6.8	LTBRBK	✓		✓		WH		65	775	950	x		2.80	60	100
920	61000				10.8	LTBRBR	✓		✓		WH		15	60	105	x		1.30	15	408
921	25				2.8	LTBRCA	✓	✓	✓		WH		15	30	210	x		0.47	20	28
62922	61050				1.0	LTGY	✓	✓	✓		WH		5	10	85	0.5		0.12	10	x

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132085

PROJECT: ... E.A. 1-78
LOCALITY: ... ZEEHAN
GRID NAME: ... MYRTLE
NOMINAL GRID AZIMUTH:

MATERIAL: ... BEDROCK
SAMPLE METHOD: ... WACKER
SAMPLED BY: ... POLTOCKS
DATE: ... 7-84

SIZE FRACTION ANALYSED: ... WHOLE
ANALYSED BY: ... ANALABS
METHOD: ... A.A.S.

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES			DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Weathered	Bedrock	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	50600N	GRID EASTING	NORTHING	EASTING																
62923	60875E				*4.8	DRGY	✓	✓	✓	WH		35	70	215	X		0.94	30	414	
924	900				7.3	DRGY	✓	✓	✓	WH		25	330	500	0.5		4.40	25	271	
925	925				1.0	BR		✓	✓		?	5	20	10	X		0.14	5	60	
926	950				10.7	DRBR	✓	✓	✓	WH		1850	1850	30	X		0.15	5	247	
927	850				0.8	GY	✓	✓	✓	WH		15	35	145	X		1.10	10	472	
928	825				5.0	GY	✓	✓	✓	WH		15	40	30	X		0.42	85	42	
929	60800				1.2	DRGY		✓	✓	WH		10	45	55	X		0.85	100	76	
62930	775				2.6	BRBK	✓	✓	✓	WH		65	350	35	3.5		0.12	5	275	
931	750				9.7	DRGY		✓	✓	WH		10	85	315	X		1.60	150	85	
932	725				4.5	GYWH		✓	✓	WH		10	30	45	X		0.42	85	31	
933	60700				4.8	DRGY	✓	✓	✓	WH		10	45	75	X		1.45	155	54	
934	675				0.7	DRGY		✓	✓			10	35	60	X		0.33	60	37	
935	650				0.9	DRGY		✓	✓	WH		10	30	25	X		0.38	75	39	
936	625				0.8	DRGYWH		✓	✓			10	30	35	X		0.85	130	81	
937	60600				1.0	GYWH		✓	✓	WH		10	30	55	X		0.46	105	43	
938	575				0.8	GY		✓	✓			10	35	60	X		0.48	80	74	
939	550				0.5	GY		✓	✓			10	55	30	X		0.88	95	82	
62940	525				0.5	DRGYWH		✓	✓			5	40	40	X		0.28	70	36	
941	60500				1.0	DRGY	✓	✓	✓	WH		10	40	30	X		0.68	110	66	
942	475				6.7	DRGYWH	✓	✓	✓	WH		10	35	85	X		0.50	105	40	
943	450				13.6	DRGY	✓	✓	✓		NB	25	345	1700	X		2.25	30	601	
944	425				14.3	GY	✓	✓	✓	WH		20	65	1450	X		7.00	20	3070	
945	60400				19.5	GYWH	✓	✓	✓	WH		55	560	1750	X		0.97	30	507	
946	375				21.8	DRGYBR	✓	✓	✓	WH		15	4050	12.0%	5.5		1.85	10	2020	
947	350				14.3	DRGY		✓	✓	WH		10	65	520	X		1.15	170	115	
948	325		PYRITE		13.6	GY	✓	✓	✓	WH		15	65	310	X		1.80	210	173	
949	60300				20.5	DRGY		✓	✓	WH		10	95	645	0.5		0.95	170	113	
62950	275				8.7	LTGYBR	✓	✓	✓	WH		35	55	9200	0.5		1.80	20	458	
951	250				4.0	LTBRGY	✓	✓	✓	WH		35	835	3200	3.0		0.32	10	528	
62952	60225				*7.2	BFBRGY	✓	✓	✓	WH		105	95	125	0.5		0.25	10	481	

E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132086

PROJECT: ...E.L.A-78.....
LOCALITY: ...ZEEHAN.....
GRID NAME: ...MYRTLE.....
NOMINAL GRID AZIMUTH:

MATERIAL:BEDROCK.....
SAMPLE METHOD:WACKER.....
SAMPLED BY:POL.TOCK.....
DATE:4-85.....

SIZE FRACTION ANALYSED: ...WHOLE.....
ANALYSED BY: ...ANALABS.....
METHOD: ...A.A.S.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA							METAL CONTENT (ppm unless specified)								
	GRID LINE NO.		A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags	Organic	Bedrock	Weathering	Cu	Pb	Zn	Ag	Au	Fe%	Mn	Ba
	50200N	60375E	NORTHING	EASTING																
64449	60375E			26.9	GY	✓	✓	✓				25	60	1155			2.28	50	183	
450	350			12.9	DKGY WH	✓	✓	✓			✓	10	25	125			1.96	215	67	
451	325			16.7	DKGY WH	✓	✓	✓			✓	30	80	305			3.19	15	324	
452	300			13.0	DKGY		✓	✓			✓	10	5	5			1.86	180	135	
453	275			16.0	DKGY WH	✓	✓	✓			✓	15	40	1055			1.56	20	423	
454	250			12.0	BRCRGY	✓	✓	✓			✓	70	1840	6005			2.26	10	447	
455	225			6.4	BRCRGY	✓	✓	✓			✓	5	10	x			0.11	x	309	
456	200			8.0	BRCRGY	✓	✓	✓			✓	180	60	5			0.20	x	371	
457	175			12.7	LTGY	✓	✓	✓			✓	25	30	855			1.36	x	328	
458	150			10.2	BRBRGY	✓		✓		NO	✓	35	65	625			3.26	50	304	
459	125			12.1	DKGY		✓	✓			✓	5	x	50			0.80	135	25	
64460	100			6.7	LTGY		✓	✓		NO	✓	x	x	245			0.47	75	12	
461	075			8.8	LTBRGR	✓	✓	✓		NO	✓	30	5	95			1.58	5	548	
462	050			10.1	LTBRGR	✓	✓	✓		P	✓	45	40	185			2.56	x	503	
463	025			12.7	DKGY GN		✓	✓			✓	5	x	x			0.55	95	23	
464	60000			10.1	DKGY		✓	✓			✓	5	15	170			0.81	95	74	
465	59975			11.8	BRBR WH	✓	✓	✓			✓	55	200	3805			1.06	x	275	
466	950			12.2	GYWH		✓	✓			✓	5	10	15			0.41	65	10	
467	925			1.2	GYWH		✓	✓			✓	10	355	185			0.69	80	44	
468	900			0.7	GYWH		✓	✓			✓	5	30	45			0.66	75	17	
469	875			0.1			✓	✓			✓	x	x	x			0.13	60	x	
470	850			0.2	DKGY		✓	✓			✓	10	20	20			0.60	75	74	
471	825			2.0	LTGY		✓	✓			✓	5	10	70			0.25	70	25	
64472	59800E			2.3	LTGY		✓	✓			✓	10	30	70			0.27	75	73	
64473	60400			13.7	DKGY		✓	✓			✓	10	25	955			3.28	5	512	
474	425			7.4	WHDKGY		✓	✓			✓	5	x	45			0.32	70	24	
475	450			2.6	DKGY		✓	✓			✓	10	15	50			0.97	110	65	
476	475			2.3	GY		✓	✓			✓	5	10	25			0.12	20	23	
64477	500			10.2	DKBR	✓	✓	✓			✓	15	40	455			7.66	15	159	

E.Z. Co. of A'Asia Ltd.,
ROSEBERRY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132087

PROJECT: ..F.A.A.7B.....
LOCALITY:
GRID NAME: ..MYRTLE.....
NOMINAL GRID AZIMUTH:

MATERIAL:BEDROCK.....
SAMPLE METHOD:WACKER.....
SAMPLED BY:POLTOCK.....
DATE:4-85.....

SIZE FRACTION ANALYSED: ..W.T.G.F.E.....
ANALYSED BY: ..ANAFABS.....
METHOD:A.A.S.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA								METAL CONTENT (ppm unless specified)							
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH M	COLOUR	Clay	Sand	Rock Frags	Organic	Bedrock	Weathered	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba	
	GRID EASTING	NORTHING	EASTING																	
64478	59850E			17.7	DKGY	✓	✓				✓	20	30	90			2.36	20	507	
479	825			7.8	DKGY	✓	✓				✓	10	25	370			3.16	x	265	
480	800			2.6	GYWHCR			✓			✓	5	x	40			0.34	135	12	
481	775			0.6	DKGYWH			✓			✓	5	20	40			0.98	250	62	
482	750			1.2	GYWH			✓			✓	5	x	20			0.09	45	x	
483	59725			2.0	GYWH			✓			✓	5	10	90			0.71	625	11	
64484	59875			1.0	GY			✓			✓	x	x	15			0.40	195	12	
64495	59700			4.8	DKGYBR	✓	✓				✓	15	30	340			3.36	x	545	
64486	59900				LTGY			✓			✓	5	x	335			0.25	85	x	
487	925			2.0	GYWH			✓			✓	5	15	175			0.69	85	14	
488	950			1.0	LTGY			✓			✓	5	x	x			0.74	70	82	
489	975			0.6	LTGY			✓			✓	5	x	5			0.84	130	48	
64490	60000			0.8	GY			✓			✓	x	x	x			0.64	90	21	
491	025			0.7	GYWH			✓			✓	x	x	135			0.16	50	15	
492	050			1.0	GYWH			✓			✓	x	x	x			0.54	75	33	
493	075			0.7	GY			✓			✓	x	x	x			0.50	60	28	
494	60100			0.6	GY			✓			✓	x	x	x			0.25	50	26	
495	125			0.9	GY			✓			✓	x	x	x			0.27	40	44	
496	150			2.2	DKGY			✓			✓	5	x	x			0.97	145	56	
497	175			3.1	WHDKGY			✓			✓	5	x	x			1.16	130	121	
498	60200			14.5	DKGY			✓			✓	5	x	x			1.16	160	120	
499	225			8.6	DKGY			✓			✓	5	x	x			0.99	165	92	
64500	60250			16.3	WHDKGY			✓			✓	5	x	x			0.97	155	82	

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E.Z. Co. of A'Asia Ltd.,
ROSEBERY, Tasmania

GEOCHEMICAL SAMPLE DATA SHEET

132088

PROJECT: ..F.H.:78.....
LOCALITY: ...ZEEHAN.....
GRID NAME: ...MYRTLE.....
NOMINAL GRID AZIMUTH:

MATERIAL: ...BEDROCK.....
SAMPLE METHOD: ...WACKER.....
SAMPLED BY: ...N. POLTOCK.....
DATE: ...4.85.....

SIZE FRACTION ANALYSED: ...WHOLE.....
ANALYSED BY: ...ANALABS.....
METHOD: ...AAS, Ba. by XRF.....

SAMPLE NUMBER	SAMPLE LOCATION DATA				SAMPLE COMPOSITION DATA						METAL CONTENT (ppm unless specified)								
	GRID LINE NO.	A.M.G. CO-ORDINATES		DEPTH	COLOUR	Clay	Sand	Rock Frags.	Organic	Bedrock	Weathered	Cu	Pb	Zn	Ag	Au	Fe %	Mn	Ba
	49600N	NORTHING	EASTING																
66201	60275			5.0	Gy			✓		✓	✓	5	x	x			0.67	150	11
202	250			7.9	LT Gy			✓		✓	✓	5	x	x			0.36	65	x
203	225			1.9	DK Gy			✓		✓	✓	10	15	x			1.26	185	215
204	200			1.7	LT Gy WH			✓		✓	✓	x	x	x			0.09	40	x
205	175			1.9	Gy WH			✓		✓	✓	5	x	x			0.65	125	11
206	150			1.9	DK Gy			✓		✓	✓	5	x	x			1.17	125	95
207	125			1.5	DK Gy WH			✓		✓	✓	5	x	x			0.77	40	68
208	100			1.4	Gy WH			✓		✓	✓	5	x	x			0.75	55	79
209	075			2.0	DK Gy			✓		✓	✓	5	5	x			1.76	115	107
210	050			2.1	DK Gy WH			✓		✓	✓	5	5	x			0.75	110	49
211	025			12.8	Gy			✓		✓	✓	5	x	x			1.20	160	90
212	60000			2.0	Gy			✓		✓	✓	5	x	x			0.29	45	38
213	59975			2.0	Gy WH			✓		✓	✓	5	x	x			0.34	65	24
214	950			4.8	DK Gy WH			✓		✓	✓	x	5	55			0.34	235	x
215	925			2.7	LT Gy			✓		✓	✓	5	x	x			0.40	165	39

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APPENDIX C. - Mitre Geophysics Reports:

- EZ/MG 85/01 - Interpretation of UTEM Surveys
over the Grieves and Myrtle Grids.
- EZ/MG 85/02 - An Interpretation of the Grieves Grid
Gravity Anomaly.
- EZ/MG 85/05 - Interpretation of UTEM Surveys over
the Baura and Grieves Grids.



MITRE GEOPHYSICS PTY LTD

MINERAL EXPLORATION AND ENGINEERING CONSULTANTS

BUGGS LANE ELLIOTT TASMANIA 7325 PHONE 004-363143

INTERPRETATION OF UTEM SURVEYS OVER
THE GRIEVES AND MYRTLE GRIDS
(E.L. 4/78, Zeehan)

for

Electrolytic Zinc Company

by

Dr J.R. Bishop

EZ/MG85/01
January, 1985.



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TABLES and FIGURES

- Table 1. UTEM coverage of Grieves and Myrtle grids.
- Figure 1. Interpretation of UTEM Survey: Grieves Grid.
- Figure 2. Interpretation of UTEM Survey: Myrtle Grid.
- Figure 3. Coupling of Fixed Loop EM Fields to a Dipping Conductor.
- UTEM Profiles: Grieves Grid.
- UTEM Profiles: Myrtle Grid.

Figures referred to, but not included in this report.

Grieves Grid: Depth to Solid Bedrock (1:5000 scale).

Myrtle Grid: Depth to Solid Bedrock (1:5000 scale).

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132093

SUMMARY

Several lines on the Grieves and Myrtle grids have been surveyed with UTEM. The surveys were carried out to evaluate the usefulness of this technique in EZ's exploration program for sediment-hosted Pb-Zn deposits in the Zeehan area.

A number of responses were obtained, all indicative of poor conductors. The best responses occurred at the eastern ends of lines on the Grieves grid and were only partially defined.

Although no conclusion can be made as to the method's overall suitability for this type of target, the responses obtained are sufficiently interesting to warrant further work.



INTRODUCTION

The Grieves and Myrtle grids are located over limestone horizons within E.L. 4/78 (Zeehan). This licence is being explored under a joint venture agreement between EZ and Amoco, with EZ managing the program.

Several lines on both grids were surveyed with the UTEM system in December, 1984. The survey was carried out to evaluate the effectiveness of a large-loop, roving-receiver electromagnetic technique in this environment. This report interprets the results from the survey.

GEOLOGY AND EXPLORATION TARGET

The main target within E.L. 4/78 is a carbonate hosted Pb-Zn deposit. The expected style is the Irish-type, which suggests that the mineralisation would occur as epigenetic feeder zones including replacement veinlets, stockwork zones and cavity infilling; as well as syndiagenetic and stratiform ore. Unlike the Irish deposits, there may not be abundant pyrite. Such mineralisation may not be very conductive, particularly if there is a much higher percentage of zinc than lead (sphalerite being non-conductive)*. Because of the expected low conductivity of the target, the UTEM system with its 'early' measurement gates, is probably the EM method most suited to the task.

Again because of the low conductivity, it is unlikely that any response from mineralisation will be discriminated by its conductance, (ie, mineralisation may have the same conductivity-thickness product as faults or contacts) thus all of the responses should be evaluated.

The target area is a relatively narrow belt of Ordovician limestone (the Gordon Limestone; no more than 800m wide on the Grieves and Myrtle grids) which occurs within a series of steeply plunging synclines and anticlines. The limestone is bounded to the north by a faulted contact with the Silurian Crotty Quartzite and to the south by a similar dip contact with the Ordovician Moine Sandstone. Both contacts dip at about 50° to the north. In places, the Gordon Limestone contains graphitic sequences which may give rise to unwanted EM responses.

EXPLORATION HISTORY

A compilation of the exploration carried out prior to Amoco being granted the licence in 1978, is given in Bishop (1983). The work

* For example, UTEM surveys over the large Black Angel Zn-Pb deposit in Greenland failed to respond. More locally, Pulse EM surveys over the Oceana deposit also gave no response.



carried out by Amoco (who had sole tenure until 1983) is summarised by Mathison and Kary (1984). The work carried out since then is described by Mathison (1984).

INTERPRETATION

Several responses were obtained on both grids. Conductive zones (ie, those responses which can be correlated across at least two lines) have been labelled alphabetically. The isolated anomalies are referred to by position.

The better anomalies were recorded on the Grieves grid and three of these have been quantitatively interpreted.

GRIEVES GRID

Four lines were surveyed on the Grieves Grid (see Table 1 for details). Several responses were obtained on each line, though none indicated the presence of 'good' conductors. Most of the responses can be correlated (at least tentively) between lines. This results in five zones which have been labelled A to E (see Figure 1). There are also three discrete (one-line) anomalies.

The area is moderately conductive. On all lines except 47100N, a conductive overburden is indicated. This has a conductance of about 0.4mho. The average depth to bedrock in this region is around 10m; this depth indicates a resistivity of 25ohm-m for the surface layer. The data on line 47100N is more suggestive of a conductive host rock; a value of 200ohm-m has been interpreted.

On each line, the northernmost (ie, grid west) response corresponded approximately with the faulted contact between the Crotty Sandstone and the Gordon Limestone (zone A in Figure 1). Except for 47100N, these responses were located to the south (ie, up-dip) of the indicated position of the fault.

The northern edge of a siltstone horizon which runs through the grid, was also recorded on all four lines (zone B). The response was best developed on line 47100N and this was quantitatively interpreted (although not all parameters could be accurately determined, due to interference from an adjacent anomaly). The conductor lies beneath 60945E (+/- 20m) at a depth of approximately 100m. It dips to the north (ie, towards the loop) at an angle between 30° and 60° (not well constrained). The depth extent appears to be limited, which suggests that the source is not just the plane of contact between the two rock types (however depth extent determination is difficult when there are adjacent conductors). The conductor is probably thin and has a conductivity-thickness product of 2mhos (ie, a poor conductor).

On line 47300N, zone B, at 60850E, is close to the position of a gravity high. The source is less conductive (about 0.5mhos) and is much shallower (at 35 to 40m) than the response on line 47100N. Also in contrast to 47100N, depth extent appears to be



significant; perhaps 100m (estimates varied between 50 and 200m). Again the dip was to the north, at about 40°. (Assuming a massive sulphide body, the gravity indicated a wide source at a very shallow depth below 60800E: Bishop, 1985.)

On line 47900N, a response corresponds with the footwall of the siltstone horizon (at 60710E). No quantitative interpretation has been attempted on this anomaly, however it would appear to have similar properties to zone B. The footwall was not detected on the other three lines.

Zone C, within the limestones, appears to follow geologic strike (as defined for example, by the siltstone horizon). The responses on lines 47900N and 47600N have been tentatively correlated and more doubtfully still, between 47600N and 47300N. A response occurs on 47100N (near 61100E), but I have not carried the correlation through to this line. The zone is best developed on 47300N and this has been interpreted. The source is located at a depth of about 55m below 61025E. It has a depth extent comparable to its depth (50 to 60m) and dips at about 55° to the north. A thin source is interpreted, with a conductivity-thickness product of less than 2mhos.

The remaining two zones (D and E) occur close together near the southern (grid east) ends of lines 47300N, 47600N and 47900N; the correlations between the first two being less confident than those between the latter two. Zone D is not strongly developed on any line and is probably due to a shallow, weak conductor. Although zone E is only partially defined, it appears to be a much better conductor than any of the other responses on the grid (or on the Myrtle grid). Zone E has been recorded over a strike length of 850m and appears to be the best conductor detected by the UTEM survey. It is recommended that this area be resurveyed to properly define the anomaly.

The remaining anomaly interpreted from this survey is at 60870E on line 47900N. A small, shallow source with a conductance similar to those interpreted elsewhere on the grid is suggested.

MYRTLE GRID

Seven lines of the Myrtle grid were surveyed with a loop on the western side of the grid and three of these lines were resurveyed with a loop on the eastern side (see Table 1 for details of coverage). A number of responses were recorded. These were nearly all weak (evident on early times only) and mostly of small amplitude. Most of the responses have been interpreted as being due to superficial (horizontal layer) conductors of limited extent*. That is, there is no broad area of conductive overburden such as occurs at Grieves, and the host rock is moderately resistive. The resistivity of the horizontal sheet on line

* Such conductors give rise to a 'trough' shaped response; eg, (footnote continued at the bottom of the next page)

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50600N (where the anomaly is best developed) is of the order of 10ohm-ms (or less) assuming a thickness of 15m (ie, about the average of the depth to bedrock in this region).

One zone (A) was recorded on all lines surveyed. At the (grid) south eastern corner, it coincides with the limestone/sandstone contact, but then diverges to the east (by about 100m) on more northerly lines (see Figure 2). If the geological boundary is only inferred in this region, then perhaps zone A is its proper location. This eastern contact was also detected (from both loops) where it recrossed line 50400N. (In contrast to the Grieves grid, the western contact with the Crotty Quartzite did not respond.)

A weak isolated anomaly was interpreted at the western end of line 50800N. This occurs within an area mapped as Crotty Quartzite and is therefore of no interest#. An isolated response is shown on Figure 2 at 60525E/50500N. This may not be 'real' (?culture), since the response continues undiminished to late times (channel 2). The isolated response at 60350E/50400N may also not indicate a (weak) dipping conductor, but may be due to the edge of a conductive overburden layer.

CONCLUSIONS AND RECOMMENDATIONS

The several weak responses on the Myrtle grid have mostly been interpreted as being due to patches of conductive overburden. No prospective anomalies were indicated.

On the Grieves grid three zones were recorded over the limestone (plus the responses along the siltstone contact and the northern (faulted) boundary). No strike lengths have been determined and all could be formational. The most southerly zone is apparently the best conductor, however it is only partially defined and resurveying is recommended.

The positions of the Grieves grid and main Myrtle grid loops were such that the dip of the strata was towards the loops. This

(continued from previous page)
between 60275E and 60525E on line 50600N. Some anomalies are more subtle (eg, between 60450E and 60600E on line 50900N) and mis-interpretation is possible. That is, two separate and dipping (poor) conductors could be interpreted as the edge effects of a horizontal sheet (and vice-versa). Here, the coincidence of a swamp with the suggested surface conductor, adds confidence to the interpretation.

Although if the indicated boundaries can be moved the 100 or so metres suggested above, its potential could be reconsidered. The anomaly was only interpreted from the easterly loop: there was no response from the nearby (130m) western loop. If real, a poor, shallow conductor is indicated.

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does not allow optimum coupling (demonstrated in Figure 3) and it is recommended that any follow up survey at Grieves, uses a loop placed at the (grid) eastern ends of the lines. The position of the leading edge of such a loop, placed for optimal coupling to zone E, is shown in Figure 1.

From the results of this survey, I can make no comment as to whether UTEM would prove to be a useful method in this environment. However the responses obtained are sufficiently interesting to recommend further work in the immediate area.

J.R. Bishop
January, 1985.



REFERENCES

- Bishop, J.R., 1983. An evaluation of the geophysical surveys carried out within E.L. 4/78 prior to 1978. Mitre Geophysics report 83/02 for Amoco.
- Bishop, J.R., 1985. An interpretation of the Grieves grid gravity anomaly. E.L. 4/78 (Zeehan). Mitre Geophysics report 85/02 for EZ.
- Mathison, I., 1984. E.L. 4/78 (Zeehan) -Progress report on exploration activity 14th January - 14th June, 1984. EZ report no. T192.
- Mathison, I. and Kary, G., 1984. Progress report on exploration activity 14th June, 1983 to 14th January, 1984. EZ report no. T177.

099



132100

Table 1

UTEM COVERAGE OF THE GRIEVES AND MYRTLE GRIDS

Survey by: Lamontagne Geophysics.

date: December, 1984.

component measured: vertical.

station spacing: 25m.

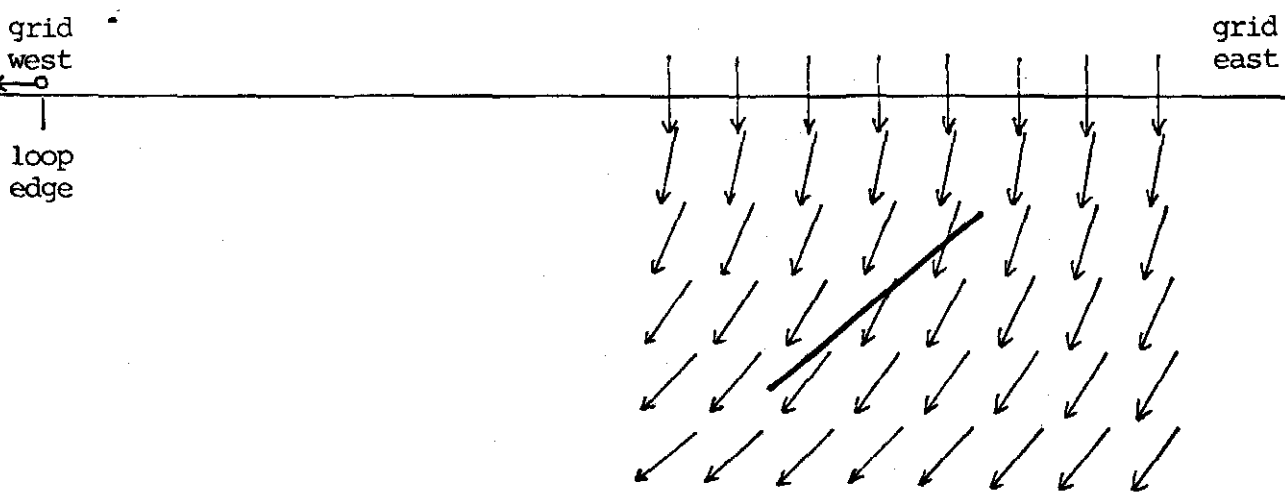
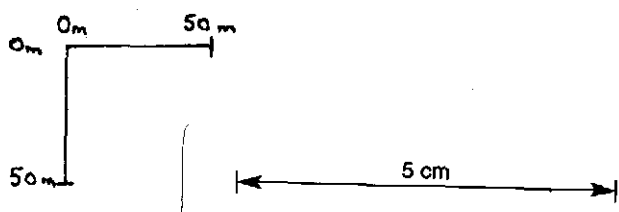
GRIEVES GRID

Line	Stations
47100N	60575E - 61350E
47300N	60500E - 61350E
47600N	60500E - 61200E
47900N	60400E - 61225E

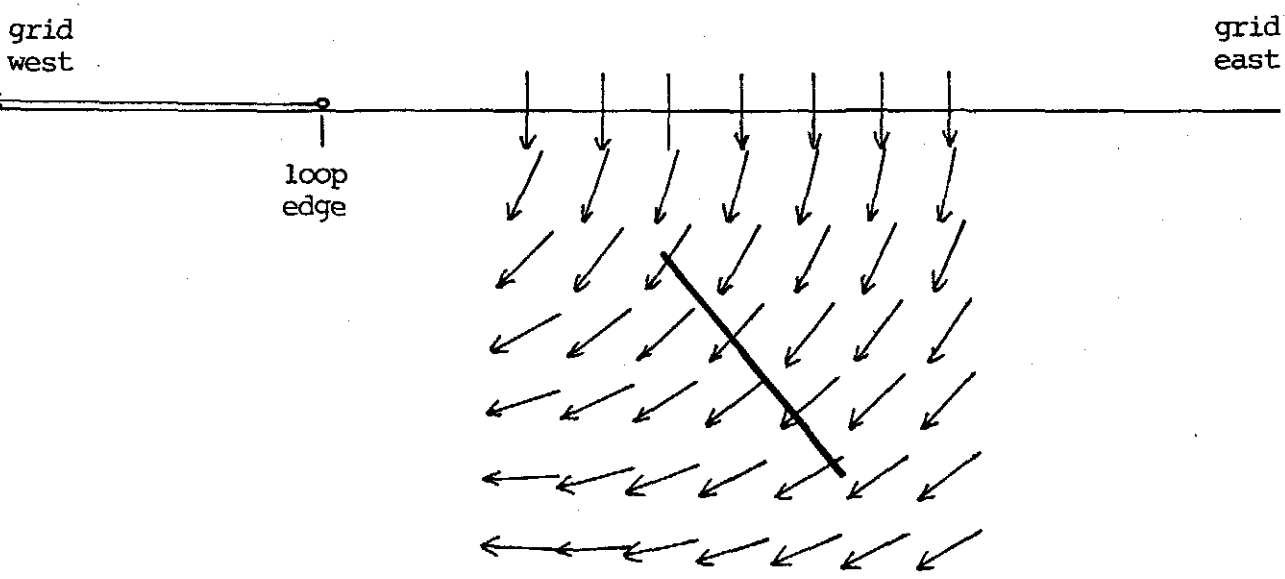
MYRTLE GRID

Line	Stations (loop 1)	Stations (loop 2)
50400N	60125E - 60975E	60125E - 60975E
50500N		60125E - 60975E
50600N	60125E - 60975E	60125E - 60950E
50700N		60125E - 60900E
50800N	60125E - 60975E	60125E - 60850E
50900N		60125E - 60850E
51000N		60150E - 60800E

100

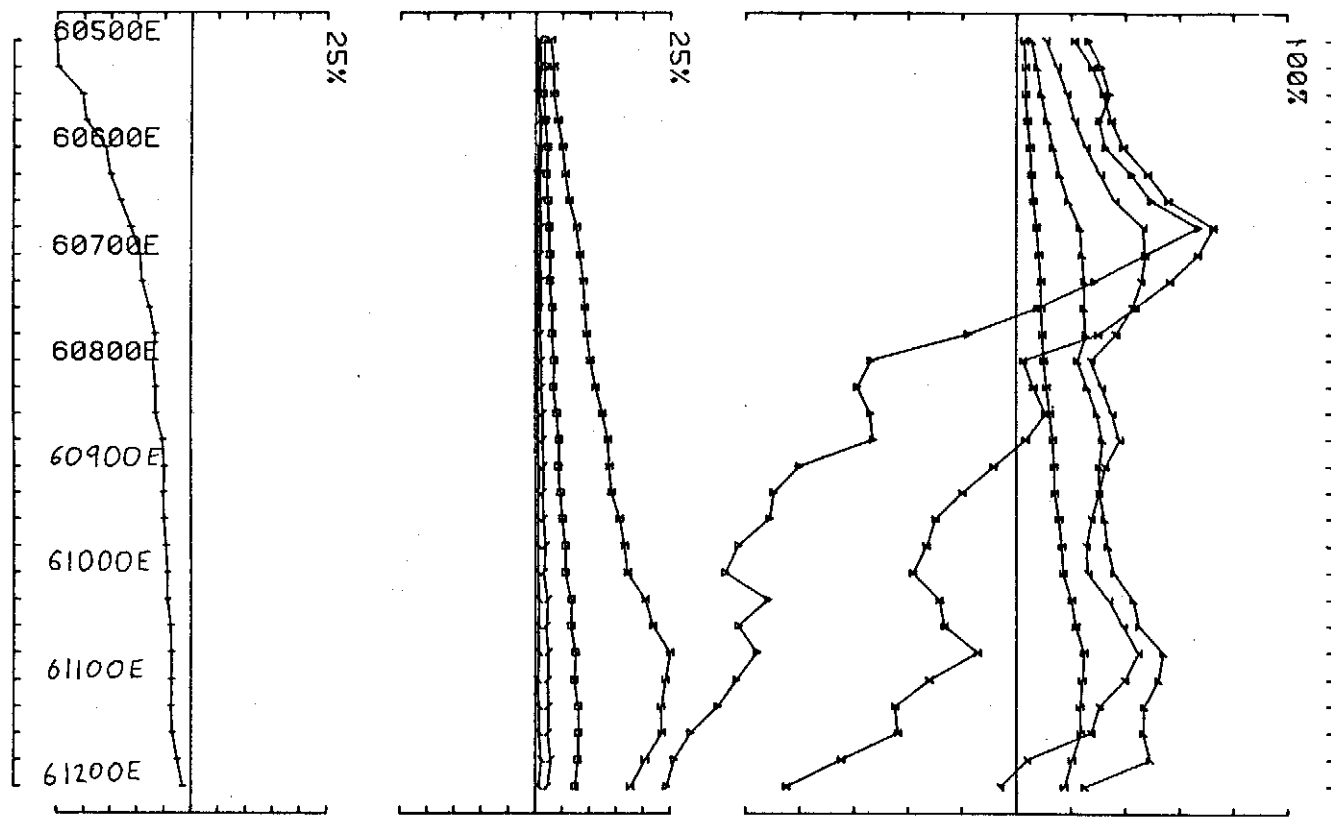


Poor coupling for Grieves grid anomaly zone 'B' at 47300N/60850E.



Good coupling for conductor dipping at 50 deg. to (grid) east and buried to 50m.

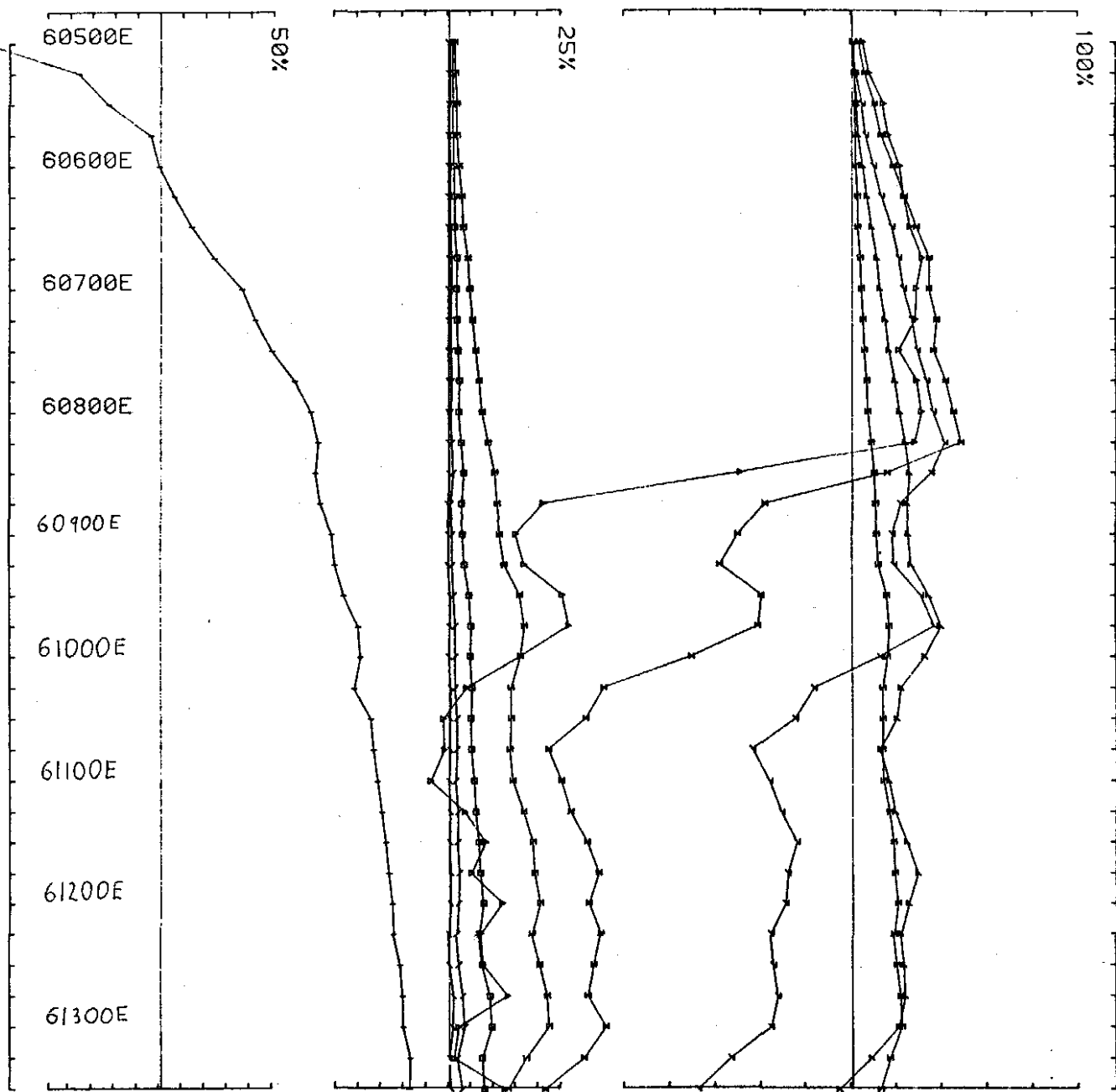
COUPLING OF FIXED LOOP EM FIELDS TO DIPPING CONDUCTORS	
J.R.B.	Jan. 1985
	FIG. 3.



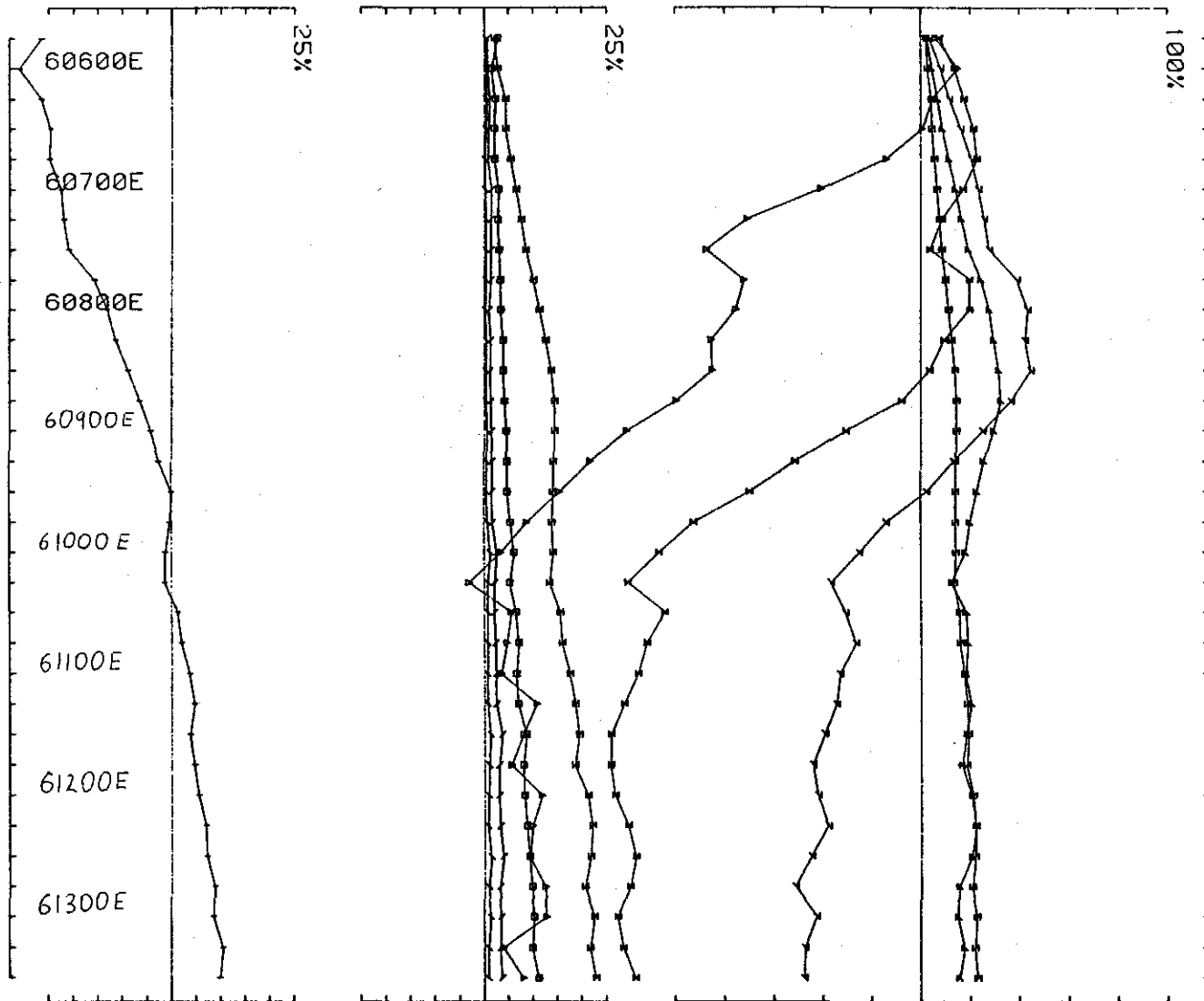
UTEM SURVEY conducted by PMM PAO Job 8456

Project Area Grievess Survey for E.Z. Exploration freq(hz) 26.230

Loopno 0001 Line 47600N component Hz secondary Ch 1,



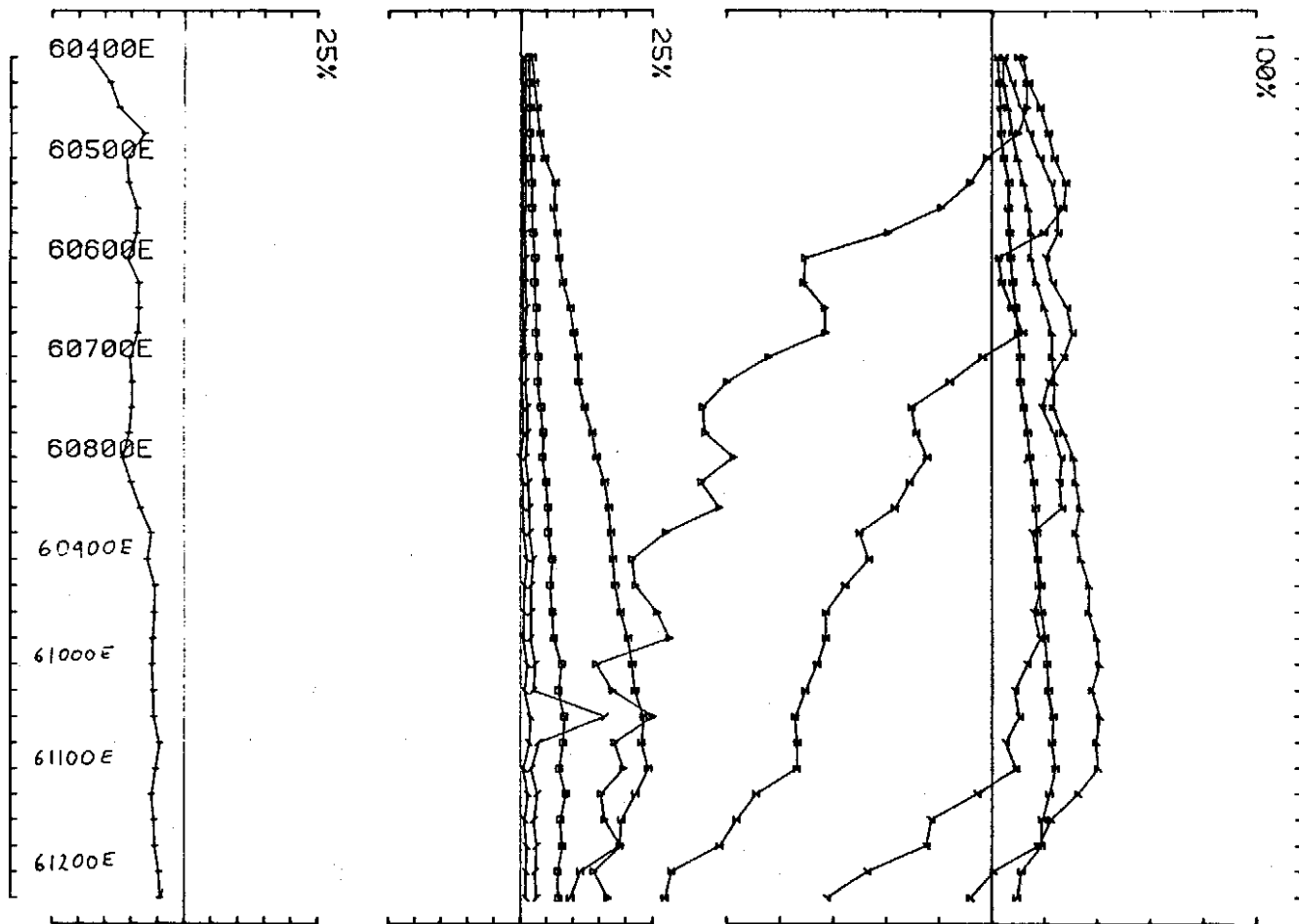
UTEM SURVEY conducted by PMM PA0 Job 8456
Project Area Grieves Survey for E.Z. Exploration freq(hz) 26.230
Loopno 0001 Line 47300 N component Hz secondary Ch 1



UTEM SURVEY conducted by PMM PA0 Job 8456

Project Area Grievess Survey for E.Z. Exploration freq(hz) 26.230

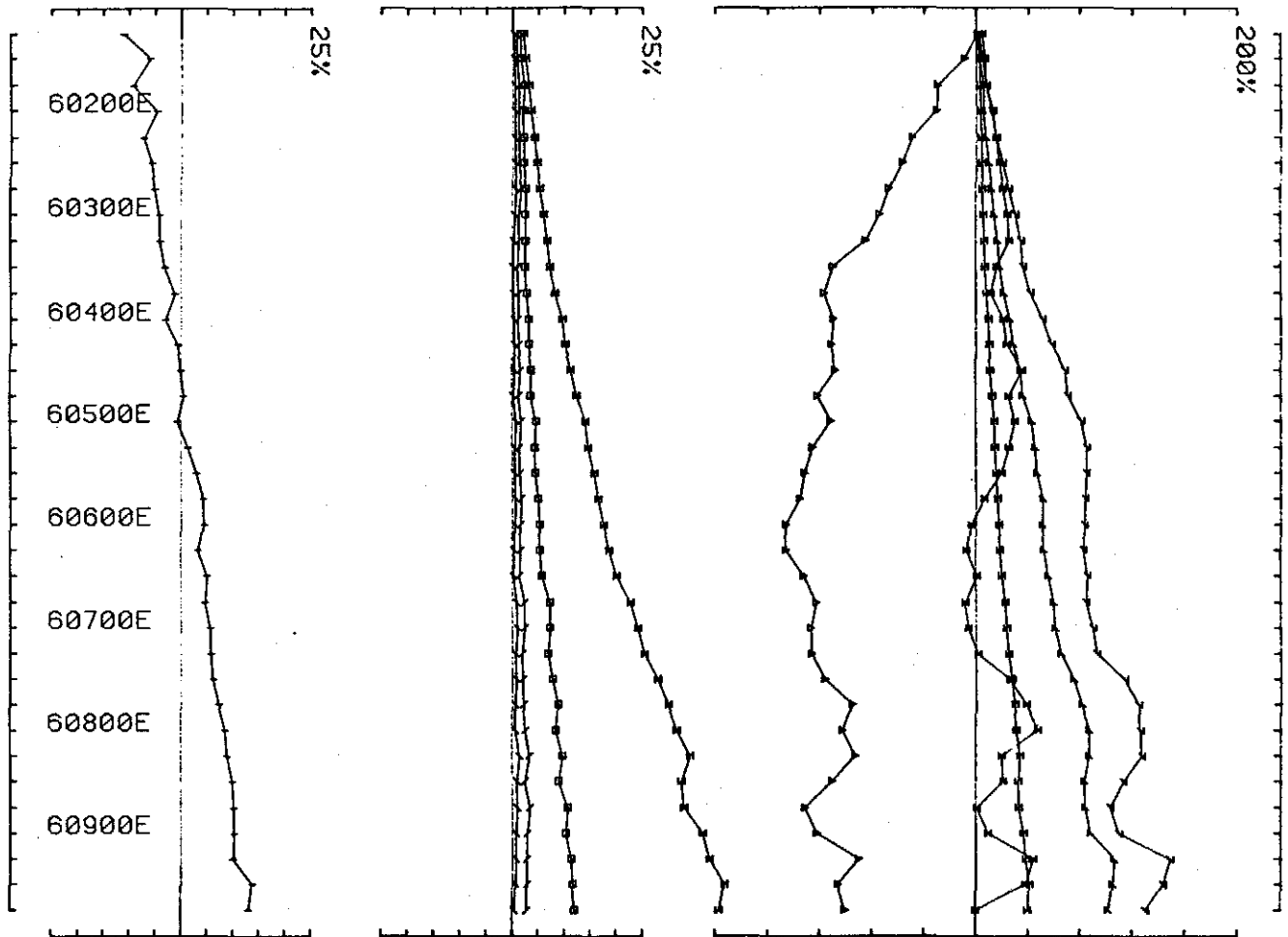
Loopno 0001 Line 47100N component Hz secondary Ch 1



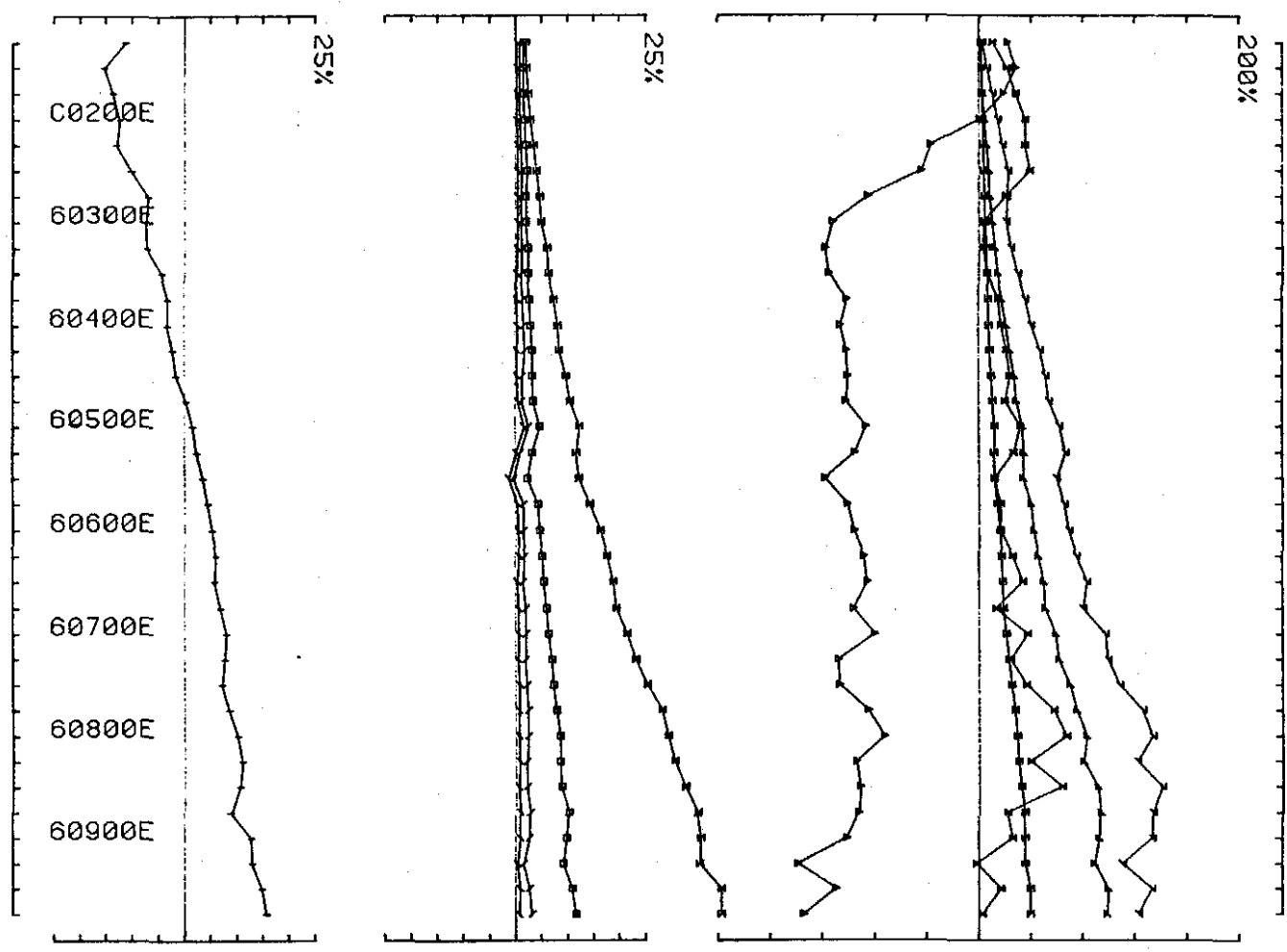
UTEM SURVEY conducted by PMM PA0 Job 8456

Project Area Grieves Survey for E.Z. Exploration freq(hz) 26.230

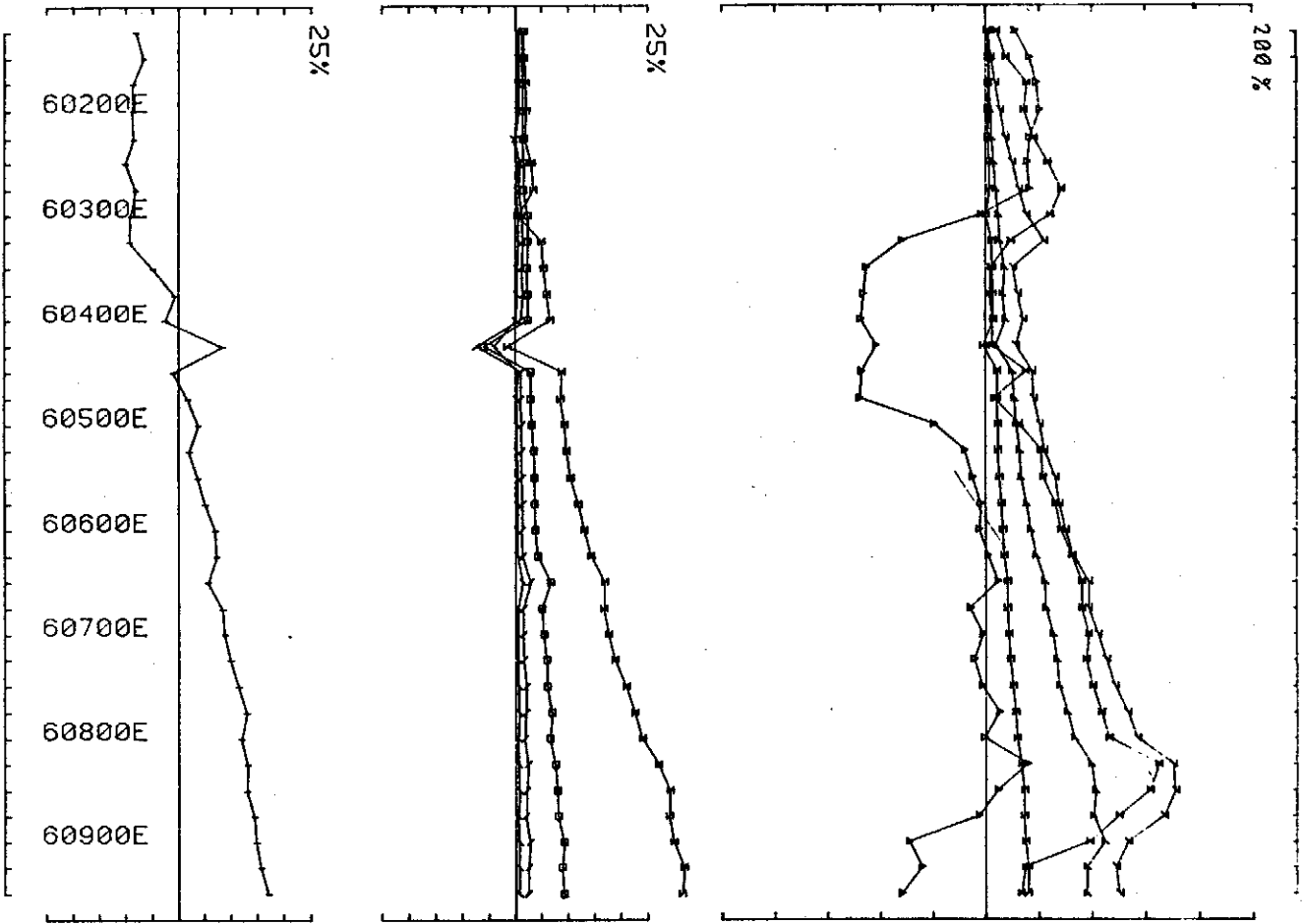
Loopno 0001 Line 47400N component Hz secondary Ch 1.



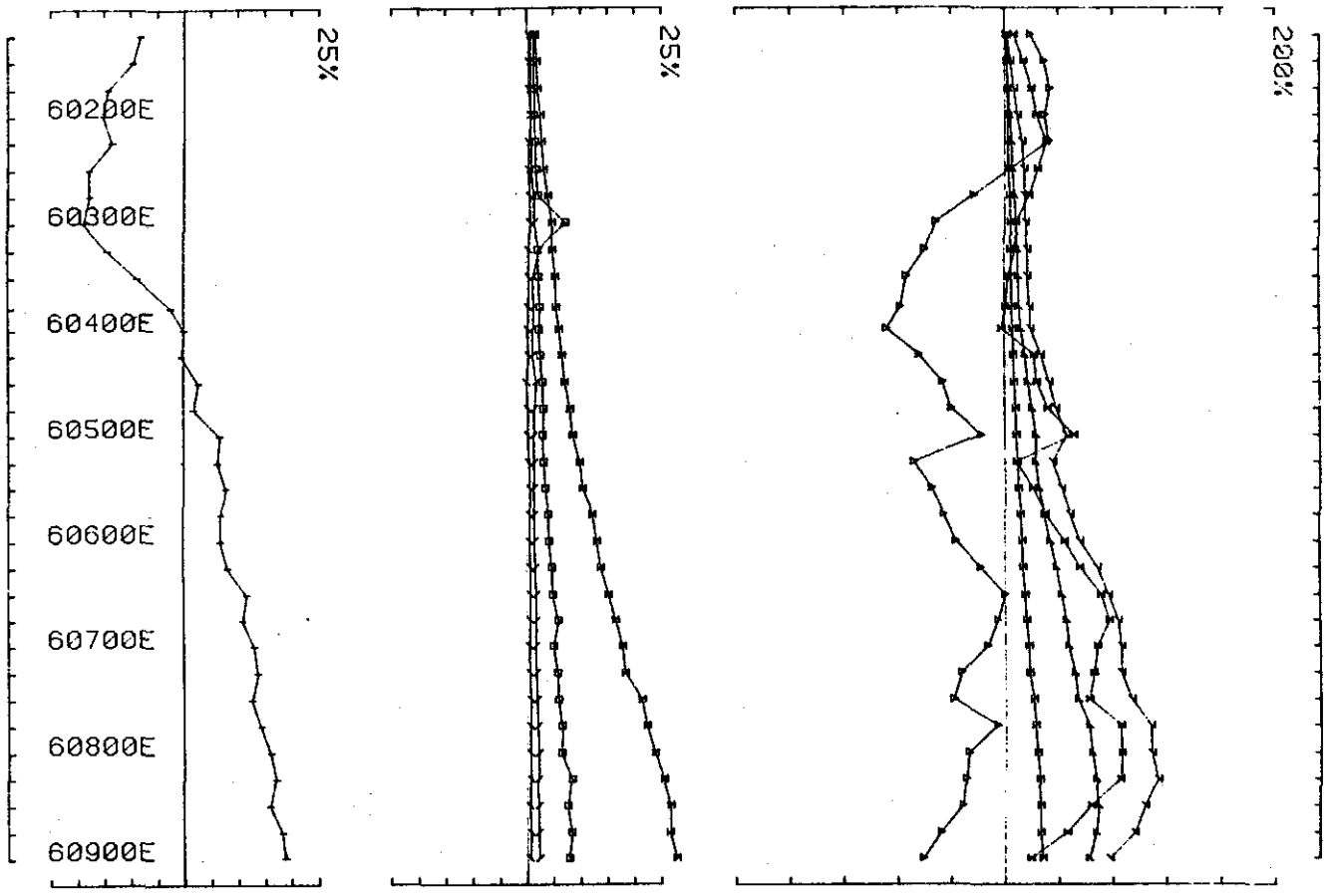
UTEM SURVEY conducted by PMM PAO Job 8456
 Project Area Myrtle Grid Survey for E.Z. Exploration freq(hz) 26.230
 Loopno 0002 Line 50400N component HZ secondary Ch 1



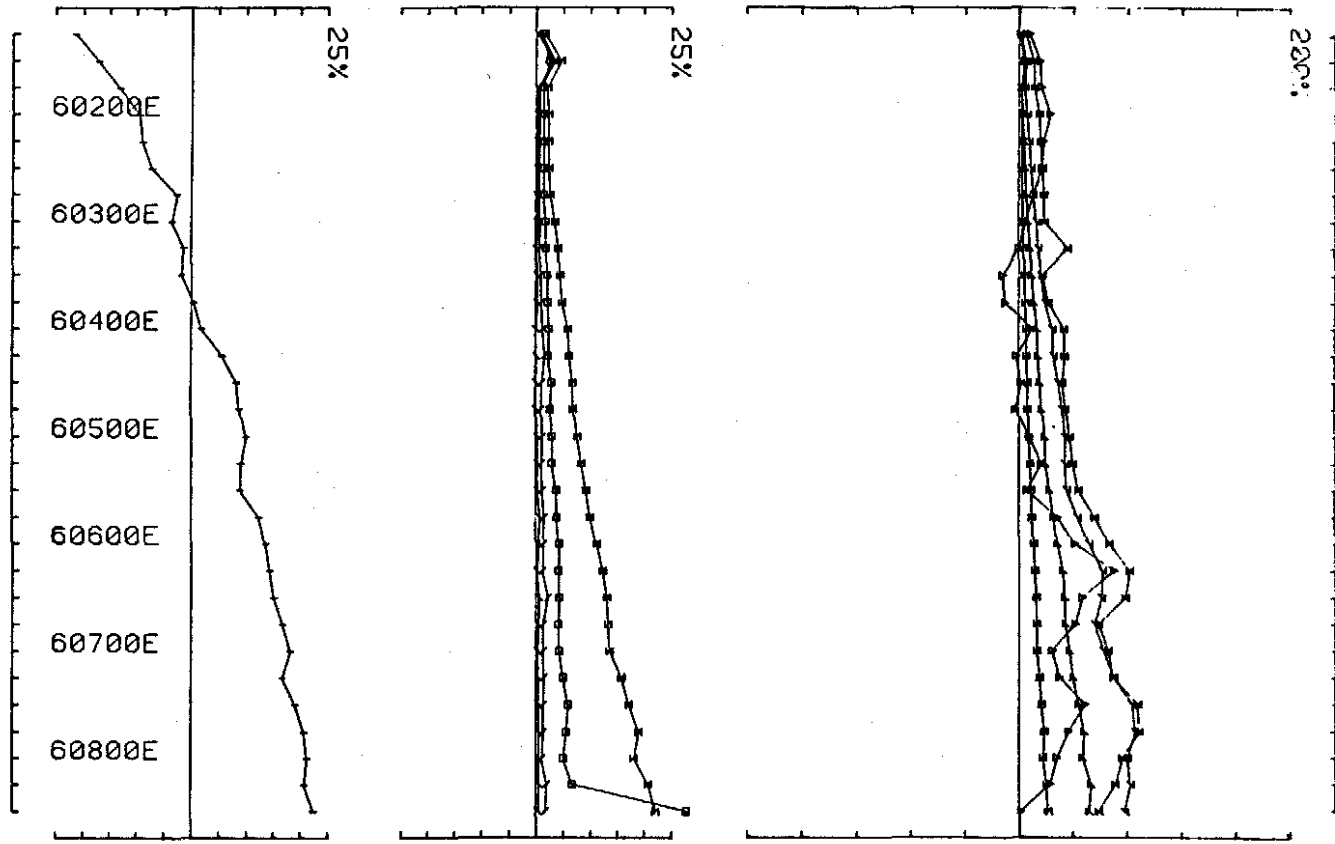
UTEM SURVEY conducted by PMM PA0 Job 8456
 Project Area Myrtle Grid Survey for E.Z. Exploration freq(hz) 26.230
 Loopno 0002 Line 50500N component Hz secondary Ch 1



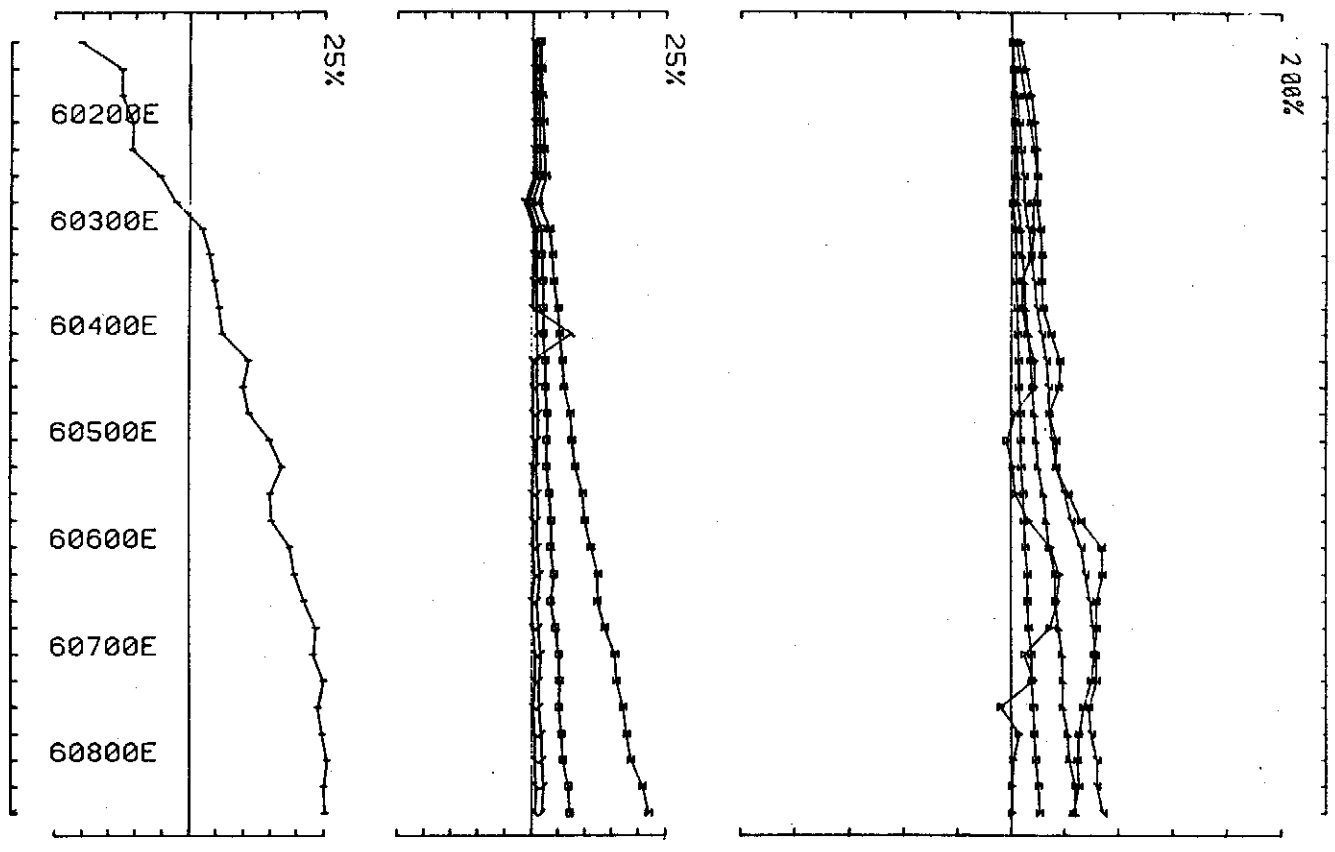
UTEM SURVEY conducted by PMM PAO Job 8456
Project Area Myrtle Grid Survey for E.Z. Exploration freq(hz) 26.230
Loopno 0002 Line 50600N component Hz secondary Ch 1



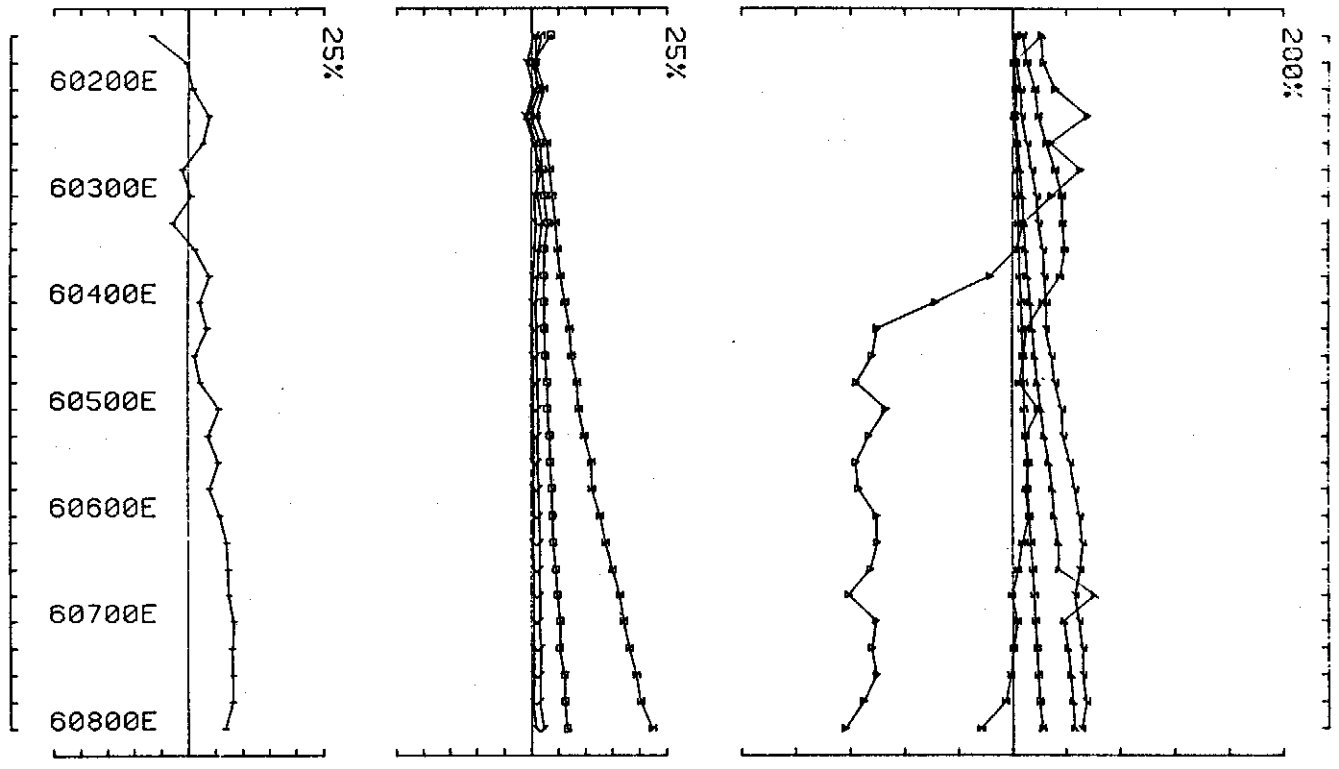
UTEM SURVEY conducted by PMM PA0 Job 8456
 Project Area Myrtle Grid Survey for E.Z. Exploration freq(hz) 26.230
 Loopno 0002 Line 50700N component Hz secondary Ch 1



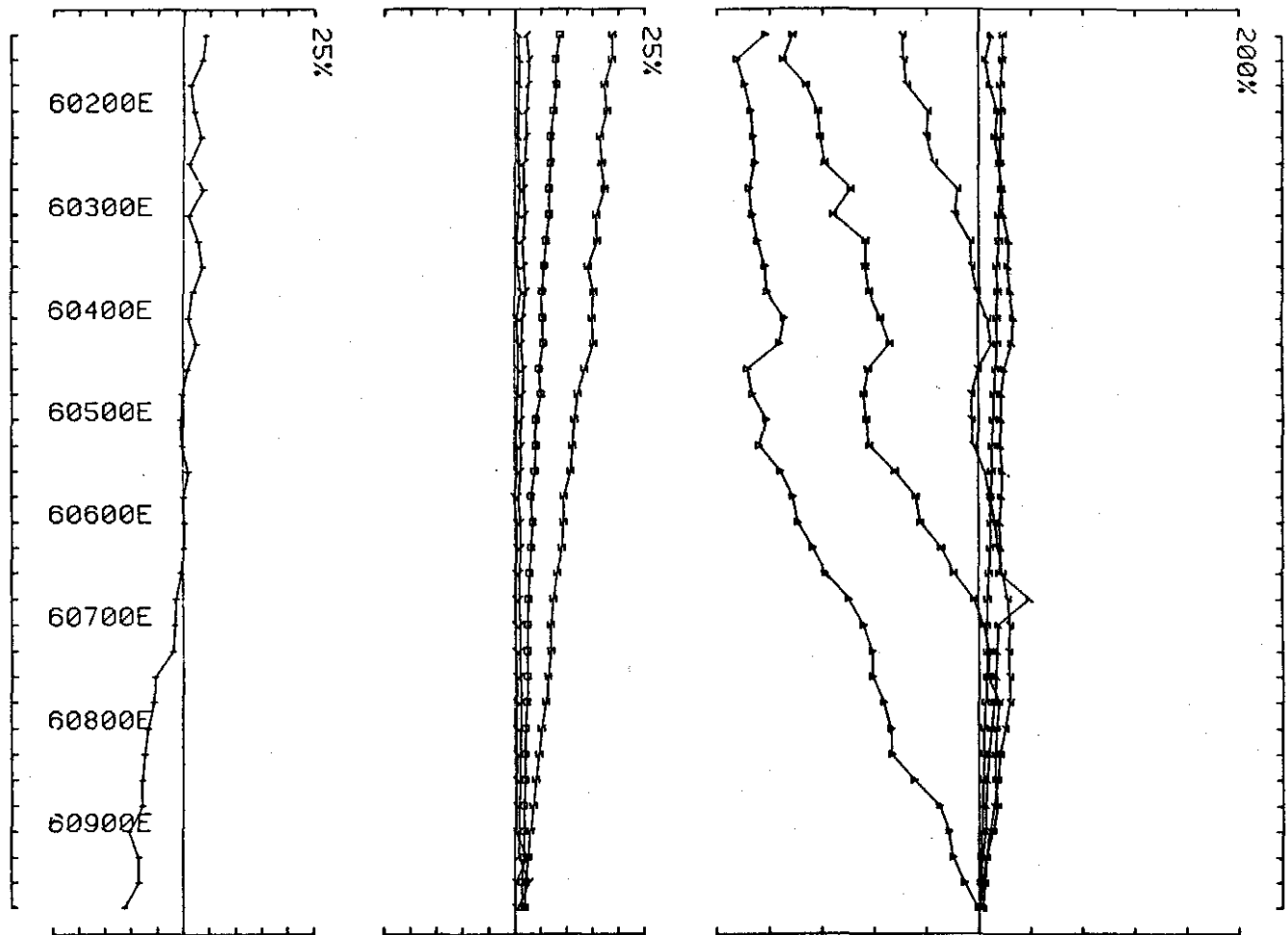
UTEM SURVEY conducted by PMM PA0 Job 8456
 Project Area Myrtle Grid Survey for E.Z. Exploration freq(hz) 26.230
 Loopno 0002 Line 50800N component Hz secondary Ch 1



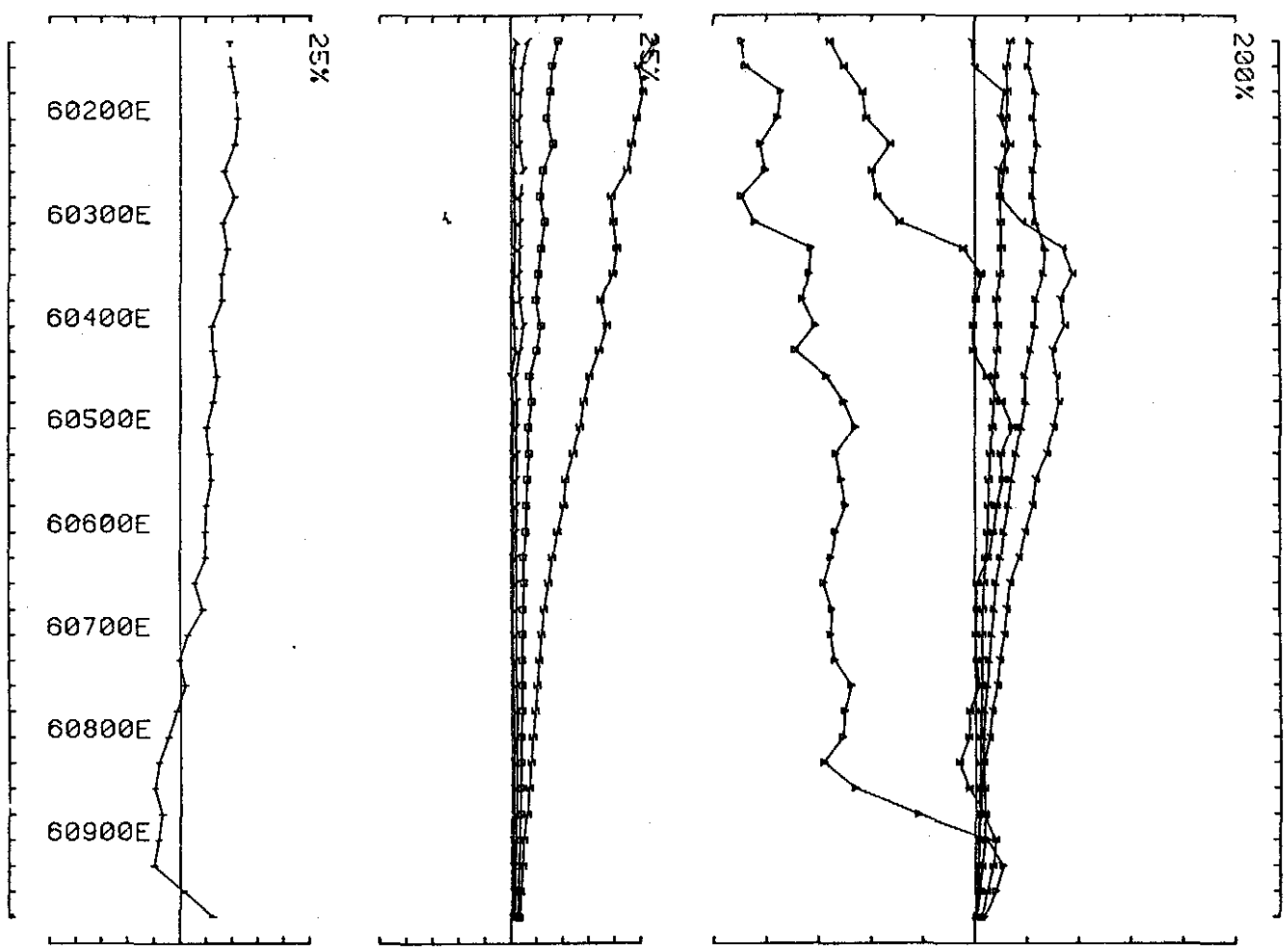
UTEM SURVEY conducted by PMM PAO Job 8456
 Project Area Myrtle Grid Survey for E.Z. Exploration freq(hz) 26.230
 Loopns 0002 Line 50900N component Hz secondary Ch 1..



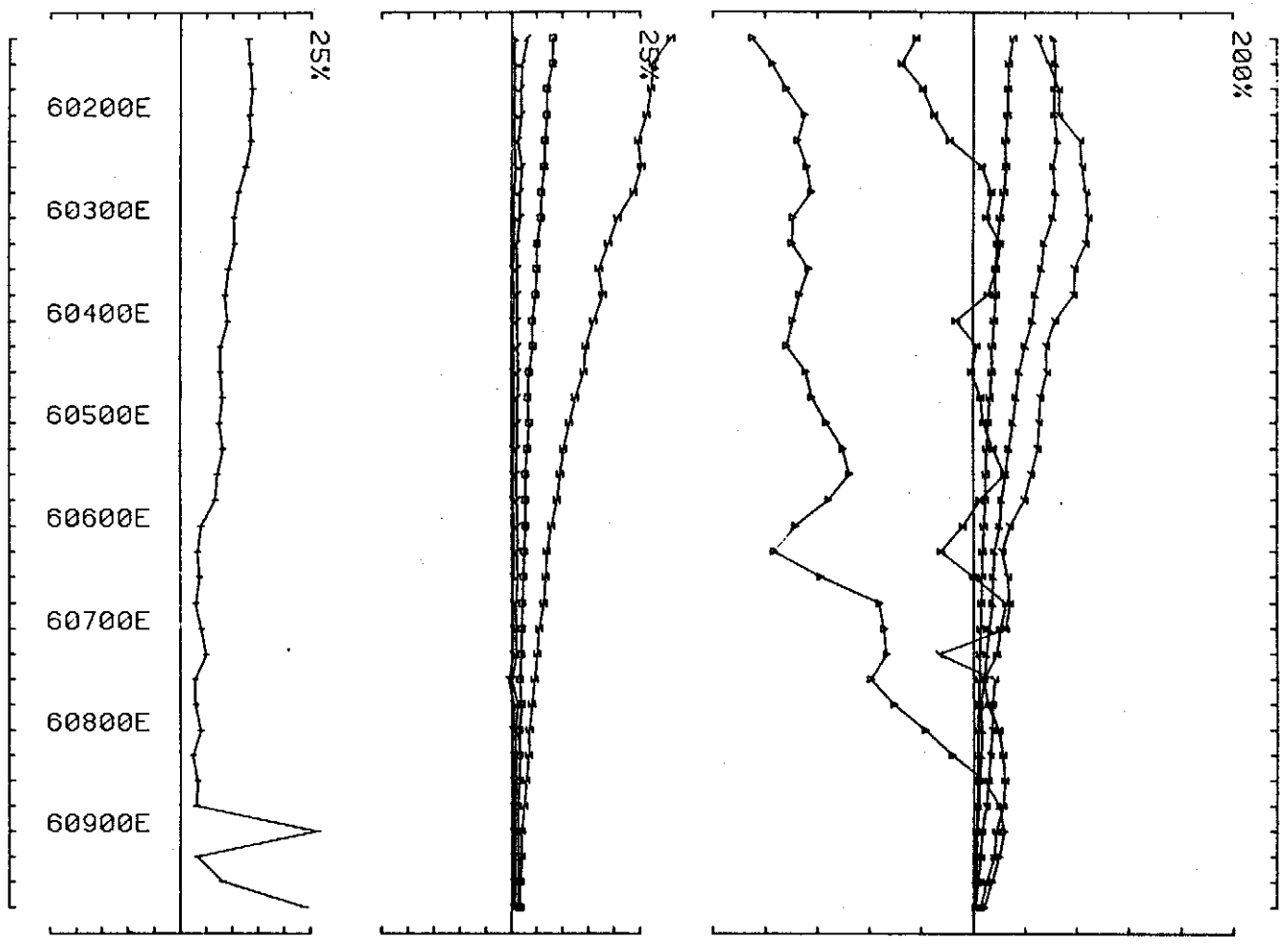
UTEM SURVEY conducted by PMM PA0 Job 8456
 Project Area Myrtle Grid Survey for E.Z. Exploration freq(hz) 26.230
 Loopno 0002 Line 51000N component Hz secondary Ch 1



UTEM SURVEY conducted by PMM PA0 Job 8456
 Project Area Myrtle Grid Survey for E.Z. Exploration freq(hz) 26.230
 Loopno 0001 Line 50400N component Hz secondary Ch 1



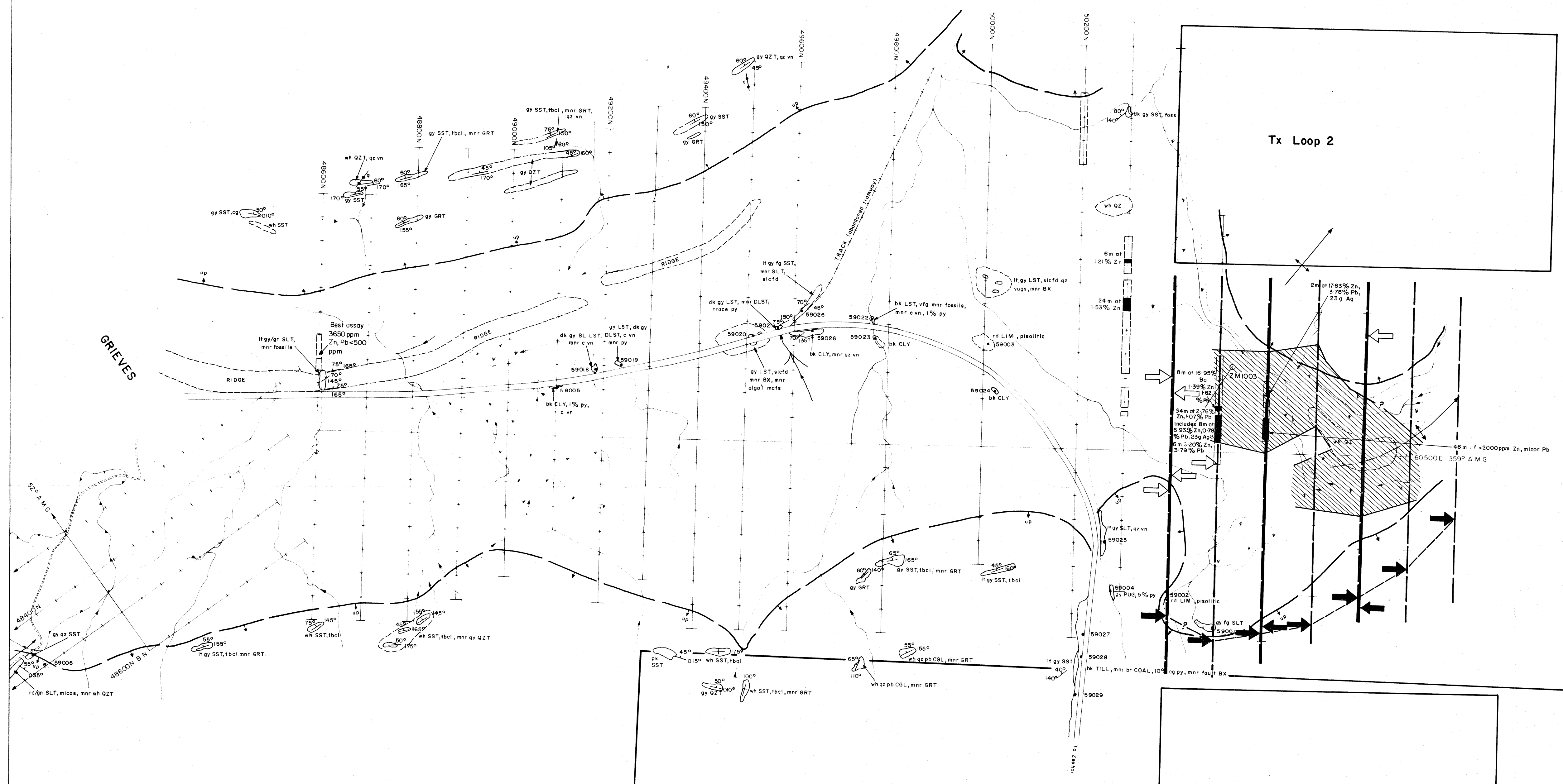
UTEM SURVEY conducted by PMM PAO Job 8456
 Project Area Myrtle Grid Survey for E.Z. Exploration freq(hz) 26.230
 Loopno 0001 Line 50600N component Hz secondary Ch 1



UTEM SURVEY conducted by PMM PAO Job 8456
 Project Area Myrtle Grid Survey for E.Z. Exploration freq(hz) 26.230
 Loopno 0001 Line 50800N component Hz secondary Ch 1.

MYRTLE

E.L. 4/78



LEGEND

- COLOUR**
- pk - pink
 - br - brown
 - bl - blue
 - gy - grey
 - rd - red
 - cr - cream
 - lt - light
 - wh - white
 - bk - black
 - gr - green
 - yl - yellow
 - or - orange
 - pl - pale
 - dk - dark

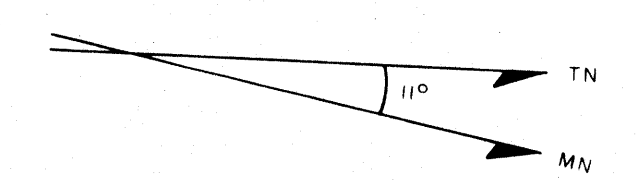
- TEXTURE**
- fg - fine grained
 - mg - medium grained
 - cg - coarse grained
 - bx - brecciated
 - clvd - cleaved
 - shrd - sheared
 - calc - calcareous
 - carb - carbonaceous
 - lam - laminated
 - xbd - cross bedded
 - tn bd - thin bedded
 - tk bd - thick bedded
 - vn - veins, veining
 - foss - fossiliferous
 - sil - siliceous
 - mic - micaceous
 - ferr - ferruginous
 - int - intense
 - wk - weak
 - v - very
 - pb - pebble
 - cb - cobble
 - tr - trace
 - in bd - inter bedded
 - tbl - tubular
 - frct - fractured

- ROCK TYPE**
- SST - sandstone
 - LST - limestone
 - BX - breccia
 - SH - shale
 - QZT - quartzite
 - GRT - grit
 - PUG - pug
 - SLT - siltstone
 - DLST - dolomite
 - CGL - conglomerate
 - BSH - black shale
 - LIM - ironstone
 - GRIT - grit
 - GRA - gravel

- MINERALOGY or ALTERATION**
- qt - quartz
 - gn - goethite
 - lim - limonite
 - cbd - carbonated
 - c - calcite
 - py - pyrite
 - sp - sphalerite
 - cp - chalcopyrite
 - sid - silicified

- ORDER**
- Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils
- e.g. dk gy mg foss SST or gy calc SH py or pl gy LST sid

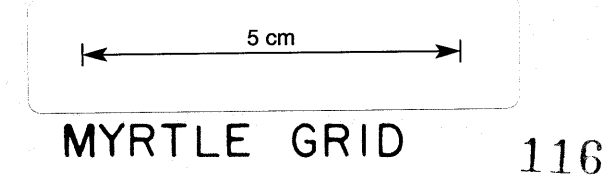
- TOPOGRAPHICAL**
- cut grid lines
 - roads
 - tracks
 - footways
 - power lines
 - rivers, creeks
 - swampy area
 - 090° joint
 - 090° joint - vertical
 - 090° overturned
 - 60° bedding
 - 090° bedding - vertical
 - quarries



132116

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: EL 4/78 ZEEHAN TAS.



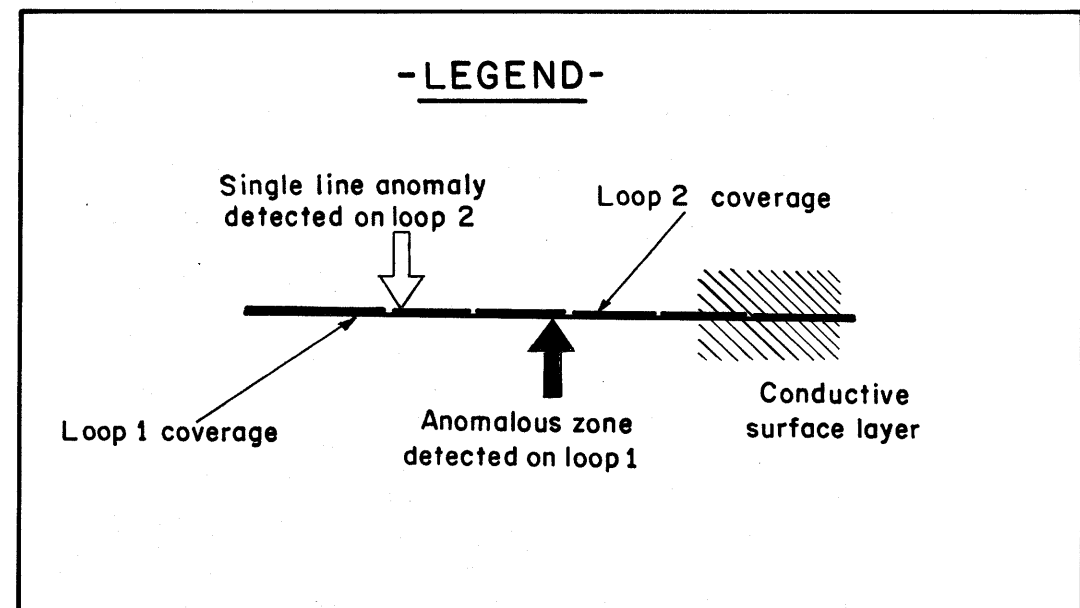
UTEM INTERPRETATION

FIG. 2

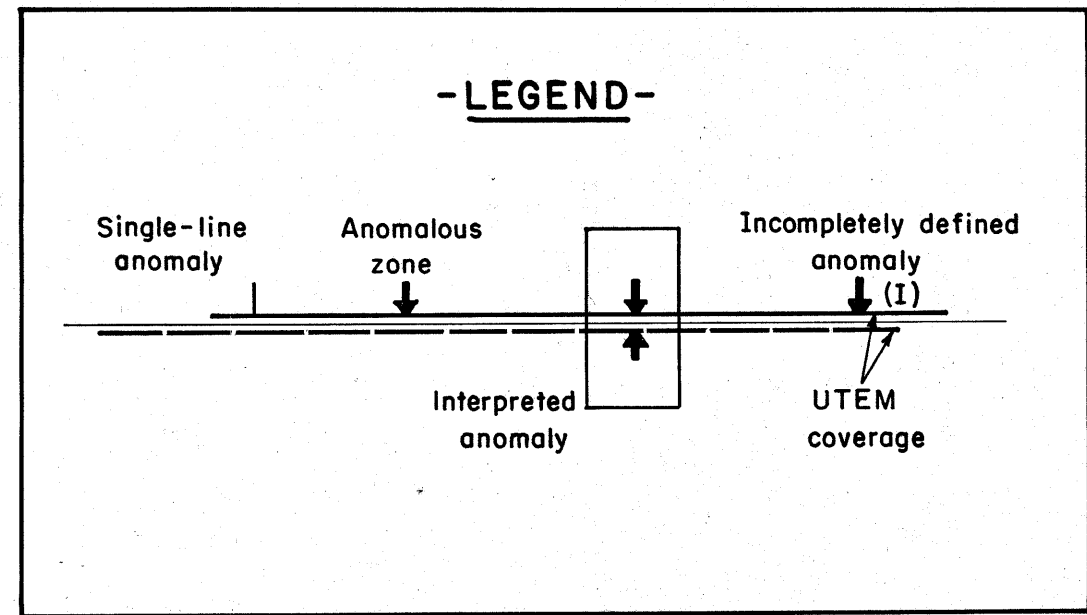
Scale 1:5000	Survey 1 MAT	Revised J. BISHOP
Reference: E.Z/MG85/01	Date: 23-1-85	REF No
Drawn R. J. R.	Checked	AI-532-0111

Survey by: Lamontagne Geophysics
Date: December, 1984

85-2440 1/2



E.L. 15/76



LEGEND

COLOUR	wh - white
pk - pink	bk - black
br - brown	gr - green
bl - blue	yl - yellow
gy - grey	or - orange
rd - red	pl - pale
cr - cream	dk - dark
lt - light	

TEXTURE	foss - fossiliferous
fg - fine grained	sil - siliceous
mg - medium grained	mic - micaceous
cg - coarse grained	ferr - ferruginous
bsd - brecciated	int - intense
clvd - cleaved	wk - weak
shrd - sheared	v - very
calc - calcareous	pb - pebble
carb - carbonaceous	cb - cobble
lam - laminated	tr - trace
xbd - cross bedded	in bd - inter bedded
tn bd - thin bedded	fbcl - fubicolor
tk bd - thick bedded	frct - fractured
vn - veins, veining	

ROCK TYPE	SLT - siltstone
SST - sandstone	LST - limestone
LST - limestone	DLST - dolomite
BX - breccia	CGL - conglomerate
SH - shale	BSH - black shale
QZT - quartzite	LIM - ironstone
GRT - grit	CLY - clay
PUG - pug	GRA - gravel

MINERALOGY or ALTERATION	py - pyrite
qz - quartz	sp - sphalerite
gn - galena	cp - chalcopyrite
lim - limonite	sid - silicified
cbd - carbonated	
c - calcite	

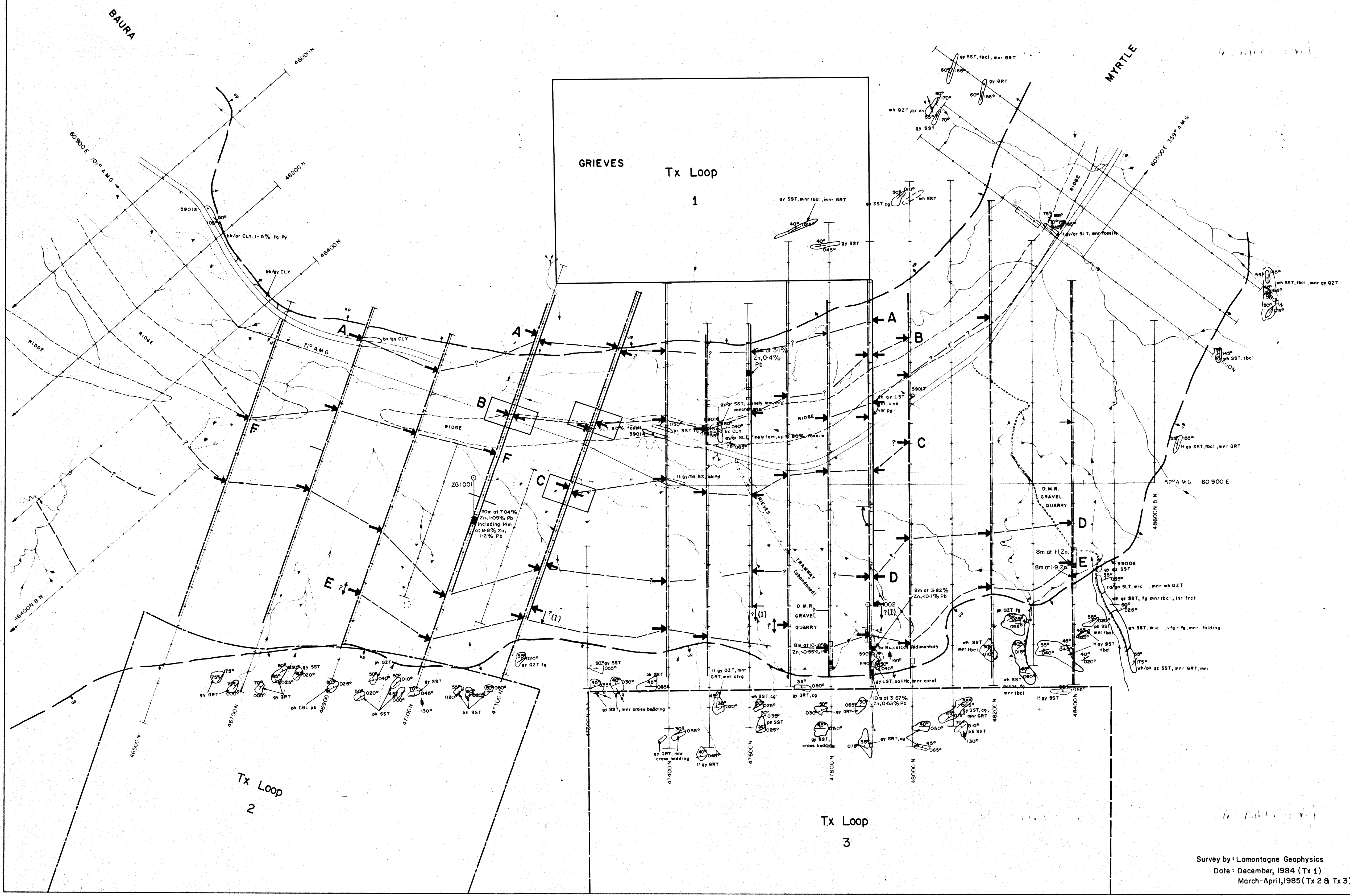
ORDER

Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils

eg
dk gy mg foss SST or gy calc SH py or ply LST sid

TOPOGRAPHICAL

cut grid lines	090° joint
roads	090° joint - vertical
tracks	090° overturned
tramways	090° bedding
power lines	090° bedding - vertical
rivers, creeks	quarries
swampy area	



132117

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: EL 4/78 ZEEHAN TAS.

GRIEVES GRID 173

5 cm

UTEM INTERPRETATION

Scale 1:5000	Survey 1 MAT	Revised
Reference A-78-60B	Date 13-5-85	REF No
Drawn R.J.R.	Checked	AT-532-0116

85-2440 12

Survey by: Lamontagne Geophysics
 Date: December, 1984 (Tx 1)
 March-April, 1985 (Tx 2 & Tx 3)

MITRE GEOPHYSICS PTY LTD

MINERAL EXPLORATION AND ENGINEERING CONSULTANTS

BUGGS LANE- ELLIOTT TASMANIA 7325 PHONE 004-363143

AN INTERPRETATION OF THE GRIEVES GRID
GRAVITY ANOMALY
(E.L. 4/78, Zeehan)

for

Electrolytic Zinc Company

by

Dr J.R. Bishop

EZ/MG85/02
January, 1985.



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Figure 1. Bouguer Anomaly Plan (1:5,000 scale).

Figure 2. Bouguer Profiles; Lines 47300N and 47400N.

Figure 3. Elevation Profiles; Lines 47300N and 47400N.

Figure 4. Terrain Corrected Profiles; Lines 47300N and 47400N.

Figure 5. Gravity Modelling for Lines 47300N and 47400N.



SUMMARY

A gravity high, with a maximum amplitude in excess of one milligal, has been defined over a prospective limestone sequence on the Grieves grid in E.L. 4/78. If a massive sulphide source is assumed, then approximate modelling (the anomaly is only poorly defined on each line) suggests a very shallow source. Since such a body is unlikely to have been missed by the previous bedrock geochemistry program, it seems probable that sulphides are not responsible for the anomaly. Nevertheless, it is recommended that the anomaly be verified and better defined by a small, detailed survey.



INTRODUCTION

The Grieves grid is located over Ordovician and Silurian sediments within E.L. 4/78 (Zeehan). This licence is being explored under a joint venture agreement between EZ and Amoco, with EZ managing the program.

The Grieves grid was surveyed with a gravity meter in 1981 (together with the Myrtle, Eaura and Rose Valley grids). A discrete anomaly was defined on the (grid) western side of the Grieves grid over a strike length of about 700m. This report gives an interpretation of this anomaly.

GEOLOGY AND EXPLORATION TARGET

The main target within E.L. 4/78 is a carbonate hosted Pb-Zn deposit. The expected style is the Irish-type, which suggests that the mineralisation would occur as epigenetic feeder zones including replacement veinlets, stockwork zones and cavity infilling; as well as syndiagenetic and stratiform ore. Unlike the Irish deposits, there may not be abundant pyrite.

An economic deposit would be expected to be a strata bound, tabular body, probably dissected by faults. It should be polarisable, dense and possibly conductive. A limited number of petrophysical measurements (Collins, 1980) has suggested that there are marked density and conductivity contrasts between ore and host rock, but not of chargeability (both being chargeable) nor of magnetic susceptibility (both being non-magnetic).

Surface surveys at Oceans (where there is a proven resource of 4 million tonnes of 10% combined Pb/Zn) have shown contrary results to these core tests. EM has not been successful (Collins, pers. comm.), whereas magnetic surveys have defined a low order anomaly (?20-30nt) over the mineralisation. Gravity has also effectively outlined the Oceans deposit (Bishop, 1983). However gravity may respond to the gangue mineral siderite (density 3.83-3.88t/c.m.) or be adversely affected by caverns and clays in the near surface limestones.

The target area is a relatively narrow belt of Ordovician limestone (the Gordon Limestone; no more than 800m wide on the Grieves grid) which occurs within a series of steeply plunging (to the north) synclines and anticlines. The limestone is bounded to the north by a faulted contact with the Silurian Crotty Quartzite and to the south by a similar contact with the Ordovician Moira Sandstone. Both contacts dip at about 50° to the north.

SURVEY DETAILS

The gravity survey was conducted over (at least) two different



periods (in 1981) by the contracting companies Wongela and Solo. A station spacing of 50m was employed on lines 100m and 200m apart. The data was digitised and tide, latitude and drift corrections were performed automatically. Reduced levels were determined using a theodolite and a density of 2.6t/c.m. was chosen for the Bouguer correction*. No terrain corrections were made.

The raw and corrected data is stored on disc by Amoco. Part of what is now the Grieves grid, and which contains the western section of the gravity anomaly, was recorded as 'Southern Grid' data.

INTERPRETATION

A contour plan of the Bouguer anomaly for the Myrtle, Grieves, Eaura and Rose Valley grids is shown in Figure 1. The anomalous zone lies on the western side of the Grieves grid between lines 47100N and 47700N. The anomaly is best developed on line 47300N. (The results for this line were recalculated from the raw data and found to agree with the computed values).

Profiles for lines 47300N and 47400N are shown in Figure 2. These show that the data takes the form of a broad anomaly, with the area of interest defined by single point highs at the western ends of the lines.

The broad high is probably entirely due to terrain effects. Approximate corrections were made for line 47300N every 100m (with 50m values interpolated) and these values were also applied to line 47400N, assuming the same topography (Figure 3)†. The terrain corrected profiles (Figure 4) show that most of the broad anomaly has been removed. More survey data and a better topographic map is needed to calculate the terrain effects accurately.

There are a number of possible sources for the anomalous zone (assuming it is real: single point anomalies should always be viewed with some scepticism, even when they occur on a number of lines). Some possible causes are:

- (1) A local thinning of overburden. Since there is no correlation between the depth to bedrock and the profile on line

* The measurements by Collins (1980), gave an average density of 2.6t/c.m. (from a range of 2.5 to 3.0t/c.m.) for the sediments (both limestones and sandstones), with mineralisation in the range 3.3 to 5.5t/c.m.. An average of 2.6t/c.m. for sediments was also obtained from some recent measurements (see Table 1).

† The terrain correction was made assuming linear contours; ie, an idealised valley was used with the traverse orthogonal to the contours.



47300N (see Figure 2), this is unlikely.

(2) Lithological (ie, a locally denser strata). A siltstone ridge parallels the anomalous zone and it apparently coincides with a minor low. A relatively more dense rock unit on its northern side may be responsible for the gravity high.

(3) A bad data point (at 47300N/60800E). Without this one point, the zone would be considerably down-graded. An incorrect reading with an error of one milligal (ie, of the order of the anomaly) is not improbable. Resurveying (preferably at a closer station spacing) would be required to test this possibility.

(4) Massive sulphides. Figure 5 shows that, assuming a discrete dense body, a very shallow depth is required (0.5m) to produce a response similar to the field data on line 47300N; a deeper (20m) and somewhat smaller body gives a better fit to line 47400N. It seems unlikely that such a shallow body would have gone undetected by the bedrock geochemical sampling program. However, more data is required before any confident modelling can be done.

CONCLUSIONS AND RECOMMENDATIONS

The Grieves grid gravity anomaly, although traceable across six lines, is poorly defined on each line. At its highest value, on line 47300N, it is defined by one point only. Whilst no modelling (in the proper sense) can be done to such sparsely sampled data, some approximations suggest that a very shallow (and depth limited) body is required to explain the response.

Although further surveying would not be required to site a drill-hole, single point responses (even over a number of lines) should be viewed with some scepticism and detailed surveying should be carried out to confirm the anomaly. (Ideally this would include preparation of a good topographic map to allow proper terrain corrections to be made.)

Although a non-sulphide source is a likely cause of the anomaly, I believe that it warrants further investigation.

J.R. Bishop
January, 1985.



REFERENCES

Bishop, J.R., 1983. An evaluation of the geophysical surveys carried out within E.L. 4/78 prior to 1978. Mitre Geophysics report 83/02 for Amoco.

Collins, S., 1980. Zeehan drillcore physical properties test. In: Appendix 5, Amoco report no. 249 by P. Jones, 1981.



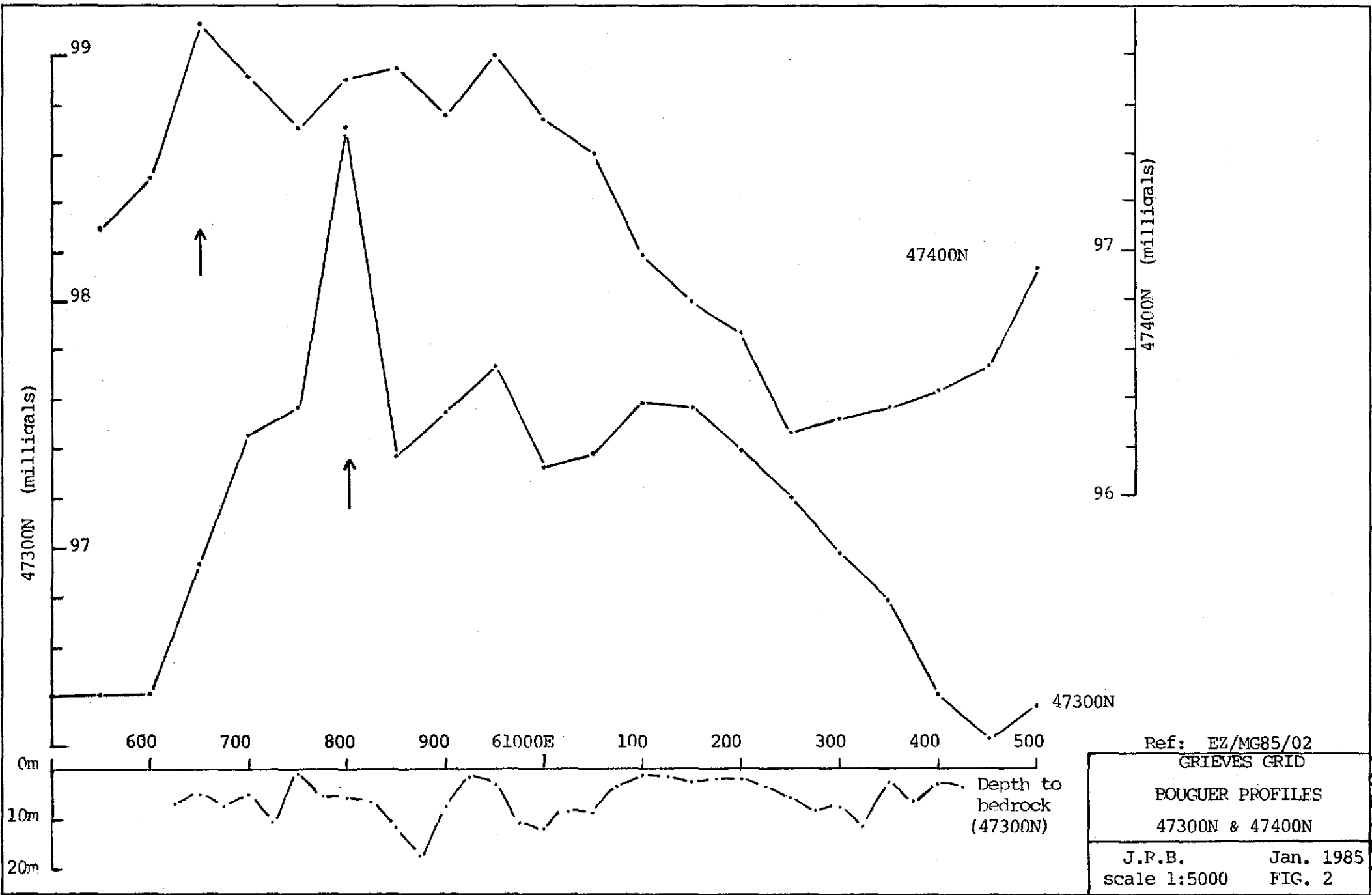
Table 1

PETROPHYSICAL MEASUREMENTS

Sample no.	Assay no.	Depth (m)	Rock Type	Density (t/c.m.)
(1) DDH ZG1001				
17/1	63601	7.5	dolomitic breccia	2.67
17/2	63602	18.7	" "	2.38
17/3	63606	87.1	dolomite	2.68
17/4	63608	125.	"	2.71
(2) DDH ZG1002				
17/5	63637	137.	quartzite	2.12
17/6	63638	138.	"	2.64
17/7	63639	140.	"	2.65

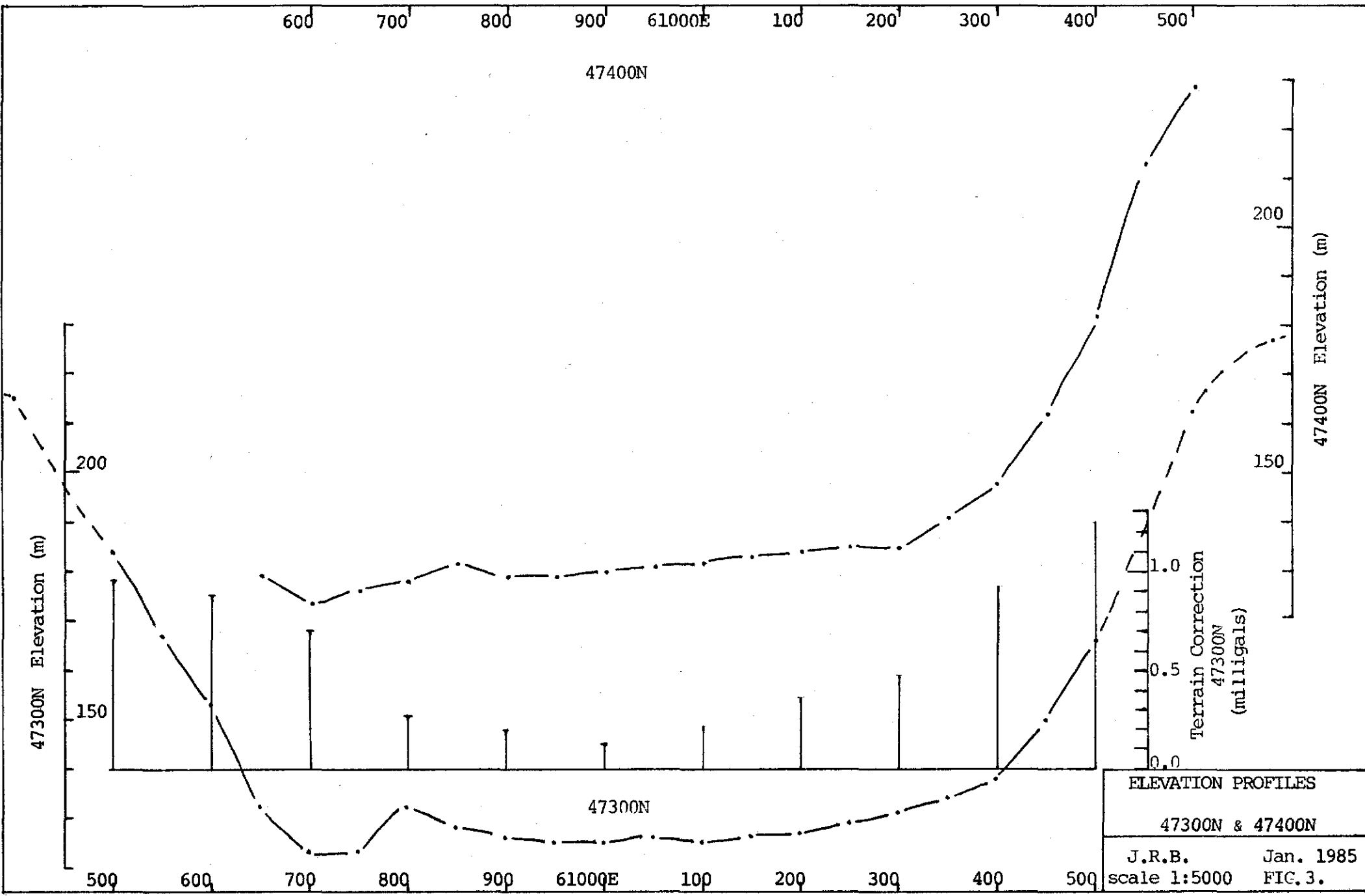
Excluding the lowest and highest values, the average density is 2.60t/c.m..

(These measurements were carried out by the University of Sydney's petrophysical laboratory in December, 1984.)

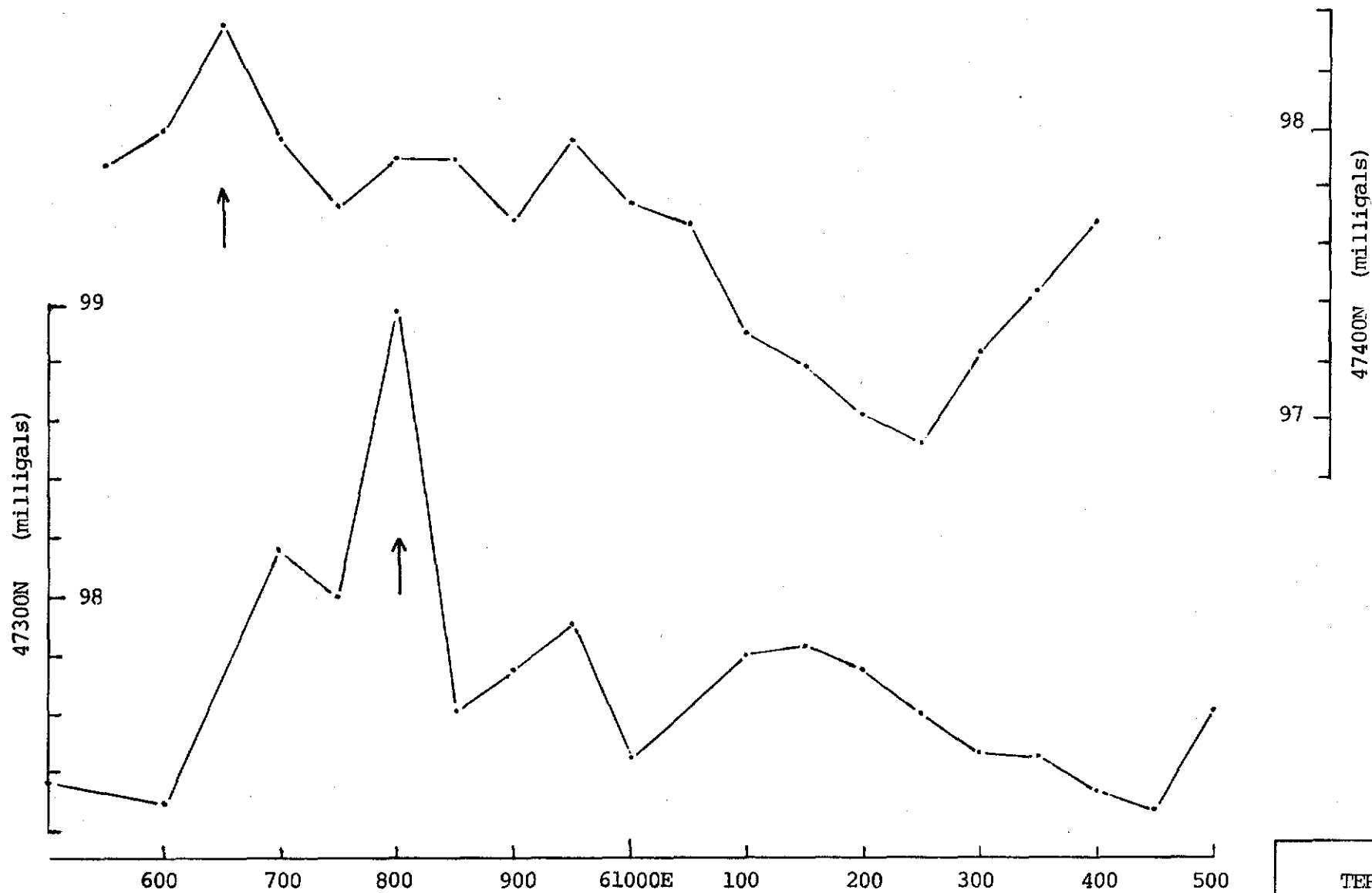


Ref: EZ/MG85/02
 GRIEVES GRID
 BOUGUER PROFILES
 47300N & 47400N
 J.R.B. Jan. 1985
 scale 1:5000 FIG. 2

132127



ELEVATION PROFILES
 47300N & 47400N
 J.R.B. Jan. 1985
 scale 1:5000 FIG. 3.

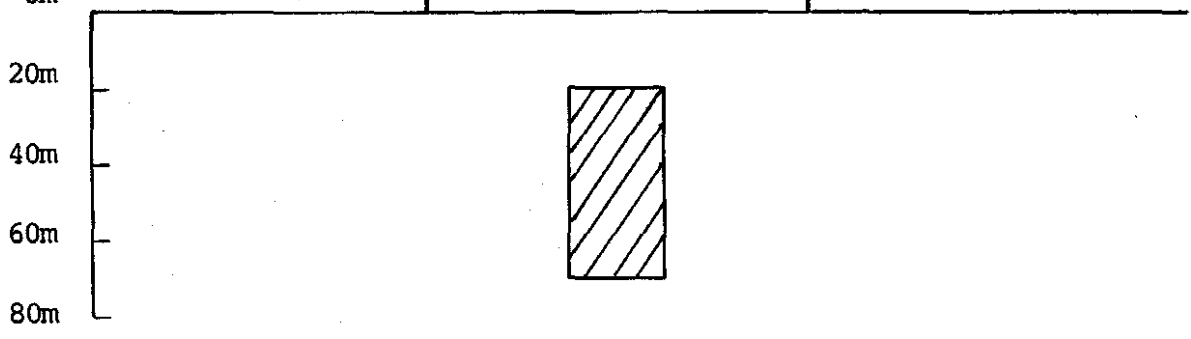
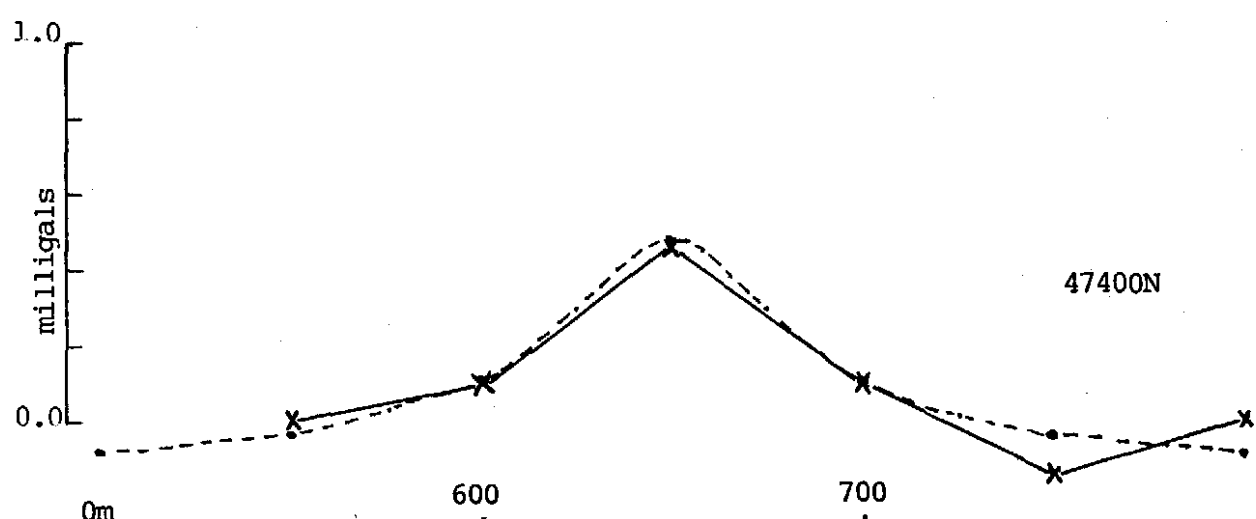
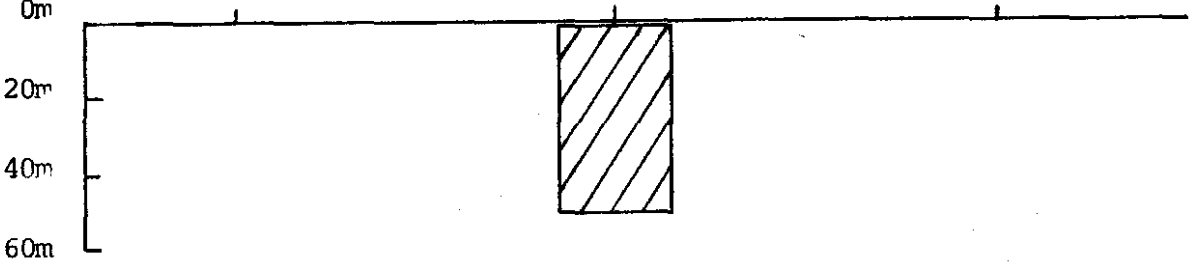
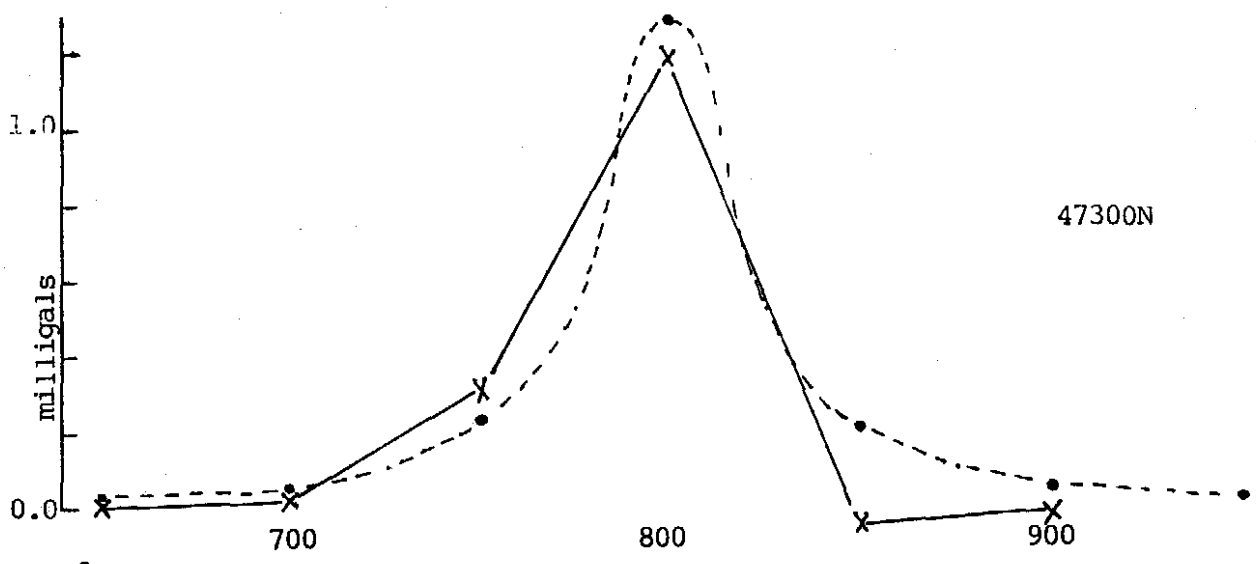


GRIEVES GRID
TERPAIN CORRECTED
BOUGUER PROFILES
47300N & 47400N
J.R.B. Jan. 1985
scale 1:5000 FIG. 4.

Ref: EZ/MG85/02

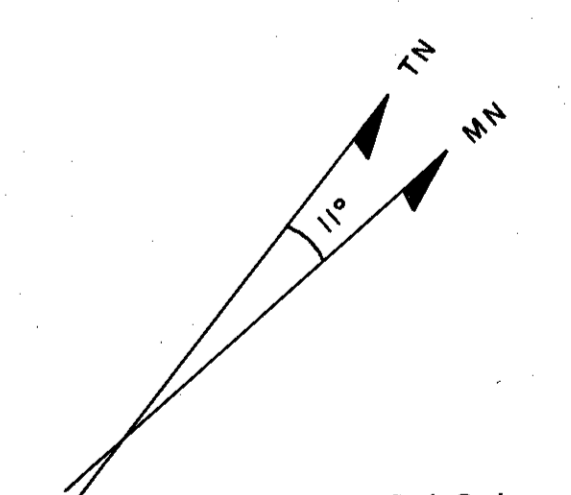
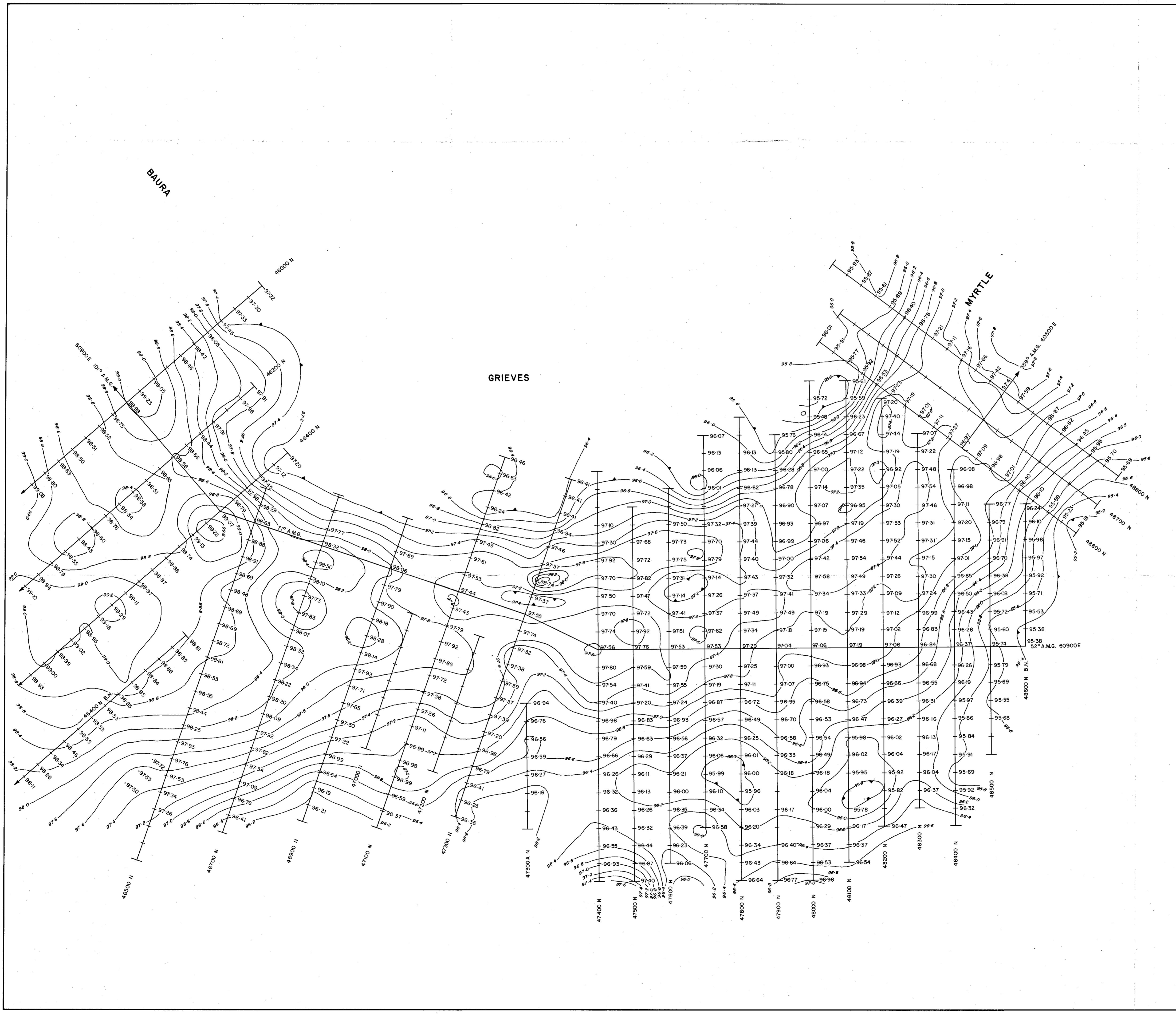
132129

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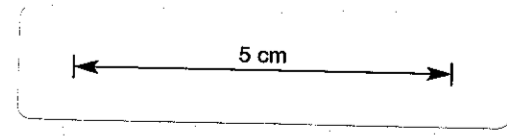
density contrast = 1.5t/c.m.
 strike length = 700m.
 Data on both lines was smoothed
 for modelling.

GRIEVES GRID GRAVITY MODELLING 47300N & 47400N	
J.R.B.	Jan. 1985
scale 1:2000	FIG. 5.



132131

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 PROJECT: EL 4/78 ZEEHAN TAS.



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GRIEVES GRID
 RESIDUAL GRAVITY

FIG. 1

Scale: 1:5000	Survey: I. MAT.	Revised: J. BISHOP
Ref: EZ/MG 85/02	Date: 24-1-85	REF. No.
Drawn: R. J. R.	Checked:	AI-532-0112

85-2440 1/2



MITRE GEOPHYSICS PTY LTD

MINERAL EXPLORATION AND ENGINEERING CONSULTANTS

BUGGS LANE ELLIOTT TASMANIA 7325 PHONE 004-363143

INTERPRETATION OF UTEM SURVEYS OVER
THE BAURA AND GRIEVES GRIDS
(E.L. 4/78, Zeehan)

for

Electrolytic Zinc Company

by

Dr J.R. Bishop

EZ/MG85/05
May, 1985.



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- Table 1. UTEM coverage of Baura and Grieves grids.
- Figure 1. Interpretation of UTEM Survey: Baura Grid.
- Figure 2. Interpretation of UTEM Survey: Grieves Grid.
- UTEM Profiles: Baura Grid.
- UTEM Profiles: Grieves Grid.

Figures referred to, but not included in this report.

Baura Grid: Depth to Solid Bedrock (1:5000 scale).

Grieves Grid: Depth to Solid Bedrock (1:5000 scale).



SUMMARY

UTEM surveys over the Baura and Grieves grids have defined a number of poorly conducting zones. These probably reflect rock-type contacts and fractures or faults within the limestones.

Anomalies defined on the Grieves grid by an earlier survey were checked by this second survey which placed the transmitting loops on the other (southern) side of the limestones. The survey showed that an incompletely defined zone, thought to show potential from the first survey, was most probably due to the southern contact of the limestones. No new prospective anomalies were defined by the repeat survey, but the three original 'best' anomalies were confirmed.

On the Baura grid, two responses are considered to be of interest.



INTRODUCTION

The Baura and Grieves grids are located over limestone horizons within E.L. 4/78 (Zeehan). This licence is being explored under a joint venture agreement between EZ and Amoco, with EZ managing the program.

Parts of both grids were surveyed with UTEM in March - April, 1985. This report integrates the data with previous work over the Grieves and Myrtle grids and interprets the results.

GEOLOGY AND EXPLORATION TARGET

The main target within E.L. 4/78 is a carbonate hosted Pb-Zn deposit. The expected style is the Irish-type, which suggests that the mineralisation would occur as epigenetic feeder zones including replacement veinlets, stockwork zones and cavity infilling; as well as syndiagenetic and stratiform ore. Unlike the Irish deposits, there may not be abundant pyrite. Such mineralisation may not be very conductive, particularly if there is a much higher percentage of zinc than lead (sphalerite being non-conductive)*. Because of the expected low conductivity of the target, the UTEM system with its 'early' measurement gates, is probably the best EM method for the task.

Again because of the low conductivity, it is possible that any response from mineralisation will not be discriminated by its conductance, (ie, mineralisation may have the same conductivity-thickness product as faults or contacts) thus all of the responses should be evaluated.

The target area is a belt of Ordovician Gordon limestone, of the order of 1km wide, which occurs within a series of steeply plunging synclines and anticlines. The limestone is bounded to the north by a faulted contact with the Silurian Crotty Quartzite and to the south by a similar contact with the Ordovician Moira Sandstone. Both contacts dip at about 50° to the north.

EXPLORATION HISTORY

A compilation of the exploration carried out prior to Amoco being granted the licence in 1978, is given in Bishop (1983). The work carried out by Amoco (who had sole tenure until 1983) is summarised by Mathison and Kary (1984). The work carried out since then is described by Mathison (1984). The previous (1984) UTEM survey over the Grieves grid is described by Bishop (1985).

* For example, UTEM surveys over the large 'Black Angel' Zn-Pb deposit in Greenland failed to respond. More locally, Pulse EM surveys over the Oceana deposit also gave no response.



INTERPRETATION

Several responses were obtained on both grids. Conductive zones (ie, those responses which can be correlated across at least two lines) have been labelled alphabetically. Single-line anomalies have not been labelled.

The better anomalies were recorded on the Grieves grid. Three anomalies, which had been defined by the earlier survey, have been re-interpreted. Two anomalies on the Baura grid were also considered to be of interest and these too, have been quantitatively interpreted.

On both grids, unless prefaced by '(grid)', directions referred to are compass directions.

BAURA GRID

Six lines of the Baura grid were surveyed. A central loop was used to cover the (grid) western and eastern ends of the lines (designated loop 0010 or 0011 on the UTEM profiles) and a southern loop (designated 0012) was used for the central area (see Table 1 for details).

A total of fifteen zones* plus several single-line anomalies have been interpreted. Nearly all of these are weak and are indicative of faults or contacts (see Figure 1). Several zones follow the known structure (eg, the Firewood Siding Fault in the southern section of the survey), but some are at variance (eg, zones D and F both cross ridges which are likely to be caused by lithologic (and stratiform) sources).

The UTEM profiles show a reasonably strong background response. This has been interpreted as being predominantly due to a conductive host rock[†], rather than a conductive surface layer, although undoubtedly such exists (depths to bedrock vary up to a recorded maximum of 24m). In the northern half of the surveyed area, a resistivity of about 200ohm-m was interpreted for the host rock. In the central and southern sections, this varied from 300ohm-m in the west to about 50ohm-m in the east.

Two responses were considered to be of potential interest; they are at 45800N/61225E and 46400N/62375E. Both anomalies are parts of zones and may be due to local variations in non-prospective conductors (eg, faults or contacts).

* The labelling of these zones (D & F to S) is a continuation of the labelling of the zones on the Grieves grid.

† Since the fresh limestone should be resistive, this conductivity must be due to water-filled fractures, graphite or possibly disseminated sulphides.

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The response at 45800N/61225E is apparently in close proximity to a swamp (see Figure 1) and the enhanced conductivity of zone D (and the adjacent zone M) on this line may be due to a surface layer of conductive material. Assuming the response is due to a dipping tabular conductor, a depth of 35m is indicated, but this may be deeper (60 to 80m) if it has little depth extent (ie, if it approximates a 'ribbon' conductor). Since the anomaly has a low amplitude, a ribbon-like conductor is probable. The anomaly was chosen primarily for the fact that the response persisted until late times (channel 3), thus indicating a (relatively) good conductor. Assuming that the source is a thin finite sheet with a depth extent of only 50m, then a respectable conductance of 50S is indicated (this decreases proportionately if the source is larger). The strong background response prevented an accurate estimation of the dip. (A dip of 30° to 50° to the north -ie, conformable with the local geology -is assumed.)

The anomaly at 46400N/62375E was chosen because of its location (close to a prominent structure -the Firewood Siding Fault) and because its amplitude, although only moderate, was perhaps the largest recorded on the Baura grid. The response was noticeable down to channel 5. Although part of a long zone (zone R), it is significant that the response on the adjacent line -line 46600N (labelled as 46400EN on Figure 1) is much diminished. A depth of burial of about 70m has been interpreted assuming a dipping, tabular source. Dip is again very poorly resolved, but may be to the north. The moderate amplitudes suggest a limited depth extent and a value in the range 50 to 150m is suggested. Such a body would have a conductance in the order of 20S. It is possible that the amplitude has been restricted by poor coupling, in which case the conductor may be larger (and would probably dip to the south).

GRIEVES GRID

Thirteen lines of the Grievies grid were surveyed from two loops. This includes re-surveying of three lines from the previous survey (see Table 1 for details). This second survey largely confirmed the results from the earlier work and several zones, indicative of contacts or fractures, are shown in Figure 2

As with the Baura grid, there was a considerable background response. From the earlier survey, this was interpreted as a conductive overburden east of 47100N (a value of 25ohm-m was calculated assuming a 10m thick layer). The data from line 47100N suggested a half-space response and a value of 200ohm-m was calculated. Interpretation of the later data gave a consistent value of about 200ohm-m for a conductive host rock west of (and including) 47100N and between 47700N and 48200N. On 48400N a more resistive host rock is indicated (about 600ohm-m) -as was interpreted for the Myrtle grid. Between 47100N and 47700N, the profiles indicate a thin conductive overburden. A conductance of less than 1S has been interpreted.



One of the reasons for undertaking further work here was to examine a series of strong responses which were recorded at the (grid) eastern ends of most of the lines. Re-surveying with the loops on the opposite side and much closer to the source has shown that this zone (zone E) has little potential: it almost certainly is due to the southern (footwall) contact of the limestones.

Three anomalies from the first Grieves survey were interpreted. The second survey confirmed that these were the most prospective responses (47100N/60900E; 47300N/60850E & 47300N/61000E). The results from the second survey have been quantitatively interpreted and compared with the original results (Bishop, 1985), since comparable results would suggest that the interpretations are correct.

Anomaly 47100N/60900E is at the western end of zone B and is coincident with the hanging-wall contact of a siltstone ridge. It was originally interpreted as being due to a conductor of limited depth extent, at 100m below 60945E and dipping at 30° to 60° to the north. A thin body with a conductance of 20S was suggested. Interpretation of the results from the second survey give a slightly different position (45m to the (grid) west), but a similar depth. A limited depth extent again seemed likely, in which case a comparable conductance of 15S was calculated. Dip was not determined (since the background could not be accurately stripped off).

Anomaly 47300N/60850E is the next-line response to that described above (and may therefore be expected to have the same source). This response was originally interpreted as having a shallower source (at ~40m) and less conductive (at 0.5S), but having a larger depth extent (up to 200m?) than its neighbour. The data from the second survey is noisy and does not readily lend itself to a quantitative interpretation. Nevertheless, the same position (60850E) was recorded and a slightly greater depth (50 to 60m) indicated. No depth extent was estimated, but using a value of 100m, a (very approximate) conductance of 20S was calculated. This value is much higher than the value obtained from the first survey, but is similar to that calculated for the adjacent anomaly.

Anomaly 47300N/61000E is the westernmost response of zone C which extends for more than 800m across the Grieves grid. The response was recorded to channel 5 from both surveys. A depth of 55m beneath 61025E was interpreted from the first survey. This compares with 50m to 80m below 61000E from the second survey. A depth extent of 50 to 60m was interpreted from the first survey.

* The enhanced responses recorded by the first survey were most probably due to current gathering. This phenomenon, when it occurs (usually with a conductive host or overburden), is often strongest at a distance from the loop. It gives an increased response and leads to a false quantitative interpretation.



but no value could be obtained from the later profile (due to interference from an adjacent response). A conductance of 1S was calculated from the second survey which compares closely with less than 2S from the first.

Contrary to expectation, the amplitudes of all three anomalies from the first survey were larger than those recorded during the follow-up work. This may again be due to (preferential) current gathering, but might also be caused by the sources extending towards the northern loop (assuming a shallow dip to the north and a much larger depth extent than was suggested above) or possibly by (both sources) having a southerly dip, so that the coupling is better for the northern loop.

CONCLUSIONS AND RECOMMENDATIONS

The UTEM surveys of the Grieves and Baura grids have defined a number of weak conductive zones. These have been interpreted as being due to contacts, fractures or faults.

No well-defined responses indicative of good conductors were recorded on either grid. However, two anomalies on the Baura grid have been chosen for further evaluation: one has a moderate amplitude and the other a moderate conductance. The former response, at 46400N/62375E, is given the higher priority.

The re-surveying of the Grieves grid showed that the apparently prospective zone E (interpreted from the first survey) was not of interest (a good example of the benefit to be gained by surveying with loops on both sides of the target). The three anomalies (from two zones) chosen from the first survey were again the most prospective targets defined by the second survey, although all three are likely to have formational sources.

The applicability of this technique to finding a Zn-Pb body has still not been established and the reader's attention is drawn to the pending test of the Oceana deposit with the CSAMT method.

J.R. Bishop
May, 1985.



REFERENCES

- Bishop, J.R., 1983. An evaluation of the geophysical surveys carried out within E.L. 4/78 prior to 1978. Mitre Geophysics report 83/02 for Amoco.
- Bishop, J.R., 1985. Interpretation of UTEM surveys over the Grieves and Myrtle grids E.L. 4/78 (Zeehan). Mitre Geophysics report 85/01 for EZ.
- Mathison, I., 1984. E.L. 4/78 (Zeehan) -Progress report on exploration activity 14th January - 14th June, 1984. EZ report no. T192.
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Table 1

UTEM COVERAGE OF THE BAURA AND GRIEVES GRIDS

Survey by: Lamontagne Geophysics.

date: March - April, 1985

component measured: vertical.

station spacing: 25m.

BAURA GRID

Line	Stations (central loop 0010)	Stations (southern loop 0012)	Stations (central loop 0011)
45400N	60350E - 61200E	60950E - 61975E	
45800N	60425E - 61175E	60900E - 62025E	61925E - 62300E
46000N	60400E - 61550E	60900E - 62000E	61550E - 62400E
46200N	60600E - 61200E	60900E - 62075E	61925E - 62600E
46400N	60650E - 61550E	60900E - 62050E	61550E - 62700E
46600N		61100E - 62025E	61875E - 62750E

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132143

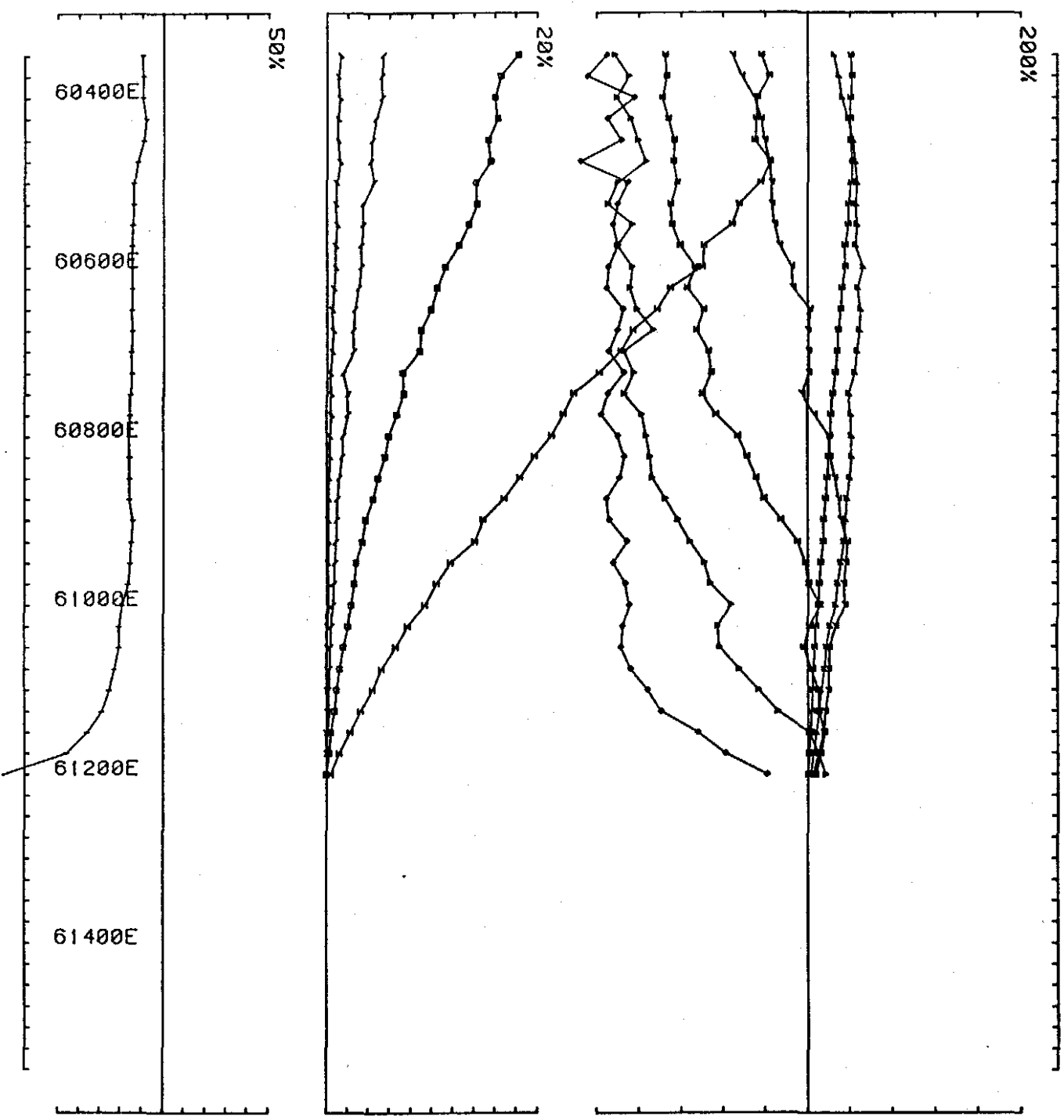
Table 1 (cont.)

GRIEVES GRID

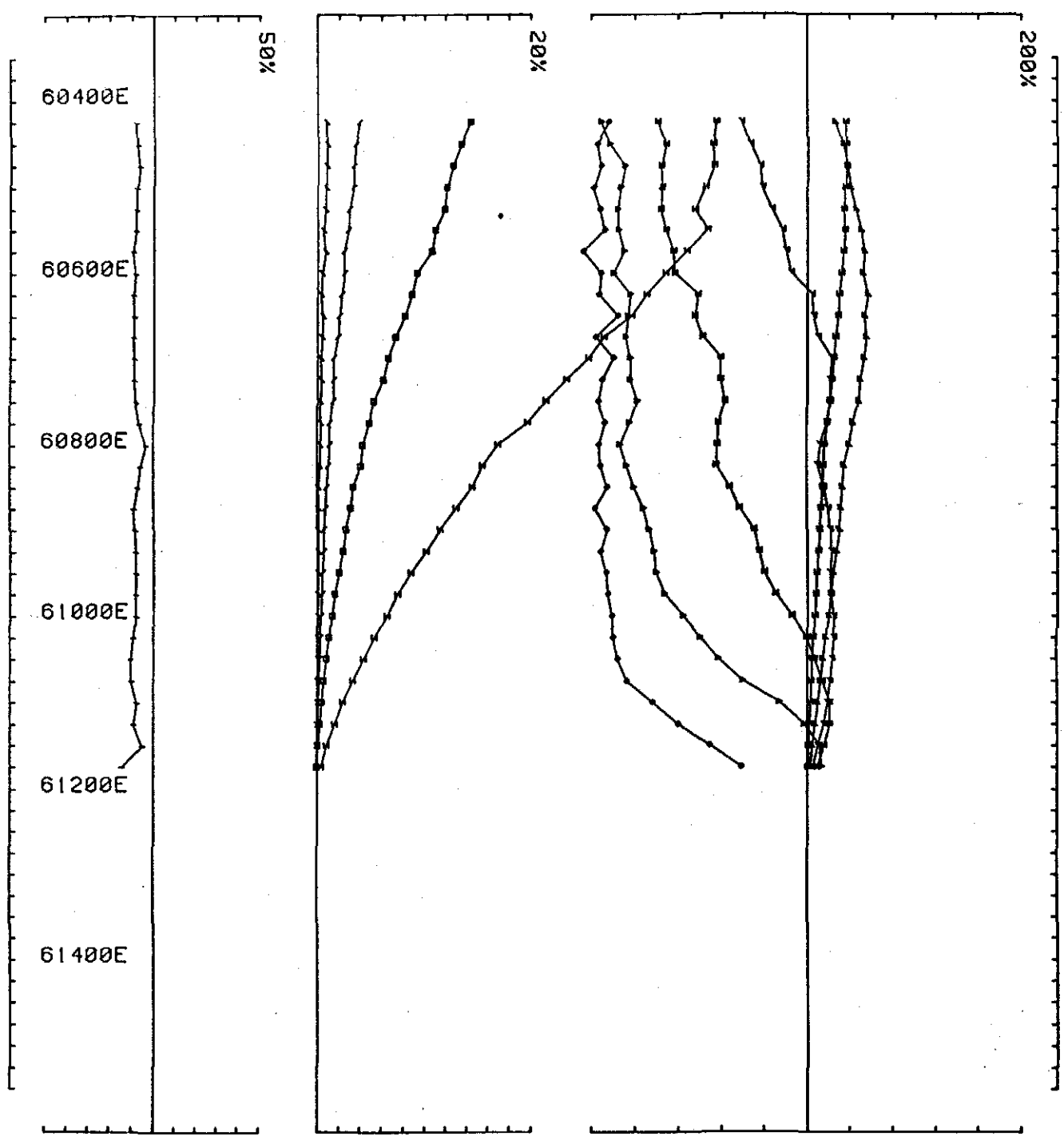
Line	Stations (loop 2)
46500N	60850E - 61625E
46700N	60750E - 61600E
46900N	60750E - 61575E
47100N	60600E - 61575E
47300N	60500E - 61525E
	(loop 3)
47400N	60400E - 61375E
47500N	60525E - 61375E
47700N	60400E - 61375E
47800N	60450E - 61375E
47900N	60400E - 61375E
48000N	60400E - 61375E
48200N	60200E - 61375E
48400N	60400E - 61400E

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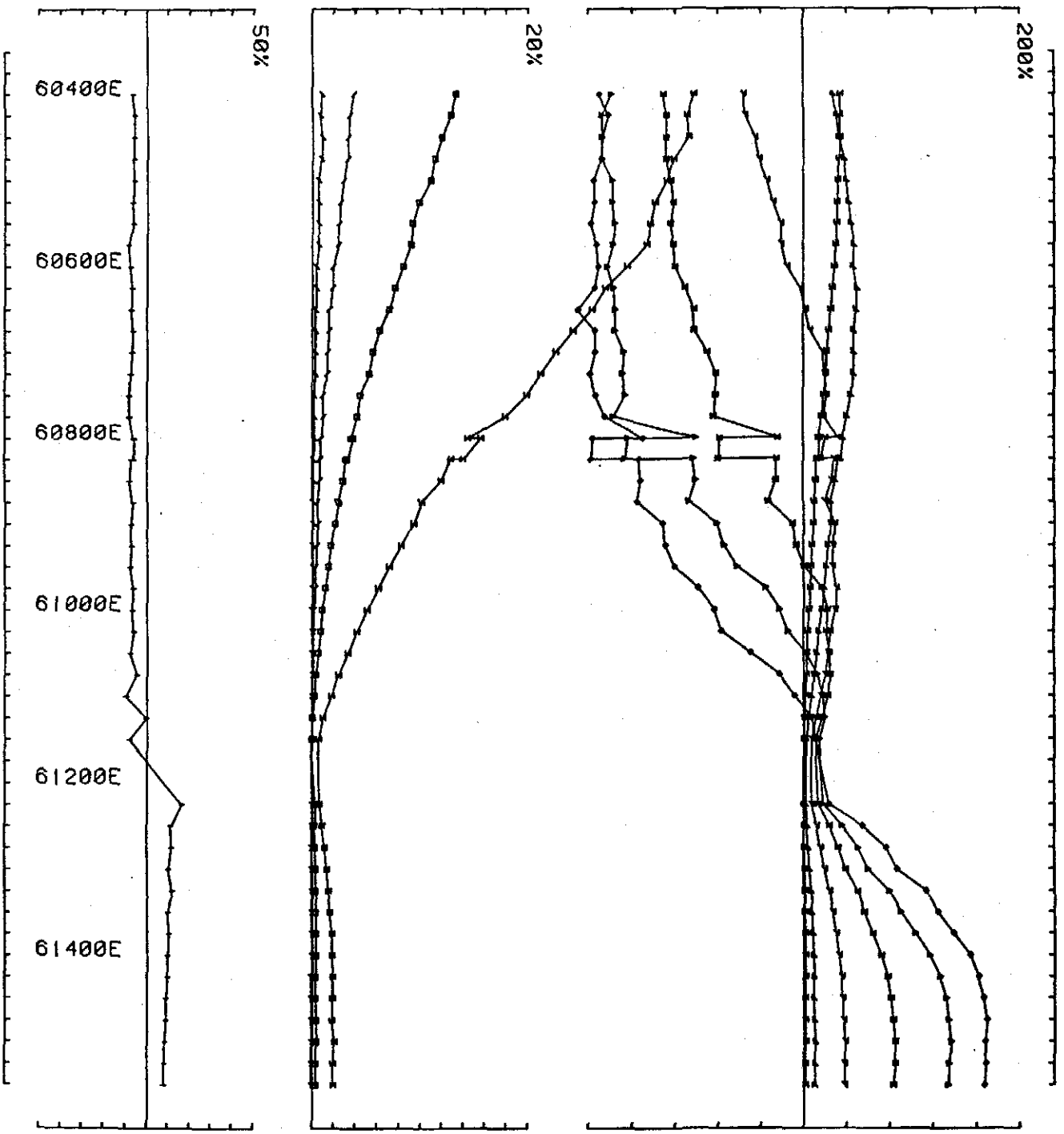
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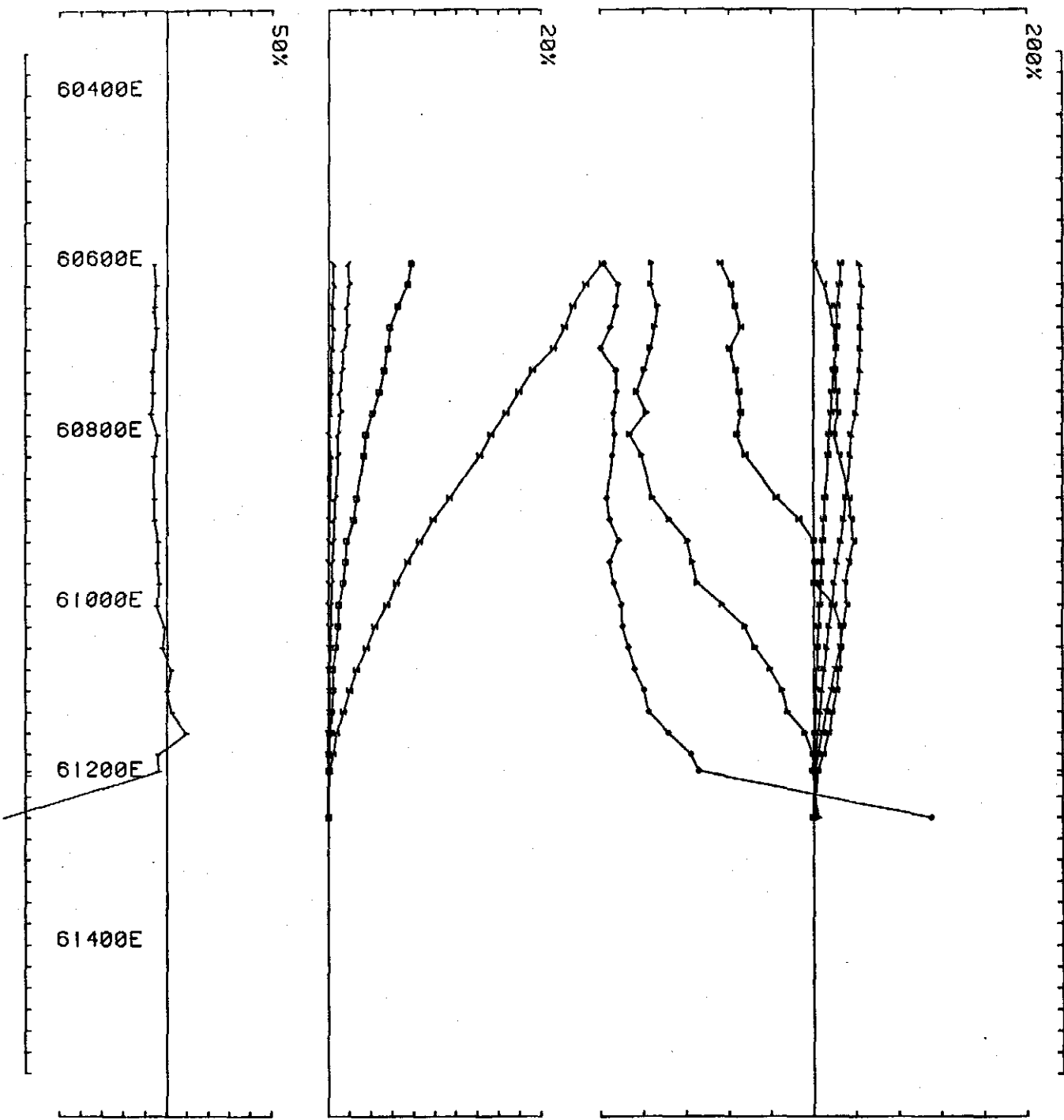
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 Loopno 0010 Line 45600N component Hz secondary Ch 1



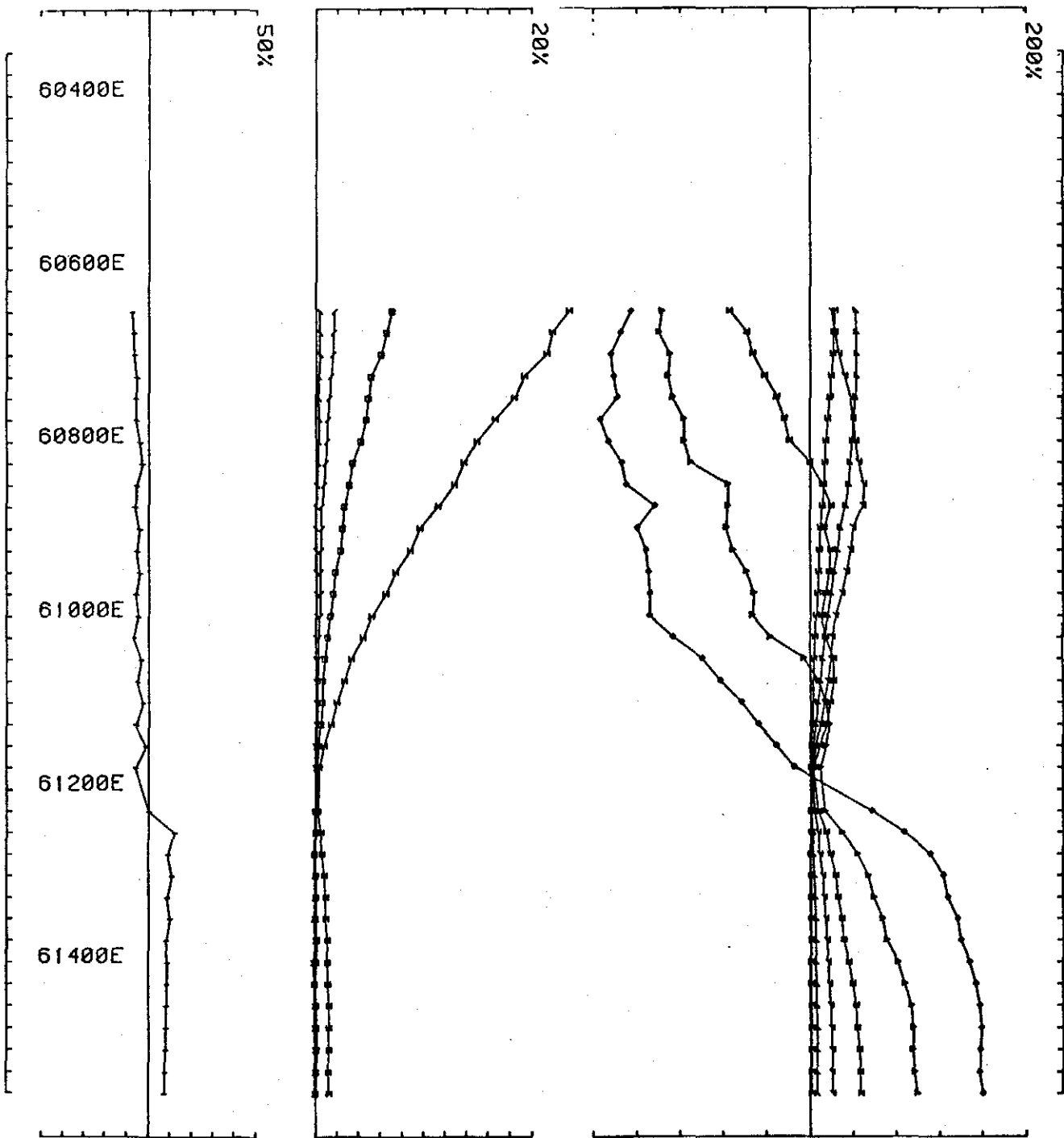
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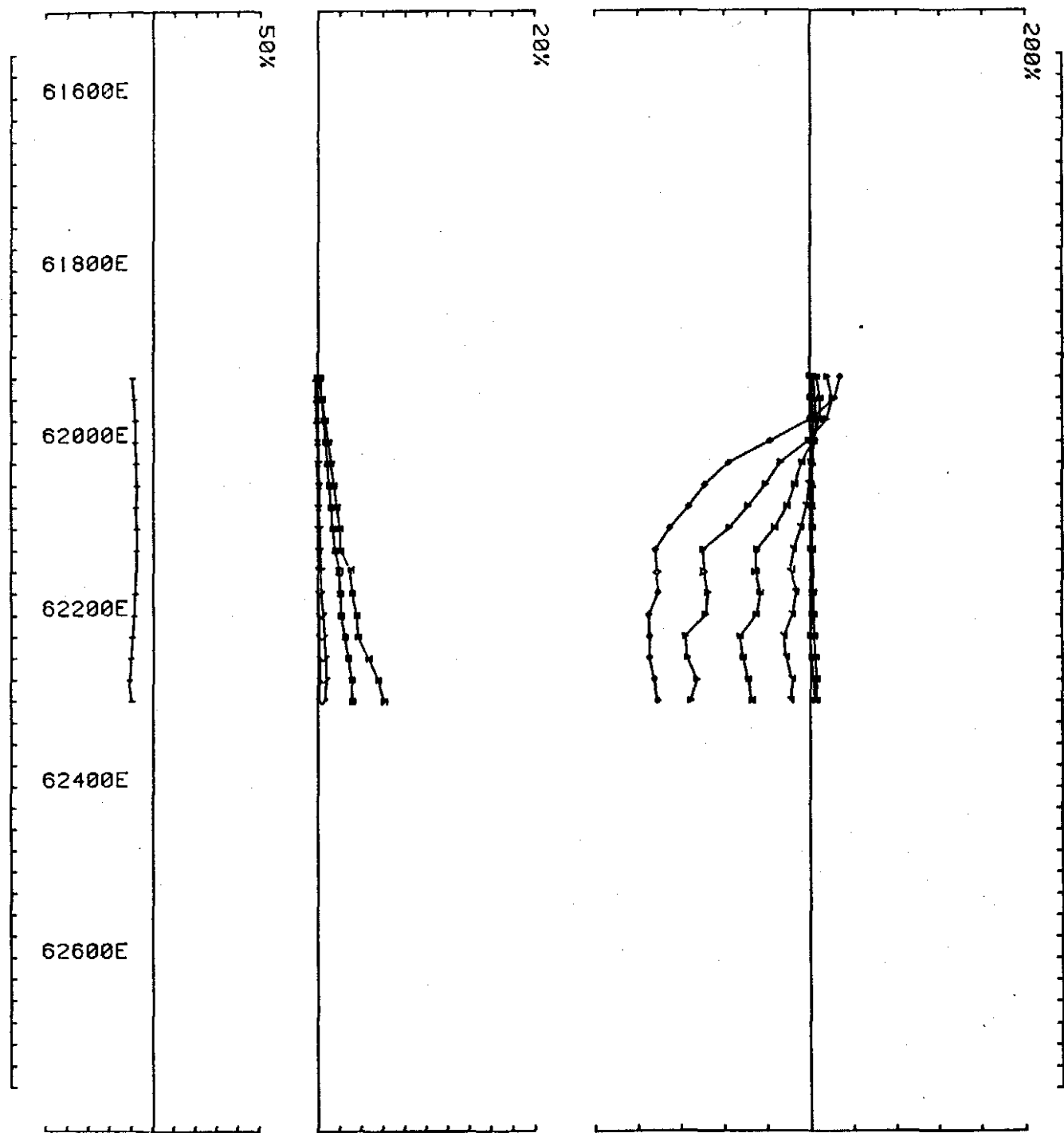
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 46000N



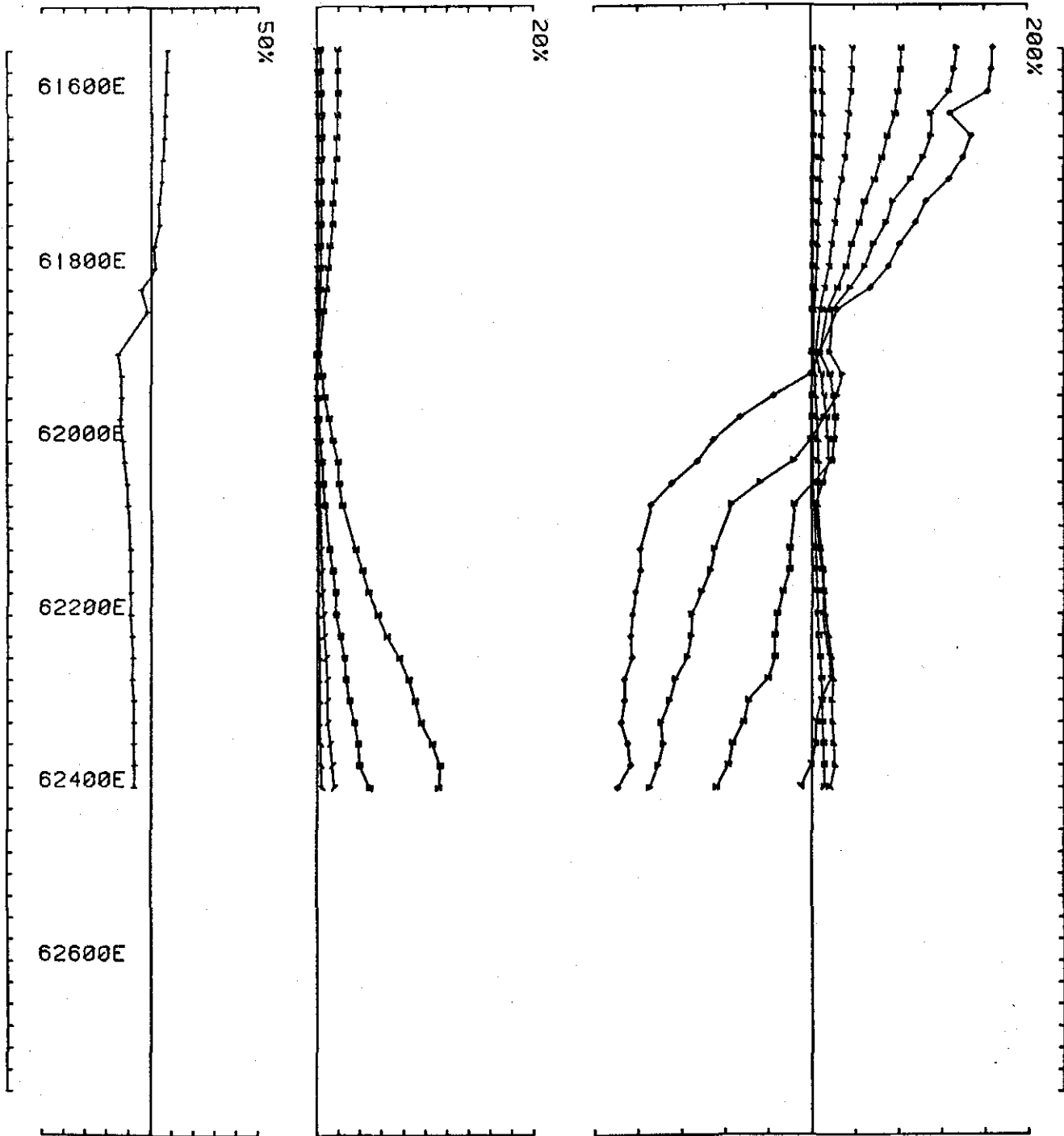
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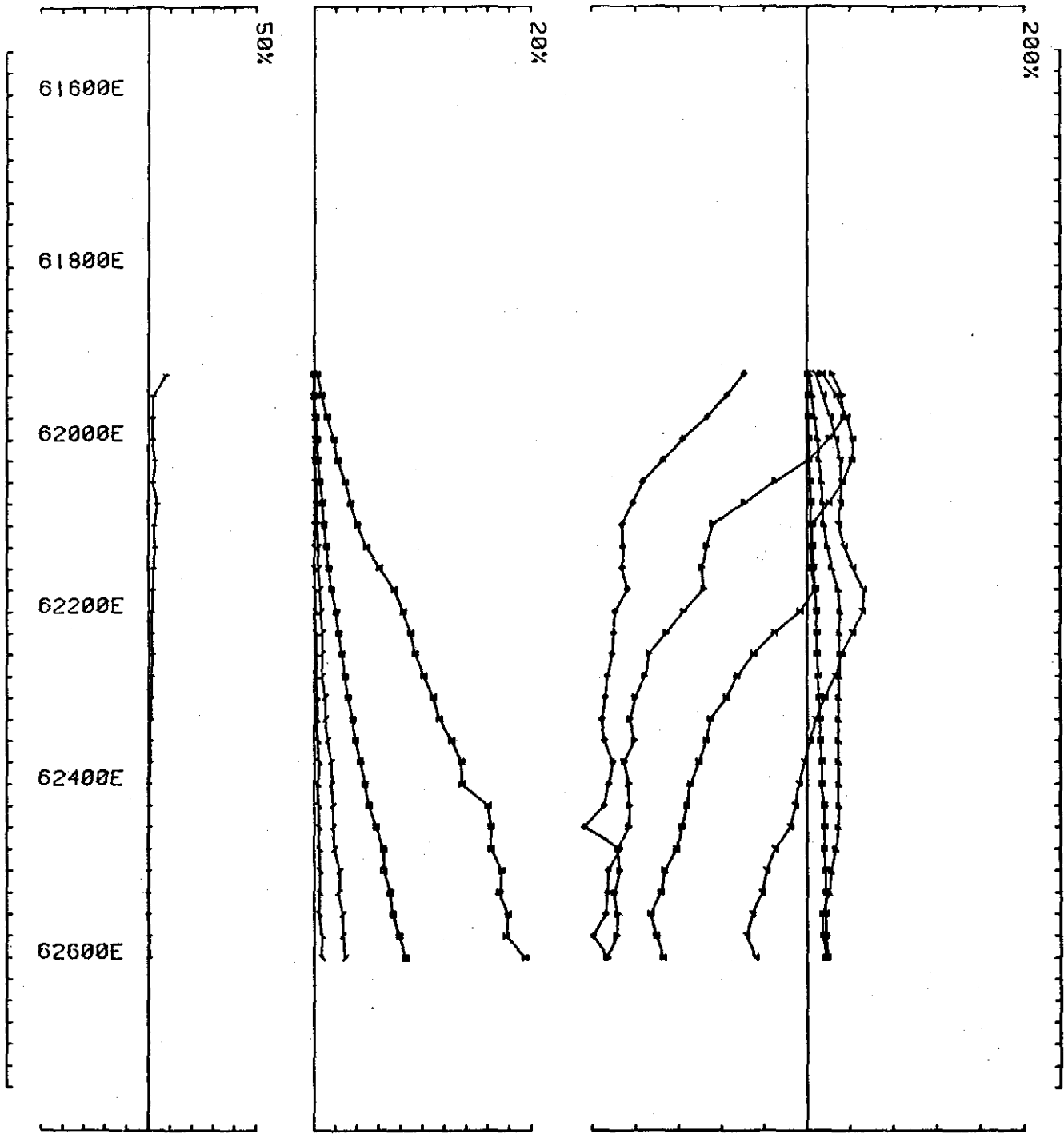
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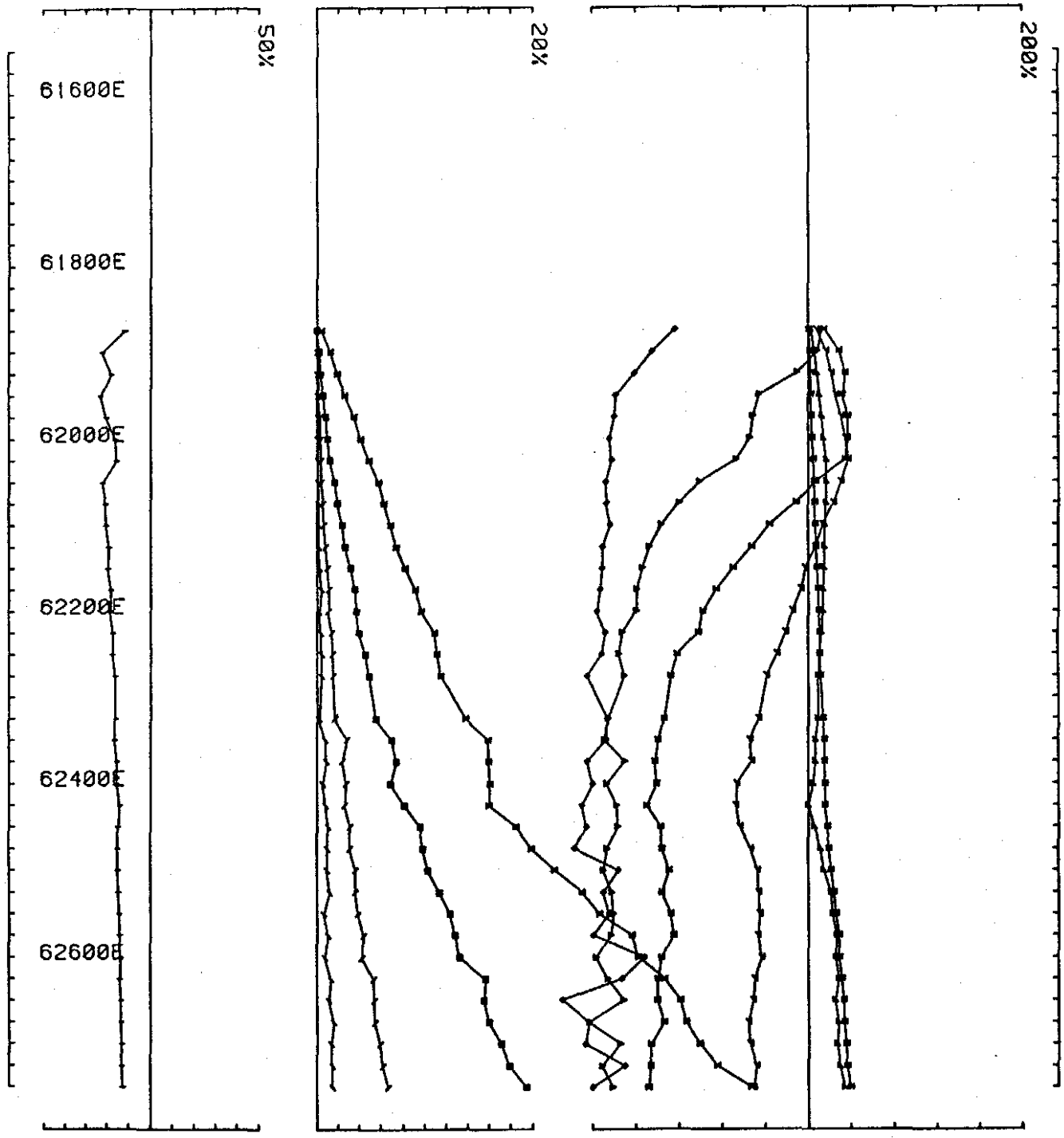
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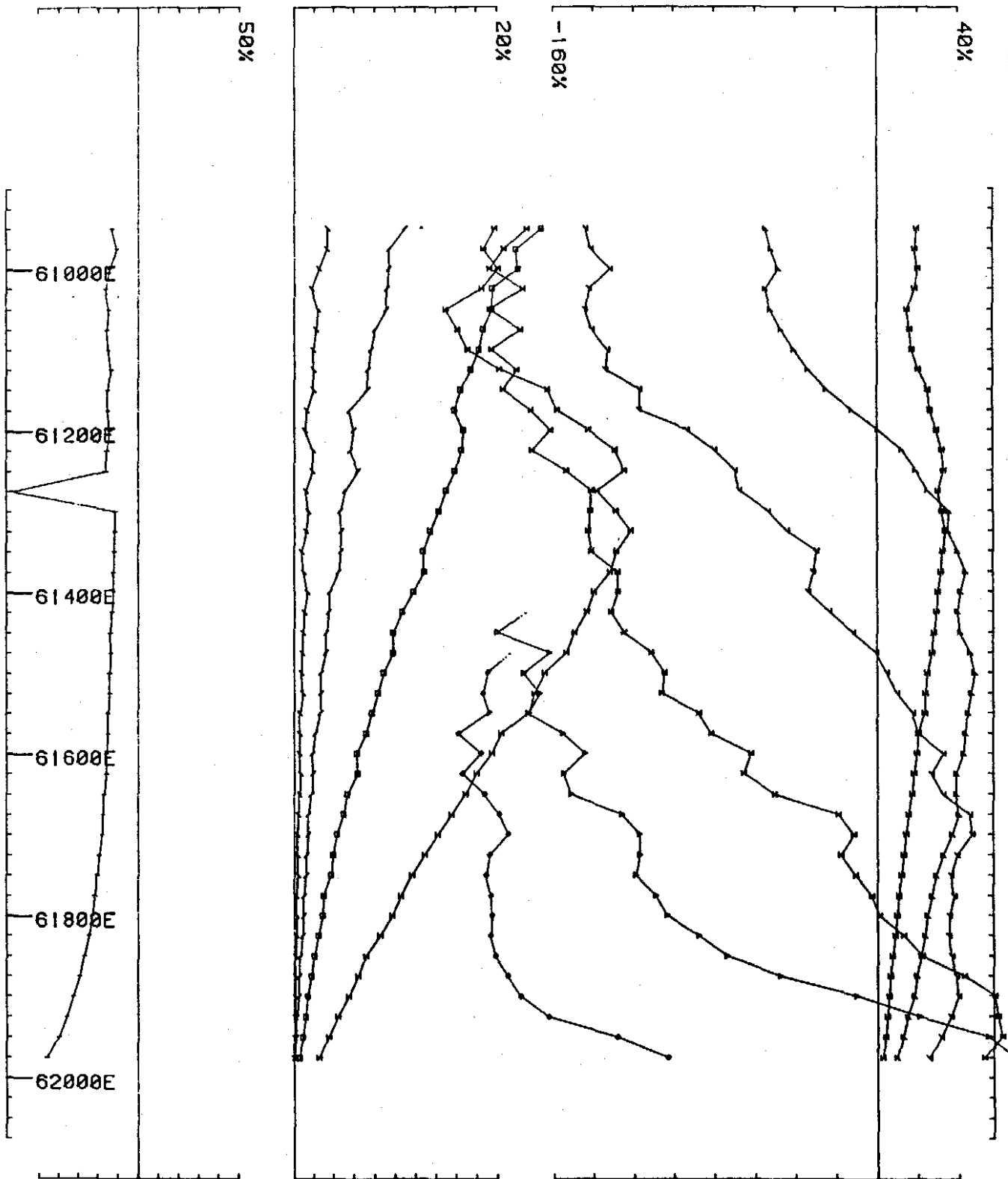
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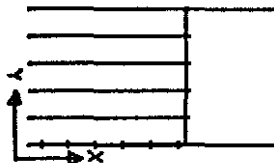
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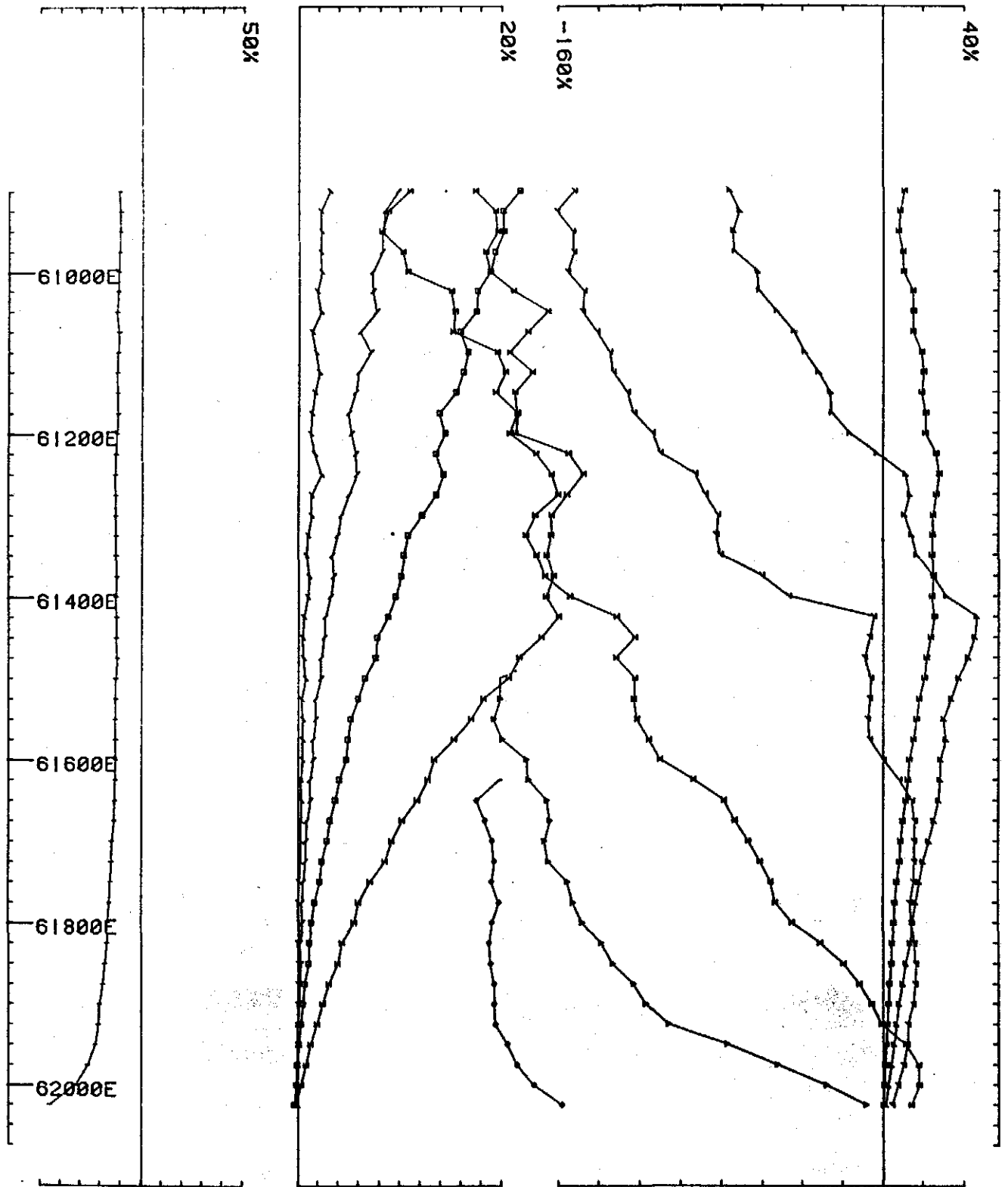
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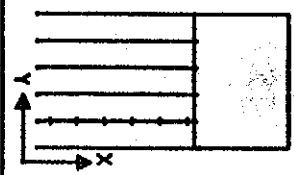
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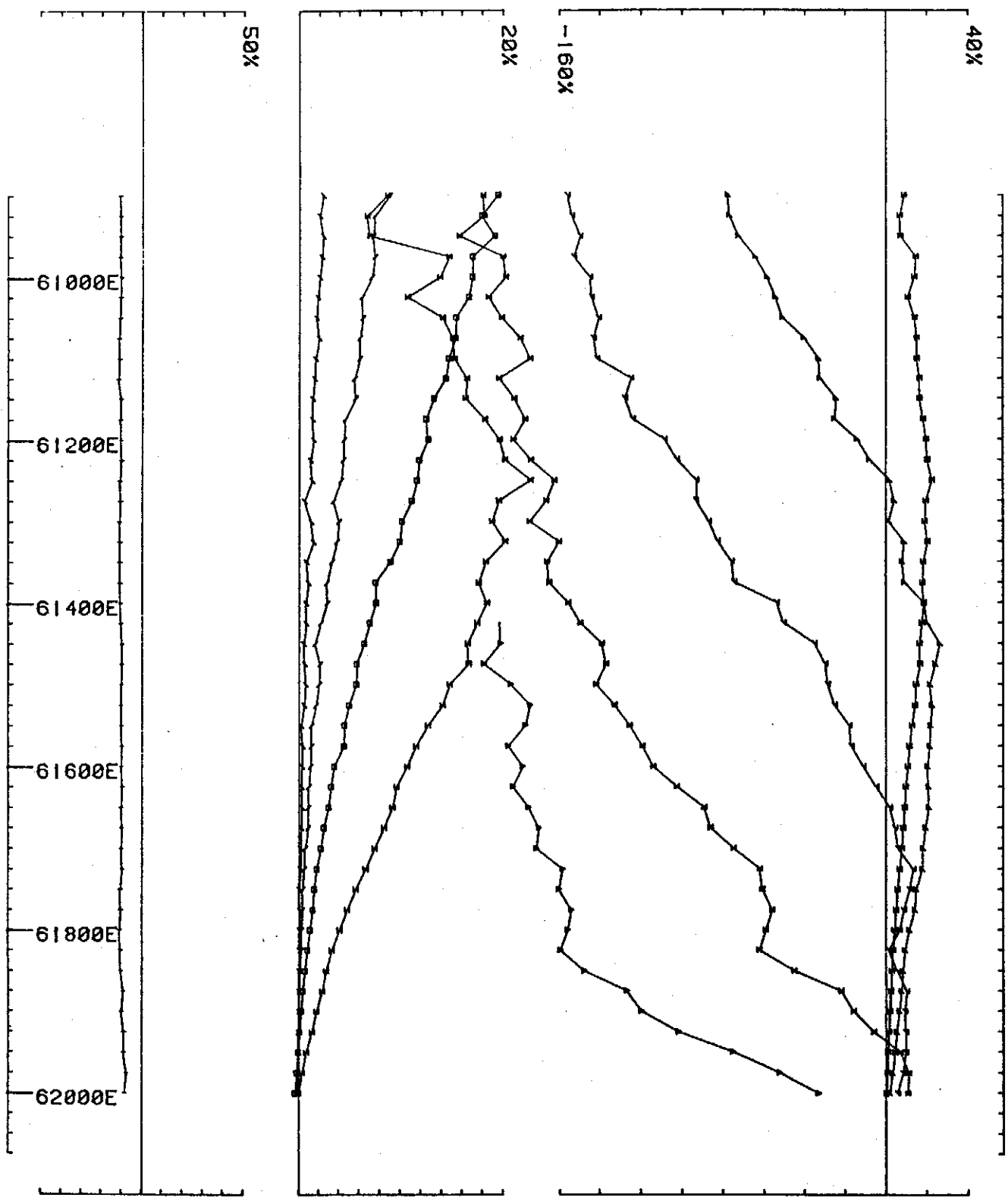
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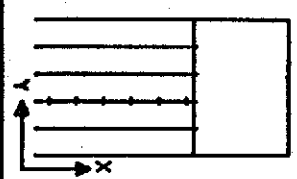
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 SECONDARY FIELD CONTINUOUS Ch 1 NORMALIZATION



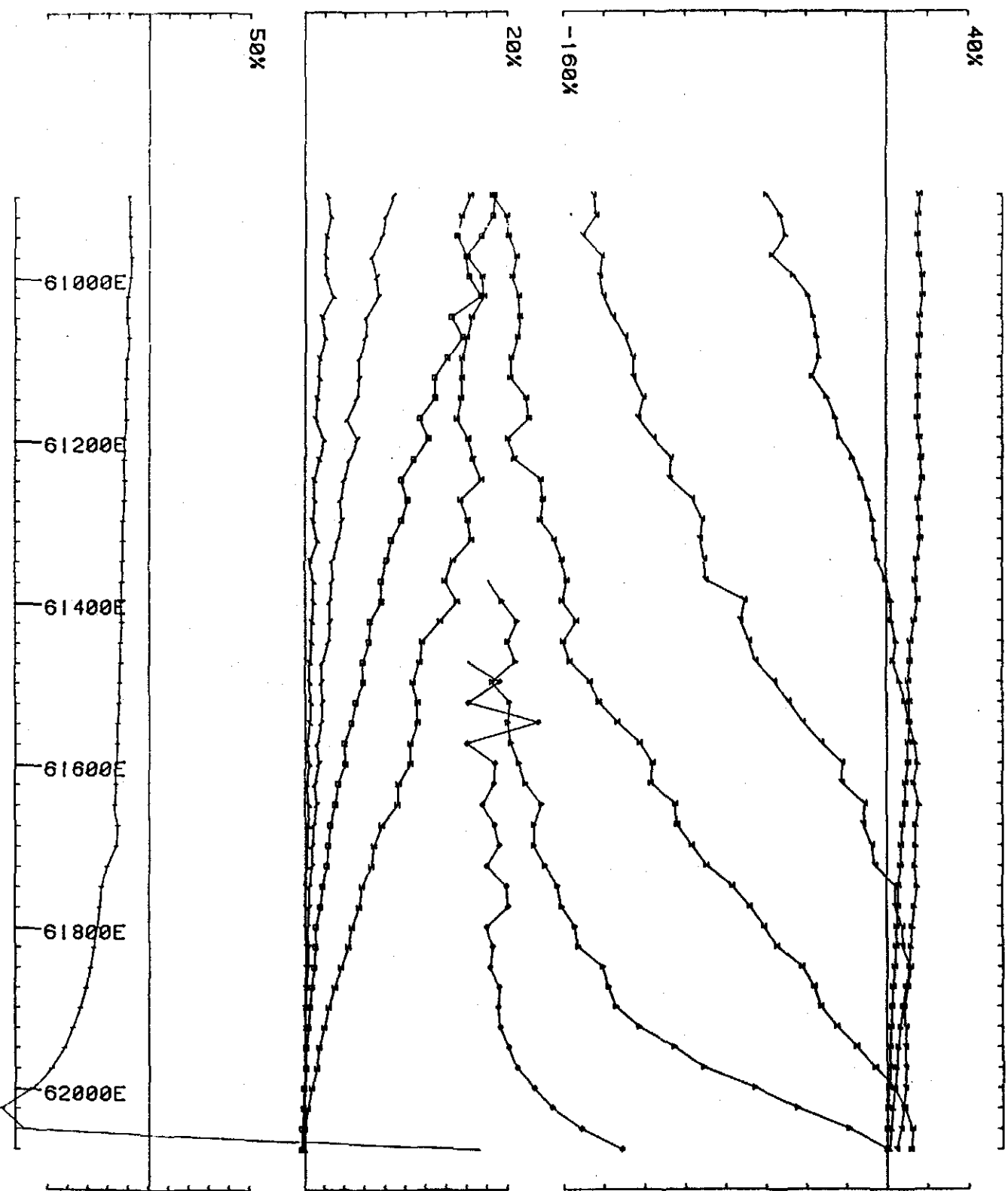
BAURA LOOP B
 LOOP 0912
 LINE 45800N
 Hz



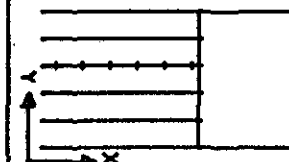
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 SECONDARY FIELD CONTINUOUS Ch 1 NORMALIZATION



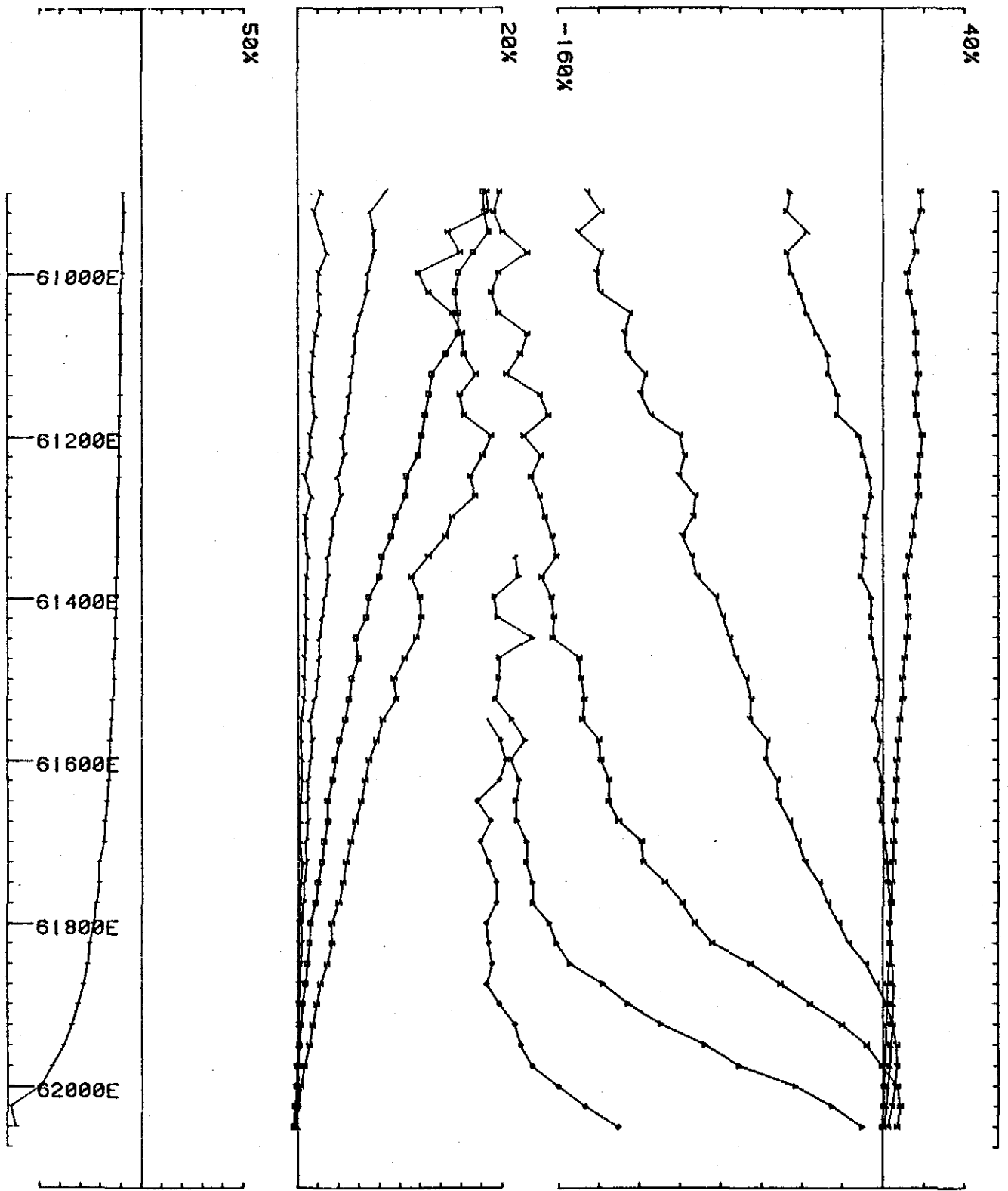
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 LOOP 8012
 LINE 40000N
 Hz



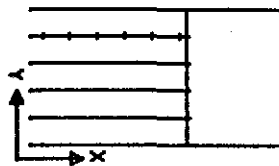
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 L46200N Hz COMPONENT BASE FREQ. 26.204HERTZ
 SECONDARY FIELD CONTINUOUS Ch 1 NORMALIZATION



BAURA LOOP B
 LOOP 0012
 LINE 46200N
 Hz



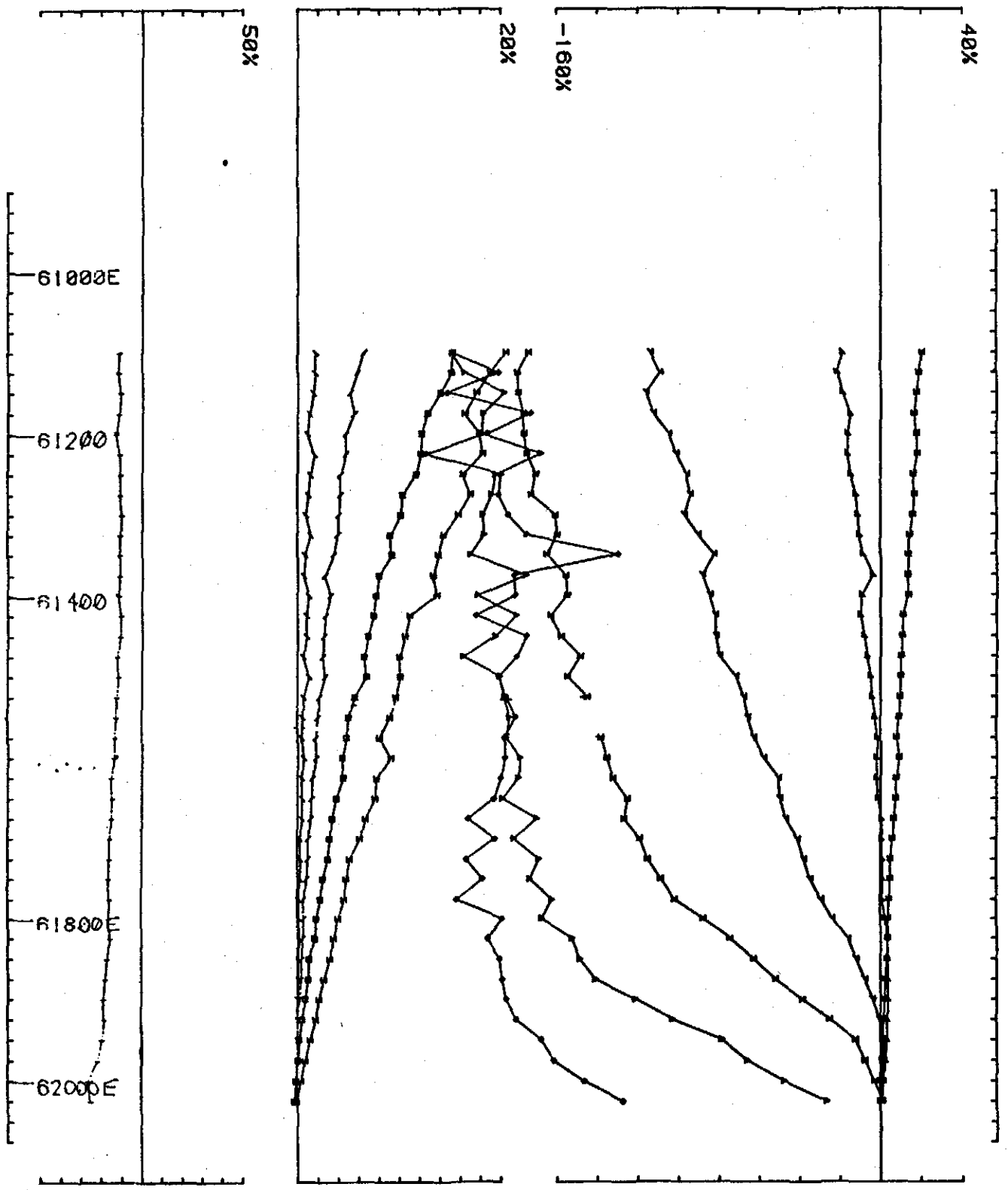
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 SECONDARY FIELD CONTINUOUS ch 1 NORMALIZATION



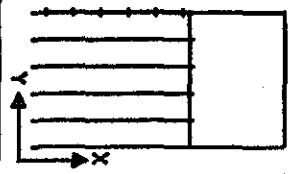
BAURA LOOP B
 LOOP 0012
 LINE 46400N
 Hz

132157

156

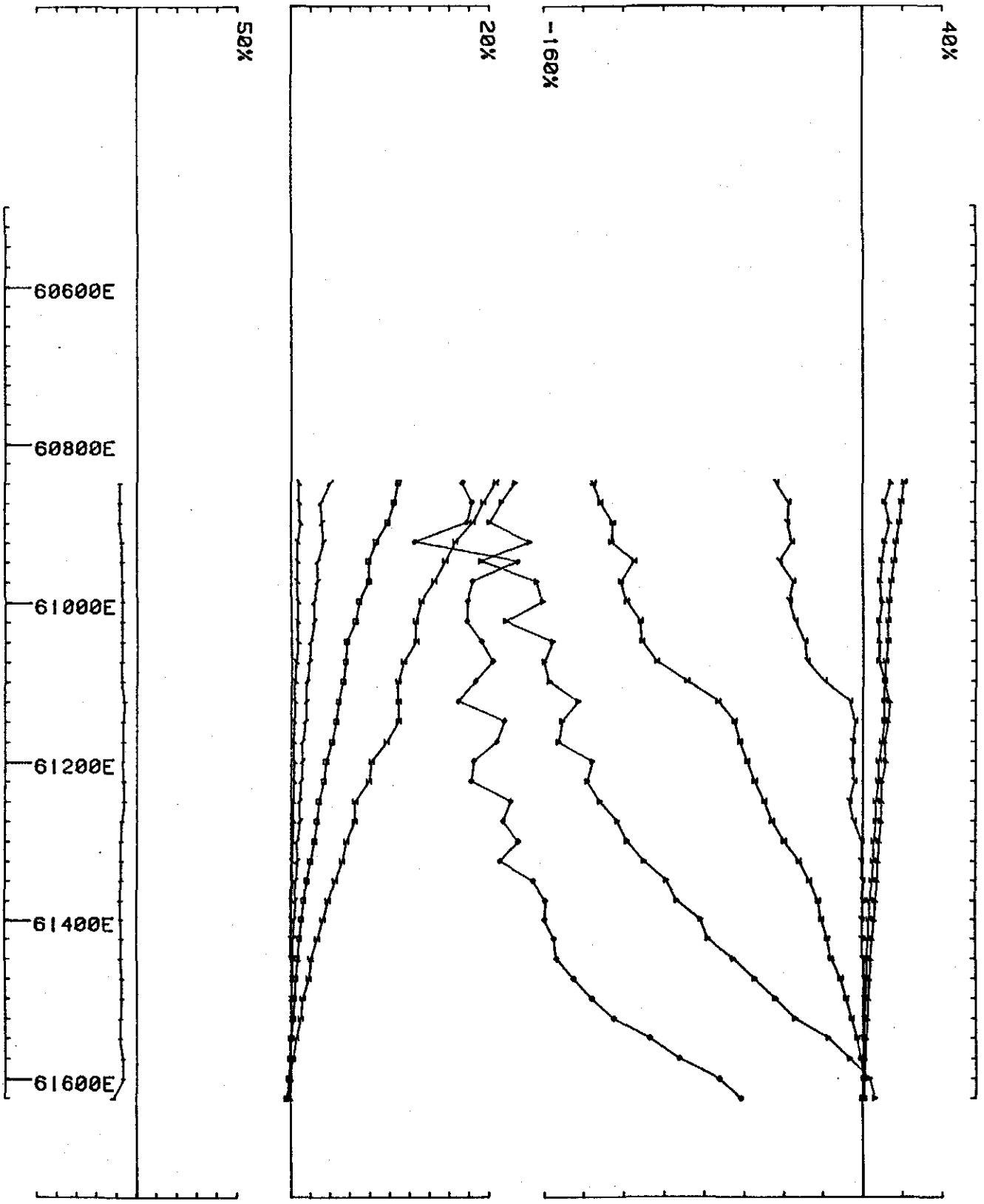


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 SECONDARY FIELD CONTINUOUS Ch 1 NORMALIZATION

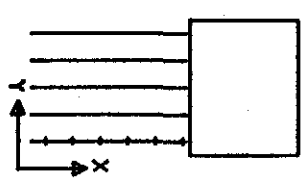


BAURA LOOP B
 LOOP 8012
 LINE 40690N
 Hz

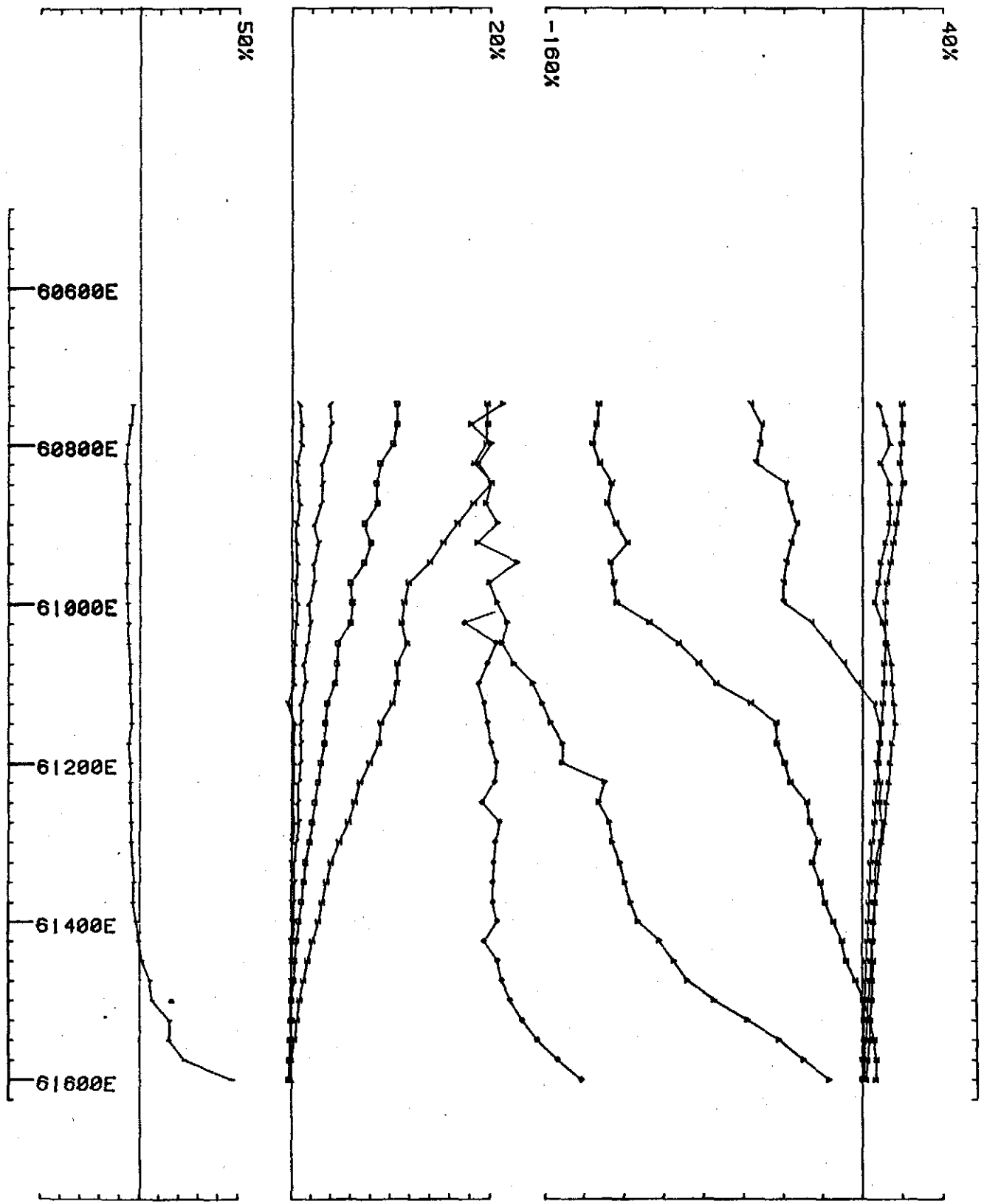
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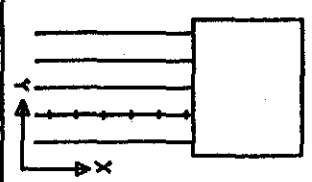
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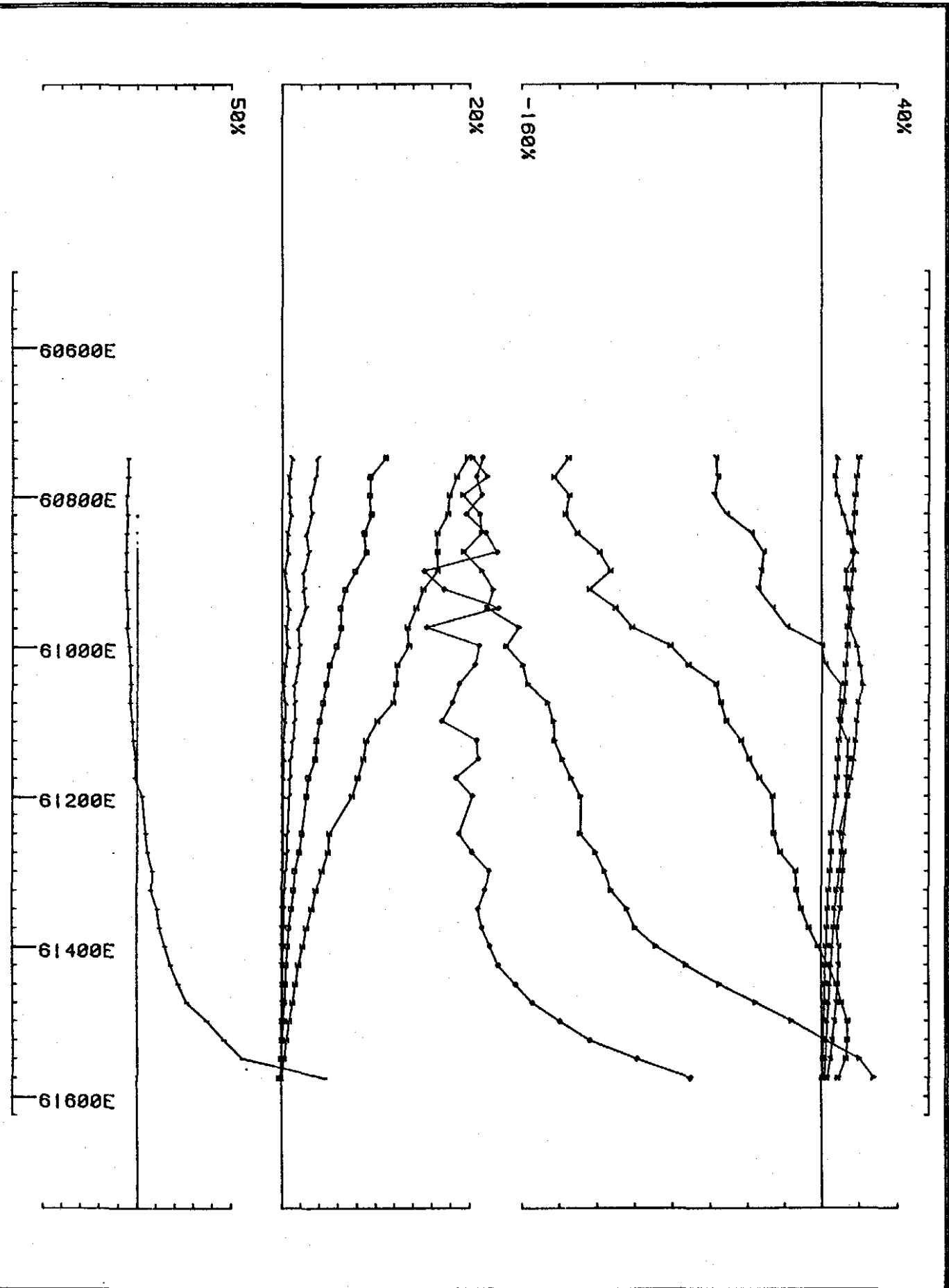
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 LINE 46500N
 Hz



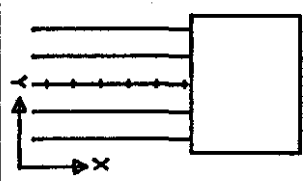
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 SECONDARY FIELD CONTINUOUS Ch 1 NORMALIZATION



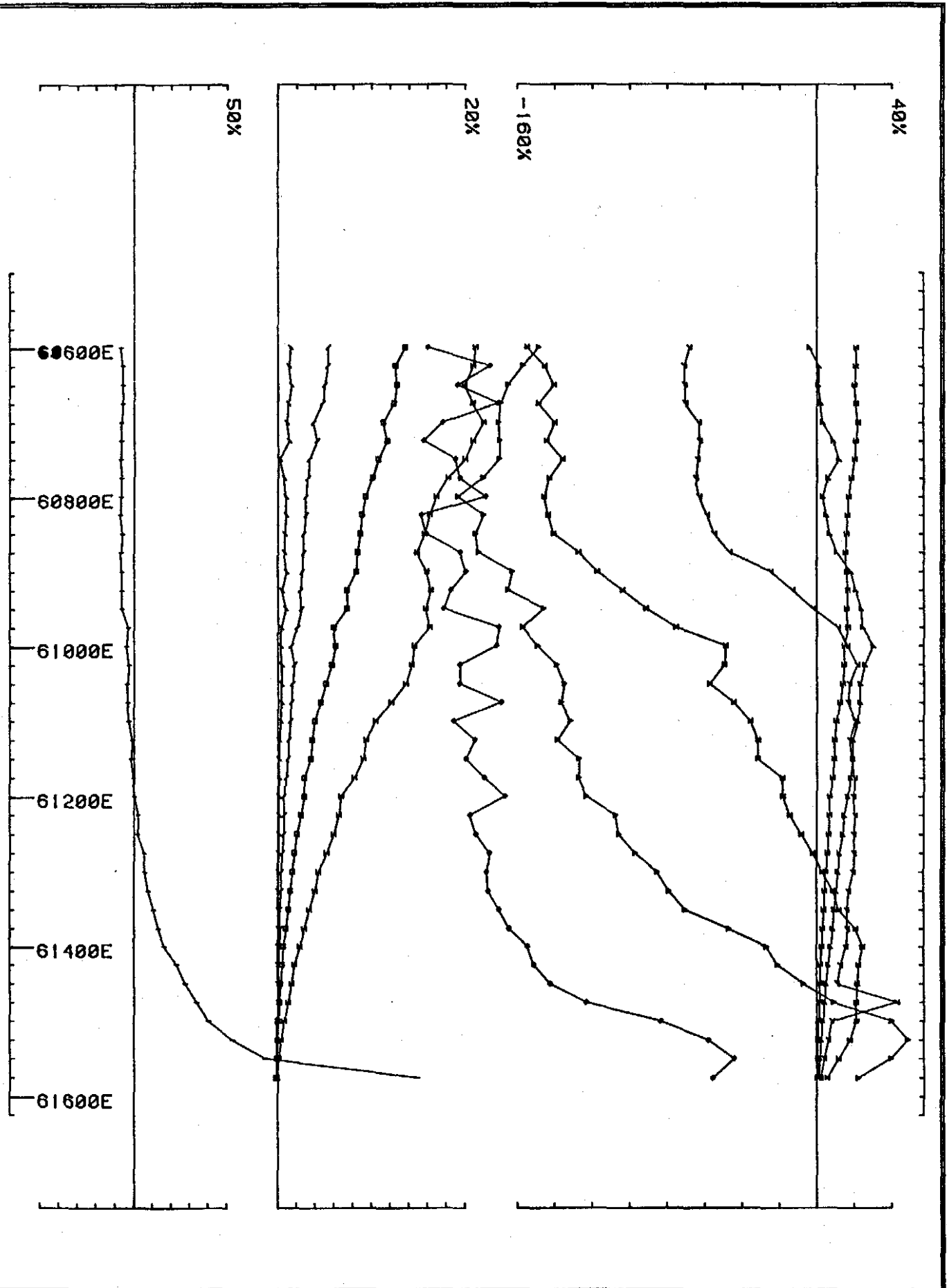
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 LOOP 8982
 LINE 46700N
 Hz



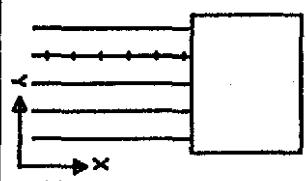
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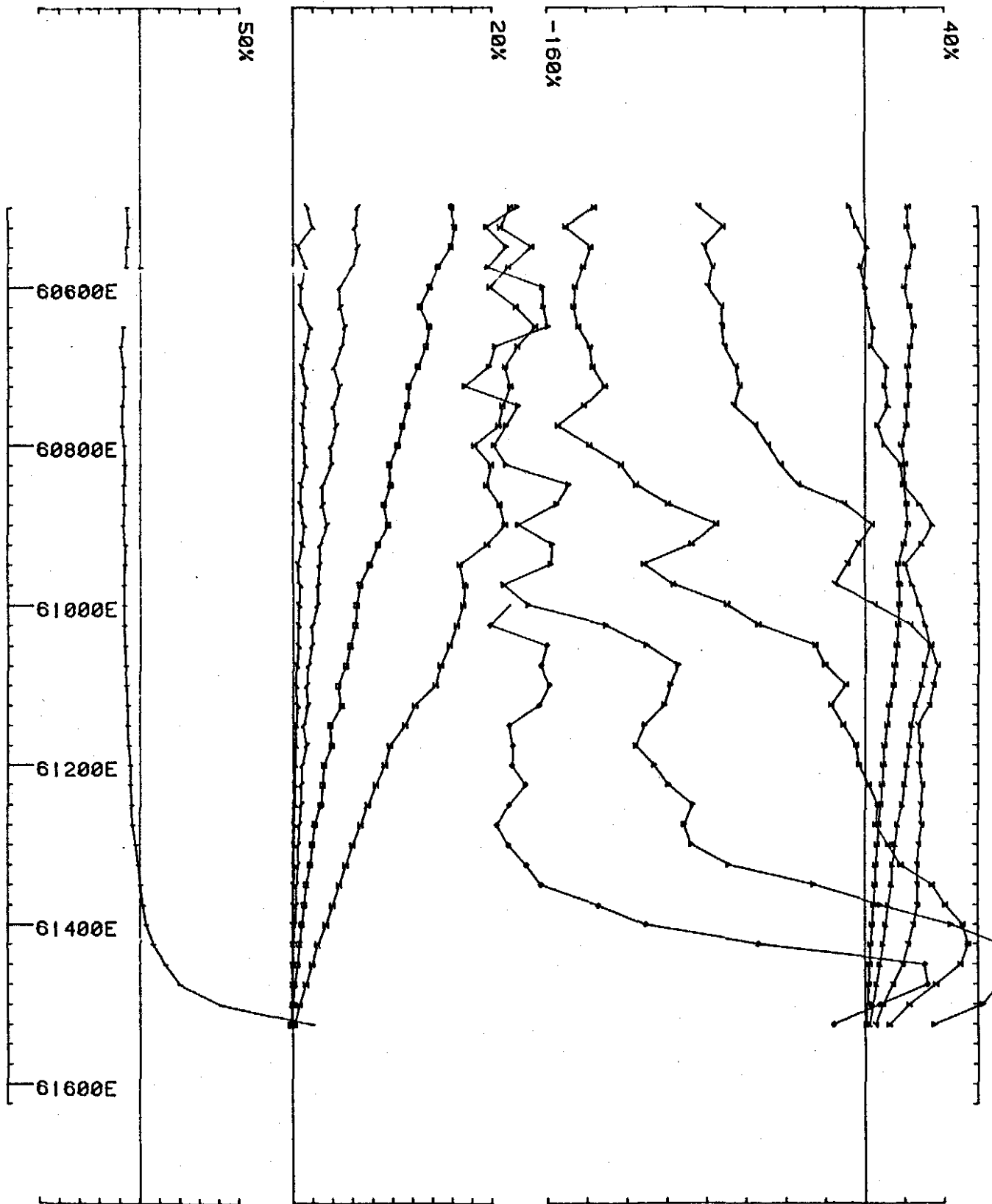
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 LINE 46900N
 Hz



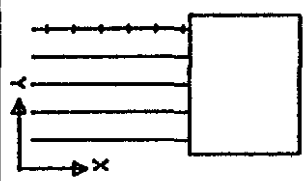
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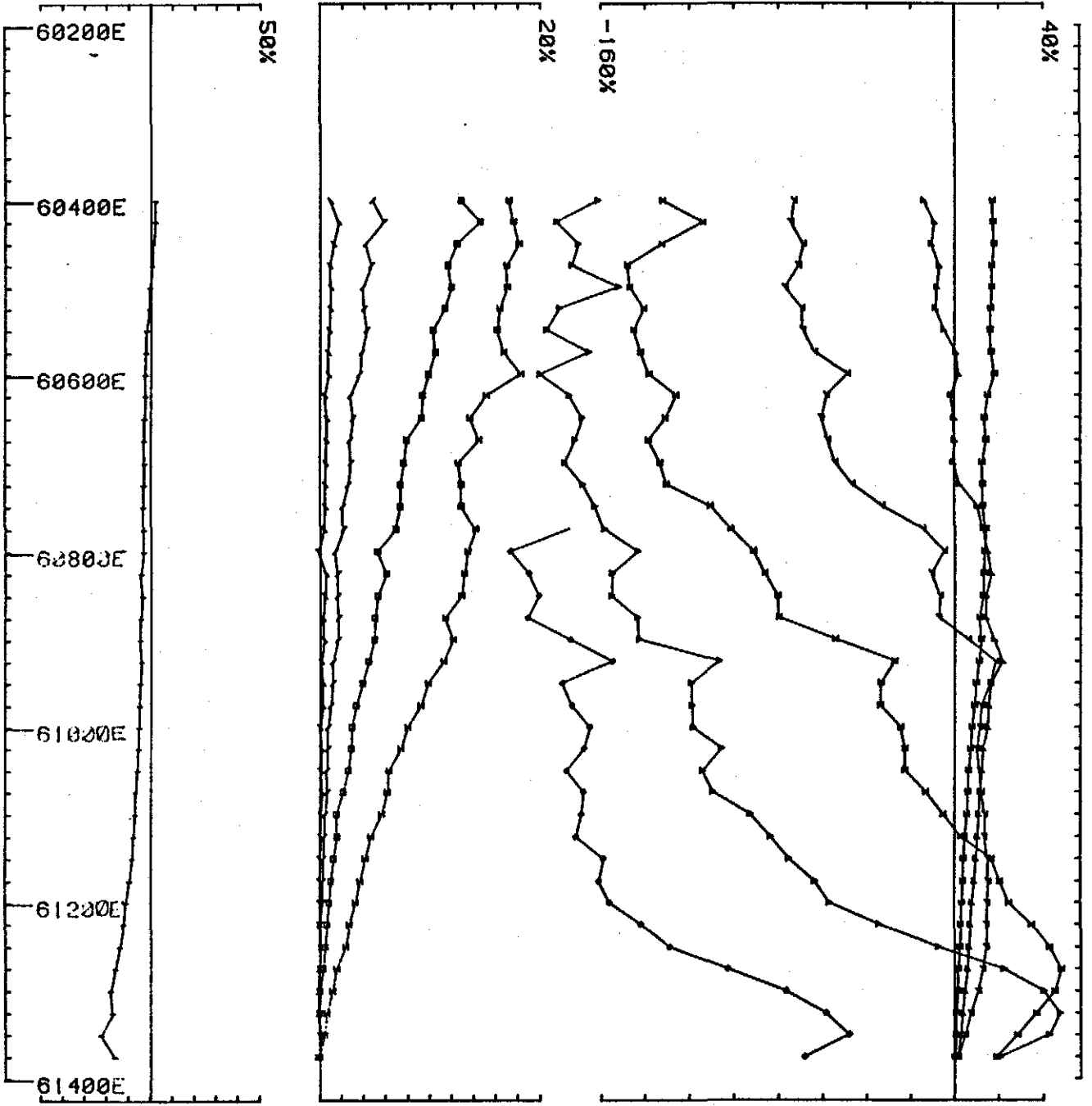
GRIEVES LOOP 2
 LOOP 8882
 LINE 47100N
 Hz



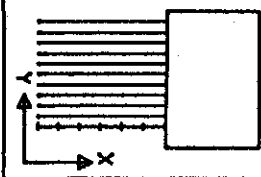
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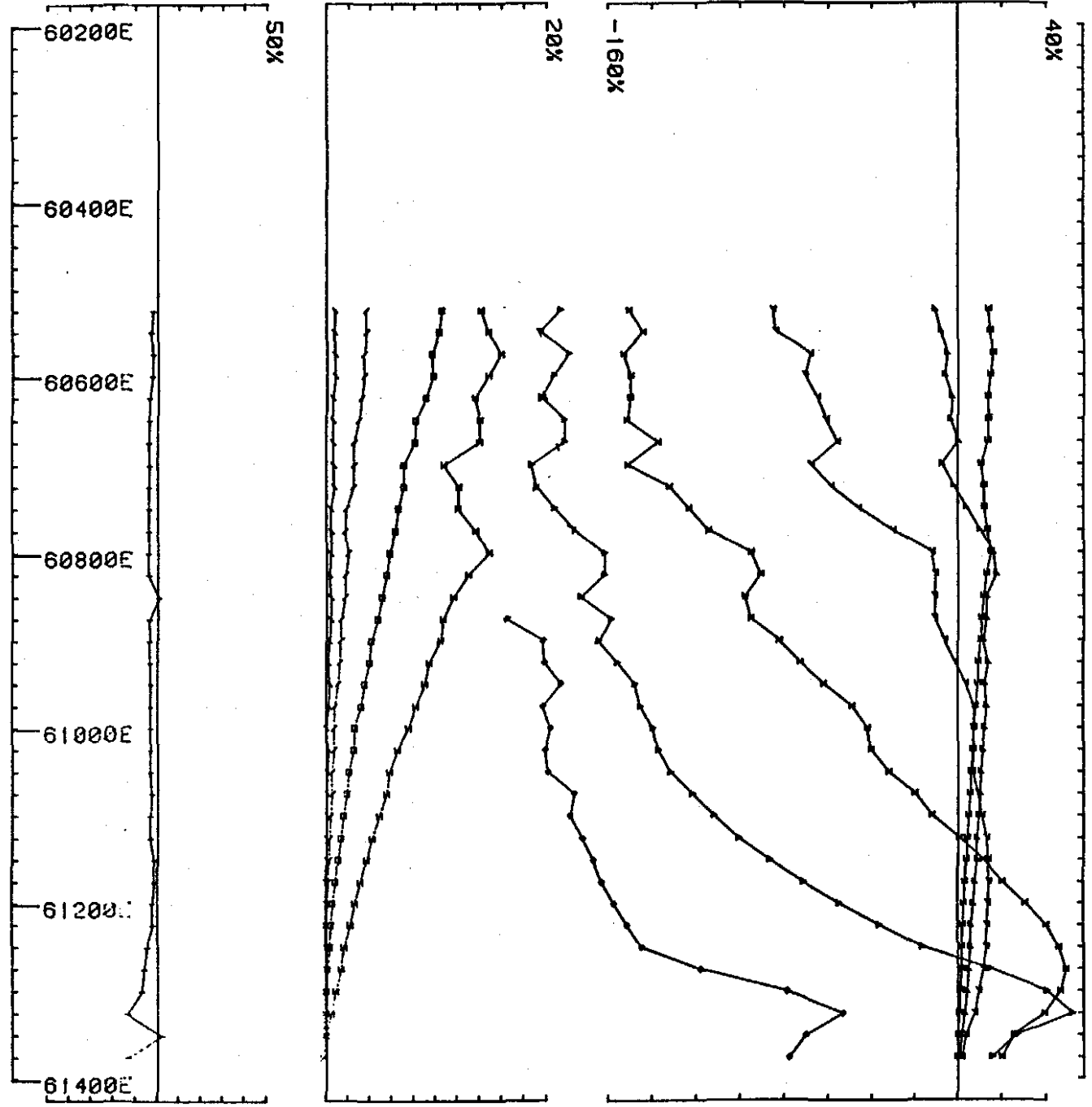
GRIEVES LOOP 2
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 LINE 47300N
 Hz



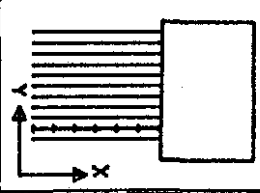
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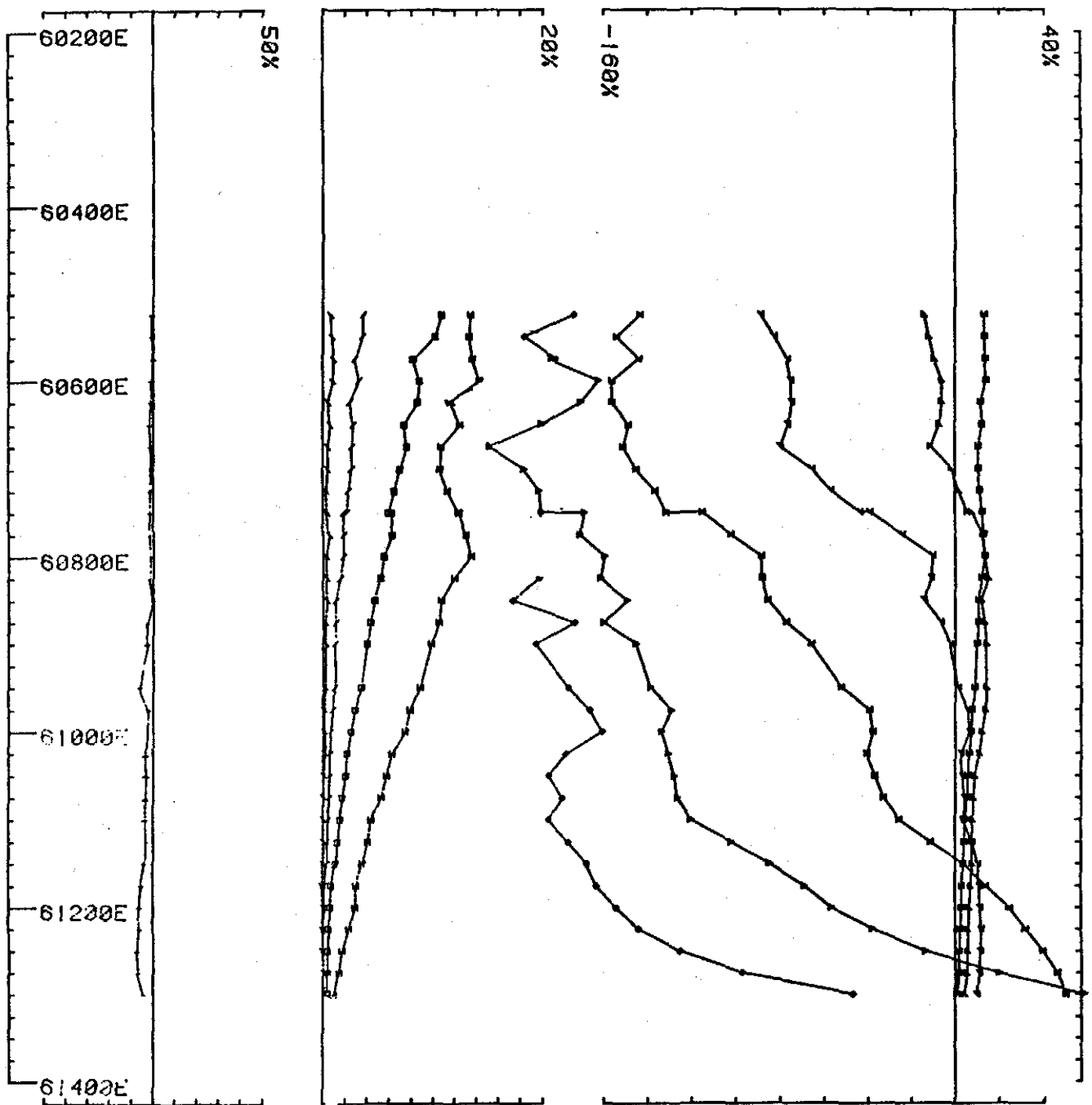
GRIEVES
 LOOP 0003
 LINE 47400N
 Hz



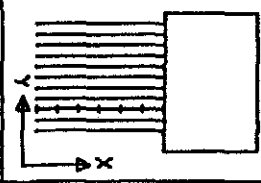
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 SECONDARY FIELD CONTINUOUS Ch 1 NORMALIZATION



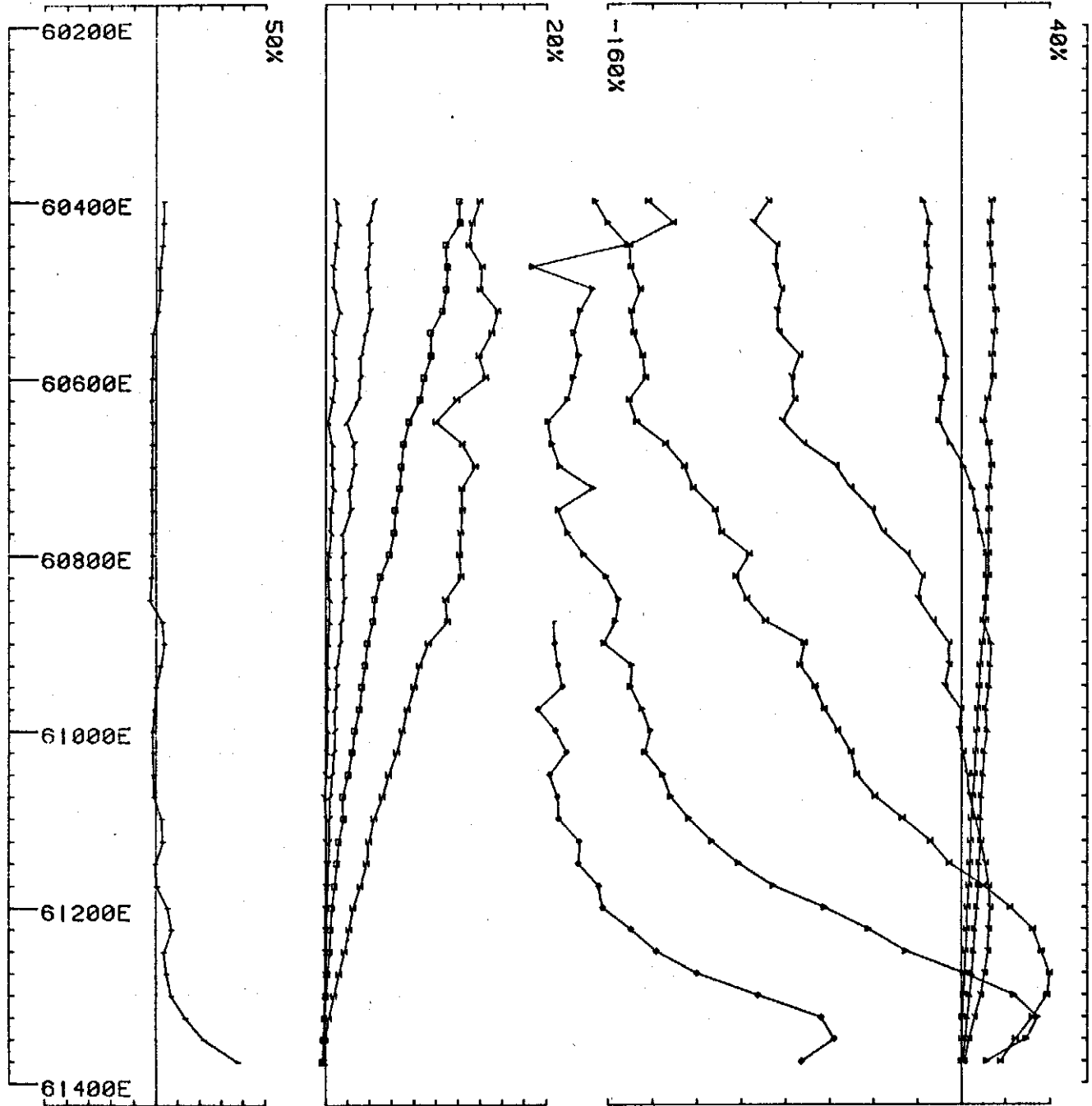
GRIEVES
 LOOP 8003
 LINE 47500N
 Hz



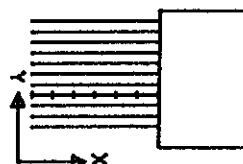
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GRIEVES
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 LINE 47600N
 Hz

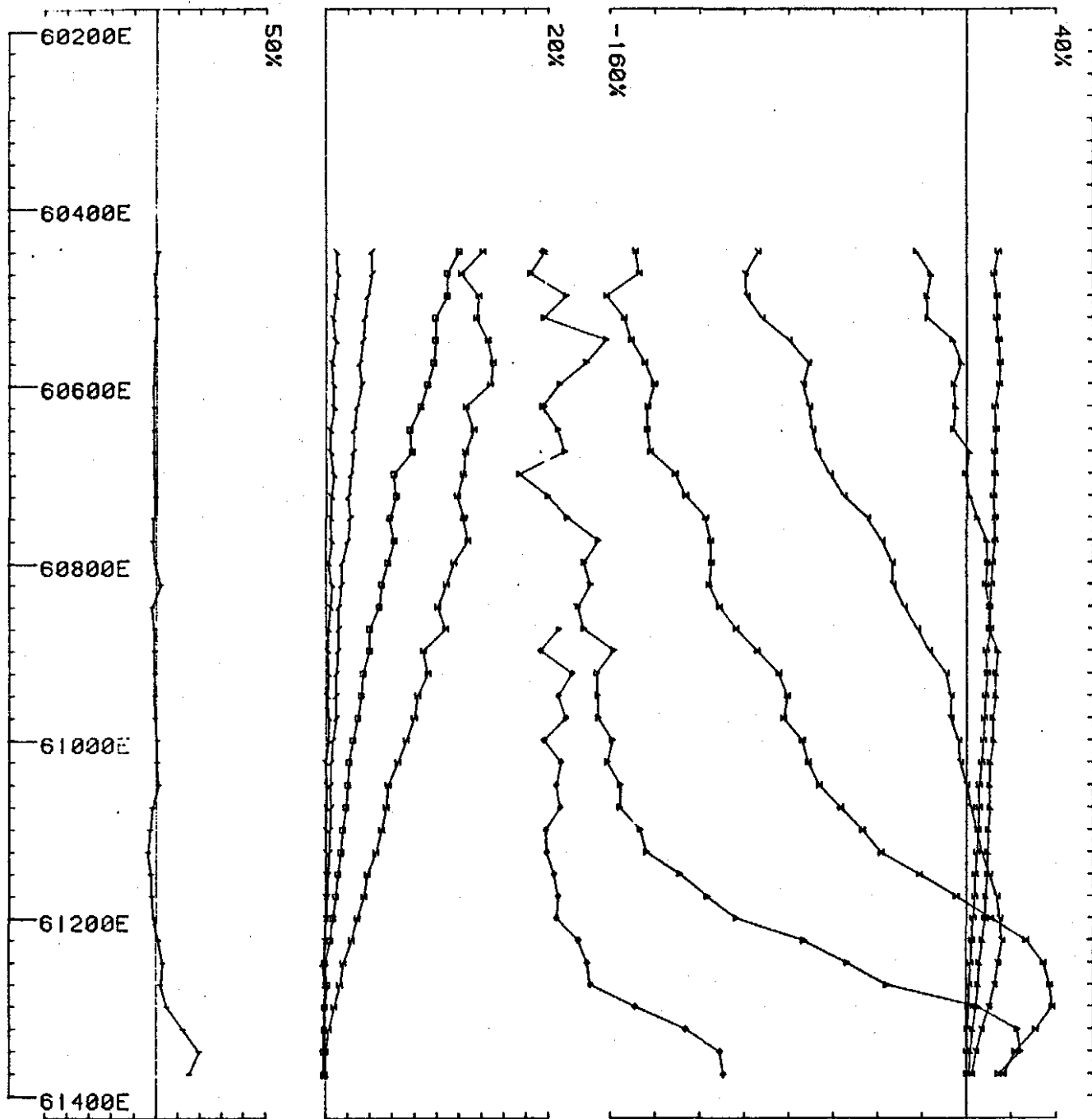


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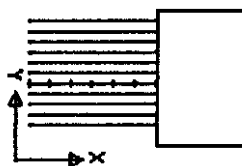


GRIEVES
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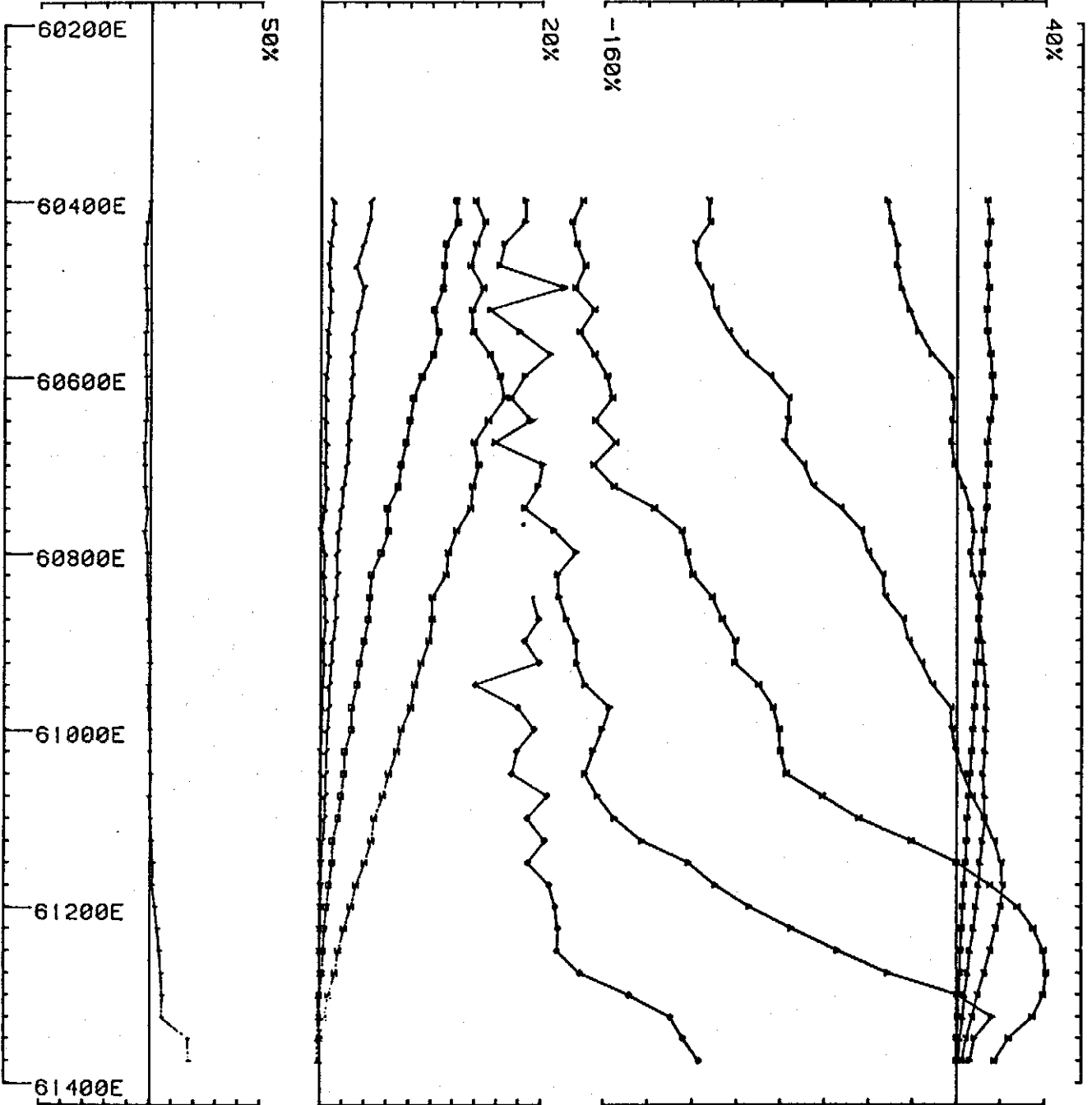
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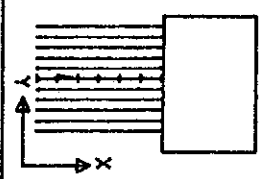
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 L47800N Hz COMPONENT BASE FREQ. 26.204HERTZ
 SECONDARY FIELD CONTINUOUS Ch 1 NORMALIZATION



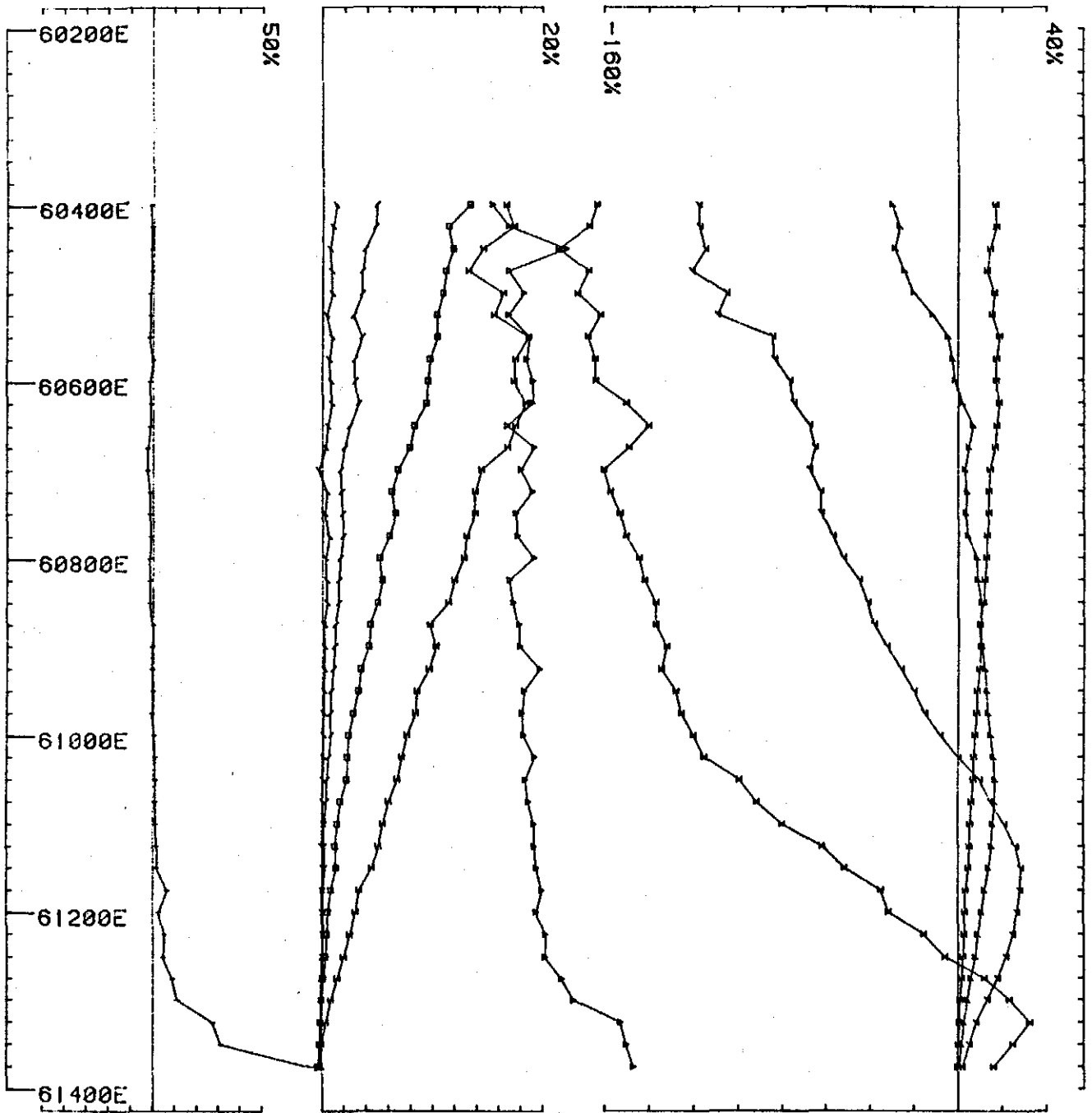
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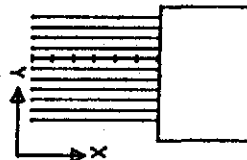
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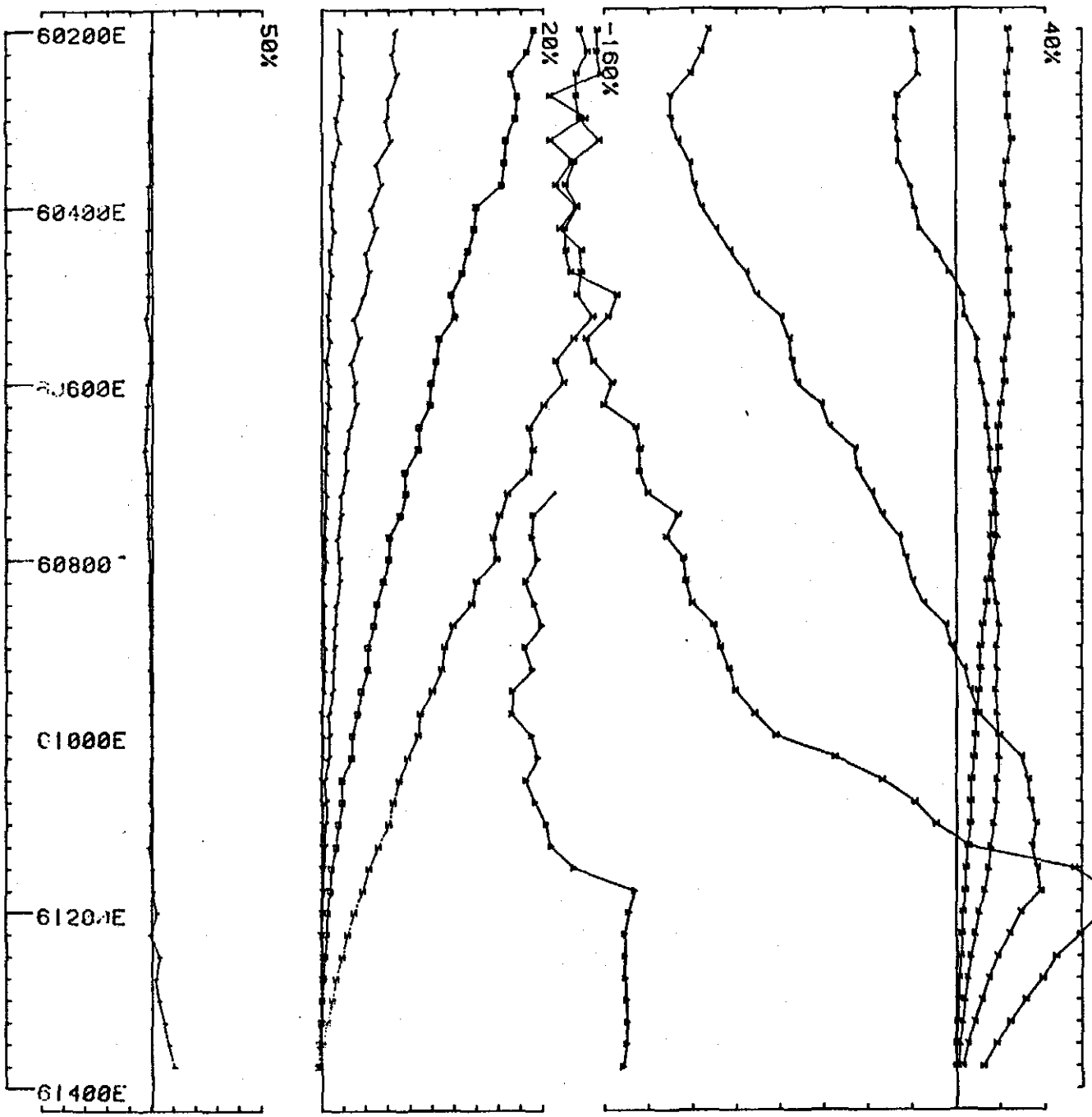
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 Hz



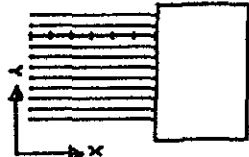
LAMONTAGNE GEOPHYSICS UTEM SURVEY JOB 8507
 AREA GRIEVES CLIENT EZ CREW TH
 L48000N Hz COMPONENT BASE FREQ. 26.204HERTZ
 SECONDARY FIELD CONTINUOUS Ch 1 NORMALIZATION



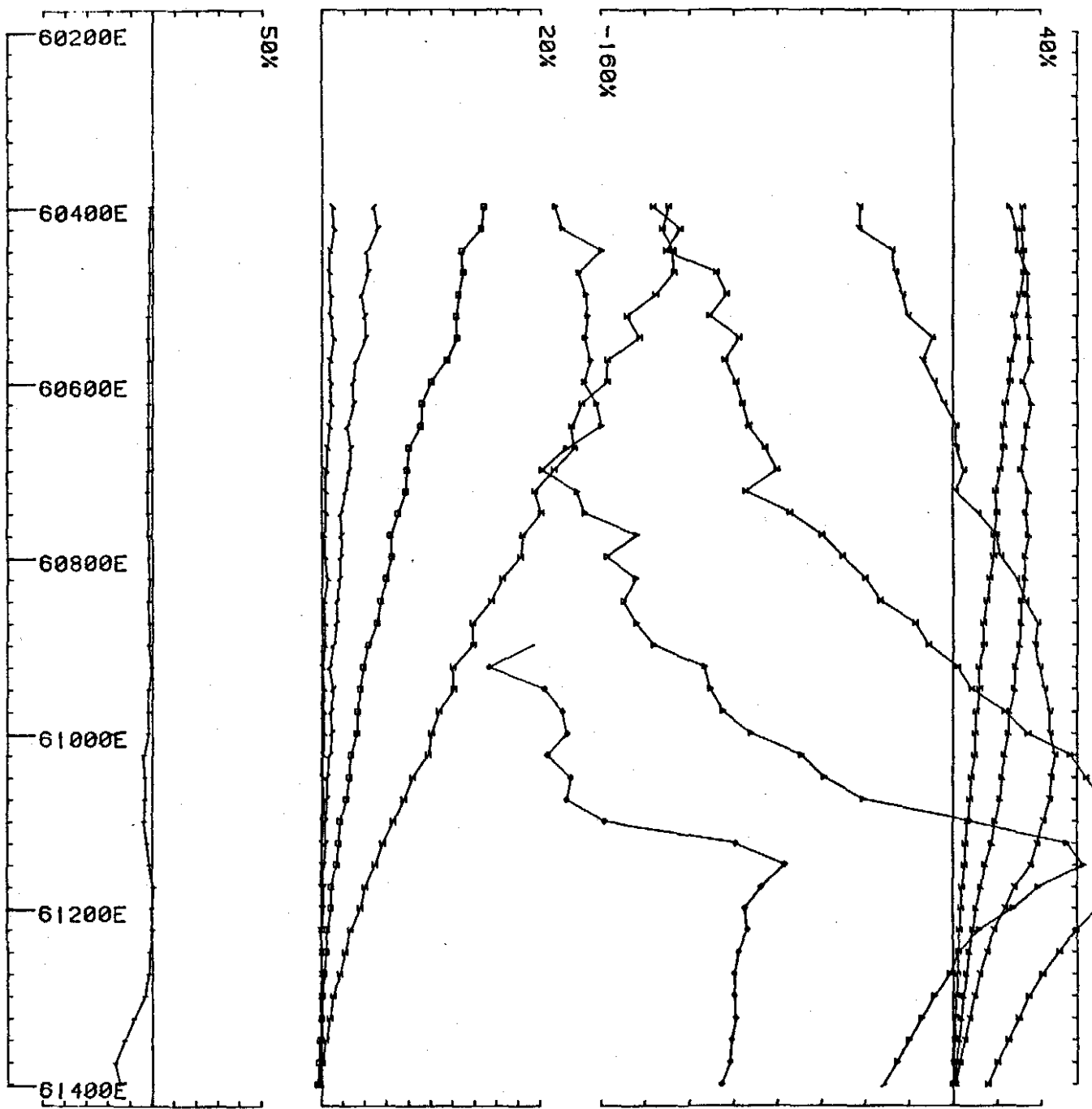
GRIEVES
 LOOP 8003
 LINE 48000N
 Hz



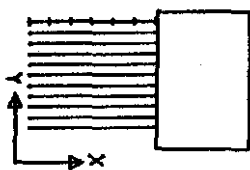
LAMONTAGNE GEOPHYSICS UTEM SURVEY JOB 8507
 AREA GRIEVES CLIENT EZ CREW TH
 L48200N Hz COMPONENT BASE FREQ. 26.204HERTZ
 SECONDARY FIELD CONTINUOUS Ch 1 NORMALIZATION



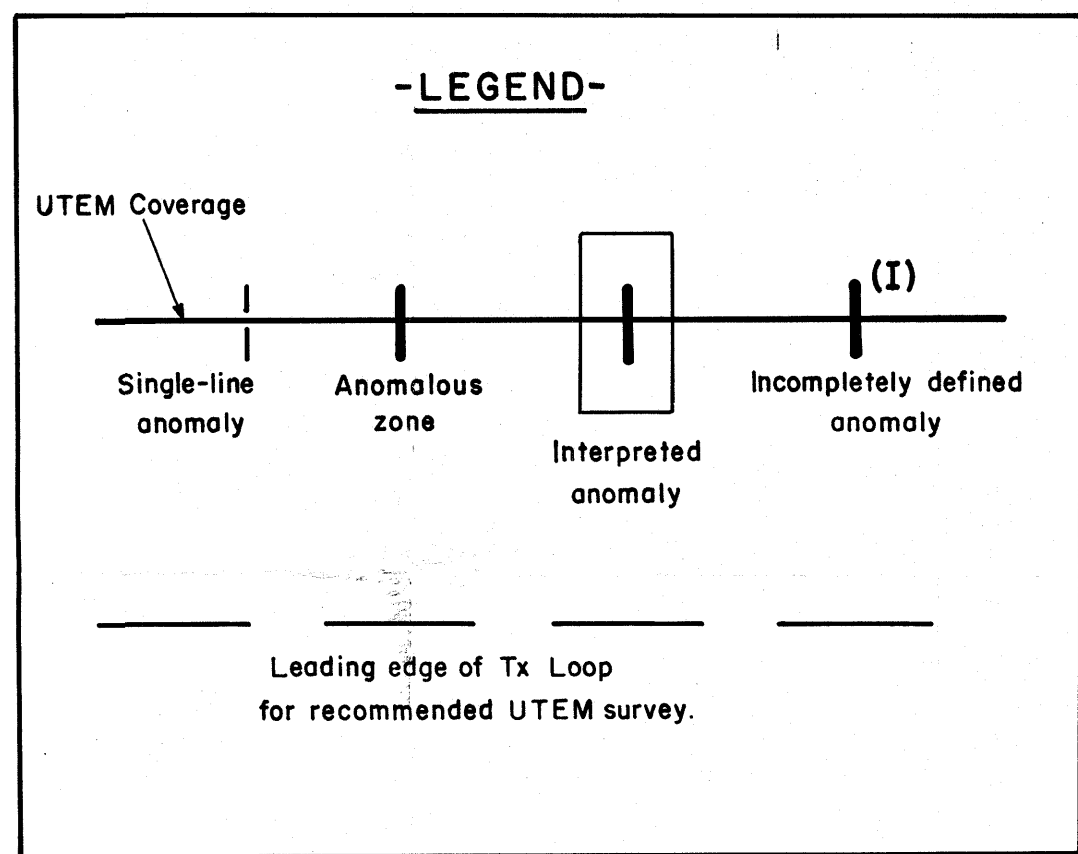
GRIEVES
 LOOP 0003
 LINE 48200N
 Hz



LAMONTAGNE GEOPHYSICS UTEM SURVEY JOB 8507
 AREA GRIEVES CLIENT EZ CREW TH
 L48400N Hz COMPONENT BASE FREQ. 26.204HERTZ
 SECONDARY FIELD CONTINUOUS CH 1 NORMALIZATION



GRIEVES
 LOOP 8883
 LINE 48400N
 Hz



LEGEND

COLOUR

pk - pink	wh - white
br - brown	bk - black
bl - blue	gr - green
gy - grey	yl - yellow
rd - red	or - orange
cr - cream	pl - pale
lt - light	dk - dark

TEXTURE

fg - fine grained	foss - fossiliferous
mg - medium grained	sil - siliceous
cg - coarse grained	mic - micaceous
brd - brecciated	ferr - ferruginous
clvd - cleaved	int - intense
shrd - sheared	wk - weak
calc - calcareous	v - very
carb - carbonaceous	pb - pebble
lam - laminated	cb - cobble
xbd - cross bedded	tr - trace
tnbd - thin bedded	inbd - inter bedded
tkbd - thick bedded	fbcl - tubular
vn - veins, veining	frct - fractured

ROCK TYPE

SST - sandstone	SLT - siltstone
LST - limestone	DLST - dolomite
BX - breccia	CGL - conglomerate
SH - shale	BSH - black shale
QZT - quartzite	LIM - ironstone
GRT - gneiss	CLY - clay
PUG - pug	GRA - gravel

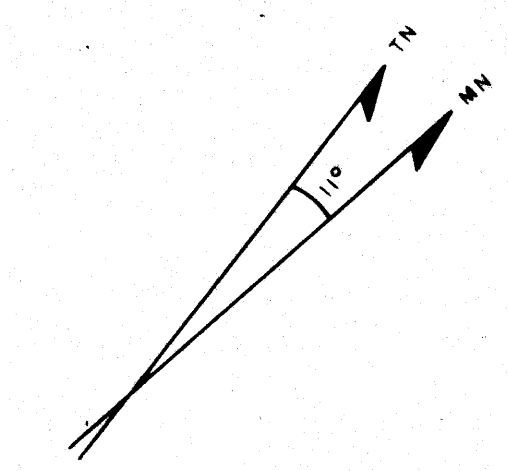
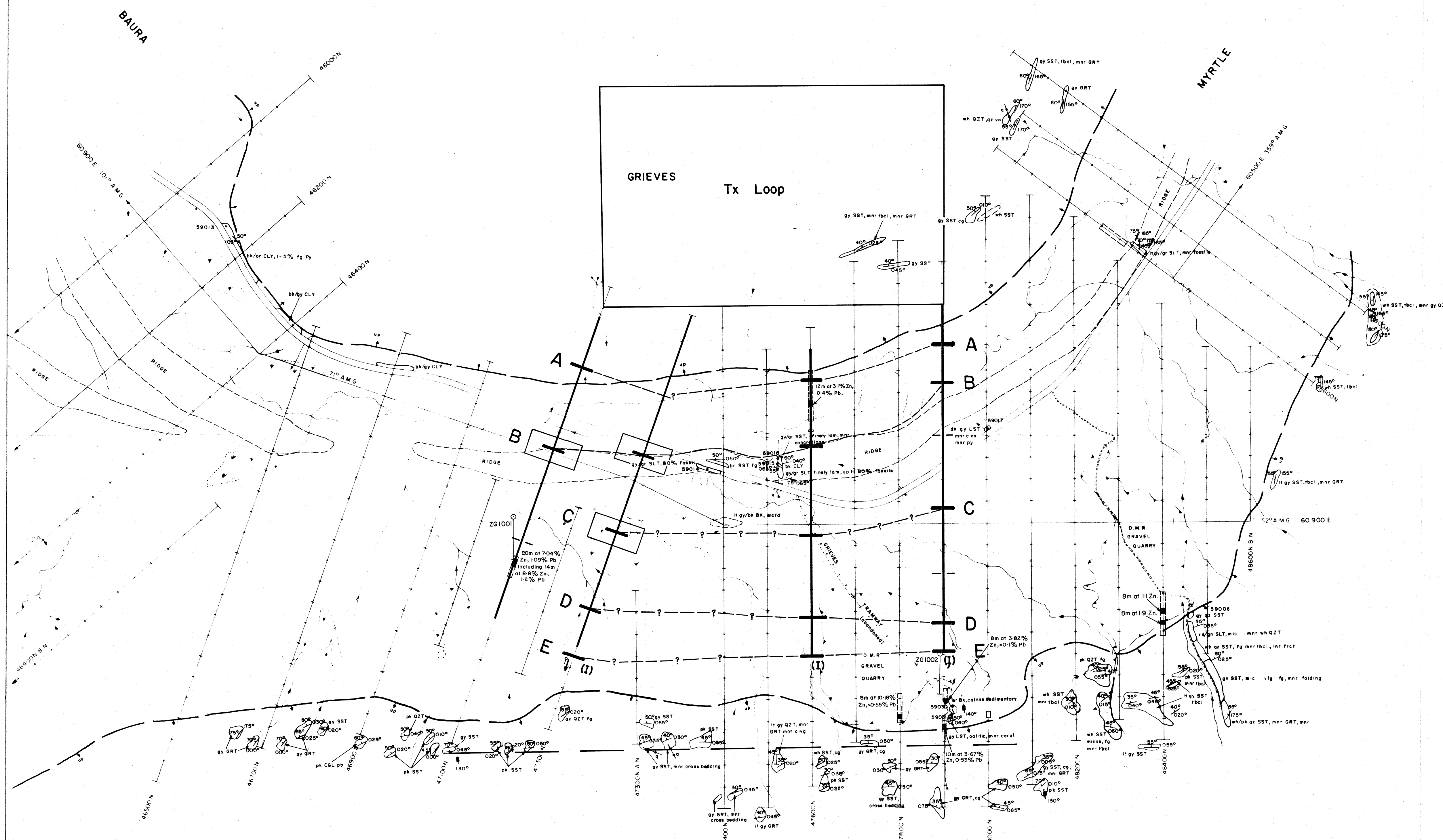
MINERALOGY or ALTERATION

qtz - quartz	py - pyrite
gn - galena	sp - sphalerite
lim - limonite	cp - chalcopyrite
cbd - carbonated	sid - silicified
c - calcite	

ORDER
 Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils
 e.g.
 dk gy mg foss SST or gy calc SH py or pl gy LST sid

TOPOGRAPHICAL

	cut grid lines		joint
	roads		joint - vertical
	tracks		overturned
	tramways		bedding
	power lines		bedding - vertical
	rivers, creeks		quarries
	swampy area		



132173

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: EL 4/78 ZEEHAN TAS.

GRIEVES GRID 115

5 cm

UTEM INTERPRETATION

Survey by: Lamontagne Geophysics
 Date: December, 1984

Scale 1:5000	Survey 1 MAT	Revised J. BISHOP
Reference E.Z/MG85/01	Date: 23-1-85	REF No
Drawn: R. J. R.	Checked:	AI-532-0110

85-2440 1/2

APPENDIX D.

Winkie Drill Logs.

132177

ELECTROLYTIC ZINC CO OF A'ASIA LTD. ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD						HOLE No. ZWG. 2 p2									
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA							CORE REC'D		
FROM	TO							Sample Length	Cu	Pb	Zn	Ag	Fe%	Mn	RUN	SHORT	
21.55	23.00m	<u>Nodular Limestone</u> , grey and dark grey fine grained.		57263	21.35	22.25		0.90	10	5125	3350	4.0	8200	495			
				64	22.25	23.05		0.80	10	1675	2350	2.0	7950	365			
	24.40	<u>Limestone</u> , partially decomposed silty grey brown.		57288	23.05	24.40		1.35	10	3300	1800	0.5	6600	305			
	26.50	<u>Clastic Limestone</u> , grey fine grained stylolitic with minor dark grey muddy limestone and associated nodular structure. Stylolites and calcite sub parallel to core		89	24.40	27.00		2.60	5	135	305	0.5	5550	185			
30.70	<u>Nodular Limestone</u> , grey fine grained stylolitic with some thin bioclastic bands. Many stylolites and associated carbonate veins sub parallel to core. c.b.a. 70°		57290	27.00	30.70		3.70	10	45	95	X	5800	160				
		End of Hole.															

A 11241

132178

ELECTROLYTIC ZINC CO. OF A'ASIA LTD. ROSEBERY - TASMANIA										DIAMOND DRILL CORE RECORD										01 HOLE No. (13-7) ZWG 3				
LOCATION			E.L. 4/78 Zeehan, Grievess Grid			TOTAL DEPTH			17.00m			03			02			ORE DIP. (8-11)						
OBJECTIVE			To test strike extension of mineralised breccia unit exposed in costean L47,100N			HOLE SIZE O/H			0-1.9; BX-2.8, T146			8-12	13-16	17-18-21	8-12	13-16	17-18-21	COLLAR DIP. (12-15) 60°						
RESULT			1.55m of 3.02% in leached limestones.			COMMENCED			20.11.84			Footage	Direction	Dip.	Footage	Direction	Dip.	DIRECTION (16-19) 169° A.M.G.						
						COMPLETED			26.11.84									R.L. (20-23)						
						LOGGED BY			I.J. Mathison									CO-ORDS. 47,075N 61,162E						
FOOTAGE		ROCK DESCRIPTION				MINERALISATION				04	SAMPLE No.	8-13	14-19	CORE REC'D	ASSAY DATA						CORE REC'D			
FROM	TO										FROM	TO		Sample Length	Cu	Pb	Zn	Ag	Fe%	Mn		RUN	SHORT	
0	1.90m	Rock roller.																						
	8.45	Banded Limestone, fine clastic with black muddy bands, in situ brachiopods. cba 80° Calcite veining increasing towards end.				Minor pyrite in muddy limestone - very fine grained				57265	7.55	8.45		0.90	5	20	140	0.5	0.20	100		0	NR	
	9.90	Probable Fault, white calcite with carbonaceous shears and patches muddy limestone				15cm sideritised limestone breccia at 9.05				66	8.45	9.05		0.60	5	90	460	0.5	0.28	185		4.50		
	17.00	Banded Limestone with numerous leached bands and cavities. Grey fine bioclastic to fossiliferous limestone. Minor dark grey muddy limestone and associated nodular structure.								67	9.05	9.90		0.85	5	190	530	0.5	0.40	235		6.05		
										68	9.90	11.45		1.55	5	0.63%	3.02%	2	3.05	1700		7.55	0.20	
										69	11.45	12.80		1.35	5	2400	8750	1.0	0.70	465		9.90	0.20	
										57286	12.80	14.55		1.75	1450	5050	0.5	0.36	325		10.25			
										87	14.55	17.00		2.45	10	1800	5050	0.5	0.40	345		11.80	0.90	
																						13.05	0.30	
																						14.55	0.10	
																						16.50	0.50	
																						17.00		
	EOH																							

132180

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	ASSAY DATA													CORE REC'D	
FROM	TO			SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	Sample Length	Cu	Pb	Zn	Ag	Fe%	Mn	RUN	SHORT		
0	4.35	Rock Roller														0		
	5.90	Limestone, grey and dark grey, stylotites cut early calcite veins. Some calcite coated fractures and stylolites sub parallel to core														4.35	NR	
																5.90	0.10	
	7.00	Banded Limestone, grey medium clastic and thin dark grey muddy bands c.b.a. 80°, some bioclasts. Some muddy bands have thin sparry rims.														6.80		
																8.30		
	10.55	Banded Limestone, grey fine clastic and dark grey muddy bands. Some nodular structure. Numerous stylolites, many sub parallel to core.														9.10		
																10.10		
	14.00	Nodular Limestone, grey fine clastic nodules in dark grey muddy matrix. Occasional shell fragment.														10.45	0.10	
																11.25		
	19.20	Banded Limestone, grey fine clastic with occasional thin dark grey muddy bands or nodular bands. Wavy layers of sparry calcite in muddy bands. Many stylolites sub parallel to core. Rare shell fossils and thin bioclastic bands. 15cm pug & breccia.														12.70		
																13.85		
	20.75	Banded Limestone - as above, but more bioclastic and some intraclasts.														14.65		
																16.05		
	23.90	Possible Fault, 60cm cavity then sheared and broken, partially leached limestone as above, with some tectonic breccia, cavity filling calcite and stylolites.														17.55		
																19.05	0.10	
	28.20	Banded Limestone, grey medium bioclastic with dark grey muddy bands. Minor nodular near muddy bands. Styloitic with many sub parallel to core.														20.50		
			Early calcite veins													21.20	0.40	
																22.45	0.40	
																23.65		
																25.15	0.10	
																26.70		
																28.20		
																29.65		
																31.15	0.10	
																32.45	0.20	
																32.80	0.20	
																33.55		
																EOH		

132182

ELECTROLYTIC ZINC CO. OF A'ASIA LTD. ROSEBERY - TASMANIA										DIAMOND DRILL CORE RECORD										01 HOLE No. (3-7) ZWG 6	
LOCATION					TOTAL DEPTH					03			02								
E.L. 4/78 Zeehan					13.95m					8-12	13-16	17-18-21	8-12	13-16	17-18-21	ORE DIP. (8-11)					
OBJECTIVE					HOLE SIZE					Footage	Direction	Dip.	Footage	Direction	Dip.	COLLAR DIP. (12-15) 60°					
To test strike extension of mineralised breccia unit exposed in costean on L47,100N					0/H 0-3.55, TT46 EOH											DIRECTION (16-19) 161° A.M.G.					
RESULT					LOGGED BY											R.L. (20-23)					
No mineralisation intersected.					I.J. Mathison											CO-ORDS. 47,000N 61,162E					
																LOCATION Grieves					
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	04												CORE REC'D					
FROM	TO			SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	Sample Length	Cu	Pb	Zn	Ag	Fe%	Mn.	RUN	SHORT					
0	3.55	Rock roller - overburden														0					
	7.85	<u>Banded limestone</u> - grey fine clastic with occasional thin dark grey muddy bands Some stylolites and minor brecciation ?solution	Intense calcite veining													3.55	NR				
																4.10					
																4.80	0.20				
																5.60					
																5.90					
	10.35	<u>Patchy limestone</u> - disrupted grey fine clastic with occasional thin bands and patches of dark grey lime mudstone.	Minor pyrite on some fractures Intense calcite veining													6.95	0.10				
																7.85					
																8.40					
																9.20					
	11.45	<u>Cavity</u>														11.65	1.00				
																12.45	0.40				
	12.90	<u>Limestone Breccia</u> - pale grey solution or collapse breccia with clasts of leached limestone as above and white sparry calcite in a matrix of fine clasts with white sparry cement.				57283	12.90	13.95	1.05	5	20	20	0.5	0.22	105	13.80	0.10				
																13.95	0.05				
	13.95	<u>Banded Limestone</u> - grey fine clastic with occasional thin muddy bands. One thin coarse grainstone band at 12.95																			
	EOH																				

ELECTROLYTIC ZINC CO. OF A'ASIA LTD. ROSEBERRY - TASMANIA										DIAMOND DRILL CORE RECORD										01 HOLE No. (3?) ZWG. 7	
LOCATION E.L. 4/78 Zeehan, Grievés					TOTAL DEPTH 31.40					03			02			02					
OBJECTIVE To test strike extension of mineralised breccia unit exposed in costean on L47,100N					HOLE SIZE 0/H 0-4.75; BX -5.05;					8-12 Footage	13-16 Direction	17-18-21 Dip.	8-12 Footage	13-16 Direction	17-18-21 Dip.	ORE DIP. (8-11) 60° COLLAR DIP. (12-15) 161° A.MG. R.L. (20-23) CO-ORDS. 47,000N 61,175E LOCATION Grievés					
RESULT No mineralisation intersected.					COMPLETED					LOGGED BY I.J. Mathison											
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	04										CORE REC'D							
FROM	TO			SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	Sample Length	Cu	Pb	Zn	Ag	Fe%	Mn	RUN	SHORT					
0	4.75m	Rock roller														0					
	6.35	Banded Limestone - grey, fine to coarse bioclastic with thin dark grey muddy bands. Some patches of solution or collapse breccia. Numerous stylolites.	Intense early calcite veining													4.75	NR				
																5.05					
																6.35	0.10				
																7.70					
																9.25					
	9.40	Banded Limestone - grey, fine to coarse bioclastic with thin dark grey muddy bands. Numerous stylolites.	Intense early calcite veining													10.75	0.30				
																12.30	0.20				
																14.45	0.20				
																15.95	0.20				
	11.90	Disrupted Limestone - disrupted and leached grey and dark grey partially decomposed limestone - nodular in places. Stylolitic	Moderate early calcite veining and occasional late calcite veins	57294	9.40	10.60		1.20	5	10	25	0.36	105			16.45					
				95	10.60	11.90		1.30	5	10	15	0.78	230			17.95					
																19.45	0.10				
																20.65					
	14.30	Cavity														22.05					
																23.55					
	14.55	Limestone Breccia - pale grey solution or collapse breccia with fragments of leached limestone in white sparry calcite.		96	14.30	16.30		2.00	X	15	115	0.24	115			25.05					
																26.55	0.20				
																28.05					
																29.55					
	16.15	Bioclastic Limestone - pale grey to grey, medium to coarse bioclastic-leached and bleached in patches. Occasional stylolites	Common calcite veins													31.05					
																31.40					
																EOH					
	21.15	Banded Limestone - grey fine clastic with dark grey muddy bands and stringers - occasionally nodular as below. Stylolitic	Moderate calcite veining	97	16.30	18.30		2.00	X	10	45	0.45	190								
				98	18.30	20.30		2.00	5	40	45	0.58	160								
				99	20.30	21.30		1.00	5	20	15	0.70	180								
	26.50	Nodular Limestone - grey, with nodules of very fine clastic LST in dark grey muddy matrix. Stylolitic		57300	21.30	23.30		2.00	5	10	15	0.53	160								
				59078	23.30	25.30		2.00	5	10	10	0.52	145								
				79	25.30	26.50		1.20	5	10	15	0.65	150								
	29.55	Banded Limestone - grey very fine clastic with occasional dark grey muddy limestone White sparry rims on muddy bands and patches. Stylolitic.		80	26.50	29.50		3.00	5	10	10	0.50	140								

132184

ELECTROLYTIC ZINC CO OF A'ASIA LTD ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD						HOLE No. <u>ZWG 7 p2</u>						A 11241		
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA							CORE REC'D	
FROM	TO							Sample Length	Cu	Pb	Zn	Ag	Fe%	Mn	RUN	SHORT
29.55	31.40	Nodular Limestone - grey, with nodules of very fine clastic LST in dark grey muddy matrix. Styloitic.		59081	29.50	31.40		1.90	5	10	10		0.58	150		

132185

ELECTROLYTIC ZINC CO. OF ASIA LTD. ROSEBERY - TASMANIA				DIAMOND DRILL CORE RECORD										01 HOLE No. (3-7) ZWG 8				
LOCATION			E.L. 4/78 Zeehan		TOTAL DEPTH		29.25m <th colspan="3">03</th> <th colspan="3">02</th> <td colspan="2">ORE DIP. (8-11)</td> <td colspan="2"></td>		03			02			ORE DIP. (8-11)			
OBJECTIVE			To test a bedrock geochemical anomaly		HOLE SIZE O/H		0-3.75, TT46		8-12	13-16	17-18-21	8-12	13-16	17-18-21	COLLAR DIP. (12-15)		60°	
RESULT			Very low grade mineralisation (0.8% Zn, 0.6% Pb) intersected in brecciated limestone at end of hole.		COMMENCED				Direction	Dip.	Footage	Direction	Dip.	R.L. (20-23)		161° A.M.G.		
					COMPLETED									CO-ORDS. 47,200N		61,225E		
					LOGGED BY		I.J. Mathison							LOCATION Grievies				
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	04										CORE REC'D				
FROM	TO			SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	Sample Length	20-25 Pb%	26-31 Zn%	32-37 Cu%	38-43 Ag - g/t	44-49 Au - g/t	50-55 Fe%	RUN	SHORT		
0	3.75	Rock Roller - overburden														0		
	6.70	Banded Limestone - grey, fine clastic with thin dark grey muddy limestone with some nodular limestone. Stylolitic.	Early calcite veins common.													3.75	NR	
	11.70	Nodular Limestone - grey, fine to medium clastic and dark grey muddy limestone. Stylolitic														5.25		
	13.85	Banded Limestone - grey, fine to medium clastic with some dark grey muddy limestone - minor nodular. Minor leaching around 15cm cavity at 13.40. Stylolitic	Minor late calcite veining													6.20	0.30	
	16.15	Banded Limestone - grey fine to medium intraclastic and/or pelletal with minor wispy muddy limestone in stringers and thin bands.														7.20		
	17.05	Leached Banded Limestone - grey, medium to coarse with dark grey muddy stringers and bands. Sparry calcite rims developed in muddy limestone.														8.70		
	20.40	Clastic Limestone - pale grey, medium clastic with intraclasts bioclasts and ?oolites. Wisps and bands of muddy limestone.														10.25	0.10	
	22.05	Banded Limestone - grey fine to medium clastic with dark grey muddy bands and thin coarse intraclastic and bioclastic bands. One coral lump.														13.20		
	25.00	Nodular Limestone - grey fine grained clastic and dark grey muddy limestone. Often nodules of clastic LST. Numerous stylolites														14.85	0.20	
																15.20		
																16.15	0.10	
																16.95	0.20	
																17.50		
																19.00		
																20.50		
																22.05		
																23.55		
																25.05		
																26.55		
																27.00		
																27.40	0.10	
																29.25	1.10	
																EOH		
																*		
																11.70		

132187

ELECTROLYTIC ZINC CO. OF A'ASIA LTD. ROSEBERY - TASMANIA										DIAMOND DRILL CORE RECORD										01 HOLE No. (3-7) ZWG 9	
LOCATION E.L. 4/78 Zeehan					TOTAL DEPTH 19.55m					03		02		02							
OBJECTIVE To test a shallow gravity anomaly.					HOLE SIZE O/H 0-3.65; BX -4.50;					8-12	13-16	17-18-21	8-12	13-16	17-18-21	ORE DIP. (8-11) 60° COLLAR DIP. (12-15) 161° A.M.G. DIRECTION (18-19) R.L. (20-23) CO-ORDS. 47,300N 60,775E LOCATION Grievess					
RESULT Intersected decomposed limestone (pug) under leached limestone. No visible mineralisation.					COMMENCED TT46					Footage	Direction	Dip.	Footage	Direction	Dip.						
LOGGED BY I.J. Mathison										04		ASSAY DATA					CORE REC'D				
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	Sample Length	20-25 Pb%	26-31 Zn%	32-37 Cu%	38-43 Ag - g/t	44-49 Au - g/t	50-55 Fe%		RUN	SHORT				
FROM	TO																				
0	3.65	Rock Roller																			
	4.50	Pelletal Lime Grainstone - pale grey, with minor patches muddy limestone. Leached last 50cm																			
	6.05	Patchy Limestone - dark grey, muddy with thin irregular bands and large clasts of bioclastic and intraclastic limestone. Shell fossils.	Minor pyrite in muddy limestone. Minor calcite veining													0					
	7.00	Patchy Limestone - as above, but partially leached.														3.65	OH				
	9.45	Disrupted Limestone - grey coarse grained bioclastic and intraclastic grainstone mixed chaotically with black muddy limestone.														4.50	0.10				
	10.95	Clastic Limestone - grey, fine grained, clastic stylolitic with jig saw pattern of irregular muddy stylolites cutting into 2cm blocks at first with larger blocks and stringers of muddy limestone to end.														5.90					
	11.95	LIMESTONE BRECCIA - debris flow with clasts of clastic limestone in matrix of black muddy limestone. Leaching increasing.														7.35					
	19.55	DECOMPOSED LIMESTONE, very poor recovery of rubbly, leached and decomposed limestone. Lumps recovered include white calcite spar and slump breccia. Hole abandoned.														8.90					
																10.35					
																11.95	0.20				
																15.00	2.75				
																16.80	1.80				
																18.35	1.65				
																19.55	1.10				
																EOH					

132188

ELECTROLYTIC ZINC CO. OF A'ASIA LTD. ROSEBERY - TASMANIA										DIAMOND DRILL CORE RECORD										01 HOLE No. (3-7) ZWG 10										
LOCATION E.L. 4/78 Zeehan					TOTAL DEPTH 16m					03 8-12 Footage			13-16 Direction			17-18-21 Dip.			04 8-12 Footage			13-16 Direction			17-18-21 Dip.			02 ORE DIP. (8-11) COLLAR DIP. (12-15) 60° DIRECTION (16-19) 161° AMG R.L. (20-23) CO-ORDS. 47,300N 60,792E LOCATION Gieves		
OBJECTIVE To test a shallow gravity anomaly - cf ZWG 9					HOLE SIZE 0-16m 0/H					COMMENCED			COMPLETED			LOGGED BY I.J. Mathison														
RESULT Intersected puggy clay																														
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	04		CORE REC'D	ASSAY DATA								CORE REC'D														
FROM	TO				8-13 FROM	14-19 TO		Sample Length	20-25 Pb%	26-31 Zn%	32-37 Cu%	38-43 Ag - g/t	44-49 Au - g/t	50-55 Fe%	RUN	SHORT														
		No recovery - black puggy clay Hole abandoned.																												

132189

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	04										CORE REC'D			
FROM	TO			SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	Sample Length	Cu	Pb	Zn	Ag	Fe%	Mn	RUN	SHORT	
0	10.05	Rock roller - overburden															
	14.95	Silty Banded Limestone - pale grey partially decomposed with thin bands and stringers of dark grey, clastic, lime mudstone (clasts = bioclasts + intraclasts 5-15mm)															
	19.60	Bioturbated Limestone - grey and dark grey with horizontal burrows - leached and decomposed in places. Hole lost at 12.20m Redrill															
12.20	14.95	Silty Banded Limestone (as above)															
	20.50	Bioturbated Limestone (as above)															
	23.25	Marly Siltstone - very poor recovery of decomposed grey siltstone.															
	25.00	Clastic Limestone - dark grey, dolomitic, clasts = intraclasts + bioclasts					59082	23.25	25.00		1.75	5	10	20		1.00	305
	26.65	Marly Siltstone - pale grey and partially leached. End of Hole															

132190

ELECTROLYTIC ZINC CO. OF A'ASIA LTD. ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD										01 HOLE No. (3:7) ZWG 12				
LOCATION E.L. 4/78 Zeehan		TOTAL DEPTH 15.70m		03			02			02						
OBJECTIVE To test a bedrock geochemical anomaly		HOLE SIZE 0/H 0-10.60, TT46		8-12 Footage	13-16 Direction	17-18-21 Dip.	8-12 Footage	13-16 Direction	17-18-21 Dip.	ORE DIP. (8-11) COLLAR DIP. (12-15) 60° DIRECTION (16-19) 142° AMG R.L. (20-23) CO-ORDS. 47,300AN 61,150E LOCATION Grievess						
RESULT		LOGGED BY I.J. Mathison														
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	04										CORE REC'D		
FROM	TO			SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	Sample Length	20-25 Pb%	26-31 Zn%	32-37 Cu%	38-43 Ag - g/t	44-49 Au - g/t	50-55 Fe%	RUN	SHORT
0	10.60	Rock Roller - overburden														
	13.10	Silty Limestone, pale grey with birdseye spar. Leached and partially decomposed, especially near start.														
	15.70	Silty Limestone, pale grey, includes thin laminated bands - cba 60°; microstylolitic disrupted bands; and rip up clasts Hole abandoned - Mechanical Breakdown.	Small patches yellow ?siderite common in more disrupted patches													

APPENDIX E. - Drill Logs ZG 1001, ZG 1002, ZM 1003, 1003-A

ELECTROLYTIC ZINC CO. OF A'ASIA LTD. ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD					01 HOLE No. (3-7) ZG 1001 pl		
LOCATION E.L. 4/78 - Zeehan - Grievies Grid		TOTAL DEPTH 149.70m		03		02			
OBJECTIVE To test down dip extension of mineralised dolomitic breccia sampled in costean on L47,100N. 20m averaged 7.04% Zn and 1.09% Pb.		MOLE SIZE HW -3, HQ -56.50; NQ -99.70, BQ		8-12 Footage		13-16 Direction A.M.G.		17-18-21 Dip.	
RESULT No mineralisation intersected. Intense faulting suggests fault displacement of breccia unit.		COMMENCED 11.4.84		50.0m		143°		-52°	
		COMPLETED 16.4.84		110m		148°		-50½°	
		LOGGED BY L.J. Mathison		149m		144°		-49½°	
								ORE DIP. (8-11) -50° COLLAR DIP. (12-15) 144° A.M.G. DIRECTION (16-19) 149.5m R.L. (20-23) 47,066.0N 61,066.2E CO-ORDS. LOCATION Grievies Grid	

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	04						ASSAY DATA ppm unless specified						CORE REC'D	
FROM	TO			SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	Sample Length	Cu	Pb	Zn	Ag	Fe	Mn	RUN	SHORT	
0	3.0m	Rock Roller		58514	3.0	3.7		15	30	45		1.80%	325	3.0	N.R.		
3.0	10.4	Bioclastic Limestone - graded, dark grey grading uphole to black muddy limestone. Clasts range from brachiopod valve and gastropods through oolites and coated shell fragments to in situ brachiopods. Sample 63601 - 7.5m (Petrology)		15		5.5		15	35	45		7150	210	3.7	0.4		
				16		8.5		10	35	45		6700	150	5.5			
				17		11.5		10	35	55		5450	170	8.5			
				18		14.5		10	35	50		5750	230	11.5	0.2		
				19		17.5		10	30	70		3200	90	12.2	0.2		
				58520		20.5		10	25	50		4750	160	14.5			
				21		24.5		10	30	40		3800	110	17.5			
				22		27.6		10	30	60		6400	155	20.5			
10.4	12.4	Probable Fault - limestone core is very broken, oxidised and leached in places and clayey in others.	Intense calcite veining	23		30.7		10	25	70		4550	110	21.4			
				24		33.8		10	35	40		7350	160	23.5	0.1		
				25		36.7		10	35	135		4100	100	24.5			
				26		39.8		10	30	45		5300	120	27.6			
12.4	14.5	Banded Limestone - thin bioclastic limestone, and burrowed limestone - dark grey.	Minor calcite veining near 12.4m	27		42.9		10	30	50		3650	100	30.7			
				28		46.0		10	25	45		5000	105	33.8			
				29		50.5		10	25	35		4200	110	36.7			
14.5	16.0	Limestone - brownish grey micritic, stylolitic limestone with occasional fossil fragments replaced by white sparry calcite - includes 20cm clastic grainstone with pisolites, coated shell fragments, and oolites in calcite cement.		58530		53.5		10	25	45		6000	165	39.8			
				31		56.5		10	25	50		4150	105	42.9			
				32		59.5		10	30	45		3700	95	46.0			
				33		62.5		10	30	40		4400	125	47.5			
				34		65.5		10	25	75		3650	100	50.5			
				35		68.5		10	30	55		7000	150	53.5	0.2		
16.0	21.4	Oncolitic Limestone - dark grey muddy limestone with oncolites - agal balls around small gastropods - and rounded corals. Occasional thin beds of bioclastic limestone. 63602 - 18.7m	Irregular calcite veins - often cut by stylolites	36		71.5		10	30	65		6100	140	56.5			
				37		73.5		10	30	90		4450	125	59.5			
				38		77.5		10	25	75		4000	125	59.9	0.1		
				39		79.4		5	30	100		1300	70	62.5	0.4		
				58540		81.4		10	45	160		1600	125	65.5			
				41		83.8		10	25	90		2200	125	68.5			
21.4	27.5	Muddy Limestone - dark grey, with occasional bioclastic and pisolitic beds. Also thin carbonaceous muddy limestone units which have disrupted boundaries with adjacent beds.	Calcite vein subparallel to core 25.5-26.3	42		85.7		15	50	305		1.55%	205	71.5			
				43		88.8		10	30	95		3800	125	73.5			
				44		91.0		10	45	75		4750	150	74.6			
				45		93.5		10	45	115		3700	120	77.5	1.6		
				46		95.5		10	60	125		4050	145	78.1	0.1		
27.5	33.8	Muddy Limestone - dark grey with minor carbonaceous muddy limestone with disrupted boundaries. c.b.a. 75° 63603 - 28.4m	Occasional fossil replaced by pyrite. Minor calcite veining.	47		97.5		10	30	65		2450	155	79.4	0.3		
				48		99.7		10	40	80		2550	150	79.9	0.2		
				49		103.9		10	40	125		3350	140	81.4	0.9		
				58550		105.1		10	30	75		4100	160	82.8			
														85.7			
														88.8			

132196

ELECTROLYTIC ZINC CO. OF ASIA LTD. ROSEBERY - TASMANIA										DIAMOND DRILL CORE RECORD										D1 HOLE No. (3-?) ZG..1002..pl	
LOCATION E.L. 4/78 - Zeehan - Grievies Grid					TOTAL DEPTH 150.0m					03			02								
OBJECTIVE To test lead-zinc mineralisation occurring at the Grievies Mine and in nearby costeans. In a costean on L47,900N, 10m averaged 3.67% Zn and 0.53% Pb, 8m similar.					MOLE SIZE HW -9.0; HQ -89.8; NO -119.4; BQ -122; reamed. HQ -126.4; NO - E.O.H. Commenced: 17.4.84 COMPLETED 2.5.84					8-12 Footage 44.0m		13-16 Direction 146°	17-18-21 Dip. -52°	8-12 Footage		13-16 Direction	17-18-21 Dip.	ORE DIP. (8-11) COLLAR DIP. (12-15) -50° DIRECTION (16-19) 142° A.M.G. R.L. (20-23) 153.3m CO-ORDS. 47,891.4N 61,198.4E LOCATION Grievies Grid			
RESULT Intersected low grade zinc mineralisation in sideritised oolitic limestone and clastic limestone; 8.2m average 2.02% Zn					LOGGED BY I.J. Mathison																
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	04				ASSAY DATA ppm unless specified							CORE REC'D						
FROM	TO			SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	Sample Length	Cu	Pb	Zn	Ag	Fe	Mn	RUN	SHORT					
0	9.0	Rock Roller		61198	0	3.0	Sludge		<25	<25	<25	<2	<50	<25		9.0	NR				
				99	3.0	6.0	"		<25	<25	200	<2	1.63%	<25		12.0	0.6				
9.0	11.0	Laminated Limestone - pale grey, fine grained laminated to thin bedded, dark grey along stylolites. c.b.a. 70°		61200	6.0	9.0	"		<25	<25	300	<2	3.38%	175		13.5					
				58583	9.0	9.5	"		<25	<25	25	<2	0.39%	125		14.4	0.1				
				84	9.5	12.0	"		<25	<25	25	<2	0.73%	175		15.6	0.2				
																17.4					
11.0	13.1	Intraclastic Limestone - grey, medium grained clastic with limestone clasts 1-10cm and brachiopod valves.		85	12.0	13.5	"		<25	<25	25	<2	0.89%	200		19.1					
																20.2	0.6				
																21.0	0.4				
																21.7					
13.1	17.5	Limestone - mixed grey limestone, silty limestone and carbonaceous limestone. Core rubbly with tectonic brecciation.	Calcite veining associated with breccia. Minor 2° pyrite veins along fractures.	86	13.5	15.6	"		<25	<25	50	<2	0.50%	125		22.6	0.3				
				87	15.6	17.4	"		<25	<25	425	<2	1.15%	125		24.0					
																24.8	0.3				
																25.5	0.1				
17.5	18.5	Intraclastic Limestone - fine grained, grey stylolitic limestone with fragments of dark grey limestone and clastic limestone.		88	17.4	19.1	"		<25	<25	75	<2	0.23%	100		28.7					
																30.6					
																33.3	NR				
																36.0	1.2				
18.5	29.8	Bioclastic Limestone - pale to grey to grey, fine to coarse grained, clasts = shell fragments occasionally replaced by white sparry calcite. Carbonaceous stylolites	Minor to moderate calcite veining Trace pyrite in some stylolites.	89	19.1	21.0	"		<25	<25	150	<2	0.17%	100		39.0					
				58590	21.0	24.0	"		<25	<25	50	<2	0.46%	150		40.2					
				91	24.0	25.5	"		<25	<25	25	<2	0.62%	100		42.6					
				92	25.5	28.7	"		<25	<25	25	<2	0.59%	125		43.9	0.1				
				93	28.7	30.6	"		<25	<25	25	<2	0.71%	125		44.5					
29.8	30.6	Muddy Limestone - dark grey to black muddy micrite with colonial coral masses at base.														46.2					
																48.6					
																49.9					
30.6	33.8	Cavity.														51.4	0.3				
																52.9					
33.8	34.3	Sandy Limestone - grey, sandy, medium grained clastic limestone with thin disrupted bands of dark grey muddy limestone. Carbonaceous stylolites.		94	33.8	36.0	"		<25	<25	25	<2	0.51%	125		54.5	0.2				
																55.4					
																57.0					
																57.9					
																59.3					
34.3	35.5	Cavity.														60.9	0.4				
																62.1	0.6				
35.5	40.2	Banded Limestone - pale grey, medium grained clastic limestone with numerous thin disrupted muddy bands. Clasts=oolites and coated shell fragments 63625 - 40.2m Petrology	Minor very fine pyrite in stylolites and fractures in carbonaceous limestone	95	36.0	39.0	"		<25	<25	50	<2	0.56%	125		64.9					
				96	39.0	42.0	"		<25	<25	150	<2	0.51%	125		68.0					

132197

ELECTROLYTIC ZINC CO OF A'ASIA LTD ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD						HOLE No. ZG 1002 p2						A 11241	
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA						CORE REC'D	
FROM	TO							Sample Length	Cu	Pb	Zn	Ag	Fe	Mn	RUN
40.2	42.4	Banded Limestone - as above but grey and coarser grained.	Common calcite veins											71.1	0.1
42.4	45.0	Banded Limestone - interbedded dark grey muddy & 5cm dolomite vein at 45.0. medium grained clastic limestone with carbonaceous fractures and stylolites. In situ brachiopod valves in muddy limestone. 63626 - 45.0m	Trace fine pyrite on some fragments.	58597	42.0	44.5		25	25	325	2	0.76%	150	74.2	
45.0	50.3	Patchy Limestone - grey fine to coarse clastic with irregular, disrupted bands and patches of dark grey, carbonaceous muddy limestone ?slumped. Clasts=intraclasts & shell fragments 63627 - 49.3m		98	44.5	46.2		25	25	200	2	0.30%	75	76.8	
				99	46.2	48.6		25	25	390	2	0.55%	125	79.9	
				58600	48.6	51.4		25	25	300	2	0.62%	150	81.5	
50.3	51.8	Limestone - pale grey laminated limestone and clastic limestone with soft sediment brecciation. 63628 - 50.8m	Common calcite veins											82.3	
														82.8	
														84.8	0.2
														87.1	
														89.8	
														92.9	2.9
														96.0	1.8
														99.0	2.8
														102.0	2.9
														105.0	2.9
														106.4	1.0
														108.9	0.2
														110.0	0.3
														110.2	
														113.2	NR
														117.2	3.2
51.8	57.9	Sandy & Silty Limestone - pale grey sandy, silty clastic limestone - extremely fractured. 63629 - 54.9m	2° pyrite along fractures as thin veins with associated leaching and bleaching.	58880	51.4	54.5		25	25	400	2	0.24%	100	118.0	0.7
				81	54.5	57.0		25	25	450	2	0.50%	100	118.8	0.6
57.9	59.3	Limestone - grey clastic and dark grey muddy limestone. Some shaley limestone and brown mud.	Minor syngenetic and 2° pyrite in shaley limestone.	82	57.0	59.7		25	25	1000	2	1.00%	250	119.0	0.1
														119.4	0.3
														119.7	0.2
														120.7	0.9
														120.9	
														122.0	1.0
59.3	60.0	Brown Mud - ?cave deposit.		83	59.7	62.1		25	25	700	2	0.60%	150	Redrilling	
60.0	61.0	Laminated Limestone - pale grey laminated, extremely fractured towards end.	Calcite veining increasing.											119.0	Start
														120.0	0.1
														121.4	0.4
														122.8	0.9
61.0	63.5	Sandstone, Siltstone, Shale, Silty Limestone and Sandy Limestone.		84	62.1	64.9		25	25	575	2	0.56%	200	123.2	0.1
														124.0	0.3
														125.0	0.2
63.5	70	Disrupted Limestone - inter mixed grey fine clastic limestone and dark grey muddy limestone, slump brecciation, bioturbation and disrupted bedding are common. 63630 - 64.7m	Calcite veining increasing. Traces bitumen on some fractures	85	64.9	68.0		25	25	150	2	0.67%	200	125.2	
				86	68.0	71.1		25	25	75	2	0.56%	200	126.4	0.2
														129.0	0.7
														132.0	2.4
														134.0	0.6
														137.0	1.7
														140.0	

132198

ELECTROLYTIC ZINC CO OF A'ASIA LTD ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD						HOLE No. ZG 1002 p3								A 11241	
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA							CORE REC'D		
FROM	TO							Sample Length	Cu	Pb	Zn	Ag	Fe	Mn		RUN	SHORT
70.0	72.8	Limestone & Silty Limestone - as above plus black marl.		58887	71.1	74.2		<25	<25	100	<2	0.87%	225		143.1		
72.8	76.8	Disrupted Limestone - similar to 63.5-70.0 but more muddy limestone. Tectonic brecciation rehealed by calcite 76.0-76.8		88	74.2	76.8		<25	<25	50	<2	0.69%	225		143.5		
76.8	82.8	Muddy Limestone - dark grey, very carbonaceous, muddy limestone - sheared and fractured. 63631 - 79.7m	Occasional thin sheared out pyritic beds.	89	76.8	79.9		<25	<25	50	<2	1.53%	425		144.5		
				58890	79.9	82.8		<25	<25	100	<2	0.83%	225		145.4		
82.8	89.8	Disrupted Limestone - disrupted and slump brecciated grey and dark grey limestone. Fossil fragments and reworked coated fragments. 63632 - 86.3m	Muddy limestone is pyritic. Some white calcite veins.	91	82.8	84.8		<25	<25	350	<2	0.98%	300		147.9		
				92	84.8	87.1		<25	<25	325	<2	3.99%	1700		150.0	1.1	
				93	87.1	89.8		<25	<25	375	<2	1.48%	525				
89.8	102.0	Silty Limestone - dark grey brecciated, with occasional fossil fragments. Very poor recovery of rubbly core. 63633 95.0m	Some calcite veining	58566	89.8	92.9		<25	25	650	<2	1.91%	750				
				67		96.0		<25	25	900	<2	2.18%	975				
				68		99.0		<25	25	1150	<2	2.11%	950				
				69		102.0		<25	25	1775	<2	4.60%	1900				
102.0	106.4	Sideritic Limestone - brown leached sideritised limestone breccia and minor dark grey silty limestone and pug. Very poor recovery of rubbly core and silty pug.		70	102.0	105.0		<25	25	0.97%	<2	29.02%	1.12%				
				71	105.0	106.4		<25	50	1.18%	<2	32.98%	0.57%				
106.4	109.4	Sideritic Limestone - brown leached sideritised and partially silicified coarse clastic limestone-clasts=oolites, broken oolites, and coated shell fragments. 63634 - 106.5m		72	106.4	107.4		<25	25	2.32%	<2	20.44%	0.95%				
				73	107.4	108.4		<25	25	3.67%	<2	30.52%	1.50%				
				74	108.4	109.4		<25	25	3.33%	<2	29.86%	1.48%				
109.4	110.2	Sideritic Limestone - brown leached sideritic clastic limestone - iron stained and rubbly		75	109.4	110.0		<25	50	3.69%	<2	32.88%	1.58%				
				76	110.0	110.2		<25	100	2.59%	<2	20.2	0.95				
110.2	113.2	No recovery - core lost															
113.2	117.2	Oolitic Limestone - pale brown grey sideritised - very poor recovery of rubbly core. 63635 - 115.0		77	113.2	117.2		<25	350	2200	<2	3.74	1525				
				78		118.0		<25	100	1400	<2	1.01	675				
				79		118.8		<25	150	975	<2	0.75	525				
				58580		119.4		<25	75	650	<2	0.84	550				
117.2	125.4	Oolitic Limestone - pale brown recrystallised extremely poor recovery of rubbly core 63636 - 120.5m		81		120.7		<25	50	500	<2	0.63	450				
				82		122.0		<25	50	600	<2	0.60	425				

132200

ELECTROLYTIC ZINC CO. OF ASIA LTD. ROSEBERY - TASMANIA										DIAMOND DRILL CORE RECORD										01 HOLE No. (3-7) ZM 1003; ZM 1003-A	
LOCATION E.L. 4/78 ZEEHAN - Myrtle Grid					TOTAL DEPTH 303.0m					03		02		02							
OBJECTIVE To test lead-zinc mineralisation occurring in pyritic clays in the costean on L50,500N. 54m of costean averaging 2.76% Zn and 1.07% Pb was overlain by coarse barite.					HOLE SIZE HW -6; HQ -107.50; Lost at 62.50; NQ 62.50-204					8-12 Footage		13-16 Direction A.M.G.		17-18-21 Dip.		8-12 Footage		13-16 Direction		17-18-21 Dip.	
RESULT Minor zinc mineralisation intersected. Very small irregular patch of white sphalerite at 202.0m.					COMMENCED BQ -303.					(A) 80m		118°		-59½°		238m		121°		-58°	
					COMPLETED 3.5.84					140m		115°		290m		123°		-57°		ORE DIP. (8-11)	
					LOGGED BY I.J. Mathison					180m		?132°								COLLAR DIP. (12-15) -55°	
																				DIRECTION (16-19) 120° AMG	
																				R.L. (20-23) 139.7m	
																				CO-ORDS. 50,524.5N 60,320.4E	
																				LOCATION Myrtle Grid	
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	04													CORE REC'D				
FROM	TO			SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	Sample Length	Cu	Pb	Zn	Ag	Fe	Mn	Ba	RUN	SHORT				
0	6.0	No Recovery- rock roller		61305	6.0	9.0	Sludge	3.0	30	25	165	X	2.95	30	6.0	NR					
6.0	18.0	No Recovery - clay		6	9	12	"	3.0	35	50	270	X	4.60	40	18.0	NR					
				7	12	15	"	3.0	40	70	820	X	3.25	55	19.0	0.1					
				8	15	18	"	3.0	35	75	770	X	4.35	45	22.0	2.0					
18.0	22.0	Clay - black to dark grey silty clay with minor angular white quartz and fragments of black siltstone		9	18	21	"	3.0	35	55	410	X	4.60	40	25.0	1.7					
				10	21	24	"	3.0	35	55	555	X	3.50	35	36.0	NR					
				11	24	27	"	3.0	30	50	345	X	2.05	40	37.0						
22.0	57.0	Clay and Siltstone - poor recovery of black silty clay and rubbly black to dark grey siltstone.		12	27	30	"	3.0	30	45	345	X	1.40	35	40.0	2.6					
				13	30	33	"	3.0	30	50	220	X	1.85	30	54.0	NR					
				14	33	36	"	3.0	30	50	250	X	1.40	40	57.0	1.8					
				15	36	39	"	3.0	30	55	485	X	2.35	50	60.0	1.8					
57.0	60.0	Siltstone - black, rubbly and clayey	1% very fine galena	16	39	42	"	3.0	30	50	800	X	1.85	40	63.0	0.9					
				17	42	45	"	3.0	25	60	1200	X	2.75	40	68.0	NR					
60.0	62.0	Clay - black, pyritic	5-10% coarse pyrite	18	45	48	"	3.0	20	45	490	X	1.75	30	70.8						
				19	48	51	"	3.0	50	60	910	X	2.80	50	73.9						
62.0	63.0	Clay and Limestone - grey clay and rubbly dark grey silty limestone and grey stylolitic fossiliferous limestone. c.b.a. 45°		20	51	54	"	3.0	20	50	500	X	1.65	35	77.0						
				61321	18	22	1.9	4.0	25	75	910	X	3.35	35	80.1						
				22	22	25	1.3	3.0	30	45	910	X	0.98	40	83.2						
															86.3						
															89.4						
63.0	68.0	Cavity		24	36	37	1	1.0	25	55	5500	X	1.50	30	90.0						
				23	37	40	0.4	3.0	20	45	580	X	0.78	30	93.0						
68.0	77.0	Banded Limestone - grey fine to coarse recrystallised and partially dolomitised bioclastic with thin disrupted muddy bands and stringers. Clasts=shell fragments, mostly vague due to recrystallisation. c.b.a. 50°	Moderate dolomite veining, 20cm calcite veining and tectonic breccia at 71.0m	25	54	57	1.2	3.0	25	40	1600	X	1.55	25	96.0						
				26	57	60	1.2	3.0	20	45	575	X	0.95	35	99.0						
				27	60	63	2.1	3.0	30	105	1500	X	2.55	80	102.0						
															105.0						
															107.0						
77.0	84.2	Banded Limestone - grey fine clastic with dark grey muddy bands and stringers. Muddy bands occasionally burrowed and ?pelletal. Scattered large recrystallised shell fragment. Many stylolites and shears subparallel to core. 63611 - 80.8m													NEW						
															62.5	New					
															63.0						
															66.0						
															66.8						
															72.0	NR					
															74.2						
															77.3						
															78.0						
															81.0						

132201

ELECTROLYTIC ZINC CO OF A'ASIA LTD ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD						HOLE No. ZM 1003; ZM 1003-A D2									
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA								CORE REC'D	
FROM	TO							Sample Length									
84.2	89.2	Banded Limestone - grey-dark brown grey, medium to coarse bioclastic with muddy bands and stringers. 20cm grainstone with oolites, intraclasts, coated shell fragments and shell fragments at 88.3. Stylolites and slickensides near 84.7m	Network carbonate veinlets 84.5-84.9 with association stylolites and slickensides. Core bleached and carbonate veining increasing towards end.													84.0	
																87.0	
																90.0	
																93.0	
																96.0	
																99.0	
																102.0	
89.2	89.5	Probable Minor Fault - rubbly limestone as above.	Intense carbonate veining.													105.0	
																108.0	
																111.0	
89.5	107.0	Patchy Limestone - grey and dark grey irregularly banded and patchy bioclastic and muddy limestone, Stylolites common. c.b.a. - disrupted. 63612 - 150.m														114.0	
																116.0	
																119.1	
																122.2	
																125.3	
																127.8	
		End HQ - Hole lost at 62.5m														129.0	
																130.4	
ZM 1003-A	62.5	66.8	Banded Limestone - grey medium bioclastic with patches, bands and stringers of dark grey muddy limestone. One large colonial coral.	Moderate white calcite. Veining towards end												132.0	
																133.5	
																136.6	
																138.8	
	66.8	72.0	Cavity													141.0	
																144.0	
	72.0	81.0	Banded Limestone - grey medium bioclastic with dark grey, muddy patches, bands and stringers. Stylolites sub parallel to core. c.b.a. 40°	Common white calcite veins -1cm and veinlets. Veins often 50-60° to core axis. 20cm vein at 78.5												147.0	
																150.0	
																153.0	
																156.0	
																159.0	
	81.0	99.0	Banded Limestone - grey fine-medium bioclastic and patchy dark grey muddy limestone - occasionally burrowed. Stylolites sub parallel to core and to banding.	Sparse calcite veinlets decreasing. Minor bleaching around 94.2 and 97.0-97.7m												162.0	
																165.0	
																167.4	
																170.5	
																173.6	
																176.7	
	99.0	110.0	Patchy Limestone - blotchy grey and dark grey bioclastic limestone and muddy limestone in bands, stringers and patches. Recrystallised fossils common.	Irregular stylolites common and banding disrupted. "Stromatactis" like structures 102.5 & 103.5												179.8	
																182.9	
																186.0	
																187.9	
																189.0	
	110.0	113.0	Laminated Limestone - pale grey, fine grained Laminae disrupted towards end. c.b.a. 50° 63613 111.8m	Trace pyrite in some stylolites												191.8	
																192.6	0.4
																193.9	0.3
																195.9	

ELECTROLYTIC ZINC CO OF A'ASIA LTD ROSEBERY - TASMANIA		DIAMOND DRILL CORE RECORD				HOLE No. ZM.1003-A p3		A 11241									
FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE No.	8-13 FROM	14-19 TO	CORE REC'D	ASSAY DATA								CORE REC'D	
FROM	TO							Sample Length									RUN
113.0	122.2	<u>Thin Bedded Limestone</u> - pale grey, bedding disrupted by numerous shears and stylolites 10-20° to core	Trace pyrite in some stylolites and in thin carbonate veins and vein margins. Numerous 1-20cm calcite veins after 119.5m													197.3	0.7
122.2	125.8	<u>Thin Bedded Limestone</u> - grey and dark grey originally bedded limestone (c.b.a. 50°). Numerous carbonaceous shears and stylolites 30° to core axis.	Common calcite veins. Minor pyrite in carbonaceous stylolites and shears and in more carbonaceous beds.													197.7	
125.8	129.0	<u>Oncolitic Limestone</u> - grey bioclastic with common clasts of fine grained limestone and occasional algal balls (Oncolites). Fragments and oncolites shear elongated and flattened at 30° to core axis. 63614 - 129.0m														198.7	
129.0		<u>Oncolitic Limestone</u> - grey bioclastic and minor muddy limestone. "Birdseye" calcite common after 131.2m. Some 4cm oncolites, stylolites and some veins and veinlets sub parallel to core.	Trace pyrite in some stylolites and fractures. Calcite veins and veinlets.													201.1	
132.2	138.7	<u>Laminated Limestone</u> - pale grey fine grained, laminae disturbed by stylolites and low angle micro shears. Stylolites at 5° to core axis and sub parallel to laminations.	5cm calcite at 138.4													204.0	
138.7	139.4	<u>Calcite Vein</u> - white														205.4	0.1
139.4	144.0	<u>Patchy Limestone</u> - grey and dark grey fine grained. Stylolitic	Common calcite veins and patches 0.5-20cm and veinlets Order 1. Veinlets 2. Stylolites 3. Larger veins.													208.4	NR
144.0	150.0	<u>Sheared Fossiliferous Limestone</u> - grey to dark grey very deformed - fossils and bedding deformed along closely spaced carbonaceous shears and stylolites at 30° to core axis. Veins, corals etc sheared out.	Minor low angle early diagenetic calcite veins													209.4	0.1
150.0	155.0	<u>Coralline Limestone</u> - patchy grey and dark grey predominantly fine grained limestone with branching corals and occasional recrystallised shell fragment. Low angle carbonaceous shears. 63615 - 153.0m	Minor calcite veining													211.4	0.8
																212.9	
																214.0	
																214.7	
																216.0	
																216.8	0.3
																217.4	0.2
																218.2	
																219.3	
																222.0	
																223.2	
																225.0	
																226.8	
																229.9	
																231.6	
																232.6	
																235.5	
																238.6	
																241.7	
																244.4	
																245.8	
																248.9	0.7
																250.8	0.9
																252.8	
																253.7	
																256.0	
																259.0	2.9
																262.0	NR
																265.0	2.9
																268.0	2.9
																268.9	0.2
																269.6	0.1
																270.6	0.4
																271.0	
																274.0	1.3

APPENDIX F. - Miscellaneous Rock Samples - Data Sheets.

Electrolytic Zinc Co. of A'asia Ltd. Rosebery, Tas.			ROCK SAMPLE LEDGER				PROJECT: EL 4178 ZEBHAN		LOCALITY: MYRTLE - ROSE VALLEY								
							COLLECTED BY: I. J. MATHISON		DATE: 1984 - 85								
Sample Number	Grid A.M.C. Co-ordinates		Sample Type	Geological Description	Rock-type (Macroscopic)	Thin or Polished Section				Metal Content (p.p.m. unless specified)							
	N	E				T or P	By	Reference	Rock-type (Microscopic)	Cu	Pb	Zn	Ag	Fe%	Mn	Ba	
59452	50490	60950	RK	Dark grey finely crystalline DOLOMITE with thin quartz veins	DLST						15	45	65	x	0.68	1100	237
59453	50490	60950	Vein	Thin QUARTZ veins I leached carbonate in DLST above	QZ						15	30	155	x	0.70	220	82
59454	50480	60950	RK	Dark grey finely crystalline DOLOMITE	DLST			Column CMS 84/9/2	DLST		10	55	50	x	0.73	275	87
59455	51600 (Professor)	67550	RK	Silty ironstone	LIM						10	45	110	x	48.0	4700	x
59456	48500	61050	Float	Red brown ironstone	LIM						45	475	1.70%	0.5	45.5	1700	10
59457	49200	60700	RK	Dark grey dolomitized limestone BRECCIA - pyrite clasts & grains	LST BX						20	70	280	x	4.10	910	60
59458	49200	60700	RK	Pale grey ? recrystallized oolitic and bioclastic lime grainstone	LST						x	40	50	x	0.69	210	10
59459	49310	60725	RK	Grey micritic LIMESTONE	LST						5	30	35	x	0.33	85	20
59460	45222	61025	COSTEAN RK	Dark grey silicified BRECCIA with pale gy SIL frags in dk gy cherty mx	BX						10	20	15	x	0.36	45	96
59461	45222	61024-28	COSTEAN R/C	As above - rock chips	BX						15	80	25	x	0.48	85	83
59462	45200	60974	COSTEAN RK	Dark grey porous partially weathered LIMESTONE	LST						x	35	30	x	0.47	80	19
59463	44000	61016-18	COSTEAN R/C	Pale grey silty LIMESTONE - minor carbonate veining	LST						5	40	60	x	1.15	255	29
59464	44000	61018-20	COSTEAN R/C	Pale grey porous, weathered LIMESTONE - carbonate veins	LST						5	50	150	x	0.40	155	21
59465	44000	61060-66	COSTEAN R/C	Pale grey fine grained LIMESTONE, mor carbonate vng	LST						x	35	90	x	0.39	100	12
59489	Baura UTA 1006		RK	Dark grey, partially decomposed micaceous SILTSTONE	SILT						20	70	125		0.98	30	500

E.L. 4/78 MYRTLE



LEGEND

COLOUR	wh - white
pk - pink	bk - black
br - brown	gr - green
bl - blue	yl - yellow
gy - grey	or - orange
rd - red	pl - pale
cr - cream	dk - dark
lt - light	

TEXTURE	foss - fossiliferous
fg - fine grained	sil - siliceous
mg - medium grained	mic - micaceous
cg - coarse grained	ferr - ferruginous
bxd - brecciated	int - intense
cld - cleaved	wk - weak
shrd - sheared	v - very
calc - calcareous	pb - pebble
carb - carbonaceous	cb - cobble
lam - laminated	tr - trace
xbd - cross bedded	in bd - inter bedded
fn bd - thin bedded	tblcl - tubular
tk bd - thick bedded	frct - fractured
vn - veins, veining	xyst - crystalline
ms - massive	

ROCK TYPE	SLT - siltstone
SST - sandstone	DLT - dolomite
LST - limestone	CGL - conglomerate
BX - breccia	BSH - black shale
SH - shale	LIM - ironstone
QZT - quartzite	CLY - clay
GRIT - grit	GRA - gravel
PUG - pug	

MINERALOGY or ALTERATION	py - pyrite
qt - quartz	sp - sphalerite
gn - galena	cp - chalcopyrite
lim - limonite	sid - silicified
cbd - carbonated	ba - barite
c - calcite	

ORDER

Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils.

e.g. dk gy mg foss SST. or gy calc SH py or pl gy LST sid.

TOPOGRAPHICAL

cut grid lines	joint
roads	joint - vertical
tracks	overturned
tramways	bedding
power lines	bedding - vertical
rivers, creeks	quarries
swampy area	cleavage
Costean	cleavage - vertical
	356° vein (barite) with dip
	abrupt break of slope
	Diamond Drill Hole

LEGEND

P_s	Permian Sediments
Sc	Crotty Quartzite
O_{gu}	Upper Limestone
O_{gs}	Siltstone Member
O_{gl}	Lower Limestone
O_s	Siltstones
O_m	Moina Sandstone
~~~~~	Fault - approximate
---?---	Fault - inferred
---	Lithological boundary - approximate
- - -	Lithological boundary - inferred

SUPERCEDES AI-532-0052

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: EL 4/78 ZEEHAN TAS.

132209

MYRTLE GRID 001

GEOLOGY (INTERP)

PL. I

Scale 1:5000 Survey: 1 MAT. Revised:

Reference A-78-60B Date 4-6-85 REF No.

Drawn: R. J. R. Checked: I. MAT. AI-532-0120

E.L. 15/76

LEGEND	
<span style="background-color: #f0e68c; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Pe	Permian Sediments
<span style="background-color: #f0e68c; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Sc	Crotty Quartzite
<span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Ogu	Upper Limestone
<span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Ogs	Siltstone Member
<span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Ogl	Lower Limestone
<span style="background-color: #f0e68c; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Os	Siltstones
<span style="background-color: #f0e68c; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Om	Maina Sandstone
	Fault - approximate
	Fault - inferred
	Lithological boundary - approximate
	Lithological boundary - inferred

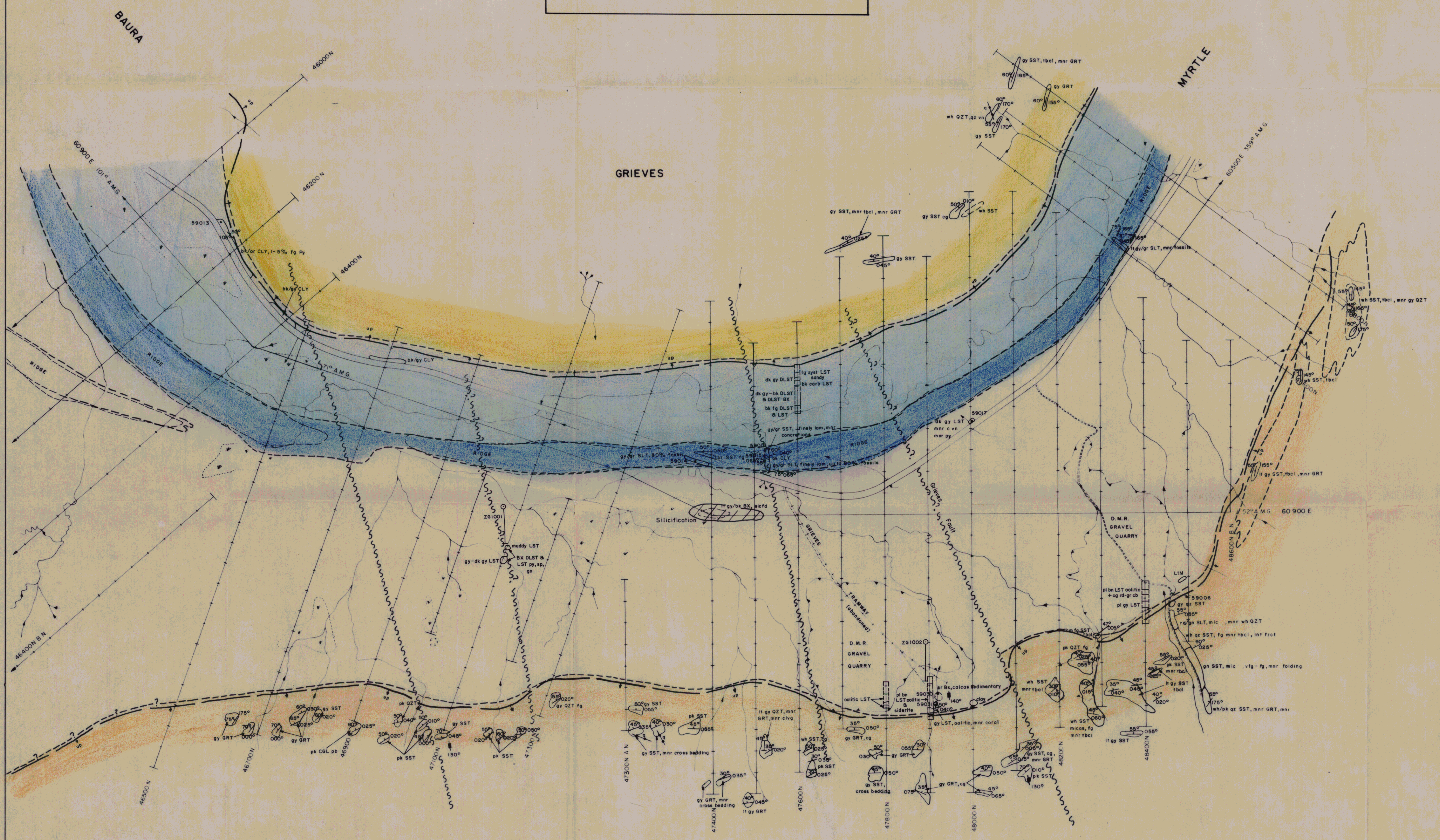
LEGEND	
<b>COLOUR</b>	
pk - pink	wh - white
br - brown	bk - black
bl - blue	gr - green
gy - grey	yl - yellow
rd - red	or - orange
cr - cream	pl - pale
lt - light	dk - dark
<b>TEXTURE</b>	
fg - fine grained	foss - fossiliferous
mg - medium grained	sil - siliceous
cg - coarse grained	mic - micaceous
bxd - brecciated	fer - ferruginous
clvd - cleaved	int - intense
shrd - sheared	wk - weak
calc - calcareous	v - very
carb - carbonaceous	pb - pebble
lam - laminated	cb - cobble
xbd - cross bedded	tr - trace
tn bd - thin bedded	in bd - inter bedded
tk bd - thick bedded	fbcl - tubular
vn - veins, veining	frct - fractured

ROCK TYPE	
SST - sandstone	SLT - siltstone
LST - limestone	DLST - dolomite
BX - breccia	CGL - conglomerate
SH - shale	BSh - black shale
QZT - quartzite	LIM - ironstone
GRIT - grit	CLY - clay
PUG - pug	GRA - gravel

MINERALOGY or ALTERATION	
qz - quartz	py - pyrite
gn - galena	sp - sphalerite
lim - limonite	cp - chalcopyrite
cbd - carbonated	sid - silicified
c - calcite	

ORDER	
Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils	
* g	
dk gy mg foss SST or gy calc SH py or pl gy LST sid	

TOPOGRAPHICAL	
	cut grid lines
	roads
	tracks
	tramways
	power lines
	rivers, creeks
	swampy area
	joint
	joint - vertical
	overturned
	bedding
	bedding - vertical
	quarries
	Diamond Drill Hole
	Crestline



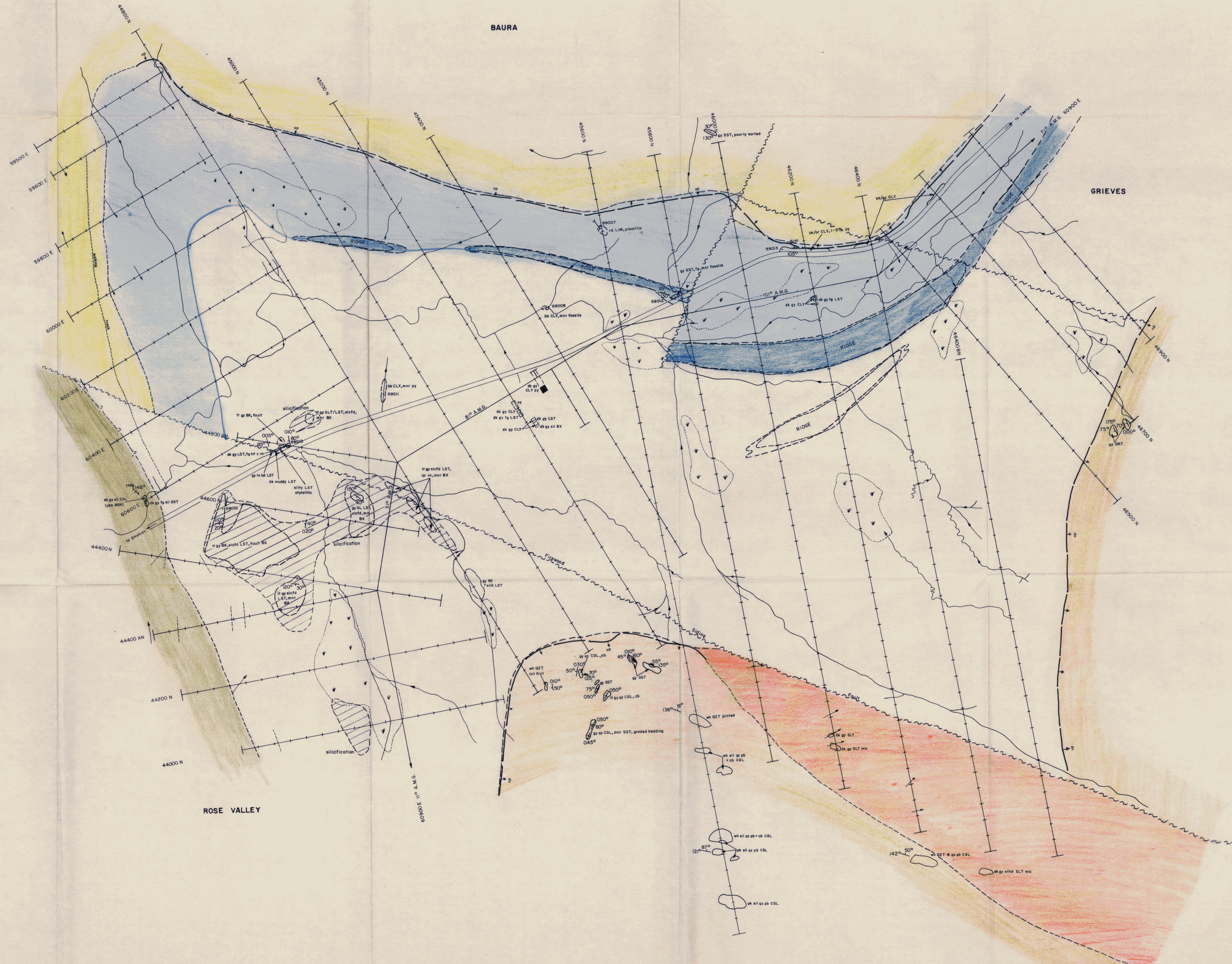
SUPERCEDES AI-532-0051

**ELECTROLYTIC ZINC CO. OF ASIA LTD.**

PROJECT: EL 4/78 ZEEHAN	TAS.
132210	
GRIEVES GRID	
002	
<b>GEOLOGY (INTERP)</b>	
5 cm	
PL. 2	

Scale 1 5000	Survey 1 MAT	Revised
Reference A-78-60B	Date 4-6-85	REF No
Drawn R. J. R.	Checked	AI-532-0119

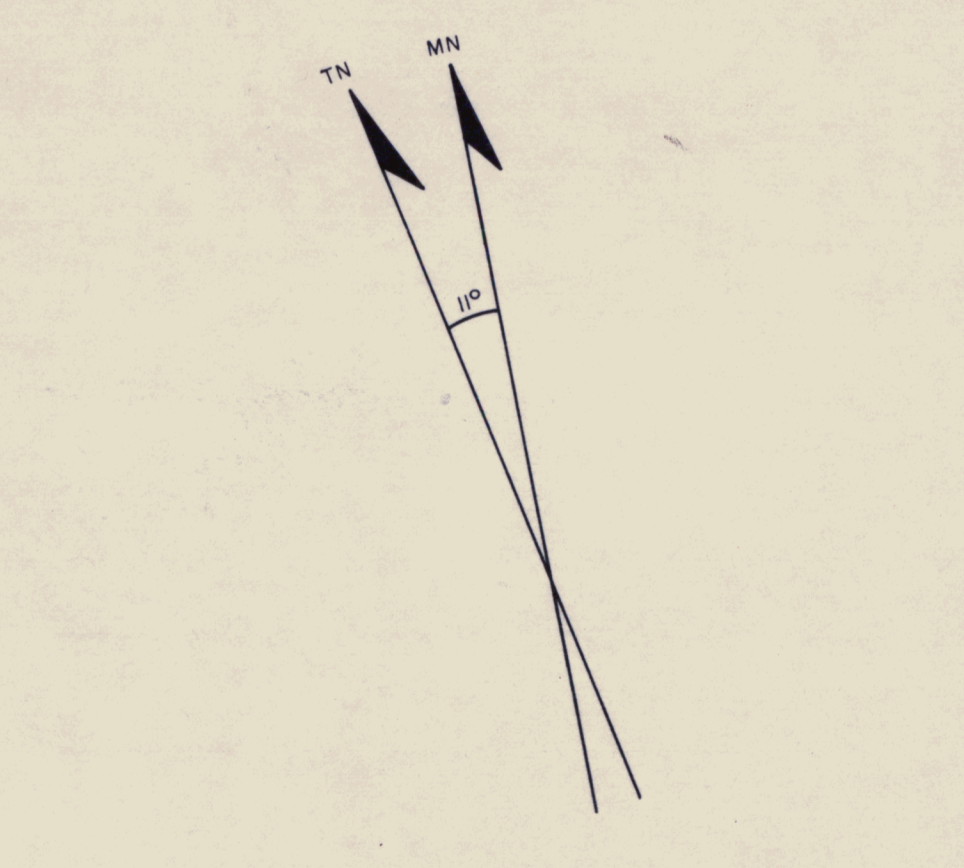
85-2440



**LEGEND**

<b>COLOUR</b>	
pk - pink	wh - white
br - brown	bk - black
bl - blue	gr - green
gy - grey	yl - yellow
rd - red	or - orange
cr - cream	pl - pale
lt - light	dk - dark
<b>TEXTURE</b>	
fg - fine grained	foss - fossiliferous
mg - medium grained	sil - siliceous
cg - coarse grained	mic - micaceous
bed - bedded	ferr - ferruginous
cld - cleaved	int - intense
shrd - sheared	wk - weak
calc - calcareous	v - very
carb - carbonaceous	pb - pebbly
lam - laminated	cb - cobble
xbd - cross bedded	tr - trace
in bd - inter bedded	in bd - inter bedded
th bd - thin bedded	tbl - tubular
rx bd - thick bedded	frct - fractured
vn - veins, veining	
<b>ROCK TYPE</b>	
SST - sandstone	SLT - siltstone
LST - limestone	DLST - dolomite
BX - breccia	CGL - conglomerate
SH - shale	BSH - black shale
QZT - quartzite	LIM - limestone
QST - quartz	CLT - clay
PUG - pug	GRA - gravel
<b>MINERALOGY or ALTERATION</b>	
qt - quartz	py - pyrite
gr - garnet	sp - sphalerite
lm - limonite	cp - chlorite
cbd - carbonated	sls - silicified
c - calcite	
<b>ORDER</b>	
Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils	
* 9	
dk gy mg foss SST or gy calc SH py or pl gy LST sld	
<b>TOPOGRAPHICAL</b>	
cut grid lines	90° joint
roads	90° joint - vertical
tracks	90° overturned
framways	90° bedding - vertical
power lines	quarries
rivers, creeks	Coastline
swampy area	

<b>Ps</b>	Permian Sediments
<b>Sc</b>	Crotty Quartzite
<b>Ogu</b>	Upper Limestone
<b>Ogs</b>	Siltstone Member
<b>Ogl</b>	Lower Limestone
<b>Os</b>	Siltstones
<b>Om</b>	Melina Sandstone
~	Fault - approximate
~	Fault - inferred
---	Lithological boundary - approximate
---	Lithological boundary - inferred
~	Break in slope



SUPERCEDES AI-532-0050

**ELECTROLYTIC ZINC CO. OF ASIA LTD.**

PROJECT: E.L. 4/78 ZEEHAN, TAS.

132211  
BAURA GRID 003

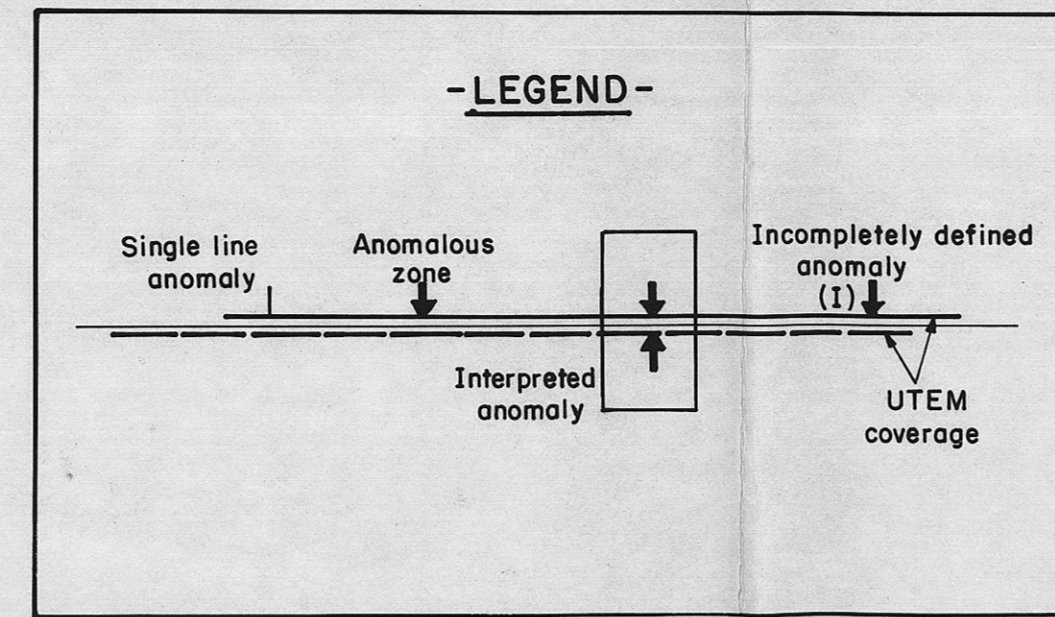
5cm

**GEOLOGY (INTERP)**

PL. 3

Scale: 1:5000	Survey: I.M.A.T.	Revised:
Reference: AI-532-0455	Date: 4-6-'85	Ref. No.
Drawn: R. J. R.	Checked:	AO-532-0118

85-2440



**COLOUR**

pk - pink	wh - white
br - brown	bk - black
bl - blue	gr - green
gy - grey	yl - yellow
rd - red	or - orange
cr - cream	pl - pale
lt - light	dk - dark

**TEXTURE**

fg - fine grained	fos - fossiliferous
mg - medium grained	sl - siliceous
cg - coarse grained	mic - micaceous
brd - brachioid	fer - ferruginous
clvd - cleaved	int - intense
shrd - sheared	wk - weak
colc - calcareous	v - very
carb - carbonaceous	pb - pebble
lam - laminated	cb - cobble
xbd - cross bedded	fr - trace
tb - thin bedded	mb - inter bedded
rb - rock bedded	tbl - tabular
vn - veins, veining	frct - fractured

**ROCK TYPE**

SST - sandstone	SLT - siltstone
LST - limestone	DLSL - dolomite
BX - breccia	COL - conglomerate
Sh - shale	BSH - black shale
QZT - quartzite	LIM - ironstone
GRIT - grit	CLY - clay
PUG - pug	GRA - gravel

**MINERALOGY or ALTERATION**

qt - quartz	py - pyrite
gn - galena	sp - sphalerite
lm - limonite	cp - chalcopyrite
cd - carbonated	slc - silicified
c - calcite	

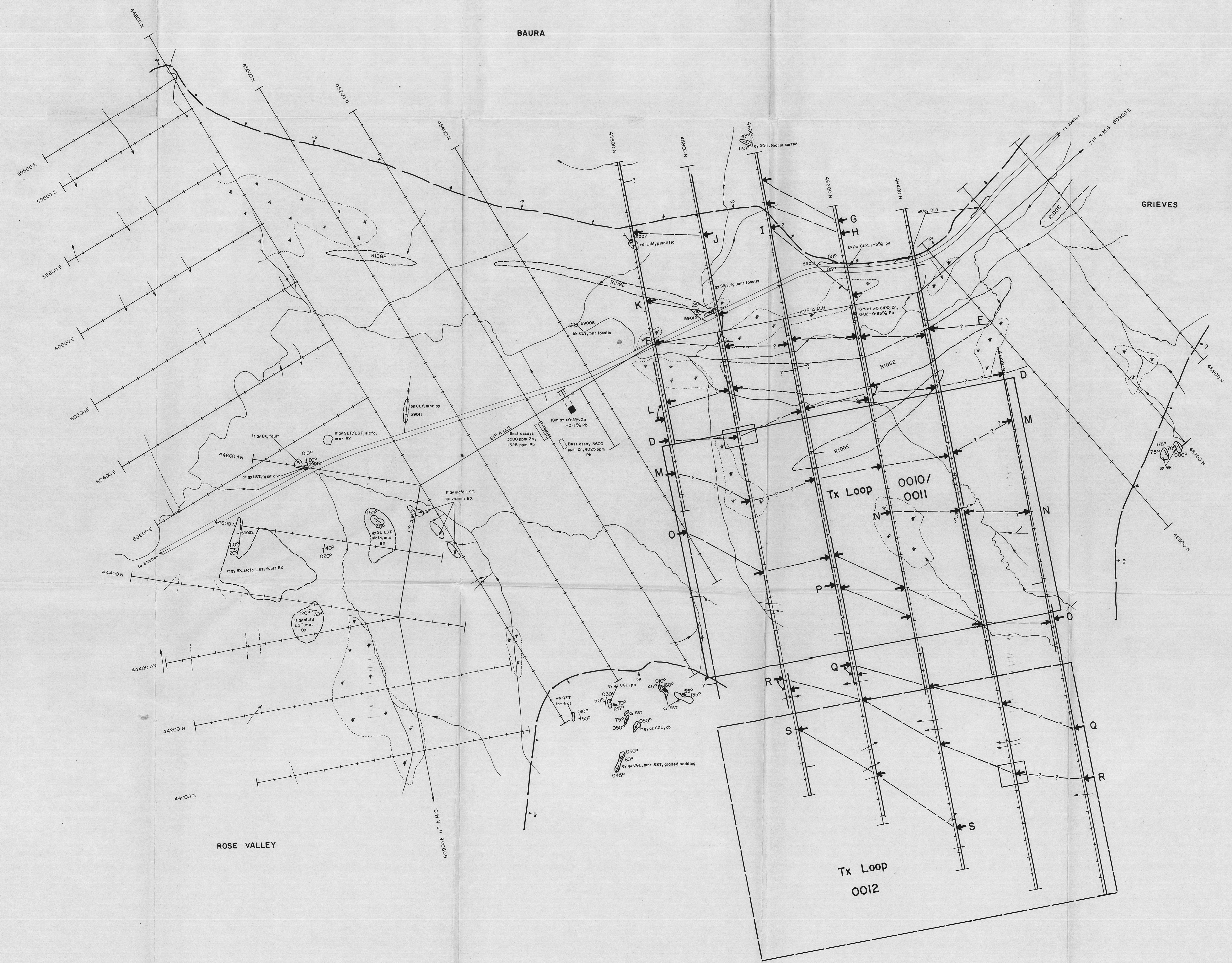
**ORDER**

Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils

kg  
dk gy mg foss SST or gy calc SH py or pl gy LST sld

**TOPOGRAPHICAL**

cut grid lines	020° joint
roads	090° joint - vertical
tracks	045° overturned
tramways	020° bedding
power lines	090° bedding - vertical
rivers, creeks	quarries
swampy area	



**ELECTROLYTIC ZINC CO. OF ASIA LTD.**  
PROJECT: E.L. 4/78 ZEEHAN, T.A.S.

**BAURA GRID** 172

**UTEM INTERPRETATION**

PL. 3a

Scale: 1:5000	Survey: I.MAT.	Revised:
Reference: AI-532-04, 55	Date: 13-5-85	Ref. No.
Drawn: R.J.R.	Checked:	AO-532-0115

95-24440-112

Survey by: Lamontagne Geophysics  
Date: March - April, 1985

MYRTLE

E.L. 4/78



**LEGEND**

<b>COLOUR</b>	
pk - pink	wh - white
br - brown	bk - black
bl - blue	gr - green
gy - grey	yl - yellow
rd - red	or - orange
cr - cream	pl - pale
lt - light	dk - dark

**TEXTURE**

fg - fine grained	foss - fossiliferous
mg - medium grained	sil - siliceous
cg - coarse grained	mic - micaceous
bx - brecciated	ferr - ferruginous
clvd - cleaved	int - intense
shrd - sheared	wk - weak
calc - calcareous	v - very
carb - carbonaceous	pb - pebble
lam - laminated	cb - cobble
xbd - cross bedded	tr - trace
tn bd - thin bedded	in bd - inter bedded
tk bd - thick bedded	fbal - tubular
vn - veins, veining	frct - fractured

**ROCK TYPE**

SST - sandstone	SLT - siltstone
LST - limestone	DLST - dolomite
BX - breccia	CGL - conglomerate
SH - shale	BSH - black shale
QZT - quartzite	LIM - ironstone
GRIT - grit	CLY - clay
PUG - pug	GRA - gravel

**MINERALOGY or ALTERATION**

qt - quartz	py - pyrite
gn - galena	sp - sphalerite
lim - limonite	cp - chalcopyrite
cbd - carbonated	sid - silicified
c - calcite	

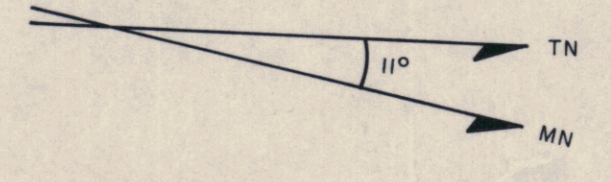
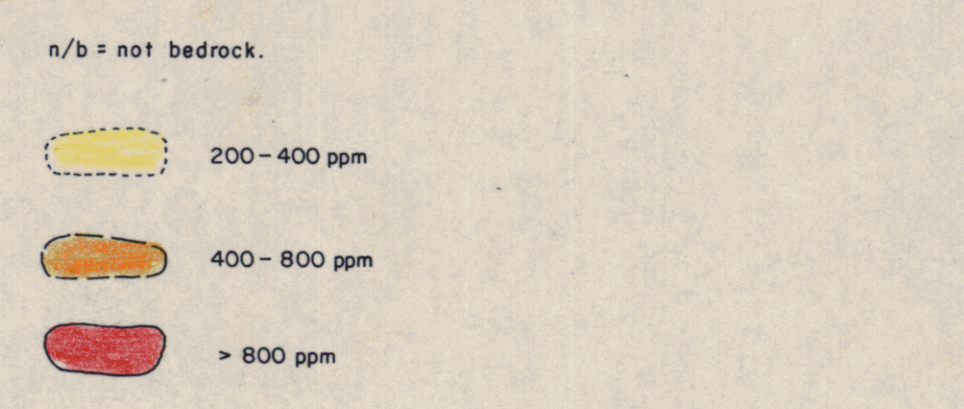
**ORDER**

Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils

e.g. dk gy mg foss SST or gy calc SH py or plgy LST sid

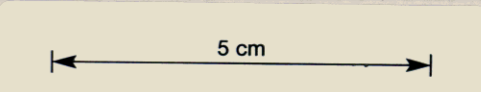
**TOPOGRAPHICAL**

cut grid lines	090° joint
roads	090° joint - vertical
tracks	090° overturned
tramways	090° bedding
power lines	090° bedding - vertical
rivers, creeks	quarries
swampy area	



132212

ELECTROLYTIC ZINC CO. OF ASIA LTD.  
PROJECT: EL 4/78 ZEEHAN TAS.



MYRTLE GRID 004  
BEDROCK GEOCHEMISTRY  
Pb  
(WACKER) PL. 4

Scale : 1:5000	Survey : I.MAT.	Revised :
Reference : A-78-60B	Date : 11-7-84	REF. No.
Drawn : R. J. R.	Checked :	AI-532-0087

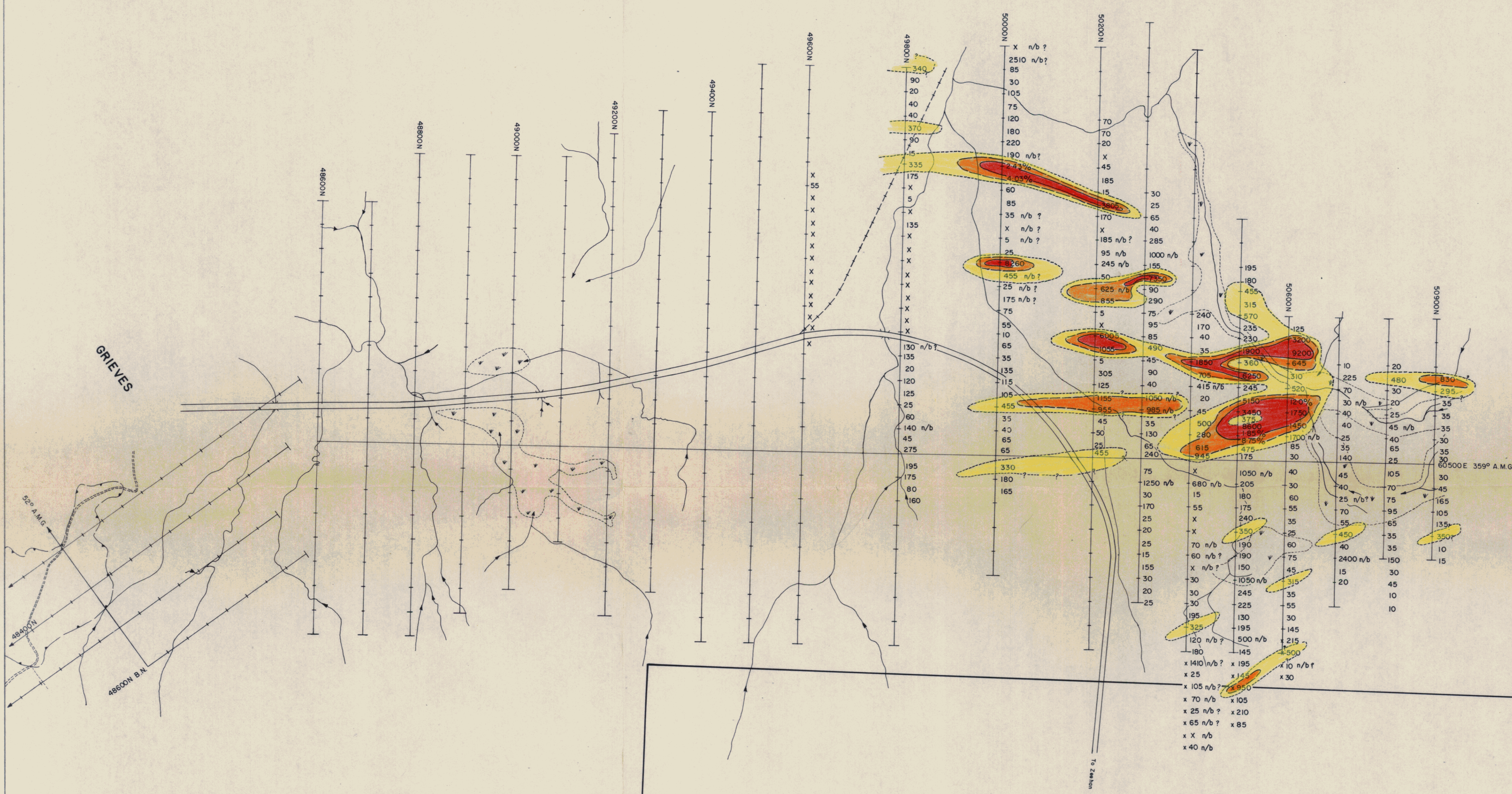
85-2440

E.L. 15/76

MYRTLE

E.L. 4/78

E.L. 15/76



LEGEND

COLOUR

- |            |             |
|------------|-------------|
| pk - pink  | wh - white  |
| br - brown | bk - black  |
| bl - blue  | gr - green  |
| gy - grey  | yl - yellow |
| rd - red   | or - orange |
| cr - cream | pl - pale   |
| lt - light | dk - dark   |

TEXTURE

- |                     |                      |
|---------------------|----------------------|
| fg - fine grained   | foss - fossiliferous |
| mg - medium grained | sil - siliceous      |
| cg - coarse grained | mic - micaceous      |
| bx - brecciated     | ferr - ferruginous   |
| clv - cleaved       | int - intense        |
| shrd - sheared      | wk - weak            |
| calc - calcareous   | v - very             |
| carb - carbonaceous | pb - pebble          |
| lam - laminated     | cb - cobble          |
| xbd - cross bedded  | tr - trace           |
| tnbd - thin bedded  | mbd - inter bedded   |
| tkbd - thick bedded | fbcl - tubular       |
| vn - veins, veining | frct - fractured     |

ROCK TYPE

- |                 |                    |
|-----------------|--------------------|
| SST - sandstone | SLT - siltstone    |
| LST - limestone | DLST - dolomite    |
| BX - breccia    | CGL - conglomerate |
| SH - shale      | BSh - black shale  |
| QZT - quartzite | LIM - ironstone    |
| GRT - grit      | CLY - clay         |
| PUG - pug       | GRA - gravel       |

MINERALOGY or ALTERATION

- |                  |                   |
|------------------|-------------------|
| qt - quartz      | py - pyrite       |
| gn - galena      | sp - sphalerite   |
| lim - limonite   | cp - chalcopyrite |
| cbd - carbonated | sid - silicified  |
| c - calcite      |                   |

ORDER

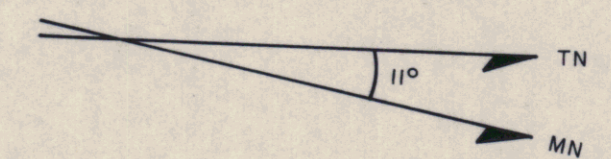
Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils  
 e.g.  
 dk gy mg foss SST or gy calc SH py or plgy LST sid

TOPOGRAPHICAL

- |           |                |           |                         |
|-----------|----------------|-----------|-------------------------|
| — — — — — | cut grid lines | — — — — — | 090° joint              |
| — — — — — | roads          | — — — — — | 090° joint - vertical   |
| — — — — — | tracks         | — — — — — | 090° overturned         |
| — — — — — | or             | — — — — — | 090° bedding            |
| — — — — — | framways       | — — — — — | 60° bedding - vertical  |
| — — — — — | power lines    | — — — — — | 090° bedding            |
| — — — — — | or             | — — — — — | 090° bedding - vertical |
| — — — — — | rivers, creeks | — — — — — | quarries                |
| — — — — — | or             |           |                         |
| — — — — — | swampy area    |           |                         |

n/b = not bedrock.

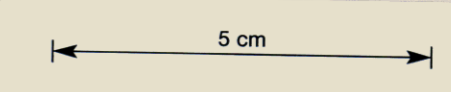
- 300-600 ppm
- 600-1200 ppm
- > 1200 ppm



132213

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: EL 4/78 ZEEHAN TAS.



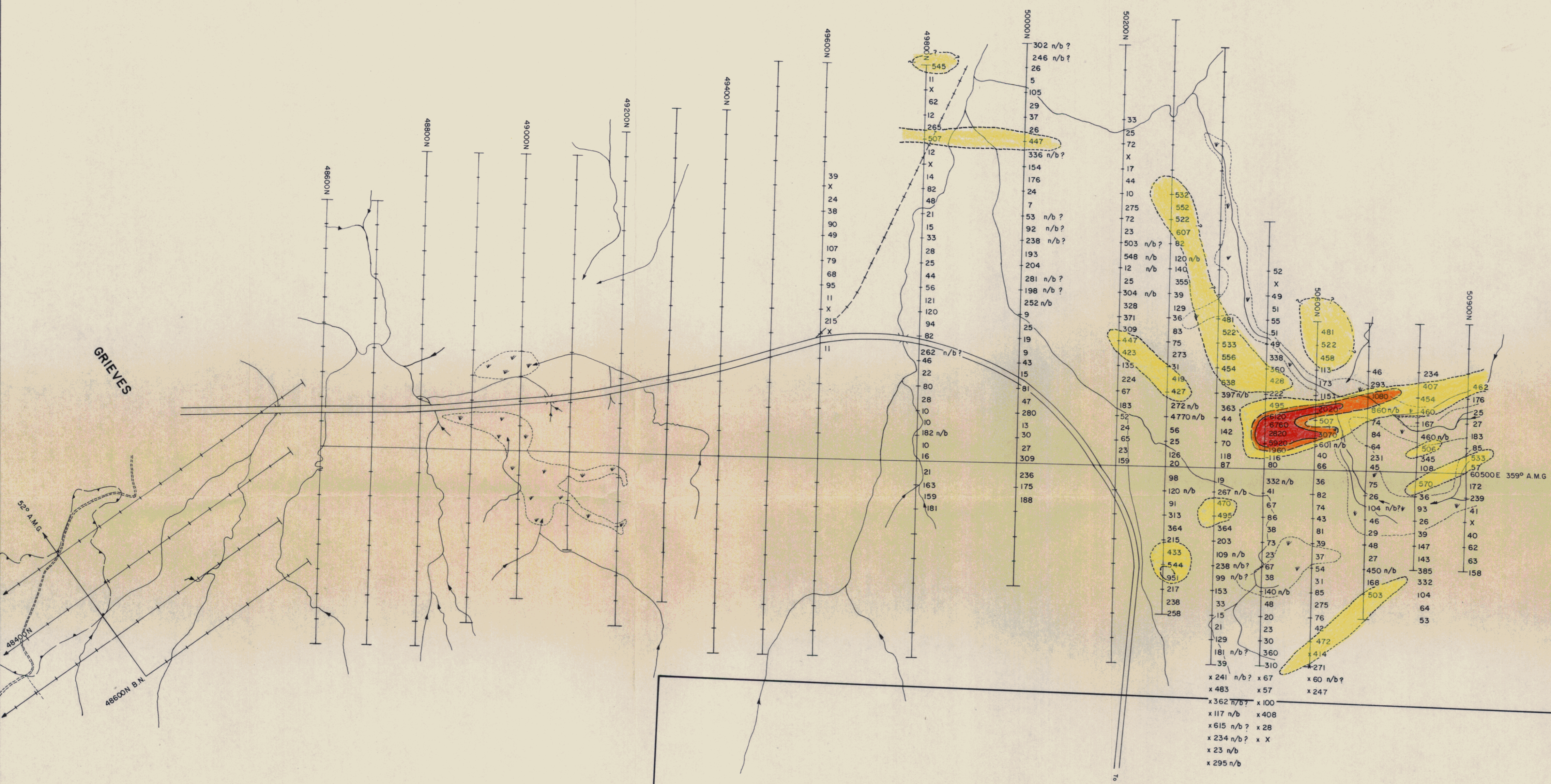
MYRTLE GRID 005  
 BEDROCK GEOCHEMISTRY  
 Zn  
 (WACKER) PL. 5

Scale : 1 : 5000	Survey : I. MAT.	Revised :
Reference : A-78-60B	Date : 11-7-'84	REF. No.
Drawn : R. J. R.	Checked :	A1-532-0086

85-2440

MYRTLE

E.L. 4/78



LEGEND

COLOUR

- |            |             |
|------------|-------------|
| pk - pink  | wh - white  |
| br - brown | bk - black  |
| bl - blue  | gr - green  |
| gy - grey  | yl - yellow |
| rd - red   | or - orange |
| cr - cream | pl - pale   |
| lt - light | dk - dark   |

TEXTURE

- |                     |                      |
|---------------------|----------------------|
| fg - fine grained   | foss - fossiliferous |
| mg - medium grained | sil - siliceous      |
| cg - coarse grained | mic - micaceous      |
| bxd - brecciated    | ferr - ferruginous   |
| clvd - cleaved      | int - intense        |
| shrd - sheared      | wk - weak            |
| calc - calcareous   | v - very             |
| carb - carbonaceous | pb - pebble          |
| lam - laminated     | cb - cobble          |
| xbd - cross bedded  | tr - trace           |
| tnbd - thin bedded  | inbd - inter bedded  |
| tkbd - thick bedded | fbcl - tubular       |
| vn - veins, veining | frct - fractured     |

ROCK TYPE

- |                 |                    |
|-----------------|--------------------|
| SST - sandstone | SLT - siltstone    |
| LST - limestone | DLST - dolomite    |
| BX - breccia    | CGL - conglomerate |
| SH - shale      | BSH - black shale  |
| QZT - quartzite | LIM - ironstone    |
| GRIT - grit     | CLY - clay         |
| PUG - pug       | GRA - gravel       |

MINERALOGY or ALTERATION

- |                  |                   |
|------------------|-------------------|
| qt - quartz      | py - pyrite       |
| gn - galena      | sp - sphalerite   |
| lim - limonite   | cp - chalcopyrite |
| cbd - carbonated | sid - silicified  |
| c - calcite      |                   |

ORDER

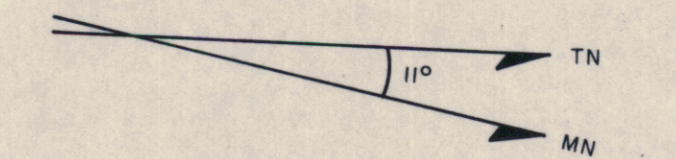
Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils  
 e.g. dk gy mg foss SST or gy calc SH py or pl gy LST sid

TOPOGRAPHICAL

- |         |                |         |                    |
|---------|----------------|---------|--------------------|
| —+—+—+— | cut grid lines | —+—+—+— | joint              |
| —+—+—+— | roads          | —+—+—+— | joint - vertical   |
| —+—+—+— | tracks         | —+—+—+— | overturned         |
| —+—+—+— | tramways       | —+—+—+— | bedding            |
| —+—+—+— | power lines    | —+—+—+— | bedding - vertical |
| —+—+—+— | rivers, creeks | —+—+—+— | quarries           |
| —+—+—+— | swampy area    |         |                    |

n/b = not bedrock

- |  |                |
|--|----------------|
|  | 400 - 800 ppm  |
|  | 800 - 1600 ppm |
|  | > 1600 ppm     |



132214

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: EL 4/78 ZEEHAN TAS.

5 cm

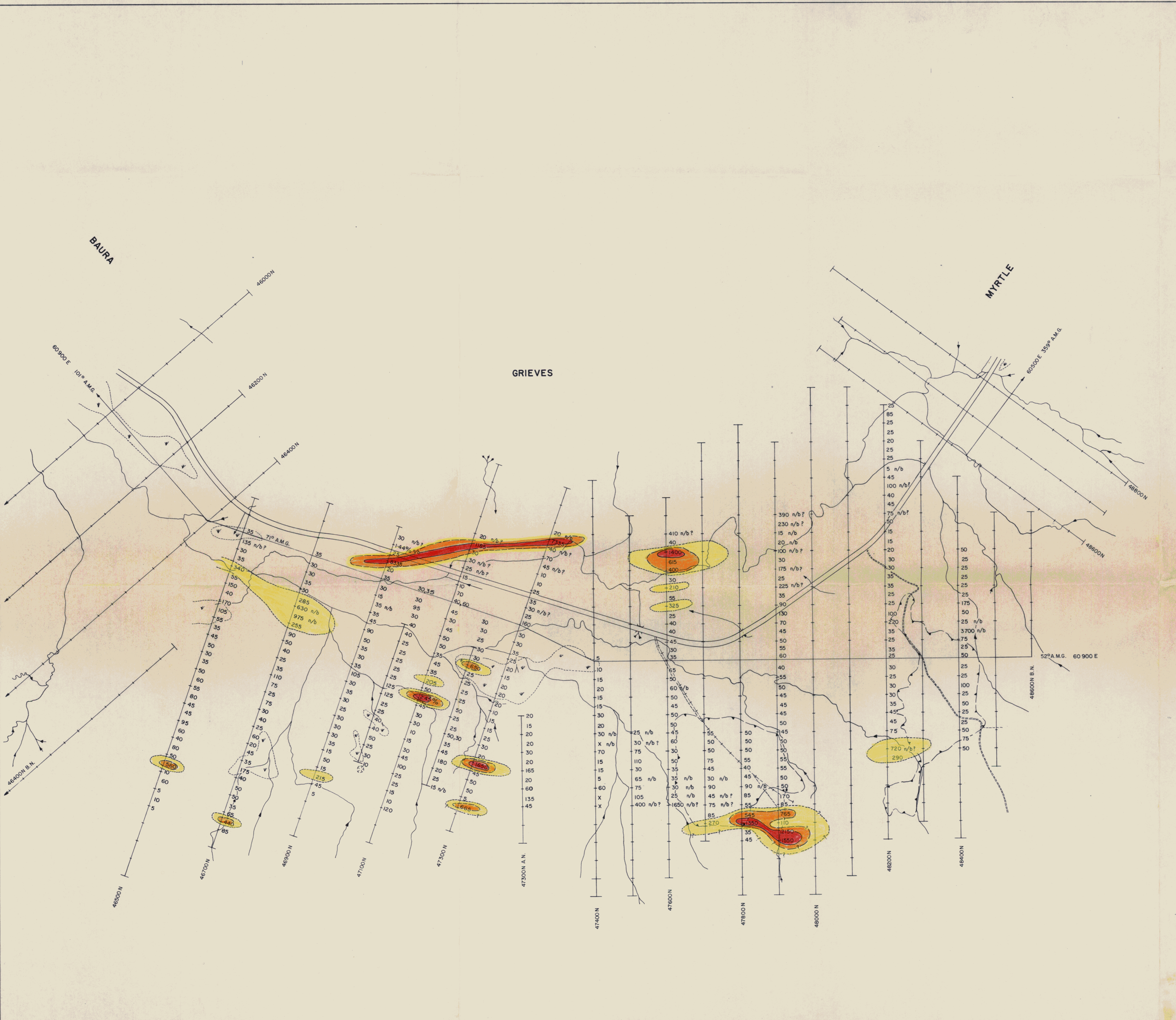
MYRTLE GRID 006  
 BEDROCK GEOCHEMISTRY  
 Ba  
 (WACKER) PL. 6

E.L. 15/76

Scale: 1:5000 Survey: I.MAT. Revised:  
 Reference: A-78-60B Date: 11-7-84 REF. No.  
 Drawn: R. J. R. Checked: A1-532-0090

85-2440





**LEGEND**

- COLOUR**
- pk - pink
  - br - brown
  - bl - blue
  - gy - grey
  - rd - red
  - cr - cream
  - lt - light
  - wh - white
  - bk - black
  - gr - green
  - yl - yellow
  - or - orange
  - pl - pale
  - dk - dark

- TEXTURE**
- fg - fine grained
  - mq - medium grained
  - cg - coarse grained
  - bd - brecciated
  - clvd - cleaved
  - shrd - sheared
  - calc - calcareous
  - carb - carbonaceous
  - lam - laminated
  - xbd - cross bedded
  - tn bd - thin bedded
  - tk bd - thick bedded
  - vn - veins, veining
  - foss - fossiliferous
  - sil - siliceous
  - mic - micaceous
  - ferr - ferruginous
  - int - intense
  - wk - weak
  - v - very
  - pb - pebble
  - cb - cobble
  - tr - trace
  - in bd - inter bedded
  - fbcl - tubular
  - frct - fractured

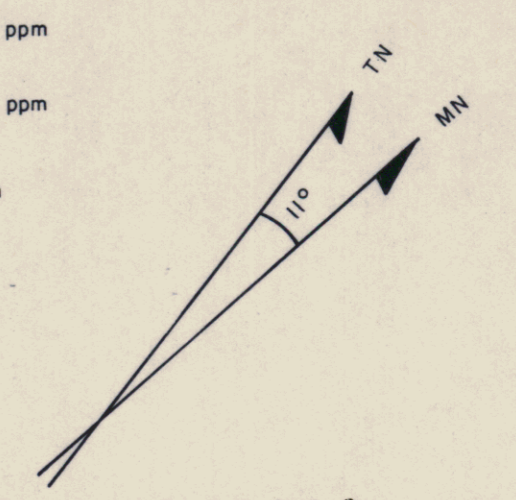
- ROCK TYPE**
- SST - sandstone
  - LST - limestone
  - BX - breccia
  - SH - shale
  - QZT - quartzite
  - GRIT - grit
  - PUG - pug
  - SLT - siltstone
  - DLST - dolomite
  - CGL - conglomerate
  - BSH - black shale
  - LIM - limestone
  - CLY - clay
  - GRA - gravel

- MINERALOGY or ALTERATION**
- qz - quartz
  - gn - galena
  - lim - limonite
  - cbd - carbonated
  - c - calcite
  - py - pyrite
  - sp - sphalerite
  - cp - chalcopyrite
  - sil - silicified

- ORDER**
- Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils
- e.g. dk gy mg foss SST or gy calc SH py or pl gy LST sil

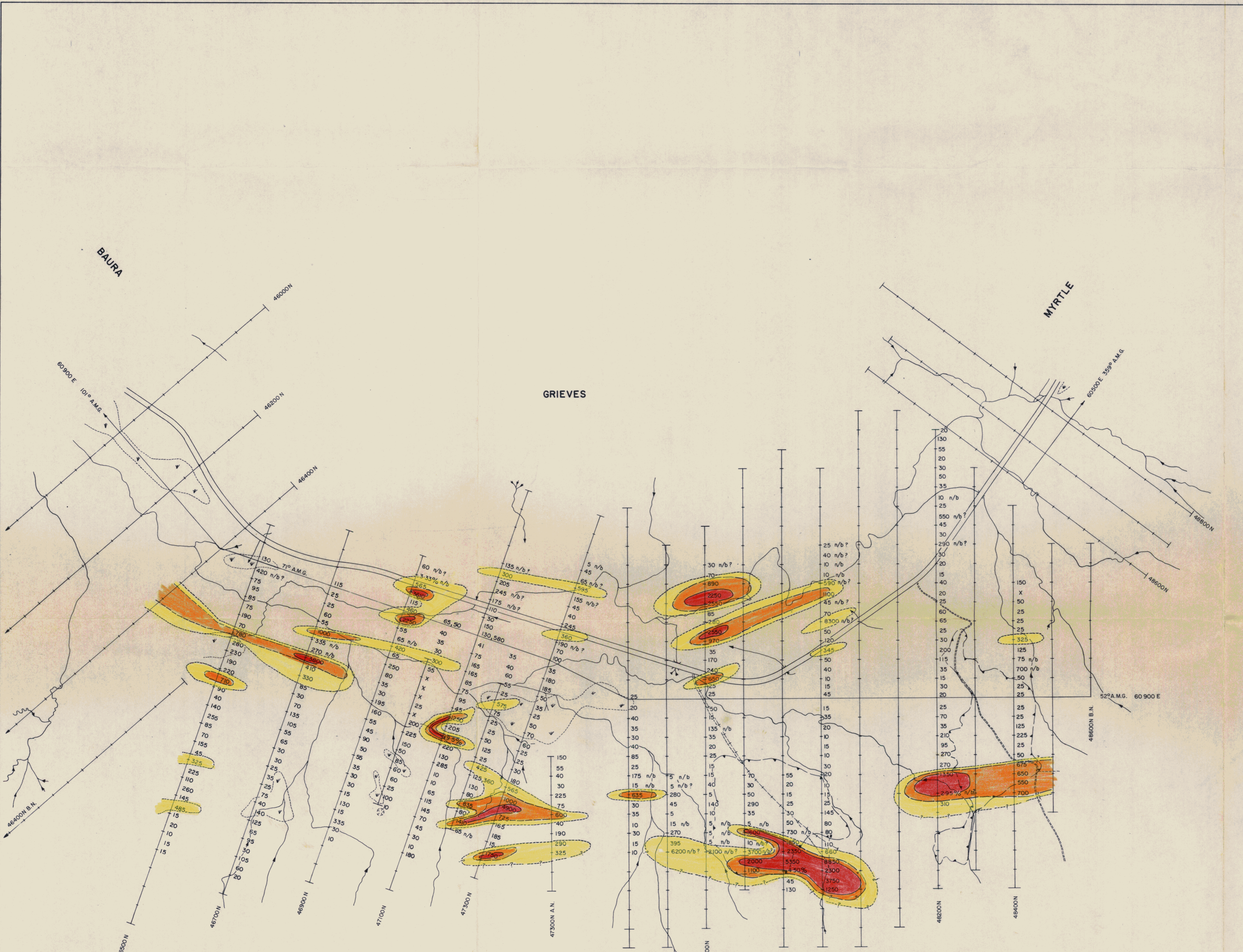
- TOPOGRAPHICAL**
- cut grid lines
  - roads
  - tracks
  - tramways
  - power lines
  - rivers, creeks
  - swampy area
  - joint 090°
  - joint - vertical 090°
  - overturned 090°
  - bedding 090°
  - bedding - vertical 090°
  - quarries

- n/b = not bedrock
- 200-400 ppm
  - 400-800 ppm
  - > 800 ppm



132216		
ELECTROLYTIC ZINC CO. OF ASIA LTD.		
PROJECT: EL 4/78 ZEEHAN		TAS.
GRIEVES GRID		008
BEDROCK GEOCHEMISTRY		
Pb		
(WACKER)		
		PL. 8
Scale : 1:5000	Survey : I. MAT.	Revised :
Reference : A-78-60B	Date : 11-7-84	REF No.
Drawn : R. J. R.	Checked :	A1-532-0092

85-2440



**LEGEND**

<b>COLOUR</b>	
pk - pink	wh - white
br - brown	bk - black
bl - blue	gr - green
gy - grey	yl - yellow
rd - red	or - orange
cr - cream	pl - pale
lt - light	dk - dark

<b>TEXTURE</b>	
fg - fine grained	foss - fossiliferous
mg - medium grained	sil - siliceous
cg - coarse grained	mic - micaceous
brd - brecciated	fer - ferruginous
clvd - cleaved	int - intense
shrd - sheared	wk - weak
calc - calcareous	v - very
carb - carbonaceous	pb - pebble
lam - laminated	cb - cobble
xbd - cross bedded	tr - trace
tn bd - thin bedded	in bd - inter bedded
tk bd - thick bedded	tbl - tubular
vn - veins, veining	frct - fractured

<b>ROCK TYPE</b>	
SST - sandstone	SLT - siltstone
LST - limestone	DLST - dolomite
BX - breccia	CGL - conglomerate
SH - shale	BSH - black shale
QZT - quartzite	LIM - ironstone
GRIT - grit	CLY - clay
PUG - pug	GRA - gravel

<b>MINERALOGY or ALTERATION</b>	
qz - quartz	py - pyrite
gn - galena	sp - sphalerite
lim - limonite	cp - chalcopyrite
cbd - carbonated	sil - silicified
c - calcite	

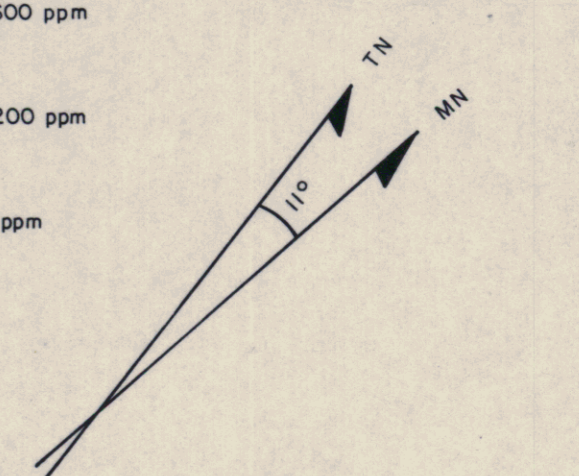
**ORDER**  
 Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils  
 e.g.  
 dk gy mg foss SST or gy calc SH py or pl gy LST sil

**TOPOGRAPHICAL**

cut grid lines	090° joint
roads	090° joint - vertical
tracks	090° overturned
tramways	090° bedding
power lines	090° bedding - vertical
rivers, creeks	quarries
swampy area	

n/b - not bedrock

	300-600 ppm
	600-1200 ppm
	>1200 ppm



132217

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: EL 4/78 ZEEHAN TAS.

5 cm

GRIEVES GRID

BEDROCK GEOCHEMISTRY 009

Zn

(WACKER)

PL. 9

Scale: 1:5000	Survey: I.MAT.	Revised:
Reference: A-78-60B	Date: 11-7-84	REF No.
Drawn: R. J. R.	Checked:	AI-532-009I

85-2440

**LEGEND**

**COLOUR**

- |            |             |
|------------|-------------|
| pk - pink  | wh - white  |
| br - brown | bk - black  |
| bl - blue  | gr - green  |
| gy - grey  | yl - yellow |
| rd - red   | or - orange |
| cr - cream | pl - pale   |
| lt - light | dk - dark   |

**TEXTURE**

- |                     |                      |
|---------------------|----------------------|
| fg - fine grained   | foss - fossiliferous |
| mg - medium grained | sil - siliceous      |
| cg - coarse grained | mic - micaceous      |
| brd - brecciated    | ferr - ferruginous   |
| clvd - cleaved      | int - intense        |
| shrd - sheared      | wk - weak            |
| calc - calcareous   | v - very             |
| carb - carbonaceous | pb - pebble          |
| lam - laminated     | cb - cobble          |
| xbd - cross bedded  | tr - trace           |
| tnbd - thin bedded  | inbd - inter bedded  |
| tkbd - thick bedded | fbcl - tubicolar     |
| vn - veins, veining | frct - fractured     |

**ROCK TYPE**

- |                 |                    |
|-----------------|--------------------|
| SST - sandstone | SLT - siltstone    |
| LST - limestone | DLST - dolomite    |
| BX - breccia    | CGL - conglomerate |
| SH - shale      | BSH - black shale  |
| QZT - quartzite | LIM - ironstone    |
| GRIT - grit     | CLY - clay         |
| PUG - pug       | GRA - gravel       |

**MINERALOGY or ALTERATION**

- |                   |                   |
|-------------------|-------------------|
| qz - quartz       | py - pyrite       |
| gn - galena       | sp - sphalerite   |
| lim - limonite    | cp - chalcopyrite |
| cb'd - carbonated | sid - silicified  |
| c - calcite       |                   |

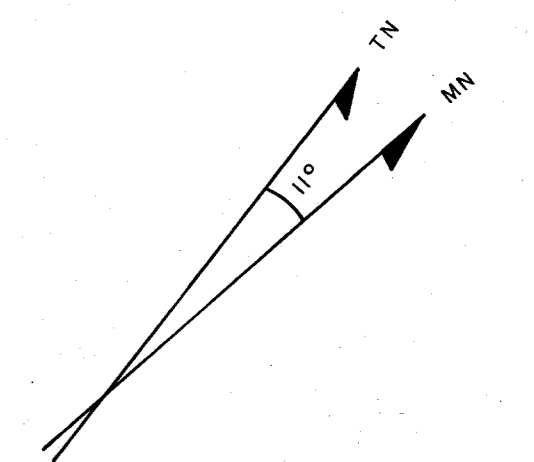
**ORDER**

Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils  
 e.g.  
 dk gy mg foss SST. or gy calc SH py or pl gy LST sid

**TOPOGRAPHICAL**

- |  |                |  |                    |
|--|----------------|--|--------------------|
|  | cut grid lines |  | joint              |
|  | roads          |  | joint - vertical   |
|  | tracks         |  | overturned         |
|  | tramways       |  | bedding            |
|  | power lines    |  | bedding - vertical |
|  | rivers, creeks |  | quarries           |
|  | swampy area    |  |                    |

n/b = not bedrock



132218

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: EL 4/78 ZEEHAN

TAS.

5 cm  
 010  
 GRIEVES GRID

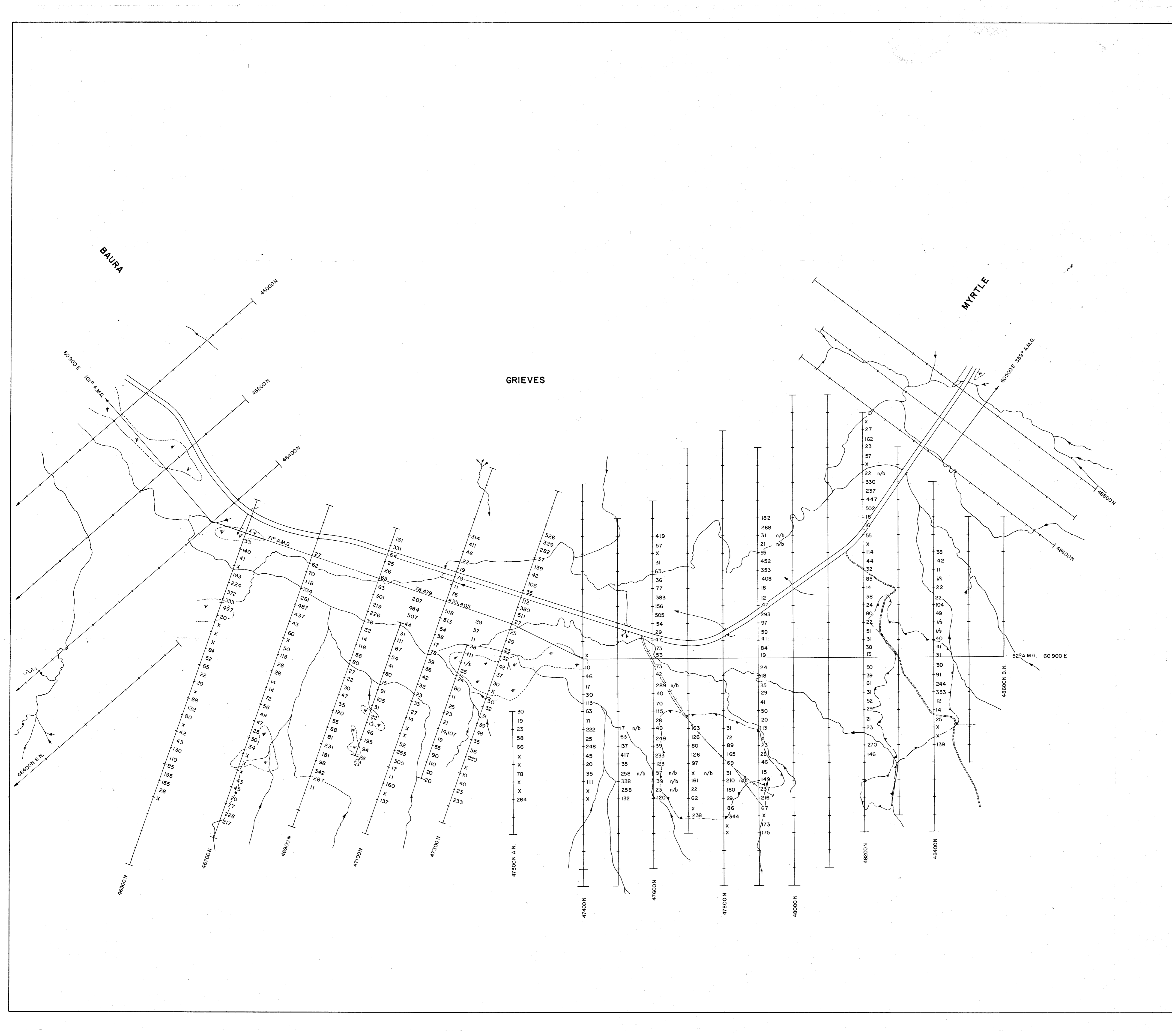
BEDROCK GEOCHEMISTRY

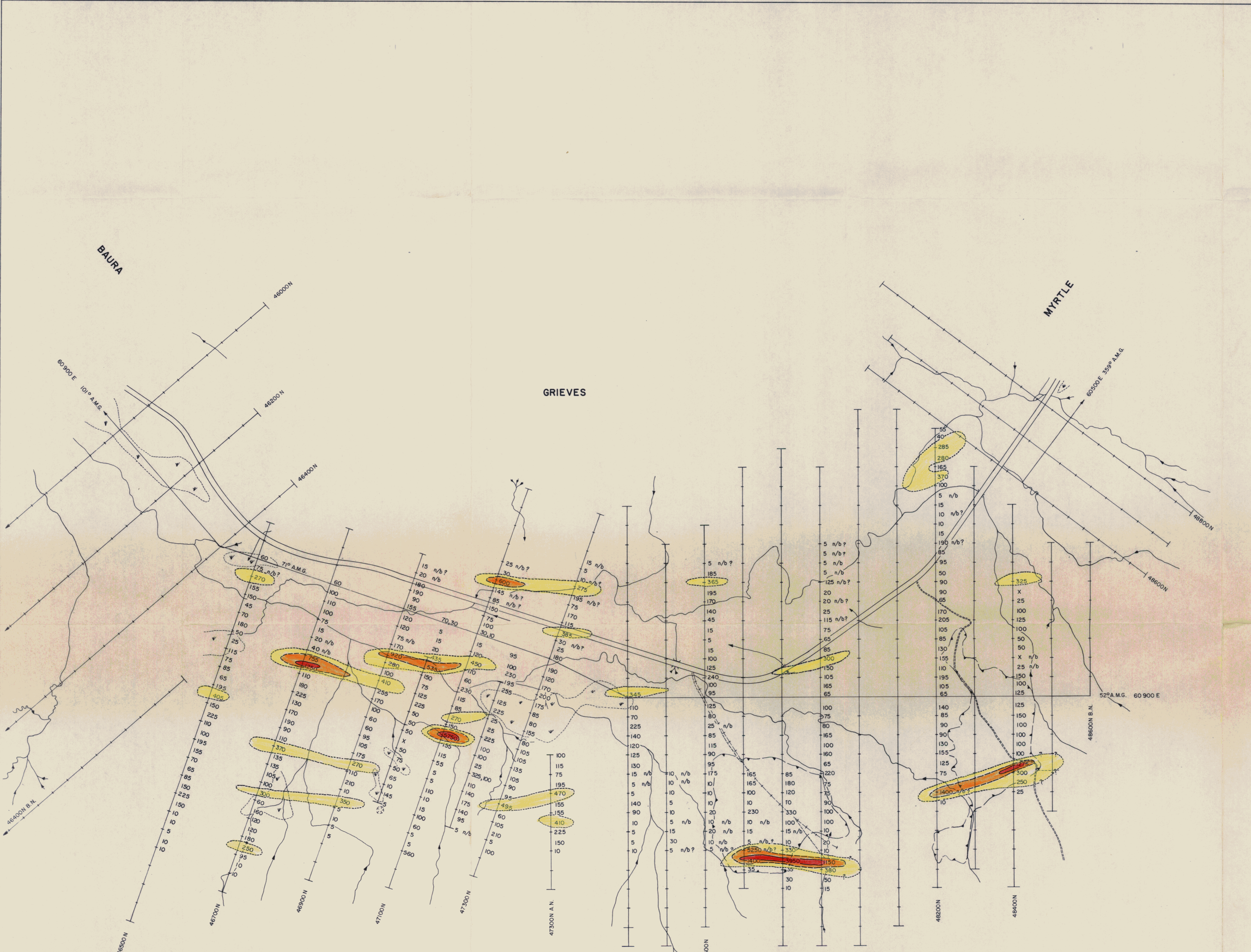
Ba  
 (WACKER)

PL. 10

Scale : 1:5000	Survey : I.MAT.	Revised :
Reference : A-78-60B	Date : 11-7-'84	REF No.
Drawn : R. J. R.	Checked :	AI-532-0095

85-24445





**LEGEND**

**COLOUR**

- |            |             |
|------------|-------------|
| pk - pink  | wh - white  |
| br - brown | bk - black  |
| bl - blue  | gr - green  |
| gy - grey  | yl - yellow |
| rd - red   | or - orange |
| cr - cream | pl - pale   |
| lt - light | dk - dark   |

**TEXTURE**

- |                      |                      |
|----------------------|----------------------|
| fg - fine grained    | foss - fossiliferous |
| mg - medium grained  | sil - siliceous      |
| cg - coarse grained  | mic - micaceous      |
| bx - brecciated      | ferr - ferruginous   |
| clvd - cleaved       | int - intense        |
| shrd - sheared       | wk - weak            |
| calc - calcareous    | v - very             |
| carb - carbonaceous  | pb - pebble          |
| lam - laminated      | cb - cobble          |
| xbd - cross bedded   | tr - trace           |
| tn bd - thin bedded  | in bd - inter bedded |
| tk bd - thick bedded | tbl - tubular        |
| vn - veins, veining  | frct - fractured     |

**ROCK TYPE**

- |                 |                    |
|-----------------|--------------------|
| SST - sandstone | SLT - siltstone    |
| LST - limestone | DLST - dolomite    |
| BX - breccia    | CGL - conglomerate |
| SH - shale      | BSH - black shale  |
| QZT - quartzite | LIM - ironstone    |
| GRIT - grit     | CLY - clay         |
| PUG - pug       | GRA - gravel       |

**MINERALOGY or ALTERATION**

- |                  |                   |
|------------------|-------------------|
| qz - quartz      | py - pyrite       |
| gn - galena      | sp - sphalerite   |
| lim - limonite   | cp - chalcopyrite |
| cbd - carbonated | sid - silicified  |
| c - calcite      |                   |

**ORDER**

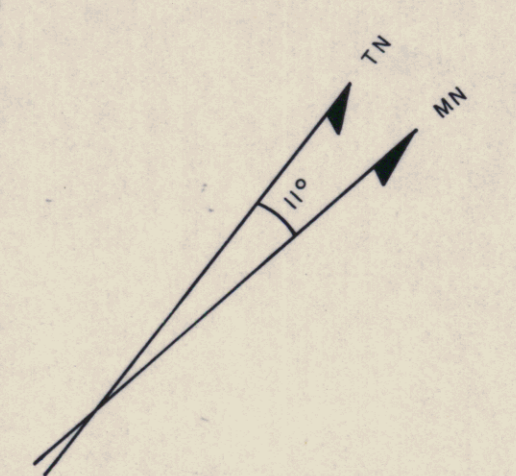
Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils  
 e.g. dk gy mg foss SST or gy calc SH py or pl gy LST sid

**TOPOGRAPHICAL**

- |                |                         |
|----------------|-------------------------|
| cut grid lines | 090° joint              |
| roads          | 090° joint - vertical   |
| tracks         | 090° overturned         |
| tramways       | 60° bedding             |
| power lines    | 090° bedding - vertical |
| rivers, creeks | quarries                |
| swampy area    |                         |

n/b = not bedrock

- 250 - 500 ppm
- 500 - 1000 ppm
- >1000 ppm



132219

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: EL 4/78 ZEEHAN TAS.

5 cm

GRIEVES GRID

011

BEDROCK GEOCHEMISTRY

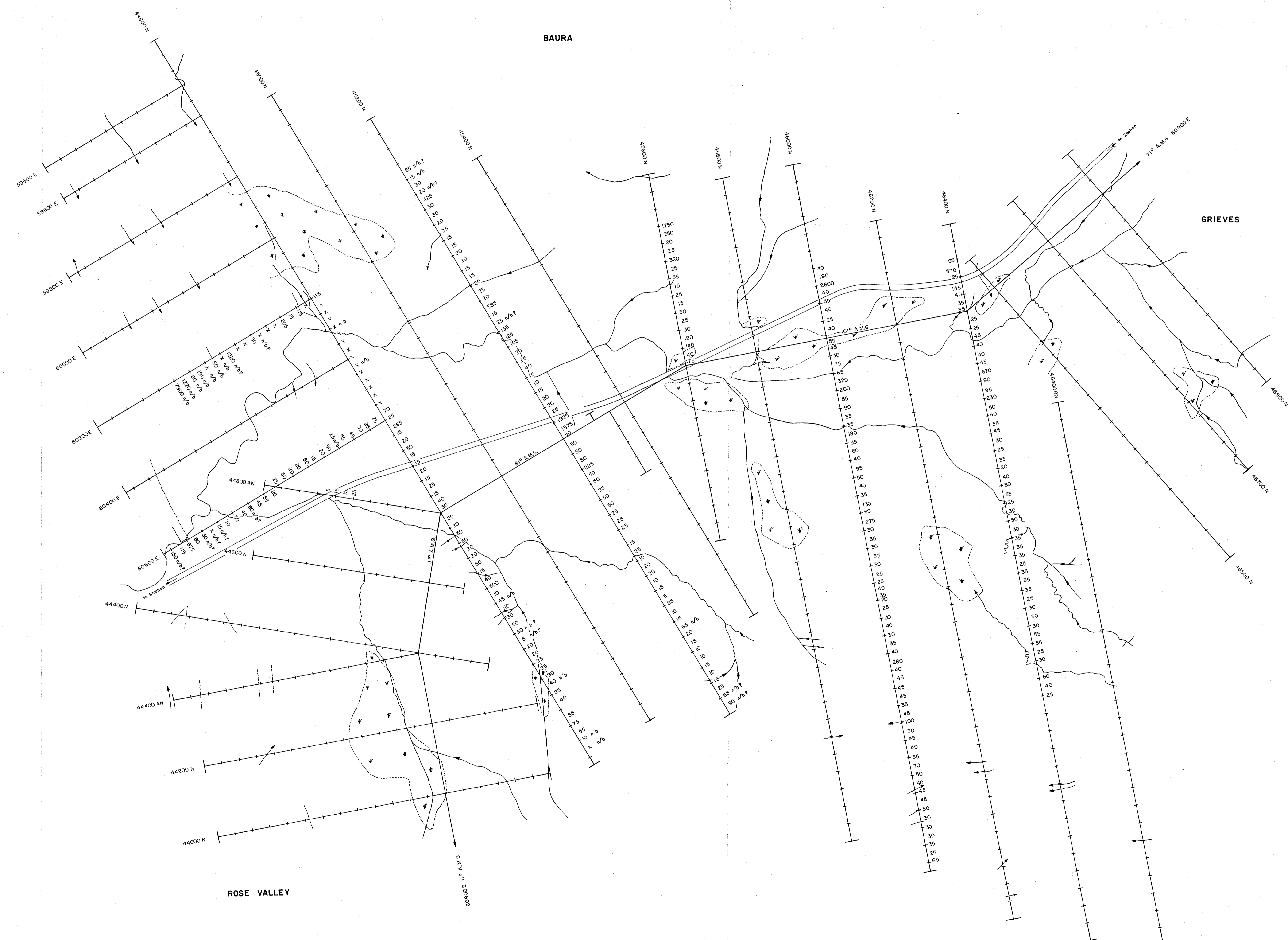
Mn

(WACKER)

PL. 11

Scale: 1:5000	Survey: I.MAT.	Revised:
Reference: A-78-60B	Date: 11-7-'84	REF No.
Drawn: R. J. R.	Checked:	AI-532-0094

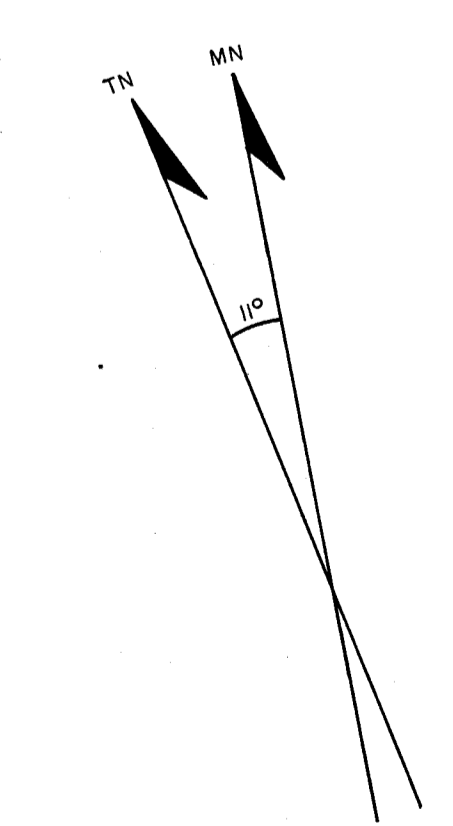
85-2440



**LEGEND**

<b>COLOUR</b>	wh - white
pk - pink	bk - black
br - brown	gr - green
bl - blue	yl - yellow
gy - grey	or - orange
rd - red	pl - pale
cr - cream	dk - dark
lt - light	
<b>TEXTURE</b>	fos - fossiliferous
fg - fine grained	sil - siliceous
mg - medium grained	mic - micaceous
cg - coarse grained	fer - ferruginous
bd - brecciated	int - intense
clw - cleaved	wk - weak
shd - sheared	v - very
calc - calcareous	pb - pebble
carb - carbonaceous	cb - cobble
lam - laminated	tr - trace
tdb - cross bedded	in bd - inter bedded
tbls - thin bedded	tblc - tabular
tkbd - thick bedded	frct - fractured
vn - veins, veining	
<b>ROCK TYPE</b>	SLT - siltstone
SST - sandstone	GLST - dolomite
LST - limestone	CGL - conglomerate
BX - breccia	BSH - black shale
SH - shale	LIM - ironstone
QZT - quartzite	CLY - clay
GRIT - grit	GRA - gravel
PUG - pug	
<b>MINERALOGY or ALTERATION</b>	qt - quartz
gn - garnet	py - pyrite
lim - limonite	sp - sphalerite
cbd - carbonated	cp - chlorite
c - calcite	sil - silicified
<b>ORDER</b>	
Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils	
* g	
dk gy mg fos SST or gy calc SH py or pl gy LST sil	
<b>TOPOGRAPHICAL</b>	
cut grid lines	joint
roads	joint - vertical
tracks	overturned
tramways	bedding
power lines	bedding - vertical
rivers, creeks	quarries
swampy area	

N.B. = not bedrock.



132220

**ELECTROLYTIC ZINC CO. OF ASIA LTD.**

PROJECT: E.L. 4/78 ZEEHAN, TAS.

5 cm

012

**BAURA GRID**

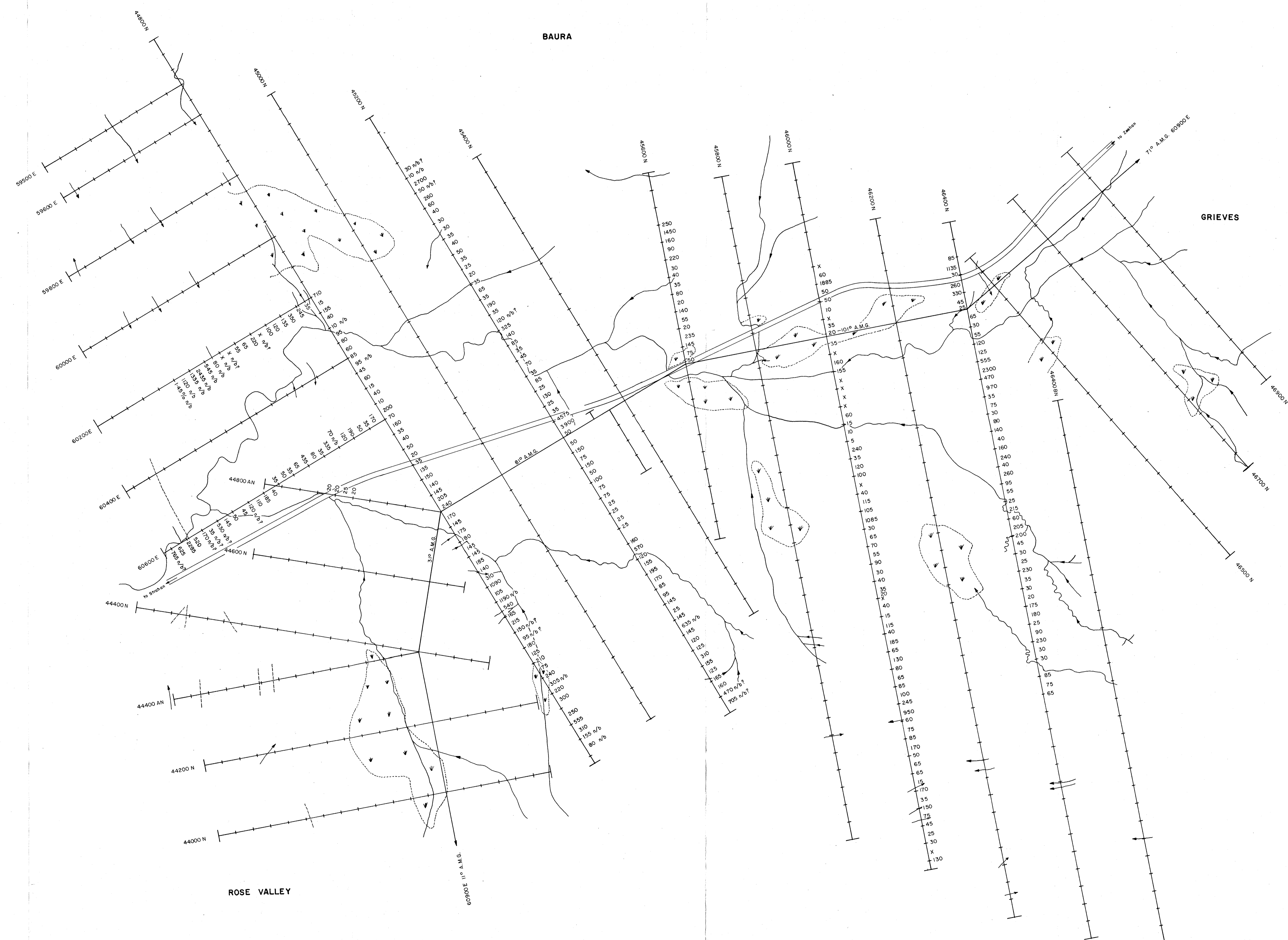
**BEDROCK GEOCHEMISTRY**

**Pb**

**(WACKER)**

PL 12

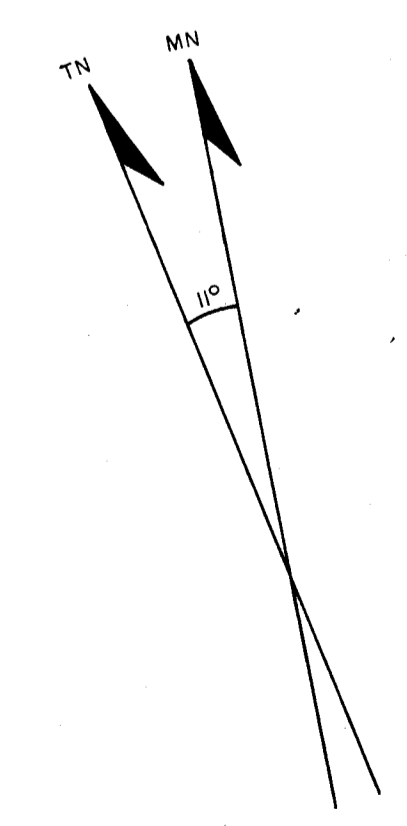
Scale: 1:5000	Survey: I.M.A.T.	Revised:
Reference: AI-532-	Date: 29-8-84	Ref. No.
Drawn: R. J. R.	Checked:	AO-532-0102



**LEGEND**

<b>COLOUR</b>	
pk - pink	wh - white
br - brown	bk - black
bl - blue	gr - green
gy - gray	yl - yellow
rd - red	or - orange
cr - cream	pl - pale
lt - light	dk - dark
<b>TEXTURE</b>	
fg - fine grained	foss - fossiliferous
mg - medium grained	sil - siliceous
cg - coarse grained	mic - micaceous
bd - bedded	fer - ferruginous
clvd - cleaved	int - intense
shrd - sheared	wk - weak
calc - calcareous	v - very
carb - carbonaceous	pb - pebble
lam - laminated	cb - cobble
xbd - cross bedded	fr - trace
in bd - thin bedded	in bd - inter bedded
th bd - thick bedded	tbl - tabular
vn - veins, veining	frct - fractured
<b>ROCK TYPE</b>	
SST - sandstone	SLT - siltstone
LST - limestone	DLST - dolomite
BX - breccia	CGL - conglomerate
SH - shale	BSH - black shale
QZT - quartzite	LIM - limestone
GRIT - grit	CLY - clay
PUG - pug	GRA - gravel
<b>MINERALOGY or ALTERATION</b>	
qt - quartz	py - pyrite
gr - garnet	sp - sphalerite
ilm - ilmenite	cp - chalcopyrite
cd - carbonated	sil - silicified
c - calcite	
<b>ORDER</b>	
Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils	
e.g.	
dk gy mg foss SST or gy calc SH py or pl gy LST sil	
<b>TOPOGRAPHICAL</b>	
cut grid lines	joint
roads	joint - vertical
tracks	overturned
tramways	bedding
power lines	bedding - vertical
rivers, creeks	quarries
swampy area	

N.B. - n/b = not bedrock



132221

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN, TAS.

BAURA GRID 013

BEDROCK GEOCHEMISTRY

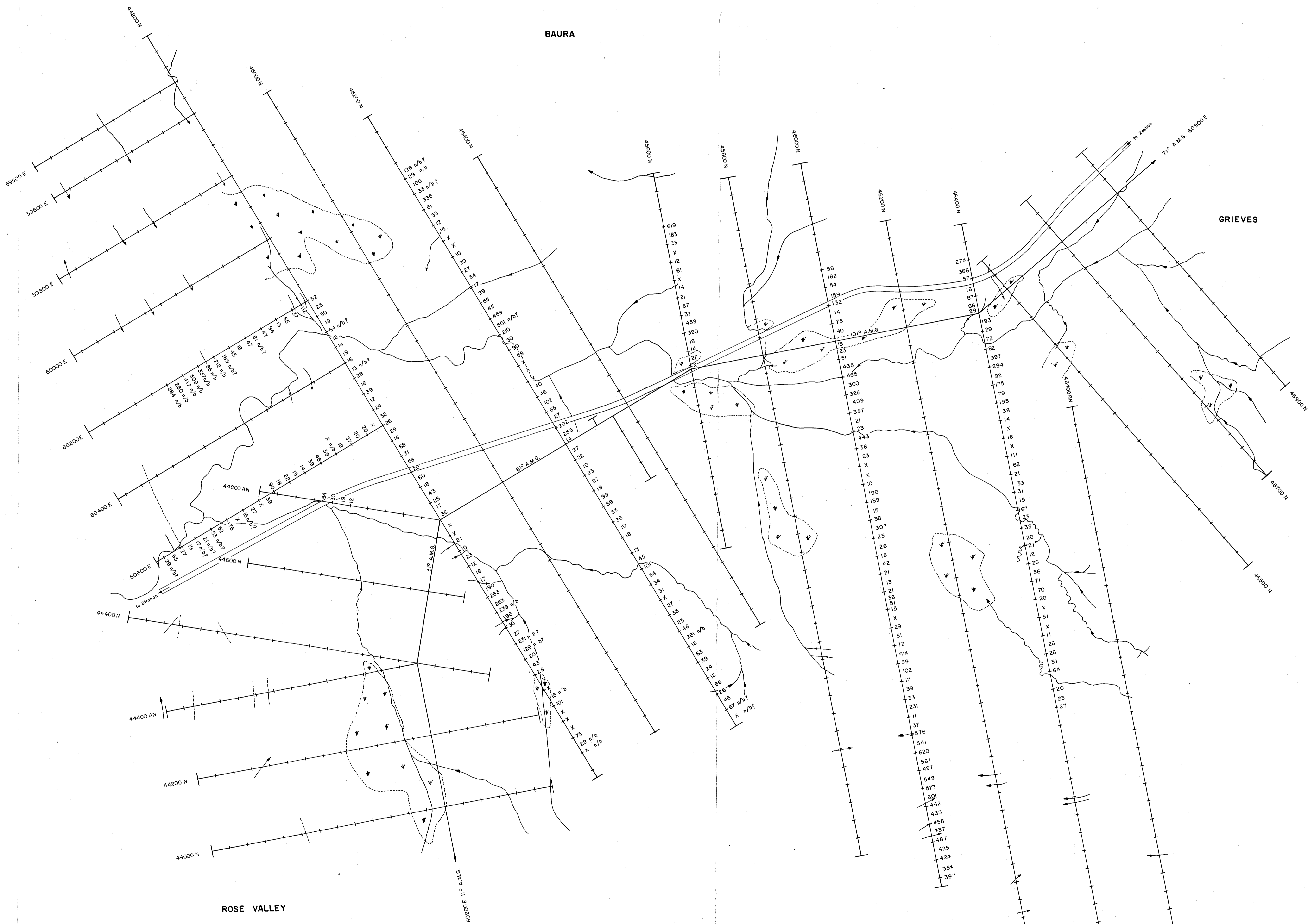
Zn

(WACKER)

PL. 13

Scale: 1:5000	Survey: I.M.A.T.	Revised:
Reference: AI-532	Date: 29-8-'84	Ref. No.
Drawn: R.J.R.	Checked:	AO-532-0101

36-2440



**LEGEND**

<b>COLOUR</b>	wh - white
pk - pink	bk - black
br - brown	gr - green
bl - blue	yl - yellow
gy - grey	or - orange
rd - red	pl - pale
cr - cream	dk - dark
lt - light	

<b>TEXTURE</b>	foss - fossiliferous
fg - fine grained	sil - siliceous
mg - medium grained	mic - micaceous
cg - coarse grained	ferr - ferruginous
brd - brecciated	int - intense
clvd - cleaved	wk - weak
shrd - sheared	v - very
calc - calcareous	pb - pebble
carb - carbonaceous	cb - cobble
lam - laminated	fr - fracture
abd - cross bedded	mbd - inter bedded
tb - thin bedded	tbl - tubular
tkbd - thick bedded	frct - fractured
vn - veins, veining	

<b>ROCK TYPE</b>	SLT - siltstone
SST - sandstone	DLST - dolomite
LST - limestone	CLC - conglomerate
BR - breccio	BSH - black shale
SH - shale	LIM - ironstone
QZT - quartzite	CLY - clay
GRIT - grit	GRA - gravel
PUG - pug	

<b>MINERALOGY or ALTERATION</b>	py - pyrite
qt - quartz	sp - sphalerite
gn - galena	cp - chalcopyrite
lim - limonite	sil - silicified
carb - carbonated	
c - calcite	

**ORDER**

Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils

e.g.

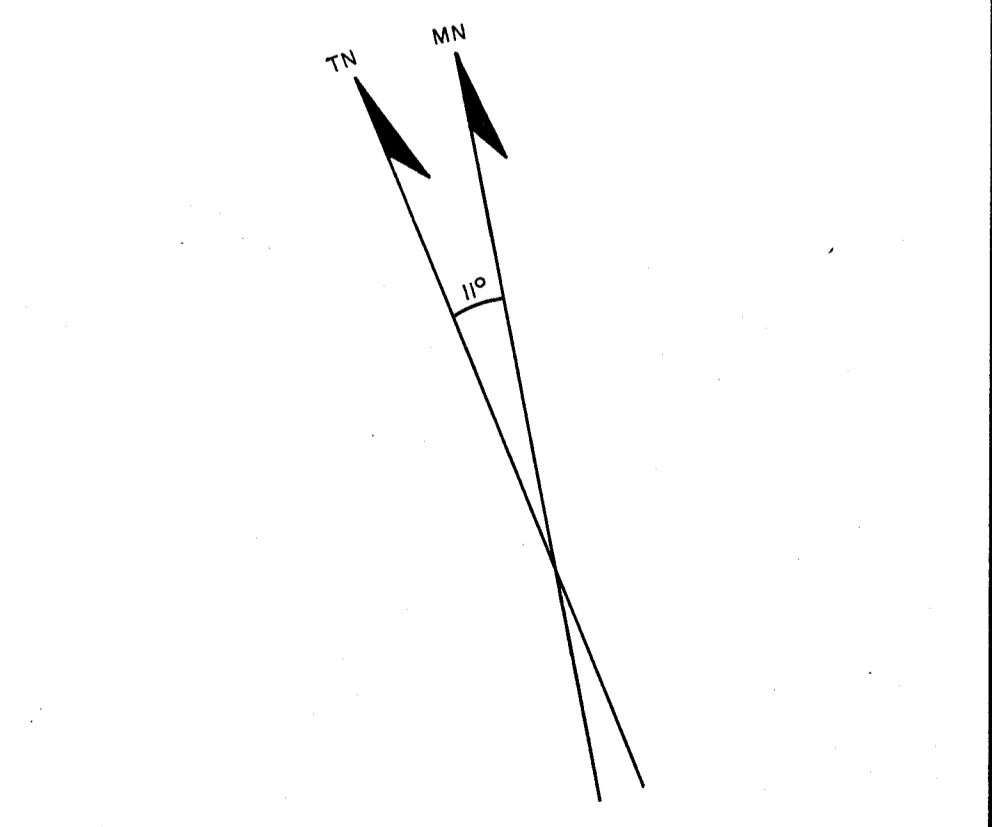
dk gy mg foss SST or gy calc SH py or pl gy LST sil

**TOPOGRAPHICAL**

cut grid lines	joint
roads	joint - vertical
tracks	overturned
tramways	bedding
power lines	bedding - vertical
rivers, creeks	quarries
swamy area	

N.B. - n/b = not bedrock.



132222

ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN, TAS.

5cm

014

BAURA GRID

BEDROCK GEOCHEMISTRY

Ba

(WACKER)

PL. 14

Scale: 1:5000	Survey: I.M.A.T.	Revised:
Reference: AI-532-	Date: 29-8-'84	Ref. No.
Drawn: R. J. R.	Checked:	AO-532-0105



**LEGEND**

<b>COLOUR</b>	wh - white
pk - pink	bk - black
br - brown	gr - green
bl - blue	yl - yellow
gy - grey	or - orange
rd - red	pl - pale
cr - cream	dk - dark
lt - light	

<b>TEXTURE</b>	fss - fossiliferous
fg - fine grained	sil - siliceous
mg - medium grained	mic - micaceous
cg - coarse grained	ferr - ferruginous
brd - brecciated	int - intense
clvd - cleaved	sw - weak
shrd - sheared	v - very
calc - calcareous	pb - pebble
carb - carbonaceous	cb - cobble
lam - laminated	tr - trace
cd - cross bedded	lb - later bedded
th - thin bedded	rbcl - rubricolor
thk - thick bedded	frct - fractured
vs - veins, veining	

<b>ROCK TYPE</b>	SLT - siltstone
SST - sandstone	CLST - dolomite
LST - limestone	CSL - conglomerate
BX - breccia	BSH - black shale
SH - shale	LIM - ironstone
QZT - quartzite	CLY - clay
GRIT - grit	GRA - gravel
PuG - pug	

<b>MINERALOGY or ALTERATION</b>	py - pyrite
qt - quartz	sp - sphalerite
gn - garnet	cp - chlorite
lim - limonite	sl - silicified
cd - carbonated	
c - calcite	

**ORDER**

Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils

e.g.

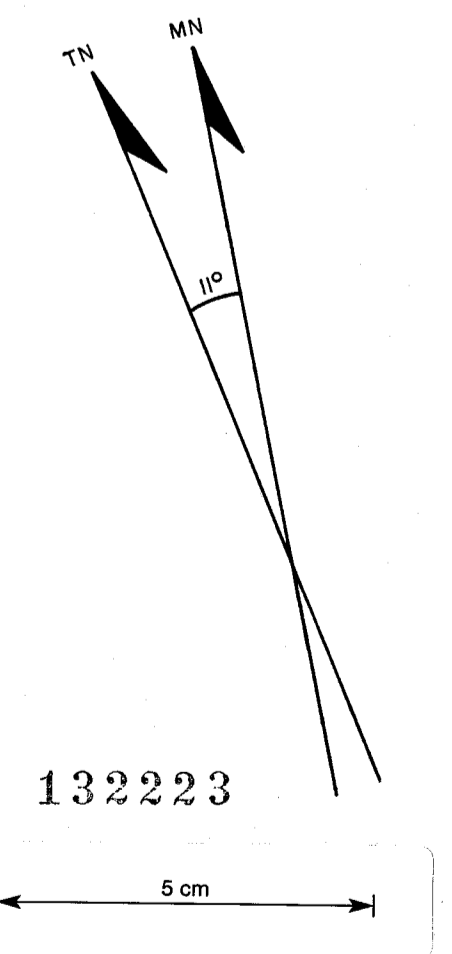
dk gy mg foss SST or gy calc SH py or pl gy LST sl'd

**TOPOGRAPHICAL**

cut grid lines	joint
roads	joint - vertical
tracks	overturned
framways	bedding
power lines	bedding - vertical
rivers, creeks	quarries
swampy area	

N.B. -x/b- not bedrock.



ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: E.L. 4/78 ZEEHAN, TAS.

BAURA GRID 015

BEDROCK GEOCHEMISTRY

Mn

(WACKER)

PL 15

Scale: 1:5000	Survey: I.M.A.T.	Revised:
Reference: AI-532-	Date: 29-8-'84	Ref. No.
Drawn: R.J.R.	Checked:	AO-532-0104

85-2440





**LEGEND**

<b>COLOUR</b>	wh - white
br - brown	bk - black
bl - blue	gr - green
gy - grey	yl - yellow
rd - red	or - orange
cr - cream	pl - pale
lt - light	dk - dark

<b>TEXTURE</b>	fos - fossiliferous
fg - fine grained	sil - siliceous
mg - medium grained	mic - micaceous
cg - coarse grained	ferr - ferruginous
brd - brecciated	int - intense
clvd - cleaved	wa - waxy
shrd - sheared	v - very
calc - calcareous	pb - pebble
carb - carbonaceous	cb - cobble
lam - laminated	fr - trace
abd - cross bedded	mbd - inter bedded
tb - thin bedded	tbl - tubicolour
tkbd - thick bedded	frct - fractured
ve - veins, veining	

<b>ROCK TYPE</b>	SLT - siltstone
SST - sandstone	DLST - dolomite
LST - limestone	COL - conglomerate
BR - breccia	BSH - black shale
SH - shale	LIM - ironstone
QZT - quartzite	CLY - clay
GRIT - grit	GRA - gravel
PUG - pug	

<b>MINERALOGY or ALTERATION</b>	qt - quartz	py - pyrite
gp - galena	sp - sphalerite	
lim - limonite	ch - chalcopyrite	
cd - carbonated	sil - silicified	
c - calcite		

**ORDER**

Colour, Texture, Rock Type, Mineralogy or Alteration, Fossils

e.g.

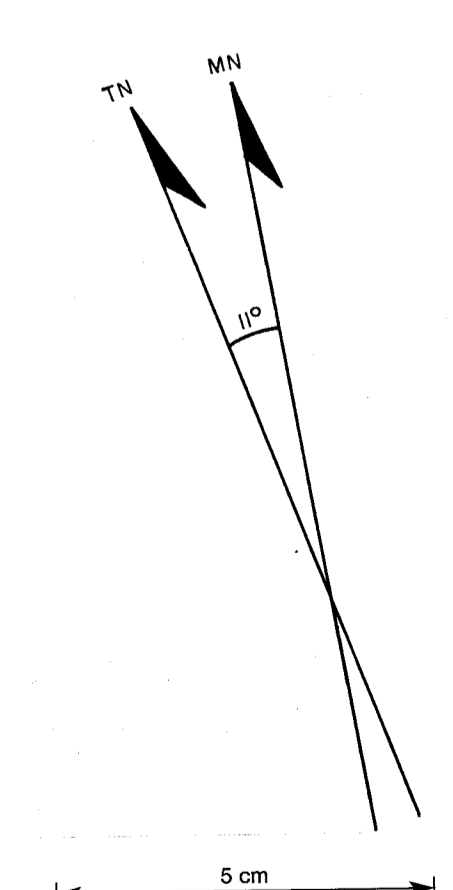
dk gy mg fos SST or gy calc SH py or pl gr LST sil

**TOPOGRAPHICAL**

cut grid lines	joint
roads	joint - vertical
tracks	overturned
tramways	bedding
power lines	bedding - vertical
rivers, creeks	quarries
swamy area	

C Cultural effect-culverts, broken augers, etc- ignored when contoured.



SUPERCEDES AI-532-0026

**ELECTROLYTIC ZINC CO. OF ASIA LTD.**

PROJECT: E.L. 4/78 ZEEHAN ,TAS.

132225 017

**BAURA GRID**

**GEOPHYSICS**

**GROUND MAGNETICS**

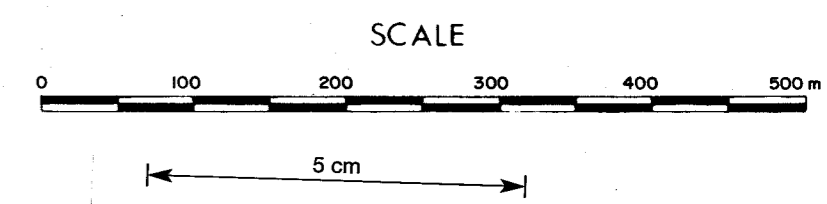
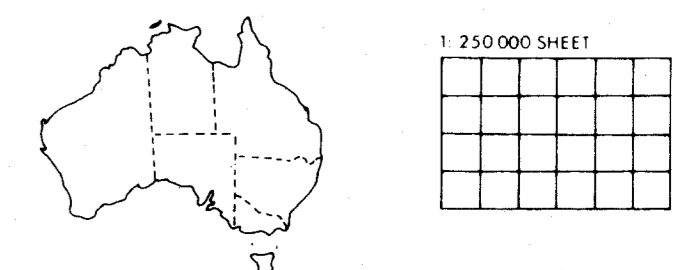
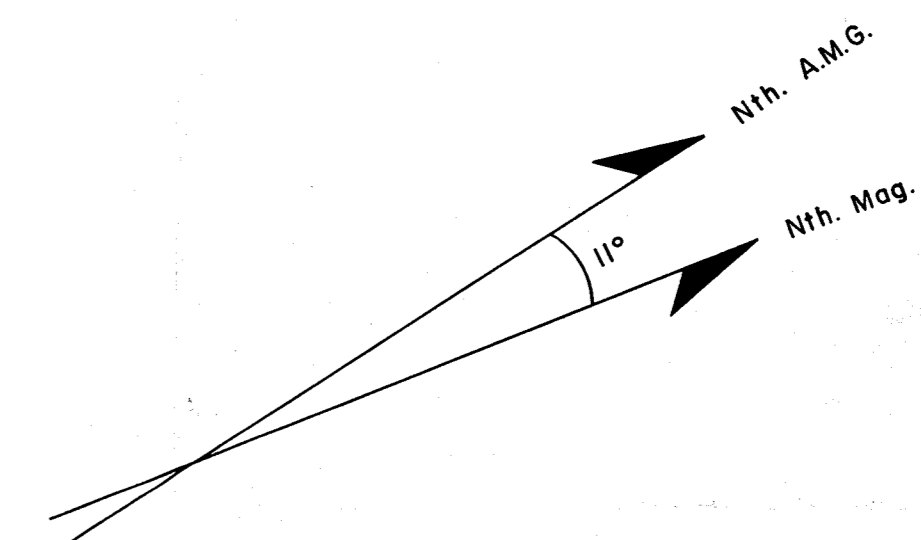
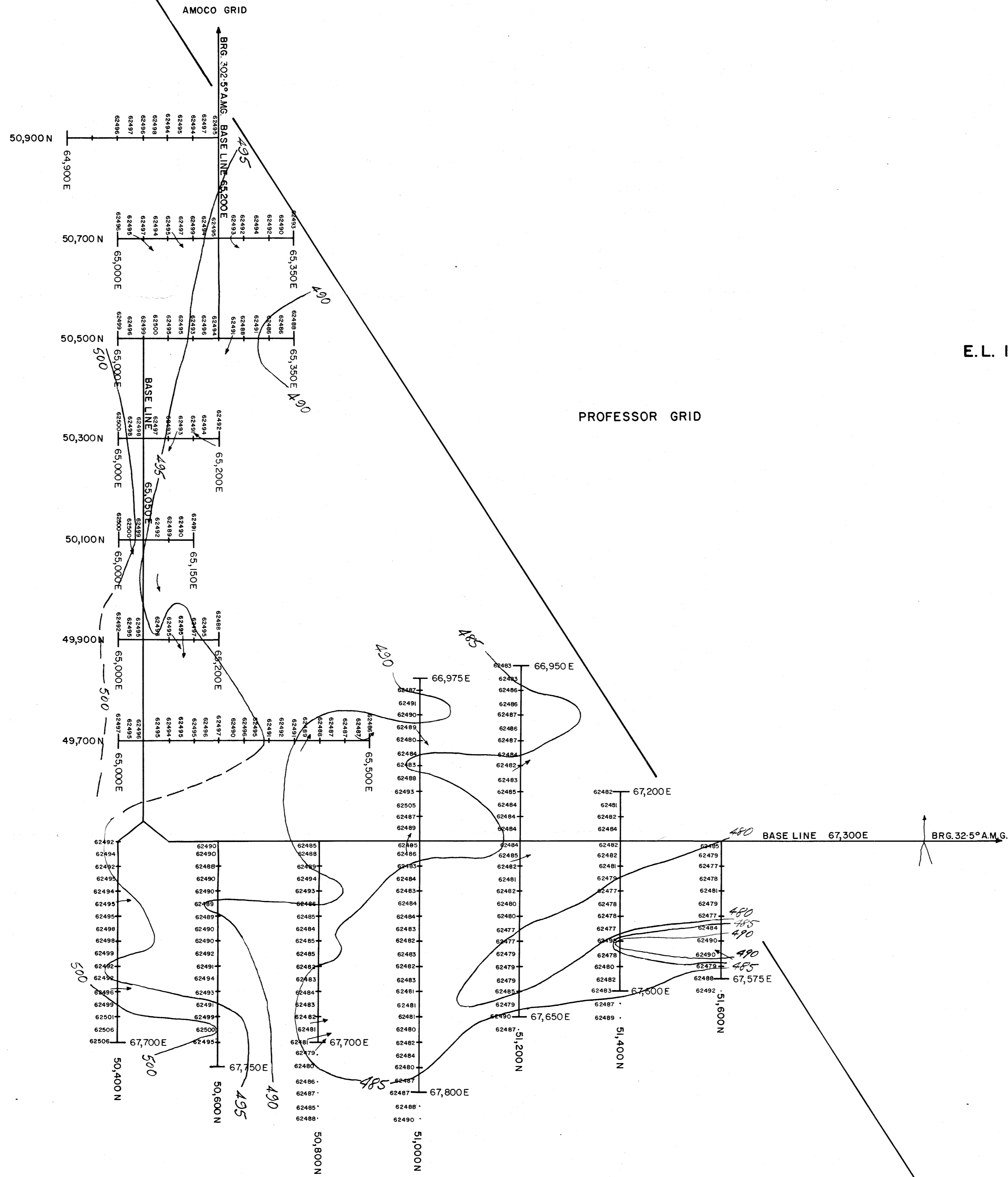
PL 17

Scale: 1:5000	Survey: I.MAT	Revised:
Reference AI-532-0026	Date: 27-8-84	Ref. No.
Drawn: R. J. R.	Checked:	AO-532-0108

85-1480

E.L. 4/78

E.L. 15/76



132226



ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED  
MINERAL RESOURCES DIVISION

PROJECT: ZEEHAN E.L. 4/78

PROFESSOR GRID 018

GROUND MAGNETICS

PL. 18

Compiled: I.MAT. Date: 14-5-'85 Scale: 1:5,000

AMG: Latitude: Longitude:

Drawn: R.J.R. FileNo: PLAN NO:

AI-532-0117